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日本銀行
BANK OF JAPAN

Outlook for Economic Activity and Prices

January 2022

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

Outlook for Economic Activity and Prices (January 2022)

The Bank's View[1]

Summary

- Japan's economy is likely to recover as downward pressure stemming from the novel coronavirus (COVID-19) on services consumption and the effects of supply-side constraints wane, while being supported by an increase in external demand, accommodative financial conditions, and the government's economic measures. Thereafter, as a virtuous cycle from income to spending intensifies in the overall economy, including the household sector, Japan's economy is projected to continue growing at a pace above its potential growth rate.
- The year-on-year rate of change in the consumer price index (CPI, all items less fresh food) is likely to increase in positive territory for the time being, albeit with fluctuations, on the back of a rise in energy prices, a moderate pass-through of raw material cost increases, and dissipation of the effects of a reduction in mobile phone charges. Thereafter, although the positive contribution of the rise in energy prices is projected to wane, the rate of increase in the CPI is expected to stay at around 1 percent toward the end of the projection period, due to the underlying inflationary pressure stemming mainly from improvement in the output gap and a rise in medium- to long-term inflation expectations.
- Comparing the projections with those presented in the previous *Outlook for Economic Activity and Prices* (Outlook Report), the projected growth rate for fiscal 2021 is lower due to the effects of supply-side constraints, but that for fiscal 2022 is higher, mainly on the back of the effects of the government's economic measures and a recovery in production to catch up with demand. The projected rate of increase in the CPI for fiscal 2022 is somewhat higher, mainly reflecting a rise in commodity prices and the pass-through of that rise to consumer prices.
- Concerning risks to the outlook, the course of COVID-19, including variants, and its impact on domestic and overseas economies continue to warrant attention. In addition, there are high uncertainties over future developments in overseas economies given the effects of supply-side constraints, as well as in commodity prices and their impact on economic activity and prices.
- 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 thereafter. Risks to prices are generally balanced.

[1] "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on January 17 and 18, 2022.

I. Current Situation of Economic Activity and Prices in Japan

A pick-up in Japan's economy has become evident as the impact of COVID-19 at home and abroad has waned gradually. Overseas economies have recovered on the whole, albeit with variation across countries and regions. In this situation, exports and industrial production have continued to increase as a trend, despite the remaining effects of supply-side constraints. In addition, corporate profits and business sentiment have continued to improve on the whole. Business fixed investment has picked up, although weakness has been seen in some industries. The employment and income situation has remained relatively weak on the whole, although improvement has been seen in some parts. A pick-up in private consumption has become evident, with downward pressure stemming from COVID-19, particularly on services consumption, waning. Housing investment has picked up. Public investment has been relatively weak, albeit at a high level. Financial conditions have been accommodative on the whole, although weakness in firms' financial positions has remained in some segments. On the price front, the year-on-year rate of change in the CPI (all items less fresh food, and the same hereafter), despite being affected by the reduction in mobile phone charges, has been slightly positive, reflecting price rises of energy and other items. Meanwhile, inflation expectations have risen moderately.

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 as downward pressure stemming from COVID-19 on services consumption and the effects of supply-side constraints wane, while being supported by the increase in external demand, accommodative financial conditions, and the government's economic measures. In the corporate sector, exports and production are expected to increase firmly, supported by steady external demand, as the effects of supply-side constraints wane. In this situation, a virtuous cycle is projected to continue operating, in which improvement in corporate profits leads to a rise in business fixed investment. In the household sector, with vigilance against COVID-19 and the effects of supply-side constraints on automobiles waning, private consumption is likely to recover, particularly for face-to-face services and durable goods.

Thereafter, the virtuous cycle from income to spending is expected to intensify in the overall economy, including the household sector, supported by accommodative financial conditions, for example. In this situation, Japan's economy is projected to see an acceleration in its growth pace, mainly due to the effects of the government's economic measures and of the recovery in production to catch up with demand. Toward the end of the projection period, the economy is likely to continue growing, albeit slower, at a pace above its potential growth rate.

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

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

Private consumption, despite being restrained for the time being, mainly through vigilance against COVID-19, is expected to recover, supported by the materialization of pent-up demand, such as for services, and by the government's economic measures, as the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations. Thereafter, private consumption is projected to continue increasing at a slower but moderate pace, supported by improvement in employee income. Employee income is likely to increase moderately on the back of a rise in the number of employees that reflects the recovery in domestic and external demand and of wage increases in industries with acute labor shortage.

Public investment is projected to be at a relatively high level, reflecting progress such as in construction related to building national resilience. Government consumption is likely to increase, mainly reflecting a pick-up in healthcare expenditure and enhancement of the COVID-19 vaccination and medical treatment systems, but see a lowering in its level thereafter due to a reduction in expenditure related to COVID-19.

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

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

B. Baseline Scenario of the Outlook for Prices

The year-on-year rate of change in the CPI is likely to increase in positive territory for the time being. That is, albeit with fluctuations due to temporary factors such as the "Go To Travel" campaign, the increase in the CPI is expected to be brought about by the rise in energy prices, the moderate pass-through of raw material cost increases on the back of improvement in the output gap, and dissipation of the effects of last year's reduction in mobile phone charges.

Thereafter, while the positive contribution of the rise in energy prices to the CPI is likely to wane, the underlying inflationary pressure is projected to increase, mainly on the back of improvement in the output gap and the rise in medium- to long-term inflation expectations. The year-on-year rate of increase in the CPI therefore is expected to stay at around 1 percent toward the end of the projection period.

The output gap, which captures the utilization of labor and capital, has been negative recently. However, it is projected to turn positive around the first half of fiscal 2022 with the economy returning to a growth path that outpaces its potential growth rate, and then continue to expand moderately. Under these circumstances, as households' tolerance of price rises improves moderately, mainly reflecting an increase in wage inflation, and as firms' price-setting stance gradually becomes active, the pass-through of cost increases and a rise in selling prices are likely to become widely observed. In addition, the increase in actual inflation is expected to lead to a rise in households' and firms' medium- to long-term inflation expectations through the adaptive formation mechanism and thereby encourage further price rises.

C. Financial Conditions

The Bank has pursued Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control. Since the onset of the pandemic in March 2020, it also has supported financing, mainly of firms, under the Special Program to Support Financing in Response to the Novel Coronavirus (COVID-19). The government has also conducted various measures to support financing, mainly of firms. Private financial institutions have actively fulfilled the functioning of financial intermediation. In this situation, firms' financial

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

positions have continued to improve on the whole due to a pick-up in economic activity, although weakness has remained in financial positions of firms in industries that are susceptible to the impact of COVID-19, as well as small and medium-sized ones.

As the Bank pursues QQE with Yield Curve Control, it is expected that financial conditions will remain accommodative and that this will support an increase in private demand.[3] That is, the environment for external funding, such as bank borrowing and the issuance of CP and corporate bonds, is projected to remain accommodative. In addition, backed by the Bank's measures to support financing, the government's measures, and efforts made by private financial institutions, firms' financial positions -- including those of small and medium-sized ones, for which weakness has remained to date -- are likely to continue on an improving trend along with an economic recovery.

III. Risks to Economic Activity and Prices

A. Risks to Economic Activity

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

The first is the impact of COVID-19 on private consumption as well as on firms' export and production activities. If people's vigilance against COVID-19 entrenches due, for example, to the spread of highly contagious variants, there is a risk that private consumption will be pushed down. In addition, in a case where COVID-19 cases surge in areas such as Asia, which is closely related to Japan's economy, with global supply-demand conditions of digital-related goods such as semiconductors remaining tight, export and production activities of Japanese firms could also be pushed down through supply-chain disruptions. On the other hand, if people's vigilance against COVID-19 lessens significantly with the widespread vaccinations and the rollout of antiviral medicines, economic activity could be pushed up through, for example, a larger-than-expected increase in pent-up demand for services consumption.

The second factor is developments in overseas economies. If supply-side constraints that mainly stem from the stagnation of logistics and labor shortage become prolonged or amplified in advanced economies such as the United States, there is a risk that the growth rates of overseas economies will deviate downward from the baseline scenario. In addition, signs of a slowdown in the Chinese economy could become clearer due, for example, to the effects of adjustments in its real estate sector, with the medium- to long-term growth potential declining gradually. Furthermore, there is a risk that overseas economies, particularly emerging economies, will deviate downward from the baseline

[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.

scenario if global financial conditions tighten by more than expected amid concern in global financial markets over steps taken by advanced economies toward reducing monetary accommodation on the back of elevated inflation rates. On the other hand, overseas economies, mainly for consumption activities, could be pushed up through, for example, rapid spending of household savings that have accumulated significantly in the respective economies due to various restrictions during the COVID-19 pandemic.

The third factor is developments in commodity prices. Due to a global surge in demand brought about by progress with the resumption of economic activity, commodity prices have been hovering at a high level for a prolonged period, with supply factors, including a decline in capital investment related to fossil fuels against the background of efforts toward decarbonization, also being taken into consideration. As described earlier, corporate profits in Japan basically are projected to continue on an improving trend on the back of the recovery in domestic and external demand, despite being affected by deterioration in the terms of trade that reflects the rise in commodity prices. That said, if the rise in commodity prices becomes prolonged or is not smoothly passed on to selling prices, Japan's economic recovery trend could be negatively affected, mainly through deterioration in corporate profits.

The fourth factor considered from a somewhat long-term perspective is firms' and households' medium- to long-term growth expectations. It is expected that efforts with a view to the post-COVID-19 era, digitalization, and decarbonization will change Japan's economic structure and people's working styles. Depending on how households and firms react to such changes, their medium- to long-term growth expectations, the potential growth rate, and the output gap could go either upward or downward.

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 high uncertainties over firms' price-setting behavior, which could exert either upward or downward pressure on prices. In the baseline scenario of the outlook for prices, as described earlier, it is projected that firms' price-setting stance will gradually become active and the pass-through of raw material cost increases will progress moderately, with continuing improvement in the output gap. That said, depending on the degree of upward pressure from raw material costs and on developments in firms' inflation expectations, the pass-through of cost increases to selling prices could accelerate by more than expected and lead prices to deviate upward from the baseline scenario. On the other hand, given that, in Japan, the behavior and mindset based on the assumption that prices will not increase easily are deeply entrenched mainly among firms, there is a risk that the

pass-through of cost increases to selling prices, particularly to downstream or consumer prices, which are closer to final demand, will not progress, and that prices will deviate downward from the baseline scenario.

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

IV. Conduct of Monetary Policy

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

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

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. Concerning risks to the outlook, the course of COVID-19, including variants, and its impact on domestic and overseas economies continue to warrant attention. In addition, there are high uncertainties over future developments in overseas economies given the effects of supply-side constraints, as well as in commodity prices and their impact on economic activity and prices. 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 thereafter. Risks to prices are generally balanced. On the financial side, overheating has not been seen in asset markets and financial institutions' credit activities. Japan's financial system has maintained stability on the whole, despite the pandemic. In addition, even in the case of a future resurgence of COVID-19, the financial system is likely to remain highly robust on the whole, mainly because financial institutions have sufficient capital bases. When examining financial imbalances from a longer-term perspective, prolonged downward pressure on financial institutions' profits could create a risk of a gradual pullback in financial intermediation, given the existing factors -- such as the prolonged low interest rate environment, the declining population, and excess savings in the corporate sector -- as well as the recent impact of COVID-19. On the other hand, under these circumstances, the vulnerability of

[4] 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."

the financial system could increase, mainly due to the search for yield behavior. Although these risks are judged as not significant at this point, it is necessary to pay close attention to future developments.

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.

(Appendix)

Forecasts of the Majority of the Policy Board Members

y/y % chg.

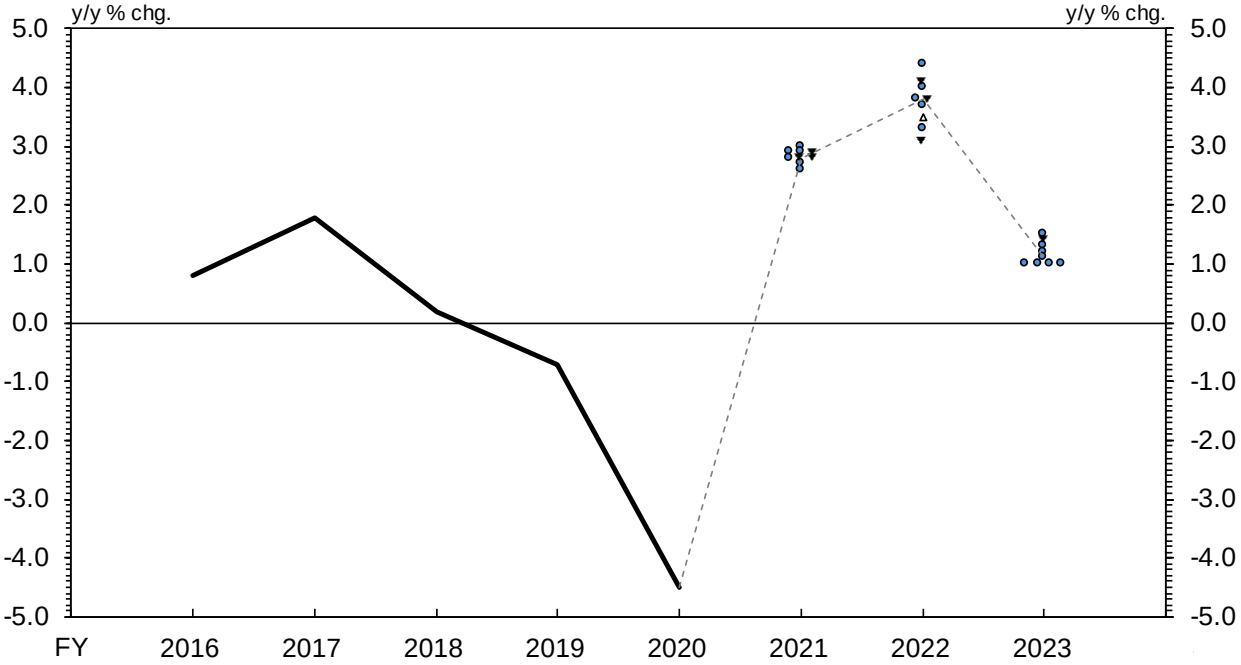
	Real GDP	CPI (all items less fresh food)
Fiscal 2021	+2.7 to +2.9 [+2.8]	0.0 to +0.1 [0.0]
Forecasts made in October 2021	+3.0 to +3.6 [+3.4]	0.0 to +0.2 [0.0]
Fiscal 2022	+3.3 to +4.1 [+3.8]	+1.0 to +1.2 [+1.1]
Forecasts made in October 2021	+2.7 to +3.0 [+2.9]	+0.8 to +1.0 [+0.9]
Fiscal 2023	+1.0 to +1.4 [+1.1]	+1.0 to +1.3 [+1.1]
Forecasts made in October 2021	+1.2 to +1.4 [+1.3]	+0.9 to +1.2 [+1.0]

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

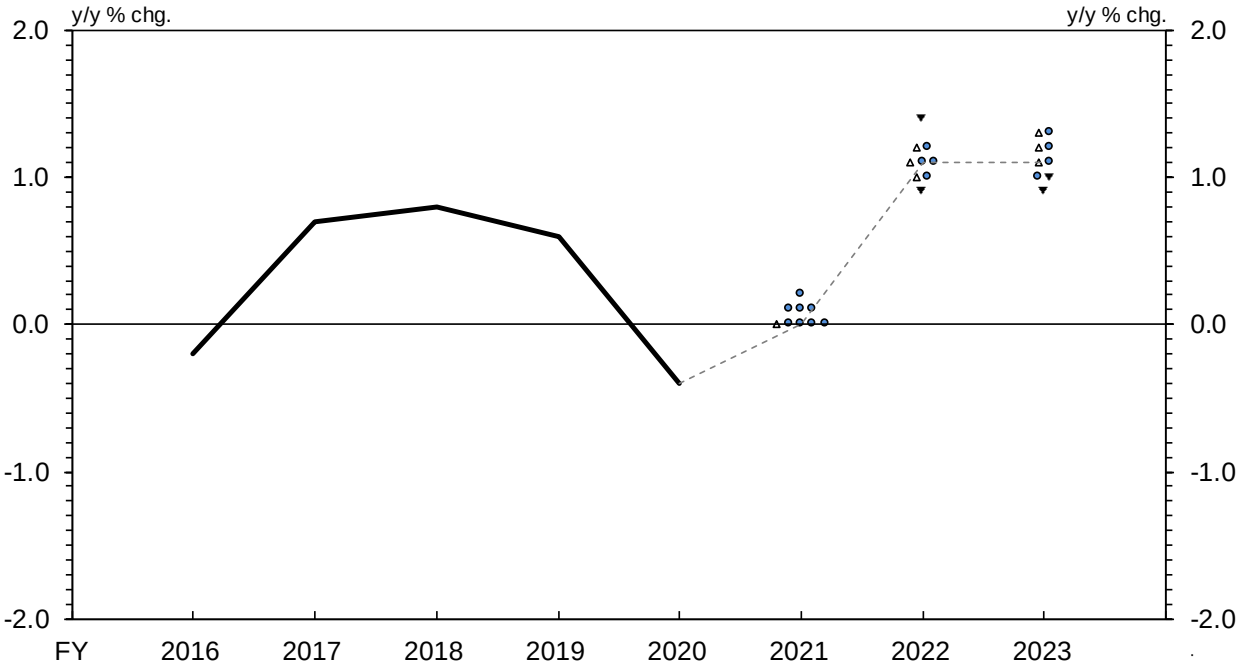
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which they attach the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.
3. Each Policy Board member makes their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding the future conduct of policy.
4. The reduction in mobile phone charges by major carriers conducted in spring 2021 is estimated to directly push down the CPI for fiscal 2021 by around 1.1 percentage points.

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[5]

I. Current Situation of Economic Activity and Its Outlook

A. Economic Developments

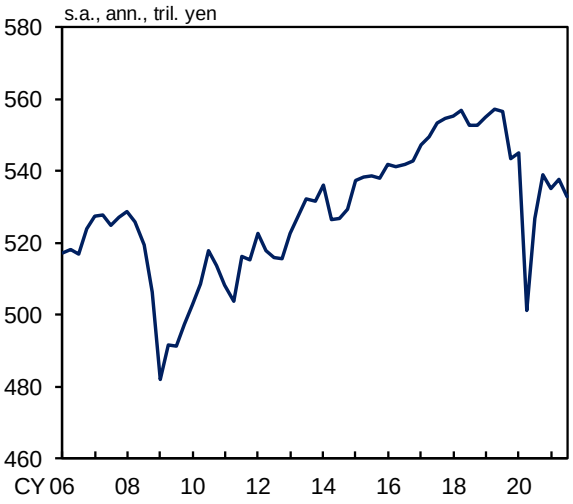
A pick-up in Japan's economy has become evident as the impact of COVID-19 at home and abroad has waned gradually.

