Outlook for the Japanese and Overseas Economies

ECONOMIC RESEARCH OFFICE
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MUFG Bank, Ltd.
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Contents

1-1. Overview of Economic Outlook – Global Economy

- For the most part, we are now in the final phase of the rapid monetary tightening that has taken place since 2022 and has had a huge impact on the global economy and markets. After inflation slows due to the effects of this tightening, the global economy will start to expand again at a moderate rate. However, there are still many issues that need to be overcome for there to be a soft landing.
- For example, changes to things like policies will easily trigger "reactions" for a while as pent-up demand from the pandemic peters out and countries enter a period of transition where they look to return to normal after responding to the crisis. In addition, there is international instability, which is exemplified in the tension between the US and China and the conflict in Ukraine, and structural changes geared towards decarbonisation and digitalisation have become the new normal. Against this backdrop, there is a possibility that trends independent of the business cycle and non-continuous changes will make economic forecasting difficult and will increase market volatility.

Economic Forecast	▪ Despite the uncertainty about the geopolitical situation, the global economy will start to expand again at a moderate rate after a phase of further deceleration triggered by the cumulative effects of monetary tightening.
Assumptions	▪ The tension between the US and China has become normalised and the conflict in Ukraine drags on, but extreme escalation is unlikely. ▪ Behaviour after the pandemic and trends such as decarbonisation, digitalisation and economic security have taken root as the new normal.
Uncertainties and Risk Factors	**Impact of rate hikes and reduced fiscal support** ✓ Rate hikes are having an effect on economies along with a paring back of government support, such as reduced fiscal support and an end to deferred loan repayments, and a depletion of excess savings. As central banks and governments take different stances on returning to normal, how and when will the impact of this appear in each country and region? *E.g. Instability in US banks' credit, large rise in UK mortgage interest payments, US student loan repayments, repayment of "zero-zero" loans in Japan, a downturn in US commercial real estate, a depletion of excess savings* **China's real estate issues** ✓ How will the Chinese government deal with real estate development companies, who are currently facing problems? What stance will it take towards real estate and the problems it faces in the medium and long term, such as reduced demand due to a declining population? **Situation in Ukraine (commodities and food)** ✓ What can we expect from Russia, which still has a strong presence in terms of commodities like natural gas, as well as food and its military?

1-1. Overview of Economic Outlook – Economic Growth

- In the latter half of 2023, we are likely to see continued downward pressure on economies from the effects of monetary tightening, even though this phase of global interest rate hikes will have come to an end. In the first half of 2024, a deceleration in inflation rates and rate cuts by central banks are expected to start to have a positive effect on economies and, in the latter half of the year, economies will return to a trend of gradual expansion.
- We forecast the global real GDP growth rate to slow to 2.9% YoY in 2023 but then pick up a little to 3.0% YoY in 2024.

Changes from the Outlook in May: The real GDP growth rate forecast for 2023 was revised upwards a little (by 0.2% points). No change to the 2024 forecast.

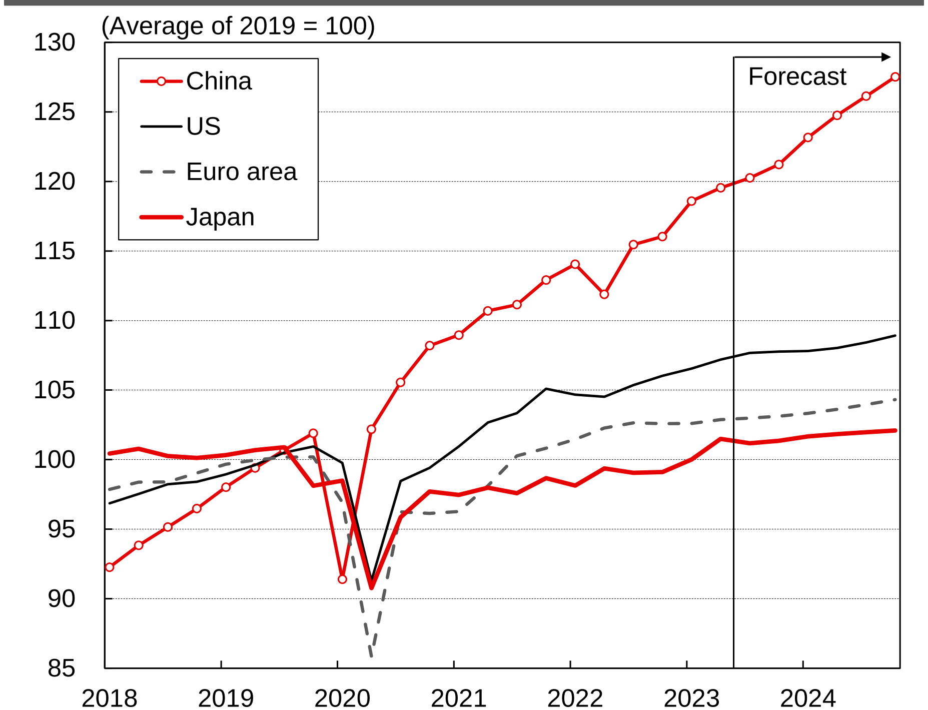
- ✓ China ↓: Instead of a rebound in demand once the “zero COVID-19” policy was abolished, there is considerable downward pressure from a slump in the real estate sector, slow improvements in the labour market and a deceleration in foreign demand.
- ✓ Japan ↑: The economy will continue to recover gradually as the economy normalises. There was strong growth in real GDP in the April-June quarter on a temporary basis due to external demand.
- ✓ US ↑: Even though the Fed will maintain its economically restrictive monetary policy, private consumption will remain firm due to a robust labour market and capital expenditure will increase.

Real GDP Outlook for Major Economies

(%)	2022	MUFG Forecast (August) 2023	MUFG Forecast (August) 2024	MUFG Forecast (May) 2023	MUFG Forecast (May) 2024
World	3.5	2.9	3.0	2.7	3.0
US	2.1	2.0 (1.1)	0.9 (0.5)	1.2	0.5
Euro area	3.3	0.6 (0.3)	0.9 (0.7)	0.8	1.2
UK	4.1	0.4 (0.3)	0.6 (0.5)	0.3	0.6
Japan (FY)	1.4	2.0 (1.4)	0.6 (0.2)	0.8	1.0
Japan (CY)	1.0	2.1 (1.8)	0.9 (0.7)	0.8	1.1
Asia (total 11 economies)	4.2	4.7	4.8	5.1	4.9
China	3.0	4.8 (3.3)	4.6 (3.5)	5.7	4.7
ASEAN 5	6.0	4.5	5.0	4.7	5.1
Indonesia	5.3	4.9 (3.0)	5.0 (3.2)	4.8	5.0
Thailand	2.6	3.0 (3.1)	3.7 (2.3)	3.5	3.7
Malaysia	8.7	4.1 (3.4)	4.4 (2.8)	4.2	4.4
Philippines	7.6	5.2 (2.3)	5.8 (3.2)	5.6	5.8
Vietnam	8.0	5.0	6.5	5.5	6.7

Note: Number in parentheses is growth rate when the carry-over effect is removed.
Source: Statistics from each country or region, MUFG Bank Economic Research Office

Real GDP Outlook for Select Major Economies



Source: Statistics from each country and region, MUFG Bank Economic Research Office

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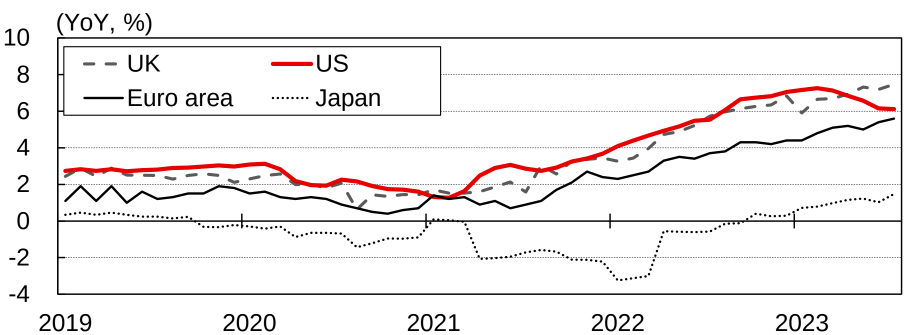
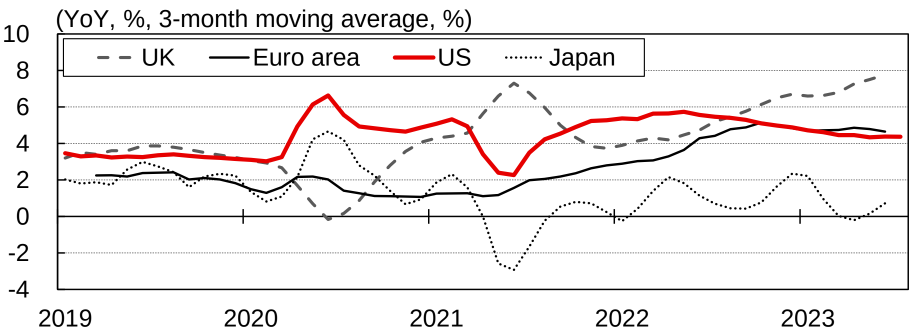
1-1. Overview of Economic Outlook – Prices and Monetary Policy in Advanced Economies

- Headline inflation rates in major advanced economies continue to slow. On the other hand, core service prices reflect the differences in wage trends between countries and regions, giving them a different sense of direction. Wage growth continues on a downward trend in the US and, while it is starting to fall gradually in the euro area, wage growth is still accelerating in the UK.
- While countries are in their final phases of monetary tightening, future policy rates will be determined by differences in prices and wage trends. In the US and euro area, the Fed and ECB will maintain their current policy rates, where as the Bank of England is expected to carry out additional rate hikes in September and November. After that, central banks are forecast to start to lower their rates until the latter half of 2024.
- Continued wage hikes are a large hurdle Japan faces if it is to reach its inflation target. However, the prevalent view is that inflation will remain positive as the economy continues to recover and the BoJ is expected to end its negative interest rate policy and yield curve control during the latter half of 2024 in order to improve the sustainability of its monetary policy.

