2023 World Economic Outlook

(Translated from the original Japanese version put out at the end of December 2022 (slightly updated))

Marubeni

1/23/2023

Marubeni Research Institute

General Outline

Summary

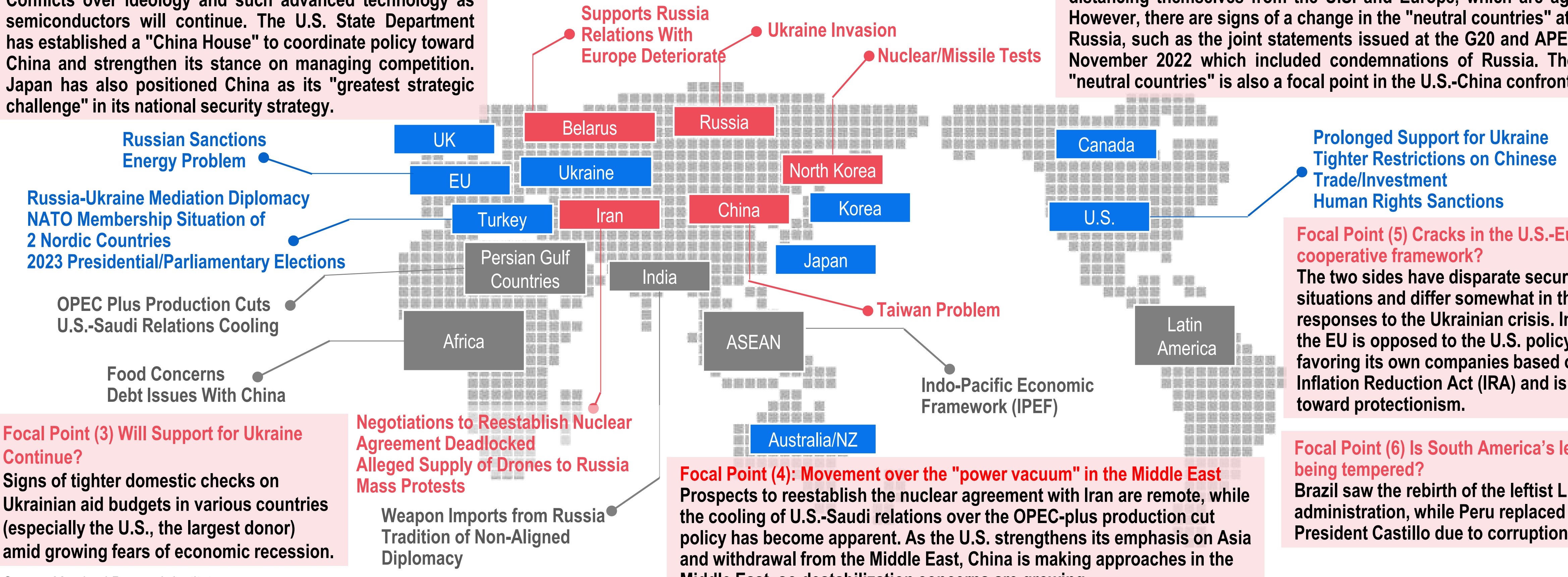
- The forecast for real GDP growth in the global economy in 2023 is +2.4% YoY. Although supply constraints due to the pandemic have now run their course and price inflation peaks as the impact of the surge in international commodity prices caused by the Ukrainian crisis wears off, reaching the 2% inflation target set by the U.S. and European central banks will still take time and thus a shift to monetary easing is not expected until 2024 or later. The financial climate remains restrained with some risk of recession due to the cumulative effects of monetary tightening and the unlikelihood of the Ukrainian crisis being resolved by the end of the year.
- In the U.S., the labor market remains tight and the financial environment (capital investment) is likely to remain restrained for some time due to upward pressure on wages, while the "excess savings" accumulated during the pandemic are dissipating with factors supporting consumption becoming uncertain. Also, in Europe, where energy issues are a deep concern, impacts on energy production and prices have increased the possibility of a recession.
- Regarding China, uncertainty remains high despite expectations for the implementation of stronger stimulus measures against the backdrop of the rapid spread of Covid and a very sluggish real estate market. In Japan, domestic demand should maintain a certain degree of strength as the country emerges from a delayed recovery from the Covid pandemic, but a slowdown in overseas economies will likely weigh on the economy. As far as the newly emerging economies go, those dependent on the imports of resources, energy, and food will, in particular, face difficulties in their fiscal management and, as such, concerns will remain over social unrest and capital outflows. In general, there is no single specific driving force right now behind the global economy.
- In terms of the commodity market, although the search for a new equilibrium point between supply and demand continues for individual commodities, prices are generally under downward pressure from sluggish demand growth due to the global economic downturn and risk-off moves as a result of tightening financial conditions. Rising geopolitical instability, supply constraints stemming from production adjustments, etc., and growing production costs, including capital goods prices and labor costs, are underpinning factors.
- Currently, it is expected that the duration and magnitude of a recession in 2023 would be relatively short and minor. It is also likely that by 2024 inflation will subside in many countries allowing a shift to more economy-oriented stimulation policies with global economic growth expected to return to a cruising speed of around 3%.

1-1. World Economic Outlook (1): International Situation
Divisions Continue Over U.S.-China Friction, Russia’s Invasion of Ukraine and Other Issues

➢ The international community remains divided over the U.S.-China clash, Russia’s invasion of Ukraine and other events. Amid growing fears of a global recession, the focus will be on the situation in Ukraine (cooperative support system, emerging countries (neutral) distancing themselves from Russia, etc.) and the struggle for scarce goods (energy/raw materials/strategic resources, semiconductors, etc.).

Focal Point (1) What will the U.S.-China relationship look like in 2023?
Conflicts over ideology and such advanced technology as semiconductors will continue. The U.S. State Department has established a "China House" to coordinate policy toward China and strengthen its stance on managing competition. Japan has also positioned China as its "greatest strategic challenge" in its national security strategy.

▽ Current State of International Relations



Focal Point (2) How will so-called "neutral countries“ respond?
Neutral countries, for example in Southeast Asia, etc., drew a line in the sand distancing themselves from the U.S. and Europe, which are against Russia. However, there are signs of a change in the "neutral countries" attitude toward Russia, such as the joint statements issued at the G20 and APEC summits in November 2022 which included condemnations of Russia. The position of "neutral countries" is also a focal point in the U.S.-China confrontation.

Focal Point (5) Cracks in the U.S.-European cooperative framework?
The two sides have disparate security situations and differ somewhat in their responses to the Ukrainian crisis. In addition, the EU is opposed to the U.S. policy of favoring its own companies based on the U.S. Inflation Reduction Act (IRA) and is leaning toward protectionism.

Focal Point (3) Will Support for Ukraine Continue?
Signs of tighter domestic checks on Ukrainian aid budgets in various countries (especially the U.S., the largest donor) amid growing fears of economic recession.

Focal Point (4): Movement over the "power vacuum" in the Middle East
Prospects to reestablish the nuclear agreement with Iran are remote, while the cooling of U.S.-Saudi relations over the OPEC-plus production cut policy has become apparent. As the U.S. strengthens its emphasis on Asia and withdrawal from the Middle East, China is making approaches in the Middle East, so destabilization concerns are growing.

Focal Point (6) Is South America’s leftward lean being tempered?
Brazil saw the rebirth of the leftist Lula administration, while Peru replaced leftist President Castillo due to corruption allegations.

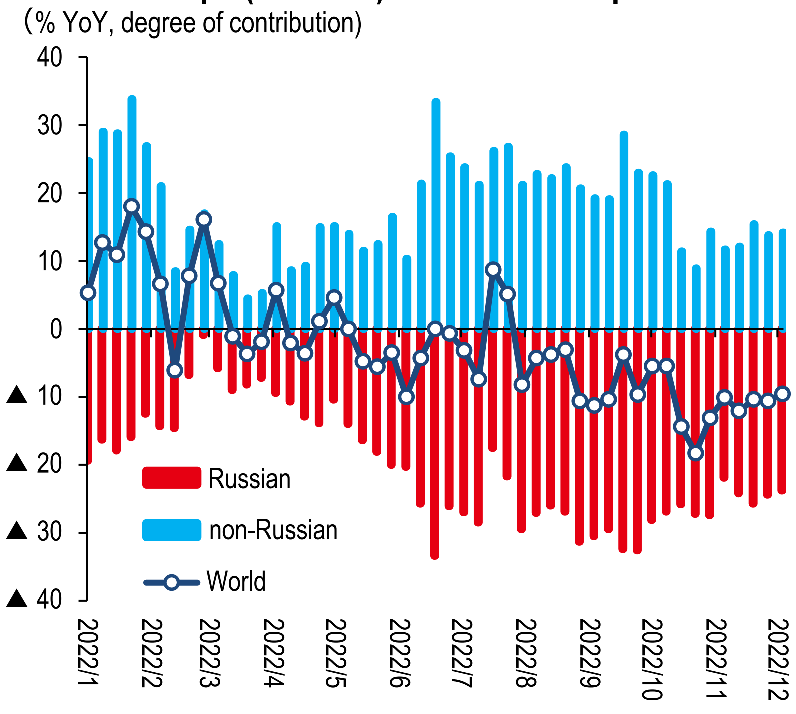
Source: Marubeni Research Institute

1-1. World Economic Outlook (2): The Food and Energy Predicament

Following the Ukrainian Crisis, Securing Scarce Resources Has Become an Urgent Issue

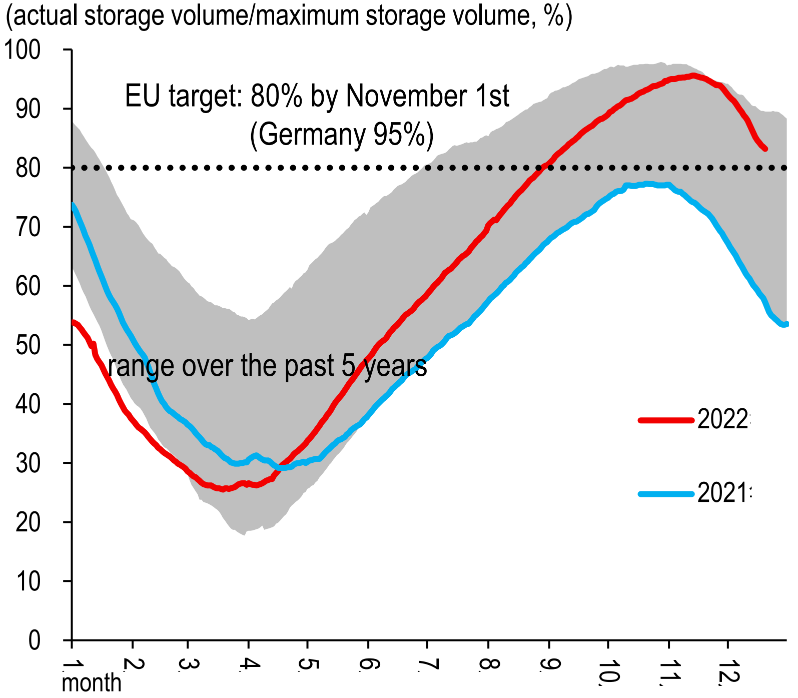
- Energy issues: Moves away from Russia are in full swing centered on the G7 and EU. Stable procurement (diversification of energy sources and suppliers), responding to price hikes, and reducing demand are the most common and pressing problems. In the mid- to long-term, the energy transition will accelerate aiming to realize climate change goals.
- Food issues: While the world population has now surpassed 8 billion, the number suffering from hunger has increased to 830 million (about 10% of the total population) due to the Covid pandemic and wars. In low-income countries food insecurity will lead to growing public discontent and may develop into risk of regime change.

▽Europe (EU + UK) Natural Gas Imports



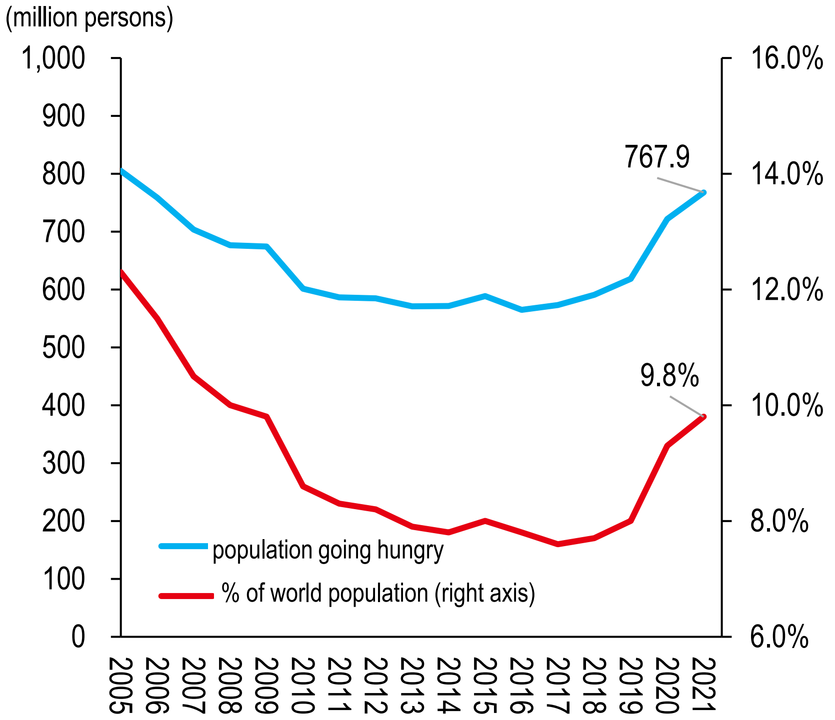
Note: Data through 1st week of December 2022
Source Bruegel (graph by the Marubeni Research Institute)

▽EU Natural Gas Stored Reserves (%)



Note: Data as of 12/20/2022
Source: AGSI+ (Graph by the Marubeni Research Institute)

▽ Growing World Population Suffering from Hunger

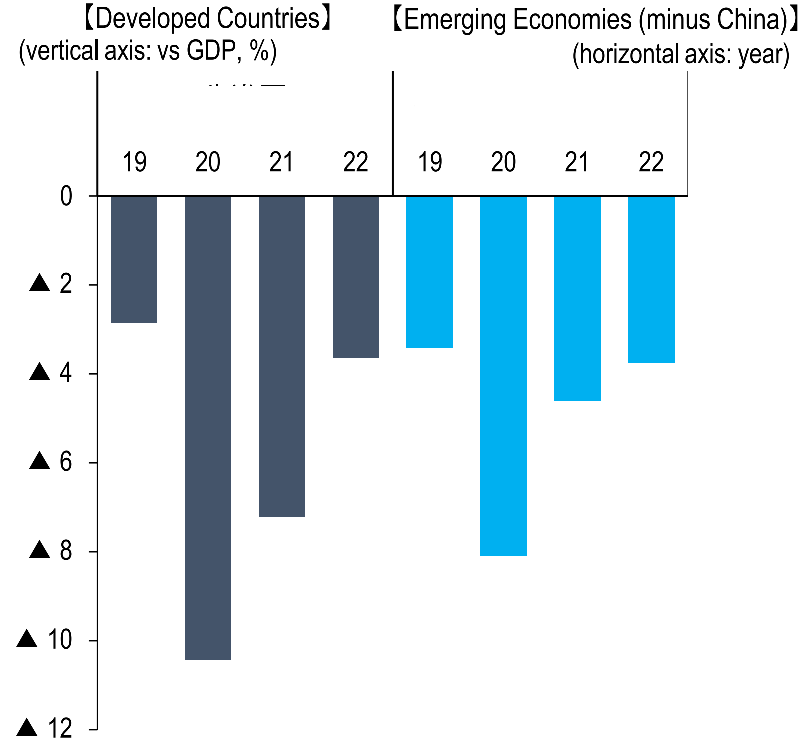


Source: United Nations (Graph by the Marubeni Research Institute)

1-1. World Economic Outlook (3) Fiscal Concerns
Fiscal Deficits Skyrocket Due to Pandemic Response, but Degree of Fiscal Restructuring Needed Varies

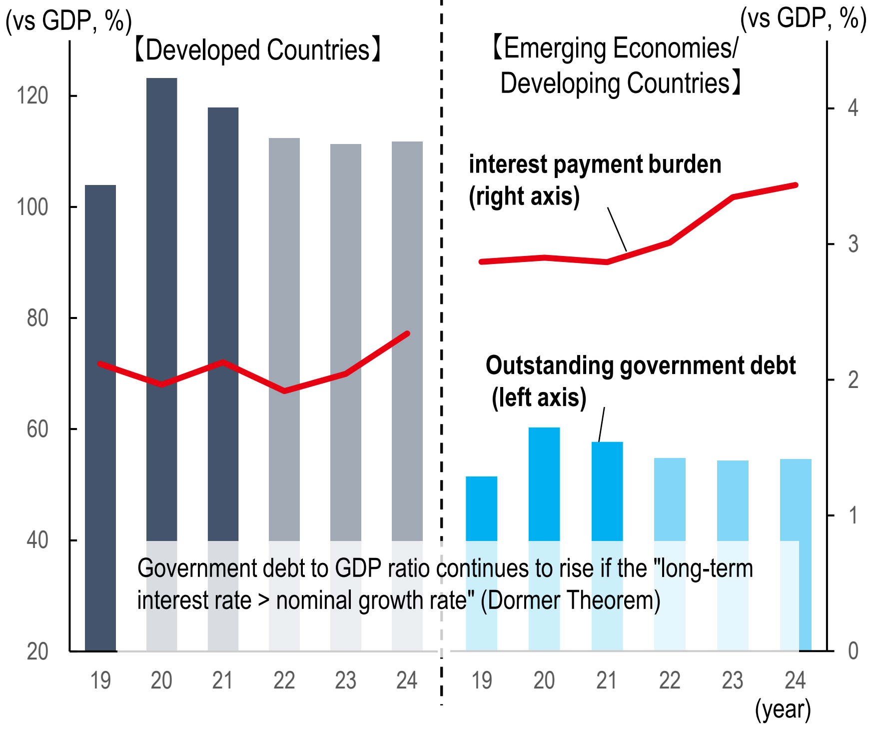
- Government debt levels have reached record highs as a result of large-scale economic measures implemented by all countries in response to the pandemic. Pressure to expand spending will continue as a result of climate change measures, expansion of industrial policies to enhance competitiveness in semiconductors, and strengthening defense capability in consideration of China's advancement.
- Expanded government debt is compounded by rising long-term interest rates with the weight of interest payments expected to increase over the next several years. However, there are differences in countries in terms of the course fiscal consolidation and normalization is taking. On the other hand, high inflation has the effect of lowering the debt burden from both the capital flow and stock perspectives.

▽Fiscal Balance



Note: Estimates as of 10/2022. Based on IMF's regional classification.
Source: IMF [Fiscal Monitor] (10/2022)

▽Outstanding Government Debt/Interest Payment Burden



Note: Estimates as of 10/2022. Forecasts from 2022. Based on IMF's regional classification
Source: IMF [Fiscal Monitor] (10/2022) (Graphs by the Marubeni Research Institute

▽Government Debt (by country/region)

	Government Debt vs GDP (%)		
	2019	2020	2022
U.S.	108.7	134.5↑	122.1↓
Canada	87.2	117.8↑	102.2↓
Germany	58.9	68.0↑	71.1↑
France	97.4	114.7↑	111.8↓
Italy	134.1	155.3↑	147.2↓
UK	83.9	102.6↓	87.0↓
Japan	236.3	259.4↑	263.9↑
China	57.2	68.1↑	76.9↑
India	75.1	89.2↑	83.4↓
ASEAN 5	38.4	47.2↑	50.8↑
Latin America	67.9	77.4↑	69.3↓
Africa	50.1	57.6↑	55.5↓

Source: IMF (Table by the Marubeni Research Institute

1-1. World Economic Outlook (4): Moves to Expand Expenditures
Pressure to Increase Spending Remains Strong to Bolster Industrial Policy and National Defense

- As semiconductors are universally recognized as a strategic necessity, countries, including Japan, are expanding subsidies domestically for new production facilities and to enhance R&D.
- Defense budgets are increasing amid growing conflicts with authoritarian regimes with Japan planning to raise its defense budget to 2% of GDP by 2027.
- Countries are expanding support for such major climate change measures as renewable energy, energy conservation, and battery energy storage systems with one example being the U.S. Inflation Reduction Act.

▽Expanded Expenditures in the Areas of Semiconductors, Defense/Security and Climate Change

		U.S.	Europe	Japan
Area	Semi-conductors	The CHIPS Act was passed in the U.S. in August 2022 to provide $39 billion in subsidies for semiconductor production and R&D over five years starting in FY2022. According to the Semiconductor Industry Association $200 billion in new investment has been announced in 16 states from 2020 onward, with Intel, TSMC, Samsung Electronics, and others planning to build new factories.	In March 2021, the EU announced its intention to double its share of the global semiconductor market to 20% by 2030 ("Digital Compass 2030"). The EU will relax state aid restraints in strategic fields with 43 billion euros in additional public-private funds to be invested by 2030.	Japan will provide support for the construction of high-performance semiconductor production facilities under the Semiconductor Support Act (¥617 billion in the FY2021 supplementary budget; ¥476 billion for TSMC's Kumamoto plant, ¥92.9 billion yen for Kioxia's Yokkaichi plant, etc.). The Economic Security Promotion Act and budget for supply chain measures will also provide support for technology development and production bases.
	Defense/ Security	The defense-related budget for the current fiscal year was boosted to $858 billion, +8% over the previous year, due to support for Ukraine and Taiwan and to replenish weapons/ammunition stocks. Even as partisan discord in Congress deepens, strengthening national defense is one of the few areas where there is bipartisan support.	In response to Russia's invasion of Ukraine, EU member states agreed to significantly increase their defense budgets. Germany is contributing 100 billion euros in special funding, with defense spending to average more than the NATO target of 2% of GDP for the next several years.	The Kishida administration announced it would boost defense spending over the five years from FY2023 to 43 trillion yen, which is 1.6 times the current level (reaching 2% of GDP in FY2027). To secure the financial resources necessary for this the LDP's Tax System Research Council proposed raising the corporate tax, income tax and cigarette tax from FY24 onward.
	Climate Change Measures	$369 billion in spending was allocated for "energy security and climate change" as part of the Inflation Reduction Act. This includes tax credits for renewable energy ($161 billion), incentive programs for clean energy, and assistance in purchasing EVs and energy-efficient homes.	The EU's goal is to reduce greenhouse gas emissions by at least 55% from 1990 levels by 2030 and to achieve carbon neutrality in 2050. Although there has been short-term movement back to fossil fuels in the wake of the Ukrainian crisis, the EU intends to accelerate investments in renewable energy and energy conservation in an effort to meet the long-term goals.	Japan has announced a basic policy on the green transformation (GX), which calls for public-private investment of ¥150 trillion over 10 years to achieve a 46% reduction in greenhouse gas emissions by FY2030 compared to FY2013 and to achieve carbon neutrality by 2050. Of this amount ¥20 trillion is planned to be financed by the government by issuing GX bonds.

Source: Marubeni Research Institute

1-1. World Economic Outlook (5): World Real GDP Growth Rate
World Economy is Slowing, Major Focus is on U.S. Inflation and Monetary Policy Trends

▽ **Real Gross Domestic Product (GDP) Growth Forecast** (YoY, %)

		Degree of Contribution	2020 Actual	2021 Actual	2022 Estimate	2023 Forecast	2024 Forecast
World		100.0	-3.1	6.1	2.9	2.4	2.8
Developed Countries		41.8	-4.5	5.2	2.5	0.5	1.0
U.S.		15.5	-3.4	5.7	1.8	0.5	1.0
Euro Zone		10.9	-6.4	5.3	3.3	0.2	0.9
UK		1.7	-9.3	7.4	4.3	-0.6	0.3
Japan	(calendar year)	3.8	2.2	8.1	1.6	1.2	0.8
	(fiscal yer)	-	-4.5	2.5	1.9	1.0	1.0
Newly Emerging Economies		58.2	-1.9	6.6	3.1	3.8	4.2
China		18.6	2.2	8.1	3.2	4.7	4.5
India		7.2	-6.6	8.7	6.8	6.1	6.8
ASEAN-5		5.6	-3.4	3.4	5.3	4.9	5.3
Central/Eastern Europe		7.2	-1.7	6.8	-4.5	0.6	2.5
Latin America		7.3	-7.0	6.9	3.0	2.0	2.4
Middle East/Central Asia		7.6	-2.7	4.5	5.0	3.6	3.5
Sub-Saharan Africa		3.2	-1.6	4.7	3.8	4.0	4.1

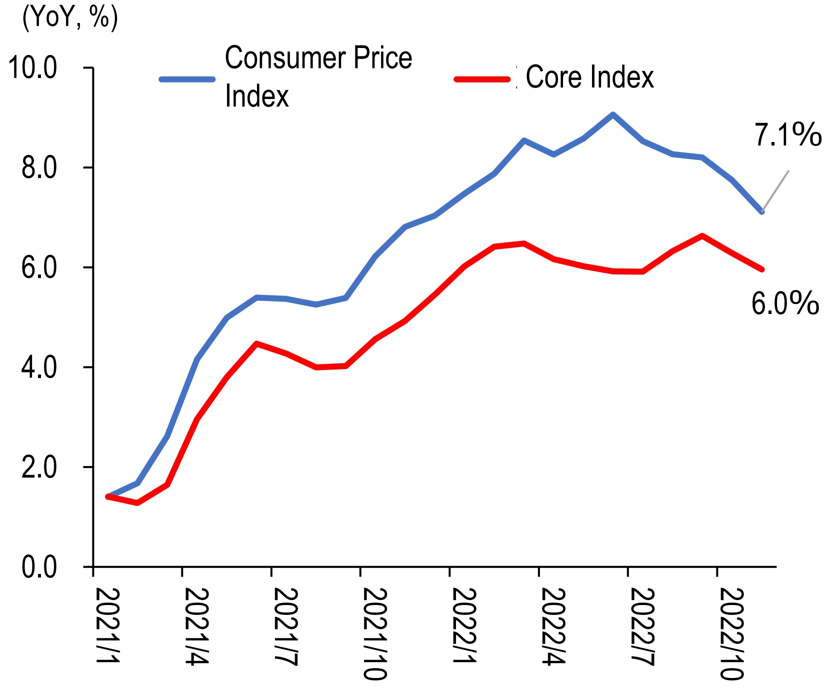
Note: The degree of contribution is based on purchasing power parity (PPP). The share of emerging countries tends to be larger than that based only on market exchange rates. The darker highlighted figures are much lower than the historical average (2010-19).
Sources: IMF, Marubeni Research Institute

- World real GDP growth is expected to be +2.4% year-on-year (YoY) in 2023 and +2.8% YoY in 2024, compared to +2.9% YoY in 2022. Although some regions are still recovering from the Covid pandemic, upward price movement and tighter monetary policy in Europe and the United States should put downward pressure on economic activity.
- The major focus will be on the course of U.S. inflation and monetary policy. Although there is a sense that inflation has peaked in the U.S., wage pressures are strong due to a tight labor market and price growth is expected to remain higher than the 2% inflation target set by the monetary authorities. The policy interest rate is also expected to remain unchanged at near 5% until the end of the year. The cumulative effects of monetary tightening should emerge pushing down personal consumption and investment resulting in lower growth.
- Business confidence in Europe has deteriorated due to record-high prices triggered by a recovery in demand following a lull caused by the Covid crisis and a sharp rise in energy prices. The economy should enter a recessionary phase in the first half of 2023.
- In terms of China, there is uncertainty over the country's Covid policies and the sluggish real estate market. Despite government policy responses the economy still lacks strength.
- As for Japan, although a slowdown in overseas economies will weigh on the economy, a recovery will continue to be led by domestic demand, including revived production in the manufacturing sector and increased consumption in the service sector.

1-2. U.S. Inflation and Monetary Policy (1): Consumer Price Index Movement
While Covid Became Manageable and Economy Recovered, Inflation Rose More Than Predicted

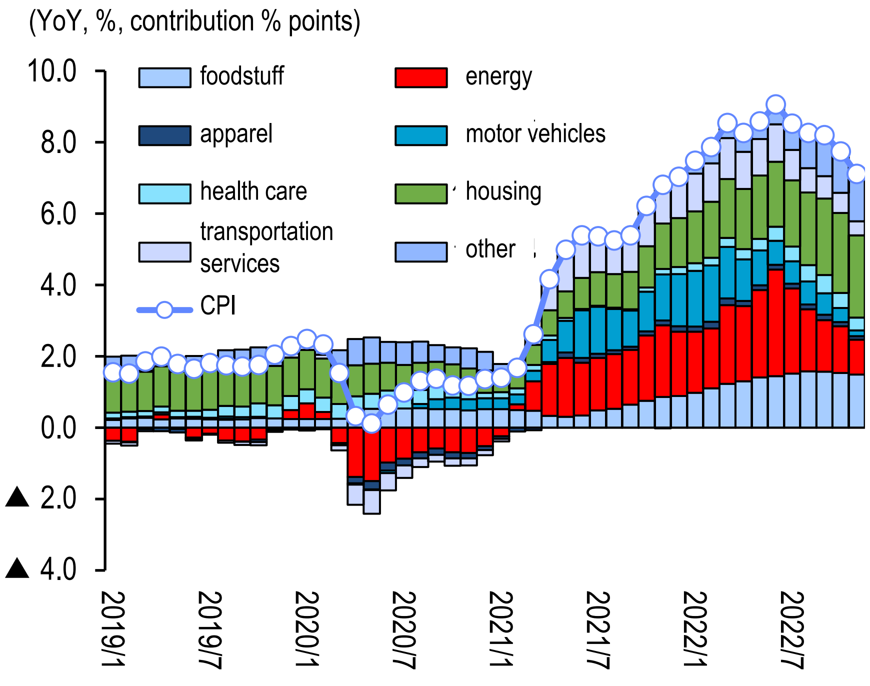
- The direction of U.S. inflation and monetary policy are the most potentially impactful uncertainties for the global economy in 2023. U.S. prices seemed to have peaked due to lower energy prices and more stable consumer goods prices. However, strong upward pressure still lingers in the housing and services sectors.
- Gasoline prices should run their course in the first half of 2023, while the upward momentum in housing prices will likely slow in 2023 as well. However, there will be lag in reflecting these trends in rents. On the other hand, structural inflationary pressures are increasing as globalization recedes, supply chains become more resilient, and workers' rights become more important.

▽ U.S. Consumer Good Prices



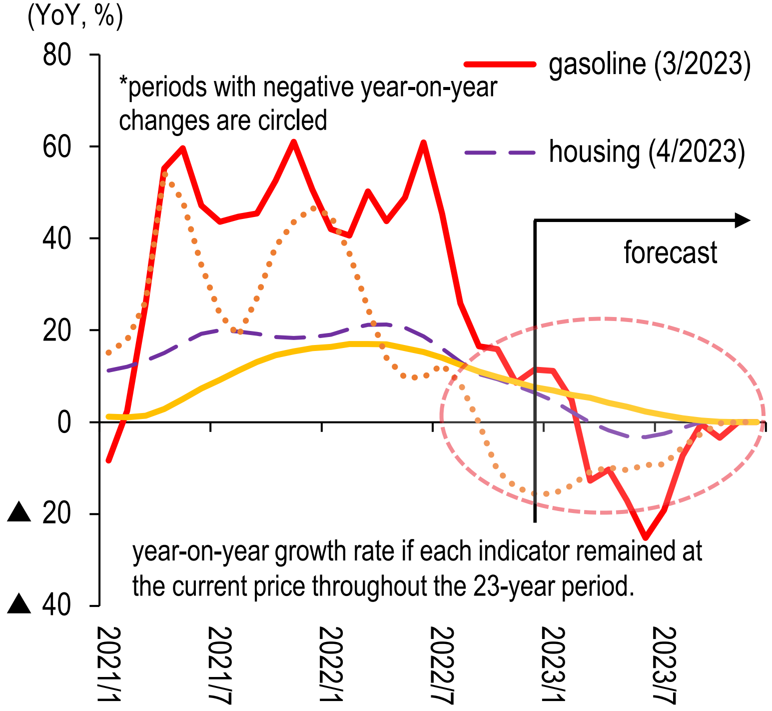
Source: U.S. Department of Labor (graphs by the Marubeni Research Institute)

▽ Contribution to the CPI Growth Rate



Source: U.S. Department of Labor (graphs by the Marubeni Research Institute)

▽Related Items

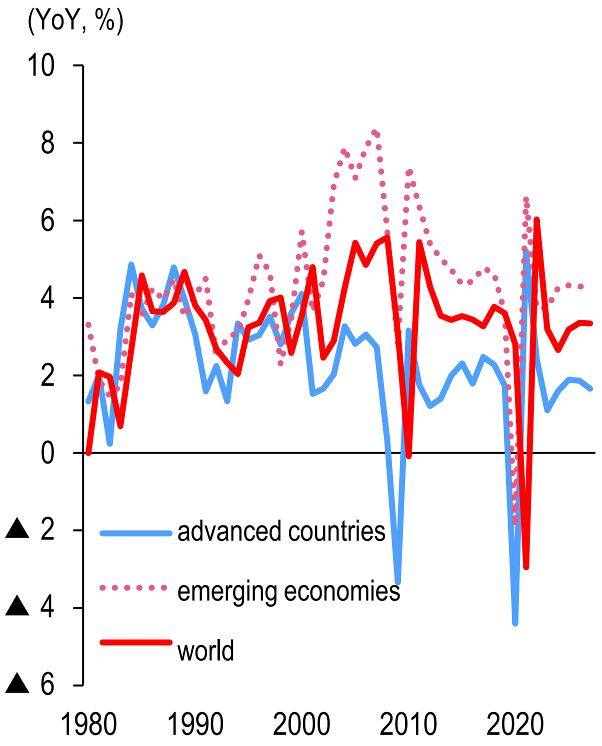


Sources: AAA, Case Shiller20-City Composite Home Price Index, Zillow Rent Index (graph by the Marubeni Research Institute)

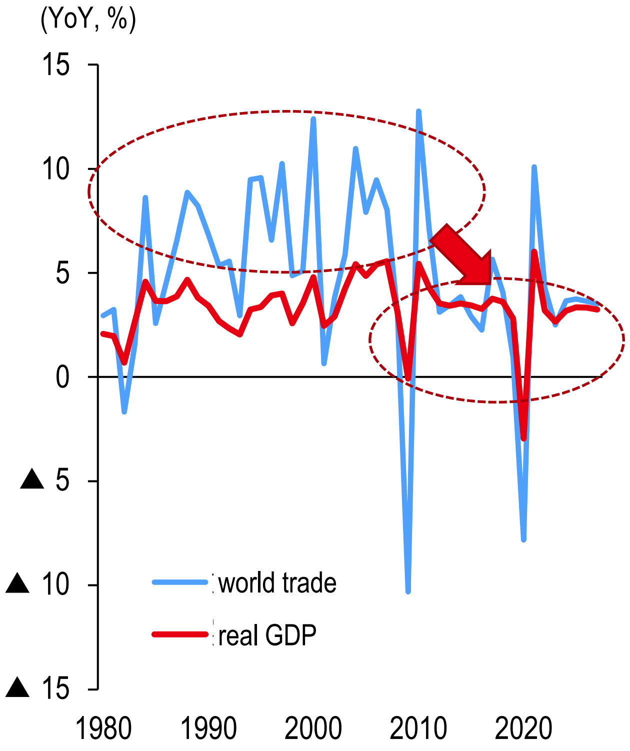
1-1. World Economic Outlook (6): Possibility of Continued Low Growth
Declining Growth Rate Trend Continues With the Risk of Low Growth Becoming Entrenched

- World's real GDP growth rate likely to remain low, below 3% YoY, in 2023 and 2024. It has declined even further than in the 2010s following the global financial crisis, showing particularly weakness in the emerging economies. World trade levels have also substantially slowed. As such, this a critical period for globalization.
- Uncertainty related to the Covid pandemic has also contributed to lower economic growth. Both advanced and emerging economies have generally recovered to their pre-Covid levels in terms of economic size, however growth rates remain below their pre-Covid trajectories, except in the Euro Zone where the decline immediately after the Covid pandemic began was significant.