Real GDP increased for the April-June quarter of 2021 and then decreased for the July-September quarter, registering minus 0.9 percent on a quarter-on-quarter basis and minus 3.6 percent on an annualized basis (Chart 1). Looking at the breakdown, although government consumption increased, mainly owing to vaccine-related expenditure, exports and business fixed investment decreased due to the effects of supply-side constraints stemming from the spread of COVID-19 in the ASEAN countries. Mainly due to a drop in consumption of durable goods, such as automobiles, that was affected by supply-side constraints, private consumption also declined, with services consumption being at a low level in reflection of the spread of the Delta variant.

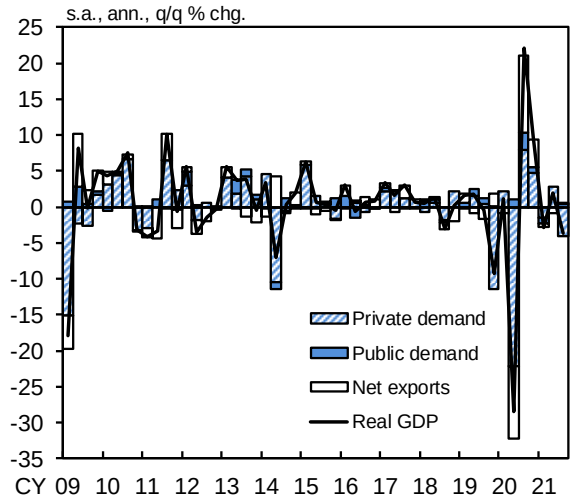
Monthly indicators and high-frequency data since then suggest that a pick-up in Japan's economy has become evident. This is because, although the effects of supply-side constraints have remained, the groundwork for resuming consumption activities while protecting public health has gradually been laid in Japan.

Chart 1: Real GDP

1. Level



2. Annualized Quarterly Growth Rate

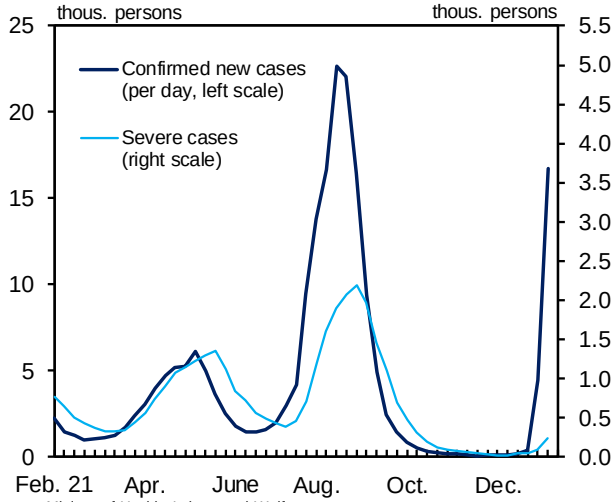


Source: Cabinet Office.

[5] "The Background" provides explanations of "The Bank's View" decided by the Policy Board at the Monetary Policy Meeting held on January 17 and 18, 2022.

Specifically, in the corporate sector, exports and production have turned to an increase, with the effects of supply-side constraints on semiconductors and certain other components -- brought about by the spread of COVID-19 in the ASEAN countries -- waning gradually, but they have not recovered to the level seen around summer last year, which was before said effects intensified. That said, global demand has remained steady, particularly for digital-related goods, and business sentiment and corporate profits have continued to improve on the whole, as confirmed, for example, in the December 2021 *Tankan* (Short-Term Economic Survey of Enterprises in Japan). In this situation, as with the previous *Tankan* surveys, the business fixed investment plan for fiscal 2021 in the December *Tankan* indicates that investment is likely to see high growth. As suggested by these developments, a virtuous cycle from corporate profits to business fixed investment has continued to operate. Meanwhile, a pick-up in private consumption has become evident, including for services consumption such as dining-out and travel, since the state of emergency and priority measures to prevent the spread of disease were lifted throughout the country at the end of September and restrictions have successively been eased on operating hours, such as for restaurants operating at nighttime, and on the number of people per table, establishment, or event. However, the Omicron variant has spread in Japan since the turn of this year, and the impact of this entails high uncertainties, as seen in the fact that priority measures to prevent the spread of disease have been placed for some areas (Chart 2).

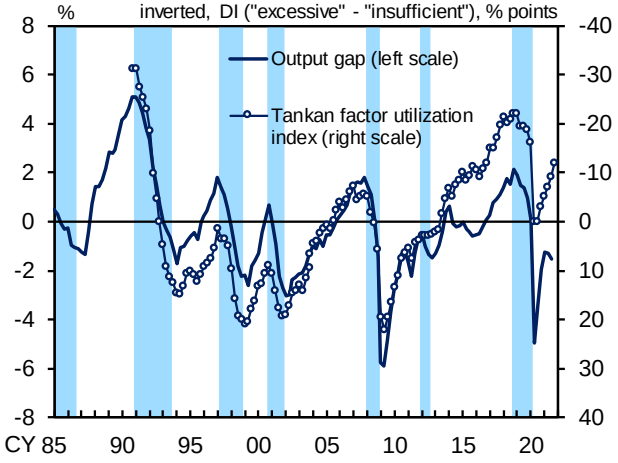
Chart 2: Confirmed New Cases and Severe Cases of COVID-19



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

The output gap -- which captures the utilization of labor and capital -- deteriorated slightly for the July-September quarter of 2021, reflecting declines in the capacity utilization rate and working hours for the manufacturing industry, particularly the automobile industry, with economic activity, such as in the face-to-face services industry, remaining restrained due to the spread of COVID-19 (Chart 3).

Chart 3: Output Gap



Source: Bank of Japan.
Notes: 1. Figures for the output gap are staff estimates.
2. The *Tankan* factor utilization index is calculated as the weighted average of the production capacity DI and the employment conditions DI for all industries and enterprises. The capital and labor shares are used as weights. There is a discontinuity in the data for December 2003 due to a change in the survey framework.
3. Shaded areas denote recession periods.

Japan's economy is likely to recover as downward pressure stemming from COVID-19 on services consumption and the effects of supply-side constraints wane, while being supported by an increase in external demand, accommodative financial conditions, and the government's economic measures.[6] Thereafter, as the virtuous cycle from income to spending intensifies in the overall economy, including the household sector, Japan's economy is projected to continue growing at a pace above its potential growth rate.

With regard to the outlook by demand component, Japan's exports of goods, mainly automobile-related ones, are expected to increase clearly for the time being as the effects of supply-side constraints stemming from the spread of COVID-19 in the ASEAN countries wane. Thereafter, they are projected to continue increasing on the back of firm expansion in global demand, including for digital-related goods.

[6] On November 19, 2021, the Cabinet decided on the Economic Measures for Overcoming Coronavirus Infections and Opening Up a New Era, with a project size of around 78.9 trillion yen and fiscal spending of around 55.7 trillion yen. The implementation of the supplementary budget for fiscal 2021 based on the aforementioned measures is expected to support economic activity, mainly through increases in government consumption and private consumption.

Inbound tourism demand, which is categorized under services exports, is expected to remain subdued while entry and travel restrictions continue. However, it is likely to recover to the pre-pandemic level as the resumption of economic activity progresses around the world while public health is being protected and as the restrictions are lifted. Private consumption is projected to be restrained for the time being, mainly through vigilance against COVID-19. However, it is expected to recover, supported by the materialization of pent-up demand and the government's economic measures, as the resumption of consumption activities progresses while public health is being protected, mainly due to the widespread vaccinations, and as vigilance against COVID-19 and the effects of supply-side constraints wane. Thereafter, although the positive contributions of pent-up demand and the economic measures are likely to dissipate gradually, private consumption is projected to continue increasing moderately, supported by improvement in employee income. Employee income is likely to increase moderately, albeit with a lag from the recovery in domestic and external demand. This will likely occur on the back of a rise in the number of employees, including non-regular employees in the face-to-face services industry, and wage increases that take place mainly in industries with acute labor shortage. Although weakness in investment by firms in the face-to-face services industry and some in the transportation industry is projected to remain for the time being, an uptrend in business fixed investment is expected to become clear, partly supported by improvement in corporate profits and accommodative financial conditions, with the effects of supply-side constraints waning. Meanwhile, public investment is projected to be at

a relatively high level, reflecting progress such as in construction related to building national resilience. Government consumption is likely to increase, mainly on the back of a pick-up in healthcare expenditure and of expenditure to enhance the COVID-19 vaccination and medical treatment systems included in the government's economic measures. Thereafter, government consumption is projected to see a lowering in its level due to a reduction in expenditure related to COVID-19.

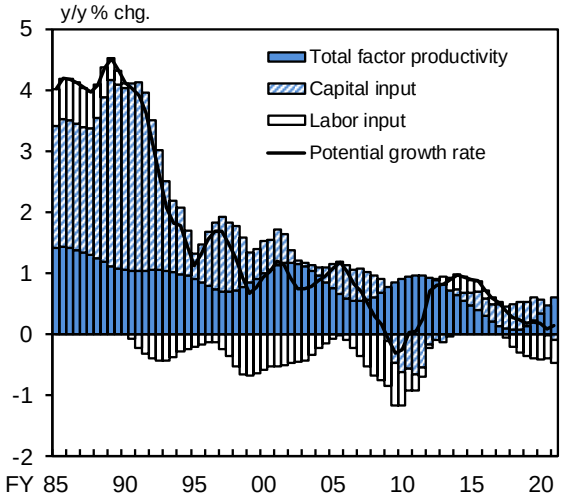
Reflecting these developments in demand both at home and abroad, Japan's economic growth rate is expected to be clearly positive for fiscal 2021. It is likely to be supported by the increase in external demand, accommodative financial conditions, and the government's economic measures, with the impact of COVID-19 continuing to wane. The rate is projected to increase for fiscal 2022 with domestic and external demand increasing and supported by the government's economic measures. The rate is expected to continue growing at a pace above its potential growth rate for fiscal 2023, with external demand continuing to increase and accommodative financial conditions being maintained, although the pace is likely to decelerate from that for fiscal 2021 and 2022, mainly because the effects of pent-up demand at home and abroad and of the government's economic measures are expected to wane. Comparing the projections with those presented in the previous Outlook Report, the projected growth rate for fiscal 2021 is lower due to the effects of supply-side constraints, but that for fiscal 2022 is higher, mainly on the back of the effects of the government's economic measures

and the recovery in production to catch up with demand.

The potential growth rate seems to have been marginally positive recently (Chart 4). This is because, although the growth rate of total factor productivity (TFP) has increased slightly, working hours have continued on a downtrend, reflecting working-style reforms, and the pace of capital stock accumulation has decelerated as a result of past declines 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 on the back of advances in digitalization and a resultant improvement in efficiency of resource allocation, (2) the pace of decline in working hours will slow with the effects of working-style reforms diminishing, and (3) growth in capital stock will accelerate cyclically. However, there has been only moderate progress with innovation by the corporate sector and transfer of production factors among sectors, both of which aim at adapting to the post-pandemic economic and industrial structures, including efforts toward digitalization and addressing climate change. There remain high uncertainties over the extent to which such innovation and transfer will advance or be sustained. Under these circumstances, the output gap and the potential growth rate, which are estimated based on a specific assumption regarding trends, should be interpreted with some latitude.

Details of the outlook for each fiscal year are as follows. In the second half of fiscal 2021, Japan's

Chart 4: Potential Growth Rate



Source: Bank of Japan.
Note: Figures are staff estimates.

economy is likely to recover as downward pressure stemming from COVID-19 on services consumption and the effects of supply-side constraints wane, while being supported by an increase in external demand, accommodative financial conditions, and the government's economic measures. That is, goods exports, mainly automobile-related ones, are expected to increase clearly as the effects of supply-side constraints wane. Private consumption is projected to be restrained for the time being, mainly through vigilance against COVID-19. However, it is expected to recover, due partly to the effects of the government's measures, as the resumption of consumption activities progresses while public health is being protected. An uptrend in business fixed investment is expected to become gradually clear because the level of economic activity is likely to rise with the effects of supply-side constraints waning and corporate profits are projected to remain on an improving trend. That said, weakness is expected to remain in construction investment, such as for restaurants and hotels, and in machinery investment by some firms in the transportation industry, including railway vehicles and aircraft. Meanwhile, with regard to government spending, public investment in construction related to building national resilience is likely to progress, and government consumption is expected to be at a high level on the back of continued spending related to, for example, enhancement of the COVID-19 vaccination and medical treatment systems, and of the pick-up in healthcare expenditure.

In fiscal 2022, the growth rate of Japan's economy is expected to increase. This is based

on the projection that overseas economies will keep improving, the resumption of economic activity will progress in Japan while public health is being protected, mainly through enhancement of the medical treatment system, and the government's economic measures will provide support. As the effects of supply-side constraints dissipate, goods exports are likely to continue increasing, reflecting improvement in overseas economies. In this situation, corporate profits are expected to continue following their improving trend, and business fixed investment is likely to increase, including for digital-related investment, urban redevelopment projects, R&D investment for growth areas and to address environmental issues. As employee income picks up, private consumption is expected to increase clearly, supported by the government's economic measures and the materialization of pent-up demand. Meanwhile, government spending is likely to increase on the whole. This is based on the projection that construction related to building national resilience will progress, expenditure related to COVID-19 included in the government's economic measures will continue, and healthcare and nursing care expenditures will see an uptrend.

In fiscal 2023, although the pace of economic growth is likely to decelerate, mainly due to the effects of pent-up demand at home and abroad and of the government's economic measures waning, Japan's economy is expected to continue growing steadily, supported by sustained growth in overseas economies and accommodative financial conditions. Goods exports are likely to continue increasing moderately while the growth rates of overseas economies are expected to

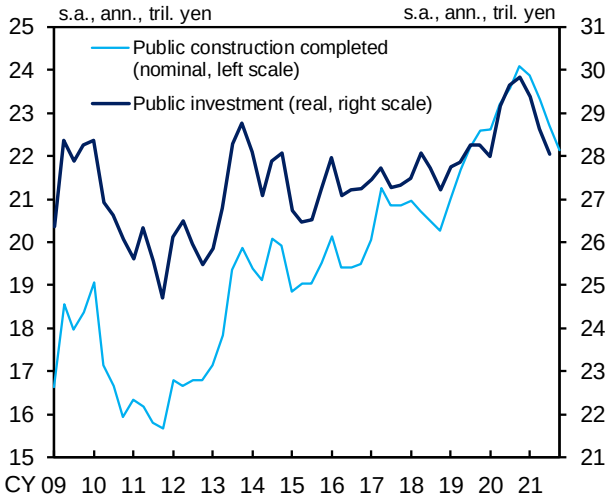
gradually converge toward about the same level as the long-term average. Inbound tourism demand, which is categorized under services exports, is projected to increase clearly, reflecting a global recovery in travel demand. Although increases in digital-related investment and R&D investment for growth areas and to address environmental issues 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. Although the effects of pent-up demand and of the government's economic measures are likely to wane, private consumption is projected to continue increasing moderately for both goods and services, as employee income continues to improve. Meanwhile, despite being supported by progress in construction related to building national resilience and by an uptrend in healthcare and nursing care expenditures, government spending is expected to decline, reflecting the reduction in expenditure related to COVID-19.

B. Developments in Major Expenditure Items and Their Background

Government Spending

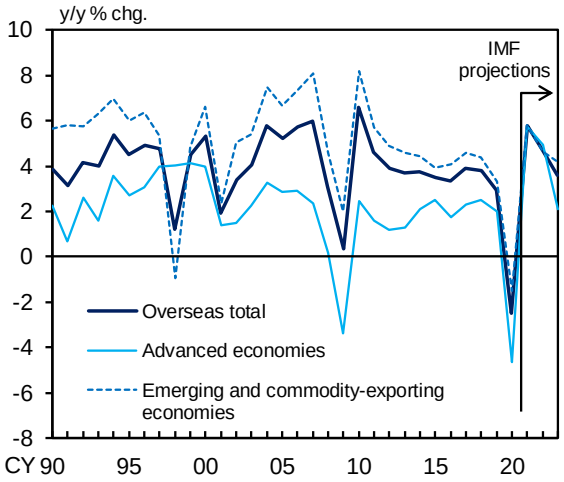
Public investment has been relatively weak, albeit at a high level (Chart 5). Orders received for public construction, which is a leading indicator, have been more or less flat when fluctuations are smoothed out, as orders associated with the government's economic measures are being placed, mainly for construction related to building national resilience. The value of public works contracted has been somewhat weak recently, despite being at a high level. As for the outlook, it is projected that public investment will be at a high level, supported by progress in construction related to building national resilience. [7] Government consumption is likely to increase, mainly on the back of the pick-up in healthcare expenditure and of expenditure to enhance the vaccination and medical treatment systems included in the government's economic measures. Thereafter, government consumption is projected to see a lowering in its level due to the reduction in expenditure related to COVID-19.

Chart 5: Public Investment



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.
Note: The figure for 2021/Q4 is that for October.

Chart 6: Overseas Economies



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

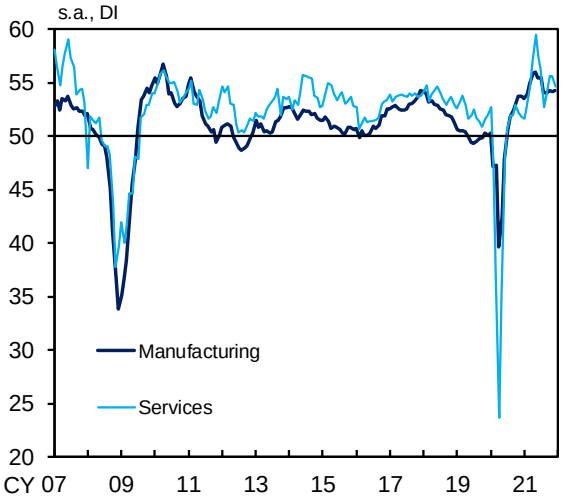
Overseas Economies

Overseas economies have recovered on the whole, albeit with variation across countries and regions (Chart 6). Improvement in overseas economies has continued to be led by recovery in advanced economies. By region, although the

[7] The five-year acceleration measures for building national resilience with a project size of about 15 trillion yen were decided by the Cabinet in December 2020. In these measures, public investment projects for disaster prevention, disaster mitigation, and building national resilience are to be implemented intensively over five years from fiscal 2021 through 2025. The government's economic measures decided by the Cabinet in November 2021 also include efforts to implement the acceleration measures.

