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# *Outlook for Economic Activity and Prices*

*October 2021*



(English translation prepared by the Bank's staff based on the Japanese original)

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## Outlook for Economic Activity and Prices (October 2021)

### The Bank's View<sup>1</sup>

#### Summary

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- The outlook for Japan's economy is that, for the time being, downward pressure stemming from the novel coronavirus (COVID-19) is likely to remain on services consumption, and exports and production are expected to decelerate temporarily due to supply-side constraints. Thereafter, however, with the impact of COVID-19 waning gradually, mainly due to the widespread vaccinations, the economy is likely to recover, supported by an increase in external demand, accommodative financial conditions, and the government's economic measures. From the middle of the projection period, as a virtuous cycle from income to spending intensifies in the overall economy, including the household sector, Japan's economy is projected to continue growing at a pace, albeit slower, above its potential growth rate.
  - The year-on-year rate of change in the consumer price index (CPI, all items less fresh food) is likely to increase moderately in positive territory for the time being, reflecting a rise in energy prices. Thereafter, albeit with fluctuations due to temporary factors, it is projected to increase gradually as a trend, mainly on the back of improvement in the output gap and a rise in medium- to long-term inflation expectations.
  - Comparing the projections with those presented in the previous *Outlook for Economic Activity and Prices* (Outlook Report), the projected growth rate for fiscal 2021 is somewhat lower, mainly for exports and private consumption, but that for fiscal 2022 is somewhat higher. The projected rate of increase in the CPI for fiscal 2021 is lower, mainly due to the effects of the rebasing of the index.
  - Concerning risks to the outlook, the course of COVID-19 and its impact on domestic and overseas economies continue to warrant attention. In particular, there are high uncertainties over whether the resumption of economic activity can progress smoothly while public health is being protected. Attention also should be paid to a risk that the effects of supply-side constraints seen in some areas will be amplified or prolonged.
  - With regard to the risk balance, risks to economic activity are skewed to the downside for the time being, mainly due to the impact of COVID-19, but are generally balanced for the middle of the projection period onward. Risks to prices are skewed to the downside.
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<sup>1</sup> "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on October 27 and 28, 2021.

## **I. Current Situation of Economic Activity and Prices in Japan**

Japan's economy has picked up as a trend, although it has remained in a severe situation due to the impact of COVID-19 at home and abroad. Overseas economies have recovered on the whole, albeit with variation across countries and regions. In this situation, exports and industrial production have continued to increase as a trend, despite being weak recently due to the effects of supply-side constraints seen in some areas. In addition, corporate profits and business sentiment have continued to improve on the whole. Business fixed investment has picked up, although weakness has been seen in some industries. The employment and income situation has remained weak due to the impact of COVID-19. Private consumption has shown signs of a pick-up recently, although downward pressure has remained strong, particularly on services consumption, mainly due to vigilance against COVID-19. Housing investment has picked up. Public investment has been more or less flat. Financial conditions have been accommodative on the whole, although weakness in firms' financial positions has remained in some segments. On the price front, the year-on-year rate of change in the CPI (all items less fresh food, and the same hereafter) has been at around 0 percent, mainly due to the rise in energy prices, despite being affected by COVID-19 and a reduction in mobile phone charges. Meanwhile, inflation expectations have picked up.

## **II. Baseline Scenario of the Outlook for Economic Activity and Prices in Japan**

### **A. Baseline Scenario of the Outlook for Economic Activity**

The outlook for Japan's economy is that, for the time being, downward pressure stemming from COVID-19 is likely to remain on services consumption, and exports and production are expected to decelerate temporarily due to supply-side constraints. Thereafter, however, with the impact of COVID-19 waning gradually, mainly due to the widespread vaccinations, the economy is likely to recover, supported by the increase in external demand, accommodative financial conditions, and the government's economic measures. In the corporate sector, a virtuous cycle is projected to continue operating, in which increases in exports and production that reflect steady external demand lead to a rise in business fixed investment, mainly through improvement in profits. In the household sector, it is highly likely that overall private consumption will pick up again because downward pressure on the face-to-face services sector is expected to gradually wane as the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations. Therefore, with improvement spreading from the corporate sector to the household sector, the recovery trend in the overall economy is projected to become pronounced.

From the middle of the projection period, although the pace of economic growth is likely to decelerate somewhat, mainly reflecting a peaking-out of pent-up demand at home and

abroad, the economy is projected to continue growing at a pace above its potential growth rate because the virtuous cycle from income to spending is expected to intensify in the overall economy, including the household sector, supported by accommodative financial conditions, for example.

Looking at the outlook for economic activity in more detail, as the impact of COVID-19 wanes gradually, overseas economies are likely to continue growing, albeit with variation across countries and regions, supported by aggressive macroeconomic policies taken mainly in advanced economies. In this situation, although Japan's exports of goods, mainly automobile-related ones, are expected to decelerate temporarily due to the effects of supply-side constraints, they are projected to continue increasing as a trend on the back of firm expansion in global demand, particularly for digital-related goods. Inbound tourism consumption, which is categorized under services exports, is expected to remain subdued while entry and travel restrictions continue but likely to recover thereafter.

Corporate profits are projected to continue on an improving trend on the back of a recovery in domestic and external demand, despite being affected by deterioration in the terms of trade that reflects a rise in international commodity prices and by supply-side constraints. In this situation, an uptrend in business fixed investment is expected to become clear, mainly for machinery and digital-related investments, supported by improvement in corporate profits, accommodative financial conditions, and the government's economic measures, although investment by the face-to-face services sector is projected to remain weak for the time being.

Private consumption, despite being restrained for the time being, mainly by vigilance against COVID-19, is expected to pick up again, supported by the materialization of pent-up demand, such as for services, as the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations. Thereafter, as the impact of COVID-19 subsides gradually, an uptrend in private consumption is projected to become evident, supported by improvement in employee income. Employee income is likely to increase moderately on the back of a rise in the number of employees that reflects the recovery in domestic and external demand and of wage increases in industries with acute labor shortage.

Public investment is projected to steadily increase, reflecting progress such as in construction related to building national resilience. Thereafter, it is expected to be at a relatively high level. Government consumption is likely to increase clearly for fiscal 2021, mainly reflecting a pick-up in healthcare expenditure and enhancement of the testing and vaccination systems and the medical treatment system, but see a lowering in its level thereafter.

Meanwhile, the potential growth rate is expected to rise moderately, mainly on the back of an increase in productivity due to advances in digitalization and of an acceleration in

capital stock growth due to the rise in business fixed investment.<sup>2</sup> These developments are likely to be encouraged by the government's measures to transform the economic structure toward the post-COVID-19 era and by accommodative financial conditions.

## **B. Baseline Scenario of the Outlook for Prices**

The year-on-year rate of change in the CPI is likely to increase moderately in positive territory for the time being. That is, although the rate is projected to continue to be pushed down relatively significantly by the reduction in mobile phone charges, it is expected to increase toward around the end of 2021, mainly due to the rise in energy prices reflecting the rise in crude oil prices, and also because of a rebound in hotel charges from last year's decline brought about by the "Go To Travel" campaign. When various temporary factors are excluded, the year-on-year rate of change in the CPI is likely to remain steady and continue to show a moderate increase in positive territory.

Thereafter, albeit with fluctuations due to temporary factors, such as deceleration in the rise in energy prices and dissipation of the effects of the rebound in hotel charges and of the reduction in mobile phone charges, the year-on-year rate of change in the CPI is expected to increase gradually as a trend, mainly on the back of improvement in the output gap and the rise in medium- to long-term inflation expectations. Although the output gap -- which captures the utilization of labor and capital -- has been negative recently, it is projected to turn positive with the economy returning to a growth path that outpaces its potential growth rate, and continue to expand moderately from the middle of the projection period. Under these circumstances, as households' tolerance of price rises improves moderately, mainly reflecting an increase in wage inflation, and as firms' price-setting stance gradually becomes active, the pass-through of cost increases and a rise in selling prices are likely to become widely observed. In addition, the increase in actual inflation is expected to lead to a rise in households' and firms' medium- to long-term inflation expectations through the adaptive formation mechanism and thereby encourage further price rises.

## **C. Financial Conditions**

The Bank has pursued Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control. It also has conducted various powerful monetary easing measures since March 2020 in response to the impact of COVID-19 with a view to supporting financing, mainly of firms, and maintaining stability in financial markets. The government has

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<sup>2</sup> Under a specific methodology, Japan's recent potential growth rate is estimated to be at around 0 percent or marginally positive. However, the rate should be interpreted with considerable latitude. This is because the estimate is subject to change depending on the methodologies employed and could be revised as the sample period becomes longer over time. In addition, there are high uncertainties in the current phase over how COVID-19 will affect the trends in productivity or labor supply.

conducted various measures to support financing, mainly of firms. Private financial institutions have actively fulfilled the functioning of financial intermediation. In this situation, although firms' financial positions have improved on the whole, mainly due to a pick-up in economic activity, weakness has remained, particularly for firms in industries facing subdued sales due to the impact of COVID-19, as well as small and medium-sized ones. The environment for external funding, such as bank borrowing and the issuance of CP and corporate bonds, has remained accommodative. On the back of financial system stability being maintained, the Bank considers that financial conditions will remain accommodative owing to the continuation of powerful monetary easing by the Bank, the government's measures, and efforts made by private financial institutions, and that this will support an increase in private demand.<sup>3</sup>

### III. Risks to Economic Activity and Prices

#### A. Risks to Economic Activity

Regarding the upside and downside risks to the aforementioned baseline scenario of the outlook for economic activity, it is necessary to pay attention to the following factors.

The first is the impact of COVID-19 on consumption activities. There are high uncertainties over the course of COVID-19 and its impact on the economy, or more specifically regarding people's vigilance against COVID-19 and its impact on consumption activities. If their vigilance entrenches due, for example, to the spread of highly contagious variants, there is a risk that economic activity will deviate downward from the baseline scenario. On the other hand, economic activity could improve by more than expected because if, for example, public health is protected and people's vigilance lessens significantly with the widespread vaccinations and the rollout of antiviral medicines, pent-up demand for services consumption will materialize relatively early.

The second factor is the effects of supply-side constraints. Mainly due to a rapid recovery in advanced economies, such as the United States, and to the effects of the resurgence of COVID-19 in Asia, supply-side constraints have been seen globally, including the semiconductor shortage, the stagnation of logistics such as in marine transport, and parts procurement difficulties reflecting supply-chain disruptions. As the impact of COVID-19 wanes, demand imbalances and production and shipping bottlenecks are likely to head toward a resolution. However, if the effects of supply-side constraints are prolonged or amplified by more than expected, there is a risk that economic activity will deviate further downward from the baseline scenario, particularly in the first half of the projection period.

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<sup>3</sup> Each Policy Board member makes their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding the future conduct of policy.

The third factor is developments in overseas economies. The growth rates of overseas economies are projected to decelerate gradually toward the end of the projection period, mainly reflecting further normalization of those economies and the peaking-out of economic stimulus measures taken in advanced economies. However, there is a risk that overseas economies, particularly emerging economies, will deviate downward from the baseline scenario if global financial conditions tighten by more than expected amid concern in global financial markets over firms' debt problems in certain industries within some emerging economies and over steps toward reducing monetary accommodation in advanced economies. On the other hand, overseas economies, mainly for consumption activities, could be pushed up through, for example, rapid spending of household savings that have accumulated significantly across economies due to various restrictions during the COVID-19 pandemic.

The fourth factor considered from a somewhat long-term perspective is firms' and households' medium- to long-term growth expectations. While it is likely that the economic structure and working style will be transformed toward the post-COVID-19 era, digitalization will see further advances, and efforts to address climate change will proceed, there are uncertainties over whether these developments raise or lower such expectations.

## **B. Risks to Prices**

If the aforementioned risks to economic activity materialize, prices also are likely to be affected accordingly. In addition, it is necessary to pay attention to the following two risks that are specific to prices.

The first is uncertainties over firms' price-setting behavior. In the baseline scenario of the outlook for prices, as described earlier, it is projected that firms' price-setting stance will gradually become active with continuing improvement in the output gap. That said, given, for example, that the entrenched mechanism of adaptive inflation expectations formation in Japan is complex and sticky, firms' price-setting behavior in the future entails uncertainties, including a risk that the pass-through of cost increases to selling prices, particularly to downstream or consumer prices, which are closer to final demand, will not progress.

The second is future developments in foreign exchange rates and international commodity prices, as well as the extent to which such developments will spread to import prices and domestic prices. These risks may lead prices to deviate either upward or downward from the baseline scenario. Thus, it is necessary to continue paying attention to them.



## IV. Conduct of Monetary Policy

In the context of the price stability target, the Bank assesses the aforementioned economic and price situation from two perspectives and then outlines its thinking on the future conduct of monetary policy.<sup>4</sup>

The first perspective involves an examination of the baseline scenario of the outlook. Although it will take time, the year-on-year rate of change in the CPI is likely to increase gradually toward achieving the price stability target, mainly on the back of improvement in the output gap and the rise in medium- to long-term inflation expectations.

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. Concerning risks to the outlook, the course of COVID-19 and its impact on domestic and overseas economies continue to warrant attention. In particular, there are high uncertainties over whether the resumption of economic activity can progress smoothly while public health is being protected. Attention also should be paid to the risk that the effects of supply-side constraints seen in some areas will be amplified or prolonged. With regard to the risk balance, risks to economic activity are skewed to the downside for the time being, mainly due to the impact of COVID-19, but are generally balanced for the middle of the projection period onward. Risks to prices are skewed to the downside. On the financial side, overheating has not been seen in asset markets and financial institutions' credit activities. Japan's financial system has maintained stability on the whole, despite the fact that COVID-19 has had a significant impact on economic and financial activity at home and abroad. In addition, even in the case of a future resurgence of COVID-19, the financial system is likely to remain highly robust on the whole, mainly because financial institutions have sufficient capital bases. When examining financial imbalances from a longer-term perspective, prolonged downward pressure on financial institutions' profits could create a risk of a gradual pullback in financial intermediation, given the existing factors -- such as the prolonged low interest rate environment, the declining population, and excess savings in the corporate sector -- as well as the recent impact of COVID-19. On the other hand, under these circumstances, the vulnerability of the financial system could increase, mainly due to the search for yield behavior. Although these risks are judged as not significant at this point, it is necessary to pay close attention to future developments.<sup>5</sup>

As for the conduct of monetary policy, the Bank will continue with QQE with Yield Curve Control, aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner. It will continue expanding the monetary

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<sup>4</sup> As for the examination from two perspectives in the context of the price stability target, see the Bank's statement released on January 22, 2013, entitled "The 'Price Stability Target' under the Framework for the Conduct of Monetary Policy."

<sup>5</sup> For details, see the Bank's *Financial System Report* (October 2021).

base until the year-on-year rate of increase in the observed CPI (all items less fresh food) exceeds 2 percent and stays above the target in a stable manner.

The Bank will continue to support financing, mainly of firms, and maintain stability in financial markets through (1) the Special Program to Support Financing in Response to the Novel Coronavirus (COVID-19), (2) an ample provision of yen and foreign currency funds without setting upper limits, mainly by purchasing Japanese government bonds (JGBs) and conducting the U.S. dollar funds-supplying operations, and (3) purchases of exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs) with upper limits of about 12 trillion yen and about 180 billion yen, respectively, on annual paces of increase in their amounts outstanding.

For the time being, the Bank will closely monitor the impact of COVID-19 and will not hesitate to take additional easing measures if necessary, and also it expects short- and long-term policy interest rates to remain at their present or lower levels.

### Forecasts of the Majority of the Policy Board Members

y/y % chg.

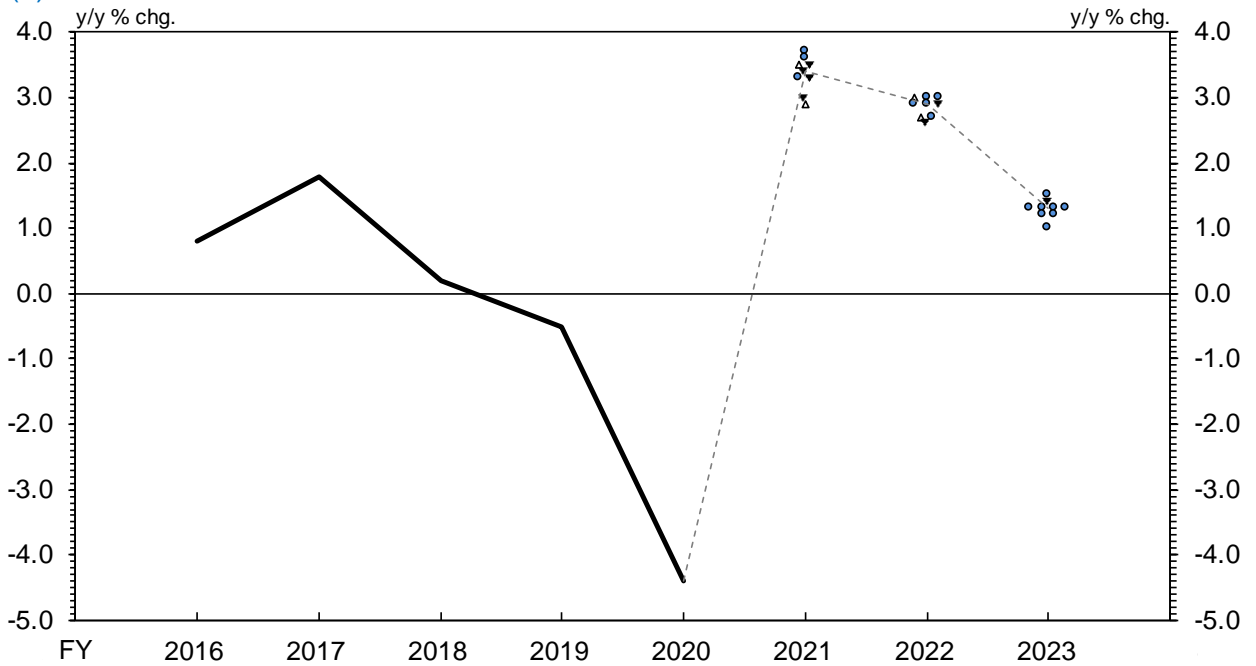
	Real GDP	CPI (all items less fresh food)
Fiscal 2021	+3.0 to +3.6 [+3.4]	0.0 to +0.2 [ 0.0]
Forecasts made in July 2021	+3.5 to +4.0 [+3.8]	+0.3 to +0.6 [+0.6]
Fiscal 2022	+2.7 to +3.0 [+2.9]	+0.8 to +1.0 [+0.9]
Forecasts made in July 2021	+2.6 to +2.9 [+2.7]	+0.8 to +1.0 [+0.9]
Fiscal 2023	+1.2 to +1.4 [+1.3]	+0.9 to +1.2 [+1.0]
Forecasts made in July 2021	+1.2 to +1.4 [+1.3]	+0.9 to +1.1 [+1.0]

Notes: 1. Figures in brackets indicate the medians of the Policy Board members' forecasts (point estimates).

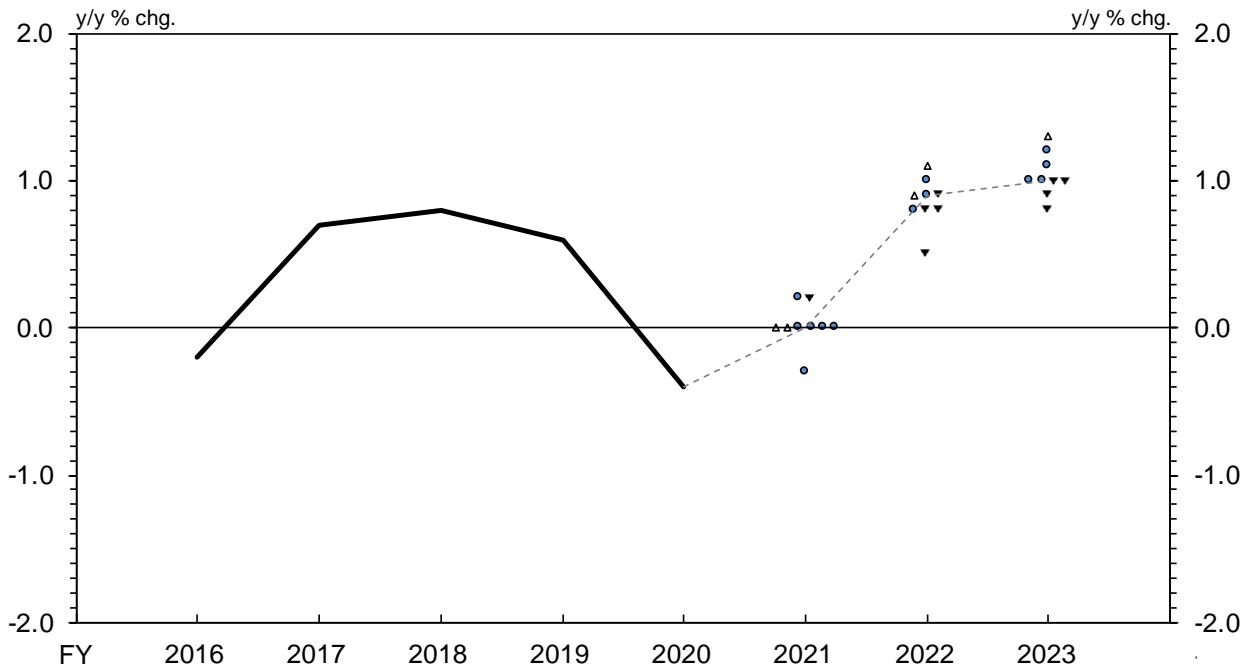
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which they attach the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.
3. Each Policy Board member makes their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding the future conduct of policy.
4. The reduction in mobile phone charges by major carriers conducted in spring 2021 is estimated to directly push down the CPI for fiscal 2021 by around 1.1 percentage points.
5. In August 2021, the base year of the CPI was changed from 2015 to 2020, and figures for the year-on-year rate of change from January 2021 onward were retroactively revised. Accordingly, the year-on-year rate of change in the CPI for all items excluding fresh food for the April-June quarter of 2021 was revised downward by around 0.7 percentage points; namely, from around 0.1 percent (2015-base) to minus 0.6 percent (2020-base). This is mainly because the negative contribution of mobile phone charges to the CPI expanded from around 0.6 percentage points to around 1.1 percentage points. The changes to the CPI forecasts in this Outlook Report from the previous ones are largely attributable to the rebasing of the CPI.

## Policy Board Members' Forecasts and Risk Assessments

### (1) Real GDP



### (2) CPI (All Items Less Fresh Food)



Notes: 1. The solid lines show actual figures, while the dotted lines show the medians of the Policy Board members' forecasts (point estimates).

2. The locations of ●, ▲, and ▼ in the charts indicate the figures for each Policy Board member's forecasts to which they attach the highest probability. The risk balance assessed by each Policy Board member is shown by the following shapes: ● indicates that a member assesses "upside and downside risks as being generally balanced," ▲ indicates that a member assesses "risks are skewed to the upside," and ▼ indicates that a member assesses "risks are skewed to the downside."

## The Background<sup>6</sup>

### I. Current Situation of Economic Activity and Its Outlook

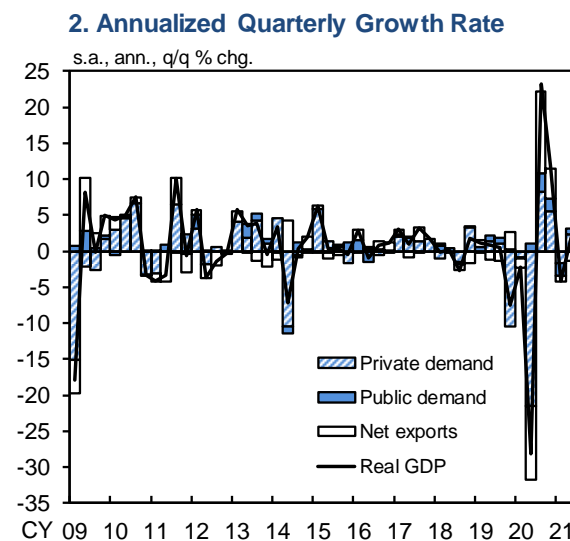
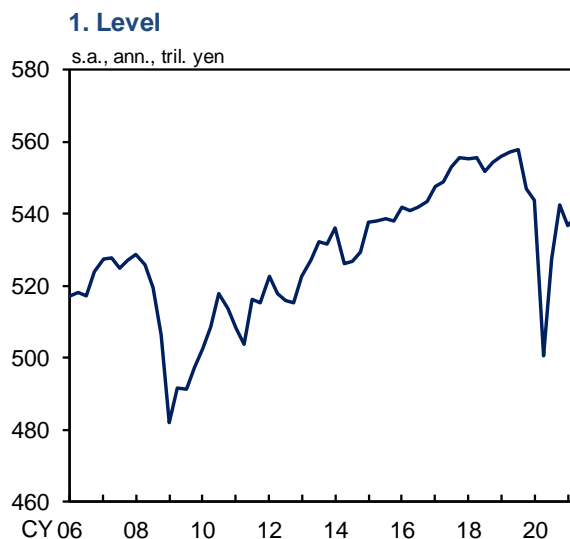
#### A. Economic Developments

Japan's economy has picked up as a trend, although it has remained in a severe situation due to the impact of COVID-19 at home and abroad.

