Outlook for the Japanese and Overseas Economies

ECONOMIC RESEARCH OFFICE
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MUFG Bank, Ltd.
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Contents

Executive Summary

- 2022 will mark the third year of the COVID-19 pandemic. With the recent emergence of new variants, uncertainty will likely linger. But with advances in vaccines and drags, the situation is expected to move in the direction of improvement and the global economy will likely continue its recovery.

- Uncertainty remains over the future course of the pandemic, and a note of caution should be sounded about major structural changes to the economy that may have resulted from developments over the past two years – such as the increase in remote work, supply-chain issues, climate change initiatives and flare-up of US-China tension. The ongoing supply issue is one manifestation of such structural changes. Risk factors for the future include developments surrounding the pandemic including case surges from the Omicron variant, short-term and long-term supply constraints and inflation, and US-China tension.

【Advanced Economies】

- **US**: Despite downside risks such as supply constraints (an aftereffect of the pandemic) and resulting high inflation exacerbated by various factors, the US economic recovery will likely accelerate as service consumption picks up with people adapting to living with COVID-19. In addition, the Infrastructure Investment and Jobs Act that was signed into law in November is expected to support economic growth starting in 2022.
- **Eurozone**: Uncertainty remains with a recent surge in COVID-19 cases and the rise of Omicron variant, but countermeasures in major Eurozone economies will allow economic activity to continue as vaccines help curb infections. Governments are expected to maintain some level of fiscal spending programs to support the economy, and the ECB will likely maintain expansive monetary policy for the time being. Thus, the Eurozone economy will likely stay on a recovery track even though the pace of growth will slow.
- **Japan**: Starting in the October-December quarter, the economy will probably show a general trend of recovery based on the premise: vaccines retain their efficacy, social and economic policies to live with COVID-19 are successful and become well-established, the number of COVID-19 cases and pressure on medical resources reduce to an extent and that various restrictions are eased in stages. Large-scale economic relief measures from the Kishida government are also forecast to support the economy. The pace of recovery in consumer spending will be moderate, however, because of lingering caution against the infection. Risk factors that can exacerbate the situation including the Omicron variant should be watched carefully.

【Emerging Economies】

- **China**: The economy faces downward pressure from strict measures of the continued Zero COVID policy as well as uncertainty from the cooling real estate market and the tightened government control over the economy. But issues such as the semiconductor shortages affecting automotive production and supply constraints related to electricity shortages will likely start improving. With the government carrying out various policies to stabilize the economy (i.e. the New Infrastructure Plan), the economy will stay on a growth track even though the pace of growth will slow.
- **NIEs**:NIEs have been relatively successful in curbing infections and maintaining economic activity. Relatively high vaccination coverage and brisk exports supported by strong demand for semiconductors will help keep NIEs' recoveries on a solid footing.
- **ASEAN**:Economic recovery has been delayed by COVID-19 case surges that started in May 2021, which have slammed the brake on resumption of economic activity. But with the worst period finally over, recovery will gain momentum toward next year.
- **Latin America**:New COVID-19 cases are on a downtrend in major economies (Brazil and Mexico), and vaccination coverage are rising further, so economic recovery will likely continue. However, accelerated inflation and multiple rounds of interest rate hikes will likely weigh on recovery.

1-1. Overview

- 2022 will mark the third year of the COVID-19 pandemic. With the recent emergence of new variants, uncertainty will likely linger. However, with advances in vaccines and drugs, the situation is expected to move in the direction of improvement and the global economy will likely continue its recovery.
- Developments over the past two years, such as the increase in remote working, supply-chain issues, climate change initiatives and a rise in US-China tension appear to have caused major structural changes as manifested in the ongoing supply-side constraints, for instance. Still, in many countries, relatively high rates of economic growth will continue with support of governments' economic relief measures, as is typically the case during a recovery period. The global real GDP is expected to grow 5.7% YoY in 2021 and 4.5% in 2022.

Assumptions

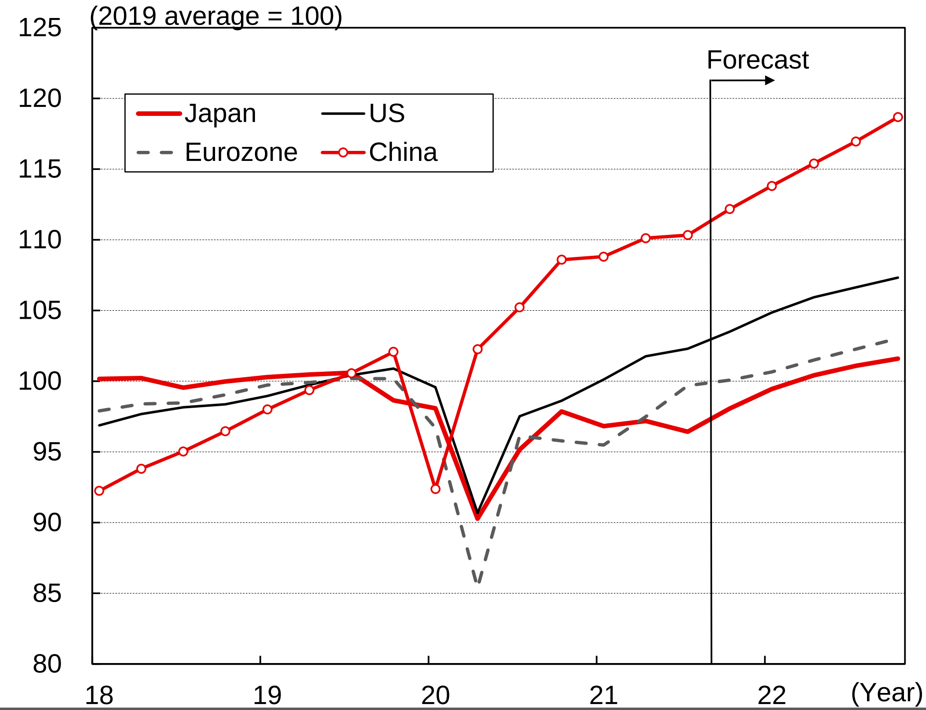
- ✓ **Pandemic:** The pandemic will not be over and people will need to live with COVID-19. More waves of infection are expected, but in countries with high vaccine coverage, critical cases and deaths will be curbed. On the recently identified Omicron variant, only limited information is available about the virulence and transmissibility, yet no major economic impact from the variant is factored in the forecast.
- ✓ **Effects of vaccines and drugs**: Although the situation can change with virus mutations, vaccines have proven effective in preventing infection, symptoms and serious illness. Since the protection offered by vaccines is known to wane over time, booster shots will be administered mainly in advanced economies. In addition, newly developed oral drugs will curb critical cases and deaths. However, herd immunity will not be achieved, and COVID-19 will continue to spur greater caution than influenza does.

Outlook for Major Economies

Real GDP growth rate	2020	MUFG outlook (Dec) 2021	MUFG outlook (Dec) 2022	MUFG outlook (Aug) 2021	MUFG outlook (Aug) 2022
World	- 3.1	5.7	4.5	5.7	4.6
US	- 3.4	5.5	4.2	6.0	4.1
Eurozone	- 6.5	5.0	3.7	4.6	4.3
UK	- 9.8	6.9	4.5	6.7	5.2
Japan (fiscal year)	- 4.4	2.8	3.6	3.1	2.7
Japan (calendar year)	- 4.6	1.8	3.6	2.1	2.9
Asia (11 countries)	- 0.8	6.9	5.5	7.2	5.6
China	2.3	7.9	5.3	8.3	5.5
ASEAN (5 countries)	- 3.4	3.2	5.5	3.8	5.6
Indonesia	- 2.1	3.7	5.2	3.7	5.2
Thailand	- 6.1	1.0	3.8	1.5	4.3
Malaysia	- 5.6	3.5	6.3	4.3	5.8
The Philippines	- 9.6	4.9	6.5	4.9	6.8
Vietnam	2.9	2.4	7.0	5.7	7.3

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

Real GDP Outlook for Select Major Economies



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

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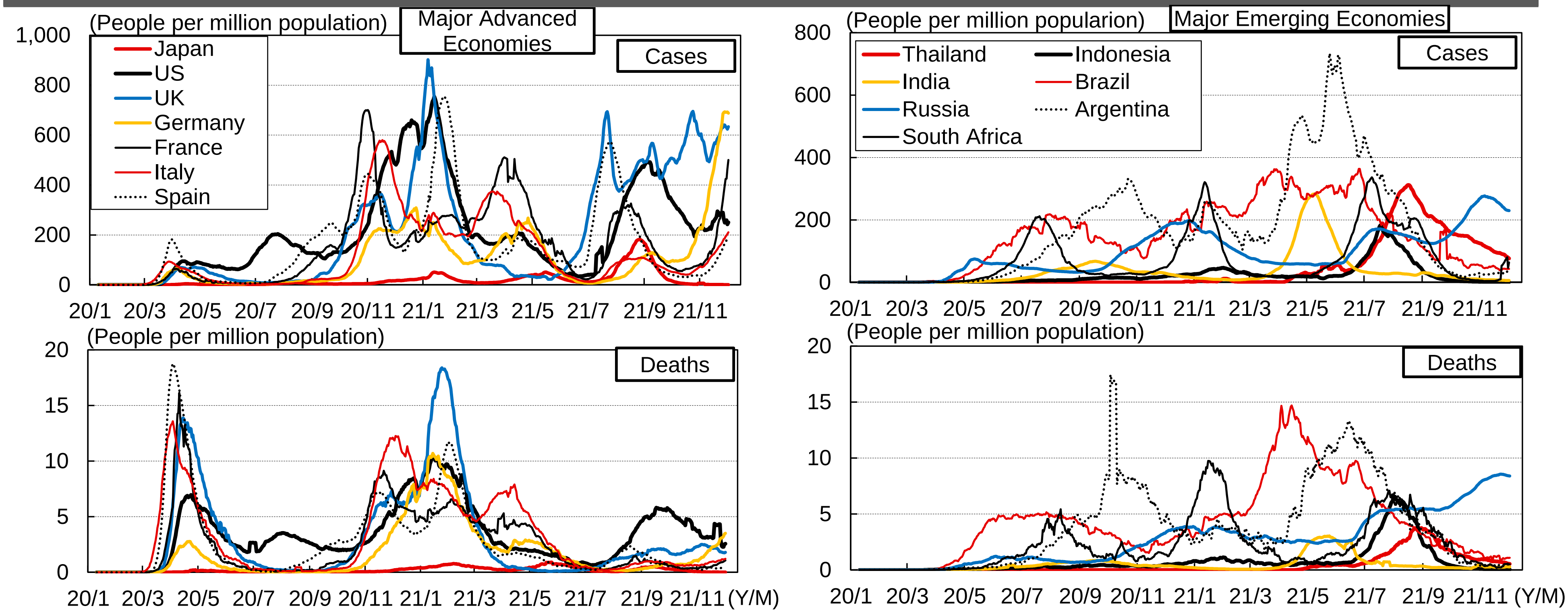
1-2. Assumptions about the COVID-19 Pandemic: Numbers of Cases and Deaths

- As of 2 December, cumulative cases totaled 262 million and deaths 5.22 million, according to the World Health Organization.
- In many advanced economies, fully vaccinated individuals now account for about 70% of the population, but the number of cases remains high in some countries (case count has surged in continental Europe). But deaths have been curbed compared to past peaks thanks to vaccines (incremental increases in Europe should be monitored carefully).
- Emerging economies are generally lagging in vaccine distribution, but case increases from the Delta variant have peaked out and deaths have been generally declining (Exception is Russia, where the numbers of cases and deaths remain high due to slow vaccine rollout).
- With many uncertainties lingering about COVID-19 and new variants emerging, the pandemic is unlikely to completely come to an end, and one cannot be simply optimistic about the future. But with many countries placing targeted mobility restrictions considering vaccine effect and drug availability, the general outlook remains unchanged: the spread of the virus and the impact on the economy will be curbed. The Omicron variant is a risk factor but with limited information available, its impact is not factored into our scenario simulation at this point.

New COVID-19 Cases and Deaths By Country

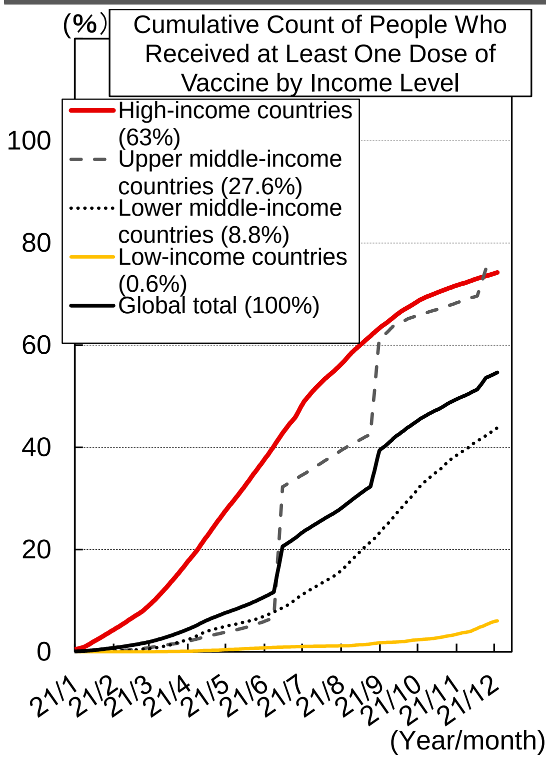


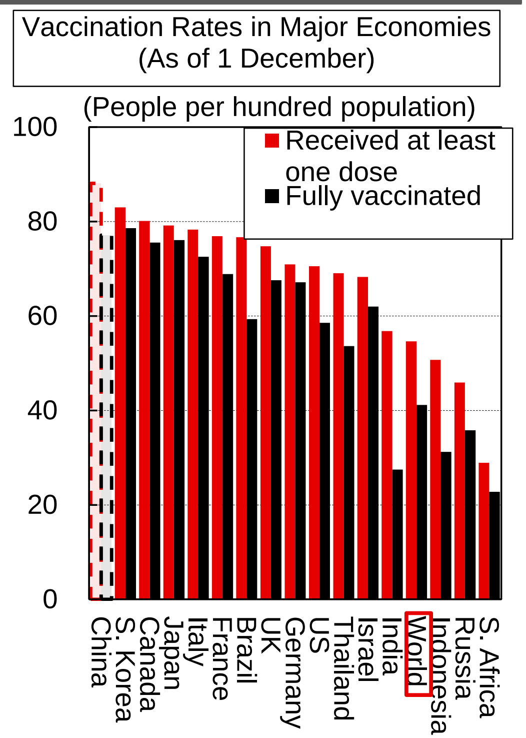
Source: World Health Organization, MUFG Bank Economic Research Office

1-2. Assumptions about the COVID-19 Pandemic: Vaccination Coverage

- High income countries such as the US and those in Europe were relatively quick to roll out vaccines, and vaccination coverage in upper-middle income countries has risen to levels comparable to those in high income countries. In addition, vaccine coverage in lower-middle income countries has risen to around 40%. Meanwhile, coverage in low-income countries remains low.
- Countries with rising vaccination coverage are generally easing mobility restrictions and will likely pursue both economic activity and curbing of COVID-19. With cases resurging or remaining high in some advanced European economies like the UK and Germany, vaccine booster shots are being considered and mobility restrictions have been tightened in Germany and Austria.
  - ✓ Vaccine booster shots (third dose) are widely administered mainly in advanced economies, and an oral drug has been approved for use in the UK. Countries will be in a good position to normalize economic activity when they are equipped with both the vaccines and oral drugs.
  - ✓ Still, the situation surrounding the pandemic remains unpredictable. In view of a potential resurgence in cases, varying capacities of healthcare systems in each country to treat seriously ill patients is drawing focus (resilience of healthcare system has an impact on the pace of economic recovery).

Vaccination Data by Country and Country Group





Note: 1. 7-day moving average. Number in parenthesis represents share of global nominal GDP.
2. High income, upper middle-income, lower middle-income, low income are classifications by World Bank.
3. Sudden rises in upper middle-income and global total are due to addition of China data on 10 June, 26 August.
4. Dotted line bars for China are based on latest data on total doses administered and data on fully vaccinated population released on 19 November.

Source: Our World in Data website run by Oxford University, MUFG Bank Economic Research Office

Topics on Vaccines and Drugs (major advanced economies)

Booster vaccine eligibility	■US Center for Disease Control expands eligibility for booster shots to all adults ages18 and older (19 November) ■Head of EU Center for Disease Prevention and Control Ammon said booster shots should be considered for all adults (24 November) ■Japanese government decides to roll out booster shots starting in December (15 November) US company Pfizer filed with Japan's health ministry for approval to produce and sell vaccines for children between ages 5 to 11 (10 November)
Impact of vaccine mandate	■As vaccine coverage plateaus, vaccine mandates are being adopted in many countries. • US: Based on a presidential executive order announced on 9 September, the labor department mandates vaccines for staff of private-sector companies that employ at least 100 (5 November). • UK: Government announces vaccine mandate for all staff of the National Health Service (9 November)
Oral drug approval	■UK's drug regulatory agency was the first in the world to approve an oral drug from US company Merck. The same drug was filed with US Food and Drug Administration (FDA) in October for approval (4 November) ■US company Pfizer said it filed with US FDA for approval to use an oral drug (16 November) ■Japan's health minister Goto announces an agreement with US company Merck to secure 1.6 million doses of oral drugs (11 November)

Source: Various sources, MUFG Bank Economic Research Office

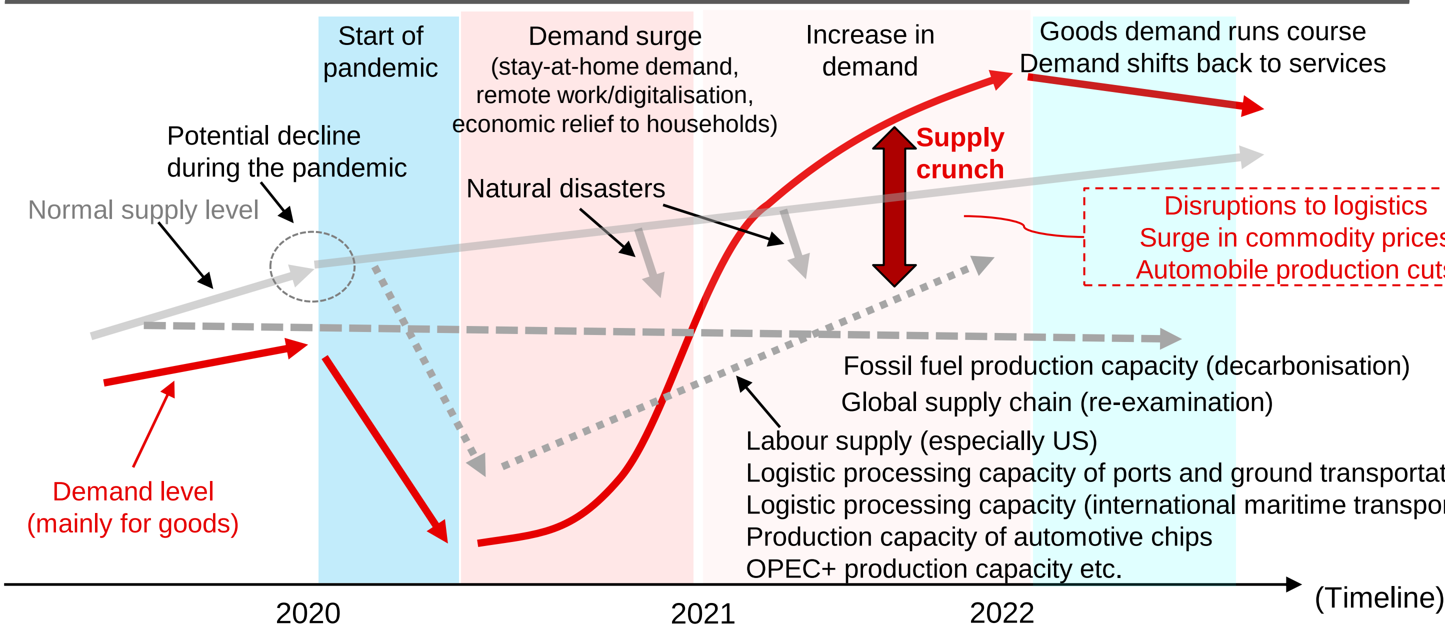
1-3. Supply Constraints: Overview

- The COVID-19 pandemic has resulted in supply constraints (supply-demand imbalance) affecting many facets of global and local economic activity, starting in the second half of 2020. The resulting inflationary pressure and negative impact on production and corporate earnings have spurred concerns (the table below shows the compounded factors contributing to shortages in capital, labour and other inter-related areas).
- Some of the factors are clear-cut and transitory, but the global trend characterised by the pursuit of free trade and efficient global supply chains (seen before the pandemic or prior to the 2010s) is unlikely to return, and it may take some time to establish a new world order. In 2022, supply issues will generally move in the direction of improvement as regulations and market mechanisms adapt to the situation. Still, structural supply constrains, incurred by decarbonisation and geopolitical changes, will likely remain over the long term.

	Labour	**Capital**	**Others**
Systemic, Regulatory	✓ Extension of unemployment benefits (expired in the US) ✓ Workplace vaccine requirements ✓ Mobility restrictions	✓ <u>Curbing fossil fuel investments in response to climate change</u> ✓ Restrictions on real estate investment (China)	✓ <u>Environmental regulations (i.e. energy related)</u> ✓ <u>Economic security issues amid increased US-China tension</u> ✓ <u>Trade restrictions due to trade friction</u>
Other	✓ Pandemic (childcare, caution about infection, retirement of older workers, lockdown etc.) ⇒ suspended operations, disruption of logistics	✓ <u>Adjustments to boost the resilience of supply chains</u> ✓ <u>Supply constraints on semiconductors</u> (excessive ordering is one contributing factor)	✓ Coordinated production cuts by oil-producing countries ✓ Excess demand for goods in pandemic (i.e. digital demand) ✓ Excess demand for homes due to pandemic and monetary easing ✓ Supply disruptions due to natural disasters and accidents

Note: Underlined items are expected to linger over longer period.

Concept Diagram of Supply Constraints During the COVID-19 Pandemic

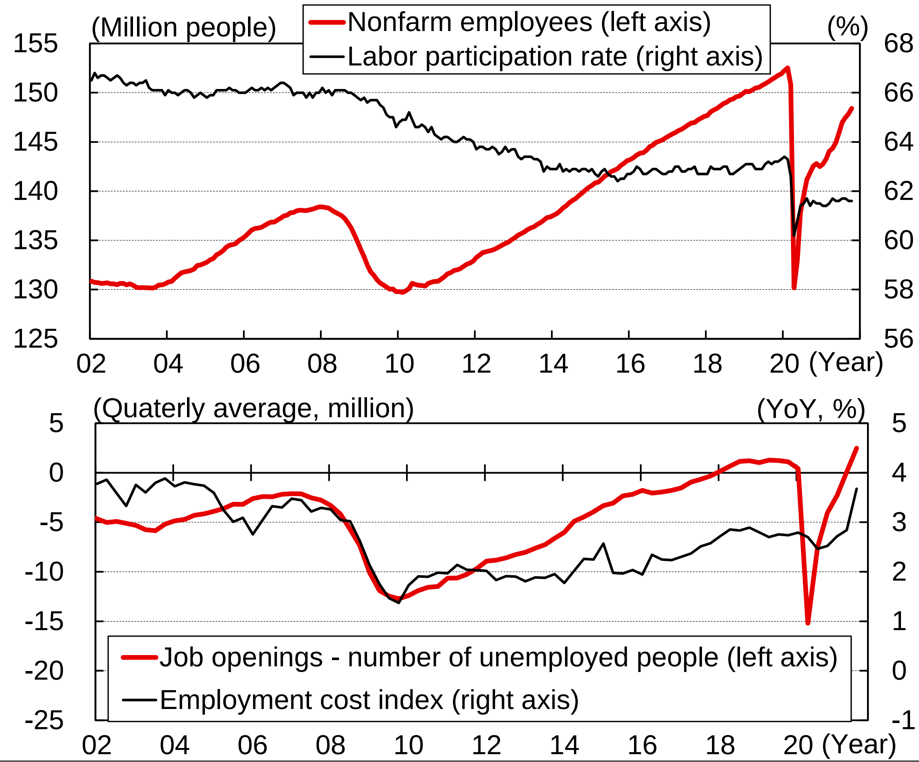


Note: Diagram is a concept illustration. Actual situation varies for specific matters.
Source: Various sources, MUFG Bank Economic Research Office

1-3. Supply Constraints: Labor Shortages in the US

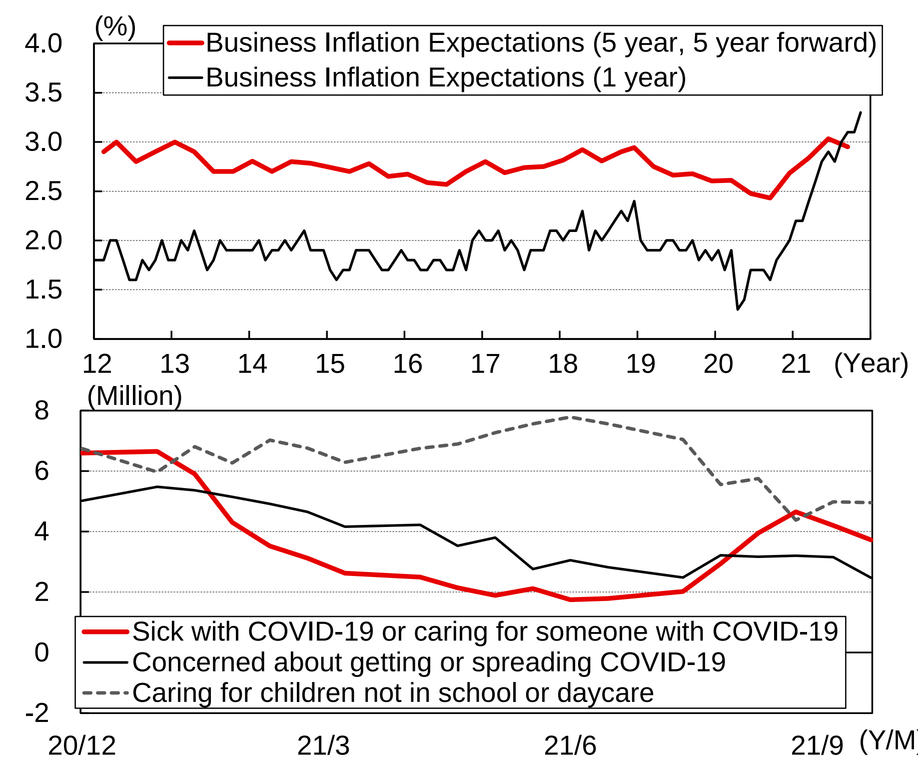
- In the US, businesses laid off many workers at the start of the pandemic in response to demand declines (while businesses in Japan and Europe mainly cut work hours). As labor market began recovering, the following factors have delayed recovery: 1) extension of unemployment benefit payment; 2) childcare needs due to school closures; and 3) caution against infection. The extension of unemployment benefit payment has expired, but the childcare issue and caution against infection still remain. With certain numbers of people yet to return to work, some industries have faced upward pressure on wages. And many elderly people exited the labor market out of caution against infection.
- While employee count is still below pre-pandemic levels, unemployment insurance data suggests that full employment may have been achieved under the new norm of labor participation rates. With the labor market tight, Employment Cost Index rose 3.7% YoY as of September-end, accelerating from a 2.8% YoY increase as of June-end.
- Meanwhile, businesses' medium-to-long term inflation expectations have been relatively stable, and there are few signs that wage increases will lead to sustained inflation. Even as wage pressure lingers, worker shortages in logistics and other areas will gradually ease as productivity improves.