Price of Core Services in Advanced Economies

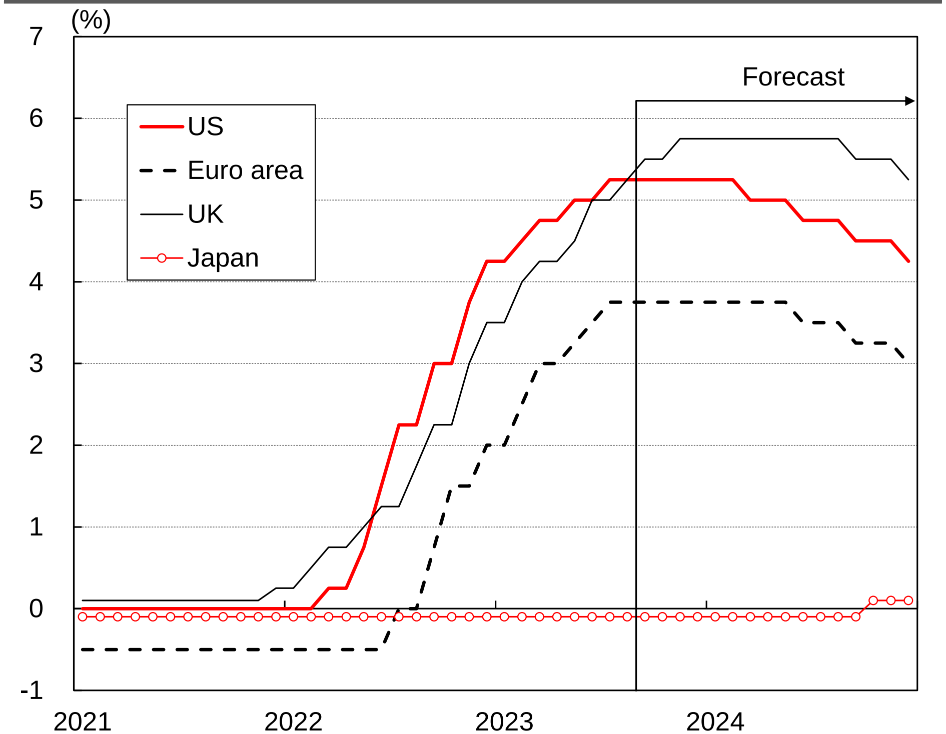


Wages in Advanced Economies



Source: US Bureau of Labor Statistics, Eurostat, UK Office of National Statistics, Japan Ministry of Internal Affairs and Communications, Indeed, MUFG Bank Economic Research Office

Policy Rates in Advanced Economies



Note: Policy rates are FF target rate for the US, Deposit Facility Rate for the euro area, Bank Rate for the UK, and Policy Balance Rate for Japan.
Source: Statistics from each country, MUFG Bank Economic Research Office

1-2. China's Real Estate Market – Evergrande

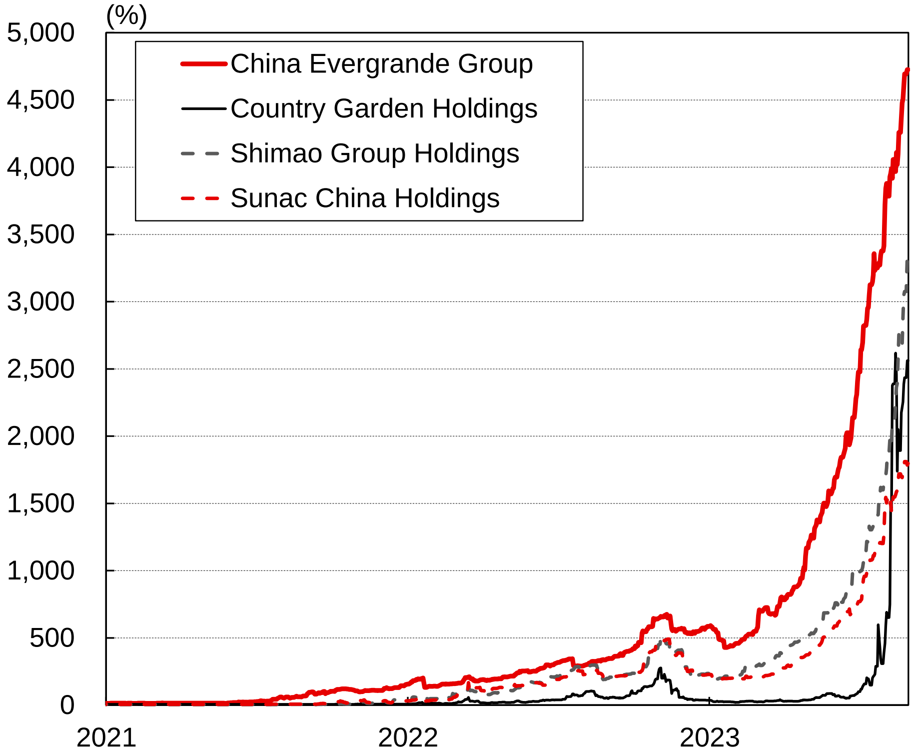
- In August this year, Evergrande filed for protection under Chapter 15 of the US bankruptcy code. Around that time, one of China's large property developers – Country Garden – was reported to have missed interest payments on its dollar-denominated debt, and concerns about the future of China's real estate market rose higher.
- This series of real estate companies failing to make their debt payments began with the government's tightening of regulations on the real estate industry in 2020. The following year, Evergrande signalled a partial default due to its liquidity crisis. After that, it proceeded with restructuring with the support of the Guangdong provincial government, but debt restructuring negotiations were rocky.
- Evergrande's bankruptcy filing is explained as a process in the debt restructuring plan, and there appears to be few concerns that the company will go bankrupt immediately. Nevertheless, Evergrande's situation is still serious; in the last two and a half years, the company has amassed a total deficit of about RMB 615 billion (approximately USD 84 billion), and the amount of insolvency has risen to about RMB 644 billion. In addition to Country Garden, firms both large and small are experiencing financing difficulties and there is little cause for optimism.

Tightening of Real Estate Restrictions & Timeline of Evergrande Issues

The Government's Tightening of Restrictions on the Real Estate Sector	
Aug 2020	Introduction of Three Red Lines Policy ⇒Puts a cap on three metrics for property developers (1: liability-to-asset ratio (excluding advance receipts), 2: net debt-to-equity ratio, 3: cash-to-short-term borrowings ratio) ⇒Limits increases in banks' lending depending on adherence to the three metrics
Dec 2020	Introduces a "collective management system for real estate loans" ⇒Restricted banks' ratio of real estate loans according to the size of their assets
Sales take a downturn during the pandemic and real estate developers' cash flows fall	
Evergrande's Situation	
Sep 2021	Flurry of news about Evergrande's cash flow problems
Dec 2021	A major ratings agency downgrades Evergrande to "restricted default" ⇒Management restructuring starts led by Guangdong provincial government
2022 onwards	The real estate market declines sharply and the government eases restructions on the sector (eased financing and mortgage restructions, increased support for real estate developers)
Mar 2023	Announces a restructuring plan for foreign currency-denominated debt ⇒Partial agreement
Jul 2023	Announces financial results that have been delayed since June 2021 ⇒Posted liabilities of RMB 2.4 trillion and a loss of RMB 600 bn in its net worth
Aug 2023	Files for protection under Chapter 15 of the US bankruptcy code

Source: Various media reports, MUFG Bank Economic Research Office

Bond Yields of Large Property Developers

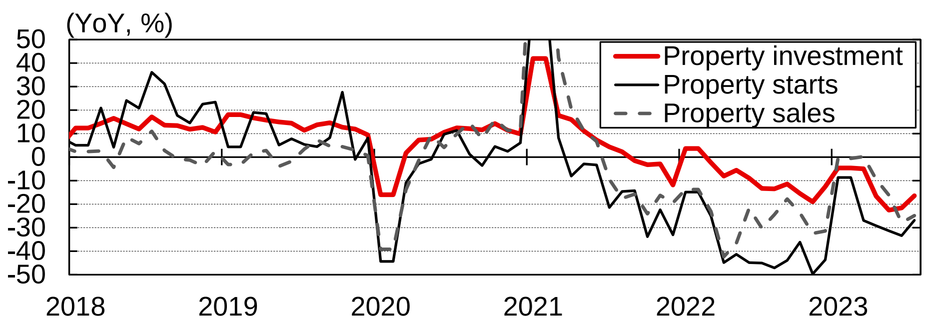


Note: Chart shows yields on bonds that will mature in 2024
Source: Bloomberg, MUFG Bank Economic Research Office

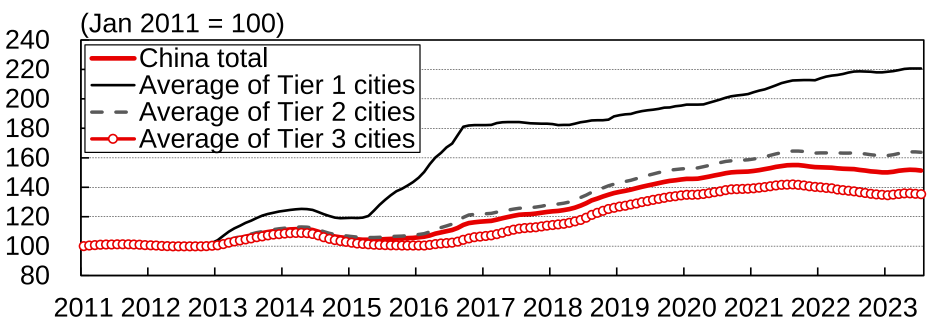
1-2. China's Real Estate Market – Current Situation

- The housing market remains on a downwards trend since 2021 2H in terms of sales, construction and investment. Since 2022, mortgage rates have been lowered and restrictions on house purchases eased to stimulate demand, but uncertainty about the future of the real estate market has not been soothed and has not led to a rise in house prices. While there has been a small fall in real estate prices, it is important to note that this does not necessarily reflect the state of supply and demand.
- In China, many have been saying there is a real estate bubble for while. According to a NUMBEO survey, which compares the cost of houses globally, Shanghai and Beijing take the top two spots globally where the house price to income ratios are 46.6 and 45.8 respectively. The government is trying to avoid a sudden and large correction to house prices while also avoiding expanding the bubble further. This will be a difficult task to try and navigate.