▽Real GDP Growth Rates

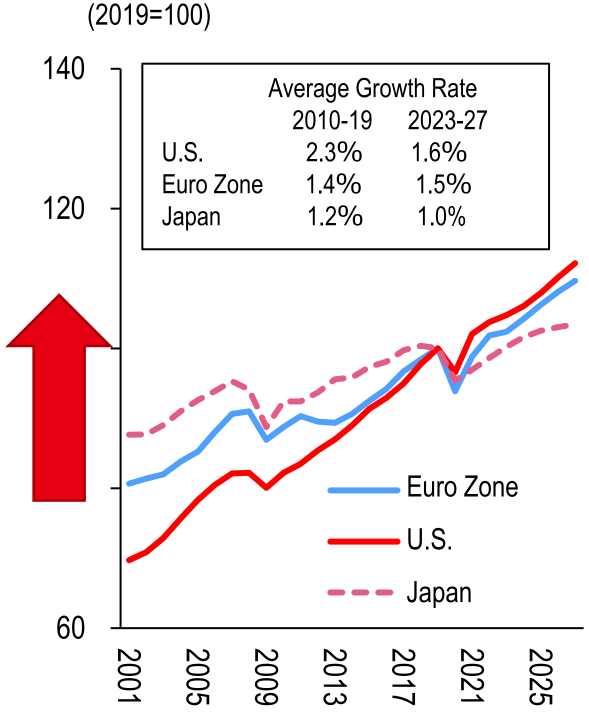


▽Change in World Trade Volume

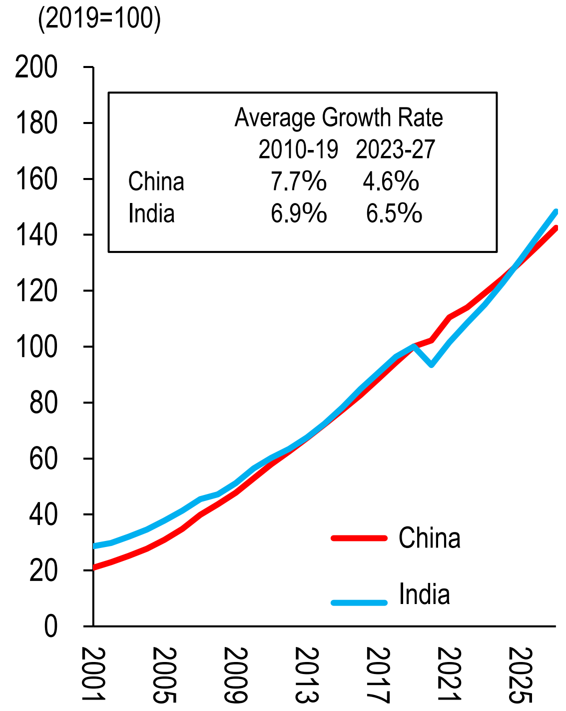


Source: IMF (graphs by the Marubeni Research Institute)

▽GDP Levels: Advanced Countries



▽GDP Levels: Emerging Economies

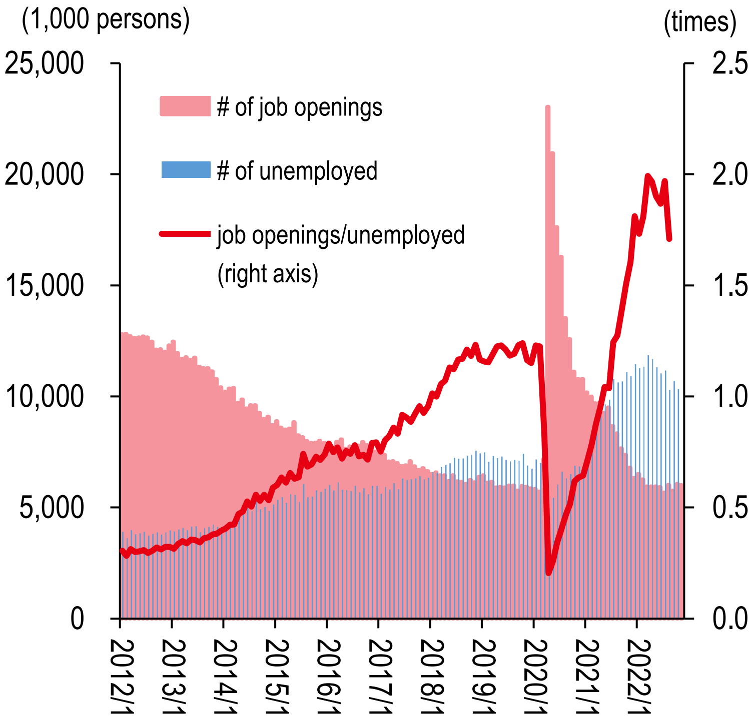


Source: IMF (graphs by the Marubeni Research Institute)

1-2. U.S. Inflation and Monetary Policy (2): Major Item Price Trends
High Wage Growth Maintained Due to Tight Labor Market

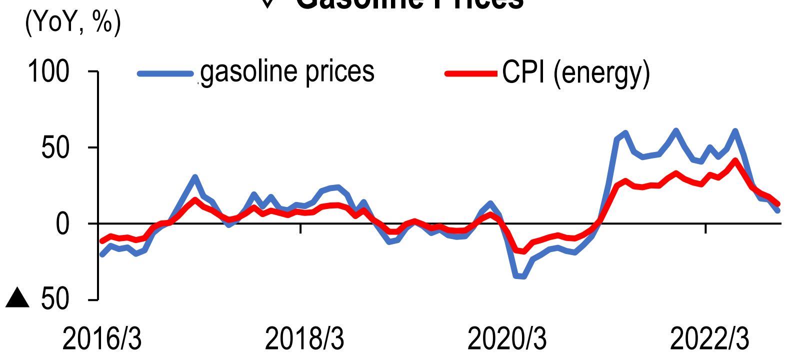
- U.S. price rises will be connected to labor market tightness and wage growth sustainability. The number of job openings in the labor market has declined from the historically high levels of mid-2022 but is still about 1.7 times the number of unemployed (pre-Covid job openings to unemployed was about 1.2 times by comparison).
- The tight employment situation will not cease quickly with wage hikes and upward pressure on prices, especially service sector prices, likely to continue.

▽ Number of Job Openings



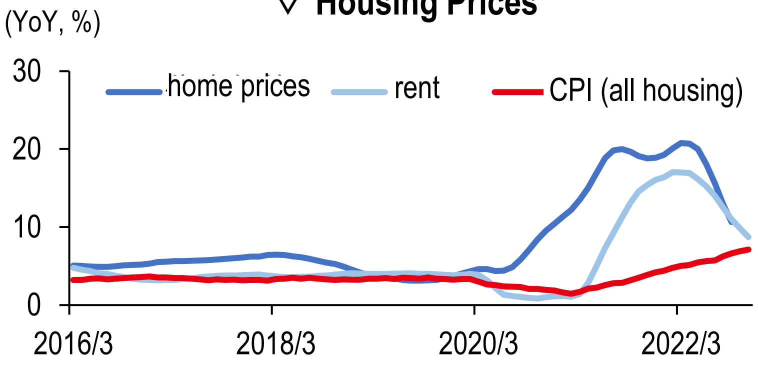
Source: U.S. Department of Labor (graphs by the Marubeni Research Institute)

▽ Gasoline Prices



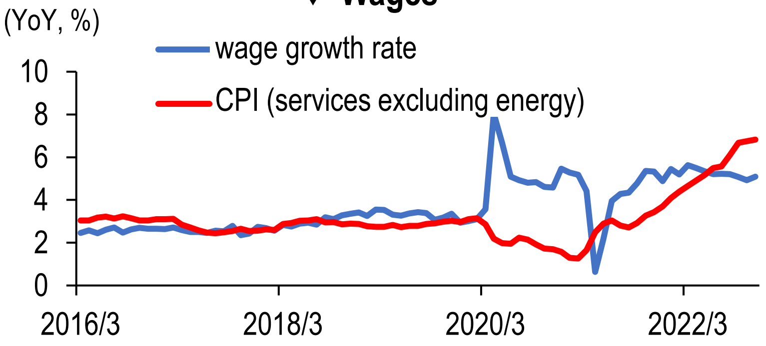
Note: The gasoline price is the AAA national retail average price.

▽ Housing Prices

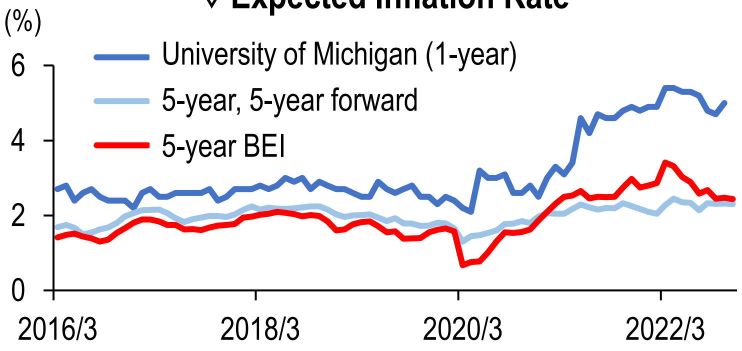


Note: Home prices: Case-Shiller (20-city index), Rent: Zillow (rent index)

▽ Wages



▽ Expected Inflation Rate



Sources: AAA, Case-Shiller, Zillow, U.S. Commerce Department, University of Michigan, FRED (graphs by the Marubeni Research Institute)

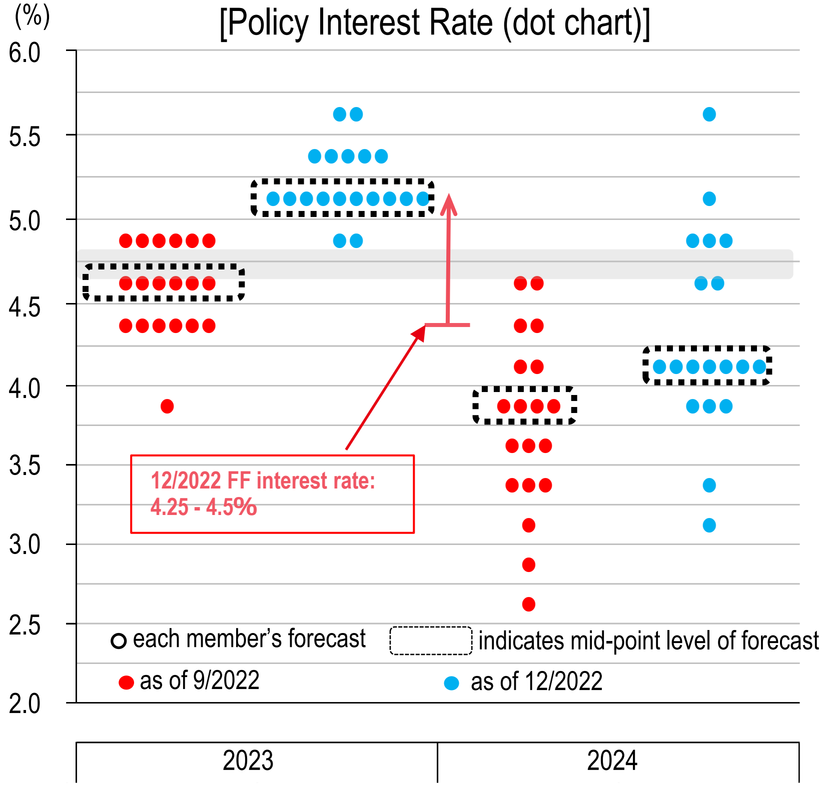
1-2. U.S. Inflation and Monetary Policy (3): Monetary Policy Outlook

FOMC Members Expect the Policy Interest Rate to be 5.1% by End of 2023, Significant Divergence from Market's View

- The forward guidance range for the U.S. policy interest rate (FF rate) at the end of 2022 was 4.25-4.50%. Federal Open Market Committee (FOMC) members expect interest rates to continue to rise to above 5% in 2023 and remain there until the end of the year. If prices fall to the 2% inflation level in 2024 it could allow for an interest rate cut. On the other hand, the market is highly concerned about a recession. Based on the view that economic considerations will take precedence over inflation, we expect interest rate cuts to begin earlier, in the second half of 2023, bringing the FF rate to around 4.5% by the end of 2023. Monetary policy authorities and the market are sharply divided on their views over this.

▽FOMC Members' Current Outlook

[Policy Interest Rate (dot chart)]



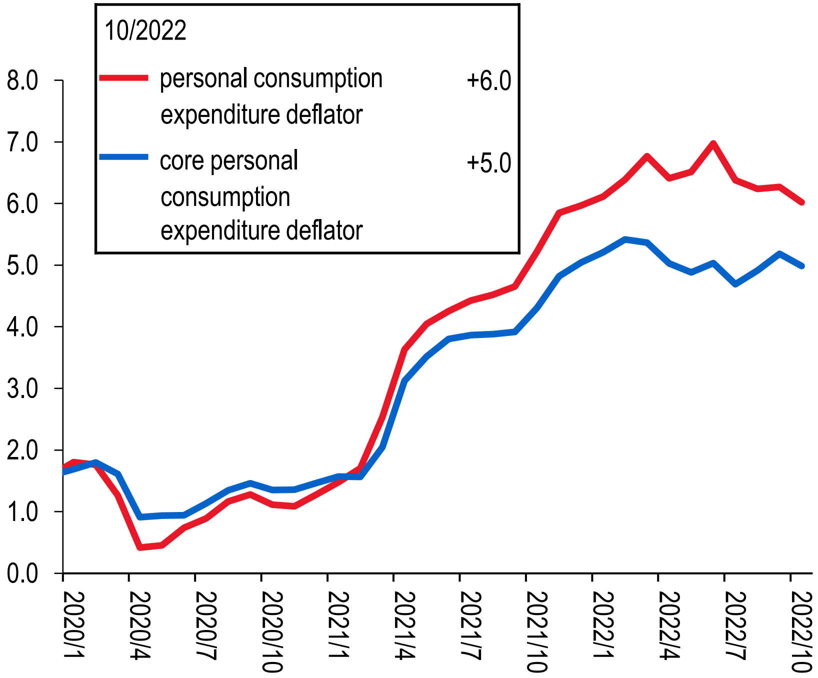
Source: U.S. Federal Reserve Board

[Economic Indicators] (unit: %)

	2022	2023	2024	2025	long-term levels
Real GDP Growth Rate	0.5 (0.2)	0.5 (1.2)	1.6 (1.7)	1.8 (1.8)	1.8 (1.8)
Unemployment Rate	3.7 (3.8)	4.6 (4.4)	4.6 (4.0)	4.5 (4.3)	4.0 (4.0)
PCE Price Index	5.6 (5.4)	3.1 (2.8)	2.5 (2.3)	2.1 (2.0)	2.0 (2.0)
Core PCE Price Index	4.8 (4.5)	3.5 (3.1)	2.5 (2.3)	2.1 (2.1)	— —

Note: Figures are the median predicted values by the members. Figures in parentheses represent the previous (9/2022) forecast. The real GDP growth rates and price index rates are October-December YoY, and the unemployment rate is the average for the same period.

▽ Personal Consumption Expenditure Deflator (price index)



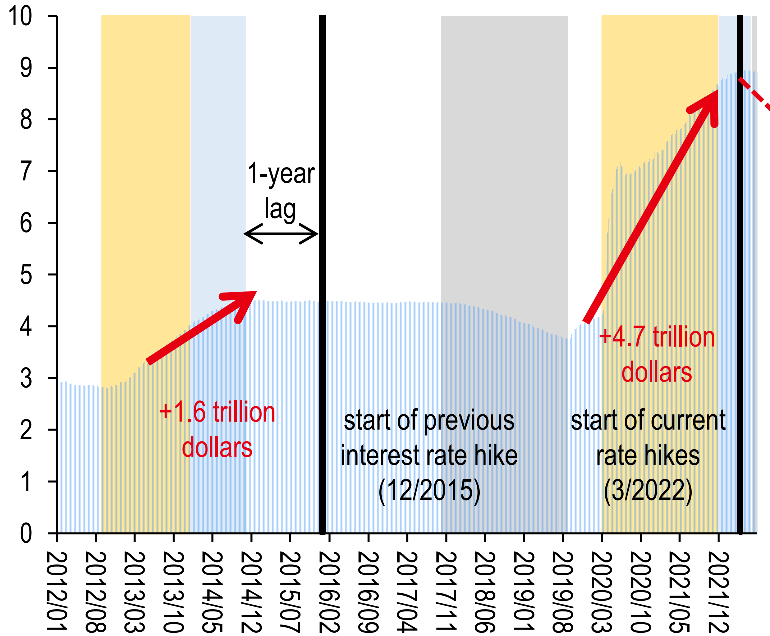
Source: U.S. Commerce Department (graphs by the Marubeni Research Institute)

1-2. U.S. Inflation and Monetary Policy (4): Price and Monetary Policy Views
In the Main Scenario Inflation Improves but Not Sufficiently, the Policy Interest Rate Remains Unchanged at Near 5%

- In the first half of 2023, so-called "excess savings" built-up during the Covid pandemic will bolster consumption, however the cumulative effects of monetary tightening will emerge in the second half of the year leading to a decline in consumption and investment and a rise in the unemployment rate thus exerting downward pressure on prices. While inflation is likely to improve due to weaker resource prices and lower demand, it is unlikely to reach the policymakers' 2% inflation target as wage growth should continue through the first half of the year. As such, we expect the policy interest rate to be raised to around 5% in the first half of the year and then left unchanged at least until the end of 2023.

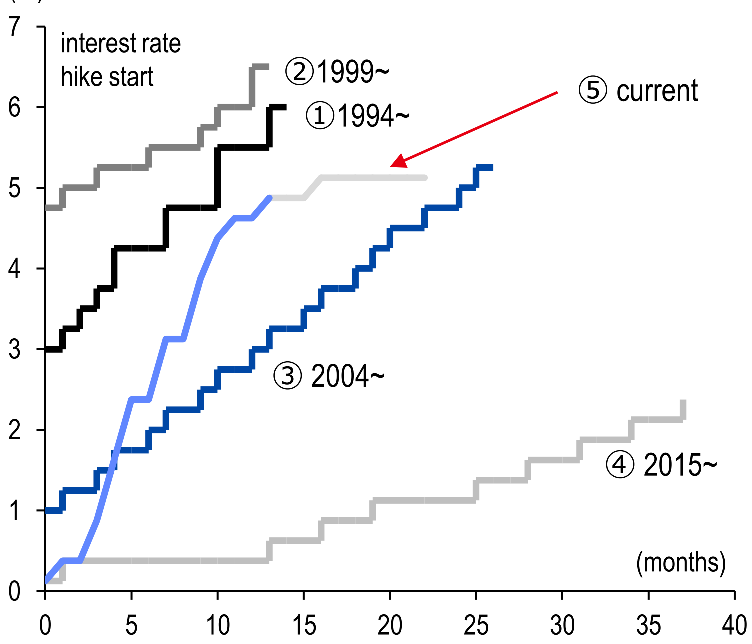
▽2023 Monetary Policy Outlook

[Assets Held by the FRB]



Sources: FRB, IMF (graphs by the Marubeni Research Institute)

[Interest Rate Trends/Past Comparisons]



Note: The month in which each interest rate hike phase begins is set as 1 with policy interest rates compared on a monthly basis

Perspective

Sector	Outlook
Real Economy	Consumption and investment will be sharply down in the second half of the year under pressure from high prices and the diminishing effects from excess savings accumulated during the Covid crisis.
Labor Market	The tight labor market and rising wages will sustain consumption and investment somewhat in the first half of the year and will give the main boost to prices in 2023.
Financial Market	Weakness in stocks and bonds is likely due to the effects of monetary tightening and the reverse asset effect will weigh on consumption. A frail global economy has also hurt commodity markets.
Housing Market	The fallout from monetary tightening has already manifested itself in the decline in housing demand with market adjustments expected to continue throughout 2023.

⇒ Interest rate hikes will likely conclude in the first half of 2023 with a prolonged period of unchanged rates at least until the end of 2023.

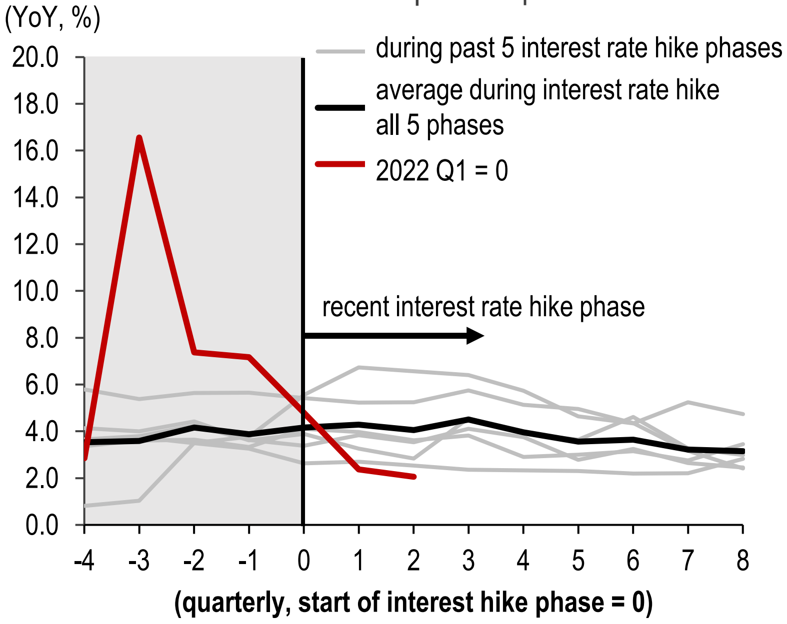
1-3. Economic Impact of Monetary Tightening (1): Real Economy Slowdown

Personal Consumption/Private Investment Tends to Slacken During a Policy Interest Rate Hike Phase

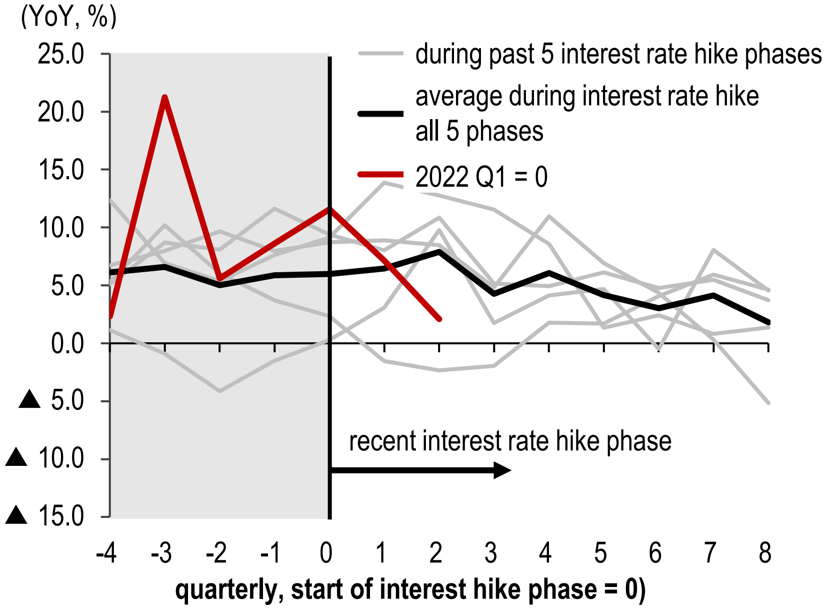
- The effects of tight monetary policy will be felt through changes in such financial market conditions as medium- and long-term interest rates, asset prices, exchange rates and bank lending rates leading to a slowdown in consumption, private investment (including housing), net exports, and other components of the real economy, as well as spilling over into a decline in overall price levels. At present, in the U.S., the housing market and other sectors sensitive to interest rate fluctuations are already showing signs of softening, but the current interest rate hike phase is characterized by a more rapid pace of rate hikes than in the past, which is expected to place greater strain on economic activity.

▽ Changes in Economic Indicators During Interest Rate Hike Phases: U.S. Example

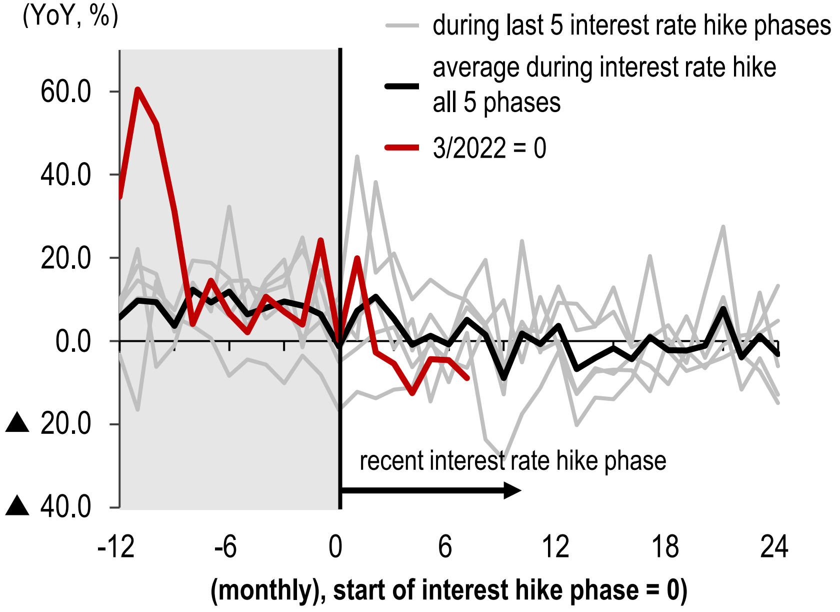
Real Personal Consumption Expenditure



Private Investment Real Gross Domestic Investment



Number of Newly Constructed Housing Units



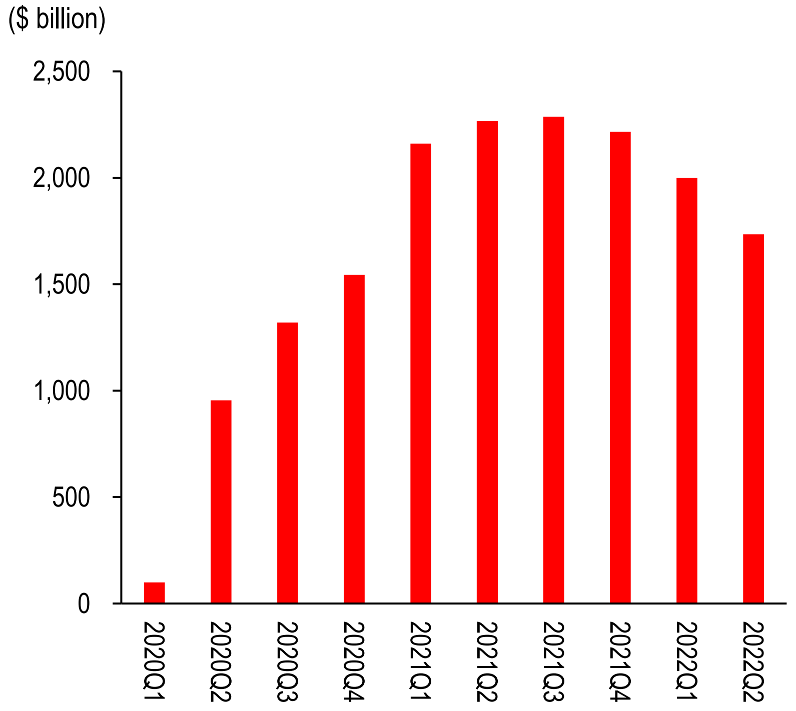
Note: The past five interest rate hike phases before the most recent one, ① 3/1983 - 3/1984, ② 1/1987 - 2/1989, ③ 2/1994 - 2/1995, ④ 6/6/2004 - 2006, ⑤ 12/2015 - 12/2018, are shown in the above graphs with the start of the most recent interest rate hike phase (shown by months) = 0 with the change in the index before and after the rate hike phase started.

Sources: U.S. Commerce and Labor Departments, FRB, (graphs by the Marubeni Research Institute)

1-3. Economic Impact of Monetary Tightening (2): "Excess Savings" Bolsters Consumption
Consumption's Boost From "Excess Savings" Will Run its Course in the 2nd Half of 2023

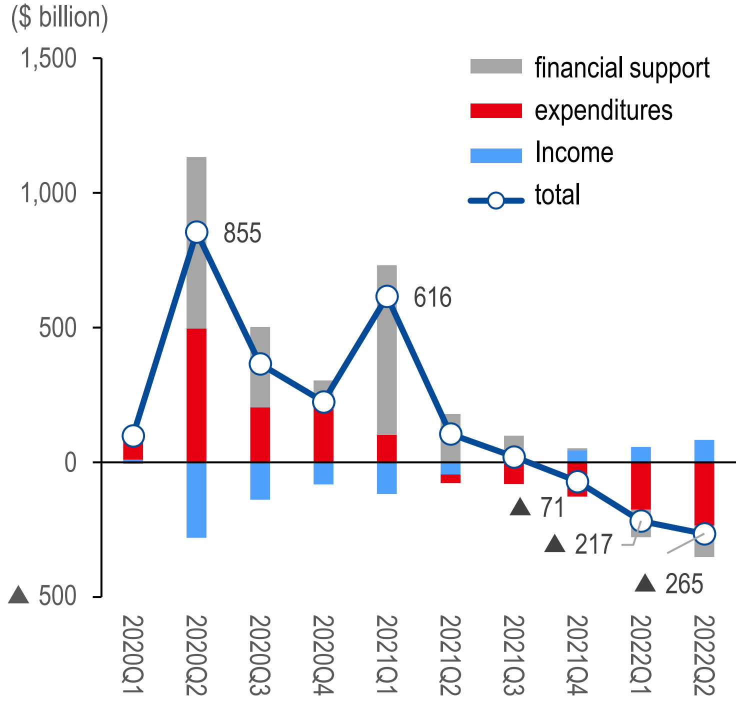
- As of Q2 2022 excess savings was about $1.7 trillion (about 10% of annual personal consumption) which was a decrease of about $0.3 trillion from the previous quarter. If the current pace continues, support for consumption from excess savings may dry up some time in the second half of 2023 with the feeling that an economic slowdown is taking place likely intensifying.
- During the recovery period from the Covid crisis the savings rate reached a historic low of 2.3% as a result of increased personal consumption in the absence of disposable income growth.

▽ Excess Savings (stock)



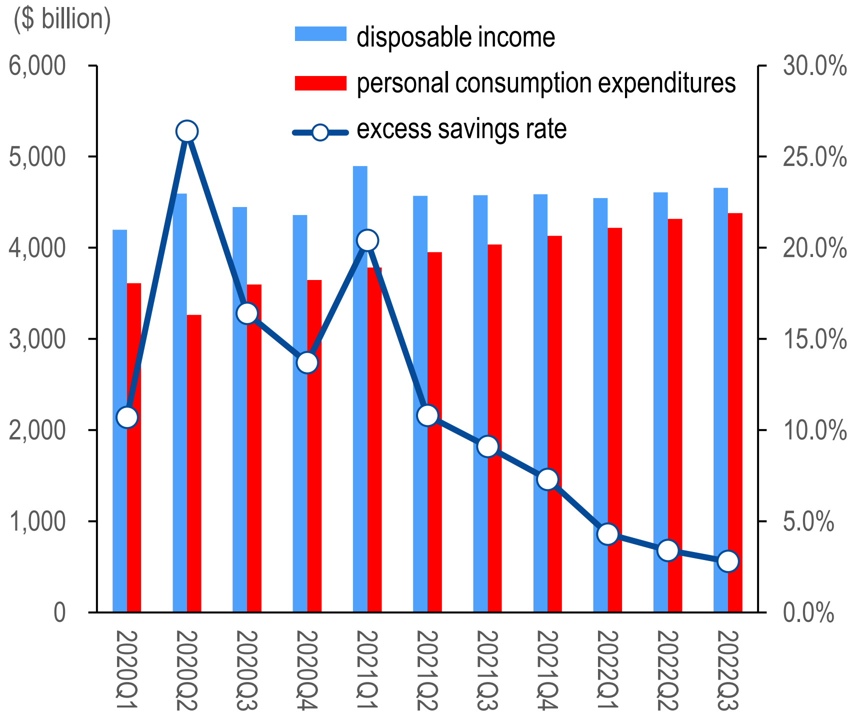
Source: FRB, (graph by the Marubeni Research Institute)

▽ Excess Savings (flow)



Source: FRB, (graph by the Marubeni Research Institute)

▽ Excess Savings Rate



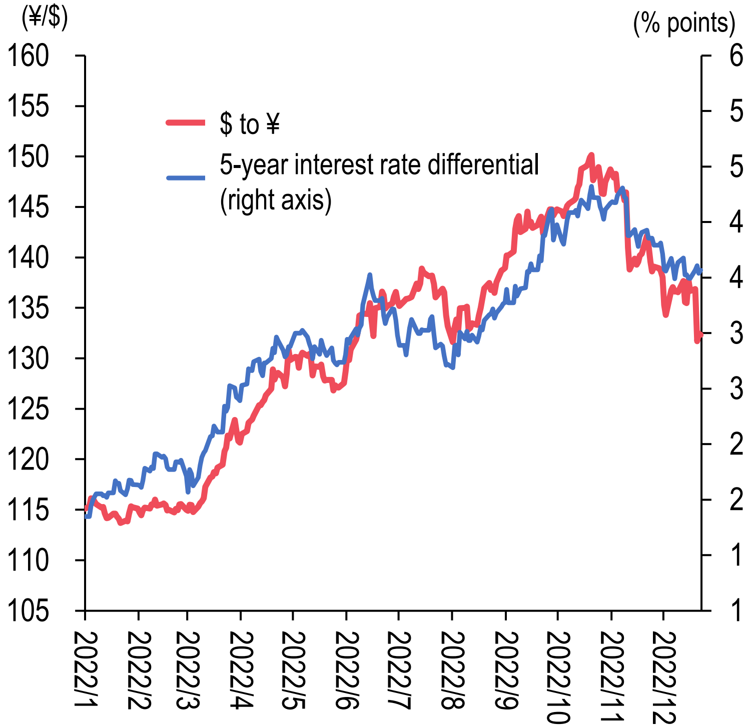
Source: FRB, (graph by the Marubeni Research Institute)

1-3. Economic Impact of Monetary Tightening (3): Exchange Rate Effects

Widening Interest Rate Differentials/Balance of Payment Trends Have Led to Yen Depreciation, Yen's Real Effective Exchange Rate Undervalued

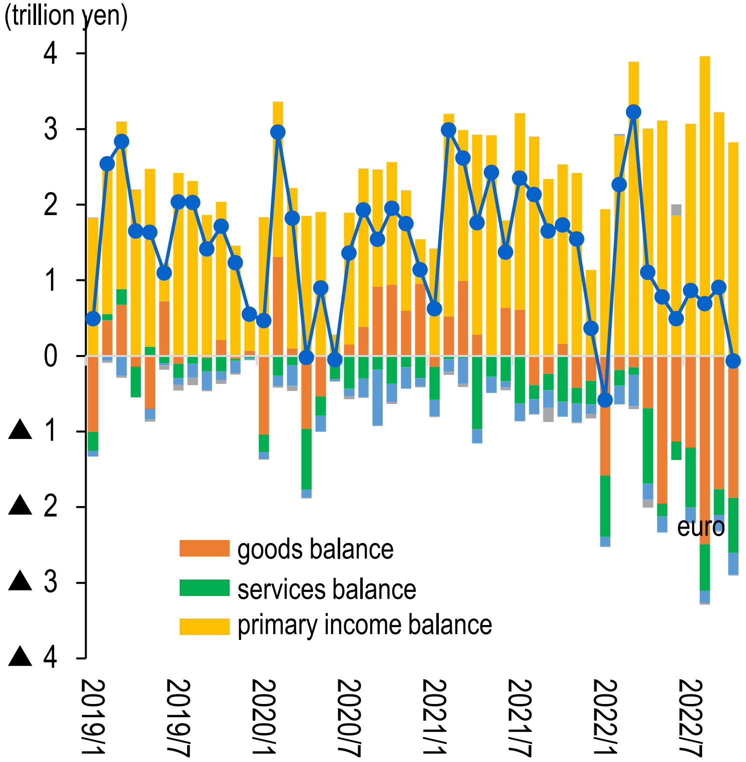
- In the short term, the widening Japan-U.S. interest rate differential connected to U.S. moves to normalize monetary policy and changes in balance of payments trends put pressure on the yen leading to its weakening against the U.S. dollar.
- The real effective exchange rate, which indicates the ability or competitiveness of a currency to trade in goods, is based on an assumed equilibrium exchange rate (long-term average) versus other currencies. In this respect, the U.S. dollar is currently overvalued and the Japanese yen is historically undervalued, and the yen's depreciation against the dollar is excessive in terms of arbitrage in trade in goods prices. By way of background, differences in economic growth rates, price inflation rates and the direction of monetary policy exist between the U.S. and Japan.

▽ $ to ¥/Japan - U.S. Interest Rate Differential



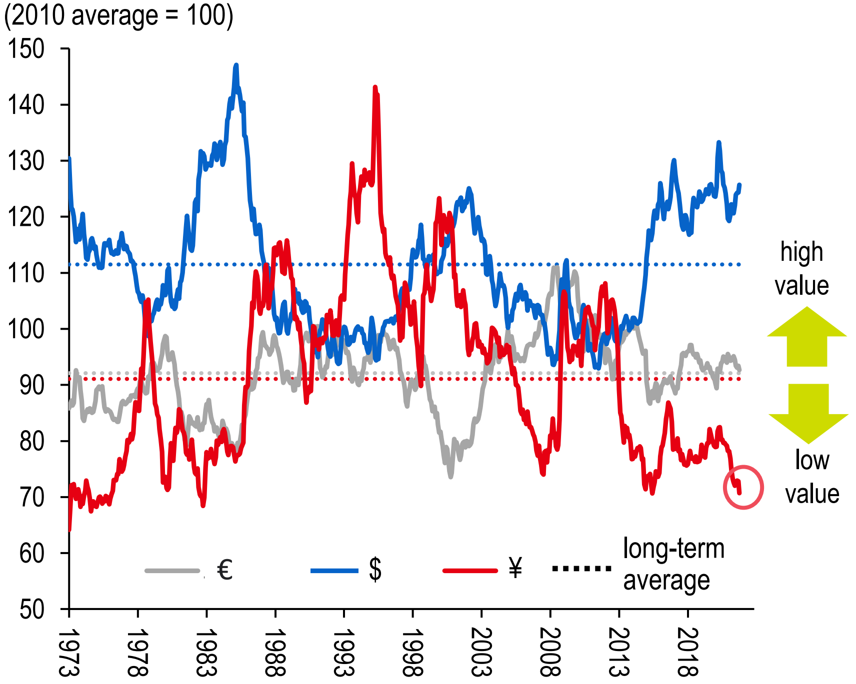
Note: The interest rate differential is U.S. government bond yield minus the Japanese government bond yield.
Source: Refinitiv, (graph by the Marubeni Research Institute)

▽ Japan's Balance of Payments



Source: Japan Finance Ministry, (graph by the Marubeni Research Institute)

▽ Real Effective Exchange Rates



Note: The real effective exchange rate is based on trade weight and a deflator (inflation) and indexed to other currencies. Data as of 11/2022
Source BIS, (graph by the Marubeni Research Institute)

1-3. Economic Impact of Monetary Tightening (4): Economic Trends in Emerging Economies
Interest Rate Hike Response On Pause in Various Countries, Watching Direction of U.S. Monetary Policy

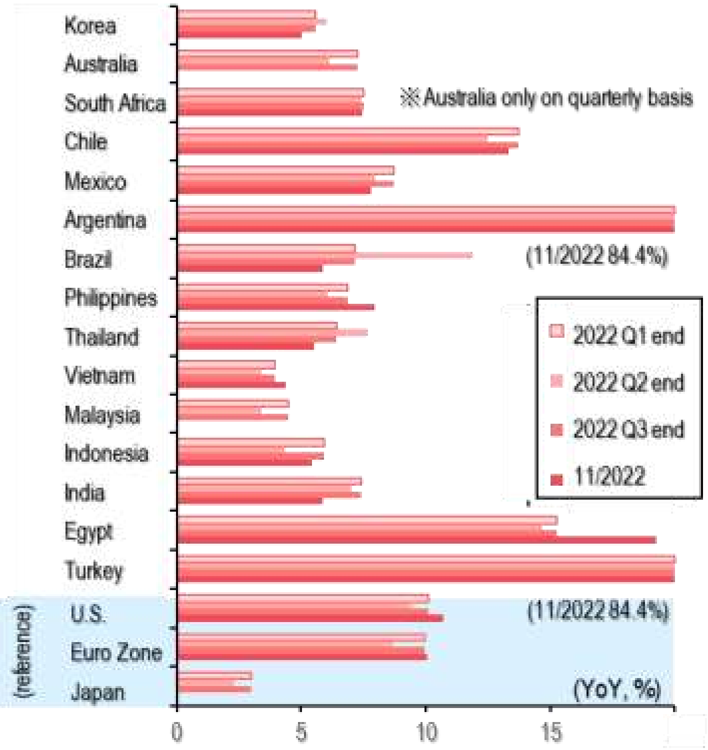
- As the U.S tightened monetary policy in 2022 other countries also began to initiate interest rate hikes. Some emerging economies may begin to cut interest rates over economic slowdown concerns.
- In numerous countries, inflation remains above their central banks' inflation targets (usually between 2% - 4%) mainly due to high resource and food prices, however, there are now signs of economic stagnation appearing.
- Fuel and food subsidies, price controls and other measures are being implemented in response to strong inflation and capital outflow concerns. Some countries are strengthening measures to attract inward investment.

