FY2022 - FY2023 Economic Outlook

Uncertainties intensified by government policies; rising risk of recession under inflation

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Mizuho Research & Technologies, Ltd.

MIZUHO

Key points of our outlook

- We expect global economic growth to slow further to +1.6% in 2023. Inflation is worsening mainly in Europe and the US and central banks are focusing on controlling inflation by tightening monetary policy. Europe and the US will fall into a recession through 2023 due to inflation and interest rate hikes. While the Asian economies will start to recover from the Covid-19 crisis, the rise of prices will put downward pressure on domestic demand and slow external demand will hamper its growth.
- In the US, where inflationary pressures are strong due to tight labor supply & demand, the Federal Reserve Board (the Fed) is expected to raise the federal funds rate to 4.5%-4.75% through early 2023 from the perspective of curbing inflation. The rise of interest rates will serve as downward pressure on housing investment, capital investment, etc., pushing the economy into a recession from the Oct-Dec quarter of 2022 to the Jul-Sep quarter of 2023.
- Amid the escalating tensions in Ukraine, Russia is expected to reduce its supply of gas to Europe to approximately 20% of the previous year. Given the persistently high gas prices, rising interest rates, and the impact of the US recession, Europe's economic growth will fall into negative territory from the end of 2022. We thus expect economic growth of -1.2% in 2023. The ECB will raise its policy rate to 2% by the end of 2022, and take a wait-and-see stance from 2023 onward, reflecting the deepening recession and peakout of prices.
- Although the Asian economies have remained firm due to the easing of Covid-19-related regulations, the downturn of external demand and the rise of interest rates due to inflation and currency depreciation will serve as negative pressures. In China, the sluggish economy due to the continued zero-Covid policy and deterioration of real estate market conditions will put downward pressure on the economy in the near term. We expect the timing of lifting the zero-Covid policy and bottoming of real estate investment will be sometime in the first half of 2023.
- Turning to the Japanese economy, despite downward pressures stemming from the rise of prices and overseas economic slowdown, positive growth should be maintained due to the recovery mainly in service consumption, driven by the ebb of Covid-19 infections and easing of border controls. The Japanese economy is forecast to follow firm footing in 2023 in contrast to the negative growth among major developed countries.
- Turning to the financial markets, we expect US long-term interest rates to rise through the end of 2022, reflecting the Fed's interest rate hikes. The yen is expected to weaken against the dollar, reaching the mid-JPY150/USD level reflecting the widening gap between US and Japanese interest rates. US stock prices are expected to fall through the end of 2022 and to subsequently trend at rock-bottom levels. Even though crude oil prices are expected to decline due to demand concerns, the pace of fall will be moderate.

Given the rise of inflation and monetary tightening, the global economy will fall into a recession, centering in Europe and the US

(Y-o-y % change) (% pt)

	2021 CY	2022 (Outlook)	2023 (Outlook)	2022 (Comparison with the forecast as of July 2022)	2023 (Comparison with the forecast as of July 2022)
Global real GDP growth	6.0	2.3	1.6	-0.1	-0.5
Japan, US, Europe	5.3	2.2	-0.7	-0.1	-0.8
US	5.9	1.7	-0.8	-0.5	-1.1
Eurozone	5.3	2.8	-1.2	0.3	-0.5
UK	7.4	4.2	-0.3	0.8	-0.8
Japan	1.7	1.3	1.1	-	-0.7
Asia	7.1	4.2	4.5	-0.5	-0.2
China	8.1	3.2	4.8	-0.8	-0.2
NIEs	5.5	2.4	1.6	-0.2	-0.3
ASEAN5	3.3	5.3	4.2	0.1	-0.3
India	8.6	7.1	5.3	-0.1	-0.2
Australia	4.9	2.7	1.8	-0.1	-0.2
Brazil	4.6	2.5	0.4	1.0	-0.3
Mexico	4.8	1.9	-0.7	0.3	-1.0
Japan (FY)	2.3	1.5	0.9	-0.3	-0.3

The global economy will remain stagnant. In 2023, global economic growth should fall below 2%, showing signs of a synchronized global recession

The rise of inflation and acceleration of interest rate hikes will serve as a drag on economic growth. The US and European economies are projected to fall into a recession through 2023

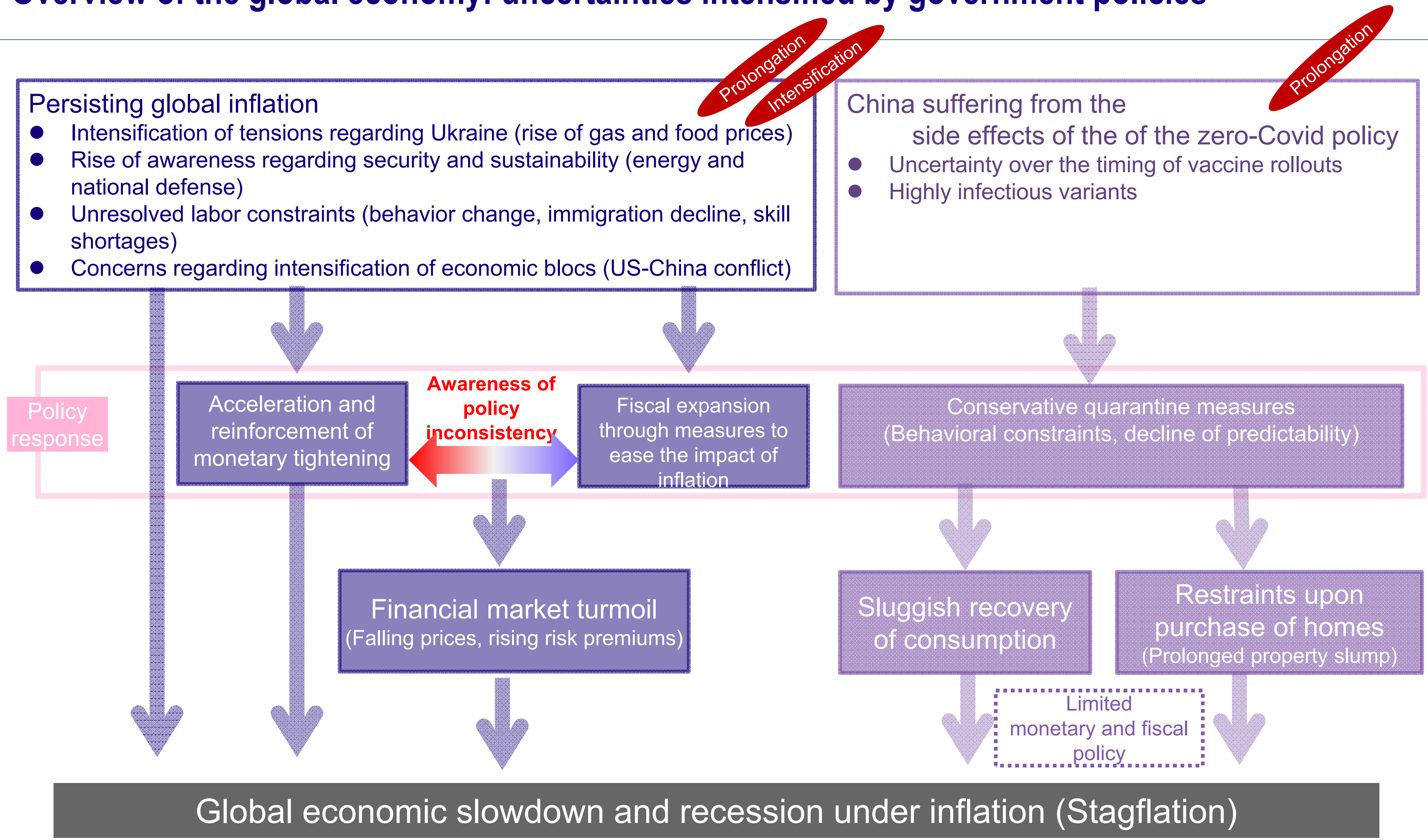
Economic growth should weaken from 2022 to mid-2023 given the fall of consumption due to the continuation of the zero-Covid policy and prolonged real estate market slump. The conservative monetary and fiscal policy stance is also one of the factors

Despite expectations of a recovery from the Covid-19 pandemic, inflation and the deterioration of external demand will serve as a negative effect upon export-oriented economies

Despite the negative impact stemming from the deterioration of external demand, the recovery from the Covid-19 pandemic through 2023 will ease the slump. Fiscal policy support will also serve to keep economic growth in positive territory

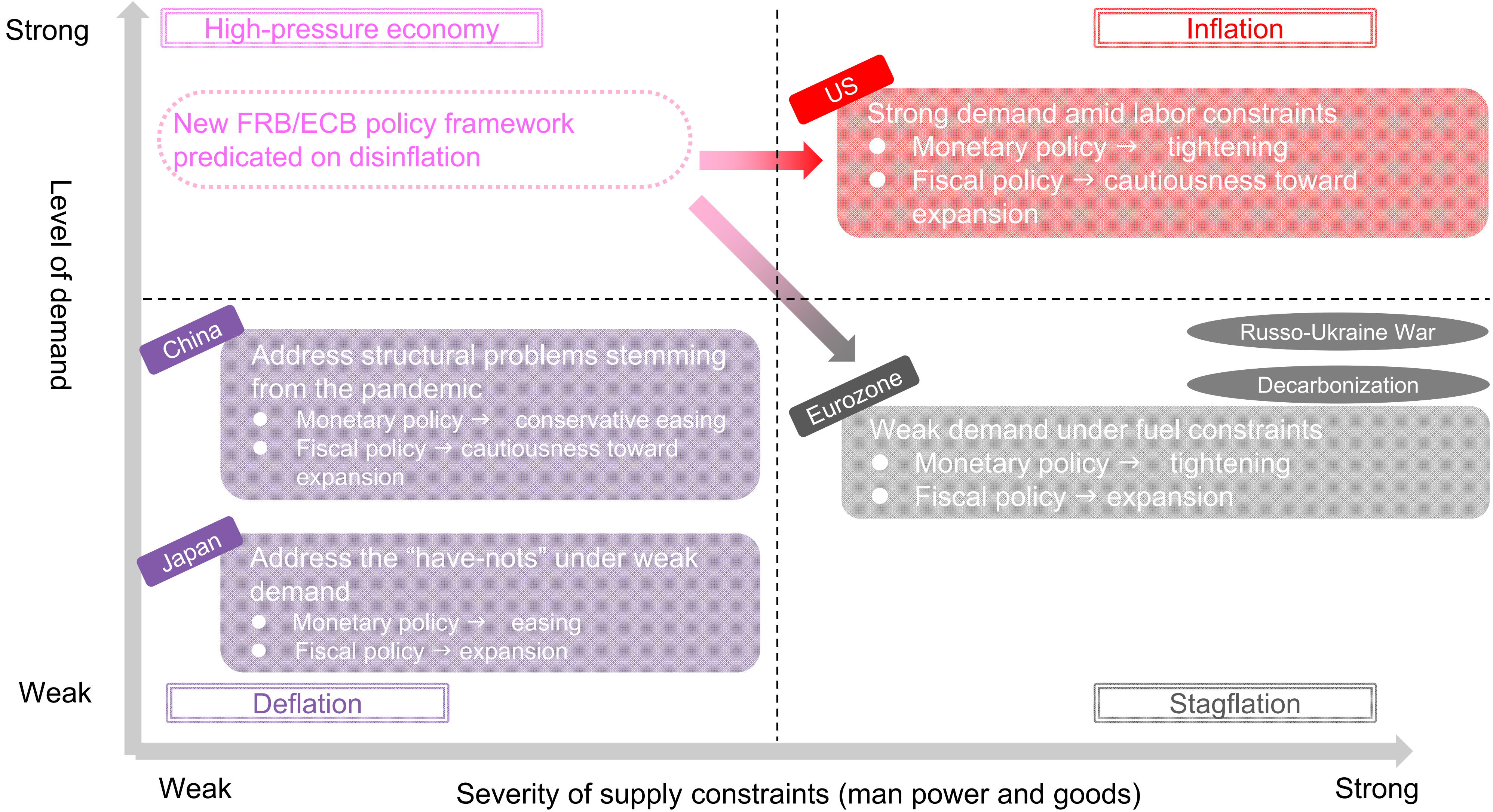
Note: Figures in the shaded areas are forecasts. The total for forecasted regions is calculated based on GDP share (PPP) by the IMF.
Source: Made by MHRT based upon releases by the IMF and the statistics of relevant countries and regions

Overview of the global economy: uncertainties intensified by government policies



Source: Made by MHRT

(Reference) Demand & supply and fiscal and monetary policy mixes (US, China, Japan, Eurozone)



Source: Made by MHRT

(1) US: the economy will slow down from the end of 2022 due to high inflation and monetary tightening

- The US economy will fall into a recession from the end of 2022, and GDP growth is projected to fall into negative territory (-0.8% y-o-y) in 2023.
  - In 2022, monetary tightening is expected to cause a clear decline in housing investment and capital investment. Consumer spending will also continue to slow due to the rise of prices.
  - In 2023, the impact of monetary tightening will spread throughout the economy, serving to widen the breadth of economic decline. Personal consumption will decline through the middle of the year due to inflation as well as the reverse asset effect caused by the fall in value of financial assets. The unemployment rate is expected to rise to 5% along with the deterioration of the economy.

Outlook for the US economy

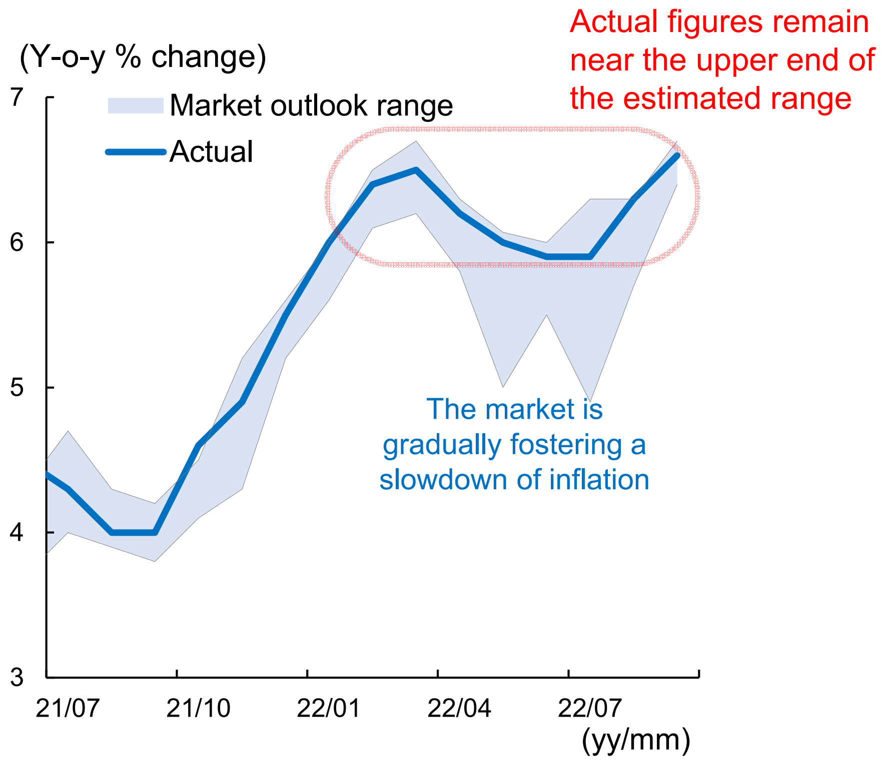
		2021	2022	2023	2021				2022				2023			
		(CY)	(Outlook)		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
GDP (real)	Q-o-q % ch. p.a.	5.9	1.7	–0.8	6.3	7.0	2.7	7.0	–1.6	–0.6	1.9	–0.2	–1.3	–2.7	–1.1	0.7
Personal consumption	Q-o-q % ch. p.a.	8.3	2.5	0.1	10.8	12.1	3.0	3.1	1.3	2.0	0.6	0.4	0.1	–0.7	–0.7	0.7
Housing investment	Q-o-q % ch. p.a.	10.7	–8.8	–21	11.6	–4.9	–5.8	–1.1	–3.1	–18	–18	–16	–33	–28	–9.2	9.5
Capital investment	Q-o-q % ch. p.a.	6.4	2.9	–2.4	8.9	9.9	0.6	1.1	7.9	0.1	2.1	–3.6	–2.5	–5.8	–2.9	1.6
Inventory investment	Q-o-q contribution p.a. % pt	0.2	–0.4	–0.5	–2.5	–0.8	2.0	5.0	0.2	–1.9	0.0	0.0	–0.3	–1.0	–0.5	–0.2
Government consumption	Q-o-q % ch. p.a.	0.6	–1.2	0.4	6.5	–3.0	–0.2	–1.0	–2.3	–1.6	0.6	0.6	0.6	0.6	0.6	0.6
Net exports	Q-o-q contribution p.a. % pt	–1.3	0.2	0.6	–1.0	–0.6	–1.1	–0.2	–3.1	1.2	2.0	0.7	1.1	1.0	0.6	–0.3
Exports	Q-o-q % ch. p.a.	6.1	7.2	3.7	0.4	4.9	–1.1	23.5	–4.6	13.8	11.2	3.4	2.8	0.0	1.2	1.2
Imports	Q-o-q % ch. p.a.	14.1	8.6	–3.4	7.6	7.9	6.6	18.6	18.4	2.2	–5.0	–2.2	–4.6	–6.0	–2.8	2.8
Unemployment rate	%	5.4	3.7	4.5	6.2	5.9	5.1	4.2	3.8	3.6	3.6	3.8	4.0	4.3	4.7	5.0
PCE deflator	Y-o-y % ch.	4.0	6.1	3.5	1.8	3.9	4.3	5.5	6.3	6.5	6.2	5.6	4.7	3.6	3.2	2.7
Core, excl. food and energy	Y-o-y % ch.	3.5	4.8	3.5	1.7	3.4	3.6	4.6	5.2	4.8	4.7	4.5	4.1	3.7	3.3	2.9