Real Estate Indicators

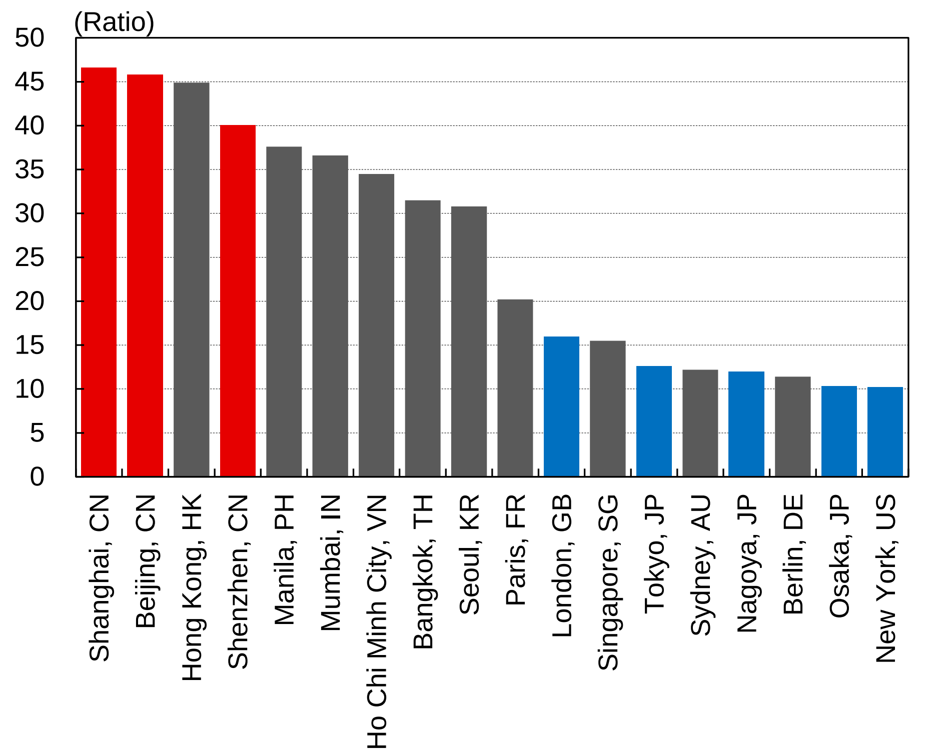


Real Estate Prices



Source: National Bureau of Statistics of China, MUFG Bank Economic Research Office

House Price-to-Income Ratios in Major Cities Worldwide



Note: 1. House price-to-income ratio = house price (㎡/yuan) x living area (90㎡) ÷ net disposable family income (net salary x 1.5 people)
2. Osaka and Nagoya uses data from 2015
Source: NUMBEO, MUFG Bank Economic Research Office

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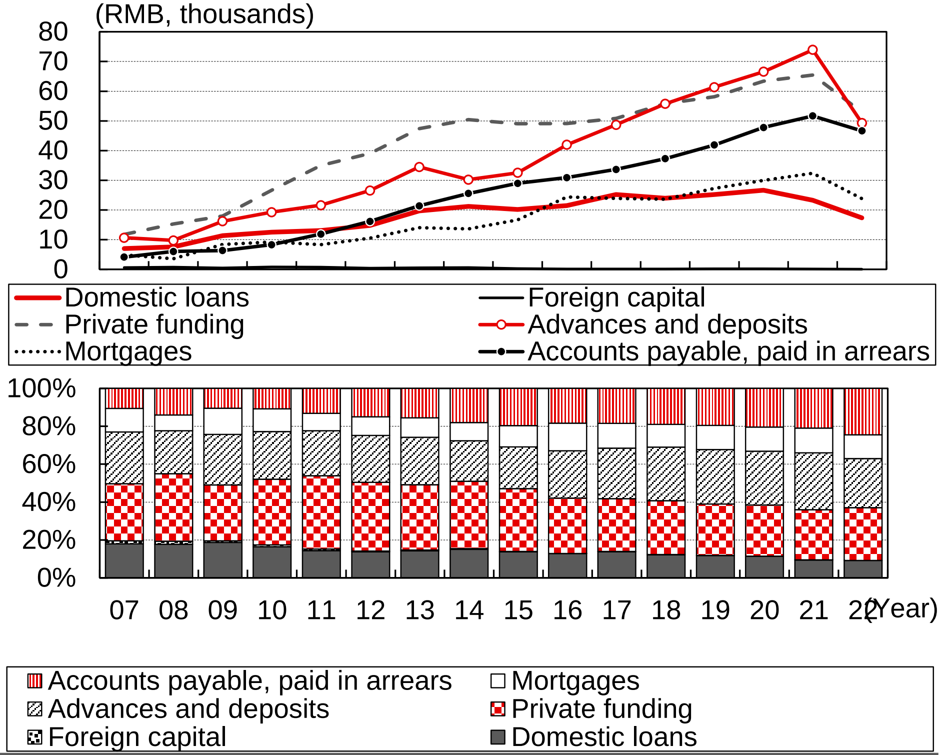
1-2. China's Real Estate Market – Impact on the economy

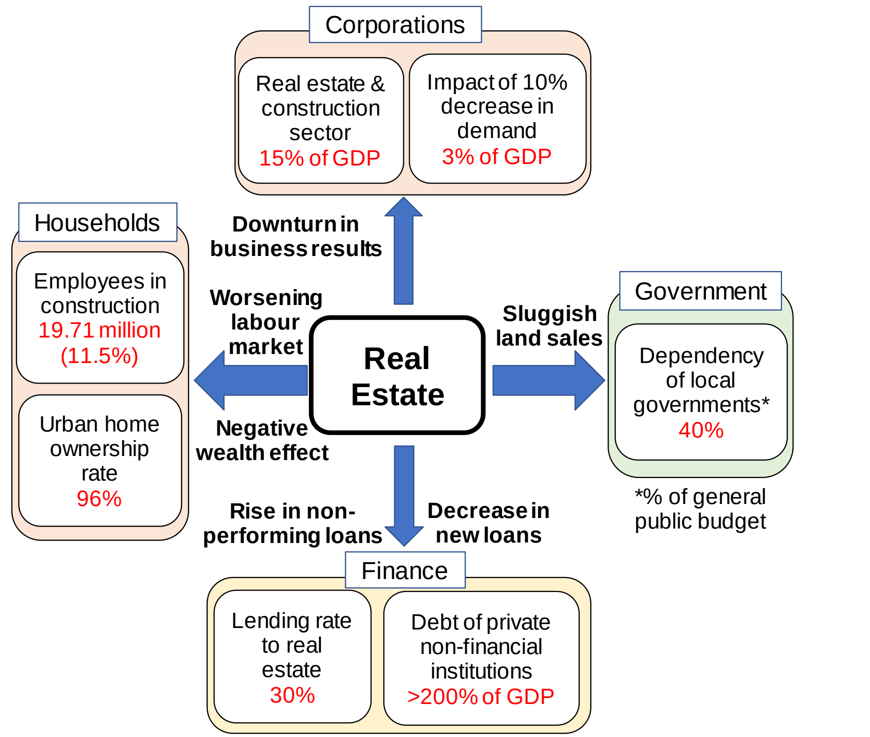
- It is unclear what the outcome of the credit issues experienced by property developers such as Evergrande will be. However, it is thought that China will avoid systemic risks emerging thanks to government support (e.g. capital injections and restructuring of the real estate industry). In addition, there are some fears that financial stability could be rocked globally as it was during the global financial crisis, but these fears are small since the use of foreign capital by the Chinese real estate sector has been limited.
- Nevertheless, the creditors of real estate of developers cover a wide range, such as subcontractors and home buyers. Depending on how the debt is disposed of, there are concerns that it could be socially disruptive. Furthermore, a protracted downturn in the real estate industry could increase downward pressure on the economy via corporations, households, monetary and fiscal policies. It will be important to monitor the impact on local governments' finances in particular as they depend on the proceeds from sales of land-use rights.
- From next year, we expect the deterioration in the real estate market to slowly ease, but do not believe this will boost the economy as it has in the past. China's stagnant economy is likely to lead to a deceleration in global economic growth owing to a decrease in trade and investment.

Real Estate Developers Funding Sources



Source: National Bureau of Statistics of China, MUFG Bank Economic Research Office

Impact of the Real Estate Market Downturn on the Chinese Economy



Source: Various media reports, MUFG Bank Economic Research Office

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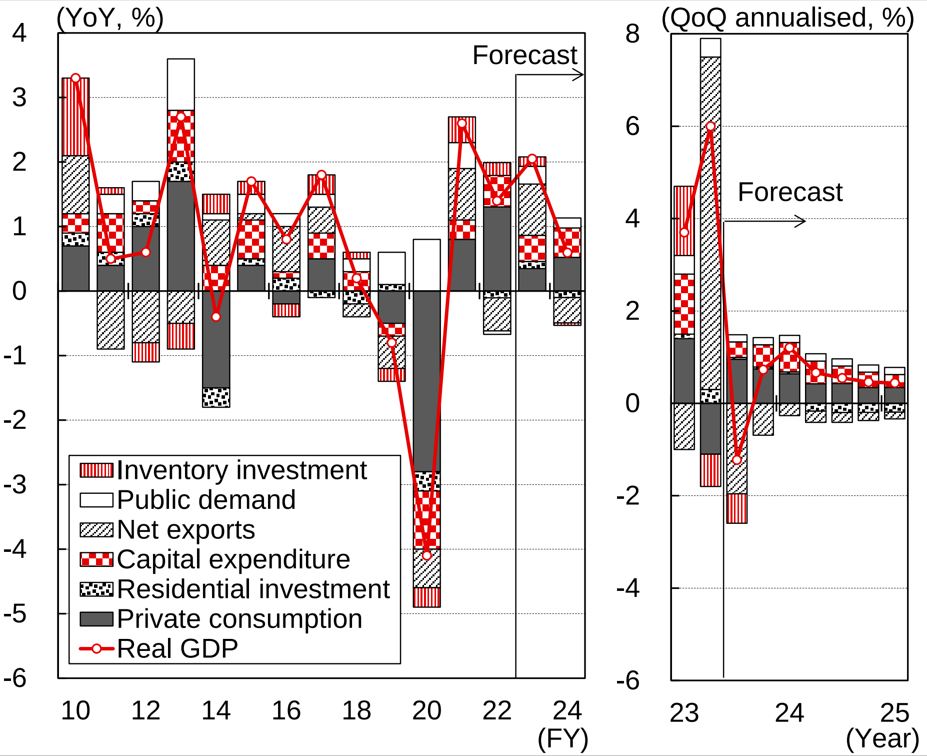
2-1. The Japanese Economy – Overview

- There was a large acceleration in the real GDP growth rate in the April-June quarter to 6.0% QoQ annualised (preliminary estimate) from the previous quarter, and GDP has now returned to the its pre-pandemic level (average of 2019). Growth was boosted by external demand, but domestic demand fell. Private consumption decreased for the first time in three quarters as high prices dragged on spending.
- The economy is likely to continue to recover on the back of a normalisation of economic activities and businesses' strong appetite for capital expenditure. However, the inflation rate will remain high for the time being, resulting in a deceleration of the recovery in households' real income. The pace of economic recovery is likely to remain gradual, especially private consumption.
- We forecast strong real GDP growth of 2.0% YoY for FY2023. However, we expect this to slow to 0.6% YoY in FY2024.