▽ Policy Interest Rate Trends

Country	End 2022 Policy Int. Rate	Change from end 2021	End 2023 (JPM forecast)	Recent Trends, etc.
Korea	3.25%	+2.25%	3.50%	Fears over deteriorating real estate market, etc.
Australia	3.10%	+3.00%	3.35%	3.4% unemployment rate (50 year low)
South Africa	7.00%	+3.25%	7.25%	Inflation rate falling
Chile	11.25%	+7.25%	7.00%	Interest rate unchanged as of 12/22
Mexico	10.00%	+4.50%	10.75%	Interest rate continues rise from 6/22
Argentina	75.00%	+37.00%	–	IMF request, rate unchanged from 9/22
Brazil	13.75%	+4.50%	11.50%	Interest rate unchanged from 8/22
Philippines*	5.00%	+3.00%	5.75%	Interest rate exceeds pre-Covid crisis level
Thailand	1.25%	+0.75%	1.75%	Cautious stance on further tightening
Vietnam**	6.00%	+2.00%	–	Worries over dong's appreciation
Malaysia	2.75%	+1.00%	3.25%	Inauguration of new PM Anwar 11/22
Indonesia*	5.25%	+1.75%	5.75%	Strong economy fueled by resource exports
India	6.25%	+2.25%	5.75%	Signals end to interest rate hike cycle
Egypt***	14.25%	+5.00%	–	Announce shift to floating exchange rate (10/22)
Turkey	9.00%	▲5.00%	30.00%	Presidential election scheduled for 6/23

*Note 1: *borrowing rate, **re-finance rate, ***lending rate*
Note 2: Deficits projected at the end of 2023 are countries with interest rates below the level at the end of 2022
Sources: CEIC, JPM (table by the Marubeni Research Institute)

▽ Consumer Price Index (CPI)



Source: CEIC

▽ Responses by Country (non-monetary policy)

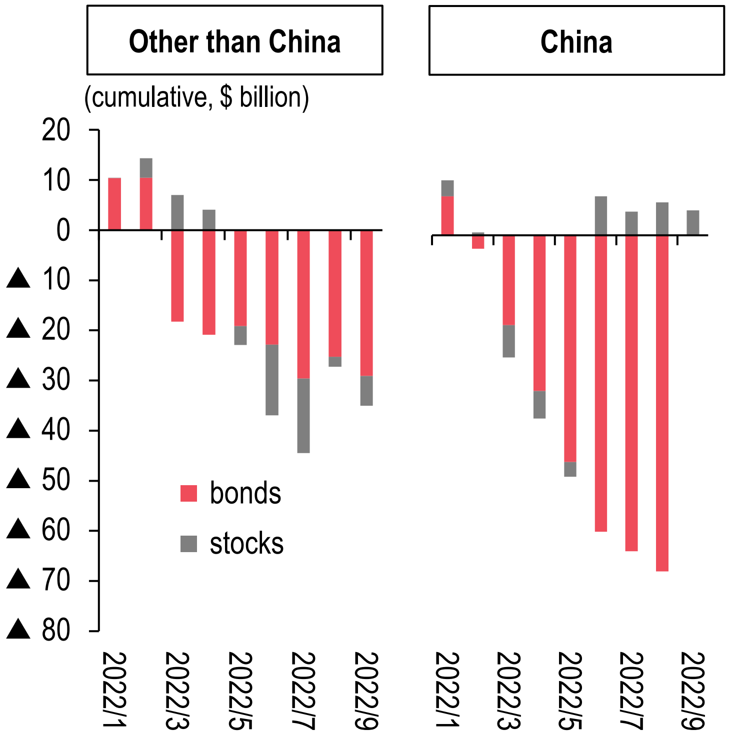
Country	Major Measure Implementation/ Planned Implementation
Korea	Foreign investor registration system abolished (11/22)
South Africa	Financial support for state-owned enterprises in the energy and other sectors
Chile	"Chile Investment Plan" announced including tax incentives for inward investment (9/22)
Mexico	Measures for rising inflation (PACIC): Food industry price reductions, export suspension agreement, etc.
Argentina	Preferential exchange rates applied by banks when converting foreign currency to the peso.
Brazil	Major spending plan being considered by new Lula administration
Philippines	Fuel subsidies for taxi drivers (jeepneys, three wheelers etc.), etc.
Thailand	Suppressed gas prices, diesel fuel subsidies (9/22-)
Vietnam	Price controls applied on major CPI items
Malaysia	Gasoline/diesel fuel subsidies (12/22-)
Indonesia	Fuel subsidies (reduced (9/22), release of food reserves, export restrictions and domestic supply priority for coal, palm oil, etc.
India	Food export restrictions, foreign investment incentives (regulatory mitigation, etc.)
Egypt	Agreed with IMF on $3 billion loan (announced shift to floating exchange rate system) (10/22), mandatory LC for import transactions fully lifted at end of 2022.
Turkey	Lira deposit protection measures (e.g., compensation for exchange rate fluctuation losses)

Sources Various media reports, official announcements (table by the Marubeni Research Institute)

1-3. Economic Impact of Monetary Tightening (5): Emerging Economy Capital Outflows
Capital Outflows/Currency Depreciation in Emerging Markets as U.S. Tightens Monetary Policy

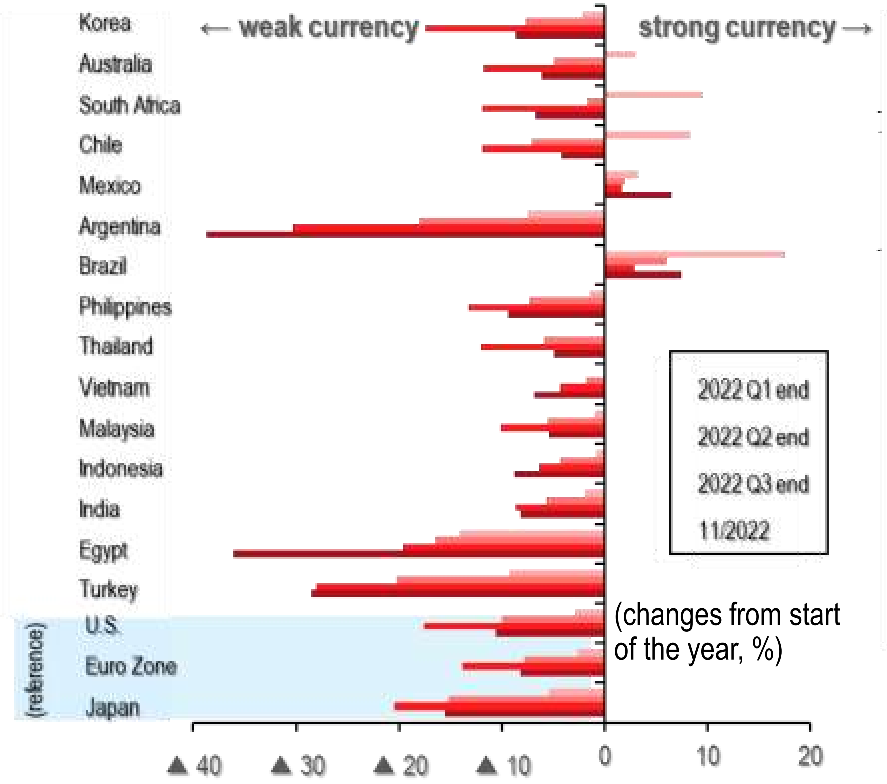
- Capital outflows are occurring mainly in local currency-denominated bond markets of emerging economies. However, it has been limited compared to 2013 when it was announced that U.S. monetary easing would be cut back.
- Central banks in various emerging economies continued to raise interest rates in 2022, however, their currencies generally weakened against the dollar. The situation will continue to depend on the direction of U.S. monetary policy.
- Currency depreciation in a number of countries is partly due to widening trade deficits caused by high resource and food prices. There is currency depreciation pressure generated countries that are net importers of resources and food.

▽Emerging Economy Bond/Stock Market Capital Flows



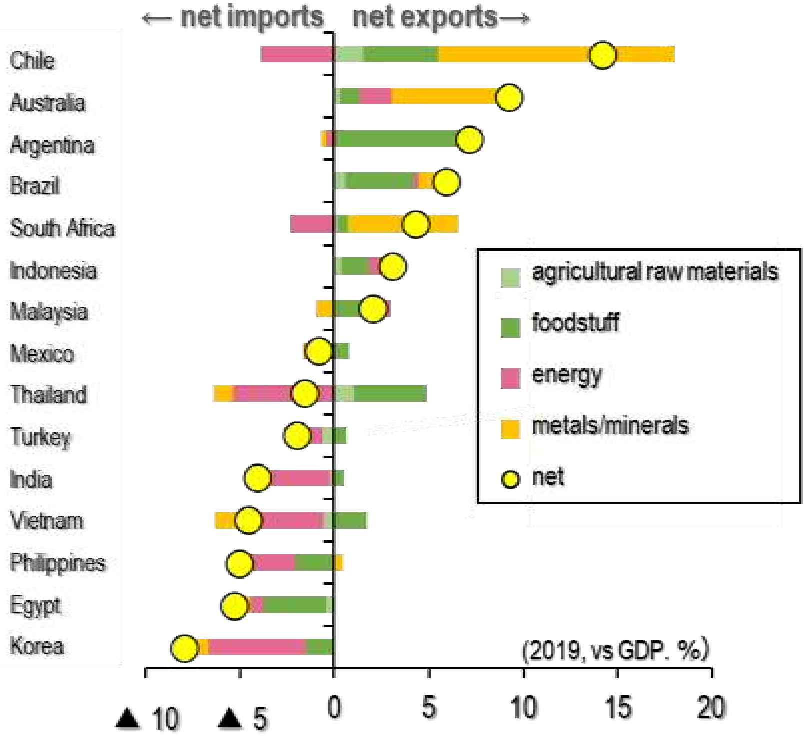
Note: Bonds denominated in local currency
Source: IMF "International Financial Stability Report (10/2022)

▽Emerging Economy Currencies (vs $)



Source: Refinitiv

▽Resources/Food Net Imports/Exports



Note: Net shows the trade balance for the above items
Source: IMF, World Bank (graph by the Marubeni Research Institute)

1-3. Economic Impact of Monetary Tightening (6): Emerging Economy Sovereign Risk
Rising Cost of External Debt Repayments Due to Stronger Dollar/Higher U.S. Interest Rates

- ① Higher debt repayment costs due to stronger dollar/higher U.S. interest rates and ② higher import costs due to higher energy and food prices to weigh on emerging economy finances.

▽ **Sovereign risk-related indicators for major emerging economies (red: high risk to green: low risk)**

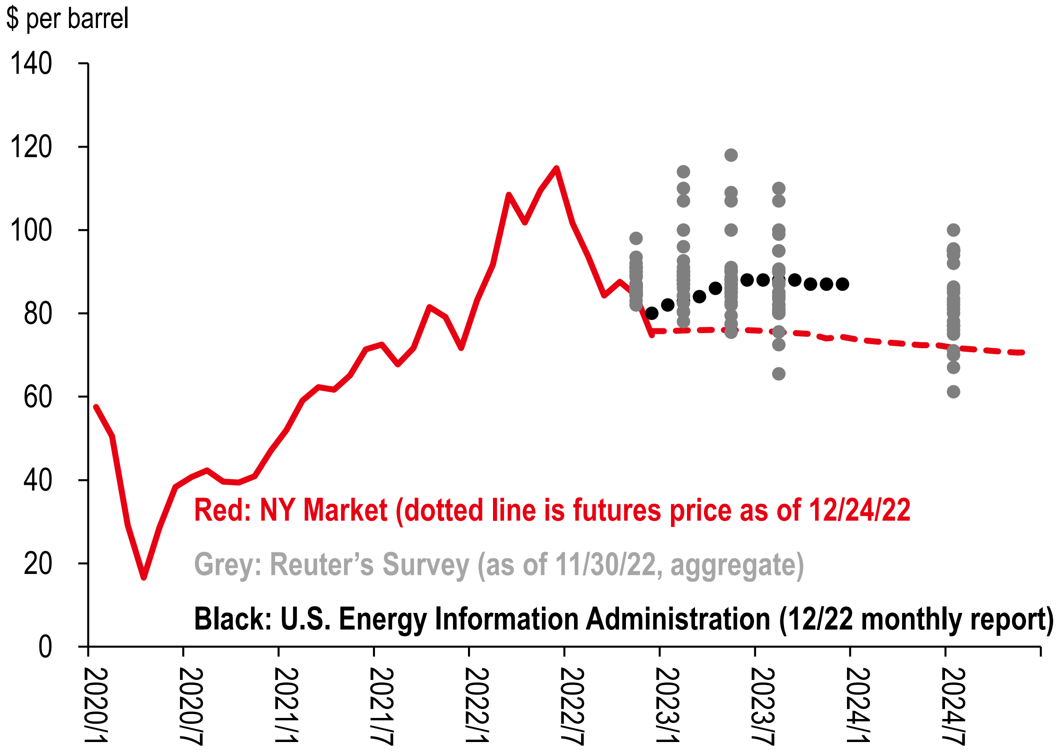
Indicators	CFR Index	Balance of Payments (vs GDP, %)	Fiscal Balance (vs GDP, %)	Foreign Debt (vs GDP, %)	Foreign Currency to Foreign Debt Ratio (%)	Foreign Currency Reserves to Short-Term Foreign Debt Ratio	Import Payments (# of months)	Political Stability Index	CPI YoY, %)	5-Year CDS	S&P	Ratings Moody's	Fitch
Reference Period	2021	2021	2021	12/2021	12/2021	2021	2021	2020	10/2022	11/2022			
China	0	1.8	▲ 6.1	15.3	-	2.0	14.7	▲ 0.3	2.1	80.19	A+	A1	A+
Korea	-	4.9	▲ 0.0	36.1	68.2	1.9	-	0.6	5.7	50.50	AA	Aa2	AA-
Indonesia	1	0.3	▲ 4.6	34.8	-	2.1	8.4	▲ 0.5	5.7	96.05	BBB	Baa2	BBB
Vietnam	1	▲ 2.0	▲ 3.5	-	-	2.4	4.0	▲ 0.1	4.3	148.15	BB+	Ba2	BB
Philippines	1	▲ 1.8	▲ 6.5	27.9	96.7	5.5	12.3	▲ 0.8	7.7	91.12	BBB+	Baa2	BBB
Thailand	0	▲ 2.2	▲ 7.0	39.1	68.2	2.8	12.1	▲ 0.6	6.0	66.32	BBB+	Baa1	BBB+
Malaysia	0	3.8	▲ 5.5	70.9	-	0.9	6.3	0.1	4.0	75.28	A-	A3	BBB+
India	1	▲ 1.2	▲ 10.0	19.5	68.9	2.2	12.9	▲ 0.9	6.8	80.54	BBB-	Baa3	BBB-
Turkey	7	▲ 1.7	▲ 3.9	55.1	96.5	0.6	4.6	▲ 1.2	85.5	527.36	B	B3	B
Egypt	8	▲ 4.4	▲ 7.0	37.3	-	2.7	-	▲ 1.2	16.3	781.87	B	B2	B+
South Africa	2	3.7	▲ 6.0	41.5	49.0	1.0	7.1	▲ 0.2	7.6	240.25	BB-	Ba2	BB-
Brazil	2	▲ 1.7	▲ 4.4	41.7	77.9	2.3	14.9	▲ 0.4	6.5	254.86	BB-	Ba2	BB-
Argentina	10	1.4	▲ 4.3	56.6	96.9	0.4	7.1	0.0	88.0	-	CCC+	Ca	CCC-
Mexico	1	▲ 0.4	▲ 3.8	47.0	65.0	2.5	5.2	▲ 0.9	8.4	130.18	BBB	Baa2	BBB-
Czech	0	▲ 0.9	▲ 5.9	-	-	-	11.3	0.9	15.1	45.40	AA-	Aa3	AA-
Poland	1	▲ 0.7	▲ 1.9	53.6	66.5	1.0	5.6	0.6	10.4	129.83	A-	A2	A-
Hungary	3	▲ 3.2	▲ 6.8	149.8	86.7	1.5	3.5	0.9	13.7	216.68	BBB	Baa2	BBB
Romania	4	▲ 7.0	▲ 6.9	53.3	87.5	0.9	5.5	0.6	6.8	292.21	BBB-	Baa3	BBB-

*Note: *CFR Index CFR is a U.S. think tank that independently calculates sovereign risk based on eight indicators (range 0-10, with higher numbers indicating higher risk)*
**Political Stability Index: The World Bank's assessment of the "likelihood of government destabilization or overthrow by violent means, etc." (range: -2.5 to 2.5 with higher numbers indicating greater stability)*
**CDS is the spread value (= CDS guarantee rate) +Credit ratings are for long-term foreign currency denominated debt as of 8/31/2022. Ratings in red are below investment grade (BBB-, Baa3).*
Sources: IMF, World Bank, Refinitiv, CFR (table by the Marubeni Research Institute)

1-4. Commodity Price Outlook (1): Crude Oil
Strong Downward Price Pressure Due to Economic Slowdown, but Also Supportive Factors

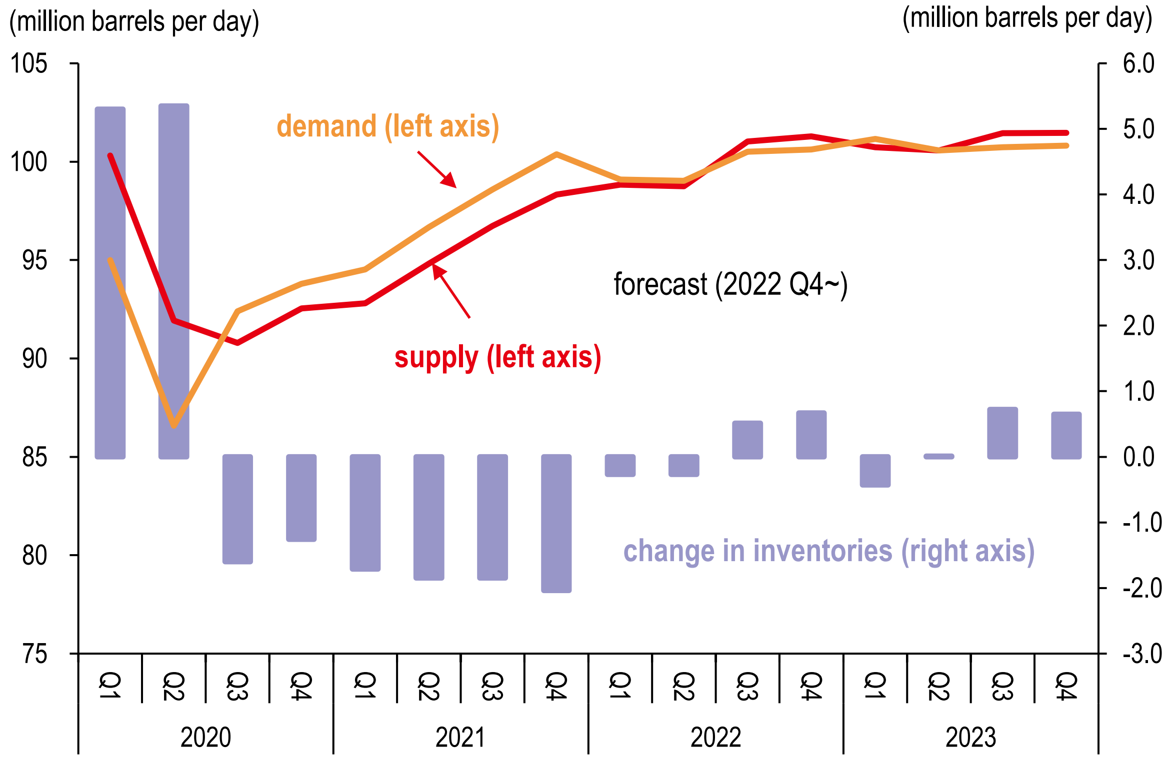
- Sluggish demand growth due to the global economic downturn and risk-off trends are also expected to exert downward pressure on prices in the near term. On the other hand, there are such supply contraction factors as OPEC-plus production cuts, shrinking Russian exports, and stagnant growth in U.S. production. We expect prices to decline going forward, albeit modestly, owing to uncertainty over sanctions against Russia mainly in Europe and the U.S., low OECD inventories, and concerns about slowing upstream investment amid decarbonization efforts.

▽WTI Price Outlook



Sources: Refinitiv, EIA, Marubeni Research Institute

▽ World Crude Oil Supply and Demand Balance



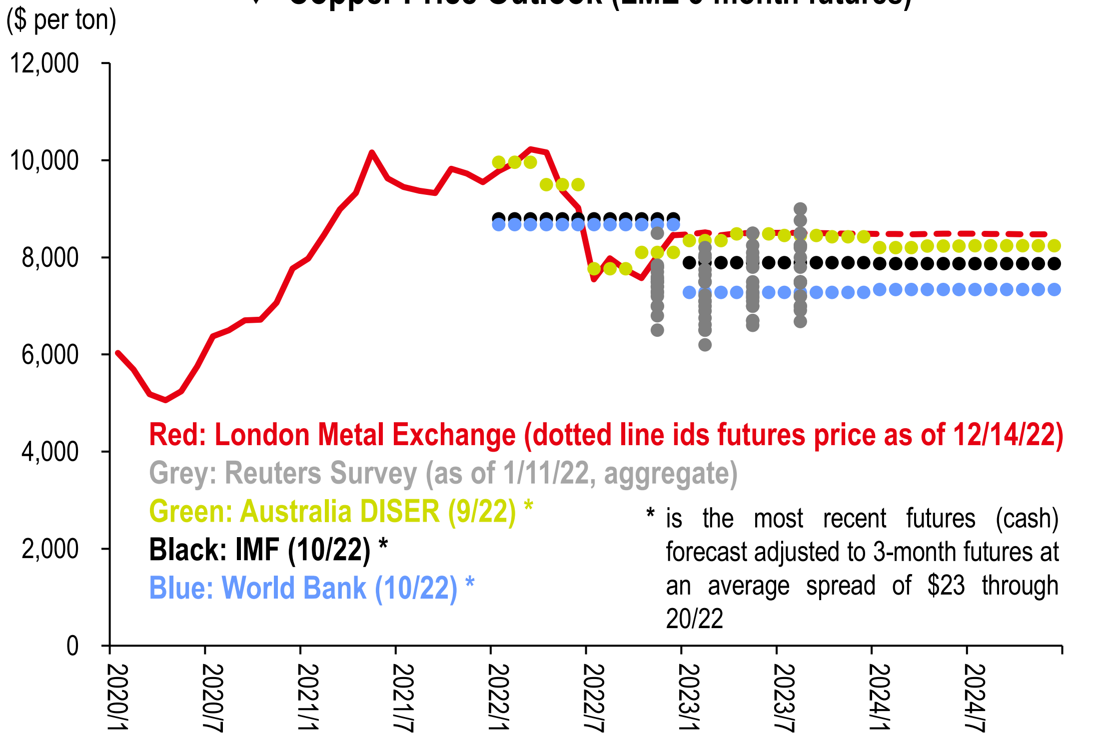
Source: EIA "Short-Term Outlook December 2022" (graph by the Marubeni Research Institute)

1-4. Commodity Price Outlook (2): Copper

Price Declines as World/Chinese Economies Slow, but Downside Limited Due to Demand Boost from the Energy Transition

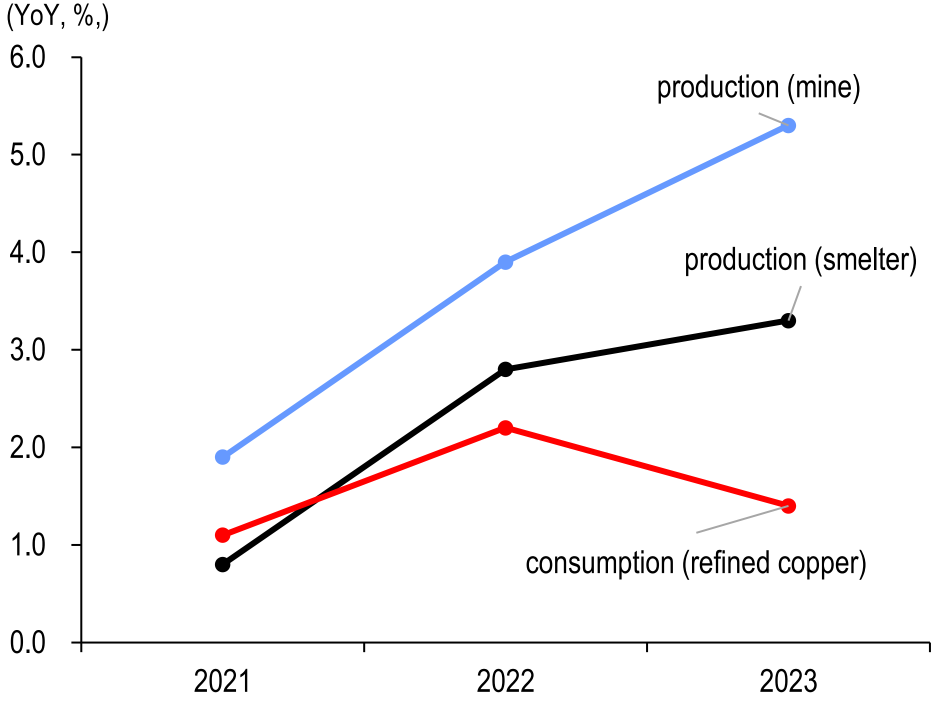
- Demand for refined copper has fallen off as a result of the global (especially Chinese) economic slowdown with supply now outstripping demand. Mine production is expected to increase significantly in Chile, Peru, and DR Congo. On the other hand, the downside is limited as a consequence of rising energy and labor costs, expectations of increased demand for energy conversion (transition) applications, increased costs related to reducing environmental impacts during production, and concerns over diminished long-term production due to deteriorating production conditions in major producing regions.

▽ **Copper Price Outlook** (LME 3-month futures)



Sources: Refinitiv, IMF, World Bank, Australian Department of Industry, Science, Energy and Resources (DISER), Marubeni Research Institute

▽ **World Copper Production/Consumption Outlook**



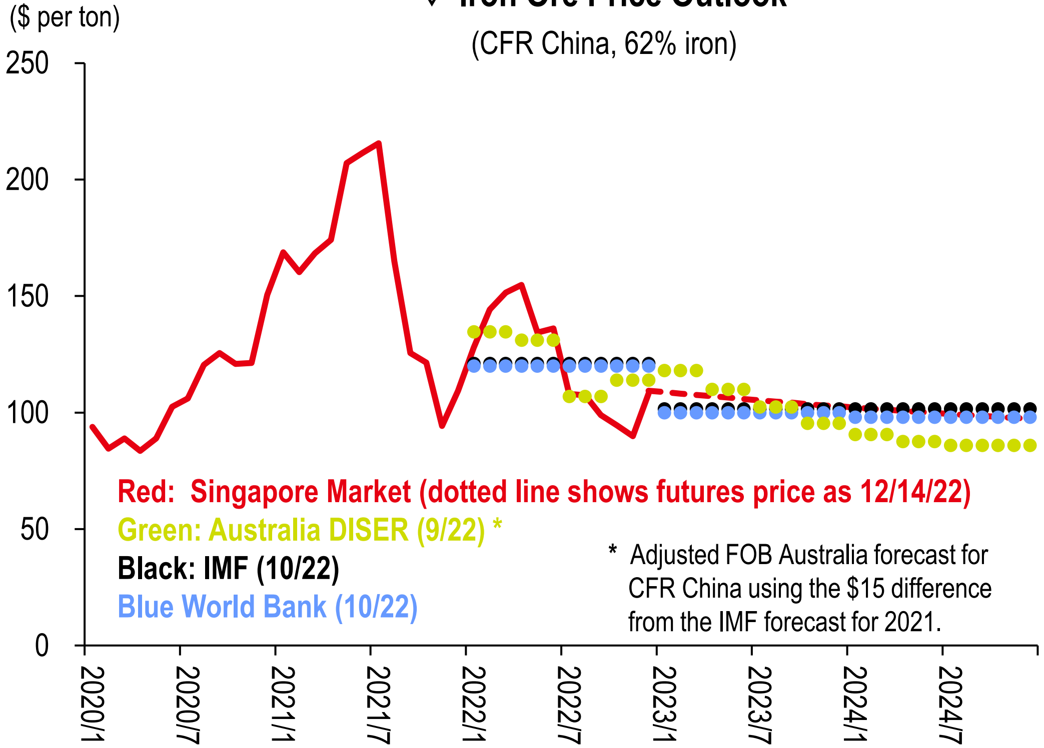
Source: International Copper Study Group's (ICSG) "Copper Market Forecast 2022/2023 (10/2022)

1-4. Commodity Price Outlook (3): Iron Ore/Coking Coal
Global Crude Steel Production Slightly Recovers, but Soft Owing to Sluggish Steel Demand

- Global crude steel production has picked up a bit, but blast furnace production growth has been sluggish. Weak steel demand and China's measures to curb steel production also weigh on prices.
- Iron ore supply has risen due to higher production in Brazil and Australia and a recovery in Ukrainian production, while import demand was weak and oversupply expanded.
- In terms of coal, a respite in the surge of coal prices and sluggish import demand will put downward pressure on prices, however, the downward pressure on Australian coal prices will be limited due to the continued avoidance of Russian coal purchases. The main factors related to price fluctuations are China's embargo on Australian coal, the La Niña phenomenon, and Australian coal shipment disruptions stemming from strikes and other factors.

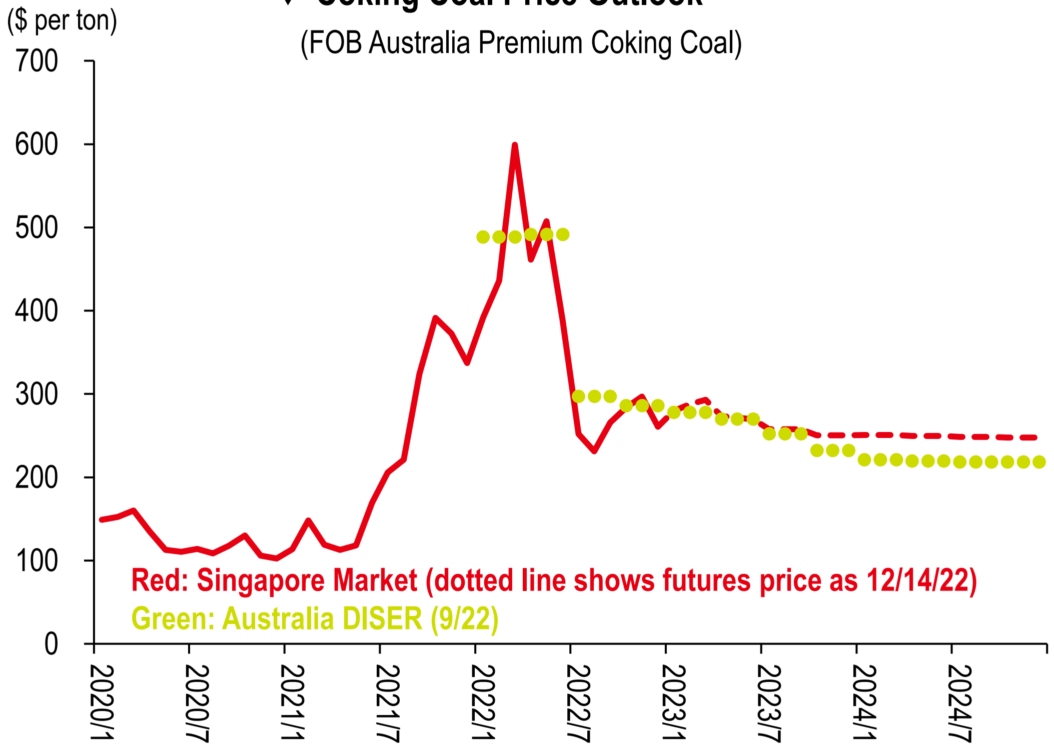
▽ Iron Ore Price Outlook

(CFR China, 62% iron)



▽ Coking Coal Price Outlook

(FOB Australia Premium Coking Coal)

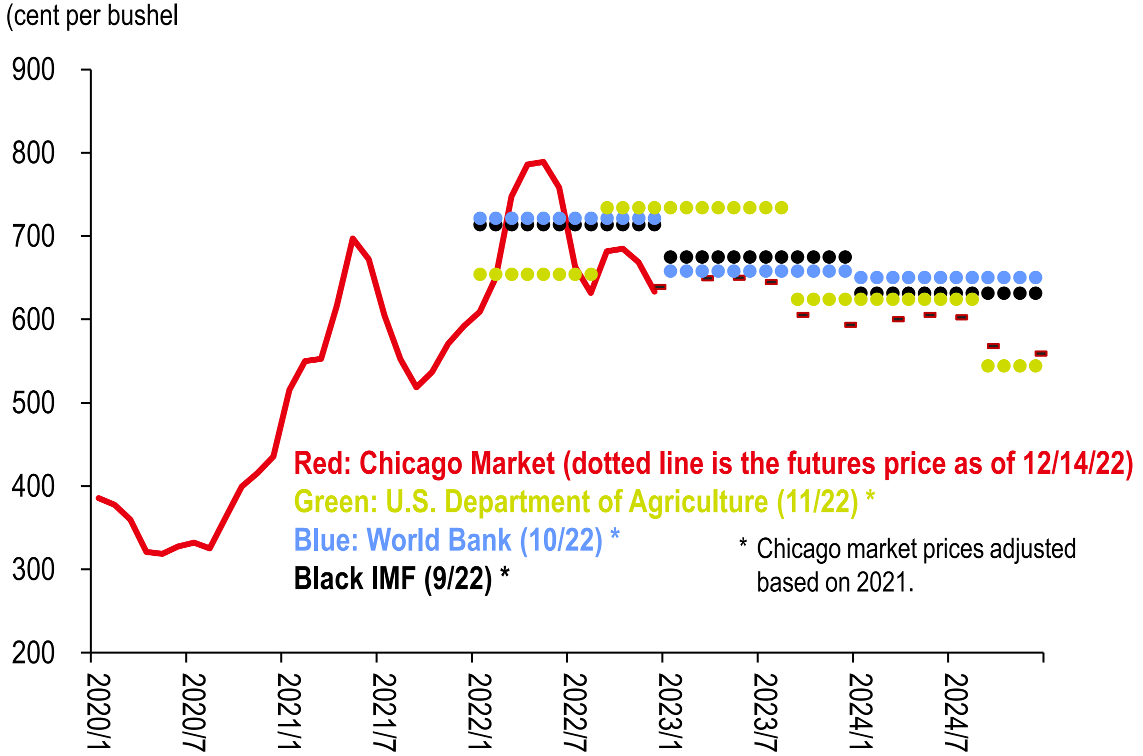


Sources: Refinitiv, IMF, World Bank, Australian Department of Industry, Science, Energy and Resources (DISER), Marubeni Research Institute

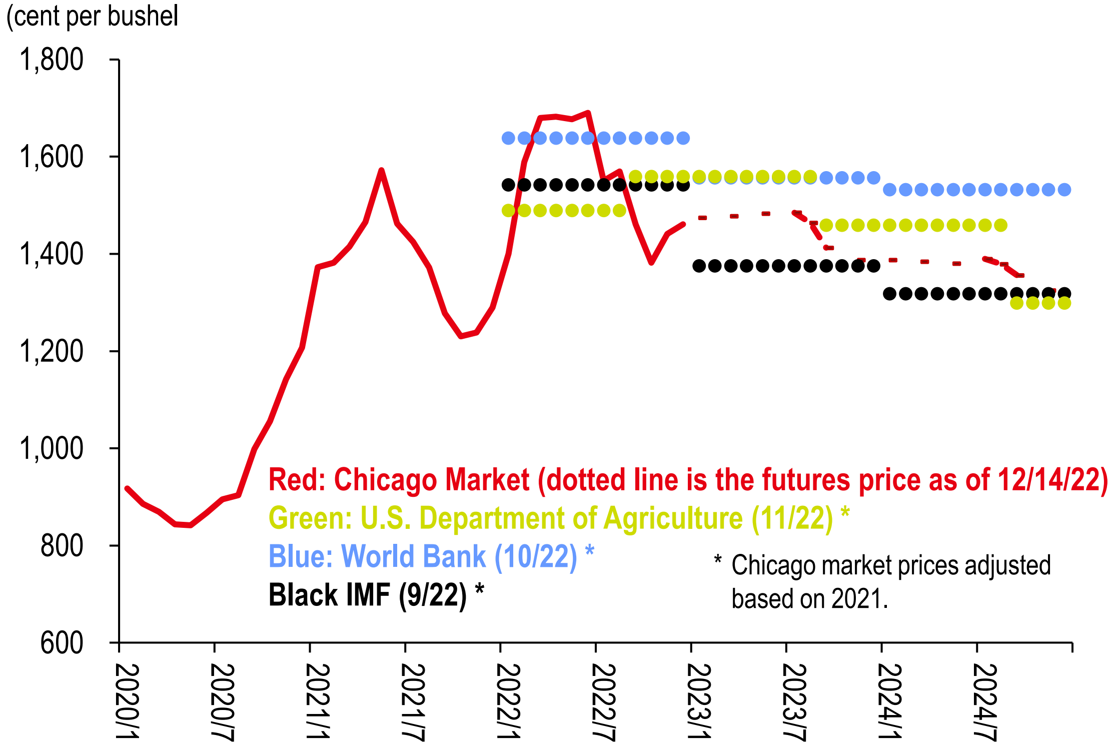
1-4. Commodity Price Outlook (3): Corn/Soybeans
Price Softens Due to Lessening Impact From Ukrainian Crisis/Easing in Supply and Demand

- Upside price factors from the Ukrainian crisis have eased for both corn and soybeans. Prices will still be bolstered though, by low U.S. inventory levels and weather factors in North American grain producing regions through the summer. However, prices will come under downward pressure in the next fiscal year, which begins in September, due to higher ending inventories.
- In terms of corn, the South American corn crop is the best ever and U.S. corn acreage is also expanding. Yet demand for ethanol is sluggish due to softening crude oil prices.
- As for soybeans, Chinese imports will expand but demand for U.S. soybeans will slow as South American production will expand significantly.