After registering negative growth for the first time in three quarters for the January-March quarter of 2021, the real GDP growth rate returned to an increase for the April-June quarter, marking 0.5 percent on a quarter-on-quarter basis and 1.9 percent on an annualized basis (Chart 1). Looking at the breakdown, exports continued to rise and business fixed investment turned to an increase on the back of the expansion in global demand for digital-related goods and a global recovery in demand for business fixed investment. Private consumption for the April-June quarter remained at a low level, despite increasing compared with the previous quarter.

Monthly indicators and high-frequency data since then suggest that Japan's economy has remained in a severe situation due to the effects of the resurgence of COVID-19 at home and abroad toward this summer. That said, the pick-up trend in economic activity has continued, as the virtuous cycle -- mainly in the manufacturing industry -- has been maintained while overseas economies, particularly advanced economies,

**Chart 1: Real GDP**

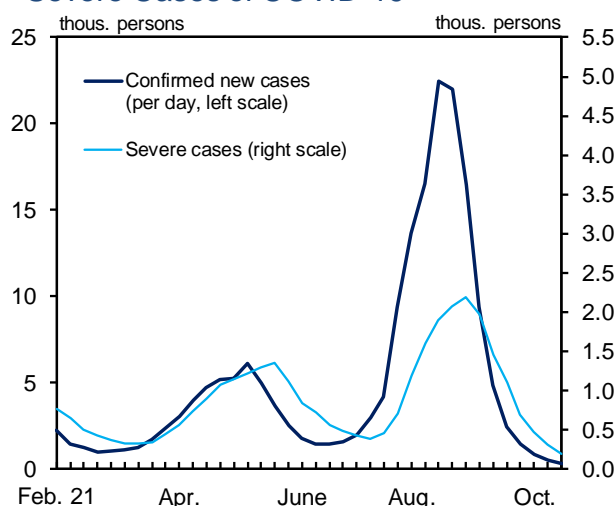


Source: Cabinet Office.

<sup>6</sup> "The Background" provides explanations of "The Bank's View" decided by the Policy Board at the Monetary Policy Meeting held on October 27 and 28, 2021.

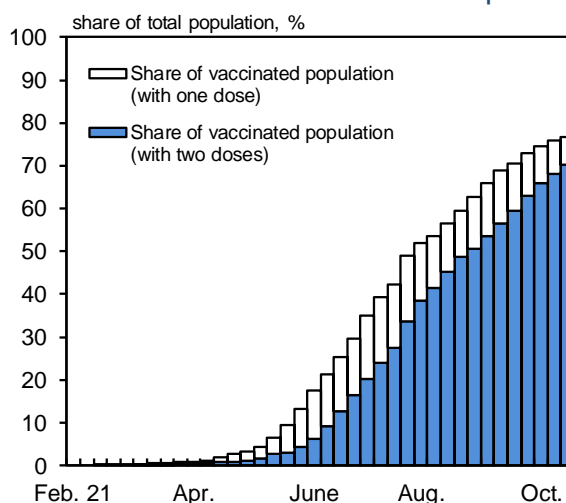
have kept growing firmly. Specifically, private consumption continued to pick up through July but turned to a decline in August with the rapid spread of the highly contagious Delta variant (Chart 2). In this situation, the employment and income situation remained weak, mainly for employment of non-regular workers in industries hit significantly by the impact of COVID-19, such as face-to-face services. However, vaccinations have progressed in the meantime, and the full vaccination rate is now at around 70 percent (Chart 3). With a clear decline in the number of confirmed new cases of COVID-19 from September to October, private consumption has shown signs of a pick-up, partly reflecting the lifting of the state of emergency and priority measures to prevent the spread of disease at the end of September. On the other hand, exports and production have declined temporarily of late, mainly due to supply-side constraints on automobile-related parts stemming from the rapid spread of the highly contagious Delta variant in the ASEAN countries. That said, exports of IT-related goods and capital goods have continued on an uptrend, reflecting a steady rise in global demand, particularly for digital-related goods. Meanwhile, as confirmed, for example, in the September 2021 *Tankan* (Short-Term Economic Survey of Enterprises in Japan), business sentiment and corporate profits have continued to improve on the whole. In addition, as with the previous *Tankan* surveys, the business fixed investment plan for fiscal 2021 indicates that investment is likely to see high growth this fiscal year. As suggested by these developments, a virtuous cycle from corporate profits to business fixed investment, triggered by the increase in external demand, has continued to operate.

**Chart 2: Confirmed New Cases and Severe Cases of COVID-19**



Source: Ministry of Health, Labour and Welfare.  
 Note: Figures for confirmed new cases are weekly averages. Figures for severe cases are those at the end of the week.

**Chart 3: Share of Vaccinated Population**

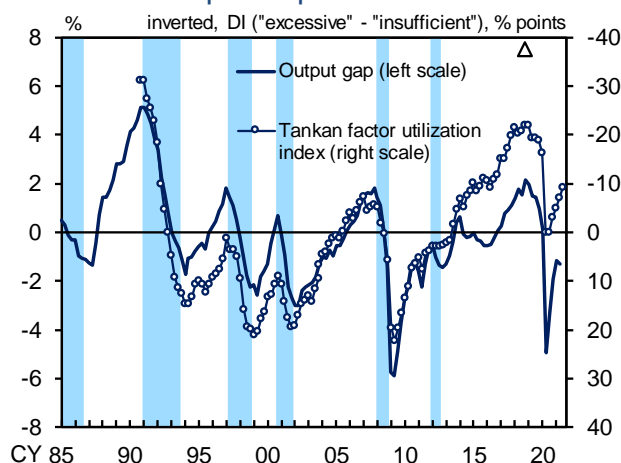


Sources: Prime Minister's Office of Japan; Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.  
 Notes: 1. Figures are as of the end of the week.  
 2. Figures may be revised upward retroactively when additional vaccinations are reported after the date they were administered.

The output gap -- which captures the utilization of labor and capital -- continued to improve in negative territory from the bottom hit in the April-June quarter of 2020, when the gap had deteriorated substantially. However, the gap for the April-June quarter of 2021 was more or less unchanged from the previous quarter, partly reflecting the effects of the third state of emergency (Chart 4). It seems highly likely that improvement in the output gap will have remained at a pause for the July-September quarter, mainly reflecting the resurgence of COVID-19.

The outlook for Japan's economy is that, for the time being, downward pressure stemming from COVID-19 is likely to remain on services consumption, and exports and production are expected to decelerate temporarily due to supply-side constraints. Thereafter, however, with the impact of COVID-19 waning gradually, mainly due to the widespread vaccinations, the economy is likely to recover, supported by the increase in external demand, accommodative financial conditions, and the government's economic measures.<sup>7</sup> From the middle of the projection period, as the virtuous cycle from income to spending intensifies in the overall economy, including the household sector, Japan's economy is projected to continue growing at a pace, albeit slower, above its potential growth rate.

**Chart 4: Output Gap**



Source: Bank of Japan.

Notes: 1. Figures for the output gap are staff estimates.

2. The *Tankan* factor utilization index is calculated as the weighted average of the production capacity DI and the employment conditions DI for all industries and enterprises. The capital and labor shares are used as weights. There is a discontinuity in the data for December 2003 due to a change in the survey framework.

3. Shaded areas denote recession periods. The triangle indicates the latest economic peak.

<sup>7</sup> On December 8, 2020, the Cabinet decided on the Comprehensive Economic Measures to Secure People's Lives and Livelihoods toward Relief and Hope, with a project size of around 73.6 trillion yen and fiscal spending of around 40.0 trillion yen. The implementation of the third supplementary budget for fiscal 2020 and the initial budget for fiscal 2021 based on the aforementioned measures is expected to support economic activity, mainly through increases in public investment and government consumption.

With regard to the outlook by demand component, although Japan's exports of goods, mainly automobile-related ones, are expected to decelerate temporarily due to supply-side constraints on parts stemming from the spread of COVID-19 in the ASEAN countries, they are projected to continue increasing as a trend on the back of firm expansion in global demand, particularly for digital-related goods. Inbound tourism demand, which is categorized under services exports, is expected to remain subdued while entry and travel restrictions continue. However, it is likely to recover to the pre-pandemic level as vaccinations progress around the world and the restrictions are lifted. With regard to private consumption, it is expected for the time being that services consumption will be restrained by vigilance against COVID-19 and durable goods consumption will be pushed down by supply-side constraints, such as on automobiles. However, private consumption is expected to pick up again, supported by the materialization of pent-up demand for services and durable goods, as the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations, and as supply-side constraints wane. Thereafter, as the impact of COVID-19 subsides gradually, an uptrend in private consumption is projected to become evident, supported by improvement in employee income. Despite weakness remaining for the time being in employment of non-regular workers in the face-to-face services industry, employee income is likely to increase moderately, with a time lag following the recovery in domestic and external demand. Although business fixed investment by the face-to-face services industry and some firms in the transportation industry is



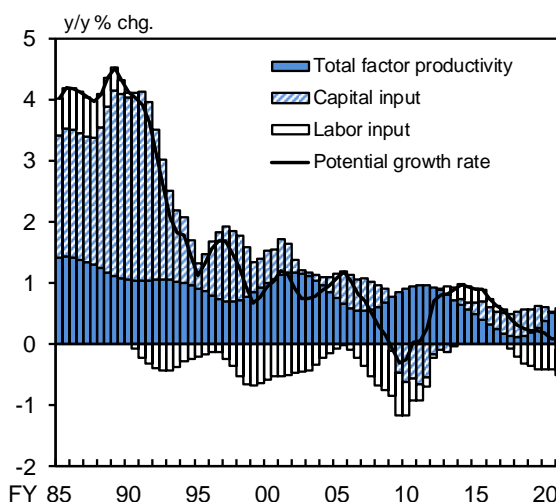
projected to remain weak for the time being, an uptrend is expected to become clear, mainly for machinery and digital-related investments, partly supported by accommodative financial conditions, with corporate profits following an improving trend. Meanwhile, public investment is projected to steadily increase, reflecting progress such as in construction related to building national resilience, which is included in the government's additional economic measures formulated at the end of 2020. Thereafter, it is expected to be at a relatively high level. Government consumption is likely to increase clearly for fiscal 2021, reflecting a pick-up in healthcare expenditure and enhancement of the COVID-19 testing and vaccination systems and the medical treatment system. Thereafter, however, government consumption is projected to see a lowering in its level, since expenditure related to COVID-19 is likely to decrease.

Reflecting these developments in demand both at home and abroad, Japan's economic growth rate is expected to register a relatively large positive figure for fiscal 2021 with the impact of COVID-19 waning gradually and supported by the increase in external demand, accommodative financial conditions, and the government's economic measures. The rate is projected to continue to see firm growth for fiscal 2022 on the back of an increase in domestic and external demand that mainly reflects the widespread vaccinations. The rate for fiscal 2023 is expected to grow at a pace slightly above its potential growth rate, with external demand increasing steadily and accommodative financial conditions being maintained, although the pace is likely to decelerate from that for fiscal 2021 and 2022,

mainly reflecting the peaking-out of pent-up demand at home and abroad. Comparing the projections with those presented in the previous Outlook Report, the projected growth rate for fiscal 2021 is somewhat lower, mainly for exports and private consumption, due to the effects of the resurgence of COVID-19 at home and abroad, but that for fiscal 2022 is somewhat higher.

The potential growth rate seems to have been at around 0 percent or marginally positive recently, although total factor productivity (TFP) has slightly picked up (Chart 5). This is because working hours have continued on a downtrend that reflects working-style reforms and because growth in capital stock has decelerated as a result of the past decline in business fixed investment stemming from the impact of COVID-19. As for the outlook, the potential growth rate is expected to rise moderately. This is based on the projection that (1) the TFP growth rate will increase moderately, mainly reflecting advances in digitalization and a resultant improvement in efficiency of resource allocation and firms' adaptation to the situation in terms of organizational management, (2) the pace of decline in working hours will slow with the effects of working-style reforms diminishing, and (3) growth in capital stock will accelerate cyclically. However, there remain high uncertainties over the extent to which the following developments will advance or be sustained: innovation by the corporate sector with the aim of adapting to the post-pandemic economic and industrial structures, including actions toward digitalization and addressing climate change; changes in households' behavior; and transfer of production factors among sectors. Under these

**Chart 5: Potential Growth Rate**



Source: Bank of Japan.  
 Note: Figures are staff estimates. Figures for the first half of fiscal 2021 are those for 2021/Q2.

circumstances, the output gap and the potential growth rate, which are estimated based on a specific assumption regarding trends, should be interpreted with some latitude.

Details of the outlook for each fiscal year are as follows. In the second half of fiscal 2021, as overseas economies continue to recover on the whole, Japan's economy is expected to recover, supported by the government's economic measures and accommodative financial conditions. That said, it is projected that exports and production will decelerate temporarily due to supply-side constraints and that downward pressure stemming from COVID-19 will remain on services consumption. Specifically, although an increase in exports of capital goods and IT-related goods is likely to continue on the back of the expansion in global demand, particularly for digital-related goods, overall exports are expected to decelerate temporarily, affected by a production decline in automobile-related goods due to supply-side constraints on parts stemming from the spread of COVID-19 in the ASEAN countries. Private consumption is projected to pick up gradually from the current relatively low level, albeit restrained by vigilance against COVID-19 and supply-side constraints on some durable goods. As for business fixed investment, construction investment, such as for restaurants and hotels, and machinery investment by some firms in the transportation industry, including railway vehicles and aircraft, are likely to remain subdued. However, with corporate profits following an improving trend, business fixed investment as a whole is expected to increase clearly, pushed up by an undertaking of postponed investment projects and an increase in

digital-related investment. Meanwhile, with regard to government spending, owing to the additional economic measures decided last fiscal year, public investment in construction related to building national resilience is likely to increase steadily, and government consumption is expected to keep increasing, on the back of continued spending related to enhancement of the COVID-19 testing and vaccination systems and the medical treatment system, and of the pick-up in healthcare expenditure.

In fiscal 2022, the economy is expected to continue growing firmly, as overseas economies keep improving and as the resumption of economic activity progresses in Japan while public health is being protected, mainly through the widespread vaccinations and enhancement of the medical treatment system. Exports are likely to return to a firm increase, reflecting improvement in overseas economies, as the effects of supply-side constraints on automobile-related goods dissipate. In this situation, corporate profits are expected to continue following their improving trend, and business fixed investment is likely to continue increasing, including for digital-related investment, investment to address environmental issues, and research and development (R&D) investment for growth areas. As the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations, an uptrend in private consumption is expected to become evident, supported by a pick-up in employee income and the materialization of pent-up demand. Meanwhile, although public investment in construction related to building national resilience is projected to serve

as support, government spending is likely to turn to a decline on the whole since government consumption is expected to decrease, mainly due to the peaking-out of expenditure related to COVID-19.

In fiscal 2023, although the pace of economic growth is likely to decelerate somewhat, mainly reflecting the peaking-out of pent-up demand at home and abroad, Japan's economy is expected to grow at a pace slightly above its potential growth rate, supported by sustained growth in overseas economies and accommodative financial conditions. Goods exports are likely to continue increasing moderately, albeit at a slower pace, while the growth rates of overseas economies are expected to decelerate gradually to around the same pace as the long-term average. Inbound tourism demand, which is categorized under services exports, is projected to increase clearly, reflecting a global recovery in travel demand. Although increases in digital-related investment, investment for growth areas, and that to address environmental issues, as well as a recovery in construction investment by the services sector, are expected to serve as support, business fixed investment is likely to see moderate deceleration in the pace of increase due to adjustment pressure stemming from the accumulation of capital stock. Due to improvement in employee income, private consumption is projected to continue increasing for both goods and services, albeit at a somewhat slower pace, mainly reflecting the peaking-out of pent-up demand. Meanwhile, although expenditure related to COVID-19 is projected to decrease, overall government spending is expected to remain at a high level that is more or

less the same as that of fiscal 2022, supported by progress in construction related to building national resilience and by an uptrend in healthcare and nursing care expenditures.

## B. Developments in Major Expenditure Items and Their Background

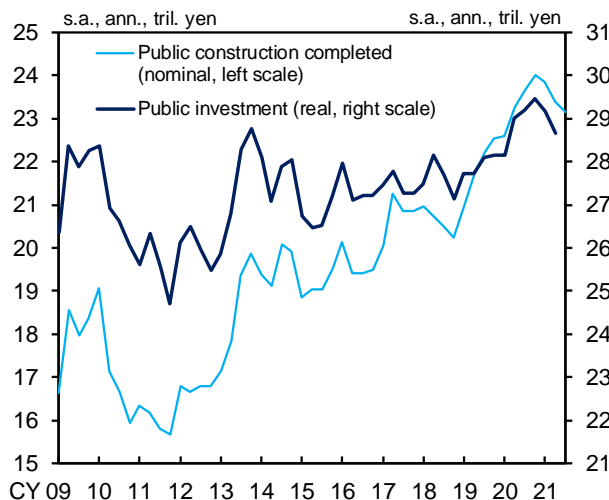
### Government Spending

Public investment has been more or less flat (Chart 6). Orders received for public construction, which is a leading indicator, have been on an uptrend, albeit with fluctuations, as orders are being placed, mainly for construction related to building national resilience, which was budgeted in the additional economic measures for fiscal 2020.<sup>8</sup> As for the outlook, it is projected that public investment will increase steadily, reflecting the progress in construction related to building national resilience, and then be at a relatively high level. Government consumption is expected to increase clearly for fiscal 2021, reflecting the pick-up in healthcare expenditure and enhancement of the COVID-19 testing and vaccination systems and the medical treatment system. Thereafter, it is projected to see a lowering in its level since expenditure related to COVID-19 is likely to decrease.

### Overseas Economies

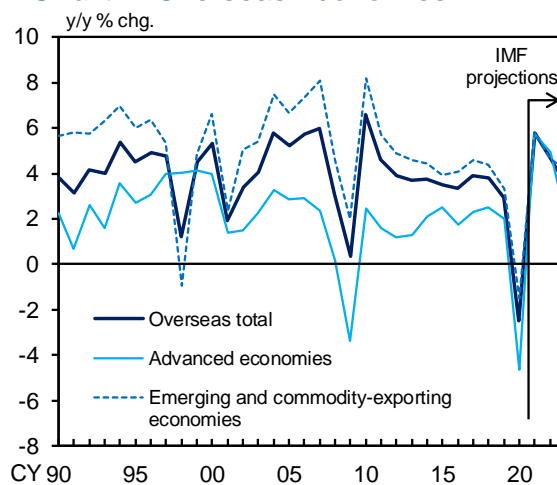
Overseas economies have recovered on the whole, albeit with variation across countries and regions (Chart 7).<sup>9</sup> By region, advanced economies have continued to improve, as the resumption of economic activity has continued to

**Chart 6: Public Investment**



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.  
Note: The figure for 2021/Q3 is the July-August average.

**Chart 7: Overseas Economies**



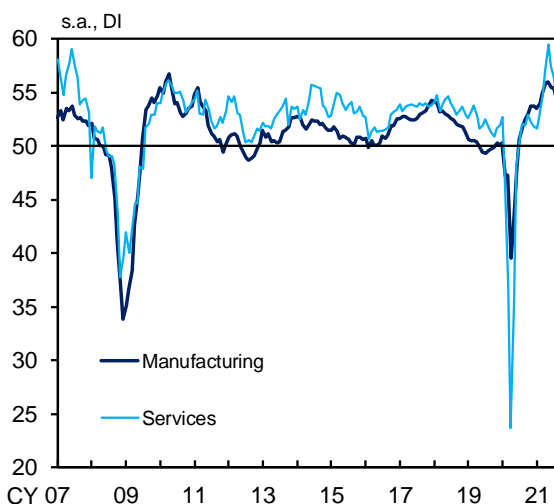
Sources: IMF; Ministry of Finance.  
Note: Figures are the weighted averages of real GDP growth rates using countries' share in Japan's exports as weights. The real GDP growth rates are compiled by the IMF, and the rates from 2021 onward are its projections in the October 2021 *World Economic Outlook* (WEO). Figures for advanced economies are those for the United States, the euro area, and the United Kingdom. Figures for emerging and commodity-exporting economies are those for the rest of the world.

<sup>8</sup> Following the three-year emergency response plan for disaster prevention, disaster mitigation, and building national resilience, which expired at the end of fiscal 2020, the five-year acceleration plan for building national resilience with a targeted period from fiscal 2021 through 2025 and a project size of about 15 trillion yen was decided by the Cabinet in December 2020. Based on this plan, public investment projects for disaster prevention, disaster mitigation, and building national resilience are to be implemented intensively over five years from fiscal 2021 through 2025.

<sup>9</sup> Box 1 outlines the outlook for overseas economies and the risks to it.

progress. On the other hand, in China and some emerging economies, downward pressure has been exerted on domestic demand, and production also has been pushed down, both reflecting the spread of COVID-19 variants this summer and supply-side constraints. Taking a detailed look at developments in overseas economies, the U.S. economy has maintained relatively high growth, partly due to the effects of the past economic measures, despite being affected by the spread of COVID-19 variants and supply-side constraints. European economies have recovered, mainly in face-to-face services. The Chinese economy has continued to recover as a trend, although the pace of improvement has decelerated, partly due to the resurgence of COVID-19 and power supply issues, for example, exerting downward pressure on domestic demand and production. Regarding emerging and commodity-exporting economies other than China, domestic demand and production in some countries and regions was under downward pressure due to the spread of COVID-19 this summer, but these economies have picked up on the whole as the effects of the spread have been waning recently. Turning to Asia, which is deeply related to Japan's economy, the NIEs have continued on a recovery trend, with an increase in exports of digital-related goods in particular. In the ASEAN countries, economies have picked up, with downward pressure on domestic demand waning due to the decline in the number of confirmed new cases. Looking at the current situation for the global economy in terms of the Global PMI, figures for both the manufacturing and services industries have declined somewhat recently, although they have remained at a relatively high level, clearly exceeding 50 (Chart 8). The world trade volume has shown a

**Chart 8: Global PMI**



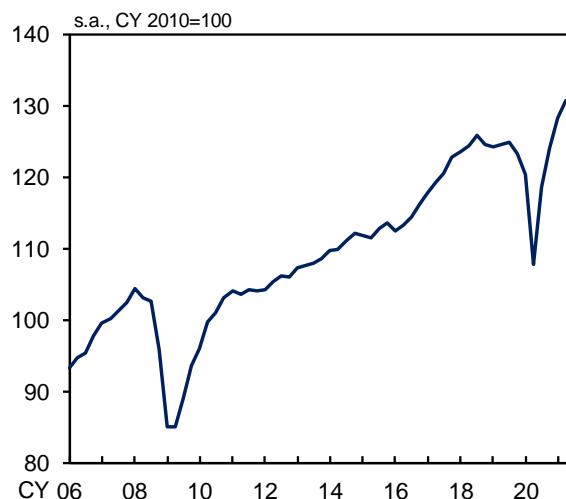
Source: IHS Markit (© and database right IHS Markit Ltd 2021. All rights reserved.).  
 Note: Figures for manufacturing are the J.P.Morgan Global Manufacturing PMI. Figures for services are the J.P.Morgan Global Services Business Activity Index.



deceleration in its pace of increase recently because the effects of supply-side constraints on automobile-related goods in particular have increased even though a steady rise in demand for digital-related goods has continued (Chart 9).<sup>10</sup>

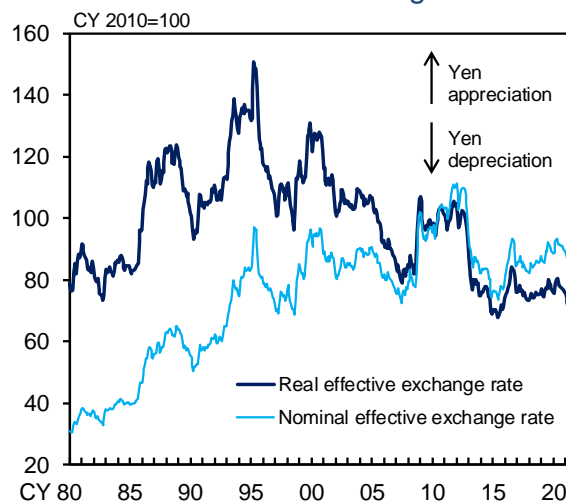
As for the outlook, with the impact of COVID-19 waning gradually, overseas economies are likely to continue growing on the whole, partly supported by aggressive macroeconomic policies taken mainly in advanced economies. However, they are expected to decelerate gradually toward the end of the projection period, partly reflecting the peaking-out of economic stimulus measures taken in advanced economies. The pace of economic improvement is highly likely to be uneven across countries, primarily due to the different paces in the vaccine rollout. That said, overseas economies are projected to continue registering relatively high growth for the time being, led by advanced economies. That is, as the resumption of economic activity continues to progress, the U.S. and European economies are expected to continue registering relatively high growth for the time being, partly due to the effects of the additional economic measures taken in the United States. The Chinese economy is projected to return to a steady growth path, as a virtuous cycle from income to spending operates and downward pressure on production stemming mainly from power supply issues dissipates. Partly reflecting a recovery in external demand, emerging and commodity-exporting economies other than China are likely to follow an improving

**Chart 9: World Trade Volume**



Source: CPB Netherlands Bureau for Economic Policy Analysis.  
 Note: Figures for the world trade volume are those for world real imports. The figure for 2021/Q3 is the July-August average.