Japan Real GDP growth rate



Source: Cabinet Office, MUFG Bank Economic Research Office

Outlook for Japan Real GDP (Fiscal Year)

(YoY, %)

	FY2021 (Actual)	FY2022 (Actual)	FY2023 (Outlook)	FY2024 (Outlook)
Real GDP	2.6	1.4	2.0	0.6
Private consumption	1.5	2.4	0.6	1.0
Residential investment	-1.1	-4.4	3.2	-3.1
Capital expenditure	2.1	3.1	2.5	2.7
Inventory investment (contribution)	0.4	0.2	-0.2	-0.0
Public demand	1.3	0.2	1.0	0.6
Net exports (contribution)	0.8	-0.6	0.8	-0.4
Exports	12.4	4.4	0.5	0.9
Imports	7.1	7.2	-3.4	2.9
Nominal GDP	2.4	2.0	5.3	1.1
GDP Deflator	-0.2	0.6	3.1	0.5

Source: Cabinet Office, MUFG Bank Economic Research Office

2-1. The Japanese Economy – Monetary Policy, Interest Rates and Currency

- The Bank of Japan decided to conduct its yield curve control with greater flexibility at its meeting in July, yet Governor Ueda suggested at the press conference following the meeting that a rise in interest rates would only be permitted if the economic and price situation deviates upwards from the baseline scenario. It will take some time to determine the outlook for wage increases next year and pressure from external interest rate rises will weaken if the US lowers its federal funds rate. As a result of these factors, long-term interest rates are expected to remain around current levels until mid-2024.
- We expect that the broad-perspective review of monetary policy that the BoJ is carrying out will follow in the footsteps of past releases of the Bank's assessments and will acknowledge the existence of both the positive impacts and side effects of monetary easing. After that, if achieving its price stability target in a sustainable and stable manner is difficult and monetary easing needs to be continued, it is likely the BoJ will dispense with its negative interest rate and yield curve control policies in order to reduce side effects, and long-term interest rates will start to rise gradually. The yen is forecast to appreciate somewhat due to a narrowing of the gap between US and Japanese interest rates.

July Monetary Policy Meeting: Press Conference and Opinions

Press Conference with Governor Ueda

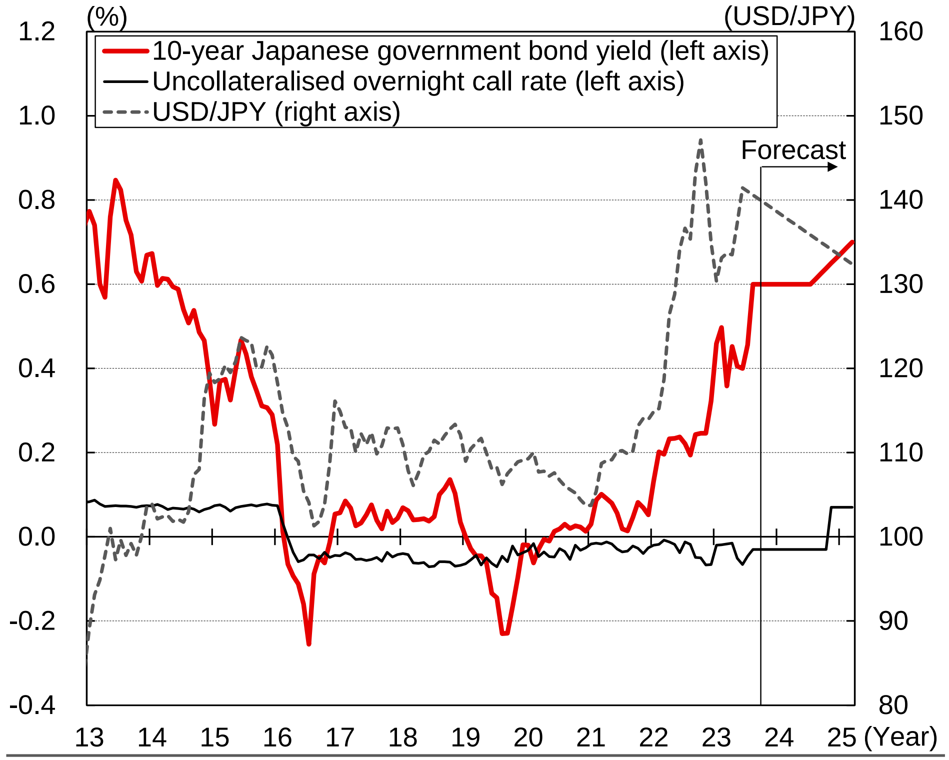
- I'm not saying I think raising interest rates to 1% at present is appropriate, but rather that we are currently revising or increasing flexibility to allow for long-term interest rates to rise above 0.5% in case prices deviate above our outlook for the future as we see it now.

Summary of Opinions

- **There has been a polarisation between those firms that seek to raise wages and prices through initiatives and investment to increase value-added and those that stick with their strategy of low wages, low value-added, and low prices. It cannot yet be said that the former type of firm has become the mainstream.**
- The main reason why projected inflation for fiscal 2023 has deviated upward from the baseline scenario is that the cost-push from import prices has affected prices for longer than expected. That said, as signs of change have been seen in firms' wage- and price-setting behaviour, close monitoring is warranted on their effects on prices. **Determining whether wage hikes will continue next year will be a key issue.**
- The year-on-year rate of change in the CPI is likely to fall below the 2 percent level in the second half of fiscal 2023. In order for this rate to then rise again to 2 percent and continue to stay at that level in a stable manner, **it is important that a trend in which wage growth surpasses the rate agreed in this year's annual spring labour-management wage negotiations take hold.**
- Price rises have been seen mainly in goods since last year due to cost-push factors. However, **triggered by the high levels in base pay increases achieved this spring, more firms have started to consider wage hikes for the next fiscal year and beyond, and thus there is likely to be a new phase where wages and services prices continue to increase.**

Source: Bank of Japan, MUFG Bank Economic Research Office

Forecast of Interest Rates in Japan and the USD/JPY Exchange Rate

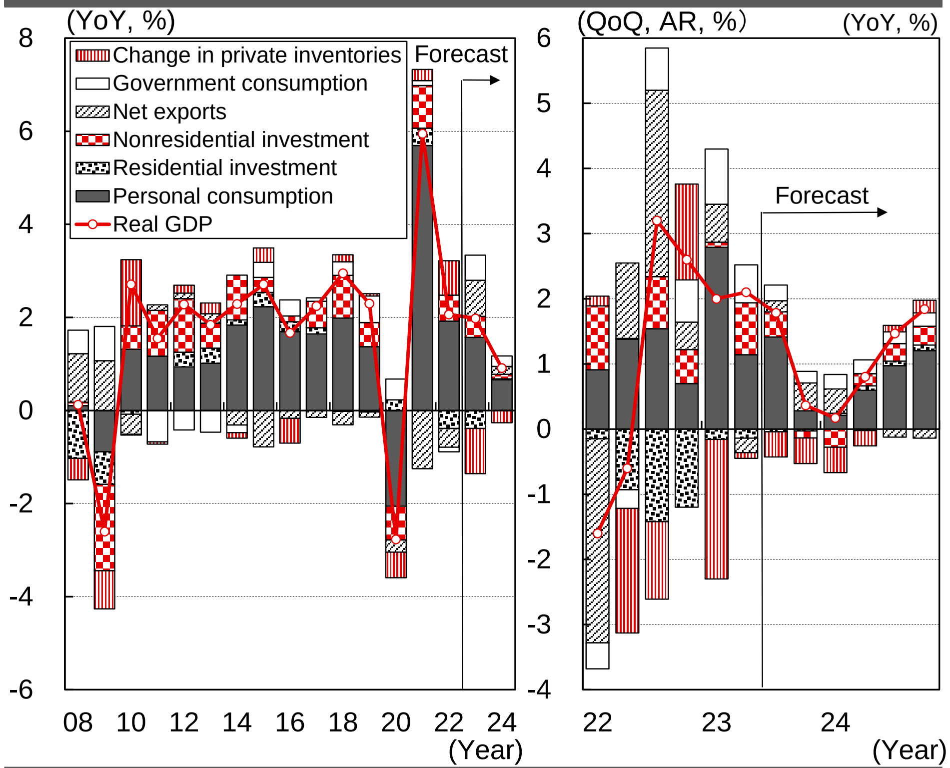


Source: Bloomberg, MUFG Bank Economic Research Office

2-2. The US Economy

- The real GDP growth rate accelerated to 2.1% QoQ annualised (second estimate) in the April-June quarter from the previous quarter, exceeding the potential growth rate of around 1.8% for the fourth quarter in a row. Non-residential fixed investment increased significantly and personal consumption expenditure remained firm, particularly that of services. On the other hand, residential investment fell for the ninth consecutive quarter.
- Even though personal consumption expenditure is expected to remain firm for the time being due to a robust labour market, the downward pressure on domestic demand from stricter lending standards and resumed student loan repayments is increasing as the Fed maintains its economically restrictive monetary policy. As a result, it is likely that the economy will decelerate in Q4 of this year and Q1 of the next year, and the unemployment rate will start to rise gradually.
- We expect the Fed will begin cutting its federal funds rate during the first half of 2024 in response to the deceleration of the US economy and the inflation rate. During this time we anticipate the labour market will continue to ease and personal consumption growth will slow. Nevertheless, we believe a recession will be avoided. That being said, there will be risks from prolonged inflation at higher-than-expected levels and growing stress in the banking sector.

