Monthly Economic Report

December 21, 2021

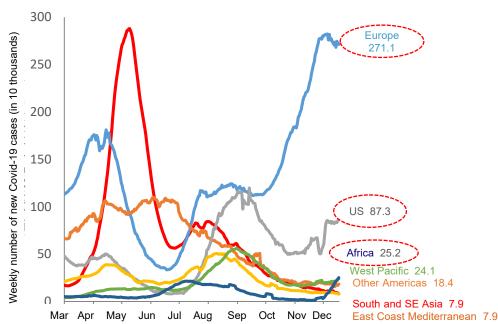
Mizuho Research & Technologies, Ltd.



Global Covid-19 infection trends: further vigilance against the Omicron variant in the US and Europe

- The number of Covid-19 cases worldwide (cumulative) reached 274.65 million as of the morning of December 20.
- The weekly number of new Covid-19 cases around the world stood at 4.42 million (previous week: 4.34 million), which is shifting to an
 increasing trend again.
 - In some countries of continental Europe, adopting more stringent infection control measures has proved successful, but the full-scale spread of Omicron variant infections is yet to come.
 - In the UK, the number of new cases per day surged due to the spread of Omicron variant infections, setting new record highs.
 - Dutch Prime Minister Mark Rutte decided on a lockdown from December 19 until at least January 14, due to concerns over the spread of the Omicron variant.
 - In the US, the level of vigilance has heightened due to such factors as the confirmed spread of Omicron variant infections in the state of New York.

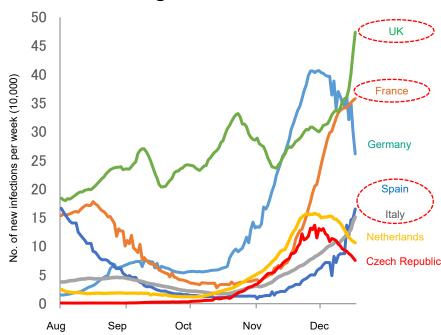
Weekly number of new Covid-19 cases reported worldwide



Note: Figures represent number of cases tallied as of December 19 (latest data as of December 17). Regional classification based upon WHO.

Source: Made by MHRT based upon Johns Hopkins University and WHO.

Weekly number of new Covid-19 cases in countries showing increases



Note: Figures represent number of cases tallied as of December 19 (latest data as of December 17).

Source: Made by MHŔT based upon Johns Hopkins University.



Vaccinations: booster vaccinations are progressing mainly in major countries in Europe and the US

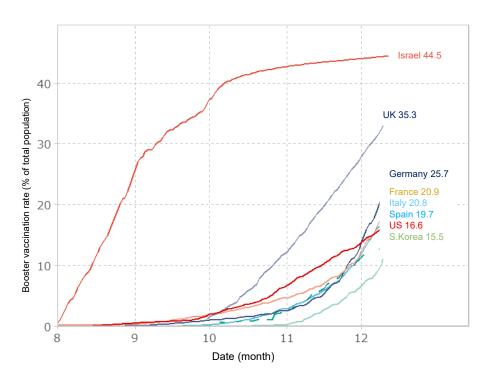
- Continental Europe's booster vaccination rate exceeds 20%.
 - Booster vaccination rates have increased to 10% even in some emerging countries such as South Korea, Malaysia, and Brazil.
 - In continental Europe and South Korea, where infections are resurging, booster vaccinations have rapidly increased since the latter half of November. In the US, on the other hand, the rise of booster vaccinations remains at a more moderate pace than in Europe and South Korea.
 - In Japan, the total number of booster vaccinations is 117,000 as of Dec 16 (0.1% of the total population).

Vaccination rate in major countries

Israel UK Germany France Italy Spain US S. Korea Singapore Malaysia Brazil Canada Thailand Russia Australia **Philippines** Taiwan Japan Hong Kong Vietnam 1st dose Mexico 2nd dose Indonesia India Booster South Africa 10 20 30 40 50 60 70 80 90 Vaccination rate (% of total population)

Note: Figures represent data tallied as of December 16 (latest data is from December 14) Source: Made by MHRT based upon *Our World in Data*

Trends in booster vaccination rates by country



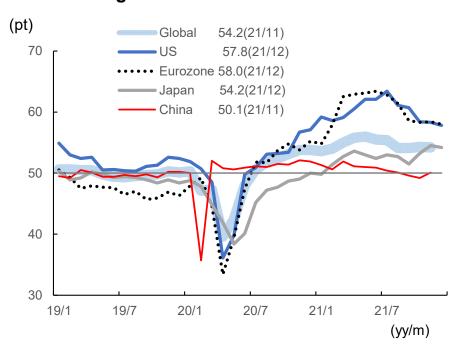
Note: Figures represent data tallied as of December 16 (latest data is from December 14) Source: Made by MHRT based upon *Our World in Data*



Current state of the global economy: the resurgence of Covid-19 infections is serving as a drag on the nonmanufacturing sector

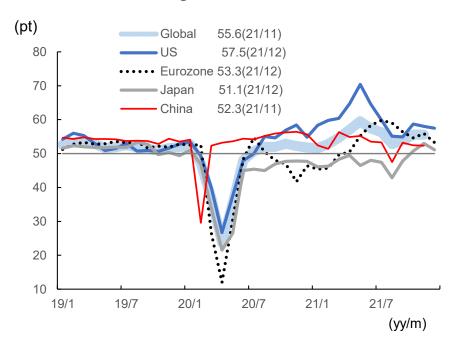
- In Europe and in the US, supply constraints such as shortages of parts and materials are improving, and the manufacturing PMI is remaining at a high level.
 - Likewise in China, the electric power shortages that had constrained the manufacturing sector are being resolved, and there are signs that leading industrial production is bottoming out.
- However, the resurgence of Covid-19 infections is serving as a drag on the nonmanufacturing sector.
 - In the Eurozone, the nonmanufacturing PMI fell to 53.3 in December due to the rapid resurgence of infections and strengthening of infection control measures.
 - Even in the US, where the nonmanufacturing PMI remains at a high level, said the PMI fell in December. The spread of infections is serving as a factor behind the sluggish recovery of service consumption.

Manufacturing PMI



Note: The Purchasing Managers' Index (PMI) is an index calculated by weighting indexes such as new orders, output, order backlogs, prices, employment, and quantity of purchases. The reading of 50 in the PMI is the "expansion-contraction" threshold. Source: Made by MHRT based upon IHS Markit, the National Bureau of Statistics of China.

Nonmanufacturing PMI



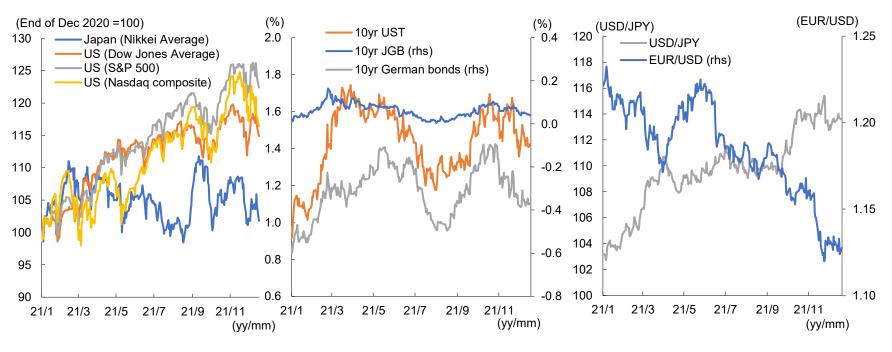
Note: The Purchasing Managers' Index (PMI) is an index calculated by weighting indexes such as new orders, output, order backlogs, prices, employment, and quantity of purchases. The reading of 50 in the PMI is the "expansion-contraction" threshold. Source: Made by MHRT based upon IHS Markit, the National Bureau of Statistics of China.



Overview of financial markets: lingering concerns regarding the Covid-19 variant. Decisions at the FOMC turned out more or less in line with expectations

- Even though US stocks fell due to concerns regarding the Omicron variant, the market rebound given the ebb of concerns due to reports of the efficacy of vaccines. However, currently recovery lacks strength, mainly in high-tech stocks. While Japanese stocks followed a similar path, the rebound is somewhat limited.
- The 10yr UST yield fell due to concerns regarding the spread of variant infections and trended around the 1.4% level. The FOMC
 (December 14 and 15) decided to accelerate tapering and indicated three rate hikes in 2022. Even so, the interest rate reaction was limited as the FOMC's decision was within market expectations.
- Turning to the USD/JPY rate, even though the yen strengthened against the dollar to the JPY 112 / USD level, due to concerns regarding the spread of Omicron variant infections, the dollar subsequently strengthened once again to the yen.

Major market trends



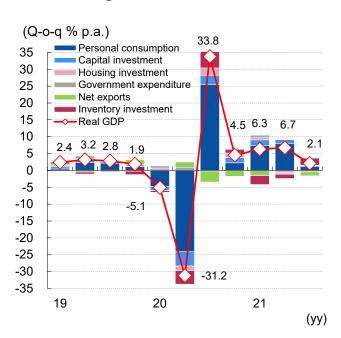
Note: All indexes show actual results up to December 20. Source: Made by MHRT based upon Refinitiv.



US Economy: GDP (second estimate) remained more or less unchanged. Results reaffirmed that supply constraints served as a drag on the economy in the Jul-Sep quarter

- US real GDP growth in the Jul-Sep quarter (second estimate) was revised upward, albeit modestly, to +2.1% q-o-q p.a. from the first estimate (+2.0% q-o-q p.a.)
 - Given the impact of semiconductor shortages, motor vehicle consumption (-50.2% q-o-q p.a.), motor vehicle investment (-28.4% q-o-q p.a.), and motor vehicle exports (-7.0% q-o-q p.a.) fell sharply. Housing investment (-8.3% q-o-q p.a.) also declined due to materials and manpower shortages. Such factors indicate that the underlying structure of supply constraints leading to economic slowdown remains unchanged.
 - Personal consumption and government expenditure were revised upward. Housing investment, capital investment, and net exports were subject to downward revisions.