Major Employment Indicators



Source: Department of Labor, MUFG Bank Economic Research Office

Business Inflation Expectations and Number of People Not Working by Reason

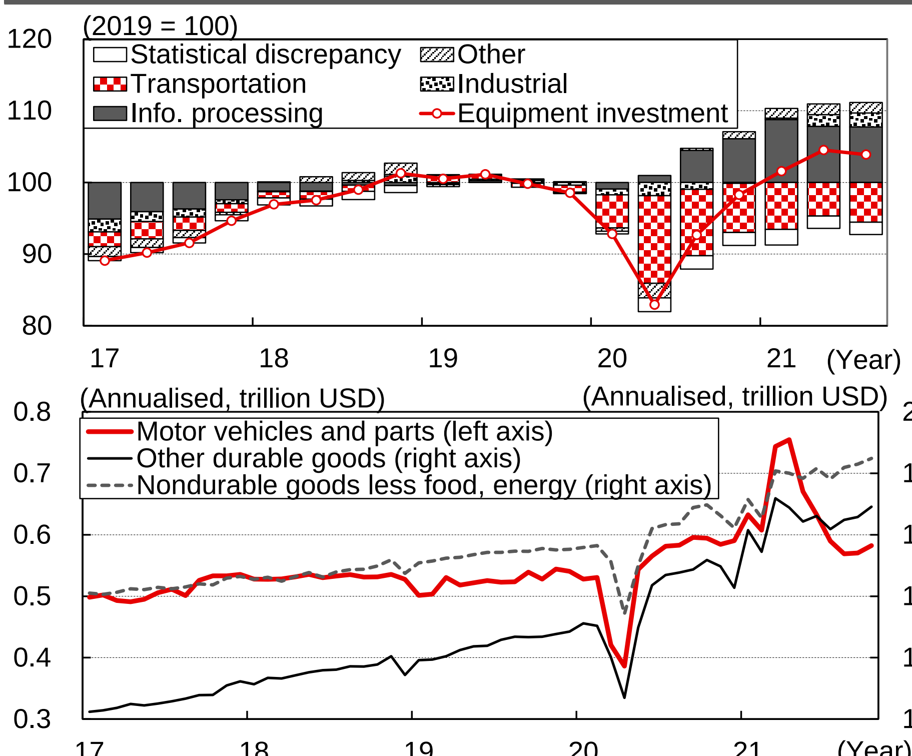


Source: Federal Reserve Bank of Atlanta, Department of Commerce, MUFG Bank Economic Research Office

1-3. Supply Constraints: Logistics Bottlenecks in the US

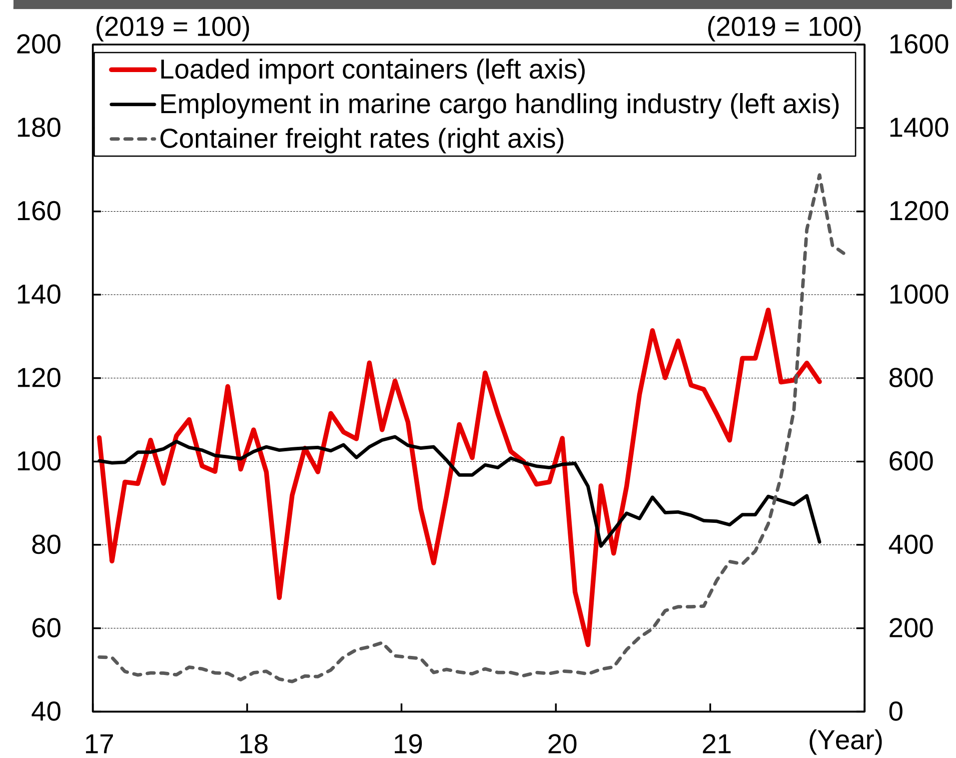
- In the US, as goods consumption and goods investment increased along with imports, bottlenecks in certain logistics sectors with severe labor shortages have led to delays in transportation of raw materials and products, raising logistics costs and inflationary pressure.
- The pandemic-driven disruptions in logistics and supply-chain operations will likely continue for some time. But improvements in areas such as processing capacity and productivity likely will help prevent increases in inflation expectations and a spiral of price increase. As an example of measures taken, the Biden administration announced in mid-October that ports of Los Angeles and Long Beach will operate 24 hours a day, seven days a week. And the two ports have announced fines for containers idling longer than certain periods. Supported by such efforts, container freight rates have been on a downtrend after peaking out in September.

Equipment Investment and Real Consumption in Goods



Source: Department of Commerce, MUFG Bank Economic Research Office

Logistics-related Indicators



Note: Container freight rates are for shipments from China/East Asia to North America west coast.
Source: Department of Labor, Port of Los Angeles, Freightos,
MUFG Bank Economic Research Office

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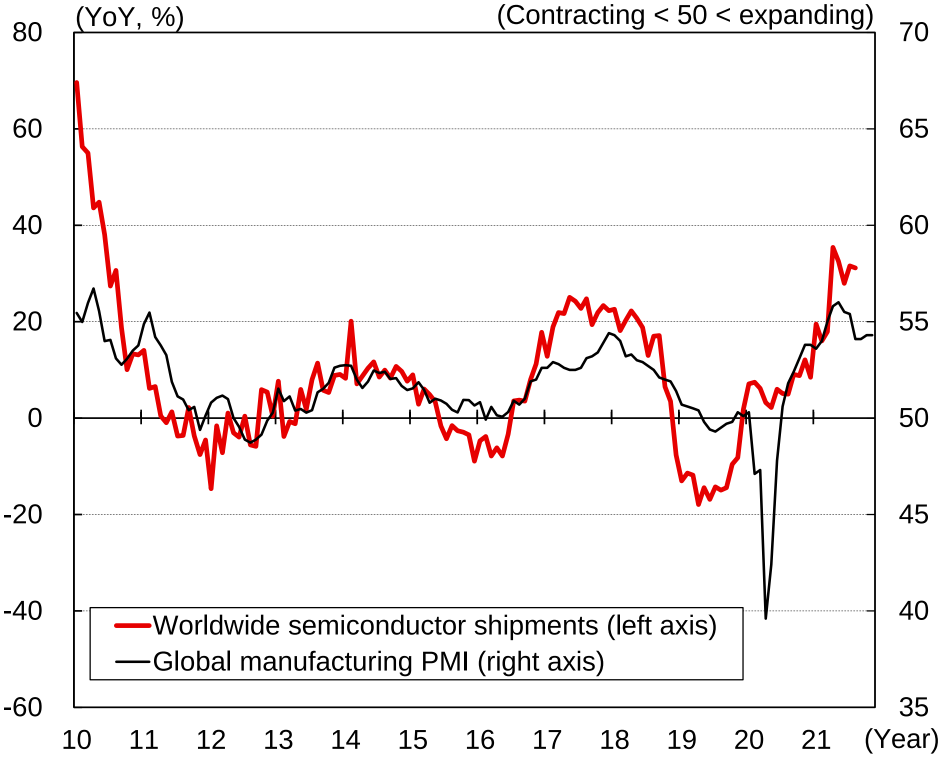
1-3. Supply Constraints: Chip Shortage and COVID-19 Case Increase in ASEAN

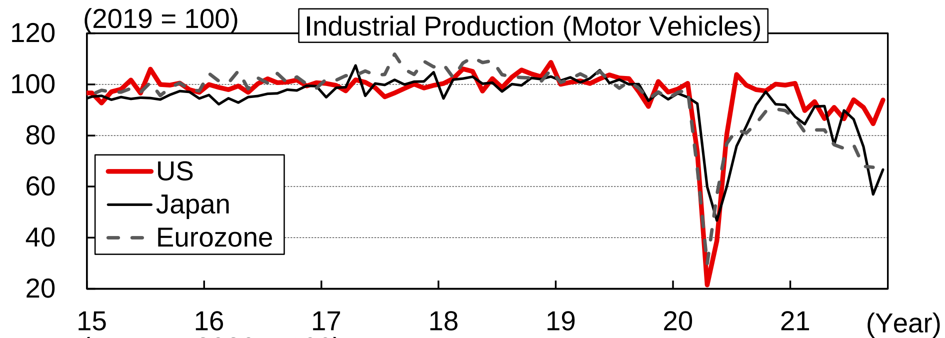
- The ongoing semiconductor shortage was caused mainly by supply capacity not keeping up with a demand surge that followed the pandemic-related economic declines, but specific situations vary depending on the type of semiconductors. Data on global shipments of semiconductors shows that the increase of shipments in the current demand cycle has outpaced peak increases of the past two cycles.
- The impact of automotive chip shortages is particularly serious. While global industrial production is picking up, automotive production has remained weak in Japan, the US, Europe and elsewhere. An especially sharp decline in Japan appears to be caused by the disruptions of auto parts factory operations in ASEAN since May amid rises in COVID-19 cases.
- As COVID-19 infection trend has calmed and factories have been reopening since October, supply from ASEAN countries is likely to improve. However, supply-demand balance will likely remain tight for some time because semiconductor demand will keep growing amid digitalisation. Manufacturers in the US and elsewhere are working to boost production capacity, but it will take all of 2022 to resolve the chip shortage issue.

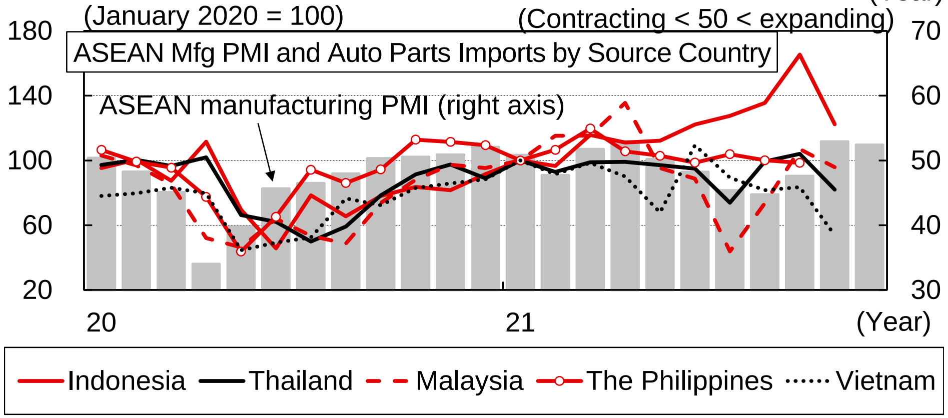
Semiconductor Production and Global Manufacturing PMI



Source: WSTS, Bloomberg, MUFG Bank Economic Research Office

Global Automobile Production



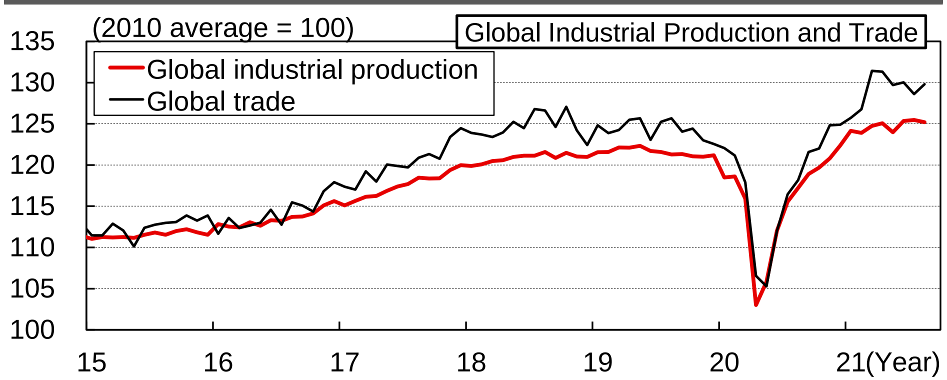


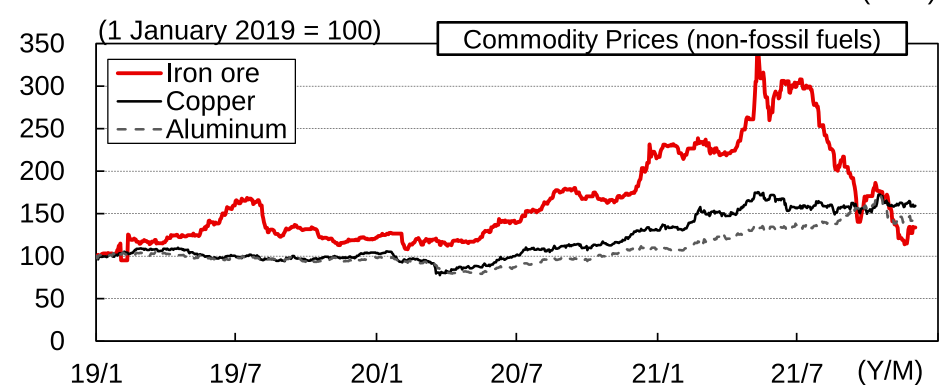
Note: ASEAN manufacturing PMI is a weighted average of 5 ASEAN members' PMIs according to value of exports to Japan.
Source: Statistics from each country, Bloomberg, MUFG Bank Economic Research office

1-3. Supply Constraints: Commodity Prices

- As global industrial production recovered rapidly amid rebounding of the broader economy, the temporary demand increase for industrial goods has accelerated the price increases for non-fossil fuel commodities such as iron ore, copper and aluminum. Now, as the global industrial production growth has leveled off, the price increases for these commodities have run their course.
- Meanwhile, prices for fossil fuels such as thermal coal, crude oil and natural gas remain elevated (thermal coal price rose to a new record). In addition to demand increases during the pandemic, one factor exacerbating the supply-demand imbalance is decarbonisation efforts led by the US and Europe. These efforts have resulted in curbing of fossil fuel production and related capital investment.
- Still, price pressure on fossil fuels will likely ease over time. For crude oil, 70-80 USD per barrel appears to be the ceiling for the time being as advanced economies and oil producing countries engage in a supply-demand tug of war. For natural gas, whose price has surged mainly in Europe, inventory levels will likely rise starting in the spring of 2022.

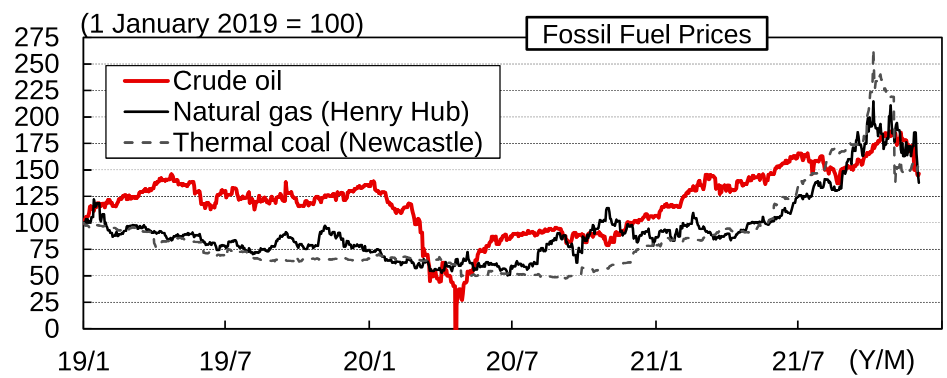
Global Industrial Production, Trade, Commodity Prices (non-fossil fuels)

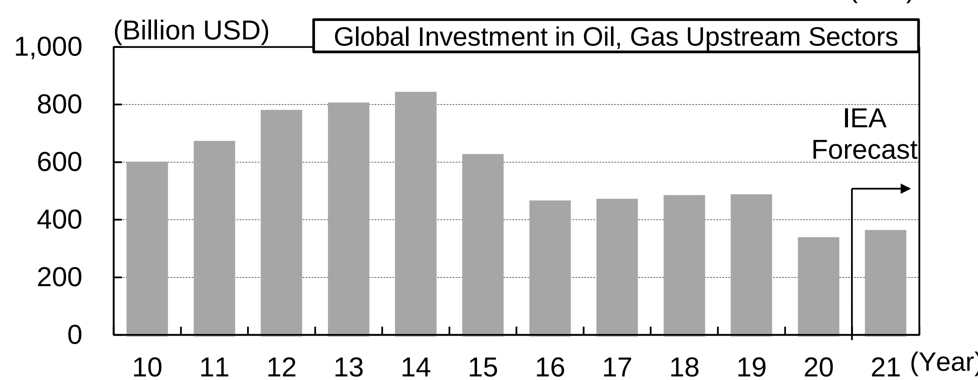




Source: Netherlands Bureau for Economic Policy Analysis, Bloomberg, MUFG Bank Economic Research Office

Fossil Fuel Prices, Upstream Investment in Oil and Gas



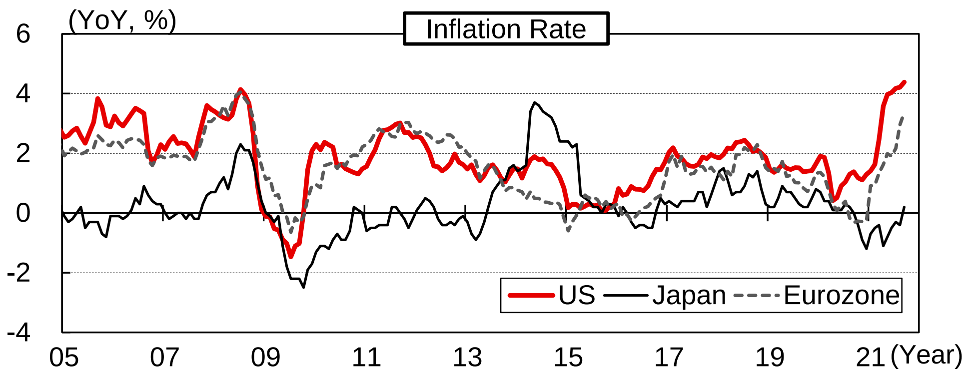


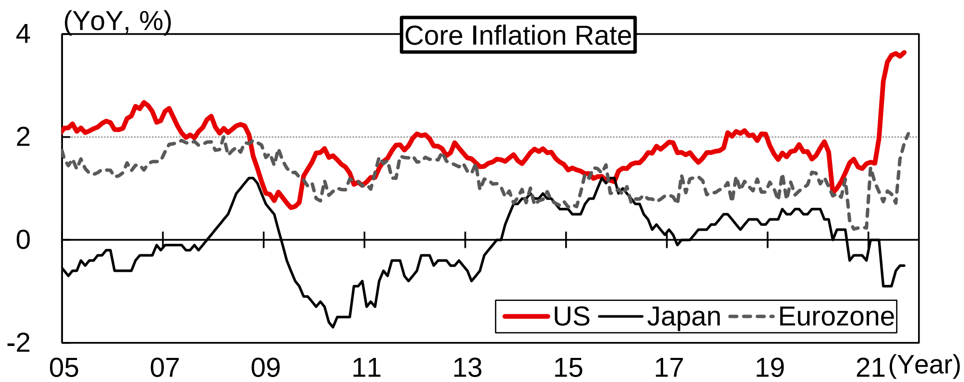
Source: Bloomberg, IEA, MUFG Bank Economic Research Office

1-3. Supply Constraints: Impact on Inflation

- As energy prices rose, inflation has accelerated in the US and Eurozone. In the US, supply constraints have led to a severe imbalance of supply and demand for durable goods, especially automobiles. In the Eurozone, the rise in core inflation rate reflects impact from the expiration of the temporary reduction of value added tax in Germany.
- Even though the increase in global trade and industrial production has slowed, the level of such activities remain high. Thus, the supplier deliveries index in US and European manufacturing PMI surveys continue to hover at historically high levels.
- The rise in inflation rate has increased expectations for interest rate hikes, and short-term bond yields have risen as a result. Still, increases in expectations for medium- to long-term inflation have been limited when compared to the increases in actual inflation rates. As the increase in energy prices slows as early as next year, broader inflation rates will likely slow down gradually.

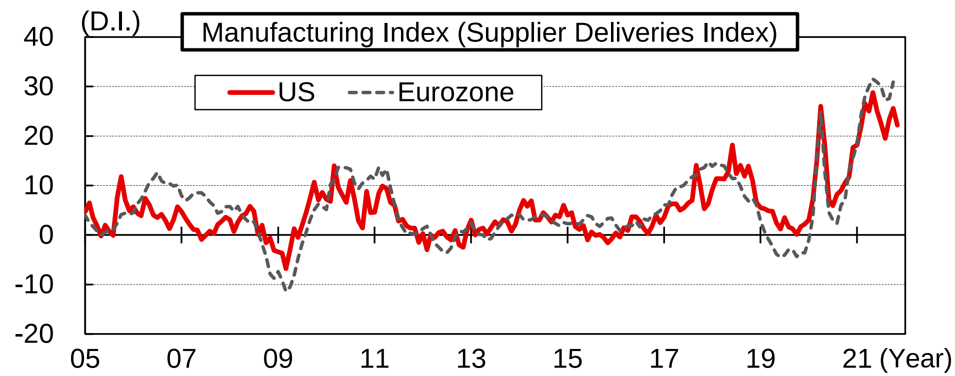
Inflation and Core Inflation Rates in US, Japan and Europe

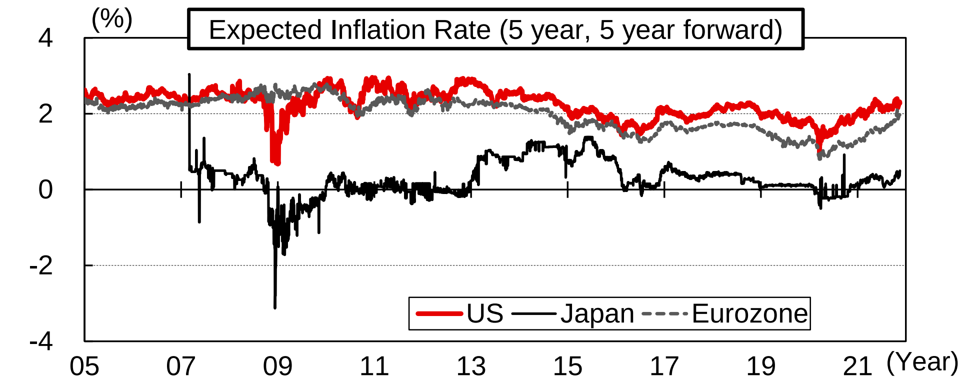




Note: Rates are based on CPI for Japan and Eurozone, and on PCE deflator for the US.
Source: Statistics from each country, MUFG Bank Economic Research Office

Supplier Deliveries Index and Expected Inflation Rates





Note: Japan and Eurozone expected inflation rates are based on inflation swaps, and US expected inflation rate is based on inflation-indexed bond yield.
Source: Statistics from each country, MUFG Bank Economic Research Office

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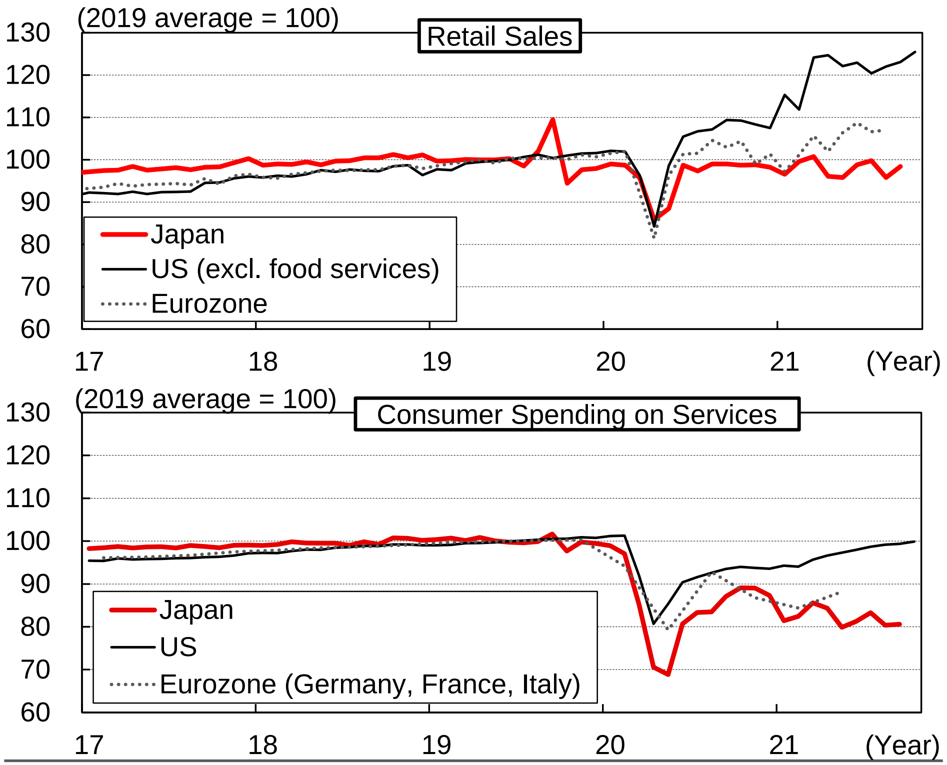
2-1. Overview of Advanced Economies

- Consumer spending:Consumer spending on goods recovered to pre-pandemic levels relatively quickly in advanced economies, although the trend thereafter has varied by location. In the US, goods spending has been significantly higher than pre-pandemic levels, while in the Eurozone, goods spending as recovered to pre-pandemic trend after a dip related to COVID-19 case increases. In Japan, goods spending has been hovering flat around pre-pandemic levels. On the service side, consumer spending has generally lagged in recovery. In the US, service spending has been recovering at a moderate pace as the economy normalises, and has reached pre-pandemic levels. In the Eurozone and Japan, service spending has remained weak due to strict mobility restrictions. With the level of goods spending still high, consumer spending is expected to shift back to services as restrictions are gradually eased.

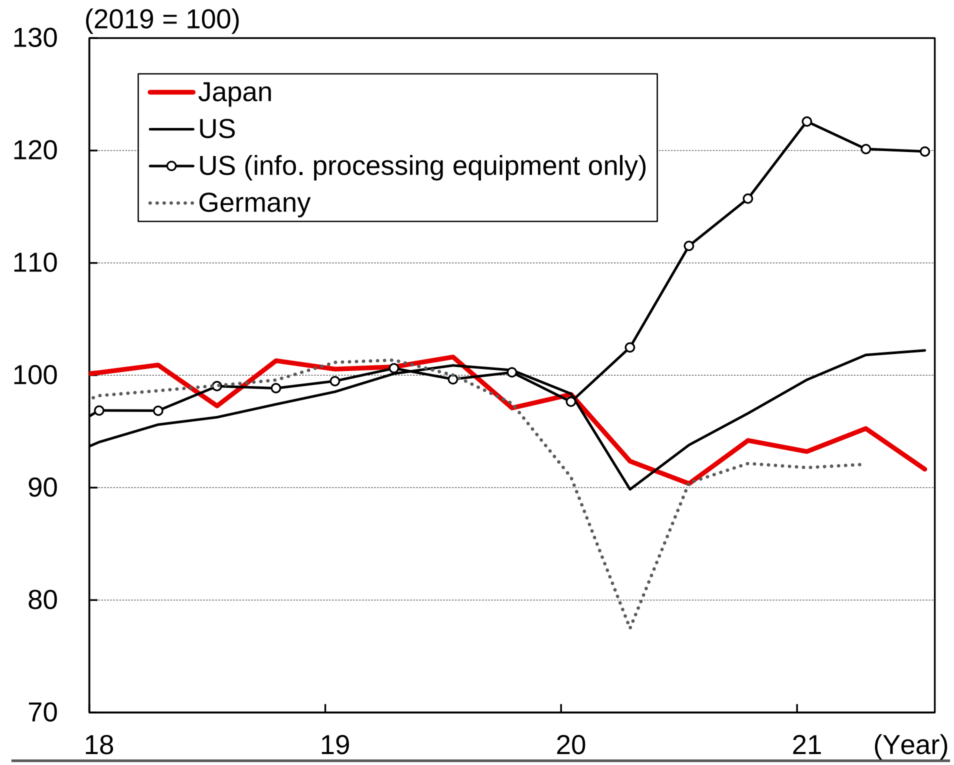
- Capital expenditures:In the US, capital expenditures have recovered to pre-pandemic levels, supported by a sharp increase in spending on information processing equipment and software to facilitate work from home. Lately, investment in semiconductor-making machinery has been on the rise. Such moves to boost the capacity of semiconductor production are expected to continue.