US Real GDP growth rate



Source: Department of Commerce, MUFG Bank Economic Research Office

Outlook for US Real GDP

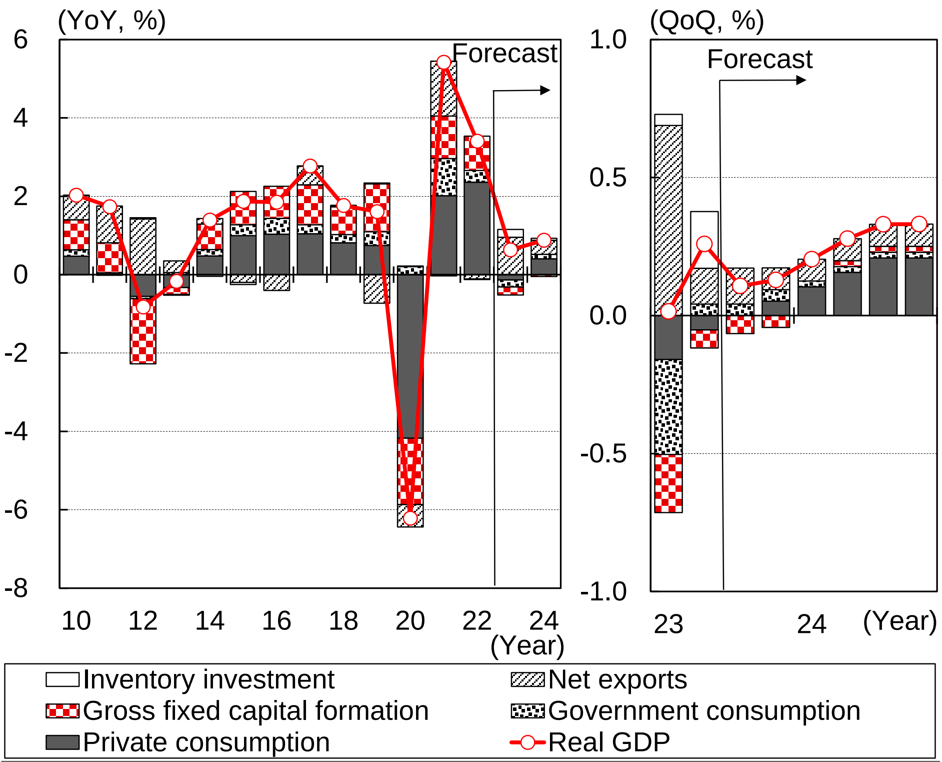
	2022 (Actual)	2023 (Forecast)	2024 (Forecast)
Real GDP	2.1	2.0	0.9
Personal consumption expenditures	2.7	2.2	0.9
Residential investment	-10.6	-12.1	0.7
Non-residential fixed investment	3.9	3.1	0.7
Change in private inventories (contribution)	0.7	-1.0	-0.3
Government consumption expenditures	-0.6	3.2	1.3
Net exports (contribution)	-0.4	0.8	0.2
Exports	7.1	1.2	-1.1
Imports	8.1	-3.2	-1.7
Nominal GDP	9.2	5.7	3.3

Source: Department of Commerce, MUFG Bank Economic Research Office

2-3. European Economies: Euro Area

- The real GDP growth rate for the euro area accelerated to 0.3% QoQ in the April-June quarter from 0.0% the previous quarter. Despite weakness in private consumption and gross fixed capital formation owing to high inflation and rate hikes by the ECB, the contribution from net exports (foreign demand) boosted growth.
- In Europe, the fall in international commodity markets has slowly started to affect food and core goods prices, and headline inflation is falling. We expect inflation will fall further as slower wage growth drags on core services prices, and private consumption will pick up due to a rise in real incomes.
- Nevertheless, the impact of rate hikes will put downward pressure on growth, and we forecast the real GDP growth rate will remain moderate at 0.6% YoY for 2023. We expect this to accelerate slightly to 0.9% YoY in 2024 as real incomes increase and the ECB starts to cut rates in mid-2024.

Euro Area Real GDP growth rate



Note: Breakdown of the April-June quarter is MUFG's forecast
Source: Eurostat, MUFG Bank Economic Research Office

Outlook for Real GDP of Major European Countries

(QoQ, %) (YoY, %)

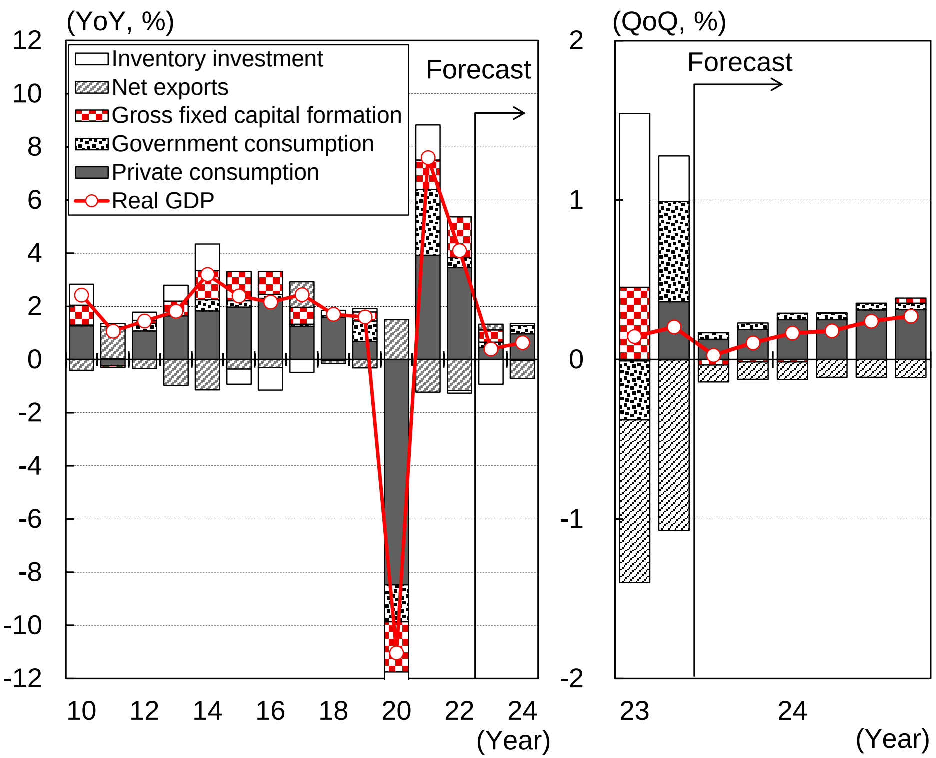
	2022			2023		2022	2023	2024
	Q2	Q3	Q4	Q1	Q2	Actual	Actual	Forecast
Euro area	0.8	0.4	-0.1	0.0	0.3	3.3	0.6	0.9
Germany	-0.1	0.4	-0.4	-0.1	0.0	1.8	-0.2	0.8
France	0.5	0.2	0.1	0.1	0.5	2.5	0.8	1.0
Italy	1.1	0.4	-0.1	0.6	-0.3	3.7	0.9	0.9
UK	0.1	-0.1	0.1	0.1	0.2	4.1	0.4	0.6

Source: Eurostat, UK Office of National Statistics, MUFG Bank Economic Research Office

2-3. European Economies: UK

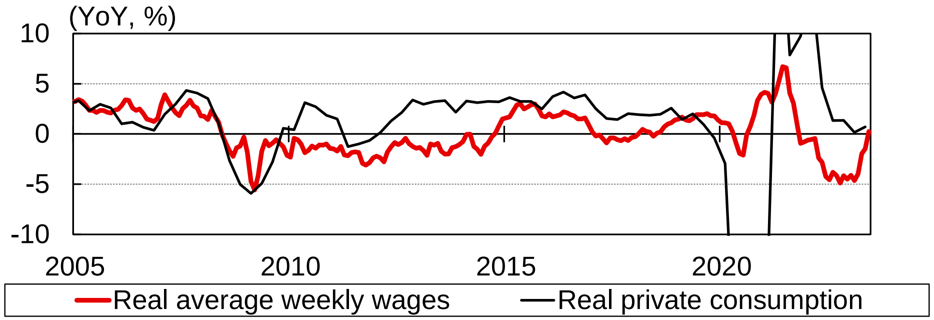
- The UK's real GDP growth rate for the April-June quarter accelerated to 0.2% QoQ from 0.1% QoQ the previous quarter. Private consumption rose as growth of nominal employee remuneration and a fall in the inflation rate led to an improvement in real purchasing power. There was also a rebound in government consumption from the previous quarter, which was affected by frequent strikes in schools and hospitals.
- The UK's inflation rate has peaked, yet nominal wages are accelerating. As a result, real wages have started to increase. Looking ahead, we forecast private consumption will continue to increase gradually due to further deceleration of inflation and the UK economy will maintain positive growth.
- Nevertheless, the negative impacts from Brexit will remain, such as stagnant capital expenditure since the referendum in 2016. Downward pressures on the economy will pile up, such as sluggish capital expenditure demand due to monetary tightening and an increase in interest rates on households' mortgages. We forecast real GDP growth will be 0.4% YoY in 2023 and will expand slightly in 2024 by 0.6% YoY.

UK Real GDP growth rate



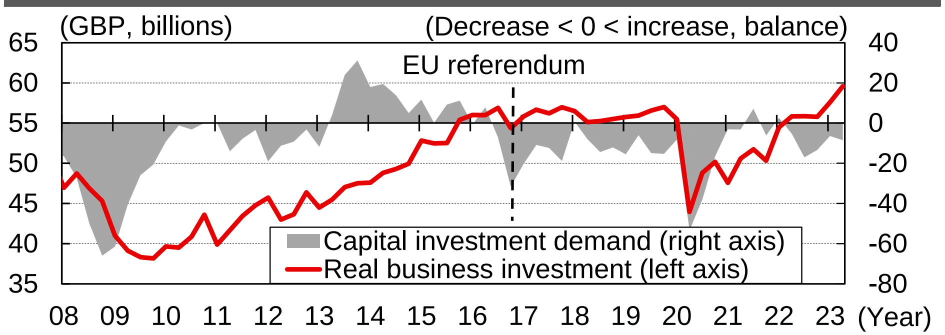
Source: Office for National Statistics, MUFG Bank Economic Research Office

Real wage and Private Consumption in UK



Note: "Real average weekly wages" = nominal average weekly wage growth ÷ inflation rate
Source: Office for National Statistics, MUFG Bank Economic Research Office