U.S. economy has been affected by the resurgence of COVID-19 and supply-side constraints, it has continued to see a recovery brought about by private consumption in particular, partly due to the effects of the government's economic measures. European economies have continued to recover on the whole, mainly in services consumption, although public health measures have been tightened again in some areas, reflecting an increase in the number of confirmed new cases of COVID-19. The Chinese economy has recovered as a trend, but the pace of improvement has remained slow, mainly due to downward pressure on production that reflects power supply issues and to deceleration in real estate investment. Emerging and commodity-exporting economies other than China have picked up as domestic demand and production have improved and as exports have increased. Turning to Asia, which is closely related to Japan's economy, the NIEs have recovered because exports have continued to increase and domestic demand has picked up with the impact of COVID-19 waning. In the ASEAN countries, economies have picked up on the back of an increase in domestic and external demand, despite the impact of COVID-19 remaining in some areas. Looking at the current situation for the global economy in terms of the Global PMI, figures for both the manufacturing and services industries have remained at relatively high levels, both clearly exceeding 50 (Chart 7). The world trade volume has shown a deceleration in its pace of increase due to the effects of supply-side constraints on automobile-related goods in particular, even though a steady rise in demand for digital-related

Chart 7: Global PMI

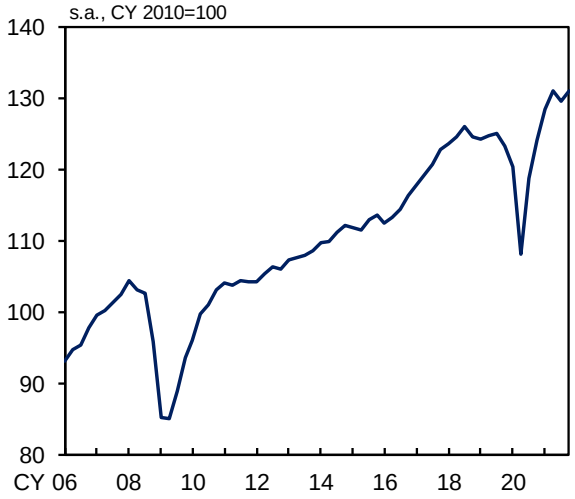


Source: IHS Markit (© and database right IHS Markit Ltd 2022. All rights reserved.).
Note: Figures for manufacturing are the J.P.Morgan Global Manufacturing PMI. Figures for services are the J.P.Morgan Global Services Business Activity Index.

goods has continued (Chart 8).[8]

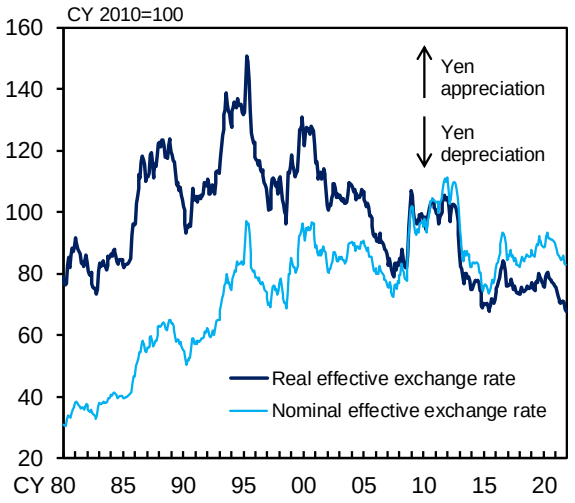
As for the outlook, with the impact of COVID-19 waning gradually, overseas economies are likely to continue growing on the whole, supported by aggressive macroeconomic policies taken mainly in advanced economies. In more detail, for the time being, overseas economic activities are likely to be weighed down by supply-side constraints seen particularly in logistics and labor markets in some advanced economies, such as the United States. However, these constraints are expected to be gradually resolved, and overseas economies as a whole therefore are likely to continue registering relatively high growth. Thereafter, overseas economies are expected to decelerate gradually toward the end of the projection period, partly reflecting the peaking-out of economic stimulus measures taken in advanced economies. By region, the U.S. and European economies are likely to remain affected by the resurgence of COVID-19 and supply-side constraints for the time being, but they are expected to keep recovering, partly due to the materialization of pent-up demand and the effects of the economic measures by their governments. The Chinese economy is projected to return to a steady growth path as downward pressure on production stemming from power supply issues dissipates, although adjustments in the real estate markets are likely to push down the economy. Partly reflecting a recovery in external demand, emerging and commodity-exporting economies other than China are likely to follow an improving trend on the whole, albeit with variation across countries and regions.

Chart 8: World Trade Volume



Source: CPB Netherlands Bureau for Economic Policy Analysis.
Note: Figures for the world trade volume are those for world real imports. The figure for 2021/Q4 is that for October.

Chart 9: Effective Exchange Rates



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

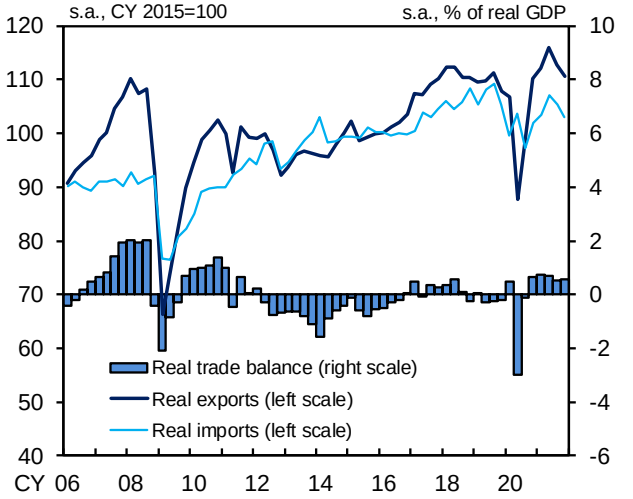
[8] The world trade volume is calculated by adding up real imports in each country.

With regard to the outlook for the world trade volume, sluggishness is expected to be seen for the time being because the effects of supply-side constraints, such as delivery delays, are likely to remain. However, the volume is projected to increase firmly thereafter. Toward the end of the projection period, the pace of increase is likely to decelerate gradually since demand for digital-related goods is expected to be under some downward pressure, partly due to a peaking-out of stay-at-home demand.

Exports and Imports

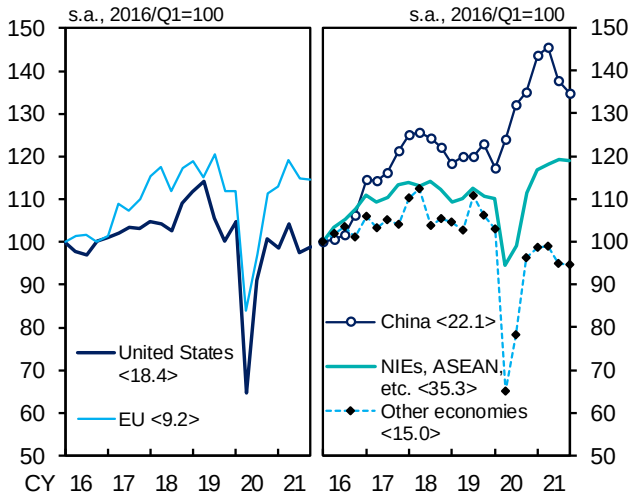
Exports have continued to increase as a trend on the back of the recovery in overseas economies, despite the remaining effects of supply-side constraints (Chart 10). By region, exports to advanced economies and emerging economies have continued on an uptrend due to the recovery in those economies and the expansion in global demand for digital-related goods, despite the effects of supply-side constraints remaining on automobile-related goods in particular (Chart 11). By goods, exports of automobile-related goods declined significantly due to the production decline that reflects supply-chain disruptions caused by the spread of COVID-19 in the ASEAN countries, and then increased clearly for November (Chart 12). However, they have not yet reached the level seen around summer last year, which was before the effects of supply-side constraints intensified. IT-related exports have been at a high level, as exports of goods such as semiconductors for data centers have been solid, despite a temporary decline in exports of on-board equipment for motor vehicles. Exports of capital goods have continued to increase, supported by steady machinery investment on a

Chart 10: Real Exports and Imports



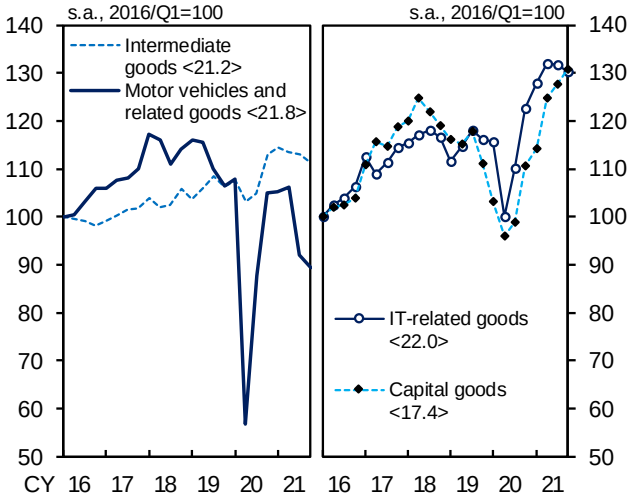
Sources: Bank of Japan; Ministry of Finance; Cabinet Office.
Note: Based on staff calculations. Figures for 2021/Q4 are October-November averages.

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. Figures for 2021/Q4 are October-November averages.
2. Figures for the EU exclude those for the United Kingdom for the entire period.

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. Figures for 2021/Q4 are October-November averages.

global basis and by strong demand for semiconductor production equipment that reflects the expansion in demand for digital-related goods. Meanwhile, despite being pushed up by exports of materials related to digital goods, those of intermediate goods have been more or less flat on the whole, partly due to declines in exports of chemicals, such as plastics, for automobiles and exports of cosmetics to Asia.

Exports, mainly of automobile-related goods, are likely to increase clearly for the time being as the effects of supply-side constraints wane. [9] Thereafter, they are projected to continue increasing on the back of firm expansion in global demand, including for digital-related goods, and of a recovery in production of automobile-related goods to catch up with demand. With growth in the world trade volume slowing gradually, as described earlier, the pace of increase in exports is projected to decelerate toward the end of the projection period, as economic growth of Japan's primary export destinations, such as the United States, also decelerates.

Meanwhile, Japan's share of exports in the world trade volume has declined recently, affected by the production decline in automobiles (Chart 13). As for the outlook, reflecting changes in the trade volume of automobile-related goods, of which Japan accounts for a large share within world exports, Japan's share of exports is likely to fluctuate significantly for the time being. Thereafter, however, it is projected to converge

Chart 13: Japan's Share of Exports in World Trade Volume

Source: CPB Netherlands Bureau for Economic Policy Analysis.
Note: Japan's share of exports in world trade volume is obtained by dividing Japan's real exports by world real imports (2010 prices). The figure for 2021/Q4 is that for October.

[9] Box 1 provides an analysis of the impact of exchange rate movements on Japan's economy via exports and other transmission channels.

toward a level that is around the average seen before the pandemic.

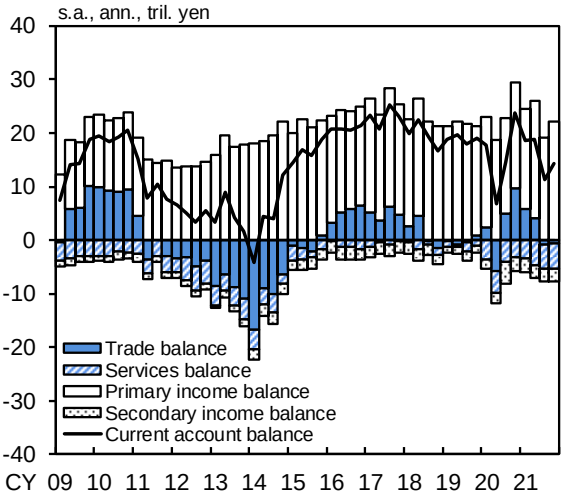
Reflecting a pick-up in domestic demand, imports have continued to increase as a trend, despite the recent weakness that is mainly due to the effects of supply-side constraints on automobiles and to the peaking-out of purchases of vaccines (Chart 10). They are expected to follow a moderate uptrend on the back of developments in induced demand due to increases in domestic demand and exports.

External Balance

The nominal current account surplus has been at a high level on the back of a recovery in overseas economies (Chart 14). However, it has declined somewhat recently, mainly due to deterioration in the terms of trade. Looking at the breakdown, the nominal trade balance has been in slight deficit recently, reflecting the rise in international commodity prices such as crude oil prices. The services balance has continued to register a deficit, mainly against the background of deterioration in the travel balance, which is due to subdued inbound tourism demand (Chart 15). The primary income balance has continued to register a relatively large surplus because receipts, mainly of dividends, have been at a high level, reflecting a recovery in overseas economies.

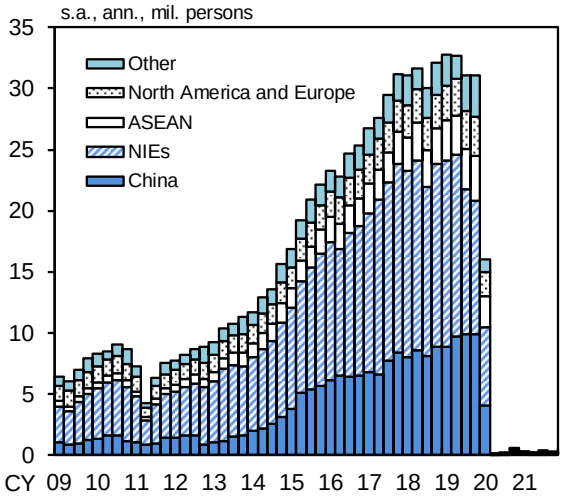
The nominal current account surplus is expected to follow a moderate expanding trend on the back of an increase in goods exports, an expanding surplus in the primary income balance due to the

Chart 14: Current Account



Source: Ministry of Finance and Bank of Japan.
Note: Figures for 2021/Q4 are October-November averages.

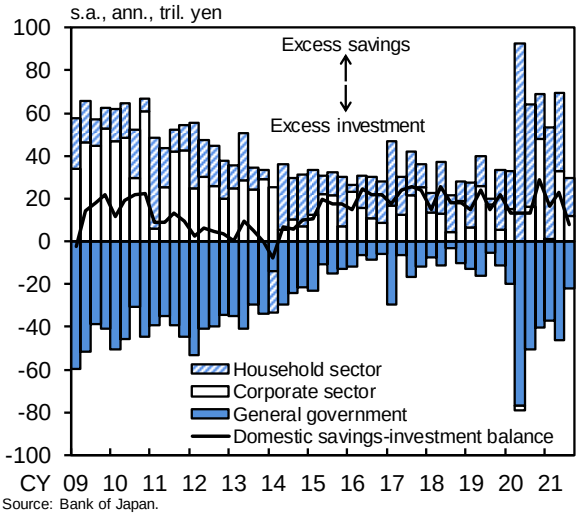
Chart 15: Number of Inbound Visitors



Source: Japan National Tourism Organization (JNTO).
Note: Figures for North America and Europe are those for the United States, Canada, the United Kingdom, France, and Germany. Figures for 2021/Q4 are October-November averages.

recovery in overseas economies, and a decrease in deficit in the services balance that reflects improvement in inbound tourism demand. In terms of the savings-investment balance, overall excess savings in Japan's economy are projected to follow a moderate expanding trend because the fiscal balance is likely to improve at a pace that somewhat exceeds the pace of decline in excess savings in the private sector (Chart 16).

Chart 16: Savings-Investment Balance

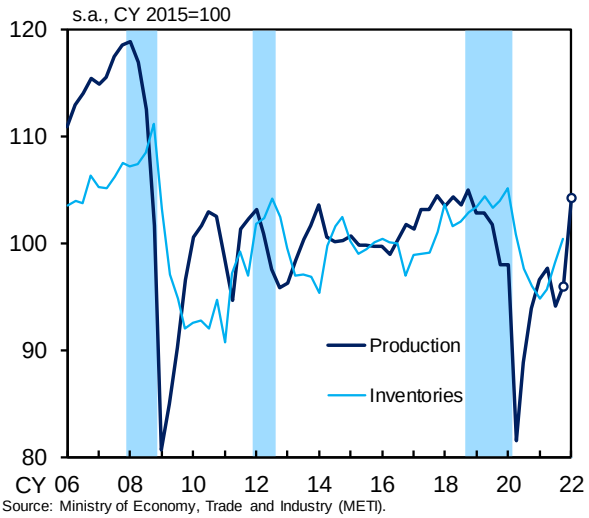


Source: Bank of Japan.

Industrial Production

Industrial production has continued to increase as a trend on the back of a rise in domestic and external demand, despite the remaining effects of supply-side constraints (Chart 17). By major industry, production of "general-purpose, production, and business-oriented machinery" has remained on an uptrend, mainly for semiconductor production equipment and construction machinery, on the back of solid demand for business fixed investment (i.e., machinery investment) at home and abroad. Production of "transport equipment" decreased significantly against the background of parts procurement difficulties stemming from the spread of COVID-19 in the ASEAN countries. It then rose for October and November as the impact of said difficulties waned but has been somewhat below the level seen around summer last year, which was before the effects of supply-side constraints intensified. Although production of "electronic parts and devices" has been relatively weak recently for items such as liquid crystal panels for smartphones, it has been at a high level on the whole as production of semiconductors for data centers, for example, has been steady and as that of on-board equipment for motor vehicles has picked up. In

Chart 17: Industrial Production



Source: Ministry of Economy, Trade and Industry (METI).
Notes: 1. Shaded areas denote recession periods.
2. Figures denoted by the round markers are calculated based on METI projections for December 2021 and January 2022. The inventories figure for 2021/Q4 is that for November.

contrast, production of "electrical machinery, and information and communication electronics equipment" has been relatively weak on the whole. This is because, while production of on-board equipment for motor vehicles has picked up, that of basic exchange for mobile customer premises equipment, for example, has continued to be pushed down by the effects of the semiconductor shortage.

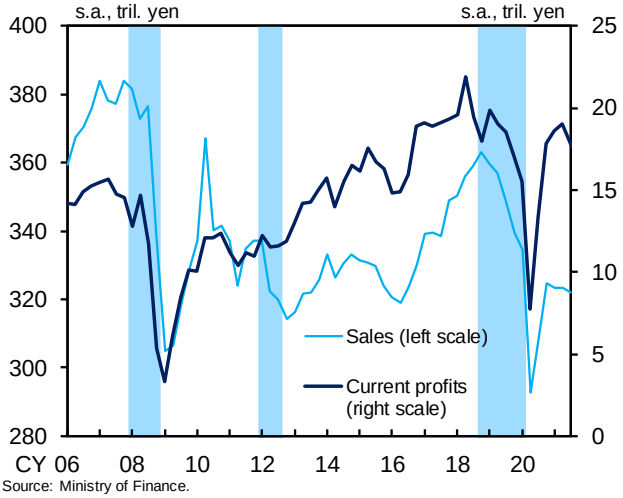
Industrial production is likely to increase, particularly for automobile-related and digital-related goods, as the effects of supply-side constraints wane. The growth rate in industrial production is expected to decline gradually toward the end of the projection period with the pace of increase in exports decelerating.