Retail Sales and Service Consumption in Advanced Economies



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

Capital Expenditures of Advanced Economies



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

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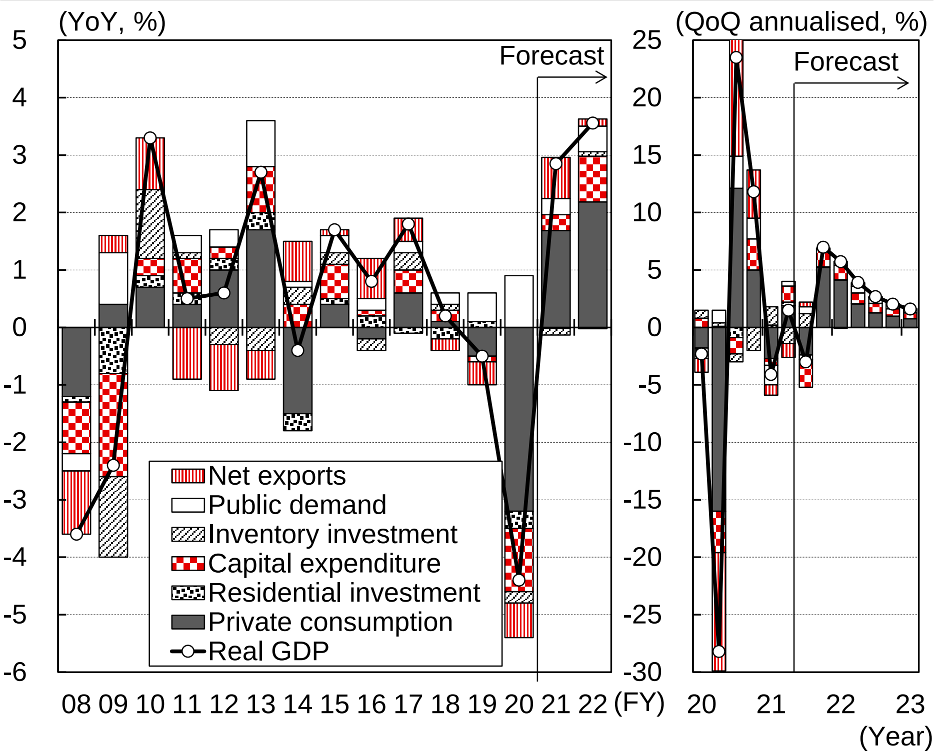
2-2. Japanese Economy: Overview

- The real GDP growth rate for the July-September quarter (first preliminary estimate) was -3.0% QoQ annualised: the first negative growth in two quarters. This was due to a decrease in domestic and foreign demand as a result of the fifth wave of COVID-19 infections and a supply shortage of some goods. Private consumption was affected by the fourth state of emergency and a huge slump in the number of automobile sales due to the constrained supply of semiconductors and other components. Capital expenditure also appears to have been affected by supply restraints, particularly investment in transport equipment.
- From the October-December quarter onwards, the economy will probably start to follow a general trend of recovery on the premise that “vaccines retain their efficiency, social and economic policies to live with COVID-19 are successful and become well-established, the number of COVID-19 cases and pressure on medical resources is reduced to a certain extent and that various restrictions are eased in stages”. Large-scale economic policies from the Kishida administration are also forecast to give support to the economy.
- The economy will pick up and grow 2.8% YoY in FY2021, after which it will continue to recover at a gradual pace into FY2022 and record strong growth (3.6% YoY) due to rebounds from weak growth. Throughout FY2022, real GDP is forecast to be at the level it was at in FY2019 before the pandemic.

Japan Real GDP and Outlook (Fiscal Year, Quarterly)



Source: Cabinet Office, MUFG Bank Economic Research Office

Japan Real GDP and Outlook (Fiscal Year, QoQ Annualised)

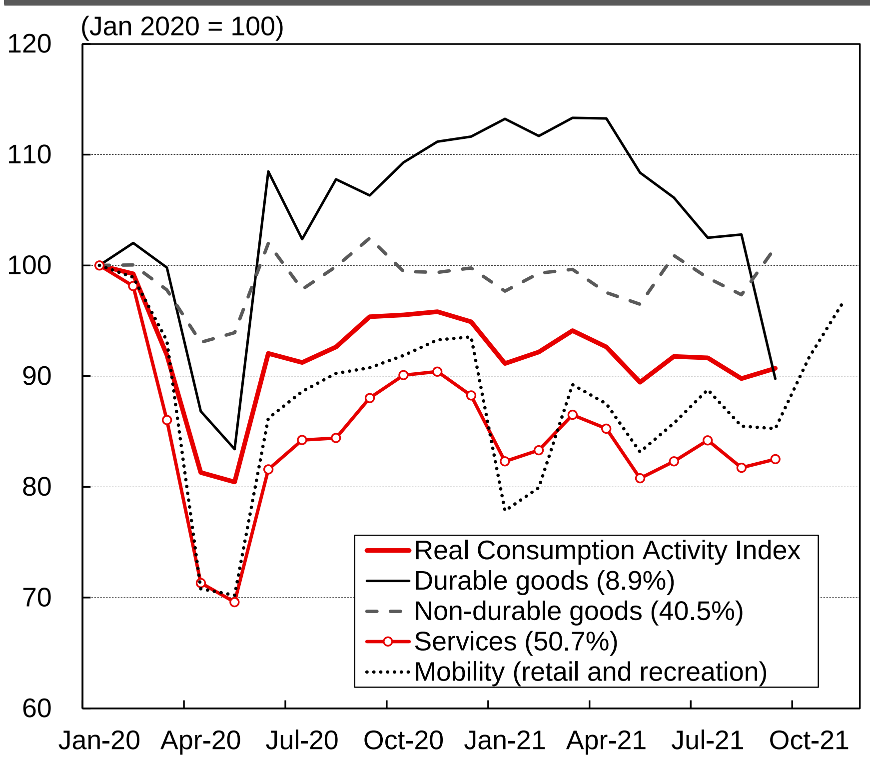
	FY2019 (Actual)	FY2020 (Actual)	FY2021 (Outlook)	FY2022 (Outlook)
Real GDP	-0.5	-4.4	2.8	3.6
Private consumption	-1.0	-5.8	3.1	4.1
Residential investment	2.5	-7.2	-0.6	-0.6
Capital expenditure	-0.6	-6.9	1.7	5.0
Inventory investment (contribution)	0.0	-0.2	-0.1	0.1
Public demand	1.9	3.5	1.0	1.7
Net exports (contribution)	-0.4	-0.6	0.7	0.1
Exports	-2.2	-10.4	11.9	3.0
Imports	0.2	-6.8	7.5	2.3
Nominal GDP	0.3	-3.9	2.4	3.9
GDP Deflator	0.9	0.6	-0.4	0.3

Source: Cabinet Office, MUFG Bank Economic Research Office

2-2. Japanese Economy: Domestic Private Consumption

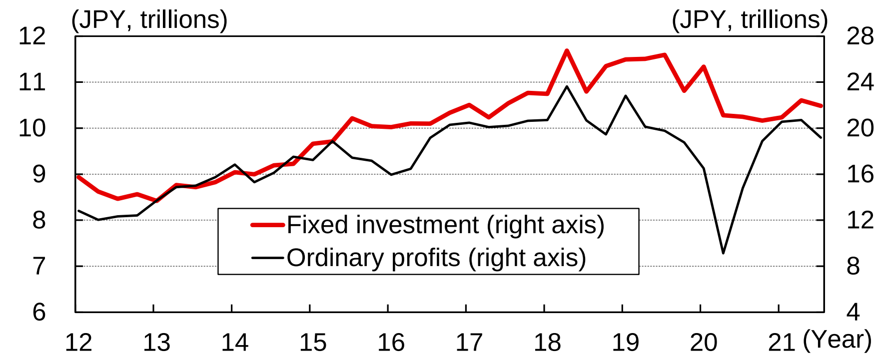
- Growth of private consumption remained slow as services stagnated due to the impact of the fourth state of emergency and there was a slump in spending on durable goods, particularly automobiles, which were affected by a shortage in the supply of parts. As the number of cases falls and restrictions on movement are eased, consumption will start to recover in the future, especially that of services. Nevertheless, a sense of caution about the spread of infection will remain for the time being, which means the pace of recovery is likely to be gradual. It will also be important to keep an eye on the risks posed by a deterioration of the COVID-19 situation, including the spread of the omicron variant.
- Although it is showing some weakness due to supply constraints and slow growth of profits, fixed investment is forecast to remain firm. Downward pressure is likely to continue, especially on some non-manufacturing industries, yet fixed investment is expected to pick up in the future on the back of a recovery of both the economy and corporate profits, as well as the need to invest in streamlining and information. The Bank of Japan's September Tankan Survey shows a clear increase in planned fixed investment for this fiscal year of 10.1% YoY.

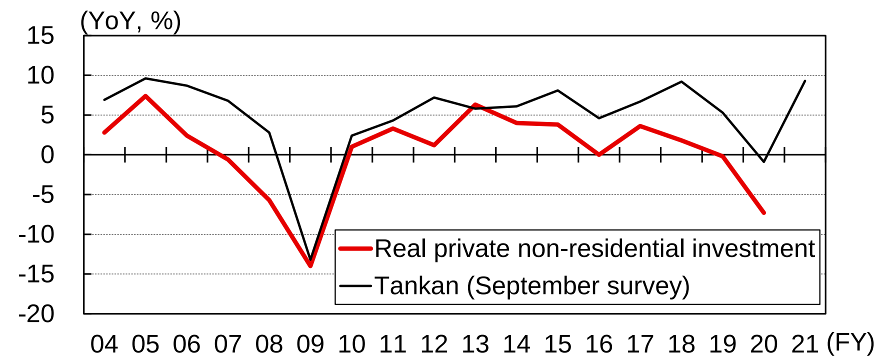
Real Consumption Activity Index by Item and Mobility



Note: 1. The numbers in brackets show the items' proportion of the Consumption Activity Index
2. Mobility is the average value for that month. November is average until 29th
Source: Bank of Japan, Google, MUFG Bank Economic Research Office

Japanese Enterprises' Fixed Investment and Ordinary Profits and the Tankan Survey Planned Fixed Investment





Note: 1. "Fixed investment" and "ordinary profits" is of enterprises of all sizes and industries (excluding finance and insurance)
2. The Tankan Planned Fixed Investment includes software and R&D and excludes land purchasing expenses
Source: Cabinet Office, Ministry of Finance, Bank of Japan, MUFG Bank Economic Research Office

2-2. Japanese Economy: Monetary and Government Policy

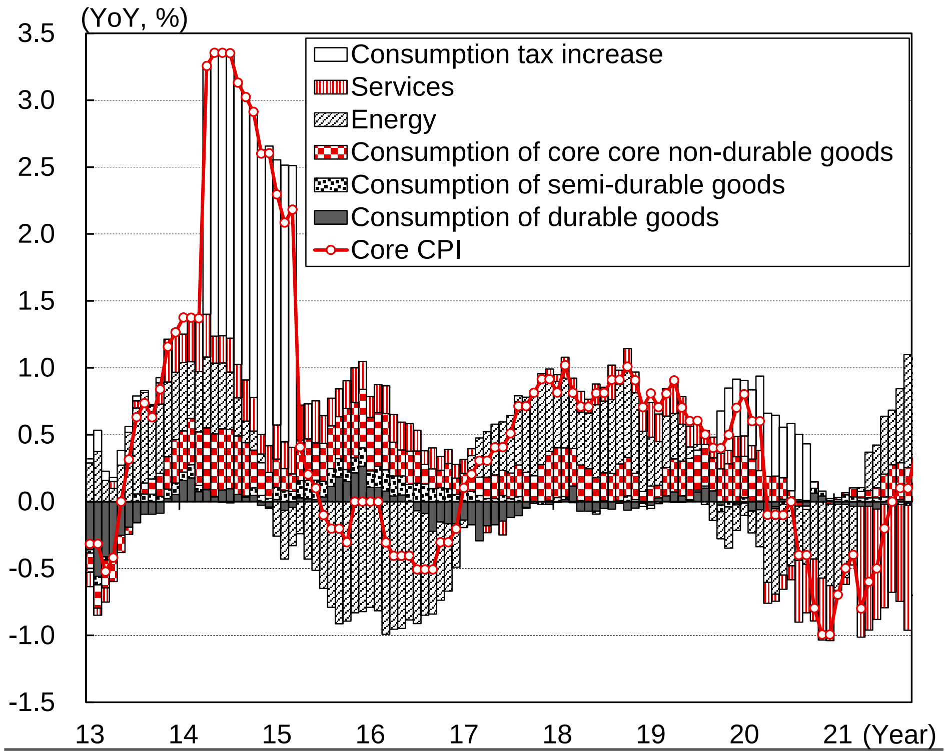
- Prime Minister Kishida's cabinet approved the Economic Policies for Overcoming COVID-19 and Developing a New Generation on 19th November. The policies focus on financial aid for households and strengthening support for businesses, resulting in fiscal expenses of JPY 55.7 trillion – a new historical high. That being said, many of the policies that provide financial aid are aimed a households, which means the upward pressure on the economy from these policies is unlikely to be large. The boost to real GDP is forecast to equate to around 0.6% points in FY2022.
- The Bank of Japan will continue with its large-scale monetary easy, such as maintaining the yield curve at low levels with active purchases of government bonds. In March, the Bank carried out adjustments to its policy to improve the stability of its monetary easing. Although there has been a marked increase in energy prices, consumer prices on the whole have only increased by a small amount. It is unlikely that the Bank of Japan will achieve its CPI target of 2% YoY, even after the temporary impact of the lowering of mobile phone charges has worn off, and it is forecast to maintain its current accommodative monetary policy.

Economic Policies for Overcoming COVID-19 and Developing a New Generation

	Details of policy	Fiscal expenses	Supple-mentary budget	Project scale
Containment measures for COVID-19	• Accelerate development of medication and vaccines • Max. JPY 2.5 million of financial support for businesses • JPY 100,000 for households exempt from residential tax • JPY 100,000 emergency relief for students	JPY 22.1T	JPY 18.6T	JPY 35.1T
Restart economic activities "with COVID" and prepare for the next crisis	• Restart "Go To Travel" • Extend "Go To Eat" • Support development of vaccines and treatment	JPY 9.2T	JPY 1.7T	JPY 10.7T
Start "new capitalism" which will open the way for the future society	• Digital Garden City Nation Realisation • Raise wages in nursing and care field • JPY 100,00 for 18-year-olds and under in households with an annual income of JPY 9.6 million or less • Max. JPY 2 million My Number Points	JPY 19.8T (of which FILP JPY 5.2T)	JPY 8.2T	JPY 28.2T
Ensure safety and security by increasing national resilience to natural disasters	• Recovery from aftermaths of natural disasters • Accelerate 5-year plan for promoting national resilience	JPY 4.6T (of which FILP JPY 0.8T)	JPY 2.9T	JPY 5.0T
Total		JPY 55.7T (of which FILP JPY 6.0T)	JPY 35.9T	JPY 78.9T

Source: Cabinet Office, MUFG Bank Economic Research Office

Consumption Prices (Total Excluding Fresh Food)



Source: Ministry of Internal Affairs and Communications, MUFG Bank Economic Research Office

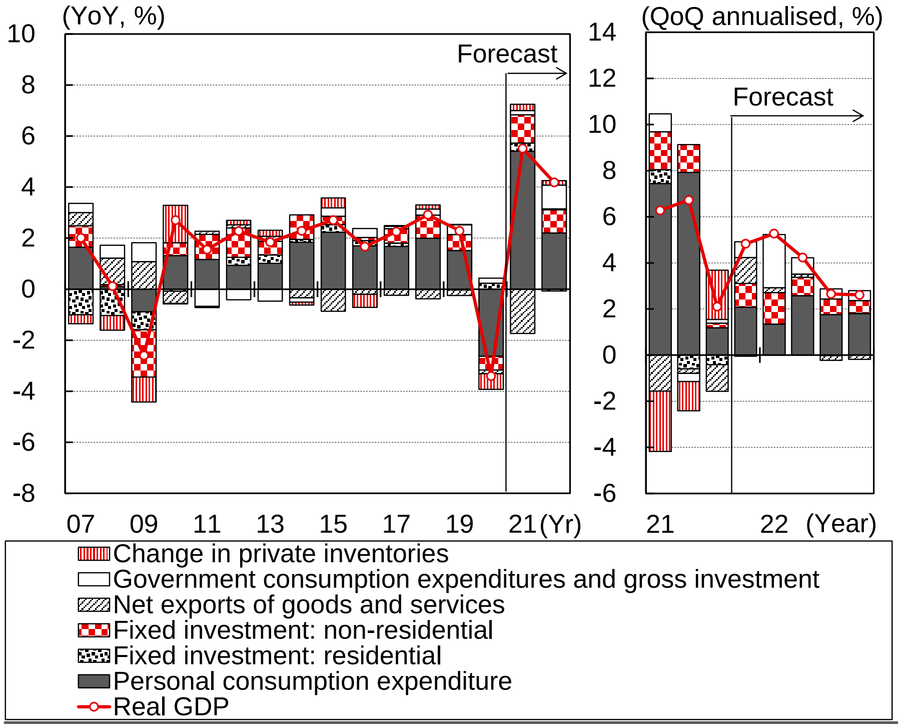
2-3. US Economy: Overview

- The US real GDP growth rate for the July-September quarter (second estimate) was 2.1% QoQ annualised, decelerating from 6.7% QoQ annualised the previous quarter. The boost to consumption of goods from the cash benefits received in March and April had worn off, and there was a rise in COVID-19 cases resulting in a large deceleration in the growth of personal consumption to 1.7% QoQ annualised from 12.0% QoQ annualised the previous quarter. Non-residential investment also slowed to 1.5% QoQ annualised from 9.2% QoQ annualised the previous quarter, and growth of investment in transport equipment turned negative due to a shortage of supplies.

- Various supply constraints, such as a shortage of workers (an aftereffect of the pandemic), the resulting disruption to logistics, a shortage of semiconductors, the rise in fossil fuel prices or a combination of a number of these factors, have pushed inflation rates higher, which in turn has put downward pressure on non-residential investment and personal consumption. Nevertheless, the pace of economic recovery is expected to start accelerating due to an increased consumption of services as people start to adapt to life with COVID-19 and pent-up demand for business investment. The real GDP growth rate is forecast to hit 5.5% YoY in 2021.

- On 15th November, the government passed the Infrastructure Investment and Jobs Act, which includes USD 550 billions' worth of new investment over the next five years. This is predicted to boost growth from next year, leading to continued strong growth and a real GDP growth rate of 4.2% YoY in 2022.

Real GDP and Breakdown of Demand Components



Source: Department of Commerce, MUFG Bank Economic Research Office

GDP Outlook by Calendar Year

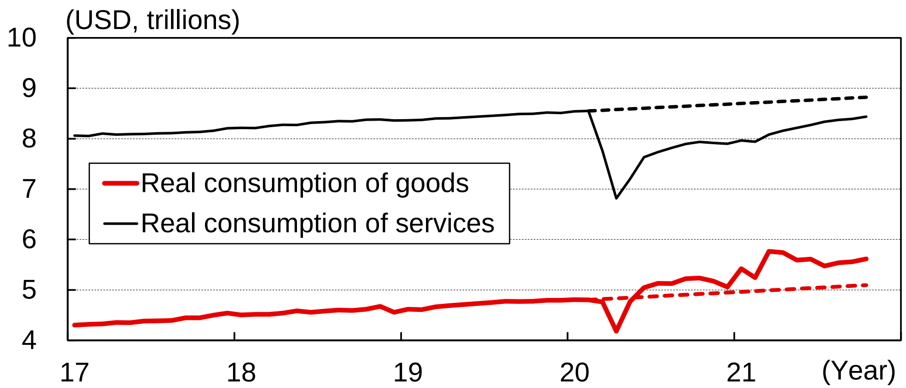
	2020 (actual)	2021 (outlook)	2022 (outlook)
Real GDP	-3.4	5.5	4.2
Personal consumption	-3.8	7.9	3.1
Residential investment	6.8	9.0	-1.9
Non-residential investment	-5.3	7.6	6.1
Change in inventories (contribution)	-0.6	0.2	0.2
Government consumption expenditure	2.5	0.9	5.4
Net exports (contribution)	-0.1	-1.7	0.0
Exports	-13.6	4.4	5.8
Imports	-8.9	13.2	3.5
Nominal GDP	-2.2	9.7	7.5

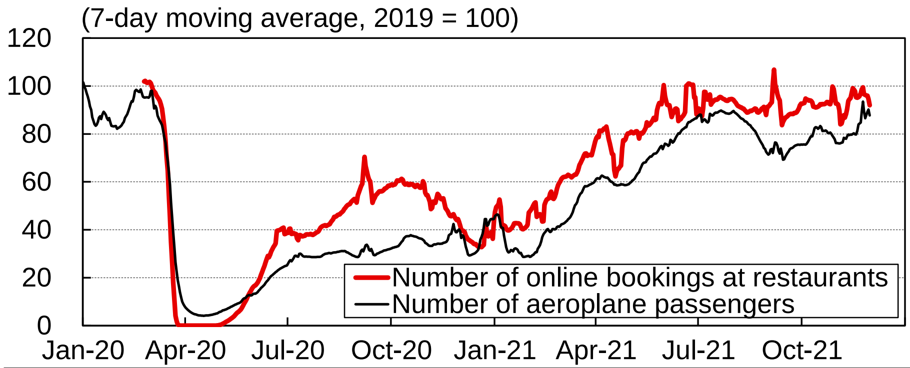
Source: Department of Commerce, MUFG Bank Economic Research Office

2-3. US Economy: Personal Consumption Expenditure

- Real personal consumption expenditure increased by 0.7% month-on-month, marking its third consecutive month of positive growth. Spending on services has still not returned the level it was at before the pandemic, but high-frequency data shows consumption of restaurant and airline services is picking up as the number of new cases decreases.
- The high level of inflation at present has led to a deterioration of consumer sentiment as households' real income declines; however, the fall in spending growth expectations is limited when compared with the fall in income growth expectations. Appetite for spending on services is high; the ratio of households who plan to spend vacation overseas is higher than it was before the pandemic. Looking ahead, the shift to services from goods as the driving force behind consumption will continue, and personal consumption expenditure is forecast to continue to recover with some support from savings accumulated during the pandemic.

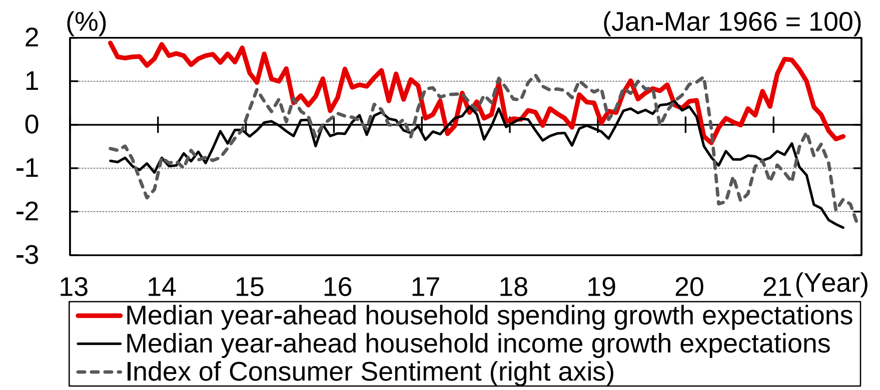
Indicators Related to Consumption

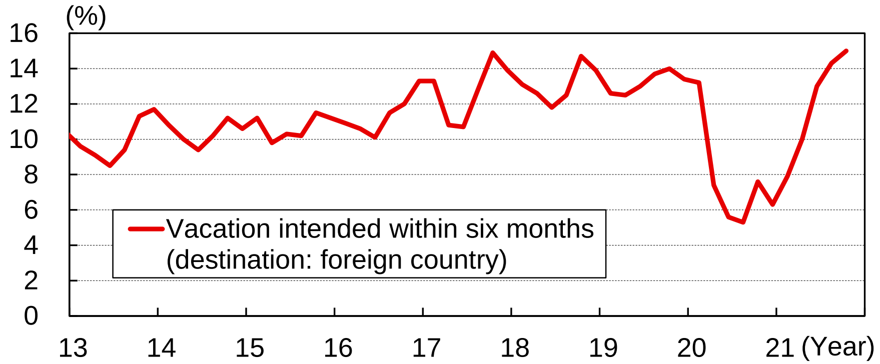




Note: Dotted line indicates extension of trend from 2017 to 2019
Source: Department of Commerce, Open Table, Department of Homeland Security, MUFG Bank Economic Research Office

Indicators Related to Consumer Sentiment



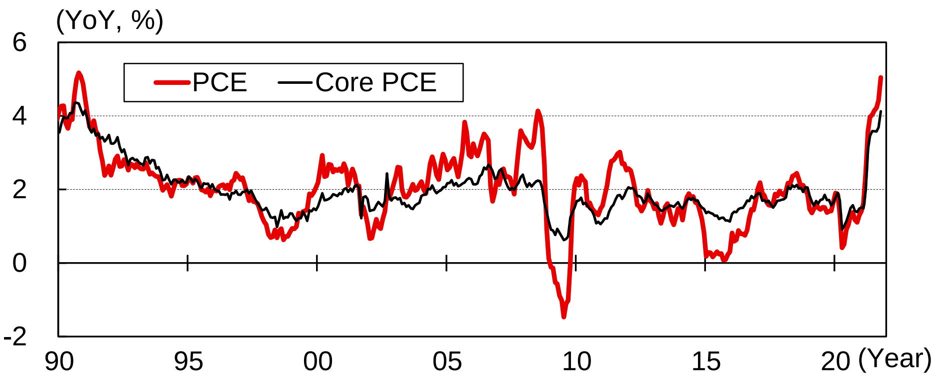


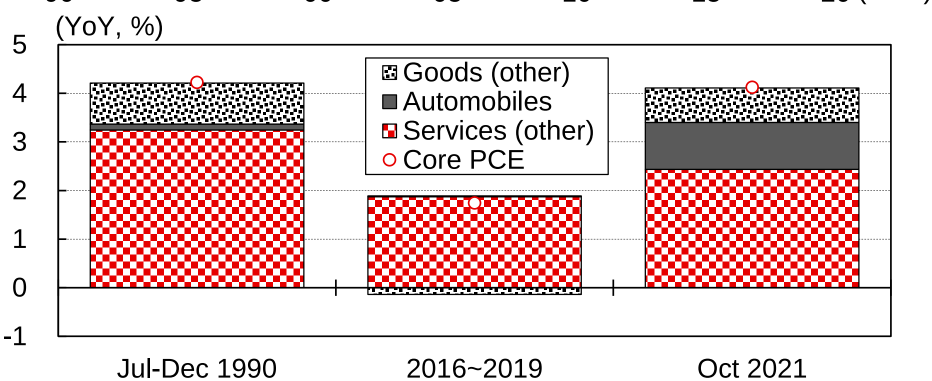
Source: Federal Reserve Bank of New York, Federal Reserve Bank of Michigan, Conference Board, MUFG Bank Economic Research Office

2-3. US Economy: Inflation and Contributing Factors

- The Personal Consumption Expenditure (PCE) Deflator rose 5.0% YoY in October, accelerating from 4.4% YoY the previous month. The core PCE deflator increased 4.1% YoY, which was the first time it hit 4% or over in 31 years.
- The acceleration in the growth of prices is due to a multitude of factors, such as soaring energy prices and various supply constraints. When it comes to energy prices, however, any further rise in oil prices will be limited. In 2022, the growth of oil prices will slow and it is highly likely they will start to fall.
- The contribution to core PCE by motor vehicles along with other goods was 1.7% YoY. Demand and supply of motor has been tightening due to a constrained supply of new vehicles caused by the shortage of semiconductors. As the semiconductor shortage starts to ease, major automobile manufacturers expect production to increase and the price of automobiles is expected to fall as the demand and supply balance eases. As a result, overall inflation is also expected to slow again on a month-on-month basis.

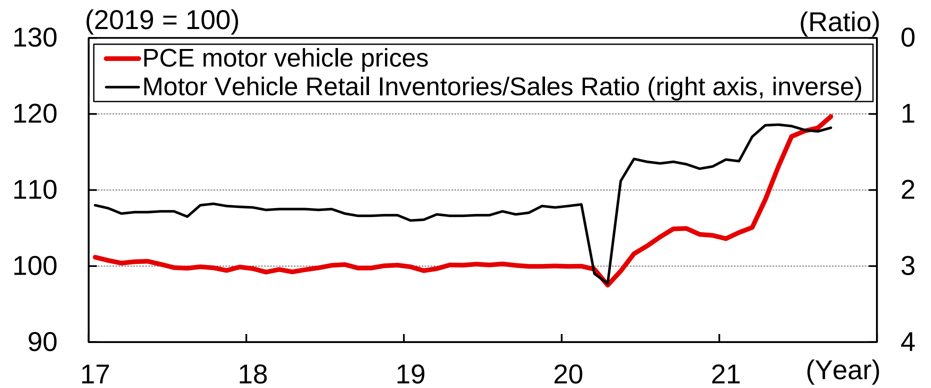
PCE Deflator and Breakdown by Contributing Factors

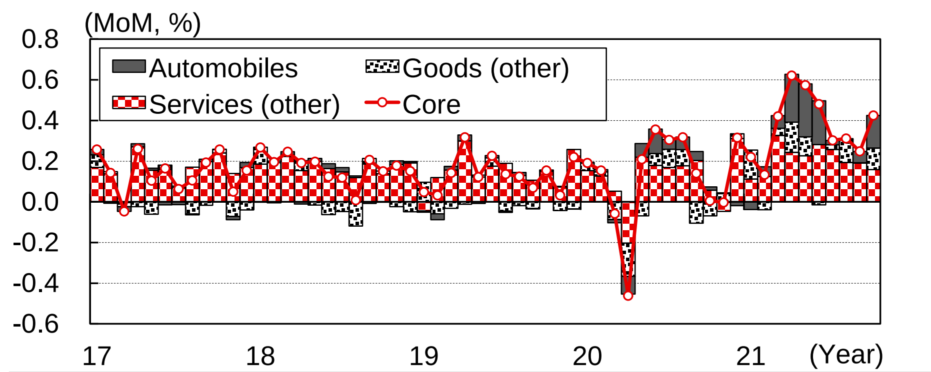




Note: "Automobiles" is a total of "automobiles and parts" and "automobile services"
Source: Department of Commerce, MUFG Bank Economic Research Office

Motor Vehicle Prices & Retail Inventories/Sales Ratio, Core PCE Deflator





Source: Department of Commerce, MUFG Bank Economic Research Office

MUFG

2-3. US Economy: Monetary Policy

- At the Federal Open Market Committee meeting in November, the Committee decided to reduce the monthly pace of its net asset purchases (tapering). From November, it plans to reduce the pace by USD 10 billion for Treasury securities and USD 5 billion for agency mortgage-backed securities per month. However, Vice Chair Clarida and Governor Waller then mentioned speeding up the Fed's tapering when the Consumer Price Index published after the meeting rose more than expected. Continued high inflation is affecting the Biden administration's approval rating and is becoming an issue politically, and it appears concerns among FOMC participants are also increasing.
- In his testimony to the Senate on 30th November, Chair Powell said, "the recent rise in COVID-19 cases and the emergence of the Omicron variant pose downside risks to employment and economic activity and increased uncertainty for inflation". In addition, while he suggested increasing the pace of balance sheet reductions, he placed greater emphasis on price stability.
- In light of this, it is thought that the FOMC will decide to accelerate its tapering (reduce the monthly pace of its net asset purchases by USD 20 billion for Treasuries and USD 10 billion for agency mortgage-backed securities) at the meeting in December. Rate hikes are expected in June, September and December next year provided the maximum employment target has been achieved for the most part by June 2022.