**Chart 10: Effective Exchange Rates**



Source: BIS.  
 Note: Figures are based on the broad effective exchange rate indices. Figures prior to 1994 are calculated using the narrow indices.

<sup>10</sup> The world trade volume is calculated by adding up real imports in each country.

trend on the whole, albeit with variation remaining across countries and regions.

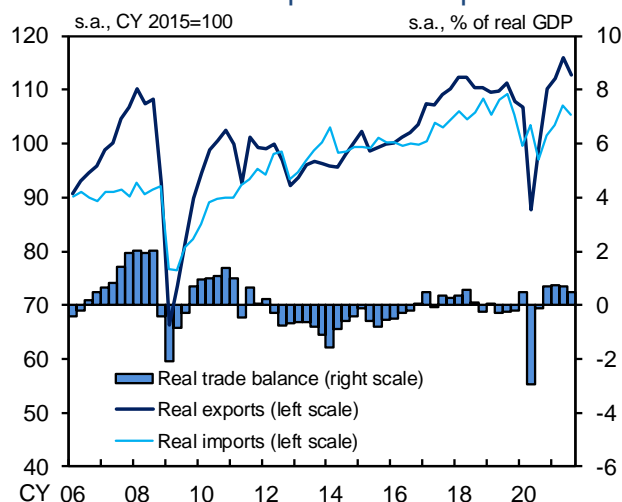
With regard to the outlook for the world trade volume, sluggishness is expected to be seen for the time being, mainly reflecting supply-side constraints on a global basis, but the volume is projected to increase firmly thereafter. Toward the end of the projection period, the pace of increase is likely to decelerate gradually since demand for digital-related goods is expected to be under some downward pressure, partly due to a peaking-out of stay-at-home demand.

## Exports and Imports

Exports have continued to increase as a trend on the back of the recovery in overseas economies, despite being weak recently due to the effects of supply-side constraints seen in some areas (Chart 11).<sup>11</sup> By region, exports to advanced economies and emerging economies seem to have continued on an uptrend due to the recovery in those economies and the expansion in global demand for digital-related goods, but have declined temporarily of late, mainly reflecting a significant decline in exports of automobile-related goods (Chart 12). By goods, exports of automobile-related goods have declined significantly due to the production decline that reflects supply-chain disruptions caused by the spread of COVID-19 in the ASEAN countries (Chart 13). IT-related exports have continued on an uptrend, as exports of goods

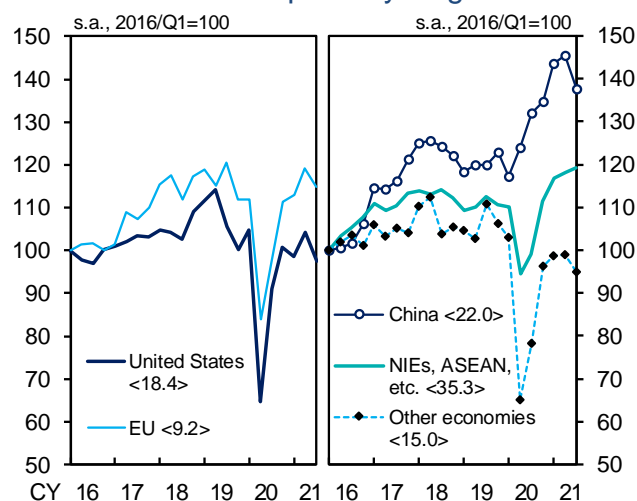
<sup>11</sup> Reflecting the expansion in global demand for digital-related goods, positive effects have been seen not only in items classified as IT-related goods in Japan's real export data but also other items. Box 2 examines the effects of such expansion on exports of these items.

### Chart 11: Real Exports and Imports



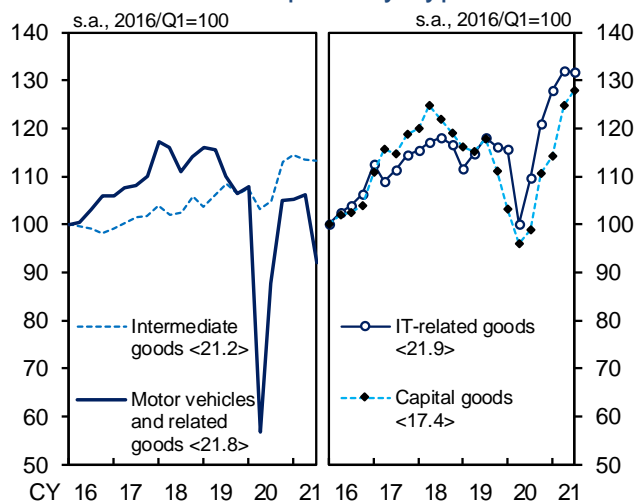
Sources: Bank of Japan; Ministry of Finance; Cabinet Office.  
Note: Based on staff calculations.

### Chart 12: Real Exports by Region



Sources: Bank of Japan; Ministry of Finance.  
Notes: 1. Based on staff calculations. Figures in angular brackets show the share of each country or region in Japan's total exports in 2020.  
2. Figures for the EU exclude those for the United Kingdom for the entire period.

### Chart 13: Real Exports by Type of Goods



Sources: Bank of Japan; Ministry of Finance.  
Note: Based on staff calculations. Figures in angular brackets show the share of each type of goods in Japan's total exports in 2020.

such as semiconductors for smartphones and data centers have been solid, despite a decline in exports of some parts for automobiles. Exports of capital goods have continued to increase, supported by a global rise in machinery investment and by steady exports of semiconductor production equipment that reflect the expansion in demand for digital-related goods. Meanwhile, despite being pushed up by exports of digital-related goods, those of intermediate goods have shown a deceleration in their pace of increase on the whole, partly due to a decline in exports of chemicals, such as plastics, for automobiles.

**Chart 14: Japan's Share of Exports in World Trade Volume**



Source: CPB Netherlands Bureau for Economic Policy Analysis.  
 Note: Japan's share of exports in world trade volume is obtained by dividing Japan's real exports by world real imports (2010 prices). The figure for 2021/Q3 is the July-August average.

Exports, mainly of automobile-related goods, are likely to decelerate temporarily due to the effects of supply-side constraints on parts. Thereafter, however, as these effects wane gradually, exports are expected to increase firmly again on the back of firm expansion in global demand, particularly for digital-related goods. With growth in the world trade volume slowing gradually, as described earlier, the pace of increase in exports is projected to decelerate toward the end of the projection period, as economic growth of the United States, China, and the NIEs -- which are Japan's primary export destination -- also decelerates.

Meanwhile, Japan's share of exports in the world trade volume has been above the pre-pandemic level recently (Chart 14). As for the outlook, reflecting changes in the trade volume of automobile-related goods, of which Japan accounts for a large share within world exports, Japan's share of exports is likely to fluctuate

significantly for the time being. Thereafter, however, it is projected to converge toward a level that is around the average seen before the pandemic.

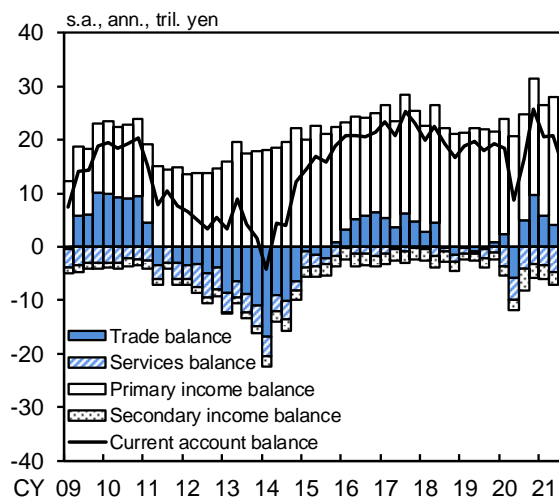
Reflecting a pick-up in domestic demand and purchases of vaccines, imports have continued on an uptrend, despite a recent decline, mainly in consumer goods, due to such effects as of supply-side constraints on automobiles (Chart 11). They are expected to follow a moderate uptrend on the back of developments in induced demand due to increases in domestic demand and exports.

### External Balance

The nominal current account balance is more or less unchanged (Chart 15). Looking at the breakdown, the nominal trade surplus has decreased, reflecting the rise in international commodity prices, such as crude oil prices. The services balance has continued to register a deficit, mainly against the background of deterioration in the travel balance, which is due to subdued inbound tourism demand since last spring (Chart 16). The primary income balance has continued to register a relatively large surplus on the back of the recovery in overseas economies.

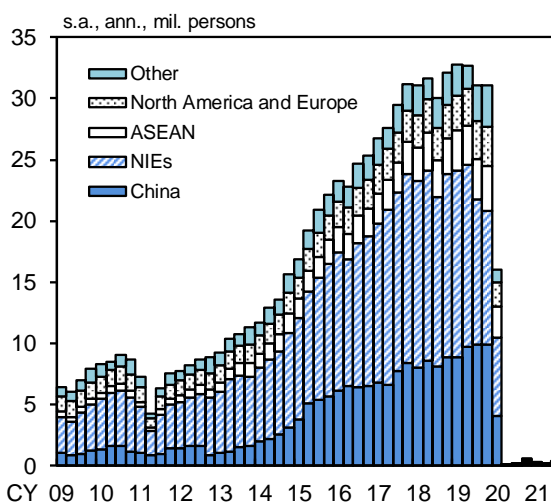
The nominal current account surplus is expected to be more or less unchanged for the time being. Thereafter, however, it is likely to follow a moderate expanding trend, mainly on the back of an increase in goods exports and an expanding surplus in the primary income balance, both due

**Chart 15: Current Account**



Source: Ministry of Finance and Bank of Japan.  
Note: Figures for 2021/Q3 are July-August averages.

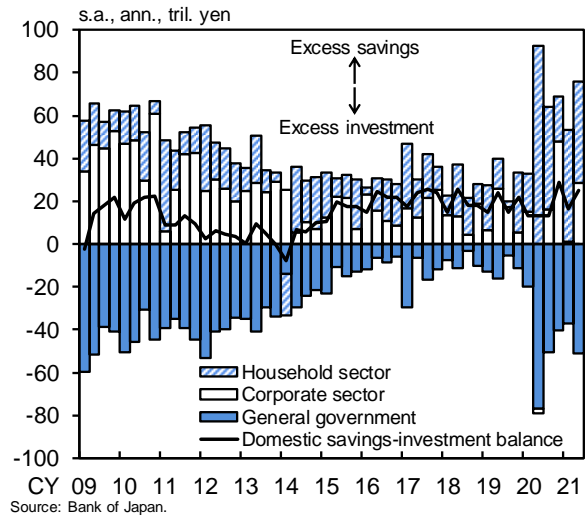
**Chart 16: Number of Inbound Visitors**



Source: Japan National Tourism Organization (JNTO).  
Note: Figures for North America and Europe are those for the United States, Canada, the United Kingdom, France, and Germany.

to the recovery in overseas economies, and of a decrease in deficit in the services balance that reflects improvement in inbound tourism demand. In terms of the savings-investment balance, overall excess savings in Japan's economy are expected to be more or less unchanged for the time being (Chart 17). However, toward the end of the projection period, they are projected to follow a moderate expanding trend because the fiscal balance is likely to improve at a pace that somewhat exceeds the pace of decline in excess savings in the private sector.

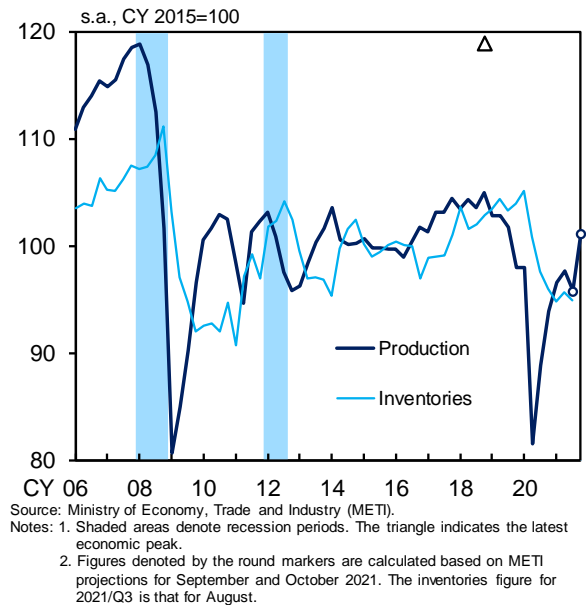
**Chart 17: Savings-Investment Balance**



## Industrial Production

Industrial production has continued to increase as a trend, despite being weak recently due to the effects of supply-side constraints seen in some areas (Chart 18). By major industry, production of "transport equipment" has shown a clear decline against the background of parts procurement difficulties stemming from the spread of COVID-19 in the ASEAN countries. Production of "electrical machinery, and information and communication electronics equipment" continued to increase from last summer but has decreased recently. This decrease is due to production declines in some parts for automobiles and in some white goods due to the effects of supply-side constraints. In contrast, production of "general-purpose, production, and business-oriented machinery" has continued to increase, mainly for semiconductor production equipment and construction machinery, on the back of a recovery in demand for business fixed investment at home and abroad. Although production of some on-board equipment for motor vehicles has been affected by supply-side constraints, production of "electronic parts and

**Chart 18: Industrial Production**



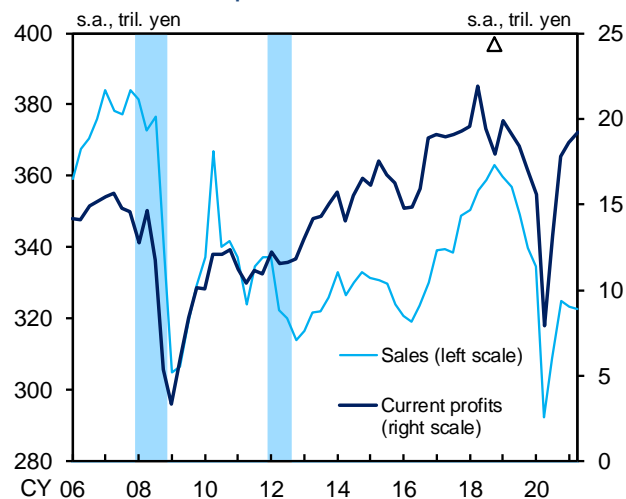
devices" as a whole has continued to increase, particularly for memory, reflecting steady demand for such items as parts for data centers and those related to smartphones.

Industrial production is likely to decelerate temporarily due to the effects of supply-side constraints. Thereafter, however, it is expected to increase, mainly on the back of a mitigation of such effects, solid demand for digital-related goods, and a global recovery in demand for business fixed investment.

## Corporate Profits

Corporate profits have continued to improve on the whole, although weakness has been seen in some industries, such as face-to-face services. According to the *Financial Statements Statistics of Corporations by Industry, Quarterly* (FSSC), current profits for all industries and enterprises improved for four consecutive quarters in the April-June quarter of 2021 (Chart 19). Since the turn of this year, while sales, mainly for the nonmanufacturing industry, have been more or less flat with the continuing impact of COVID-19 and public health measures remaining in place, current profits have increased clearly. The more evident improvement in current profits than in sales remains attributable to a reduction in selling, general and administrative (SG&A) expenses -- such as advertising and business travel expenses -- during the COVID-19 pandemic and the underpinnings of various measures to support firms, such as employment adjustment subsidies and subsidies for firms that complied with the

**Chart 19: Corporate Profits**

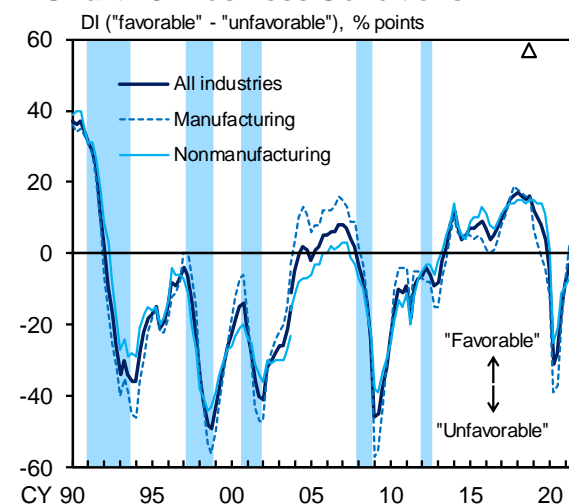


Source: Ministry of Finance.  
 Notes: 1. Based on the *Financial Statements Statistics of Corporations by Industry, Quarterly*. Excluding "finance and insurance."  
 2. Figures from 2009/Q2 onward exclude pure holding companies.  
 3. Shaded areas denote recession periods. The triangle indicates the latest economic peak.

requests to shorten operating hours.<sup>12</sup> In addition, profits of large firms have been pushed up for the April-June quarter due to an increase in dividends from subsidiaries that mainly reflects favorable performance of their overseas businesses. By industry and firm size, current profits have improved in the manufacturing industry regardless of firm size, supported by increases in exports and production, favorable performance of their overseas businesses, and cost cuts. As for the nonmanufacturing industry, current profits of large firms have improved mainly for the wholesale industry, which benefits from a rise in commodity prices, but they have continued to show weak developments, mainly within the transportation industry, such as for airlines and railways. Despite being pushed up by various subsidies, current profits of small and medium-sized firms decreased and have remained low due to the continuing impact of COVID-19 and public health measures remaining in place.

Business sentiment also has continued to improve on the whole, despite weakness in the automobile and face-to-face services industries. According to the September *Tankan*, the diffusion index (DI) for business conditions for all industries and enterprises has improved for five consecutive quarters after hitting a bottom in the June 2020 survey (Chart 20). With regard to the manufacturing industry, the DI for the automobile industry has deteriorated due to the production decline that reflect parts procurement difficulties. However, the DIs for a wide range of industries, such as chemicals, processed metals, production machinery, and electrical machinery, have

**Chart 20: Business Conditions**



Source: Bank of Japan.  
 Notes: 1. Based on the *Tankan*. All enterprises. There is a discontinuity in the data for December 2003 due to a change in the survey framework.  
 2. Shaded areas denote recession periods. The triangle indicates the latest economic peak.

<sup>12</sup> For details, see Box 2 in the April 2021 Outlook Report.

continued to improve. This is mainly on the back of the steady expansion in global demand for digital-related goods and a pick-up in business fixed investment at home and abroad. In addition, a rise in product prices in business-to-business transactions has had positive effects on the DIs for some raw material industries. As for the nonmanufacturing industry, the DI for the accommodations as well as eating and drinking services industries has remained at a subdued level and the DIs for industries of retail and services for individuals have deteriorated, both affected by COVID-19 and public health measures. However, the DIs for such industries as wholesaling, transport and postal activities, as well as services for businesses have improved, mainly reflecting a recovery in activity of the manufacturing industry and a resultant increase in logistics.

Regarding the outlook for corporate profits, it is highly likely that, with those of the face-to-face services industry remaining at a low level, the pace of improvement will decelerate temporarily, reflecting the effects of the production decline in mainly the automobile-related industry and of a rise in the cost of raw materials seen particularly in the nonmanufacturing industry and small and medium-sized firms. Thereafter, although the effects of various measures to support firms are expected to dissipate, corporate profits, including those of the face-to-face services industry, are projected to continue on an improving trend, reflecting a recovery in economic activity.

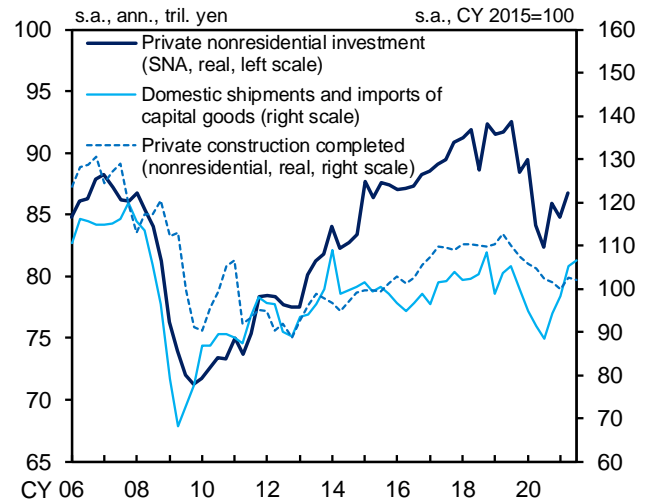


## Business Fixed Investment

Business fixed investment has picked up, although weakness has been seen in some industries (Chart 21). With corporate profits continuing to improve, the aggregate supply of capital goods -- a coincident indicator of machinery investment -- has continued to increase firmly, mainly for digital-related goods, such as semiconductor production equipment and goods related to mobile phone base stations and 5G networks, and for construction machinery. Private construction completed (nonresidential) -- a coincident indicator of construction investment -- remained on a moderate declining trend but has bottomed out, mainly reflecting an increase in construction of logistics facilities on the back of expansion in e-commerce.

When fluctuations are smoothed out, machinery orders -- a leading indicator of machinery investment -- have shown a pick-up (Chart 22). By industry, orders by the manufacturing industry have increased, mainly led by "general-purpose, production, and business-oriented machinery" and electrical machinery, for both of which exports and production have continued on an uptrend. Orders by the nonmanufacturing industry have been fluctuating on the whole. This is because orders by the transportation industry -- including "rolling machines" (i.e., railway vehicles) and "motor vehicles" -- which is strongly affected by COVID-19, have remained weak, whereas orders by the construction industry have been on an increasing trend when fluctuations are smoothed out, mainly for digital-related and labor-saving investment. Construction starts (in terms of planned expenses for private and nonresidential construction) -- a leading indicator of construction

**Chart 21: Coincident Indicators of Business Fixed Investment**

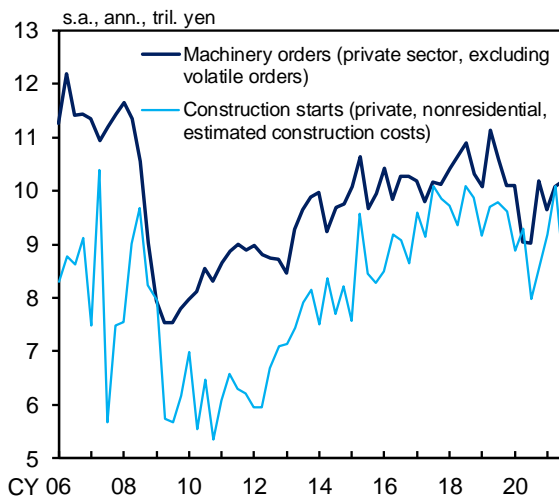


Sources: Cabinet Office; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.

