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# *Outlook for Economic Activity and Prices*

*April 2021*



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

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

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

#### Summary

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- Although the level of Japan's economic activity, mainly in the face-to-face services sector, is expected to be lower than that prior to the pandemic for the time being, the economy is likely to recover, with the impact of the novel coronavirus (COVID-19) waning gradually and supported by an increase in external demand, accommodative financial conditions, and the government's economic measures. Thereafter, as the impact subsides, it is projected to continue growing with a virtuous cycle from income to spending intensifying.
  - The year-on-year rate of change in the consumer price index (CPI, all items less fresh food) is likely to be slightly negative for the time being, mainly affected by COVID-19 and a reduction in mobile phone charges. Thereafter, it is expected to turn positive and then increase gradually, mainly on the back of economic activity continuing to improve and the effects of the reduction in mobile phone charges dissipating.
  - Comparing the projections through fiscal 2022 with those presented in the previous *Outlook for Economic Activity and Prices* (Outlook Report), the projected growth rates are higher, mainly for fiscal 2022, on the back of stronger domestic and external demand. The projected rate of increase in the CPI for fiscal 2021 is lower due to the effects of the reduction in mobile phone charges, but that for fiscal 2022 is more or less unchanged.
  - The outlook for economic activity and prices provided in this Outlook Report is highly unclear, since it could change depending on the consequences of COVID-19 and their impact on domestic and overseas economies. The outlook is based on the assumption that the impact of COVID-19 will wane gradually and then almost subside in the middle of the projection period. It also is based on the premises that, while the impact remains, firms' and households' medium- to long-term growth expectations will not decline substantially and the smooth functioning of financial intermediation will be ensured with financial system stability being maintained. However, the assumption and premises entail high uncertainties.
  - 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 April 26 and 27, 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. In addition, corporate profits and business sentiment have improved 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. A pick-up in private consumption has paused due to increased downward pressure on consumption of services, such as eating and drinking as well as accommodations. Housing investment has declined moderately. Public investment has continued to increase moderately. Financial conditions have been accommodative on the whole, although weakness in firms' financial positions has been seen. 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 slightly negative, mainly affected by COVID-19 and the past decline in crude oil prices. Meanwhile, inflation expectations have been more or less unchanged.

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

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

Japan's economy is likely to recover, although the level of economic activity, mainly in the face-to-face services sector, is expected to be lower than that prior to the pandemic for the time being. That is, with the impact of COVID-19 waning gradually and the economy being supported by an increase in external demand, accommodative financial conditions, and the government's economic measures, a virtuous cycle from income to spending is expected to operate. Thereafter, as the impact subsides, the economy is projected to continue growing with the virtuous cycle intensifying.

This baseline scenario is based on the assumption that, while taking preventive measures against COVID-19 and improving economic activity simultaneously, the impact of COVID-19 will wane gradually and then almost subside in the middle of the projection period, due mainly to progress with vaccinations. The outlook also is based on the premises that, in Japan, while the impact of COVID-19 remains, firms' and households' medium- to long-term growth expectations will not decline substantially and the smooth functioning of financial intermediation will be ensured with financial system stability being maintained.

Looking at the outlook for economic activity based on the assumption and premises in more detail, overseas economies are likely to continue growing, albeit with variation across countries and regions, partly supported by aggressive macroeconomic policies taken mainly in advanced economies. In this situation, although the pace of increase in

Japan's goods exports is likely to decelerate for the time being, mainly for automobile-related goods, goods exports are projected to continue increasing firmly, supported by a global recovery in business fixed investment and an expansion in digital-related demand. 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.

An uptrend in business fixed investment is expected to become clear, mainly for machinery and digital-related investments, with improvement in corporate profits and supported by accommodative financial conditions and the government's economic measures, although construction investment by the face-to-face services sector is projected to remain weak.

Private consumption, mainly of face-to-face services, is likely to remain sluggish, being at a relatively low level for the time being due to the impact of COVID-19, but then it is expected to pick up again with the impact waning gradually and supported also by the government's economic measures. Thereafter, as the impact of COVID-19 subsides, an uptrend in private consumption, including that of face-to-face services, is projected to become evident with employee income improving. Employee income is likely to stop declining, reflecting improvement in corporate profits, and then increase moderately with a time lag following the recovery in domestic and external demand.

Meanwhile, public investment is projected to steadily increase, reflecting progress such as in construction related to restoration and reconstruction following natural disasters, as well as 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 enhancement of the medical treatment system and the testing and vaccination system, but see a lowering in its level thereafter.

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

The year-on-year rate of change in the CPI is likely to be slightly negative for the time being, mainly affected by COVID-19 and the reduction in mobile phone charges.<sup>2</sup> That said, the reduction is a temporary factor, and when its effects are excluded, the year-on-year rate of change in the CPI is expected to be steady. Although weakness in demand amid the situation of COVID-19 is projected to have an impact on prices, firms' price cuts that aim at stimulating demand have not been and are not likely to be observed

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<sup>2</sup> The CPI forecasts in this Outlook Report are based on the current 2015-base index. The statistics authority that compiles the CPI has announced its plan to rebase the CPI to the base year of 2020 and retroactively revise its figures for the year-on-year rate of change from those for January 2021 onward, both in August 2021. With the rebasing, the reduction in mobile phone charges will have a larger impact than the current index, mainly because the weight of such charges in the CPI will rise. Therefore, the year-on-year rate of increase in the CPI is highly likely to be revised downward for the 2020-base index.

widely, given that one of the reasons for the decrease in demand is vigilance against COVID-19 and that there have been supply-side constraints and cost increases because of taking preventive measures against COVID-19. In addition, it is expected that the year-on-year rate of change in energy prices will turn positive on the back of a pick-up in crude oil prices since last autumn. Under these circumstances, medium- to long-term inflation expectations are likely to be more or less unchanged.

Thereafter, the year-on-year rate of change in the CPI is expected to turn positive and then increase gradually, mainly on the back of economic activity continuing to improve and the effects of the reduction in mobile phone charges dissipating. Medium- to long-term inflation expectations also are expected to rise again.

### **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.<sup>3</sup> The government has conducted various measures to support financing, mainly of firms. Private financial institutions have actively fulfilled the functioning of financial intermediation. In this situation, although weakness in firms' financial positions has been seen, the environment for external funding, such as bank borrowing and the issuance of CP and corporate bonds, has remained accommodative. Owing to the continuation of powerful monetary easing by the Bank, the government's measures, and efforts made by private financial institutions, the Bank considers that financial conditions will remain accommodative and further downward pressure on the real economy from the financial side will be avoided.<sup>4</sup>

## **III. Risks to Economic Activity and Prices**

### **A. Risks to Economic Activity**

Regarding the baseline scenario of the outlook for economic activity, it is necessary to pay attention to the following three upside and downside risks in particular until the impact of COVID-19 subsides.

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<sup>3</sup> See "Enhancement of Monetary Easing in Light of the Impact of the Outbreak of the Novel Coronavirus (COVID-19)" released on March 16, 2020, "Enhancement of Monetary Easing" released on April 27, 2020, "Introduction of a New Fund-Provisioning Measure to Support Financing Mainly of Small and Medium-Sized Firms" released on May 22, 2020, "Statement on Monetary Policy" released on December 18, 2020, in which the Bank made decisions such as on the extension of the Special Program to Support Financing in Response to the Novel Coronavirus (COVID-19), and "Further Effective and Sustainable Monetary Easing" released on March 19, 2021.

<sup>4</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 first is the impact of COVID-19 on domestic and overseas economies. There are high uncertainties over the consequences of COVID-19 and their impact on domestic and overseas economies. As the baseline scenario, it is assumed that the impact of COVID-19 will subside, mainly due to the vaccine rollout. However, the pace of such rollout and the effects of the vaccines entail uncertainties, and thus there is a risk that downward pressure on economic activity will increase. In addition, it is also uncertain how the varying paces of the vaccine rollout across countries and regions will affect global economic activity. On the other hand, with economic measures conducted particularly in advanced economies, such as those in response to the impact of COVID-19, the pace of recovery in domestic and overseas economies could be faster than expected.

The second risk is firms' and households' medium- to long-term growth expectations. If such expectations decline due to a shock caused by COVID-19 that pushes down the economy considerably, there is a risk that firms' and households' appetite for spending will not increase easily even after the impact of COVID-19 subsides. On the other hand, medium- to long-term growth expectations could increase if the issue of COVID-19 leads to, for example, active use of information and communication technology to prevent infection and an undertaking of investment to meet new demand, thereby having positive effects on economic activity such as further innovation. 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.

The third risk is developments in the financial system. Although COVID-19 has affected the financial side as well, the Bank and the government have taken measures aggressively with a view to supporting financing, mainly of firms, and maintaining stability in financial markets. In addition, financial institutions have considerable resilience in terms of both capital and liquidity. In this situation, the financial system has maintained stability on the whole and the smooth functioning of financial intermediation has been ensured.<sup>5</sup> However, if COVID-19 has a larger impact than expected, there is a risk that deterioration in the real economy will affect financial system stability, thereby exerting further downward pressure on the real economy. Although this risk is judged as not significant at this point, it is necessary to pay close attention to future developments.

## **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 amid the impact of COVID-19. As the baseline scenario of the outlook for prices, firms' price cuts that aim at stimulating

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

demand have not been and are not likely to be observed widely, as described earlier. That said, including this aspect, firms' price-setting behavior entails uncertainties.

The second is future developments in foreign exchange rates, international commodity prices, and import prices, as well as the effects of such developments on domestic prices. These risks may lead prices to deviate either upward or downward from the baseline scenario, and thus continue to warrant attention.

#### **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>6</sup>

The first perspective involves an examination of the baseline scenario for the outlook. The year-on-year rate of change in the CPI is likely to increase gradually toward achieving the price stability target, although it will take time. For the time being, weakness in demand amid the situation of COVID-19 is expected to have an impact on prices, and medium- to long-term inflation expectations are likely to be more or less unchanged. Thereafter, prices are expected to increase gradually since upward pressure on them is projected to intensify at a gradual pace with the economy continuing to improve. In addition, medium- to long-term inflation expectations also are likely to rise again.

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. The outlook for economic activity and prices is highly unclear, since it could change depending on the consequences of COVID-19 and their impact on domestic and overseas economies. The outlook is based on the assumption that the impact of COVID-19 will wane gradually and then almost subside in the middle of the projection period. It also is based on the premises that, while the impact remains, firms' and households' medium- to long-term growth expectations will not decline substantially and the smooth functioning of financial intermediation will be ensured with financial system stability being maintained. However, the assumption and premises entail high uncertainties. 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. Looking at the current situation from the perspective of financial imbalances, the aggregate credit relative to the size of the economy has been increasing at a pace significantly above the past trend. This is because financial institutions have responded to demand for working capital, mainly by firms, which has increased due to the

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<sup>6</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."



impact of COVID-19, and the increase in the aggregate credit therefore does not seem to show overheating of financial activities. On this basis, 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, mainly because financial institutions have sufficient capital bases, it is necessary to pay close attention to future developments.

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 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.

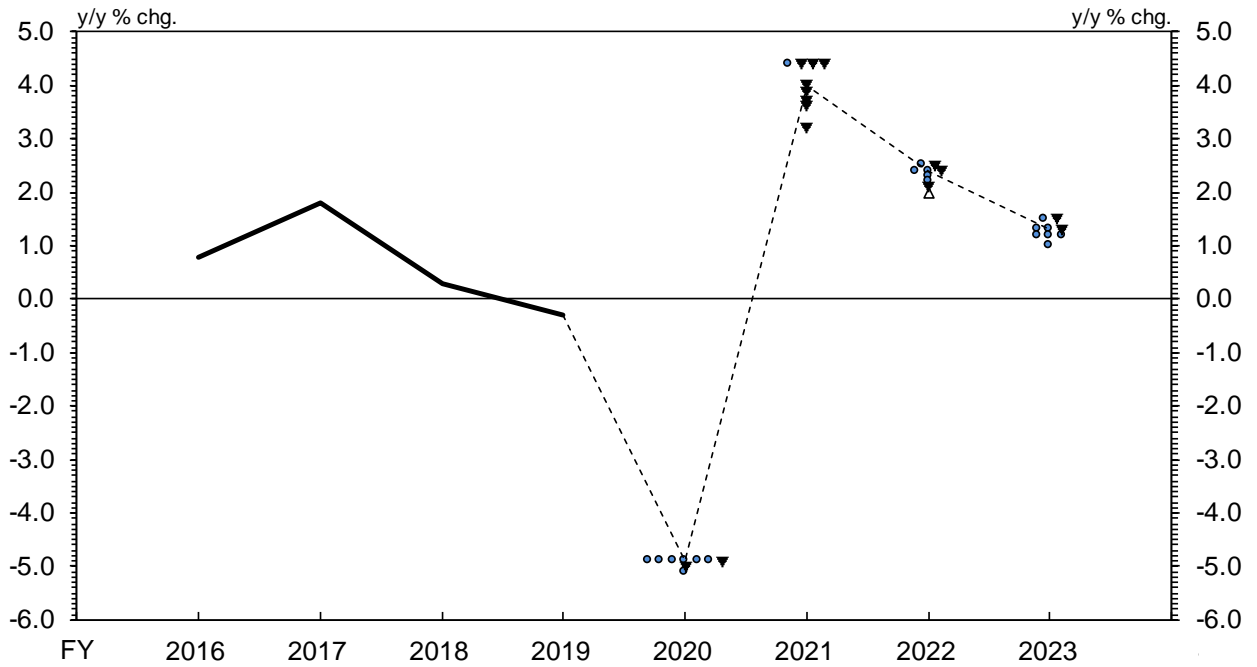
|                                | Real GDP               | CPI<br>(all items less fresh food) |
|--------------------------------|------------------------|------------------------------------|
| Fiscal 2020                    | -5.0 to -4.9<br>[-4.9] | -0.4                               |
| Forecasts made in January 2021 | -5.7 to -5.4<br>[-5.6] | -0.7 to -0.5<br>[-0.5]             |
| Fiscal 2021                    | +3.6 to +4.4<br>[+4.0] | 0.0 to +0.2<br>[+0.1]              |
| Forecasts made in January 2021 | +3.3 to +4.0<br>[+3.9] | +0.3 to +0.5<br>[+0.5]             |
| Fiscal 2022                    | +2.1 to +2.5<br>[+2.4] | +0.5 to +0.9<br>[+0.8]             |
| Forecasts made in January 2021 | +1.5 to +2.0<br>[+1.8] | +0.7 to +0.8<br>[+0.7]             |
| Fiscal 2023                    | +1.2 to +1.5<br>[+1.3] | +0.7 to +1.0<br>[+1.0]             |

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

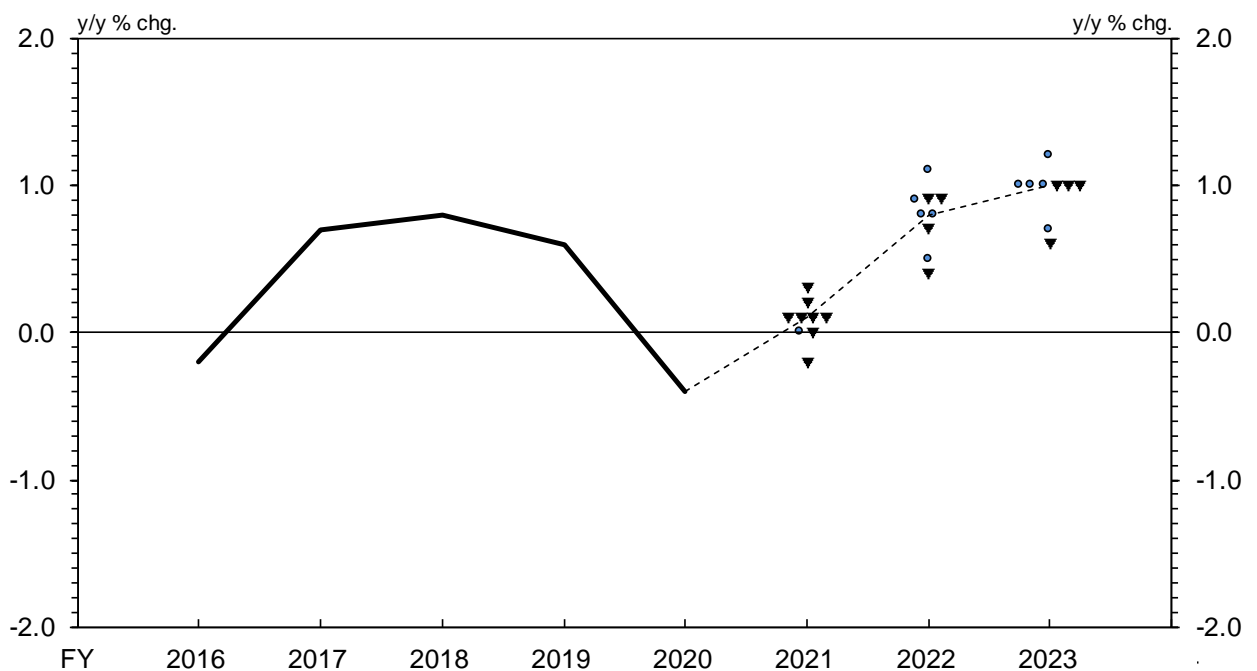
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which they attach the highest probability of realization. These forecasts are then shown as a range, with the highest 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 CPI (all items less fresh food) for fiscal 2020 is an actual figure.

## 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>7</sup>

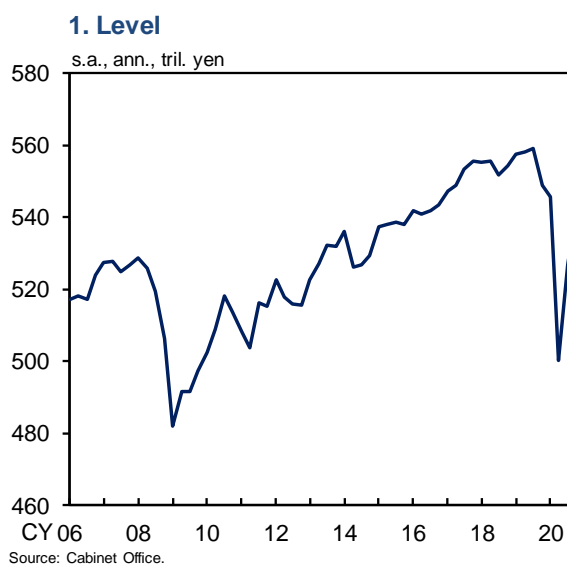
### I. Current Situation of Economic Activity and Its Outlook

#### A. Economic Developments

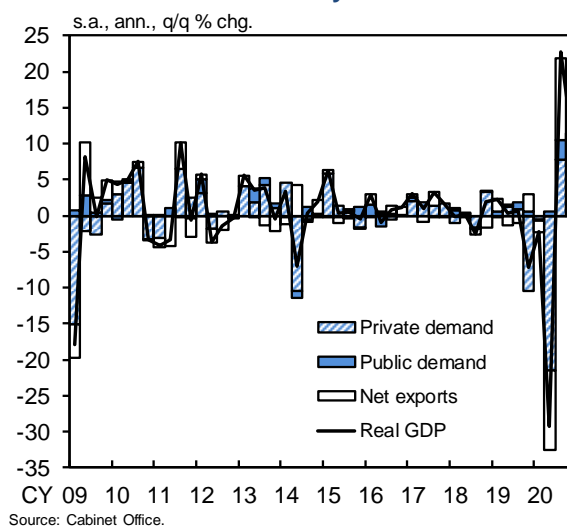
Japan's economy has picked up as a trend, although it has remained in a severe situation due to the impact of COVID-19 at home and abroad.

The real GDP growth rate for the October-December quarter of 2020 was 2.8 percent on a quarter-on-quarter basis and 11.7 percent on an annualized basis, registering solid and positive growth for two consecutive quarters after marking an extremely large decline for the April-June quarter (Chart 1). Looking at the breakdown, business fixed investment, mainly machinery investment, turned to an increase for the first time in three quarters, with exports continuing to rise steadily. Although remaining at a low level, private consumption also increased, particularly for services, partly encouraged by the "Go To" campaign. Monthly indicators and high-frequency data since then suggest that, although Japan's economy has been affected by the spread of COVID-19 and the resultant public health measures, it has continued to pick up as a trend after hitting a bottom around last spring. COVID-19 has put strong downward pressure on the face-to-face services sector, including dining-out and travel, particularly at times when the number of confirmed cases has increased or remained high, such as from late December through early January and again recently, but the

Chart 1: Real GDP



**2. Annualized Quarterly Growth Rate**

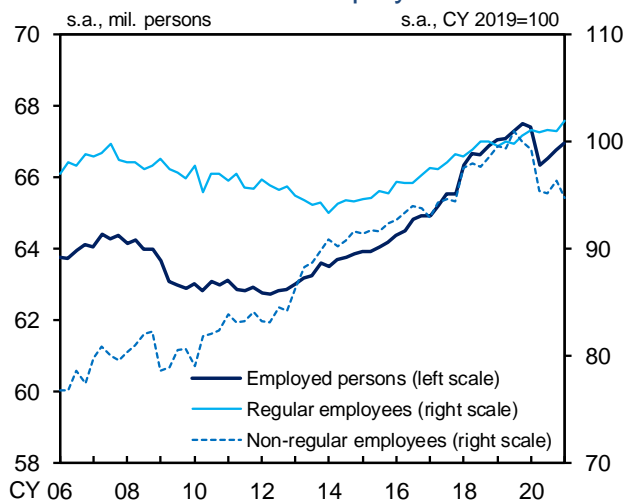


<sup>7</sup> "The Background" provides explanations of "The Bank's View" decided by the Policy Board at the Monetary Policy Meeting held on April 26 and 27, 2021.

degree to which COVID-19 constrains economic activity has lessened considerably in other sectors. In this situation, a virtuous cycle has gradually started in the overall corporate sector; profits have improved, supported by an increase in exports and the effects of various policy measures, and this has led to a pick-up in business fixed investment as well as the bottoming-out of the overall number of employed persons, including regular employees (Chart 2). On this point, looking at the pace of recovery in the level of economic activity by industry, while a recovery from the significant decline for the April-June quarter of 2020 has become evident for an increasing number of industries, which include not only manufacturing but also nonmanufacturing, economic activity in the face-to-face services sector, such as accommodations, eating and drinking, and travel-related, has remained low (Chart 3). The output gap -- which captures the utilization of labor and capital -- became significantly negative for the April-June quarter of 2020 for the first time since immediately after the Global Financial Crisis (GFC) but narrowed within negative territory for two consecutive quarters from the July-September quarter, reflecting a pick-up in economic activity (Chart 4). That said, improvement in the output gap seems to have paused temporarily for the January-March quarter of 2021, affected by the resurgence of COVID-19 and the reinstatement of the state of emergency.

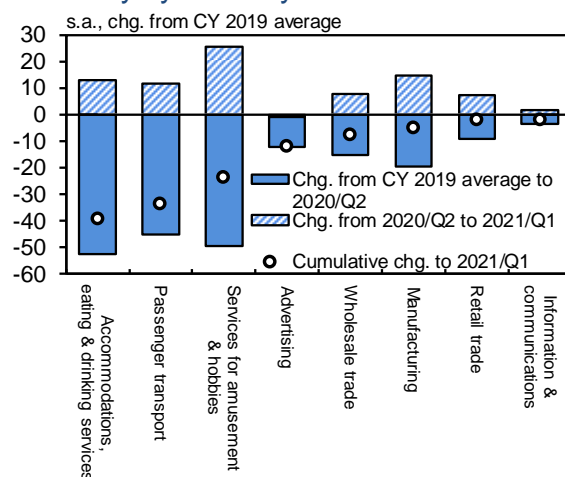
As for the outlook, Japan's economy is likely to recover, although the level of economic activity, mainly in the face-to-face services sector, is expected to be lower than that prior to the pandemic for the time being. That is, with the

**Chart 2: 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/Q1 are January-February averages.

**Chart 3: Developments in Economic Activity by Industry**

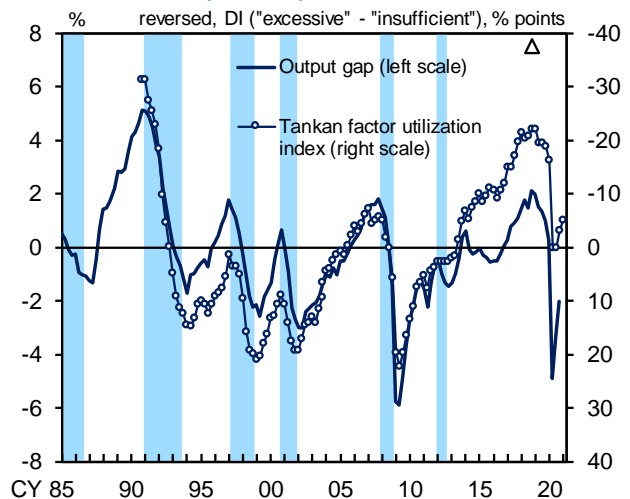


Source: Ministry of Economy, Trade and Industry.  
 Notes: 1. Figures for manufacturing are based on the "Indices of Industrial Production" and those for other industries are based on the "Indices of Tertiary Industry Activity."  
 2. Figures are calculated after setting the averages for 2019 equal to 100.  
 3. Figures for 2021/Q1 are January-February averages.

impact of COVID-19 waning gradually and the economy being supported by an increase in external demand, accommodative financial conditions, and the government's economic measures, a virtuous cycle from income to spending is expected to operate.<sup>8</sup> From the middle of the projection period, when it is assumed that the impact of COVID-19 will almost subside on the back of the widespread vaccinations, the virtuous cycle from income to spending is projected to intensify with overseas economies continuing to grow steadily and accommodative financial conditions being maintained, and a recovery in the level of economic activity is expected to be further evident, including in the face-to-face services sector.