Note: Figures in the shaded areas are forecasts by MHRT. (As of October 18, 2022)
Source: Made by MHRT based upon releases by the US Department of Commerce and the US Department of Labor

Inflation rises faster-than-expected; strong upward pressure on prices stemming from both goods and services

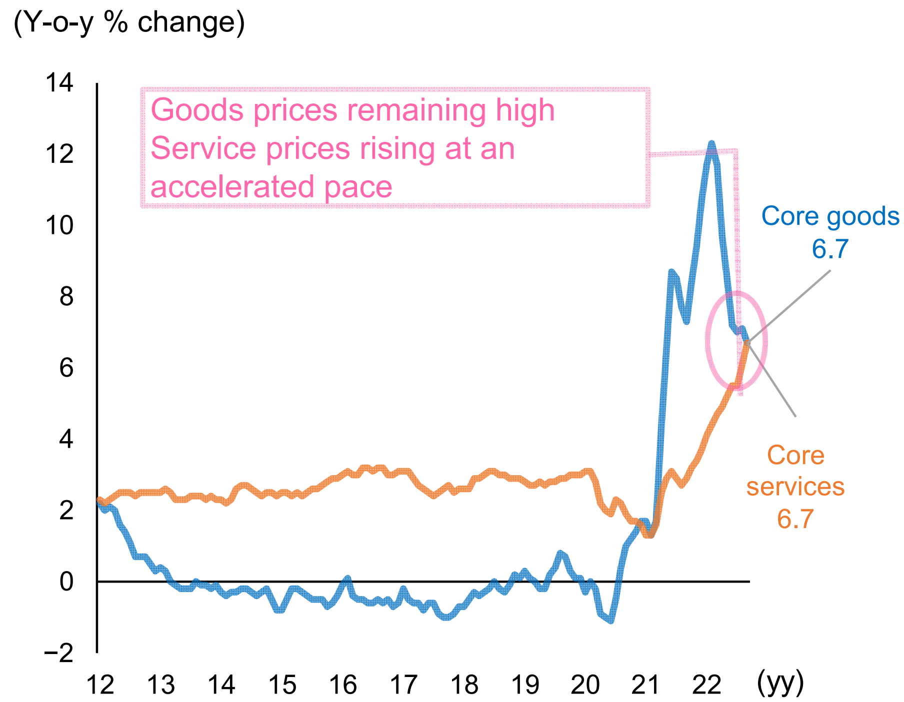
- In September, the core inflation rate (excluding volatile energy and food) accelerated at a pace of +6.6% y-o-y (cf. Aug +6.3% y-o-y), showing an increase for two consecutive months.
  - There are no signs that inflation is being curbed. Actual figures remain near the upper end of the estimated range amid growing expectations of a slowdown in inflation.
  - The breakdown shows that prices of goods which had been declining have stopped falling, while the pace of increase in services prices has accelerated. The rise in service prices, which are considered to be persistent, poses the risk of continued high inflation.

Market forecasts and actual results of core CPI



Source: Made by MHRT based upon releases by Bloomberg

Inflation rate of core goods and core services

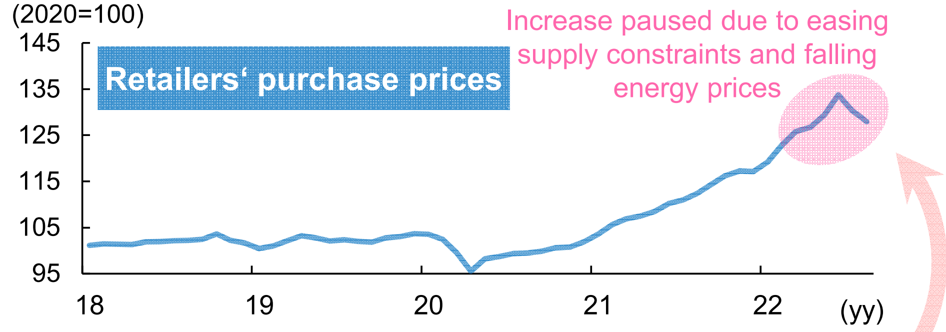


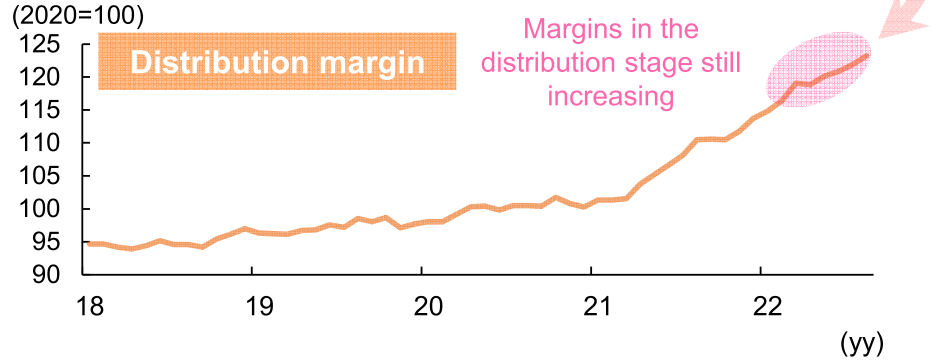
Source: Made by MHRT based upon releases by the US Department of Labor

Deep-rooted upward pressures on prices stem from corporate behavior to pass on prices and the labor market crunch

- Expanding margins in the distribution stage behind deep-rooted upward pressure on goods prices
  - Despite a pause in retailers' purchase prices, companies are continuing to pass on increased costs to product prices at the distribution stage.
- The rise of wages is spilling over to core service prices. Reflecting tight labor supply & demand, wages remain high.
  - Job openings to job seekers (= unemployed) is hovering at a historically high level of 1.7 times.
  - Although a decline in job openings in August is good news for the Fed, it is not enough to ease inflation alert levels.

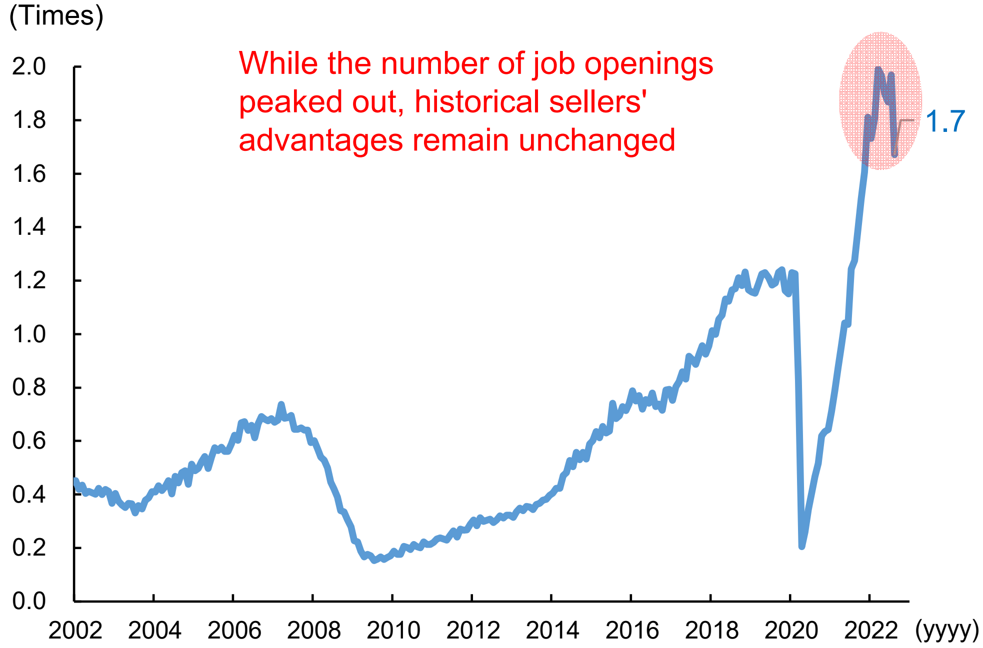
Retailers’ purchase prices and distribution margins of goods prices





Note: Based on the wholesale price statistics, final consumer goods are used for retailers' purchase prices, and final consumer goods demand trade services (indicating the margins received by wholesalers and retailers) are used for distribution margin.
Source: Made by MHRT based upon releases by the US Department of Labor

Job openings to job seekers (number of job openings divided by number of unemployed)

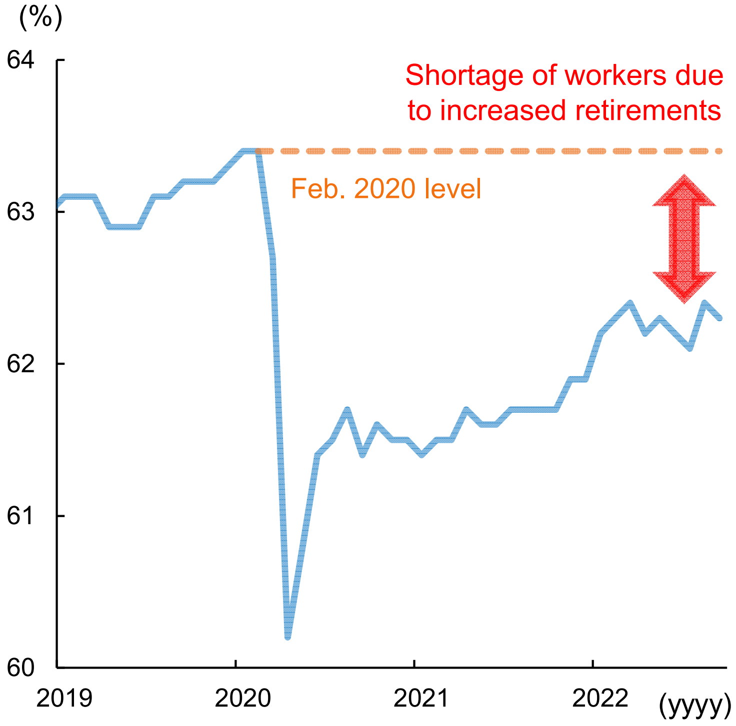


Source: Made by MHRT based upon releases by the US Department of Labor

Increasing retirements and dramatic changes in the industrial structure and business environment are tightening the labor supply-demand balance

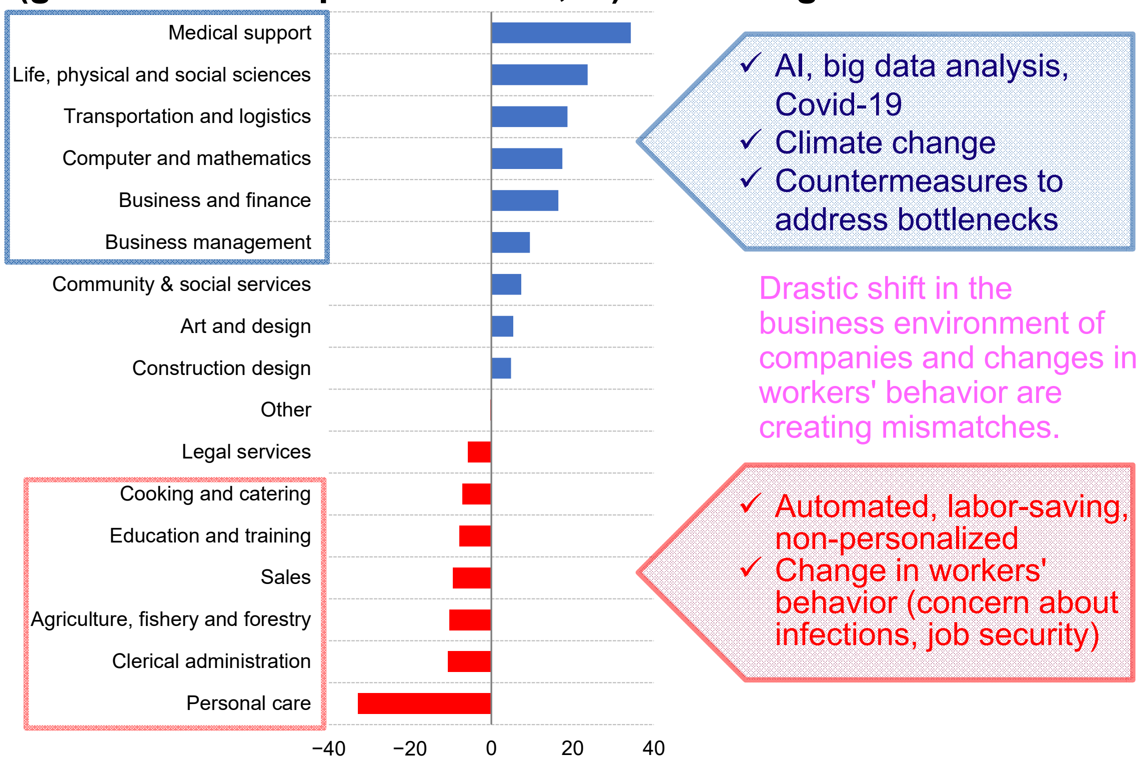
- The labor participation rate has not returned to pre-pandemic levels due to an increase in early retirement of workers. Chronic labor shortages are persisting.
  - The spread of Covid-19 has contributed to the early retirement of the Baby Boomer generation, which has a relatively high risk of mortality from the infection. The number of retired workers increased by about 4 million as of August compared to the period before the pandemic, and this mostly explains the decline in labor participation rates compared to the same period.
- Demand for labor is dramatically changing due to drastic shift in the corporate business environment including the spread of AI/big data analysis and reassessment of global supply chains, as well as responses to address climate change.
  - In occupations related to services toward individuals, workers' concerns about infection and job security also have an impact on the situation.

Labor participation rate



Source: Made by MHRT based upon releases by the US Department of Labor

Change in the number of workers by occupation (growth rate compared to 2019, %) and background

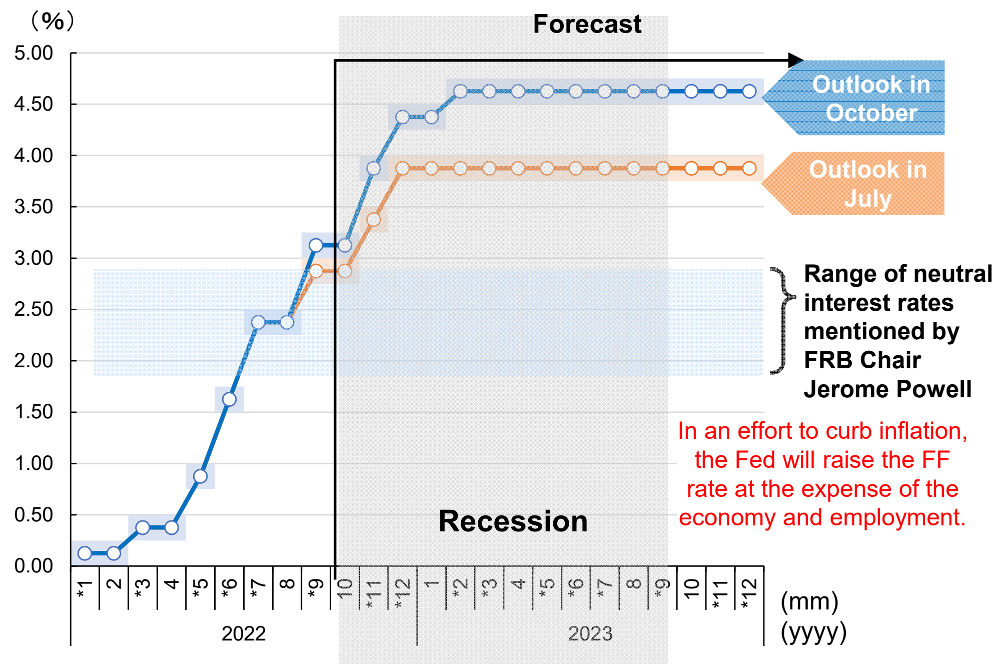


Source: Made by MHRT based upon releases by the US Department of Labor

Change in outlook on federal funds (FF) rate. Inflation and tighter monetary policy intensify the downturn of the US economy

- The US monetary policy outlook has been revised upward due to persistent inflationary pressures.
  - We raised our outlook for the peak FF rate to 4.50%-4.75% from 3.75%-4.00%.
- High inflation and tighter monetary policy will push the US economy into recession earlier than previously expected.
  - The US economy will fall into a recession from the Oct-Dec quarter of 2022 to the Jul-Sep quarter of 2023, dipping into negative territory of -0.8% in 2023.
  - The decline of consumer spending and capital investment will become evident, triggered by housing investment. The unemployment rate will also rise to 5.0% in the Oct-Dec quarter of 2023.