Statements by FOMC Members with Voting Rights in 2021

Members	Date	Details
Waller	19 Nov	"…For my part the rapid improvement in the labor market and the deteriorating inflation data have pushed me towards favoring a faster pace of tapering and a more rapid removal of accommodation in 2022."
Clarida	19 Nov	"I'll be looking closely at the data that we get between now and the December meeting, and it may well be appropriate at that meeting to have a discussion about increasing the pace at which we're reducing our balance sheet"
Bostic	22 Nov	Says he is "comfortable" with moving the tapering (to finish at the end of Q1 2022) based on recent data.
Daly	24 Nov	"If things (prices and employment) continue to do what they've been doing, then I would completely support an accelerated pace of tapering."
Powell	30 Nov	"It is … appropriate in my view to consider wrapping up the taper of our asset purchases . . . perhaps a few months sooner." "To get back to the kind of great labor market we had before the pandemic, we're going to need…price stability"

Source: Various news reports, MUFG Bank Economic Research Office

Minutes of the Federal Open Market Committee November 2021

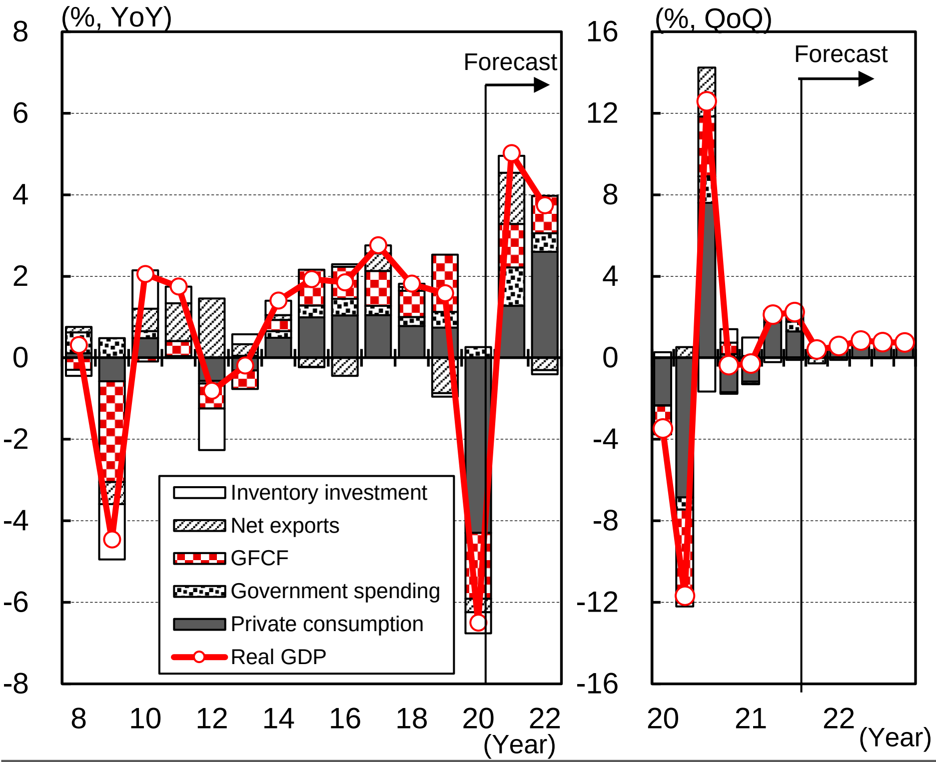
Item	Details
Labour Market	• "Some" participants cited a number of signs that the US labour market was very tight. • "Several" participants judged that labour force participation would be structurally lower than in the past. • "Several" participants suggested that labour supply was currently being depressed by pandemic-related factors such as disruptions related to caregiving arrangements and noted that the importance of such factors would likely diminish as economic and public health conditions improved further.
Prices	• "Some" participants highlighted the fact that price increases had become more widespread • "Many" participants pointed to considerations that might suggest that elevated inflation could prove more persistent. • "Some" participants remarked that although inflationary pressures were lasting longer than anticipated, those pressures continued to reflect the same pandemic-related imbalances and would likely abate when supply constraints eased.
Monetary Policy	• Participants highlighted the more stringent criteria for raising the target range, compared with the criteria that applied to beginning to reduce the pace of asset purchases. • Various participants noted that the Committee should be prepared to adjust the pace of asset purchases and raise the target range for the federal funds rate sooner than participants currently anticipated. • Participants noted that the Committee would not hesitate to take appropriate actions to address inflation pressures that posed risks to its longer-run price stability and employment objectives.

Source: Board of Governors of the Federal Reserve System,
MUFG Bank Economic Research Office

2-4. European Economies: Eurozone – Overview

- Eurozone real GDP rose by 2.2% QoQ in Q3 (revised), a second consecutive quarter of expansion. This was driven by the increase in vaccination coverage and subsequent relaxation of restrictions, especially for the vaccinated.
- While there has been a recent increase in infections and uncertainty around the Omicron variant, major Eurozone countries will aim to maintain economic activity by using vaccinations as a main measure against COVID. We expect fiscal spending in each country to continue at a relatively high level, and the ECB to maintain its accommodative monetary policy. We forecast the economic recovery will continue but the pace of growth will slow.
- Real GDP is predicted to grow by 5.0% YoY in 2021, and 3.7% in 2022, as the recovery continues after the steep fall in activity in 2020. The level of real GDP is likely to return to pre-pandemic levels by early 2022.

Eurozone Real GDP Outlook



Note: Q3 expenditure breakdown data is a MUFG Bank estimate.

Source: Eurostat, MUFG Bank Economic Research Office

Real GDP Outlook of Major European Countries

(%, QoQ) (%, YoY)

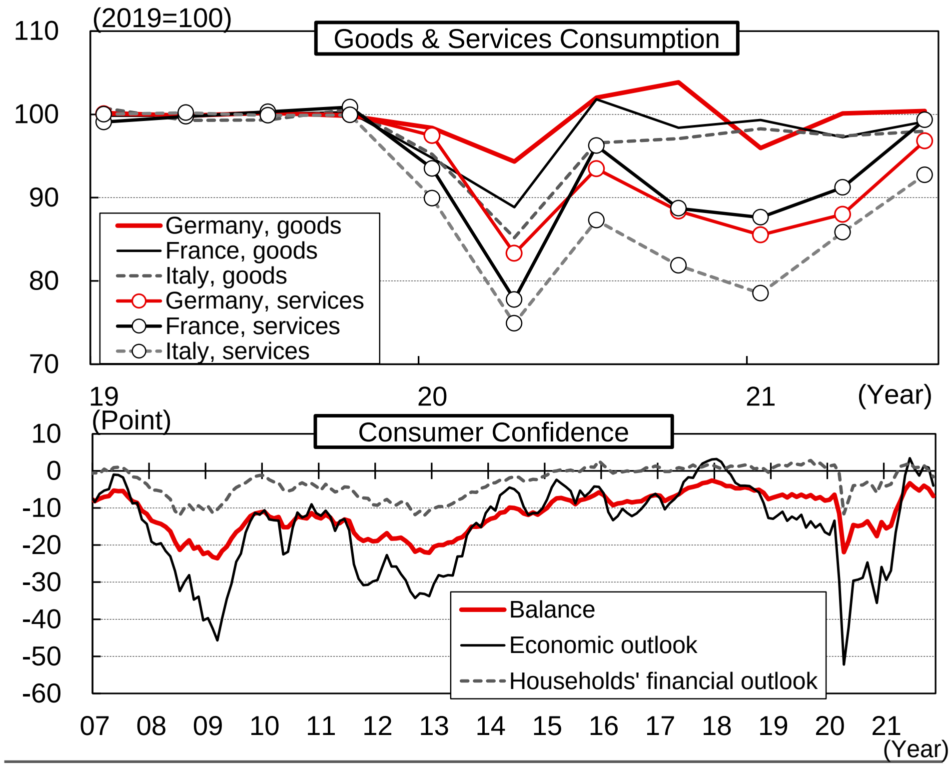
	2020	2020	2021	2021	2021	2020	2021	2022
	Q3	Q4	Q1	Q2	Q3	Actual	Forecast	Forecast
Eurozone	12.4	-0.6	-0.3	2.0	2.2	-6.5	5.0	3.7
Germany	9.0	0.7	-1.9	1.9	1.8	-4.8	2.6	4.0
France	18.5	-1.1	0.1	1.3	3.0	-8.0	6.4	3.4
Italy	15.6	-1.7	0.3	2.7	2.6	-8.9	6.1	3.9
UK	16.9	1.3	-1.6	4.8	1.3	-9.8	6.9	4.5

Source: Eurostat, ONS, MUFG Bank Economic Research Office

2-4. European Economies: Eurozone – Private Consumption and Production

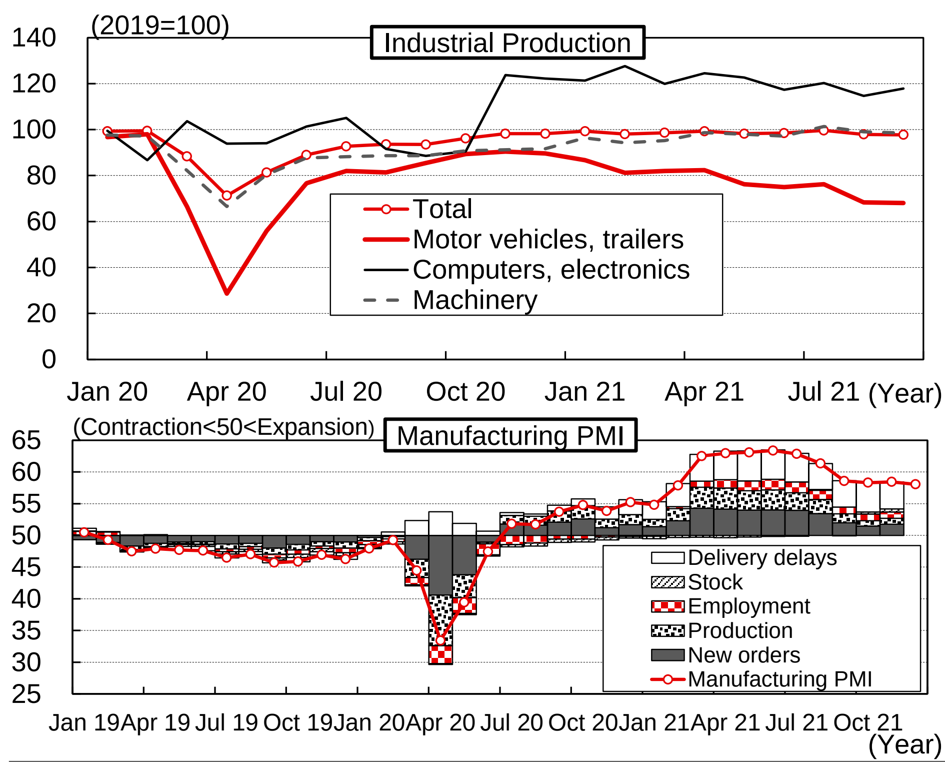
- Private consumption recovered especially quickly in the services sector after mobility increased rapidly from May with the loosening of restrictions. While infections are currently increasing, we expect private consumption will continue to recover. Most Eurozone governments will attempt to focus on COVID measures that do not affect economic activity, such as vaccinations, but some countries (Austria, the Netherlands, etc.) do now have partial lockdown measures in place. In these countries, there are now signs of lower consumer confidence and the pace of recovery is set to remain particularly slow through to the beginning of next year.
- Automobile production in the Eurozone is currently suffering from supply problems. However, total industrial production has almost recovered to their pre-pandemic levels as tech-related production is at a high level. New orders are continuing to expand and we forecast industrial production will gradually increase in the future as supply-side pressures reduce.

Eurozone Consumption & Consumer Confidence



Source: Eurostat, European Commission. MUFG Bank Economic Research Office

Eurozone Industrial Production & Manufacturing PMI

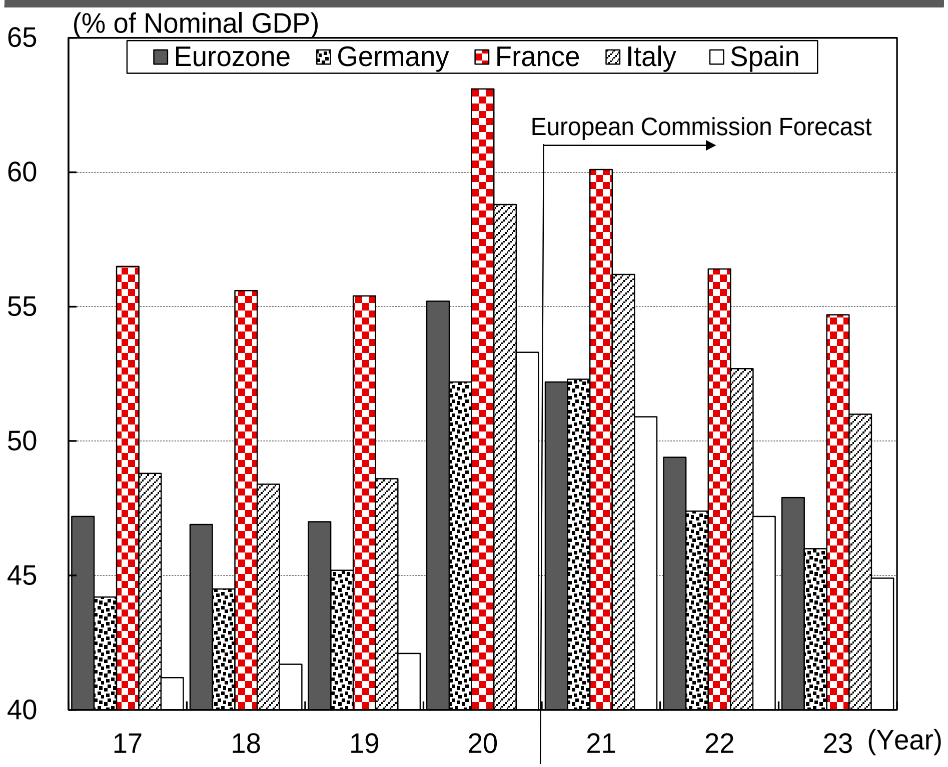


Source: Eurostat, IHS Markit, MUFG Bank Economic Research Office

2-4. European Economies: Eurozone – Policy Response

- Government expenditure for each Eurozone country since 2021 has fallen from the highs of 2020 as pandemic-related emergency support measures ended as the economy began to recover. However, fiscal policy will remain accommodative in 2022 due to the EU recovery fund.
- The ECB conducted its first monetary policy strategy review for 18 years in July this year. The inflation target rate was changed from “below, but close to 2%” to a symmetric 2% target in the medium term (so now there is some tolerance for a transitory rise in inflation). In September, the pace of PEPP purchases was reduced slightly, but ECB President Christine Lagarde stressed that this is just a “reconciliation”. The PEPP is to end in March next year, but accommodative monetary policy is to be maintained with an upwards adjustment to the existing asset purchase programme (APP).

Eurozone Government Expenditure



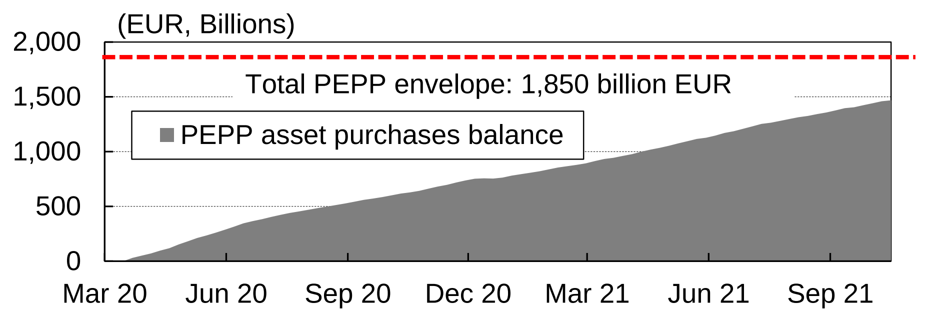
Source: Eurostat, MUFG Bank Economic Research Office

ECB Members’ Comments

Speaker	Date	Contents
Luis de Guindos	30/11	■ We must keep our monetary policy accommodative ■ Factors behind the high rate of inflation will not last ■ Observing the Omicron variant. The economy is different from last year and vaccinations are available.
Hernández de Cos	29/11	■ Inflationary pressures are in response to the pandemic. They are likely to decline or settle over the course of next year. ■ It is better to err on the side of caution when adjusting monetary policy

Source: Various news sources, MUFG Bank Economic Research Office

Pandemic Emergency Purchasing Programme (PEPP) Amount

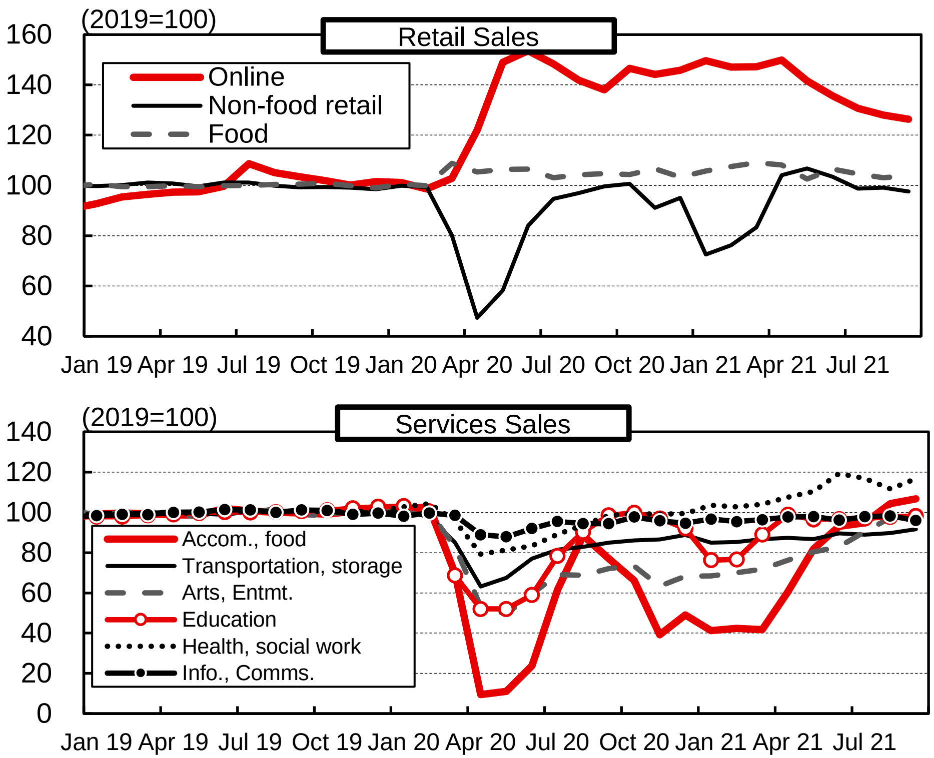


Source: ECB, MUFG Bank Economic Research Office

2-4. European Economies: UK

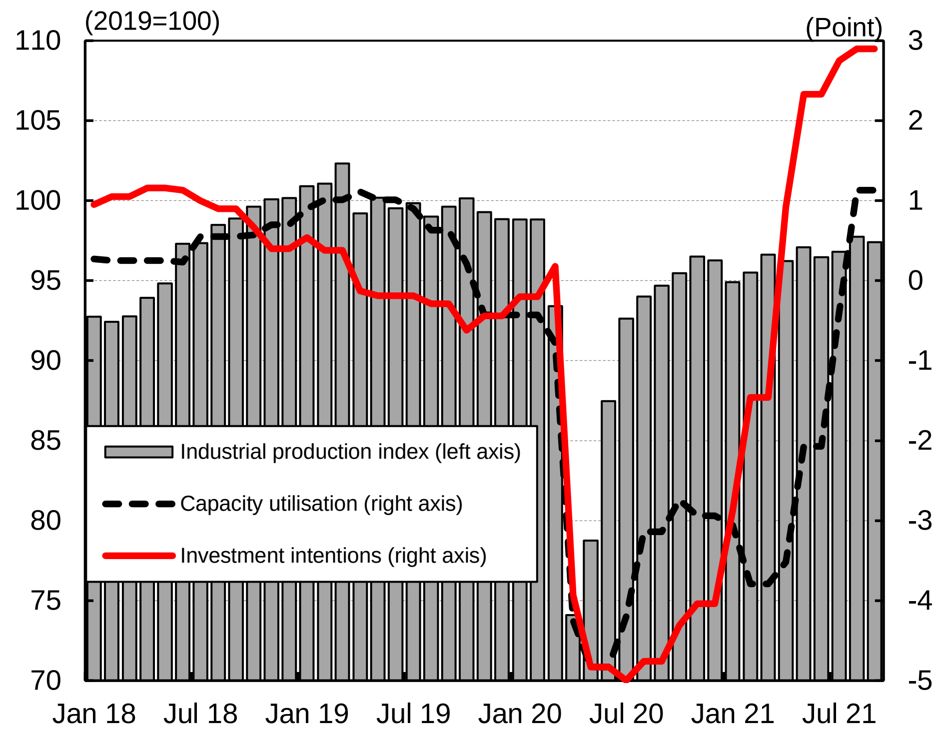
- UK retail sales currently appear to have slowed after reaching a peak, but sales in services have recovered since the relaxation of restrictions in March. In particular, food and accommodation, which were strongly affected by COVID, have now recovered to pre-pandemic levels in 2019. While industrial production remains below pre-pandemic levels in 2019, capacity utilisation and capital investment intentions are recovering substantially. This indicates production will be increasing.
- We expect that the economic recovery will continue based on private consumption from the end of restrictions despite concerns over infections. The British government and BoE have indicated their intentions to normalise fiscal and monetary policies, but both are likely to be cautious. We forecast UK real GDP will expand by 6.9% YoY in 2021 and 4.5% YoY in 2022. Real GDP is expected to return to pre-pandemic levels in H1 2022.

UK Retail and Services Sales (By Industry)



Source: ONS, MUFG Bank Economic Research Office

UK Industrial Production and Investment Intentions

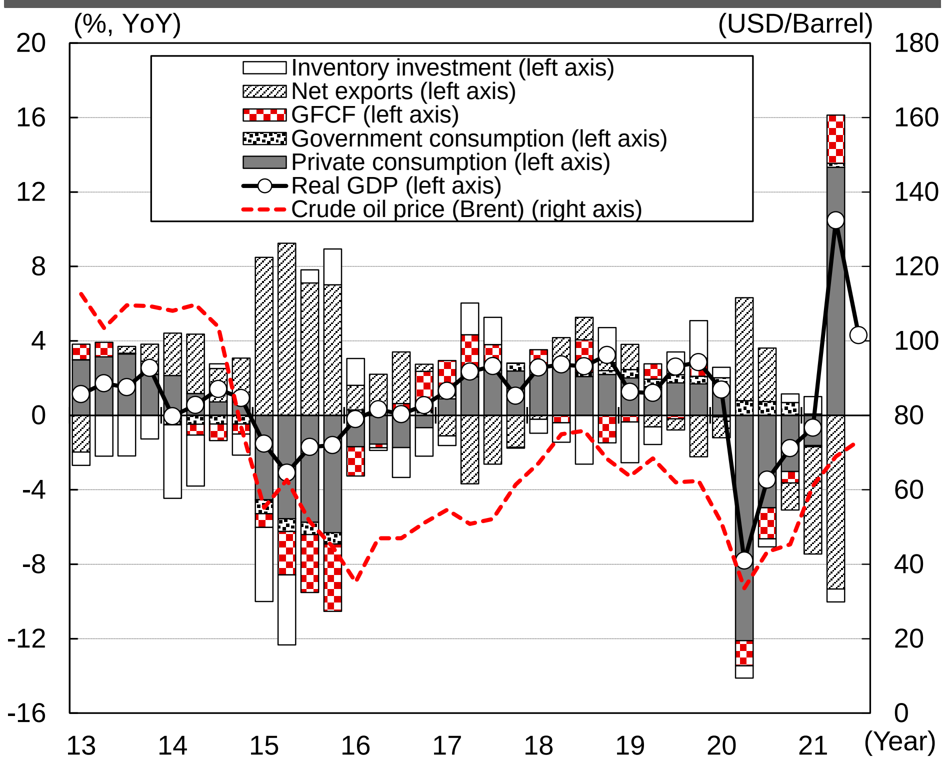


Source: ONS, MUFG Bank Economic Research Office

2-4. European Economies: Russia

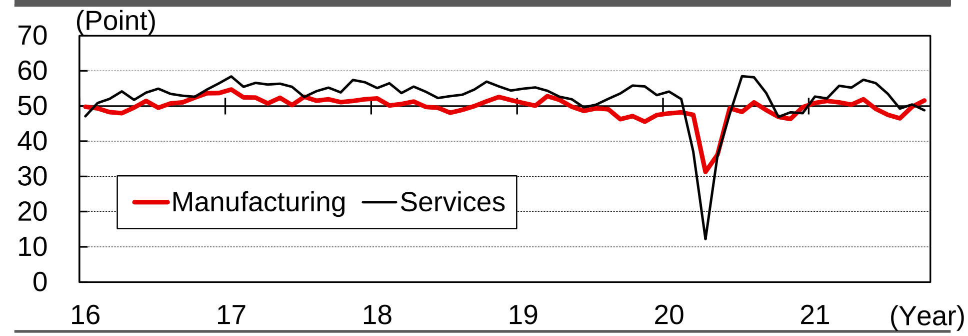
- Russia real GDP rose by 10.5% YoY in Q2 2021, mainly due to a large rebound from its drop last year. More recently, economic activity has softened, especially in the services sector, following a resurgence of COVID infections. Even though there are certain positive factors such as strong production in extractive industries due to the global economic recovery and rise in crude oil prices, we expect the economy to remain under strong downward pressure from recent COVID wave.
- In addition to the government's restrictive fiscal spending, the Russian central bank implemented rate hikes from the beginning of the year to address rising inflation. The result is that economic support from fiscal and monetary policies is likely to remain limited. We forecast real GDP will rise by 4.2% YoY in 2021 and 2.2% YoY in 2022 as the pace of recovery slows down.