Notes: 1. Figures for 2021/Q3 are July-August averages.

2. Figures for real private construction completed are based on staff calculations using the construction cost deflators.

**Chart 22: Leading Indicators of Business Fixed Investment**



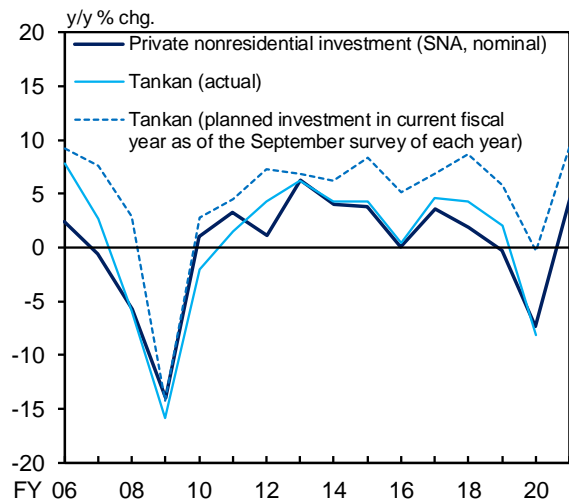
Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.

Notes: 1. Volatile orders are orders for ships and orders from electric power companies.

2. Figures for 2021/Q3 are July-August averages.

investment -- have picked up on the whole when fluctuations are smoothed out. This is because, although the construction of stores and accommodation facilities -- mainly by the eating and drinking as well as accommodations industries -- has remained weak, construction starts have been supported by an uptrend in such construction as of logistics facilities as well as by progress in urban redevelopment projects. Looking at the business fixed investment plan in the September *Tankan*, business fixed investment (on the basis close to GDP definition; business fixed investment -- including software and R&D investments, but excluding land purchasing expenses -- in all industries and enterprises including financial institutions) for fiscal 2021 showed a year-on-year rate of increase of 9.3 percent; this plan suggests that -- as with the previous survey -- the year-on-year rate of change in business fixed investment for this fiscal year is likely to turn to a clear increase (Chart 23).

**Chart 23: Planned and Actual Business Fixed Investment**



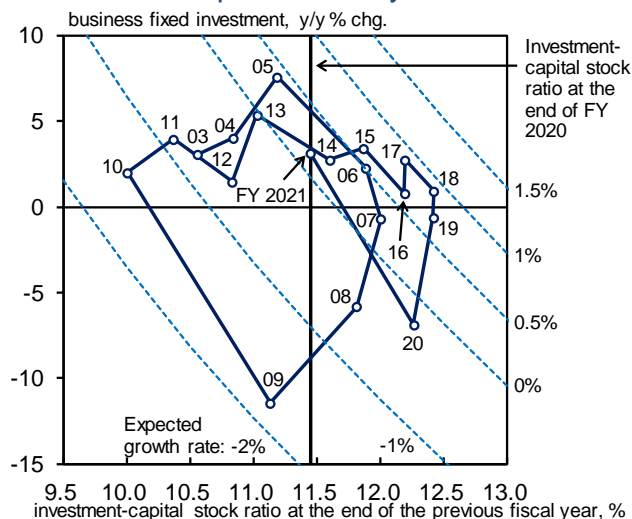
Sources: Bank of Japan; Cabinet Office.  
 Notes :1. The *Tankan* figures include software and R&D investments and exclude land purchasing expenses. R&D investment is not included before the March 2017 survey. The figures are for all industries including financial institutions.  
 2. The figure for private nonresidential investment for fiscal 2021 is that for 2021/Q2.

As for the outlook, an uptrend in business fixed investment is expected to become clear, supported by improvement in corporate profits and accommodative financial conditions. Specifically, investment that is projected to be undertaken includes (1) machinery investment induced by the increase in exports, (2) investment to address labor shortage, that related to teleworking, and software investment to digitalize business activities, (3) construction investment in logistics facilities accompanied by an expansion in e-commerce, (4) R&D investment for growth areas, and (5) investment to address environmental issues, such as toward decarbonization for addressing climate change. That said, investment by industries hit

significantly by the impact of COVID-19 is projected to remain subdued for a while; specifically, renewal investment in railway vehicles and aircraft by the transportation industry and construction investment by the eating and drinking as well as accommodations industries. Toward the end of the projection period, since the pace of increase in exports is likely to decelerate and the effects to push up corporate profits through various subsidies are expected to dissipate, the pace of increase in business fixed investment is projected to slow, partly pushed down by cyclical adjustment pressure stemming from the accumulation of capital stock. However, it is expected that business fixed investment will continue increasing even at the end of the projection period since many medium- to long-term investment projects, such as those listed in (2) to (5) above, will be carried out irrespective of the different phases of business cycles.

The outlook for business fixed investment is assessed from the viewpoint of the capital stock cycle, which is based on the assumption that such investment will be undertaken in order to achieve the level of capital stock necessary for production activity under certain growth expectations (Chart 24). Business fixed investment temporarily entered a phase of capital stock adjustment in fiscal 2020, pushed down mainly by a depression in economic activity brought about by the impact of COVID-19. That said, it is expected to continue increasing, supported by improvement in corporate profits and accommodative financial conditions, and along with a moderate rise in the expected growth rate.

**Chart 24: Capital Stock Cycles**



Source: Cabinet Office.  
 Note: Each broken line represents the combination of the rate of change in business fixed investment and the investment-capital stock ratio at a certain expected growth rate. The figure for fiscal 2021 is that for 2021/Q2.

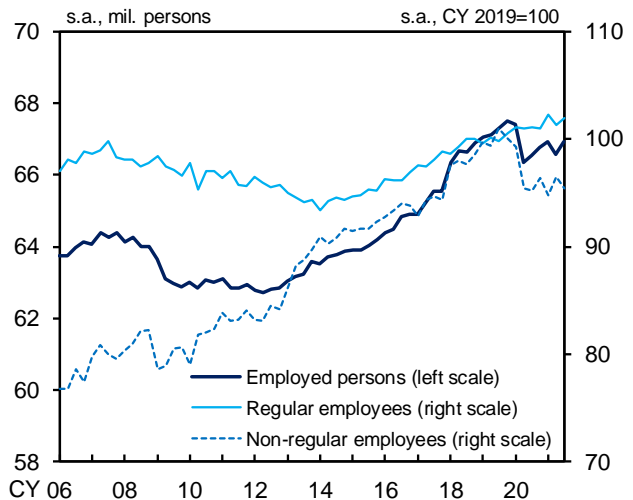
## Employment and Income Situation

The employment and income situation has remained weak due to the impact of COVID-19.

The number of employed persons has bottomed out, reflecting a pick-up in overall economic activity (Chart 25). However, it has remained at a relatively low level, mainly for non-regular employees in the face-to-face services industry. Meanwhile, the number of regular employees has continued to increase moderately, mainly in the medical, healthcare, and welfare services industry as well as the information and communications industry, both of which have faced a severe labor shortage. On the back of overall economic activity continuing to pick up, the year-on-year rate of change in total hours worked per employee has been positive, partly due to a rebound from the significant decline seen last year, but the level of total hours worked per employee has remained relatively low (Chart 26). With regard to labor market conditions, the labor force participation rate increased through the beginning of this year as seniors, women, and student part-time workers that were temporarily out of the labor market around last spring started returning to it (Chart 27). However, the increase has subsequently leveled off. The unemployment rate has remained more or less flat at around 3 percent, albeit with fluctuations. The active job openings-to-applicants ratio has remained more or less flat at a level slightly above 1 since the turn of the year (Chart 28).

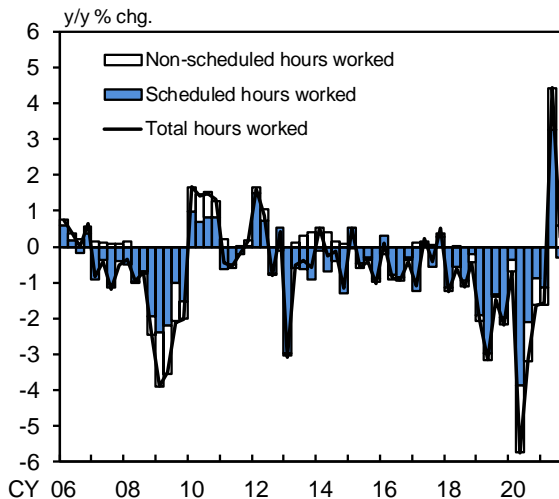
With regard to the outlook, the number of employees is expected to fluctuate for the time being, partly due to the production decline in the

**Chart 25: Number of Employed Persons**



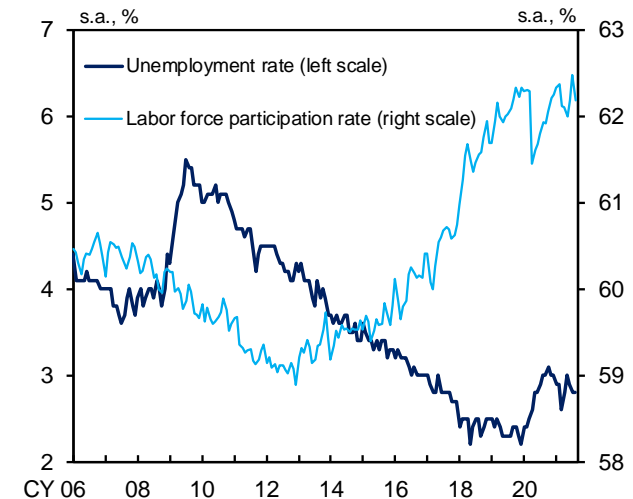
Source: Ministry of Internal Affairs and Communications.  
Note: Figures for regular employees and non-regular employees prior to 2013 are based on the "detailed tabulation" in the Labour Force Survey. Figures for 2021/Q3 are July-August averages.

**Chart 26: Hours Worked**



Source: Ministry of Health, Labour and Welfare.  
Note: Figures for 2021/Q3 are July-August averages.

**Chart 27: Unemployment Rate and Labor Force Participation Rate**



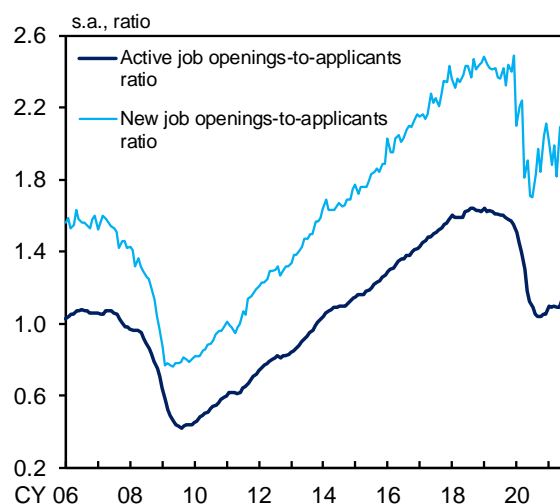
Source: Ministry of Internal Affairs and Communications.

manufacturing industry. However, it is likely to follow a moderate increasing trend thereafter. This is because labor absorption is expected to progress, mainly in industries with labor shortage, such as medical, healthcare, and welfare services, the wholesale and retail trade, and construction, and because demand such as for eating and drinking as well as accommodations is projected to recover as the impact of COVID-19 wanes gradually. The unemployment rate is likely to remain more or less flat at around the current level for a while, partly because the employment adjustment subsidies program is expected to be gradually scaled back along with economic improvement. Thereafter, however, it is projected to follow a moderate declining trend with a time lag following a recovery in economic activity.

On the wage side, the year-on-year rate of change in total cash earnings per employee has been positive since non-scheduled cash earnings and summer bonuses have increased relative to the level last year, when they declined significantly, and since scheduled cash earnings have increased for some industries (Chart 29).<sup>13</sup> The year-on-year rate of change in scheduled cash earnings has remained clearly positive, mainly on the back of a rebound from the decline seen last year and wage increases of full-time employees in the medical, healthcare, and welfare services industry, which has faced a severe labor shortage (Chart 30). On the other hand, in contrast to last year, when significant declines were observed, the year-on-year rates of change in both non-scheduled cash earnings and

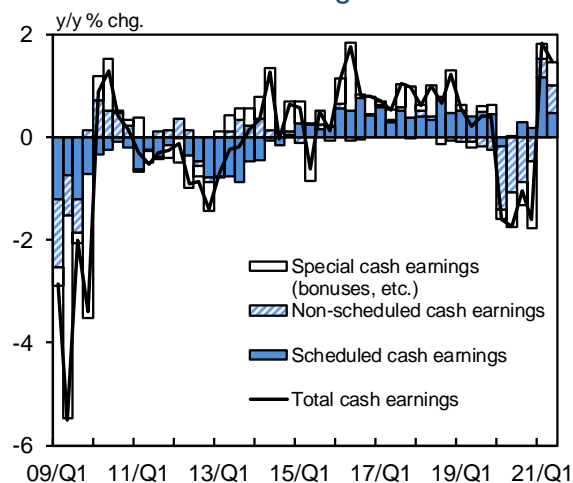
<sup>13</sup> Wages in the *Monthly Labour Survey* are assessed on the basis of continuing observations, which are less affected by the sample revisions.

**Chart 28: Job Openings-to-Applicants Ratio**



Source: Ministry of Health, Labour and Welfare.

**Chart 29: Nominal Wages**

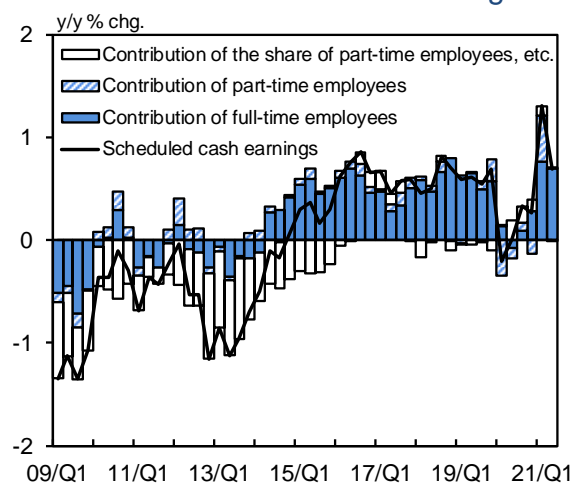


Source: Ministry of Health, Labour and Welfare.

Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.

2. Figures from 2016/Q1 onward are based on continuing observations following the sample revisions.

**Chart 30: Scheduled Cash Earnings**



Source: Ministry of Health, Labour and Welfare.

Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.

2. Figures from 2016/Q1 onward are based on continuing observations following the sample revisions.

special cash earnings have been positive, reflecting a recovery in production in the manufacturing industry for the former and improvement in business performance since the second half of fiscal 2020 for the latter. However, the levels for both earnings categories are still somewhat lower than those before the pandemic.

With regard to the outlook for wages, it likely will remain difficult for the rate of increase in scheduled cash earnings to accelerate for the time being. This is because, despite being pushed up by a continued rise in wages for regular employees on the back of continuing labor shortage and by a rise in minimum wages, scheduled cash earnings are projected to be somewhat pushed down by a rise in the share of part-time employees resulting from a recovery in the employment of non-regular workers. From the middle of the projection period, scheduled cash earnings are expected to rise moderately, reflecting improvement in business performance and a rise in the inflation rate. On the other hand, non-scheduled cash earnings are likely to continue improving on the back of a recovery in overall economic activity. Subsequently, the rate of increase in non-scheduled cash earnings is expected to decelerate toward the end of the projection period. Special cash earnings (bonuses), which lag behind corporate profits by about half a year, are likely to increase steadily, reflecting an improving trend in profits. Under these circumstances, an increase in total cash earnings per employee is projected to continue for the time being because non-scheduled cash earnings and special cash earnings are likely to maintain their recovery. Thereafter, total cash earnings per employee are expected to continue

increasing moderately, led by a rise in scheduled cash earnings.

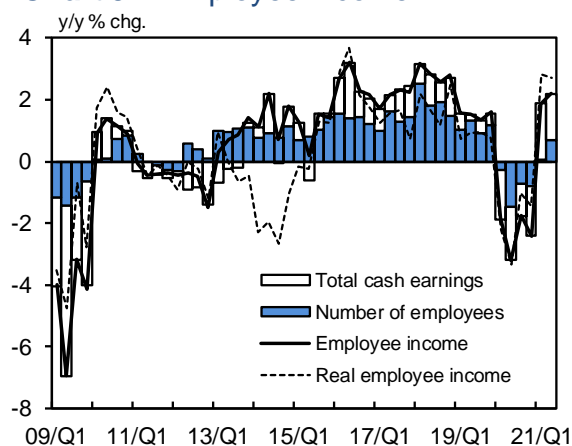
In light of the aforementioned employment and wage conditions, employee income has been on a moderate improving trend (Chart 31). However, it has remained at a relatively low level. With regard to the outlook, employee income is likely to continue improving moderately on the back of economic improvement and exceed the pre-pandemic level from the middle of the projection period.

## Household Spending

Private consumption has shown signs of a pick-up recently, although downward pressure has remained strong, particularly on services consumption, mainly due to vigilance against COVID-19.

The Consumption Activity Index (CAI, travel balance adjusted) -- which is calculated by combining various sales and supply-side statistics from the viewpoint of gauging Japan's consumption activity in a comprehensive manner -- decreased for two consecutive quarters, and it also declined thereafter for the July-August period relative to the April-June quarter (Charts 32 and 33).<sup>14, 15</sup> Based on various sources, such as

**Chart 31: Employee Income**



Sources: Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.

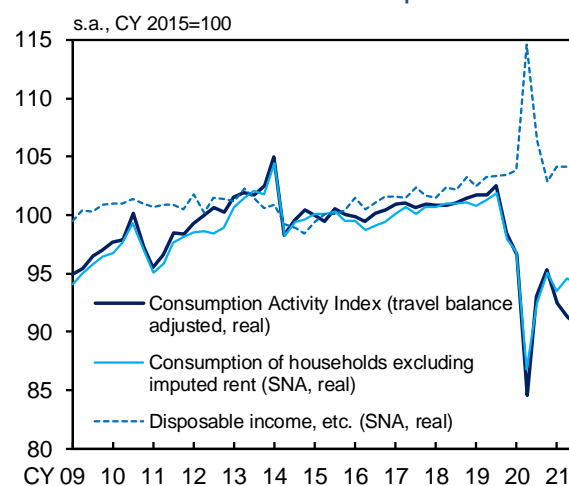
Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.

2. Employee income = Total cash earnings (*Monthly Labour Survey*) × Number of employees (*Labour Force Survey*)

3. Figures from 2016/Q1 onward are based on continuing observations following the sample revisions of the *Monthly Labour Survey*.

4. Figures for real employee income are based on staff calculations using the CPI (less imputed rent).

**Chart 32: Private Consumption**



Sources: Bank of Japan; Cabinet Office, etc.

Notes: 1. Figures for the Consumption Activity Index (CAI) are based on staff calculations. The CAI figures (travel balance adjusted) exclude inbound tourism consumption and include outbound tourism consumption. The figure for 2021/Q3 is the July-August average.

2. The figure for consumption of households excluding imputed rent for 2021/Q3 is based on staff calculations using the July-August average of the Synthetic Consumption Index.

3. "Disposable income, etc." consists of disposable income and adjustment for the change in pension entitlements. Real values are obtained using the deflator of consumption of households.

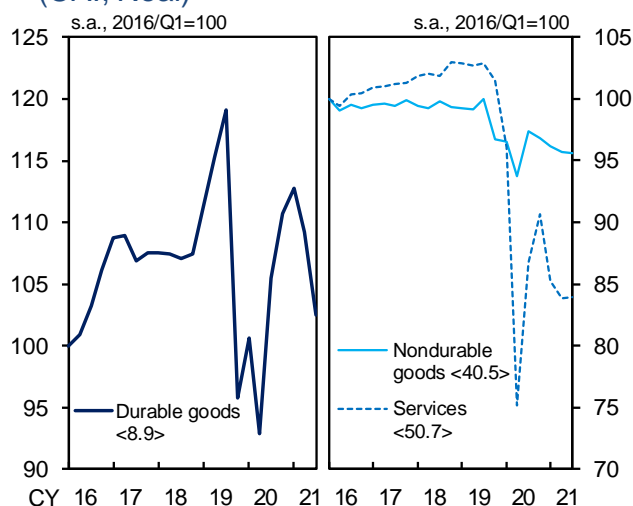
<sup>14</sup> Regarding the CAI, see the Bank's research paper "Revision of the Consumption Activity Index to Capture Recent Changes in Consumption Patterns" released in July 2021. The CAI Plus, which explicitly incorporates online consumption, has shown similar developments to the CAI, but the negative value has been slightly smaller for the CAI Plus since the outbreak of COVID-19, reflecting an increase in online consumption.

<sup>15</sup> Box 3 analyzes the impact of COVID-19 on developments in private consumption in the first half of fiscal 2021.

high-frequency indicators, statistics published by industry organizations, and anecdotal information from firms, private consumption seems to have remained at a low level, affected by COVID-19 and supply-side constraints on some durable goods. However, signs of a pick-up seem to have been observed of late, mainly in face-to-face services consumption, reflecting a decline in the number of confirmed new cases of COVID-19 and the lifting of the state emergency and priority measures to prevent the spread of disease (Chart 34).

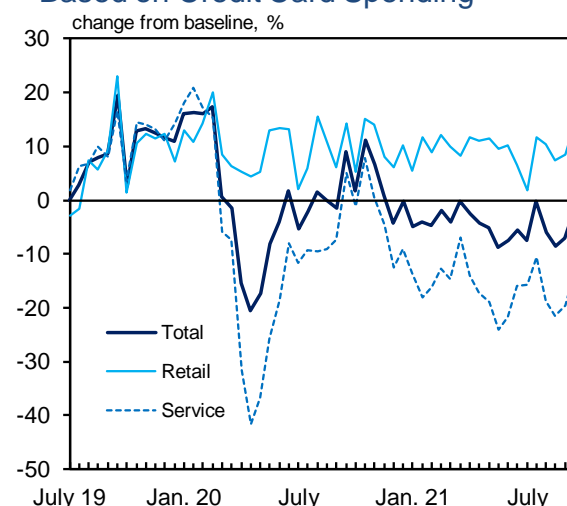
Looking at private consumption by type, durable goods have declined recently, reflecting demand related to staying at home peaking out and supply-side constraints seen in some areas (Chart 35). Specifically, the number of new passenger car registrations has declined, with a particularly noticeable plunge in September, due to the semiconductor shortage seen already and the effects of additional supply-side constraints experienced since this summer. Sales of household electrical appliances declined toward this summer. This is because of stay-at-home-related demand -- such as for personal computers -- leveling off, a decrease in the number of customers and weak sales of air conditioners, both reflecting irregular weather, and some white goods running out due to the semiconductor shortage. Nondurable goods have been more or less flat at a somewhat low level. Food and daily necessities have been firm, supported by the expansion in stay-at-home demand, albeit with some fluctuations depending on the situation with COVID-19. On the other hand, clothes and cosmetics dropped at the beginning of the year, mainly reflecting a

**Chart 33: Consumption Activity Index (CAI, Real)**



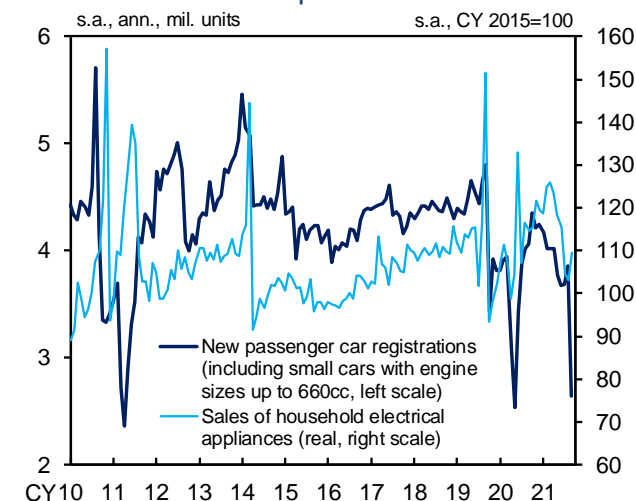
Sources: Bank of Japan, etc.  
 Notes: 1. Based on staff calculations. Figures in angular brackets show the weights in the CAI. Figures for 2021/Q3 are July-August averages.  
 2. Nondurable goods include goods classified as semi-durable goods in the SNA.