Real GDP growth



	21Q2	21Q3	21Q3 (Second estimate)	Key Points
Real GDP	+6.7	+2.0	+2.1	Growth slowed sharply in the Jul-Sep quarter
Personal consumption	+12.0	+1.6	+1.7	Goods consumption (-8.4% q-o-q p.a.) fell sharply (however, if motor vehicles are excluded, it generally remains unchanged). Service consumption (+7.6% q-o-q p.a.) decelerated partly due to the fourth wave of Covid-19 infections.
Housing investment	-11.7	-7.7	-8.3	Deteriorated for the second consecutive quarter. The shortage of materials and manpower continued to serve as a drag on housing construction activities.
Capital investment	+9.2	+1.8	+1.5	Sharp slowdown. IT investment, which had been steady, showed signs of pausing, partly reflecting the impact of semiconductor shortages.
Inventory investment (※)	-1.3	+2.1	+2.1	The pace of inventory reduction eased, including those for motor vehicle dealers, and turned the contribution rate positive. However, such trends fall short of inventory replenishment amid strong supply constraints.
Government expenditure	-2.0	+0.8	+0.9	The expiration of the financing program for small and medium-sized enterprises (Paycheck Protection Program, PPP) served as a drag, but increased investment by local governments served as support.
Net exports (※)	-0.2	-1.1	-1.2	The contribution of external demand was negative due to the fall of exports and increase of imports.
Exports	+7.6	-2.5	-3.0	Exports fell. In addition to motor vehicles, agricultural products (presumably due to Hurricane Ida and container shortages) served as a drag on overall exports.
Imports	+7.1	+6.1	+5.8	Imports grew steadily. Despite the weakness of goods imports, service imports, particularly travel and patent fees, increased substantially.

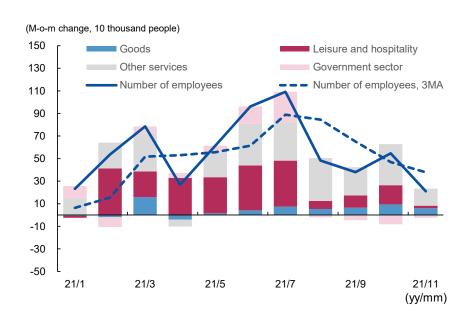
Source: Made by MHRT based upon US Department of Commerce.



Although employment is slowing down, demand for labor is strong. The unemployment rate is falling despite the rise of the labor participation rate

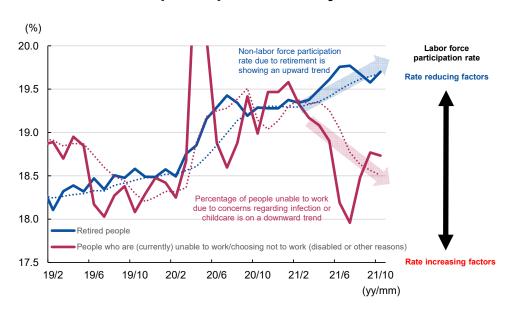
- The rise in number of employees slowed down to +210 thousand m-o-m (October: +546 thousand m-o-m). The slowdown was noticeable in the service sector, indicating the impact of the spread of Covid-19 infections and that people who left the labor force have not been replaced in time. Average weekly hours worked increased and total labor input (labor demand) grew strongly (+0.5% m-o-m).
- The unemployment rate fell further to 4.2% (October: 4.6%), confirming the strength of labor demand. This was far below the FOMC participants' September outlook (averaged 4.8% for the Oct-Dec quarter of 2021). The tightening of labor supply and demand indicates a further rise of upward pressures on wages.
 - Although the labor participation rate rose +0.2% pt to 61.8% (a positive factor), downward pressures stemming from retirements are serving as impediments to the swift recovery to pre-pandemic levels (63% level). The spread of Omicron variant infections has raised concerns regarding infection among workers, serving as a drag on the labor participation rate.

Number of employees by industry



Source: Made by MHRT based upon US Department of Labor.

Non-labor force participation rate by reason



Note: Non-labor participation rate = 100 - labor participation rate. The dotted lines are the sixmonth moving average, and the latest value is as of October.

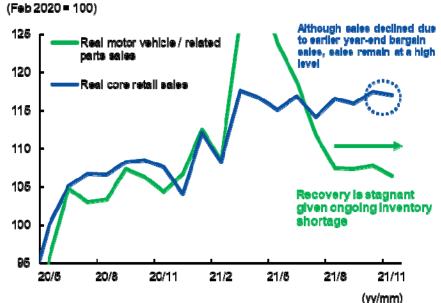
Source: Made by MHRT based upon US Census Bureau.



Even though consumption of goods has peaked, the shift of demand to service consumption will most likely be slow

- Real core retail sales declined in November (-0.3% m-o-m). Sales of furniture/home appliances, clothing, etc., have peaked out, while the impact of earlier year-end bargain sales has become tangible.
 - Looking at October-November average, real core retail sales is still strong at +1.5% q-o-q. Demand for goods is following firm footing at a high level.
 - The recovery in real motor vehicle-related products sales (-1.2% m-o-m) did not progress, given the inventory shortage.
- Dining out sales in real terms rose (+0.4% m-o-m) but lacked strength. Shortened business hours due to manpower shortages appears to have served as a drag.
- Goods consumption peaked out as the year-end bargain sales season ran its course. The shift of demand to services is expected to be sluggish, given lingering concerns regarding the resurgence of Covid-19 infections.
 - The number of restaurant reservations in mid-December dropped compared to November. Looking forward, growing concerns about Covid-19 infections are expected to serve as a drag on demand for services requiring face-to-face interactions.

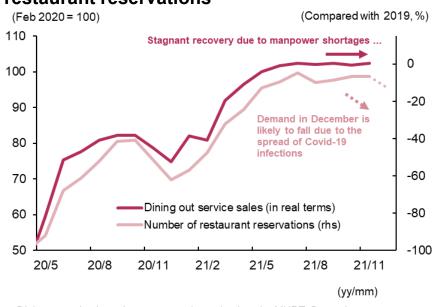
Real retail sales (core retail / motor vehicle-related)



Note: Estimated value by MHRT. Core retail sales excludes motor vehicles, building materials, gasoline and dining out.

Source: Made by MHRT based upon the US Department of Commerce and the US Department of Labor.

Dining out sales in real terms and number of restaurant reservations



Note: Dining out sales in real terms are estimated values by MHRT. December restaurant reservations is the average up to December 10.

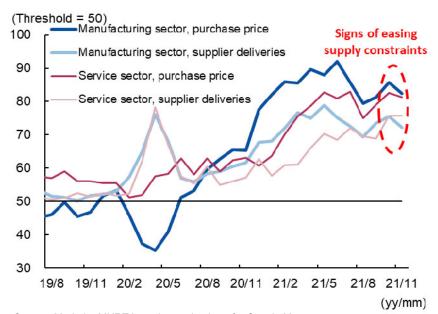
Source: Made by MHRT based upon US Department of Commerce and Open Table.



Business sentiment is favorable. While supply constraints show signs of easing, its sustainability is uncertain

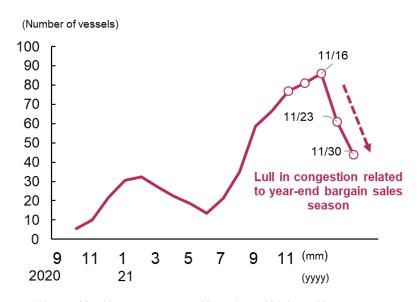
- In November, ISM manufacturing/service sector indices marked high levels on the back of strong demand. Supply constraints remain severe, but are showing signs of alleviating.
 - Purchase price and supplier deliveries indices remain at high levels but declined. Some corporations indicated that there was a lull in price rises and that supply chains were improving.
 - Logistics networks remain clogged, and resolving congestion is still expected to take time. However, congestion at ports has peaked out.
 - ◆ The number of vessels waiting offshore on the West Coast peaked out in mid-November. Moves to build up inventory for year-end bargain sales have run their course.
 - ◆ The shortage of container storage space at ports is showing signs of improving, as retailers are working to secure available space on their own.
- On the other hand, the November FRB survey showed no improvement in corporations' outlook on supply constraints. The spread of new Covid-19 variants further increases risk of delays.

ISM manufacturing / service sector indices



Source: Made by MHRT based upon Institute for Supply Management.

Number of container ships anchored and waiting offshore to be unloaded at the West Coast (LA/LB ports)



Note: Monthly averages except November, which is weekly. Source: Made by MHRT based upon Marine Exchange.