▽ Corn Price Outlook



▽ Soybean Price Outlook

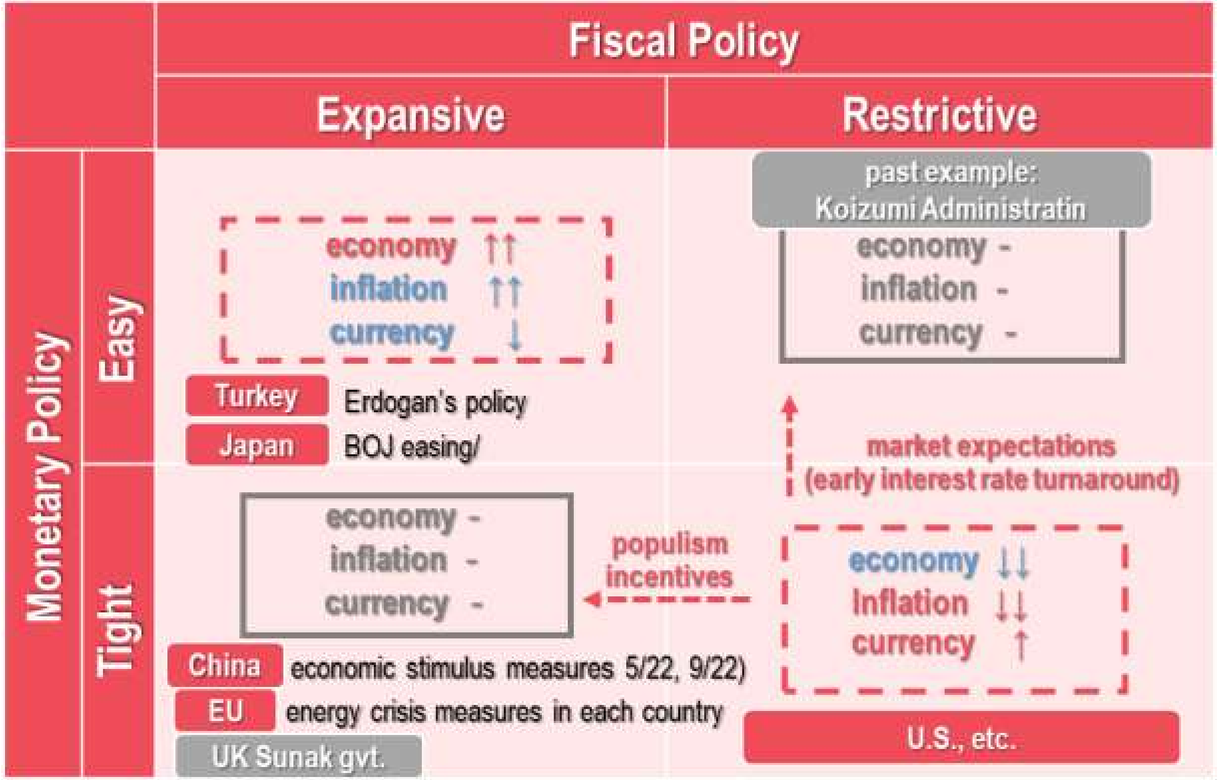


Sources: Refinitiv, IMF, World Bank, U.S. Department of Agriculture, Marubeni Research Institute

1-5. Risk Factors (1): Failed Government Policy Responses
Risk of Policy Response Failure Increases if an Economic Downturn Leads to “Inward-Looking” Politics

- The coexistence of high inflation and fears of an economic downturn further heightens the need for balanced monetary and fiscal policies. For the time being, monetary and fiscal management will continue to be inflation-focused and tight, however, if economic slowdown concerns become prevalent there will be incentive for stimulus measures.
- Momentum for international cooperation is weak due to the growing confrontation between the U.S. and China and the burgeoning influence of authoritarian countries. If the political climate becomes more "inward-looking" or self-centered amid growing fears of recession in major countries, international coordination on monetary policy and other areas will weaken with the risk of discrepancies in crisis and other responses as well.

▽ Monetary/Fiscal Policy Balance



Source: Marubeni Research Institute

▽ Concern Over International Policy Coordination Failure

[Strong dollar exchange rate] U.S./non-U.S. (especially emerging economies)
U.S. monetary tightening has led to capital outflows and currency depreciation, particularly in emerging economies. The G20 finance ministers and central bank governors' meeting (10/22) saw differing and conflicting opinions on the matter.

[EU Inflation Control and Energy Crisis] EU/EU member states
The European Commission noted that if countries' energy crisis measures function as fiscal stimulus, they would run counter to the ECB's tightening measures to curb inflation

[Debt Restructuring Negotiations] Debtor countries/creditor countries (especially China)
Such countries as Sri Lanka and Zambia, etc., that are in default, have begun negotiations on debt restructuring. However, there have been some difficulties in entering negotiations with China, a major creditor country.

[Energy Supply Difficulties] Oil producing countries (OPEC Plus/oil consuming countries
The U.S. opposes the October 22 OPEC Plus production cut agreement. The Russian produced oil price cap measure may cause dissatisfaction in oil-producing countries as price intervention by consuming countries.

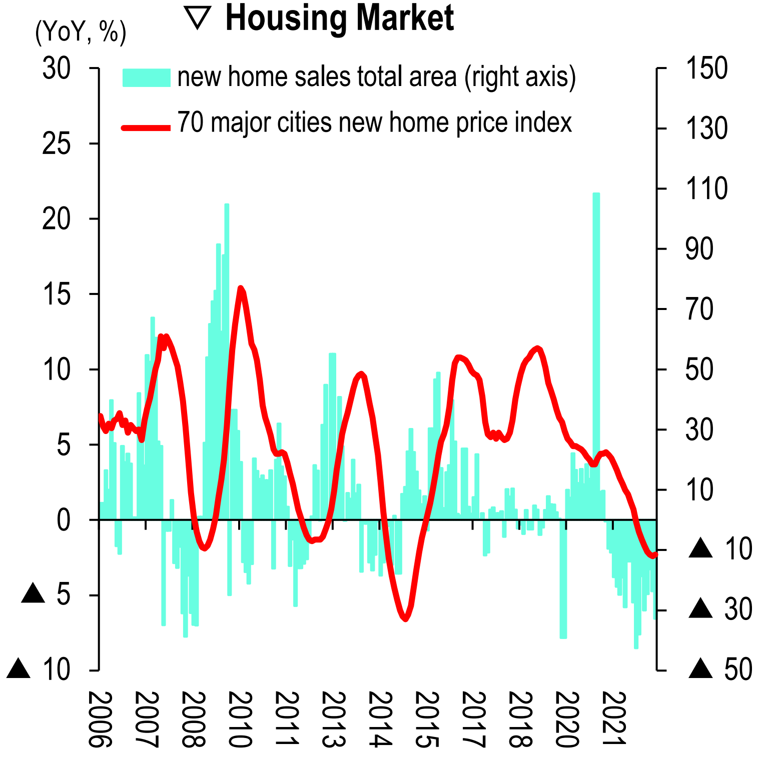
[Food/Fertilizer Assistance for Low-Income Countries] Russia/Europe, U.S.
The World Food Program (WFP) has warned of a worsening in the food crisis in 2023. Meanwhile, Russia is causing problems over the agreement on Ukrainian agricultural exports and other issues.

Source: Marubeni Research Institute

1-5. Risk Factors (2): China's Economy/Real Estate Market Risks
China's Depressed Housing Market Weighs on the Economy

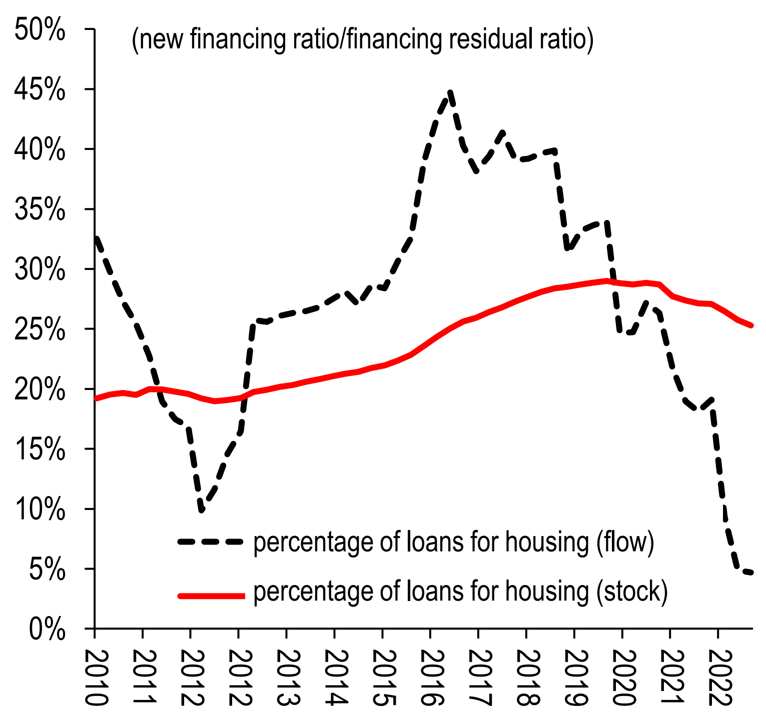
- China's housing sector facing its most problematic situation since its transition to market-based transactions in the late 1990s. There has been a significant and prolonged drop in sales with prices continuing to fall.
- Since 2016, the government has strictly regulated the total volume of mortgages and loans as a bubble control measure. Lending for housing has shrunk in terms of both flows and stock
- Although a market recovery is expected to be supported by measures aimed at leveraging the residential housing sector, the recovery is not expected to be strong due to the lack of significant easing of bubble suppression measures.

▽ Housing Market



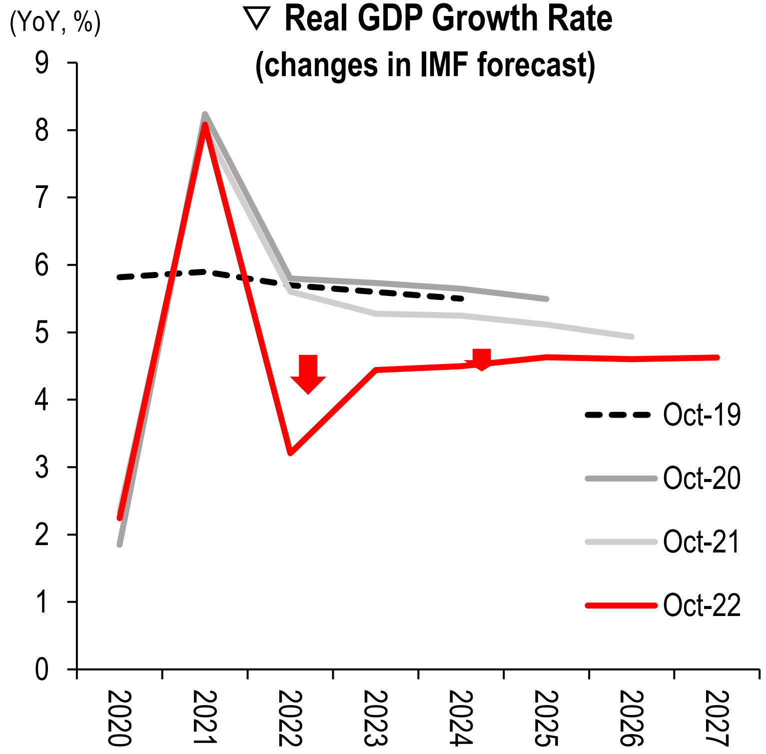
Source: China's Central Statistics Bureau Most recent: 11/2022

▽ Percentage of Housing Loans



Source: China's Central Statistics Bureau Most recent: 7-9/2022

▽ Real GDP Growth Rate (changes in IMF forecast)



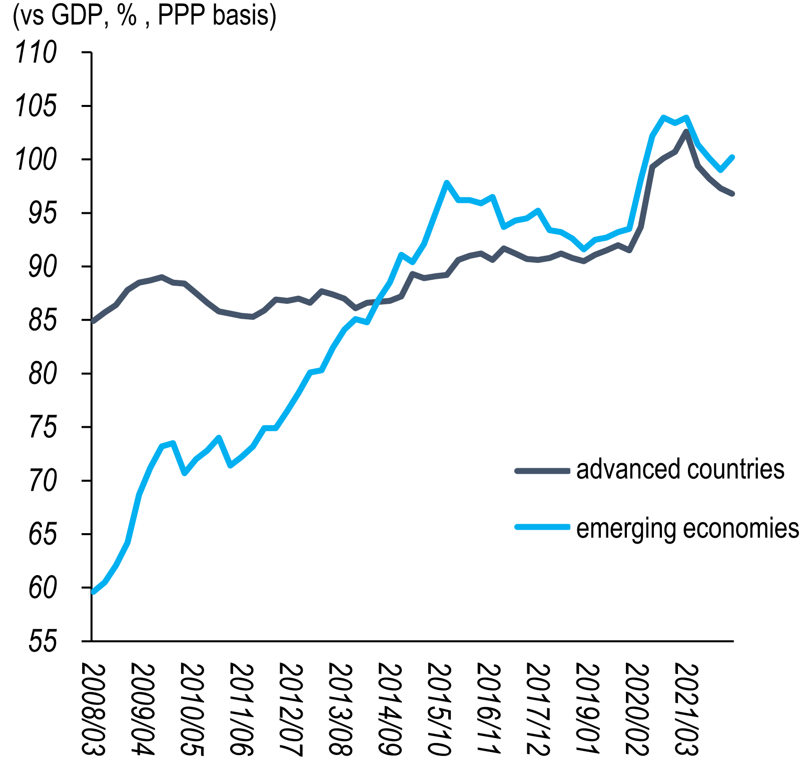
Source: IMF

1-5. Risk Factors (3): Impact on Corporate Debt

Protracted High Inflation Increases the Default Risk of Vulnerable Firms Whose Lives Were Extended During the Covid Crisis

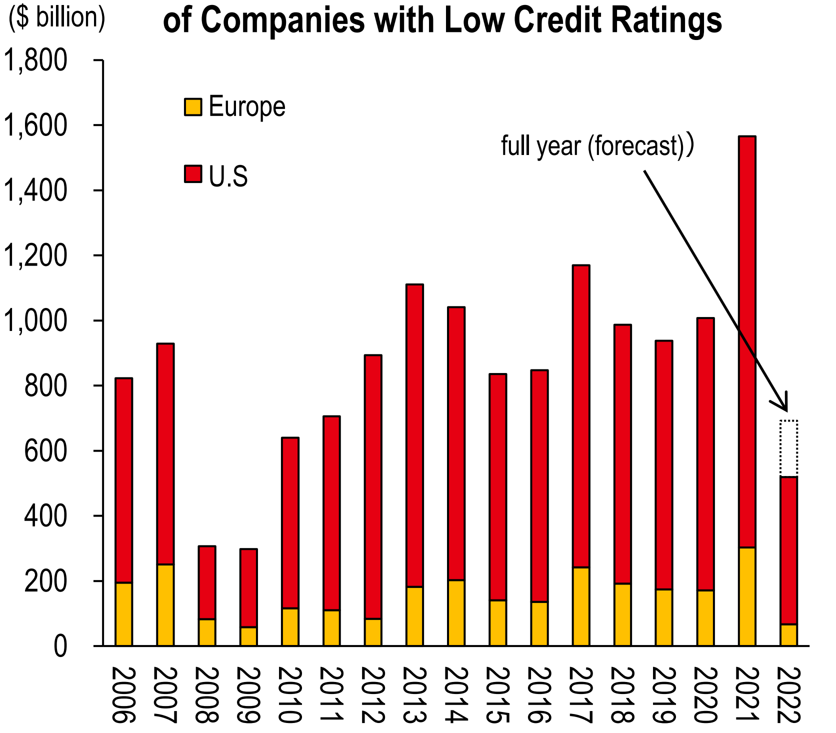
- While government and central bank Covid support measures reduced the risk of corporate default, corporate debt has now ballooned to record levels.
- Subsequently, soaring energy and raw material prices and rising wages put pressure on earnings while the financing climate has worsened due to monetary tightening and recession fears.
- Prolonged high costs raise the risk of default through deteriorating corporate profitability and lead to an increase in bankruptcies of companies whose existence was extended during the Covid crisis (Covid loans, etc.).

▽ Outstanding Corporate Debt



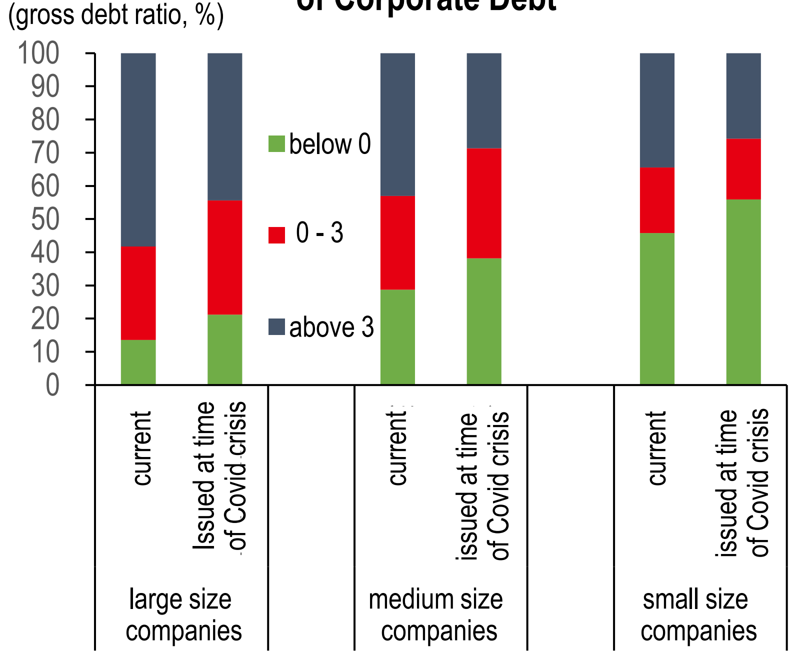
Note: Based on BIS regional classification excluding the financial sector.
Source: BIS (graph by the Marubeni Research Institute

▽ U.S./Europe: Debt Issuance Status of Companies with Low Credit Ratings



Note: Total of corporate bonds issued by less than investment grade companies (high yield bonds) and loans to these companies (leveraged loans).
Source: IMF "International Financial Stability Report (10/2022)

▽ Interest Coverage Ratio Classification of Corporate Debt

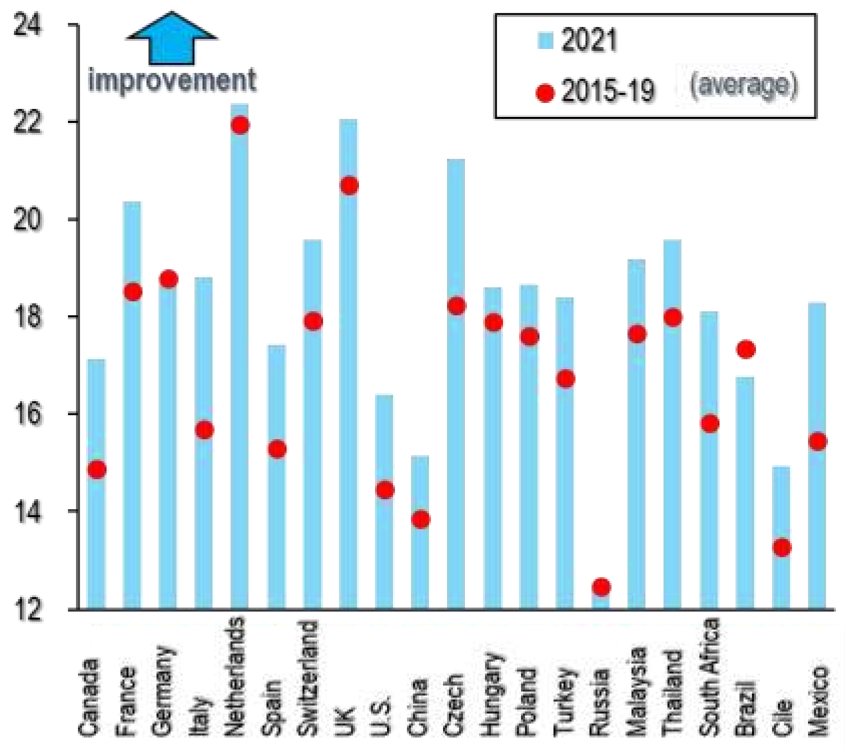


Note: The interest coverage ratio is an index of net income before interest and taxes divided by interest expense. The above chart is the result of sensitivity analysis by the IMF as of October 2022. "At time of Covid crisis" is estimated in reference to the high inflation of the 1970s-80s.
Source: IMF "International Financial Stability Report (10/2022)

1-5. Risk Factors (4): Banking Sector Health Improves
Global Financial System Instability is Unlikely, but Emerging Market Banks Have Relatively Higher Vulnerability

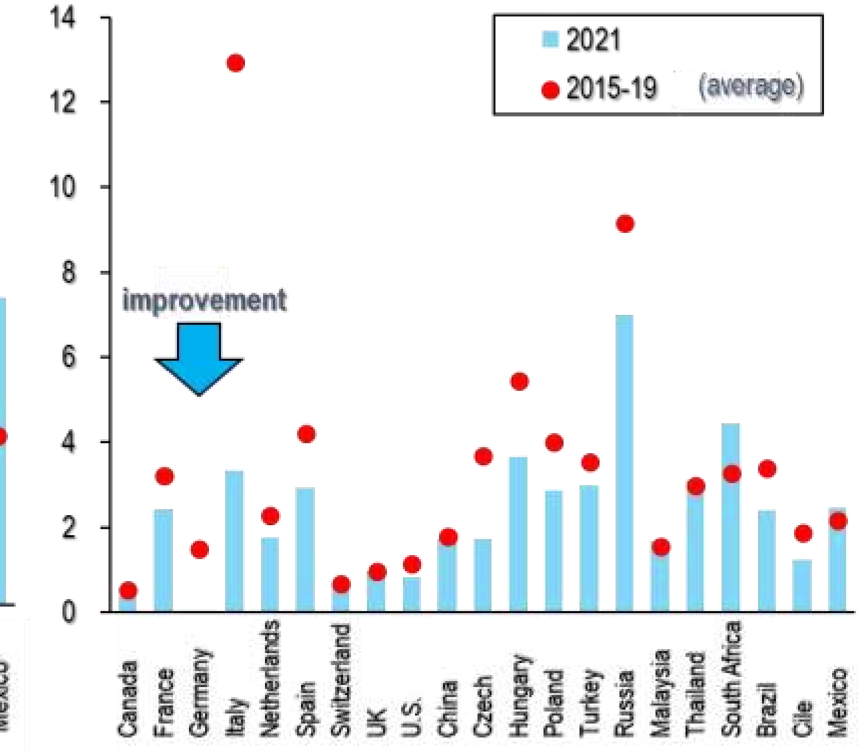
➢ The banking sector's financial health has improved across the board over the past decade. Global monetary tightening, in some respects, is having a positive impact on banks' interest income. According to IMF stress tests, the banking sector in most countries has sufficient capital to withstand severe stagflation (i.e., absorb losses), but about 30% of banks in emerging countries are expected to fall below the lower limit of capital adequacy regulations (CET1 ratio of 4.5%).

▽ **Banks' Capital Adequacy Ratio (vs risk assets)**



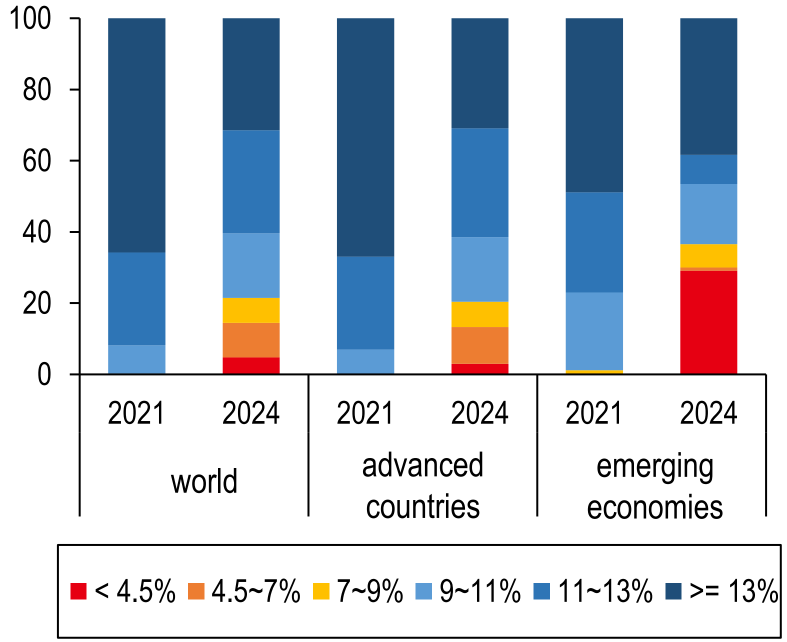
Source: IMF, (graph by the Marubeni Research Institute)

▽ **Non-Performing Loan Ratio *(vs all loans)***



Note: 2021 data for Germany has not been published yet.
Source: IMF, (graph by the Marubeni Research Institute)

▽**IMF Stress Test Results: By Capital Adequacy Ratio (see note) Classification**



Note: Capital adequacy ratios are on a CET1 (Common Equity Tier 1) basis, based on the IMF stress scenario published in October 2022 (assuming stagflation in 2023 and negative growth rates in both advanced and emerging economies).
Source: IMF "International Financial Stability Report (10/2022)

1-6. 2023 Main Political/Economic Schedule
G7 Chaired by Japan, G20 by India, and APEC by the U.S.

▽ Country/Region

Date	Region	Event
January13-14	Europe/CIS	Czech presidential election
January 21-27	Asia	Chinese new year holidays
January	Asia	Ordinary session of the Diet (Japan)
February 5	Europe/CIS	Cyprus presidential election
February 24	Europe/CIS	1-year mark of the Russian invasion of Ukraine
February 25	Africa	Nigeria presidential/parliamentary elections
March 5	Europe/CIS	Estonia parliamentary election
March 22-April 20	World	Ramadan (month of fasting)
March	Asia	National People's Congress (China)
by March	Latin America	Cuba parliamentary election
April 2	Europe/CIS	Finaland parliamentary election
April 9-23	Asa	Japan nationwide local elections
May 6	Europe/CIS	Official coronation of King Charles III (UK)
June 8	Europe/CIS	Greece parliamentary election
June18	Europe/CIS	Turkey presidential/parliamentary elections
June 25	Latin America	Guatemala presidential/parliamentary elections
June 30	World	LIBOR completely abolished
July 23	Asia	Thailand general election
by August	Asia	Myanmar general election
Sept. 8-Oct. 28	Europe/CIS	Rugby World Cup 2023 France
October 23	Europe/CIS	Switzerland federal election
October 29	Latin America	Argentina general election
October 29	Europe/CIS	Ukraine parliamentary election
October	World	50th anniversary of the first oil shock (crisis)
by November 11	Asia	Pakistan general election
In the fall	Europe/CIS	Poland parliamentary election
by December 1	Asia	Bangladesh general election
by December 10	Europe/CIS	Spain general election
by December 31	Africa	Democratic Republic of the Congo (DRC) general election
around December	Asia	Central Economic Work Conference (China)

Sources Various official announcements and media reports (table by the Marubeni Research Institute)

▽ International Meetings, Summits, etc.

Date	Region	Event
undecided	World	BRICS Summit (South Africa)
undecided	World	World Trade Organization (WTO) Ministerial Conference
undecided (2 yearly)	Asia	ASEAN Summit (Indonesia)
Undecided	Asia	Shanghai Cooperation Organization (SCO) Summit (India)
January 16-20	World	World Economic Forum Annual Meeting (Davos, Switzerland
March 23-24	Europe/CIS	EU Council Meeting (Belgium)
Around March-April	Latin America	Inter-American Development Bank (IDB) Annual Meting (Panama)
April 14-16	World	IMF/World Bank Spring Meeting (U.S., Washington D.C.)
around April	Asia	Boao Forum for Asia Annual Meeting (China)
May 2-5	Asia	Asian Development Bank (ADB)k Annual Meeting (Korea, Incheon9
May 16-18	Europe/CIS	EBRD 32nd Annual Meeting and Business Forum (Uzbekistan)
May 19-21	World	G7 Summit (Japan, Hiroshima)
May 21-30	World	World Health Organization (WHO) World Health Assembly (Switzerland)
May 22-26	Africa	Annual African Development Bank (ADB) Meeting (Egypt)
May 5-16	World	International Labor Organization's (ILO) International Labor Conference
June 29-30	Europe/CIS	EU Council Meeting (Belgium)
July 11-12	World	NATO Summit (Lithuania)
September 5-8	Europe/CIS	Eastern Economic Forum. (Russia)
September 25-26	Asia	Asian Infrastructure Investment Bank (AIIB) Annual Meeting (Egypt)
September 9-10	World	G20 Summit (India, New Delhi)
September	World	78th Session of the UN General Assembly (U.S.)
October 13-15	World	IMF/World Bank Fall Meeting (Morocco, Marrakech)
October 26-27	EuropeCIS	EU Council Meeting (Belgium)
Nov. 30-Dec.12	World	COP 28 (Egypt)
November	Asia	Asia-Pacific Economic Cooperation (APEC) Summit (U.S.)
around December	Asia	ASEAN-Japan Summit (Japan, Tokyo)

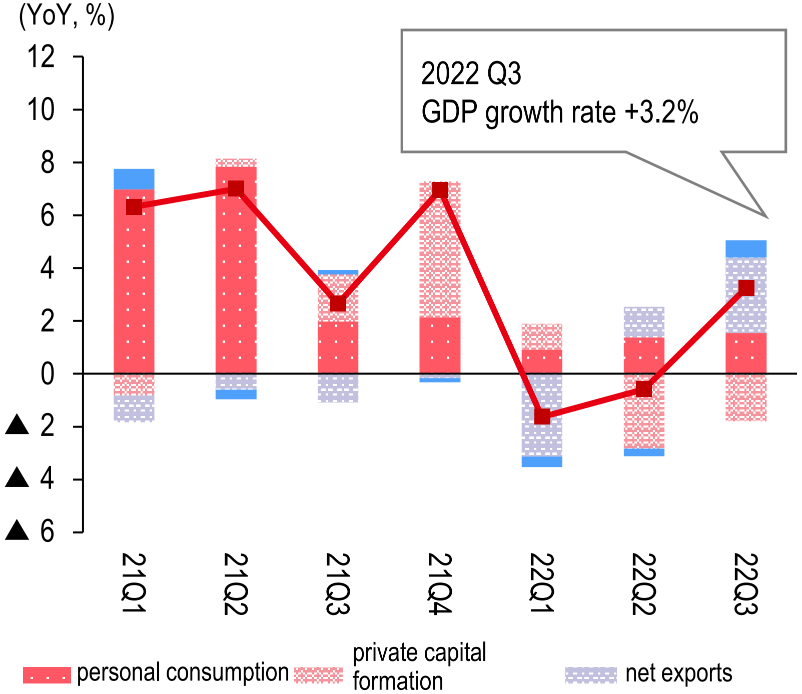
Note: Schedule is provisional at the time of this survey (end of November 2022).
Note: Those events without a date or are preceded by "by" are events with a yet-to-be-determined implementation date.

Major Regions

2-1. U.S.: Main Economic Indicators
Demand Declines Under the Impact of Monetary Tightening Measures, Labor Market Remains Resilient.

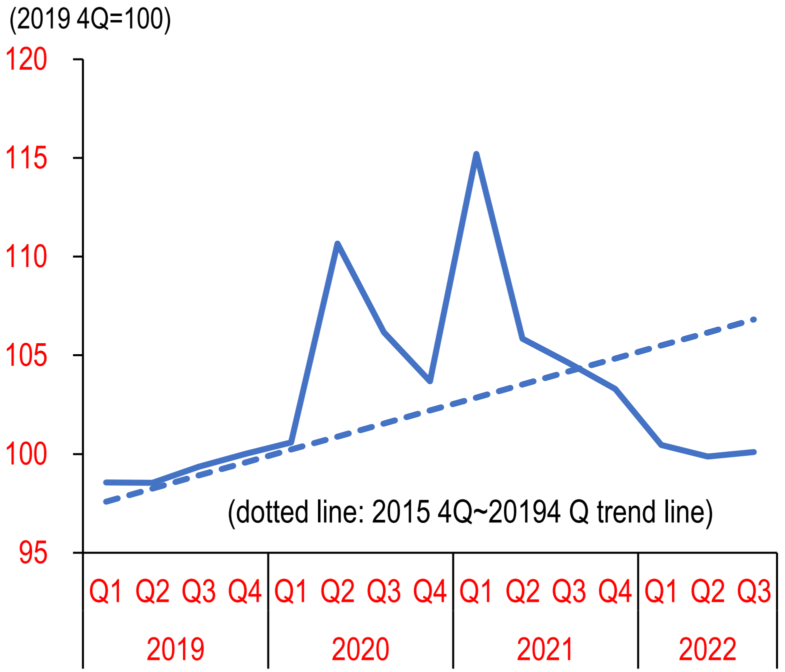
- In the first half of 2022, real gross domestic product (GDP) recorded negative growth for the second consecutive quarters due to downward pressure from a drop off in the housing market and burgeoning trade deficit, etc. Although positive growth was recorded in the July-September period, a downturn is expected going forward, especially in domestic demand which includes consumer spending.
- Nominal income is increasing due to wage growth and other factors, but real disposable income (inflation-adjusted) will fall below the historical trend due to inflation.
- A higher unemployment rate, common in past recessions, has yet to rise. However, a change in the employment situation would further the sense that the economy is stalling.

▽ Real GDP Growth Rate



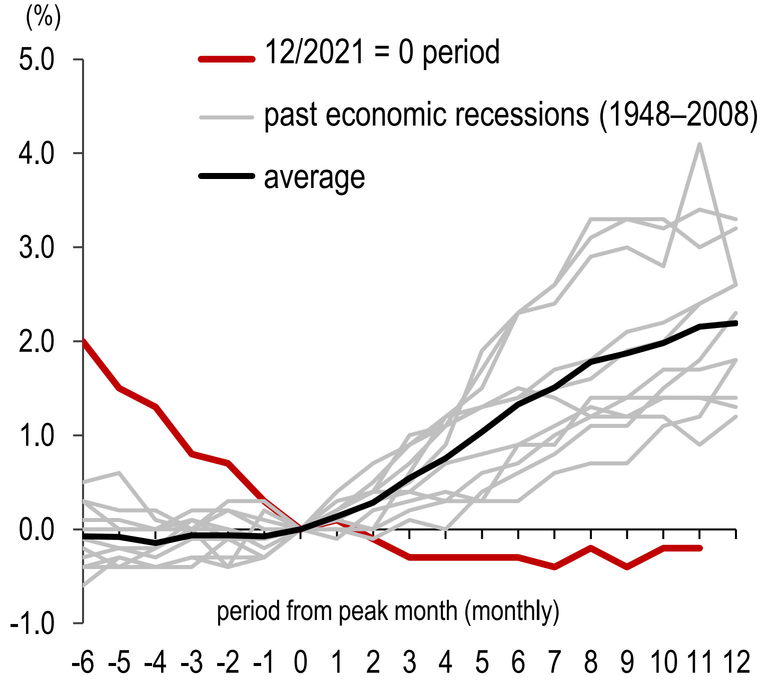
Source: U.S. Commerce Department (graph by the Marubeni Research Institute)

▽ Real Disposable Income



Source: U.S. Commerce Department (graph by the Marubeni Research Institute)

▽ Unemployment Rate: Past Recession Comparisons



Note: A "0" on the horizontal axis indicates the peak quarter (month) of the economic cycle.
Source: U.S. Labor Department (graph by the Marubeni Research Institute)

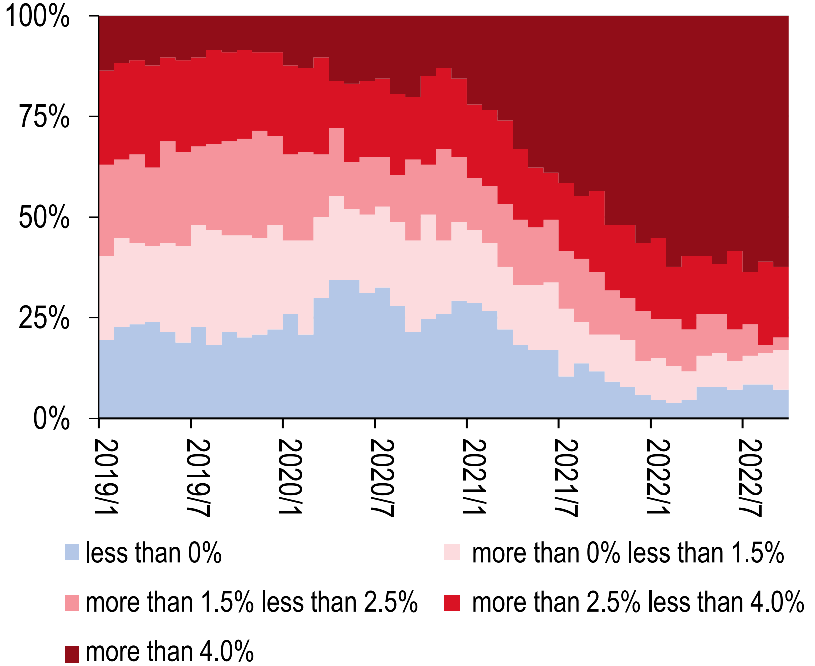
2-2. U.S.: Inflation Trend

Inflation Remains Persistent Across a Wide Range of Goods But is Peaking, 2% Target Still Out of Reach

- Prices are still rising in a wide range of items, with more than half of the components of the price index (PCE deflator) recording a year-on-year increase of more than 4%. Although the rate of increase has already contracted in the flexible (elastic) price index for energy and other items with extreme price volatility, and the rate of increase for "sticky-price" items with less frequent price volatility is also showing signs of leveling off, it is expected to take some time for them to converge and hit the 2% price target level of the Federal Reserve Bank (FED).
- According to the Federal Reserve Bank of New York's Survey of Consumer Expectations, both one-year and three-year expected inflation rates are falling.