With regard to the outlook by demand component, the pace of increase in goods exports is likely to decelerate for the time being, mainly for automobile-related goods, affected by such factors as a shortage of semiconductors. That said, goods exports are projected to continue increasing firmly, supported by a global recovery in business fixed investment and the expansion in digital-related demand, and with aggressive macroeconomic policies continuing to be taken, mainly in advanced economies. On the other hand, inbound tourism demand, which is categorized under services exports, is expected to remain subdued while entry and travel

**Chart 4: Output Gap**



Source: Bank of Japan.

Notes: 1. The output gap is based on staff estimations.

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

3. Shaded areas indicate recession periods. The triangle shows the latest peak.

<sup>8</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.

restrictions continue but likely to recover toward the pre-pandemic level as vaccinations progress around the world and such restrictions are lifted. Private consumption, mainly of face-to-face services, is likely to remain sluggish, being at a relatively low level for the time being due to the impact of COVID-19, but thereafter it is expected to pick up again with the impact waning gradually and supported also by the government's economic measures. Toward the second half of the projection period, as people's consumption activities mostly become unconstrained by COVID-19 along with the vaccine rollout, an uptrend in private consumption, mainly of services, is projected to become evident with employee income improving. Employee income is likely to stop declining, reflecting improvement in corporate profits, and then increase moderately with a time lag following the recovery in domestic and external demand. An uptrend in business fixed investment is expected to become clear, mainly for machinery and digital-related investments, supported by improvement in corporate profits and accommodative financial conditions, although construction investment by the face-to-face services industry is projected to remain weak for the time being. Meanwhile, public investment is likely to steadily increase, reflecting such progress as in construction related to restoration and reconstruction following natural disasters, as well as 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 projected to increase clearly for fiscal 2021. This reflects healthcare expenditure picking up and the medical treatment system and the testing and vaccination system being enhanced under the

additional economic measures. Thereafter, however, government consumption is projected to see a lowering in its level since expenditure related to measures in response 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 mark a relatively large positive figure for fiscal 2021 with the impact of COVID-19 waning gradually and supported by an increase in external demand, accommodative financial conditions, and the government's economic measures. The rate is projected to continue to register firm growth for fiscal 2022 on the back of an increase in domestic and external demand due to progress with vaccinations. As for fiscal 2023, for which the outlook has been newly formulated, the economy is expected to continue growing 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. Comparing the projections through fiscal 2022 with those presented in the previous Outlook Report, the projected growth rates are higher, mainly for fiscal 2022, due to a rise in domestic and external demand that mainly reflects the upward revisions to the economic forecasts of overseas economies, particularly the United States, and the virtuous cycle in the corporate sector.

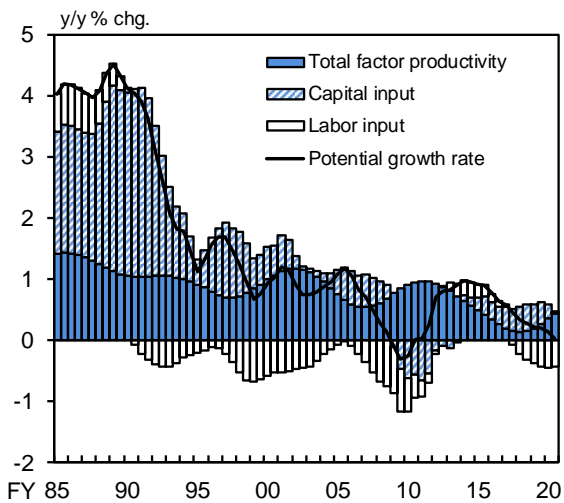
The potential growth rate seems to have been at around 0 percent or marginally positive recently, although total factor productivity (TFP) has slightly



picked up (Chart 5). This is because working hours have continued on a downtrend that reflects working-style reforms and because the growth of 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 advancement 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) the growth of capital stock will accelerate cyclically. However, the outlook continues to be highly uncertain. For example, there are uncertainties over innovation by the corporate sector and flexible transfer of economic resources among industries, both of which aim at adapting to the post-pandemic economic and industrial structures, because it is unclear how much they will advance or be sustained. 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 fiscal 2021, as the impact of COVID-19 wanes gradually at home and abroad and the growth rates of overseas economies rise, Japan's economy is expected to recover, partly supported by the government's economic measures and accommodative financial conditions. That said, the level of economic activity, mainly in the face-to-face services sector, is likely to remain

**Chart 5: Potential Growth Rate**



Source: Bank of Japan.  
 Note: Based on staff estimations. Figures for the second half of fiscal 2020 are those for 2020/Q4.

lower than that prior to the pandemic while vigilance against COVID-19 continues. The pace of increase in exports of automobile-related goods is likely to decelerate, affected by such factors as a shortage of semiconductors, but overall exports -- mainly of capital goods and IT-related goods -- are expected to follow a clear uptrend on the back of high economic growth in the United States that reflects the additional economic measures and of a global expansion in digital-related demand. Private consumption, mainly of face-to-face services, is likely to remain sluggish due to the impact of COVID-19. Thereafter, with the impact waning gradually, mainly due to progress with vaccinations, it is expected to increase, albeit only moderately, supported also by a pick-up in employee income, the government's economic measures, and Olympic Games-related demand. As for business fixed investment, construction investment, such as for commercial facilities and hotels, is likely to remain at a low level. However, with corporate profits improving, 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, public investment in construction related to building national resilience is likely to increase steadily, and government consumption is expected to continue showing a clear increase, pushed up by spending related to enhancement of the medical treatment system and the testing and vaccination system, in addition to a pick-up in healthcare expenditure.

In fiscal 2022, the economy is expected to continue growing firmly, with domestic and external demand increasing, partly due to further progress with vaccinations. Exports are likely to continue increasing firmly, reflecting improvement in overseas economies, although the pace of increase is projected to be slower than in fiscal 2021. In this situation, corporate profits are expected to follow 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. As vigilance against COVID-19 lessens along with the vaccine rollout, an uptrend in private consumption is expected to become evident, also supported by the materialization of pent-up demand for services. Meanwhile, although an increase in 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 a peaking-out of spending related to COVID-19.

In fiscal 2023, with the widespread vaccinations at home and abroad and an increase in consumption activities that involve people's movements and going out, Japan's economy is expected to grow at a pace slightly above its potential growth rate, partly supported by steady growth in overseas economies and accommodative financial conditions. Regarding exports, with overseas economies continuing to grow at around the same pace as the long-term average, goods exports are likely to continue increasing moderately and inbound tourism

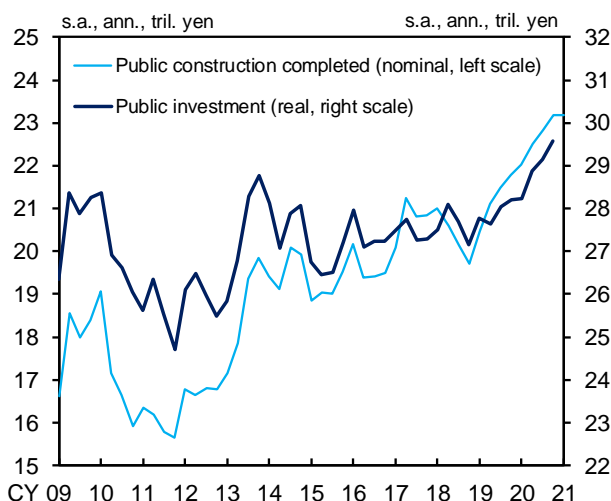
demand, which is categorized under services exports, also is projected to increase clearly, reflecting a global recovery in travel demand. Although undertaking of investment for growth and investment to address environmental issues, as well as a recovery in construction investment by the services sector, 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. Private consumption is likely to continue to see a solid increase for both goods and services, pushed up by improvement in employee income and a rise in the propensity to consume stemming from the dissipation of the impact of COVID-19. Meanwhile, despite being pushed down by a decrease in expenditure related to measures in response to COVID-19, 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 elderly care expenditures.

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

### Government Spending

Public investment has continued to increase moderately (Chart 6). The amount of public construction completed, which is a coincident indicator, has continued to increase moderately since early 2019. The value of public works contracted, as well as orders received for public construction, both of which are leading indicators, have been on a moderate uptrend, albeit with fluctuations, reflecting progress such as in construction related to restoration and reconstruction following natural disasters, as well as to building national resilience. As for the outlook, public investment is expected to continue increasing steadily for the time being due to the progress in the aforementioned infrastructure-related construction and to construction of Olympic Games-related temporary facilities. Then, toward the end of the projection period, it is projected to be at a relatively high level, supported by construction related to building national resilience, such as construction to control flooding and address decaying infrastructures.<sup>9</sup> Government consumption is expected to increase clearly for fiscal 2021, reflecting healthcare expenditure picking up and the medical treatment system and the testing and vaccination system being enhanced under the

**Chart 6: Public Investment**



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.  
 Note: The figure for 2021/Q1 is the January-February average.

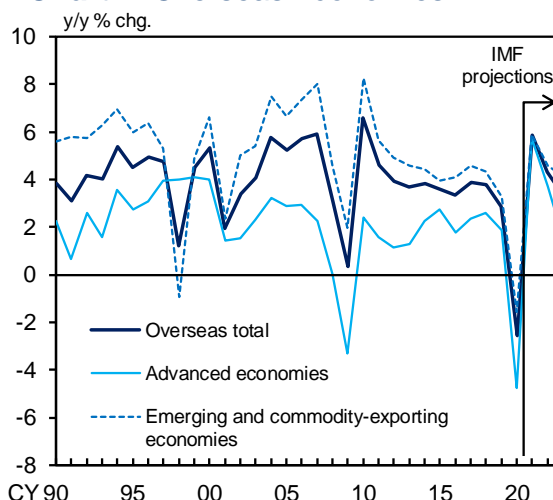
<sup>9</sup> Following the three-year emergency response plan for disaster prevention, disaster mitigation, and building national resilience, which expired at the end of fiscal 2020, a new plan for building national resilience with a targeted period from fiscal 2021 through 2025 and a project size of about 15 trillion yen was decided by the Cabinet in December 2020. In reflection of this plan, public investment projects for disaster prevention, disaster mitigation, and building national resilience have been incorporated into the third supplementary budget for fiscal 2020 as major measures. Therefore, the implementation of the budget is expected to push up public investment.

additional economic measures. From fiscal 2022 onward, government consumption is projected to see a lowering in its level since expenditures related to measures in response to COVID-19 are likely to decrease, although it is expected to be supported by an uptrend in healthcare expenditure.

## Overseas Economies

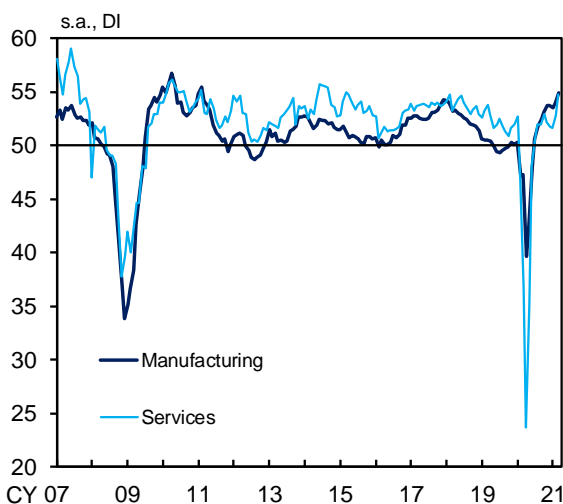
Overseas economies have recovered on the whole, albeit with variation across countries and regions (Chart 7). Business sentiment of the manufacturing sector has continued to improve clearly on a global basis, partly due to sustained favorable developments in the digital-related industry and the effects of the additional economic measures since the end of 2020, such as in the United States (Chart 8). In addition, the production level and trade volume have evidently exceeded the pre-pandemic level. Looking at developments by major region, the Chinese economy has continued to recover. With the number of confirmed new cases of COVID-19 decreasing, the U.S. economy has recovered, partly due to the effects of the additional economic measures since the end of 2020. Emerging and commodity-exporting economies other than China have picked up on the whole, albeit with variation across countries and regions: for example, the NIEs have continued to register relatively high growth, whereas a recovery in the ASEAN countries has been somewhat weak. On the other hand, European economies, mainly for the services industry, have continued to be pushed down with the impact of the resurgence of COVID-19 remaining.

### Chart 7: Overseas Economies



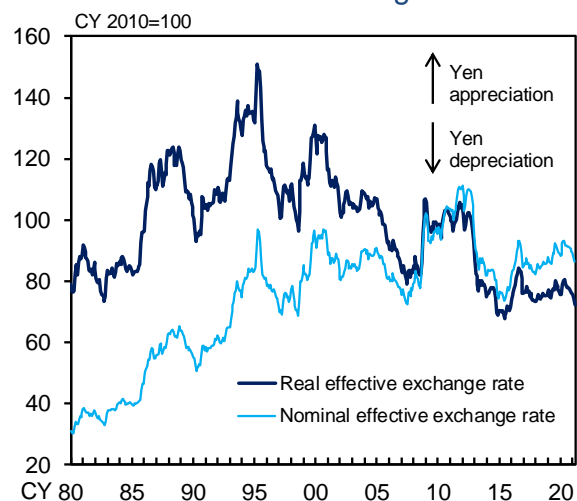
Sources: IMF; Ministry of Finance.  
 Note: Figures are the weighted averages of real GDP growth rates using countries' share in Japan's exports as weights. Annual GDP growth rates are from the "World Economic Outlook (WEO)" as of April 2021. Advanced economies consist of the United States, the euro area, and the United Kingdom. Emerging and commodity-exporting economies consist of the rest of the world economy.

### 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."

### Chart 9: Effective Exchange Rates



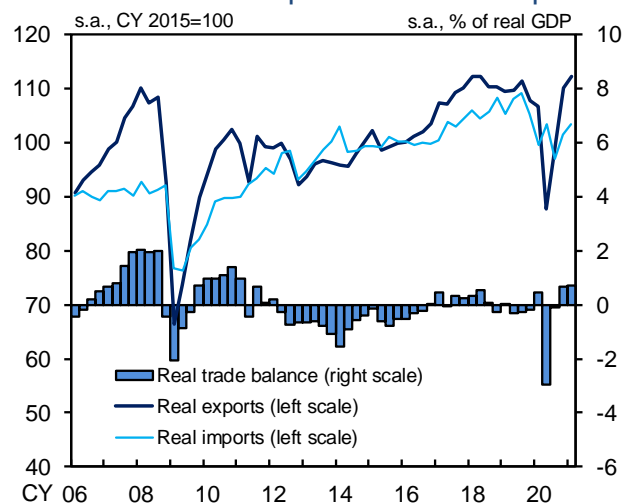
Source: BIS.  
 Note: Figures are based on the broad index of the "Effective Exchange Rate." Those prior to 1994 are calculated using the narrow index.

As for the outlook, with the impact of COVID-19 waning gradually, overseas economies are likely to continue recovering on the whole, partly supported by aggressive macroeconomic policies taken mainly 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.<sup>10</sup> However, for the time being, the global economy is expected to be led by relatively high growth in China and the United States. That is, the Chinese economy is projected to return to a steady growth path that is led by the private sector, and the U.S. economy is expected to see a clear increase in its growth rate on the back of acceleration in vaccinations and the effects of the additional economic measures enacted at the end of 2020 and in March 2021. Toward the end of the projection period, the growth rates of overseas economies are likely to gradually decelerate toward the long-term average with the stimulus effects of macroeconomic policies dissipating.

## Exports and Imports

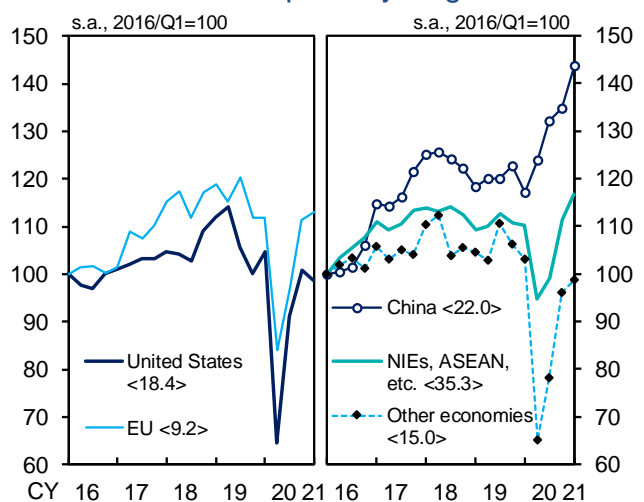
Exports have continued to increase, reflecting a recovery in overseas economies (Chart 10). By region, the pace of increase in exports to advanced economies has decelerated, mainly affected by a peaking-out of pent-up demand and a shortage of semiconductors, both of which are related to automobiles (Chart 11). Exports to emerging economies have increased firmly, mainly those to Asia, supported by the expansion in digital-related demand. By goods, the pace of

**Chart 10: Real Exports and Real Imports**



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

**Chart 11: Real Exports by Region**

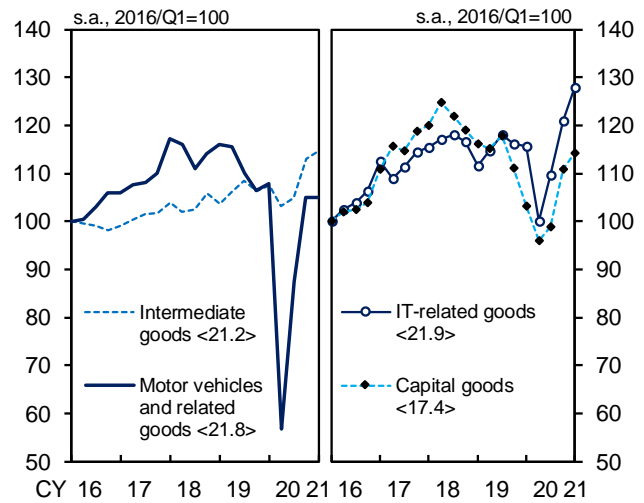


Sources: Bank of Japan; Ministry of Finance.  
 Notes: 1. Based on staff calculations. Figures in angular brackets show the share of each country or region in Japan's total exports in 2020.  
 2. "EU" does not include the United Kingdom for the entire period.

<sup>10</sup> Box 1 outlines the thinking behind the uneven paces of economic improvement across countries, focusing on the differences in the pace of the vaccine rollout and in the stance on fiscal policy conduct.

increase in exports of automobile-related goods has leveled off recently, mainly affected by a peaking-out of pent-up demand and a shortage of semiconductors (Chart 12). IT-related exports have increased clearly because demand has been firm for a wide range of goods, including those related to smartphones and personal computers, as well as parts for data centers and on-board equipment for motor vehicles. Exports of capital goods have increased, partly supported by a global increase in machinery investment and by firm exports of semiconductor production equipment that reflect the expansion in digital-related demand. Exports of intermediate goods have increased, mainly for iron and steel, as well as metal products to Asia.

**Chart 12: 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.

The pace of increase in exports is likely to decelerate for the time being, mainly for automobile-related goods, affected by such factors as a shortage of semiconductors. That said, exports are projected to continue increasing firmly, led by capital goods and IT-related goods, supported by a global recovery in business fixed investment and a steady expansion in digital-related demand. The pace of increase in exports is likely to decelerate from the middle of the projection period with that in the world trade volume slowing and economic growth of the United States, which is Japan's primary export destination, decelerating.

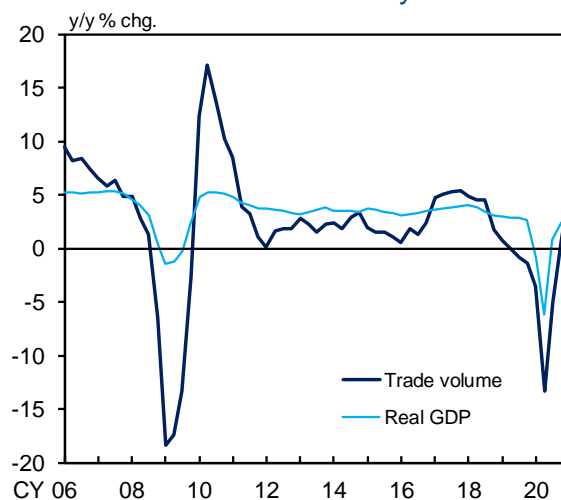
The world trade volume, which has a crucial impact on developments in Japan's exports, has recovered clearly from the bottom hit around last



spring (Chart 13).<sup>11</sup> As for the outlook, although the increase in trade of automobile-related goods is likely to be sluggish for the time being, affected by such factors as a shortage of semiconductors, the overall world trade volume is expected to remain on a steady uptrend since digital-related goods and capital goods are projected to continue increasing firmly. The pace of increase in the volume is likely to decelerate toward the end of the projection period because the global progress with vaccinations is likely to put downward pressure on stay-at-home demand -- namely, demand brought about by people staying at home -- amid the recovery in services demand. Japan's share of exports in world trade has recovered to the pre-pandemic level, along with a recovery in exports of automobile-related goods and capital goods, of which Japan accounts for a large share in both cases (Chart 14). As for the outlook, Japan's share of exports is expected to show relatively strong developments, mainly reflecting an increase in imports of the United States, which is Japan's primary export destination. Thereafter, based on the assumption that competitiveness of Japanese firms will be maintained and the shift of production sites to overseas will not accelerate, Japan's share of exports is projected to return to a level that is close to the average seen before the pandemic.

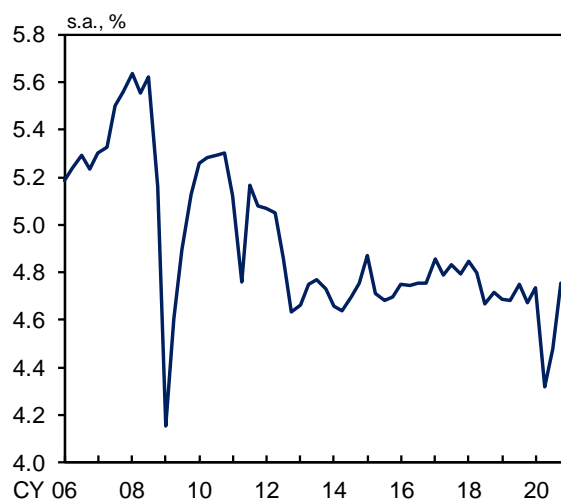
Imports have picked up, reflecting domestic economic activity (Chart 10). They are expected to follow a moderate uptrend on the back of developments in induced demand due to increases in domestic demand and exports.

**Chart 13: World Trade Volume and Real GDP of the World Economy**



Sources: CPB Netherlands Bureau for Economic Policy Analysis; IMF, etc.  
 Notes: 1. Figures for the trade volume are those for real imports.  
 The figure for 2021/Q1 is the percentage change from the January-March 2020 average to the January-February 2021 average.  
 2. Real GDP of the world economy is based on staff calculations using GDP shares of world total GDP from the IMF as weights.

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



Source: CPB Netherlands Bureau for Economic Policy Analysis.  
 Note: Japan's share of exports in world trade is obtained by dividing Japan's real exports by world real imports (2010 prices). The figure for 2021/Q1 is the January-February average.

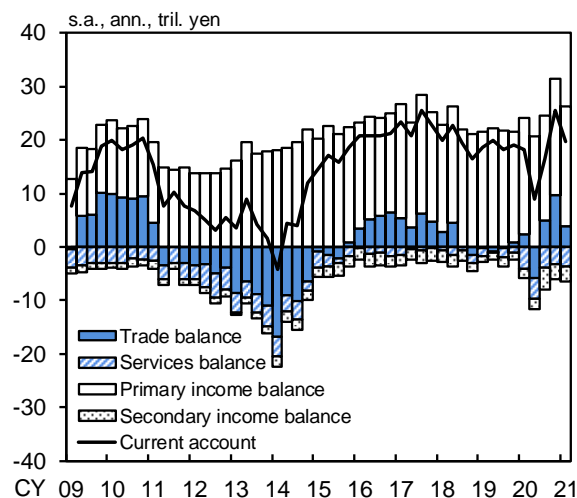
<sup>11</sup> The world trade volume is calculated by adding up real imports in each country.