Inflationary pressures are increasing, and high inflation is expected to continue into early 2022

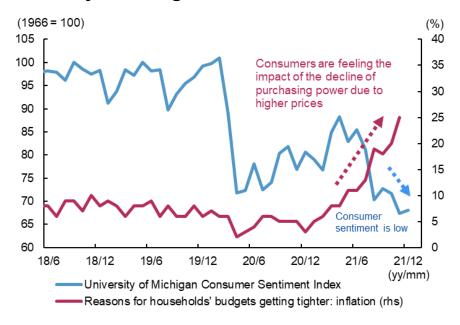
- In November, the core CPI accelerated to +4.9% y-o-y from the previous month (October:+4.6% y-o-y). Tight supply-demand balance among goods is continuing, increasing inflationary pressures.
 - Motor vehicle prices continued to rise substantially due to insufficient inventories. Airline fares turned upward month-on-month reflecting higher travel demand during the holiday season.
 - Inflation increased, even excluding the above-mentioned demand for motor vehicles and outings. The median CPI, which indicates underlying inflation, registered +3.5% y-o-y, indicating that there are no signs of a pause in acceleration.
- In view of these results, the core PCE deflator is expected to continue to rise reaching +4.6% y-o-y in November (October: +4.1% y-o-y).
 - Despite signs of easing in terms of logistics, supply constraints remain severe, mainly due to manpower shortages. The core PCE deflator is expected to continue rising at above 4% y-o-y through early 2022.
 - On the other hand, high prices will serve as a drag on consumer sentiment, weakening the upward pressure on prices from the demand side

Breakdown of core CPI (y-o-y % ch)

(Y-o-y % ch) Up to August, price rises were driven by 6.0 specific items, such as motor vehicle-related New vehicles Items and demand for outlings 5.0 Used vehicles Motor vehicle 4.0 insurance fees Rental cars 3.0 Accomodation fees Airline fares 2.0 0.0 ■Rent Others Since September, contributions other than the -1.0 above (residual error) have expanded, indicating the Core CPI rise of inflationary pressures -2.0 20/11 21/5 21/8 21/11 21/2 (yy/mm)

Source: Made by MHRT based upon US Department of Labor.

University of Michigan Consumer Sentiment Index



Source: Made by MHRT based upon University of Michigan.



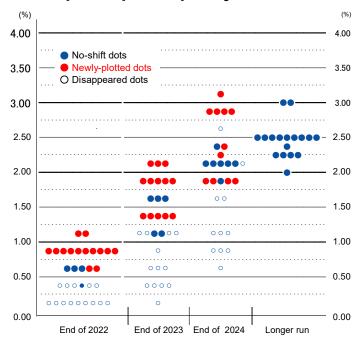
December FOMC pivots to curb inflation, paving the way for early rate hike

- The FOMC decided in December to move the taper forward on the back of increased inflation and rapid improvement in employment, with a view to end in March.
 - The reference to "transitory" factors was removed from the statement, and views that inflationary pressures had "contributed to sizable price increases in some sectors" had changed to "continued to contribute to elevated levels of inflation."
 - Wages (ECI), employment data and CPI released before and after the November FOMC meeting revealed that a pivot to a hawkish stance was deemed necessary.
- The FOMC revised its forward guidance to prepare for an early rate hike. The dot plot chart now projects three rate hikes in 2022, another three in 2023, and two in 2024.
 - Although timings of rate hikes were not clearly mentioned, there were phrases such as "employment is improving rapidly" and that "this is a significantly different economic situation that we have at the current time...the same thing would be true about raising rates...I don't foresee that there would be that kind of very extended wait."

Key points of the December FOMC

- The reference to "transitory" factors affecting inflation in the
 postmeeting statement was removed. The increase in inflation was
 indicated, as the term "supply and demand imbalances related to the
 pandemic and the reopening of the economy have contributed to
 sizable price increases in some sectors." was changed to
 "...continued to contribute to elevated levels of inflation."
- The forward guidance states that the price stability goals have been achieved and is now rephrased as waiting for the maximum employment to be achieved.
- Maximum employment is admittedly a judgment call because it's a range of factors.
- With high inflation, the economy is so much stronger now, so much closer to full employment. There will not be any kind of extended wait at this time between the end of tapering and rate hikes.

FOMC participants' policy rate outlook



Source: Made by MHRT based upon FRB.

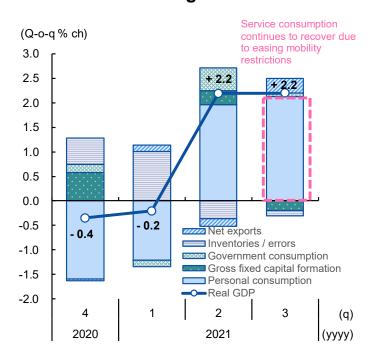
Source: Made by MHRT based upon FRB.



The Eurozone economy: consumption recovery continued in the Jul-Sep quarter. Economic activity is expected to stagnate in winter due to the resurgence of Covid-19 infections

- Eurozone real GDP grew +2.2% q-o-q (final estimate) in the Jul-Sep quarter, unchanged from the flash estimate. The recovery in personal consumption (contribution +2.1% pt) due to the alleviation of mobility restrictions was among the background factors.
 - The impact of supply constraints such as the shortage of semiconductors served as a drag on the economy. Capital investment (-0.9% q-o-q) and goods exports (-1.0% q-o-q) declined.
 - Eurozone GDP growth in the first half of 2021 has been revised upward from the flash estimate, mainly for personal consumption and government consumption.
- The economy is expected to remain stagnant until early spring 2022 due to prolonged supply constraints and the resurgence of Covid-19 infections during the winter.

Eurozone: real GDP growth rate



	21Q1	21Q2	21Q3	Key points
Real GDP	-0.2	+2.2	+2.2	Significant growth for the second consecutive quarter.
Personal consumption	-2.3	+3.9	+4.1	Service consumption continued its recovery due to easing of mobility restrictions since early spring. Goods consumption appears to have remained more or less flat.
Gross fixed capital formation	-0.0	+1.3	-0.9	Machinery investment (-1.5% q-o-q) fell due to supply constraints. Construction investment (-0.9% q-o-q) also fell, as the shortage of labor and materials served as a drag.
Government consumption	-0.6	+2.1	+0.3	Despite the slowdown of the pace of increase, the level remains high.
Inventory investment (※)	+1.0	-0.4	-0.1	Decreased for the second consecutive quarter. Inventories could not be restored due to sluggish production of products such as motor vehicles caused by parts and materials shortages.
Net exports (※)	+0.1	-0.2	+0.3	The contribution by external demand turned positive as the growth of exports exceeded those of imports.
Exports	+1.2	+2.4	+1.2	Positive growth for the fifth consecutive quarter. Even though goods exports (-1.0% q-o-q) dropped due to supply constraints, service exports (+7.3% q-o-q) surged due to recovery in inbound demand.
Imports	+1.0	+2.9	+0.7	Goods imports decreased. Service imports (+4.9% q-o-q) such as outbound services increased.

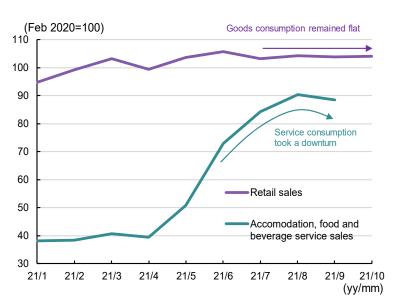
Note: Figures in the table are on a q-o-q basis. Those marked with an asterisk (*) represent the q-o-q growth contributions. Source: Made by MHRT based upon Eurostat.



In personal consumption, goods consumption remained flat and service consumption declined. Going forward, consumption is expected to be stagnant

- Eurozone retail sales registered +0.2% m-o-m in October, revealing a slight increase. Sales in accommodation, and food and beverage services in September fell (-2.0% m-o-m).
 - Retail sales remained more or less flat due to factors such as product shortages caused by supply constraints.
 - Sales in accommodation, and food and beverage services dropped reflecting a pause in services' demand that had increased due to the resumption of economic activities.
 - ♦ However, during the Jul-Sep quarter, sales in accommodation, and food and beverage services rose a dramatic +61% q-o-q, serving as a driver of economic recovery.
- Consumption is expected to remain stagnant until early spring 2022 due to the resurgence of Covid-19 infections and product shortages caused by supply constraints.
 - Consumer sentiment has deteriorated due to the resurgence of Covid-19 infections. Concerns regarding infections and reinforcement
 of infection control measures are serving as a drag on consumption.

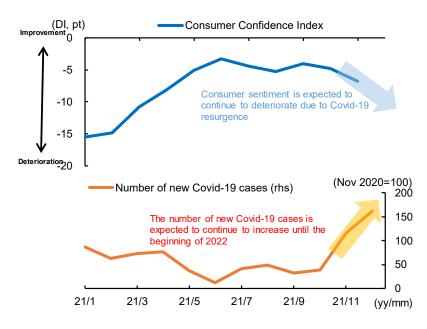
Eurozone: retail sales, and sales of accommodation, and food & beverage services



Note: Retail sales are in real terms excluding motor vehicles. Sales of accommodation, and food and beverage services are described in nominal terms.

Source: Made by MHRT based upon Eurostat.

Eurozone: Consumer Confidence Index



Note: The number of new Covid-19 cases represents the monthly average of the total of 19 Eurozone countries.

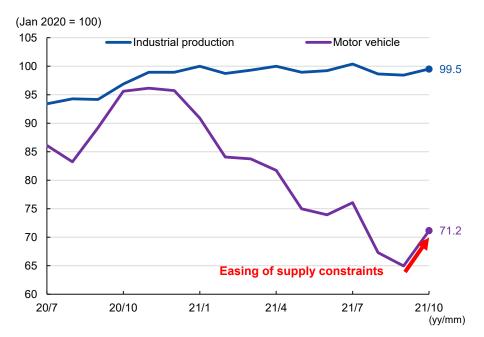
Source: Made by MHRT based upon European Commission and Our World in Data.



Production rose in October due to easing of supply constraints. Gradual recovery to continue for the time being, supporting the economy

- Eurozone industrial production rose in October (+1.0% m-o-m), recording a rise of production for the first time in three months. Among the background factors was the easing of supply constraints.
 - The easing of supply constraints led to a large increase in production of motor vehicles (+9.5% m-o-m), which drove overall production. However, the impact of supply constraints linger, as production is still about 29% below the pre-pandemic level (Jan 2020).
- In early 2022, the odds are high that the recovery of production will remain subdued, given the persistence of the negative effects of supply constraints. Amid downward pressures on the service sector due to the resurgence of Covid-19 infections, the manufacturing sector is expected to support the economy.
 - In the German manufacturing sector, where supply constraints have had a significant negative impact, more than 70% of corporations cited material shortages, despite the easing of supply constraints.