Target range of the federal funds (FF) rate



Note: An asterisk denotes a month with a Federal Open Market Committee (FOMC) meeting.
Source: Made by MHRT based upon releases by the FRB and Bloomberg

Comparison with previous recessions

	Recession period	GDP	Unemployment rate
Nov. 1973 to Mar. 1975	5 months	−3.1%	3.5%
Jan. 1980 to Jul. 1980	7 months	−2.2%	1.7%
Jul. 1981 to Nov. 1982	17 months	−2.5%	3.3%
Jul. 1990. to Mar. 1991	9 months	−1.4%	0.9%
Mar. 2001 to Nov. 2001	9 months	0.5%	1.3%
Dec. 2007 to Jun. 2009	19 months	−3.8%	4.5%
Feb. 2020 to Apr. 2020	3 months	−9.6%	9.4%
Oct. 2022 to Sep. 2023	**12 months**	**−1.3%**	**1.4%**
(Ref.) Previous outlook	6 months	−0.6%	1.1%

Note: Figures are the breadth of deterioration since the start of the recession.
Source: Made by MHRT based upon releases by the US Department of Commerce and the US Department of Labor

(2) Eurozone: accelerated interest rate hikes due to high inflation and US recession serving as downward pressure on the economy

- The Eurozone real GDP growth is forecast to grow +2.8% in 2022 and slow to -1.2% in 2023.
  - In 2022, relatively high growth is expected in the first half of the year as consumption picks up due to the easing of Covid-19-related regulations. Subsequently, we expect growth to fall into negative territory from the Jul-Sep quarter due to a slump of consumption caused by high inflation.
  - In 2023, the fall of capital investment reflecting the rise of borrowing costs due to the high pace of interest rate hikes in the previous year, and the decline of imports stemming from the US economic slowdown will serve as downward pressures on eurozone growth.

Outlook for the eurozone economy

		2021	2022 (Outlook)	2023 (Outlook)	2021 Jan-Mar	2021 Apr-Jun	2021 Jul-Sep	2021 Oct-Dec	2022 Jan-Mar	2022 Apr-Jun	2022 Jul-Sep	2022 Oct-Dec	2023 Jan-Mar	2023 Apr-Jun	2023 Jul-Sep	2023 Oct-Dec
GDP (real)	Q-o-q % ch	5.3	2.8	−1.2	−0.1	2.0	2.3	0.5	0.6	0.8	−0.2	−0.6	−0.9	−0.0	0.1	0.4
Domestic demand	Q-o-q % ch	4.2	3.2	−0.7	−0.9	2.1	2.3	1.4	−0.2	0.8	0.5	−0.9	−1.1	0.4	0.5	0.1
Personal consumption	Q-o-q % ch	3.8	3.7	−0.7	−1.9	3.3	4.7	−0.2	−0.1	1.0	0.1	−0.9	−0.9	0.2	0.5	0.4
Gross fixed capital formation	Q-o-q % ch	3.6	2.2	−2.3	−2.4	1.8	−0.7	3.4	−0.8	0.7	0.2	−0.8	−1.5	−0.4	−0.3	−0.1
Government consumption	Q-o-q % ch	4.3	1.9	1.1	−0.1	2.1	−0.2	0.7	0.2	0.6	0.2	0.3	0.3	0.3	0.1	0.1
Inventory investment	Q-o-q contribution, % pt	0.3	0.3	−0.1	0.6	−0.5	−0.0	0.7	−0.1	−0.1	0.3	−0.3	−0.3	0.3	0.2	−0.1
External demand	Q-o-q contribution, % pt	1.3	−0.3	−0.4	0.9	−0.1	0.0	−0.9	0.9	0.1	−0.6	0.3	0.2	−0.4	−0.4	0.2
Exports	Q-o-q % ch	10.5	5.8	−1.3	0.9	2.5	2.2	2.6	1.5	1.7	−0.1	−0.2	−0.6	−0.9	−0.5	0.5
Imports	Q-o-q % ch	8.3	6.9	−0.5	−0.9	3.0	2.3	4.7	−0.2	1.6	1.1	−0.8	−1.0	−0.1	0.3	0.1
CPI	Y-o-y % ch	2.6	8.7	7.2	1.1	1.8	2.8	4.6	6.1	8.0	9.3	10.4	10.4	8.0	5.9	4.6
Core, excl. food and energy	Y-o-y % ch	1.5	3.8	3.4	1.2	0.9	1.4	2.4	2.7	3.7	4.4	4.5	4.7	3.8	2.6	2.4

Note: Figures in the shaded areas denote forecasts by MHRT.
Source: Made by MHRT based upon releases by Eurostat

EU countermeasures for imported gases are moderate and not integrated among the member countries. Gas prices remain high due to Russia's attempts to apply pressure

- Russia reacted to the EU's tightening of sanctions against Russia. Continued restraint of the gas supply will worsen the gas supply-demand balance in Europe.
  - The resumption of gas supply to Germany is unlikely due to damage to the Nord Stream 1 pipeline. Supplies to Italy, which was the second-largest purchaser after Germany, have also been temporarily suspended.
- The EU has agreed on gas price measures in preparation for the winter season, when supply & demand will be tight. The agreement is conservative, with some opposition from Germany and other countries.
- The governments of EU countries are also trying to reduce the burden of inflation by providing support for electricity rates, but gas prices remain high against a backdrop of worsening supply & demand during the winter.

Energy price control measures in the EU

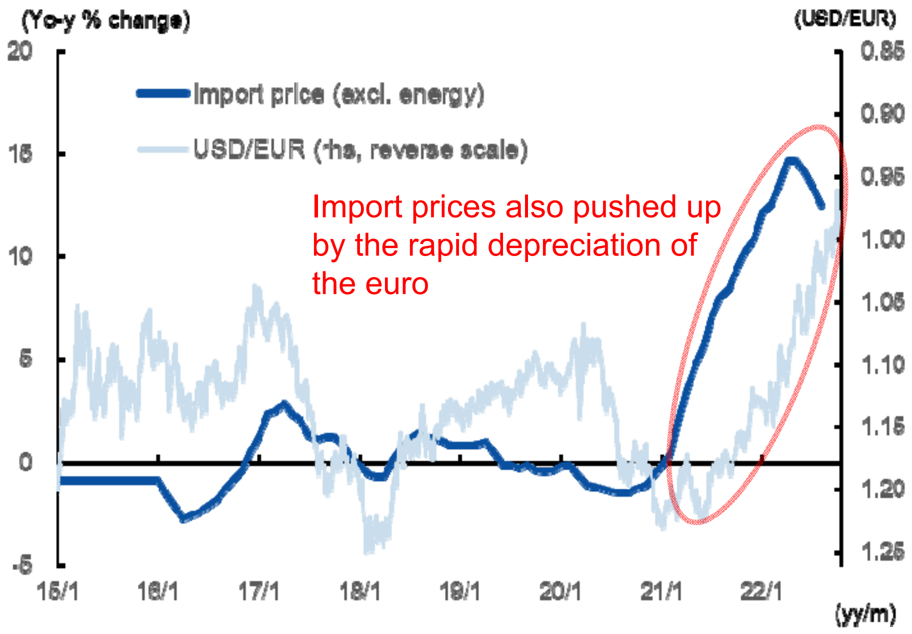
Energy	EU-wide countermeasures	Country-specific measures
Oil	• **Price cap on Russian oil transported by sea to third countries**	Objection (by Greece, etc. → ultimately agreed): • Concerned about negative impact on shipping business
Electricity	• **Mandatory reduction of peak electricity demand** ✓ Setting a voluntary target of 10% reduction in total electricity demand and mandating 5% reduction during peak hours • **Taxation on oil, gas, and coal companies (windfall tax)** ✓ Taxation on the portion of average annual profits exceeding 20% from 2018 • **Collection of a portion of sales to power generators** ✓ Collection of sales over 180 euros/MWh • **Possible to set electricity rates below cost for supply to small and medium-sized enterprises**	• The windfall tax **can be substituted** by existing domestic measures of equivalent level and purpose. • **Allowing flexibility for countries** to make decisions, such as **setting looser or stricter caps** for power generators or differentiating between power generation technologies • **Each country to decide** how to use the collected proceeds (electricity rate caps, subsidies for low-income users, etc.)
Gas	• **Joint purchase of gas** ✓ Encouraging **voluntary** joint purchase, in principle; mandating 15% of the volume that needs to be accumulated • **Setting a new complementary price index for imported gas** ✓ Setting a price index for LNG **(prices may rise from the current index depending on LNG supply & demand)** • **Establishing a dynamic price corridor temporarily** ✓ The purpose is to limit the surge of gas price **(its control of the average price is limited)** • **Temporary cap on gas fuel prices for power generation in the EU** ✓ **(Details on how to fill the price gap with imported gas prices not yet decided)**	Agreed (by 15+ countries): • Inflation control while limiting financial sources for Russia **Objection** (by **Germany**, Austria, Netherlands, Hungary, etc.): • Concerned about stable supply, as lower imported gas prices would make it harder to bring gas to Europe and increase the risk of Russia stopping supplies

Source: Made by MHRT based upon releases by the European Commission and Euractiv

Inflation surging due to soaring commodity prices and the weak euro, which is pushing up import prices

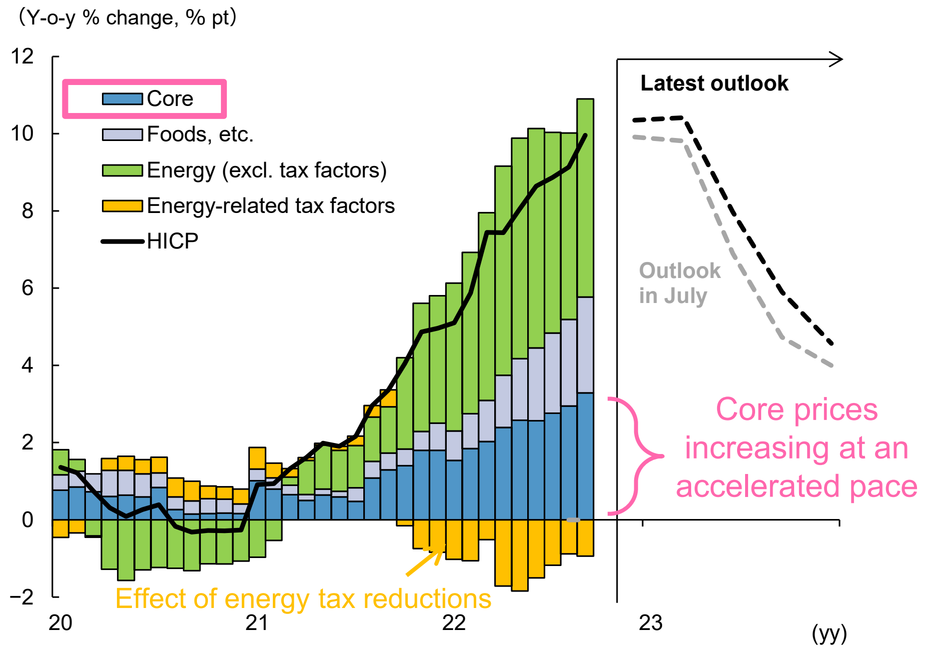
- Import prices, excluding energy, are pinned at a high level driven by the weak euro, contributing to persistent inflationary pressures.
- We revised our inflation outlook upward from July, due in part to the upward pressure from energy prices.
  - Eurozone consumer prices in September hit a record high of +9.9% y-o-y (cf. Aug +9.1% y-o-y).
  - Although energy-related VAT tax cuts, etc., will curb the rise of energy prices to some extent, the impact will be limited.
  - Given the widespread trend to pass on higher input costs to product prices stemming from higher energy prices and weaker euro, core prices are also rising at an accelerated pace.

Eurozone: import prices



Source: Made by MHRT based upon releases by Eurostat and CEIC Data

Eurozone: rate of increase in Harmonized Indices of Consumer Prices (HICP)

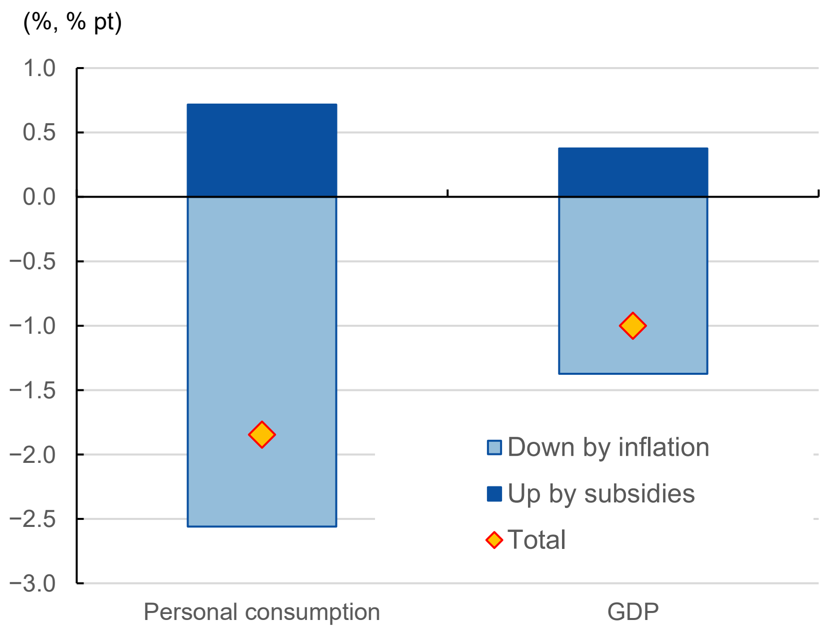


Note: Outlook = Quarterly basis
Source: Made by MHRT based upon releases by Eurostat

Consumption to decline through the winter months, despite price control measures to mitigate the effects of inflation

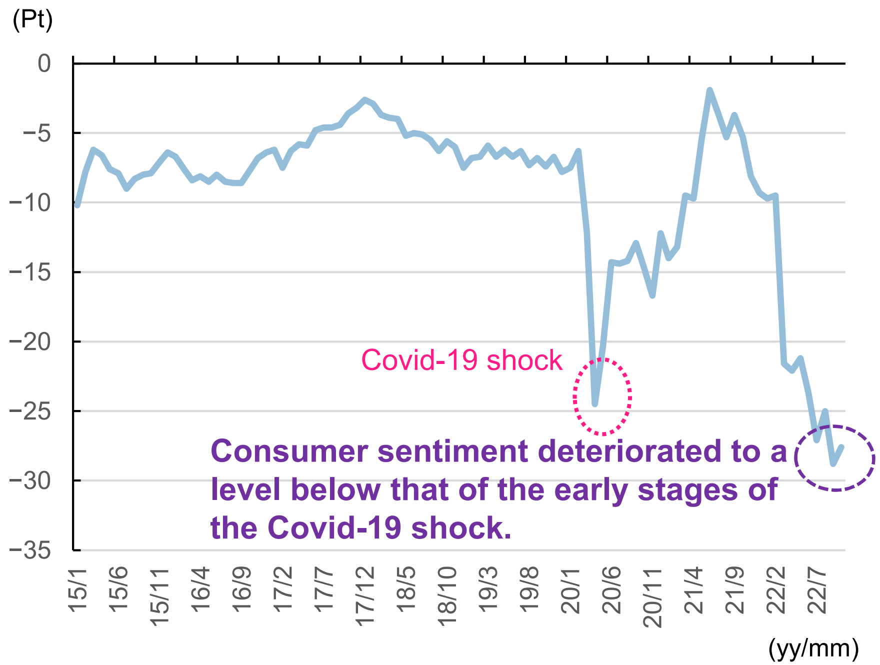
- Although the government's subsidies to households will provide some support, our view remains that consumption will decline over the winter months due to high inflation.
  - Subsidies to households by the German and French governments are expected to push up GDP by almost +0.4% pt in 2023. On the other hand, higher inflation will push down the GDP almost -1.5% pt, offsetting the effect of the subsidies.
- Consumer sentiment has already deteriorated more than the early stages of the Covid-19 crisis, indicating a decline in consumption ahead.
  - Consumer sentiment (preliminary) deteriorated to -27.6 in October, below the April 2020 level (-24.5), reflecting the rise of inflation.
  - A further decline of consumption appears likely through the winter months, when inflation is expected to accelerate.