Corporate Profits

Corporate profits have continued to improve on the whole, although weakness has been seen in some industries, such as face-to-face services. According to the *Financial Statements Statistics of Corporations by Industry, Quarterly* (FSSC), current profits for all industries and enterprises for the April-June quarter of 2021 registered a fourth consecutive quarter of improvement, and profits for the July-September quarter remained at high levels that were well above the pre-pandemic ones (Chart 18[1]). In detail, corporate profits have been pushed down by sales declines due to supply-side constraints and deterioration in the terms of trade brought about by raw material cost

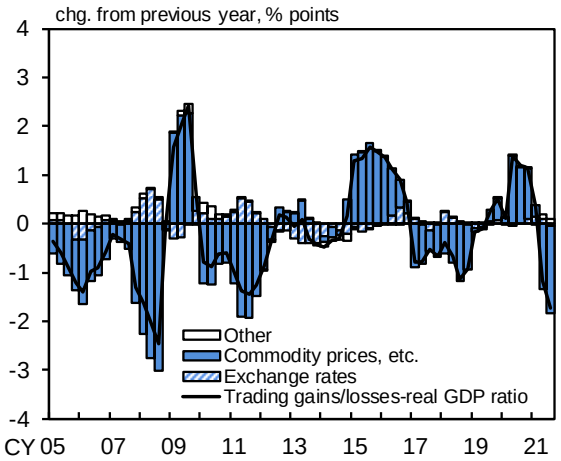
Chart 18: Indicators Related to Corporate Profits

1. Sales and Current Profits



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

2. Contribution to Changes in Trading Gains and Losses



Sources: Cabinet Office; Bank of Japan.
Notes: 1. The contribution of changes in commodity prices, etc. is calculated using changes in export/import price indexes on a contract currency basis. The contribution of exchange rates is calculated using the difference between export/import price indexes on a yen basis and those on a contract currency basis. "Other" is the contribution of other factors such as changes in quantities.
2. Trading gains/losses = (Nominal net exports / Weighted average of export and import deflators) – Real net exports

increases (Chart 18[2]).[10] However, they have been supported by (1) a pass-through of cost increases to selling prices, as seen in a hike in export prices on the back of steady external demand, (2) a rise in dividends from subsidiaries abroad, (3) a reduction in advertising and business travel expenses during the COVID-19 pandemic, and (4) various measures to support firms, such as employment adjustment subsidies and subsidies for firms that complied with the requests to shorten operating hours.[11] By industry and firm size, current profits for manufacturers, regardless of firm size, have deteriorated for the automobile and related industries due to the effects of supply-side constraints but have improved for such industries as chemicals on the back of a hike in selling prices and strong digital-related demand. As for nonmanufacturers, current profits of large firms have been relatively weak, mainly for the face-to-face services industry and the transportation industry (i.e., airlines and railways), reflecting the effects of the spread of the Delta variant during summer last year. Despite being pushed up by various subsidies, current profits of small and medium-sized firms have continued to be low due to public health measures remaining in place.

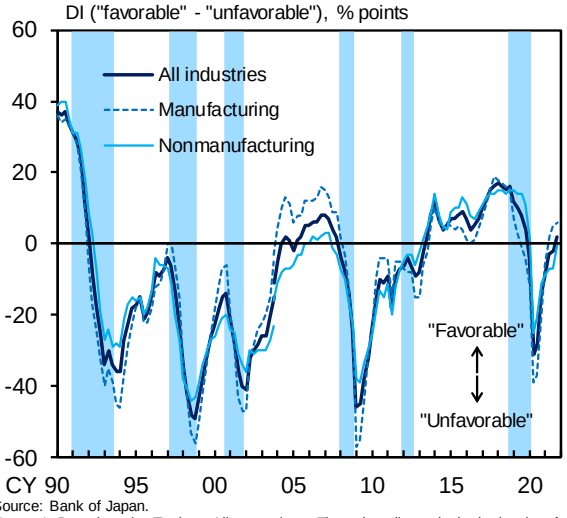
Business sentiment, including that of the face-to-face services industry, has continued to improve. According to the December *Tankan*, the diffusion index (DI) for business conditions for all industries and enterprises has improved for six

[10] Since movements in foreign exchange rates affect both export and import prices, the impact that such movements have on the terms of trade (or trading gains and losses) is smaller than that from market developments.

[11] For details, see Box 2 in the April 2021 Outlook Report.

consecutive quarters, turning to a net "favorable" (Chart 19). With regard to manufacturing, the DI has continued to improve, remaining higher than the level registered in the December 2019 survey conducted before the pandemic. Specifically, the DIs for a wide range of industries have been pushed down by raw material cost increases, and those for the automobile and related industries suggest that these industries have continued to be affected by supply-side constraints. However, the overall DI for manufacturing has been pushed up because the DIs for industries such as production machinery and electrical machinery have continued to improve on the back of global demand for digital-related goods and demand for business fixed investment at home and abroad, and the DIs for industries such as textiles and chemicals have improved clearly due to a pick-up in private consumption. As for nonmanufacturing, the overall DI has improved relatively significantly; although the DIs for industries of transport and postal activities as well as construction suggest that those industries have been affected by rises in fuel and material prices, the DIs for many industries, including services for individuals and accommodations as well as eating and drinking services, have picked up clearly because the COVID-19 situation has improved and public health measures have been lifted across Japan.

Chart 19: Business Conditions



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

Regarding the outlook for corporate profits, it is highly likely that the pace of improvement will decelerate temporarily, as the effects of the production decline in automobiles remain and those of past increases in raw material costs continue to materialize at a gradual pace. Thereafter, although the effects of various measures to support firms are expected to

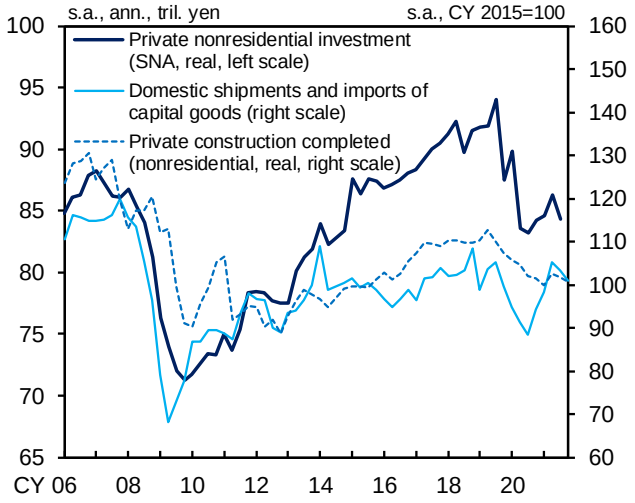
dissipate gradually, corporate profits of both the manufacturing and nonmanufacturing industries are projected to continue on an improving trend, reflecting a recovery in the level of economic activity and the resultant rise in product prices.

Business Fixed Investment

Business fixed investment has picked up, although weakness has been seen in some industries (Chart 20). Although the effects of parts shortages have remained in the supply of some capital goods, such as mobile phone base stations, the aggregate supply of capital goods -- a coincident indicator of machinery investment -- turned to an increase for October and then has continued to rise, mainly reflecting the waning of supply-side constraints on automobiles. Private construction completed (nonresidential) -- a coincident indicator of construction investment -- remained on a moderate declining trend but has bottomed out, mainly reflecting an increase in construction of logistics facilities on the back of an expansion in e-commerce.

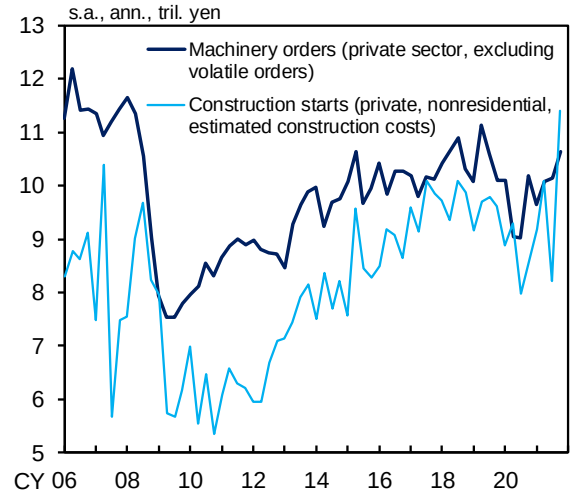
When fluctuations are smoothed out, machinery orders -- a leading indicator of machinery investment -- have shown a pick-up (Chart 21). By industry, orders by the manufacturing industry have increased, albeit with fluctuations, mainly led by "general-purpose, production, and business-oriented machinery" and electrical machinery, for both of which exports and production have continued on an uptrend. Orders by the nonmanufacturing industry have been fluctuating on the whole. Specifically, orders by the transportation industry -- including "rolling machines" (i.e., railway vehicles) and "motor

Chart 20: Coincident Indicators of Business Fixed Investment



Sources: Cabinet Office; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.
Notes: 1. The figure for domestic shipments and imports of capital goods for 2021/Q4 is the October-November average. The figure for private construction completed for 2021/Q4 is that for October.
2. Figures for real private construction completed are based on staff calculations using the construction cost deflators.

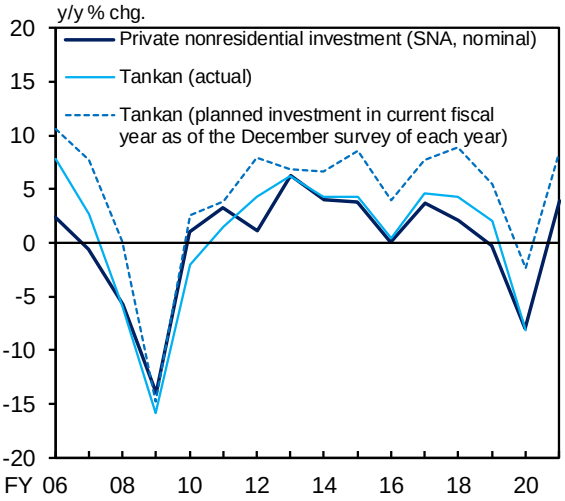
Chart 21: Leading Indicators of Business Fixed Investment



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.
Notes: 1. Volatile orders are orders for ships and orders from electric power companies.
2. Figures for 2021/Q4 are October-November averages.

vehicles" -- which was strongly affected by COVID-19, have remained weak. In contrast, orders by the construction industry have been on an increasing trend when fluctuations are smoothed out, mainly for digital-related and labor-saving investments, and those by the wholesale and retail industries also have increased moderately for "conveying, elevating, materials handling machinery," such as belt conveyors, due to the expansion in e-commerce. 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 -- has remained weak, construction starts have been supported by an uptrend in construction of logistics and other facilities, as well as by progress in urban redevelopment projects. Looking at the business fixed investment plan in the December *Tankan*, business fixed investment (on the basis close to GDP definition; business fixed investment -- including software and R&D investments, but excluding land purchasing expenses -- in all industries and enterprises including financial institutions) for fiscal 2021 shows a year-on-year rate of increase of 8.4 percent due to resumption of investment that has been held back temporarily and the aforementioned projection that corporate profits will improve (Chart 22). Although the figure was revised marginally downward from the preceding survey in September, the plan for this fiscal year is unchanged from the previous surveys, in that the year-on-year rate of change in business fixed investment is likely to be positive to a significant degree.

Chart 22: Planned and Actual Business Fixed Investment

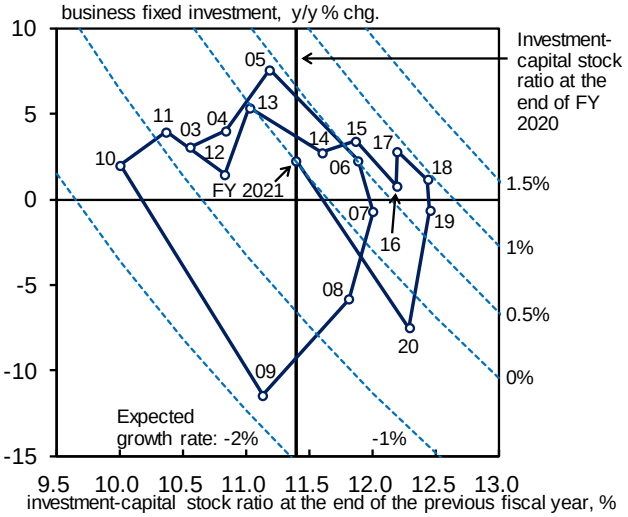


Sources: Bank of Japan; Cabinet Office.
Notes :1. The *Tankan* figures include software and R&D investments and exclude land purchasing expenses. R&D investment is not included before the March 2017 survey. The figures are for all industries including financial institutions.
2. The figure for private nonresidential investment for fiscal 2021 is the 2021/Q2-Q3 average.

With regard to the outlook, as the effects of supply-side constraints wane, an uptrend in business fixed investment is expected to become clear, mainly supported by improvement in corporate profits and accommodative financial conditions. Specifically, investment that is projected to be undertaken includes (1) machinery investment induced by the increase in exports, (2) investment to address labor shortage, that related to teleworking, and software investment to digitalize business activities, (3) construction investment in logistics facilities, accompanied by the expansion in e-commerce, and in offices and commercial facilities due to redevelopment projects, and (4) R&D investment for growth areas and to address environmental issues, such as toward decarbonization. That said, weakness is projected to remain for a while in investment by industries hit significantly by the impact of COVID-19; specifically, renewal investment in railway vehicles and aircraft by the transportation industry and construction investment by the eating and drinking as well as accommodations industries. Toward the end of the projection period, since the pace of increase in exports is likely to decelerate and the effects to push up corporate profits through various subsidies are expected to dissipate, the pace of increase in business fixed investment is projected to slow, partly pushed down by cyclical adjustment pressure stemming from the accumulation of capital stock. However, it is expected that business fixed investment will continue increasing even at the end of the projection period since many medium- to long-term investment projects, such as those listed in (2) to (4) above, will be carried out irrespective of the different phases of business cycles.

The outlook for business fixed investment is assessed from the viewpoint of the capital stock cycle, which is based on the assumption that such investment will be undertaken in order to achieve the level of capital stock necessary for production activity under certain growth expectations (Chart 23). Business fixed investment temporarily entered a phase of capital stock adjustment in fiscal 2020, pushed down mainly by a depression in economic activity brought about by the impact of COVID-19. That said, it is expected to continue increasing, supported by improvement in corporate profits and accommodative financial conditions, and along with a moderate rise in the expected growth rate.

Chart 23: Capital Stock Cycles

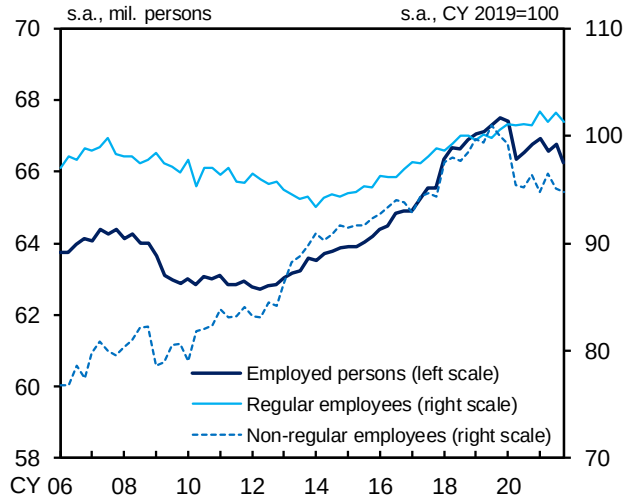


Source: Cabinet Office.
Note: Each broken line represents the combination of the rate of change in business fixed investment and the investment-capital stock ratio at a certain expected growth rate. The figure for fiscal 2021 is the 2021/Q2-Q3 average.

Employment and Income Situation

The employment and income situation has remained relatively weak on the whole, although improvement has been seen in some parts.

Chart 24: 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/Q4 are October-November averages.

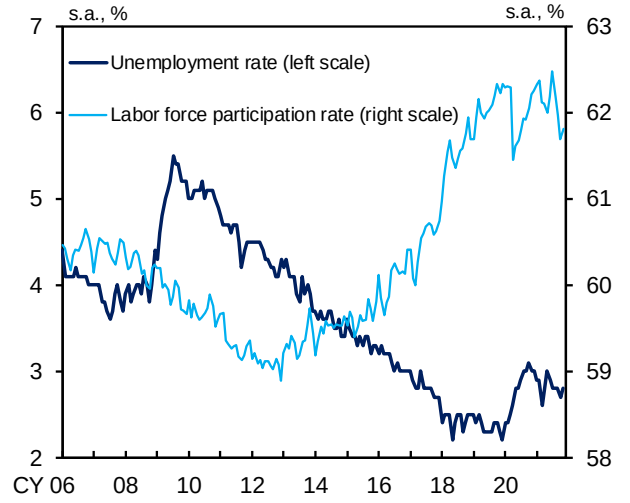
The number of employed persons has bottomed out, reflecting a pick-up in overall economic activity (Chart 24). However, it has remained at a relatively low level, mainly for non-regular employees in the face-to-face services industry. Meanwhile, the number of regular employees has continued to increase moderately, mainly in the medical, healthcare, and welfare services industry as well as the information and communications industry, both of which have faced a severe labor shortage. Despite remaining at relatively low levels, total hours worked per employee have picked up, including for employees in the face-to-face services industry, on the back of a pick-up in economic activity. With regard to labor market conditions, the labor force participation

rate has remained more or less flat since early 2021 when fluctuations are smoothed out (Chart 25). The unemployment rate also has remained more or less flat, at around 3 percent, albeit with fluctuations. The active job openings-to-applicants ratio has remained more or less flat as well, at a level slightly above 1 (Chart 26).

With regard to the outlook for the number of employees, regular employees are likely to continue increasing, mainly in industries with labor shortage, such as medical, healthcare, and welfare services, information and communications, as well as construction, and non-regular employees are expected to also increase in industries such as face-to-face services, with the impact of COVID-19 waning. That said, the pace of increase in the number of employees is projected to be moderate for the time being compared with a rise in the level of economic activity. This is because firms are likely to cope with an increase in demand by making use of their hoarded labor force to some extent. Under these circumstances, the unemployment rate is expected to be at around the current level for a while, but then follow a moderate declining trend with a time lag following a recovery in economic activity.

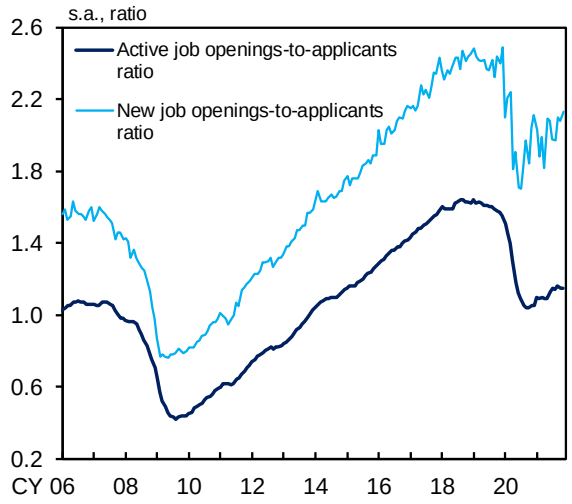
On the wage side, total cash earnings per employee declined significantly for the April-June

Chart 25: Unemployment Rate and Labor Force Participation Rate



Source: Ministry of Internal Affairs and Communications.