Eurozone: industrial production



Source: Made by MHRT based upon Eurostat.

Germany: percentage of corporations that mentioned "material shortages"

Supply constraints are easing	Supply constraints are easing, but impact remains				(%)
	Jul	Aug	Sep	Oct	Nov
Electrical equipment	84	84	93	90	85
Motor vehicle	83	92	97	88	88
Machinery, equipment	70	82	89	81	86
PC, electronics & optical	72	80	82	78	82
Manufacturing sector	64	69	77	70	74

Source: Made by MHRT based upon the ifo



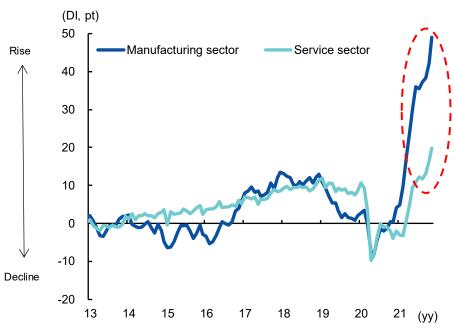
Inflation accelerated further in November. Winter will be the peak, but inflation will remain high for the time being

- Eurozone consumer prices rose in November (+4.9% y-o-y), accelerating from the previous month (change from previous month: +0.8% pt). The rise of energy (y-o-y contribution +0.4% pt) mainly drove the overall rise, together with services (y-o-y contribution +0.3% pt) and goods (y-o-y contribution +0.1% pt).
 - Other factors are increasing beyond the reaction to the VAT tax cut (base effect), confirming the increase of inflationary pressures.
- Although the pace of price rises in 2022 is expected to peak out as the base effect diminishes, it is likely to remain at high levels for the time being, as there are growing hopes for corporations to sell products or services at higher prices.
 - Employee compensation in the Jul-Sep guarter lacked strength, and the upward spiral in wages and prices has not been confirmed so far.

Eurozone: consumer price index (CPI)

(Y-o-y % ch) Consumer price index Base effect Others 6.0 Being raised by factors other than the base effect (inflation in the corresponding period 5.0 of the previous year), indicating increased inflationary pressure 4.0 3.0 2.0 1.0 0.0 21/4 21/5 21/6 21/7 21/8 21/9 21/10 21/11 (yy/mm)

Eurozone: DI for selling price expectations



The base effect refers to the degree of the impacts on prices (y-o-y) associated with the policy effects of the previous year, etc. Calculated based on deviations from the 2012-19 average m-o-m change for each month. Source: Made by MHRT based upon Eurostat.

The reading of zero is the DI threshold.

Source: Made by MHRT based upon the European Commission.



The ECB will implement a phased reduction in asset purchases. Policy rates are likely to remain unchanged throughout 2022

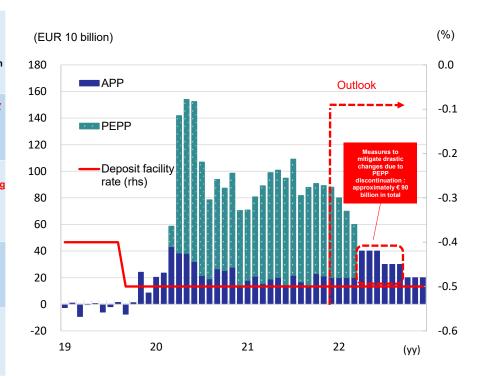
- At the Governing Council meeting in December, the ECB announced its plan to discontinue new net asset purchases under the Pandemic Emergency Purchase Program (PEPP) at the end of March 2022. At the same time, the ECB indicated that it will continue to take an accommodative stance, such as extending the reinvestment horizon for principal payments from maturing securities purchased under the PEPP for one year until the end of 2024.
 - Subsequent to the discontinuance of new purchases under the PEPP, the ECB will temporarily increase monthly purchases under the existing Asset Purchase Program (APP) and reduce the overall amount of asset purchases in phased steps, as cataclysmic mitigation measures.
- The odds are high that the policy rate will remain unchanged during 2022.
 - Although the inflation outlook has been revised up, inflation is still projected to settle below the 2% inflation target from 2023 onward.

Key points of the ECB Governing Council meeting (December 16)

The current pandemic wave and extended supply bottlenecks will be a drag on the economy, but the ECB expects growth to rebound strongly over the course of 2022. The ECB now expects output to exceed its pre-pandemic level in the first quarter of Economic situation / staff projections New ECB staff projections foresee annual real GDP growth at +4.2% in 2022, +2.9% in 2023 and +1.6% in 2024. (September projections for 2022 and 2023 were +4.6% and +2.1%, respectively) inflation is expected to remain elevated in the near term owing to the surge in energy prices, but decline over the course of 2022. New staff projections foresee annual inflation at +3.2% in 2022, +1.8% in 2023, and Inflation outlook (September projections for 2022 and 2023 were +1.7% and +1.5%, respectively) ECB will discontinue new net asset purchases under the PEPP at the end of March 2022 (as originally projected). Will now reinvest the principal payments from maturing Pandemic Emergency securities purchased under the PEPP until the end of 2024 (extended by one year). Purchase Program (PEPP) Depending on the situation, PEPP reinvestments can be adjusted flexibly, including purchasing bonds issued by the Hellenic Republic over and above rollovers of redemptions. Net purchases under the PEPP could also be resumed, if necessary. After discontinuing PEPP, in line with a step-by-step reduction in asset purchases, the ECB decided to increase the volume of purchases on a monthly net purchase Asset Purchase Programme pace from the current €20 billion, to €40 billion in the second quarter and €30 billion in the third quarter. From the fourth quarter onwards, the volume will return to €20 billion. Liquidity provision program, the Targeted Longer-Term No additional measures indicated (new applications will end in December 2021. The Refinancing Operations special conditions applicable under TLTRO III will end in June 2022) (TLTRO)

Source: Made by MHRT based upon ECB.

ECB: outstanding asset purchases



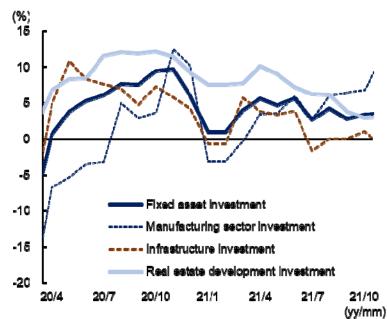
Source: Made by MHRT based upon ECB.



Chinese economy: economic indicators show only slight improvement in November

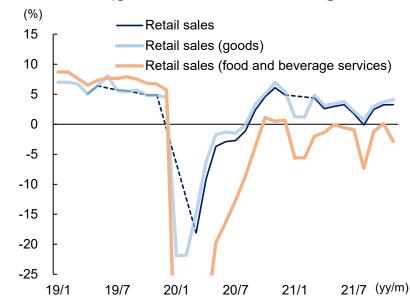
- Fixed asset investment improved slightly to +3.6% compared to 2019 (annualized). from the previous month (+3.4% compared to 2019, annualized).
 - There is no fundamental change in the overall picture where manufacturing sector investment is serving to complement the weakness of investment in real estate and infrastructure.
 - A minor policy amendment helped mitigate the pace of the slowdown in real estate development investment. The underlying trend of overall investment has been improving, albeit at a moderate pace.
- Retail sales statistics (goods, food and beverage services) remained more or less flat at +3.3% compared to 2019 (annualized) (previous month: +3.2% compared to 2019 (annualized).
 - Food and beverage services were weak again due to a surge in infections in the northeast region and other areas in late October and November. Looking forward, retail sales should continue to lack momentum.
 - On the other hand, retail sales were supported by selective consumption, such as motor vehicles, where production conditions are recovering, and precious metals.

Fixed asset investment



Note: Y-o-y growth rate in 2020, and annualized growth rate in 2021 compared to 2019. Source: Made by MHRT based upon the National Bureau of Statistics of China and CEIC data.

Retail sales (goods, food and beverage services)



Note: Y-o-y growth until 2020, and annualized growth rate in 2021 compared to 2019. The retail sales contain data of certain months that are not published such as those of January and February every year, which are shown with a dotted line. For goods and food and beverage services in the breakdown, nominal values are converted to real values adjusted by the Retail Price Index.

Source: Made by MHRT based upon the National Bureau of Statistics of China and CEIC data.



The reserve requirement ratio and the loan prime rate were lowered. In the foreign exchange market, the yuan appreciation has been halted

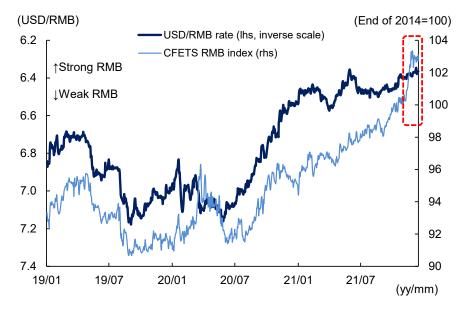
- On December 15, the People's Bank of China (PBOC) cut the reserve requirement ratio by 0.5%. On December 20, it cut its one-year loan
 prime rate (LPR) by 0.05%.
 - This is the first time in 20 months, since April 2020, that the LPR has been lowered. Only the one-year rate was cut, while the five-year rate was left unchanged.
 - The PBOC explained that there is "no change in its prudent monetary policy," but there is a possibility of further monetary easing to support the economy.
- The yuan rose against the US dollar to the 1 USD=6.34 RMB range on December 8, the highest yuan level since May 2018.
 - The CFETS RMB index surged to its highest level since the index was first published in December 2015, partly due to the depreciation of major currencies.
 - The appreciation of the yuan has been halted by raising the foreign exchange reserve requirement ratio and setting a weaker yuan fixing rate. A gradual depreciation of the yuan is expected going forward.