Higher-than-expected inflation and impact of government subsidy payments in Germany and France (2023)



Source: Made by MHRT based upon releases by Eurostat and Bruegel

Eurozone: consumer sentiment

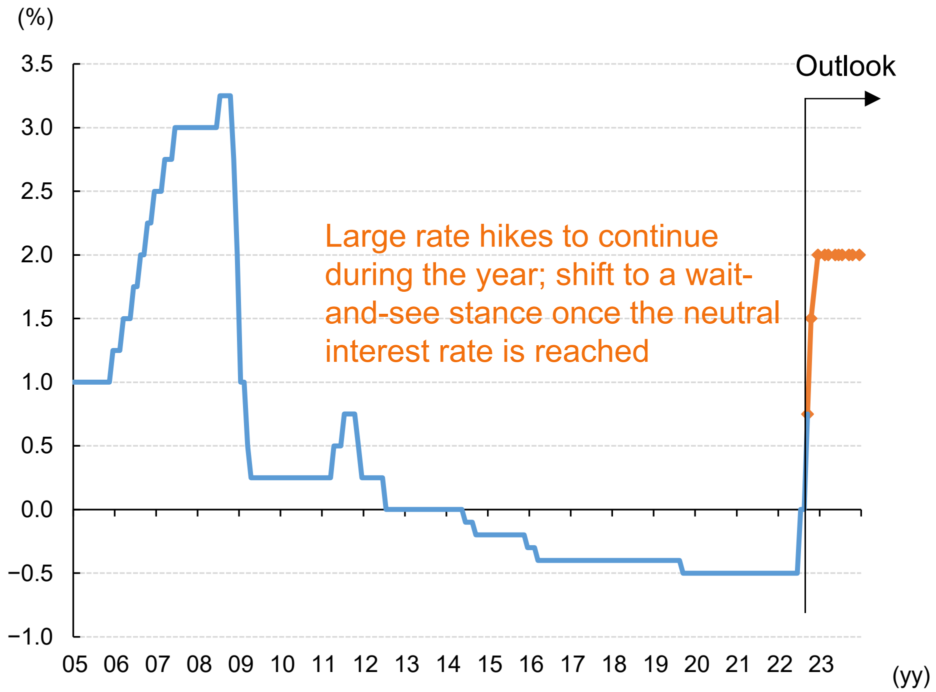


Source: Made by MHRT based upon releases by the European Commission

The ECB faces a tradeoff between prices and the economy. Once the neutral interest rate is reached, a shift to a wait-and-see stance is expected

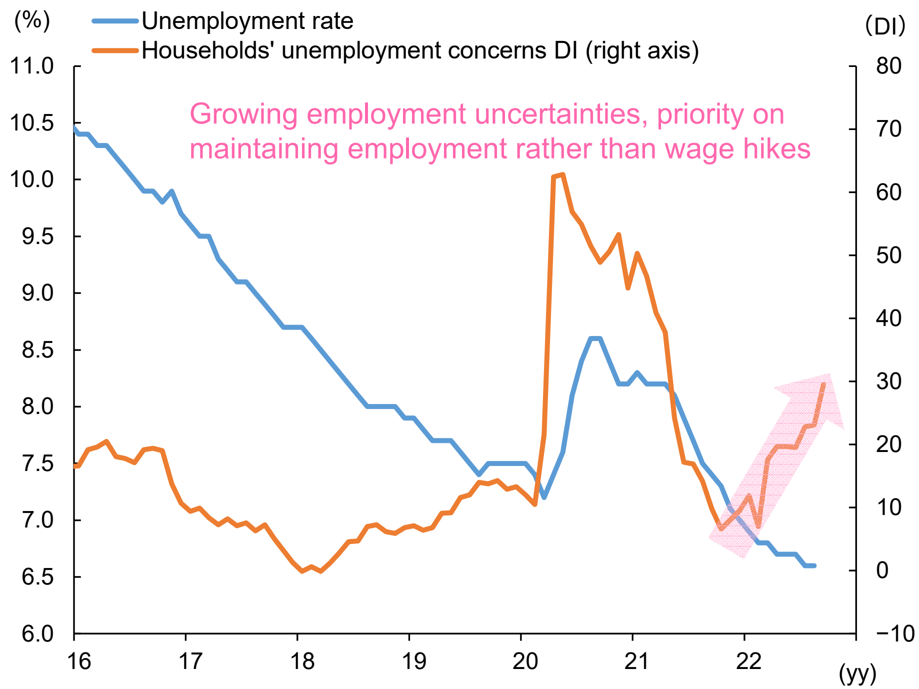
- The ECB implemented large interest rates hikes at two consecutive meetings in July (+50bp) and September (+75bp). Looking forward, the ECB will likely continue to implement sharp rate hikes.
  - Additional rate hikes of +75bp in October and +50bp in December are expected, with the policy rate reaching 2% (the benchmark for the neutral interest rate) at the end of 2022.
- The odds are high that the ECB will shift to a wait-and-see stance after the start of 2023, reflecting the deepening recession and peak-out of inflation.
  - Although there are opinions within the ECB that express caution about a spillover effect on wages, we expect that demand for wage hikes will remain restrained (i.e., wage growth will remain moderate), amid the rise of household employment uncertainties reflecting concerns regarding the deterioration of the economy.

Eurozone: deposit facility rate



Source: Made by MHRT based upon releases by the ECB and Bloomberg

Eurozone: labor market trends



Note: The unemployment concerns DI asked perceptions of households about the likelihood of unemployment.
Source: Made by MHRT based upon releases by Eurostat and the European Commission

(3) Emerging economies: EM growth will slow down due to shifts in internal and external environments. China’s economic growth will also remain weak

- Even though the emerging economies should maintain continue to follow firm footing given the easing of Covid-19-related regulations, growth is expected to slow down from the second half of 2022 due to the rise of inflation combined with currency depreciation, downward pressure on domestic demand due to pressure to raise interest rates, and the slowdown of external demand mainly in Europe and the US.
  - Despite variations from country to country, the overall slowdown should intensify.
- In China, growth is expected to slow significantly in 2022 due to the real estate market slump and zero-Covid policy. Growth should remain weak, falling short of 5% in 2023 due to the economic slowdown in the US and Europe.

Outlook for Asian and emerging economies

	2020	2021	2022 (Outlook)	2023 (Outlook)	2020 Oct-Dec	2021 Jan-Mar	2021 Apr-Jun	2021 Jul-Sep	2021 Oct-Dec	2022 Jan-Mar	2022 Apr-Jun	2022 Jul-Sep
Asia	−0.9	7.1	4.2	4.5	-	-	-	-	-	-	-	-
China	2.2	8.1	3.2	4.8	6.4	18.3	7.9	4.9	4.0	4.8	0.4	3.9
NIEs	−0.6	5.5	2.4	1.6	-	-	-	-	-	-	-	-
South Korea	−0.7	4.1	2.3	1.5	−0.9	2.2	6.2	4.0	4.2	3.0	2.9	-
Taiwan	3.4	6.6	3.2	1.6	5.3	9.2	7.8	4.4	5.3	3.7	3.0	-
Hong Kong	−6.5	6.3	−0.2	3.0	−3.6	8.0	7.6	5.4	4.7	−3.9	−1.3	-
Singapore	−4.1	7.6	3.1	1.9	−0.9	2.0	15.8	7.5	6.1	3.9	4.5	4.4
ASEAN 5	−3.5	3.3	5.3	4.2	-	-	-	-	-	-	-	-
Indonesia	−2.1	3.7	4.7	3.9	−2.2	−0.7	7.1	3.5	5.0	5.0	5.4	-
Thailand	−6.2	1.5	3.2	3.0	−4.2	−2.4	7.7	−0.2	1.8	2.3	2.5	-
Malaysia	−5.5	3.1	7.0	3.9	−3.3	−0.5	15.9	−4.5	3.6	5.0	8.9	-
Philippines	−9.5	5.7	6.4	5.1	−8.2	−3.8	12.1	7.0	7.8	8.2	7.4	-
Vietnam	2.9	2.6	7.1	5.8	4.6	4.7	6.7	−6.0	5.2	5.1	7.8	13.7
India	−6.6	8.6	7.1	5.3	0.7	2.5	20.1	8.4	5.4	4.1	13.5	-
Australia	−2.2	4.9	2.7	1.8	−0.5	1.4	9.9	4.0	4.5	3.1	3.8	-
Brazil	−3.9	4.6	2.5	0.4	−0.9	1.3	12.3	4.0	1.6	1.7	3.2	-
Mexico	−8.1	4.8	1.9	−0.7	−4.3	−3.9	19.9	4.5	1.1	1.8	2.0	-
Ref. NIEs+ASEAN 5	−2.4	4.2	4.2	3.2	-	-	-	-	-	-	-	-
Ref. Asia, excl. China	−4.3	5.9	5.5	4.1	-	-	-	-	-	-	-	-

Note: Real GDP growth rate (y-o-y, %); figures in the shaded areas are forecasts. Average figures are calculated based on the GDP share (PPP) by the IMF.
Source: Made by MHRT based upon releases by the IMF and the statistics of relevant countries and regions

China: zero-Covid policy will only be lifted sometime from next spring at the earliest. In the near term, the side effects will serve as downward pressure on the economy

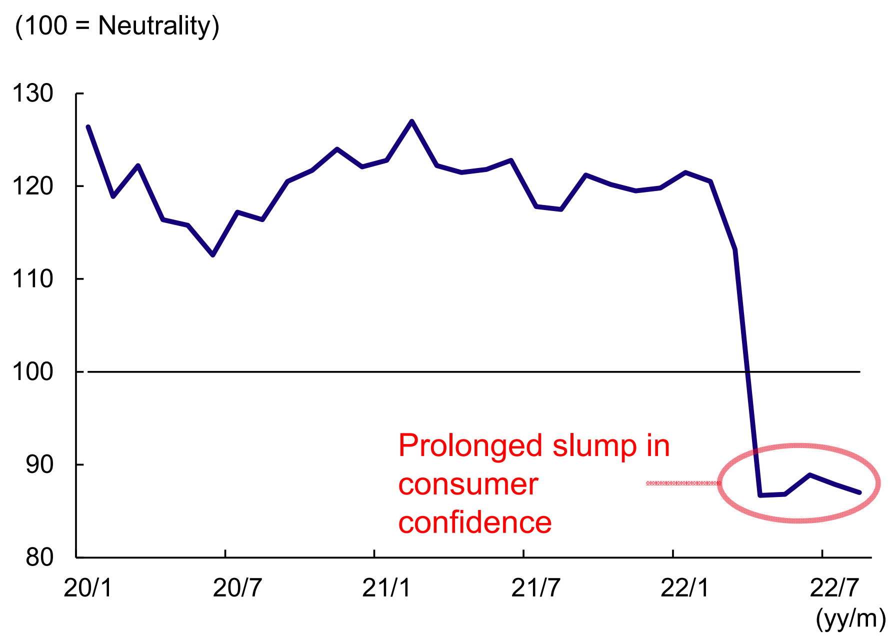
- Our view remains unchanged that the zero-Covid policy will be phased out in the Apr-Jun quarter of 2023, judging from political events and the current state of domestic vaccine development.
  - Although the domestic mRNA vaccine is still in the clinical trial stage, it has been approved for use in other countries.
  - We assume that the zero-Covid policy will be lifted in stages from next spring, when a full production system of vaccination will be established and vaccination will be widely available, considering the political events. After that, the situation will be normalized in the Jul-Sep quarter.
- Weak consumer sentiment due to zero-Covid policy will weigh on consumption and housing investment in the near term.
  - Recovery in consumption of services such as travel and food services is expected to come after the strict anti-Covid measures are lifted.

Outlook for the zero-Covid policy

	Oct-Dec 2022	Jan-Mar 2023	Apr-Jun 2023
Covid-19 measures	Strict zero-Covid policy		Phased relaxation
Political schedule	Prioritizing safety & stability National Congress of the Chinese Communist Party	National People's Congress	
Domestic development of mRNA vaccines	Clinical trial	Production	Dissemination
	Walvax Biotechnology Co (Walvax): Phase III clinical trials in progress; production system already secured (emergency use permitted in Indonesia) CanSino Biologics (CanSino): Phase II clinical trials in progress; production expected to be started by the end of 2022.		

Note: Only major vaccine developers are mentioned. The schedules are based upon media reports, etc.
Source: Made by MHRT based upon media reports

Consumer confidence index



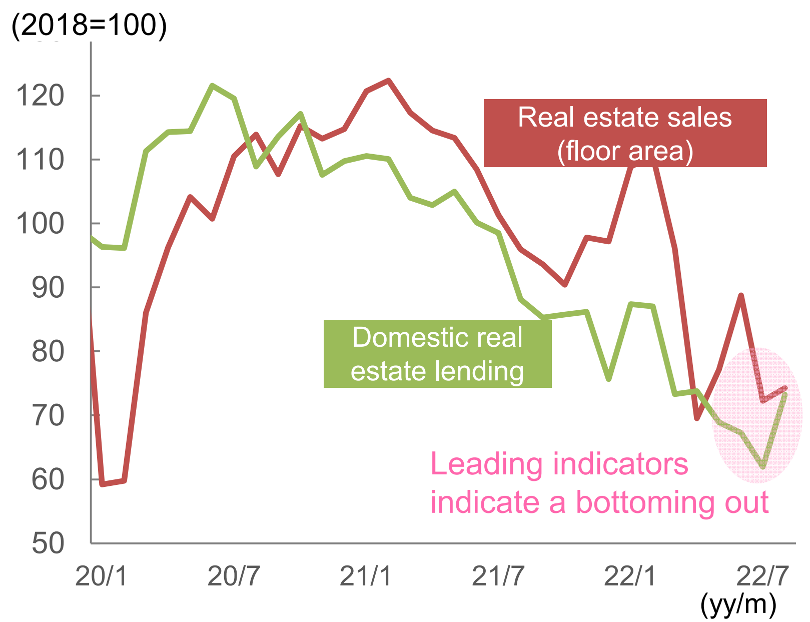
Source: Made by MHRT based upon releases by the National Bureau of Statistics of China and CEIC Data

MIZUHO

The real estate market is showing signs of bottoming out. The market should pick up in mid-2023 along with the materialization of latent demand

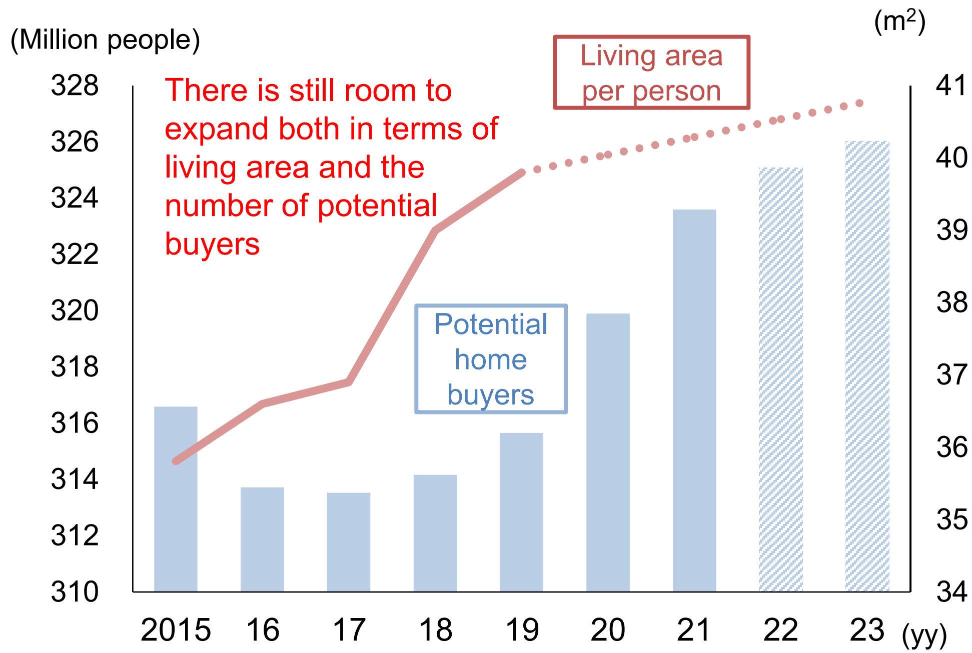
- Leading indicators of real estate investment are showing signs of bottoming out, given the government's financial support.
  - Housing sales (by floor area) is showing signs of bottoming out. Albeit on a single month basis, loans to real estate developers also increased sharply.
  - Even though it is necessary to keep a close eye on the exhaustion of government support in the near term, the decline of investment in real estate development is expected to be curbed in the first half of 2023.
- Real demand for housing in China is firm due to an increase in the population of homebuyers and demand for relocation in search of larger living space.
  - If the financing support works and construction delays improve, the excessive concerns should fade, leading to the pickup of housing demand.