Russia Real GDP Forecast & Crude Oil Prices



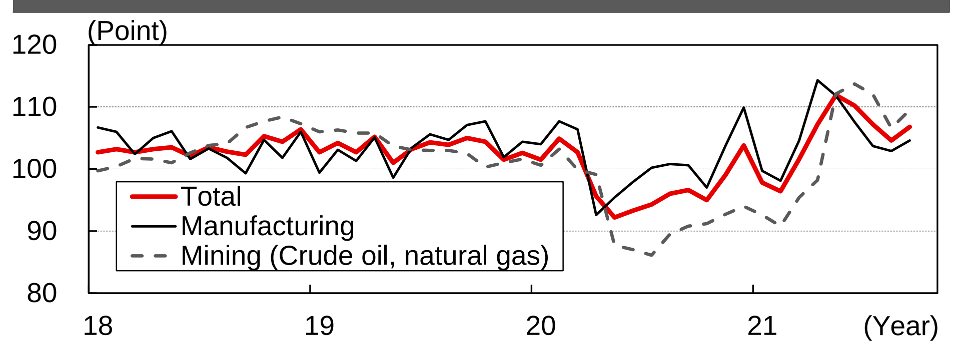
Source: Russian Statistics, MUFG Bank Economic Research Office

Russia Industry PMIs



Source: IHS Markit, MUFG Bank Economic Research Office

Russia Industrial Production



Source: Russia Statistics, MUFG Bank Economic Research Office

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2-5. Asian and the Australian Economies: Overview

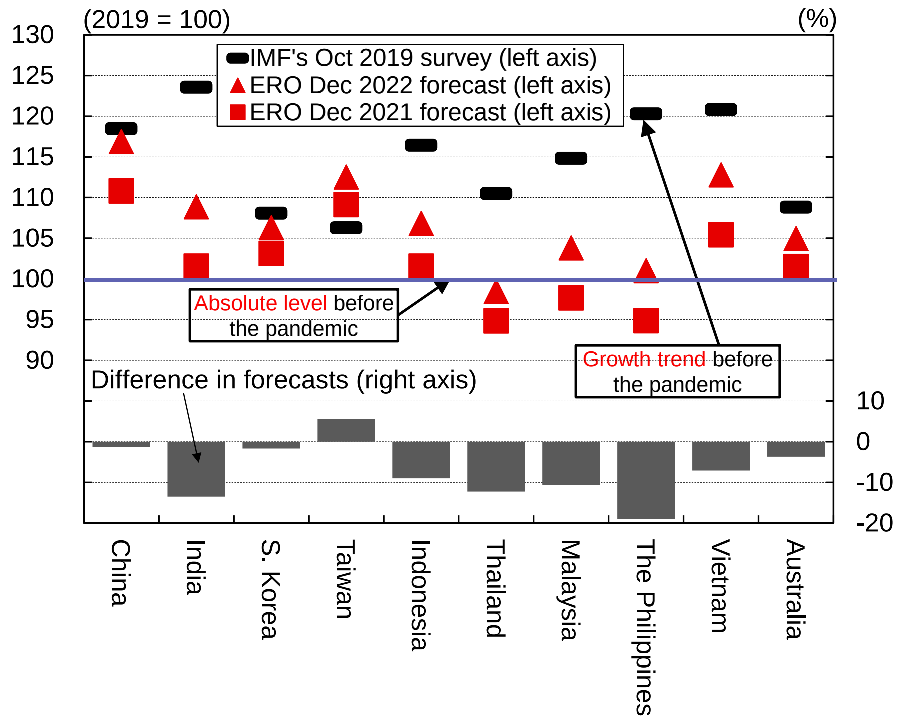
- China has curbed the spread of infection with its continued, strict “zero COVID” policies, but this has also but downward pressure on its economy. Slow growth of the real estate market, natural disasters and supply constraints have also been sources of downward pressure, and there are concerns of tightened control over the economy. Nevertheless, overall growth is expected to remain firm thanks the government introducing policies with economic stability in mind.
- NIEs have been relatively successful in both curbing the spread of infection and maintaining economic activities up until now, and, given the reasonable progress made with vaccinations already and the robust growth of exports due to increased global demand for semiconductors, the stable economic recoveries are forecast to continue. ASEAN economies had to suddenly apply the brakes when they tried to re-start economic activities in around May due to the spread of COVID-19 variants, and economic recoveries are expected to fall behind. That being said, ASEAN economies have finally overcome the worst period of the COVID-19 pandemic and are expected to follow a clear trend of recovery next year.
- The Australian economy’s recovery turned negative in the third quarter due to the on-again, off-again introduction of stringent restrictions on movement in many states. However, restrictions are being eased and the economy is forecast to start to recover again at a gradual pace.

Outlook for Asian and the Australian Economies

	Real GDP growth rate (%)			Consumer Price Index (%)		
	2020 (Actual)	2021 (Forecast)	2022 (Forecast)	2020 (Actual)	2021 (Forecast)	2022 (Forecast)
Asia (11 countries/regions)	- 0.8	6.9	5.5	2.9	2.2	2.7
China	2.3	7.9	5.3	2.5	1.0	2.2
India (FY basis)	- 7.3	9.5	7.2	6.2	5.5	4.8
NIEs	- 0.8	5.0	3.2	0.2	2.0	1.6
South Korea	- 0.9	4.0	3.1	0.5	2.2	1.7
Taiwan	3.1	5.9	3.1	- 0.2	1.7	1.4
Hong Kong	- 6.1	6.3	3.0	0.3	1.7	2.0
Singapore	- 5.4	6.3	4.0	- 0.2	1.8	1.5
ASEAN 5	- 3.4	3.2	5.5	1.4	2.2	2.6
Indonesia	- 2.1	3.7	5.2	2.0	1.8	2.9
Thailand	- 6.1	1.0	3.8	- 0.8	1.1	1.2
Malaysia	- 5.6	3.5	6.3	- 1.1	2.5	1.8
The Philippines	- 9.6	4.9	6.5	2.6	4.3	3.1
Vietnam	2.9	2.4	7.0	3.1	2.5	3.5
Australia	- 2.4	4.0	3.4	0.8	2.5	2.1

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

Change in the Forecasts for Major Asian Economies (Comparison of IMF’s Pre-Pandemic and ERO’s August Outlooks)



Note: Forecast calculated using the IMF’s forecast made in October 2019 and assumptions about the level of real GDP based on the trend of growth since the start of the COVID-19 pandemic
Source: IMF, MUFG Bank Economic Research Office

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2-5. Asian and the Australian Economies: China – Overview

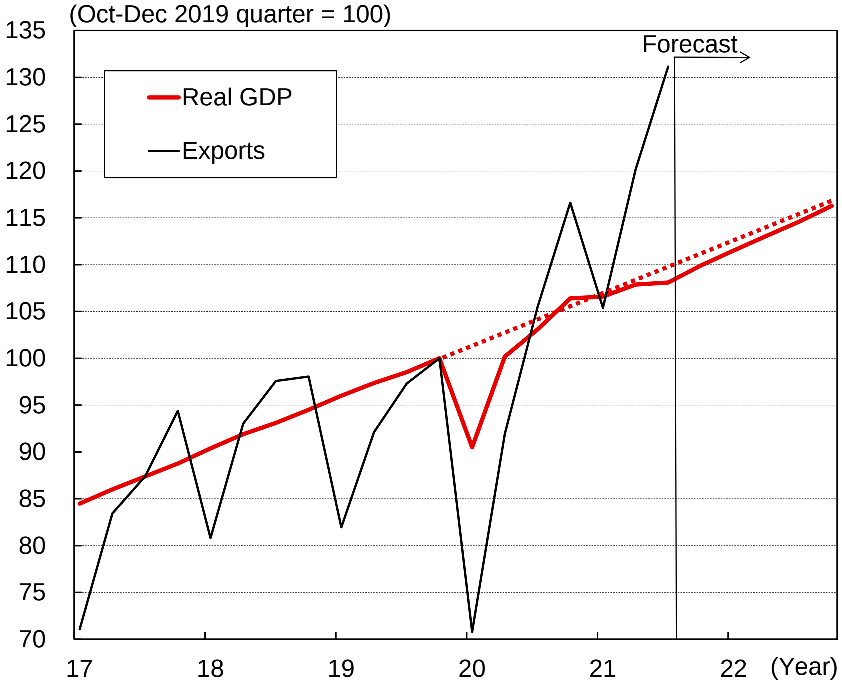
- China's real GDP growth rate slowed to 4.9% YoY in the July-September quarter and the level of GDP was below the average trend established before the pandemic (2017~2019). From around August, there has been some weakness, particularly in face-to-face services, owing to a tightening of the stringent restrictions on movement not seen in other countries in response to sporadic outbreaks of the Delta variant. In addition, a decrease in automobile production and sales due to the semiconductor shortage, along with natural disasters and an electricity shortage have also been sources of downward pressure on the economy.

  While there have been some COVID-19 cases in some areas, the number remains low in general, reflecting the stringent restrictions on movement.

- The continued, strict zero-COVID policies are putting downward pressure on the economy and there are still concerns over the cooling real estate market and tighter economic controls. Although exports are strong and remain at a high level, they are likely to slow in the future as global demand for goods falls and demand shifts to services.

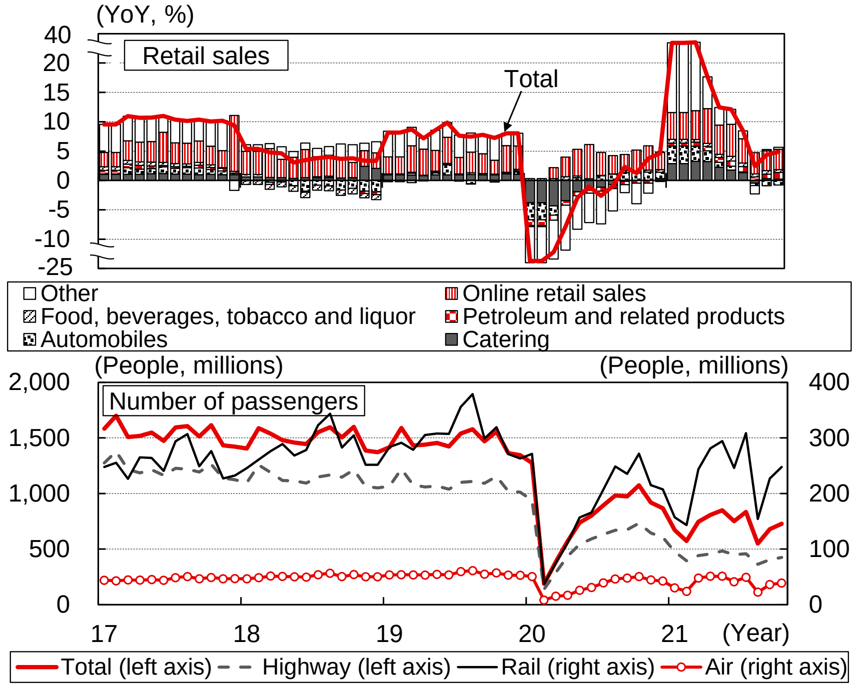
- It appears that supply constraints, such as the impact of the semiconductor shortage on automobile production and the electricity shortage, are starting to be resolved. The government has introduced policies that take into account economic stability, including "investment in new infrastructure". As a result, growth is forecast to remain on a trend of expansion, despite some deceleration. The real GDP growth rate is forecast at 7.9% YoY in 2021 and 5.3% YoY in 2022 – just lower than the growth rate established before the pandemic.

China's Real GDP and Exports



Note: The red line shows the trend of "Real GDP" from 2017 to 2019
Source: National Bureau of Statistics of China, MUFG Bank Economic Research Office

China's Retail Sales and Number of Passengers



Note: "Retail sales" for January and February are the total of both months divided by two
Source: National Bureau of Statistics of China, MUFG Bank Economic Research Office

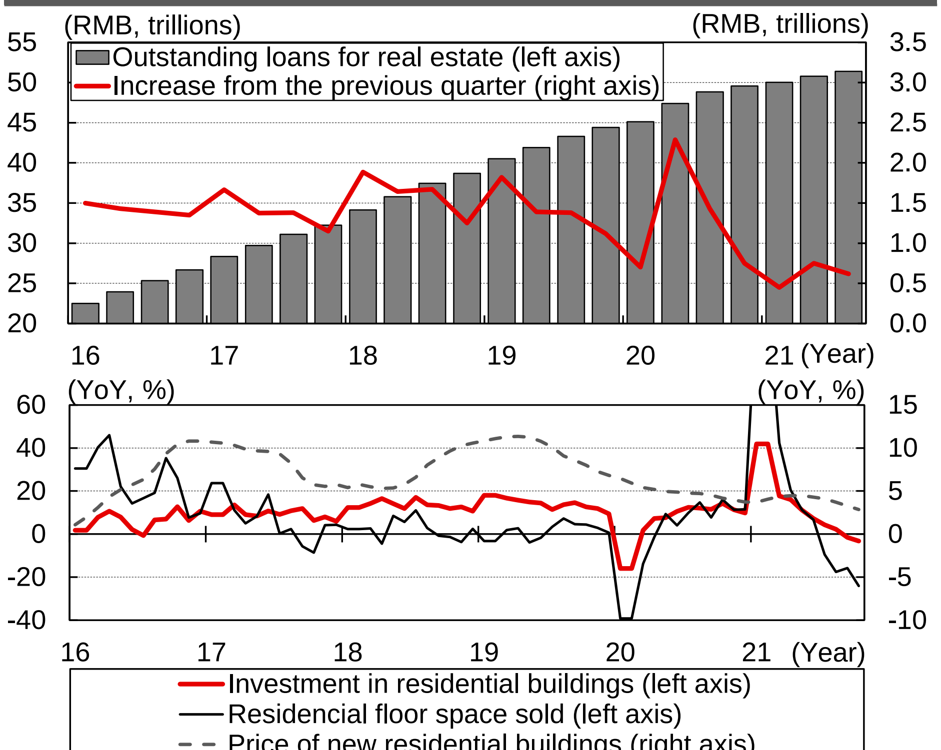
2-5. Asian and the Australian Economies: China – Real Estate

- The slowdown in China's real estate market is increasingly garnering attention, triggered by Evergrande's debt crisis. The reason for this is the continued tightening of regulations since August focused on the financial stability of property firms since August to prevent property prises rocketing, which led to a deceleration in the growth of real estate lending. Along with a deterioration of consumer sentiment, growth of investment in residential buildings and residential floor space sold has been sluggish (October indicators show they fell 3.2% YoY and 24.1% YoY respectively).
- Although the regulatory environment surrounding investment in residential buildings is forecast to be tough for the time being, there is still potential demand for residential property due to demographics and urbanisation rates, and the government has stated it will protect sound developments in the real estate market*. Therefore, the real estate market is forecast to start to pick up in the latter half of 2022 in terms of prices, investment and sales.

  * The People's Bank of China said it "will work to safeguard the healthy development of the real-estate market and protect home buyers' lawful rights" at its Monetary Policy Committee meeting on 27th September,

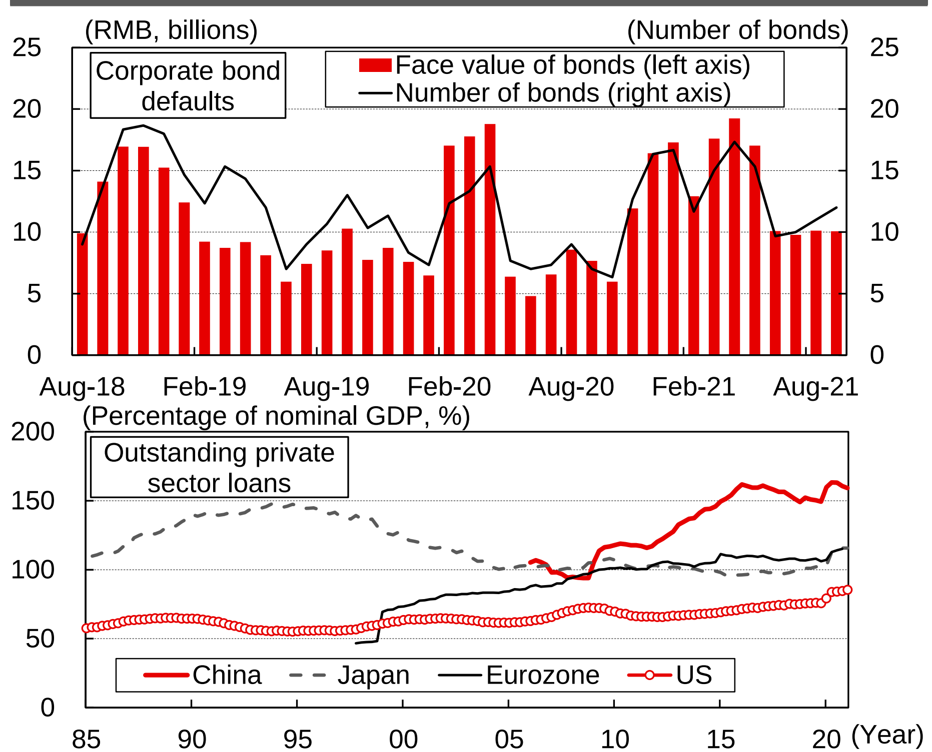
- The level of outstanding debt in China's private sector is at an all time high, and it will be important to keep an eye on this in the future.

China's Real Estate Lending and Property-Related Indicators



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

Corporate Bond Defaults and Private Sector Debt by Country/Region

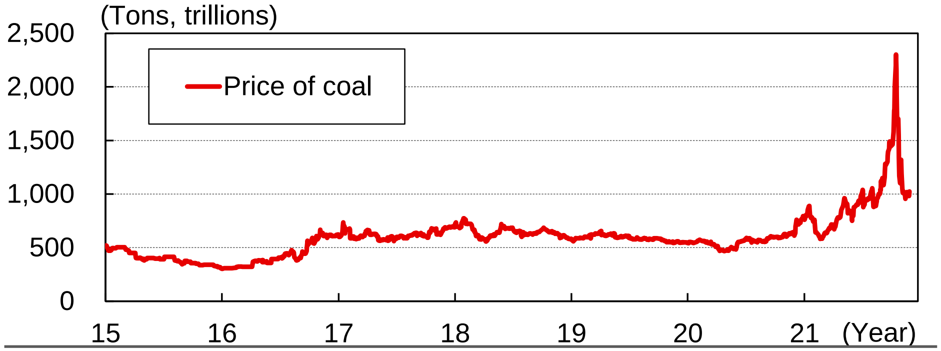


Note: "Number and face value of corporate bond defaults" uses three-month moving average
Source: China Central Depository & Clearing Co. Ltd, BIS, MUFG Bank Economic Research Office

2-5. Asian and the Australian Economies: China – Policy

- While coal prices have rocketed in China, it is uncertain if China will achieve its target of “reducing energy intensity” (energy use per unit of economic output) in 2021 by 3% YoY” set at the National People’s Congress in March due to an increase in demand for electricity on the back of strong exports. There were power shortages in August and September as local governments adopted policies to curb power usage as part of the plan set forth by the central government.
- Although the power shortage has mostly been resolved thanks to a fall in coal prices, the government maintains its stance on pushing for decarbonisation, which means it will be important to keep an eye on the risk of power shortages in the future.
- There are concerns that the tightening of restrictions for corporations and sectors will hinder their growth and create a headwind for the Chinese economy (particularly platform companies). In his recent essay, Vice Premier Liu He raised “common prosperity” as an objective while emphasising that that this did not mean economic egalitarianism, yet it appears the government is aware that the business world has concerns.
- At the sixth plenary session of the 19th CPC Central Committee in November, a “historical resolution” was passed by President Xi Jinping for the first time in forty years, and his administration looks set for a third term.

China’s Coal Prices



Source: Zhengzhou Commodity Exchange, MUFG Bank Economic Research Office

Progress to Achieve Energy Consumption Targets (August 2021)

	Energy intensity	Volume of energy consumption
"First- level pre-warning" (Very strict)	Qinghai, Ningxia, Guangxi, Guangdong, Fujian, Xinjiang, Yunnan, Shaanxi, Jiangsu	Qinghai, Ningxia, Guangxi, Guangdong, Fujian, Yunnan, Jiangsu, Hubei
"Second-level pre-warning" (Strict)	Zhejiang, Henan, Gansu, Sichuan, Anhui, Guizhou, Shanxi, Heilongjiang, Liaoning, Jiangxi	Xinjiang, Shaanxi, Zhejiang, Sichuan, Anhui
"Third-level pre-warning" (Target achieved)	11 areas including Shanghai, Chongqing, Beijing, Tianjin, Hunan, Shandong, Jilin, Hainan	17 areas including Henan, Gansu, Guizhou, Shanxi, Heilongjiang, Liaoning, Shanghai

Source: Various news reports, MUFG Bank Economic Research Office

China’s Tightening of Various Restrictions

Date	Details
Feb	・Antitrust Guidelines for the Platform Economy enacted.
Mar	・The government announced it was considering plans to achieve "common prosperity" within Chinese society at the 13th National People's Congress.
Apr	・The State Administration for Market Regulation held an administrative guidance meeting with 34 Chinese platform businesses.
Jun	・General Office of the State Council released its detailed Legislative Work Plan for this year which includes revisions to the Antimonopoly Law.
Jul	・The Chinese government ordered a major US-listed Chinese ride-hailing service business to suspend app downloads in accordance with the Network Security Law. ・China’s State Council cabinet and the Communist Party’s General Secretary plans to strengthen management for confidentiality related to listing on overseas markets. ・The government banned the establishment of new tutoring institutions aimed at primary and middle school students and decided that existing institutions should be registered as non-profit groups.
Aug	・Law which bans unfair competition on the internet was announced. ・State-owned media fiercely criticised online games. ・China's National Press and Publication Administration published a notice on "preventing minors from becoming addicted to online games.
Sep	・The National Radio and TV Administration announced it will ban the broadcast of some entertianment programmes. ・The government said it will rigidly enforce new regulations on online game companies.
Oct	・The government announces a new "Negative List" for private companies entering the news service sector.
Nov	・The government tightens regulations on online information about entertainers.

Source: Various news reports, MUFG Bank Economic Research Office

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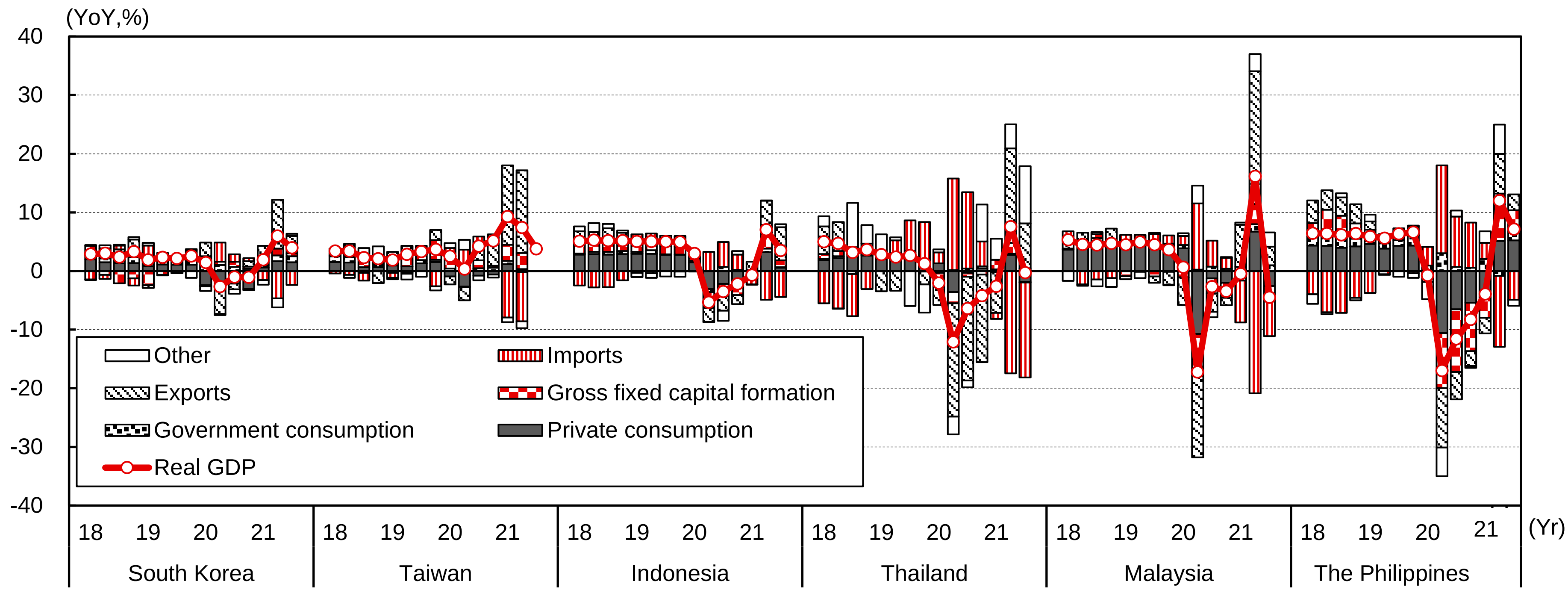
2-5. Asian and the Australian Economies: Other Asian Economies – Overview

- The real GDP growth of NIEs and ASEAN (5 member states) for the July-September quarter was 4.4% YoY and 0.9% YoY respectively.
- Although growth in NIEs generally slowed from the April-June quarter as the rebound wore off, it remained firm. Growth continued to be led by exports, particularly exports of semiconductors, for which demand is still strong. However, a point to keep in mind is the number of COVID-19 cases in some regions, which remain at high levels.
- Meanwhile, growth in ASEAN economies slowed considerably and is lower than the level recorded last year owing to the increased severity of the COVID-19 situation caused by the spread of variants. Growth remained positive in the Philippines and Indonesia, where restrictions on economic activities were relatively limited. On the other hand, growth was negative in Malaysia and Vietnam – where stringent restrictions were imposed on corporate activities, such as a shutdown of factories – and also in Thailand, where the halt of tourism continues to weigh on the economy.
- The real GDP growth rates of NIEs and ASEAN economies are forecast to be 5.0% YoY and 3.2% YoY in 2021, and 3.2% YoY and 5.5% YoY in 2022, respectively. NIEs are forecast to record stable recoveries in the future as they strike a balance between controlling the spread of infection with economic activities. In ASEAN economies, where recovery has been slow up until now owing to the effects of COVID-19, the number of cases is forecast to peak and a clear recovery trend will be established in 2022.

Real GDP of Major Asian Economies

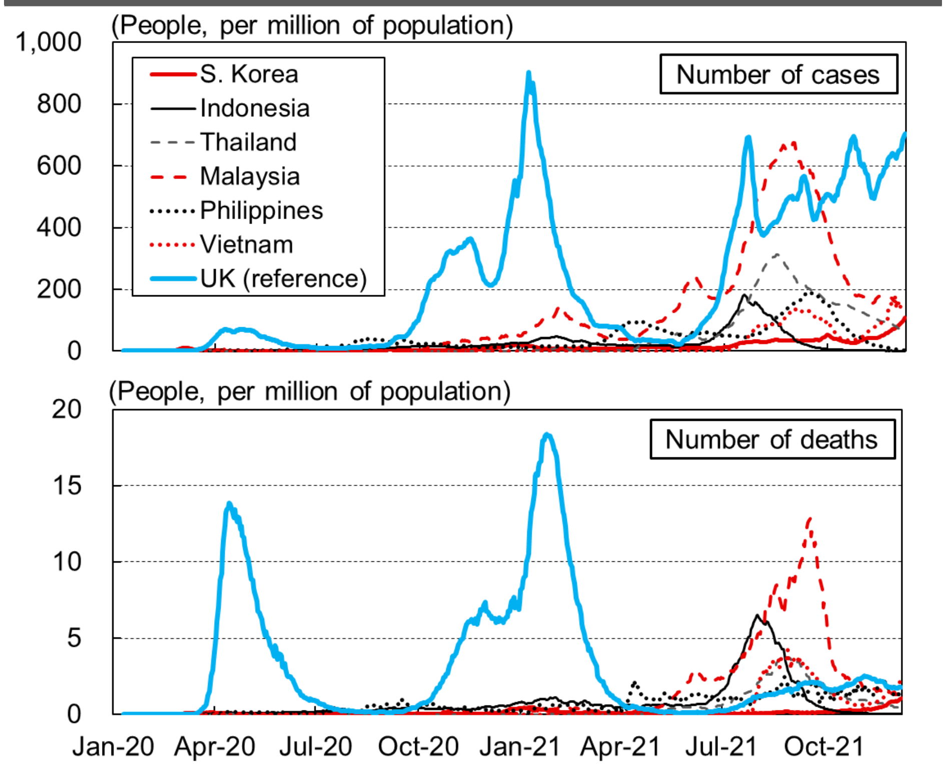


Source: National statistics of each country/region, MUFG Bank Economic Research Office

2-5. Asian and the Australian Economies: Other Asian Economies – Situation Surrounding the Pandemic

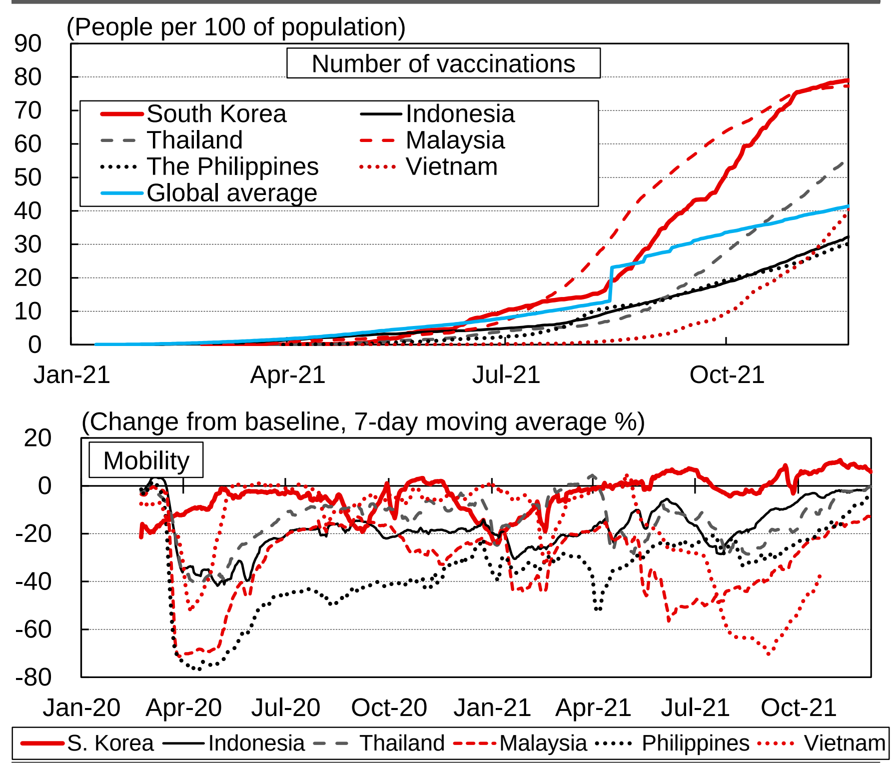
- With the exception of some countries, the spread of COVID-19 in Asia was limited until mid-2021 compared with other regions in the world. Cases in ASEAN member states rose sharply in the middle of 2021 owing to the spread of variants, and there was a significant impact on member states' economies. However, the number of cases has now peaked.
- Singapore and South Korea have finished administering vaccines for the most part. Even ASEAN member states, which were decidedly slow to distribute vaccines, have accelerate their pace of vaccination. However, there are countries which still fall below the global average, and it is expected to take until around mid-2022 before they reach the levels of vaccination seen in developed countries.
- It appears some countries in Asia tightened restrictions on movement from the middle of the year, but they started to ease them alongside other countries from September once the number of cases had peaked. After decreasing considerably for some time, there is now a sharp increase in mobility. However, there are some countries where vaccination has been insufficient, and it is likely that any increase in mobility would lead to another rise in cases.