Benchmark interest rate and reserve requirement ratio

(%) (%)6.0 18.0 China one-year medium-term lending facility (MLF) rate China one-year loan prime rate (LPR) 16.0 Reserve requirement ratio (for large banks) (rhs) 5.0 14.0 11.5% 12.0 4.0 10.0 3.80% 8.0 3.0 6.0 4.0 2.0 2.0 20/07 18/01 19/01 19/07 21/01 (vv/mm)

Source: Made by MHRT based upon the People's Bank of China, National Interbank Funding Center, and CEIC data.

USD/RMB rate and CFETS RMB index



Note: The CFETS RMB Index are estimates by MHRT. Daily data. Latest readings are as of December 15, 2021.

Source: Made by MHRT based upon CFETS, CEIC data.



The Japanese economy: the Jul-Sep quarter 2nd QE was revised downward. Steady growth is expected to continue in the second half of the fiscal year

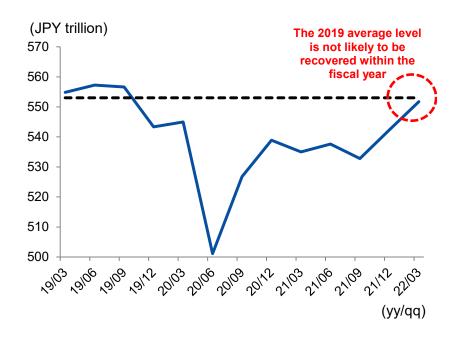
- According to the Second Preliminary Quarterly Estimates of GDP ("2nd QE"), Japan's real GDP growth in the Jul-Sep quarter was revised downward to -0.9% q-o-q (-3.6% p.a.) from the 1st QE (-3.0% p.a.)
 - This was mainly due to a downturn in personal consumption, inventory investment, and public investment. Our view remains unchanged that Japan's economy stagnated in the Jul-Sep quarter, caused by factors serving as a drag including the fading of stay-at home demand, the spread of the Delta variant, and motor vehicle output cuts due to supply constraints of semiconductors and other parts.
 - In the Oct-Dec and Jan-Mar quarters, Japan's economy is expected to continue to grow at a high rate (+7% q-o-q p.a.) due to a recovery in personal consumption associated with increased number of people going out and a slower pace of motor vehicle output cuts due to the alleviation of the effects related to Southeast Asia. However, GDP is not expected to regain its pre-pandemic (2019 average) level by the end of the fiscal year due to the following factors serving as a drag: (1) lingering Covid-19 infection concerns, (2) deteriorating terms of trade, and (3) prolonged semiconductor shortages.

Jul-Sep quarter of 2021 (2nd QE) results and outlook on GDP growth from the Oct-Dec quarter onward

	2020	2021				2022
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
Real GDP	2.3	-0.7	0.5	-0.9	1.8	1.7
(Q-o-q % change, p.a.)	9.6	-2.9	2.0	-3.6	7.4	7.1
(Y-o-y % change)	-0.9	-1.8	7.3	1.2	0.6	3.2
Domestic demand	1.4	-0.6	0.7	-0.9	1.7	1.7
	(1.4)	(-0.6)	(0.7)	(-0.9)	(1.7)	(1.7)
Private sector demand	1.6	-0.5	1.0	-1.4	2.3	2.0
	(1.2)	(-0.4)	(0.7)	(-1.0)	(1.6)	(1.5)
Personal consumption	2.3	-1.1	0.6	-1.3	2.4	2.5
Housing investment	0.0	0.9	1.0	-1.6	-0.6	0.7
Capital investment	1.2	0.4	2.0	-2.3	2.4	1.6
Inventory investment	(-0.2)	(0.1)	(0.0)	(0.1)	(-0.0)	(-0.2)
Pubilc sector demand	0.7	-0.8	0.0	0.4	0.3	1.0
	(0.2)	(-0.2)	(0.0)	(0.1)	(0.1)	(0.3)
Government consumption	8.0	-0.6	0.7	1.0	0.3	1.0
Public investment	0.6	-1.5	-2.6	- 2.0	0.5	1.1
External demand	(0.9)	(-0.1)	(-0.2)	(0.0)	(0.1)	(0.0)
Exports	11.1	2.3	2.5	-0.9	1.0	2.0
Imports	5.0	3.2	3.9	-1.0	0.6	1.8
Nominal GDP	1.8	-0.7	0.1	-1.0	0.7	3.1
GDP deflator (y-o-y change)	0.2	-0.1	-1.1	-1.2	-1.6	-0.3

Note: A q-o-q basis (in real terms) unless otherwise noted. The figures in parentheses represent the contribution to growth. Figures for the Oct-Dec quarter 2021 and beyond are forecasts. Source: Made by MHRT based upon Cabinet Office, *Quarterly Estimates of GDP*.

Real GDP growth outlook



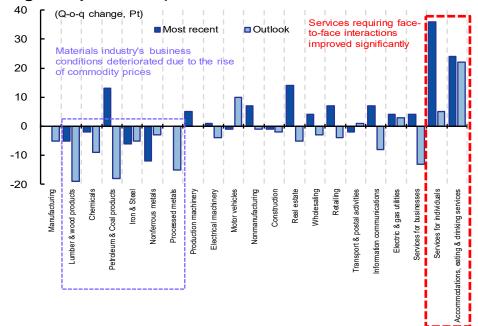
Note: The dotted line indicates the average level for 2019. Source: Made by MHRT based upon Cabinet Office, *Quarterly Estimates of GDP*.



Business conditions in the manufacturing sector levelled-off. The nonmanufacturing sector improved significantly, mainly in the services requiring face-to-face interactions

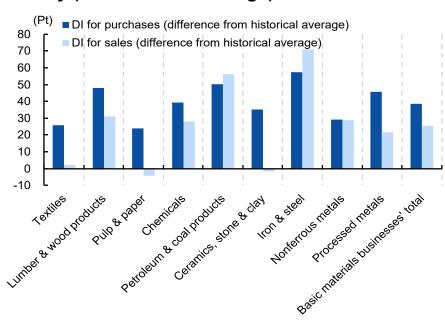
- The business conditions DI of the Bank of Japan's *Short-Term Economic Survey of Enterprises in Japan (Tankan, December survey)*, for large corporations and manufacturing sector levelled-off, while the nonmanufacturing sector improved significantly.
 - In the manufacturing sector, the DI for production machinery and electrical machinery improved, but the DI for materials and motor vehicles deteriorated, serving as a drag overall. A sharp rise in purchase prices, mainly in the materials sector, caused by the surge of commodity prices served as a negative factor for business conditions.
 - In the nonmanufacturing sector, the DI for sectors mainly in services for individuals and accommodation, eating and drinking services improved significantly, reflecting a recovery in consumption of services requiring face-to-face interactions.
- The outlook for business conditions DI deteriorated mainly in material industries, due to the impact of the rise of commodity prices on the
 manufacturing sector. In the nonmanufacturing sector, while services requiring face-to face interactions is expected to continue to improve,
 the outlook deteriorated mainly in the services for businesses and information communication sectors, where the DI is already at a high
 level.

Change in DI for business conditions by industry (large corporations)



Source: Made by MHRT based upon Bank of Japan, Short-Term Economic Survey of Enterprises in Japan (Tankan).

DI for purchase/sales prices in the materials industry (vs. historical average)



Note: The historical average is the average from 2015 to 2019.

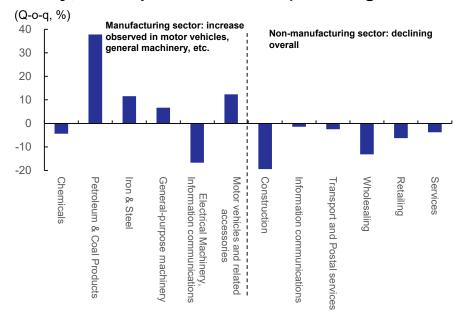
Source: Made by MHRT based upon Bank of Japan, Short-Term Economic Survey of Enterprises in Japan (Tankan).



Capital investment decreased in the Jul-Sep quarter, mainly in the nonmanufacturing sector. Expected to rebound in the Oct-Dec quarter

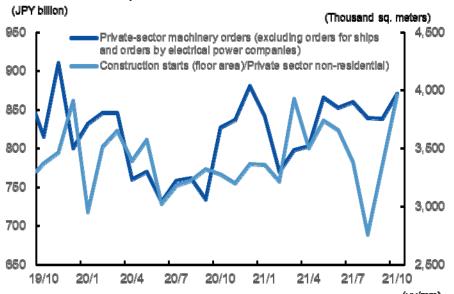
- Capital investment in the Jul-Sep quarter declined mainly in the nonmanufacturing sector. The postponement of investment due to the fifth wave of Covid-19 infections appears to have had an impact.
 - Capital investment (including software investment, all industries excluding finance and insurance) declined by -2.6% q-o-q.
 - In the manufacturing sector (-1.7% q-o-q), capital investment increased in some industries. On the other hand, capital investment fell sharply (-3.0% q-o-q) in the nonmanufacturing sector, revealing an overall decline.
- Looking forward, capital investment is expected to rebound in the nonmanufacturing sector in response to the lifting of the declaration of a state of emergency. On average, capital investment is expected to remain on a gradual downward path.
 - Leading indicators are rising gradually. Private-sector machinery orders are expected to grow in the Oct-Dec quarter (+3.1% q-o-q).
 - Construction starts (floor area) (private sector non-residential) rebounded in September and October. The pickup from the second half of last year is continuing.