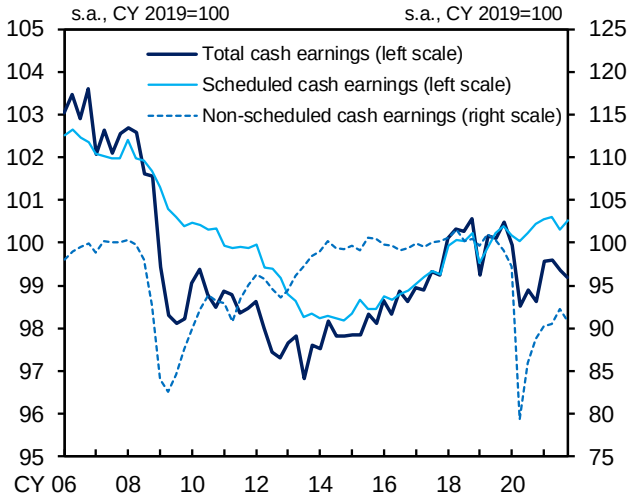
Chart 26: Job Openings-to-Applicants Ratio



Source: Ministry of Health, Labour and Welfare.

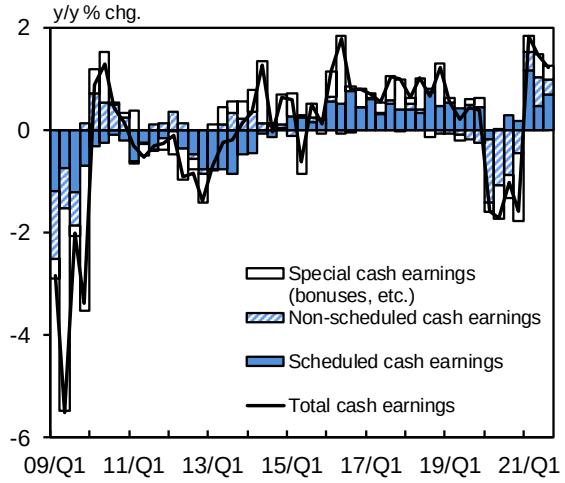
quarter of 2020 (Charts 27 and 28). [12] Subsequently, they have increased moderately, reflecting a pick-up in overall economic activity, although they have remained below the pre-pandemic level seen in spring 2020. The year-on-year rate of change in scheduled cash earnings has continued to increase moderately, particularly for full-time employees (Chart 29). Looking at the breakdown, the rate of change in scheduled cash earnings for full-time employees has continued to increase moderately, due to wage increases in the medical, healthcare, and welfare services industry, which has faced a severe labor shortage, as well as in the face-to-face services industry, which has seen a pick-up in demand. When fluctuations are smoothed out, the year-on-year rate of change in hourly scheduled cash earnings of part-time employees has been in the range of 1.0-1.5 percent due to a pick-up in demand for labor in the face-to-face services industry and the effects of a rise in minimum wages. Meanwhile, non-scheduled cash earnings have been on a pick-up trend, reflecting a recovery in production in the manufacturing industry, and their year-on-year rate of change has registered a relatively large positive figure. However, the level has remained considerably below that prior to the pandemic. Relative to 2020, when a significant decline was observed, the rate of change in special cash earnings has been positive, reflecting improvement in business performance since the second half of fiscal 2020.

Chart 27: Nominal Wages



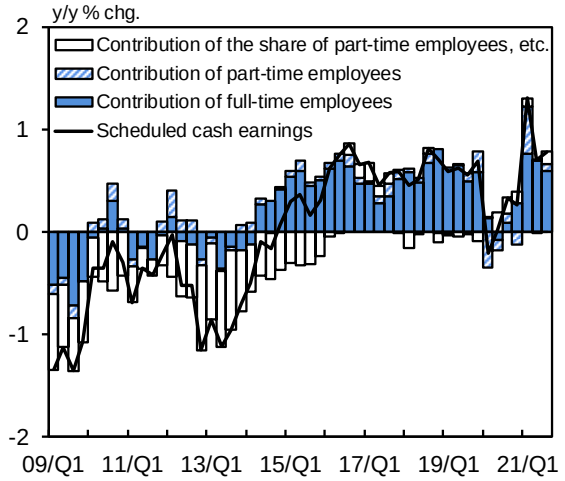
Source: Ministry of Health, Labour and Welfare.
Note: Figures for 2021/Q4 are October-November averages.

Chart 28: Decomposition of Developments in Nominal Wages



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

Chart 29: Decomposition of Developments in Scheduled Cash Earnings



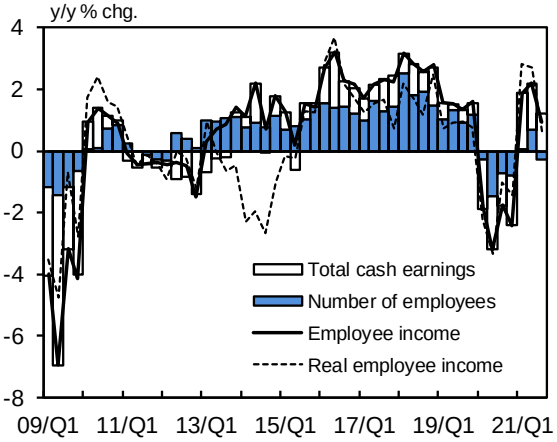
Source: Ministry of Health, Labour and Welfare.
Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.
2. Figures from 2016/Q1 onward are based on continuing observations following the sample revisions.

[12] The year-on-year rate of increase in wages in the *Monthly Labour Survey* is assessed on the basis of continuing observations, which are less susceptible to fluctuations due to the sample revisions. On the other hand, the level of wages from a somewhat long-term perspective is assessed based on the survey results of all establishments, which cover a larger number of observations than do the results of continuing observations.

With regard to the outlook for wages, it likely will remain difficult for the rate of increase in scheduled cash earnings to accelerate for the time being. This is because, despite being pushed up by continued rises in wages for regular employees on the back of continuing labor shortage and for non-regular employees due to a rise in minimum wages and the effects of improvement in the supply-demand conditions in the face-to-face services industry, scheduled cash earnings are projected to be somewhat pushed down by a rise in the share of part-time employees resulting from a recovery in the employment of non-regular workers. Thereafter, scheduled cash earnings are expected to rise moderately, reflecting improvement in business performance and a rise in the inflation rate. Despite the declining trend in non-scheduled hours worked brought about by progress with working-style reforms, non-scheduled cash earnings are likely to increase moderately, reflecting a recovery in such hours worked that is due to improvement in economic activity. Special cash earnings (bonuses) are likely to increase steadily, albeit with a certain lag following improvement in corporate profits. Taking all of these factors into account, a moderate increase in total cash earnings per employee is projected to continue.

In light of the aforementioned employment and wage conditions, employee income has been on a moderate improving trend (Chart 30). However, it has remained at a relatively low level. With regard to the outlook, employee income is likely to continue increasing moderately on the back of economic improvement and see a clear rise in its level.

Chart 30: Employee Income



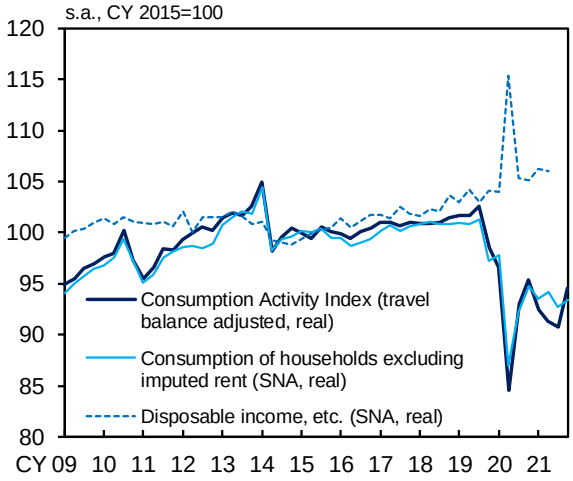
Sources: Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.
Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.
2. Employee income = Total cash earnings (*Monthly Labour Survey*) × Number of employees (*Labour Force Survey*)
3. Figures from 2016/Q1 onward are based on continuing observations following the sample revisions of the *Monthly Labour Survey*.
4. Figures for real employee income are based on staff calculations using the CPI (less imputed rent).

Household Spending

A pick-up in private consumption has become evident, with downward pressure stemming from COVID-19, particularly on services consumption, waning.

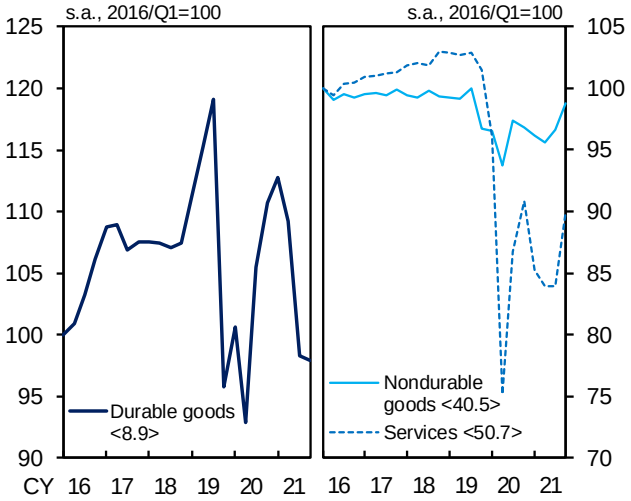
The Consumption Activity Index (CAI, travel balance adjusted) -- which is calculated by combining various sales and supply-side statistics from the viewpoint of gauging Japan's consumption activity in a comprehensive manner -- decreased for the January-March quarter of 2021 and had been at a relatively low level (Charts 31 and 32). [13] However, the CAI increased clearly by 4.3 percent for the October-November period relative to the July-September quarter. Based on various sources, such as high-frequency indicators, statistics published by industry organizations, and anecdotal information from firms, services consumption seems to have continued improving thereafter, and on the back of the effects of supply-side constraints waning, goods consumption seems to have been firm, partly due to an increase in the number of visitors to physical stores (Chart 33). However, the Omicron variant has spread in Japan since the turn of this year, and the impact of this entails high uncertainties, as seen in the fact that priority measures to prevent the spread of disease have been placed for some areas.

Chart 31: Private Consumption



Sources: Bank of Japan; Cabinet Office, etc.
Notes: 1. Figures for the Consumption Activity Index (CAI) are based on staff calculations. The CAI figures (travel balance adjusted) exclude inbound tourism consumption and include outbound tourism consumption. The figure for 2021/Q4 is the October-November average.
2. The figure for consumption of households excluding imputed rent for 2021/Q4 is based on staff calculations using the Synthetic Consumption Index (October).
3. "Disposable income, etc." consists of disposable income and adjustment for the change in pension entitlements (using annual and quarterly estimates). Real values are obtained using the deflator of consumption of households.

Chart 32: Consumption Activity Index (CAI, Real)



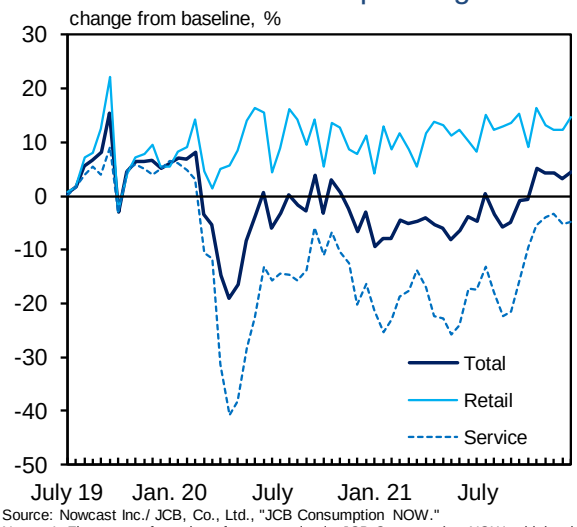
Sources: Bank of Japan, etc.
Notes: 1. Based on staff calculations. Figures in angular brackets show the weights in the CAI. Figures for 2021/Q4 are October-November averages.
2. Nondurable goods include goods classified as semi-durable goods in the SNA.

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

Looking at private consumption by type, durable goods declined toward summer last year, reflecting demand related to staying at home peaking out and supply-side constraints seen in some segments, but recently have picked up, mainly because such constraints have eased (Chart 34). Specifically, after the plunge for September due to the effects of supply-side constraints, the number of new passenger car registrations has picked up with these effects waning. Sales of household electrical appliances were firm overall as the situation with COVID-19 was subdued on the whole and the number of visitors to stores increased, despite being affected by the peaking-out of stay-at-home-related demand -- such as for personal computers -- and by shortages of some products due to supply-side constraints. Nondurable goods have increased. Food and daily necessities were firm. This is partly because, although stay-at-home demand waned somewhat, mainly reflecting a rise in dining-out, demand picked up at resorts and other places. Clothes and personal effects increased, mainly on the back of a pick-up in people's willingness to go out and a rise in the number of visitors to department and other stores.

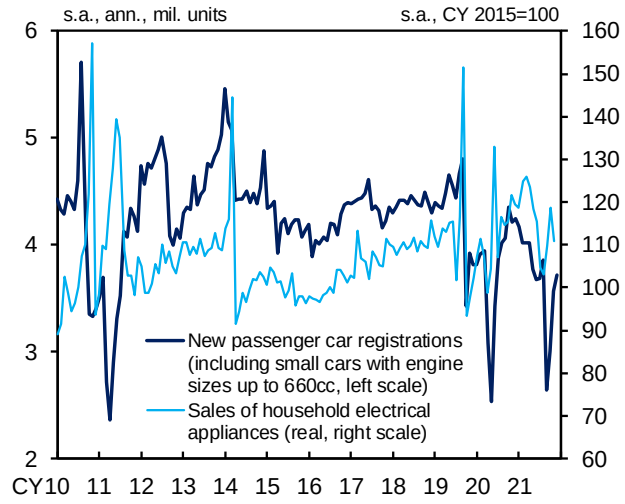
Services consumption stopped declining for September and has continued on an improving trend since then (Chart 35). Dining-out had been at a low level through September, with the state of emergency and priority measures to prevent the spread of disease remaining in place nationwide. Thereafter, however, dining-out, including at *izakaya* (Japanese-style bars), increased significantly through November. This increase, mainly led by dining-out in small groups, was due to a resumption of alcohol service and to a

Chart 33: Consumption Developments Based on Credit Card Spending



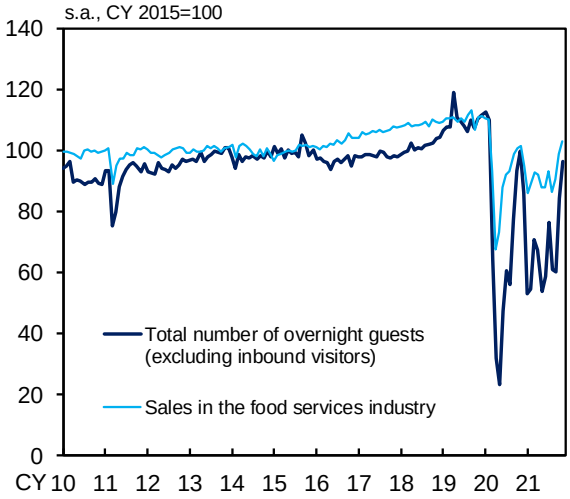
Source: Nowcast Inc./ JCB, Co., Ltd., "JCB Consumption NOW."
Notes: 1. Figures are from the reference series in *JCB Consumption NOW*, which take changes in the number of consumers into account.
2. The baseline is the average for the corresponding half of the month for fiscal 2016 through fiscal 2018.

Chart 34: 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.

Chart 35: Consumption of Services



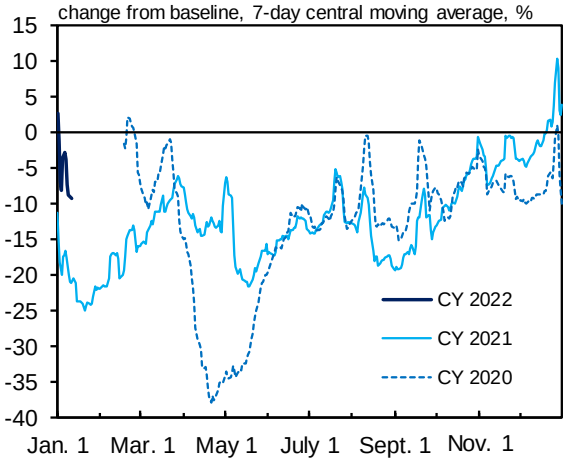
Sources: Japan Tourism Agency; Japan Foodservice Association, "Market Trend Survey of the Food Services Industry."
Note: Figures for the total number of overnight guests in 2010 are calculated using those for the survey results (year-on-year basis) of accommodation facilities with more than nine employees.

phased easing of requests to shorten operating hours and other restrictions. Domestic travel also remained somewhat weak through September but saw substantial increases for October and November for short-distance travel in particular, partly owing to a resumption of measures conducted by the local governments to support tourism (travel and accommodation discounts aimed at local residents). Based on various sources, such as high-frequency indicators and anecdotal information from firms, it seems that services consumption remained on an uptrend from late December through early January (Charts 36 and 37). 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 has followed an improving trend, and recently has been at around the same level as spring 2020, before the pandemic (Chart 38). In addition, the current economic conditions DI (household activity-related) of the *Economy Watchers Survey* -- which asks firms for their views on the direction of the economy -- has improved significantly since September, including for food and beverage-related and services-related sectors.

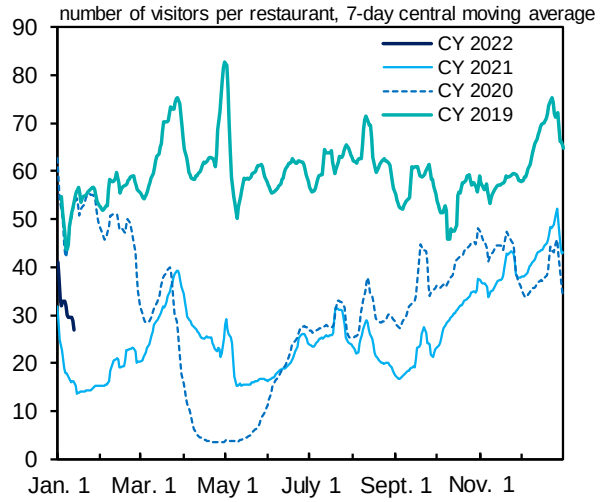
Regarding the outlook, private consumption is projected to be restrained for the time being, mainly through vigilance against COVID-19. However, it is expected to recover, supported by the materialization of pent-up demand and the government's economic measures, as the resumption of consumption activities progresses while public health is being protected, mainly due

Chart 36: Mobility Trends Based on Location Data



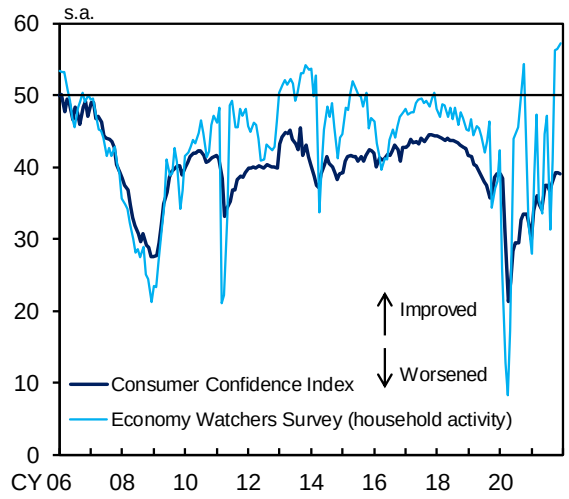
Source: Google LLC *"Google COVID-19 Community Mobility Reports."* https://www.google.com/covid19/mobility/. Accessed: January 18, 2022.
Notes: 1. The baseline is the median on the corresponding day of the week during the 5-week period from January 3 to February 6, 2020.
2. Figures are mobility trends for places such as restaurants, shopping centers, and theme parks.
3. The latest figure is the average for January 8-14.