## External Balance

The nominal current account surplus was on an expanding trend after hitting a bottom around last spring, but the expansion has paused recently (Chart 15). Looking at the breakdown of developments in the current account balance, the nominal trade surplus was on an expanding trend from the July-September quarter of 2020, reflecting a firm increase in exports, but such expansion has come to a halt of late, partly due to a rise in crude oil prices. The services balance has continued to register a deficit of late, reflecting deterioration in the travel balance, as described later. The primary income balance has not been affected much by COVID-19 and the relatively large surplus is more or less unchanged. Meanwhile, the net travel balance has remained at a deteriorated level since there are still almost no inbound visitors, reflecting entry and travel restrictions (Chart 16).

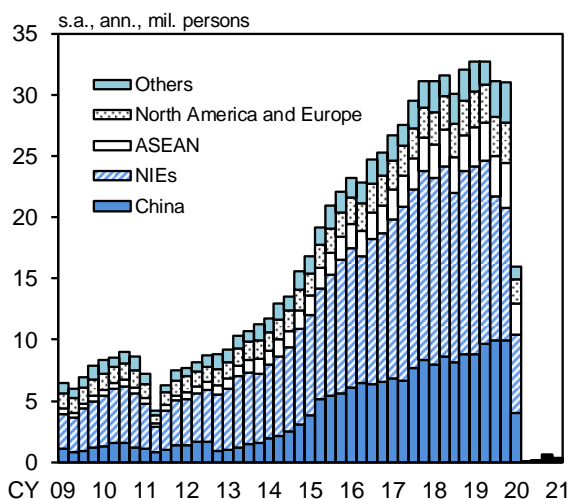
The nominal current account surplus is expected to follow a moderate expanding trend on the back of improvements in the trade balance and the primary income balance that reflect a recovery in overseas economies. In terms of the savings-investment balance, overall excess savings in Japan's economy are expected to continue on a moderate expanding trend (Chart 17). This is because the fiscal balance, which has been registering a large deficit due to the conduct of economic measures, is likely to improve at a pace that somewhat exceeds the pace of decline in excess savings in the private sector.

### Chart 15: Current Account



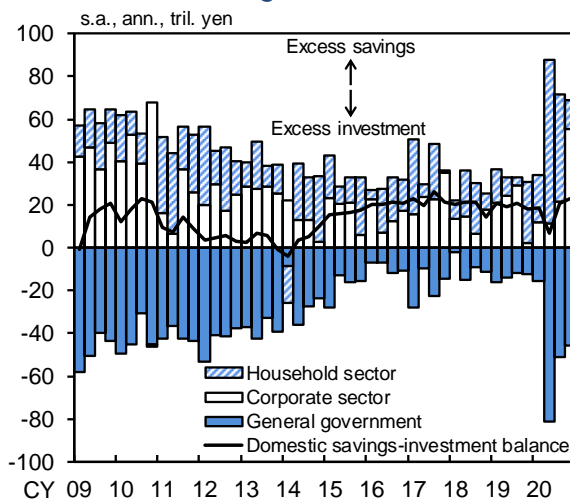
Source: Ministry of Finance and Bank of Japan.  
Note: Figures for 2021/Q1 are January-February averages.

### Chart 16: Number of Inbound Visitors



Source: Japan National Tourism Organization (JNTO).  
Note: North America and Europe consist of the United States, Canada, the United Kingdom, France, and Germany.

### Chart 17: Savings-Investment Balance



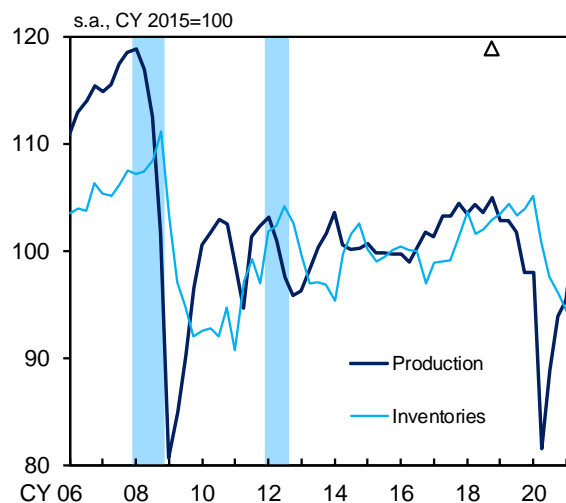
Source: Bank of Japan.

## Industrial Production

Industrial production has continued to increase (Chart 18). By major industry, transport equipment production continued to increase clearly on the back of a global recovery in automobile sales, but the pace of increase has leveled off recently since a peaking-out of pent-up demand and a shortage of semiconductors have been observed at the same time. Production of machinery (i.e., "general-purpose, production, and business-oriented machinery" in the *Indices of Industrial Production*) has shown a clear uptrend on the back of a recovery in demand for machinery investment at home and abroad. Production of electronic parts and devices has increased evidently, reflecting steady demand for parts for data centers, those related to smartphones and personal computers, and those for on-board equipment for motor vehicles. Meanwhile, the shipments-inventories balance (i.e., the year-on-year rate of change in shipments minus that in inventories) has improved clearly since an increase in shipments and progress in inventory adjustments have been observed at the same time across a wide range of industries (Chart 19).

Industrial production is likely to continue increasing, mainly supported by a global recovery in demand for business fixed investment and steady digital-related demand, although its pace of increase is expected to decelerate for the time being, affected by such factors as a shortage of semiconductors.

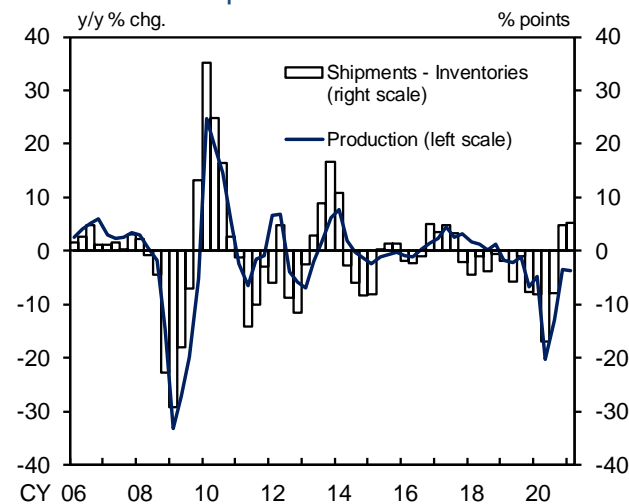
### Chart 18: Industrial Production



Source: Ministry of Economy, Trade and Industry (METI).

Notes: 1. Shaded areas indicate recession periods. The triangle shows the latest peak.  
2. The production figures for 2021/Q1 and Q2 are calculated based on METI projections for March and April 2021.  
The inventories figure for 2021/Q1 is that for February.

### Chart 19: Shipments-Inventories Balance



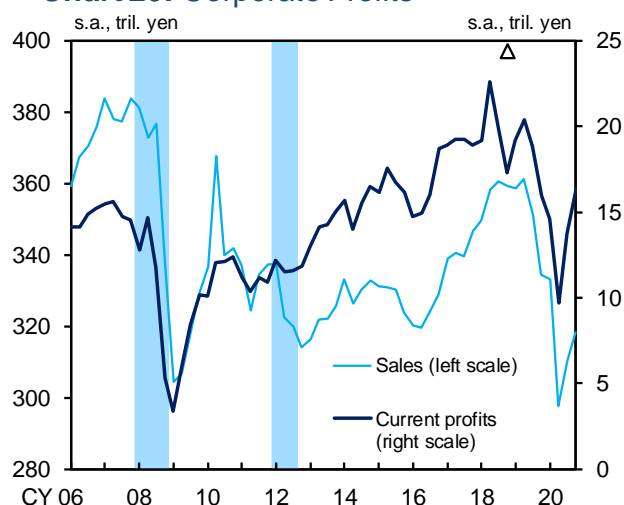
Source: Ministry of Economy, Trade and Industry.

Note: The production figure and the shipments figure for 2021/Q1 are January-February averages. The inventories figure for 2021/Q1 is that for February.

## Corporate Profits

Corporate profits have improved on the whole, although weakness has been seen in some industries such as face-to-face services.<sup>12</sup> According to the *Financial Statements Statistics of Corporations by Industry, Quarterly* (FSSC), current profits for all industries and enterprises improved for two consecutive quarters in the October-December quarter of 2020 and recovered to a level slightly above that registered for the same quarter of 2019, which was before the pandemic (Chart 20). The improvement in current profits is attributable to a combination of the following factors: (1) a pick-up in sales; (2) a reduction in selling, general and administrative (SG&A) expenses, such as advertising and business travel expenses, amid a situation of the continuing impact of COVID-19; and (3) various measures to support firms such as subsidies for sustaining businesses and employment adjustment subsidies. Looking at current profits by industry and firm size, a clear improvement has been observed in the manufacturing industry regardless of firm size, supported by increases in exports and production and by cost cuts. As for the nonmanufacturing industry, current profits of small and medium-sized firms have picked up clearly, backed by various measures to support firms and pushed up by the "Go To" campaign, whereas those of large firms have continued to show weak developments on the whole, being significantly affected by the drop in current profits of the transportation industry, such as of airlines and railways.

**Chart 20: Corporate Profits**



Source: Ministry of Finance.

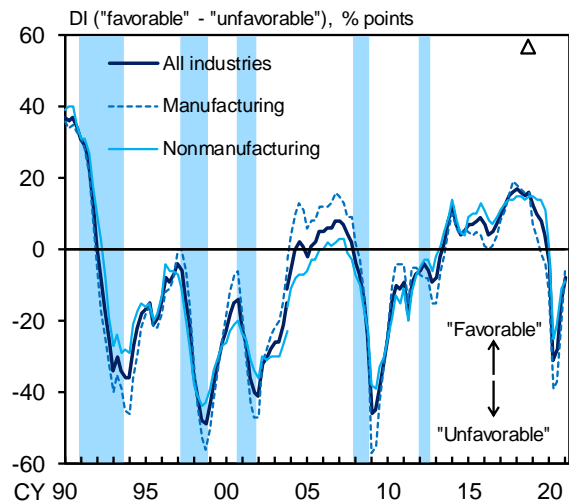
Notes: 1. Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly," Excluding "finance and insurance."  
2. Figures from 2009/Q2 onward exclude "pure holding companies."  
3. Shaded areas indicate recession periods. The triangle shows the latest peak.

<sup>12</sup> Box 2 outlines characteristics of the virtuous cycle from income to spending (or from corporate profits to business fixed investment) that is beginning to be seen lately in the corporate sector.

Improvement in business sentiment also has become evident on the whole, although weakness has remained in some industries, such as face-to-face services. According to the March 2021 *Tankan* (Short-Term Economic Survey of Enterprises in Japan), the diffusion index (DI) for business conditions for all industries and enterprises has improved for three consecutive quarters after hitting a bottom in the June 2020 survey (Chart 21). By industry, the DI for the manufacturing industry has improved clearly for a wide range of industries, such as automobiles, electrical machinery, general-purpose machinery, and production machinery. This is mainly on the back of (1) the global recovery in automobile sales, (2) the steady expansion in digital-related demand on a global basis, and (3) a pick-up in domestic business fixed investment. As for the nonmanufacturing industry, while the DI for the accommodations as well as eating and drinking services industries has deteriorated again, affected by the resurgence of COVID-19 since last autumn and the declaration of a state of emergency, the DIs for many other industries have improved, mainly reflecting a pick-up in economic activity and a resultant increase in logistics.

Corporate profits are likely to increase clearly for the time being, pushed up by a rise in the sales volume that reflects a recovery in domestic and external demand and by a reduction in SG&A expenses, despite being pushed down by deterioration in the terms of trade stemming from a rise in crude oil prices. Thereafter, toward the end of the projection period, the pace of increase in profits is expected to slow, partly due to dissipation of the effects of various measures to

**Chart 21: Business Conditions**



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

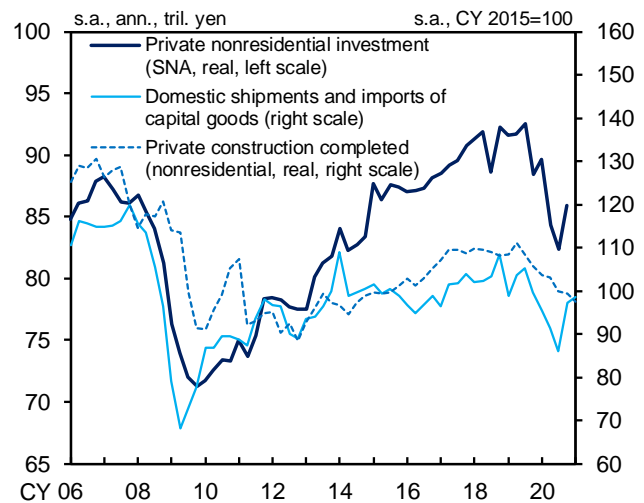
support firms, but corporate profits, including those of the nonmanufacturing industry, are likely to continue on a firm improving trend, reflecting a recovery in the level of economic activity.

### Business Fixed Investment

Business fixed investment has picked up, although weakness has been seen in some industries (Chart 22). On the back of improvement in corporate profits, the aggregate supply of capital goods -- a coincident indicator of machinery investment -- has picked up, mainly for digital-related goods, such as personal computers and goods related to base stations and 5G networks. On the other hand, with large-scale Olympic Games-related construction having almost completed, private construction completed (nonresidential) -- a coincident indicator of construction investment -- has remained on a moderate declining trend due to the effects of a decrease in construction of stores and accommodation facilities, mainly by the eating and drinking as well as accommodations industries.

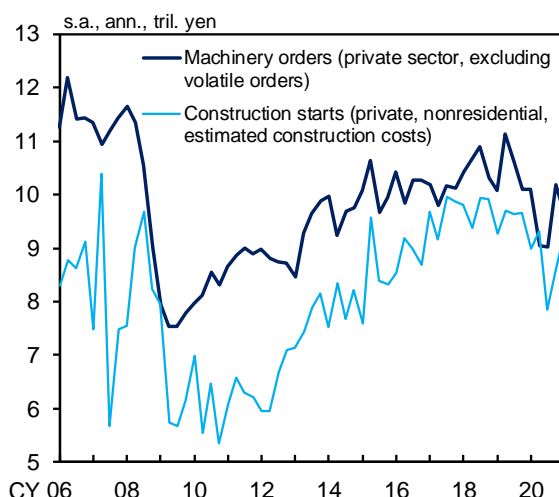
When fluctuations are smoothed out, machinery orders -- a leading indicator of machinery investment -- have shown a pick-up (Chart 23). Looking at the breakdown, orders have picked up for the manufacturing industry, mainly led by "general-purpose, production, and business-oriented machinery," reflecting increases in exports and production. Orders also have picked up on the whole for the nonmanufacturing industry. This is because they have been supported by investment related to base stations and 5G networks by the

**Chart 22: 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/Q1 are January-February averages.  
 2. Real private construction completed is based on staff calculations using price indices in the "Construction Cost Deflators."

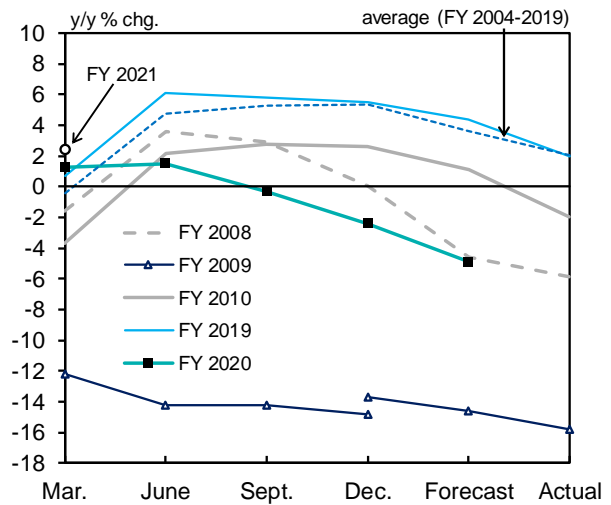
**Chart 23: Leading Indicators of Business Fixed Investment**



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.  
 Notes: 1. Volatile orders: orders for ships and orders from electric power companies.  
 2. Figures for 2021/Q1 are January-February averages.

telecommunications industry, logistics facilities-related investment by the wholesale and retail trade industries, and digital-related investment by the construction industry, although orders by the transportation industry -- including "rolling machines" (i.e., railway vehicles) and "motor vehicles" -- which is strongly affected by COVID-19, have been on a downtrend. Construction starts (in terms of planned expenses for private and nonresidential construction) -- a leading indicator of construction investment -- have picked up on the whole. This is because, although the construction of stores and accommodation facilities -- mainly by the eating and drinking as well as accommodations industries, which have been affected by COVID-19 -- has continued to decrease, construction starts have been supported by an increase in construction of warehouses, such as logistics facilities, on the back of expansion in e-commerce and by progress in urban redevelopment projects that were decided before the outbreak of COVID-19. Meanwhile, looking at the business fixed investment plan in the March 2021 *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) is expected to be clearly negative for fiscal 2020 in terms of the year-on-year rate of change, but the capital stock adjustment seems to have not been as significant as that seen after the GFC, since accommodative financial conditions have been maintained on the back of the Bank's and the government's measures to support financing and of financial institutions' active efforts (Chart 24). The plan for fiscal 2021, which was surveyed for the first time

**Chart 24: Developments in Business Fixed Investment Plans**



Source: Bank of Japan.  
 Notes: 1. Based on the *Tankan*. All industries including financial institutions.  
 2. Including software and R&D investments and excluding land purchasing expenses (R&D investment is not included before the March 2017 survey).  
 3. There is a discontinuity in the data in December 2009 due to a change in the survey sample.

in this *Tankan*, shows that business fixed investment is likely to increase by 2.4 percent on a year-on-year basis, indicating relatively high growth compared with the past March *Tankan* surveys.

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 expected to be undertaken includes (1) machinery investment triggered by an increase in exports, (2) software investment to address labor shortage, expand the use of teleworking, and digitalize, for example, sales 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. That said, reflecting the prolonged impact of COVID-19 and a delay in recovery in inbound tourism demand, renewal investment in railway vehicles and aircraft by the transportation industry and construction investment such as in restaurants, commercial facilities, and hotels by the services industry are projected to remain sluggish for a while. 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 measures to support firms 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.



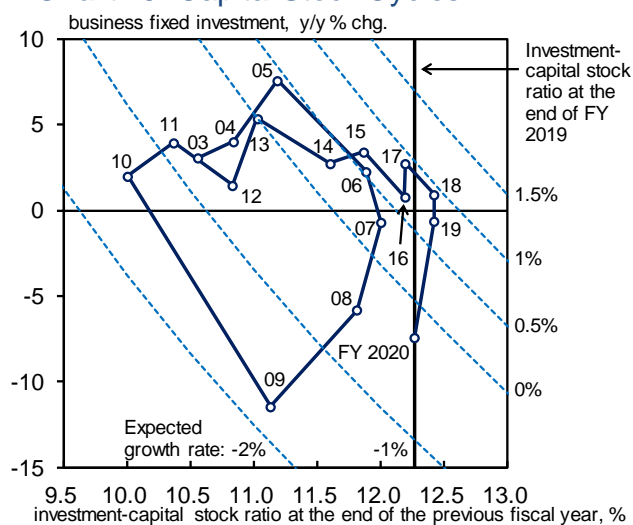
The outlook for business fixed investment is assessed from the viewpoint of the capital stock cycle, which is based on the assumption that such investment will be undertaken in order to achieve the level of capital stock necessary for production activity under certain growth expectations (Chart 25). A phase of increase in business fixed investment, which persistently lasted for nine years since fiscal 2010, ended in fiscal 2019, and business fixed investment seems to temporarily have 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 reenter an increasing phase, supported by improvement in corporate profits and accommodative financial conditions, and along with a moderate rise in the expected growth rate.

## Employment and Income Situation

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

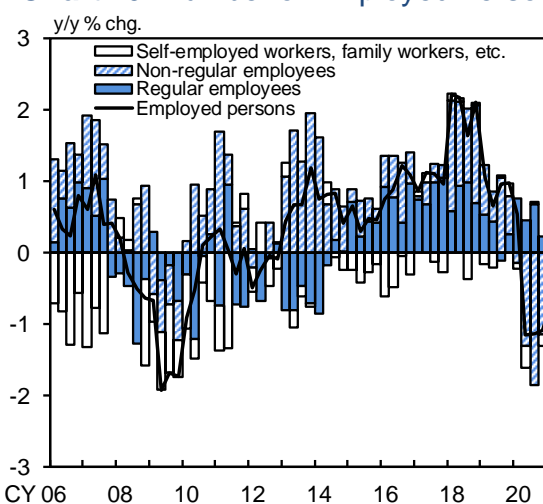
The year-on-year rate of decline in the number of employed persons hit a bottom around last spring and has decelerated moderately, reflecting a pick-up in economic activity (Chart 26). Looking at the number of employed persons by employment status, while the number of non-regular employees has decreased, mainly in the face-to-face services industry, partly affected by the resurgence of COVID-19 since last autumn and the reinstatement of the state of emergency, that of regular employees has continued to increase moderately, mainly in the information and communications as well as the medical, healthcare, and welfare services industries. The

**Chart 25: 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 2020 is the 2020/Q2-Q4 average.

**Chart 26: Number of Employed Persons**

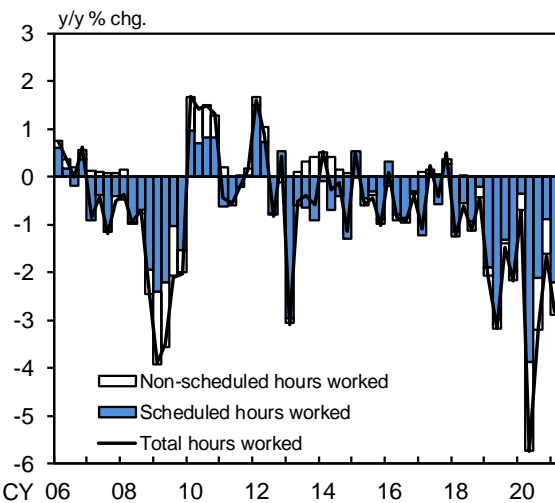


Source: Ministry of Internal Affairs and Communications.  
 Note: "Self-employed workers, family workers, etc." includes executives of companies or corporations. Figures prior to 2014 are based on the "detailed tabulation" in the "Labour Force Survey." Figures for 2021/Q1 are January-February averages.

year-on-year rate of decline in total hours worked per employee decelerated from the bottom hit around last spring but has accelerated again of late, mainly for the accommodations as well as eating and drinking industries, affected by the requests to shorten operating hours under the state of emergency (Chart 27). With regard to labor market conditions, the labor force participation rate declined around last spring because some seniors, women, and student part-time workers were out of the labor market. However, with these people returning to the labor market, the labor force participation rate has increased, recovering recently to the latest peak level, seen around the end of 2019 (Chart 28). The unemployment rate has been more or less flat at around 3 percent of late. The active job openings-to-applicants ratio continued to decline clearly through the middle of 2020 but subsequently has been more or less flat at a level slightly above 1, mainly due to an increase in job openings that reflects a pick-up in economic activity (Chart 29).

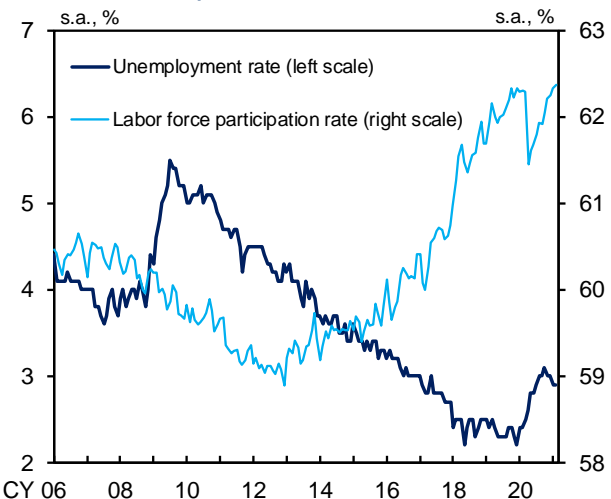
As for the outlook, with policy responses -- such as employment adjustment subsidies, subsidies for firms that complied with the requests to shorten operating hours, and various measures to support financing -- continuing to support employment, the number of employed persons is likely to return to a moderate increasing trend since labor absorption is expected to progress, mainly in industries with labor shortage, such as construction as well as medical, healthcare, and welfare services. However, while vigilance against COVID-19 continues, it is likely that employment adjustment pressure will continue to be exerted to a certain degree, mainly on non-regular

**Chart 27: Hours Worked**



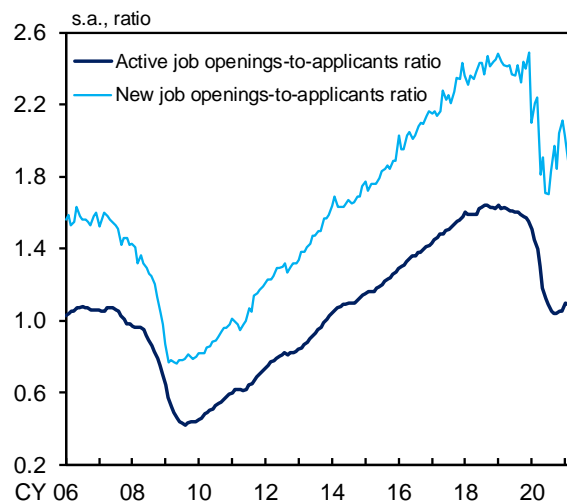
Source: Ministry of Health, Labour and Welfare.  
Note: Figures for 2021/Q1 are January-February averages.