Financial Statements Statistics of Corporations by Industry, and capital investment (including software)



Note: Seasonally adjusted by MHRT.
Source: Made by MHRT based upon Ministry of Finance, *The Financial Statements Statistics of Corporations by Industry*.

Leading index for capital investment (machinery / construction)



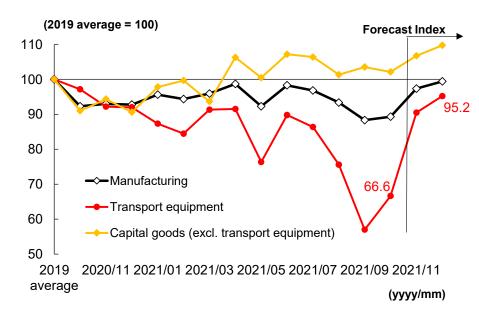
Note: 1. Construction starts (floor area) is seasonally adjusted by MHRT.
 2. October figures exclude large projects of approximately 900 thousand square meters.
 Source: Made by MHRT based upon the Cabinet Office, Machinery Orders from Private Sector by Machinery Classification, and the Ministry of Land, Infrastructure, Transport and Tourism, Data of the Current Survey of Construction Statistics.



Motor vehicle output is expected to achieve a full-fledged recovery from November, and capital goods are also expected to follow firm footing

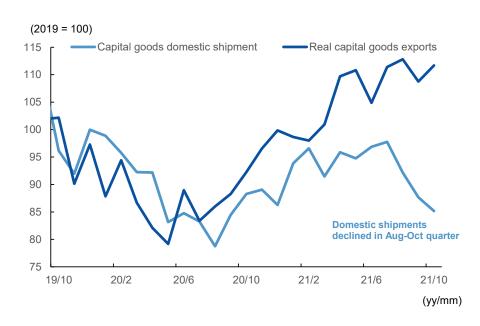
- The impact of motor vehicle output cuts should start to ebb from November.
 - Industrial production rose in October (+1.1% m-o-m), rising for the first time in four months. Motor vehicles and production machinery boosted overall production.
 - The automobile industry has bottomed out and is expected to recover to 95% of its 2019 output level in December.
 - However, after the start of 2022, recovery production is expected to vary among automakers, leading to limited boost in overall output.
- Output of capital goods is currently weak, given the postponement of domestic investment due to the resurgence of Covid-19 infections.
 However, capital goods output should follow firm footing going forward, given support by external demand.
 - Real exports of capital goods are on the rise, suggesting that domestic factors, not supply constraints, may be the cause of the weakness in capital goods.

Industrial production / actual results and production forecast index



Source: Made by MHRT based upon Ministry of Economy, Trade and Industry, *Indices of Industrial Production*.

Domestic shipments of capital goods and exports of capital goods in real terms



Source: Made by MHRT based upon the Ministry of Economy, Trade and Industry, *The Indices of Industrial Domestic Shipments and Exports*, and the Bank of Japan, *Developments in Real Exports and Real Imports*.



Exports rose, driven by motor vehicles. Import values reached a historical high

- The export volume index rose in November ($\pm 2.2\%$ m-o-m), turning positive for the first time in four months (October: $\pm 0\%$ m-o-m).
 - Exports of motor vehicles rose (+23.2% m-o-m), reflecting the gradual resolution of supply constraints. In addition, IC and capital goods trended at high levels.
- Import values reached a historical high due to the rise of commodity prices. The trade balance is showing an excess of imports for the seventh consecutive month.
- Looking ahead, exports are expected to increase gradually, reflecting the recovery in motor vehicles. On the other hand, the increase in import costs will continue to be an impediment to the recovery of corporate earnings.

Trends in exports by major items

(2019 average = 100)

130 110 90 70 Overall exports Motor vehicles

<--IC

2021/01

General machinery (capital goods)

2021/07

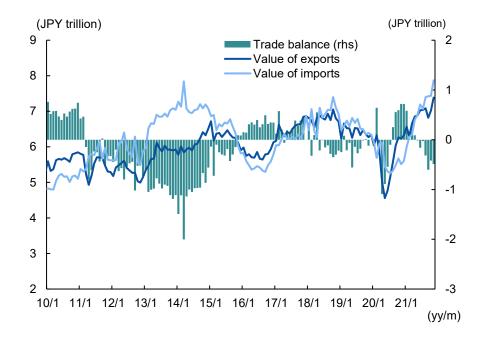
(yyyy/mm)

Note: Seasonally adjusted by MHRT.

Source: Made by MHRT based upon Ministry of Finance, Trade Statistics.

2020/07

Trends in import / export values and trade balance



Note: Seasonally adjusted by MHRT.

Source: Made by MHRT based upon Ministry of Finance, Trade Statistics.



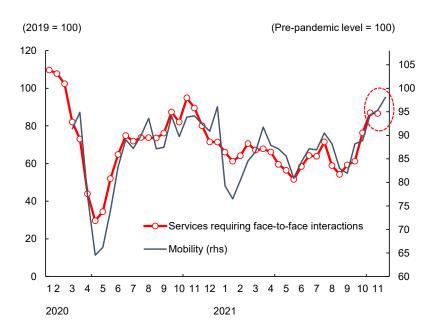
30

2020/01

The pace of recovery in service consumption slowed down. Cautious stance among households attitude appears to have served as a drag

- In the first half of November, consumption of services requiring face-to-face interaction remained flat from the second half of October. Signs of robust service consumption above pre-pandemic levels could not be confirmed from recent data releases.
 - In the survey on consumption behavior (as of November), 90% of respondents answered that their consumption behavior was "almost the same" or "partially the same" compared to that during the declaration of a state of emergency. This suggests that households are still taking a cautious stance in consumption behavior.
- Looking ahead, service consumption should continue to recover in the Jan-Mar quarter of 2022 on the back of the easing of restrictions and consumer behavior.
 - However, there are concerns that consumer sentiment will deteriorate due to rising prices and the spread of Covid-19 variants.

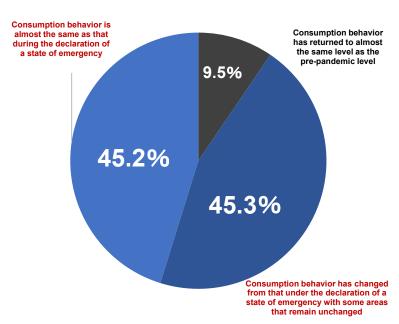
Trends of consumption of services requiring face-to-face interactions and mobility



Note: The index representing consumption of services requiring face-to-face interactions is seasonally adjusted by MHRT. Mobility is represented by retail and entertainment mobility.

Source: Made by MHRT based upon JCB and Nowcast, *JCB Consumption NOW*, and Google LLC, *Google COVID-19 Community Mobility Reports*.

Questionnaire on consumer behavior after the lifting of the declaration of a state of emergency



Note: The question was: "Please select the one that best describes the change in your current consumption behavior compared with that under the most recent declaration of a state of emergency."

Source: Made by MHRT based upon the Consumer Affairs Agency, *The Monitoring Survey on Consumer Price*.



Bank of Japan: December Meeting decides on partial extension of the Covid-19 response program

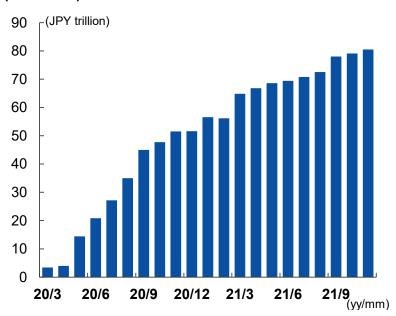
- At the December Monetary Policy Meeting (December 16 and 17), the Bank of Japan (BOJ) decided to maintain its current monetary
 policy. The economic outlook was left unchanged.
- With regard to the Special Program to Support Financing in Response to the Novel Coronavirus (Covid-19), which will expire at the end of March 2022, BOJ decided to complete the increase in purchases of CP and corporate bonds as scheduled, and to partially extend the Special Funds-Supplying Operations until the end of September 2022.
 - Raising the purchase value limit for corporate bonds and CP will be completed as scheduled. The outstanding balance will be reduced in a gradual manner from April 2022.
 - The BOJ decided to partially extend the Special Funds-Supplying Operations, since it judged that some difficulties remain, such as in the service sectors requiring face-to-face interactions, despite the general improvement in the cash flow of small and medium-sized enterprises (SMEs).

Partial extension of the Special Program to Support Financing in Response to the Novel Coronavirus (Covid-19)

Programs	Decision			
Increased purchases of CP and corporate bonds (up to a total of 20 trillion yen)	O <u>Complete as scheduled</u> •After April, the balance will be reduced gradually to the prepandemic levels (CP, etc.: approx. 2 trillion yen, corporate bonds, etc.: approx. 3 trillion yen)			
Special Funds- Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (Covid-19)	OExtended until the end of Sep 2022 Non-government-supported loans for small and medium-sized firms: No change in content (applied interest +0.2%, twice as much as the amount of increase in loans will be included in the Macro Add-on Balances) Government-supported loans for small and medium-sized firms: Applied interest rate lowered (+0.1% → 0.0%) The amount included in the macro added-on balance reviewed (twice as much as the amount of increase in loans ⇒ the amount outstanding of funds they receive)			
	OComplete as scheduled Funds against private debt pledged as collateral, which mainly consists of debt issued by large firms and housing loans			

Source: Made by MHRT based upon the Bank of Japan.

Balance of the BOJ's Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (Covid-19)



Source: Made by MHRT based upon the Bank of Japan.