Daily COVID-19 Cases and Deaths in Major Asian Economies



Source: World Health Organization, MUFG Bank Economic Research Office

Mobility in Major Asian Economies

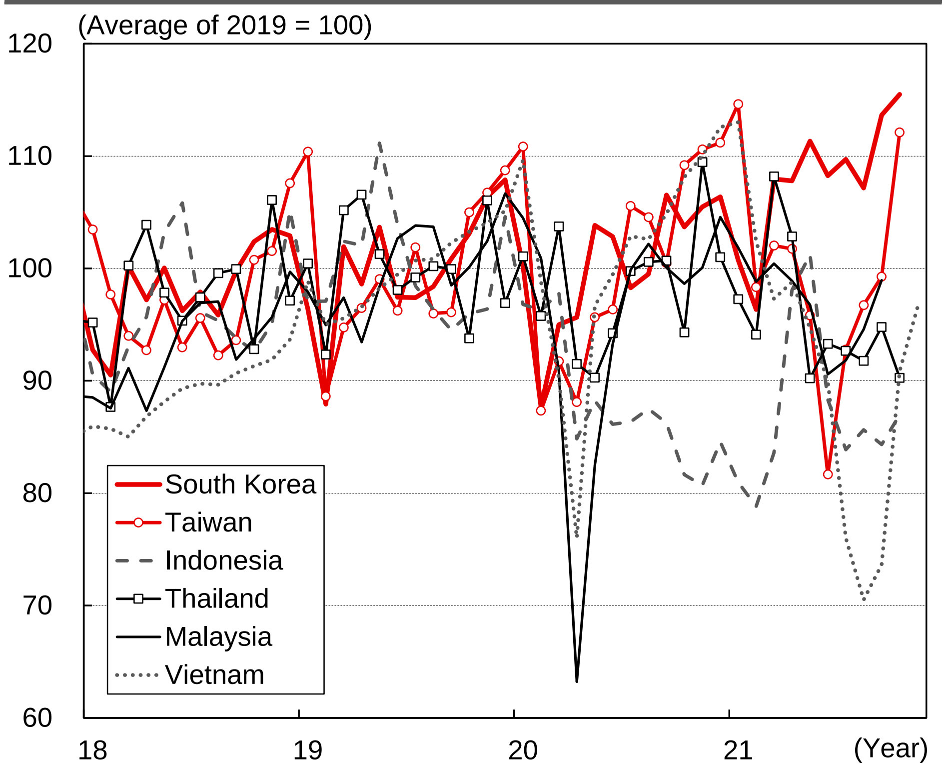


Note: 1. "Vaccinations" are the number of people who have completed a course of vaccination as prescribed
2. The baseline is calculated using data from 3 Jan~6 Feb '20
Source: "Our World in Data" website run by Oxford University, MUFG Bank Economic Research Office

2-5. Asian and the Australian Economies: Other Asian Economies – Private Consumption

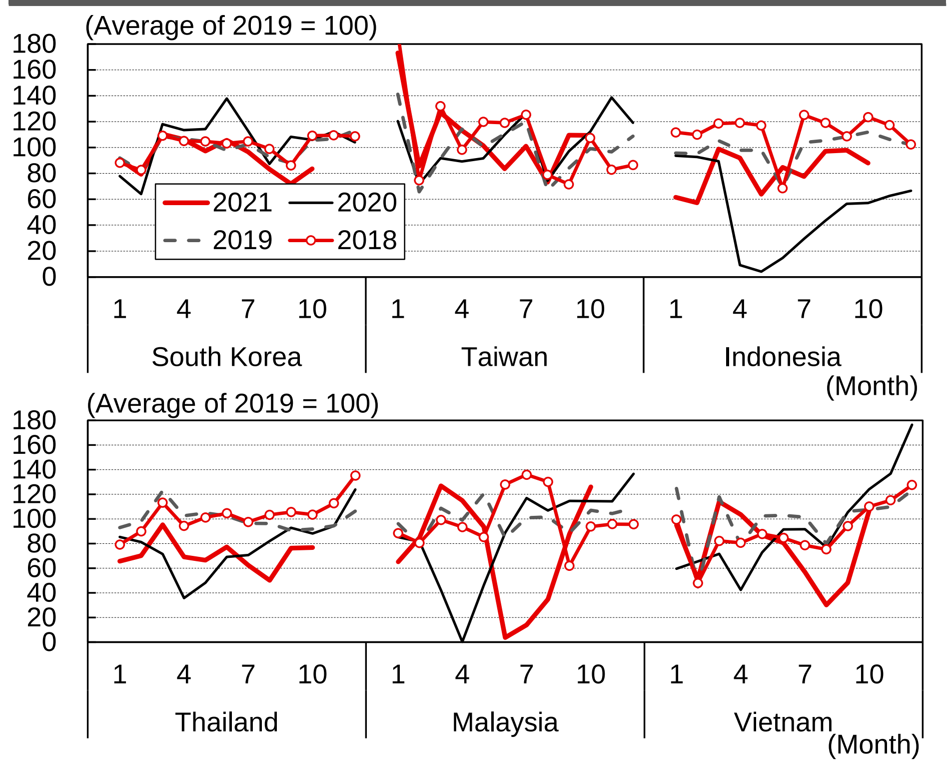
- It appears there were significant falls in retail sales and motor vehicle sales – indicators of private consumption activities – during the first wave of infection in 2020 and the spread of the delta variant in mid-2021. However, the number of cases were limited during the first wave with the exception of some countries, and the fall in sales was due to preventative and cautious restrictions on movement as people refrained from going outside. On the other hand, the slump during 2021 was caused by a full-fledged rise in cases.
- Currently, the number of cases has peaked and countries are easing their restrictions on movement in stages, which has caused private consumption to start to pick up, and it is thought that this recovery will continue at a gradual pace. Motor vehicle sales have experienced downward pressure due to the shortage of semiconductors in South Korea and other countries. However, supply constraints are expected to be resolved as the COVID-19 situations calms.

Retail Sales in Major Asian Economies



Note: Data for Thailand shows its Private Consumption Index.
Source: National statistics of each country, MUFG Bank Economic Research Office

Number of Motor Vehicle Sales in Major Asian Economies



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

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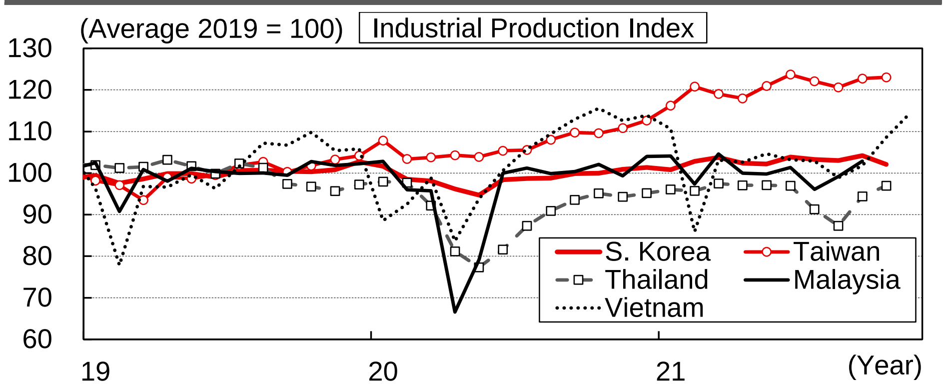
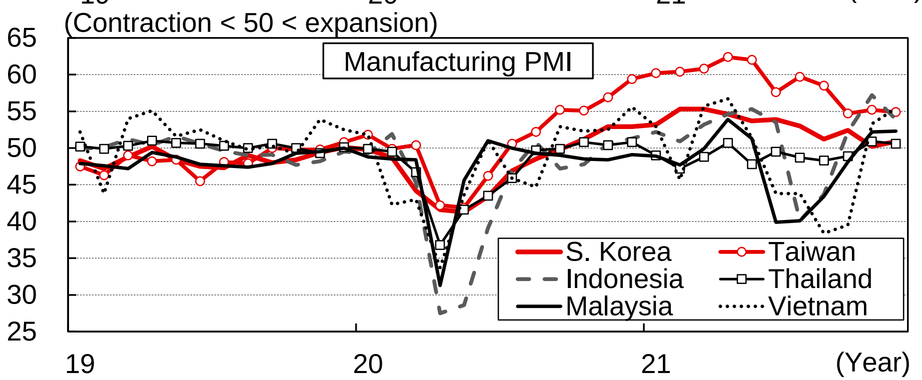
2-5. Asian and the Australian Economies: Other Asian Economies – Production and Exports

- The spread of variants since around May has had a considerable impact on corporations' production activities, and there has been large decreases in Asian economies' Industrial Production Indices and Manufacturing PMIs. However, restrictions have been eased since the number of COVID-19 cases peaked, and both Indices have started to rise.
- Exports remain firm as overseas economies recover. In addition to continued high levels of demand for semiconductors and machinery, the increase in demand for resources globally has acted as a tailwind for resource-rich countries like Indonesia and Malaysia.
- Restrictions on business operations have been eased in ASEAN economies. Even in Vietnam and Malaysia, where the impact of these restrictions was particularly serious, production is forecast to recover in the future as business operations restart in stages. Although there are concerns related to demand, such as a deceleration of the Chinese economy, the gradual increase in exports is expected to continue as the supply side recovers.

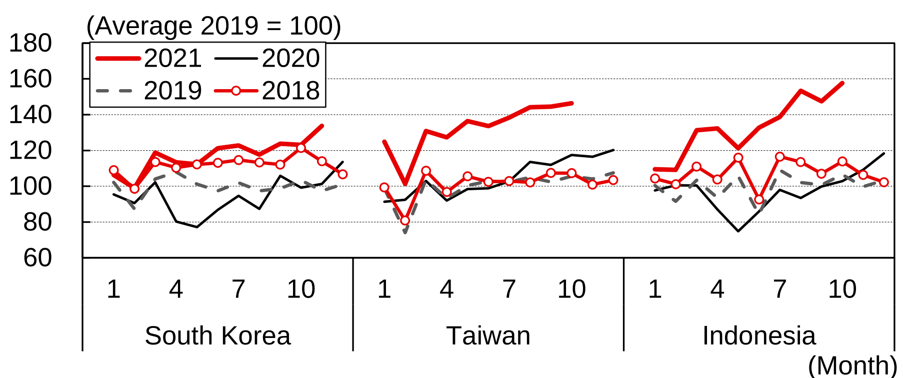
Industrial Production of Major Asian Economies

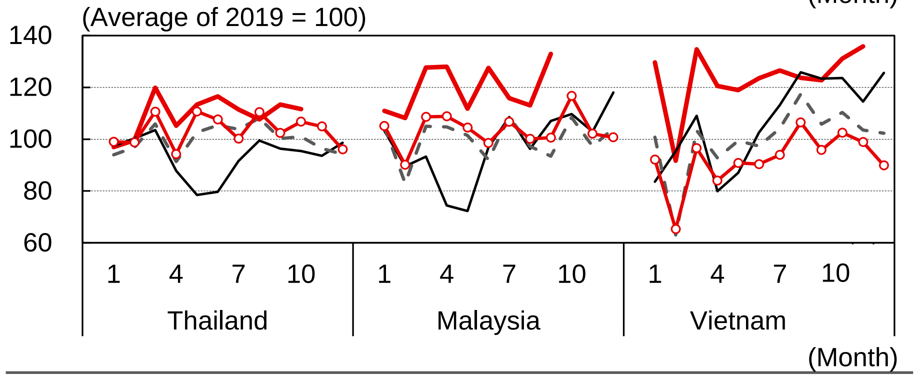




Source: National statistics of each economy, MUFG Bank Economic Research Office

Exports of Major Asian Economies



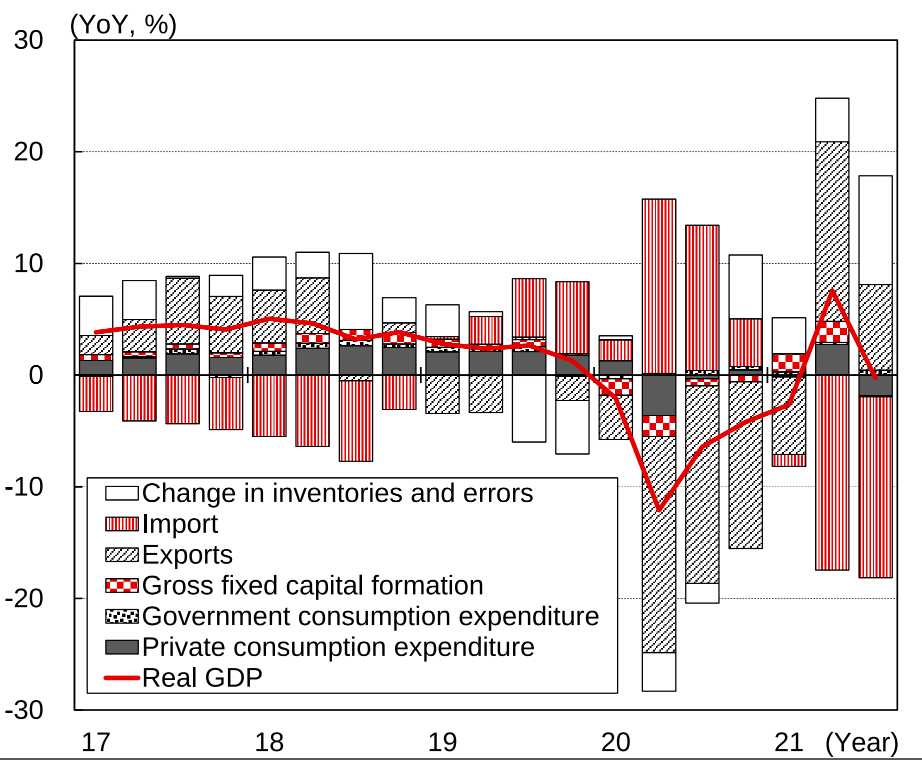


Source: National statistics of each economy, MUFG Bank Economic Research Office

2-5. Asian and the Australian Economies: Other Asian Economies – Thailand

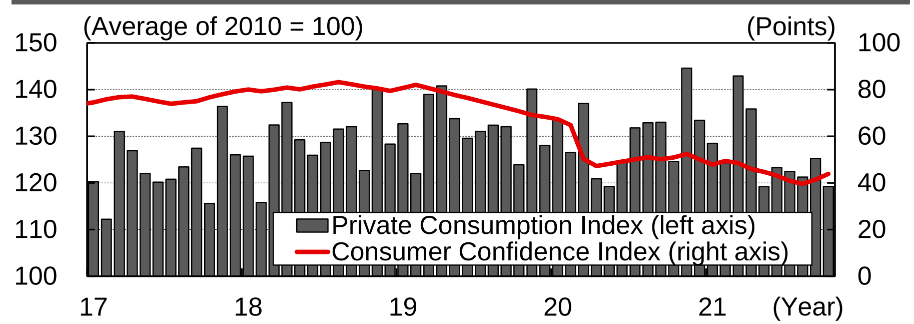
- Thailand's real GDP growth rate for the July-September quarter turned negative for the first time in two quarters, falling 0.3% YoY. Private consumption decreased 3.2% YoY owing to the spread of COVID-19. This, along with a fall in net exports resulting from a deceleration in the growth of exports, put downward pressure on overall growth.
- Restrictions on movement were adopted in response to the third wave of cases from around April, the impact of which is continued weakness in private consumption, which fell below the level it recorded for the same months in 2019 before the pandemic. In addition, the number of foreign visitors to Thailand remains close to zero. Meanwhile, exports of goods remain firm.
- The number of cases is improving at present, and the government is slowly easing restrictions on movement. Vaccines are being administered at a quick pace, which is thought will trigger a gradual recovery in private consumption in the future. Although it is still difficult to predict when the tourism industry will start to recover in earnest, exports of goods will grow at a firm pace on the back of the global economic recovery. The real GDP growth rate will be 1.0% YoY for 2021 and will then accelerate to 3.8% YoY in 2022. The level of real GDP in 2022 is predicted to still fall below the level it was at in 2019 before the pandemic.

Thailand's Real GDP



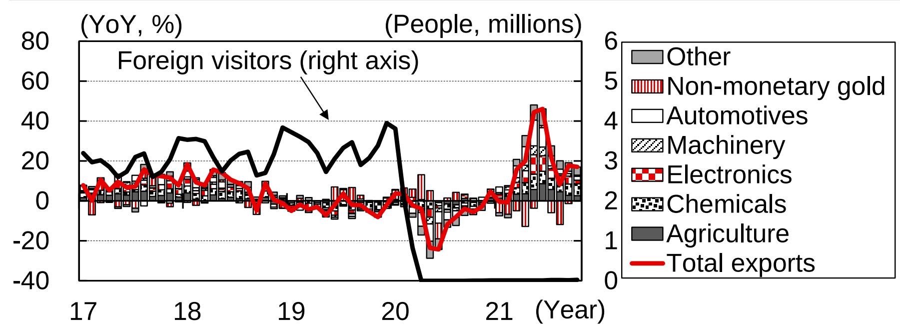
Source: Thailand's Office of the National Economic and Social Development Council , MUFG Economic Research Office

Thailand's Private Consumption and Consumer Confidence Indices



Source: Bank of Thailand, MUFG Bank Economic Research Office

Thailand's Exports and Number of International Visitors

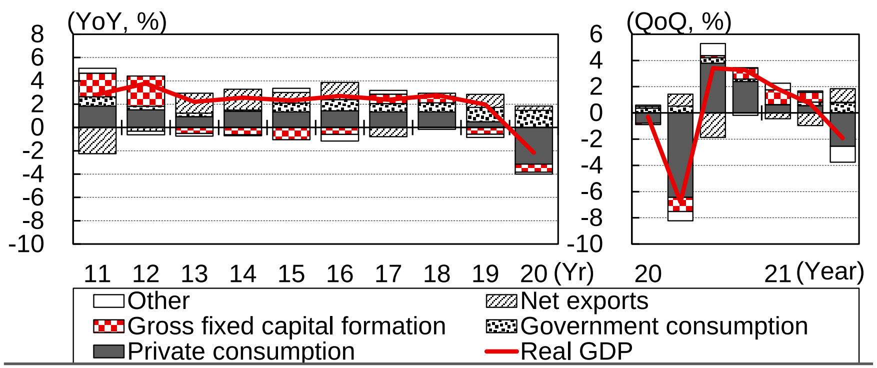


Source: Ministry of Commerce of Thailand, Ministry of Tourism and Sport, MUFG Bank Economic Research Office

2-5. Asian and the Australian Economies: Australia

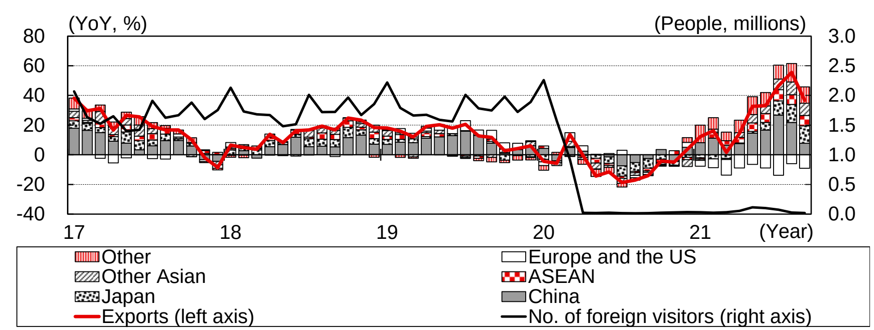
- Australia's real GDP growth rate for the July-September quarter was -1.9% QoQ – the first negative growth in five quarters. Intermittent lockdowns in major cities in response to the spread of COVID-19 variants put downward pressure on private consumption.
- Retail sales had been robust since last spring, yet they have been on a downward trend since around June when the number of cases increased again, and Consumer Sentiment is also falling. In terms of foreign demand, the number of foreign visitors is still close to zero and the tourism industry's recovery has been delayed, which in turn has led to a deceleration in the recovery of service exports. On the other hand, exports of goods remain strong, particularly those to countries in Asia, which are experiencing a tailwind from an increase in global demand for resources.
- Currently, lockdowns in many states have been lifted and growth of exports is robust due to strong demand for resources globally. As a result of these factors, it is thought the economy will start to gradually recover again. The recovery from the COVID-19 pandemic faltered a little due to another rise in cases in the middle of the year, and the real GDP growth rate is forecast to be 4.0% YoY in 2021 and 3.4% YoY in 2022.

Australia's Real GDP



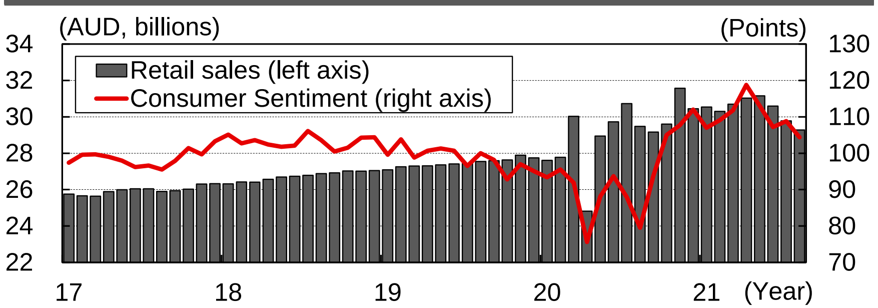
Source: Australian Bureau of Statistics, MUFG Bank Economic Research Office

Australia's Exports and Number of Foreign Visitors



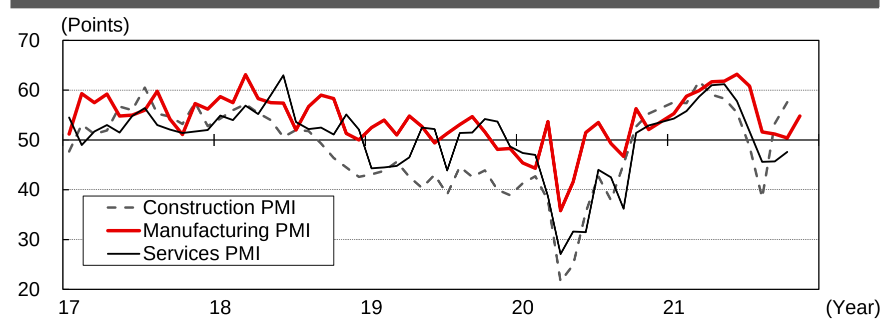
Source: Australian Bureau of Statistics, MUFG Bank Economic Research Office

Australia's Retail Sales and Consumer Sentiment



Source: Australian Bureau of Statistics, MUFG Bank Economic Research Office

Australia's PMI



Source: The Australian Industry Group, MUFG Bank Economic Research Office

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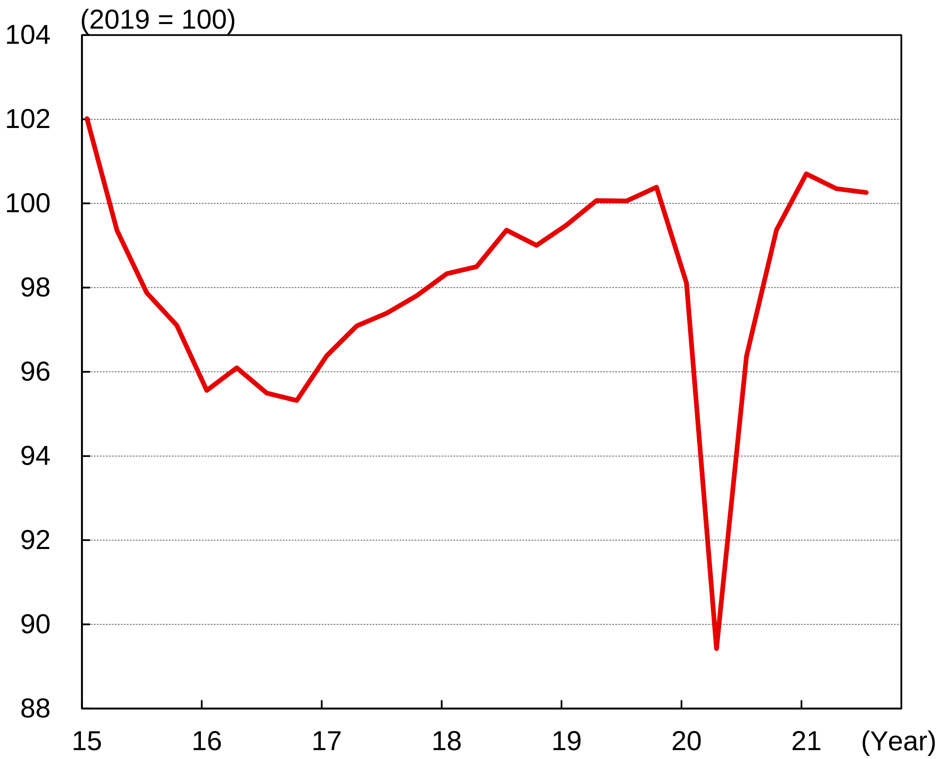
2-6. Central and South American Economies: Brazil

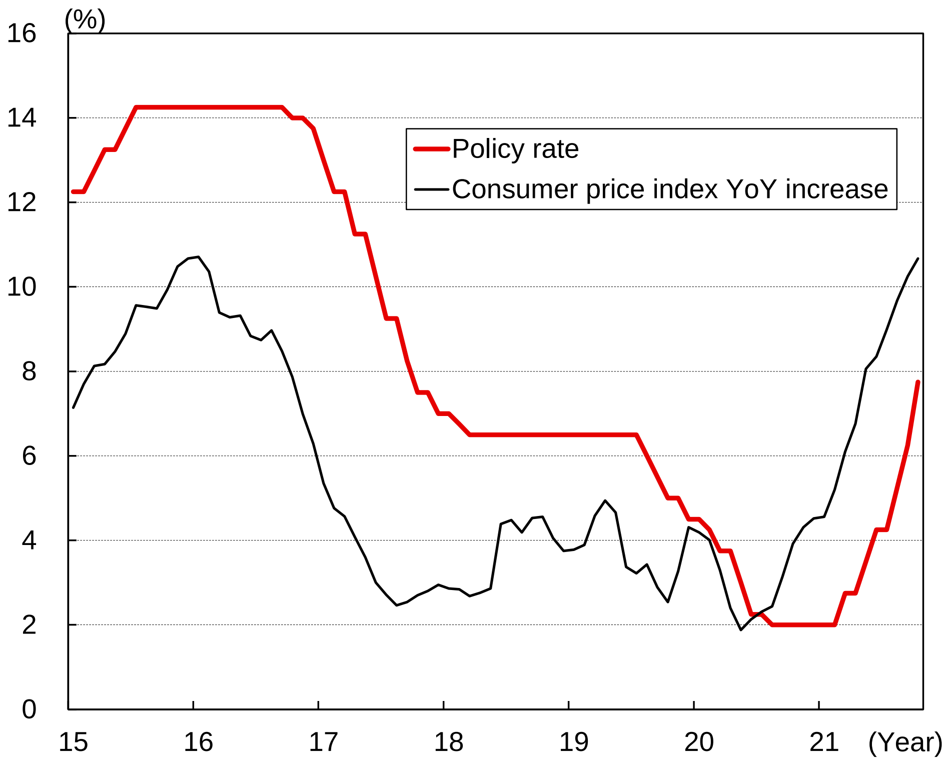
- Brazil's real GDP declined by 0.1% QoQ in the July-September quarter, marking a second straight quarter of decline. New COVID-19 cases have been on a downtrend since June-end, and the latest case count is at a historically low level. But economic recovery has stalled due to drought hurting agricultural and livestock production, as well as high inflation rates eroding real income. For the full year 2021, Brazil's real GDP is estimated to increase by 4.5% YoY.
- Brazil's Consumer Price Index rose 10.7% YoY in October. Inflation has been accelerating as energy prices rise globally and domestic electricity prices rise due to a hydropower capacity reduction brought on by the drought. Multiple rounds of rate hikes since March have pushed up Central Bank of Brazil's policy rate from 2.00% to 7.75%. Yet, inflation rate remains substantially higher than the central bank's 5.25% target.
- In 2022, presidential and general elections are scheduled, so the government may pursue expansionary fiscal policy. Yet with high inflation and rate hikes weighing on the economic recovery, Brazil's real GDP is expected to grow at a modest 2.0% YoY in 2022.