Domestic lending to real estate developers and sales area



Note: Seasonally adjusted by MHRT, domestic real estate lending = lending to domestic developers
Source: Made by MHRT based upon releases by the National Bureau of Statistics of China and CEIC Data

Homebuyers and living area per person

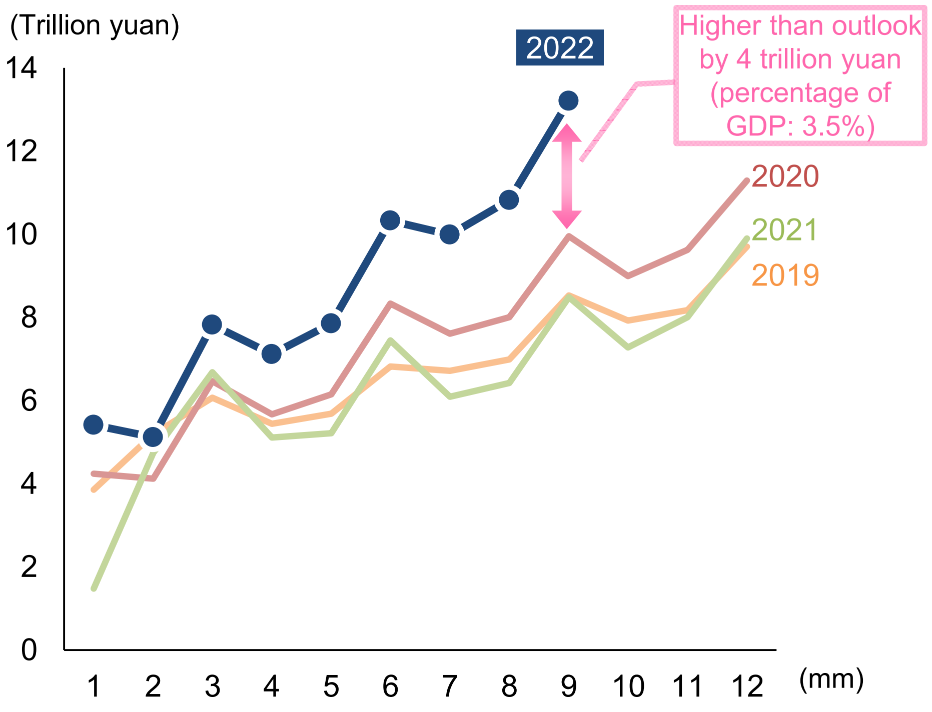


Note: Shaded population figures are UN projections (low estimates), and dotted lines for (urban) residential areas are projections by Guotai Junan Securities. The homebuying age group is assumed to be 30-44 years old.
Source: Made by MHRT based upon releases by the National Bureau of Statistics of China, United Nations, Guotai Junan Securities and CEIC Data

Excess savings to act as tailwinds for consumption after the lifting of the zero-Covid policy. On the other hand, the slow improvement of employment may serve as a drag

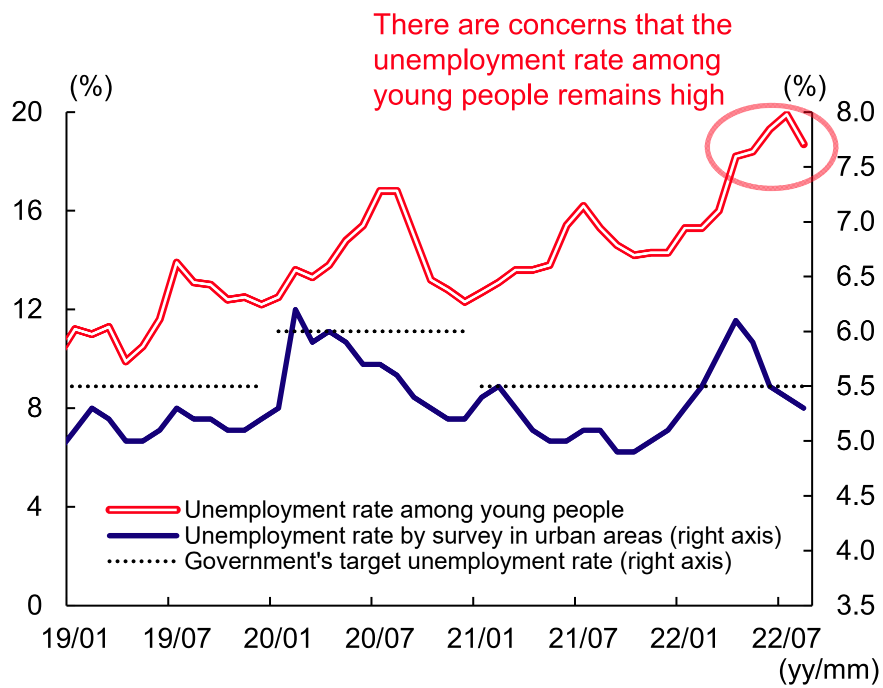
- From the beginning of 2022 onward, household savings have trended above normal years, serving as a driver of consumption recovery after the lifting of the zero-Covid policy.
  - Looking closer at the background factors, the larger motivation for savings reflects uncertainties regarding the future due to the zero-Covid policy.
- On the other hand, although the employment environment (which deteriorated due to the spread of Covid-19 infections in early spring) is out of its worst phase, the pace of improvement is slow.
  - Uncertainties regarding employment will serve to restrain the pickup of consumption. In particular, the persistently high unemployment rate among young people is a source of concern.

New increase in household savings (year-to-date)



Source: Made by MHRT based upon releases by the People's Bank of China and CEIC Data

Surveyed unemployment rate

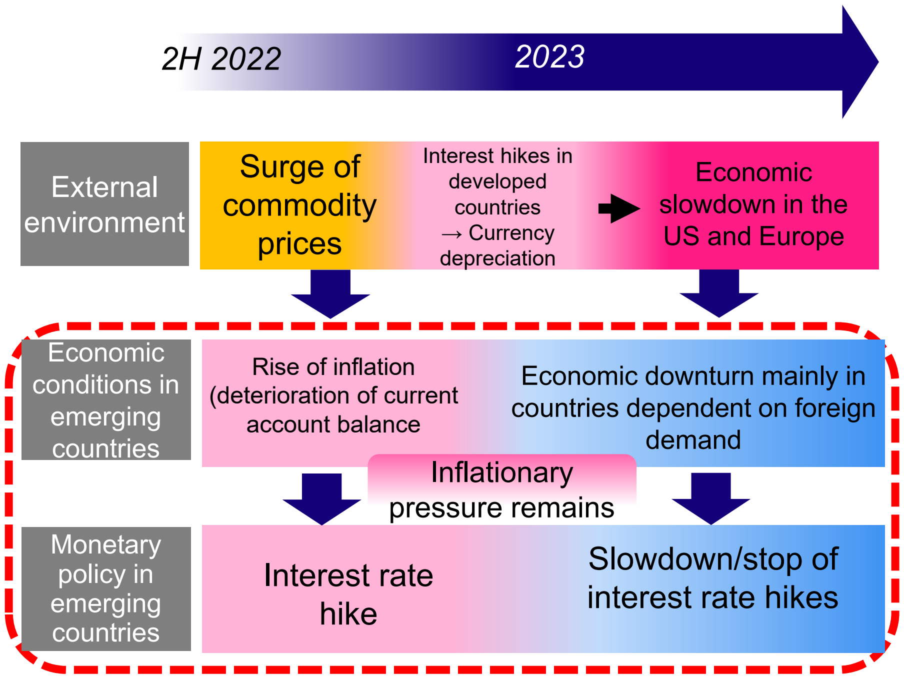


Source: Made by MHRT based upon releases by the National Bureau of Statistics of China and CEIC Data

Emerging economies face weaker economic growth and inflationary pressures

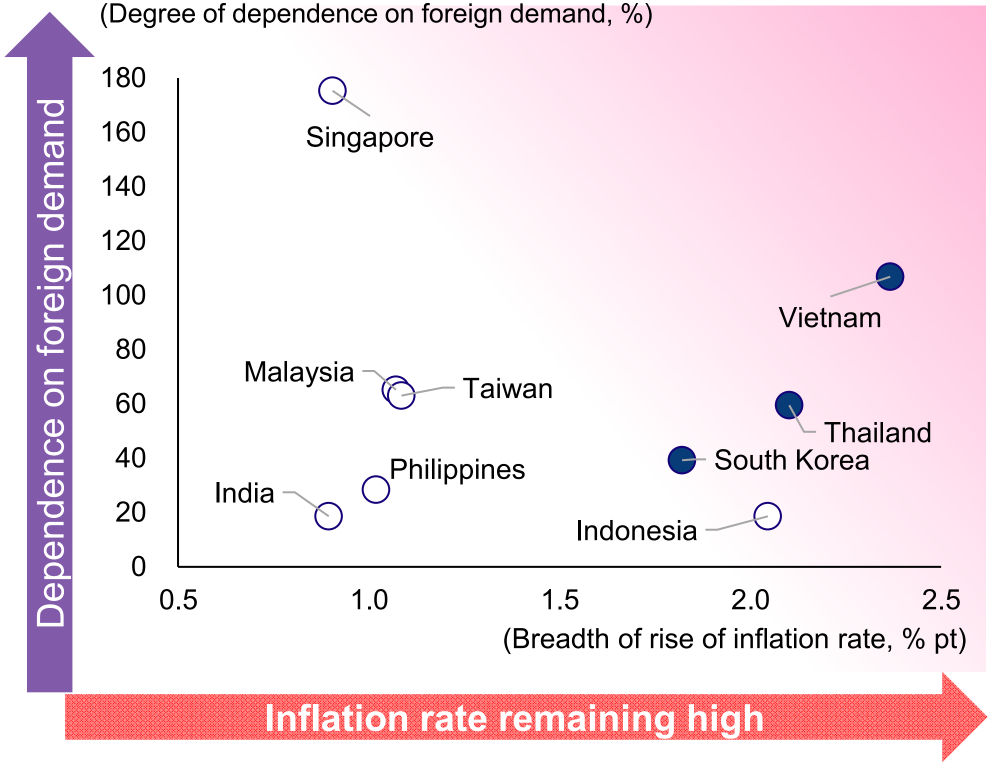
- The macroeconomic environment of emerging economies has worsened.
  - Vicious cycle of "inflation triggered by soaring commodity prices ⇒ deterioration of current account balance due to ballooning import prices ⇒ currency depreciation ⇒ further inflation"
  - Domestic demand slowed by interest rate hikes to address inflation and currency depreciation, and the current account balance worsened due to the global economic slowdown.
- Looking forward, the key points are (1) the deterioration of foreign demand due to the global economic slowdown and (2) the future course of interest rate hikes accompanying inflation and currency depreciation.

Key points in the outlook on emerging economies



Source: Made by MHRT

Asian economies exposed to global economic downturn and inflationary pressures

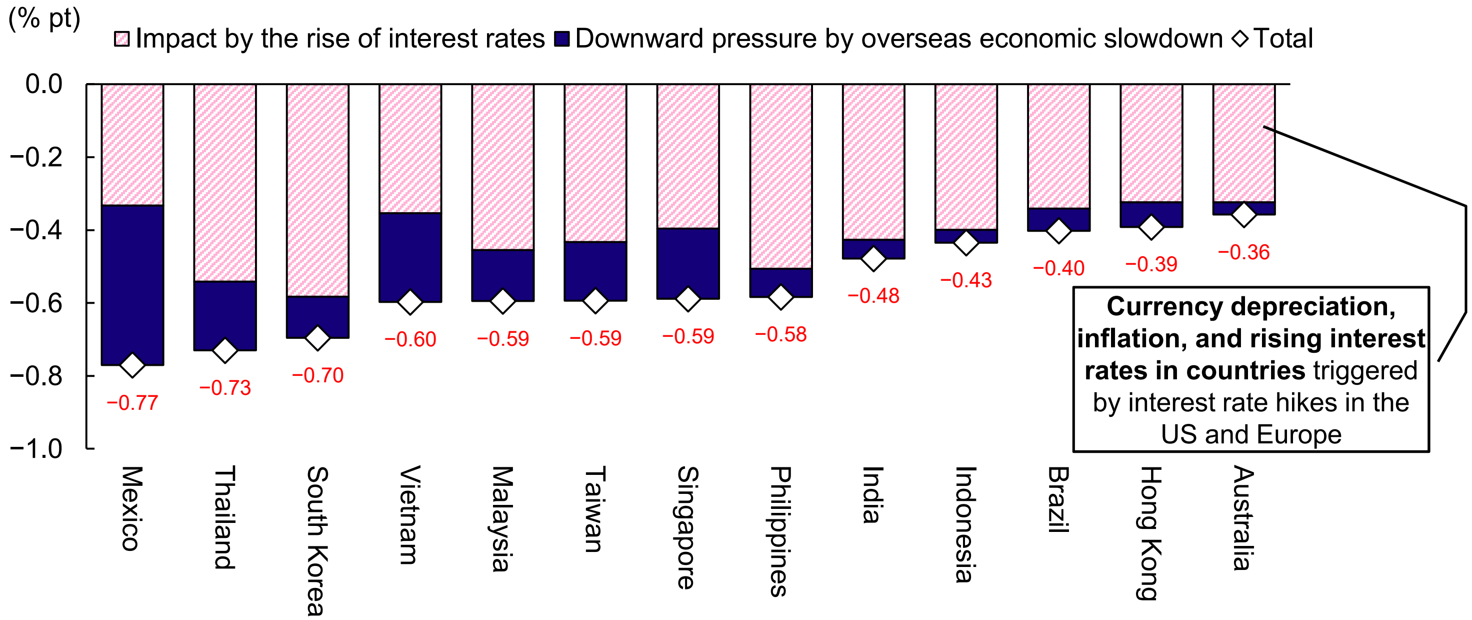


Note: "Breadth of rise of inflation rate" is calculated by subtracting the average core inflation rate for 2017-2019 from the Asian Development Bank's inflation forecast for 2023.
Source: Made by MHRT based upon releases by ADB, the World Bank and country statistics

Forecast of slowdown among emerging economies in 2023

- The global economic slowdown will have greater impact on export-dependent countries.
  - The US economic slowdown will hit Mexico, given its high dependence on the US. The tourism-driven economy of Thailand and the NIEs and ASEAN economies driven by electronics will also be subject to downward pressures.
- In addition, downward pressure will also spill over to domestic demand due to currency depreciation, inflation, and rising interest rates in other countries triggered by interest rate hikes in the US and Europe.
  - While the global economic slowdown will mainly impact export-dependent countries, downward pressure on domestic demand is expected to be uniform across all countries.

Negative impact on growth stemming from interest rate hikes in the US and Europe and global economic slowdown (2023, comparison with outlook as of July)

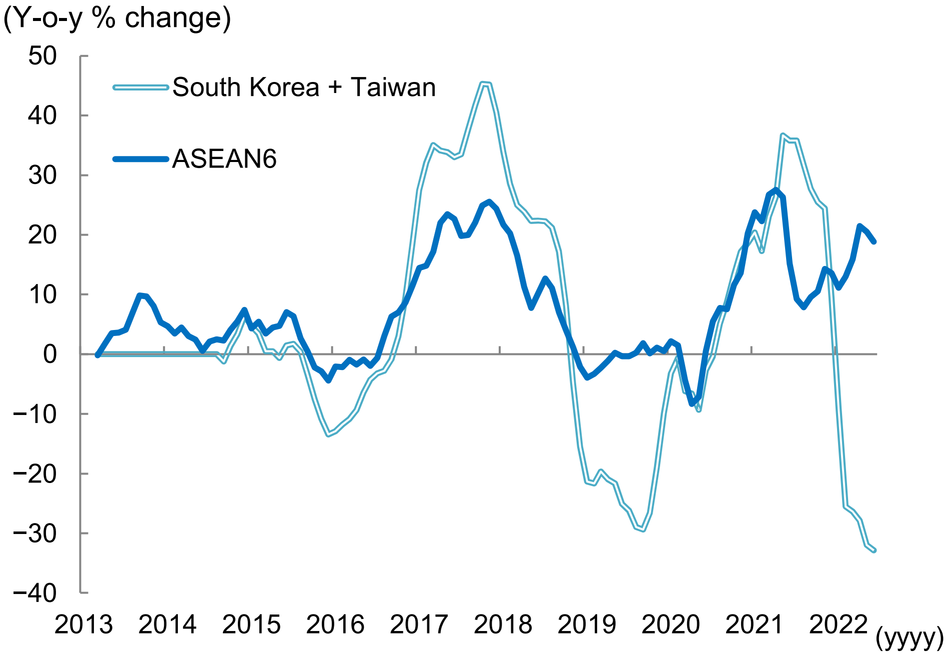


Note: 1. Estimated the impact of the downward swing on the growth rate relative to the outlook in July
2. Impacts of interest rate hikes are MHRT estimates considering the results of calculation by Akinci and Queralto (2019) and the impact of currency depreciation.
3. Downside effects of overseas economic slowdown are MHRT estimates, considering (1) downside in the US, European, and Chinese economies, (2) downside in demand for electronic equipment, and (3) delay in the recovery of the tourism industry.
Source: Made by MHRT based upon releases by ADB

Slowdown in the global economy and semiconductor demand raises concerns about countries with high dependence on electronics-related production

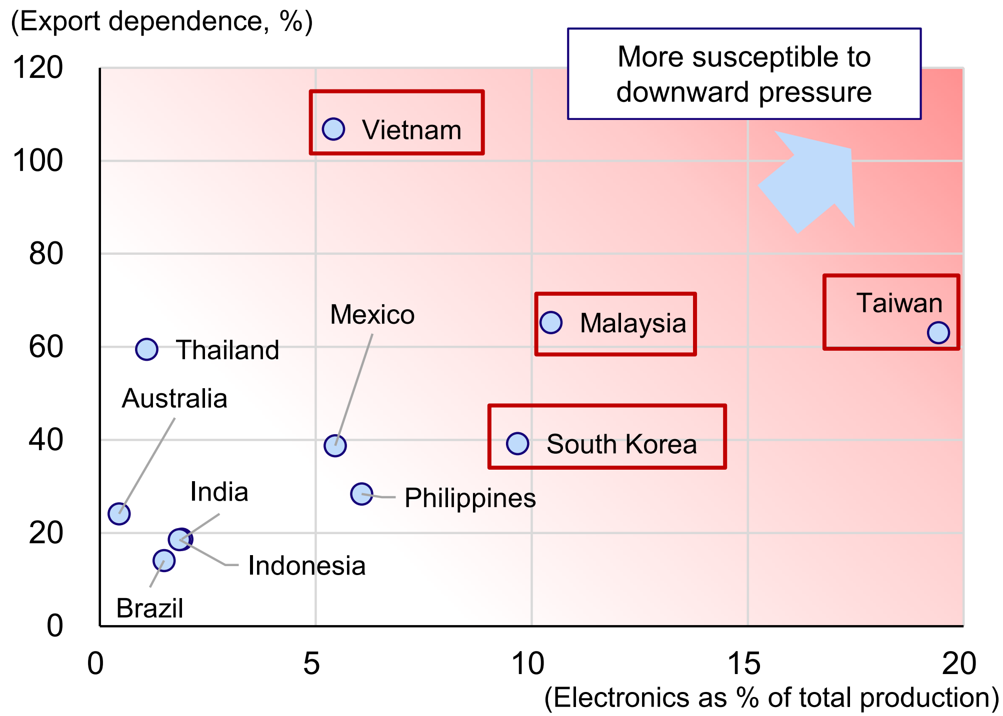
- Trade in goods is expected to slow down due to the global economic slowdown, which is likely to serve as downward pressure mainly upon export-driven countries.
  - In particular, signs of a downturn are already are evident in the electronics sector, which is highly sensitive to economic conditions.
    - Although electronics exports grew rapidly since the Covid-19 pandemic, the momentum has already faded as the special demand for PCs and smartphones has already run its course in Korea and Taiwan. Likewise, ASEAN has also peaked.
  - The downward pressure is expected to be stronger for Vietnam, given its high dependence on exports, and for Taiwan, South Korea, and Malaysia, where electronics account for a large proportion of production.
  - In Latin America, Mexico will be vulnerable to downward pressure due to its highly dependence on exports to the US.