Sustainability: COP26 moves forward with request for phase-out of unabated coal power and detailed agreement on market mechanisms

- The main points of the COP26 climate change conference, which closed in November 2021, were (1) providing further financial assistance to emerging countries, (2) gradual phase out of coal-fired power plants that have not taken emission reduction measures, and (3) develop market rules.
 - It was the first time in a United Nations document, that the policy on the use of specific technologies (coal-fired power) was mentioned. The odds are high that pressure to curb the use of coal-fired power will increase worldwide.
 - The rules for market mechanisms that would allow international emissions trading were settled in the final stage of COP26. These will serve as tailwinds for businesses in emerging countries.

Main discussion points at COP26 (Issues that were focused on prior to the conference)

Financial assistance to emerging countries

Under the Paris Agreement, developed countries pledged to provide \$100 billion per year in financial assistance to emerging countries until 2025. However, according to the OECD, the amount of aid in 2019 was less than \$100 billion, and the focus will be on the support system after 2025.

<u>Set each country's ambitious emission reduction</u> goals (Nationally Determined Contributions (NDCs))

Focus on whether the goals currently proposed by each country toward 2030 can be made more ambitious.

Establish rules for market mechanisms (emissions trading)

Focus on establishing rules for calculating emission reductions and whether to acknowledge the emissions quotas generated by emissions trading, which were implemented following the Kyoto Protocol, even after the Paris Agreement.

Source: Made by MHRT based upon various reports.

Outcomes of discussions at COP26



 Call for doubling the amount by 2025 compared to 2019 levels



- ✓ Request for reviews and strengthening of goals by the end of 2022
- ✓ Call for gradual phase out of coal-fired power plants without emission reduction measures and inefficient fossil fuel subsidies



Agreement on rules

 Emission credits appropriated under the Kyoto Protocol will be partially available for continued use. Double counting of emission reductions by host and implementing countries is not allowed

Source: Made by MHRT based upon the United Nations.



COP26 suggests "Europe-driven" climate change measures may become standard. Regulatory trends in Europe and other countries will require attention

- The COP26's decision is expected to change the business environment for corporations.
 - Introduction of market mechanisms may lead to integration and expanded impact of carbon pricing in Europe and other countries.
 - As a result of the decision to call for a reduction in coal-fired power generation, there is an increased likelihood that the strict European rules that restrict even the technologies used will become the global standard.
- Going forward, regulatory trends in Europe and other countries will require attention.

Introduction of market mechanisms

[Base scenario]

Scenarios to watch

Expansion of business in emerging countries

 Tailwind for Japanese corporations with proven emission reduction technologies



Strengthening of cooperation and integration of emission trading markets in various countries, and expansion of the impact of carbon pricing in other countries, especially in the EU Emissions Trading Market (EU-ETS). This will be an opportunity to strengthen carbon pricing in Japan.

Source: Made by MHRT.

Gradual phase out from coal-fired power

- No impact on coal-fired power plants that are "taking emission reduction measures"
 - Most of Japan's coal-fired power plants are highly efficient, and promoting cocombustion of biomass, etc.



- Further headwind for use of coal-fired power itself as EU rules become the global standard
 - Under EU taxonomy, coal-fired power is not considered "green," regardless of whether emission reduction measures are taken or not.

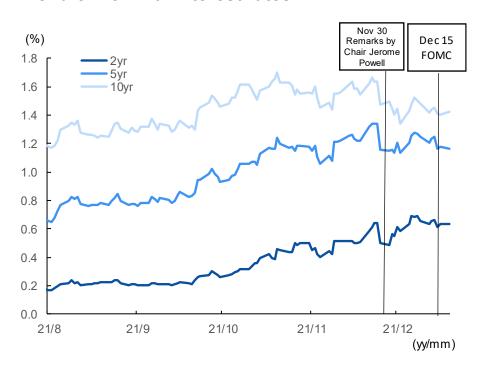
Source: Made by MHRT.



US bond market: the 10yr UST yield trends around the 1.4% level amid lingering concerns regarding the Covid-19 variant

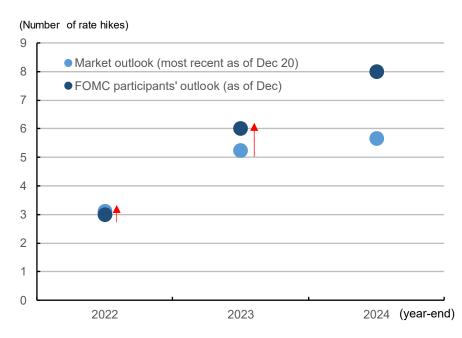
- The 10yr UST yield fell to around 1.4% due to concerns over the spread of Omicron variant infections.
 - The 2yr UST yield rose sharply after FRB Chair Jerome Powell suggested bringing forward tapering in his testimony to Congress (November 30).
 - While the FOMC (December 14 and 15) decided to move the taper forward and suggested three rate hikes in 2022, the reaction of interest rates on the day was limited as the decision was already factored in the market to some extent.
- Looking forward, we expect long-term interest rates to rise as the market factors in the interest rate hikes.
 - In 2022 and 2023, rate hikes are expected to be further factored in as high inflation continues amid the steady recovery of the economy.

Trend of nominal interest rates



Source: Made by MHRT based upon Bloomberg.

Market and FOMC participants' rate hike outlook



Note: The market outlook is calculated from Eurodollar futures (December contract), while FOMC participants' forecasts are based on the median of their policy rate expectations at the end of each year. The rise in rates per one rate hike is assumed to be 0.25%.

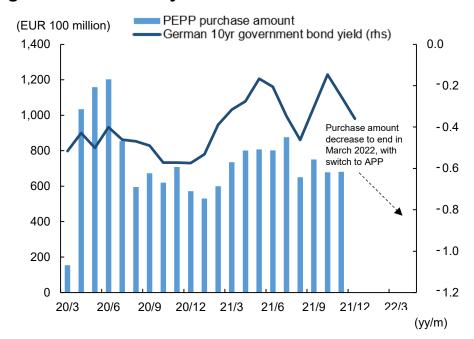
Source: Made by MHRT based upon FRB and Bloomberg.



Eurozone bond market: German 10yr government bond yield trended around the -0.3% level reflecting concerns regarding the Covid-19 variant

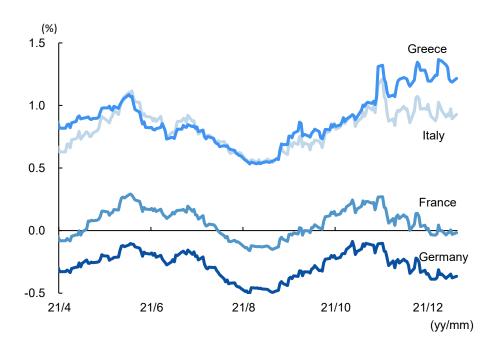
- German 10-year government bond yield trended around the -0.3% level on the back of risk-off sentiment due to concerns over the Omicron variant.
 - Interest rates in European countries rose slightly, given the ECB's decision to discontinue the Pandemic Emergency Purchase Program (PEPP) at the end of March 2022 as the market expected.
 - On the other hand, Greek interest rates dropped due to the possibility of the ECB purchasing more Greek government bonds over and above rollovers or redemptions when reinvesting through the PEPP.
- Looking forward, the German 10yr government bond yield is expected to rise on the back of the reduction of ECB asset purchases and
 rise of US interest rates.
 - Even so, the pace of the rise will most likely be moderate since an interest rate hike is unlikely during 2022 in view of expectations of the fall of Eurozone inflation.

PEPP purchase amount and German 10yr government bond yield



Note: German 10-year government bond yield represented is monthly average. Source: Made by MHRT based upon Bloomberg.

Eurozone countries' 10yr government bond yields



Source: Made by MHRT based upon Bloomberg.



Japanese bond market: the 10yr JGB yield is projected to move in the mid-0.0% range

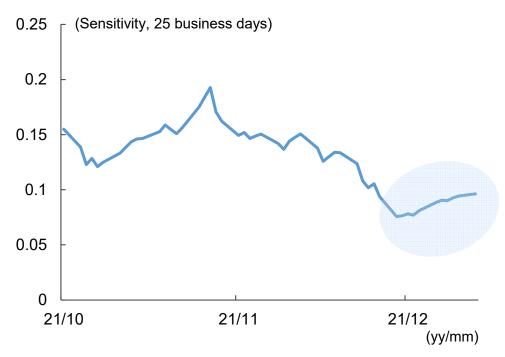
- The 10yr JGB yield fell to the low 0.0% range, due mainly to moves to avoid risks, including a decline in US long-term interest rates caused by caution over the Omicron variant.
 - Even though sensitivity to US long-term interest rates had been declining since late November, the linkage has been increasing.
- The 10yr JGB yield is expected to trend in the mid-0.0% range
 - Given that US long-term interest rates are expected to rise moderately due to expectations of an early rate hike reflecting the persistence of high inflation, long-term interest rates in Japan are also expected to rise. However, Japan's long-term interest rates are expected to move within a narrow range around the upper half of the 0.0% range due to the continuation of the Bank of Japan's yield curve control.

Trends in JGB yields

0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0.0 0.1 0.0 20yr 0.1 0.0 21/1 21/2 21/3 21/4 21/5 21/6 21/7 21/8 21/9 21/1021/1121/12 (yy/mm)

Source: Made by MHRT based upon Bloomberg.

Sensitivity of the 10yr JGB yield to the 10yr UST yield



Source: Made by MHRT based upon Bloomberg.