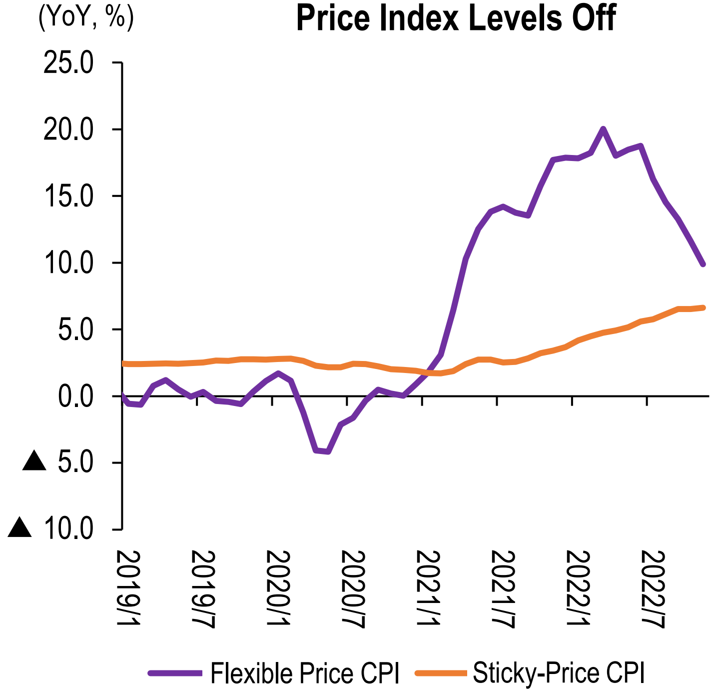
▽Price Increases in a Wide Range of Items

Classifying PCE Components by Price Volatility (YoY, %)



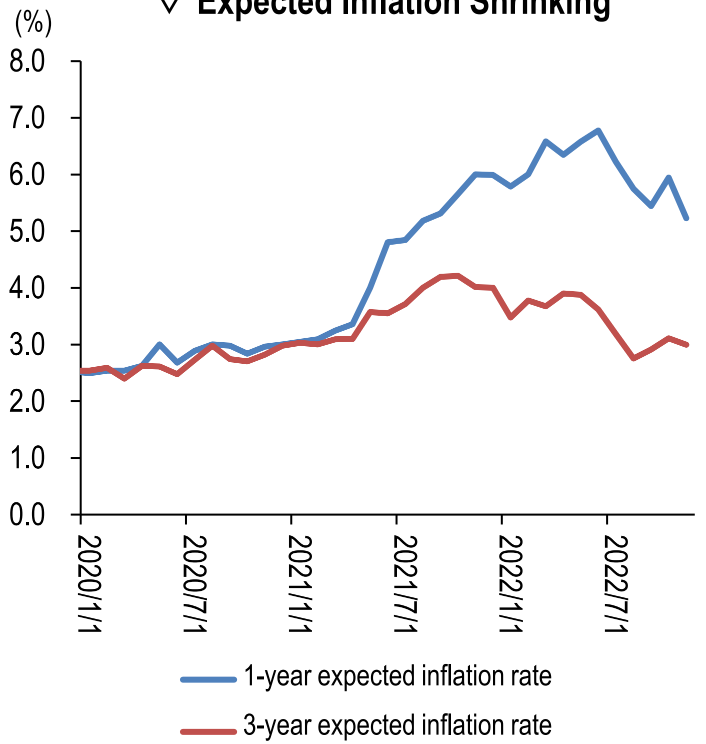
Note: Percentage calculated using 154 medium-range items as a denominator
Source: U.S. Labor Department (graph by the Marubeni Research Institute)

▽ Less Volatile Sticky-Price Items' Price Index Levels Off



*Note: **Flexible Price CPI**: Index composed of goods/services whose prices tend to fluctuate infrequently (low volatility) **Sticky Price Index**: Sticky-Price CPI: Index composed of goods/services whose prices fluctuate frequently (high volatility)*
Source: Atlanta Federal Reserve Bank (graph by the Marubeni Research Institute)

▽ Expected Inflation Shrinking



Note: Percentage calculated using 154 medium-range items as a denominator
Source: NY Federal Reserve Bank (graph by the Marubeni Research Institute)

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2-3. U.S.: Focal Points

Congress Becomes “Divided Government" Following Midterms, Moves Toward 2024 Presidential Election Accelerate

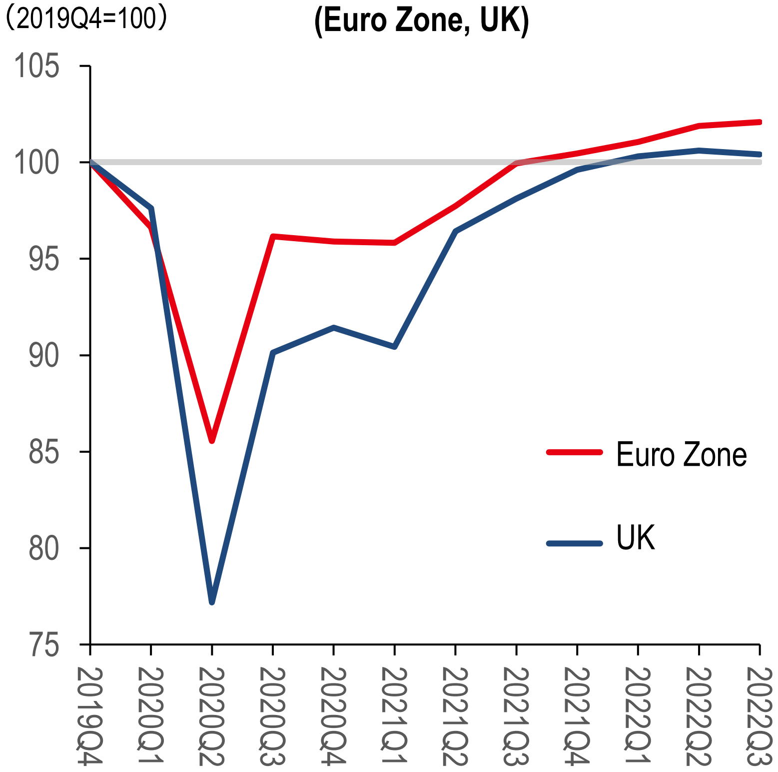
Focal Point	Current Situation/Outlook
Running, functioning of Congress after the midterm elections	➢ **U.S. Congress’ divided state**: The Democrats gained one seat in the Senate and maintained the Senate majority 51-49, while the Republicans regained the majority in the House of Representatives 222-2i3, creating a “divided government” situation where the president‘s party has a majority in the Senate and the opposition party controls the House. During the 118th Congress, which will last for two years beginning January 3, 2023, bipartisan policy coordination is essential for effective government, however deliberations on the budget and legislation are expected to stall. Republicans are expected to establish hearings and special committees through the House Administration oversight function to increase their pursuit of the administration on the withdrawal of U.S. troops from Afghanistan, southern border policy, and the relationship between the president's son and Ukrainian companies, etc. ➢ **Debt ceiling problem**: As of November 2022, outstanding debt was approximately $31.3 trillion, less than $40 billion to the statutory federal debt limit ceiling of approximately $31.4 trillion. The ceiling will be reached in January 2023, and if Congress fails to agree on measures such as raising the debt ceiling or suspending the application of the ceiling before the U.S. government runs out of funds, the U.S. Treasury could default on its obligations in the worst-case scenario .
Moves toward the 2024 presidential election	➢ **Democratic Party**: President Biden has expressed his willingness to run again stating that he will make a decision early next year. If the President does not run again, Vice President Kamala Harris, Secretary of Transportation Pete Buttigieg, and Michigan Governor Gretchen Whitmer are considered the frontrunners. ➢ **Republican Party**: Former President Donald Trump has already announced his intention to run. His main opponent in the party's primaries is considered to be the right-wing candidate, Governor Ron DeSantis, who won a major victory in the gubernatorial race in Florida, which is classified as a battleground state. Several other candidates are also being discussed, including former Vice President Mike Pence.
Foreign/Security Policy	➢ **Policy toward China**: The “National Security Strategy” released by the U.S. government clearly states its opposition to China in various areas, positioning China as “the only competitor that has both the intention to rebuild the international order and the economic, diplomatic, and technological capabilities to achieve it. Issues of contention include the outflow of advanced technology, intellectual property rights infringement, and human rights issues. In the House of Representatives, a new Republican-led "Special Committee on China" is expected to strengthen oversight of government policy toward China and corporate investment in China. Some observers believe that the House will sharpen its policy toward China in a way that reflects the hardline stance of Congress. ➢ **Ukraine support**: Some Republicans are calling for more accountability for U.S. support for Ukraine ➢ **APEC**: The Asia-Pacific Economic Cooperation (APEC) meeting is scheduled to be held in November 2023 with the U.S. as the chairing country. It remains to be seen whether progress will be made toward the conclusion of negotiations on the Indo-Pacific Economic Framework (IPEF), which is positioned as one of the pillars of the U.S. Indo-Pacific strategy announced in February 2022.
Energy/Climate Change Policy	➢ **Inflation Reduction Act:** The Inflation Reduction Act, passed in August 2022, included $369 billion over 10 years in the spending budget for energy security and climate change measures. This will include production and investment in renewable energy, clean hydrogen production, tax credits for personal purchases of eco-cars and eco-friendly homes, and the introduction of a surcharge system for methane. However, implementation of some of the budget may be restricted by the Republican Party. ➢ **FRB’s Climate Change Program:** The Federal Reserve Board (FRB) will conduct a program called the "Pilot Scenario Analysis Exercise on Climate-Related Risks" during 2023, in which six major financial institutions will participate. The goal is to assess financial institutions' resilience to various climate scenarios and to enhance the ability of executives and firms to measure and manage financial risks related to climate change.

Source: By the Marubeni Research Institute from various media reports

3-1. Europe: Main Economic Indicators,
Recovery in Demand From Resumed Economic Activity After the Covid Crisis Subsides/ A “Shallow and Short" Recession in 2023?

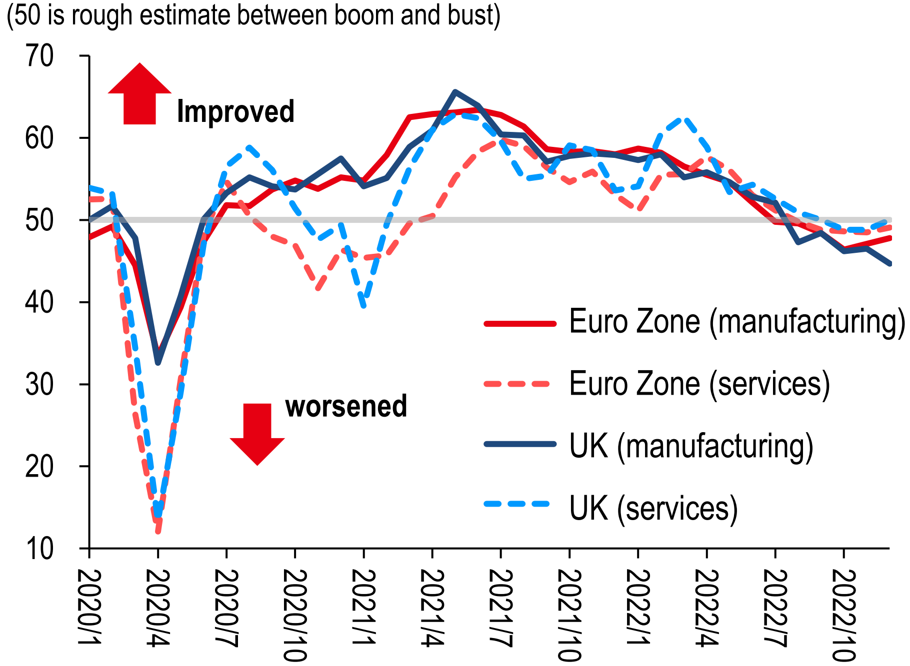
- Real GDP in the Eurozone and the UK recovered to pre-Covid levels in 2021, then growth slowed again in 2022. Record high prices weighed heavy in this.
- Business confidence is deteriorating in both the manufacturing and service sectors. Domestic and foreign demand is slowing due to high inflation and accompanying rapid monetary tightening.
- Consumer confidence has declined significantly with strong concerns that consumer spending will remain sluggish for some time. In particular, the U.K. and Germany may be headed for recessions (real GDP contracting for two consecutive quarters) in he first half of 2023. However, the recessions should not be as deep as past recessions.

▽ **Real GDP Recovery Trajectory (Euro Zone, UK)**



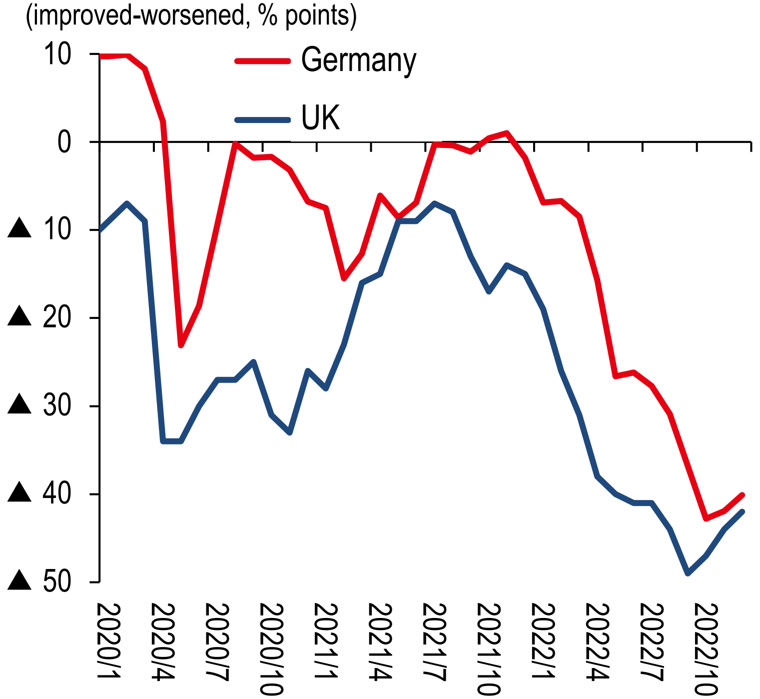
Sources: European Commission, UK Office for National Statistics

▽ **Business Confidence (PMI Euro Zone, UK)**



Note: Purchasing managers of companies were asked to indicate their business conditions for the month in question by selecting "improved," "unchanged," or "worsened" compared to the previous month, and the results were converted into an index. Data are available through December 2022. The data for the same month are preliminary figures.
Source: Refinitiv

▽ **Consumer Confidence Index (Germany/UK)**

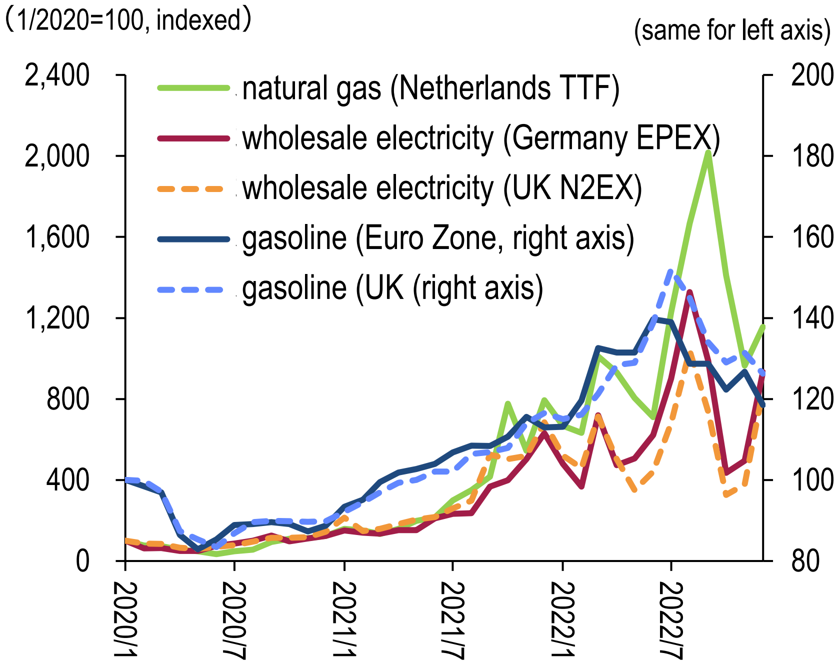


Note: Respondents were asked to indicate whether their household economic situation and that of the country as a whole had improved, remained the same, or worsened compared to one year earlier and their forecasts for one year from now. Data are available through December 2022.
Source: GfK (graph by the Marubeni Research Institute)

3-2. Europe: Energy Prices and Inflation Trend
Inflation Peaking but May Remain Well Above Central Bank Targets During 2023

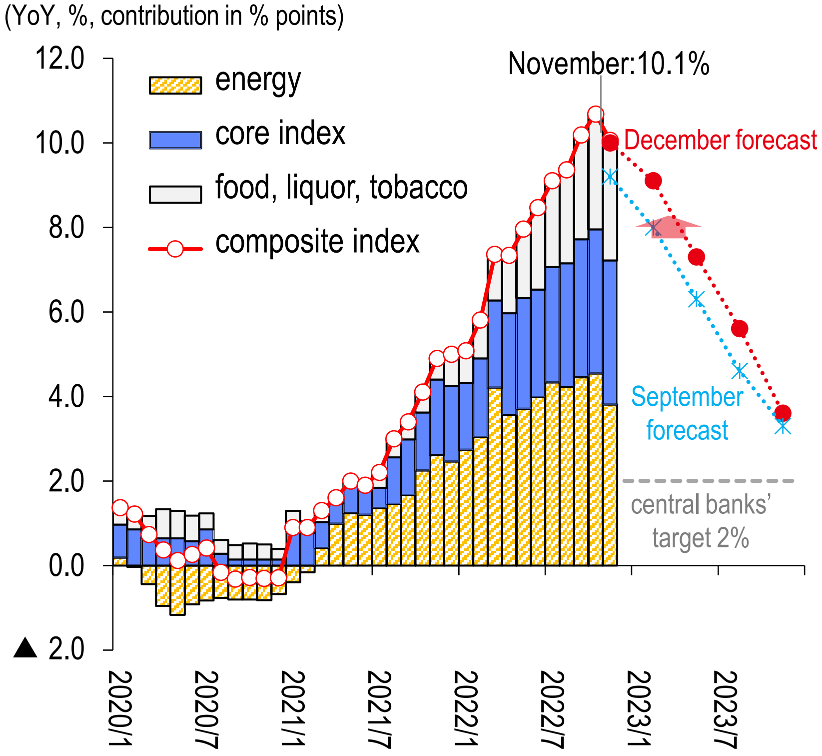
- Inflation has been driven by a sharp rise in energy prices that has continued since last year. Inflation has also noticeable in food and a wide range of other goods and services.
- The European Central Bank (ECB) and the Bank of England (BOE) reduced their policy rate hikes (interest rate hikes) from 0.75% to 0.50% at their December meetings, but also remain wary of inflationary pressures associated with tight labor supply and demand. Inflation is peaking due to the utility rate hike freeze and economic downturn but is still expected to be well above the 2% target at the end of 2023, so interest rates may continue to rise, at least in the first half of the year.

▽ **Energy Prices** (Euro Zone, UK)



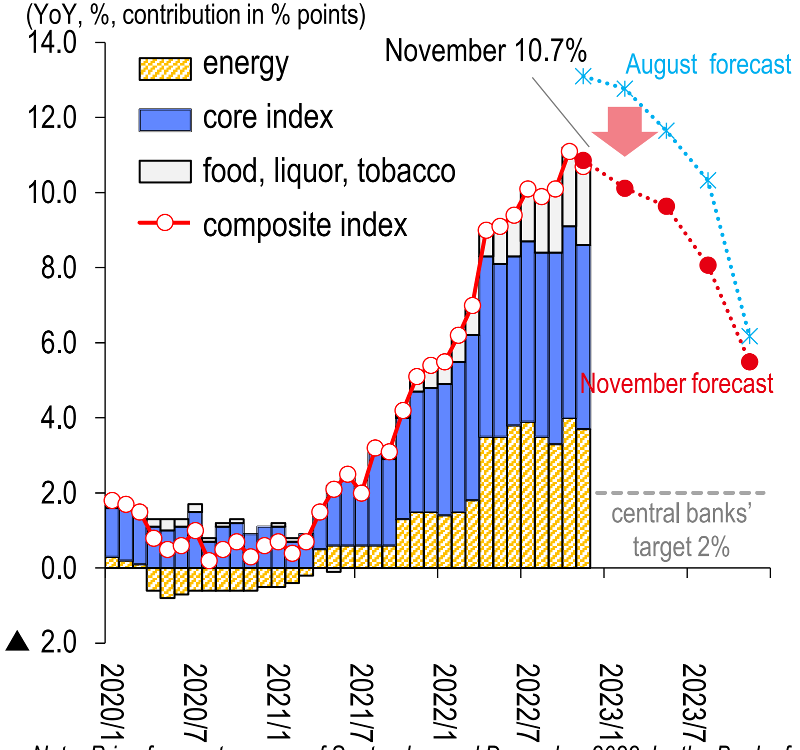
Note: Natural gas and gasoline prices are for the first week of each month. Wholesale electricity is the spot price (baseload) at the beginning of the month. Original units are in euros/MWh for natural gas and electricity, and local currency for gasoline, through December 2022.
Sources: Refinitiv, CEIC

▽ **Consumer Price Inflation** (Euro Zone)



Note: Price forecasts are as of September and December 2022 by the European Central Bank (ECB).
Source: European Commission (graph by the Marubeni Research Institute)

▽ **Consumer Price Inflation** (UK)

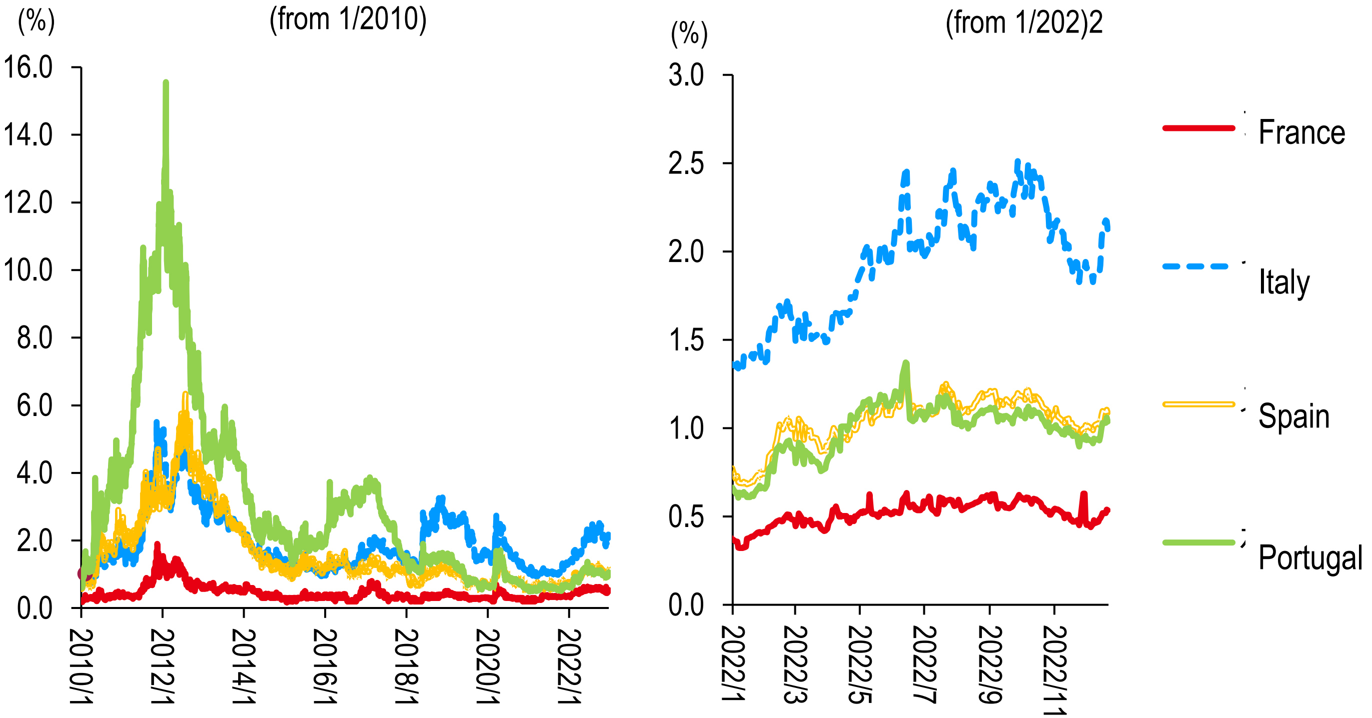


Note: Price forecasts are as of September and December 2022 by the Bank of England (BOE)
Sources: UK Office for National Statistics, BOE (graph by the Marubeni Research Institute)

3-3. Europe: Southern Europe Fiscal Concerns
Italy's Meloni Administration Plans to Expand Budget Deficit, but Avoids Full Confrontation With the EU

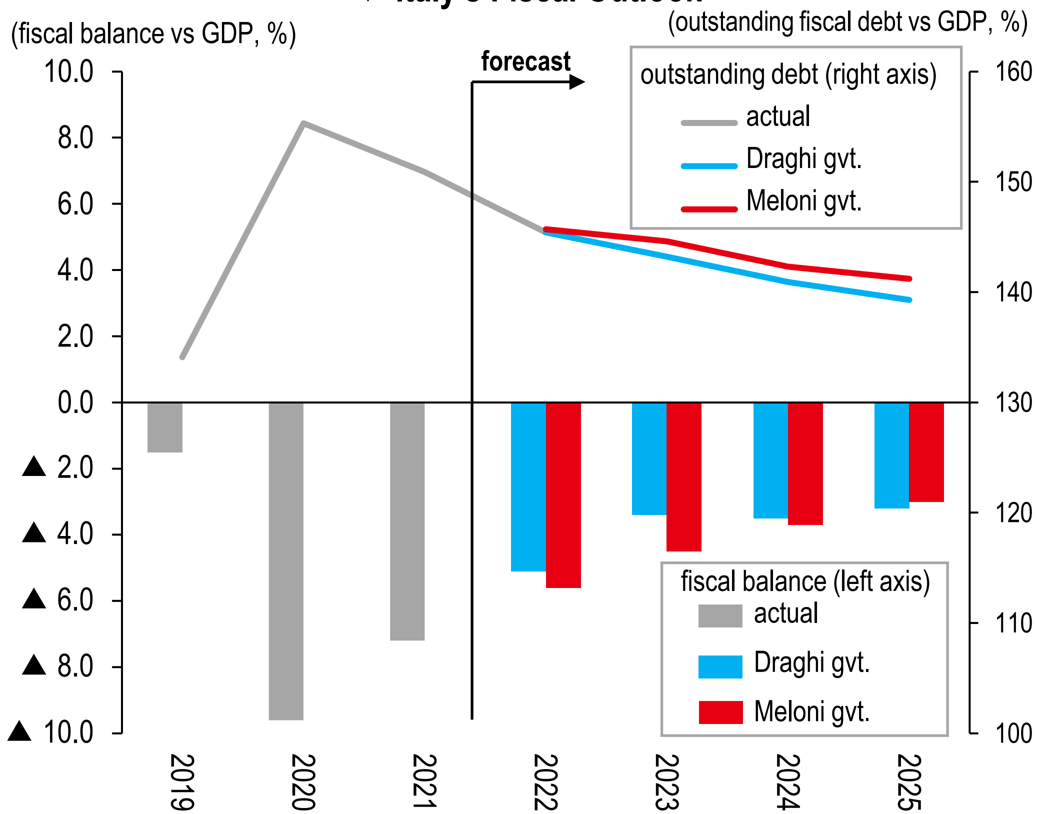
- Italy, whose government debt is over 150% of GDP, is very aware of its government bonds' credit risk as the government bond yield spread versus Germany's rose sharply from spring 2022 onward following the ECB's monetary tightening and the collapse of the pro-EU Draghi government. Since October, spreads have narrowed slightly as the new right-wing Meloni government, which took office that month, has emphasized its stance of avoiding confrontation with the EU over fiscal management policies. While strong concern over Italy's fiscal situation has receded for the moment, caution is advised against the risk that quantitative tightening, which begins in March 2023, could lead to widening yield spreads.

▽ Major European Countries' Long-Term Interest Rates (yield gaps vs Germany)



Note: Long-term interest rate is the 10-year Treasury yield. Data as of 12/21/2022.
Source: Refinitiv

▽ Italy's Fiscal Outlook



Sources: European Commission, Italian Ministry of Economy and Finance, IMF(graph by the Marubeni Research Institute)

3-4. Europe: 2023 Major Economic/Industry Focal Points

Energy Transition Makes Steady Progress, but "Balancing the Scrapping" of Both "Dependence on Russia" and "Dependence on China" a Challenge

Point	Possible Scenarios/Plans
Normalize Natural Gas Shortage Measures	Although reduced supply of Russian natural gas has raised concerns over gas shortages in the EU, gas supply disruptions during the winter months are likely to be avoided. However, measures to stem gas shortages will continue in 2023. Also, efforts to reduce electricity and gas consumption (energy conservation) may become the norm. In addition, increased LNG procurement continues, with a number of floating storage and regasification units (FSRUs) now coming on-line. As such, the global LNG market will remain tight for the time being.
Expand Use of Coal-Fired and Nuclear Power Plants/Accelerate Decarbonization Investment	The trend of expanding the use of coal-fired power generation will continue for the next several years as the supply-demand balance for electricity remains tight. However, this move back to fossil fuels is a short-term measure with the shift toward decarbonization irreversible in the mid to long-term. Some countries are now promoting nuclear power plants. Also, the EU's aggressive subsidy policy to expand green investment (renewable energy, hydrogen, ammonia, etc.) should also be watched closely. The EU plans to use public funds for permanent gas infrastructure (LNG receiving terminals and pipelines) due to uncertainty over the private sector's willingness to invest in such infrastructure.
EU Electric Power/Gas Market Reform	The European Commission announced an electricity market reform proposal to decouple natural gas procurement prices from wholesale electricity market prices, etc. (Q1). TTF natural gas price caps (from February) and a new price index are also in the process of being made.
EU Decarbonization Policy Trends	• Introduction of the Carbon Border Adjustment Mechanism begins in October 2023 (test). Only required to report the amount of carbon in eligible imports until 2026. • The Emissions Trading Scheme (ETS) is being extended to maritime and road transport and buildings (applied in stages, then transition to the new ETS in a few years) • The European Commission has proposed international freight and passenger transport greening legislation - Includes expanding rail transport, etc. (Q2) • European Commission also proposed legislation to establish a European hydrogen bank - Guarantees for the purchase of green hydrogen, support for the creation of a market, etc. (Q3) • European Commission proposed legislation on the treatment of ICE vehicles by companies - Tightening regulations on leasing of ICE vehicles (Q3)

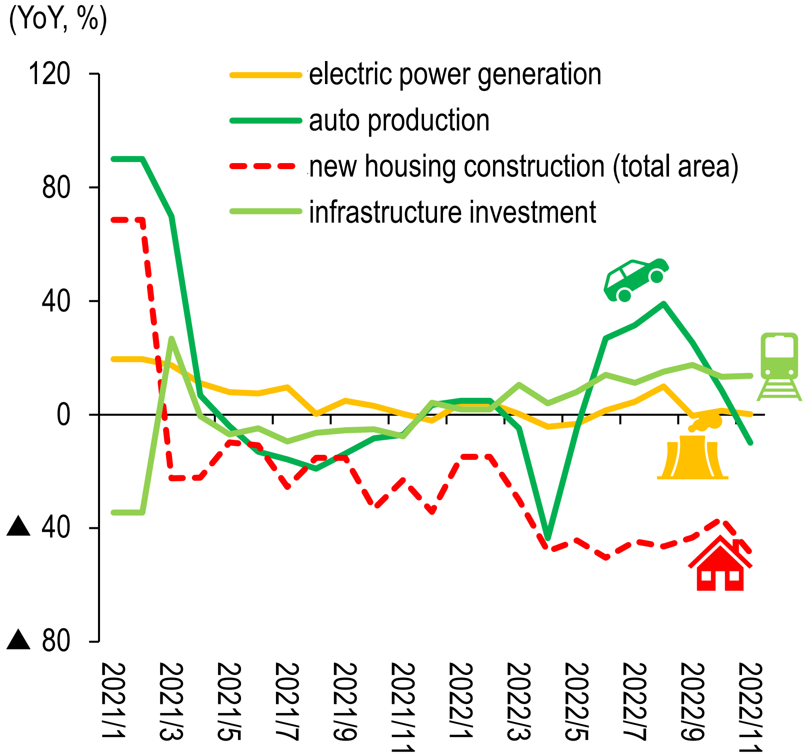
Point	Possible Scenario/Plans
Non-Decarbonization EU Policy Developments	• Critical raw materials bill proposed by the European Commission - Strengthening intra-regional supply of raw materials (Q1) • European Commission proposed legislation on the introduction of a digital euro (Q2) • European Commission proposed legislation on a new income taxation framework (BEFIT) - Introduces a standard intra-regional method for calculating the taxable base (Q3) • Will adopt a draft directive on mandatory human rights and environmental due diligence by the end of the year
De-Russification Accelerates/ Dependence on China a Challenge	While the de-Russification of its dependence on Russian energy is accelerating, dependence on China continues to be an issue with respect to the energy technology needed to do so (e.g., solar panels, wind turbines, batteries). According to a survey commissioned by the German government, China is a major supplier of 23 out of 46 critical raw materials.
European Economy Deterioration/ Interest Rate Hike Halt	The economy may enter a recession in the first half of 2023, particularly in the U.K. and Germany. Consumer price inflation is peaking but is still expected to be well above the 2% target at the end of 2023, so interest rates may continue to rise at least until the first half of the next year.
EU Fiscal Discipline Rule Flexibility	Reform of the region's common fiscal discipline rules is in full swing. In November 2022, the European Commission announced it would be more flexible in terms of fiscal discipline, policy and Italy's Meloni government, whose debt-to-GDP ratio exceeds 150%, has thus shown a more positive attitude toward discipline compliance, which, in the short term, has reduced market concerns about debt risk in southern Europe. The European Commission's proposed rule reforms, which emphasize mid to long-term debt reduction, will not discourage investment in green and other areas though, so there are concerns that it will only postpone the problem, as uncertainty remains over the path to fiscal consolidation and the implementation of plans in Italy and other countries where frequent changes of government are taking place.
Southern Europe Elections	Spain general election (May): Currently, the opposition party is slightly ahead in the polls. Greece general election (July): Support for the ruling center-right party is stable, but there is uncertainty about whether it will be able to maintain its single-party majority.
Reskilling/ Upskilling	The EU has designated 2023 as the "Year of Skills". The goal is to have 80% of all adults master basic digital skills by 2030.