Electronics exports by Asian countries



Note: 3-month backward moving average y-o-y
Source: Made by MHRT based upon releases by the statistics of relevant countries and regions

Dependence on exports and the production of electronics

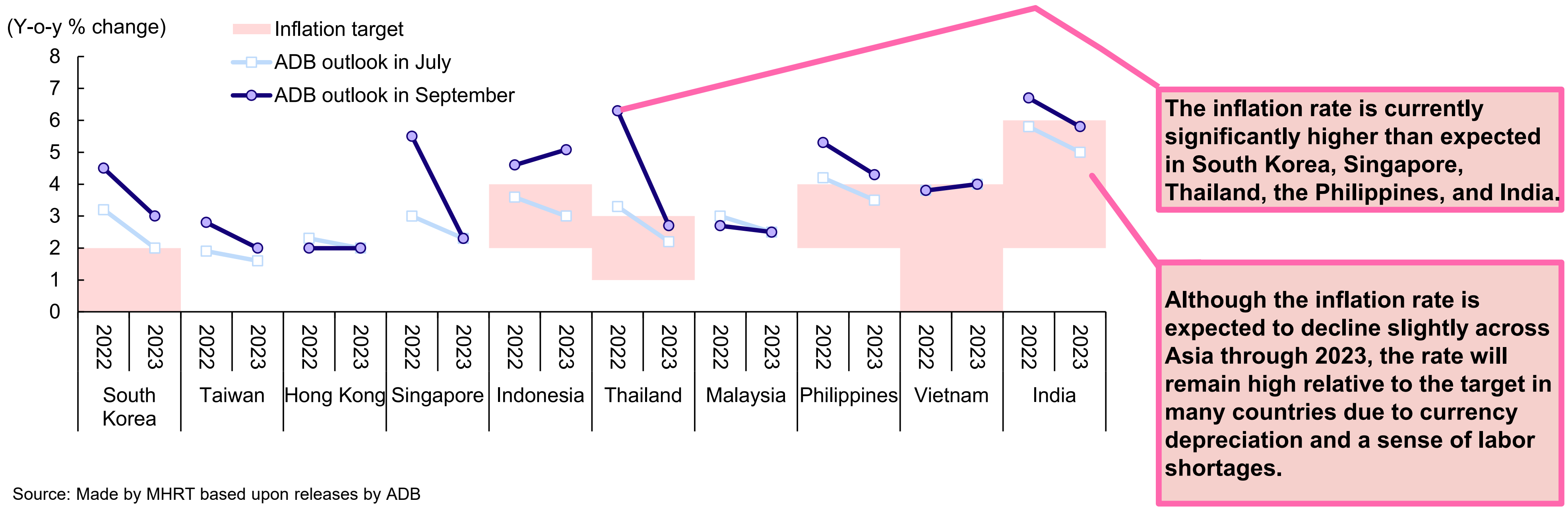


Note: Export dependence relative to GDP, nominal basis (2019)
Source: Made by MHRT based upon releases by the World Bank, ADB, and Directorate-General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. (Taiwan)

Despite the economic slowdown mainly in external demand, countries shifting to interest rate cuts will be limited due to lingering inflationary pressures

- The emerging economies are tightening their monetary policies due to inflation reflecting the surge of commodity prices.
  - In Asia, Thailand, Indonesia, and Vietnam shifted to tightening mode in the summer, after a long period of foregoing rate hikes.
- In 2023, even though the pace of interest rate hikes will be revised due to economic slowdown, countries shifting to interest rate cuts will be limited due to lingering inflationary pressures.
  - While the inflation rate in 2023 is expected to slow down from the previous year in each of the countries, it will still remain high relative to the target.
  - We expect that most countries will only "ease the pace" or "suspend" their interest rate hikes. There is the risk that some countries will be faced with a difficult balancing act in monetary policy due to the persistence of strong inflationary pressures.

ADB's outlook on inflation rates



Source: Made by MHRT based upon releases by ADB

(4) Japan: even though the overseas economic slowdown will serve as a drag, the recovery of services will keep Japan's economic growth in positive territory

- FY2022 growth forecast: +1.5% y-o-y. Although the overseas economic slowdown and deterioration of terms of trade are expected to serve as negative pressures, consumer spending and the demand for inbound tourism should recover in the second half of the fiscal year due to the government's nationwide travel support program and easing of border control measures.
- FY2023 growth forecast: +0.9% y-o-y. While the slowdown in overseas economies mainly in the US and the adjustment in the semiconductor market will serve as downward pressures, Japan will maintain positive growth due to the easing of the impact of rising prices accompanying the pause in the surge of the commodity market and the expansion of inbound tourists accepted into the country.

Outlook for the Japanese economy

		2021	2022	2023	2022				2023				2024
		FY	(Outlook)		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
GDP (real)	Q-o-q % ch.	2.3	1.5	0.9	0.1	0.9	0.1	0.0	0.5	−0.0	0.3	0.5	0.1
	Q-o-q % ch. p.a.	—	—	—	0.2	3.5	0.4	0.1	2.2	−0.1	1.3	2.1	0.4
Domestic demand	Q-o-q % ch.	1.5	2.0	1.1	0.6	0.8	0.3	0.2	0.6	0.0	0.3	0.4	0.0
Private-sector demand	Q-o-q % ch.	2.1	2.5	1.2	0.9	0.8	0.2	0.2	0.8	0.0	0.3	0.4	−0.0
Personal consumption	Q-o-q % ch.	2.6	2.8	0.8	0.3	1.2	0.2	0.4	0.4	−0.2	0.3	0.3	0.1
Housing investment	Q-o-q % ch.	−1.6	−4.8	0.6	−1.4	−1.9	−0.8	−0.6	0.4	0.4	0.6	0.1	−0.5
Capital investment	Q-o-q % ch.	0.6	2.9	0.9	−0.1	2.0	1.3	0.5	0.4	−0.3	−0.4	0.7	0.9
Inventory investment	Q-o-q contribution, % pt	(0.1)	(0.0)	(0.3)	(0.6)	(−0.3)	(−0.1)	(−0.1)	(0.3)	(0.1)	(0.1)	(0.0)	(−0.2)
Public-sector demand	Q-o-q % ch.	−0.0	0.6	1.0	−0.3	0.7	0.5	0.3	0.2	−0.0	0.5	0.4	0.3
Government consumption	Q-o-q % ch.	2.0	1.5	0.9	0.4	0.7	0.2	0.3	0.3	−0.1	0.3	0.3	0.3
Public investment	Q-o-q % ch.	−7.5	−2.5	1.5	−3.2	1.0	1.5	0.3	−0.2	0.0	0.9	0.7	0.2
External demand	Q-o-q contribution, % pt	(0.8)	(−0.5)	(−0.2)	(−0.5)	(0.1)	(−0.2)	(−0.2)	(−0.1)	(−0.0)	(−0.0)	(0.1)	(0.0)
Exports	Q-o-q % ch.	12.5	1.8	−1.0	0.9	0.9	0.5	−0.8	−0.6	−0.8	−0.3	0.8	0.8
Imports	Q-o-q % ch.	7.2	4.2	0.1	3.5	0.6	1.3	0.3	0.0	−0.5	−0.2	0.3	0.5
GDP (nominal)	Q-o-q % ch.	1.3	1.9	2.4	0.4	0.6	0.3	0.4	1.6	0.6	0.0	0.4	0.5
GDP deflator	Y-o-y % ch.	−1.0	0.4	1.5	−0.5	−0.3	−0.1	0.7	1.3	2.4	1.8	1.3	0.6
Domestic demand deflator	Y-o-y % ch.	1.0	2.5	0.2	1.7	2.6	2.8	2.8	2.2	0.9	0.1	−0.2	−0.1

Note: Figures in the shaded areas are forecasts.
Source: Made by MHRT based upon the Cabinet Office, *Quarterly Estimates of GDP*

Core CPI (y-o-y ch) will rise to the mid-3% range in the Oct-Dec quarter, and slow down in 2023

- Although labor compensation will start to recover mainly in the service sector due to the resumption of economic activities reflecting the ebb of Covid-19 infections, the pace of recovery will be slow, as the deterioration of terms of trade and the slowdown in overseas economies will serve as a drag on corporate earnings primarily in the manufacturing sector

- Forecast on core CPI (y-o-y): FY2022 +2.6%, FY2023 +0.8%. The breadth of the rise should reach the mid-3% range in the Oct-Dec quarter of 2022, given the rise in prices of food items reflecting a further weakening of the yen. Our view remains unchanged that the core CPI will slow to the 0% range in the second half of 2023, given a pause in surge of the commodity market and the government's measures to address the rise of prices.

Outlook for the Japanese economy (key economic indicators)

		2021	2022	2023	2022				2023				2024
		FY	(Outlook)		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
Industrial production	Q-o-q % ch.	5.8	1.5	0.6	0.8	−2.7	6.0	−0.5	−0.6	−1.0	−0.4	1.4	1.8
Ordinary profits	Y-o-y % ch.	36.8	9.2	1.5	13.7	17.6	9.3	5.1	4.3	3.1	−0.6	0.5	2.3
Nominal labor compensation	Y-o-y % ch.	1.8	1.8	1.1	1.0	1.6	1.8	2.1	1.8	1.3	0.9	1.1	1.1
Unemployment rate	%	2.8	2.5	2.4	2.7	2.6	2.5	2.5	2.4	2.5	2.5	2.5	2.4
New housing starts	P.a., 10,000 units	86.6	85.7	85.7	87.3	85.2	85.4	85.7	85.8	86.0	85.8	85.5	85.0
Current account balance	P.a., JPY tril	12.7	0.1	2.9	9.1	5.3	−1.7	−1.4	−0.6	2.1	3.3	2.7	2.7
Domestic corporate goods price	Y-o-y % ch.	7.1	8.1	−2.2	9.3	9.6	9.4	8.8	4.8	0.7	−3.4	−3.7	−2.3
Consumer prices, excl. fresh food	Y-o-y % ch.	0.1	2.6	0.8	0.6	2.1	2.7	3.4	2.4	1.2	0.7	0.6	0.6
" (Excl. institutional factors)	Y-o-y % ch.	−0.1	3.3	1.4	0.7	2.7	3.4	3.8	3.3	2.1	1.4	1.2	1.0
Consumer prices, excl. fresh food and energy	Y-o-y % ch.	−0.8	1.7	1.4	−0.9	0.9	1.5	2.2	2.3	1.7	1.6	1.4	1.0
" (Excl. institutional factors)	Y-o-y % ch.	−0.9	1.7	1.4	−0.9	0.9	1.5	2.2	2.3	1.7	1.6	1.4	1.0

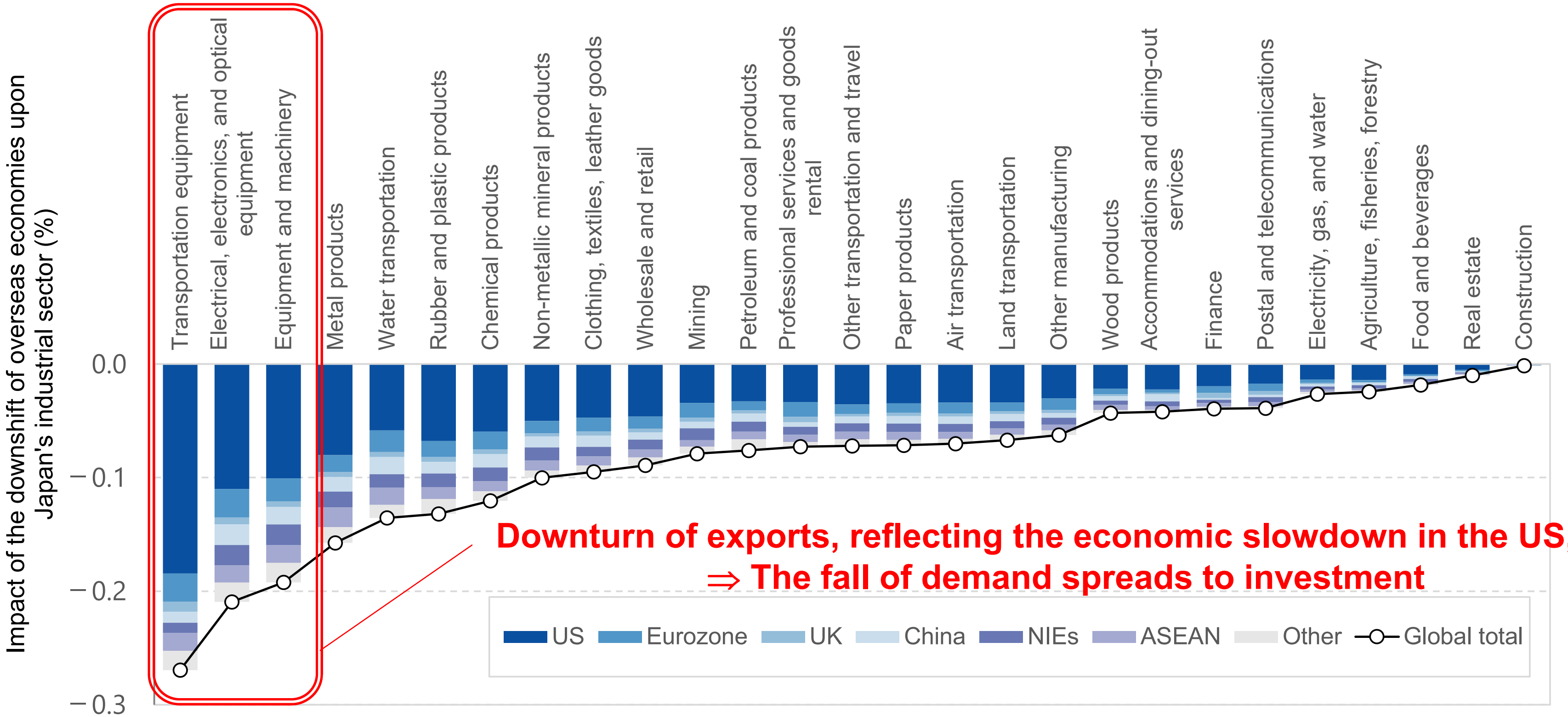
Note: 1. Figures in the shaded areas are forecasts. The readings above may differ from public releases because the rates of change are calculated on the basis of real-terms data.
2. Ordinary profits are based on the *Financial Statements Statistics of Corporations by Industry* (all industries basis) (excluding finance & insurance).
3. Regarding consumer prices, it is assumed that measures to ease the drastic change in fuel oil prices will be extended beyond January 2023 as a measure to address the rise of prices and that new measures to restrain electricity and gas rates will be implemented in and after January 2023, and that the amount of subsidies will gradually be reduced. "Excl. institutional factors" excludes the impact of the measures to address the rise of prices.

Source: Made by MHRT based upon relevant statistics

Global economic slowdown serve as downward pressure on the Japanese economy through exports and capital investment

- Exports of transportation equipment, electrical and electronics, equipment, and machinery, etc., are expected to decline due to the overseas economic slowdown reflecting the recession in the US and Europe.
  - We have revised our outlook on GDP for FY2022 and FY2023 downward from July by 0.5% and 0.4% respectively, including restraints upon capital investment.
  - As a result of the downshift of external demand in 2023, gross profit of transportation equipment and electrical and electronics equipment are projected to decline by 0.3% and 0.2%, respectively.