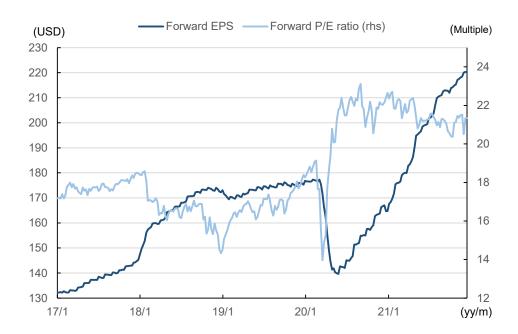
US stock market: large market swings due to lingering concerns regarding the Omicron variant

- The US stock market is subject to large swings, given lingering concerns regarding the spread of Omicron variant infections.
 - Since the second half of November, the stock market fell sharply due to caution against the Omicron variant. The market's concerns subsequently receded, lifting the S&P 500 to a record high (December 10). However, the market softened slightly mainly with respect to high-tech stocks after the FOMC meeting (December 14 and 15).
 - The VIX index, which measures the future level of volatility in the market, temporarily reached the 30 pt level for the first time in 10 months.
- In the US stock market, the P/E ratio remains high despite expectations of the rise of the EPS, indicating a lingering sense of overvaluation. Looking forward, US stocks should flatten out as the sense of overvaluation fades.

Trends in the VIX Index

(Pt) (Pt) 4,800 4,600 35 4.400 30 4,200 4,000 25 3.800 20 3,600 3.400 15 3.200 3,000 10 20/11 21/2 21/5 21/8 21/11 (yy/mm)

S&P 500 forward EPS and forward P/E ratio



Note: Forward EPS and forward P/E ratio are based on a 12-month forward forecast. Source: Made by MHRT based upon Refinitiv.

Source: Made by MHRT based upon Refinitiv.



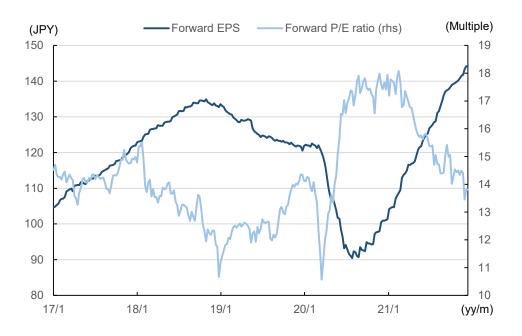
Japanese stock market: stocks subject to large swings as in the US stock market

- As in the US, the Japanese stock market is subject to large swings, given lingering concerns regarding the spread of Omicron variant infections.
 - Despite a market rebound when concerns regarding the Omicron variant receded, the rebound of Japanese stocks was not as strong as that of US stocks.
 - Factors such as Prime Minister Fumio Kishida's comments on the possibility of establishing guidelines for share buybacks, served as negative factors.
- The P/E ratio of Japanese stocks has recently dipped below 14x. Amid the recovery of the Japanese economy, Japanese corporations are expected to maintain solid corporate earnings, which should limit a further decline of the future P/E ratio. Japanese stocks are expected to remain steady in line with the rise of the EPS.

Trends in total amount of share buybacks by TOPIX indexed corporations

(JPY trillion) 6 5 4 3 2 1 FY2011 FY2013 FY2015 FY2017 FY2019

TOPIX forward EPS and forward P/E ratio



Note: Aggregated from the cash flow statements of TOPIX indexed corporations whose fiscal year-end is March.

Source: Made by MHRT based upon Bloomberg

Note: Forward EPS and forward P/E ratio are based on a 12-month forward forecast. Source: Made by MHRT based upon Refinitiv.



Forex market: the dollar is expected to strengthen against the yen as US rate hikes are factored in

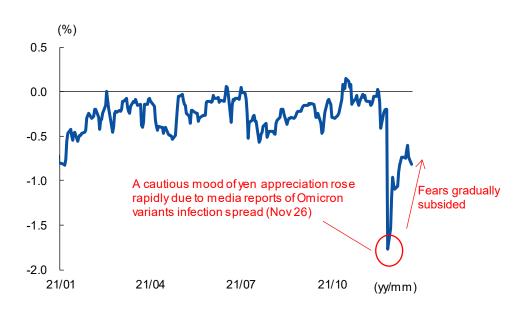
- Although the yen strengthened against the dollar to the JPY 112 range to the US dollar, due to concerns about the spread of Omicron
 variant infections, the yen subsequently weakened against the dollar.
 - Given FRB Chair Jerome Powell's hawkish stance in his testimony to Congress (November 30), and reports on the effectiveness of booster vaccinations against the Omicron variant, US interest rates rose, leading to a further widening of the US-Japan interest rate differential, causing the yen to weaken against the dollar.
- Looking forward, we expect the yen to weaken against the dollar as US interest rate hikes are factored in.
 - In view of the USD/JPY risk reversal, it appears that concerns regarding the strong yen reflecting fears regarding the spread of Omicron variant infections, are subsiding.

USD/JPY rate and **US-Japan** interest rate differentials

(USD/JPY) (% pt) 116 1.6 USD/JPY rate 115 1.5 114 1.4 113 1.3 112 1.2 US-Japan interest rate differential (rhs) 111 1.1 11/15 11/29 12/13 11/1 (mm/dd)

Note: US-Japan interest rate differential = yield on 5yr US government bonds – yield on 5y JGBs. Source: Made by MHRT based upon Bloomberg.

USD/JPY risk reversal



Note: Risk reversal represents the same exercise date, and price difference between calls and puts in the same delta. It is known as an indicator that reflects the risk perception of option market participants. Delta 25%, 1 month.

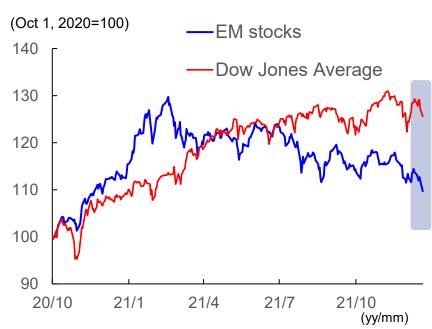
Source: Made by MHRT based upon Bloomberg.



EM financial markets: both stocks and currencies are generally weak

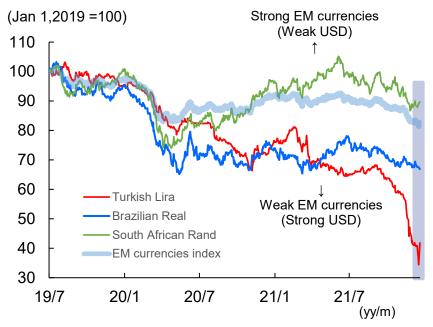
- EM stocks continue to face a heavy topside.
 - EM stocks declined due to reports of the emergence of the Omicron variant. Subsequently ,the topside of EM stocks remains heavy in contrast to the rebound of US stocks.
 - The observed slowdown in China's economy due to debt problems in the real estate sector is also raising uncertainty on the future.
- High inflation has led to currency depreciation in emerging countries.
 - The FOMC's decision on an early end of tapering also served as downward pressure on emerging market currencies.
 - In contrast to interest rate hikes in EM countries in a bid to curb inflation and currency depreciation, the Turkish Lira is recording new lows due to Turkey's monetary easing stance.

EM stocks and Dow Jones Average



Note: EM stocks are indicated by MSCI Emerging Markets. Source: Made by MHRT based upon Refinitiv.

Trend of EM currencies



Note: EM currencies index is indicated by JP Morgan Emerging Markets FX Index. Source: Made by MHRT based upon Refinitiv.



Outlook on the financial markets

		Dec 20, 2021	Oct-Dec	Jan-Mar	Apr-Jun	
	Interest rate on Policy-Rate balances	-0.10	-0.10	-0.10	-0.10	
	(End of quarter, %)	-0.10	-0.10	-0.10		
Japan	Newly-issued JGBs	0.04	0.00 to 0.10	0.00 to 0.10	0.05 to 0.15	
an	(10yr, %)	0.04	0.00 to 0.10	0.00 to 0.10	0.00 to 0.10	
	Nikkei Stock Average	27,938	28,500 to 29,500	28,900 to 29,900	29,400 to 30,400	
	(JPY)	21,300	20,000 to 20,000	20,000 to 20,000	29,400 10 30,400	
	Federal Funds Rate	0.00 to 0.25	0.00 to 0.25	0.25 to 0.50	0.50 to 0.75	
	(End of quarter, %)	0.00 to 0.25	0.00 to 0.25	0.23 to 0.30	0.50 to 0.75	
C	Long-term UST	1.42	1.45 to 1.65	1.65 to 1.85	1.80 to 2.00	
S	(10yr, %)	1.72		1.00 to 1.00	1.00 to 2.00	
	Dow Jones Average	34,932	34,400 to 36,200	34,300 to 36,100	34,000 to 35,800	
	(USD)	04,002	04,400 to 00,200	04,000 10 00,100	O+,000 to 00,000	
Ē	ECB deposit facility rate	-0.50	-0.50	-0.50	-0.50	
Jro:	(End of quarter, %)	0.00	0.00	0.00	-0.00	
urozone	Long-term government bond	-0.37	-0.35 to -0.15	-0.35 to -0.15	-0.25 to -0.05	
Ф	(Germany, 10yr, %)	0.07	0.00 to 0.10	0.00 10 0.10	-0.20 10 -0.00	
Forex	USD/JPY rate	113.61	112 to 114	114 to 116	115 to 117	
	(USD/JPY)	110.01	11210117	11410110	113 10 117	
œx	EUR/USD rate	1.128	1.12 to 1.14	1.11 to 1.13	1.10 to 1.12	
	(EUR/USD)	1.120	1.12 10 1.14	1.11 to 1.15	1.10 to 1.12	

Note: 1. The foreign exchange rates (actual) are NY closing rates.
2. The projected policy interest rate indicated for the Jul-Sep, Oct-Dec, and Jan-Mar quarters is the end of quarter closing rate, while others indicate that the average value in the quarter will fall within the range indicated.

Source: Made by MHRT based upon Bloomberg



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