**Chart 34: Consumption Developments Based on Credit Card Spending**



Source: Nowcast Inc./ JCB, Co., Ltd., "JCB Consumption NOW."  
 Notes: 1. Figures are from the reference series in *JCB Consumption NOW*, which take changes in the number of consumers into account.  
 2. The baseline is the average for the corresponding half of the month for 2016 through 2018.

**Chart 35: Consumption of Durable Goods**



Sources: Japan Automobile Dealers Association; Japan Light Motor Vehicle and Motorcycle Association; Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications.

Note: Figures for real sales of household electrical appliances are based on staff calculations using the retail sales index of machinery and equipment in the *Current Survey of Commerce* and the price index of related items in the CPI.

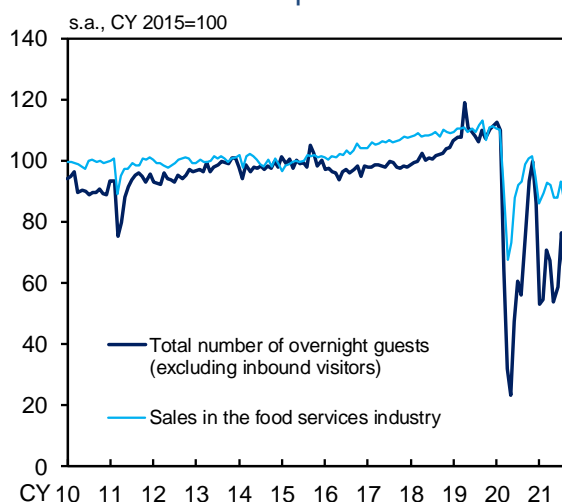


decrease in opportunities to go out due to the spread of COVID-19, and thereafter have been more or less flat, albeit with fluctuations.

Services consumption has shown signs of a pick-up recently, despite being at a low level. Monthly developments show that it continued to pick up through the June-July period but declined for August with the resurgence of COVID-19 (Chart 36). Dining-out increased for the June-July period due, for example, to a partial lifting of restrictions on serving alcohol, but it decreased again for August. Domestic travel also increased for the June-July period, mainly for short trips, and declined to a relatively large degree for August. That said, based on various sources, such as high-frequency indicators and anecdotal information from firms, it seems that the number of customers to restaurants has picked up and domestic travel bookings also have improved since October in particular, when the number of confirmed new cases of COVID-19 declined and the state emergency and priority measures to prevent the spread of disease were lifted (Charts 37 and 38). Meanwhile, there is still almost no overseas travel due to continued travel restrictions.

Looking at confidence indicators related to private consumption, the Consumer Confidence Index and the DI of the *Economy Watchers Survey* improved for the June-July period but declined for August, mainly due to the resurgence of COVID-19 (Chart 39). They improved for September, partly reflecting the decline in the number of confirmed new cases.

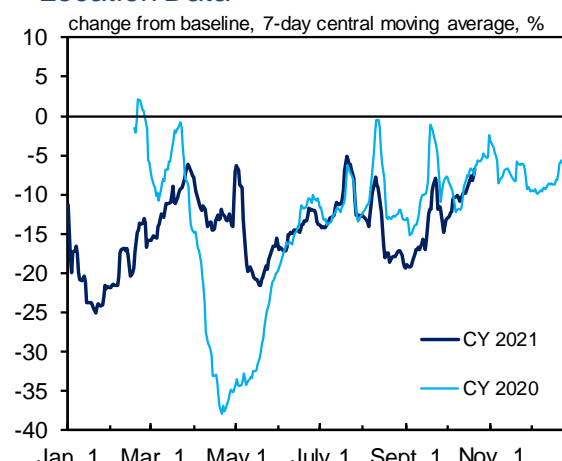
**Chart 36: Consumption of Services**



CY 10 11 12 13 14 15 16 17 18 19 20 21  
Sources: Japan Tourism Agency; Japan Foodservice Association, "Market Trend Survey of the Food Services Industry."

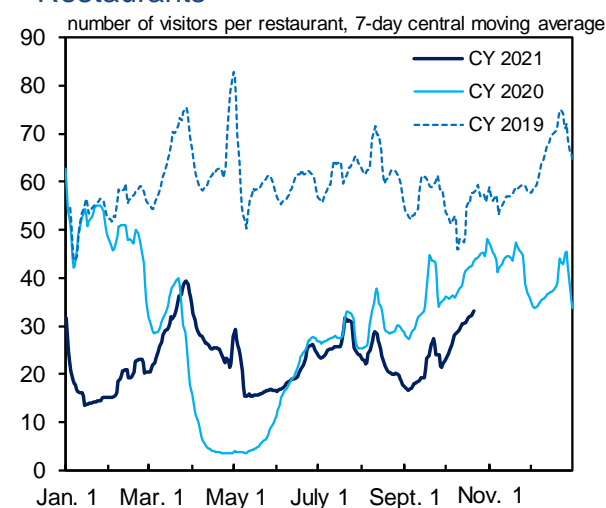
Note: Figures for the total number of overnight guests in 2010 are calculated using those for the survey results (year-on-year basis) of accommodation facilities with more than nine employees.

**Chart 37: Mobility Trends Based on Location Data**



Jan. 1 Mar. 1 May 1 July 1 Sept. 1 Nov. 1  
Source: Google LLC "Google COVID-19 Community Mobility Reports." <https://www.google.com/covid19/mobility/>. Accessed: October 28, 2021.  
Notes: 1. The baseline is the median on the corresponding day of the week during the 5-week period from January 3 to February 6, 2020.  
2. Figures are mobility trends for places such as restaurants, shopping centers, and theme parks.  
3. The latest figure is the average for October 18-24.

**Chart 38: Number of Visitors to Restaurants**



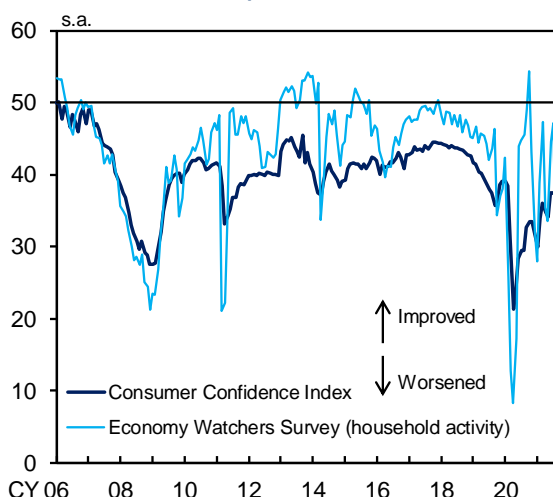
Jan. 1 Mar. 1 May 1 July 1 Sept. 1 Nov. 1  
Source: TableCheck Inc.  
Notes: 1. Figures are for about 5,400 restaurants that use the reservation and customer management system for restaurants provided by TableCheck Inc.  
2. The latest figure is the average for October 18-24.

With regard to the outlook for private consumption, it is expected for the time being that services consumption will be restrained by vigilance against COVID-19 and durable goods consumption will be pushed down by supply-side constraints, such as on automobiles. However, private consumption is expected to pick up again, supported by the materialization of pent-up demand for services and durable goods, as the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations, and as supply-side constraints wane.<sup>16</sup> Thereafter, as the impact of COVID-19 subsides gradually, an uptrend in private consumption is projected to become evident, supported by improvement in employee income. Under these circumstances, the propensity to consume is likely to follow an uptrend with the impact of COVID-19 waning; in the second half of the projection period, it is expected to be pushed up to a level that is slightly higher than the average level seen prior to the pandemic (Chart 40).

Housing investment has picked up (Chart 41). Specifically, the number of housing starts -- a leading indicator of housing investment -- has picked up after hitting bottom at the end of 2020, partly due to the materialization of pent-up demand and an increase in demand for detached houses in the suburbs. As for the outlook, with downward pressure stemming from the impact of COVID-19 dissipating, housing investment is likely to continue to pick up for the time being,

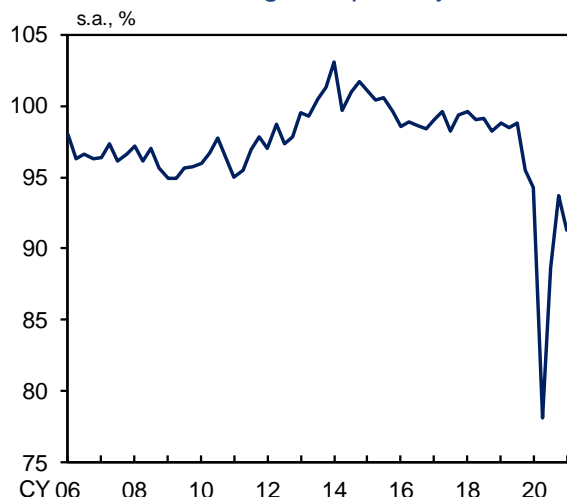
<sup>16</sup> "Forced savings," which is funds on hand that accumulated under the impact of COVID-19, mainly because households lost opportunities to spend, is expected to see quite moderate withdrawals. For details, see Box 3 in the April 2021 Outlook Report.

**Chart 39: Confidence Indicators Related to Private Consumption**



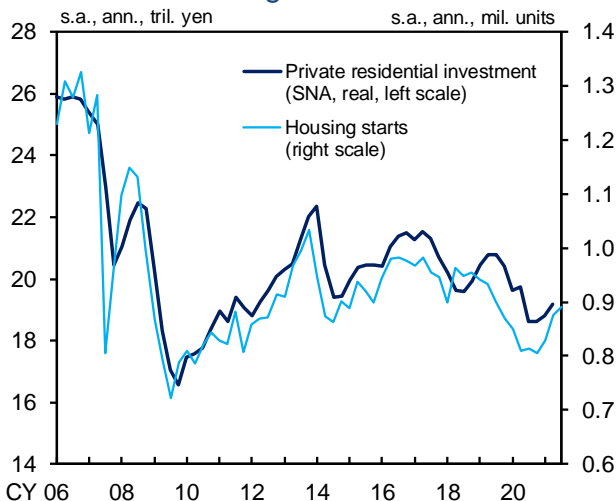
Source: Cabinet Office.  
Note: Figures for the *Economy Watchers Survey* are those for the current economic conditions DI.

**Chart 40: Average Propensity to Consume**



Source: Cabinet Office.  
Note: Average propensity to consume = Consumption of households / Disposable income, etc.  
"Disposable income, etc." consists of disposable income and adjustment for the change in pension entitlements.

**Chart 41: Housing Investment**



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.  
Note: The figure for 2021/Q3 is the July-August average.

partly supported by accommodative financial conditions and the materialization of pent-up demand. Thereafter, it is expected to follow a moderate declining trend again toward the end of the projection period, reflecting demographic developments.

## II. Current Situation of Prices and Their Outlook

### Developments in Prices

The rate of change in the producer price index (PPI, adjusted for the effects of seasonal changes in electricity rates) has continued to increase on a quarter-on-quarter basis, mainly reflecting the rise in international commodity prices (Chart 42). The year-on-year rate of increase in the services producer price index (SPPI, excluding international transportation) has been in the range of 0.5-1.0 percent, mainly reflecting a rebound from the decline seen last year.

The year-on-year rate of change in the CPI (all items less fresh food) has been at around 0 percent, mainly due to the rise in energy prices, despite being affected by COVID-19 and the reduction in mobile phone charges (Chart 43).<sup>17</sup> That in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the reduction in mobile phone charges) has been at around 0.5 percent (Chart 42).<sup>18</sup>

<sup>17</sup> In August 2021, the base year of the CPI was changed from 2015 to 2020, and figures for the year-on-year rate of change from January 2021 onward were retroactively revised. As a result, the year-on-year rate of change in the CPI for all items excluding fresh food for the April-June quarter of 2021 was revised downward by around 0.7 percentage points. This is mainly because the negative contribution of mobile phone charges to the CPI from this April expanded upon rebasing.

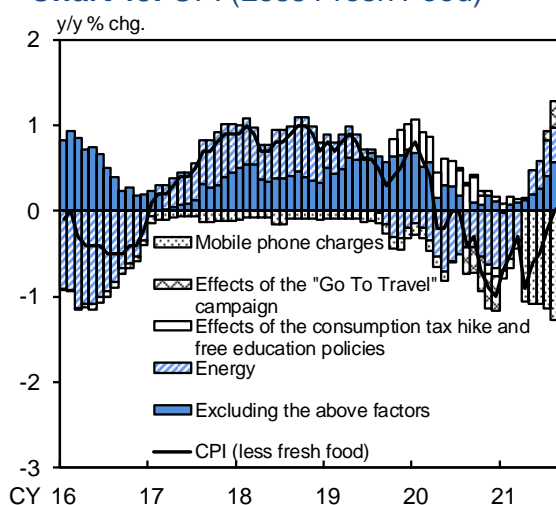
<sup>18</sup> The CPI figures that exclude "temporary factors such as the effects of the reduction in mobile phone charges" are calculated by excluding (1) the effects of the consumption tax hike and policies concerning the provision of free education, (2) the effects of the "Go To Travel" campaign, and (3) mobile phone charges from the CPI (all items less fresh food) and the CPI (all items less fresh food and energy), respectively.

### Chart 42: Inflation Indicators

	y/y % chg.			
	20/Q4	21/Q1	21/Q2	21/Q3
<b>Consumer Price Index (CPI)</b>				
Less fresh food	-0.9	-0.5	-0.6	0.0
Adjusted figure	-0.4	-0.5	0.4	1.0
Less fresh food and energy	-0.3	0.0	-0.9	-0.5
Adjusted figure	0.1	0.0	0.2	0.6
<b>Producer Price Index (q/q % chg.)</b>				
Producer Price Index (q/q % chg.)	0.0	1.6	2.5	1.8
Services Producer Price Index	-0.2	0.2	1.0	0.8
<b>GDP Deflator</b>				
Domestic demand deflator	-0.8	-0.5	0.2	

Sources: Ministry of Internal Affairs and Communications; Bank of Japan; Cabinet Office.  
 Notes: 1. Figures for the producer price index (PPI) are adjusted for the hike in electric power charges during the summer season. Figures for the services producer price index (SPPI) exclude international transportation. Both sets of figures exclude the effects of the consumption tax hike.  
 2. Adjusted figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.

### Chart 43: CPI (Less Fresh Food)

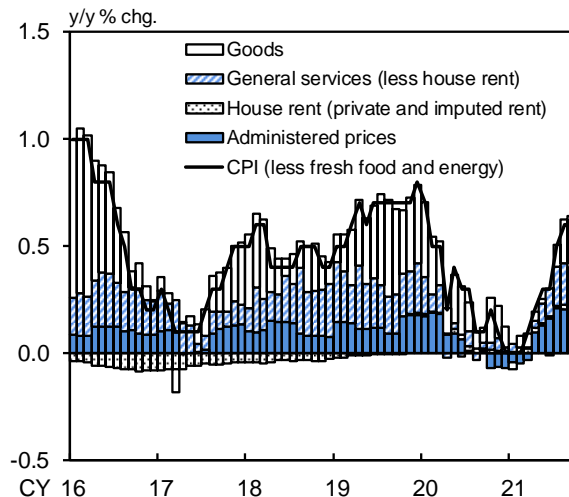


Source: Ministry of Internal Affairs and Communications.  
 Notes: 1. Figures for energy consist of those for petroleum products, electricity, and gas, manufactured & piped.  
 2. Figures for the "effects of the consumption tax hike and free education policies" from April 2020 onward are staff estimates and include the effects of measures such as free higher education introduced in April 2020.

Looking at the breakdown of developments in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the reduction in mobile phone charges), the rate of change in goods has increased slightly in positive territory, and the rates of change in general services prices and administered prices also have stayed in that territory (Chart 44). With respect to goods, prices of daily necessities and durable goods have continued to see firm developments, and some food products have seen a pass-through of raw material costs. Regarding general services, hotel charges that exclude the effects of the "Go To Travel" campaign have picked up, and services related to education have risen quite moderately, mainly reflecting personnel expenses. Administered prices have risen somewhat for fire and earthquake insurance premiums as well as water and sewerage charges for some local governments.

The indicators for capturing the underlying trend in the CPI have exhibited the following developments (Chart 45).<sup>19</sup> The trimmed mean of the year-on-year rate of change in the CPI has increased to around 0.5 percent recently on the back of developments in some items, including fresh food and energy. The weighted median also has increased slightly in positive territory of late.

**Chart 44: CPI (Less Fresh Food and Energy)**

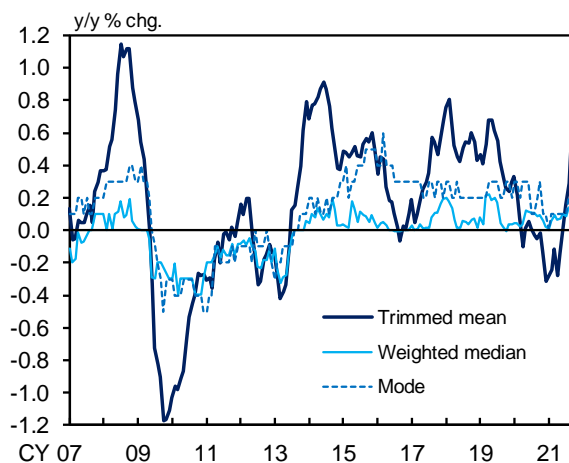


Source: Ministry of Internal Affairs and Communications.

Notes: 1. Administered prices (less energy) consist of "public services" and "water charges."

2. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.

**Chart 45: Various Measures of Core Inflation**



Sources: Bank of Japan; Ministry of Internal Affairs and Communications.

Note: Based on staff calculations using the CPI excluding the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses. The CPI figures from April 2020 onward are staff estimates and exclude the effects of measures such as free higher education introduced in April 2020.

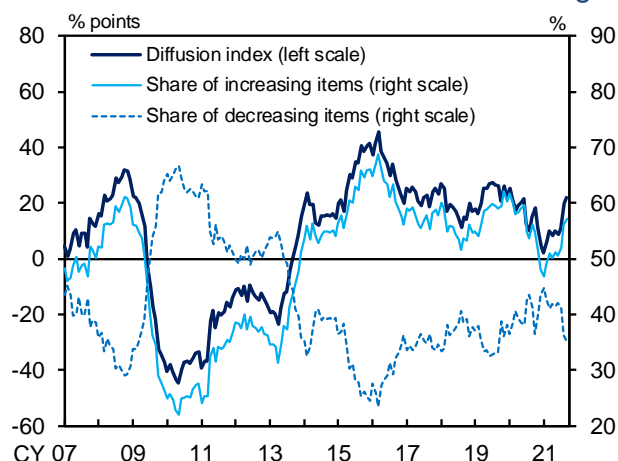
<sup>19</sup> The trimmed mean is calculated by excluding items that belong to a certain percentage of the upper and lower tails of the price change distribution (10 percent of each tail) in order to eliminate the effects of large relative price changes. The mode is the inflation rate with the highest density in the price change distribution. The weighted median is the average of the inflation rates of the items at around the 50 percentile point of the cumulative distribution in terms of weight. All three indicators are calculated using data for each CPI item that excludes the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign.

The mode, which is less susceptible to developments in certain CPI items, has been marginally positive. Looking at annual price changes across all CPI items (less fresh food), the share of price-increasing items minus the share of price-decreasing items has increased in positive territory because the number of price-increasing items has been on a moderate uptrend for such items as food products and daily necessities (Chart 46).

In sum, in terms of the underlying trend, the CPI inflation rate has continued to be firm relative to the extent to which the output gap has been negative, which has been seen mainly in the services sector. This is primarily because, under the impact of COVID-19, the price elasticity of demand for services has declined, costs have increased on the supply side, and demand for goods for which prices are sensitive to economic activity has been firm. In addition, the year-on-year rate of change in the CPI excluding temporary factors such as the effects of the reduction in mobile phone charges has increased slightly in positive territory of late, partly due to a moderate pass-through of raw material costs to some items.<sup>20</sup>

Meanwhile, the year-on-year rate of change in the domestic demand deflator has been marginally positive (Chart 42). This is because, while the private consumption deflator has declined due to the effects of the reduction in mobile phone

**Chart 46: Diffusion Index of Price Changes**



Sources: Bank of Japan; Ministry of Internal Affairs and Communications.  
 Note: The diffusion index is defined as the share of increasing items minus the share of decreasing items. The share of increasing/decreasing items is the share of items for which price indices increased/decreased from a year earlier. Based on staff calculations using the CPI (less fresh food) excluding the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses. The CPI figures from April 2020 onward are staff estimates and exclude the effects of measures such as free higher education introduced in April 2020.

<sup>20</sup> However, the current pace of increase in Japan's CPI has been quite moderate compared with the consumer price inflation rates in Europe and the United States. Box 4 compares the recent developments in the consumer price inflation rates in Japan, the United States, and Europe.

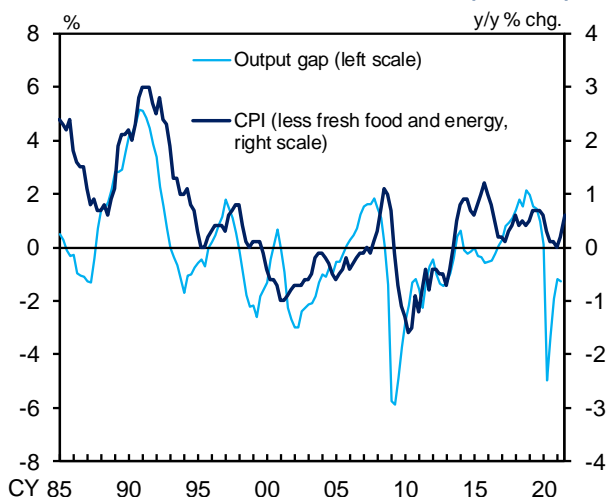
charges, deflators for business fixed investment and public investment have increased, reflecting rises in such prices as of materials. On the other hand, the year-on-year rate of change in the GDP deflator has been negative, at around minus 1 percent, pushed down by an increase in the import deflator in reflection of developments in crude oil prices, for example.

## Environment surrounding Prices

In the outlook for prices, the main factors that determine inflation rates are assessed as follows. First, against the background of continuing downward pressure on the face-to-face services industry, it is highly likely that improvement in the output gap will remain at a pause for the July-September quarter, partly due to the production decline in automobiles stemming from supply-side constraints (Charts 4 and 47). Thereafter, however, the output gap is likely to follow an improving trend, with an increase in domestic and external demand. It is expected that a positive trend will take hold in the middle of the projection period and the output gap will continue to expand moderately toward the end of the period.

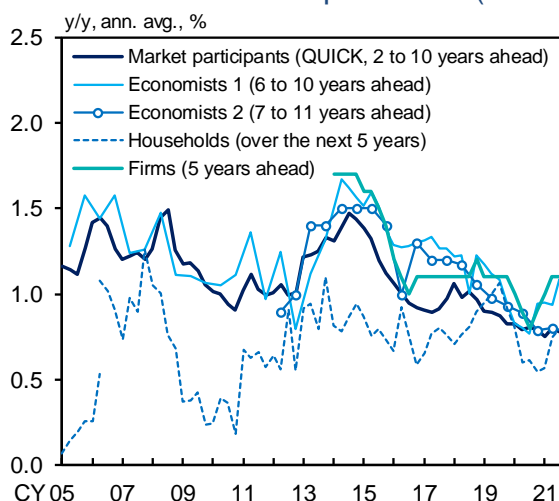
Second, medium- to long-term inflation expectations have picked up and are likely to follow an uptrend (Charts 48 and 49). That is, in terms of the adaptive component, inflation expectations are likely to be pushed up by actual price increases along with improvement in the output gap. In terms of the forward-looking component, the Bank will pursue monetary easing through its strong commitment to achieving the

**Chart 47: Inflation Rate and Output Gap**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
Notes: 1. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.  
2. Figures for the output gap are staff estimates.