Impact of overseas economic slowdown by industry sector (rate of decline in gross profit (20023), comparison with outlook as of July)



Note: Europe includes 19 eurozone countries. The shock range is the breadth of the downshift of the forecasted growth rates of each country/region in 2023 compared to the outlook in July. Factors other than the overseas economic growth rate are assumed to be constant.
Source: Made by MHRT based upon releases by the OECD

Japan’s comprehensive economic measures focused on curbing electricity and gas rates; pushing down CPI by approximately 0.6%

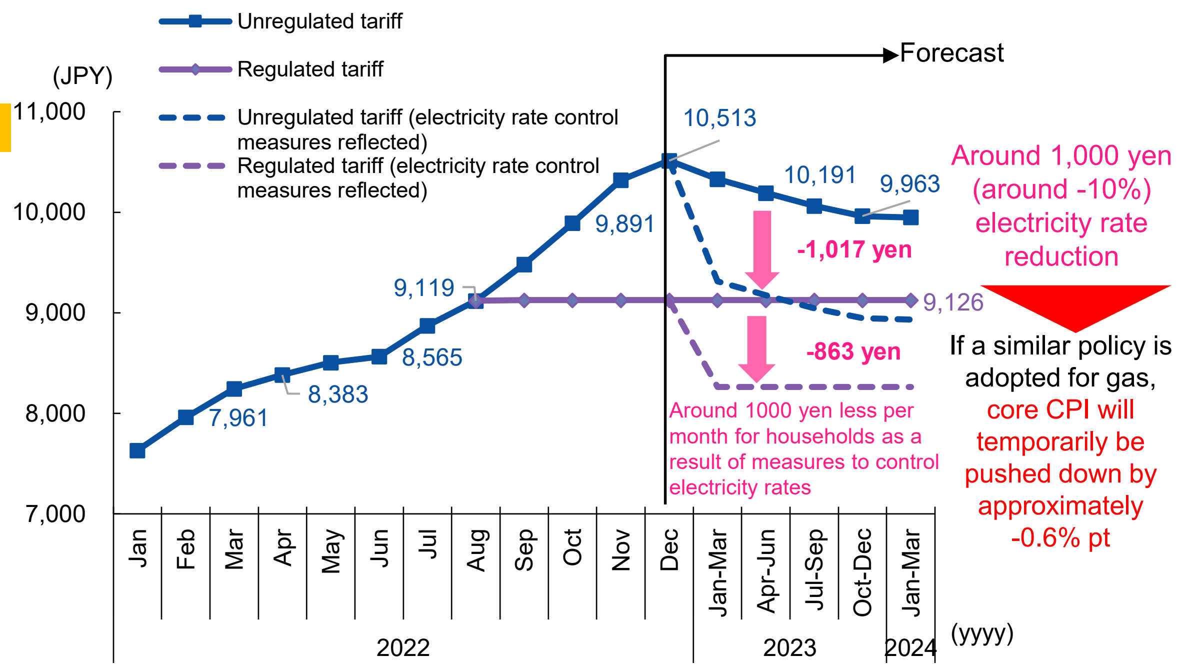
- The comprehensive economic measures are expected to focus on the reallocation of existing budgets and additions of funds and reserves. The additional measures will mainly be restraints upon the rise of electricity and other utility prices.
  - According to our estimates, in the event the rise of electricity and gas rates (about 20-30%) is curbed by about half, it would temporarily push down core CPI by approximately -0.6% pt and push up 2023 GDP growth by about +0.1% pt.

Outline of the comprehensive economic measures

Four pillars	Outline
(1) Measures to address the rise of prices, wage hikes	• Establishment of a new system to control electricity and other utility price increases (Additional measure) • Acceleration of wage hikes
(2) Recovery & strengthening of the local economy by taking advantage of the weak yen	• Promotion of investment in Japan • Expansion of exports of agricultural products, etc.
(3) Acceleration of new capitalism	• Enhancing investment in people • Promoting investment in GX and DX
(4) Ensuring the safety and security of the people	• Measures for economic security and food security

Source: Made by MHRT based upon media reports, etc.

Estimated electricity rates (Kanto area)

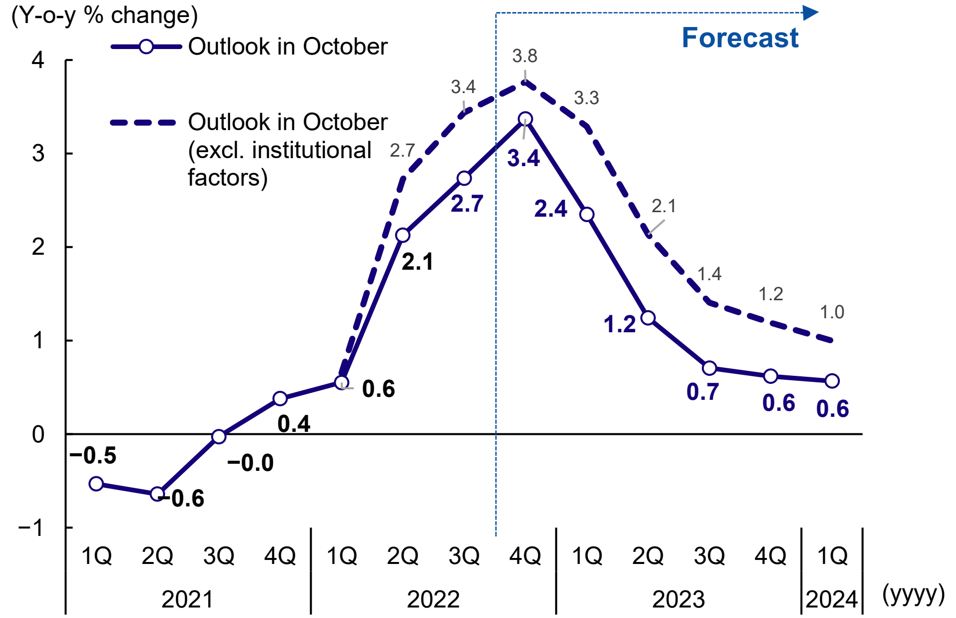


Note: Calculated using an average model according to the fuel cost adjustment system; the "electricity rate control reflected" scenario assumes that half of the average increase from 2021 will be subsidized by the government's comprehensive economic measures from January 2023 onward.
Source: Made by MHRT based upon releases by the Tokyo Electric Power Company Holdings etc.

The core CPI (y-o-y ch) should rise to the mid-3% range and subsequently slow down in 2023. For the time being, real wage growth will remain in negative territory

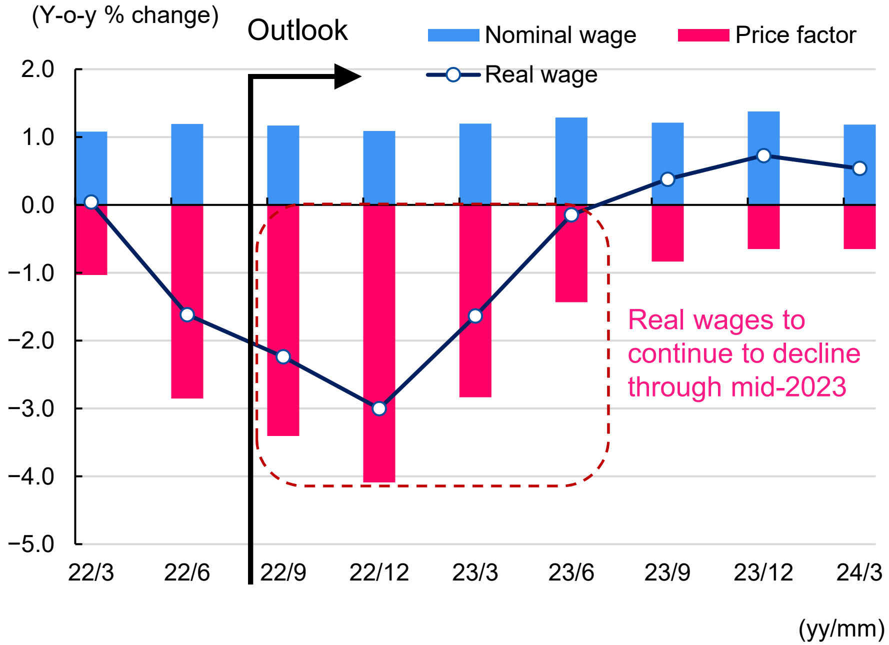
- Looking forward, we forecast that the core CPI (y-o-y ch) will rise to the mid-3% range in the Oct-Dec quarter of 2022 and gradually slow down in 2023.
  - Prices are rising across a broad range of items, including food and beverages and durable goods, reflecting factors including the weakening yen. The impact of last year's telecom fee price cuts has also faded.
  - On the other hand, we expect that nominal wage growth in 2023 will trend around the +1% range, and the chances are remote that it will contribute to a continued rise in prices. The y-o-y core CPI is expected to slow to the 0% level in the second half of 2023 due to a pause in commodity prices along with the slowdown in overseas economies.
  - The y-o-y real wage is expected to remain negative until mid-2023, hindering the pace of recovery in personal consumption.

Outlook on core CPI



Note: The series excluding institutional factors excludes the impact of the projects for easing the drastic change in fuel oil prices and of the measures to control electricity and gas prices scheduled to be formulated as part of the comprehensive economic measures at the end of October.
Source: Made by MHRT based upon the Ministry of Internal Affairs and Communications, *Consumer Price Index*

Outlook on nominal and real wages

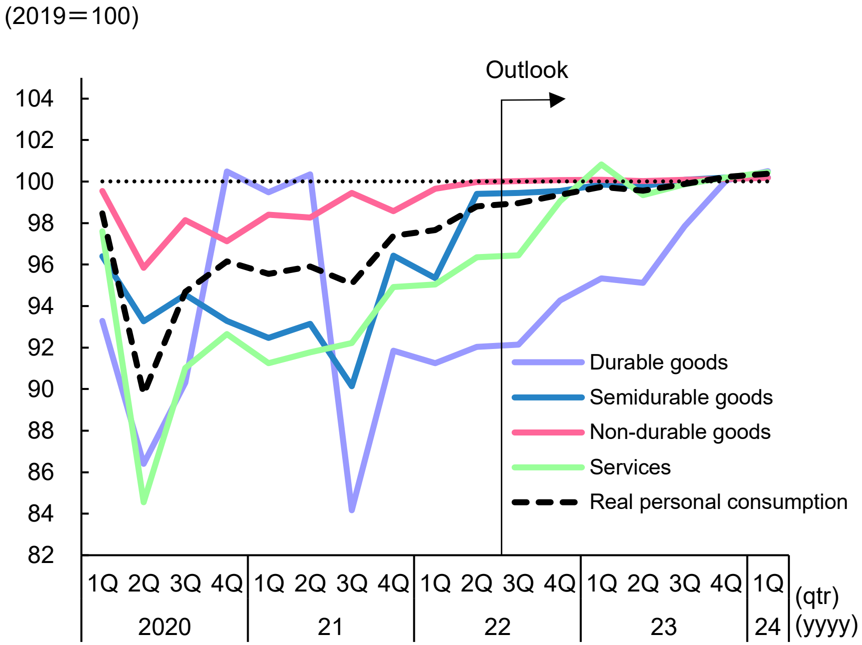


Note: Continuity corrected values; converted into real terms using the composite consumer price index excluding imputed rents of owner-occupied houses
Source: Made by MHRT based upon the Ministry of Health, Labour and Welfare, *Monthly Labour Survey*

Our view remains unchanged that personal consumption will continue to recover, despite drags stemming from the rise of prices

- Personal consumption is forecast to recover in the Oct-Dec quarter of 2022 onward, mainly in service consumption, against a backdrop of the ebb of Covid-19 infections.
  - Concerns are shifting from Covid-19 infections to the rise of prices. We estimate that the rise of prices will push down personal consumption by 0.8% and GDP by 0.4% in FY2022.
  - Consumption of services toward individuals is expected to recover to the pre-pandemic level in the Jan-Mar quarter of 2023 due to the ebb of consumers' concerns regarding infections and the launch of the government's nationwide travel support program. The economic impact of the government's nationwide travel support program is estimated to be 1.1 trillion yen (+0.2% increase of GDP in FY2022).
  - By the same token, although goods consumption will continue to improve mainly in durable goods, the rise of prices will serve as a drag. The recovery will likely be subdued.

Outlook on personal consumption



Source: Made by MHRT based upon the Cabinet Office, *National Accounts* and JCB & Nowcast, *JCB Consumption NOW*

Economic impact of the government's nationwide travel support program

	Economic impact
Economic impact	1,147.5 billion yen
Personal consumption (FY)	+0.4%
GDP (FY)	+0.2%

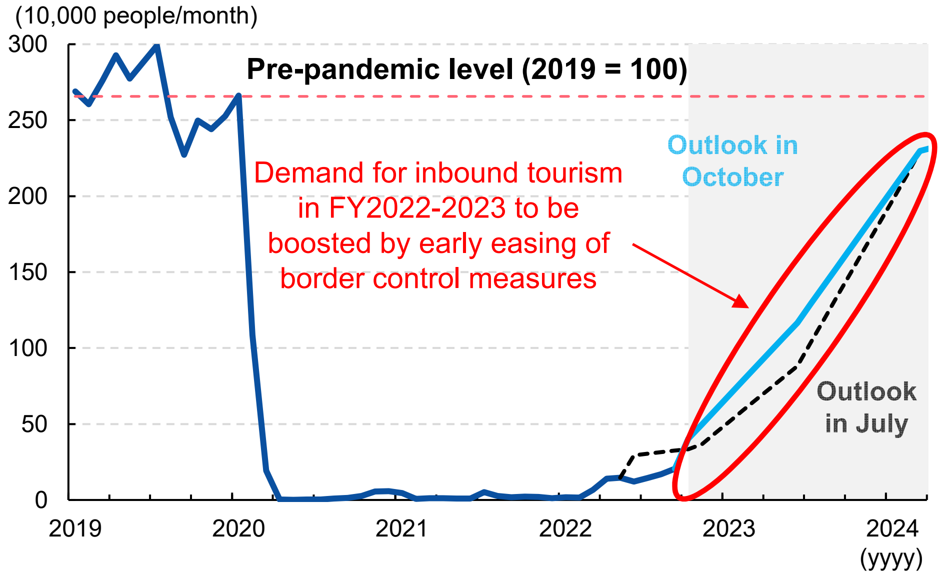
Note: Estimated using the average discount rate and price elasticity of service consumption (0.8) under the government's nationwide travel support program; the implementation period is assumed to be from October 11, 2022 to March 31, 2023. Economic impact is the total of direct and spillover effects.

Source: Made by MHRT based upon Cabinet Office, *Annual Report on the Japanese Economy and Public Finance 2000*, and *Quarterly Estimates of GDP,* Ministry of Land, Infrastructure, Transport and Tourism, *Japan National Tourism Survey,* and Ministry of Internal Affairs and Communications, *Input-Output Table*

Easing of border control measures will serve as tailwinds for the Japanese economy

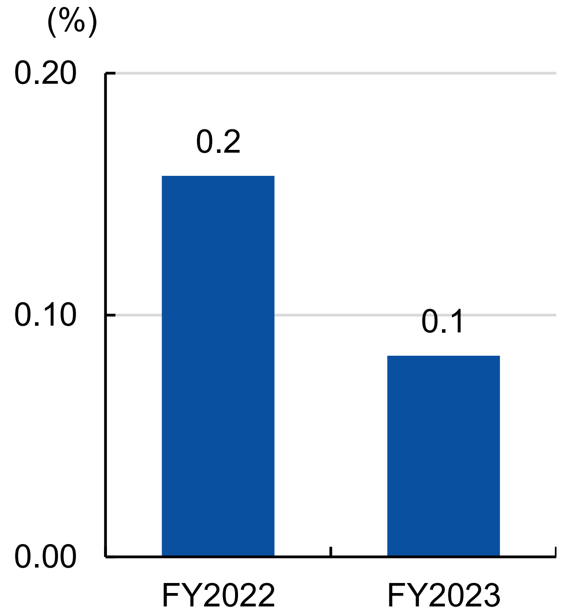
- The government eased Japan's border control measures in October. The recovery of demand for inbound tourism is expected to be frontloaded.
  - The pace of recovery will accelerate due to the removal of the cap on the number of entrants, the exemption of short-term visitors from obtaining visas, and the reopening of the borders for individual travelers.
  - We expect that demand for inbound tourism will increase by approximately 20% in FY2022 and approximately 10% in FY2023 compared to our outlook in July (pushing up GDP by +0.2% in FY2022 and +0.1% in FY2023).
  - However, a recovery to the pre-pandemic level will be difficult in the near term due to China's zero-Covid policy and the impact of recession in Europe and the US.

Outlook on the number of foreign visitors to Japan



Source: Made by MHRT based upon Japan National Tourism Organization (JNTO), *Statistics on Foreign Travelers Visiting Japan*

Impact on GDP of accelerated recovery (breadth of increase compared to the outlook in July)



Source: Made by MHRT based upon the Cabinet Office, *Quarterly Estimates of GDP*

(5) Financial markets: US long-term interest rate will remain high; the USD/JPY exchange rate will test the mid-150 yen-range

- Although the US long-term interest rate is projected to hover around 4.0% through the end of 2022, reflecting the interest rate hike, it will subsequently fall as it factors in the recession.
- We expect that the US stock market will fall sharply through the end of 2022, and remain at rock-bottom levels until around the summer of 2023. From then onward, the market should gradually follow a recovery path. Although Japanese stocks are expected to soften in tandem with US stocks, they should gradually rise along with the recovery of corporate earnings.
- According to our forecasts, the yen will continue to weaken against the dollar through the end of 2022 due to the widened gap between US and Japanese interest rates. Further yen-buying intervention may be triggered as the USD/JPY exchange rate tests the mid-150 yen-range. From 2023 onward, the yen is expected to strengthen against the dollar as US interest rates fall as the market factors in the US economic slowdown.