**Chart 28: Unemployment Rate and Labor Force Participation Rate**



Source: Ministry of Internal Affairs and Communications.

**Chart 29: Job Openings-to-Applicants Ratio**



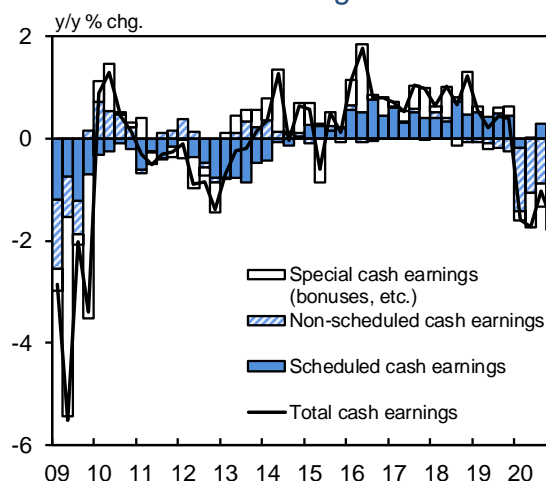
Source: Ministry of Health, Labour and Welfare.

employees in the industry of face-to-face services such as accommodations as well as eating and drinking.

On the wage side, total cash earnings per employee have declined, mainly due to decreases in special cash earnings (winter bonuses) and non-scheduled cash earnings (Chart 30).<sup>13</sup> The year-on-year rate of change in scheduled cash earnings has been steady, being positive at around 0.0-0.5 percent (Chart 31). This is because the rate of change in such earnings for full-time employees has increased somewhat, mainly in the manufacturing as well as the medical, healthcare, and welfare services industries, and because a decline in the share of part-time employees also has contributed positively. The year-on-year rate of change in non-scheduled cash earnings continued to register a relatively large negative figure due to a decline in non-scheduled hours worked that has been brought about by working-style reforms and also pushed down by the impact of COVID-19. However, the rate of decline has been on an decelerating trend recently, reflecting a pick-up in economic activity. The year-on-year rate of change in special cash earnings has been significantly negative, mainly against the background of a decline in winter bonuses that reflects deterioration in business performance for the first half of fiscal 2020.

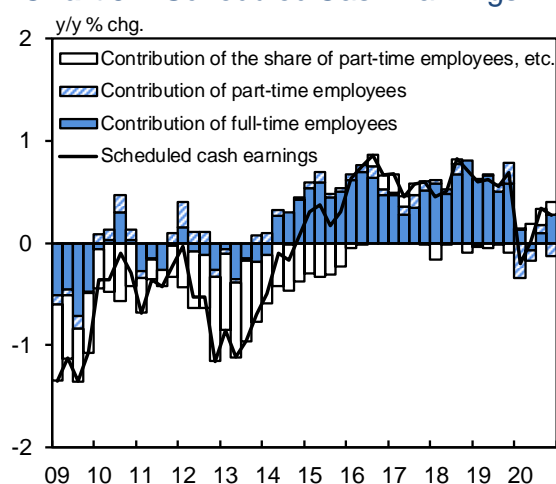
With regard to the outlook for wages, it likely will remain difficult for the rate of increase in

**Chart 30: 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 are based on continuing observations following the sample revisions.

**Chart 31: Scheduled Cash Earnings**



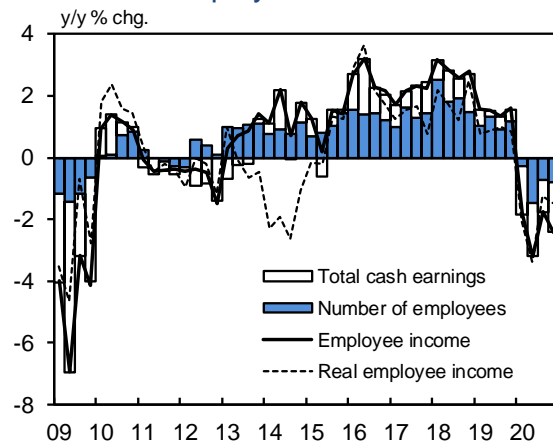
Source: Ministry of Health, Labour and Welfare.  
 Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.  
 2. Figures from 2016/Q1 are based on continuing observations following the sample revisions.

<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.

scheduled cash earnings to accelerate for the time being. This is because wage increases discussed at the annual spring labor-management wage negotiations, based on which scheduled cash earnings of full-time employees are determined, seem to have decelerated, and a rise in the share of part-time employees resulting from a recovery in the employment of non-regular workers is likely to push down such earnings through a composition change. From the middle of the projection period, scheduled cash earnings are expected to rise moderately again as the rate of wage increase is likely to rise, reflecting improvement in business performance. On the other hand, non-scheduled cash earnings are likely to turn to an uptrend, reflecting a recovery in non-scheduled hours worked that is due to improvement in economic activity. Special cash earnings (bonuses), which lag behind corporate profits for about half a year, are likely to stop declining sooner or later, reflecting improvement in corporate profits, and continue increasing steadily thereafter. Under these circumstances, the year-on-year rate of change in total cash earnings per employee is projected to turn positive, mainly due to rises in non-scheduled cash earnings and special cash earnings. Thereafter, in addition to these rises, an increase in scheduled cash earnings is likely to push up total cash earnings, and thus the rate of change is expected to continue on a moderate expanding trend toward the end of the projection period.

In light of the aforementioned employment and wage conditions, employee income has declined clearly (Chart 32). This is projected to bottom out with some time lag following a pick-up in

**Chart 32: 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 are based on continuing observations following the sample revisions of the "Monthly Labour Survey."

4. Real employee income is based on staff calculations using the CPI (less imputed rent).

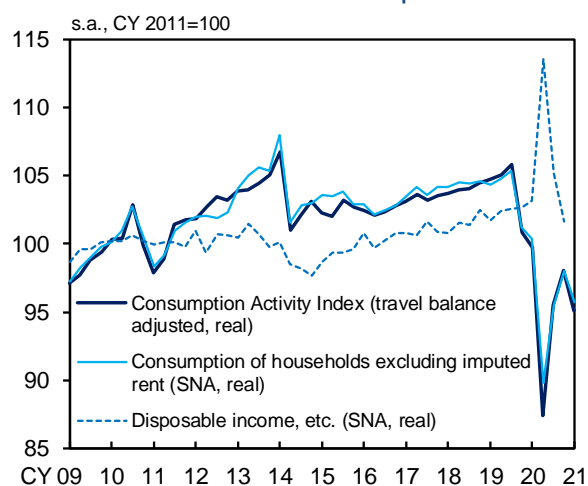
economic activity and improvement in business performance. Thereafter, employee income is likely to return to a moderate uptrend.

## Household Spending

A pick-up in private consumption has paused due to increased downward pressure on consumption of services, such as eating and drinking as well as accommodations.

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 -- increased for two consecutive quarters after hitting a bottom for the April-June quarter of 2020.<sup>14</sup> However, the CAI for the January-February period of 2021 turned to a decline again relative to the October-December quarter of 2020, affected by the resurgence of COVID-19 since last autumn and the resultant reinstatement of the state of emergency (Charts 33 and 34). Based on various sources, such as high-frequency indicators, statistics published by industry organizations, and anecdotal information from firms, services consumption for March improved somewhat compared with that for the January-February period, reflecting a lifting of the state of emergency and a recovery in the number of people going out (Chart 35). However, since the turn of April, downward pressure seems to have intensified again, such as on eating and drinking as well as accommodations, due to the

### Chart 33: Private Consumption



Sources: Bank of Japan; Cabinet Office, etc.

Notes: 1. The Consumption Activity Index is based on staff calculations.

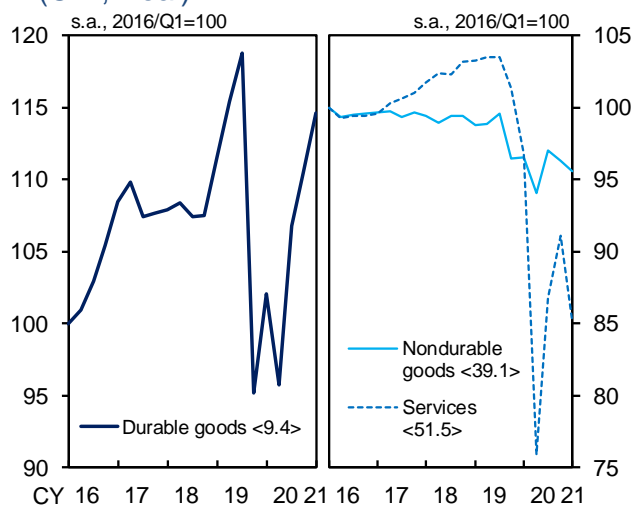
Figures for the Consumption Activity Index (travel balance adjusted) exclude inbound tourism consumption and include outbound tourism consumption.

The figure for 2021/Q1 is the January-February average.

2. The figure for consumption of households excluding imputed rent for 2021/Q1 is based on staff calculations using the "Synthetic Consumption Index" (February).

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.

### Chart 34: 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/Q1 are January-February averages.

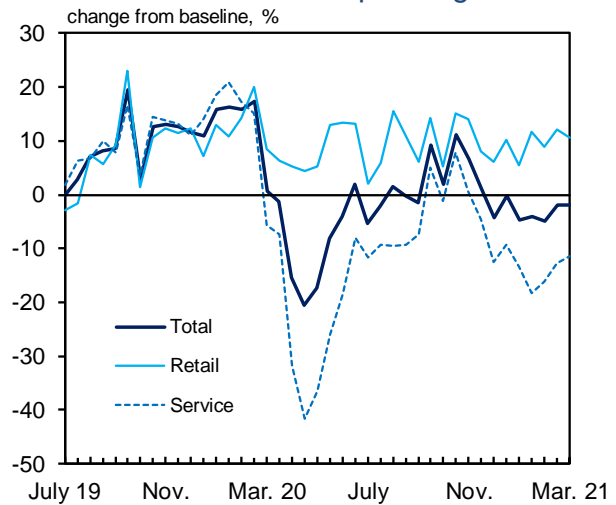
2. Nondurable goods include goods classified as "semi-durable goods" in the SNA.

<sup>14</sup> Regarding the CAI, see the Bank's research paper "Revision of the Consumption Activity Index to Address the 2008 SNA and Improve Accuracy" published in April 2018.

increase in confirmed cases of COVID-19 and the resultant public health measures. Meanwhile, goods consumption has been firm on the back of stay-at-home demand.

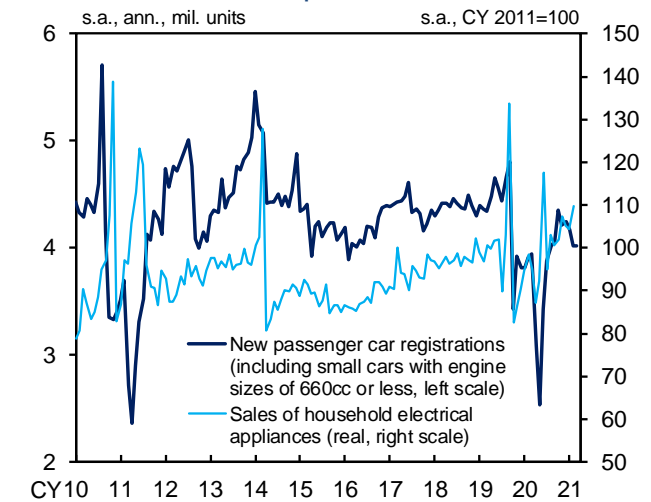
Looking at private consumption by type, durable goods have been on an uptrend from the bottom hit around last spring, on the back of an expansion in stay-at-home demand and the effects of a demand shift from services (Chart 36). Specifically, automobile sales increased from last spring, partly on the back of measures to support sales by some automakers and the effects of the introduction of new car models. However, the increase has paused of late, mainly brought about by the effects of supply-side constraints due to a shortage of semiconductors. Sales of household electrical appliances have maintained their moderate uptrend, mainly for personal computers, televisions, and white goods (air conditioners), on the back of the expansion in stay-at-home demand. Nondurable goods picked up from the decline seen around last spring but have decreased again since the turn of this year, mainly because demand for clothes and gasoline has waned due to the resurgence of COVID-19. Food and daily necessities have been firm on the back of an expansion in stay-at-home consumption, albeit with some fluctuations depending on the situation with COVID-19. Clothes picked up from the significant decline seen around last spring but have dropped since the turn of this year, mainly reflecting the effects of the resurgence of COVID-19.

**Chart 35: 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 36: Consumption of Durable Goods**



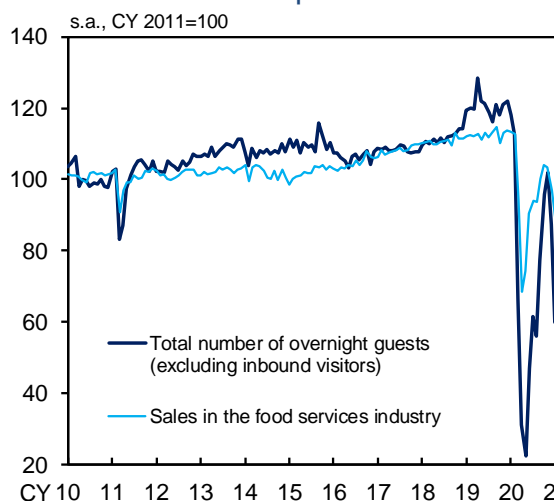
Sources: Japan Automobile Dealers Association; Japan Light Motor Vehicle and Motorcycle Association; Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications.  
 Note: Figures for real sales of household electrical appliances are based on staff calculations using the retail sales index of machinery and equipment in the "Current Survey of Commerce" and the price index of related items in the CPI.



Services consumption, mainly for face-to-face services, showed a relatively significant decline toward the beginning of this year, affected by the resurgence of COVID-19 since last autumn, the reinstatement of the state of emergency, and the suspension of the "Go To Travel" campaign (Chart 37). Subsequently, it increased temporarily through March due to the recovery in the number of people going out that reflects the lifting of the state of emergency, but downward pressure on services consumption seems to have intensified again after the turn of April with the confirmed cases turning to an increase and public health measures being tightened (Chart 38). Dining-out declined clearly from December 2020 through January 2021 due to the resurgence of COVID-19 and the reinstatement of the state of emergency, and then turned to a slight increase on the back of an easing of the requests to shorten operating hours that reflects a lifting of the state of emergency. However, after the turn of April, it seems to have declined again, reflecting the reinforcement of the requests (Chart 39). Domestic travel has declined due to the effects of the suspension of the "Go To Travel" campaign and the reinstatement of the state of emergency. The number of overnight guests since January has declined to the level seen around last summer and remained low. 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* deteriorated from the end of last year, reflecting the resurgence of COVID-19, but have turned toward improvement since February on the back

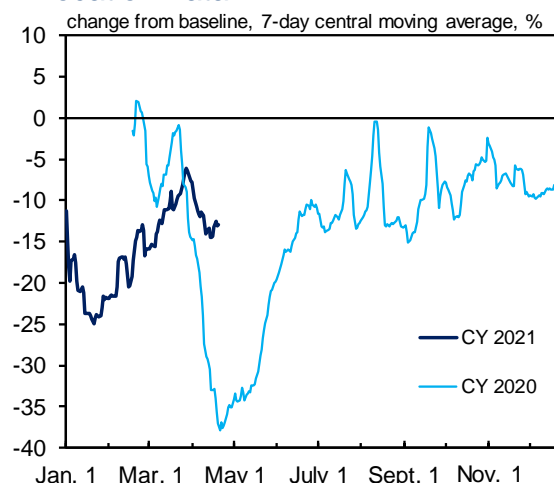
**Chart 37: Consumption of Services**



Sources: Japan Tourism Agency; Japan Foodservice Association, "Market Trend Survey of the Food Services Industry."

Note: Figures for the "total number of overnight guests (excluding inbound visitors)" in 2010 are calculated using those of accommodation facilities with more than nine employees.

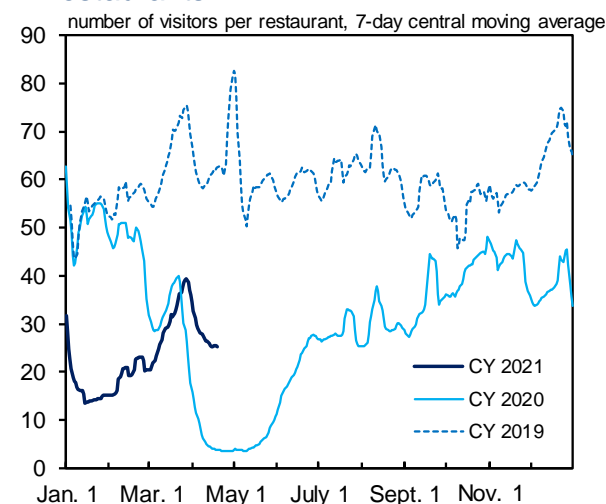
**Chart 38: Mobility Trends Based on Location Data**



Source: Google LLC "Google COVID-19 Community Mobility Reports." <https://www.google.com/covid19/mobility/>. Accessed: April 27, 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.

**Chart 39: Number of Visitors to Restaurants**



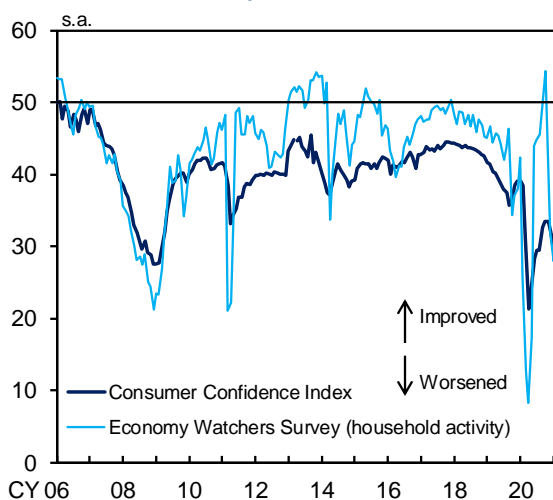
Source: TableCheck Inc.  
 Note: Figures are for about 4,800 restaurants that have installed the reservation and customer management system for restaurants provided by TableCheck Inc.

of the decline in the number of confirmed cases of COVID-19 and the lifting of the state of emergency (Chart 40).

In the outlook, private consumption, mainly of face-to-face services, is likely to remain sluggish, being at a relatively low level for the time being due to the impact of COVID-19. Thereafter, it is expected to pick up again with the impact waning gradually and supported also by the government's economic measures. With the impact of COVID-19 subsiding on the back of the widespread vaccinations, an uptrend in private consumption is expected to become evident toward the second half of the projection period, supported by improvement in employee income and quite moderate withdrawals of "forced savings," which is funds on hand that accumulated under the impact of COVID-19, mainly because households lost opportunities to spend.<sup>15</sup>

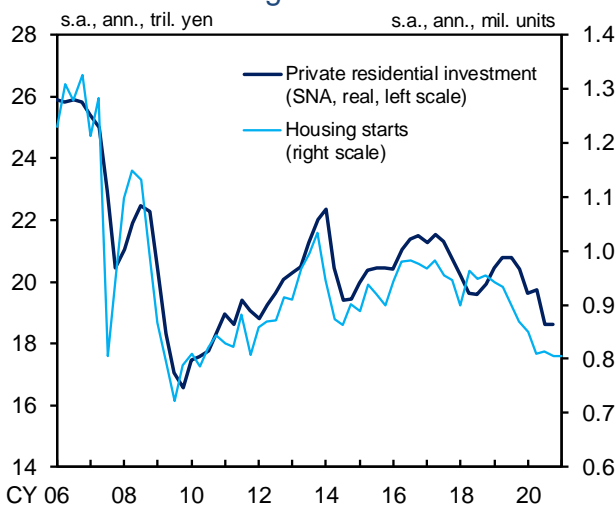
Housing investment has declined moderately (Chart 41). The number of housing starts -- a leading indicator of housing investment -- declined due to the effects of the consumption tax hike and COVID-19 but has almost bottomed out recently. As for the outlook, with downward pressure stemming from the effects of the consumption tax hike and COVID-19 dissipating, housing investment is likely to temporarily head toward a pick-up from the bottoming-out, partly supported by accommodative financial conditions. Thereafter, it is expected to follow a moderate

**Chart 40: 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 41: Housing Investment**



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.  
Note: The figure for 2021/Q1 is the January-February average.

<sup>15</sup> Box 3 outlines the basic ideas on how the widespread vaccinations will affect private consumption while analyzing and examining "forced savings."



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 risen on a quarter-on-quarter basis, reflecting developments in international commodity prices and foreign exchange rates (Chart 42). The year-on-year rate of change in the services producer price index (SPPI, excluding international transportation) has turned positive due to a rebound from the decline in prices, such as hotel charges, seen around last spring and to a recent pick-up in advertising demand.

The year-on-year rate of change in the CPI (all items less fresh food) has been slightly negative, mainly affected by COVID-19 and the past decline in crude oil prices (Charts 42 and 43). That in the CPI (all items less fresh food and energy) has been slightly positive recently. The year-on-year rate of change in the CPI (all items less fresh food and energy, excluding the effects of temporary factors of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign) also has been slightly positive (Chart 44).<sup>16,17</sup> Looking at the

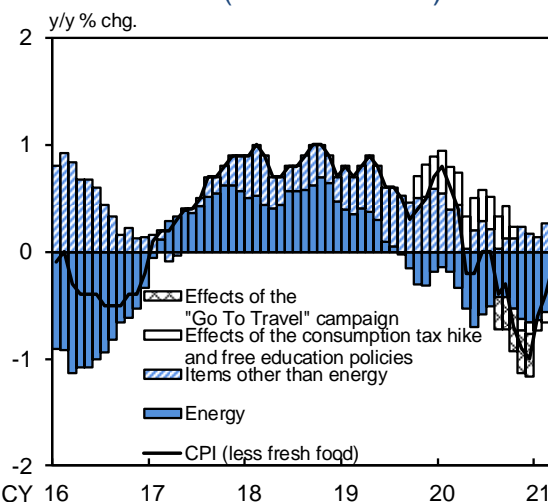
<sup>16</sup> A positive contribution of the consumption tax hike to the CPI has dissipated since November 2020. On the other hand, with regard to policies concerning the provision of free education, the effects of free higher education have pushed down the year-on-year rate of change in the CPI (all items less fresh food) for April 2020 onward by around 0.1 percentage points, but the negative contribution will dissipate from April 2021.

### Chart 42: Inflation Indicators

|  | y/y % chg. |       |       |       |
|--|------------|-------|-------|-------|
|  | 20/Q2      | 20/Q3 | 20/Q4 | 21/Q1 |
| <b>Consumer Price Index (CPI)</b>        |            |       |       |       |
| Less fresh food                          | -0.1       | -0.2  | -0.9  | -0.4  |
| Adjusted figure                          | -0.4       | -0.3  | -0.5  | -0.3  |
| Less fresh food and energy               | 0.4        | 0.1   | -0.3  | 0.2   |
| Adjusted figure                          | 0.2        | 0.2   | 0.2   | 0.3   |
| <b>Producer Price Index (q/q % chg.)</b> | -2.4       | 0.6   | 0.0   | 1.4   |
| <b>Services Producer Price Index</b>     | -1.0       | -0.5  | -0.2  | 0.2   |
| <b>GDP deflator</b>                      | 1.4        | 1.2   | 0.3   |       |
| Domestic demand deflator                 | -0.0       | 0.2   | -0.6  |       |

Sources: Ministry of Internal Affairs and Communications; Bank of Japan; Cabinet Office.  
 Notes: 1. Adjusted figures exclude 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. The figures are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020.  
 2. Figures for the Producer Price Index are adjusted for the hike in electric power charges during the summer season.  
 3. Figures for the Services Producer Price Index exclude international transportation.  
 4. Figures for the Producer Price Index and the Services Producer Price Index exclude the effects of the consumption tax hike.