Brazil Real GDP



Source: Brazilian Institute of Geography and Statistics, Institute for International Monetary Affairs

Brazil Policy Rate and Consumer Price Index

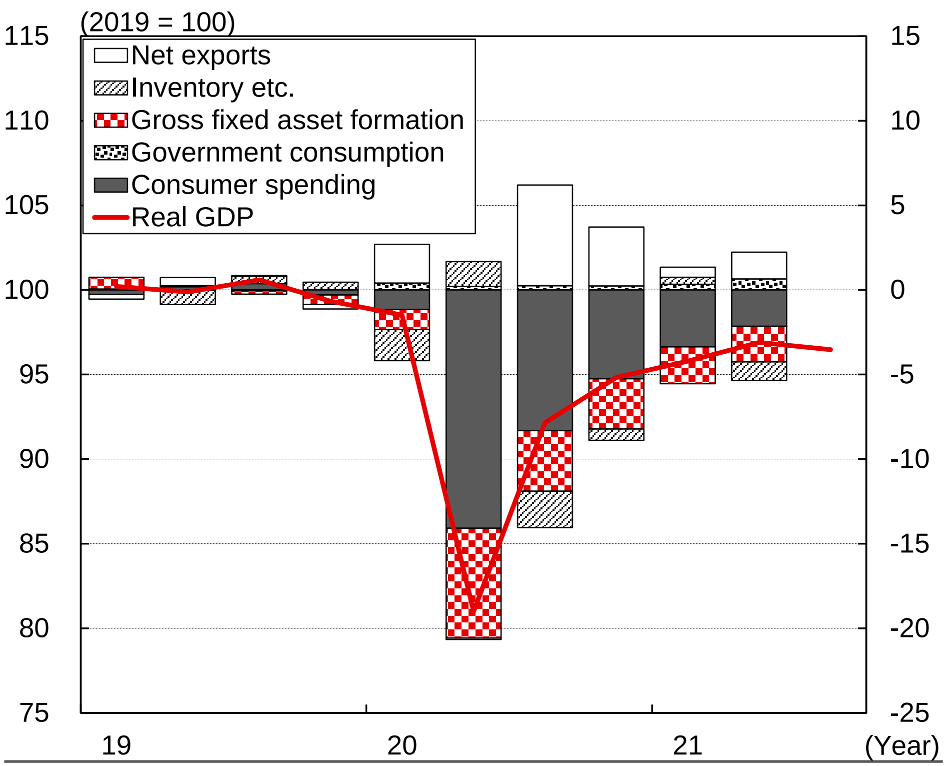


Source: Central Bank of Brazil, Institute for International Monetary Affairs

2-6. Central and South American Economies: Mexico

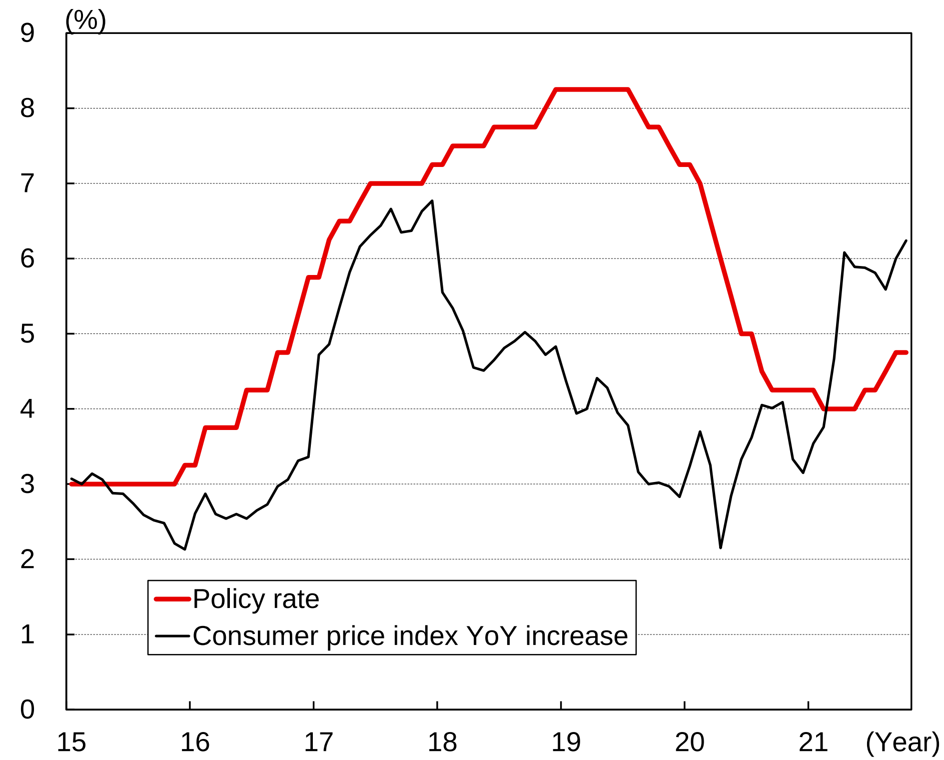
- Mexico's real GDP declined 0.4% QoQ in the July-September quarter as COVID-19 cases increased. However, as new cases trend lower and automobile production moves toward normalizing after declines related to chip shortages, Mexico's full-year real GDP is expected to grow by 6.0% YoY in 2021.
- Mexico's Consumer Price Index rose by 6.2% YoY in October, accelerating from September's 6.0% amid the rise in global energy prices and supply-demand imbalance of goods due to supply constraints. To curb inflation, Bank of Mexico has raised its policy rate by a total of 1.00% point since June to 5.00% currently. With real interest rate still in the negative territory, however, the central bank will likely continue raising the policy rate.
- Multiple rounds of interest rate hikes are expected to weigh on Mexico's economic recovery going forward, but domestic demand will likely be solid as COVID-19 cases decline on the back of rising vaccination coverage. In view of this, Mexico's full-year real GDP is expected to grow by 3.0% YoY in 2022, surpassing its potential growth rate. A note of caution should be sounded, however, that a ban on labor subcontracting put in place by the leftist government since September will likely increase costs for companies and add to inflationary pressure, and may weigh down capital expenditures and foreign direct investment in Mexico.

Mexico Real GDP



Source: National Institute of Statistics and Geography, Institute for International Monetary Affairs

Mexico Policy Rate and Consumer Price Index

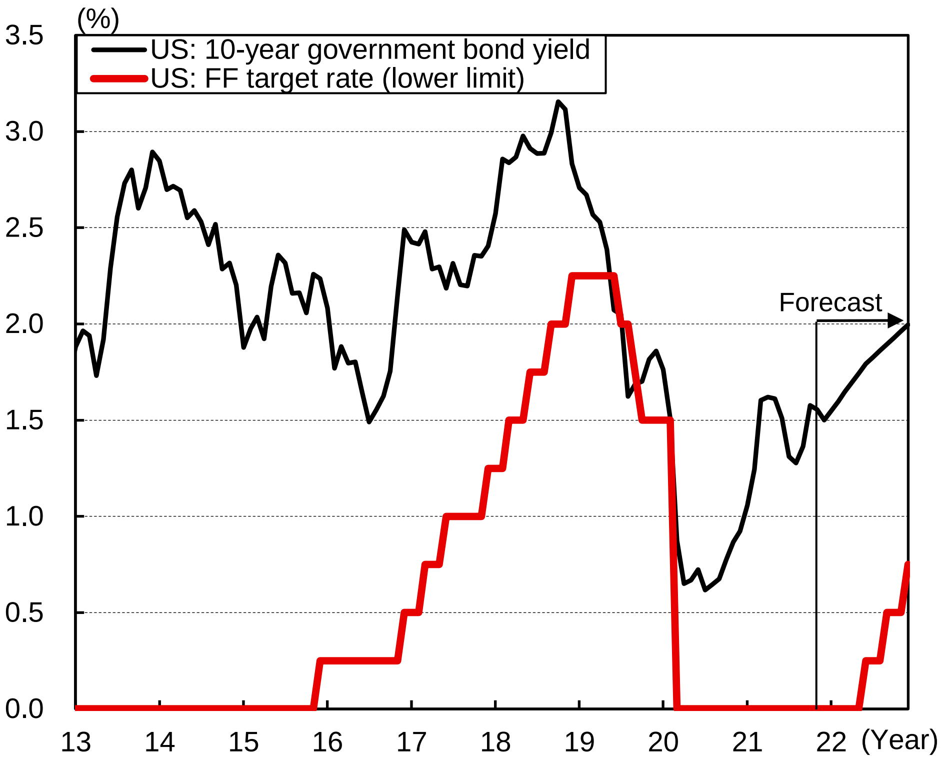


Source: Bank of Mexico, National Institute of Statistics and Geography, Institute for International Monetary Affairs

2-7. Financial Market Trends: Outlook for Interest Rates

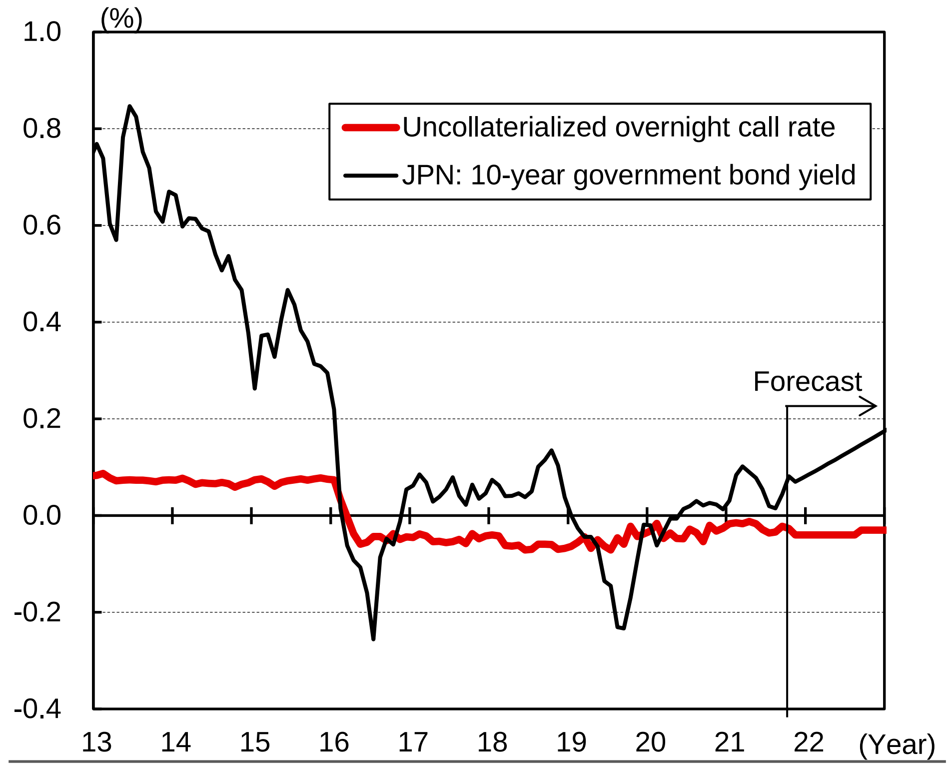
- Japan and the US have strengthened their accommodative monetary policies since the outbreak of the pandemic. The Bank of Japan made adjustments to its monetary policy in March to enhance the feasibility of the policy as it is unlikely the inflation target will be met in the near future.
- In the US, following prolonged supply constraints and high inflation, the expectation for rate hikes has increased and the long-term yields has been on a rising trend. While inflation is likely to slow down, we forecast that the FOMC will judge that maximum employment will be mostly met by June 2022, and will raise interest rates in June, September and December. As some rate hikes are already incorporated, long-term yields rise will remain at a gradual pace.
- Although Japan's long-term interest rates will remain at low levels owing to the Bank of Japan's current monetary policy framework, they are expected to rise gradually, led by US long-term interest rates.

US Policy Rates & Long-term Yields



Source: Bloomberg, MUFG Bank Economic Research Office

Japan Policy Rates & Long-term Yields



Source: Bloomberg, MUFG Bank Economic Research Office

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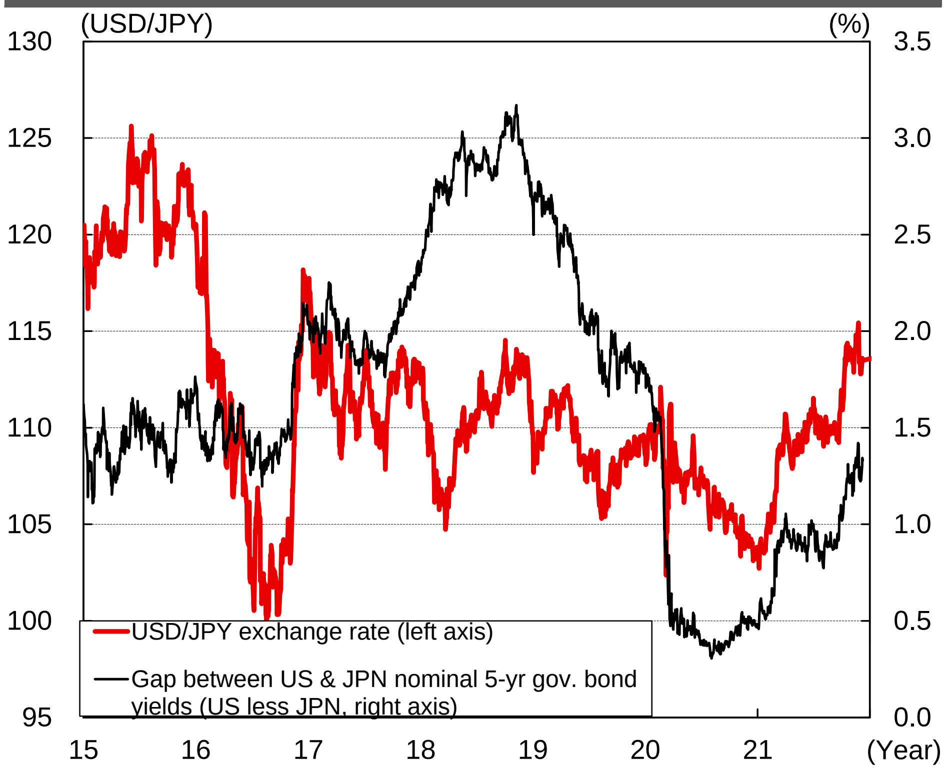
2-7. Financial Market Trends: Outlook for the USD/JPY Exchange Rate

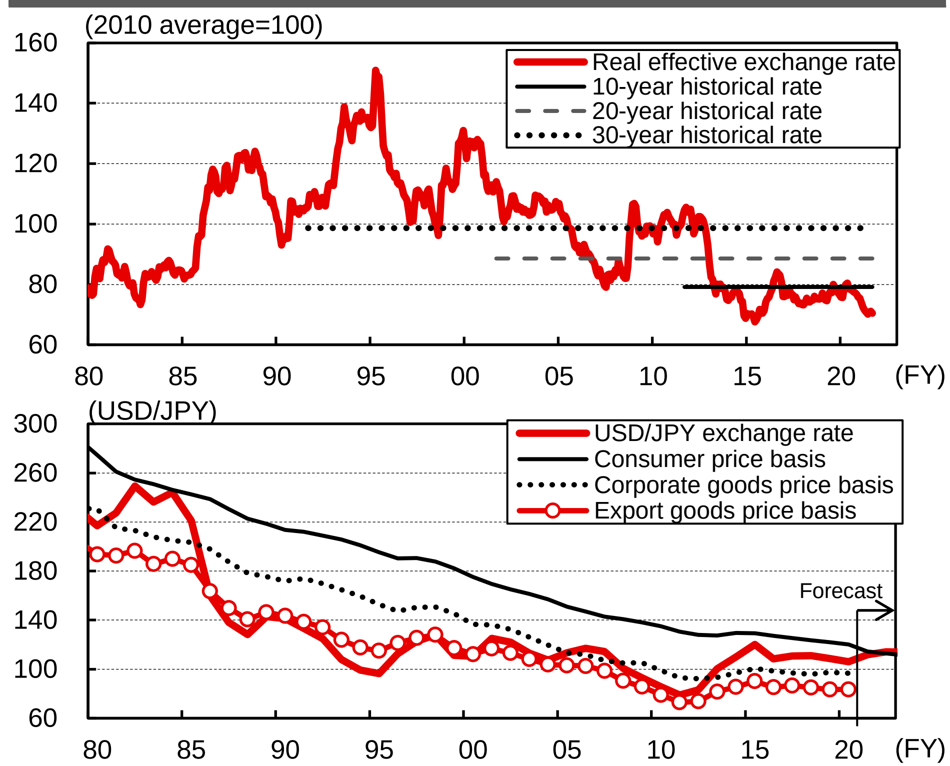
- The USD has appreciated against the JPY to JPY115 along with the expectation of US rate hikes, but is currently depreciated to JPY113 due to concerns over the Omicron variant. While US interest rates are expected to rise gradually based on the continued expectation of US rate hikes, Japan's interest rates are likely to remain at their current levels. Therefore, the JPY is expected to experience depreciatory pressure due to the difference in interest rates with the USD.
- Meanwhile, as the JPY is depreciated at a historical level in terms of its real effective exchange rate, it is expected to strengthen over the medium-to-long term. In terms of purchasing power parity, the appreciatory pressures to JPY are also likely to strengthen gradually as the gap in inflation rates between the US and Japan remains wide.
- In conclusion, although there is a possibility the JPY will start to strengthen due to risk aversion in the short term, it is expected to depreciate gradually into 2022 as both upward and downward pressures continue.

USD-JPY and Spread between US & JPN 5-Yr Nominal Gov. Bond Yields



Source: Bloomberg, MUFG Bank Economic Research Office

USD/JPY by Purchasing Power Parity



Note: "Purchasing power parity" is (Japan's price index divided by US price index) X standard rate.
Source: Bloomberg, BIS, other countries; statistical offices, MUFG Bank Economic Research Office

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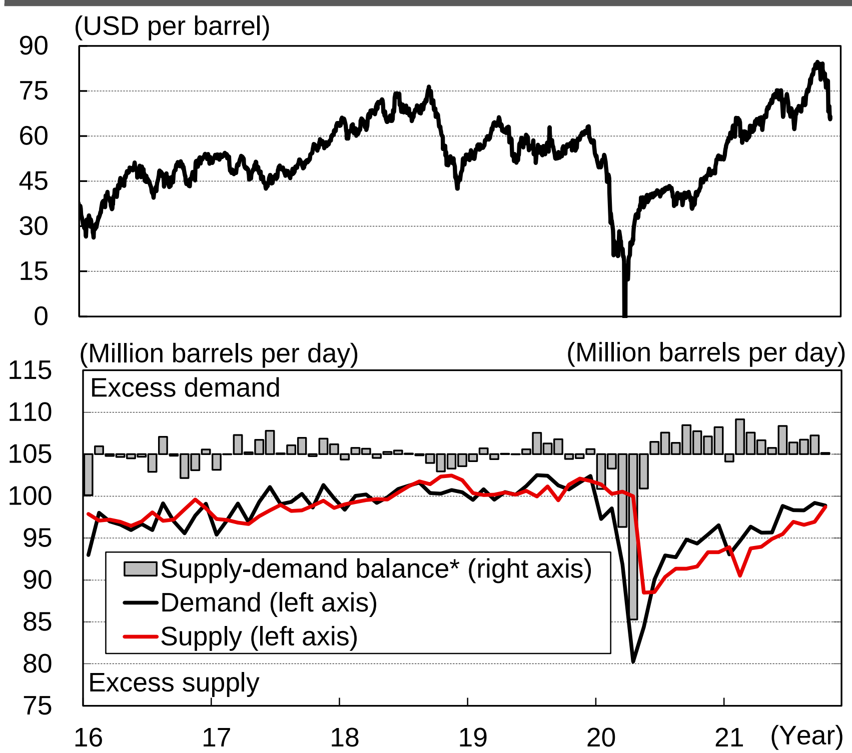
2-8. Oil Prices: Current Situation

- Oil prices (WTI front month) rose to around USD 75 at the end of September as oil production fell in the US due to hurricanes hitting the country. In October, OPEC+ agreed to maintain its plan to reduce the scale of oil production cuts which it initially decided at its Ministerial Meeting in July. In addition, there was a rise in demand for oil as an alternative for coal and natural gas, which were soaring in price. As a result of these factors, oil prices hit just over USD 85 per barrel – their highest point in around seven years. Subsequently, another rise of new COVID-19 cases in Europe and signs that the US will release oil from its Strategic Petroleum Reserve caused oil prices to fall to around USD 75. The actual volume of oil reserves released from Japan, the US and others was announced to be over 60 million barrels, which equates to just under one day of the total volume of global oil consumption. Therefore, the impact of the oil release was limited. At the end of November, oil prices fell sharply due to concerns about the spread of the omicron variant, and are now around USD 65 per barrel.

- Globally, demand continues to pick up, whereas the increase in supply remains gradual owing to OPEC+ oil production cuts and a slow recovery in US shale oil output. As a result, excess demand has continued almost unbroken since June last year. However, the amount of excess demand in October was small owing to a recovery in supply.

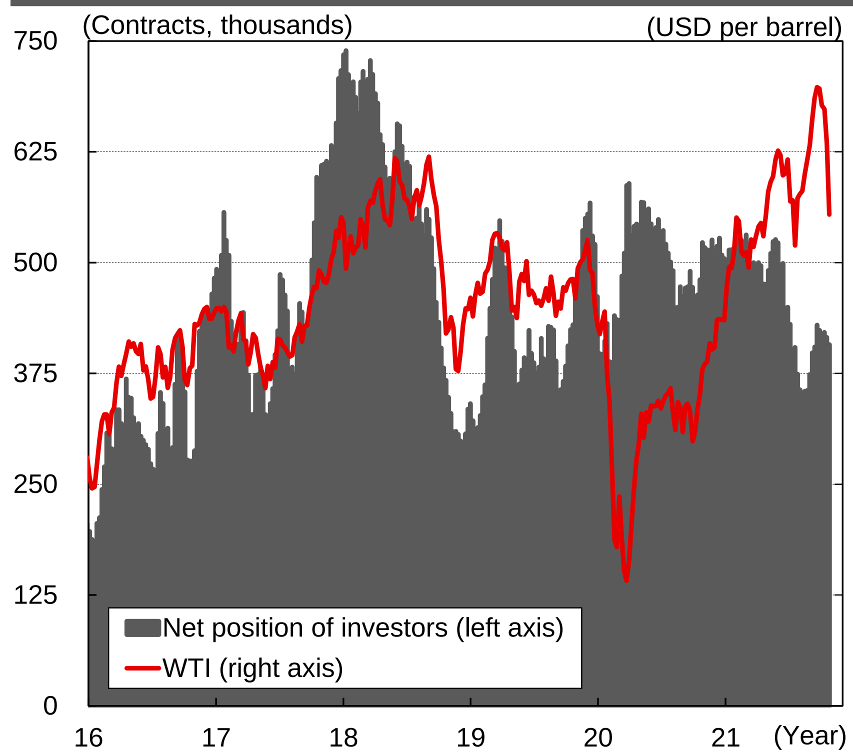
- Although oil prices rose from September, the increase in investors' net position is limited and has started to fall at present.

Oil Prices (WTI Front Month) and the Global Supply & Demand Balance



Note: * Demand less supply
Source: EIA, Bloomberg, MUFG Bank Economic Research Office

Net Position of Oil Future Investors and Oil Prices

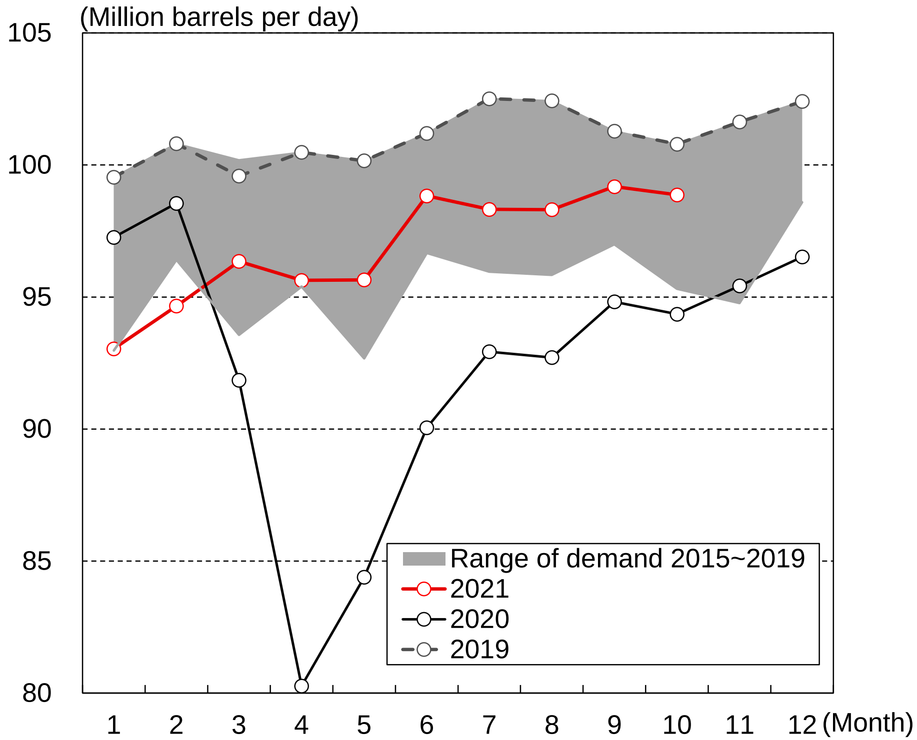


Note: "Net position of investors" reflects data as of 23 November
Source: Bloomberg, MUFG Bank Economic Research Office

2-8. Oil Prices: Demand

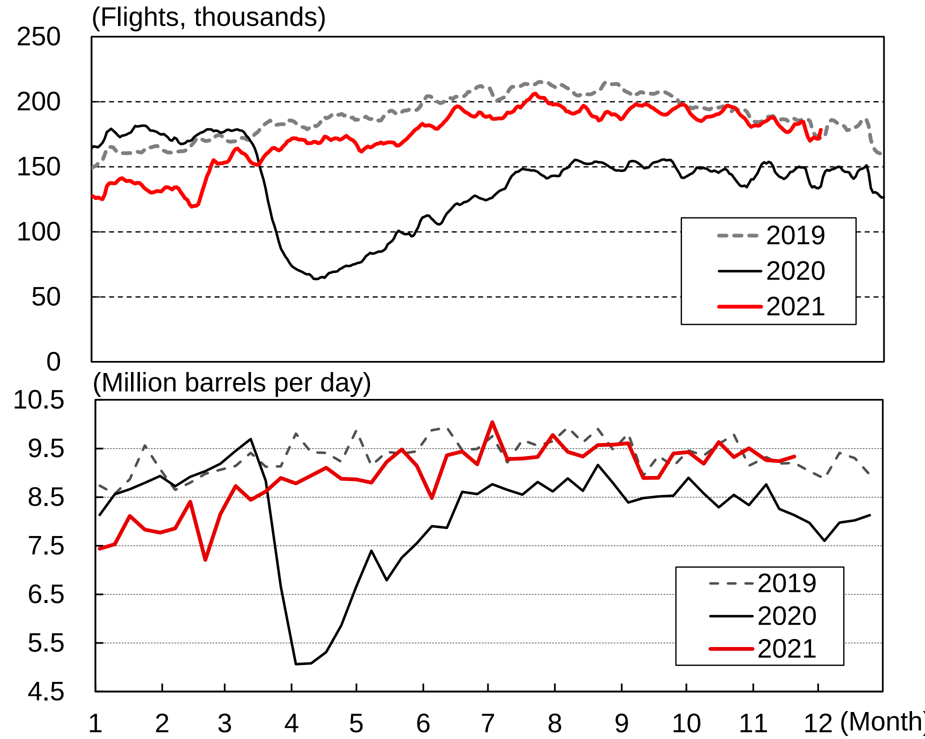
- Demand for oil fell significantly due to the pandemic last year and it remained towards the lower limit of the range recorded before the pandemic (2015 to 2019) until the start of this year as demand for transport failed to recover completely. However, demand for oil then recovered close the median of its pre-pandemic range between May and June. In October, demand for oil rose owing to a recovery in transport demand as vaccines were administered and oil became an alternative to other fossil fuels, which were experiencing a sharp rise in prices. As a result, oil demand rose from the middle towards the upper bound of its pre-pandemic range.
- The number of flights globally and the volume of US gasoline consumption both appear to have recovered to the levels they were at in 2019. In the future, demand for oil is forecast to gradually increase as the global economy recovers, yet it will be important to keep an eye on downside risks from the spread of the omicron variant.