Real Business Investment and Capital Investment Demand in UK

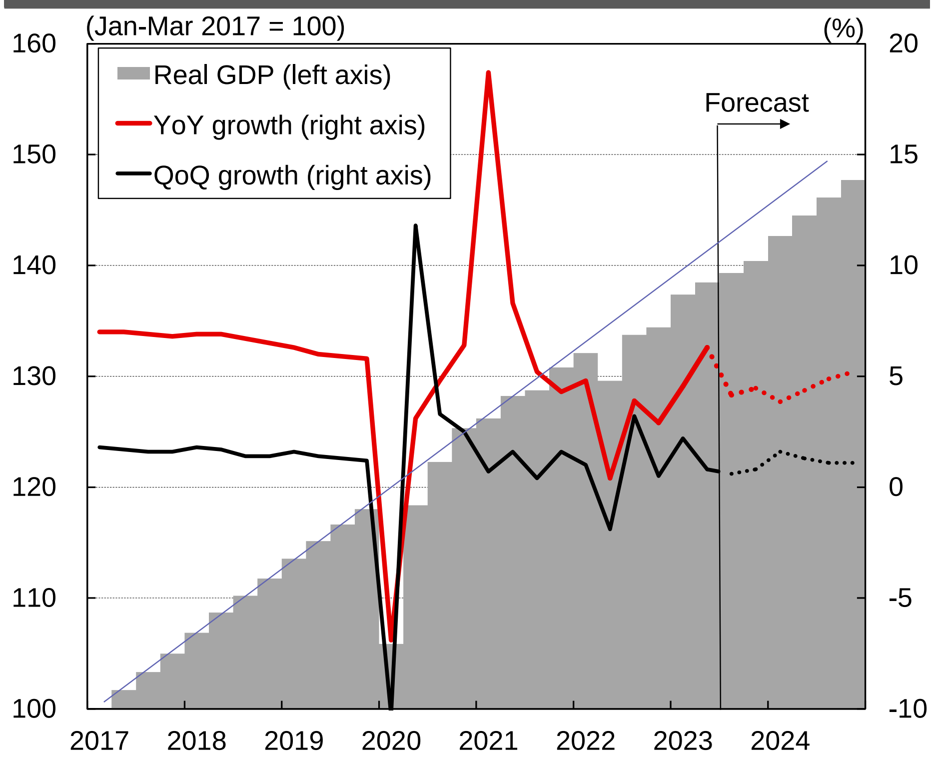


Source: Bank of England, Office for National Statistics, MUFG Bank Economic Research Office

2-4. Asian Economies: China

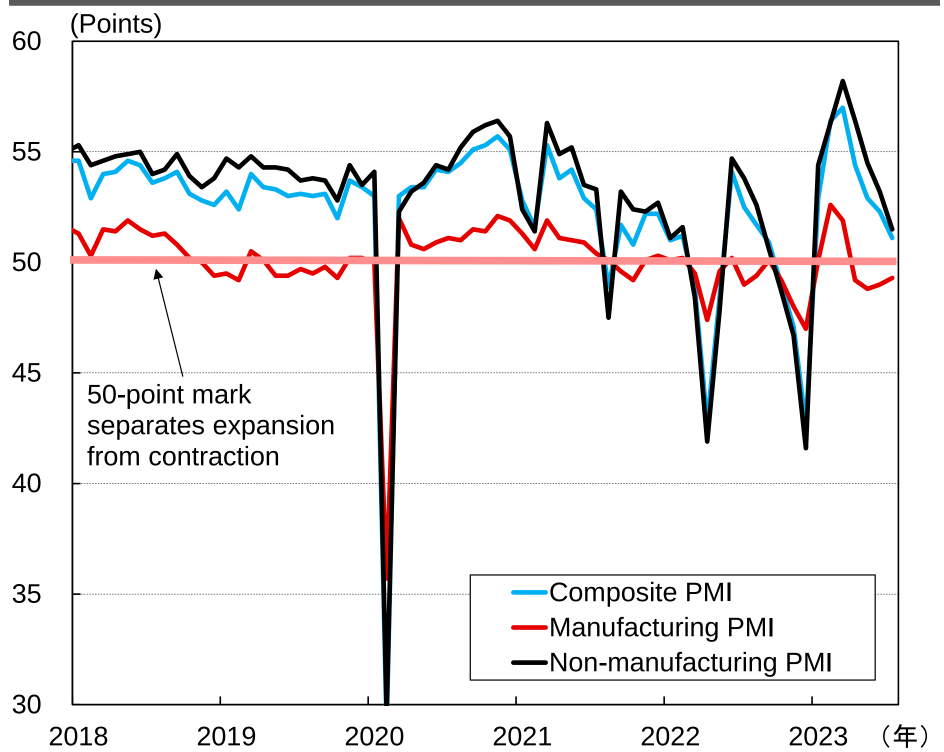
- The real GDP growth rate for the April-June quarter accelerated to 6.3% YoY from 4.5% YoY the previous quarter. However, on a quarter-on-quarter basis, there was a considerable deceleration to 0.8% from 2.9% the previous quarter. PMI fell below the 50 mark in July for the fourth month in a row. As a result, there is a growing feeling that the Chinese economy is slowing.
- Although government support is expected to underpin the economy, slow improvements in the real estate and labour markets and sluggish foreign demand are forecast to result in real GDP growth of 4.8% YoY in 2023. In 2024, foreign demand will pick up and real GDP growth is expected to slow to 4.6% YoY. This is below the lower limit of the governments current target of “around 5.0% YoY”.
- For the time being, it will be important to keep an eye on the downside risks, such as a further deterioration of the real estate sector due to bankruptcies of real estate development companies; a deflationary mindset taking hold on the back of uncertainty about the future; and a decline in foreign capital and exports as a result of de-risking.

China’s Real GDP Forecast



Source: National Bureau of Statistics of China, MUFG Bank Economic Research Office

China’s PMI

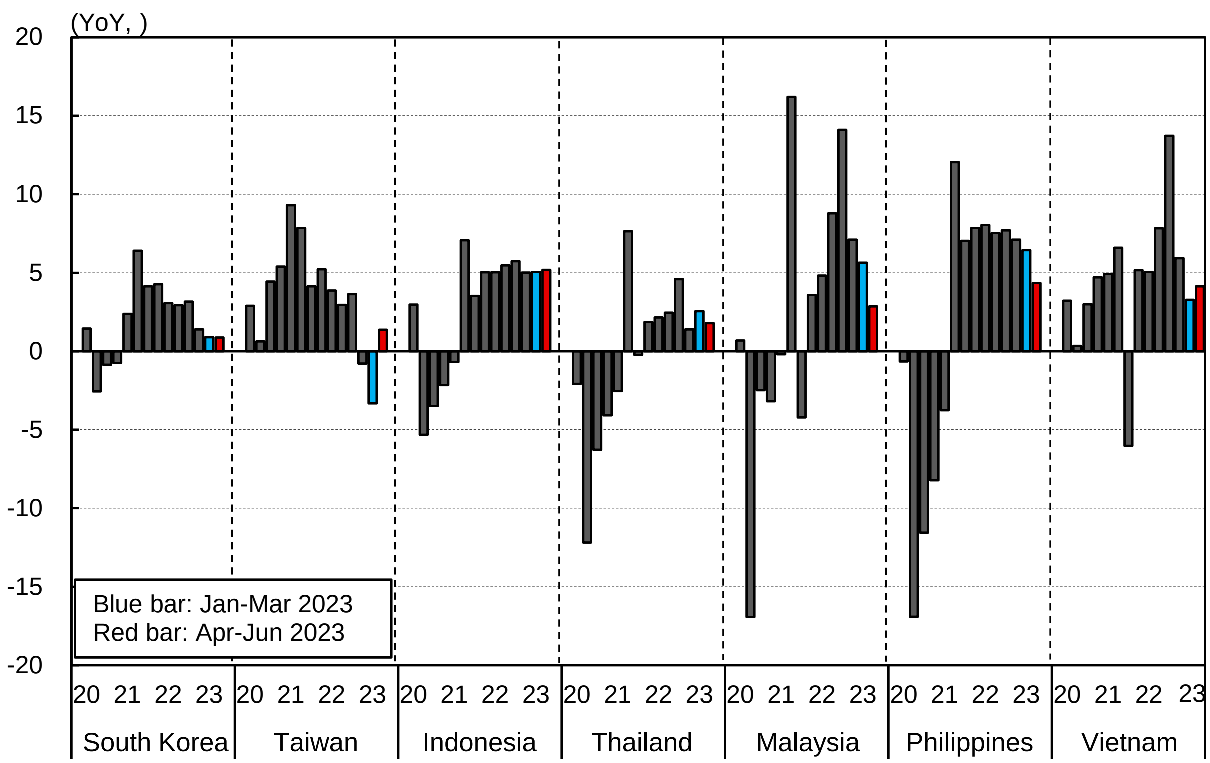


Source: National Bureau of Statistics of China, MUFG Bank Economic Research Office

2-4. Asian Economies: NIEs and ASEAN

- On the whole, Asian economies slowed in the April-June quarter. The real GDP growth rate for NIEs remained low at 1.0% YoY and growth in ASEAN (five major countries) slowed from the previous quarter at 4.1% YoY. While private consumption was robust, there was strong downward pressure on economies from sluggish exports.
- NIEs: Although a fall in the inflation rate is expected to support consumption, exports will not start to pick up until next year in light of the forecast for semiconductor demand and overseas economies. Given that NIEs are heavily reliant on foreign demand, we expect the real GDP growth rate to remain low at 1.3% YoY in 2023 and then to accelerate to 2.7% YoY in 2024.
- ASEAN: Consumption will continue to recover as inflation slows. Public investment and inward investment will resume, underpinning economies. Foreign demand will provide a tailwind for the recovery of services exports (international tourists). As a result, the real GDP growth rate for 2023 is expected to slow to 4.5% YoY but then pick up to 5.0% YoY in 2024.

Real GDP of Major Asian Economies



Source: National statistics of each country, MUFG Bank Economic Research Office

Forecast for ASEAN

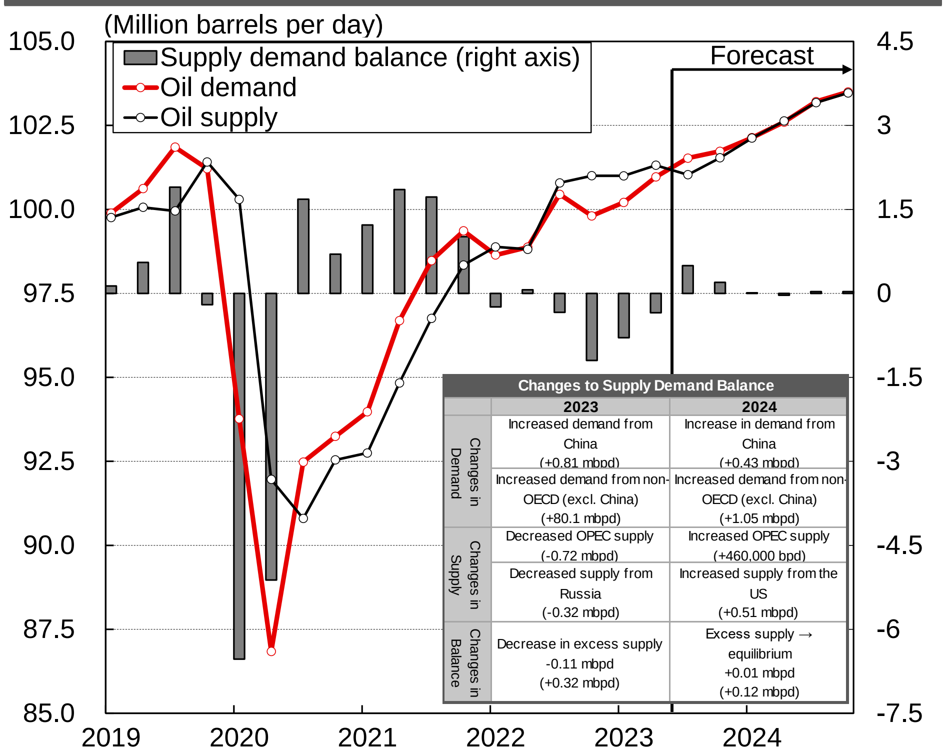
Indonesia
Consumption and investment will recover at a robust pace. Purchasing power will also recover as inflation slows and the labour market improves, and construction investment will grow.
Thailand
The economy is highly reliant on tourism and will receive a boost from the recovery in inbound travellers. Despite the new prime minister, there are still concerns about a smooth transition to a new administration.
Malaysia
The economy's reliance on exports of electronic machinery and commodities will result in downward pressure. Consumption will continue to recover as the labour market picks up.
The Philippines
The inflation rate is still high and will put downward pressure on the economy. A rise in public investment will act as a tailwind after it was stagnant due to the pandemic.
Vietnam
A fall in foreign demand and a downturn in the real estate market will weigh on the economy. Proactive fiscal and monetary policy will underpin the economy (tax cuts, rate cuts).