Chart 37: Number of Visitors to Restaurants



Source: TableCheck Inc.
Notes: 1. Figures are for about 5,800 restaurants that use the reservation and customer management system for restaurants provided by TableCheck Inc.
2. The latest figure is the average for January 10-16.

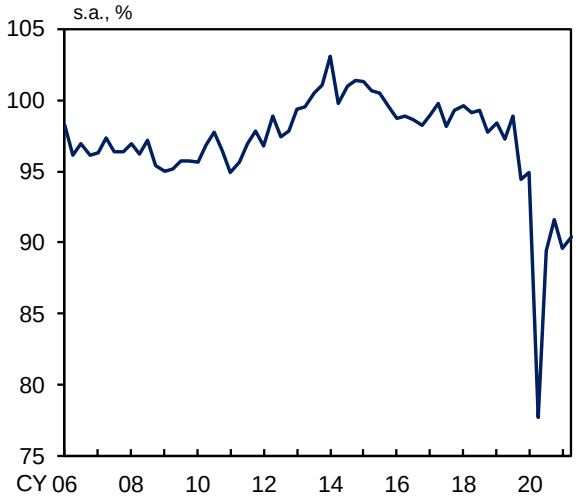
Chart 38: Confidence Indicators Related to Private Consumption



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

to the widespread vaccinations. Thereafter, although the effects of pent-up demand and the economic measures are likely to dissipate gradually, private consumption is projected to continue increasing moderately on the back of continued improvement in employee income.[14] The propensity to consume is likely to follow an uptrend with the impact of COVID-19 waning; toward the end of the projection period, it is expected to somewhat exceed the average level seen prior to the pandemic (Chart 39).

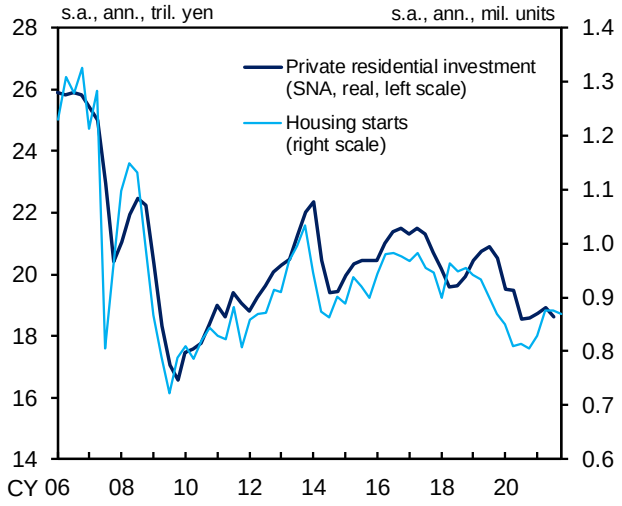
Chart 39: Average Propensity to Consume



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 (using annual and quarterly estimates).

Housing investment has picked up (Chart 40). Specifically, the number of housing starts -- a leading indicator of housing investment -- hit bottom for the October-December quarter of 2020 and then continued picking up through around the middle of 2021. It has been more or less flat recently. For the time being, housing investment is likely to be more or less flat, albeit with fluctuations. Thereafter, it is expected to follow a moderate declining trend toward the end of the projection period, reflecting demographic developments.

Chart 40: Housing Investment



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.
Note: The figure for 2021/Q4 is the October-November average.

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

II. Current Situation of Prices and Their Outlook

Developments in Prices

The rate of change in the producer price index (PPI, adjusted for the effects of seasonal changes in electricity rates) has continued to increase clearly on a quarter-on-quarter basis, reflecting developments in international commodity prices and foreign exchange rates (Chart 41). The year-on-year rate of increase in the services producer price index (SPPI, excluding international transportation) has been in the range of 0.5-1.0 percent due to a rebound from the decline seen in 2020 and a recovery in demand for advertising and accommodation services.

Chart 41: Inflation Indicators

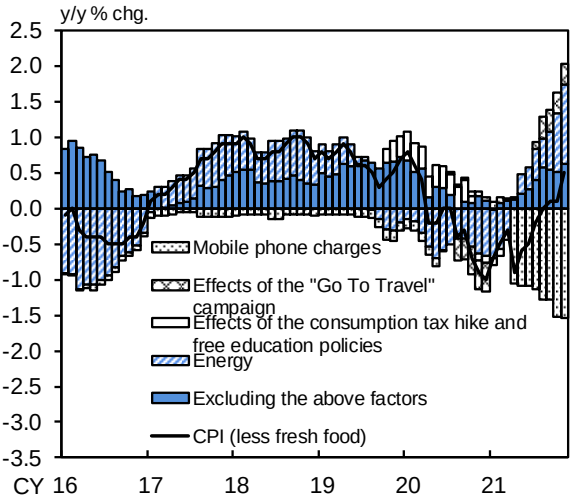
y/y % chg.

	21/Q1	21/Q2	21/Q3	21/Q4
Consumer Price Index (CPI)				
Less fresh food	-0.5	-0.6	0.0	0.3
Adjusted figure	-0.5	0.4	1.0	1.6
Less fresh food and energy	0.0	-0.9	-0.5	-0.7
Adjusted figure	0.0	0.2	0.6	0.6
Producer Price Index (q/q % chg.)	1.6	2.5	1.9	2.5
Services Producer Price Index	0.2	1.0	0.8	0.7
GDP Deflator	-0.1	-1.1	-1.2	
Domestic demand deflator	-0.5	0.3	0.5	

Sources: Ministry of Internal Affairs and Communications; Bank of Japan; Cabinet Office.
Notes: 1. Figures for the producer price index (PPI) are adjusted for the hike in electric power charges during the summer season. Figures for the services producer price index (SPPI) exclude international transportation.
2. Adjusted figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.
3. Figures for the CPI and the SPPI for 2021/Q4 are October-November averages.

The year-on-year rate of change in the CPI (all items less fresh food), despite being affected by the reduction in mobile phone charges, has been slightly positive, reflecting price rises of energy and other items (Chart 42). That in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the reduction in mobile phone charges) has remained positive at around 0.5 percent (Chart 41).[15]

Chart 42: CPI (Less Fresh Food)



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

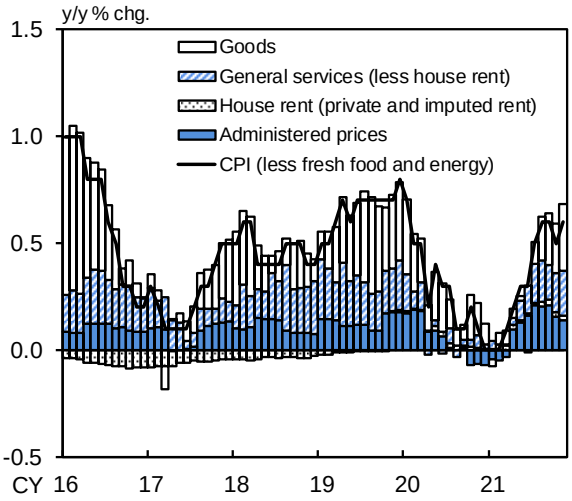
Looking at the breakdown of developments in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the reduction in mobile phone charges), the

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

year-on-year rates of change in goods, general services, and administered prices have been positive (Chart 43). With respect to goods, prices of daily necessities and durable goods have continued to see firm developments, and the rate of change in prices of food products has increased moderately in positive territory, reflecting the pass-through of raw material costs on to some of the products. Regarding general services, hotel charges that exclude the effects of the "Go To Travel" campaign have picked up, and dining-out and housework-related services have partly seen a pass-through of raw material costs and personnel expenses. Administered prices have risen somewhat for fire and earthquake insurance premiums as well as water and sewerage charges for some local governments.

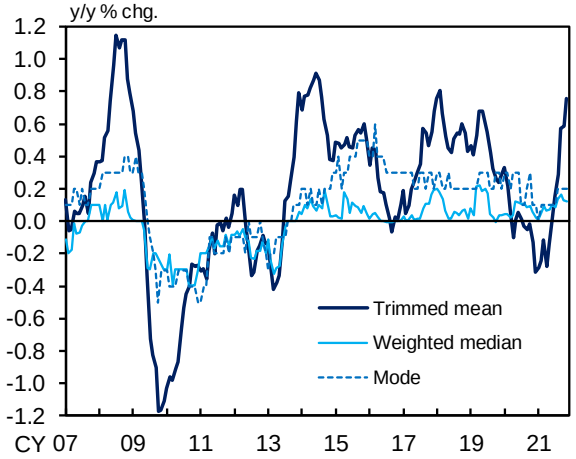
The indicators for capturing the underlying trend in the CPI have exhibited the following developments (Chart 44).[16] The trimmed mean of the year-on-year rate of change in the CPI has increased to the range of 0.5-1.0 percent on the back of price rises in such items as food products and daily necessities. The weighted median and the mode, which is less susceptible to developments in certain CPI items, have been marginally positive. Looking at annual price changes across all CPI items (less fresh food), the share of price-increasing items minus the

Chart 43: CPI (Excluding Temporary Factors)



Source: Ministry of Internal Affairs and Communications.
Notes: 1. Administered prices (less energy) consist of "public services" and "water charges."
2. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.

Chart 44: Various Measures of Core Inflation



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

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

share of price-decreasing items has continued increasing in positive territory, returning of late to the level seen around 2019, before the pandemic (Chart 45). This is because the number of price-increasing items has been on a moderate uptrend for such items as food products.

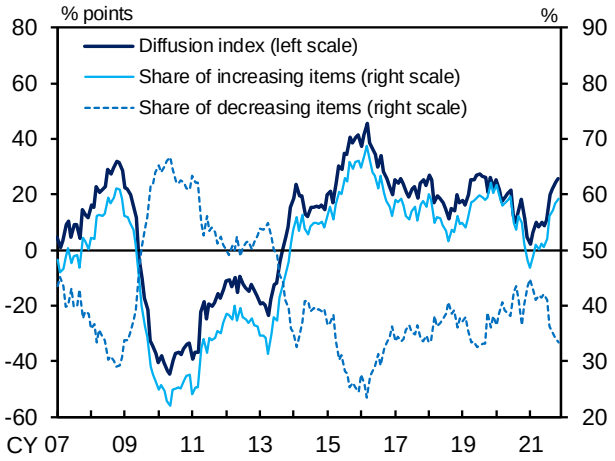
In sum, with the impact of COVID-19 waning gradually, the CPI inflation rate has risen moderately in terms of the underlying trend, partly reflecting the pass-through of raw material costs.

Meanwhile, the year-on-year rate of change in the domestic demand deflator has been at around 0.5 percent (Chart 41). This is because, while the private consumption deflator has declined due to the effects of the reduction in mobile phone charges, deflators such as for business fixed investment and housing investment have increased significantly, reflecting rises in material and other prices. On the other hand, the year-on-year rate of change in the GDP deflator has been in the range of minus 1.0 to minus 1.5 percent, pushed down by an increase in the import deflator in reflection of developments in crude oil prices, for example.

Environment surrounding Prices

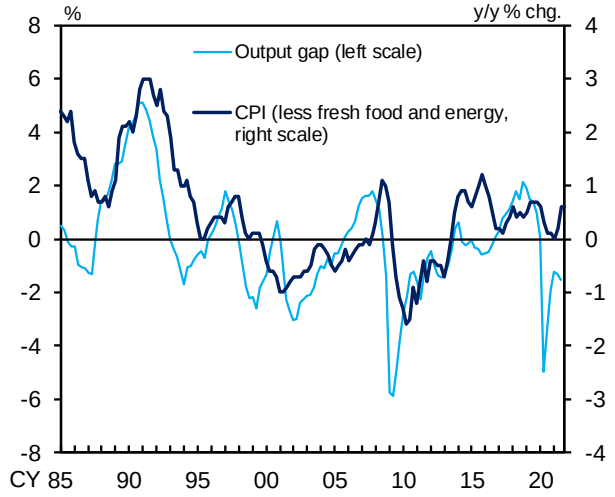
In the outlook for prices, the main factors that determine inflation rates are assessed as follows. First, the output gap is projected to turn positive around the first half of fiscal 2022 with the economy returning to a growth path that outpaces its potential growth rate, and then continue to expand moderately (Charts 3 and 46).

Chart 45: Diffusion Index of Price Changes



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

Chart 46: Inflation Rate and Output Gap



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.
Notes: 1. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses. The figure for 2021/Q4 is the October-November average.
2. Figures for the output gap are staff estimates.

Second, medium- to long-term inflation expectations have risen moderately and are likely to follow an uptrend (Charts 47 and 48). That is, in terms of the adaptive component, inflation expectations are likely to be pushed up by actual price increases along with improvement in the output gap. In terms of the forward-looking component, the Bank will pursue monetary easing through its strong commitment to achieving the price stability target, and this is projected to be effective in pushing up inflation expectations.

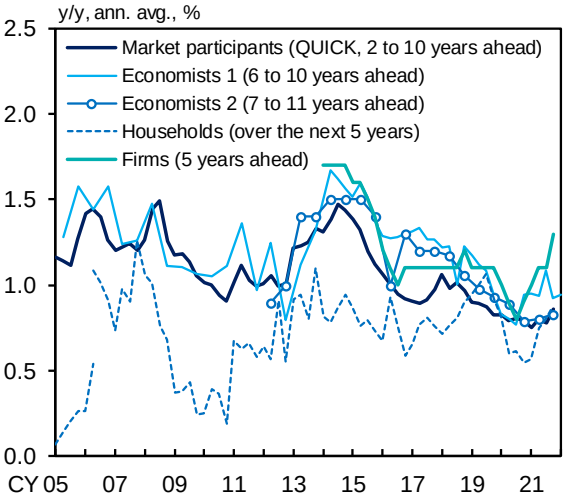
The third factor is developments in import prices, which have continued to see a clear increase as international commodity prices, such as for crude oil and copper, have risen or remained high (Chart 49). The rise in international commodity prices and the resultant increase in the PPI seen recently will consequently make a positive contribution to the CPI, with upstream cost increases gradually being passed downstream.[17] For the time being, the year-on-year rate of change in the CPI (all items less fresh food) is expected to be pushed up by a rise in energy prices, such as for petroleum products, electricity charges, and manufactured and piped gas charges, as well as a moderate pass-through of cost increases to prices of the CPI items, mainly for food and dining-out.

Outlook for Prices

Based on this underlying scenario, as the impact of COVID-19 wanes, the underlying trend in the inflation rate is expected to increase moderately, supported by improvement in the output gap and

[17] Box 2 outlines the effects that a rise in import prices has on consumer prices.

Chart 47: Inflation Expectations (Survey)

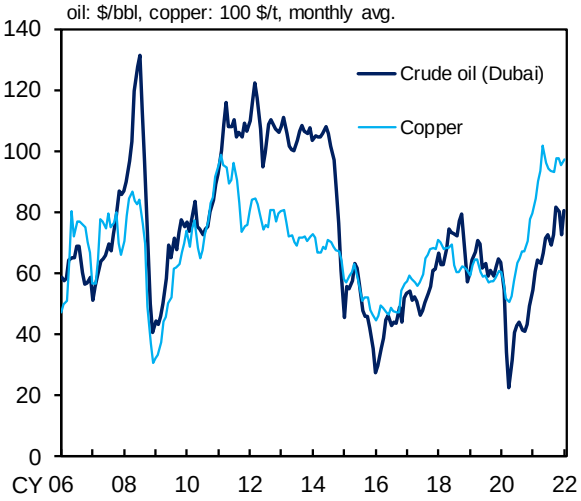


Sources: Bank of Japan; QUICK, "QUICK Monthly Market Survey <Bonds>"; JCER, "ESP Forecast"; Consensus Economics Inc., "Consensus Forecasts."
Notes: 1. "Economists 1" shows the forecasts of economists in the *Consensus Forecasts*. "Economists 2" shows the forecasts of forecasters surveyed for the *ESP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

Chart 48: Inflation Expectations (BEI)

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

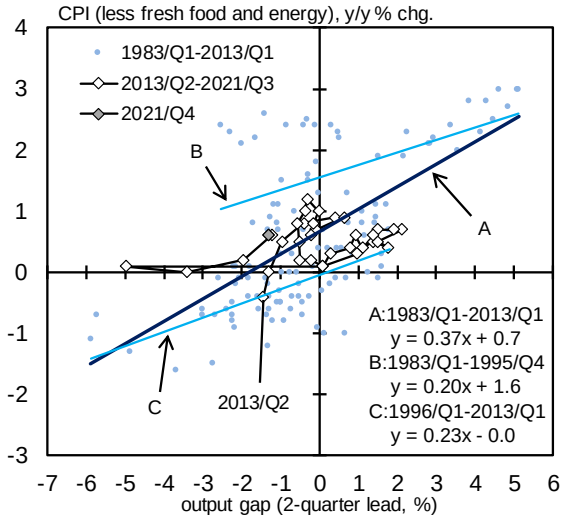
Chart 49: International Commodity Prices



Sources: Nikkei Inc.; Bloomberg.

the rise in inflation expectations. The year-on-year rate of change in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the reduction in mobile phone charges) is likely to increase in positive territory for the time being because raw material costs are expected to be moderately passed on to items such as food. Thereafter, with the output gap continuing to improve steadily and medium- to long-term inflation expectations rising through both the adaptive and the forward-looking expectation formation mechanisms, the year-on-year rate of change in the CPI excluding the temporary factors is likely to increase (Chart 50).

Chart 50: Phillips Curve



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.
Notes: 1. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses. The figure for 2021/Q4 is the October-November average.
2. Figures for the output gap are staff estimates.