**Chart 48: Inflation Expectations (Survey)**



Sources: Bank of Japan; QUICK, "QUICK Monthly Market Survey <Bonds>"; JCER, "ESP Forecast"; Consensus Economics Inc., "Consensus Forecasts."  
Notes: 1. "Economists 1" shows the forecasts of economists in the *Consensus Forecasts*. "Economists 2" shows the forecasts of forecasters surveyed for the *ESP Forecast*.  
2. Figures for households are from the *Opinion Survey on the General Public's Views and Behavior*, estimated using the modified Carlson-Parkin method.  
3. Figures for firms show the inflation outlook of enterprises for general prices (all industries and enterprises, average) in the *Tankan*.

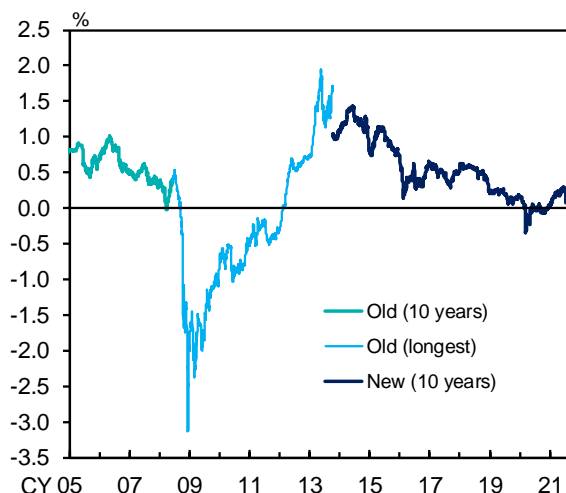
price stability target, and this is projected to be effective in pushing up inflation expectations.

The third factor is developments in import prices, which have been at a high level, reflecting the rise in international commodity prices, such as for crude oil and copper (Chart 50). The rise in international commodity prices and the resultant rise in the PPI seen recently could consequently push up the CPI, with upstream cost increases gradually being passed downstream. Energy prices, such as of petroleum products, electricity charges, and manufactured and piped gas charges, are likely to rise for the time being, and this is expected to clearly push up the year-on-year rate of change in the CPI (all items less fresh food). However, with regard to cost increases in items other than energy, the extent to which they will push up the CPI depends mainly on the strength of demand for consumption at any given time, and thus it is highly likely that such cost increases will be passed on only moderately to the CPI for the time being.

### Outlook for Prices

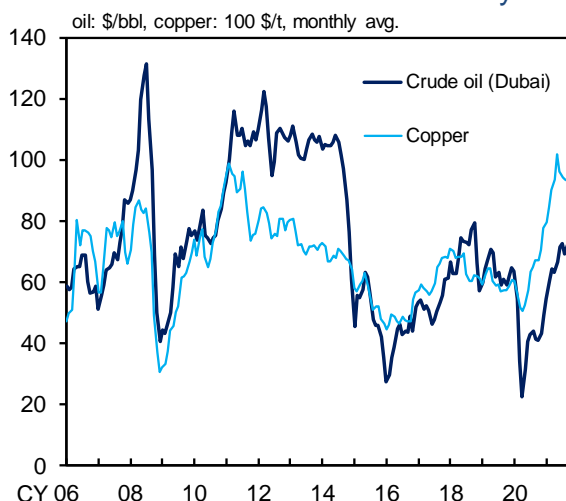
Based on this underlying scenario, as the impact of COVID-19 wanes gradually, mainly due to the widespread vaccinations, the underlying trend in the inflation rate is expected to increase moderately, supported by improvement in the output gap and a rise in inflation expectations. The year-on-year rate of change in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the reduction in mobile phone charges) is likely to increase moderately in positive territory for the time being because the moderate pass-through of

**Chart 49: Inflation Expectations (BEI)**



Source: Bloomberg.  
 Note: The BEI (break-even inflation) rate is the yield spread between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs. Inflation-indexed JGBs issued since October 2013 are designated as "new," while the rest are designated as "old." Figures for "old (longest)" are calculated using yield data for issue No. 16 of inflation-indexed JGBs, which matured in June 2018.

**Chart 50: International Commodity Prices**



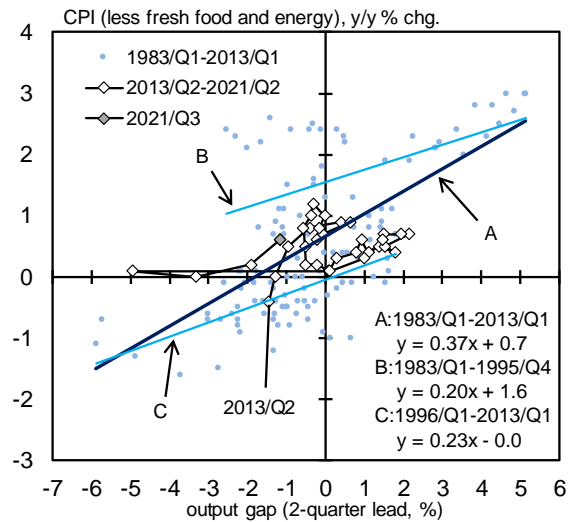
Sources: Nikkei Inc.; Bloomberg.



raw material costs to items such as food products is expected to continue. Thereafter, with the output gap continuing to improve steadily and medium- to long-term inflation expectations rising through both the adaptive and the forward-looking expectation formation mechanisms, the year-on-year rate of change in the CPI excluding the temporary factors is likely to increase (Chart 51).

Under these circumstances, the year-on-year rate of change in the CPI (all items less fresh food), which includes energy prices and mobile phone charges as well as the effects such as of the "Go To Travel" campaign, is highly likely to increase moderately in positive territory toward the end of 2021. This is based on the projection that, although the rate of change will continue to be pushed down relatively significantly by the reduction in mobile phone charges, it will increase, mainly due to the rise in energy prices reflecting the rise in crude oil prices, and also because of a rebound in hotel charges from last year's decline brought about by the "Go To Travel" campaign.<sup>21</sup> Thereafter, the year-on-year rate of change in the CPI (all items less fresh food) is likely to fluctuate due to temporary factors such as a decrease in the positive contribution of energy prices as well as dissipation of the effects of the reduction in mobile phone charges seen from this April and of the "Go To Travel" campaign. From the middle of the projection period, it is likely to accelerate at

**Chart 51: Phillips Curve**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
Notes: 1. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.  
2. Figures for the output gap are staff estimates.

<sup>21</sup> The handling of the "Go To Travel" campaign is yet to be decided, but when only the effects of the rebound from last year's decline brought about by the campaign are simply calculated, it is expected that the year-on-year rate of change in the CPI (all items less fresh food) will be pushed up by around 0.2 to 0.3 percentage points for the August-December period of 2021 and by around 0.1 percentage point for fiscal 2021.

about the same pace as that in the CPI (all items less fresh food and energy).

### III. Financial Developments in Japan

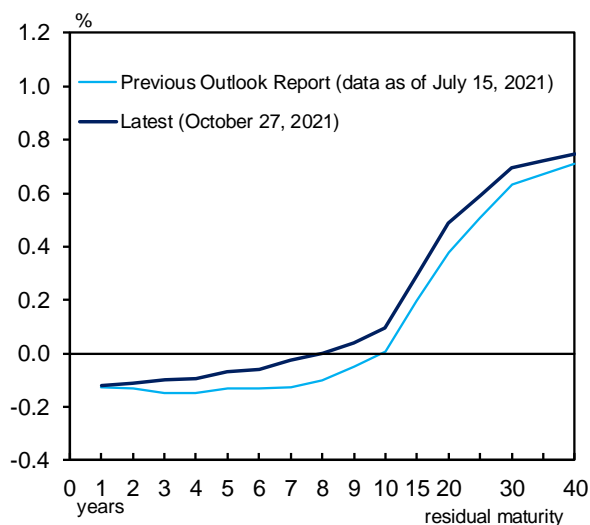
#### Financial Conditions

Financial conditions have been accommodative on the whole, although weakness in firms' financial positions has remained in some segments.

Under QQE with Yield Curve Control, the yield curve for JGBs has been in line with the current guideline for market operations, in which the short-term policy interest rate is set at minus 0.1 percent and the target level of 10-year JGB yields is around zero percent (Chart 52). That is, the yields for relatively short maturities have been in slightly negative territory and the 10-year JGB yields have been at around 0 percent as the Bank has purchased a necessary amount of both JGBs and treasury discount bills (T-Bills) without setting upper limits. Meanwhile, the 20-year JGB yields have been at around 0.5 percent.

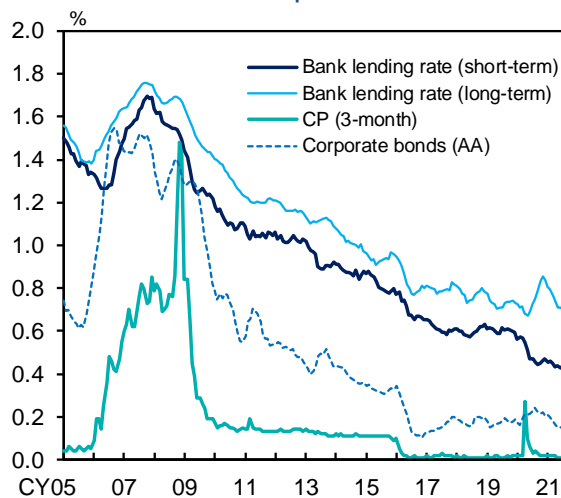
Firms' funding costs have been hovering at extremely low levels (Chart 53). Issuance rates for CP showed a significant rise in April 2020 but then declined, reflecting an increase in the Bank's purchases of CP. Subsequently, they have been at extremely low levels as increased demand for funds by large firms has subsided. Although the DI for issuance conditions for CP in the *Tankan* declined temporarily, an improving trend has become evident, mainly reflecting stabilized issuance rates. Issuance rates for corporate bonds rose somewhat in April 2020, but they declined thereafter and have been at extremely low levels. Meanwhile, lending rates (the average interest rates on new loans and discounts) have

**Chart 52: Yield Curves**



Source: Bloomberg.

**Chart 53: Bank Lending Rates and Issuance Yields for CP and Corporate Bonds**



Sources: Bank of Japan; Japan Securities Depository Center; Capital Eye; I/N Information Systems; Bloomberg.

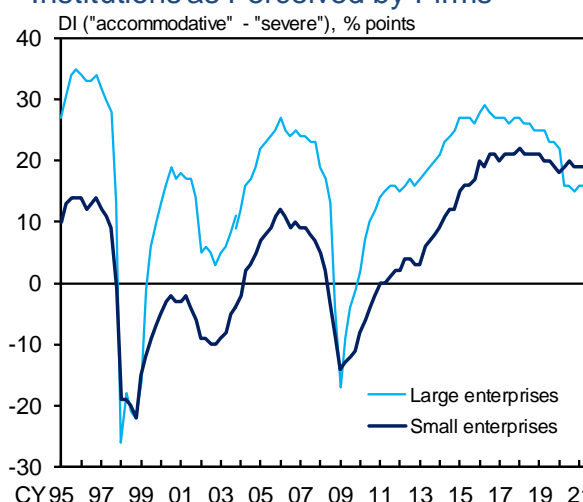
- Notes: 1. Figures for issuance yields for CP up through September 2009 are the averages for CP (3-month, rated a-1 or higher). Those from October 2009 onward are the averages for CP (3-month, rated a-1).
2. Figures for issuance yields for corporate bonds are the averages for domestically issued bonds launched on a particular date. Bonds issued by banks and securities companies, etc., are excluded.
3. Figures for bank lending rates and issuance yields for corporate bonds are 6-month backward moving averages.

been at around historical low levels.

With regard to the availability of funds for firms, the DI in the *Tankan* for financial institutions' lending attitudes as perceived by firms suggests that such attitudes have remained accommodative on the whole (Chart 54). That is, although the DI for large firms has been slightly lower than the pre-pandemic level, the proportion of firms answering that financial institutions' lending attitudes are "severe" has remained small on the whole. As the background to this, there have been various measures taken by the Bank and the government to support financing, mainly of firms, as well as efforts made by financial institutions. With regard to corporate financing, the DI for firms' financial positions in the *Tankan* has improved on the whole, mainly on the back of a pick-up in the economy (Chart 55). However, the DI suggests that weakness has remained in financial positions, particularly for firms in industries facing subdued sales due to the impact of COVID-19, as well as small and medium-sized ones.

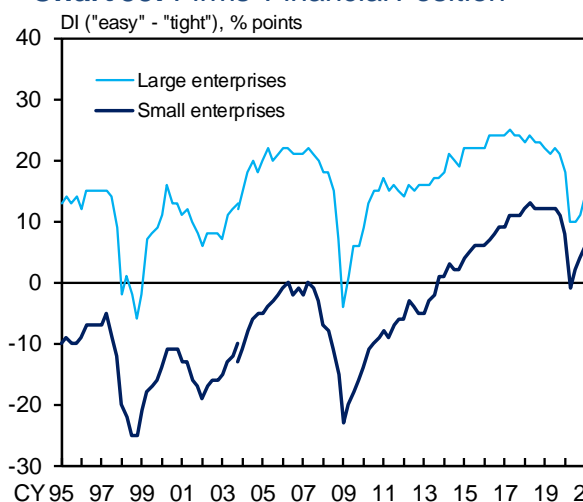
Firms' demand for funds that stems mainly from a rise in precautionary demand due to the impact of COVID-19 has subsided on the whole, as evidenced by large firms repaying loans by compressing their increased funds on hand. Under these circumstances, the year-on-year rates of increase in the amount outstanding of bank lending and the aggregate amount outstanding of CP and corporate bonds have decelerated relative to somewhat high growth last year; the rates of increase have been at around 0.5 percent and around 4 percent, respectively

**Chart 54: Lending Attitudes of Financial Institutions as Perceived by Firms**



Source: Bank of Japan.  
 Note: Based on the *Tankan*. All industries. There is a discontinuity in the data for December 2003 due to a change in the survey framework.

**Chart 55: Firms' Financial Position**

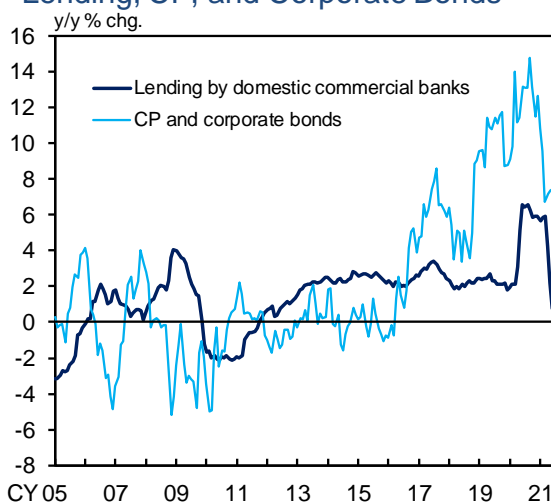


Source: Bank of Japan.  
 Note: Based on the *Tankan*. All industries. There is a discontinuity in the data for December 2003 due to a change in the survey framework.

(Chart 56). That said, their amounts outstanding have continued to exceed the pre-pandemic levels significantly.

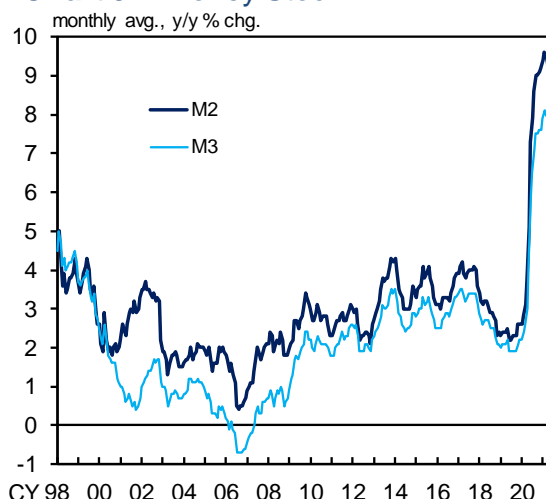
The year-on-year rate of increase in the monetary base has been in the range of 10-15 percent, and its amount outstanding as of end-September was 663 trillion yen, of which the ratio to nominal GDP was 122 percent.<sup>22</sup> The year-on-year rate of increase in the money stock (M2) has been in the range of 4.0-4.5 percent, mainly reflecting an increase in fiscal spending (Chart 57).

**Chart 56: Amounts Outstanding of Bank Lending, CP, and Corporate Bonds**



Sources: Bank of Japan; Japan Securities Depository Center; Japan Securities Dealers Association; I-N Information Systems.  
 Note: Figures for lending by domestic commercial banks are monthly averages. Figures for CP and corporate bonds are those at the end of the period.

**Chart 57: Money Stock**



Source: Bank of Japan.

<sup>22</sup> It is assumed that the figure for nominal GDP is unchanged from the April-June quarter of 2021.

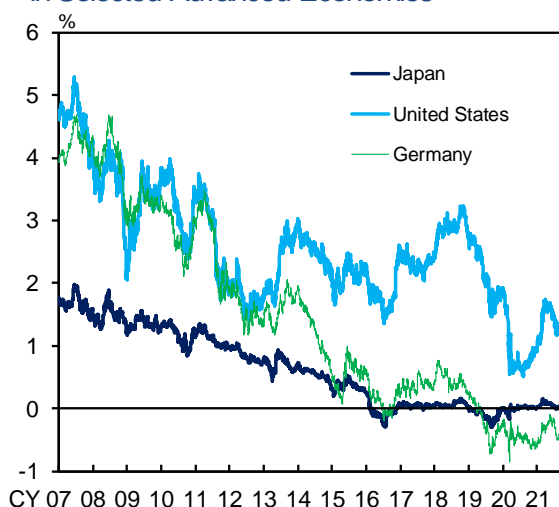
## Developments in Financial Markets

In global financial markets, stock prices in the United States and Europe have been at high levels, reflecting a recovery in the global economy that is mainly due to progress with vaccinations. That said, markets were nervous at times amid continued vigilance against the spread of COVID-19, as well as concern over the debt problems in the Chinese real estate sector and steps toward reducing monetary accommodation in the United States and Europe in response to rising inflation.

Yields on 10-year government bonds in the United States declined temporarily, mainly because of safe-haven flows due to the spread of the Delta variant. However, the yields subsequently have increased, reflecting higher-than-expected inflation and resultant concern over the Federal Reserve's steps toward reducing monetary accommodation (Chart 58). Yields on 10-year government bonds in Germany, with upward pressure stemming from the rise in U.S. yields, also have increased due to speculation over the reduction in the amount of assets the European Central Bank (ECB) is purchasing in response to the COVID-19 pandemic.

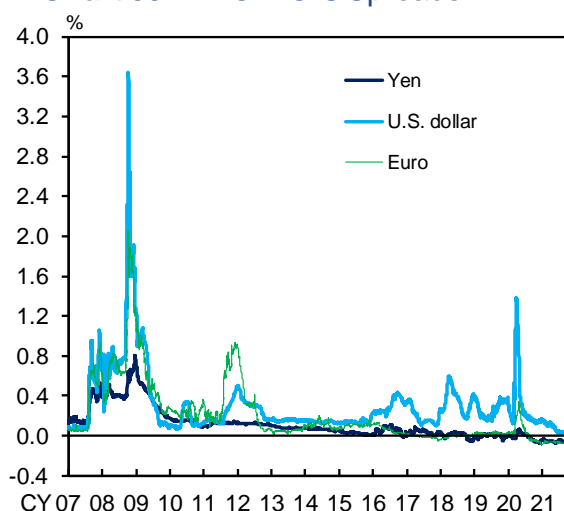
With regard to the LIBOR-OIS spreads for major currencies, those for the U.S. dollar, the euro, and the yen have been more or less flat at low levels (Chart 59). Premiums for U.S. dollar funding through the dollar/yen foreign exchange swap market have been at low levels, despite expanding somewhat since end-September, reflecting transactions conducted in view of the year-end (Chart 60).

**Chart 58: 10-Year Government Bond Yields in Selected Advanced Economies**



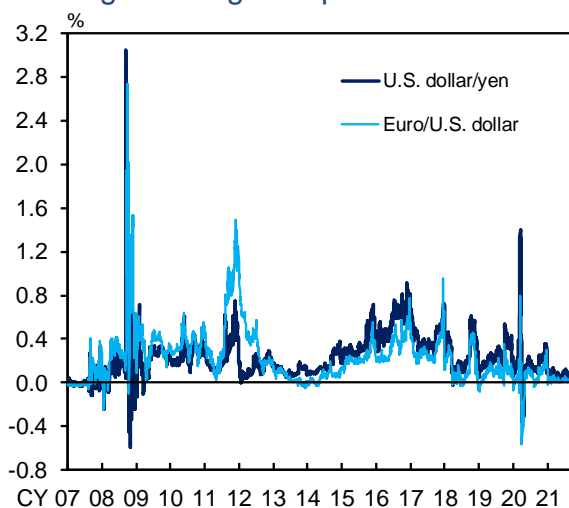
Source: Bloomberg.

**Chart 59: LIBOR-OIS Spreads**



Source: Bloomberg.  
Note: LIBOR-OIS spreads are LIBOR (3-month) minus the yield on overnight index swaps (3-month).

**Chart 60: Dollar Funding Premiums through Foreign Exchange Swaps**



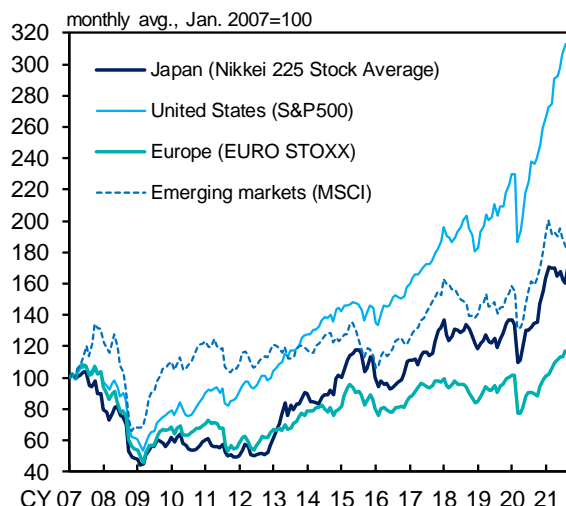
Source: Bloomberg.  
Note: U.S. dollar funding rate from yen or euro minus 3-month dollar LIBOR.

Stock prices in the United States and Europe have been at high levels on the back of the recovery in the global economy and favorable corporate results. However, stock markets were nervous at times, as seen in the decline in prices amid concern over, for example, the debt problems in the Chinese real estate sector and steps toward reducing monetary accommodation in the United States and Europe (Chart 61). Stock prices in Japan have fluctuated to a large degree; they had been sluggish, mainly due to the spread of COVID-19 this summer, then rebounded temporarily reflecting a decrease in the number of confirmed cases, but have declined thereafter along with stock prices in the United States and Europe. Developments in stock prices in emerging economies have differed across countries and regions, mainly reflecting commodity prices and the COVID-19 situation. Among them, Asian stocks have declined on the whole, greatly affected by the debt problems in the Chinese real estate sector, the strengthening of various controls in China, and supply-chain disruptions in the ASEAN countries.

J-REIT prices have declined against the background of a rise in U.S. interest rates and deteriorated supply and demand conditions due to an increase in public offerings (Chart 62).

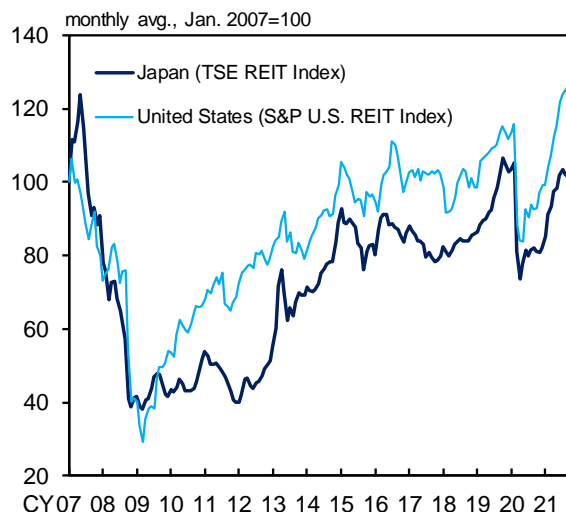
In foreign exchange markets, after being more or less flat, the yen has depreciated against the U.S. dollar to date, mainly due to the rise in U.S. interest rates (Chart 63). The yen also has depreciated somewhat against the euro.