Sources: European Commission, various media reports (table by the Marubeni Research Institute)

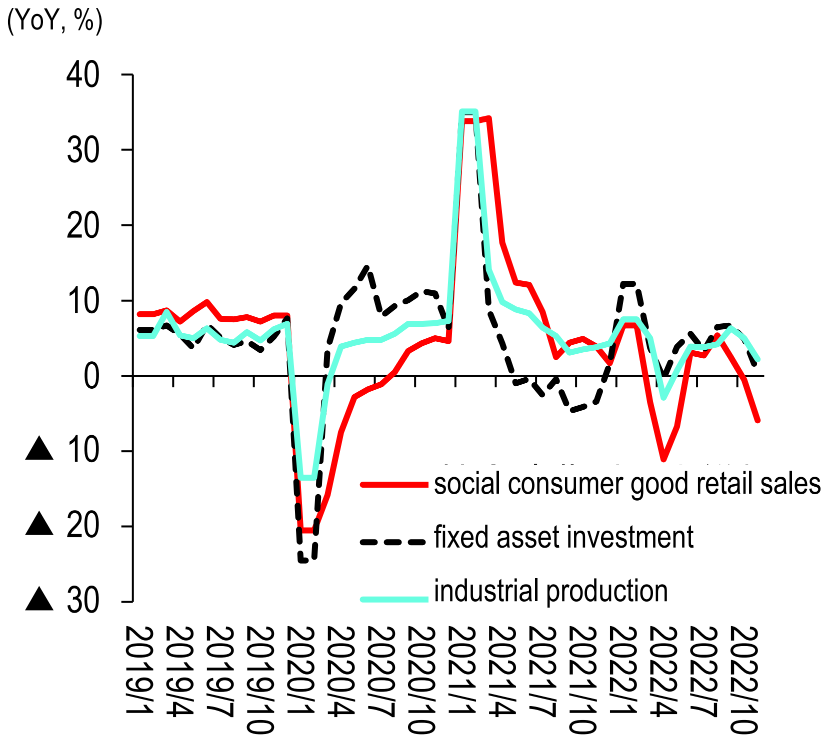
4-1. China: Main Economic Indicators
Economy Picking-Up but Lacking Strength

- Due to the strict zero-Covid policy and the sluggish housing market, the government's economic growth target (around +5.5%) was significantly missed in 2022 at just over +3%.
- The zero-Covid policy, which has been in place for almost three years, has finally been substantially eased. The government continues suppression of the housing bubble, but supported by various stimulus and other economic measures, the economy is expected to pick up to the mid-4% range in 2023-2024 but will lack strength

▽ Main Economic Indicators

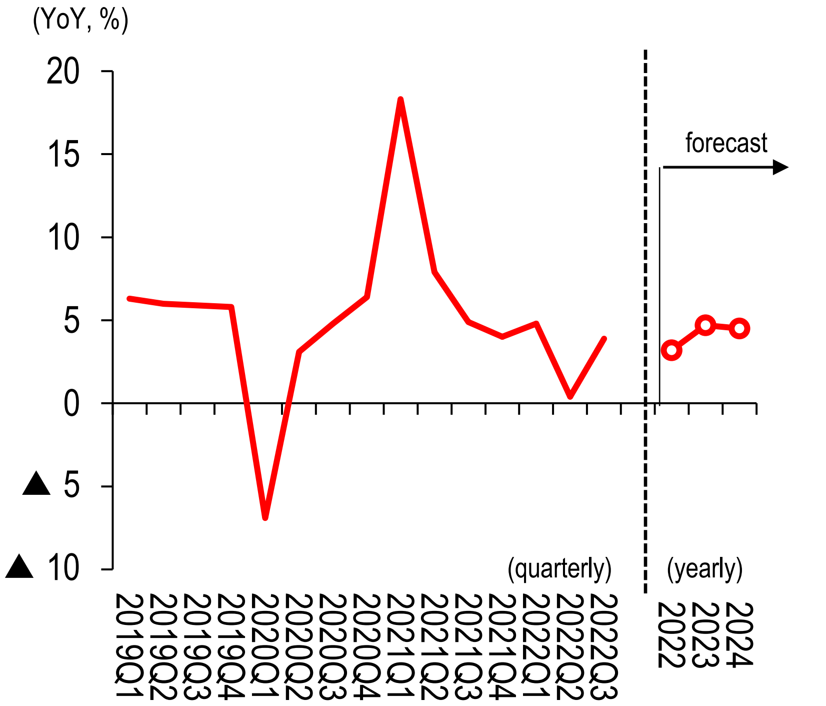


Source: China National Bureau of Statistics (as of 11/2022)



Source: China National Bureau of Statistics (as of 11/2022)

▽ Real GDP Growth Rate

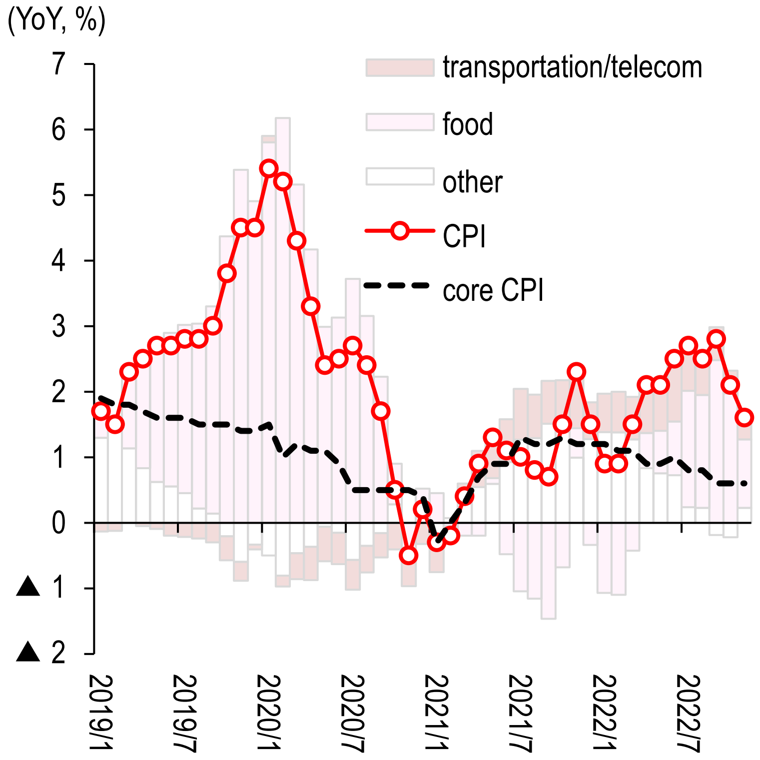


Source: China National Bureau of Statistics Forecast: Marubeni Research Institute

4-2. China: Inflation Trend and Monetary Policy
Price Increases Relatively Moderate, Fears of Capital Outflows Hinder Further Easing

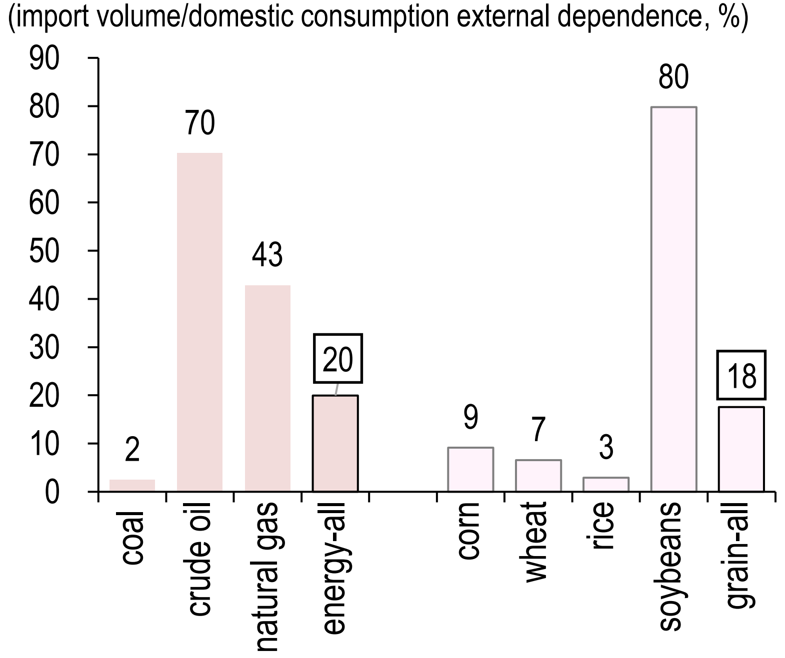
- Price rises have been relatively moderate, influenced by low dependence on external natural resources/raw materials and food products, increased domestic resource production, and difficulties in shifting increased manufacturing costs to consumer goods.
- Monetary easing has been implemented off and on since mid-2021 to support the economy. However, the scope for easing may be limited due to strong concerns over capital outflows against the backdrop of accelerated monetary tightening in the U.S. and Europe.

▽ Consumer Price Index



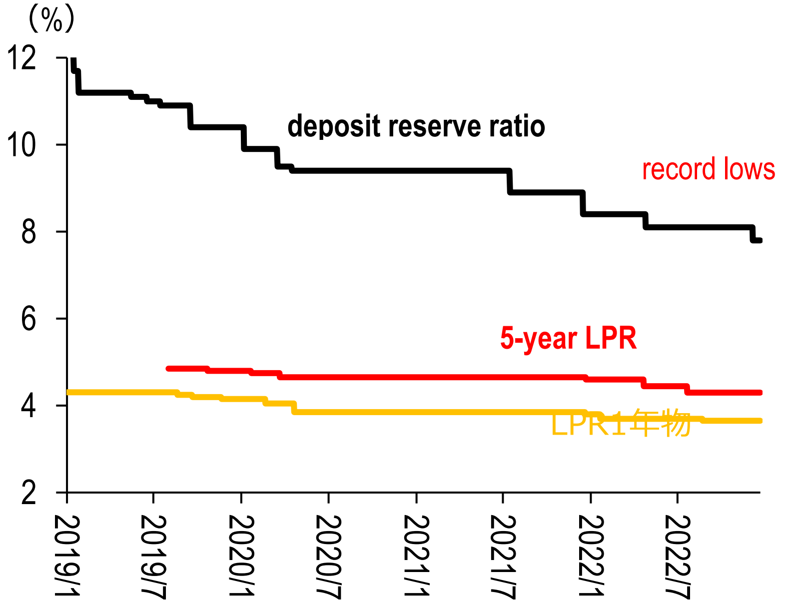
Source: China National Bureau of Statistics (as of 11/2022)

▽Degree of External Dependence



Sources: China National Bureau of Statistics, WIND Resources: 2020, standard coal equivalent Grain: Based on quantity

▽ Deposit Reserve Ratio/LPR

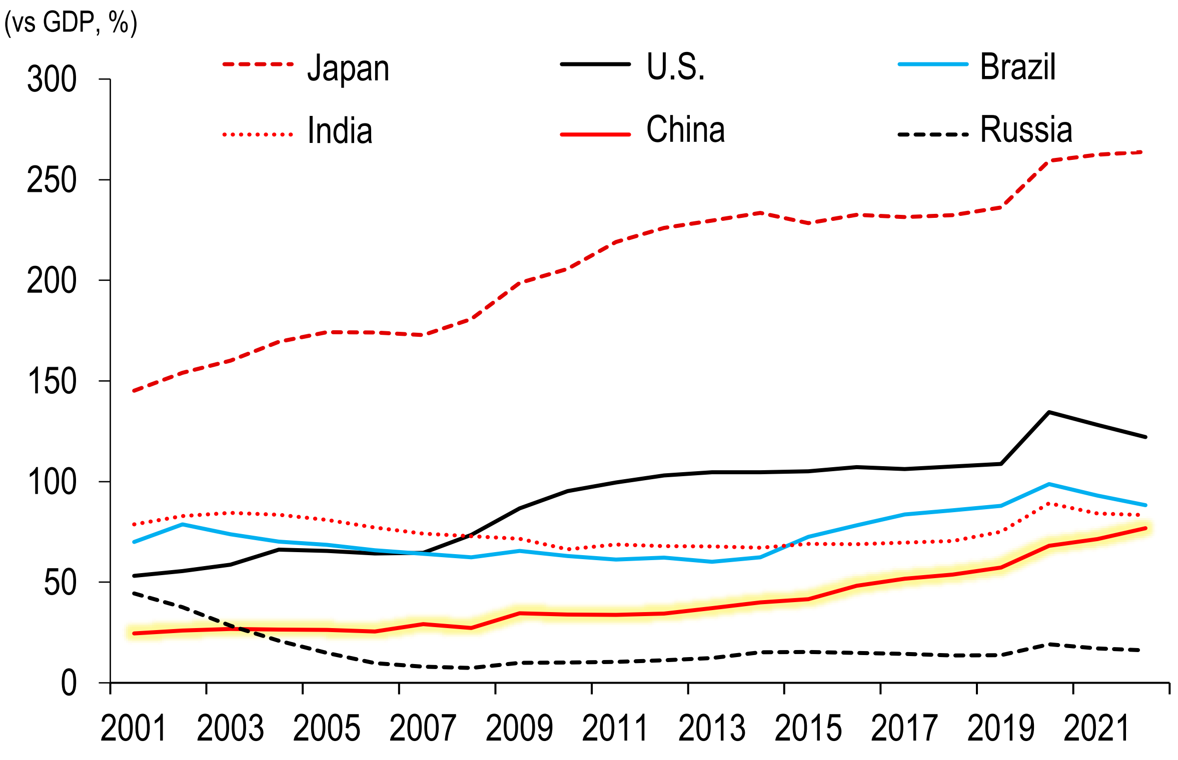


Note: Deposit reserve ratio: The ratio at which commercial banks deposit a certain percentage of their deposits in cash with the central bank for deposit protection purposes. LPR (loan prime rate): Most preferential lending rate, the rate used by commercial banks for lending to prime customers
Source: People's Bank of China (as of 12/2022)

4-3. China: Monetary and Fiscal Policy
Stance at Odds With Taking Large-Scale Stimulus Measures

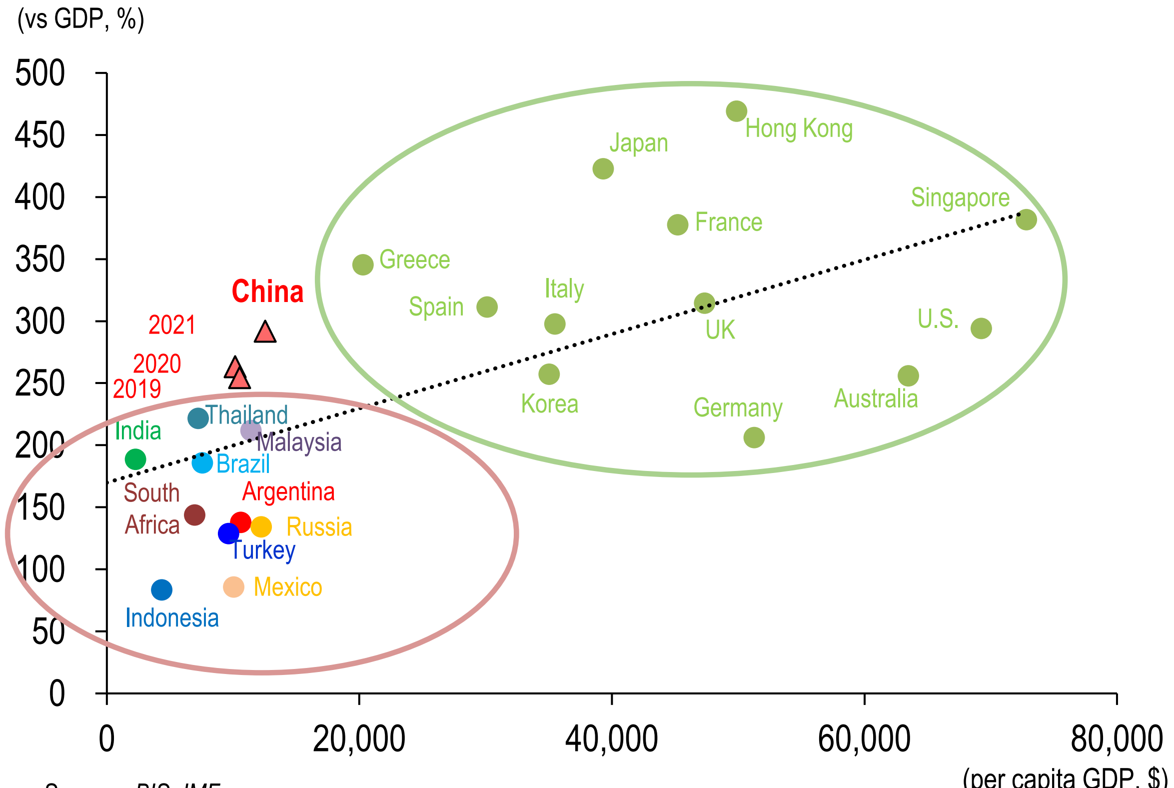
- The Chinese government has not taken any major fiscal or monetary measures since the beginning of the Covid pandemic, and the current rampant Covid infection situation will act as a drag on any economic stimulus measures taken.
- Fiscal reserves: Although fiscal discipline has been emphasized, the retirement of baby boomers, in addition to declining tax revenues due to the decrease in the working-age population, tends to put pressure on public finances.
- Financial sustainability: The scale of credit to the private sector is prominent in emerging countries. Loan balances are expanding again, especially bank lending.

▽ Outstanding Government Debt



Source: IMF

▽ Private Non-Financial Corporate Sector Outstanding Credit (2021)



Sources: BIS, IMF

4-4. China: Focal Points

President Xi Starts 3rd Term/Taking an Internal or External Path?

- The new party leadership (members) led by President Xi is notable for flaunting "Chinese-style modernization" and the heavy use of hardliners in foreign affairs (wolf warriors), so there are concerns that it will intensify confrontation with the West.
- On the economic front, the highest priority is being placed on economic development, and after the party congress the zero-Covid policy was drastically eased. It is also hurrying to leverage the housing market.
- On the other hand, there are some major private companies and foreign companies who are wary of measures to correct social disparities (e.g., increasing the burden on large companies) and over-regulation of data.

▽ Direction of Domestic/Foreign Policy Over the Next 5-Years (Party Congress Report)

Aim	• The Communist Party's main goal is to "become a strong country by the middle of the 21st century": It involves 2 stages, one, becoming a middle power by 2035 and then a developed country by 2050. The next five years are an important kick-off period toward this goal.
Economy	• Emphasis on economic development. Reform, opening-up and marketization to continue. • (With the U.S.-China confrontation in mind) Urge self-reliance in advanced technology and development of highly skilled human resources. • From controlling the total amount of energy to regulating the total amount of carbon emissions. • Zero Covid policy: eased. Housing bubble control measures: maintained. Measure to reduce inequality (common prosperity): maintained
Politics	• Increasing confidence in the Chineseization of Marxism. • Reinforcing ideology by putting Chinese-style modernization (China's unique development model) at the forefront. • Enhancing national security capabilities. Defend the security of the regime, institutions, and ideology at all costs.
Foreign Policy	• Maintain multi-directional diplomacy and expand international influence. • Keep advancing the Belt and Road Initiative. • Become actively involved in the reform and building of global governance.
Taiwan	• Taiwan is the last piece of the" Great Revival of the Chinese Nation". • Unification with Taiwan is up to the Chinese people to decide. China will never renounce the right to use force over Taiwan a statement aimed at interference by external forces and Taiwan independence advocates (The statement itself has often been used in the past, but this is the first time it has been mentioned at a party congress).

Source: Report from the Opening of the 20th Communist Party Congress (10/2022) (table by the Marubeni Research Institute)

▽ Party Congress Report: Number of Times These Words Used

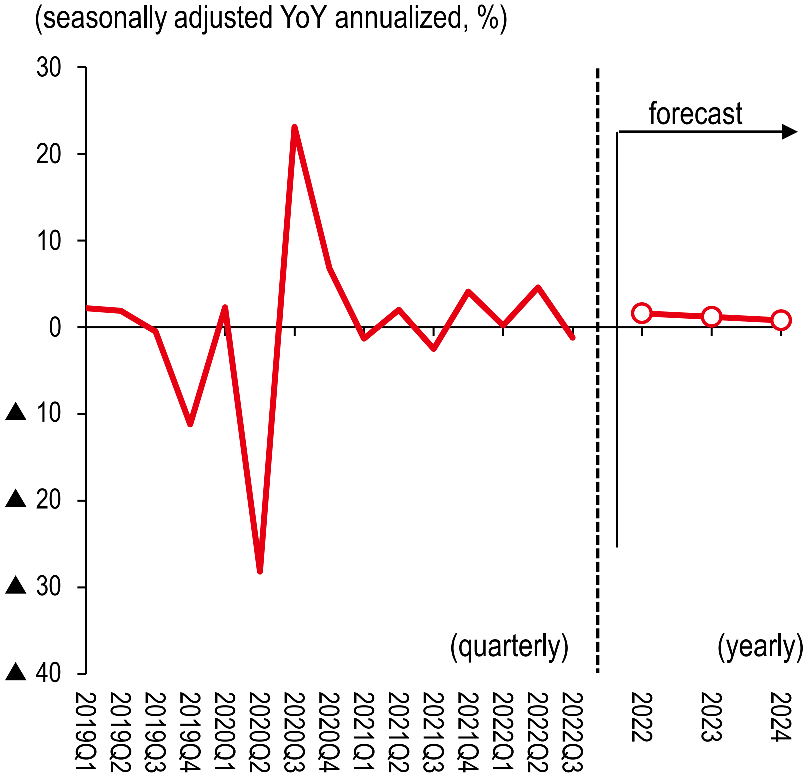
	Representative Expressions	19th	20th
Economy	Development	232	239
	Innovation	59	55
	Reform	70	51
	Common prosperity	6	8
	Self-reliance	0	6
	Private information security	0	1
Politics	National security	18	29
	Ideology	8	10
	Chinese-style	0	11
FP	Influence (power)	4	7
	Belt and Road Initiative	5	2
Taiwan	Great Revival of the Chinese Nation	27	16
	Taiwan	9	13
	External force	0	4
	Use of force	0	1

Source: 19th and 20th Communist Party Congress Reports (full text, 32,000 characters each) (table by the Marubeni Research Institute)

5-1. Japan: Main Economic Indicators
Economic Recovery Expected to Continue On Back of Domestic Demand, Though Foreign Demand Likely to Weaken

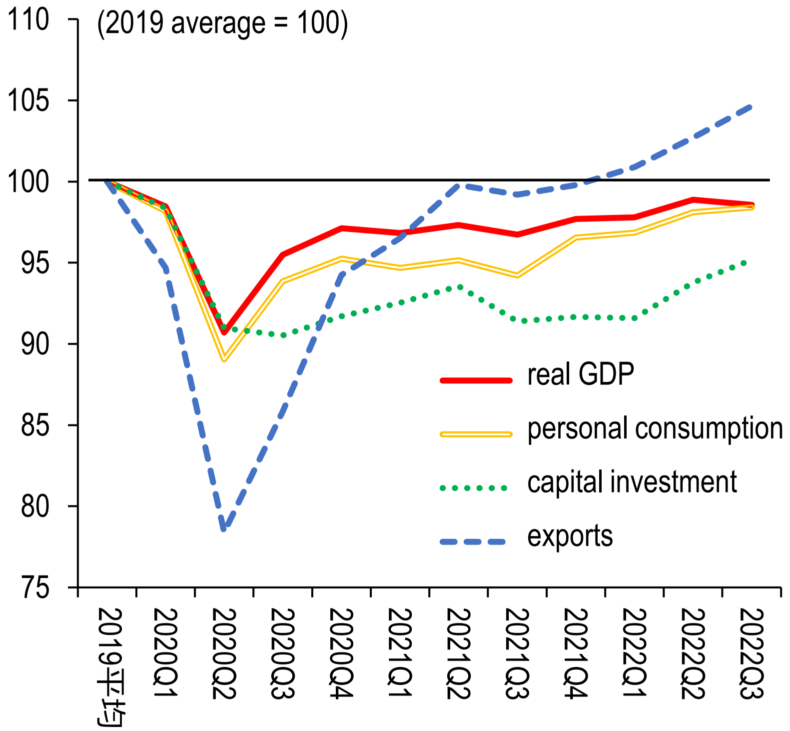
- Although exports are expected to weaken due to the slowdown in overseas economies, domestic demand, including consumer spending and capital investment, is likely to continue to recover as economic activities normalize.
- In the manufacturing sector, easing supply chain constraints and a weaker yen will provide a tailwind for exports, while a slowdown in overseas economies and higher costs will put downward pressure on earnings.
- The service sector is predicted to recover due to the government's domestic travel support and a significant easing of entry and border measures, but there are downside risks such as a mass respreading of Covid infections.

▽Real GDP



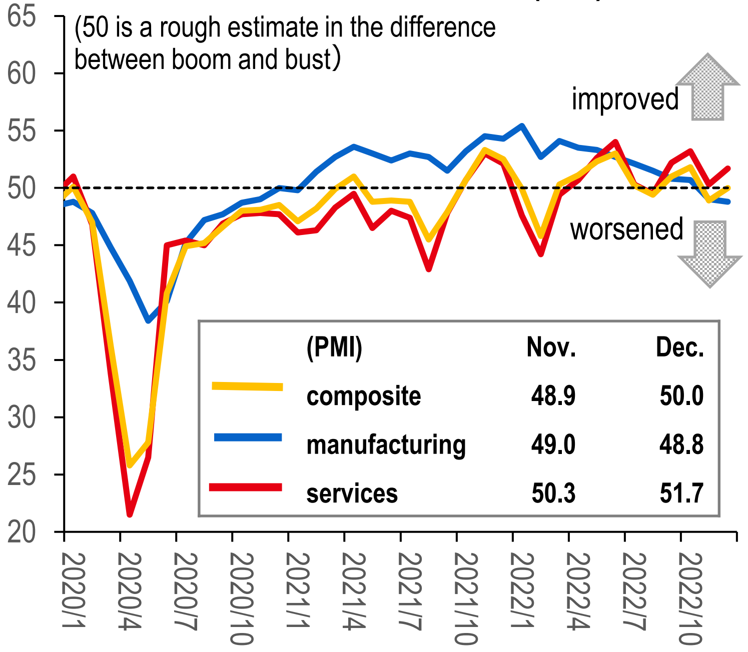
Source: Japan Cabinet Office (forecast/graph by the Marubeni Research Institute)

▽ Major Demand Items Recovery Pace



Source: Japan Cabinet Office (graph by the Marubeni Research Institute)

▽ Business Confidence (PMI)



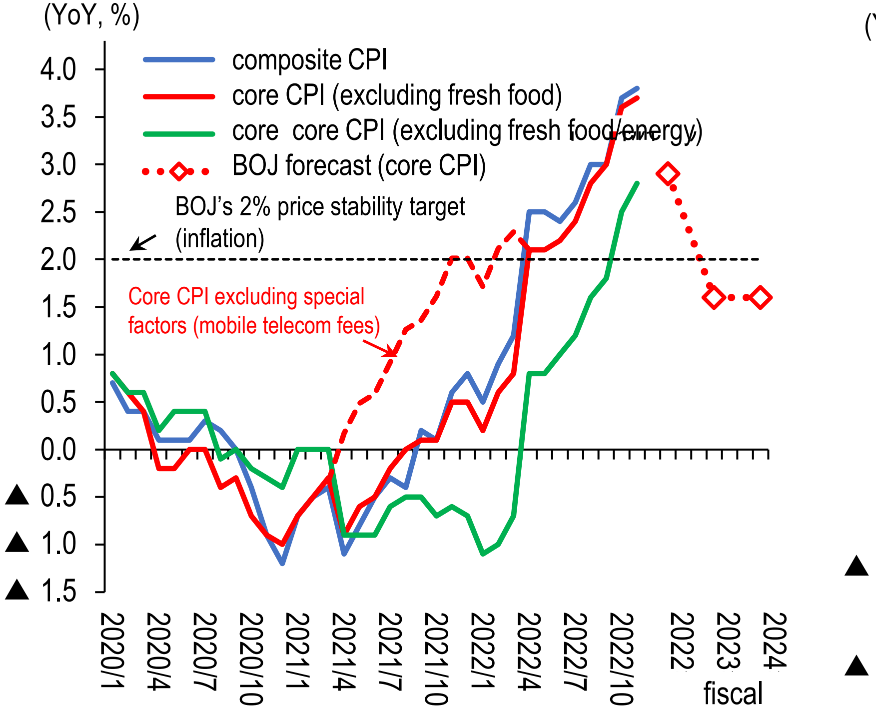
(PMI)	Nov.	Dec.
composite	48.9	50.0
manufacturing	49.0	48.8
services	50.3	51.7

Note Purchasing managers of companies were asked to indicate their business conditions for the month in question by selecting "improved," "unchanged," or "worsened" compared to the previous month. The results were converted into an index. The results are converted into an index.
Source: HIS Markit (graph by the Marubeni Research Institute)

5-2. Japan: Inflation Trend
Energy/Food Prices Central to Inflation, Plus Real Wages Have Declined

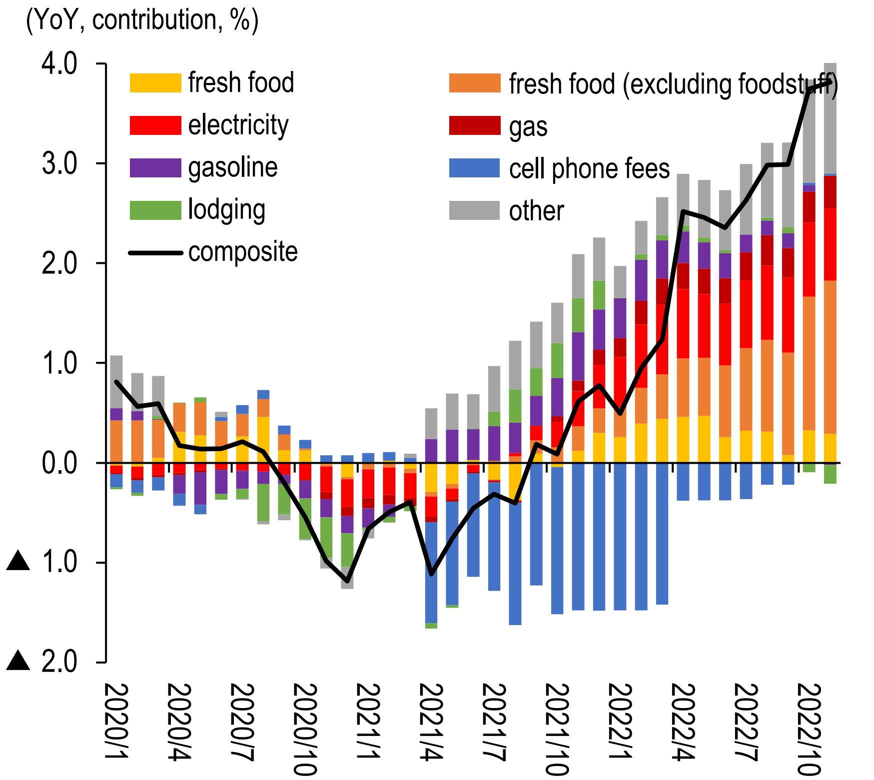
- Japan's inflation has remained relatively low compared to the higher inflation seen in the U.S. and Europe. Prices have risen mainly in energy and food against a backdrop of higher resource prices and a weak yen.
- These prices are expected to fall in 2023 though, due to Japanese government measures to curb energy prices and the fact that the rebound in prices had already begun from more than a year before.
- Real wages remain in negative territory due to rising prices. The question is now how far companies can go in raising wages in response to high prices.

▽ Consumer Prices



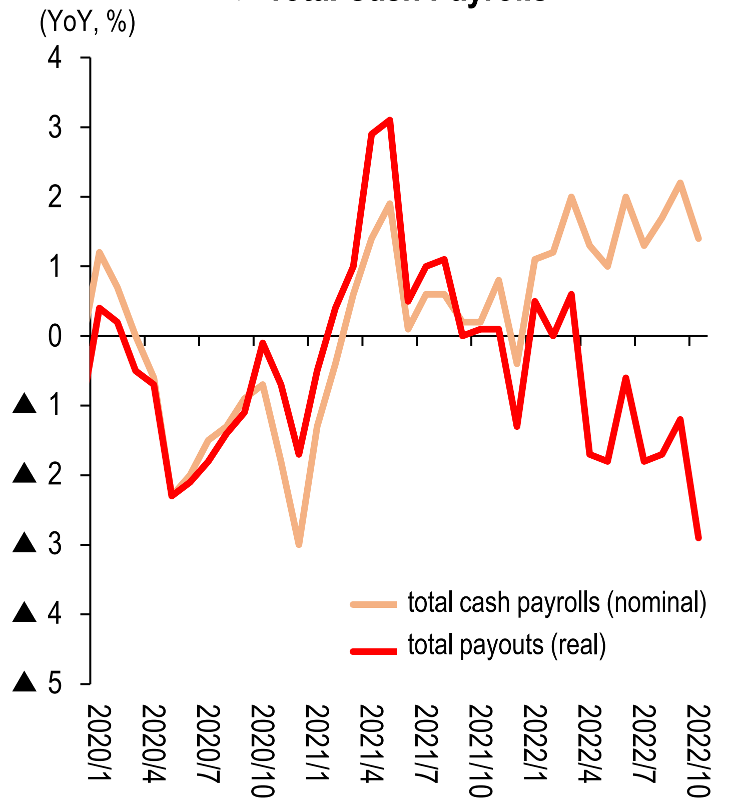
Note: The fiscal year forecast includes the core CPI forecast from the Bank of Japan's Outlook Report.
Sources: Japan Ministry of Internal Affairs and Communications, BOJ (graph by the Marubeni Research Institute)

▽ Composite CPI (degree of contribution)



Source: Japan Ministry of Internal Affairs and Communications, (graph by the Marubeni Research Institute)

▽ Total Cash Payrolls



Source: Japan Ministry of Health, Labor and Welfare, (graph by the Marubeni Research Institute)

5-3. Japan: Monetary and Fiscal Policy's
All Eyes on Appointment of BOJ Governor Kuroda's Successor in April 2023 and Possible Policy Revisions

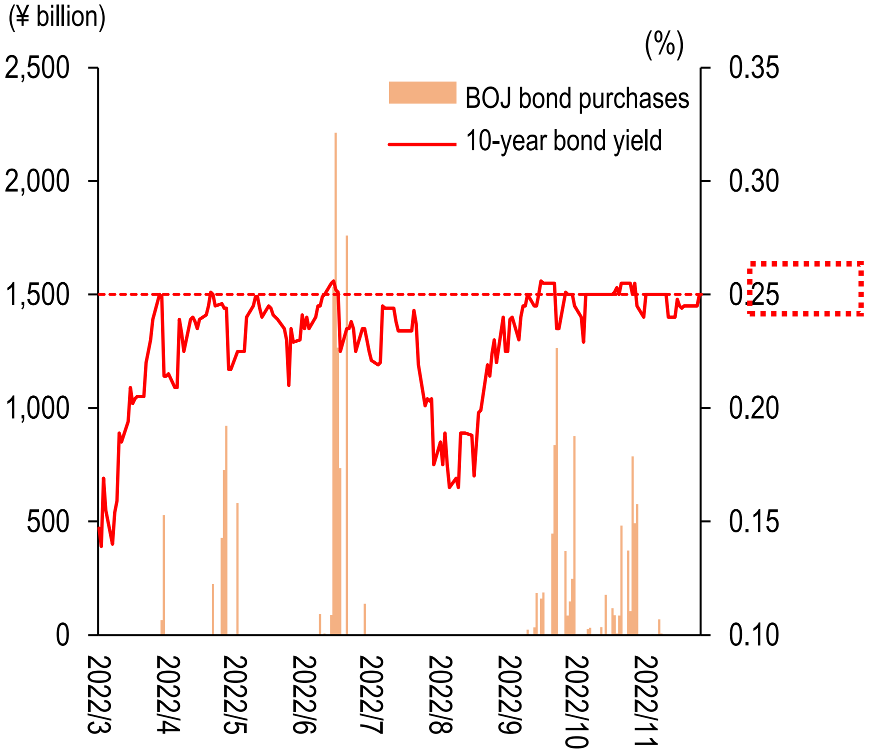
- At the BOJ's December monetary policy meeting the allowable range of fluctuations in long-term interest rates was increased (currently targeted at around 0%) from about ±0.25% to around ±0.5%, while its framework for long-term/short-term interest rate operations (yield curve control: YCC) was maintained. The market interpreted this as a substantial move on interest rates (the BOJ has since reaffirmed its easy monetary policy).
- In addition, the Bank of Japan's administration of long and short-term interest rates attention is focused on the next governor's appointment, which will take place on April 2023 and the possibility of a policy shift under the new governor.

▽ BOJ Policy Meeting Decisions (12/2022)

Main Points	
negative interest rate policy	no change
YCC long-term interest rate allowable fluctuation range (was targeted at around 0%)	raised from ±0.25% to ±0.5%
bond purchases	nicreased from ¥7.3 trillion a month to about ¥9 trillion
YCC operations	conducted each year as needed
asset purchase policy (ETFs, J-REITs, CP and corporate bonds, etc.)	no change
forward guidance (future policy)	no change

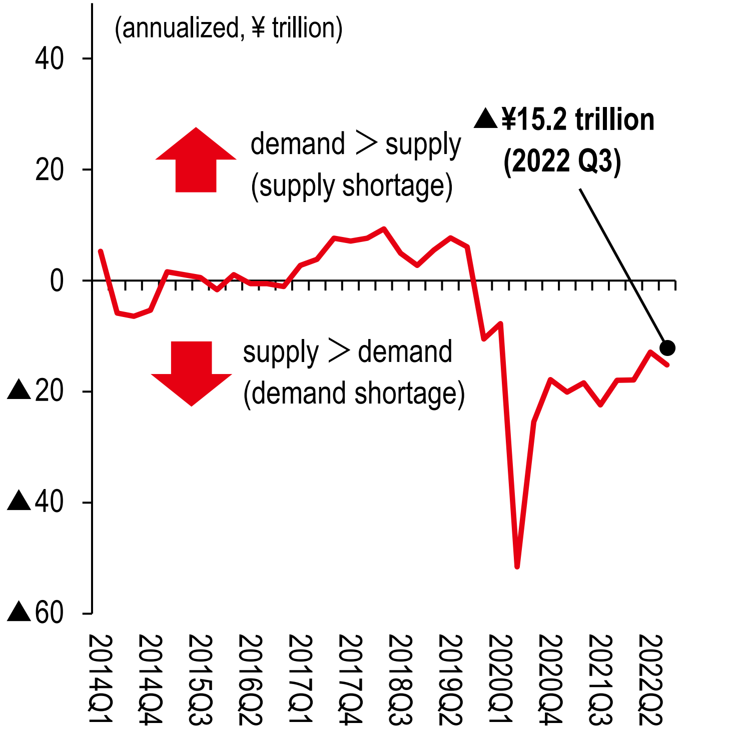
Source: BOJ (table by the Marubeni Research Institute)

▽ BOJ's Bond Yield Curve Control Operations



Source: BOJ (graph by the Marubeni Research Institute)

▽ Supply/Demand Gap



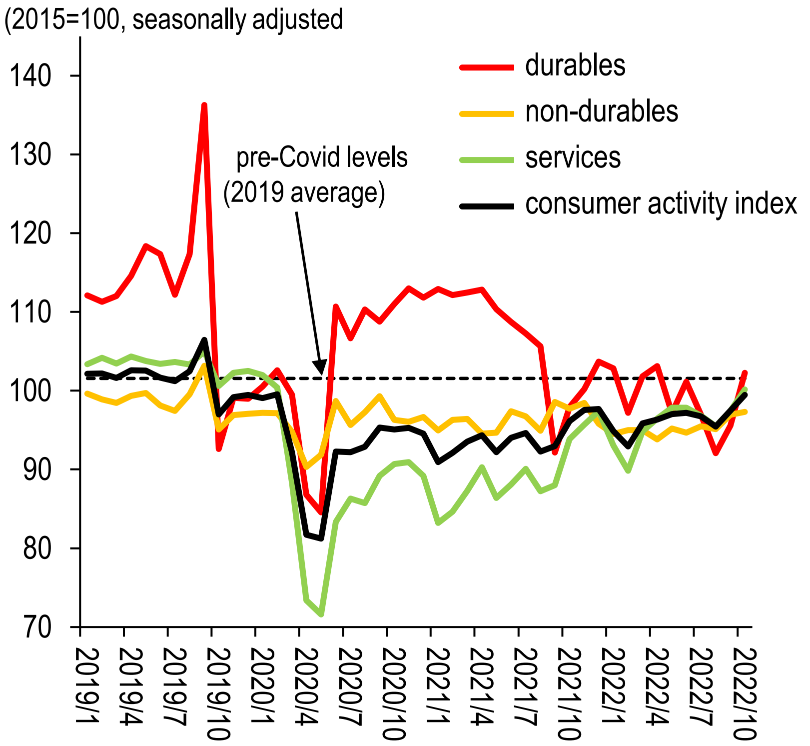
Note: Supply-Demand Gap = (Actual GDP - Potential GDP)/Potential GDP
Source: Japan Cabinet Office (graph by the Marubeni Research Institute)

5-4. Japan: Focal Points ①

Can the Slow Economic Recovery from the Covid Crisis be Reversed Even as Overseas Economies Decelerate?