Under these circumstances, the year-on-year rate of increase in the CPI (all items less fresh food), which includes energy prices, mobile phone charges, and the effects of the "Go To Travel" campaign, is highly likely to decelerate temporarily toward the end of fiscal 2021. This is based on the projection that, although the rate of change in this CPI will be pushed up by the rise in energy prices reflecting the increase in crude oil prices, it will continue to be pushed down significantly by the past reduction in mobile phone charges and will also be affected by the "Go To Travel" campaign.[18] Thereafter, the year-on-year rate of change in the CPI (all items less fresh food) is likely to increase clearly in positive territory, since it is expected that prices such as of energy and food will continue to push up this rate

[18] The CPI has been pushed up by a rebound in hotel charges from the decline brought about by the "Go To Travel" campaign that took place in 2020, but this positive contribution is expected to dissipate in January 2022. If the campaign resumes and discounts on hotel charges are reflected in the CPI, the CPI could be pushed down for the corresponding campaign period.

of change and the effects of the reduction in mobile phone charges will dissipate. Toward the end of the projection period, the rate of increase is likely to stay at around 1 percent. This is based on the projection that, while positive contributions such as of energy prices will wane, prices of a wide range of items will increase, reflecting improvement in the output gap and the rise in inflation expectations.

III. Financial Developments in Japan

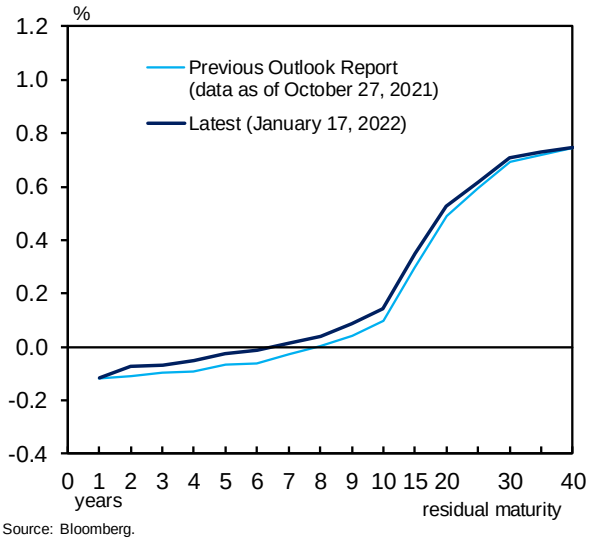
Financial Conditions

Financial conditions have been accommodative on the whole, although weakness in firms' financial positions has remained in some segments.[19]

Under QQE with Yield Curve Control, the shape of the yield curve for JGBs has been consistent 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 51). 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.

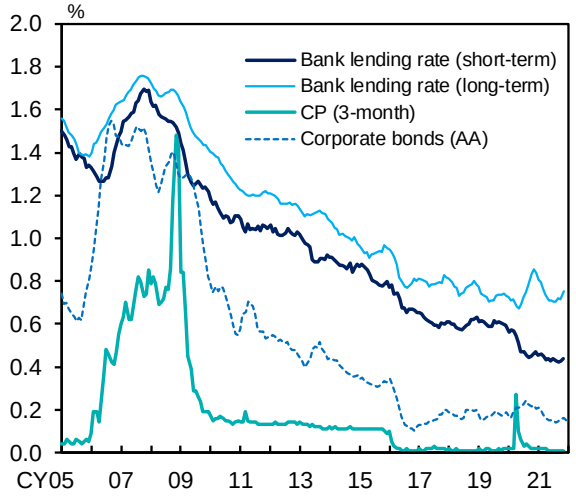
Firms' funding costs have been hovering at extremely low levels (Chart 52). Issuance rates for CP showed a significant rise in April 2020 but then declined, reflecting an increase in the Bank's purchases of CP. Subsequently, they have been at extremely low levels as demand for funds by large firms that increased in response to COVID-19 has subsided. The DI for issuance conditions for CP in the *Tankan* deteriorated temporarily after the outbreak of COVID-19 but has been on an improving trend, mainly reflecting stabilized issuance rates. Issuance rates for

Chart 51: Yield Curves



Source: Bloomberg.

Chart 52: Bank Lending Rates and Issuance Yields for CP and Corporate Bonds



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

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

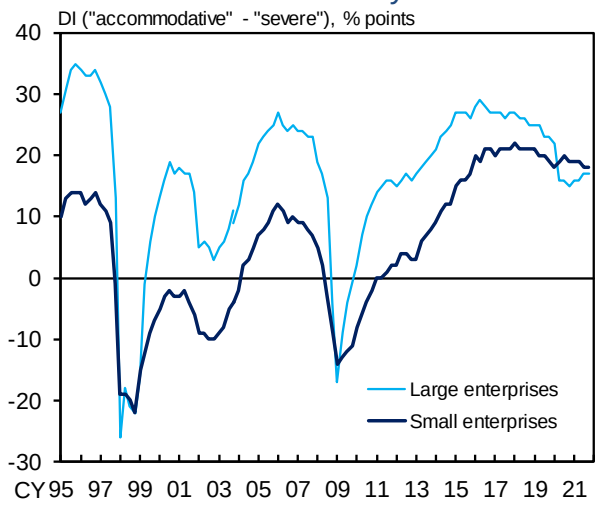
[19] Box 3 explains developments in corporate financing since the outbreak of COVID-19.

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.

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, owing to the respective financing support measures taken by the Bank and the government, as well as efforts made by financial institutions, although the DI for large firms has been slightly lower than the pre-pandemic level (Chart 53). Looking at corporate financing, the DI for firms' financial positions in the *Tankan* suggests that, although weakness has remained, particularly for firms in industries that are susceptible to the impact of COVID-19, as well as for small and medium-sized ones, financial positions have continued to improve on the whole on the back of a pick-up in the economy (Chart 54).

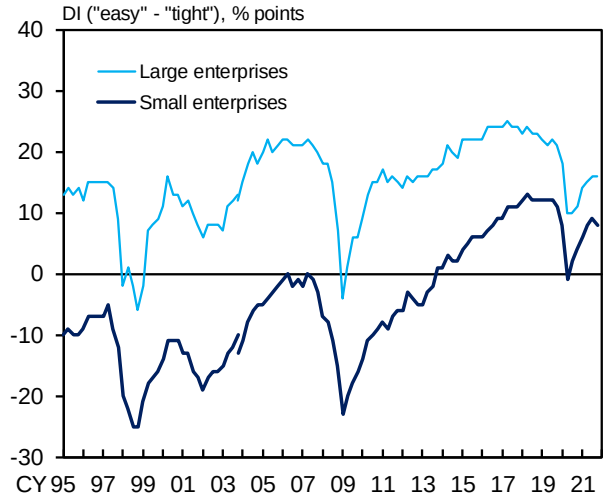
Regarding demand for funds, some firms' demand for working capital has risen particularly in the CP market, reflecting raw material cost increases, whereas precautionary demand for liquidity due to the impact of COVID-19 has subsided on the whole. Under these circumstances, the year-on-year rates of increase in the amount outstanding of bank lending and the aggregate amount outstanding of CP and corporate bonds have been at around 0.5 percent and around 9 percent, respectively, both showing

Chart 53: Lending Attitudes of Financial Institutions as Perceived by Firms



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

Chart 54: Firms' Financial Position

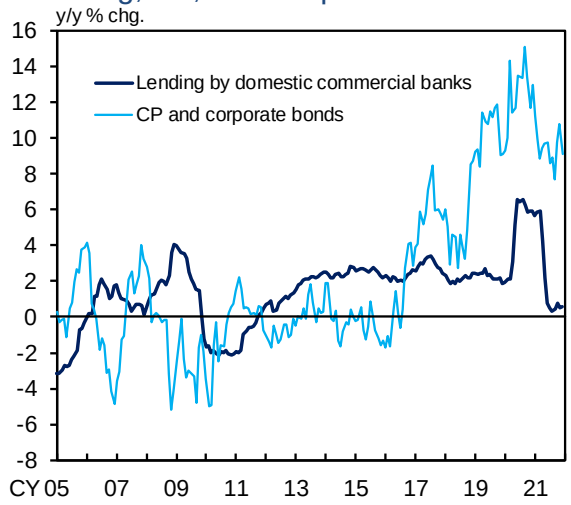


Source: Bank of Japan.
Note: Based on the *Tankan*. All industries. There is a discontinuity in the data for December 2003 due to a change in the survey framework.

a smaller increase compared with immediately after the outbreak of COVID-19 (Chart 55).

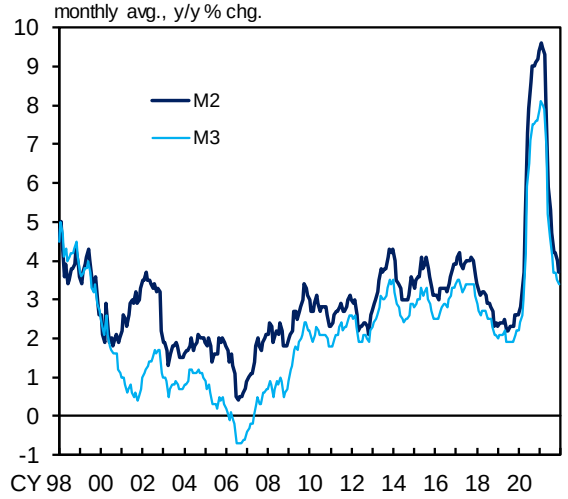
The year-on-year rate of change in the monetary base, while declining compared with a while ago, has remained positive and is in the range of 8.0-8.5 percent recently. Its amount outstanding was 670 trillion yen, of which the ratio to nominal GDP was 125 percent.[20] Similarly, the year-on-year rate of change in the money stock (M2) has declined due to developments such as in the amount outstanding of bank lending, but has remained positive, in the range of 3.5-4.0 percent, reflecting an increase in fiscal spending (Chart 56).

Chart 55: Amounts Outstanding of Bank Lending, CP, and Corporate Bonds



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

Chart 56: Money Stock



Source: Bank of Japan.

[20] The amount outstanding of the monetary base is as of end-December 2021. Nominal GDP is the figure for the July-September quarter of 2021.

Developments in Financial Markets

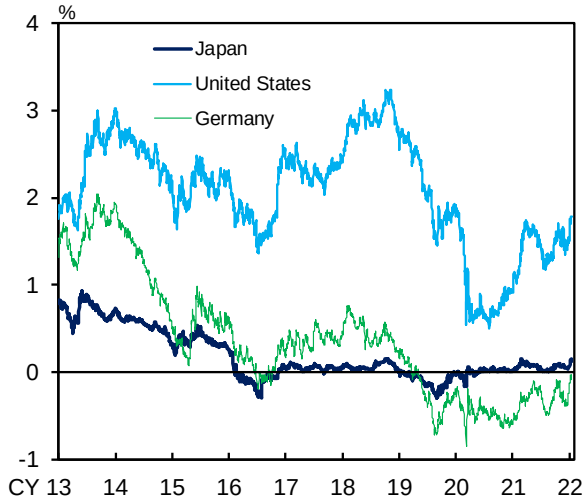
In global financial markets, there have been large fluctuations due to both bullish and bearish factors: favorable corporate results, uncertainties over the Omicron variant, and moves to reduce monetary accommodation in the United States and Europe.

Yields on 10-year government bonds in the United States declined temporarily because of safe-haven flows brought about by the outbreak of the Omicron variant. However, the yields have increased, mainly reflecting moves to reduce monetary accommodation by the Federal Reserve against the background of a rise in inflation (Chart 57). Yields on 10-year government bonds in Germany declined temporarily due to a correction in market expectations regarding a swift reduction in monetary accommodation by the European Central Bank (ECB), but they have increased along with U.S. yields.

Premiums for U.S. dollar funding through the dollar/yen foreign exchange swap market have been at low levels when fluctuations are smoothed out, albeit with temporary upward pressure stemming from seasonal transactions conducted in view of the year-end (Chart 58).

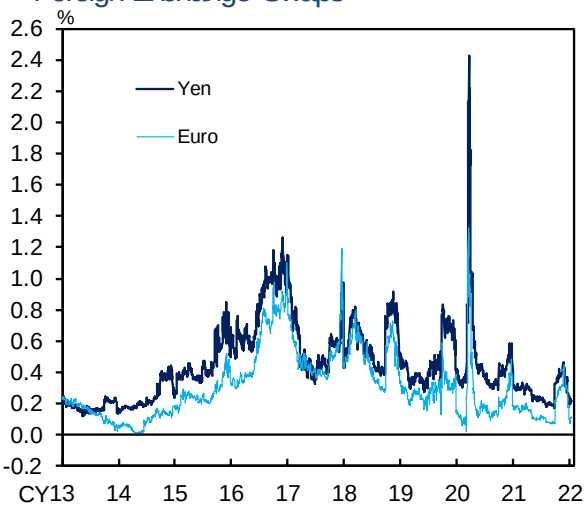
Stock prices in the United States and Europe have been at high levels, mainly on the back of favorable corporate results. However, they have fluctuated to a large degree, as seen in a relatively large decline when risk sentiment deteriorated, mainly due to the outbreak of the Omicron variant (Charts 59 and 60). Stock prices

Chart 57: 10-Year Government Bond Yields in Selected Advanced Economies



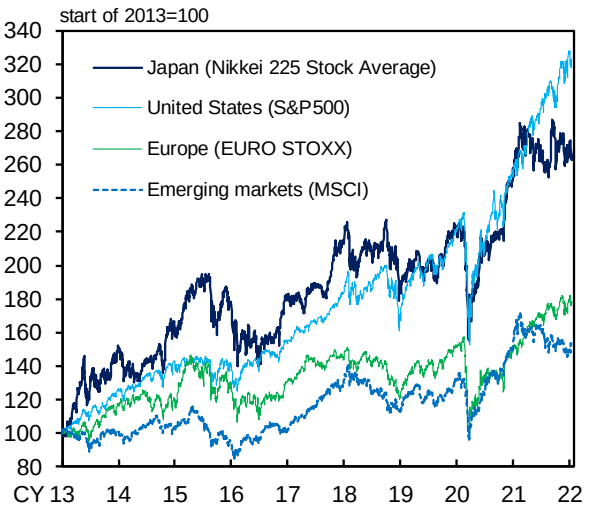
Source: Bloomberg.

Chart 58: Dollar Funding Premiums through Foreign Exchange Swaps



Source: Bloomberg.
Notes: 1. U.S. dollar funding premiums are calculated as the difference between U.S. dollar fundings rates (3-month) in the dollar/yen or euro/dollar foreign exchange swap market and those in the money market.
2. The interest rates used for the calculation are as follows: for the yen, the OIS rate; for the euro, the EONIA-referencing OIS rate before October 4, 2019, and the €STR-referencing OIS rate thereafter; for the U.S. dollar, the OIS rate before January 3, 2019, and the SOFR thereafter.

Chart 59: Selected Stock Price Indices



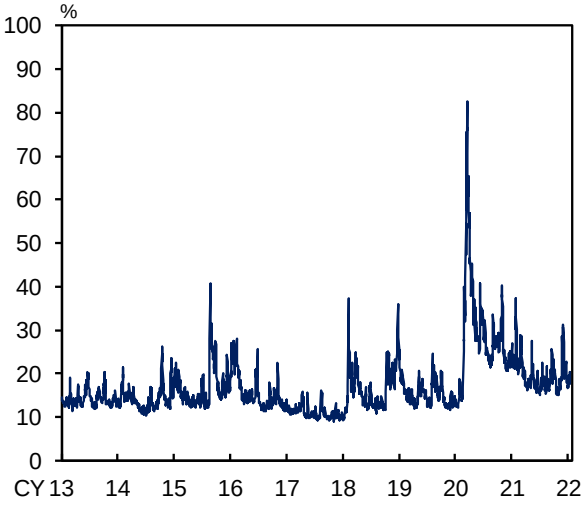
Source: Bloomberg.
Note: Figures for emerging markets are those for the MSCI Emerging Markets Index (local currency).

in Japan also have fluctuated significantly; they rose, mainly due to favorable corporate results, but then declined to a relatively large degree when risk sentiment deteriorated globally. Although developments in stock prices in emerging economies have differed across countries and regions, mainly reflecting commodity prices and the COVID-19 situation, the prices have been more or less flat on the whole.

J-REIT prices have declined somewhat, mainly reflecting a rise in U.S. interest rates (Chart 61).

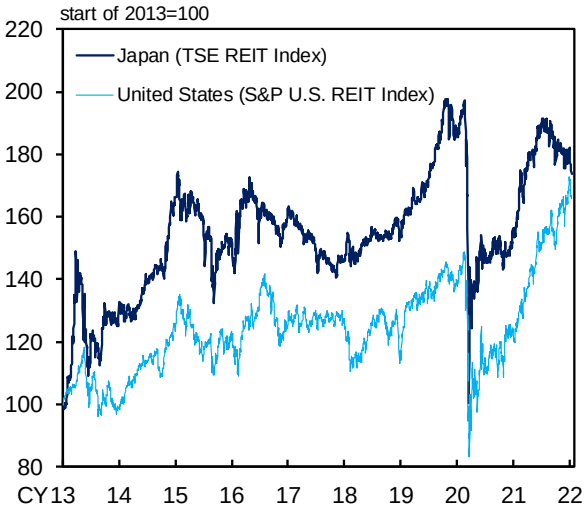
In foreign exchange markets, the yen has depreciated somewhat against the U.S. dollar, albeit with fluctuations, reflecting a widening of the yield differential between Japan and the United States (Chart 62). The yen appreciated against the euro, mainly due to an increase in COVID-19 cases in the euro area, but has depreciated recently, reflecting a rise in interest rates in European economies.

Chart 60: Stock Market Volatility (VIX)



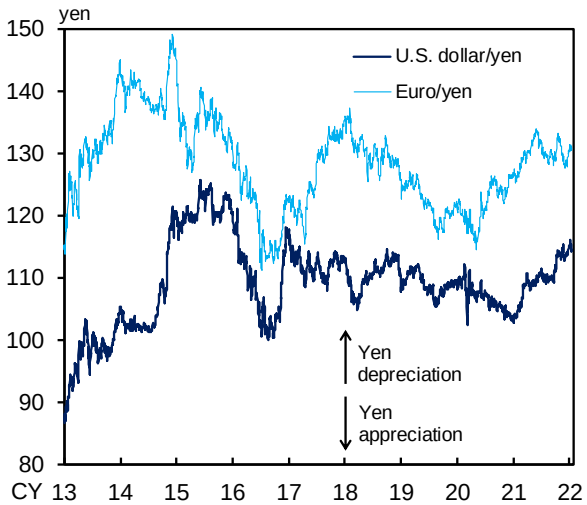
Source: Bloomberg.

Chart 61: Selected REIT Indices



Source: Bloomberg.

Chart 62: U.S. Dollar/Yen and Euro/Yen



Source: Bloomberg.

(Box 1) Impact of Exchange Rate Movements on Japan's Real Economy

This box presents an empirical analysis of the impact of movements in foreign exchange rates on Japan's economy based on objective data, taking recent changes in economic structure into account.

There are a wide range of channels through which movements in foreign exchange rates can affect the economy. The following considers a depreciation of the yen; the impact would be the opposite in the case of the yen's appreciation. Specifically, a depreciation would (1) increase the volume of goods exports through improved price competitiveness of Japanese exporting firms, (2) increase domestic corporate profits through a rise in the goods export value in yen terms, (3) increase services exports (inbound tourism consumption by foreign visitors to Japan), (4) increase net income receipts from abroad converted into yen (improving the income balance within the balance of payments), and (5) decrease domestic corporate profits or consumer purchasing power due to a rise in import costs. Among these channels, there is a trade-off between (1) and (2) in the short run, depending on whether firms change the price in yen terms or the volume of their exports. Moreover, from a long-term perspective, if firms proceed with shifting their production sites to overseas, the impact through channels (1) and (2) will shrink, while the impact through channel (4) will increase. Thus, the channels through which exchange rate movements affect the real economy can change as a result of changes in corporate strategy and

economic structure.