### Chart 43: CPI (less fresh food)

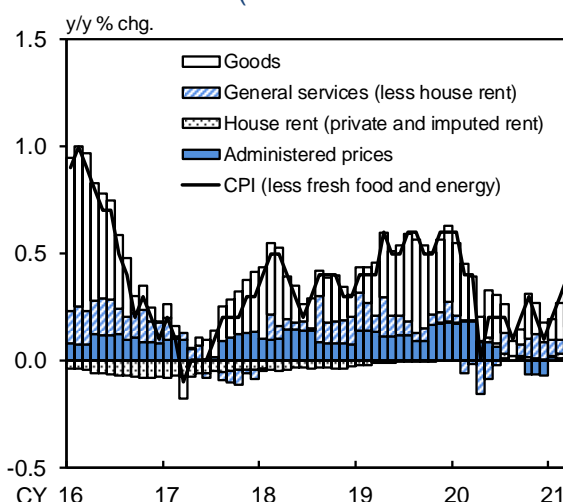


Source: Ministry of Internal Affairs and Communications.  
 Notes: 1. Energy consists of petroleum products, electricity, and gas, manufactured & piped.  
 2. Figures for the "effects of the consumption tax hike and free education policies" from April 2020 onward are based on staff estimations, and include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

breakdown of developments in this CPI, the year-on-year rate of change in goods has remained slightly positive on the whole; while the rate of change in food products, which are sensitive to economic activity, has remained marginally negative, the rates of change in daily necessities and white goods, for which stay-at-home demand has been increasing, have exerted upward pressure. The rate of change in general services has been slightly positive on the whole; although the rates of increase in dining-out and housework-related services, such as services related to housing repairs and maintenance, have decelerated, the rate of decline in hotel charges (excluding the effects of the "Go To Travel" campaign) has slowed compared with last year. Meanwhile, administered prices were pushed down by a decline in airfare and a reduction in or exemption for school lunch charges but have been at around 0 percent since this January, pushed up by rises in fire and earthquake insurance premiums and in accident insurance premiums.

The indicators for capturing the underlying trend in the CPI have exhibited the following

**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 exclude 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. The figures from April 2020 onward are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020.

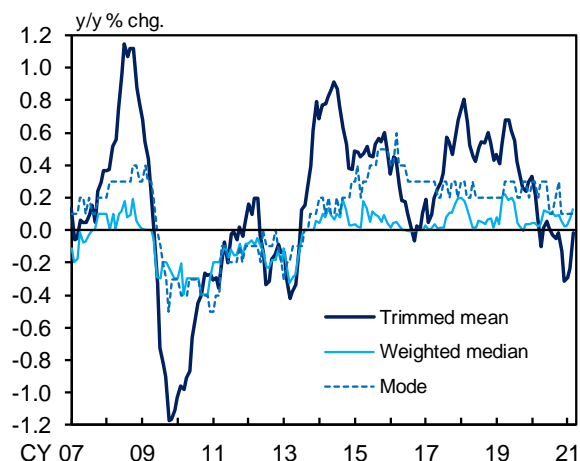
<sup>17</sup> The "Go To Travel" campaign pushed down the year-on-year rate of change in the CPI (all items less fresh food) by around 0.3 to 0.4 percentage points for the August-December period of 2020. However, due to the suspension of the campaign, such negative contribution has dissipated since January 2021. As a result, the year-on-year rate of change in the CPI (all items less fresh food) was pushed down by around 0.2 percentage points for fiscal 2020 as a whole. On the other hand, rebounding from the negative contribution, the year-on-year rate of change is estimated to be pushed up by around 0.3 to 0.4 percentage points for the August-December period of 2021.

Regarding the outlook, assuming that the "Go To Travel" campaign will be resumed, it is expected that the year-on-year rate of change in the CPI (all items less fresh food) will be pushed down for the months the campaign is conducted and pushed up for the same months of the following year.

developments (Chart 45).<sup>18</sup> The rate of change in the trimmed mean stayed at around 0 percent but has been slightly negative recently, albeit with fluctuations, pushed down by the effects of a decline in prices of food products. On the other hand, the rate of change in the mode, which is less susceptible to developments in CPI items with large weights, has been slightly positive, albeit with fluctuations. The rate of change in the weighted median has continued to be more or less flat, either at a slightly positive level or at around 0 percent. 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 maintained a net "increase" on the whole, although it has been on a moderate declining trend, albeit with fluctuations, mainly because the number of price-increasing items has been decreasing as a trend, such as for food products as well as agricultural, aquatic, and livestock products (Chart 46).

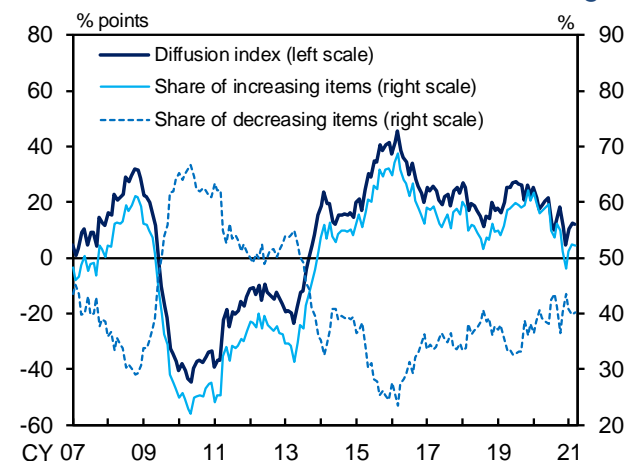
Meanwhile, the year-on-year rate of change in the domestic demand deflator has turned negative of late, mainly due to a decline in the private consumption deflator that includes energy prices (Chart 42). On the other hand, the year-on-year rate of change in the GDP deflator has remained positive, pushed up by a decrease in the import

**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 based on staff estimations and exclude the effects of measures such as free higher education introduced in April 2020.

**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 whose 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 based on staff estimations and exclude the effects of measures such as free higher education introduced in April 2020.

<sup>18</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 by 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.

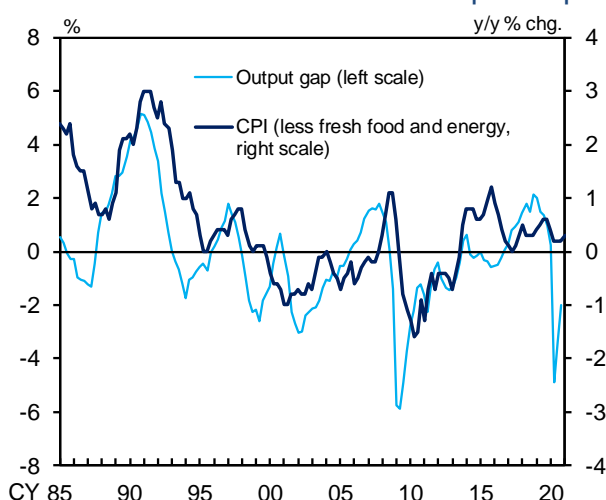
deflator stemming from the past decline in crude oil prices.

## Environment surrounding Prices

In the outlook for prices, the main factors that determine inflation rates are assessed as follows. First, it is highly possible that the output gap, which had improved since the middle of 2020, saw a temporary pause in such improvement for the January-March quarter of 2021, affected by the resurgence of COVID-19 since last autumn and the reinstatement of the state of emergency (Charts 4 and 47). That said, the output gap is likely to follow an improving trend again, with the economy returning to a growth path that outpaces its potential growth rate. 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 projection period.

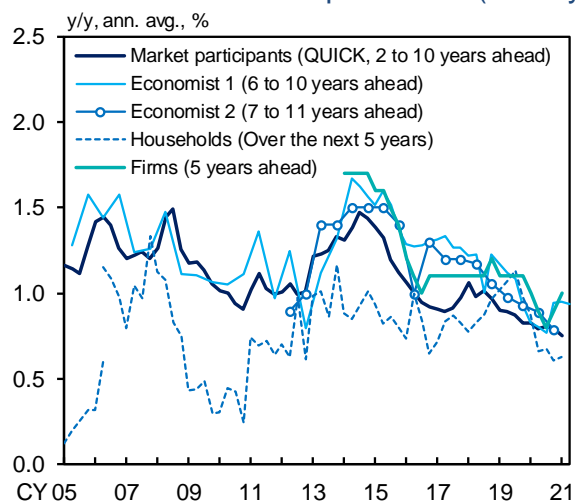
Second, medium- to long-term inflation expectations have been more or less unchanged (Charts 48 and 49). With regard to the outlook, such expectations are likely to remain so for the time being, since the rate of change in the CPI is expected to be steady when excluding the effects of the temporary factor of the reduction in mobile phone charges, as described below. Thereafter, as the economy improves, inflation expectations are projected to rise again on the back of an increase in actual prices and the Bank pursuing monetary easing through its strong commitment to achieving the price stability target.

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



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
 Notes: 1. The CPI figures exclude 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 figures from 2020/Q2 onward are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020.  
 2. The output gap is based on staff estimations.

**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. Figures for the economist 1 are from the "Consensus Forecasts." Figures for the economist 2 are from 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 are "Outlook for General Prices (*Tankan*, all industries and enterprises, average)."

The third factor is developments in import prices. The contribution of energy prices to the CPI (all items less fresh food) remained negative due to declines in electricity as well as manufactured and piped gas charges that reflect the past decline in crude oil prices. However, it is likely to turn positive from the beginning of fiscal 2021, reflecting the rise in crude oil prices and the depreciation of the yen observed since last autumn (Chart 50).

### Outlook for Prices

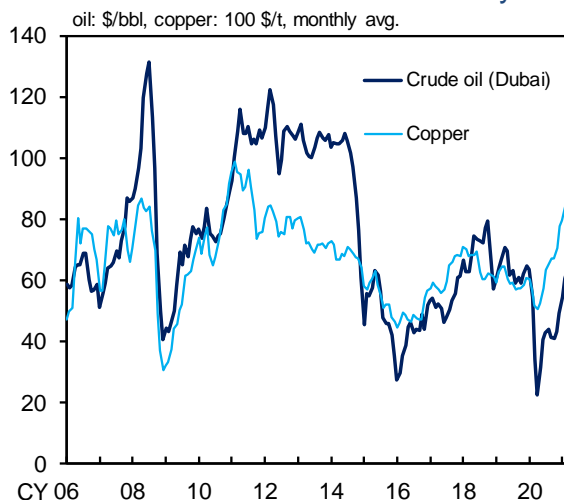
Based on the recent developments in the indicators, as described earlier, although downward pressure has been exerted on prices of some items that are sensitive to economic activity since the output gap deteriorated significantly due to the impact of COVID-19, firms' price cuts that aim at stimulating demand have not been observed widely to date. This seems to be attributable mainly to (1) cost increases on the supply side, such as by conducting temperature checks and disinfection steps or reducing the number of seats, (2) a decline in the price elasticity of demand for services due to vigilance against COVID-19, and (3) a difference between goods and services prices in the sensitivity to economic activity -- that is, the expansion in stay-at-home demand for goods, of which prices are sensitive to economic activity, and a decline in demand for services, of which prices are less so.<sup>19</sup> Regarding the outlook, the rate of change in the CPI is likely to be slightly negative due to the effects of a particular item (i.e., the significant

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



Source: Bloomberg.  
 Note: BEI (break-even inflation) rates are yield spreads 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.

<sup>19</sup> Box 4 examines the background to the weak relationship between the CPI and the output gap during the COVID-19 pandemic, focusing on the sensitivity of goods and services prices to economic activity.

decline in mobile phone charges).<sup>20</sup> However, as for other items, price cuts that aim at stimulating demand have not been and are not likely to be observed widely. Thereafter, against the background of the waning impact of COVID-19 that reflects progress with vaccinations, the rate of change in the CPI is expected to return to a moderate uptrend since it is projected that the output gap will continue to improve and the effects of the decline in mobile phone charges will dissipate (Chart 47).

Based on this underlying scenario, the year-on-year rate of change in the CPI (all items less fresh food and energy) is likely to fall into negative territory for the time being. In detail, while the rate of change in prices of goods, such as daily necessities, is projected to remain slightly positive, partly supported by stay-at-home demand, mobile phone charges are likely to decline significantly from April and downward pressure is expected to remain on prices of travel-related services, such as airfare and hotel charges (excluding the effects of the "Go To Travel" campaign), that face a considerable

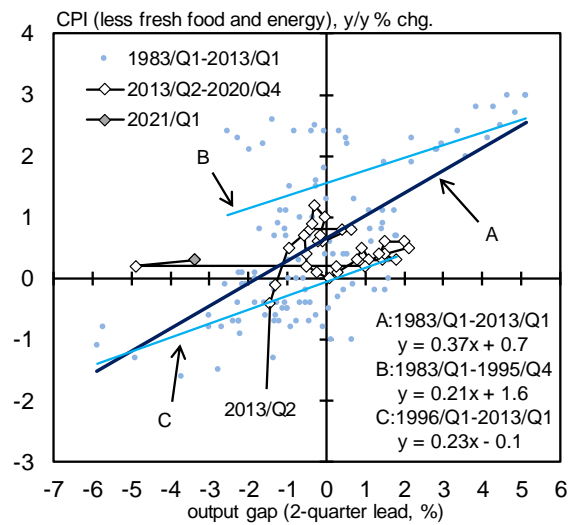
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<sup>20</sup> Low-cost mobile phone plans by major carriers, which became available from mid-March 2021, are expected to significantly push down the year-on-year rate of change in the CPI for April 2021 onward. Based on a specific assumption on mobile phone charges, the year-on-year rate of change in the CPI (all items less fresh food) is estimated to be pushed down by around 0.5 to 1 percentage points, but this should be interpreted with some latitude. In addition, given the rebasing of the CPI to use 2020 as the base year, which is scheduled to take place in August 2021, it is highly likely that the effects of the reduction in mobile phone charges on the overall CPI will be larger for the new 2020-base index than the current 2015-base one because (1) the weight of mobile phone charges in the 2020-base index will increase compared with that in the 2015-base index and (2) the index level of such charges, which has declined, will be reset. However, this entails uncertainties since the model formula used for calculating mobile phone charges as the CPI item is also scheduled to be revised upon the rebasing.

decline in demand. Meanwhile, if the "Go To Travel" campaign is resumed, this will push down the CPI through a decline in hotel charges. From the middle of the projection period, the year-on-year rate of change in the CPI (all items less fresh food and energy) is likely to increase (1) with the effects of the decline in mobile phone charges dissipating, and on the back of (2) the output gap continuing to improve steadily and (3) medium- to long-term inflation expectations rising through both the adaptive and the forward-looking expectation formation mechanisms (Chart 51).

Under these circumstances, the year-on-year rate of decline in the CPI (all items less fresh food), which includes energy prices, is likely to be only marginal for the time being compared with that in the CPI (all items less fresh food and energy) since energy prices are expected to start making a clearly positive contribution, and the rate of change in the CPI (all items less fresh food) for fiscal 2021 as a whole is projected to be either at around 0 percent or slightly positive. From the middle of the projection period, the year-on-year rate of increase in the CPI (all items less fresh food) is likely to accelerate at about the same pace as that in the CPI (all items less fresh food and energy) since a positive contribution of energy prices is expected to dissipate.

**Chart 51: Phillips Curve**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
 Notes: 1. The CPI figures exclude 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 figures from 2020/Q2 onward are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020.  
 2. The output gap is based on staff estimations.



### III. Financial Developments in Japan

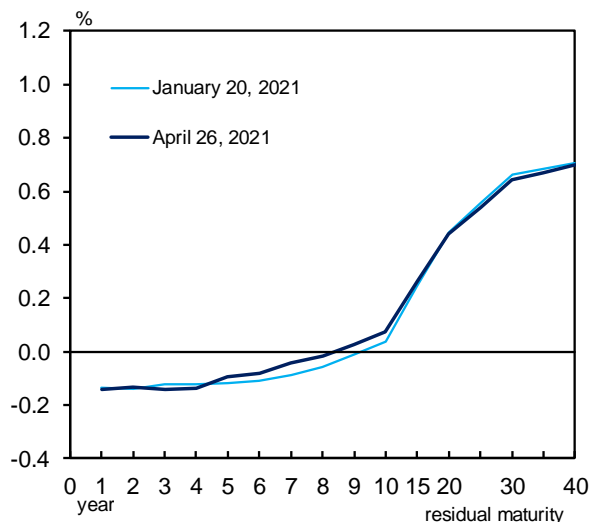
#### Financial Conditions

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

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.

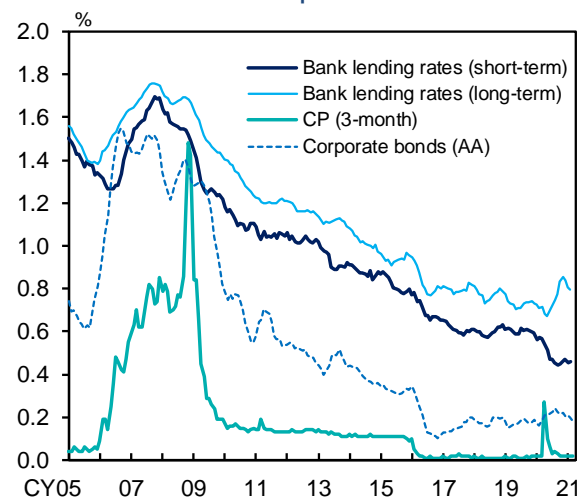
Firms' funding costs have been hovering at extremely low levels (Chart 53). Issuance rates for CP showed a significant rise in April 2020, but they declined after the Bank announced that it would increase purchases of CP and have been at extremely low levels. The DI for issuance conditions for CP in the *Tankan*, which declined temporarily, has continued to improve, 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 been at around historical low levels.

**Chart 52: Yield Curves**



Source: Bloomberg.

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



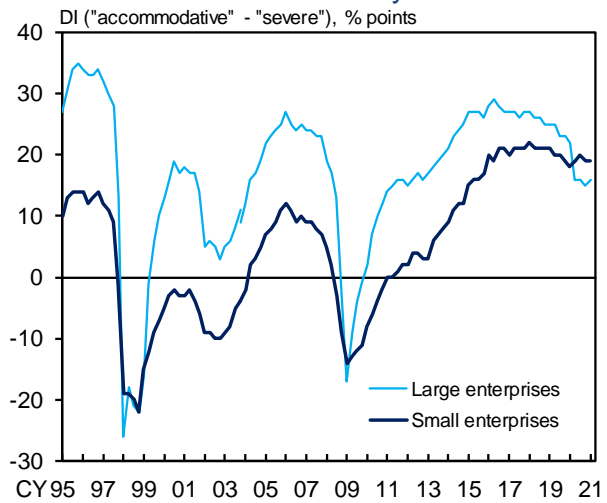
Sources: Bank of Japan; Japan Securities Depository Center; Capital Eye; I-N Information Systems; Bloomberg.

- Notes: 1. Figures for issuance yields for CP up to September 2009 are the averages for CP (3-month, rated a-1 or higher). Those from October 2009 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 show 6-month backward moving averages.

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). Although the DI for large firms has declined somewhat compared to a while ago, the proportion of firms answering that financial institutions' lending attitudes are "severe" has remained small for both large and small firms. As the background to these developments, 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 moderately for both large and small firms, mainly due to a pick-up in the economy (Chart 55). However, the DI for the accommodations as well as eating and drinking services industries has continued to register a significant net "tight," and that for all industries has not recovered to the pre-pandemic level.

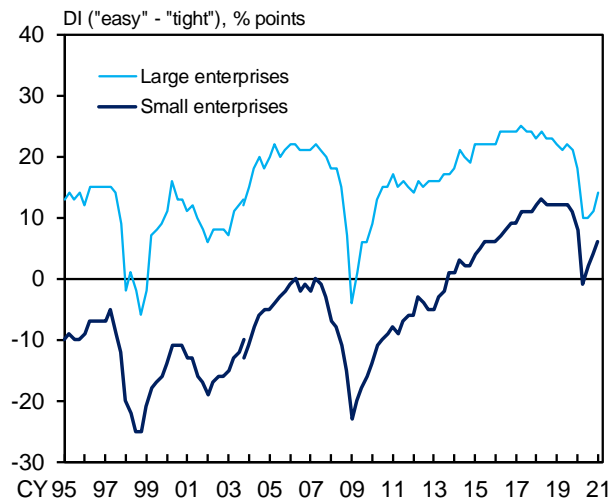
Firms' demand for funds that stems mainly from a decline in sales and a rise in precautionary demand, both affected by COVID-19, has remained at a high level, although an increase in demand by large firms in particular has leveled off. Under these circumstances, the year-on-year rate of increase in the amount outstanding of bank lending has been positive at around 6 percent (Chart 56). Although the year-on-year rate of increase in the aggregate amount outstanding of CP and corporate bonds has been at a relatively high level, the pace has slowed compared with a while ago.

**Chart 54: Lending Attitude 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 in December 2003 due to a change in the survey framework.

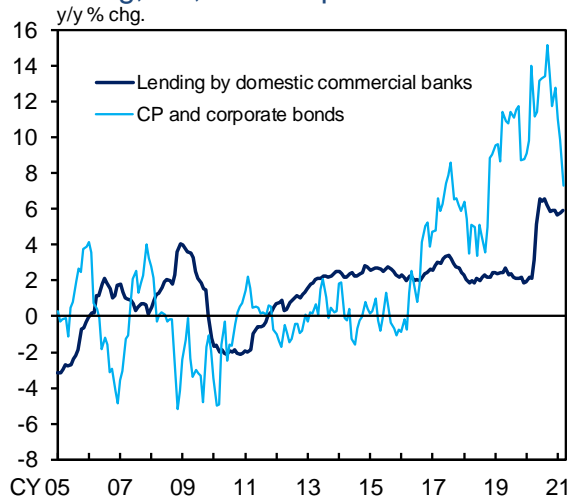
**Chart 55: Financial Position**



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

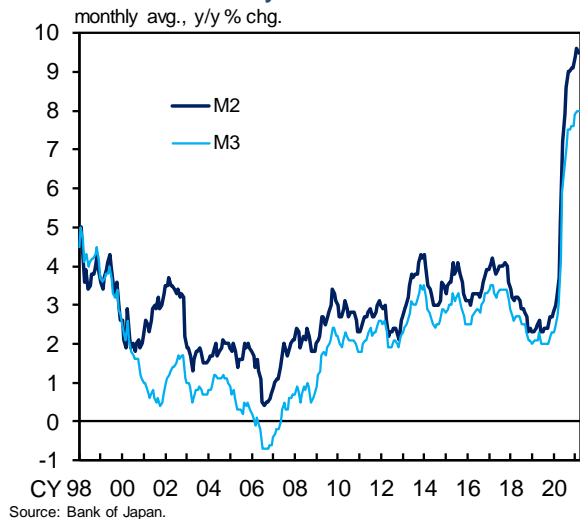
The year-on-year rate of change in the monetary base has been positive at around 20 percent, and its amount outstanding as of end-March was 644 trillion yen, of which the ratio to nominal GDP was 117 percent.<sup>21</sup> The year-on-year rate of increase in the money stock (M2) has been at around 9.5 percent, mainly due to increases in fiscal spending and bank lending (Chart 57).

**Chart 56: Amount 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 period.

**Chart 57: Money Stock**



Source: Bank of Japan.

<sup>21</sup> It is assumed that the figure for nominal GDP is unchanged from the October-December quarter of 2020.

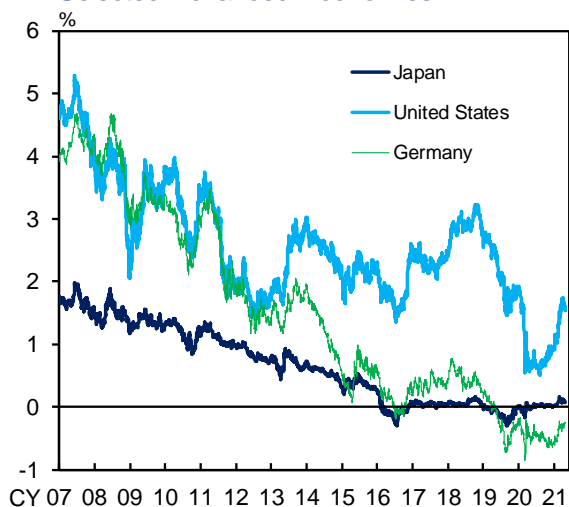
## Developments in Financial Markets

With regard to developments in global financial markets, market sentiment has continued on an improving trend due to heightened expectations for a recovery in the global economy, mainly on the back of progress with vaccinations and the additional economic measures taken in some advanced economies. In this situation, long-term interest rates in the United States and Europe have risen, as have stock prices in advanced economies. That said, attention has continued to be paid to various uncertainties, including those over the COVID-19 situation.

Yields on 10-year government bonds in the United States rose significantly, mainly due to heightened expectations for an economic recovery with the announcement of large-scale additional economic measures, but then have been more or less flat recently (Chart 58). Yields on 10-year government bonds in Germany increased along with those in the United States but subsequently have been more or less flat against the background of such market expectations as those regarding the resurgence of COVID-19 and tightening of public health measures in Europe, as well as asset purchases by the European Central Bank (ECB) in response to the COVID-19 pandemic.