**Chart 61: Selected Stock Price Indices**



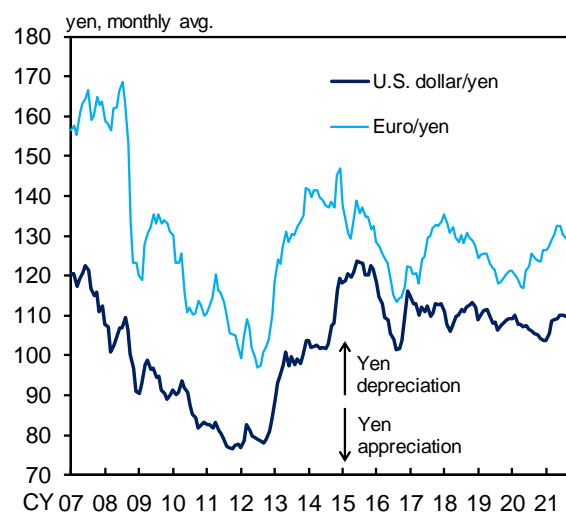
Source: Bloomberg.  
Note: Figures for emerging markets are those for the MSCI Emerging Markets Index (local currency).

**Chart 62: Selected REIT Indices**



Source: Bloomberg.

**Chart 63: U.S. Dollar/Yen and Euro/Yen**

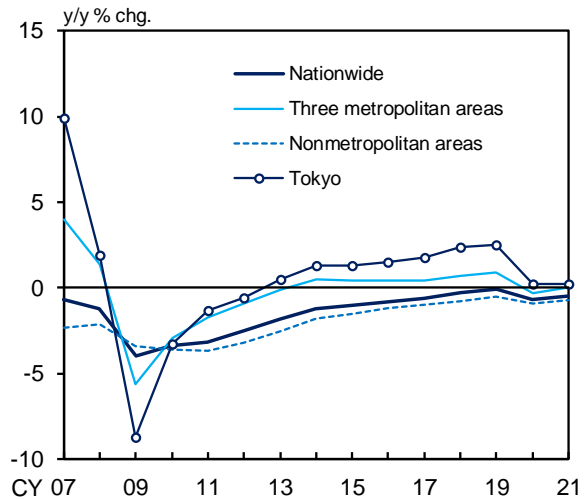


Source: Bloomberg.

## Land Prices

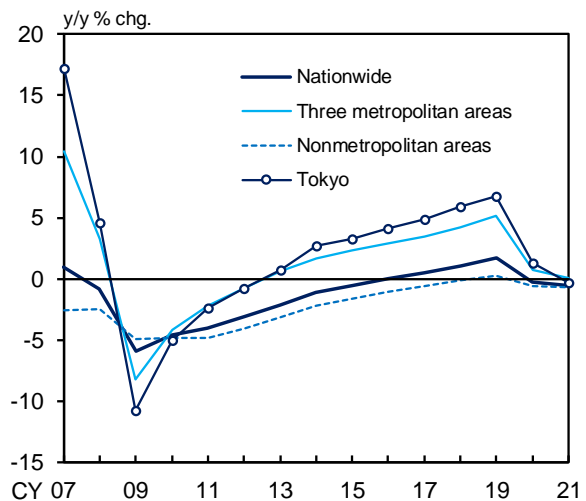
Land prices have continued to decrease slightly since last year due to the impact of COVID-19. According to the *Land Price Research by Prefectural Governments* for 2021 (as of July 1), the year-on-year rate of decline in residential land prices has decelerated, whereas that in commercial land prices has accelerated (Charts 64 and 65). In the three major metropolitan areas (Tokyo, Osaka, and Nagoya), the year-on-year rate of change in residential land prices declined last year but has stopped doing so, while the rate of increase in commercial land prices has decelerated, mainly owing to a decline in such prices in Osaka. In nonmetropolitan areas, the year-on-year rates of change in both residential and commercial land prices have remained slightly negative.

### Chart 64: Residential Land Prices



Source: Ministry of Land, Infrastructure, Transport and Tourism.  
 Notes: 1. Based on the *Land Price Research by Prefectural Governments*. Figures are as of July 1.  
 2. The three metropolitan areas are the Tokyo area (Tokyo, Kanagawa, Saitama, Chiba, and Ibaraki prefectures), the Osaka area (Osaka, Hyogo, Kyoto, and Nara prefectures), and the Nagoya area (Aichi and Mie prefectures). Nonmetropolitan areas are areas other than the three metropolitan areas.

### Chart 65: Commercial Land Prices



Source: Ministry of Land, Infrastructure, Transport and Tourism.  
 Notes: 1. Based on the *Land Price Research by Prefectural Governments*. Figures are as of July 1.  
 2. The three metropolitan areas are the Tokyo area (Tokyo, Kanagawa, Saitama, Chiba, and Ibaraki prefectures), the Osaka area (Osaka, Hyogo, Kyoto, and Nara prefectures), and the Nagoya area (Aichi and Mie prefectures). Nonmetropolitan areas are areas other than the three metropolitan areas.



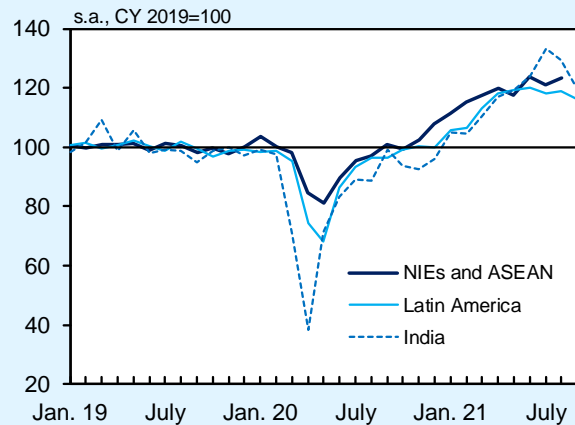
## (Box 1) Varied Developments in Overseas Economies and Uncertainties Regarding the Outlook

Overseas economies have recovered on the whole. That said, there is variation across countries and regions: while the United States and Europe have maintained relatively high growth, the Chinese and some other emerging economies have been under downward pressure, including on production, due to the spread of COVID-19 variants this summer and supply-side constraints. This box outlines these varied developments in overseas economies and risks to the outlook.

Some emerging economies have decelerated recently. In particular, in some ASEAN countries, the spread of COVID-19 variants this summer has had a negative impact on production, thereby leading to some weakness in exports, especially of semiconductors and automobile parts (Chart B1-1). In China, which had continued to recover firmly, business activity in both the manufacturing and services industries seems to have been pushed down, partly because of downward pressure on domestic demand and production stemming from such factors as the resurgence of COVID-19 and power supply issues (Chart B1-2).

On the other hand, in the United States and Europe, where full vaccination rates are high, the resumption of economic activity has continued to progress without public health measures being tightened even during phases when the number of confirmed new cases of COVID-19 increases.

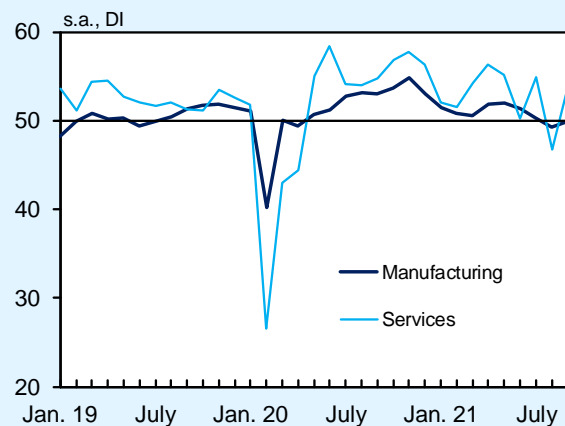
**Chart B1-1: Nominal Exports of Major Emerging Economies**



Source: CEIC.

Note: Based on staff calculations. U.S. dollar basis. Figures for the NIEs and ASEAN and Latin America are the sum of figures for the major economies in the respective regions.

**Chart B1-2: PMI for China**



Source: IHS Markit (© and database right IHS Markit Ltd 2021. All rights reserved.). Note: Figures are the Caixin China PMI. Figures for services are the Services Business Activity Index.

Against this backdrop, business sentiment has improved firmly in the manufacturing industry and has continued to improve, despite a temporary slowdown, in the services industry (Chart B1-3).

Regarding the outlook, overseas economies are likely to continue recovering, led by advanced economies and China. Specifically, the U.S. and European economies are expected to maintain their recovery with the resumption of economic activity continuing to progress. The Chinese economy is also likely to return to a steady growth path as downward pressure on production stemming mainly from power supply issues dissipates. Emerging economies are expected to follow an improving trend as the impact of COVID-19 wanes.

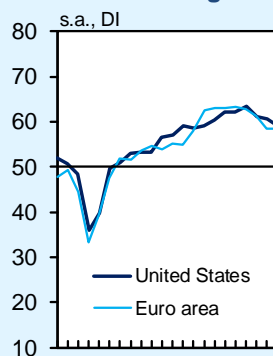
There are considerable risks -- both upside and downside -- to the baseline scenario of the outlook for overseas economies. Among the risks, the following four factors require particular attention for the time being.

The first is the course of COVID-19 on a global basis. If the number of confirmed new cases increases in emerging economies, where full vaccination rates are relatively low, and then public health measures are tightened, the recovery in these economies could be hampered through restraints on consumption and production.

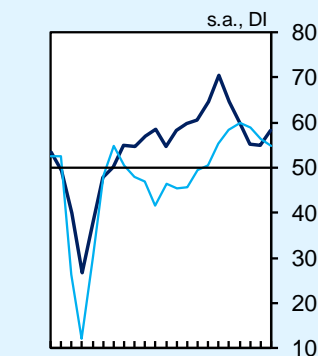
The second factor is global supply-side constraints. If the economic recovery is delayed

**Chart B1-3: PMIs for the United States and the Euro Area**

**1. Manufacturing**



**2. Services**



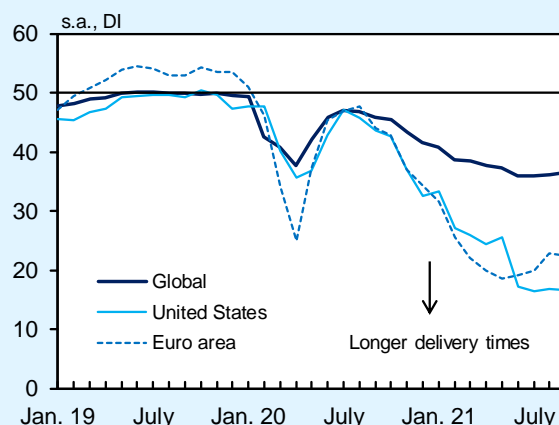
Source: IHS Markit (© and database right IHS Markit Ltd 2021. All rights reserved.).  
Note: Figures for services are the Services Business Activity Index.

or the number of confirmed new cases increases in emerging economies while the resumption of economic activity in the United States and Europe continues to progress, global supply-side constraints could be amplified or prolonged (Chart B1-4). This could consequently curb global economic growth and at the same time push up prices.

The third factor is the debt problems in the Chinese real estate market, which is a risk concerning an individual country. Construction starts have been somewhat weak because the real estate sector has pushed forward with deleveraging, mainly reflecting the phased tightening of regulations since last year. If these developments in the real estate market negatively affect firms' funding conditions and households' sentiment, growth in the Chinese economy could be restrained (Chart B1-5).

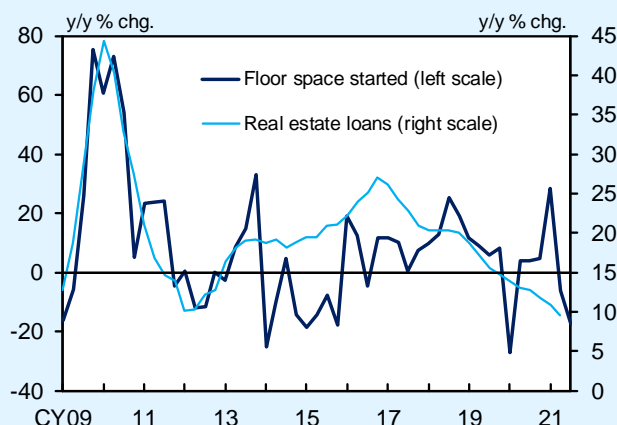
The fourth factor concerns developments in global financial conditions. In global financial markets, there have been temporary capital outflows from emerging economies of late, mainly against the background of vigilance on China's real estate market and a resultant rise in concern over a possible slowdown in the Chinese economy. If global financial conditions tighten by more than expected due to concern over steps toward reducing monetary accommodation in advanced economies, overseas economies, particularly some vulnerable emerging economies, could be pushed down (Chart B1-6).

**Chart B1-4: Suppliers' Delivery Times PMI**



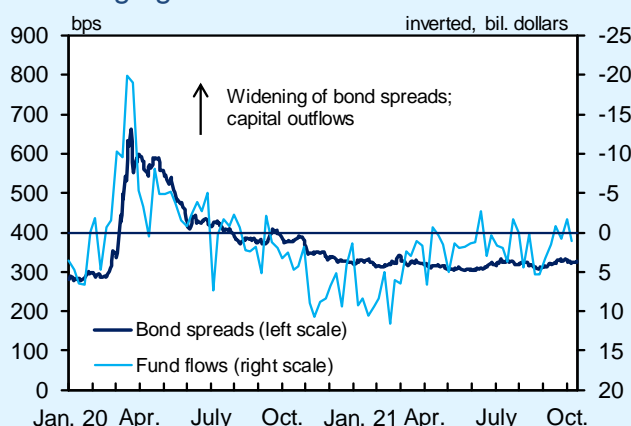
Source: IHS Markit (© and database right IHS Markit Ltd 2021. All rights reserved.).  
 Note: The suppliers' delivery times PMI is the suppliers' delivery times index in the Manufacturing PMI. Global figures are the J.P.Morgan Global Manufacturing PMI.

**Chart B1-5: Floor Space Started and Real Estate Loans in China**



Sources: CEIC; Wind; The People's Bank of China.  
 Note: Figures for real estate loans throughout the year 2009 are from the *China Monetary Policy Report* published by the People's Bank of China.

**Chart B1-6: Financial Conditions in Emerging Economies**



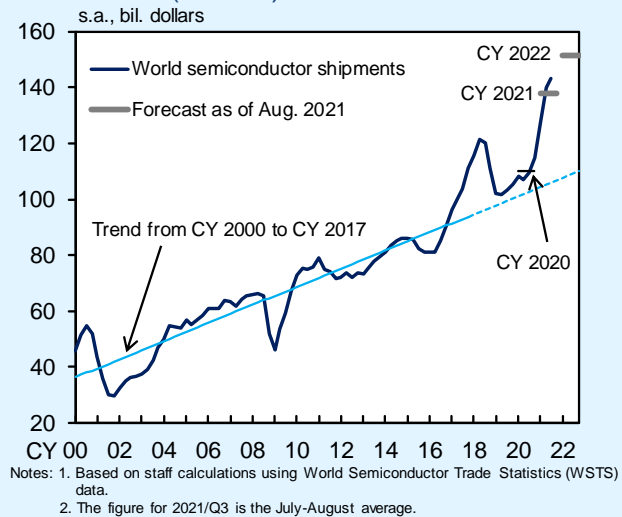
Sources: Bloomberg; EPFR Global.  
 Note: Figures for bond spreads are the yield spreads of the J.P.Morgan EMBI Global over U.S. Treasuries. Those for fund flows are the sum of bond and equity fund flows.

## (Box 2) Developments in "Digital-Related Exports"

Japan's real exports of automobile-related goods have decreased due to the effects of supply-side constraints, but those of other goods -- such as IT-related, intermediate, and capital goods -- have continued on an uptrend (Chart 13). Overall exports are likely to remain in the deceleration phase for the time being but are expected to return to a rising path thereafter, supported by a recovery in global demand, with the effects of supply-side constraints waning gradually. The rise in Japan's exports is likely to be driven in particular by a rapid expansion in global demand for digital-related goods, as indicated by forecasts for an increase in demand for semiconductors (Chart B2-1). Regarding the recent supply-side constraints such as on semiconductors, while it should be noted that supply-chain disruptions in the ASEAN countries have been the trigger for the production declines at final product manufacturers, the underlying cause of the constraints is that global demand for digital-related goods, mainly semiconductors, has been expanding firmly at a pace exceeding suppliers' expectations.

The expansion in demand for digital-related goods is likely to stimulate exports of not only items classified as IT-related goods (e.g., semiconductors and personal computers) in real export data compiled by the Bank but also some items that are classified as either capital goods or intermediate goods and closely related to IT. In this box, "digital-related exports," which is broadly defined to include exports of some of the capital or intermediate goods just described, is

**Chart B2-1: World Semiconductor Demand (WSTS)**

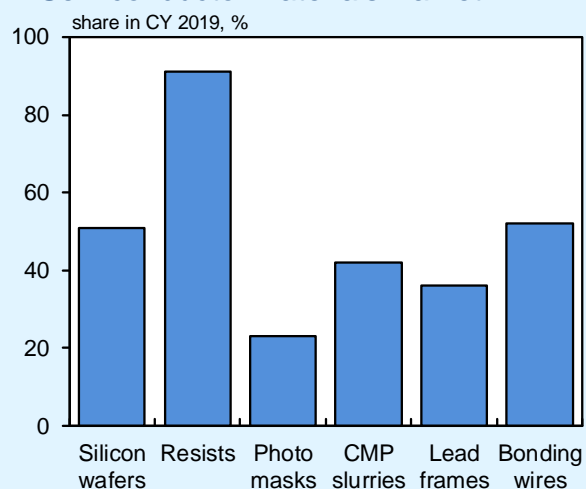


calculated so as to comprehensively capture the positive effects that the uptrend in demand for semiconductors and related goods has on Japan's exports.

A detailed look at real exports by item shows that many goods have a close link with global demand for digital-related goods. Of capital goods, for example, semiconductor production equipment obviously is closely related to demand for semiconductors; exports and production of this equipment have increased clearly of late, reflecting the rapid expansion in demand for semiconductors. In addition, many parts and components classified as intermediate goods in the Bank's real export data have a high correlation with changes in digital-related demand. Typical examples of these parts and components are the so-called cutting-edge materials, such as silicon wafers and plastic films (e.g., LCD protective films and insulating films). Regarding semiconductor production equipment as well as various semiconductor and related materials, Japanese firms have large global market shares in many items where they have advantages in terms of, for example, relevant technologies (Chart B2-2).

Given these observations, as a new indicator to more comprehensively capture the effects of the expansion in demand for digital-related goods on Japan's exports, "digital-related exports" is estimated by adding up exports of (1) IT-related goods, as currently classified by the Bank, (2) semiconductor production equipment included in capital goods, and (3) intermediate goods that have a high correlation with the "silicon cycle"

**Chart B2-2: Japanese Firms' Share of the Semiconductor Materials Market**



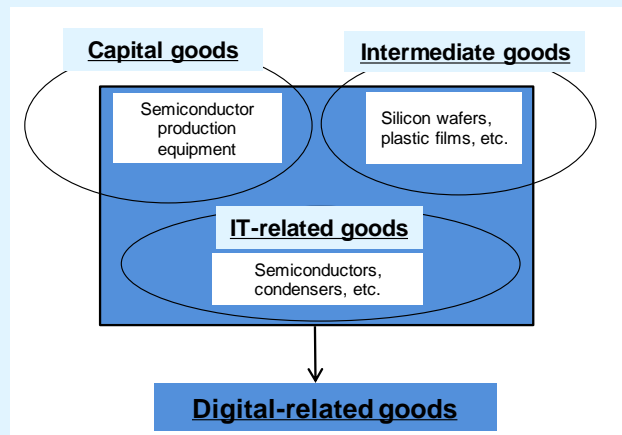
(Chart B2-3).<sup>23</sup>

The estimated digital-related exports account for over 30 percent of total nominal exports, implying that these correspond to exports of a wider range of goods than those in the existing category of IT-related goods, which account for over 20 percent of total nominal exports (Chart B2-4). Looking at developments in the share of digital-related exports in total nominal exports by goods comprising digital-related goods, the share of IT-related goods fell substantially in the 2000s, mainly reflecting a decline in product prices and the effects of the relocation of production bases to overseas, and has been on a moderate declining trend since then (Chart B2-5). On the other hand, the shares of semiconductor production equipment and digital-related intermediate goods have continued to rise in recent years. As a result, the share of overall digital-related exports in total nominal exports has remained at a high level.

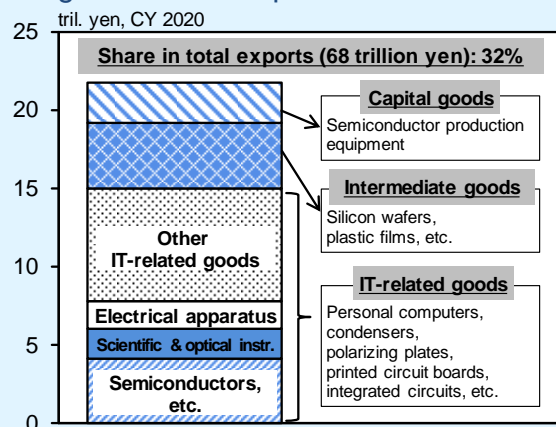
Turning to developments in real terms, since the outbreak of COVID-19, the estimated

<sup>23</sup> Since a variety of items are classified as intermediate goods, it is difficult to identify which are to be used for digital products simply by referring to their name. Therefore, in estimating "digital-related exports," a statistical approach is employed and intermediate goods that are highly correlated with world semiconductor shipments -- calculated using World Semiconductor Trade Statistics (WSTS) data -- are selected as items described in (3) above. More specifically, the selection is made using the following criterion: based on data for the period 2003-2020, an item is selected if the correlation coefficient between its export value and world semiconductor shipments -- both of which are in yen terms and measured on the basis of the year-on-year rate of change -- is 0.5 or higher. Then, the selected items are narrowed down to those having a higher correlation with global semiconductor demand than with the OECD's Composite Leading Indicator (a proxy indicator of the global business cycle), so as to exclude items for which exports increase or decrease in tandem with the typical business cycle.

**Chart B2-3: Overview of Digital-Related Goods**

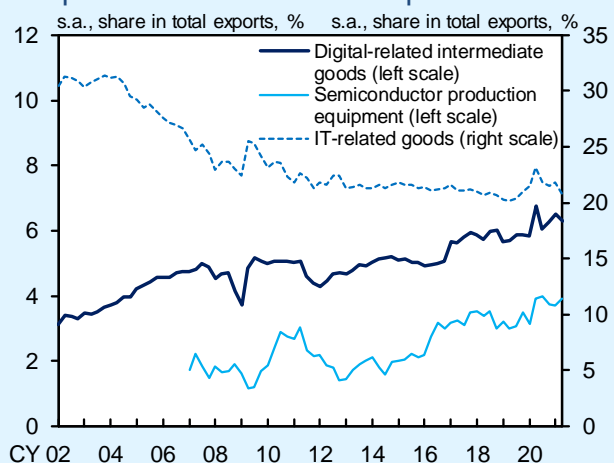


**Chart B2-4: Breakdown of Nominal Digital-Related Exports**



Sources: Ministry of Finance; WSTS; OECD; Nikkei NEEDS-Financial QUEST.