Source: Various sources, MUFG Bank Economic Research Office

2-5. Oil Prices

- Oil demand is expected to increase gradually after slowing for a while. On the other hand, OPEC+ is expected to continue to adjust the volume of oil supply through flexible voluntary production cuts by some of its members. It appears the supply-demand balance will achieve a rough equilibrium from the small excess in demand currently. We expect oil prices will remain around USD 5 either side of their current level (approximately USD 80 per barrel).
- Upside and downside risks to oil prices include a larger-than-expected surge in demand from China caused by policies to stimulate the economy; a sudden decline in Russian oil production (a reaction to economic sanctions by G7 and others or disruptions to supply due to the conflict in the Black Sea); the result of discussions to restore the Iran nuclear agreement (reports in late August that the US and Iran are seeking to ease tensions).

Forecast of Global Oil Supply and Demand



Changes to Supply Demand Balance

	2023	2024
Changes in Demand	Increased demand from China (+0.81 mbpd)	Increase in demand from China (+0.43 mbpd)
	Increased demand from non-OECD (excl. China) (+80.1 mbpd)	Increased demand from non-OECD (excl. China) (+1.05 mbpd)
Changes in Supply	Decreased OPEC supply (-0.72 mbpd)	Increased OPEC supply (+460,000 bpd)
	Decreased supply from Russia (-0.32 mbpd)	Increased supply from the US (+0.51 mbpd)
Changes in Balance	Decrease in excess supply -0.11 mbpd (+0.32 mbpd)	Excess supply → equilibrium +0.01 mbpd (+0.12 mbpd)

Note: Forecast for 2023 and 2024 by MUFG Economic Research Office
Table (inset): values in parentheses are year-on-year change
Source: EIA, UK Energy Institute, MUFG Bank Economic Research Office

Forecast of Oil Prices

	WTI price (USD/barrel)	YoY (%)	Brent Price (USD/barrel)	YoY (%)
Q1 2022	95.0	63.4%	97.9	59.7%
Q2	108.5	64.2%	112.0	62.1%
Q3	91.4	29.7%	97.7	33.4%
Q4	82.6	7.2%	88.6	11.3%
Q1 2023	76.0	-20.0%	82.2	-16.1%
Q2	73.7	-32.1%	77.7	-30.6%
Q3	80.0	-12.5%	83.0	-15.0%
Q4	80.0	-3.2%	83.0	-6.4%
Q1 2024	80.0	5.3%	83.0	1.0%
Q2	80.0	8.6%	83.0	6.8%
Q3	80.0	0.0%	83.0	0.0%
Q4	80.0	0.0%	83.0	0.0%
2022	94.3	38.8%	99.0	39.8%
2023	77.4	-17.9%	81.5	-17.7%
2024	80.0	3.3%	83.0	1.9%

Forecast

Note: Prices shown are average for period
Source: Bloomberg, MUFG Bank Economic Research Office

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Appendix: Global Economic Outlook

Forecast for the Global Economy

		World (weighted average of nominal GDP)				Japan (FY)	Americas				Europe					
								Latin America (6 countries)			Euro area (20 countries)					
			Advanced economies	Emerging economies	Other		US		Brazil	Mexico		Germany	France	Italy	UK	Russia
Nominal GDP	USD trillions	163.5	62.1	66.1	35.4	6.1	25.5	10.1	3.8	3.0	19.5	5.3	3.7	3.1	3.7	4.8
(2022)	Japan = 100	2,664	1,011	1,076	576	100	415	164	63	48	318	87	60	50	61	78
Real GDP	2022 Actual	3.5	2.5	3.8	4.7	1.4	2.1	3.4	2.9	3.0	3.3	1.8	2.5	3.7	4.1	-2.1
YoY, %	2023 Forecast	2.9	1.4	4.1	3.2	2.0	2.0	1.4	2.0	2.5	0.6	-0.2	0.8	0.9	0.4	-1.0
	2024 Forecast	3.0	1.1	4.3	3.9	0.6	0.9	1.6	1.1	1.5	0.9	0.8	1.0	0.9	0.6	1.5
CPI	2022 Actual	8.6	7.2	6.1	15.9	3.0	8.0	15.7	9.3	7.9	8.4	8.6	5.9	8.7	9.1	13.8
(YoY, %)	2023 Forecast	6.6	4.6	4.7	13.7	2.8	4.1	15.9	5.0	6.3	5.5	5.9	5.0	6.1	7.3	7.0
	2024 Forecast	4.8	2.5	4.1	10.1	1.4	2.8	10.0	4.3	3.9	2.5	2.7	2.6	2.2	3.2	5.0

		Asia and Oceania														
		Asia (11 countries and regions)														Australia
			China	India (FY)	NIEs (4 countries and regions)					ASEAN (5 countries)						
						S. Korea	Taiwan	Hong Kong	Singapore		Indonesia	Thailand	Malaysia	Philippines	Vietnam	
Nominal GDP	USD trillions	56.8	30.2	11.9	5.6	2.8	1.6	0.5	0.7	9.1	4.0	1.5	1.1	1.2	1.3	1.6
(2022)	Japan = 100	926	492	193	91	45	26	8	12	149	66	24	18	19	22	27
Real GDP	2022 Actual	4.2	3.0	7.2	2.1	2.6	2.4	-3.5	3.6	6.0	5.3	2.6	8.7	7.6	8.0	3.7
(YoY, %)	2023 Forecast	4.7	4.8	6.0	1.3	1.2	1.0	4.2	0.7	4.5	4.9	3.0	4.1	5.2	5.0	1.5
	2024 Forecast	4.8	4.6	6.4	2.6	2.2	3.1	3.1	2.8	5.0	5.0	3.7	4.4	5.8	6.5	1.4
CPI	2022 Actual	3.6	1.9	6.7	4.3	5.1	2.9	1.9	6.1	4.5	4.2	6.1	3.4	5.8	3.2	6.6
(YoY, %)	2023 Forecast	2.3	0.7	5.1	3.0	3.2	2.0	2.1	4.7	3.5	4.0	1.6	2.8	5.7	2.9	5.4
	2024 Forecast	2.7	2.0	4.9	1.8	1.8	1.4	2.2	2.8	2.7	3.2	1.4	2.3	3.2	3.0	3.1

Note: 1. "Nominal GDP" is based on purchasing power parity
2. For "CPI", Japan is composite figure excluding fresh food. CPI refers to the HCIP for the euro area and member countries (HICP)
3. Figures for Japan and India based on their financial years (April to following March) except Japan's nominal GDP
4. "World", "advanced economies", "emerging economies" calculated using Japan data based on the calendar year, India data based on the fiscal year for nominal GDP only and other countries' data based on the calendar year
5. "Advanced economies" is a total of Japan, NIEs (4 countries and regions), Australia, US, Euro area (20 countries) and the UK. "Emerging economies" is a total of China, India, ASEAN (5 countries), Latin America (6 countries) and Russia
6. "Central and South America (6 countries)" is a total of Brazil, Mexico, Argentina, Colombia, Chile and Peru
7. "Other" uses the IMF forecast for July as a reference.

Source: National statistics of each country, MUFG Bank Economic Research Office

Appendix: Outlook for the Japanese Economy and Financial Markets

Outlook for the Japanese Economy (First Preliminary Estimate of GDP Statistics for January-March 2023)