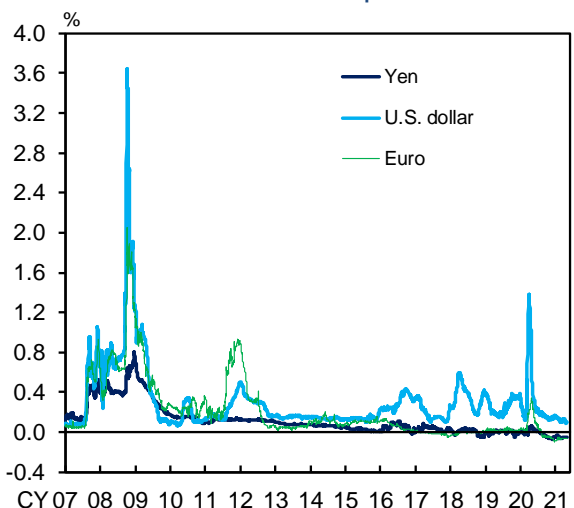
With regard to the LIBOR-OIS spreads for major currencies, those for the U.S. dollar, the euro, and the yen have been more or less flat at low levels (Chart 59). Premiums for U.S. dollar funding through the dollar/yen foreign exchange swap market have been at low levels as the U.S. dollar funds-supplying operations conducted by the central bank of each country and region, including

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



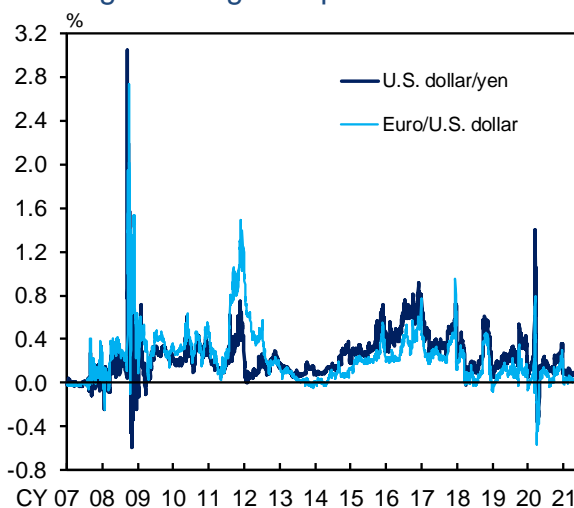
Source: Bloomberg.

**Chart 59: LIBOR-OIS Spreads**



Source: Bloomberg.  
Note: LIBOR-OIS spreads are LIBOR (3-month) minus yields 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.

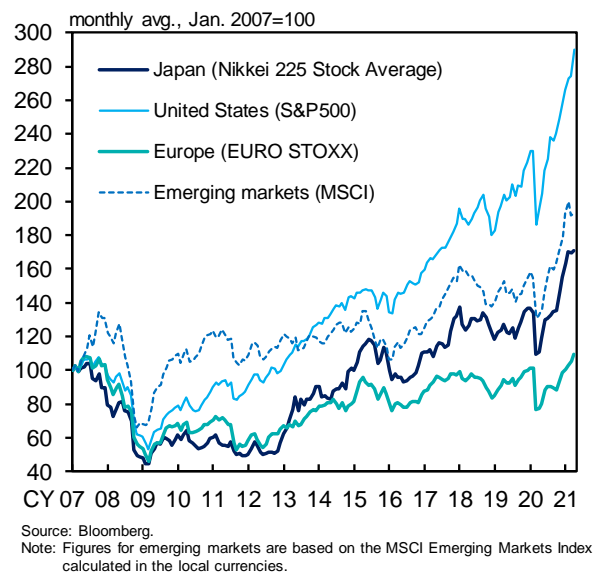
the Bank of Japan, have been functioning as a backstop (Chart 60).

Stock prices in Japan, the United States, and Europe have risen with an improving trend in market sentiment that reflects heightened expectations for a recovery in the global economy, mainly on the back of progress with vaccinations and the additional economic measures taken in some advanced economies (Chart 61). They also have been supported by increasing expectations for a recovery in business performance. Stock prices in emerging economies declined mainly due to the significant rise in U.S. long-term interest rates, but then have been more or less flat.

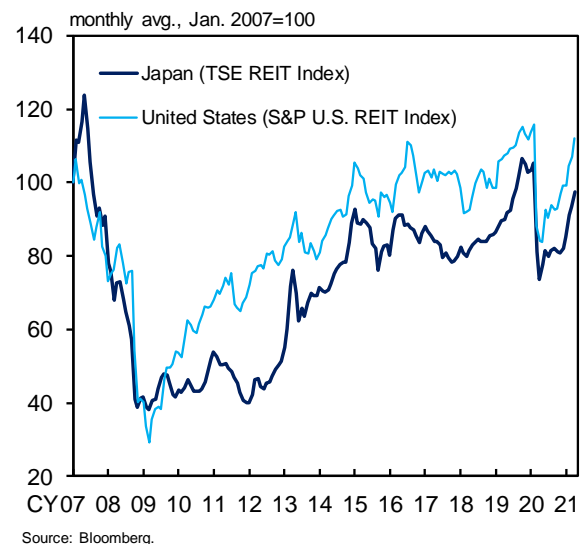
In the J-REIT market, prices have risen for a wide range of REITs, including office and residential REITs (Chart 62).

In foreign exchange markets, the yen has depreciated against a wide range of currencies as market sentiment has been on an improving trend. On the other hand, the U.S. dollar, which had been on a depreciating trend, turned toward appreciation, reflecting the rise in U.S. long-term interest rates, but such appreciation has leveled off recently. As a result, the yen depreciated against the U.S. dollar, and is generally more or less unchanged of late (Chart 63). Meanwhile, it has depreciated against the euro.

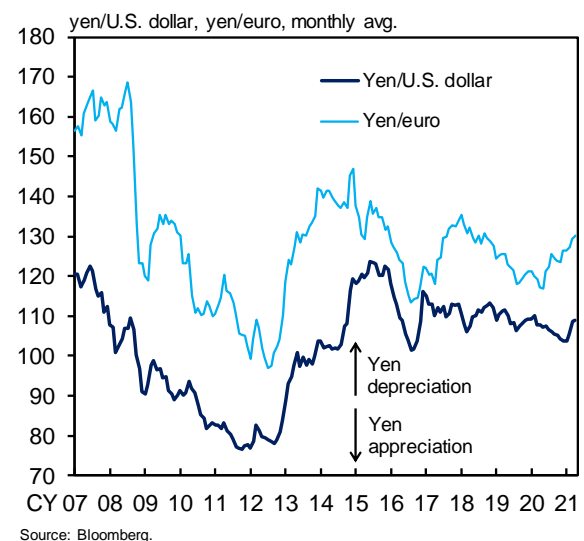
**Chart 61: Selected Stock Prices**



**Chart 62: Selected REIT Indices**



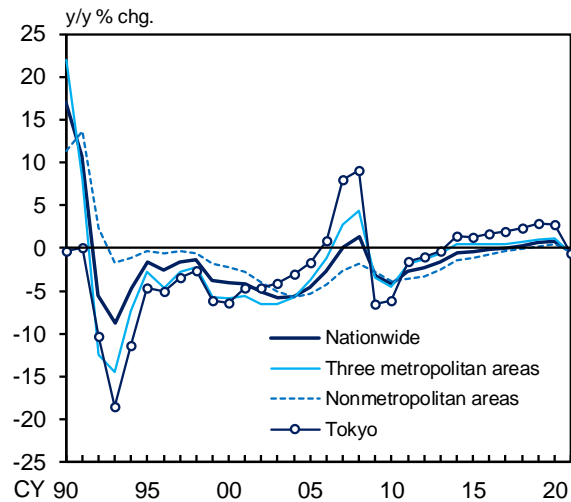
**Chart 63: Yen/U.S. Dollar and Yen/Euro**



## Land Prices

Land prices have declined marginally on the whole. According to the *Land Market Value Publication* for 2021 (as of January 1), the year-on-year rates of change in residential and commercial land prices turned negative for the first time in five years and seven years, respectively (Charts 64 and 65). By type of use, the year-on-year rate of change in commercial land prices, which had continued to see a clearer increase than that in residential land prices, has shown a larger decline. By region, the year-on-year rate of decline in land prices for the three major metropolitan areas (Tokyo, Osaka, and Nagoya) has been larger than that for nonmetropolitan areas, both for residential and commercial land prices.

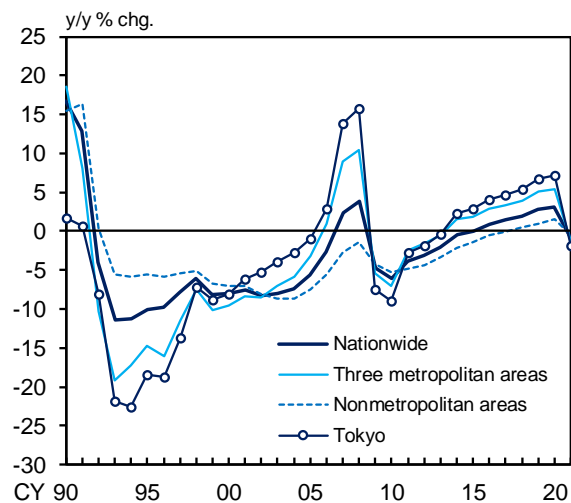
**Chart 64: Residential Land Prices**



Source: Ministry of Land, Infrastructure, Transport and Tourism.

Notes: 1. Based on the "Land Market Value Publication." Figures are as of January 1.  
2. Three metropolitan areas: 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: 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 Market Value Publication." Figures are as of January 1.  
2. Three metropolitan areas: 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: other than the three metropolitan areas.

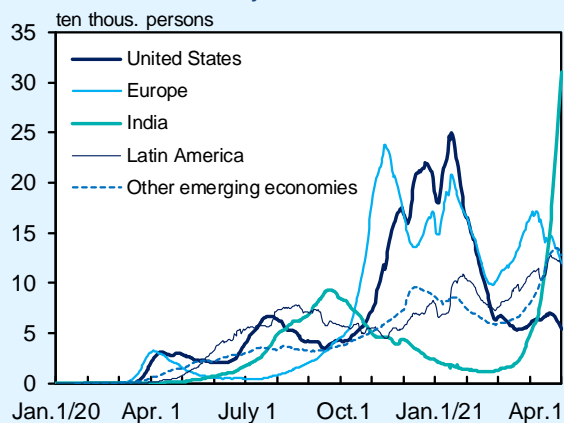
## (BOX 1) Variation in the Pace of Recovery in Overseas Economies

While overseas economies have been recovering on the whole, the pace has been uneven across countries. The pace of economic improvement is highly likely to remain uneven, mainly due to differences in the future course of COVID-19, the pace of the vaccine rollout, and the stance on fiscal policy conduct. This box looks at developments in COVID-19 and the vaccination situation and examines the variation in the pace of recovery across countries.

The number of confirmed new cases of COVID-19 temporarily decreased in many countries after the turn of this year. Since early spring, however, there has been a resurgence of cases in Europe and some emerging economies, and thus there remain high uncertainties over the consequences of COVID-19 (Chart B1-1). Meanwhile, although vaccinations have started in many countries, the pace of the vaccine rollout has been uneven (Chart B1-2).

Looking at economic developments by country or region, the Chinese economy has continued to recover. In the January-March quarter of 2021, services consumption was pushed down by restrictions on movement during the Lunar New Year holidays due to the domestic resurgence of COVID-19. However, the economy has continued on an improving trend, as seen in goods consumption remaining firm and exports and production accelerating their rates of increase compared with two years ago, partly because

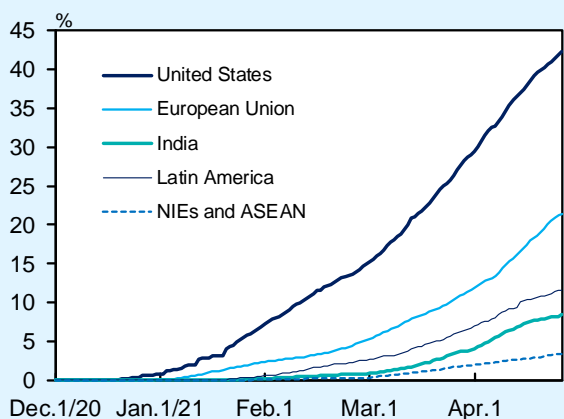
**Chart B1-1: Confirmed New Cases of COVID-19 in Major Economies**



Source: CEIC.

Note: Figures for the United States, Taiwan, and Hong Kong are from the CDC, the Taiwan Ministry of Health and Welfare, and the Hong Kong Centre for Health Protection, Department of Health, respectively. All other figures are from the WHO. Figures for Europe are the sum of figures for the EU and the United Kingdom. Figures for Latin America are the sum of figures for the major economies in the region. Figures for other emerging economies are the sum of figures for South Africa, Russia, Turkey, and the major economies in the NIEs and ASEAN and the Middle East. Figures show 7-day backward moving averages. The latest figures are for April 25.

**Chart B1-2: Share of People in Major Economies Who Received a Vaccine**



Sources: CEIC; United Nations.

Note: The chart shows the share of the total population who received at least one dose of the COVID-19 vaccine. Figures for Latin America and the NIEs and ASEAN are for the major economies in the respective regions. In the case of missing figures, the latest figure available prior to the relevant date is used. The latest figures are for April 25.

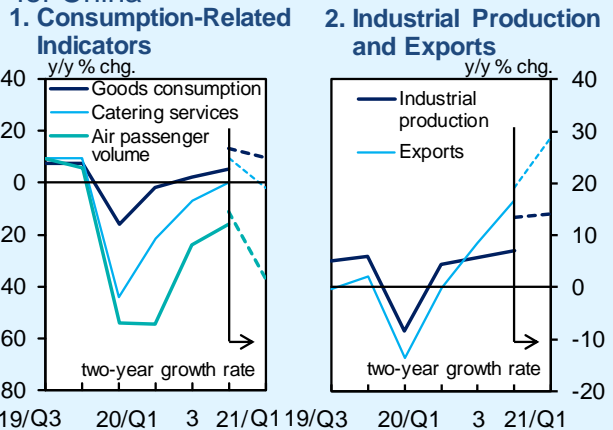


fewer workers were on vacation during the Lunar New Year holidays (Chart B1-3). Taking also into account the fact that the effects of economic improvement are spreading to household income, the Chinese economy is expected to return to a stable growth path that is led by the private sector.

The U.S. economy has been recovering (Chart B1-4). Since the beginning of this year, with the number of confirmed new cases turning to a decline and the pace of vaccinations accelerating, restrictions on economic activity have been lifted in stages. In addition, the large-scale additional economic measures since the end of last year have boosted economic activity (Chart B1-5). The U.S. economy is expected to grow at a faster rate, mainly reflecting the widespread vaccinations and the materialization of the effects of additional economic measures.

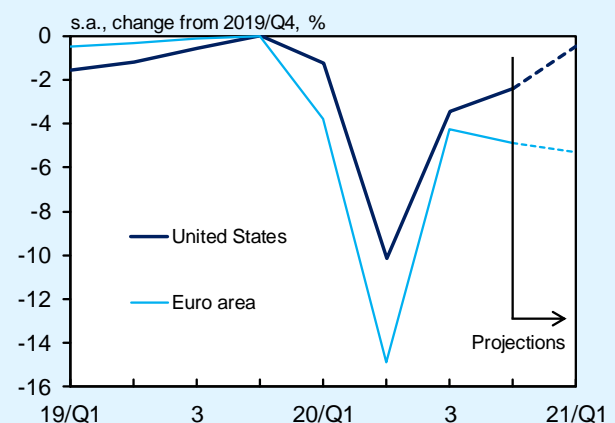
European economies, mainly for the services industry, have continued to be pushed down (Chart B1-4). With the number of confirmed new cases being somewhat high, albeit with fluctuations, governments have intermittently introduced relatively strict public health measures. However, a decline in economic activity has been limited because (1) in an attempt to strike a balance with sustaining economic activities, these measures have been revised flexibly depending on the COVID-19 situation, and (2) support measures for households and firms such as subsidies have been extended. European economies are likely to return to an improving trend. However, the pace of improvement is expected to be more moderate than that in the United States, since the vaccine rollout is likely to

**Chart B1-3: Key Economic Indicators for China**



Source: CEIC.  
 Note: Based on staff calculations. The rates of change for goods consumption and catering services are based on nominal values. The rate of change for industrial production is based on real values, while that for exports is based on nominal values in U.S. dollar terms. The latest figures for the year-on-year and two-year growth rates are for 2020/Q4 and 2021/Q1, respectively. Figures for 2021/Q1 are compared not with those for 2020/Q1, which were already sharply down due mainly to the outbreak of COVID-19, but with figures for 2019/Q1, before COVID-19 (i.e., the two-year growth rate rather than the year-on-year rate of change is calculated). Figures for 2020/Q4 are also compared with those for 2018/Q4.

**Chart B1-4: Real GDP for the United States and the Euro Area**



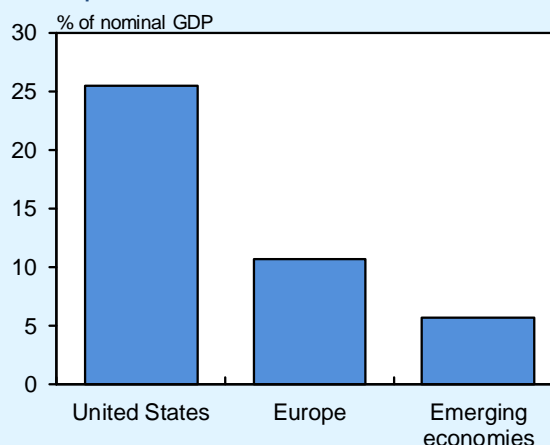
Sources: Atlanta Fed; ECB; Haver.  
 Notes: 1. The figure for the United States for 2021/Q1 is the GDPNow model estimate released by the Atlanta Fed (as of April 26).  
 2. The figure for the euro area for 2021/Q1 is the ECB staff projection (as of March 11).



take time and the size of fiscal support is different (Charts B1-2 and B1-5).

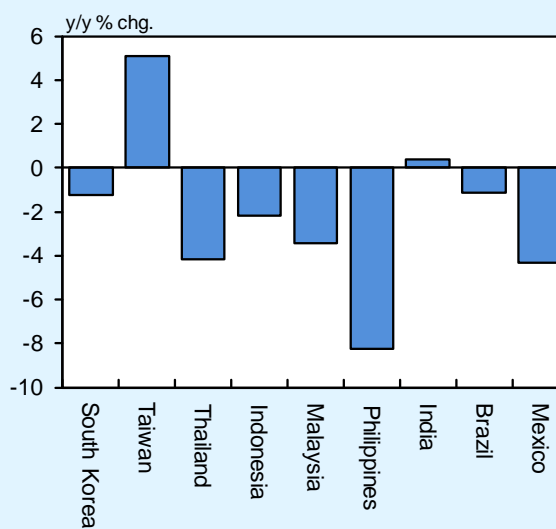
Looking at emerging economies other than China, in the NIEs, where exports, mainly of IT-related goods, have been favorable, and in India, where the number of confirmed new cases continued to decline toward the end of last year, GDP for the October-December quarter of last year generally recovered to the pre-pandemic levels (Chart B1-6). On the other hand, in the ASEAN countries, a pick-up has been delayed due to weakness in domestic demand that mainly reflects an increase in the number of confirmed cases and to continued sluggishness of inbound tourism demand. Emerging economies are expected to continue improving on the whole, partly due to the spillover effects of the recovery in the U.S. and Chinese economies. However, compared with advanced economies, the vaccine rollout in many emerging economies is likely to progress at a slower pace and fiscal support is also relatively small (Charts B1-2 and B1-5). Therefore, it is projected that the pace of economic improvement will be only moderate and there will remain a variation in the pace of recovery across countries and regions that reflects the differences in the COVID-19 situation and economic structures. In addition, attention should continue to be paid to downside risks, especially in countries with fiscal and financial vulnerabilities.<sup>22</sup>

**Chart B1-5: Size of Fiscal Support in Response to COVID-19**



Source: IMF.  
 Notes: 1. Figures are based on estimates in U.S. dollars released by the IMF in its April 2021 "Fiscal Monitor." They include only fiscal support that affects the fiscal balance immediately. Tax deferrals, government guarantees for banks, firms, and households, etc., are excluded.  
 2. The figure for Europe is the sum of figures for Germany, France, Italy, Spain, and the United Kingdom.  
 3. The figure for emerging economies is the sum of figures for 29 economies.

**Chart B1-6: Real GDP of Major Emerging Economies**



Source: CEIC.  
 Note: Figures are for 2020/Q4.

<sup>22</sup> Regarding the effects of such factors as these vulnerabilities on the capital flow, see "Emerging Economies' Vulnerability to Changes in Capital Flows: The Role of Global and Local Factors," *Bank of Japan Working Paper Series*, forthcoming in English.

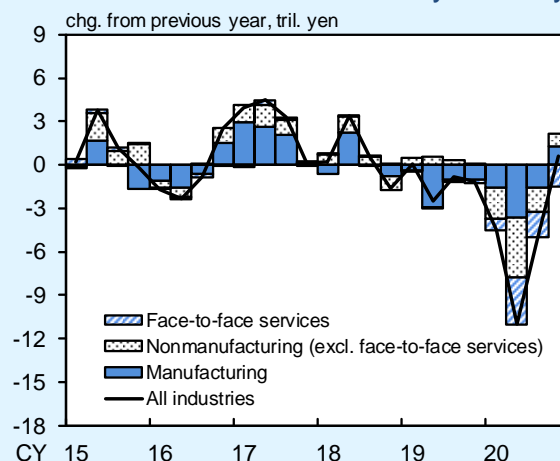
## (Box 2) Virtuous Cycle from Improvement in Corporate Profits to Business Fixed Investment

This box examines in detail the fact that a virtuous cycle from income to spending has started to operate in the corporate sector. Specifically, it first describes why corporate profits have shown improvement that is firmer than a pick-up in economic activity and then explains that business fixed investment is highly likely to remain in a recovery phase, supported by firm improvement in profits.

According to the *Financial Statements Statistics of Corporations by Industry, Quarterly* (FSSC), current profits for all industries and enterprises for the October-December quarter of 2020 improved for two consecutive quarters, somewhat exceeding those for the same quarter of 2019, which was prior to the pandemic (Chart B2-1). By industry, while such profits have shown notable improvement in the manufacturing industry, they also have recovered in the nonmanufacturing industry, other than face-to-face services. One of the reasons for the improvement in profits is a recovery in sales that reflects a pick-up in economic activity at home and abroad. It should be noted, however, that profits have been improving even at a faster pace than the sales recovery. This is largely attributable to the following two factors.

The first factor is a substantial reduction in selling, general and administrative (SG&A) expenses -- such as social expenses, business travel

**Chart B2-1: Current Profits by Industry**



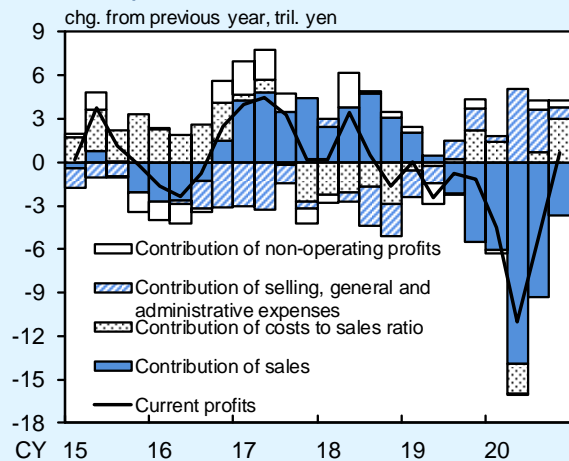
Source: Ministry of Finance.

Notes: 1. Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly," Excluding "finance and insurance" and "pure holding companies."  
2. "Face-to-face services" consists of "transport and postal activities," "accommodations, eating and drinking services," and "advertising."

expenses, and advertising expenses -- due to firms actively making efforts to improve business efficiency as a result of the pandemic, particularly through canceling or cutting back on face-to-face sales activities and meetings (Chart B2-2). The reduction in SG&A expenses has contributed to improvement in corporate profits across a wide range of sectors, regardless of industry or firm size, and has pushed up profits for all industries and enterprises for April through December 2020 by about 9 trillion yen from those for the same period of 2019 on a cumulative basis for the three quarters. This amount of increase is equivalent to over 10 percent of current profits for 2019 on an annual cumulative basis.