Global Oil Demand



Source: EIA, Bloomberg, MUFG Bank Economic Research Office

Number of Global Aeroplane Flights and US Gasoline Consumption



Source:flightradar24, EIA, MUFG Bank Economic Research Office

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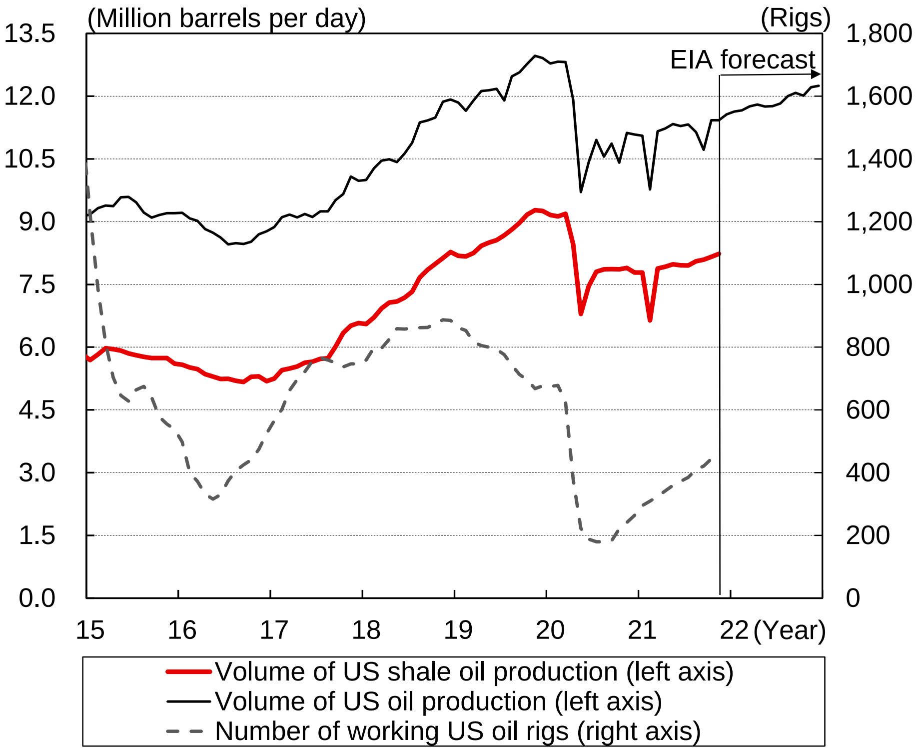
2-8. Oil Prices: Supply

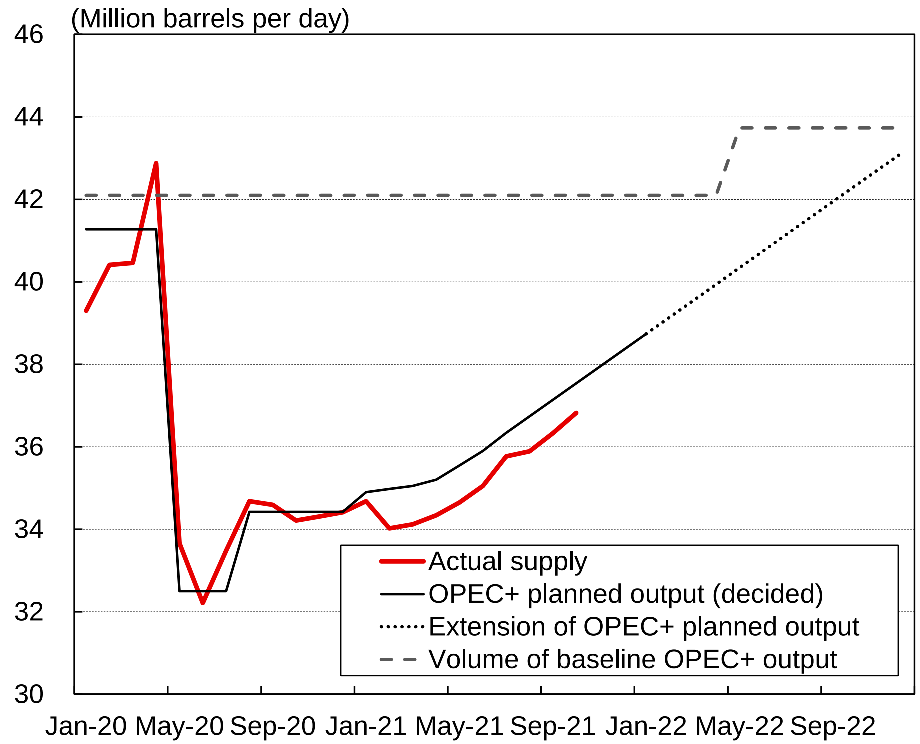
- Currently, oil prices are higher than USD 58, which marks the upper limit of the average cost of development of new shale oil fields (according to a survey published in March this year by the Federal Reserve Bank of Dallas). In addition, the number of working oil rigs has slowly recovered to around 70% of its pre-COVID-19 level. Taking this into account, the volume of US shale oil production is forecast to gradually increase from now. That being said, it is thought that attitudes about new investment in shale oil companies will remain cautious for the time being given the labour shortage and the global shift towards decarbonisation. Therefore, it is important to keep eye an on the risk that production will not recover as much as expected.
- OPEC+ has increased its output by 400,000 barrels per day each month since August based on the agreement it reached at its Ministerial Meeting in July. Although oil production in some countries has fallen below planned levels owing to operational issues at oil-related facilities, Saudi Arabia – which has a large oil production capacity – is carrying out its primary role of coordinator, and interesting is mounting as to what it will do. OPEC+ agreed to maintain its planned production cuts at its Ministerial Meeting in December, which had attracted attention in light of the sharp fall in oil prices brought about by the spread of the omicron variant, and observers will look to see if OPEC+ agrees to stick with its former plan to increase production in January next year as well. After the meeting, OPEC+ said it will "continue to monitor the market closely and make immediate adjustments (to the volume of production) if required". It is highly likely that OPEC+ will continue with its cooperative oil production cuts in order to underpin oil prices.

Volume of US Oil and Shale Oil Output and No. of US Working Oil Rigs



Source: EIA, Bloomberg, MUFG Bank Economic Research Office

Volume of OPEC+ Oil Supply



Note: 1. Excludes countries not participating in cooperative production cuts – Iran, Libya, Venezuela, Mexico
2. "Extension of OPEC+ planned output" shows the extended oil production cuts from August 2021 until January 2022
Source: IEA, MUFG Bank Economic Research Office

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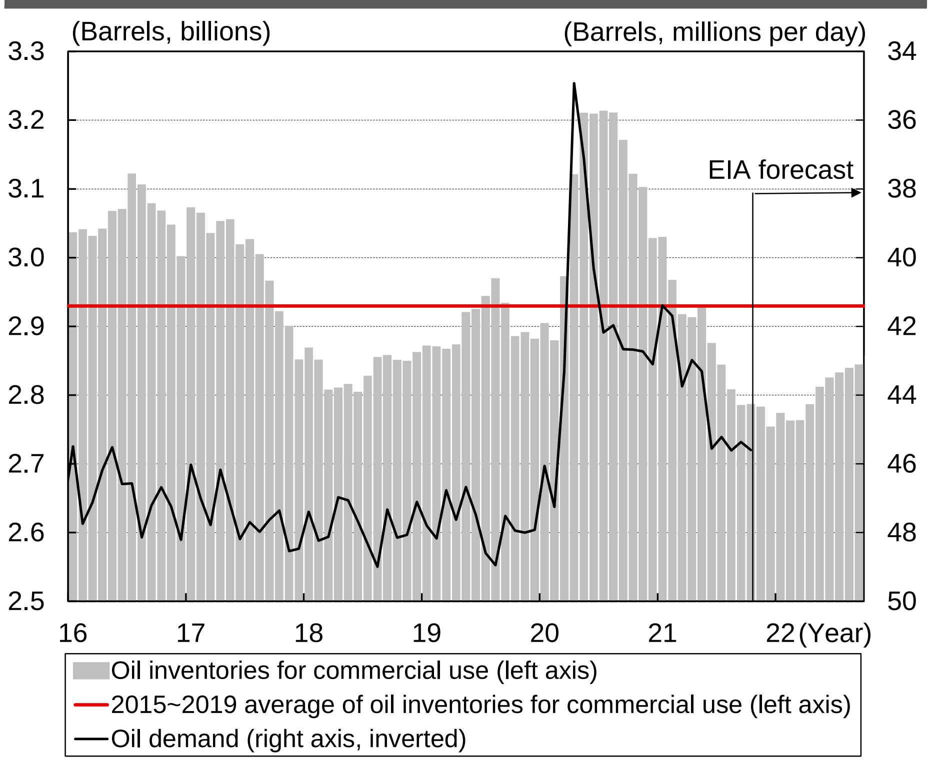
2-8. Oil Prices: Oil Inventories and the Supply-Demand Balance

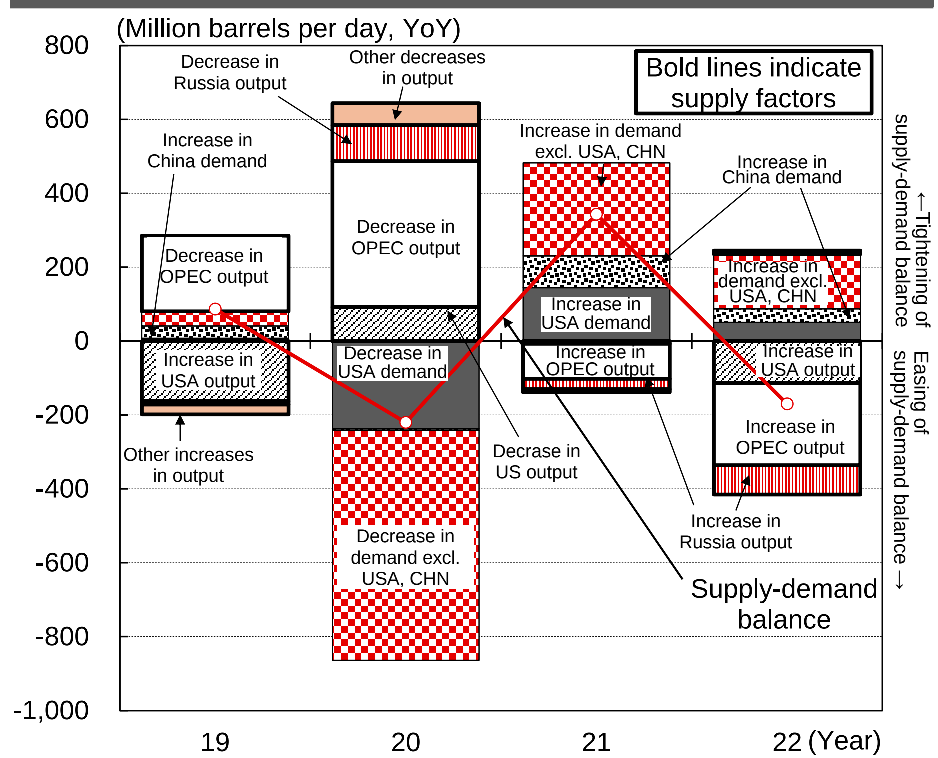
- While demand for oil is recovering at a robust pace as the global economy picks up, the increase in US shale oil and OPEC+ oil output remains gradual. As a result, the current level of OECD commercial oil inventories is currently much lower than the average it recorded before the pandemic (2015 to 2019).
- The balance of oil supply and demand is forecast to record an excess of demand in 2021 owing to the increase in global oil demand as economies recover, despite the decision by OPEC+ to increase its oil output. In 2022, although demand will continue to increase as the global economy recovers, the global balance of supply and demand is expected to shift to an excess of supply due to an increase in OPEC+ oil production and a gradual increase in US shale oil output.

OECD Commercial Oil Inventories and OECD Oil Demand



Source: EIA, MUFG Bank Economic Research Office

Forecast of Future Supply and Demand of Oil



Note: Figures from 2021 onwards are forecasts by Economic Research Office
Source: EIA, MUFG Bank Economic Research Office

2-8. Oil Prices: Outlook

- Oil prices (WTI front month) fell sharply owing to concerns about downward pressure on demand from the spread of the omicron variant and are currently around USD 65 per barrel. In the future, the supply and demand balance is forecast to shift from excess demand to excess supply. As a result, oil prices are expected to remain around the USD 60-per-barrel mark until the end of 2022. However, oil prices may fall or rise depending on developments in the COVID-19 situation, an unexpected increase or decrease in oil production by OPEC+, a change in policies by many countries related to decarbonisation and the outcome of negotiations over the Iran nuclear agreement.
- The futures curve for WTI oil prices (1 month to 5 years) shows 2-year futures are around USD 60~65, whereas 5-year futures are around USD 55~59, which means the market has factored in a fall in prices.

Oil Price Forecast

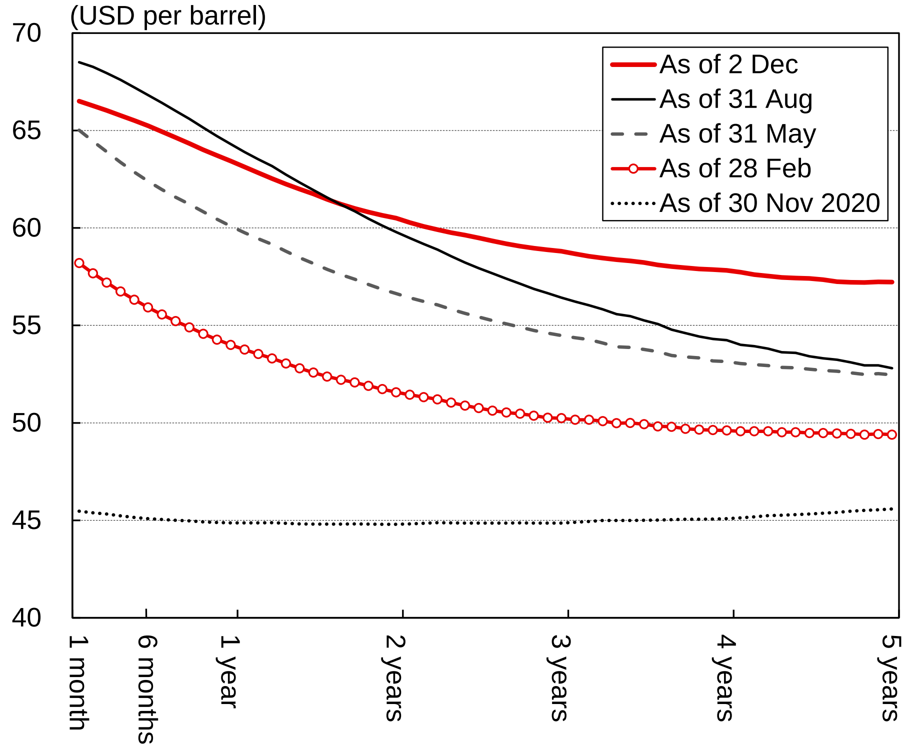
	WTI future (USD/barrel)	YoY (%)	Brent future (USD/barrel)	YoY (%)
2020 Q1	45.8	-16.6%	50.8	-20.4%
Q2	28.0	-53.3%	33.4	-51.2%
Q3	40.9	-27.5%	43.3	-30.1%
Q4	42.7	-24.9%	45.3	-27.5%
2021 Q1	58.1	27.0%	61.3	20.7%
Q2	66.1	136.1%	69.1	106.9%
Q3	70.6	72.5%	73.2	69.0%
Q4	74.0	73.3%	77.0	70.1%
2022 Q1	66.0	13.5%	69.0	12.5%
Q2	64.0	-3.2%	67.0	-3.0%
Q3	62.0	-12.1%	65.0	-11.2%
Q4	60.0	-18.9%	63.0	-18.2%

Forecast

2020	39.3	-31.0%	42.3	-34.0%
2021	67.2	70.8%	70.2	65.7%
2022	63.0	-6.3%	66.0	-5.9%

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

Oil Price Forecast



Source: Bloomberg, MUFG Bank Economic Research Office

Appendix: Global Economic Outlook

Forecast for the Global Economy

		World (weighted average of nominal GDP)				Japan (FY)	Americas					Europe					
			Developed countries	Emerging countries	Other		US	Central and South America (6 countries)				Eurozone (19 countries)				UK	Russia
									Brazil	Mexico	Argentina		Germany	France	Italy		
Nominal GDP	USD trillions	142.0	51.1	52.8	38.1	5.3	20.9	8.1	3.2	2.4	0.9	15.9	4.5	3.0	2.5	3.0	4.1
(2019)	Japan = 100	2,673	961	995	717	100	393	153	59	46	18	300	85	57	46	56	77
Real GDP	2020 Actual	-3.1	-4.6	-1.9	-3.0	-4.4	-3.4	-6.7	-4.1	-8.2	-9.9	-6.5	-4.8	-8.0	-8.9	-9.8	-3.0
YoY, %	2021 Forecast	5.7	5.0	6.7	5.1	2.8	5.5	6.2	4.5	6.0	7.5	5.0	2.6	6.4	6.1	6.9	4.2
	2022 Forecast	4.5	3.9	5.0	4.7	3.6	4.2	2.6	2.0	3.0	2.5	3.7	4.0	3.4	3.9	4.5	2.2
CPI	2020 Actual	3.2	0.7	3.8	5.6	-0.5	1.2	7.1	3.2	3.4	42.0	0.3	0.4	0.5	-0.1	0.9	3.4
(YoY, %)	2021 Forecast	4.4	2.9	3.9	7.2	0.0	4.3	10.6	8.0	5.0	50.0	2.4	3.1	1.9	1.8	2.4	6.8
	2022 Forecast	3.7	2.1	3.8	5.8	0.5	2.5	8.2	5.5	4.0	40.0	2.1	2.1	2.0	2.0	3.1	4.4

		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	45.3	24.2	9.0	4.6	2.3	1.3	0.4	0.6	7.5	3.3	1.3	0.9	0.9	1.1	1.3
(2019)	Japan = 100	852	455	169	87	44	25	8	11	140	62	24	17	17	20	25
Real GDP	2020 Actual	-0.8	2.3	-7.3	-0.8	-0.9	3.1	-6.1	-5.4	-3.4	-2.1	-6.1	-5.6	-9.6	2.9	-2.4
(YoY, %)	2021 Forecast	6.9	7.9	9.5	5.0	4.0	5.9	6.3	6.3	3.2	3.7	1.0	3.5	4.9	2.4	4.0
	2022 Forecast	5.5	5.3	7.2	3.2	3.1	3.1	3.0	4.0	5.5	5.2	3.8	6.3	6.5	7.0	3.4
CPI	2020 Actual	2.9	2.5	6.2	0.2	0.5	-0.2	0.3	-0.2	1.4	2.0	-0.8	-1.1	2.6	3.1	0.8
(YoY, %)	2021 Forecast	2.2	1.0	5.5	2.0	2.2	1.7	1.7	1.8	2.2	1.8	1.1	2.5	4.3	2.5	2.5
	2022 Forecast	2.7	2.2	4.8	1.6	1.7	1.4	2.0	1.5	2.6	2.9	1.2	1.8	3.1	3.5	2.1

Note: 1. "Nominal GDP" is based on purchasing power parity
2. For "CPI", Japan is composite figure excluding fresh food, Eurozone and the UK are the EU standardised inflation rate (HICP)
3. Figures for Japan and India based on their financial years (April to following March) except Japan's nominal GDP
4. "World", "developed countries", "emerging countries" 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. "Developed countries" is a total of Japan, NIEs (4 countries and regions), Australia, US, Eurozone (19 countries) and the UK. "Emerging countries" is a total of China, India, ASEAN (5 countries), Central and South America (6 countries) and Russia
6. "Central and South America (6 countries)" is a total of Brazil, Mexico, Argentina, Colombia, Chile and Peru

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 July-September 2021)

Forecast →

	2020				2021				2022				2023	FY2020	FY2021	FY2022
	Q1	2Q	3Q	4Q	Q1	2Q	3Q	4Q	Q1	2Q	3Q	4Q	Q1			
1. The Real Economy (QoQ annualized change)																
Real GDP	-2.3	-28.2	23.5	11.8	-4.1	1.5	-3.0	7.0	5.7	3.9	2.7	2.0	1.6	- 4.4	2.8	3.6
Private Consumption	-3.2	-29.1	22.8	9.3	-5.0	3.7	-4.5	10.0	7.8	3.8	2.4	1.8	1.4	- 5.8	3.1	4.1
Housing Investment	-14.1	2.3	-20.9	-0.1	4.3	8.3	-10.1	0.8	0.2	0.2	-0.4	-0.6	-0.6	- 7.2	- 0.6	- 0.6
Private Business Fixed Investment	5.1	-22.1	-8.4	18.1	-4.1	9.1	-14.4	10.0	8.2	6.1	5.3	4.1	3.2	- 6.9	1.7	5.0
Business Inventory (Contribution)	0.7	0.3	-0.7	-2.0	1.6	-1.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	- 0.2	- 0.1	0.1
Government Expenditures	-1.2	4.4	10.4	6.7	-6.3	1.7	2.4	0.2	1.3	2.2	1.9	1.6	1.3	3.5	1.0	1.7
Public Investment	-0.8	11.9	5.3	3.0	-5.5	-8.1	-5.8	0.0	1.6	2.8	3.2	3.2	3.2	4.2	- 3.6	2.0
Net Exports (Contribution)	-1.2	-10.3	11.3	4.2	-0.9	-1.2	0.4	0.1	-0.1	0.3	0.1	0.0	0.0	- 0.6	0.7	0.1
Exports	-17.6	-53.8	33.0	55.6	9.9	13.6	-8.3	5.7	5.3	4.1	2.4	2.0	1.6	- 10.4	11.9	3.0
Imports	-11.7	-2.4	-29.1	20.7	16.9	22.8	-10.5	5.3	5.7	2.4	2.0	2.0	1.6	- 6.8	7.5	2.3
Nominal GDP	-2.2	-27.2	23.9	9.7	-4.4	-1.0	-2.5	11.0	4.0	3.0	1.7	6.6	0.2	-3.9	2.4	3.9
GDP Deflator (YoY)	1.0	1.4	1.1	0.1	-0.2	-1.1	-1.1	0.3	-0.0	0.5	0.1	0.2	0.4	0.6	-0.4	0.3
Industrial Production Index (QoQ)	0.0	-16.8	9.0	5.7	2.9	1.1	-3.7	2.8	4.5	0.9	0.7	0.6	0.6	- 9.5	7.8	5.8
Domestic Corporate Goods Price Index (YoY)	0.6	-2.2	-0.8	-2.2	-0.3	4.6	6.0	8.0	4.9	3.9	2.1	0.6	0.8	- 1.4	6.0	1.8
Consumer Price Index (excl. fresh food, YoY)	0.7	-0.1	-0.3	-0.9	-0.5	-0.6	0.0	0.4	0.3	0.4	0.4	0.5	0.5	- 0.5	0.0	0.5
2. Balance of Payments																
Trade Balance (billion yen)	583	-1,472	1,229	2,436	1,437	998	-193	1,316	498	429	-671	959	87	3,902	2,619	804
Current Balance (billion yen)	4,410	1,697	3,623	5,922	4,626	4,719	2,894	4,454	3,674	3,649	2,586	4,254	3,420	16,302	15,741	13,910
3. Financial																
Uncollateralized overnight call rate	0.0	0.0	-0.1	0.0	0.0	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Euro-Yen TIBOR (3-month rate)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Newly Issued 10-Year Government Bonds Yield	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.2
Exchange Rate (USD/JPY)	109	108	106	104	106	109	110	114	114	114	114	114	114	106	112	114

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 →

	2020				2021				2022				2020 (Actual)	2021 (Forecast)	2022 (Forecast)
	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, %)	-5.1	-31.2	33.8	4.5	6.3	6.7	2.1	4.8	5.3	4.2	2.6	2.6	-3.4	5.5	4.2
Personal Consumption Expenditures	-6.9	-33.4	41.4	3.4	11.4	12.0	1.7	2.9	1.9	3.7	2.5	2.6	-3.8	7.9	3.1
Fixed Investment (Residential)	20.3	-30.8	60.0	34.4	13.3	-11.7	-8.3	0.0	0.0	0.0	-0.7	0.5	6.8	9.0	-1.9
Fixed Investment (Nonresidential)	-8.1	-30.3	18.7	12.5	12.9	9.2	1.5	7.0	9.2	5.2	4.5	3.7	-5.3	7.6	6.1
Changes in Business Inventories (Contribution)	-0.5	-4.0	6.8	1.1	-2.6	-1.3	2.1	0.0	0.0	0.0	0.0	0.0	-0.6	0.2	0.2
Government Expenditures	3.7	3.9	-2.1	-0.5	4.2	-2.0	0.9	4.0	14.0	4.1	2.5	2.4	2.5	0.9	5.4
Net Exports (Contribution)	-0.1	1.5	-3.3	-1.7	-1.6	-0.2	-1.2	1.1	0.2	0.1	-0.2	-0.2	-0.1	-1.7	0.0
Exports	-16.3	-59.9	54.5	22.5	-2.9	7.6	-3.0	14.2	6.2	4.9	3.9	3.1	-13.6	4.4	5.8
Imports	-13.1	-53.1	89.2	31.3	9.3	7.1	5.8	2.9	2.9	2.4	3.7	3.1	-8.9	13.2	3.5
Domestic Private End User Demand	-6.2	-32.8	38.0	6.0	11.8	10.4	1.3	3.5	3.0	3.8	2.7	2.7	-3.7	7.9	3.4
Nominal GDP (QoQ annualized, %)	-3.9	-32.4	38.7	6.6	10.9	13.2	8.3	9.5	8.0	5.8	4.2	4.3	-2.2	9.7	7.5
Industrial Production (QoQ annualized, %)	-6.7	-42.4	44.5	8.2	4.0	6.4	3.9	3.4	2.3	1.3	0.9	0.6	-7.2	5.5	2.5
Unemployment Rate (%)	3.8	13.0	8.8	6.7	6.2	5.9	5.1	4.3	4.0	3.8	3.8	3.8	8.1	5.4	3.8
Producer Price Index (YoY, %)	1.1	-1.1	-0.1	0.8	2.9	7.1	8.3	8.7	6.8	4.0	2.1	1.2	0.2	6.7	3.5
Consumer Price Index (YoY, %)	2.1	0.4	1.2	1.2	1.9	4.8	5.3	5.1	4.5	2.9	1.4	1.3	1.2	4.3	2.5
2. Balance of Payments															
Trade Balance (hundred million dollars)	-2,003	-2,233	-2,454	-2,531	-2,689	-2,697	-2,752	-2,929	-2,846	-2,817	-2,814	-2,809	-9,220	-11,067	-11,286
Current Account (hundred million dollars)	-1,148	-1,539	-1,724	-1,751	-1,894	-2,237	-2,347	-2,257	-2,105	-2,073	-2,067	-2,059	-6,161	-8,735	-8,303
3. Financial Indicators															
FF Rate Target (%)	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	0.00-0.25	0.00-0.25	0.75-1.00
Euro Dollar (3M) (%)	1.5	0.6	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.6	0.9	0.7	0.2	0.5
10-year Treasury Note's Yield (%)	1.4	0.7	0.6	0.9	1.6	1.6	1.3	1.5	1.6	1.7	1.9	2.0	0.9	1.5	1.8

Note: FF Rate Targets is end-of-period figures, Euro Dollar (3M) and 10-year Note's Yield are averages for periods
Source: Various reports, Bloomberg, MUFG Bank Economic Research Office

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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)		
	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F
Eurozone	-6.5	5.0	3.7	0.3	2.4	2.1	2,546	2,951	2,735
Germany	-4.8	2.6	4.0	0.4	3.1	2.1	2,647	2,919	2,675
France	-8.0	6.4	3.4	0.5	1.9	2.0	-501	-314	-879
Italy	-8.9	6.1	3.9	-0.1	1.8	2.0	669	647	892
UK	-9.8	6.9	4.5	0.9	2.4	3.1	-949	-953	-1,014
Russia	-3.0	4.2	2.2	3.4	6.8	4.4	339	594	558

2. Forecast by Demand Component (YoY, %)

	Eurozone			UK		
	2020	2021F	2022F	2020	2021F	2022F
Nominal GDP	-5.0	6.2	4.8	-4.4	7.3	6.0
Real GDP	-6.5	5.0	3.7	-9.8	6.9	4.5
Domestic demand contribution	-6.0	3.8	4.0	-10.5	8.1	5.4
Foreign demand contribution	-0.5	1.2	-0.3	0.7	-1.2	-0.9
Private consumption	-8.0	2.4	5.0	-10.8	3.7	6.0
Government consumption	1.3	4.2	2.1	-6.3	15.8	4.2
Gross fixed capital formation	-7.3	4.9	4.2	-9.1	4.9	5.7
Inventory investment (contribution)	-0.6	0.3	-0.1	-0.7	1.3	0.1
Exports	-9.4	10.2	4.6	-14.7	-2.9	2.6
Imports	-9.3	8.1	5.6	-16.8	1.3	5.7

Note: 1. "Eurozone" is total of 19 countries - Germany, France, Italy, Ireland, Estonia, Austria, The Netherlands, Cyprus, Greece, Spain, Slovakia, Slovenia, Finland, Belgium, Portugal, Malta, Luxembourg, Lithuania
2. "CPI" is the standardised inflation rate for the EU (HICP)
Source: Eurostat, UK Office for National Statistics, MUFG Bank Economic Research Office

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