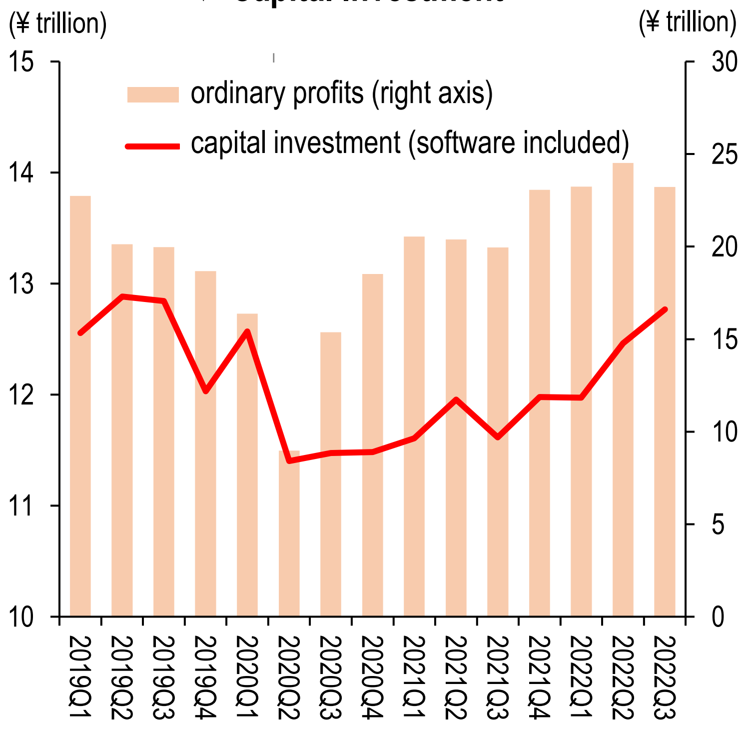
- Pent-up demand is expected to be unleashed, mainly for travel and eating out, but overall consumer confidence is declining, especially among low-income consumers, due to high prices.
- Capital investment, which had been on the back burner during the Covid pandemic, is expected to continue to recover on the back of strong corporate earnings. High costs and a downturn in overseas economies will act as a weight on the market though.
- Resumption of inbound travel and easing of supply chain constraints are positive factors, but slowdowns in overseas economies, including Europe, the U.S., and China, will be a downside factor.

▽ Personal Consumption



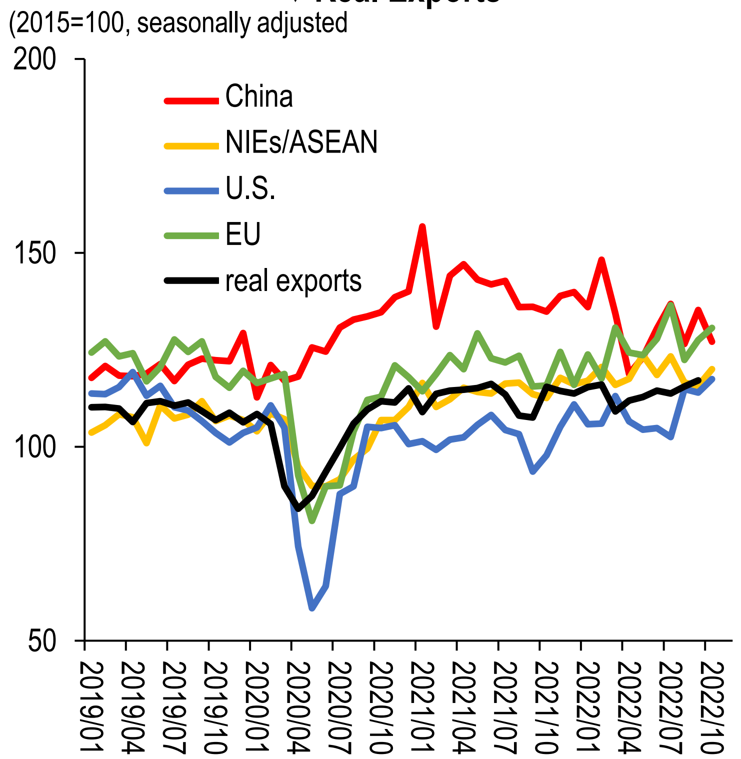
Source: BOJ (graph by the Marubeni Research Institute)

▽ Capital Investment



Note: All industries except for finance and insurance. Seasonally adjusted.
Source: Japan Finance Ministry (graph by the Marubeni Research Institute)

▽ Real Exports



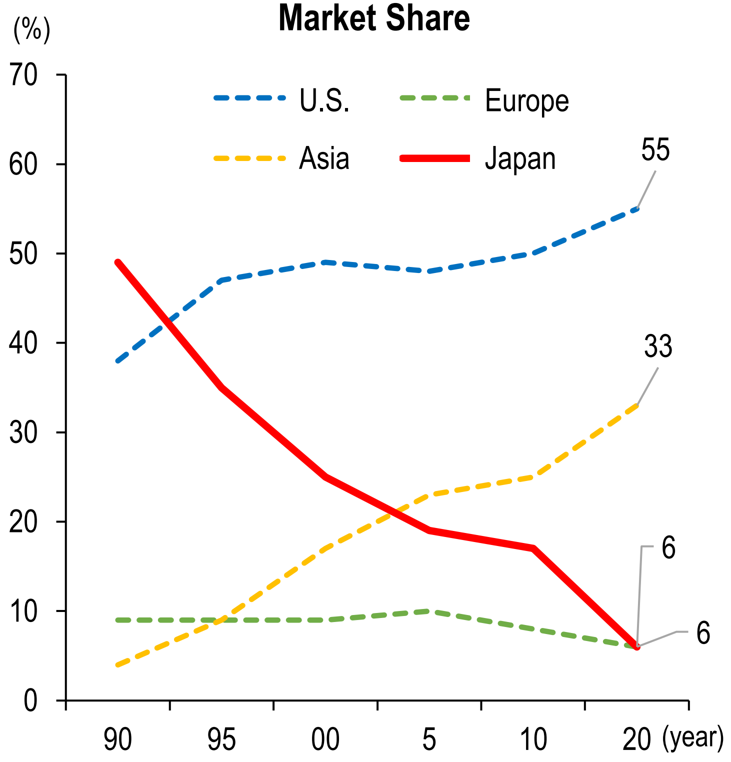
Source: BOJ (graph by the Marubeni Research Institute)

5-4. Japan: Focal Points ②

U.S.-China Confrontation and Ukrainian Situation Have Triggered a Domestic Security Rethinking

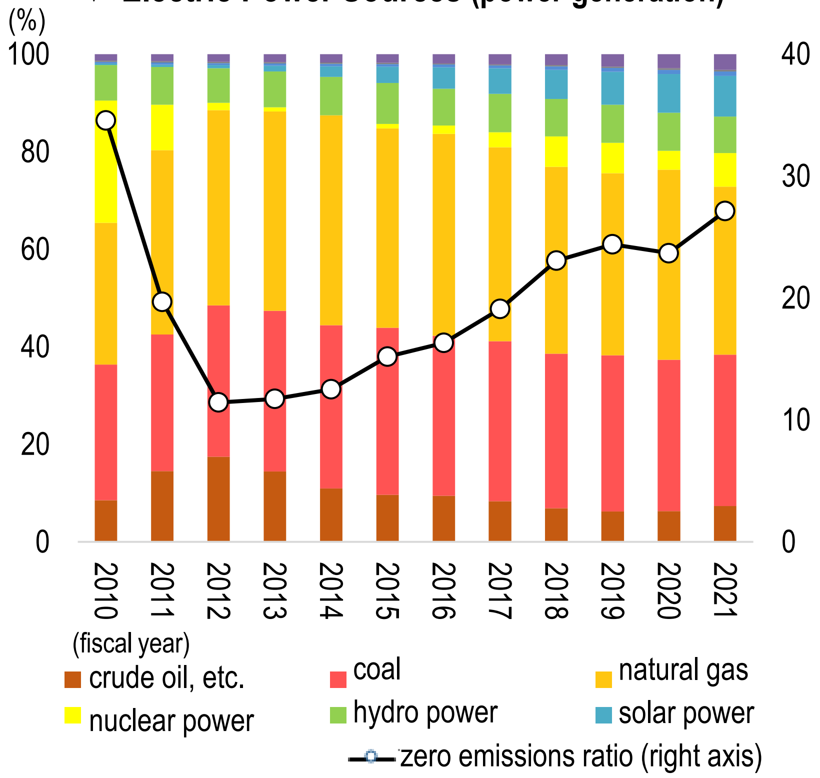
- Strengthening economic security is tan urgent issue against the backdrop of potential U.S.-China conflict. Reinforcement of the domestic supply system, especially in terms of specific high tech-related critical materials and intermediates in 11 fields, including semiconductors.
- As the situation in Ukraine becomes more protracted, energy supply concerns over LNG are becoming more serious. In addition to requests to conserve energy, the government is planning to make maximum use of nuclear power plants and renewable energy.
- The risk of price hikes in feed grains (and other foodstuff) and lumber, which are highly dependent on imports, have become apparent. As such, serious discussions and a review of the Basic Act on Food, Agriculture, and Rural Areas have begun.

▽ **Semiconductor IC** (integrated circuit) **Market Share**



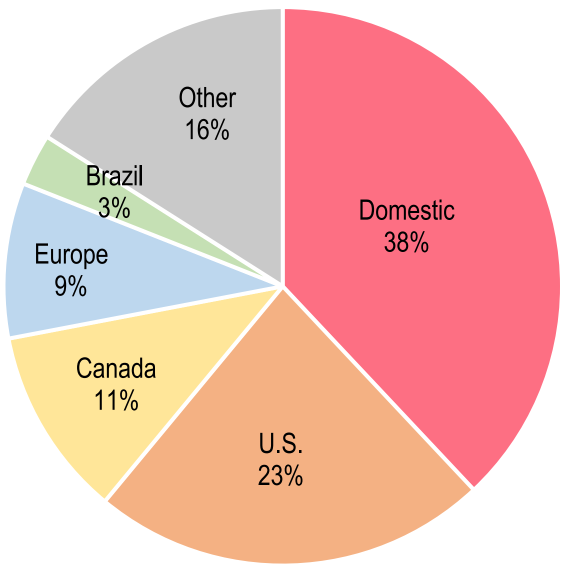
Source: IC Insights (graph by the Marubeni Research Institute)

▽ **Electric Power Sources** (power generation)



Source: Japan Ministry of Economy, Trade and Industry (graph by the Marubeni Research Institute)

▽ **Japan's Food Supply**



Note: Percent supplied per person in Japan in fiscal 2021.
Source: Japan Ministry of Agriculture, Forestry and Fisheries (graph by the Marubeni Research Institute)

6-1. ASEAN: Main Economic Indicators

Relatively Favorable Economic/Inflation Trends, but Slowdown in Overseas Economies Weighing on Outlook

▽ Main Economic Indicators

		Calendar		Quarterly				Monthly				
Country	**Economic Indicator**	**2020**	**2021**	**21Q4**	**22Q1**	**22Q2**	**22Q3**	**7**	**8**	**9**	**10**	**11**
Indonesia	Real GDP Growth Rate (YoY, %)	▲2.1	3.7	5.0	5.0	5.4	5.7	—	—	—	—	—
	Business Confidence (manufacturing PMI)	44.7	51.7	54.9	52.1	51.0	52.2	51.3	51.7	53.7	51.8	50.3
	Exports (YoY, %)	▲2.7	41.9	9.5	▲1.7	13.4	4.3	32.0	29.9	20.2	12.3	—
	Consumer Price Index (YoY, %)	2.0	1.6	1.8	2.3	3.8	5.2	4.9	4.7	6.0	5.7	5.4
Thailand	Real GDP Growth Rate (YoY, %)	▲6.2	1.5	1.8	2.3	2.5	4.5	—	—	—	—	—
	Business Confidence (manufacturing PMI)	47.1	49.2	50.3	52.0	51.5	53.9	52.4	53.7	55.7	51.6	51.1
	Exports (YoY, %)	▲5.9	17.4	6.2	2.3	2.7	▲4.5	4.3	7.5	7.8	▲4.4	—
	Consumer Price Index (YoY, %)	▲0.8	1.2	2.4	4.7	6.5	7.3	7.6	7.9	6.4	6.0	5.5
Philippines	Real GDP Growth Rate (YoY, %)	▲9.5	5.7	7.8	8.2	7.5	7.6	—	—	—	—	—
	Business Confidence (manufacturing PMI)	46.6	50.8	51.5	52.0	54.1	51.6	50.8	51.2	52.9	52.6	52.7
	Exports (YoY, %)	▲8.1	14.5	▲3.8	2.4	▲1.6	3.6	▲4.1	▲2.0	7.0	—	—
	Consumer Price Index (YoY, %)	2.4	3.9	3.6	3.4	5.5	6.5	6.4	6.3	6.9	7.7	8.0
Singapore	Real GDP Growth Rate (YoY, %)	▲4.1	7.6	6.1	3.9	4.5	4.1	—	—	—	—	—
	Business Confidence (manufacturing PMI)	48.8	50.8	50.7	50.3	50.3	50.0	50.1	50.0	49.9	49.7	49.8
	Exports (YoY, %)	3.1	9.3	6.8	▲3.3	0.9	5.2	11.1	8.5	9.6	▲1.3	—
	Consumer Price Index (YoY, %)	▲0.2	2.3	3.7	4.6	5.9	7.3	7.0	7.5	7.5	6.7	—
Malaysia	Real GDP Growth Rate (YoY, %)	▲5.5	3.1	3.6	5.0	8.9	14.2	—	—	—	—	—
	Business Confidence (manufacturing PMI)	47.3	48.4	52.4	50.3	50.7	50.0	50.6	50.3	49.1	48.7	47.9
	Exports (YoY, %)	▲1.1	26.1	15.9	▲1.9	14.3	6.5	38.0	48.1	30.1	15.0	—
	Consumer Price Index (YoY, %)	▲1.1	2.5	3.2	2.2	2.8	4.5	4.4	4.7	4.5	4.0	—
Vietnam	Real GDP Growth Rate (YoY, %)	2.9	2.6	5.2	5.1	7.8	13.7	—	—	—	—	—
	Business Confidence (manufacturing PMI)	47.2	49.2	52.3	53.2	53.5	52.1	51.2	52.7	52.5	50.6	47.4
	Exports (YoY, %)	6.9	18.9	4.0	9.5	3.5	▲8.5	9.9	27.8	9.9	5.2	—
	Consumer Price Index (YoY, %)	—	1.8	1.9	1.9	3.0	3.3	3.1	2.9	3.9	4.3	4.4
ASEAN	Business Confidence (manufacturing PMI)	45.5	50.2	52.9	52.3	52.4	52.7	52.2	52.3	53.5	51.6	50.7

Sources: CEIC, Refinitiv

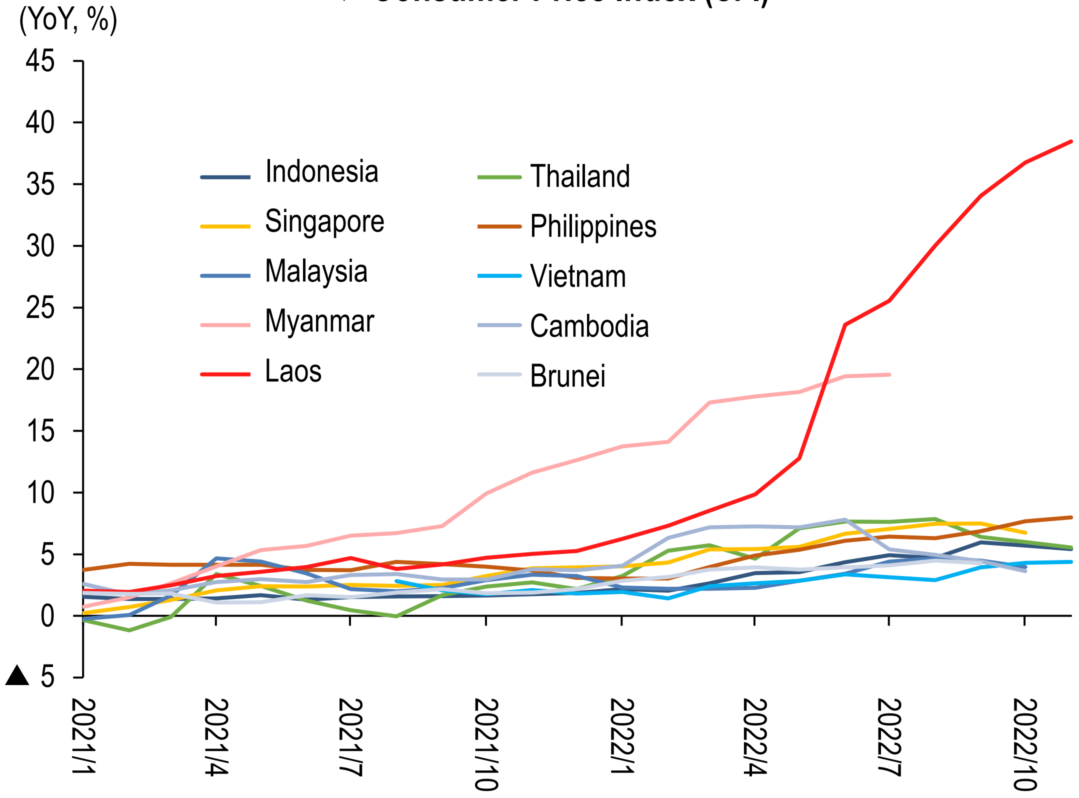
Note: Indicators with no published quarterly or annual data are averages of monthly data; PMI for ASEAN covers the above 6 countries + Myanmar

6-2. ASEAN: Inflation

In General Inflation Levels are Relatively Moderate, bur Remain Serious for a Few Countries

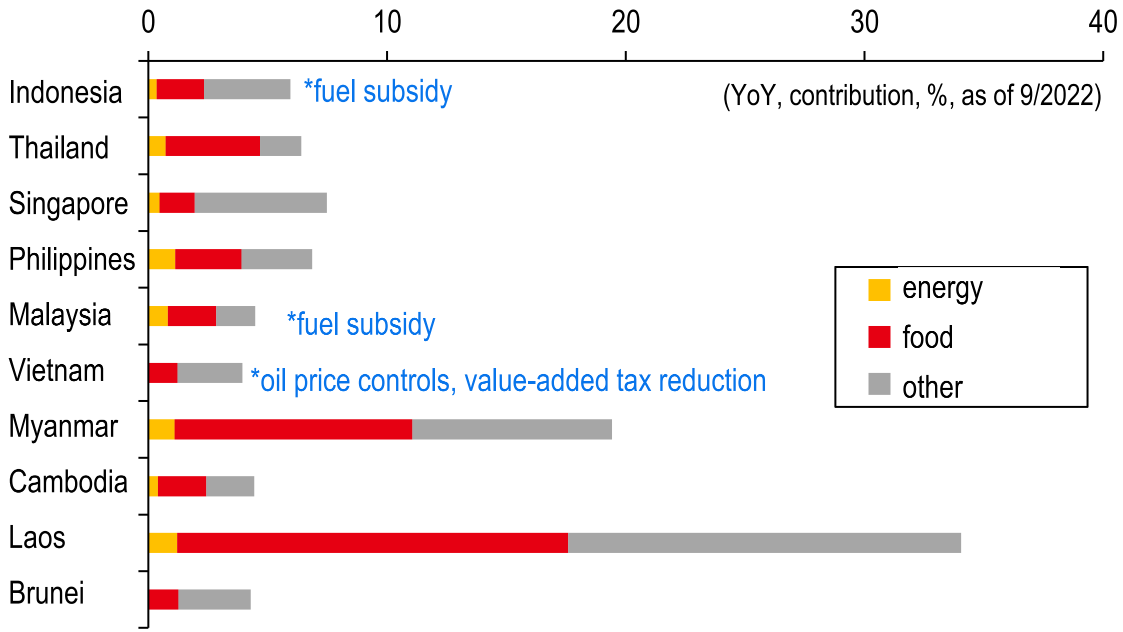
- Inflation in ASEAN's major countries has remained above the monetary authorities' target range (generally set within 1~4%) but has been relatively low compared to other regions. On the other hand, Myanmar and Laos are experiencing more serious inflation problems due to the depreciation of their currencies which has pushed up import prices.
- Inflation is expected to generally slow in 2023 due to milder resource and energy prices and reduced stimulus measures.

▽ Consumer Price Index (CPI)



Source: CEIC

▽ Consumer Price Index (CPI) Contribution

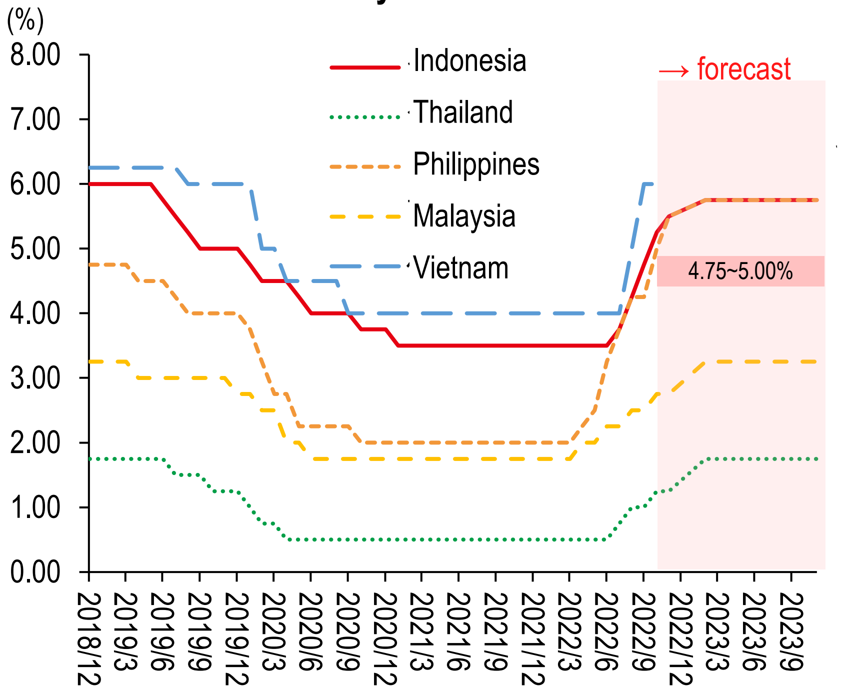


Note 1: Energy for Laos and Myanmar includes all housing-related items. Vietnam's breakdown is food only. Myanmar is only for 6/2022. Data for Cambodia is from the city of Phnom Penh.
Note 2: Indonesia's fuel subsidy will be partially reduced in 9/2022. Malaysia's fuel subsidy will be reviewed in fiscal 2023..
Source: Various media reports (graph by the Marubeni Research Institute)

6-3. ASEAN: Monetary and Fiscal Policy
U.S. Interest Rate Hike Direction and ASEAN Countries' Domestic Economies

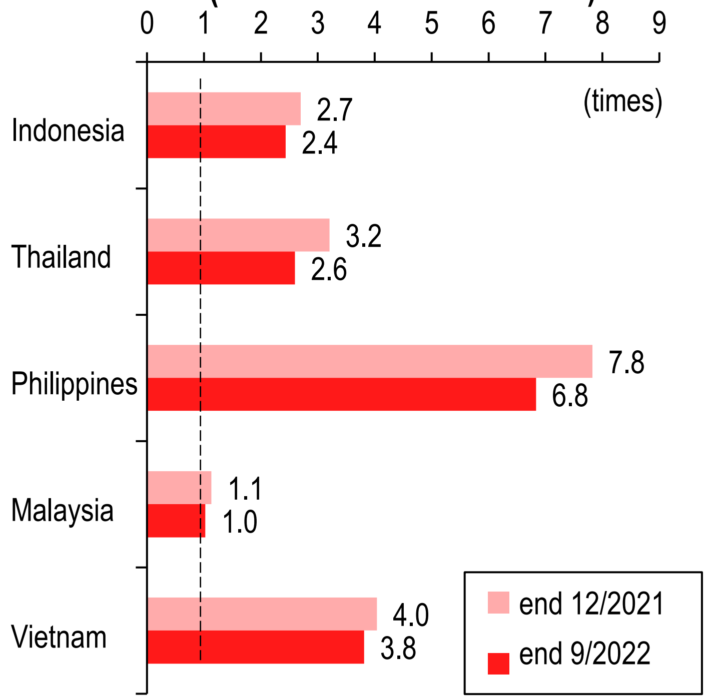
- The central banks of various ASEAN countries are raising interest rates in response to monetary tightening in the U.S. and high domestic inflation. Some central banks may slow their hikes in light of a reduction in the range of interest rate hikes in the U.S.
- Foreign exchange reserves in major ASEAN countries are generally at safe levels on a short-term external debt ratio basis, however, the reserves have been shrinking.
- In countries that made large fiscal outlays in response to the Covid crisis, etc., the level of disbursements is expected to remain above pre-Covid levels for the time being, although spending is likely to be reduced in the future.

▽ Policy Interest Rate



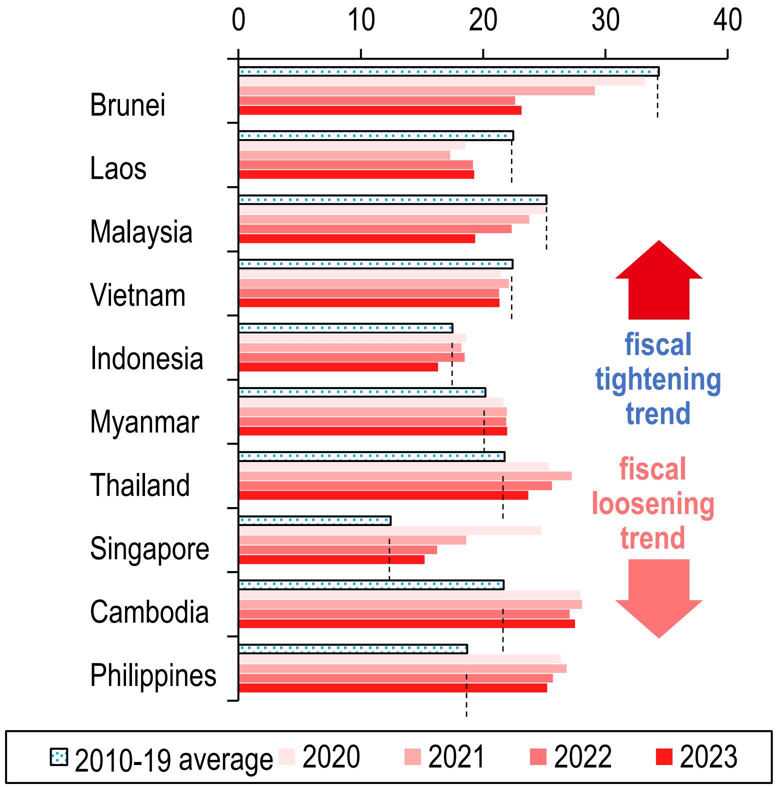
Note: JP Morgan's U.S. policy interest rate forecast (end-11/2022) was 4.25-4.50% for the end of 2022 and 4.75-5.00% for the end of 2023.
Sources: CEIC, JP Morgan (graph by the Marubeni Research Institute)

▽ Foreign Exchange Reserves (vs short-term external debt)



Note: Short-term external debt as of end-9/2022 is actually as of end-6/2022. Foreign exchange reserves are at the end of 6/2022 and debt at the end of 2020 for Vietnam only.
Sources: IMF, World Bank, Refinitiv (graph by the Marubeni Research Institute)

▽ Fiscal Balance (vs GDP, %)



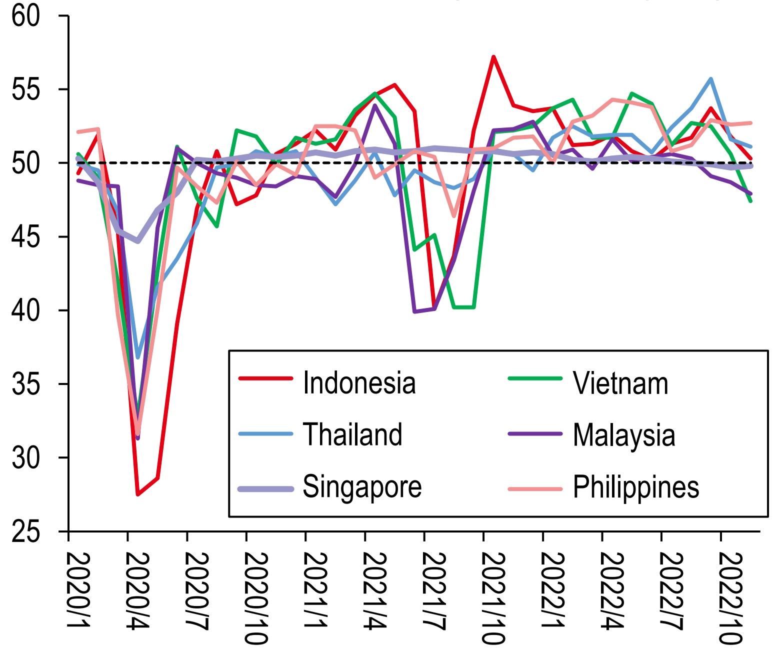
Source IMF
Note; 2022/2023 are IMF forecasts

6-4. ASEAN: Focal Points

Political/Economic Developments in China Will Have a Significant Impact on ASEAN Economies' Future

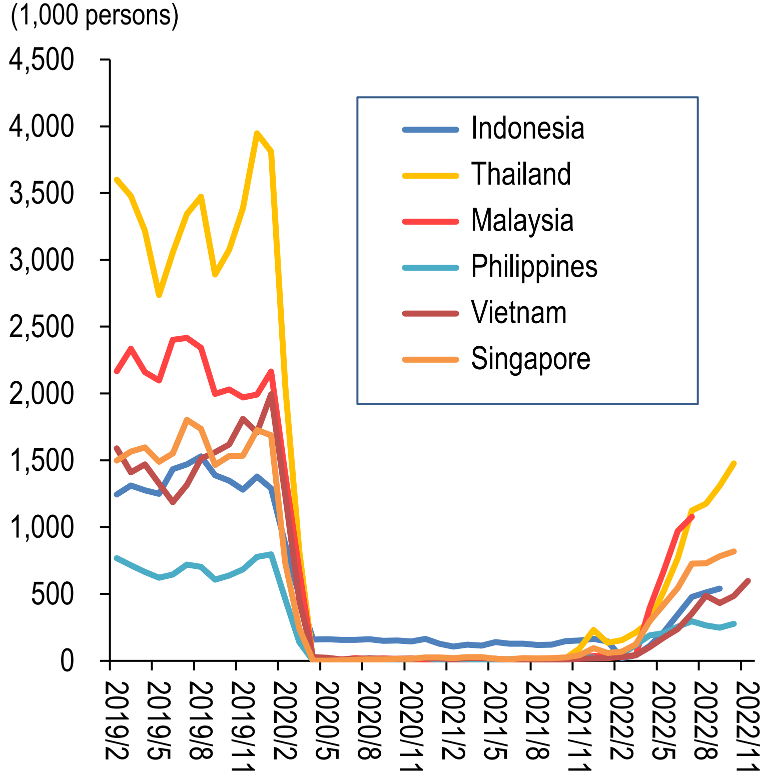
- Business confidence in the manufacturing sector has gradually declined due to economic deterioration in overseas economies (especially in China) and monetary tightening by central banks in various ASEAN countries.
- Tourist numbers are picking up steadily as border/entry measures are eased. The challenge is to recover Chinese tourist numbers, which have been sluggish due to the zero-Covid policy.
- The relocation of production from China to Vietnam has been growing owing to the escalation of U.S.-China friction and the zero-Covid policy, etc.

▽ Business Confidence (manufacturing PMI)



Note: The index is calculated by having production managers select from the three options of "improved," "unchanged," or "worsened" for the business conditions during the month compared to the previous month.
Source: Refinitiv

▽ Number of Foreigners Entering Country



Source: CEIC, (graph by the Marubeni Research Institute)

▽ Shift of Production Bases from China to Vietnam

Company	Details
Apple	Intends to utilize more suppliers in Vietnam. Suppliers such as Hon Hai are also increasing their production capacity in Vietnam.
Hon Hai	Plans to establish a manufacturing subsidiary in the northern province of Bac Giang to produce iPads and MacBooks for Apple.
Samsung Electronics	Currently constructing the largest R&D center in Southeast Asia in Hanoi.
Google	The company plans to move its smartphone manufacturing base from China to Vietnam. Although production in China will be maintained for the time being, small orders have already been shifted to Vietnam on a trial basis.
Boeing	Opened first representative office in Hanoi in August 2021. Plans to build an aviation-related manufacturing base in Vietnam.
Sharp	Considering the construction of a production base in the south to reduce their supply chain's dependence on China.
Iris Ohyama	Seeking outsourced manufacturing (furniture, etc.) in Vietnam and other countries to diversify production concentrated in China.