As long as vigilance against COVID-19 continues, SG&A expenses are likely to remain restrained for the time being, mainly for social expenses and business travel expenses, and thereby underpin corporate profits. Thereafter, as COVID-19 subsides, SG&A expenses are expected to increase again, reflecting a recovery in firms' sales activities that include face-to-face interaction. That said, it is also highly likely that firms will take this opportunity to continue to advance with the digitalization and streamlining of business processes, which are the management challenges they have faced even before the outbreak of COVID-19. Thus, it seems that some SG&A expenses will not completely return to the pre-pandemic level. For example, there are possibilities that some domestic and overseas business travel will be permanently replaced by remote interviews and other means, and that sales and other activities will increasingly be conducted online. If firms reallocate some portion of the budget for face-to-face activities to

**Chart B2-2: Decomposition of Developments in Current Profits**



Source: Ministry of Finance.

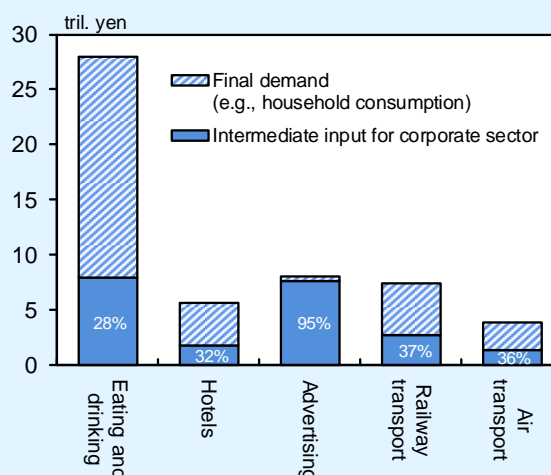
- Notes: 1. Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly," Excluding "finance and insurance" and "pure holding companies."  
 2. Contribution of sales = (1 - costs to sales ratio) × Δsales  
 3. Contribution of costs to sales ratio = Δ(costs to sales ratio) × sales

proactive investment toward digitalization, this is expected to lead to a rise in productivity in the medium to long run, mainly through the effective use of cutting-edge technologies and in-house business resources.

It should be noted that such a decline in SG&A expenses is inextricably linked to a drop in demand for business in the face-to-face services industry. For example, this can be explained by breaking down the total demand for eating and drinking, hotels, railway transport, and air transport (Chart B2-3). The breakdown shows that final demand (e.g., households' demand) accounts for more than half, whereas intermediate demand from the corporate sector accounts for 30-40 percent. From a macroeconomic perspective, the reduction in SG&A expenses underpins corporate profits, leading to lower break-even points. At the same time, however, the reduction also brings about a substantial decrease in sales in industries such as accommodations, eating and drinking, and transportation. Since the outbreak of COVID-19, the gap in business conditions and profits has been widening between the face-to-face services industry and other industries. This is largely attributable not only to a decline in household consumption, mainly of services, but also to firms' reduction in SG&A expenses.

The second factor behind the improvement in corporate profits outpacing the sales recovery is an unprecedented scale of income transfers. These have been made from the government sector to the corporate sector, particularly small and medium-sized firms, through various

**Chart B2-3: Demand for Face-to-Face Services**

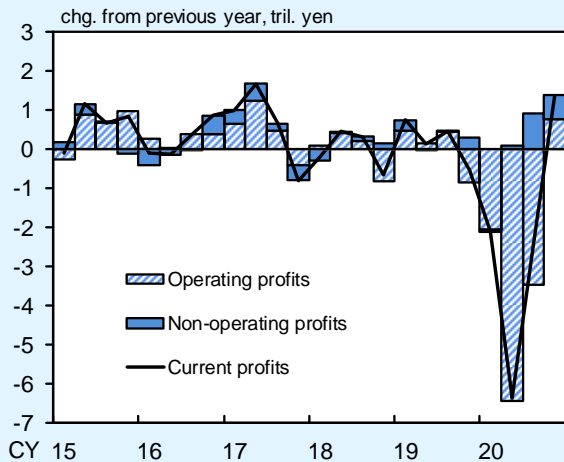


Source: Ministry of Internal Affairs and Communications.  
 Note: Based on the "Input-Output Tables for Japan" for 2015. "Intermediate input for corporate sector" consists of input for the intermediate sector and "consumption expenditure outside households." The percentage figures in the bars show the share of intermediate input in the total demand for a particular industry.

measures to support firms, which have been implemented to date as part of the government's economic measures. Since the accounting treatment of financial aid through these support measures -- such as subsidies for sustaining businesses, employment adjustment subsidies, rent assistance subsidies, and subsidies for firms that complied with the requests to shorten operating hours -- varies across firms, it is difficult to precisely gauge the amount of these subsidies from firms' financial data. That said, in the FSSC, the effects of these subsidies can be seen mainly in the form of an increase in non-operating profits, a decrease in personnel expenses, and a reduction in costs. In particular, non-operating profits of small and medium-sized firms have increased clearly, mainly in industries that have been hit substantially by COVID-19, such as services, and it is highly likely that this is attributable to the provision of the aforementioned various subsidies (Chart B2-4).

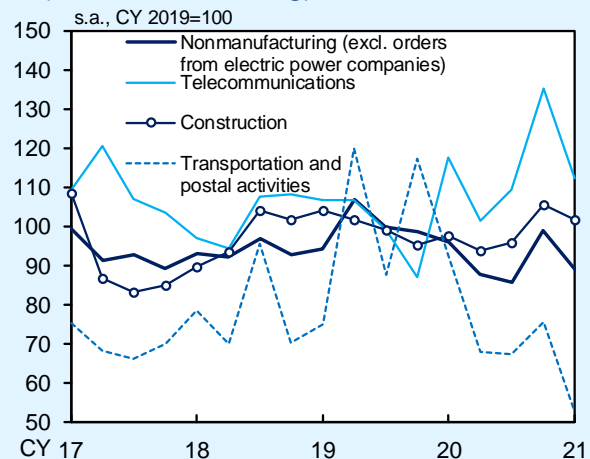
Such improvement in corporate profits -- particularly the portion derived from the sales recovery and the streamlined expenses -- has contributed to the recent pick-up in business fixed investment, coupled with improvement in export conditions and with accommodative domestic financial conditions, as seen in financial institutions' active lending stance. Regarding the provision of various subsidies for industries and firms facing deteriorated business conditions as a result of COVID-19, there seem to be few cases where this has directly led to proactive business fixed investment, but it is likely that the provision has been effective in underpinning their investment to some extent.

**Chart B2-4: Current Profits of Small and Medium-Sized Firms**



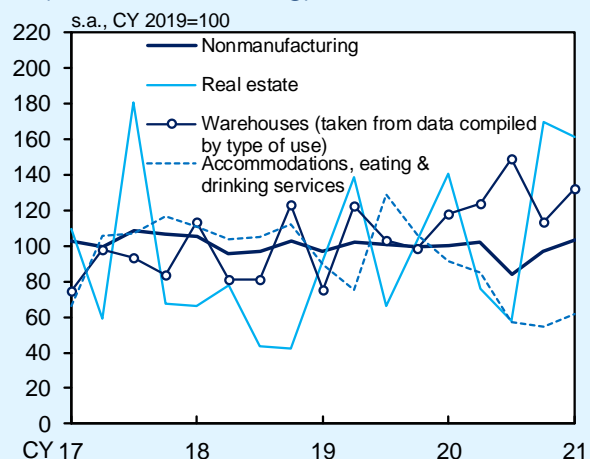
Source: Ministry of Finance.  
 Note: Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly." Small and medium-sized firms are firms with a capitalization of 10 million yen or more but less than 1 billion yen. Excluding "finance and insurance" and "pure holding companies."

**Chart B2-5: Machinery Orders (Nonmanufacturing)**



Source: Cabinet Office.  
 Note: Excluding orders for ships. Figures for 2021/Q1 are January-February averages.

**Chart B2-6: Construction Starts (Nonmanufacturing)**

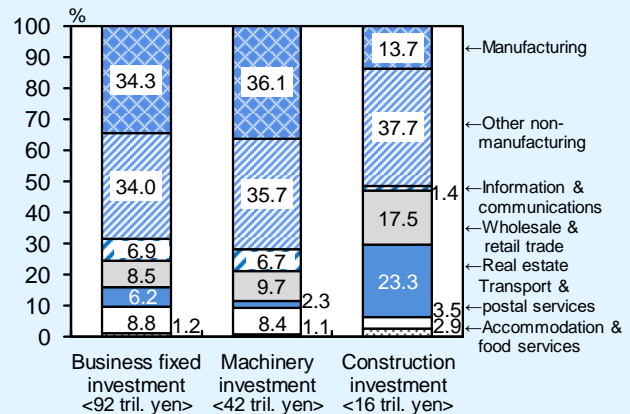


Source: Ministry of Land, Infrastructure, Transport and Tourism.  
 Note: Figures are estimated construction costs reported by private-sector builders. Figures for 2021/Q1 are January-February averages.

In fact, taking a detailed look at leading indicators of business fixed investment by industry, a pick-up in such investment has been evident not only in the manufacturing industry but also in the nonmanufacturing industry, other than face-to-face services (Charts B2-5 and B2-6). With regard to machinery investment, firms in the telecommunications industry have been taking an active stance toward investment to expand base stations and promote the spread of 5G networks, given the increased data traffic that reflects digitalization and an expansion in online consumption. In addition, with labor shortage continuing against the background of, for example, a steady increase in public investment, firms in the construction industry have been focusing on labor-saving investment, such as purchases of construction machinery equipped with information and communication technology (ICT). Turning to construction investment, some firms have been continuing to newly build or upgrade logistics facilities (warehouses) for e-commerce, and firms in the real estate industry have been steadily proceeding with urban redevelopment projects in view of the post-COVID-19 era. On the other hand, machinery investment in railway vehicles and aircraft by the transportation industry and construction investment by the accommodations as well as eating and drinking industry are likely to remain sluggish for a prolonged period. That said, these industries are labor intensive on the whole, and their share in overall business fixed investment accounts for only around 10 percent (Chart B2-7).

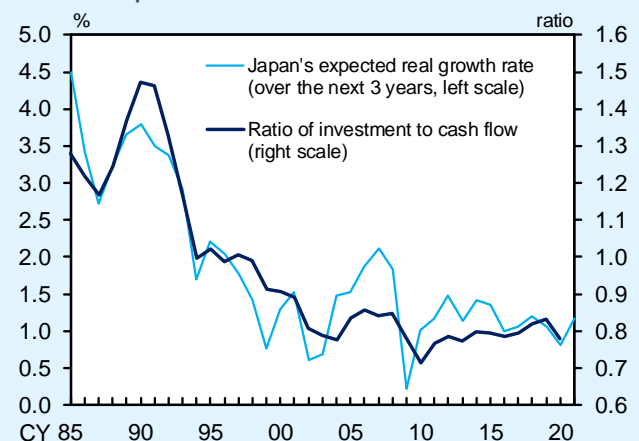
As for the outlook, a virtuous cycle from corporate profits to business fixed investment is expected to continue operating with a sharp decrease in firms'

**Chart B2-7: Business Fixed Investment by Industry**



Source: Cabinet Office.  
 Note: Based on "Gross Fixed Capital Formation of Assets Classified by Institutional Sectors and Economic Activities" for CY 2019 in current prices. Figures in or next to the bars show industries' shares in the total amount of investment by all industries excluding "public administration." These industries include some entities in the public sector.  
 Figures for construction investment are for investment in buildings other than dwellings (excluding civil engineering work).  
 Figures in angular brackets show the actual amount of investment by the private sector for CY 2019.

**Chart B2-8: Business Fixed Investment and Expected Growth Rate**



Source: Cabinet Office.  
 Notes: 1. Japan's expected real growth rate is based on the "Annual Survey of Corporate Behavior." Figures show the result for listed firms in a particular survey year for the next three years ahead.  
 2. The ratio of investment to cash flow is based on the SNA. Figures before 1994 are based on the 1993SNA (benchmark year: 2000). Cash flow = consumption of fixed capital + (operating surplus + net property income) / 2.  
 3. The figure for cash flow for 2020 is assumed to be the same as that for 2019.



medium- to long-term growth expectations being avoided and accommodative financial conditions being maintained (Chart B2-8). This can be confirmed by estimating simple functions using the ratio of investment to cash flow as the dependent variable and (1) Japan's expected growth rate of firms, (2) capital costs, and (3) adjustment pressure on capital stock as explanatory variables (Charts B2-9 and B2-10). The simulation results based on the estimated parameters suggest that the adjustment phase due to the impact of COVID-19 will come to an end sooner or later and business fixed investment will turn to an increase (Chart B2-11).

Toward the end of the projection period of the Outlook Report, business fixed investment is likely to slow its pace of increase, mainly because adjustment pressure on capital stock is projected to accumulate. However, as mentioned earlier, digitalization is expected to accelerate simultaneously with the reduction in SG&A expenses, and thus the shares of IT-related investment (including software investment) and R&D investment in overall business fixed investment are likely to increase further (Chart B2-12). Given that the depreciation rates of IT-related and R&D investments are high, the level of business fixed investment that is necessary to maintain the same level of capital stock will be higher than before (i.e., adjustment pressure on capital stock will be smaller with the same amount of business fixed investment). Therefore, taking also into account that business fixed investment that is necessary in the medium to long run, such as investment to address environmental issues, will increase, it is unlikely that adjustment pressure on capital stock will be

### Chart B2-9: Investment Function

#### Stock adjustment pressure

$$ST_t = \Delta K_t / K_{t-1} - g_t = I_t / K_{t-1} - \delta_t - g_t$$

#### Investment function

$$\Delta_4 \left( \frac{I_t}{CF_{t-1}} \right) = Const. + \sum_{i=0}^4 \alpha_i \times \Delta_4 (g_{t-i}^e) + \beta \times \Delta_4 (c_t) + \sum_{j=1}^{12} \gamma_j \times ST_{t-j}$$

where  $I_t$  = Real business fixed investment  
 $K_t$  = Real capital stock,  $g_t$  = Potential growth rate  
 $\delta_t$  = HP trend of depreciation rate,  $CF_t$  = Real cash flow  
 $g_t^e$  = Expected growth rate,  $c_t$  = Capital costs

$\Delta_4$  denotes the chg. from the previous year.  
 $g_t^e$  and  $ST$  are assumed to follow an Almon lag structure.

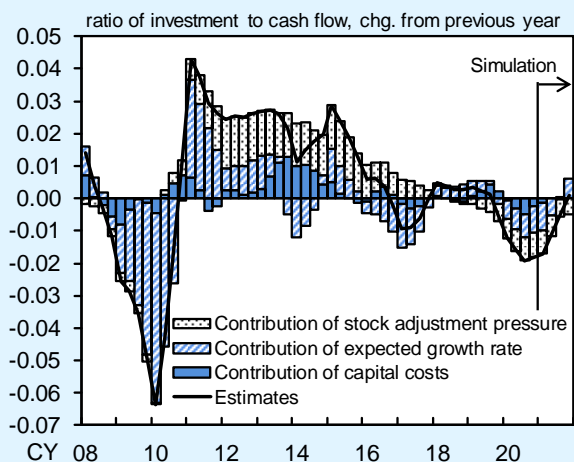
Note: Nominal cash flow = consumption of fixed capital + (operating surplus + net property income) / 2. Real cash flow = nominal cash flow / GDP deflator. The ratio of investment to cash flow is calculated using the trend-cycle component of real business fixed investment and real cash flow. Capital costs = long-term interest rate - medium- to long-term inflation expectations + depreciation rate. The expected growth rate is the forecast of Japan's real economic growth rate over the next three years in the "Annual Survey of Corporate Behavior."

### Chart B2-10: Estimation Results

| Dependent variable: Ratio of investment to cash flow |                      |
|--|----------------------|
| Constant   | -0.008 **<br>(0.004) |
| Expected growth rate                                 | 4.00 ***<br>(0.91)   |
| Capital costs  | -1.99 **<br>(0.85)   |
| Stock adjustment pressure                            | -1.39 **<br>(0.68)   |
| Adj. R <sup>2</sup>                                  | 0.31                 |
| Estimation period                                    | 1998/Q1-2020/Q2      |

Sources: Cabinet Office; Ministry of Finance; Bank of Japan; Consensus Economics Inc., "Consensus Forecasts."  
 Note: Figures in parentheses are standard errors. \*\*\* and \*\* denote statistical significance at the 1 percent and 5 percent levels, respectively. The coefficient estimates for the expected growth rate and the stock adjustment pressure shown in the table are the sums of parameters estimated for the individual lags.

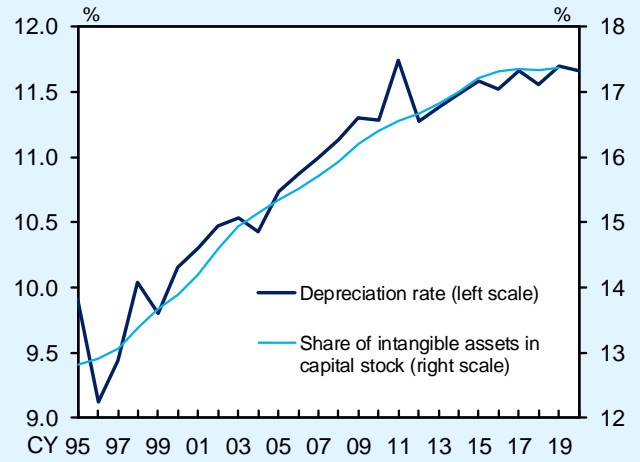
### Chart B2-11: Estimates from the Investment Function



Sources: Cabinet Office; Ministry of Finance; Bank of Japan; Consensus Economics Inc., "Consensus Forecasts."  
 Notes: 1. Excluding the contribution of the constant term.  
 2. Figures from 2021/Q1 onward are calculated based on the assumption that (1) capital costs, the potential growth rate, and the depreciation rate are constant from 2020/Q4 onward and (2) the real cash flow is constant from 2020/Q1 onward.

so significant as to cause a decline in business fixed investment, even at the end of the projection period.

**Chart B2-12: Depreciation Rate and Share of Intangible Assets in Capital Stock**



Source: Cabinet Office.  
 Note: The share of intangible assets in the capital stock is the share of intellectual property products (consisting of computer software, research and development, and entertainment originals) in the net capital stock of fixed assets other than "dwellings" for the private sector in the "Net Capital Stocks of Fixed Assets Classified by Institutional Sectors and Economic Activities" in real terms.



### **(Box 3) Effects of Widespread Vaccinations and Outlook for Private Consumption**

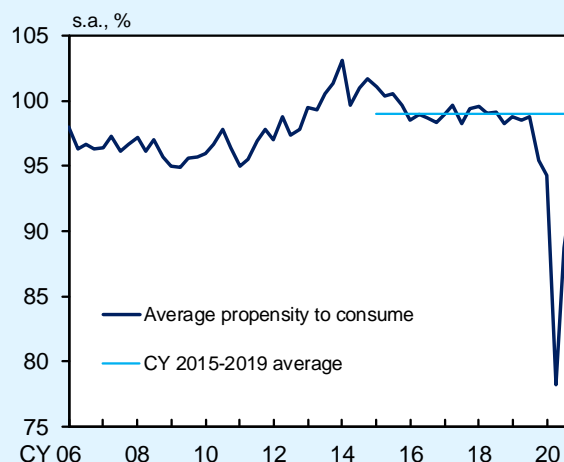
While the progress with COVID-19 vaccinations has been led by overseas countries -- mainly European countries and the United States -- vaccinations in Japan have started for healthcare workers and seniors in February and April 2021, respectively, and those for the general public are scheduled to begin thereafter. In projecting the outlook for private consumption, the impact of widespread vaccinations on households' consumption behavior is an important factor. This box explains basic ideas regarding this factor, which are behind the baseline scenario of this Outlook Report, and touches on uncertainties accompanying them.

Progress with the rollout of effective COVID-19 vaccines is likely to have significant effects on overall private consumption and its components through the following three channels. First, due to a lowered risk of COVID-19 infection as a result of vaccinations, services consumption that involves contacting with others and going out -- which has been constrained to date -- is expected to increase again, and a recovery in overall private consumption is projected to become evident. In particular, as achievement of "herd immunity" becomes increasingly clear in the overall society due to the widespread vaccinations, there will likely be progress in the "normalization" of households' consumption behavior, in that such behavior will be under almost no constraint stemming from COVID-19 -- for example, social distancing.

Second, in the course of the aforementioned "normalization," goods consumption is likely to decline or be under downward pressure due to an unwinding of increased demand stemming from stay-at-home consumption during the pandemic. That said, the degree of this negative impact depends on the following: (1) the extent to which expanded online consumption and changed lifestyles -- both of which have been induced by COVID-19 -- will be maintained even after COVID-19 subsides, and (2) the extent to which firms in the services industry -- for which supply capacity has declined due to the impact of COVID-19, such as through a decrease in employees and a closure of some stores -- can accommodate services demand when it recovers. It should be noted that this second channel may also have implications for future price developments from the aspect of a difference in price sensitivity to economic activity between goods and services (see Box 4).

Third, as COVID-19 subsides, households may withdraw some of their "forced savings" and this may push up private consumption. Here, "forced savings" refers to the portion of disposable income that households effectively have been forced to save mainly because they lost opportunities to spend due to COVID-19; for example, there has been a decrease in opportunities to go out or move across national and prefectural borders. Such withdrawals of "forced savings" can be interpreted as the materialization of pent-up demand from a longer-term perspective. This means that, along with this materialization, the propensity to consume -- which has declined significantly to date due to constraints brought about by

**Chart B3-1: 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."

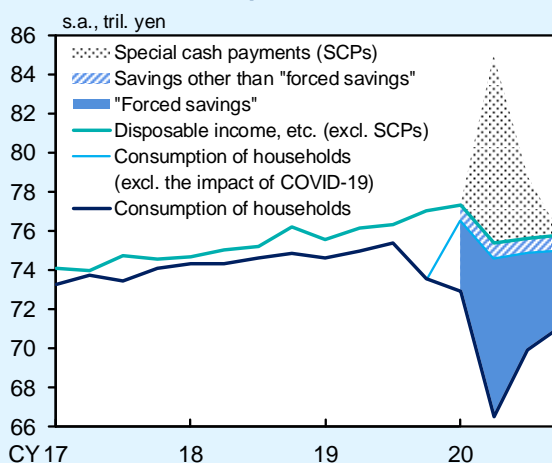
COVID-19 -- may turn to a rise and temporarily exceed the equilibrium level that is determined by such factors as demographic developments (Chart B3-1).<sup>23</sup>

As for the last channel of the withdrawals of "forced savings" in particular, these may have significant effects on developments in private consumption for the second half of the projection period, depending on the timing and pace of these withdrawals. Therefore, in the following, the size of "forced savings" is estimated based on a specific assumption, and the possible pace of the withdrawals is examined.

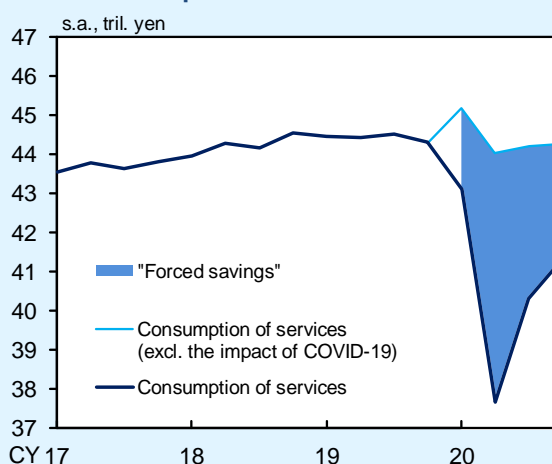
Using a simple method, the size of "forced savings" in the overall economy is estimated to be quite large, at around 20 trillion yen on a cumulative basis for 2020 (excluding the amount of special cash payments that have been put aside for savings), accounting for around 7 percent of disposable income (Chart B3-2[1]). In the estimation, for simplicity, "forced savings" is calculated by subtracting the observed level of private consumption from the level of consumption that could have been realized if people had not lost consumption opportunities due to COVID-19. The level that could have been

**Chart B3-2: Estimated Amount of "Forced Savings"**

**1. Total Consumption**



**2. Consumption of Services**



Sources: Cabinet Office, etc.  
 Notes: 1. "Disposable income, etc." consists of disposable income and "adjustment for the change in pension entitlements."  
 2. Consumption of households (excl. the impact of COVID-19)  
 = disposable income, etc. (excl. SCPs)  
 × average propensity to consume during the pre-pandemic period  
 Consumption of services (excl. the impact of COVID-19)  
 = consumption of households (excl. the impact of COVID-19)  
 × share of services in consumption during the pre-pandemic period  
 Share of services in consumption  
 = consumption of services / domestic final consumption expenditure of households  
 "Pre-pandemic period" in the equations refers to the period from 2015 through 2019.