Outlook for financial markets

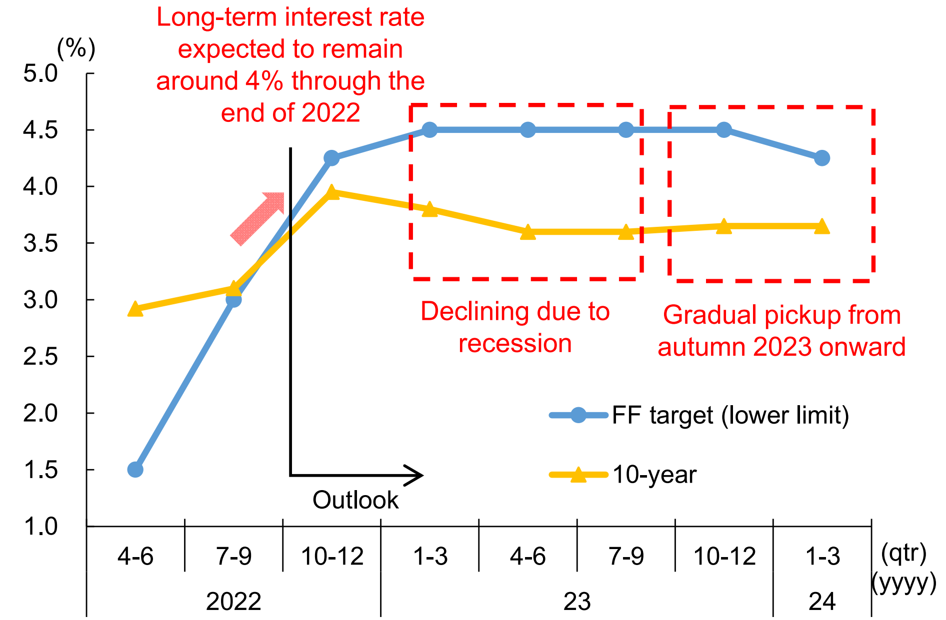
		2021 FY	2022 FY	2023 FY	2021 Jan-Mar	2021 Apr-Jun	2021 Jul-Sep	2021 Oct-Dec	2022 Jan-Mar	2022 Apr-Jun	2022 Jul-Sep	2022 Oct-Dec	2023 Jan-Mar	2023 Apr-Jun	2023 Jul-Sep	2023 Oct-Dec	2024 Jan-Mar
Japan																	
Interest rate on the policy rate balance	(End-of period value, %)	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10	−0.10
Newly issued JGBs	(10-year, %)	0.09	0.15 to 0.26	0.15 to 0.25	0.08	0.08	0.03	0.07	0.18	0.24	0.23	0.15 to 0.26	0.15 to 0.25	0.15 to 0.25	0.15 to 0.25	0.20 to 0.25	0.20 to 0.25
Nikkei Stock Average	(JPY)	28,387	22,200 to 29,223	22,400 to 31,400	29,002	28,984	28,554	28,810	27,156	26,891	27,611	22,200 to 28,400	22,600 to 28,800	22,900 to 29,100	22,400 to 30,400	23,100 to 31,100	23,400 to 31,400
US																	
Federal Funds Rate (lower end)	(End-of period value, %)	0.25	4.50	4.25	0.00	0.00	0.00	0.00	0.25	1.50	3.00	4.25	4.50	4.50	4.50	4.50	4.25
Newly issued government bonds	(10-year, %)	1.59	2.38 to 4.50	3.25 to 4.00	1.31	1.58	1.32	1.53	1.95	2.92	3.10	3.60 to 4.50	3.45 to 4.35	3.25 to 3.95	3.25 to 3.95	3.30 to 4.00	3.30 to 4.00
Dow Jones Average	(USD)	34,812	23,500 to 35,161	23,200 to 31,900	31,551	34,121	34,916	35,517	34,679	32,688	31,774	23,800 to 31,300	23,500 to 30,500	23,500 to 30,500	23,200 to 31,200	23,300 to 31,300	23,900 to 31,900
Eurozone																	
ECB deposit facility rate	(End-of period value, %)	−0.50	2.00	2.00	−0.50	−0.50	−0.50	−0.50	−0.50	−0.50	0.75	2.00	2.00	2.00	2.00	2.00	2.00
German government bonds	(10-year, %)	−0.17	0.51 to 2.85	2.15 to 2.95	−0.41	−0.22	−0.37	−0.24	0.17	1.10	1.36	1.85 to 2.85	2.15 to 2.85	2.15 to 2.85	2.15 to 2.85	2.25 to 2.95	2.25 to 2.95
Exchange rates																	
USD/JPY	(USD/JPY)	112	121 to 154	123 to 144	106	109	110	114	116	130	138	140 to 154	135 to 147	126 to 144	123 to 141	125 to 143	125 to 143
EUR/USD	(EUR/USD)	1.16	0.92 to 1.10	0.93 to 1.12	1.21	1.21	1.18	1.14	1.12	1.06	1.01	0.92 to 1.02	0.88 to 0.98	0.93 to 1.03	0.96 to 1.06	0.99 to 1.09	1.02 to 1.12

Source: Made by MHRT based upon releases by Bloomberg

The US long-term interest rate will be pinned at a high level through the end of 2022, and the dollar should remain strong against the yen

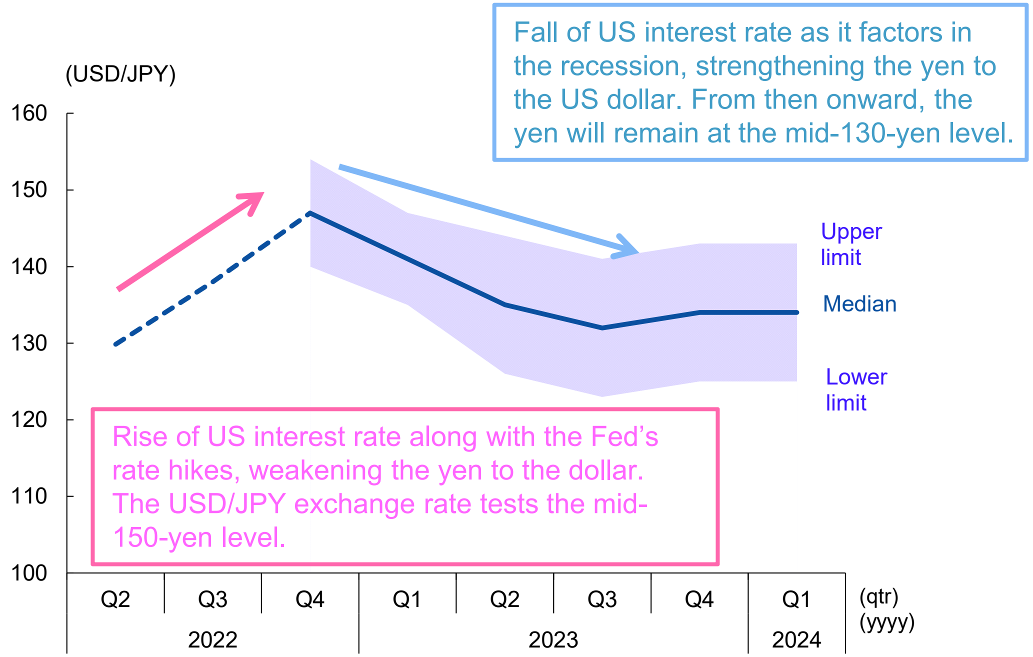
- The US long-term interest rate will hover at around 4% through the end of 2022.
  - Despite a downshift in 2023 due to the recession, the Fed's prolonged monetary tightening stance will push up the overall interest rate level. Even at the end of 2023, we expect the long-term US interest rate to trend around the upper-3% range at the end of 2023.
- The US dollar will follow an uptrend through the end of 2022 along with US interest rate hikes (rise of short-term interest rates).
  - The USD/JPY exchange rate is expected to test the mid-150-yen level against the dollar through the end of 2022. From mid-2023, we expect the yen to trade around the mid-130-yen level to the dollar.

Outlook on US interest rates



Note: 10 years refers to the US Treasury yield (quarterly average). The long-term interest rate outlook refers to the median of the forecast range. The FF target refers to the value at the end of the quarter.
Source: Made by MHRT based upon releases by Bloomberg

USD/JPY exchange rate outlook

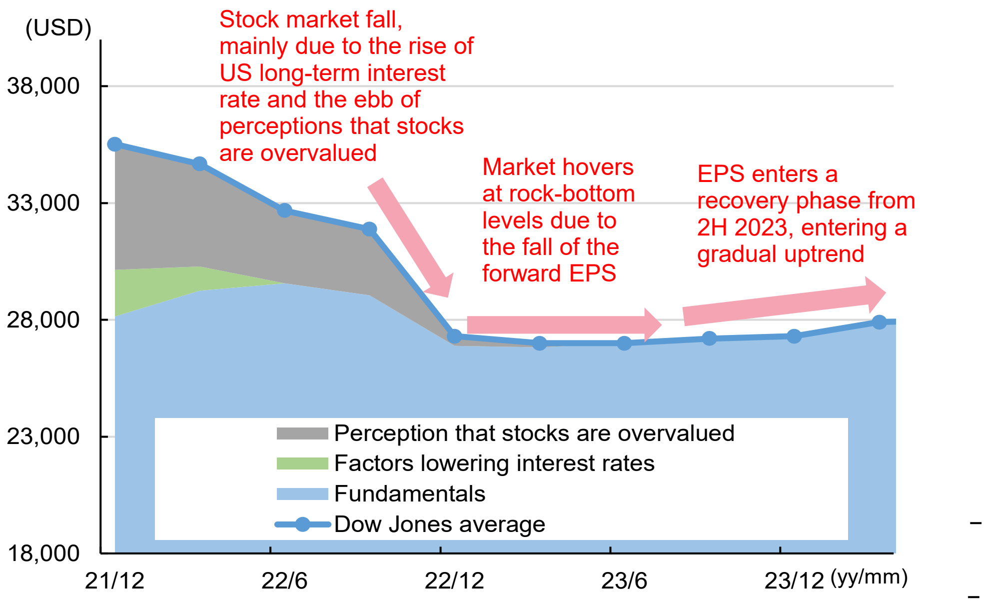


Note: The blue dotted line shows the actual, and the solid line is the median for the quarter. Purple shadows indicate ranges.
Source: Made by MHRT based upon releases by Bloomberg

US stocks expected to decline through the end of 2022, mainly due to higher long-term interest rates and the ebb of market perception that stocks are overvalued

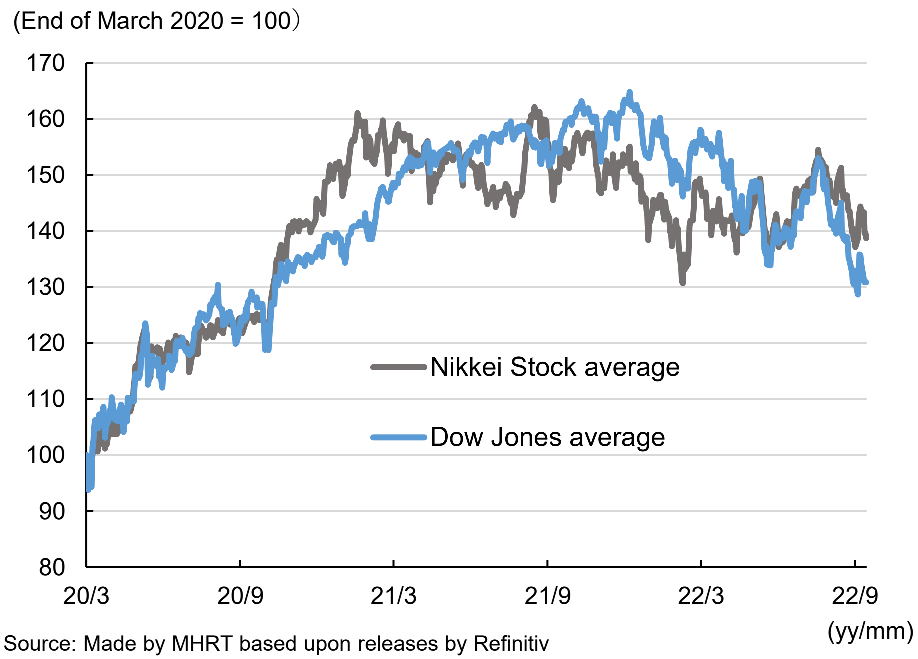
- We expect a US stock market correction by approximately 10% through the end of 2022.
  - The P/E ratio is expected to fall through the end of 2022, mainly due to the rise of the US long-term interest rate. US stocks will continue to fall.
  - Subsequently, the US stock market will remain at rock-bottom levels until the Jul-Sep quarter of 2023 as the forward EPS declines, factoring in the economic slowdown. The P/E ratio will remain stable from 2H 2023 and will enter a gradual upward path as the EPS recovers.
- We expect that Japanese stocks will continue to be swayed by US stock market fluctuations.

Dow Jones average and sense of overvaluation, fading of factors pushing down interest rates



Note: The "perception that stocks are overvalued" refers to the amount that the actual stock price exceeds the stock price calculated by theoretical P/E ratio taking into account the level of interest rates at each point of time. The factors lowering interest rates are calculated from the theoretical P/E ratio based on the assumption that long-term interest rates are at the same level as the average of the past 10 years. The predicted value is the median of the range.
Source: Made by MHRT based upon releases by Refinitiv

The Japanese stock market is moving in tandem with the US stock market

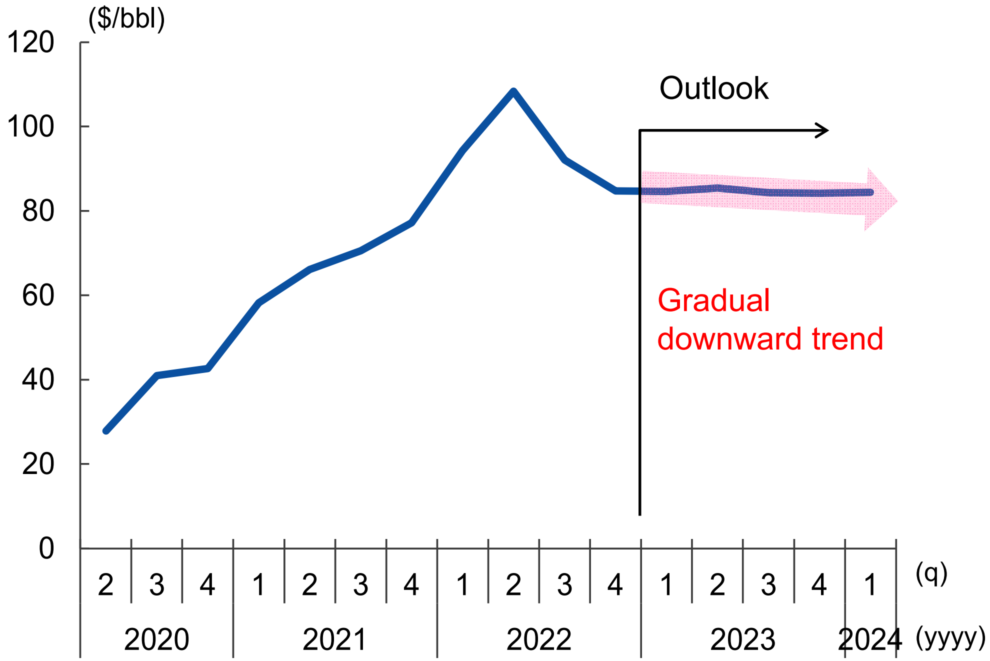


Source: Made by MHRT based upon releases by Refinitiv

Despite downward pressure from the global economic slowdown, the pace of the fall of crude oil prices will be slow

- We expect that oil prices will continue to fall against a backdrop of gobal economic slowdown.
  - Amid concerns over future oil demand due to monetary tightening in the US and Europe, in October OPEC Plus decided in October to cut production by 2 million barrels/day in response to the market environment. Oil prices are rebounding, subsequent to a downward trend since July 2022.
  - That said, we expect that crude oil prices will return to a downward path again along with the emergence of demand concerns.
- Even so, the pace of oil price decline should remain moderate, given a number of factors to support prices, such as the need for the US to repurchase its strategic reserves, the OPEC Plus' maintenance of its stance to control supply, and the rise of production costs in the face of inflation.

Crude oil prices (outlook)



Source: Made by MHRT based upon releases by the IEA, EIA, Refinitiv, etc.

Key points

Demand	■ Concerns over oil demand due to monetary tightening ■ Price target set at $80/bbl for the repurchase of US strategic reserves
Supply	■ OPEC Plus announced that it will continue to cut production by 2 mb/day until December 2023, re-emphasizing its stance to control supply in response to the market environment ■ The US shale gas rig count will continue to increase albeit moderately (increase in output not enough to make up for the production cut by OPEC Plus)
Other	■ Production costs in the US expected to increase by more than 10% y-o-y from 2021 to 2022 due to the impact of inflation

Source: Made by MHRT based upon releases by the IEA, S&P Global Commodity Insights, media reports, etc.

Reference: key political events

	2022		2023		2024	
US	Nov	Mid-term elections	Mar	20 years since the Iraq War	Nov	Presidential election
Europe			By year-end	Spain: legislative election	May May Jul-Sep Oct	Russia: end of term of President Vladimir Putin European Parliamentary elections Paris Olympic and Paralympic Games End of term of European Commission President Ursula von der Leyen
Japan			Apr Apr May	End of term of Bank of Japan Governor Haruhiko Kuroda Nationwide local elections G7 Summit (Hiroshima)	Jul	End of term of the governor of Tokyo
Asia	Nov	Malaysia: general election	Spring By Mar By Jul By Aug	China: National People's Congress Thailand: election of the House of Representatives (lower house) Cambodia: general election Myanmar: general election	Jan Feb 1H By mid-year	Taiwan: presidential election Indonesia: presidential and parliamentary elections South Korea: legislative election India: general election
Other	Oct Oct Nov	Brazil: presidential and legislative elections G20 Finance Ministers and Central Bank Governors Meeting (Washington DC) COP27 (Egypt)	Oct Nov By year-end By year-end	Argentina: presidential and legislative elections COP28 (UAE) G20 Summit (India) Turkey: presidential and legislative elections	Jun By year-end By year-end	Mexico: presidential election and legislative elections G20 Summit (Brazil) COP29

Source: Made by MHRT based upon media reports, etc.