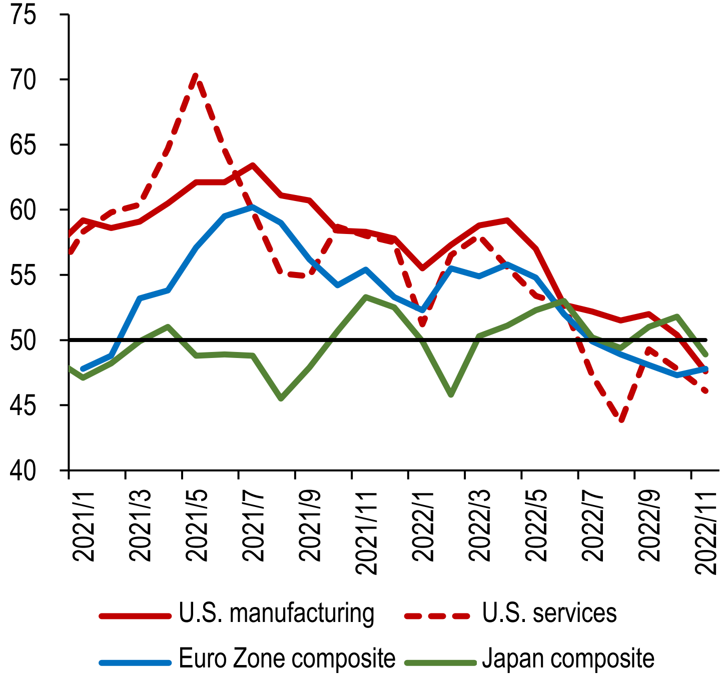
Source: Various media reports

Reference Material

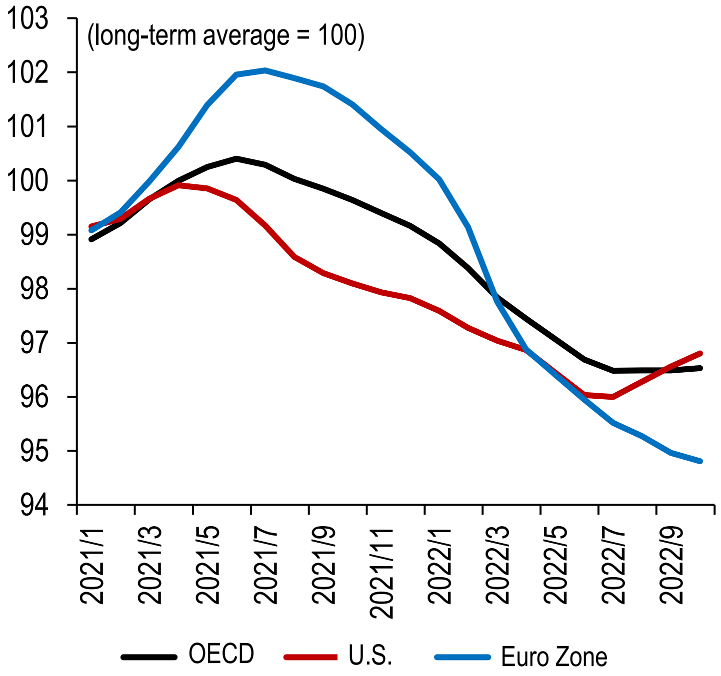
Sentiment
Household/Business Sentiment Declined Through 2022, Consumers' Short-Term Inflation Expectations Still High

- In the corporate sector, the PMI, which had been rising throughout 2021 mainly in the U.S. and Europe, has trended downward in 2022 falling below 50, the threshold for improvement or deterioration in business confidence, across the board as of November 2022. The consumer confidence index, which reflects household sentiment, was also weak during 2022. In addition to energy and other soaring price concerns due to the crisis in Ukraine, demand is expected to fall as a result of widespread monetary tightening measures.
- Consumers' short-term inflation expectations rose in all countries. While in the U.S. there are signs of a drop-off, in Japan and Europe inflation worries continues to rise,

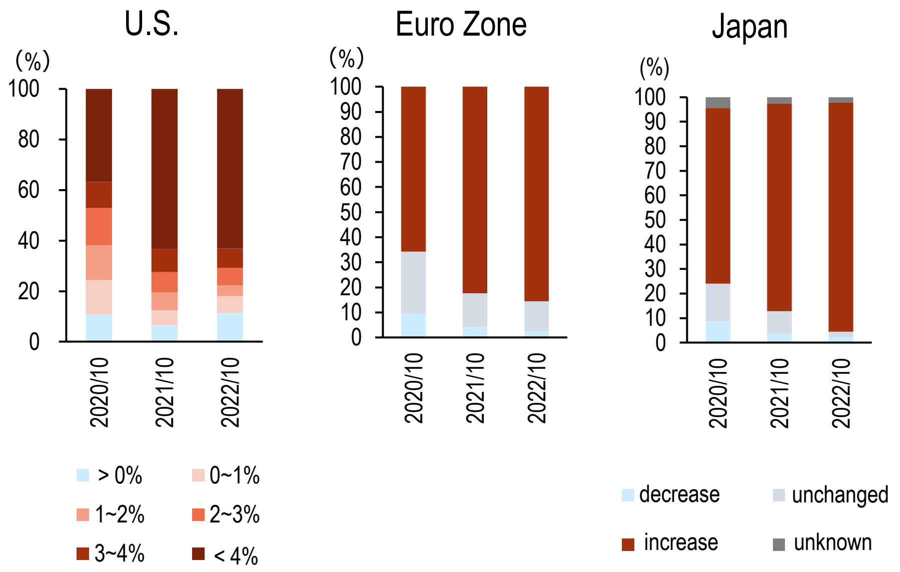
▽ Major Country PMIs



▽ Consumer Sentiment



▽ Consumer Inflation Expectations (1-year ahead survey)



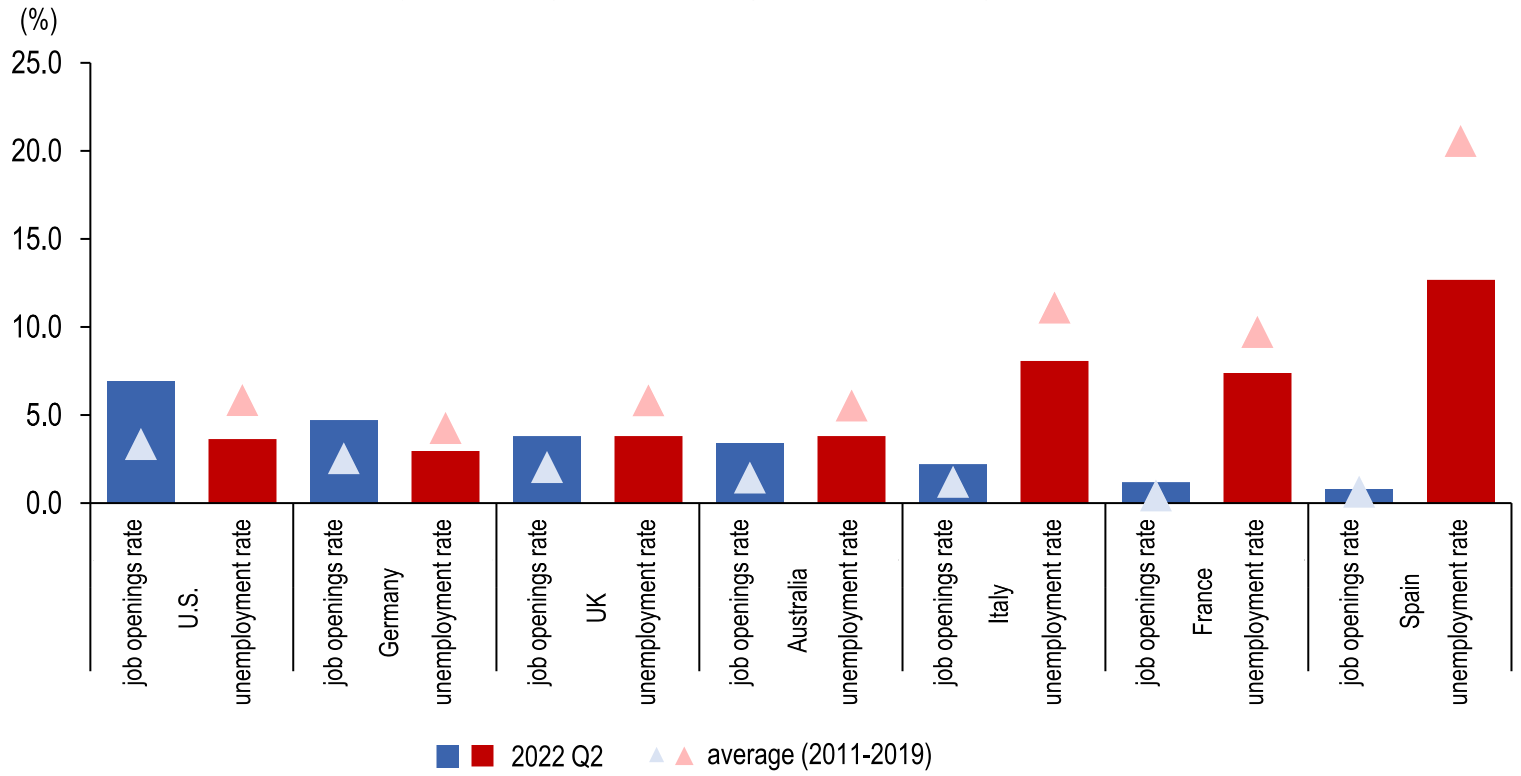
Note: PMI (Purchasing Managers' Index) The Purchasing Managers' Index is an index of business conditions in which corporate purchasing managers are asked to indicate whether their business conditions improved, remained unchanged, or worsened during the month compared to the previous month. The index is calculated by dividing the difference between improvement and deterioration in business confidence at 50.
Sources: S&P Global, OECD "Economic Outlook Volume 2022, Issue 2", NY Federal Reserve Bank, European Central Bank, Bank of Japan (graphs by the Marubeni Research Institute)

Labor Market Situation

In Many Major Economies Labor Supply/Demand to Remain Tight for Some Time, Wages Rising but Real Purchasing Power Declining

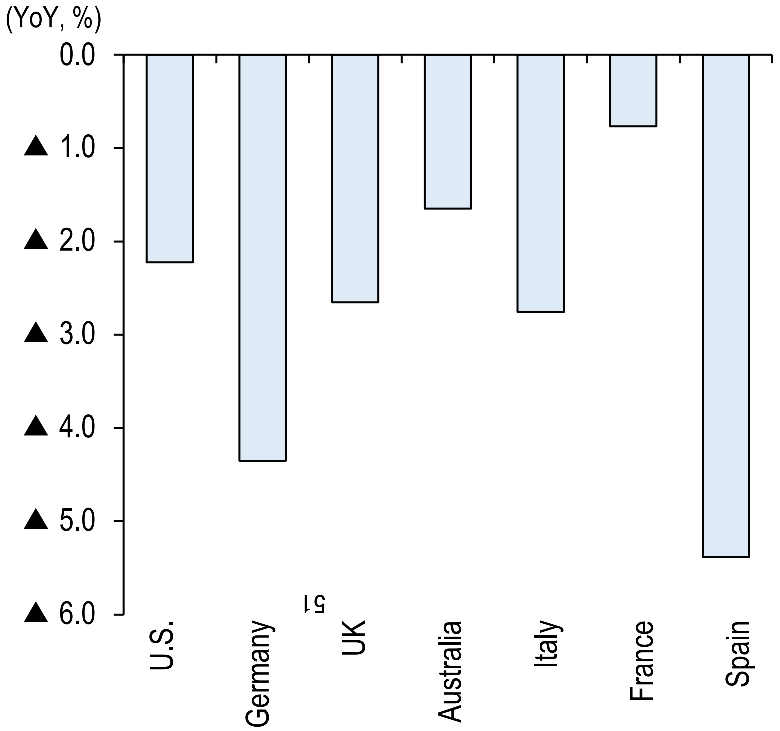
- While demand for labor increased in many major countries, with the job openings rate (number of job openings/number of labor participants, i.e., job seekers) exceeding pre-Covid levels, labor supply was tight and unemployment rates fell to their lowest levels in 20 years. Nominal wages (compensation per employee) have been increasing due to the supply-demand imbalance which may lead to inflationary pressures as companies pass on some of the higher employment costs to prices for goods and services. On the other hand, on the workers' side the pace of wage growth has not kept pace with high inflation so real purchasing power has fallen sharply.

▽ Major Country Job Openings and Unemployment Rates



Source: OECD, "Economic Outlook Volume 2022 Issue 2"

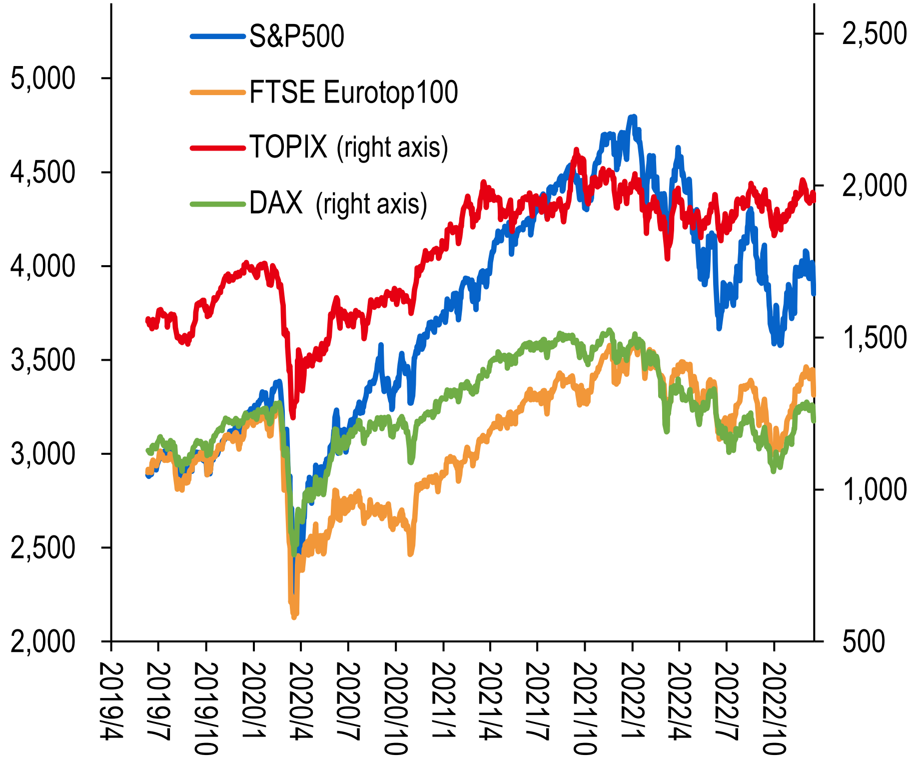
▽ Major Countries Real Wages (as of 3Q 2022)



Financial Market Trends
Stock Markets Weak Since the Start of 2022, Financing Situation has Worsened

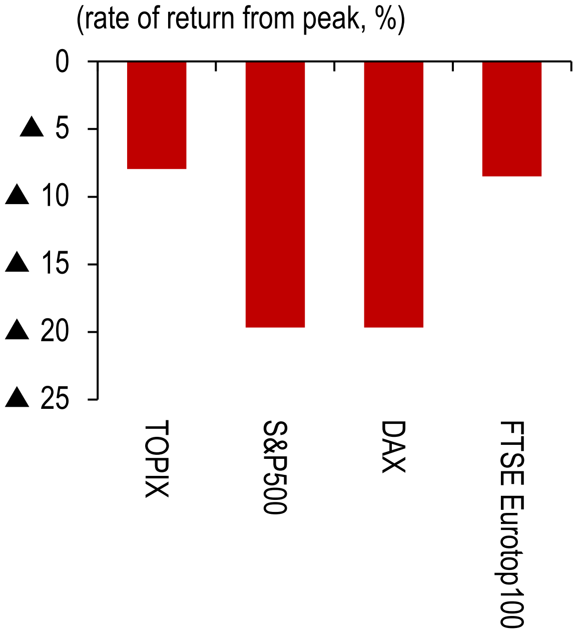
- In 2022 U.S. stocks continued their downward trend after peaking at the beginning of the year, while European stocks remained soft. After monetary tightening was in full swing, stocks declined further from summer to fall resulting in a 20% adjustment for the year as a whole. Although the rate of decline in Japan was relatively small, it was about the same in dollar terms.
- The number of IPOs after 2022 will decline sharply due to difficulty in raising funds as a result of higher interest rates. Investors are becoming, by necessity, more selective.

▽ Stock Market Indexes



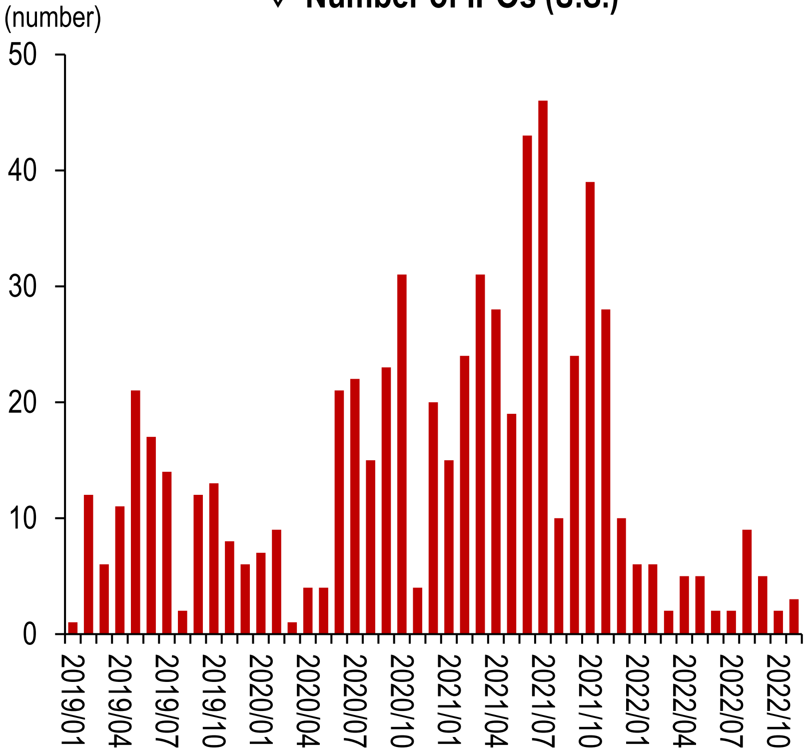
Source: Refinitiv (graph by the Marubeni Research Institute)

▽ Stock Price Appreciation



Source: Refinitiv graph by the Marubeni Research Institute)

▽ Number of IPOs (U.S.)



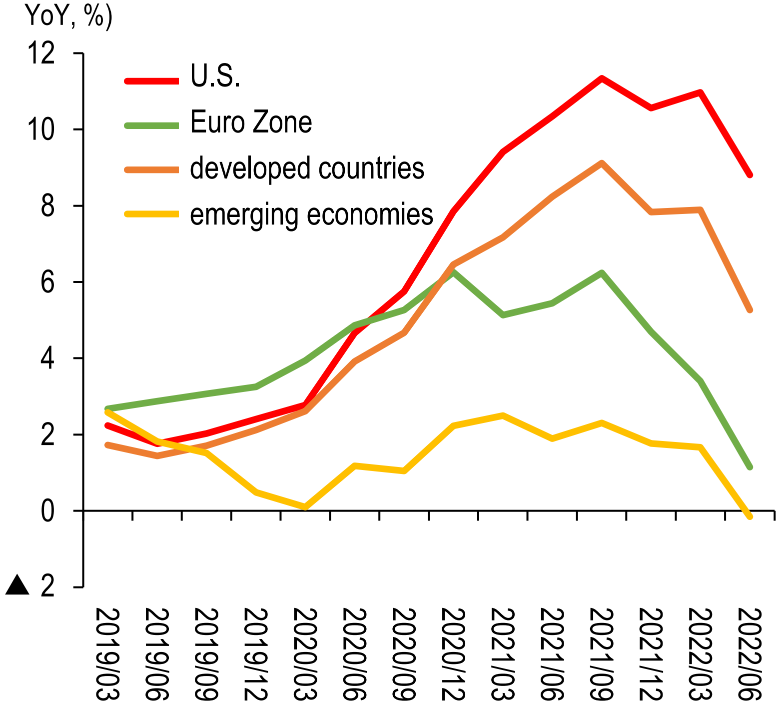
Source: Refinitiv graph by the Marubeni Research Institute)

Housing Prices/Crypto Assets

Housing Prices Have Peaked in Developed/Emerging Markets, Crypto Assets, etc., Undergoing Serious Corrections

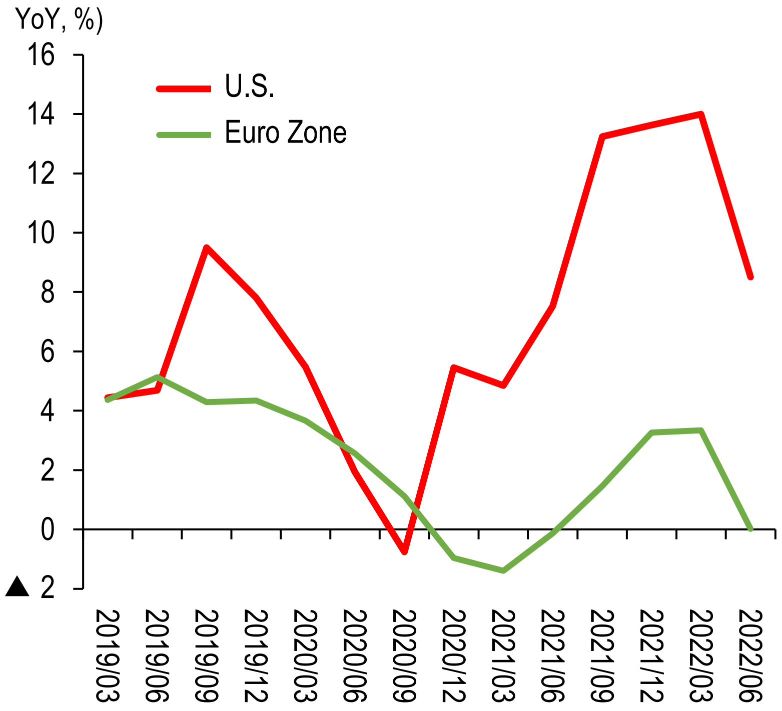
- As interest rates have risen the ability to acquire a home has declined. As such, the rate of increase in home prices is contracting in both developed and emerging economies.
- Commercial real estate prices peaked at the beginning of 2022 with price adjustments becoming apparent ahead of those in the residential market.
- Crypto assets have plummeted to pre-boom levels. Although there are industry-specific factors, there is a growing trend to move out of risky crypto assets.

▽ Housing Prices



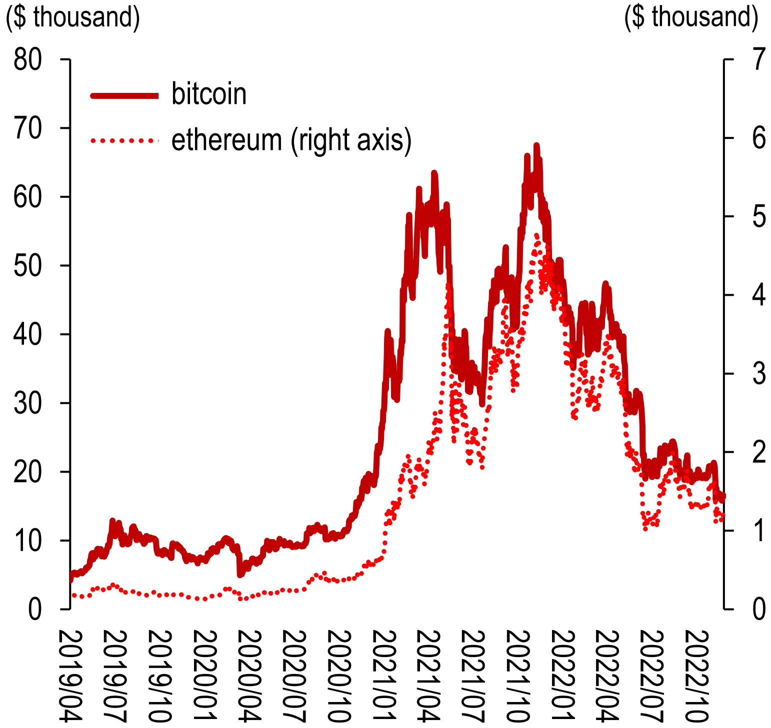
Source: BIS (graph by the Marubeni Research Institute)

▽ Commercial Real Estate Prices



Source: BIS (graph by the Marubeni Research Institute)

▽ Crypto Assets

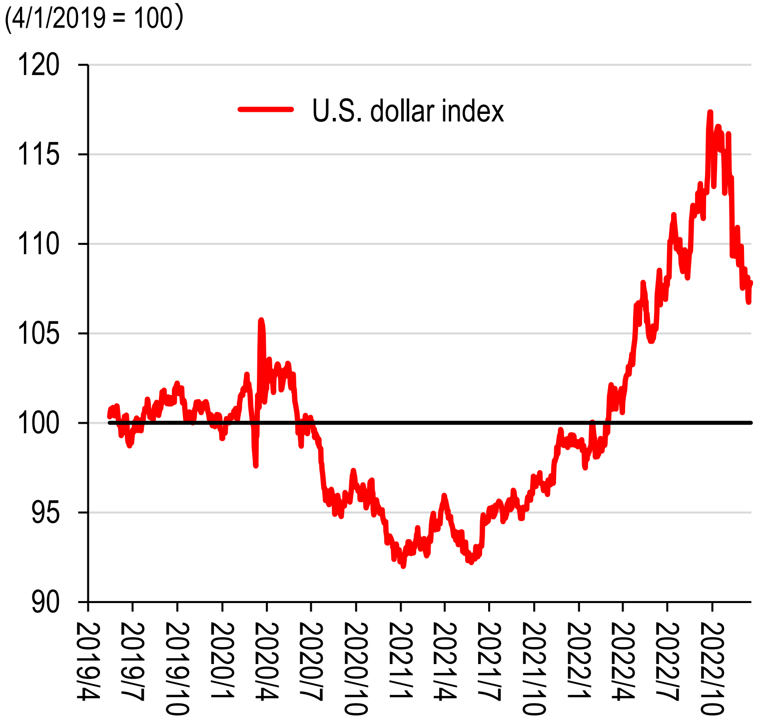


Source: Refinitiv (graph by the Marubeni Research Institute)

Foreign Exchange: U.S. Dollar
Respite from Appreciation of the U.S. Dollar Against Major Currencies

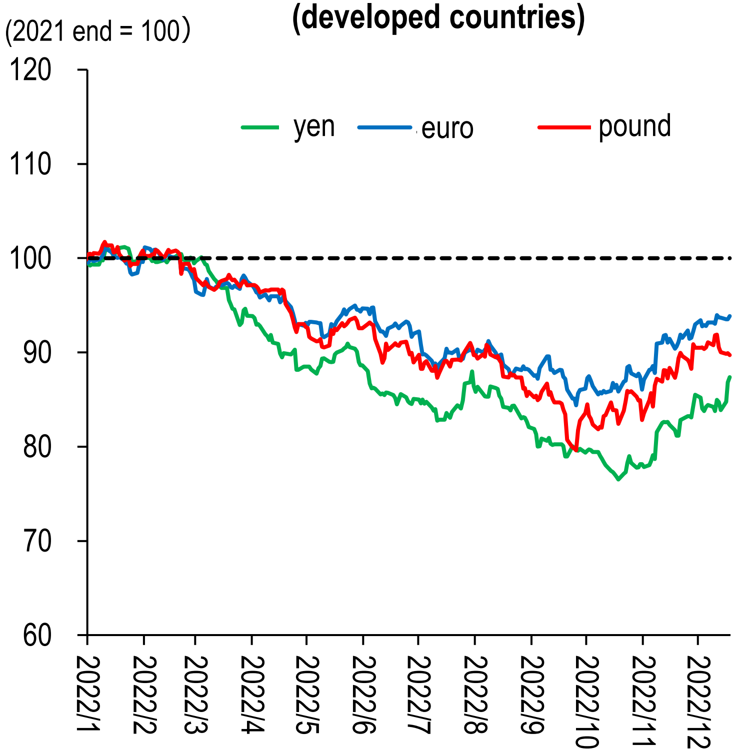
- The dollar index, which represents the relative value of the U.S. dollar against major currencies, began to surge around May of 2022 and reached its highest level in about 20 years in September of 2022. Although the market has entered an adjustment phase since then, there has been no significant change in the situation whereas the foreign exchange market is easily influenced by interest rate differentials.
- Major currencies depreciated against the U.S. dollar almost universally, with the exception of a few such as the Brazilian real, which was supported by aggressive interest rate hike measures and high resource prices.

▽ U.S. Dollar index



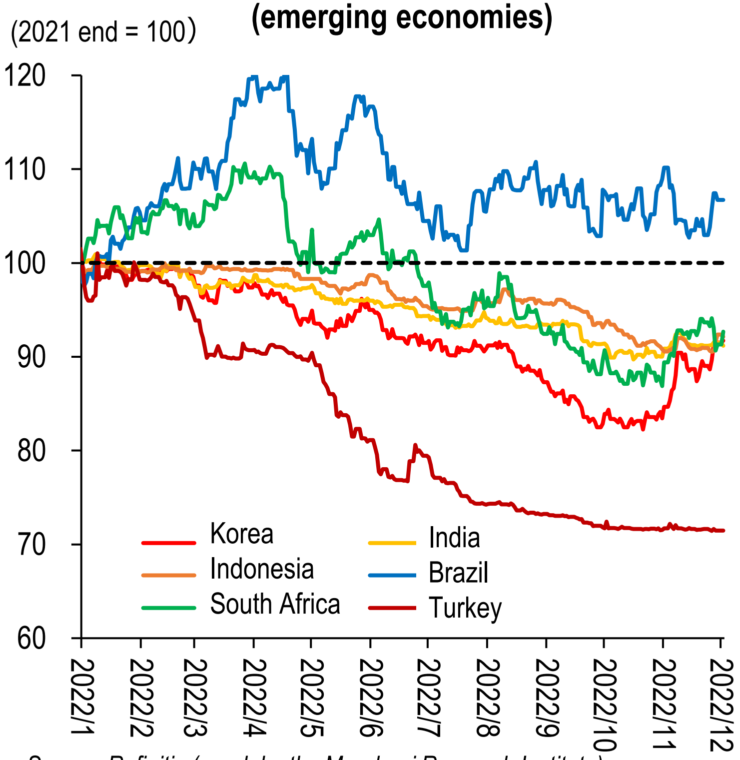
Source: Refinitiv (graph by the Marubeni Research Institute)

▽ Exchange Rates vs U.S. Dollar (developed countries)



Source: CEIC (graph by the Marubeni Research Institute)

▽ Exchange Rates vs U.S. Dollar (emerging economies)



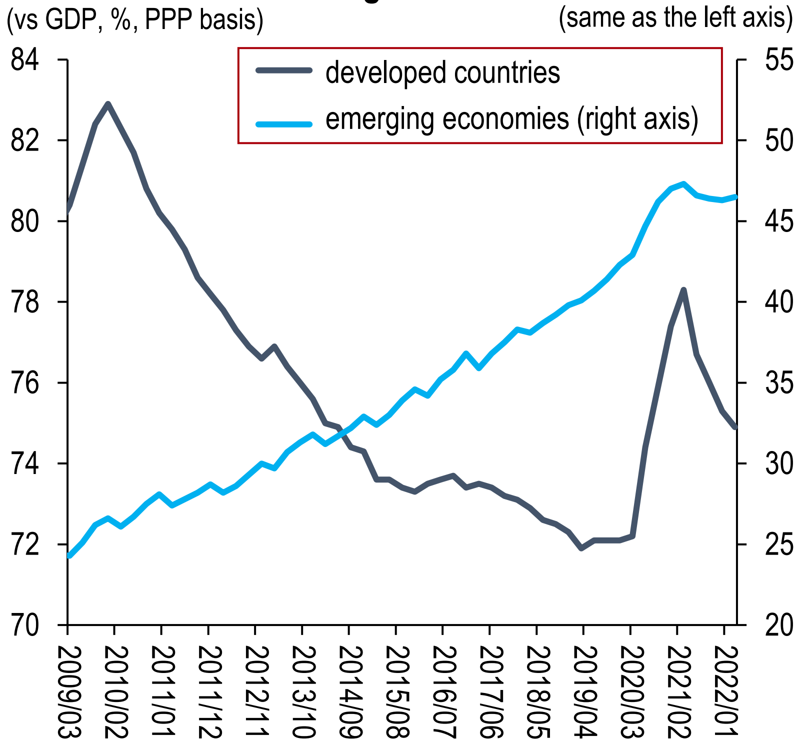
Source: Refinitiv (graph by the Marubeni Research Institute)

Household Debt

Household Debt is Lower Than During Past Crises but Concerns Over Disproportionate Impacts on the Low-Income Stratum and Fragile Countries

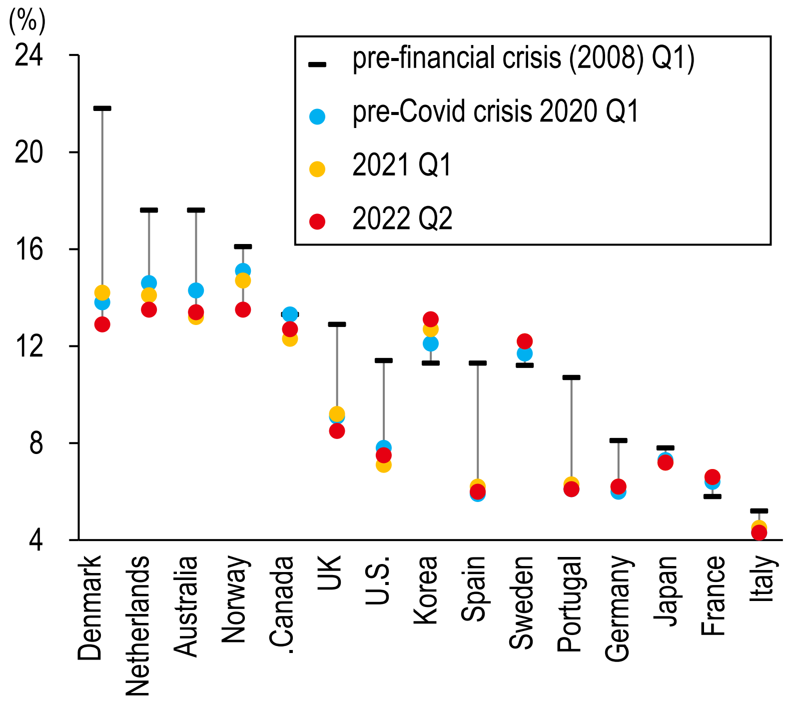
- Following the global financial crisis, a favorable financial environment help push up housing prices. During the Covid pandemic a combination of rising building material costs due to supply chain constraints and expanding housing demand further pushed up prices with household debt expanding. On the other hand, household debt has been shrinking as a percentage of GDP since last year owing to economic recovery.
- At the macro level, with the exception of some countries such as Korea, household debt indicators are generally lower than during past crises. However, there are concerns that the impact of rising interest rates will disproportionately increase the debt burdens of the low-income class, who have high debt to income ratios, and that falling home prices will damage household assets.

▽ Outstanding Household Debt



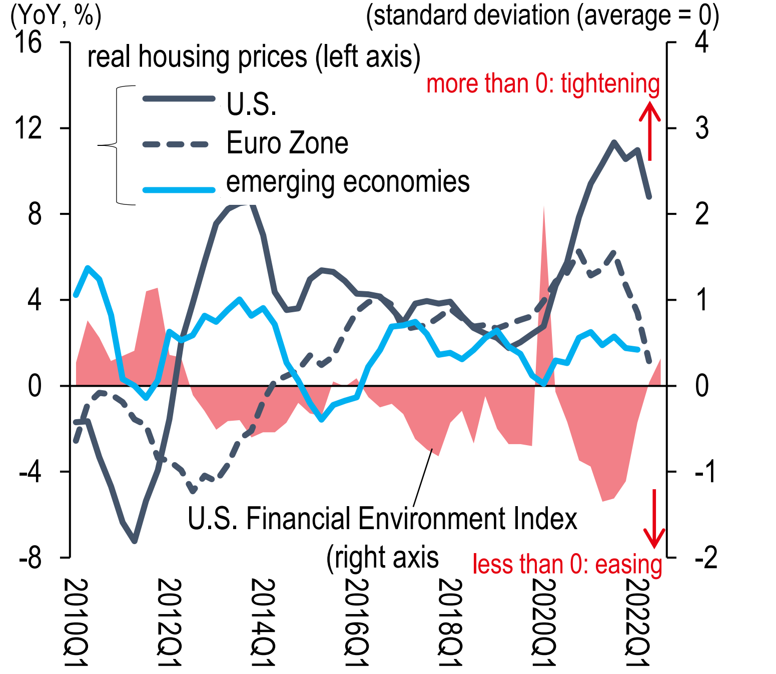
Note: Based on BIS' regional classification.
Source: BIS (graph by the Marubeni Research Institute)

▽ Households' Debt Service Ratio



Note: Debt service ratio = debt repayment (interest + principal)/income.
Source: BIS (graph by the Marubeni Research Institute)

▽ Real Housing Prices and Financial Environment Index



Note: The Financial Environment Index is an indicator of the ease of obtaining financing in the market. The IMF produces this index by integrating various interest rate spreads, stock prices, exchange rates, and other indicators.
Source: BIS, IMF (graph by the Marubeni Research Institute)

Major Country Monetary Policy Trends
Europe/U.S. Accelerate Tightening, Japan Somewhat Unmovable, China Focuses on Economy

Country/Region		U.S.	Japan	Euro Zone	UK	China
Central Bank		Federal Reserve System	Bank of Japan	European Central Bank	Bank of England	People's Bank of China
Policy Decision Bodies		Federal Open Market Committee（FOMC）	Monetary Policy Meeting（MPM）	Governing Council	Monetary Policy Committee (MPC)	･Important monetary decisions made by State Council ･The PBC implements monetary policy independently ･The Monetary Policy Committee is an advisory body
	previous meeting	December 13, 14	December 19, 20	December 15	December 15	LPR (most preferential lending rate for commercial banks) decided the 20th of each month
	next scheduled meeting	January 31/February 1	January 17, 18	February 2	February 2	
Short-Term Interest Rate		**4.25-4.50%** Federal Fund Rate	**▲0.1%** Interest Rate on Complementary Deposit Facility	**2.00%** Deposit Facility Rate	**3.50%** Bank Rate	**3.65%** 1-Year Loan Prime Rate
	corridor cap (short-term interest rate cap)	**4.50%** Repurchase Agreement Rate **4.50%** Primary Credit Rate	**0.3%** Basic Loan Rate	**2.75%** Marginal Lending Facility Rate	**3.75%** Standing Lending Facility Rate	-
	corridor floor (short-term interest rate lower limit)	**4.30%** Reverse Repurchase Agreement Rate	same as the short-term interest rate	same as the short-term interest rate	**3.25%** Standing Deposit Facility Rate	-
	other important interest rates	**4.40%** Interest Rate on Reserve Balance	-	**2.50%** Main Refinancing Operations Rate	-	-
Long-Term Interest Rate		not set	**｢around 0%｣（0%±0.50%）** 10-year JGB yield-to-maturity	not set	not set	**4.30%** 5-Year Loan Prime Rate
Asset Purchases (quantitative easing)		**portfolio runoff in process (from 6/20022)**	**Long-Term JGBs: Unlimited purchases** **ETFs: 12 trillion yen per year (pace of increase in balance)** **J-REITs: 180 billion yen (pace of increase in balance)** **CP：Maintain a balance of 2 trillion yen** **Corporate Bonds: Maintain a balance of 2 trillion yen**	**end of new purchases (7/2022)**	**portfolio runoff in process (from 2/2022)** (IG CBs included in sell off) **started to sell government bond holdings (from 11/2022)**	Reduced the **cash reserve ratio** and liquidity supply through the **MLF** (3 month to 1-year medium-term funding facility) from mid-2021 onward
	balance sheet size	About 8.6 trillion dollars(as of 12/13/2022)	695 trillion yen	8.5 trillion euros	940 billion pounds	
Decisions made at previous meeting		● Raise short-term policy interest rate (FF rate) by 50 basis points	● Expanded the range of long-term yields from around ±0.25% to ±0.5% ● Increase the monthly purchases of JGBs from 7.3 trillion yen to about 9 trillion yen	●Raised the short-term policy interest rate by 50 basis points	● Raised the short-term policy interest rate by 50 basis points	9/20/2022 ●1-year LPR：3.70% → 3.65% ●5-year LPR：4.45% → 4.30% 12/5/2022 ● Cash reserve ratio: 8.1% → 7.8%

Source: Marubeni Research Institute

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