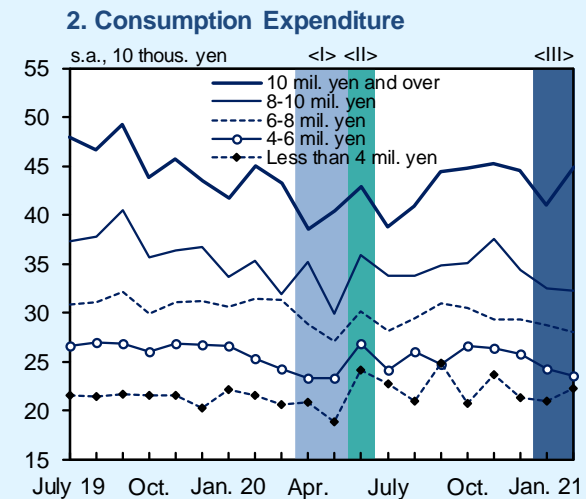
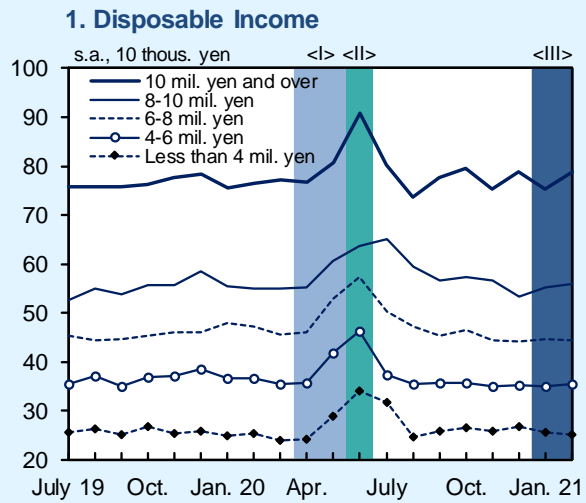
<sup>23</sup> As described, the term "forced savings" is used in this box to refer to the portion of household consumption that should have been made during normal times but has been constrained due to the loss of consumption opportunities during the pandemic. It should be noted that, given the growing uncertainties regarding the outlook due to COVID-19, households may also have been increasing savings because of precautionary motives, and the amounts of such savings may be included in the estimated amounts of "forced savings" in this box. That said, as with "forced savings," savings made because of precautionary motives may be withdrawn as COVID-19 subsides.

realized is obtained by multiplying disposable income by the average propensity to consume during the pre-pandemic period (the 2015-2019 average) (Chart B3-1).<sup>24</sup> The estimation results indicate that the majority of "forced savings" has accumulated as a result of reducing services consumption, of which constraints due to COVID-19 have been most significant (Chart B3-2[2]). For the time being, as long as vigilance against COVID-19 continues, "forced savings" due to the loss of consumption opportunities is likely to accumulate further, albeit at a slower pace than before.

By income group, "forced savings" seems to have accumulated mainly among middle- and high-income households. According to the results of the *Family Income and Expenditure Survey*, households whose consumption declined markedly in 2020 relative to their income were those with annual incomes of 6 million yen and over, although it should be noted that the results are subject to large short-term fluctuations (Chart B3-3). Consumption of middle- and high-income households is characterized not only by the large amount of consumption per household but also by the large share of selective expenditures for services in total consumption expenditures (Chart B3-4). Given this, a decline in the average propensity to consume since the outbreak of COVID-19 can be largely explained by the changes in the consumption behavior of those

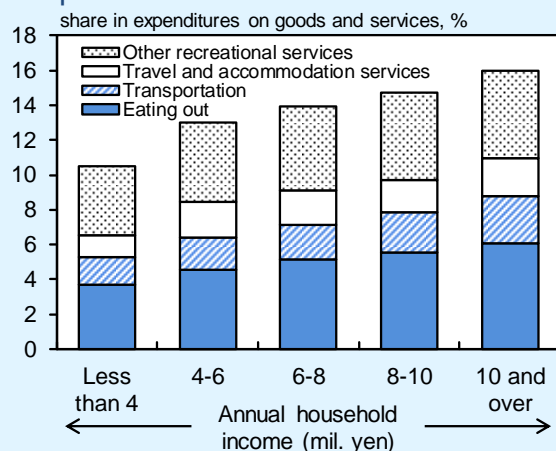
<sup>24</sup> In the estimation here, special cash payments are excluded from disposable income. This is because savings from special cash payments may be significantly different in nature from "forced savings" as defined in this box, given that there may be a significant difference in the propensity to consume between such temporary income as special cash payments and regular income, which includes employee income and pension income.

**Chart B3-3: Income and Consumption by Annual Household Income**



Source: Ministry of Internal Affairs and Communications.  
 Notes: 1. Figures are for workers' households with two or more persons in the "Family Income and Expenditure Survey."  
 2. Shaded area <I> denotes the period of the first state of emergency, <II> denotes when the provision of special cash payments began, and <III> denotes the period of the second state of emergency.

**Chart B3-4: Shares of Selective Services Expenditures**

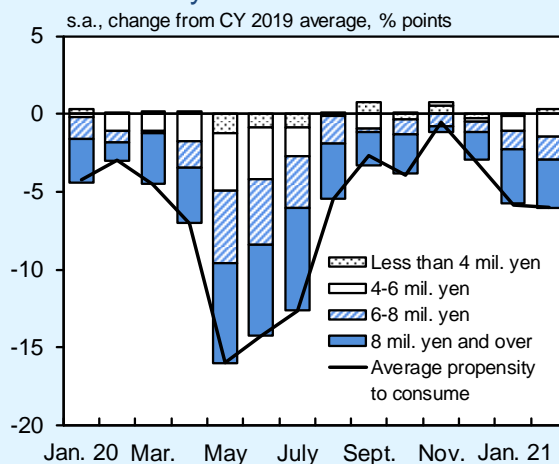


Source: Ministry of Internal Affairs and Communications.  
 Note: Figures are for two-or-more-person households in the "National Survey of Family Income, Consumption and Wealth." Expenditures on goods and services = consumption expenditures - pocket money - social expenses - remittance. Figures for travel and accommodation services are the sum of expenditures on accommodation services and package tours. Figures for other recreational services include expenditures on lesson fees. Figures are October-November 2019 averages.

households (Chart B3-5). The estimation using data for the amount of savings and the distribution of households, both by annual household income, shows that over half of "forced savings" seems to have been made by households with annual incomes of 6 million yen and over (Chart B3-6).

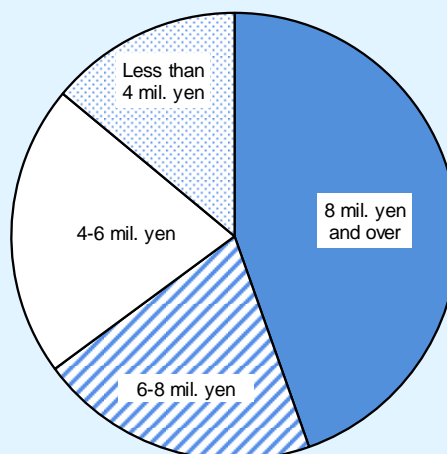
It is assumed in the baseline scenario of this Outlook Report that "forced savings" will be withdrawn gradually from the middle of the projection period, when vaccinations are assumed to become widespread, and that this will continue to be done for a long time beyond the projection period. The reasons for assuming that the pace of withdrawals will be quite moderate are as follows. First, the majority of "forced savings" has been made mainly by middle- and high-income households, as mentioned earlier, and these households' propensity to consume is relatively low (Chart B3-7).<sup>25</sup> Second, although pent-up demand for services will likely materialize, the amount of services that can be consumed within a certain time period seems to be limited compared with that of goods consumption. Services consumption is more likely to reach the upper limit of supply in the short run because there are many cases where (1) such consumption activity requires a certain time period and a specific occasion, as exemplified by travel, and (2) demand concentrates on a certain time of day or period, as seen in dining-out (Charts B3-8 and B3-9). Third, if the aggressive fiscal spending during the pandemic heightens households' concern about possible future increases in taxes and social security

**Chart B3-5: Average Propensity to Consume by Annual Household Income**



Source: Ministry of Internal Affairs and Communications.  
 Note: Figures are for workers' households with two or more persons in the "Family Income and Expenditure Survey." The figures for the average propensity to consume do not match those released in the "Family Income and Expenditure Survey" due to such factors as seasonal adjustment errors.

**Chart B3-6: "Forced Savings" by Annual Household Income**



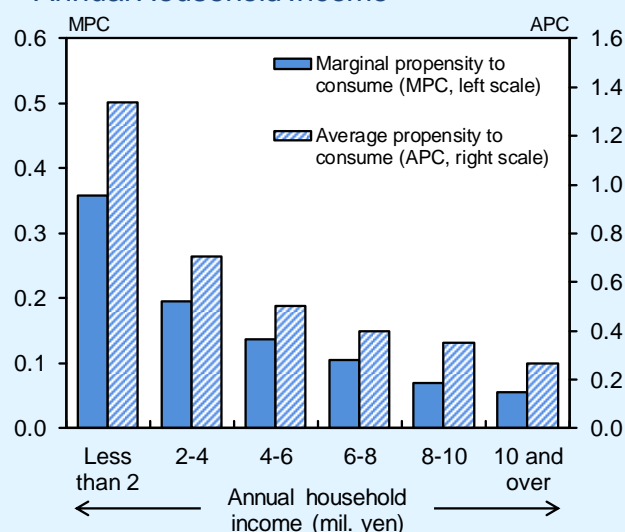
Sources: Ministry of Internal Affairs and Communications, etc.  
 Note: Figures are estimated using (1) the amounts of savings by annual household income (for workers' households with two or more persons) in the "Family Income and Expenditure Survey" and (2) the distribution of households by annual household income (for total households) in the "National Survey of Family Income, Consumption and Wealth" conducted in 2019.

<sup>25</sup> With regard to the propensity to consume by income group, see Box 3 in the October 2016 Outlook Report.

contributions, this may constrain consumption, mainly by middle- and high-income households whose current income levels (i.e., liquidity) are not acting as constraints on consumption expenditures.

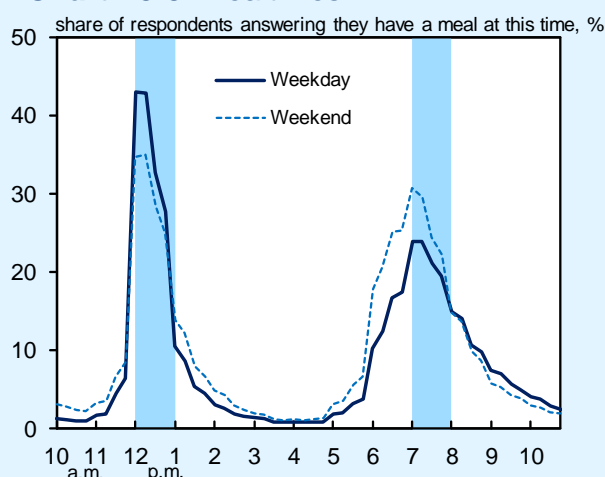
The quantitative estimation results for "forced savings" explained earlier need to be interpreted with some latitude as they may change depending on the equilibrium level for the propensity to consume. In addition, from a wider perspective, there are both upside and downside risks relative to the baseline scenario concerning the impact on private consumption of the COVID-19 situation and the widespread vaccinations. In the first place, until effective COVID-19 vaccines become widespread, the spread of COVID-19 may push down private consumption through public health measures and households' self-restraint behavior. Therefore, for the time being, attention should continue to be paid to downside risks posed by the spread of COVID-19. On the other hand, there are possibilities that, as vaccinations progress, the consumption behavior of those already vaccinated will become more active than expected, and that, around the time vaccinations become widespread, "forced savings" will be withdrawn at a faster pace and private consumption consequently will be pushed up. From a somewhat long-term perspective, it is also necessary to take into account the possibility that private consumption will see a larger-than-expected rebound as COVID-19 subsides because the amount of consumption of canceled activities -- such as events, dining with others, and travel -- seems to have become considerable due to the prolonged period of self-restraint from engaging in such activities.

**Chart B3-7: Propensity to Consume by Annual Household Income**



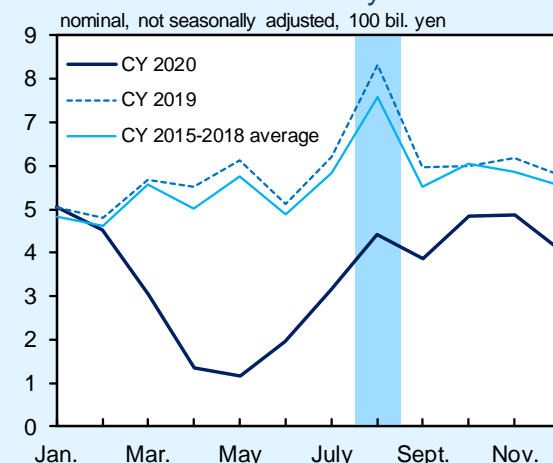
Source: Bank of Japan.  
 Note: Figures are from Box 3 (specifically, the estimation using panel data from Osaka University's "Preference Parameters Study" conducted as part of its Global COE Program) in the October 2016 Outlook Report.

**Chart B3-8: Mealtimes**



Source: Ministry of Internal Affairs and Communications.  
 Notes: 1. Figures are for employed persons and as of 2016. Figures for weekend are the simple averages of Saturday and Sunday.  
 2. Shaded areas indicate peak times for lunch and dinner.

**Chart B3-9: Seasonality in Sales in the Accommodations Industry**



Source: Ministry of Internal Affairs and Communications.  
 Note: The shaded area indicates August (the month of the *bon* festival and the school summer holiday).

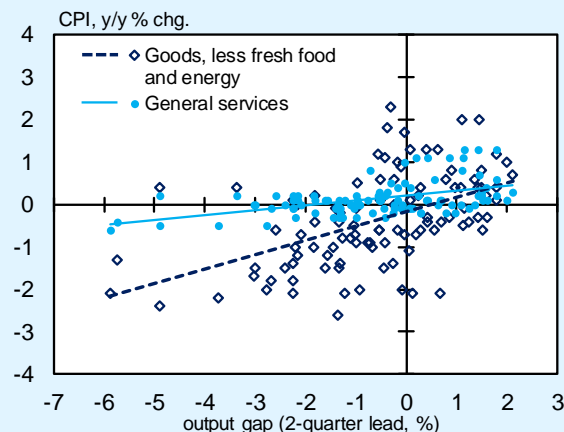


## (Box 4) Relationship between Price Changes and the Output Gap in the Goods and Services Sectors

Looking at developments after the outbreak of COVID-19, even though the output gap deteriorated significantly to an extent not seen since the GFC, the year-on-year rate of change in the CPI has remained slightly positive to date when excluding the effects of temporary factors such as a decline in energy prices (Chart 47). The relationship between the CPI and the output gap has been weakening since the outbreak, and this is attributable to the following factors, as pointed out in past Outlook Reports: (1) there have been cost increases on the supply side as a result of taking preventive measures against COVID-19 and avoiding creating crowds -- for example, conducting temperature checks and disinfection steps or reducing the number of seats -- and (2) many firms in the face-to-face services industry have been cautious in cutting prices, which could lead to further deterioration in their profitability because the price elasticity of demand has decreased in the industry due to consumers' vigilance against COVID-19. Besides these factors, this box points out that the recent firmness in the CPI may also be attributable to (3) a difference in price sensitivity to economic activity (or price stickiness) between goods and services, taking into account that the supply-demand conditions for goods and services have been significantly different during the pandemic.

Since before the outbreak of COVID-19, the general tendency has been that prices of the

**Chart B4-1: Output Gap and Prices of Goods and Services**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
Notes: 1. The observation period is 1996/Q1-2021/Q1.

2. The CPI figures exclude 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 figures from 2020/Q2 onward are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020. Goods exclude water charges.

3. The output gap is based on staff estimations.

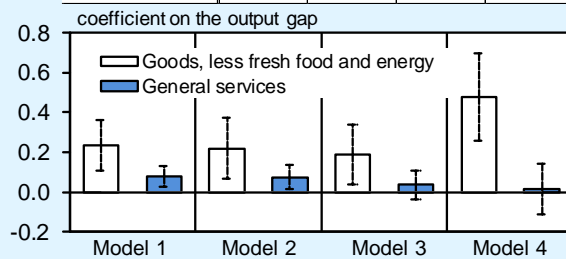
majority of services for households do not immediately respond to the supply-demand conditions at the time or to changes in marginal costs, partly because such prices are revised with less frequency compared with goods prices. In fact, looking at the scatter diagram showing the relationship between the rates of change in prices of goods or services and the output gap, the slope of regression line for services price inflation on the output gap is flatter than that for goods price inflation (Chart B4-1). The aforementioned tendency is also evident from the quantitatively estimated Phillips curves that take into account not only the output gap but also such factors as inflation expectations, using different models and various estimation periods. The results indicate that, while goods prices are sensitive to such factors as the output gap, services prices do not immediately respond to changes in the supply-demand conditions, as seen in the fact that the coefficients of the output gap for regressions of services prices are smaller than those for regressions of goods prices and are statistically insignificant in some models (Chart B4-2).

While the negative demand shock due to COVID-19 has been seen mainly in the services sector, many items in the goods sector -- such as digital devices and household electrical appliances -- have improved in terms of the supply-demand conditions due, for example, to a demand shift from the services sector. Thus, the fact that the overall CPI has remained firm seems to be partly because, in the services industry -- where prices are sticky -- deterioration in the supply-demand conditions has not immediately led to exerting downward pressure on prices,

**Chart B4-2: Phillips Curves for Goods and Services**

Dependent variables:  
CPI (goods, less fresh food and energy, s.a., ann., q/q % chg.)  
CPI (general services, s.a., ann., q/q % chg.)

| Explanatory variables   | Model 1         | Model 2         | Model 3         | Model 4         |
|---|-----------------|-----------------|-----------------|-----------------|
| Output gap  | ○               | ○               | ○               |                 |
| DI for domestic supply & demand conditions for goods and for services |                 |                 |                 | ○               |
| Lagged dependent variables  | ○               | ○               | ○               | ○               |
| Medium- to long-term inflation expectations                           |                 |                 | ○               | ○               |
| Estimation period   | 1990/Q4-2020/Q4 | 1996/Q1-2020/Q4 | 1996/Q1-2020/Q4 | 2004/Q1-2020/Q4 |



Sources: Ministry of Internal Affairs and Communications; Bank of Japan; Consensus Economics Inc., "Consensus Forecasts."

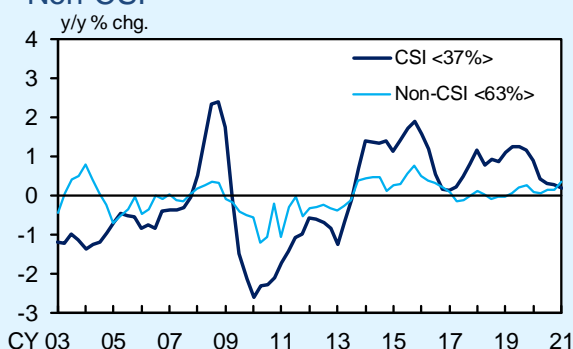
- Notes: 1. All models include a constant term. The lagged dependent variables are the averages of the previous two quarters. The dotted lines in the figure represent  $\pm 2$  standard errors. The bars for Model 4 in the figure represent the coefficients of the DIs for domestic supply and demand conditions.
2. The output gap is based on staff estimations.
3. Figures for medium- to long-term inflation expectations from 2014 onward are estimated using principal component analysis of figures in the *Tankan* for 5-year-ahead expectations of output prices by industry and enterprise size. Figures before 2014 are from the "Consensus Forecasts" (average for 6-10 years ahead).
4. The DIs used in Model 4 are those in the *Tankan* for domestic supply and demand conditions for products and services. Specifically, the DI for "wholesaling and retailing" is used to estimate figures for "goods, less fresh food and energy" and the average of the DIs for "services for individuals" and "accommodations, eating and drinking services" is used for "general services." The DIs for the period from 2004 through 2020 are standardized to have zero mean and unit variance.
5. The CPI figures exclude 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 figures from 2020/Q2 onward are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020. Goods exclude water charges.



whereas goods prices -- which are more sensitive to economic activity -- have been underpinned by a tailwind of demand for stay-at-home consumption.

Taking a more detailed look, there are some goods items of which prices are not sensitive to economic activity, such as tobacco and newspapers, and some services items of which prices are relatively sensitive to economic activity, such as hotel charges and dining-out. To examine this point, it is useful to estimate the price indicator of cyclically sensitive inflation (CSI), which is compiled by aggregating the rates of price change for only the goods and services items that have high correlation with the output gap.<sup>26</sup> The results of estimating CSI for the CPI (all items less fresh food and energy) show that, although CSI has declined recently compared with a while ago, it has remained slightly positive, which is different from at the time of the GFC, when deterioration in the output gap resulted in a substantial decline in CSI (Chart B4-3).<sup>27</sup> This suggests that, supported by increased demand for stay-at-home consumption of goods (e.g.,

**Chart B4-3: Developments in CSI and Non-CSI**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
 Notes: 1. CPI items (less fresh food, energy, and house rent; seasonally adjusted q/q change) are regressed on 0 to 4 quarter lags of the output gap, and items for which any of the coefficients are positive and significant at the 5 percent level are classified cyclically sensitive. Figures for CSI are the average inflation rate of these items, while those for non-CSI are the average of all other items and house rent. The estimation period is 2000/Q2-2019/Q4. Figures in angular brackets show the weights in the CPI (less fresh food and energy).  
 2. The output gap is based on staff estimations. The CPI figures exclude 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 figures from 2020/Q2 onward are based on staff estimations, and exclude the effects of measures such as free higher education introduced in April 2020.

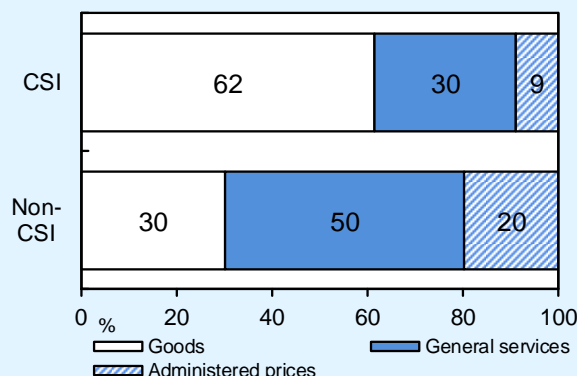
<sup>26</sup> Earlier U.S. studies that compiled price indicators sensitive to business cycles include Mahedy and Shapiro (2017) and Stock and Watson (2020). CSI and non-CSI in this box are based on the compilation methods developed by Mahedy and Shapiro for procyclical inflation and acyclical inflation, respectively. For details on these studies, see Mahedy, T. and Shapiro, A., "What's Down with Inflation?" *FRBSF Economic Letter*, no. 2017-35 (2017); Stock, J. and Watson, M., "Slack and Cyclically Sensitive Inflation," *Journal of Money, Credit and Banking*, vol. 52, issue 52 (2020): 393-428.

<sup>27</sup> CPI items (less fresh food, energy, and house rent; seasonally adjusted quarter-on-quarter change) are regressed on 0 to 4 quarter lags of the output gap, and items for which any of the coefficients are positive and significant at the 5 percent level are classified as CSI while all other items and house rent are classified as non-CSI. The estimation period is from the April-June quarter of 2000 through the October-December quarter of 2019.

household electrical appliances and daily necessities), which comprise a large share in CSI items, there may have been a relatively low necessity for firms to stimulate demand by competitively cutting the prices of such goods at retail stores (Chart B4-4). Meanwhile, non-CSI for the CPI -- in which services have large weights -- has stayed at around 0 percent.

Such a difference in price sensitivity to economic activity between goods and services may have implications for examining risks to future price developments in the course of private consumption heading toward "normalization" as vaccinations progress. In terms of the outlook for private consumption, for the time being, goods consumption and services consumption as a trend are highly likely to be relatively strong and relatively weak, respectively, due to the continuing impact of COVID-19. From the second half of the projection period, however, it is highly likely that goods consumption will be under some downward pressure amid a recovery in private consumption -- mainly of services -- taking hold. Given this, the CPI is likely to remain firm for the time being. However, thereafter, there is a possibility that the rate of change in the overall CPI will not increase easily (i.e., the slope of the observed Phillips curve will remain flat) because of the slow pace of increase in services prices, which are sticky relative to the overall economic recovery, and of downward pressure on the rate of increase in goods prices. That said, there are high uncertainties regarding the likelihood of this happening and the degree of the slope of the observed Phillips curve, because the relative strengths between goods consumption and services consumption after the widespread

**Chart B4-4: Breakdowns of CSI and Non-CSI**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.  
 Notes: 1. CPI items (less fresh food, energy, and house rent; seasonally adjusted q/q change) are regressed on 0 to 4 quarter lags of the output gap, and items for which any of the coefficients are positive and significant at the 5 percent level are classified as CSI items. Non-CSI items are all other items and house rent. Figures in the bars show the weight of each component in CSI and non-CSI items. The estimation period is 2000/Q2-2019/Q4.  
 2. The output gap is based on staff estimations. The CPI figures exclude the effects of the consumption tax hikes and policies concerning the provision of free education.  
 3. Administered prices consist of "public services" and "water charges."

vaccinations depend on the extent to which the changed behaviors of private economic entities during the pandemic will take hold in the post-COVID-19 era.