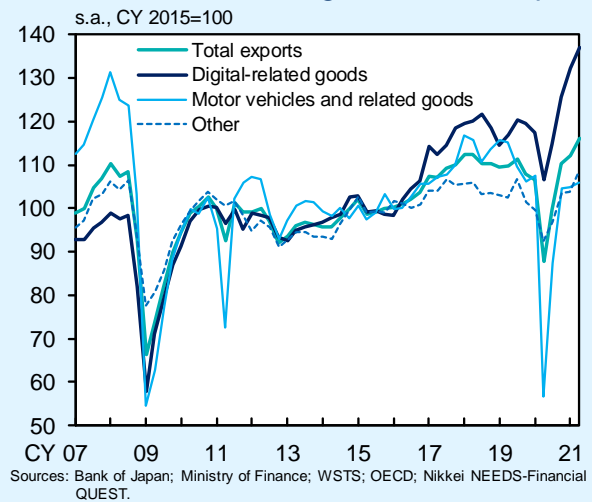
**Chart B2-5: Share of Digital-Related Exports in Total Nominal Exports**



Sources: Ministry of Finance; WSTS; OECD; Nikkei NEEDS-Financial QUEST. Note: Figures for semiconductor production equipment are available from CY 2007 onward.

digital-related exports have increased at a pace exceeding growth in what the Bank currently classifies as IT-related exports, thereby driving a rise in total real exports (Chart B2-6). In sum, the expansion in global demand for digital-related goods recently has been benefitting a wide range of industries in Japan's economy. This expansion is likely to push up Japan's exports as a trend, with the global economy, particularly advanced economies, continuing to recover.

**Chart B2-6: Real Digital-Related Exports**

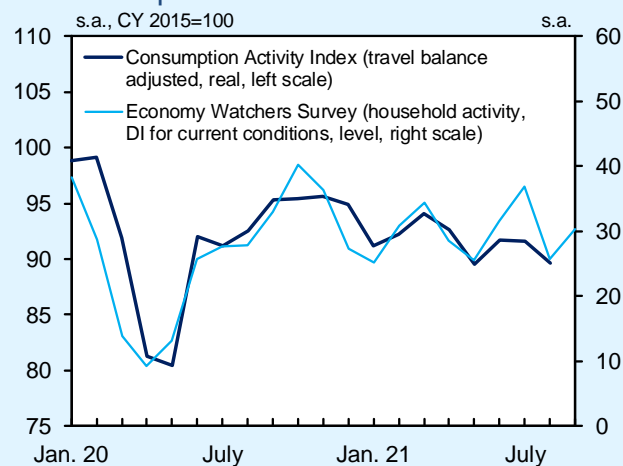


### (Box 3) Private Consumption during the COVID-19 Pandemic: Developments in the First Half of Fiscal 2021

Looking back at the first half of fiscal 2021, private consumption, mainly of face-to-face services, fluctuated in the short run but on average remained stagnant at a level below that prior to the pandemic (Chart B3-1). This box examines recent developments in private consumption while considering their relationship with the COVID-19 pandemic, the resultant public health measures, and progress with vaccinations. It should be noted that the results of the analysis presented in this box should be interpreted with some latitude because the analysis is based on limited data obtained under the unusual situation of the pandemic. It is therefore important to assess recent developments based on various data and analyses.

Recent consumption developments as measured by the CAI -- a monthly indicator of private consumption -- are as follows. Although consumption declined for the April-May period of 2021, mainly reflecting the resurgence of COVID-19 and the resultant third state of emergency, it picked up temporarily for June, with the COVID-19 situation heading toward improvement and the state of emergency being lifted late in the month for most regions (some of them shifted to priority measures to prevent the spread of disease). Consumption for July was almost unchanged from June, remaining firm even amid the resurgence of the number of confirmed new cases of COVID-19 and the fourth state of emergency declared for Tokyo. However,

**Chart B3-1: Developments in Private Consumption**



Sources: Bank of Japan; Cabinet Office, etc.  
Note: Figures for the Consumption Activity Index (CAI) are based on staff calculations. The CAI figures (travel balance adjusted) exclude inbound tourism consumption and include outbound tourism consumption.

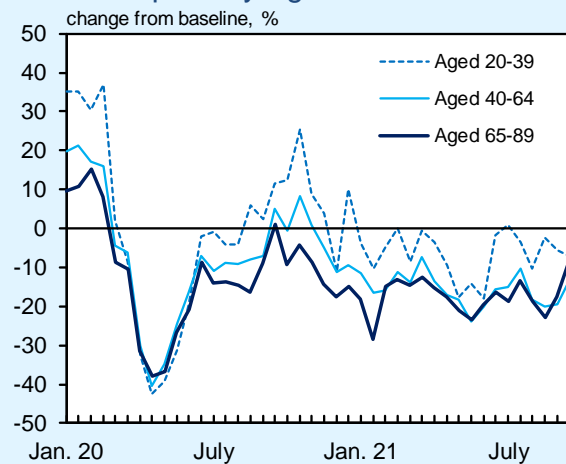


it turned to a decline for August, against the background of the nationwide spread of the Delta variant and the expansion in the areas where the state of emergency was declared.

A key to understanding these private consumption developments is to grasp those of seniors, whose expenditures account for a large share in total consumption expenditures. In this regard, services consumption developments based on credit card spending by age group show that, while consumption activities by the younger generation exhibited relatively strong developments, those by seniors showed no notable increase through August (Chart B3-2). It is noteworthy that, for the period from June through August in particular, seniors were not so active in terms of consumption that involved going out and traveling, even though they were ahead of other age groups with respect to progress with vaccinations.

To examine the relationship between recent consumption developments and COVID-19 or vaccinations, an analysis is made using microdata from a survey conducted by Imperial College London and YouGov in selected countries. This survey asks respondents a number of questions, such as "how often have you avoided crowded areas?" and "have you had the first or second doses of a COVID-19 vaccine?" Of the survey results, the proportion of respondents answering that they do not avoid crowded areas can be interpreted as indicating people's willingness to

**Chart B3-2: Developments in Services Consumption by Age**



Source: Nowcast Inc./ JCB, Co., Ltd., "JCB Consumption NOW."

Notes: 1. Figures are from the reference series in *JCB Consumption NOW*, which take changes in the number of consumers into account. Figures are the arithmetic averages of the corresponding age groups in five-year increments.  
 2. The baseline is the average for the corresponding half of the month for 2016 through 2018.

go out.<sup>24</sup> In fact, this willingness is highly correlated with selective services expenditures as measured by the CAI and thus can be regarded as a useful proxy variable for expenditures for face-to-face services (Chart B3-3[1]). An international comparison shows that Japanese respondents, at least until around this summer, were less willing to go out relative to U.S. and U.K. respondents, suggesting Japanese people's cautiousness in this regard during the COVID-19 pandemic, while this also seems to partly reflect the difference in progress with vaccinations at the time of the survey (Chart B3-3[2]).

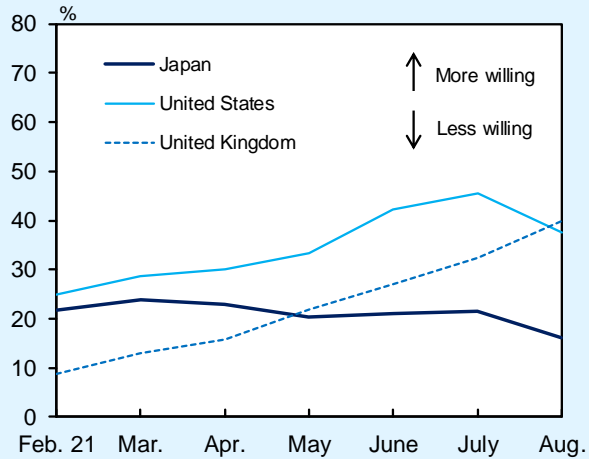
Next, an ordered probit model is estimated to explain the willingness to go out using variables such as the number of confirmed new cases of COVID-19 in the region where the respondent is based, the stringency index -- which indicates the strictness of public health measures -- as well as dummies, for example, for whether or not the respondent is vaccinated and for their age and gender (Chart B3-4).<sup>25</sup> The estimation results, which cover from May through August 2021, suggest that (1) there was no statistically significant change in the willingness to go out of

**Chart B3-3: Willingness to Go Out According to Survey Results**

**1. Comparison with Consumption Activity Index**



**2. International Comparison**



Sources: Jones, Sarah P., Imperial College London Big Data Analytical Unit and YouGov Plc. 2020; Imperial College London YouGov Covid Data Hub, v1.0, YouGov Plc, April 2020; Bank of Japan, etc.

Notes: 1. Percentage of people answering 3, 4, or 5 (where 5 represents "not at all") to the question "how often have you avoided crowded areas?" (5 choices: 1-5).  
2. Figures for "selective services expenditures (Consumption Activity Index)" are the weighted averages of food services, travel services, railway, bus, taxi, air, services for amusement and hobbies, and accommodations. Based on staff calculations.

<sup>24</sup> Answers to the question "how often have you avoided crowded areas?" range from 1 ("always") to 5 ("not at all"). The proportion of people answering 3, 4, or 5 to this question was used for the analysis here.

<sup>25</sup> The causality between whether or not a person is vaccinated and the willingness to go out may run in both directions. Specifically, on the one hand, a person may become less vigilant against COVID-19 after getting vaccinated, and on the other hand, a person with higher vigilance may be more willing to get vaccinated. To address the estimation problem arising from this (i.e., endogenous biases of estimated parameters), not fully vaccinated respondents who expressed some level of disagreement in answer to the question "to what extent do you agree or disagree that COVID-19 is very dangerous for you?" are excluded from the sample, and thus the analysis was limited to those who have at least some vigilance against COVID-19.

seniors aged 65 years and over even after they were vaccinated, (2) those under the age of 65 took a somewhat more active stance toward going out after getting vaccinated, and (3) an increase in the number of confirmed new cases made overall respondents more cautious about going out. Given the very short observation period available, these results may not be fully applicable to a variety of situations. That said, the following developments can be confirmed by the estimation results obtained from microdata on people's behavior: (1) a pick-up in mobility and consumption from June through July was driven mainly by consumers other than seniors, particularly the younger generation; (2) in the meantime, seniors were not so active in terms of consumption even though they were ahead of other age groups with respect to progress with vaccinations; and (3) for August, mobility and consumption declined again due to the rapid spread of the Delta variant and the resultant heightening of overall consumers' vigilance.

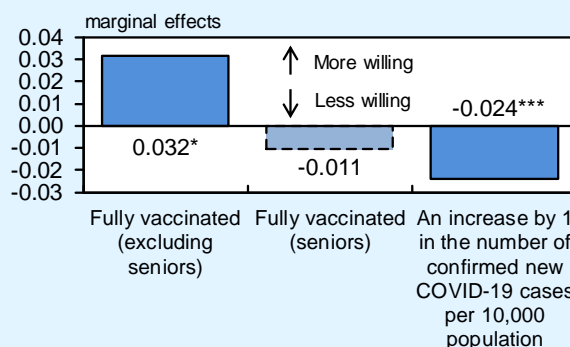
Lastly, turning to consumption developments since September, the *Economy Watchers Survey* and high-frequency data suggest that consumption has been heading toward improvement. In addition, signs of a pick-up have been observed in services consumption by seniors, which showed no notable increase through August (Chart B3-2). In the outlook, private consumption is expected to pick up again, supported by the gradual materialization of pent-up demand from seniors. This will likely occur as the resumption of consumption activities progresses while public health is being protected, such as through the widespread vaccinations, including for the younger generation, and through

## Chart B3-4: Decomposition of Changes in the Willingness to Go Out

### 1. Estimation Method

<b>Dependent variable:</b>	Answers ranging from 1-5 to "how often have you avoided crowded areas?" (where a higher score indicates a lower frequency of avoiding crowds)
<b>Explanatory variables:</b>	<ul style="list-style-type: none"> <li>(1) Fully-vaccinated dummy (equals 1 if a respondent is vaccinated twice)</li> <li>(2) Confirmed new COVID-19 cases (population share by region, lagged by 7 days)</li> <li>(3) Stringency index (strictness of public health measures)</li> <li>(4) Senior dummy (equals 1 if a respondent is over 64 years old)</li> <li>(5) Gender dummy (equals 1 if a respondent is male)</li> <li>(6) Employment dummy (equals 1 if a respondent is a full-time or part-time worker)</li> <li>(7) Disease dummy (equals 1 if a respondent has one or more of 13 major diseases such as asthma, cancer, and diabetes)</li> <li>(8) Region dummy (8 regional areas)</li> <li>(9) Fully-vaccinated dummy × Senior dummy</li> </ul>
<b>Estimation period:</b>	May-August 2021
<b>Number of observations:</b>	4,047

### 2. Estimation Results



Sources: Jones, Sarah P., Imperial College London Big Data Analytical Unit and YouGov Plc. 2020, Imperial College London YouGov Covid Data Hub, v1.0, YouGov Plc, April 2020; Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford; Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.

Notes: 1. Estimated excluding those who are not fully vaccinated and responded with 1, 2, or 3 (where 1 represents "disagree") to the question "to what extent do you agree or disagree that COVID-19 is very dangerous for you?" (7 choices: 1-7). For the number of new COVID-19 cases, the 7-day backward moving average is used.

2. Figures are the marginal effects on the probability that respondents answered with 3, 4, or 5 (where 5 represents "not at all") to the question "how often have you avoided crowded areas?" (5 choices: 1-5).

3. \*\*\* and \* denote statistical significance at the 1 percent and 10 percent levels, respectively.

the phased easing of movement restrictions with the use of, for example, vaccination certificates. That said, in light of this summer's experience, it is likely for the time being that consumers' willingness to go out and travel will remain largely dependent on the COVID-19 situation and resultant vigilance of people against COVID-19. It is necessary to continue to carefully monitor consumer behavior while also taking account of differences across attributes.

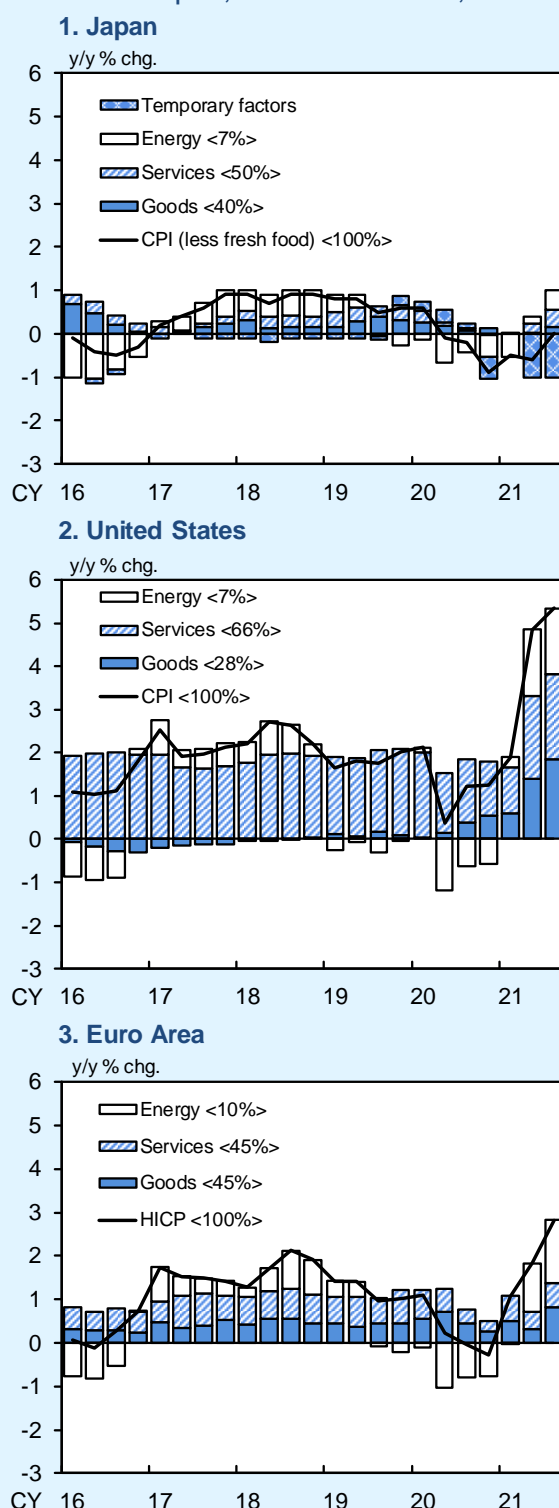
## (Box 4) Comparison of Inflation Rates in Japan, the United States, and Europe

The year-on-year rate of change in Japan's CPI recently has increased slightly in positive territory when excluding temporary factors such as the effects of the reduction in mobile phone charges (Chart 44). That said, the consumer price inflation rates in the United States and Europe have risen rapidly of late, and the gap in the inflation rates between Japan and those economies has widened. This box outlines the basic facts about which categories or items contribute to such a difference in the inflation rates between Japan, the United States, and Europe.

When classifying consumer price items of the inflation rates in Japan, the United States, and Europe on the same basis as much as possible and comparing their year-on-year rates of change in terms of broad categories such as goods and services, the following differences can be confirmed (Chart B4-1).<sup>26</sup> That is, there has been a disparity between Japan and those economies in the year-on-year rates of change -- mainly in services prices, including administered prices -- since before the outbreak of COVID-19. In addition, since the pandemic began, the paces of increase in goods prices have diverged significantly between Japan and the United

<sup>26</sup> To compare consumer price developments in Japan, the United States, and Europe under conditions that are as similar as possible, this box uses classifications of consumer price items that are somewhat different from the widely used ones. For details on the classifications, see the notes to each chart in this box. In addition, it should be noted that figures for European consumer prices examined in this box include the effects of changes in the value-added tax rates.

**Chart B4-1: Developments in Consumer Prices in Japan, the United States, and Europe**



Sources: Ministry of Internal Affairs and Communications; Haver.

Notes: 1. Figures for services include administered prices.

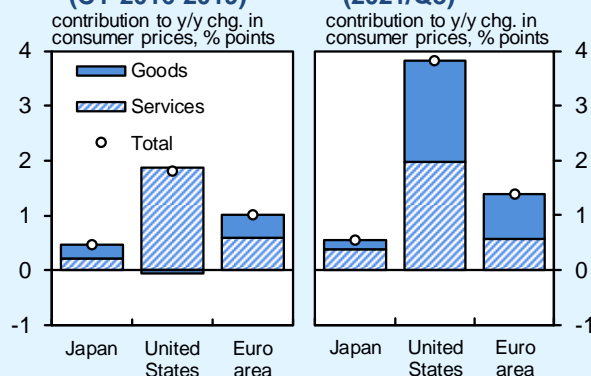
2. Figures for temporary factors for Japan are staff estimates and consist of mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.

3. Figures in angular brackets show the share of each component. Figures for temporary factors for Japan include mobile phone charges (weight: 3%).

States.<sup>27</sup> The comparison also shows that the year-on-year rate of increase in energy prices has been higher recently in the United States and Europe than has that in Japan. This seems to mainly reflect the differences by country and region in (1) the weight of gasoline prices -- which are subject to large short-term fluctuations -- in the respective consumer price indexes and (2) the structure of electricity rate systems. Next, when comparing developments in the indexes excluding energy prices (for Japan, temporary factors such as the effects of the reduction in mobile phone charges are also excluded) before and after the outbreak of COVID-19, the positive contribution of goods prices to the CPI has expanded clearly in the United States for the latest period (the July-September quarter of 2021) relative to the pre-pandemic period (the 2016-2019 average), and this has made the gap in the inflation rate with Japan wider (Chart B4-2). On the other hand, when excluding such factors as energy prices, the gap between Japan and Europe for the latest period has not widened much compared with that in the pre-pandemic period.

As mentioned earlier, developments in goods prices show a clear contrast between Japan and the United States. Taking a detailed look at the developments for the latest period by item, the positive contribution of automobile prices to goods prices is particularly large in the case of the United States, which can be partly explained by a surge in demand for durable goods such as

**Chart B4-2: Developments in Consumer Prices Before and After the Outbreak of COVID-19**  
**1. Before the Pandemic (CY 2016-2019)**    **2. Latest Period (2021/Q3)**



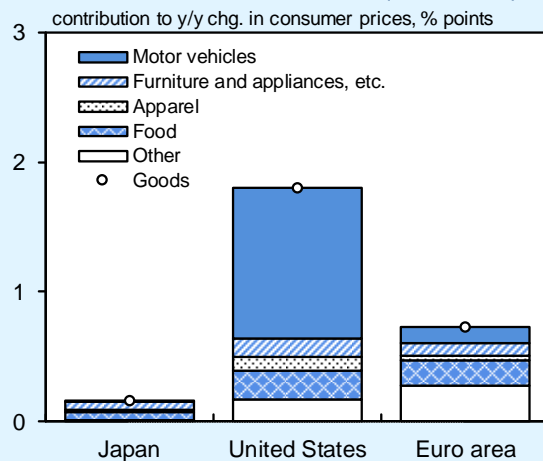
Sources: Ministry of Internal Affairs and Communications; Haver.  
Notes: 1. Figures for Japan are the contribution to changes in the CPI (less fresh food).  
Figures for the United States are the contribution to changes in the overall CPI.  
Figures for the euro area are the contribution to changes in the overall HICP.  
2. Figures for Japan are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.  
3. Figures exclude energy. Figures for services include administered prices.

<sup>27</sup> In addition, as described in the main text of this Outlook Report, the year-on-year rate of change in Japan's CPI has been pushed down temporarily to a significant degree by the reduction in mobile phone charges.

automobiles (Chart B4-3).<sup>28</sup> Moreover, prices of goods other than automobiles -- such as food, furniture, household electrical appliances, and apparel -- in the United States show a higher rate of increase for the latest period compared with those in Japan (Charts B4-3 and B4-4).

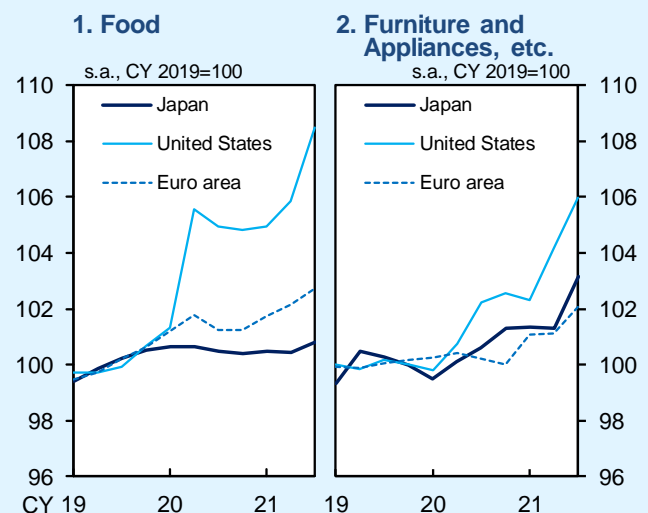
As a background to the widened gap in the inflation rates between the United States and Japan -- mainly of goods prices -- since the COVID-19 pandemic, there are differences in the following aspects in particular: (1) the strength in goods demand, mainly reflecting the diverging paces of recovery in economic activity; (2) supply-side conditions against the background of the difference in such factors as labor market structures; and (3) firms' price-setting stance in response to short-term changes in the supply-demand conditions.<sup>29</sup> Regarding the price-setting stance of Japanese firms, it is necessary to closely monitor whether their stance will change during a future recovery in economic activity and a resultant state of sustained moderate inflation, while taking into account the experiences of the United States and Europe.

**Chart B4-3: Goods Prices (2021/Q3)**



Sources: Ministry of Internal Affairs and Communications; Haver.  
 Notes: 1. Figures for Japan are the contribution to changes in the CPI (less fresh food).  
 Figures for the United States are the contribution to changes in the overall CPI.  
 Figures for the euro area are the contribution to changes in the overall HICP.  
 2. Figures for Japan exclude the effects of the consumption tax hike.  
 3. Figures for goods exclude fresh food, eating out, and energy. Figures for furniture and appliances, etc. exclude communication and entertainment appliances.

**Chart B4-4: Developments in Goods Prices**



Sources: Ministry of Internal Affairs and Communications; Haver.  
 Notes: 1. Figures for Japan exclude the effects of the consumption tax hike.  
 2. Figures for food exclude fresh food and eating out. Figures for furniture and appliances, etc. exclude communication and entertainment appliances.

<sup>28</sup> The increase in U.S. goods prices has been particularly remarkable for used car prices, which tend to fluctuate. In this respect, automobile prices in Japan's CPI are measured in terms of new car prices.

<sup>29</sup> Box 3 in the July 2021 Outlook Report explains the differences between Japan, the United States, and Europe in terms of the degree of tightness in the supply-demand conditions for products and firms' stance toward raising their product prices.