							Forecast								Forecast	
	2022				2023				2024				2025	FY2022	FY2023	FY2024
	Q1	2Q	3Q	4Q	Q1	2Q	3Q	4Q	Q1	Q2	Q3	Q4	Q1			
1. The Real Economy (QoQ annualized change)																
Real GDP	-2.1	5.1	-1.2	0.2	3.7	6.0	-1.2	0.7	1.2	0.7	0.6	0.5	0.4	1.4	2.0	0.6
Private Consumption	-4.1	7.4	-0.1	1.0	2.5	-2.1	1.8	1.4	1.2	0.8	0.8	0.6	0.6	2.4	0.6	1.0
Housing Investment	-4.9	-7.1	-0.4	3.8	2.8	7.7	1.0	1.0	1.0	-5.2	-5.7	-5.7	-5.7	- 4.4	3.2	- 3.1
Private Business Fixed Investment	0.4	7.1	6.8	-2.8	7.6	0.1	2.1	3.0	3.9	3.0	2.3	2.0	1.7	3.1	2.5	2.7
Business Inventory (Contribution)	0.6	-0.1	0.0	-0.4	0.4	-0.2	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	- 0.2	- 0.0
Government Expenditures	-1.0	1.4	0.2	1.5	1.5	1.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.2	1.0	0.6
Public Investment	-13.8	0.5	4.6	1.0	7.1	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	- 3.0	3.3	1.0
Net Exports (Contribution)	-0.4	0.1	-0.6	0.3	-0.3	1.8	-2.0	-0.7	-0.3	-0.2	-0.2	-0.2	-0.1	- 0.6	0.8	- 0.4
Exports	5.5	7.8	10.0	6.0	-14.4	13.6	-5.2	-1.9	2.8	1.9	1.1	1.2	1.2	4.4	0.5	0.9
Imports	15.5	4.6	23.7	-0.5	-8.7	-16.2	5.1	1.7	4.3	3.2	2.2	2.1	2.0	7.2	- 3.4	2.9
Nominal GDP	1.2	4.1	-3.3	4.9	9.5	12.0	1.0	2.7	2.5	1.5	1.3	1.2	1.2	2.0	5.7	1.7
GDP Deflator (YoY)	0.4	-0.3	-0.4	1.2	2.0	3.4	4.4	3.8	2.7	1.6	1.2	0.9	0.8	0.6	3.6	1.1
Industrial Production Index (QoQ)	0.8	-1.4	3.1	-1.7	-1.8	1.3	-0.4	0.1	0.7	0.5	0.3	0.3	0.3	- 0.3	- 0.3	1.5
Domestic Corporate Goods Price Index (YoY)	9.3	9.6	9.7	10.0	8.4	5.1	6.9	6.3	6.2	5.5	4.3	2.3	1.8	9.4	6.5	3.4
Consumer Price Index (excl. fresh food, YoY)	0.6	2.2	2.7	3.8	3.5	3.2	3.0	2.6	2.3	2.1	1.9	0.9	0.8	3.0	2.8	1.4
2. Balance of Payments																
Trade Balance (JPY billions)	-1,751	-3,692	-5,573	-5,162	-3,725	-875	-1,948	-2,333	-2,600	-2,685	-2,778	-2,879	-2,930	-18,151	-7,756	-11,271
Current Balance (JPY billions)	4,131	3,206	1,033	2,469	2,747	5,948	4,924	4,580	4,354	4,311	4,259	4,200	4,189	9,455	19,806	16,959
3. Financial																
Uncollateralized overnight call rate	- 0.0	- 0.0	- 0.0	- 0.1	- 0.0	- 0.1	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	0.1	0.1	- 0.0	- 0.0	0.1
Euro-Yen TIBOR (3-month rate)	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	0.1	0.1	- 0.0	- 0.0	0.0
Newly Issued 10-Year Government Bonds Yield	0.2	0.2	0.2	0.3	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.3	0.5	0.6
Exchange Rate (USD/JPY)	116	130	138	141	132	138	141	139	138	137	135	134	133	135	139	135

Note: Uncollateralized overnight call rate is the average rate during the last month of the period. Euro-Yen TIBOR (3-month rate), Newly Issued 10-Year Government Bonds Yield and Exchange Rate (USD/JPY) are averages during the period.

Source: Various statistics, Bloomberg, MUFG Bank Economic Research Office

Appendix: Outlook for the US Economy and Financial Markets

Outlook for the US Economy

							Forecast →							2023 Forecast →	
	2022				2023				2024				2022	2023	2024
	1～3	4～6	7～9	10～12	1～3	4～6	7～9	10～12	1～3	4～6	7～9	10～12			
1. Main Economic Indicators															
Real GDP (QoQ annualized, %)	-1.6	-0.6	3.2	2.6	2.0	2.1	1.8	0.4	0.2	0.8	1.5	1.8	2.1	2.0	0.9
Personal Consumption Expenditures	1.3	2.0	2.3	1.0	4.2	1.7	2.0	0.4	0.3	0.8	1.4	1.7	2.7	2.2	0.9
Fixed Investment (Residential)	-3.1	-17.8	-27.1	-25.1	-4.0	-3.6	-1.5	-1.0	1.1	2.5	2.6	3.1	-10.6	-12.1	0.7
Fixed Investment (Nonresidential)	7.9	0.1	6.2	4.0	0.6	6.1	2.6	-0.7	-1.9	1.3	1.8	1.9	3.9	3.1	0.7
Changes in Business Inventories (Contribution)	0.2	-1.9	-1.2	1.5	-2.1	-0.1	-0.4	-0.4	-0.4	-0.2	0.1	0.2	0.7	-1.0	-0.3
Government Expenditures	-2.3	-1.6	3.7	3.8	5.0	3.3	1.4	1.0	1.3	1.2	1.1	1.2	-0.6	3.2	1.3
Net Exports (Contribution)	-3.1	1.2	2.9	0.4	0.6	-0.2	0.2	0.4	0.4	0.0	-0.1	-0.1	-0.4	0.8	0.2
Exports	-4.6	13.8	14.6	-3.7	7.8	-10.6	-2.5	-1.2	-1.5	0.9	1.7	2.1	7.1	1.2	-1.1
Imports	18.4	2.2	-7.3	-5.5	2.0	-7.0	-2.6	-3.1	-3.1	0.7	1.8	2.2	8.1	-3.2	-1.7
Domestic Private End User Demand	2.1	0.5	1.1	0.0	3.2	2.1	4.4	-0.3	-0.5	0.7	1.6	2.0	2.1	1.9	0.9
Nominal GDP (QoQ annualized, %)	6.6	8.5	7.7	6.6	6.1	4.1	4.3	2.9	2.6	3.2	3.8	4.2	9.2	5.7	3.3
Industrial Production (QoQ annualized, %)	3.7	4.1	2.1	-2.5	-0.3	0.0	0.3	-0.7	-1.0	0.6	1.7	1.8	3.4	0.0	0.1
Unemployment Rate (%)	3.8	3.6	3.5	3.6	3.5	3.6	3.6	3.9	4.2	4.4	4.3	4.3	3.6	3.6	4.3
Producer Price Index (YoY, %)	10.7	11.2	9.0	7.3	4.4	1.2	0.9	0.7	0.9	1.7	1.8	1.8	9.5	1.8	1.6
Consumer Price Index (YoY, %)	8.0	8.6	8.3	7.1	5.8	4.0	3.4	3.1	2.9	2.8	2.8	2.6	8.0	4.1	2.8
2. Balance of Payments															
Trade Balance (hundred million dollars)	-3,401	-3,328	-3,089	-2,672	-2,741	-2,631	-2,752	-2,961	-2,863	-2,782	-2,767	-2,825	-11,830	-11,208	-11,210
Current Account (hundred million dollars)	-2,808	-2,839	-2,488	-2,228	-2,162	-2,193	-2,407	-2,248	-2,131	-2,037	-2,018	-2,093	-9,716	-8,978	-8,254
3. Financial Indicators															
FF Rate Target (%)	0.25-0.50	0.25-0.50	1.50-1.75	3.00-3.25	4.25-4.50	4.75-5.00	5.00-5.25	5.25-5.50	5.25-5.50	5.00-5.25	4.75-5.00	4.50-4.75	4.25-4.50	5.25-5.50	4.25-4.50
Euro Dollar (3M) (%)	0.5	0.3	1.3	2.8	4.2	4.8	5.1	5.3	5.3	5.2	4.9	4.7	2.2	5.1	4.8
10-year Treasury Note's Yield (%)	1.9	1.9	2.9	3.1	3.8	3.6	3.6	4.1	4.0	3.9	3.8	3.6	2.9	3.8	3.7

Note: FF Rate Target is for end of the period, and Euro Dollar (3M) and 10-year Note's Yields are period averages. Current account balance for Q2 2023 is a forecast.

Source: Compiled by MUFG Bank Economic Research Office from various reports and Bloomberg

Appendix: Outlook for the European Economies and Financial Markets

Outlook for European Economies

1. Overview

	Real GDP Growth Rate (YoY, %)			CPI (YoY, %)			Current Account (USD billions)		
	2022 (Actual)	2023 (Forecast)	2024 (Forecast)	2022 (Actual)	2023 (Forecast)	2024 (Forecast)	2022 (Actual)	2023 (Forecast)	2024 (Forecast)
Euro Area	3.3	0.6	0.9	8.4	5.5	2.5	- 1064	1584	1981
Germany	1.8	-0.2	0.8	8.6	5.9	2.7	1751	1840	2020
France	2.5	0.8	1.0	5.9	5.0	2.6	- 599	- 538	- 421
Italy	3.7	0.9	0.9	8.7	6.1	2.2	- 245	33	106
UK	4.1	0.4	0.6	9.1	7.3	3.2	- 1210	- 777	- 678
Russia	- 2.1	- 1.0	1.5	13.8	7.0	5.0	2330	1090	940

2. Forecast by Demand Component (YoY, %)

	Euro Area			UK		
	2022 (Actual)	2023 (Forecast)	2024 (Forecast)	2022 (Actual)	2023 (Forecast)	2024 (Forecast)
Nominal GDP	8.3	6.7	3.5	9.7	6.3	3.8
Real GDP	3.4	0.6	0.9	4.1	0.4	0.6
Contribution by domestic demand	3.5	- 0.3	0.5	5.3	0.2	1.3
Contribution by foreign demand	- 0.1	1.0	0.4	- 1.2	0.2	- 0.7
Private consumption	4.5	- 0.3	0.8	5.6	0.7	1.3
Government consumption	1.4	- 0.9	0.6	1.8	1.0	1.5
Gross fixed capital formation	4.0	- 0.9	- 0.2	8.6	2.5	0.5
Inventory investment (contribution)	0.7	0.2	0.0	0.3	- 1.3	-0.1
Exports	7.3	2.0	2.5	9.9	- 3.6	1.2
Imports	8.2	0.2	2.0	13.3	- 4.0	3.3

Note: 1. "Euro area" is total of 20 countries - Germany, France, Italy, Ireland, Estonia, Austria, The Netherlands, Croatia, Cyprus, Greece, Spain, Slovakia, Slovenia, Finland, Belgium, Portugal, Malta, Luxembourg, Lithuania

2. "CPI" is the standardised inflation rate for the euro area, Germany, France and Italy (HICP)

Source: Eurostat, UK Office for National Statistics, MUFG Bank Economic Research Office

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Contact Information

MUFG Bank, Economic Research Office

Authors:	**Akira Watanabe (Chief Economist)**	**e-mail: akira_7_watanabe@mufg.jp**
	Takayuki Miyado (Overview)	**e-mail: takayuki_miyadou@mufg.jp**
	Yuma Tsuchiya (Overview)	**e-mail: yuma_tsuchiya@mufg.jp**
	Sai Yabuki (Japan)	**e-mail: sai_yabuki@mufg.jp**
	Akira Yoshimura (US)	**e-mail: ayoshimura@us.mufg.jp**
	Yuki Hasegawa (US & Europe)	**e-mail: yuuki_4_hasegawa@mufg.jp**
	Takasuke Tanaka (Europe)	**e-mail: takasuke_tanaka@uk.mufg.jp**
	Yohei Nose (Asia & Australia)	**e-mail: youhei_nose@mufg.jp**
	Kengo Nakayama (Oil prices & FX)	**e-mail: kengo_nakayama@mufg.jp**
	Nana Matsui (Oil prices)	**e-mail: nana_matsui@mufg.jp**

Translation by Elizabeth Foster (London)