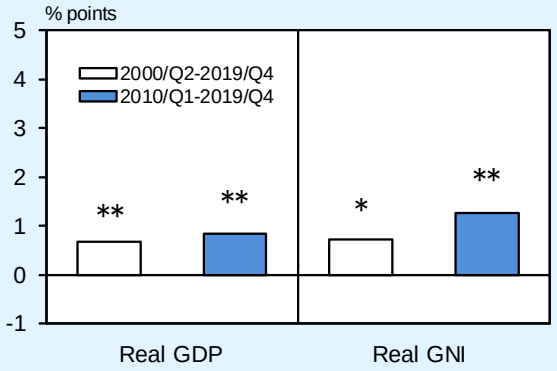
Given these considerations, changes in macroeconomic variables in response to a 10 percent yen depreciation shock on real effective exchange rates are examined using a vector auto-regression (VAR) model.[21] In order to take into account that the economic structure may have changed in recent years, the estimation results for (1) the two decades before the COVID-19 pandemic (2000-2019) and (2) the decade before the pandemic (2010-2019) are compared.

Starting with the most fundamental result, the estimates show that the impact of the yen's depreciation on real GDP is statistically significantly positive, including in recent years (Chart B1-1[1]).

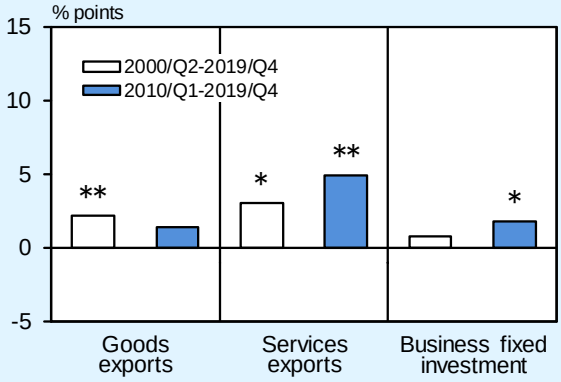
Next, the main channels through which the yen's depreciation affects Japan's economic activity and prices have changed in recent years. First, the positive impact of the yen's depreciation on the volume of goods exports has been smaller in recent years (Chart B1-1[2]).[22] This is attributed to the fact that the link between export prices in

Chart B1-1: Response to a 10% Yen Depreciation Shock

1. Real GDP and Real GNI



2. Real GDP Components



Sources: BIS; Cabinet Office; CPB Netherlands Bureau for Economic Policy Analysis; IMF, etc.

Notes: 1. The VAR models (three-period lag) are estimated using the real effective exchange rate (quarterly log difference) and each of the macroeconomic variables shown on the horizontal axis (quarterly log difference) as endogenous variables. Shocks are identified by Cholesky decomposition, where variables are ordered as above. World real GDP (q/q % change) is used as an exogenous variable. The bars represent the cumulative responses after four quarters following a 10% yen depreciation shock.
2. For the estimation of the impact on real goods exports and real business fixed investment, the world trade volume (quarterly log difference) instead of world real GDP is used as an exogenous variable in the models.
3. For the estimation of the impact on real goods exports, dummy variables for the Great East Japan Earthquake are included for 2011/Q2-Q3 in the model. For the estimation of the impact on real services exports, a Great East Japan Earthquake dummy variable for 2011/Q2 as well as a dummy variable for the rebasing of the Balance of Payments Related Statistics for 2014/Q1 are included in the model.
4. ** and * in the figures denote statistical significance at the 5 and 10 percent levels, respectively (obtained using the bootstrap method).

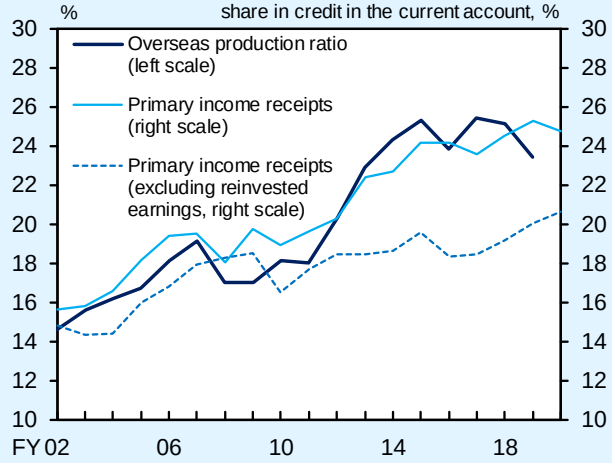
[21] The VAR model is used to estimate cumulative responses after 4 quarters following a 10 percent yen depreciation shock on the quarter-on-quarter rate of change in foreign exchange rates. Note that the results are almost the same when estimating cumulative responses after 8 or 12 quarters following the shock.

[22] The decline in the positive impact of the yen's depreciation on the goods export volume also is pointed out in the following: "Changes in the Environment Surrounding Japan's Exports: An Approach Focusing on Global Trade Volume and Export Share," *Bank of Japan Review Series*, no. 15-E-7, April 2015, and Box 2 in the April 2018 Outlook Report.

foreign currency terms, such as the U.S. dollar, and exchange rates has weakened, mainly because, (1) until the mid-2010s, major exporting firms shifted their production sites to overseas, and (2) during this process, domestic production of Japanese firms shifted to higher value-added goods (Charts B1-2 and B1-3).[23] An analysis of detailed data by item shows that, while the exchange rate elasticity of export volumes remains statistically significantly positive for many items in recent years (1,947 out of the 2,710 items analyzed), the distribution has shifted to the left -- which indicates a lower exchange rate elasticity -- compared with a decade earlier (Chart B1-4). In industries where the overseas production ratio is high and domestic production has shifted to higher value-added goods, more items are seeing a decline in the exchange rate elasticity.

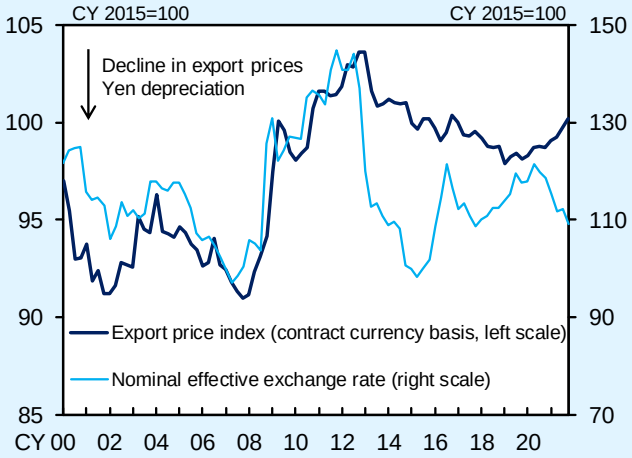
Second, on the other hand, the positive impact that the yen's depreciation has on Japan's economy through improvement in the income balance within the balance of payments has been larger in recent years. Globalization of firms has led to steady increases in the amount of profits that Japanese firms earn from their overseas businesses and the amount of profits repatriated to Japan through dividends and other means (Chart B1-2). As a result, when the VAR analysis is conducted using real gross national income (real GNI, which is defined as real GDP plus trading gains and losses as well as net income from the rest of the world) rather than real GDP, it

Chart B1-2: Overseas Production Ratio and Primary Income



Sources: Ministry of Economy, Trade and Industry; Ministry of Finance and Bank of Japan.
Note: The overseas production ratio is based on "all domestic companies (manufacturing industries)" from the *Basic Survey on Overseas Business Activities* and calculated as follows: Sales of overseas affiliates / (Sales of overseas affiliates + Sales of domestic companies).

Chart B1-3: Export Prices of Transportation Equipment



Sources: Bank of Japan; BIS.
Note: The figure for the nominal effective exchange rate for 2021/Q4 is the October-November average.

[23] In a case where export prices in foreign currency terms do not move together with foreign exchange rates, the yen's depreciation does not raise export volumes but instead increases export prices in yen terms. Therefore, even in this case, the yen's depreciation has a positive impact on the export value and corporate profits through improvement in export profitability.

is confirmed that the positive impact of the yen's depreciation has been larger in recent years (Chart B1-1[1]). The increase in profits, including income transfers from overseas, also seems to have pushed up domestic business fixed investment (Chart B1-1[2]).

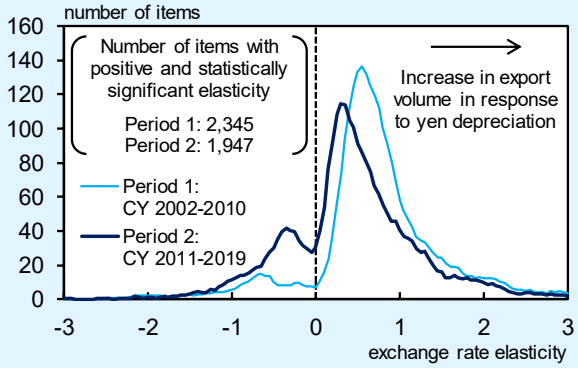
Third, in terms of changes in the impact on prices, the pass-through of the yen's depreciation to the CPI seems to have been larger in recent years, reflecting a rise in the import penetration ratio of household appliances and other products through the early 2010s (Chart B1-5).

Thus, even when taking into account economic structural changes in recent years, the yen's depreciation is likely to continue to have a positive impact on Japan's economy on the whole.[24] However, the following three points need to be borne in mind.

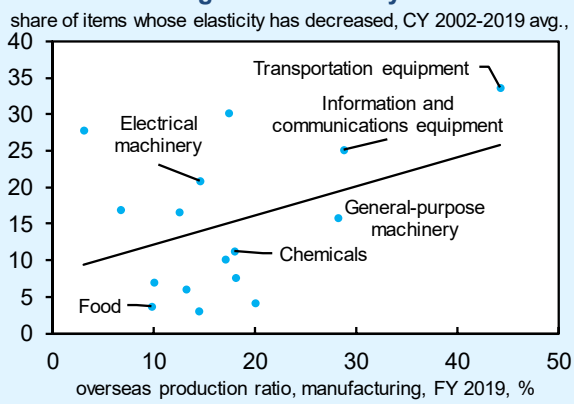
First, the majority of firms, including exporters, tend to favor exchange rate stability in order to avoid uncertainties in formulating and executing their business plans. This can be confirmed quite often in anecdotal information from a wide range of firms. Regardless of whether the yen depreciates or appreciates, if the exchange rates change rapidly at a pace that economic entities cannot keep up with, this may have an adverse impact on the economy. Therefore, not only the

Chart B1-4: Impact of Yen Depreciation on Export Volume

1. Distribution of Exchange Rate Elasticities



2. Overseas Production Ratio and Change in Exchange Rate Elasticity



Sources: Ministry of Economy, Trade and Industry; Ministry of Finance; Ministry of Internal Affairs and Communications; BIS; CPB Netherlands Bureau for Economic Policy Analysis.

Notes: 1. Exchange rate elasticity β is estimated based on the following regression for each item i:
Export volume of item i (s.a., m/m % chg. of 6-month backward moving average)
= Constant
– β × Real effective exchange rate (n-month lag, m/m % chg.)
+ γ × World trade volume (s.a., m/m % chg.)
Lag length n is set between 0 and 24 and chosen such that β is maximized and statistically significant at least at the 10 percent level. If no significant β is obtained, n is set to 0.
2. β is estimated for 2,710 items (classified at the 9-digit level and excluding re-exported goods) for which there are neither missing values nor changes in units during the period from 2002 through 2019.
3. The share of items whose elasticity has decreased is the share of items in each industry for which β is positive and statistically significant for Period 1 but either has decreased by one or more with the sign remaining positive or is no longer significant for Period 2.
4. The definition of the overseas production ratio is the same as in Chart B1-2.

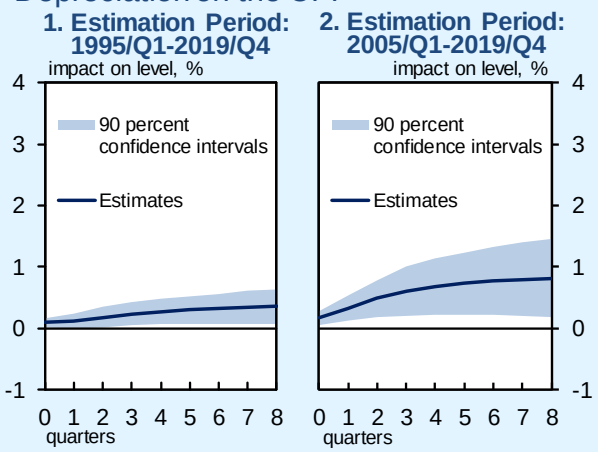
[24] The yen's depreciation can also push up services exports (inbound tourism consumption). While this channel currently is not operating due to entry and travel restrictions under the COVID-19 pandemic, it is expected to start operating again when these restrictions are eased as the impact of COVID-19 wanes.

level of the exchange rates but also the pace and duration of their movements should be taken into account.

Second, the direction and magnitude of the impact of exchange rate movements seem to vary depending on the industry and firm size. For example, while the yen's depreciation has a positive impact on profits of export-oriented industries, it has a negative impact on profits of domestic demand-oriented industries through increased import costs. The yen's depreciation also pushes down households' real income through rises in prices of imported goods and other items. Attention should also be paid to the increased impact on the CPI through the aforementioned rise in the import penetration ratio.

Third, and related to the second point, exchange rate movements have a different impact on sentiment, depending on how the economy, including stock prices and general prices, is affected by exchange rates. Looking at household activity-related comments in the Cabinet Office's *Economy Watchers Survey*, there are currently few comments referring to the yen's depreciation and it is not confirmed that exchange rate movements are having a major impact on sentiment (Chart B1-6). It should be noted, however, that (1) in the period from the end of 2012 through 2013, the yen's depreciation together with a rise in stock prices tended to be mentioned in comments that suggested an economic improvement, whereas (2) in the period from autumn 2014 through 2015, the yen's depreciation and a rise in general prices tended to

Chart B1-5: Impact of a 10% Yen Depreciation on the CPI



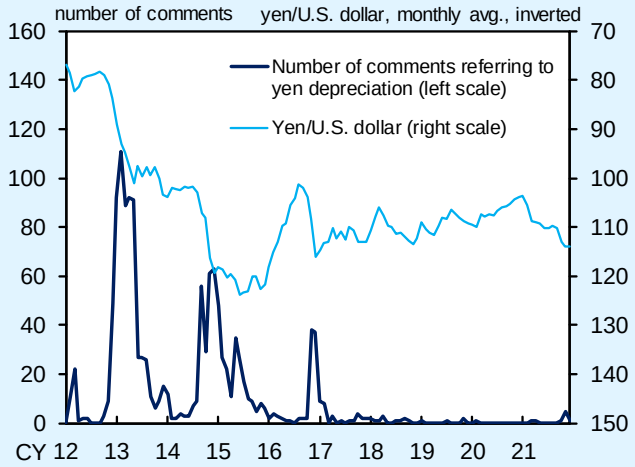
Sources: Ministry of Internal Affairs and Communications; Bank of Japan; BLS; Bloomberg.

Note: The impact of a 10% yen depreciation on the CPI (less fresh food) is estimated for each period employing a VAR model (two-period lag) and using the yen/U.S. dollar exchange rate, the output gap, and the CPI as endogenous variables. Shocks are identified by Cholesky decomposition, where variables are ordered as above. Real commodity prices (the CRB Index deflated by the U.S. CPI) are used as an exogenous variable.

be mentioned in comments that suggested an economic downturn.

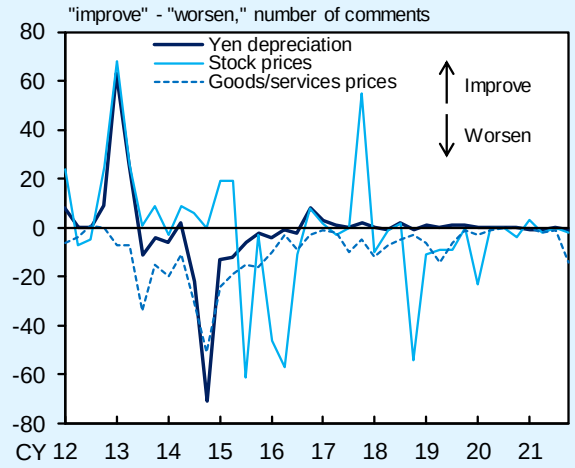
Chart B1-6: Yen Depreciation and Private Consumption-Related Business Sentiment

1. Comments about Yen Depreciation in the *Economy Watchers Survey*



Sources: Cabinet Office; Bloomberg.
Note: Figures for the number of comments referring to yen depreciation are based on the *Economy Watchers Survey* (household activity-related). In the comments, respondents provide reasons for their assessment of the economic outlook.

2. Sentiment toward Yen Depreciation



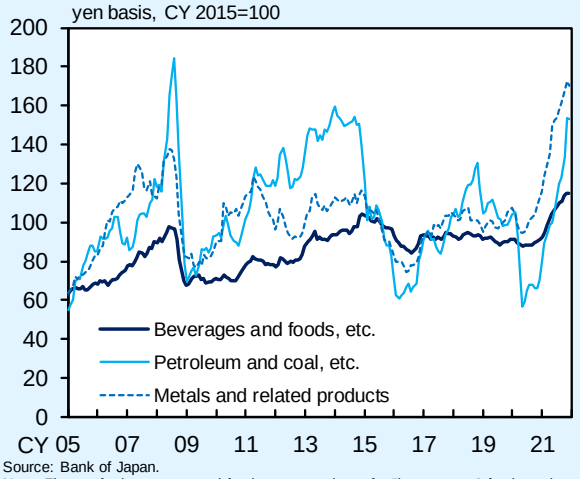
Source: Cabinet Office.
Note: Figures are based on comments in the *Economy Watchers Survey* (household activity-related). In the comments, respondents provide reasons for their assessment of the economic outlook. Focusing on comments referring to "yen depreciation," "stock prices," or "goods/services prices," the chart shows the difference between the number of comments indicating that respondents expect the economy to get "better" or "slightly better" in the next 2-3 months and those expecting the economy to get "worse" or "slightly worse."

(Box 2) Raw Material Cost Increases and Consumer Prices

Japan's import prices have continued to show a clear increase since early 2021, and this is attributable to the fact that prices of a wide range of commodities -- including crude oil, food, and metals -- have risen or remained high, as well as to the effects of the yen's depreciation (Chart B2-1).[25] The significant increase in raw material costs has brought about a rise in product prices -- especially export prices -- in the manufacturing industry, where demand has recovered or expanded. Even in the case of the nonmanufacturing industry, as well as small and medium-sized firms, which do not directly benefit from an upturn in the export environment, there has been a gradual increase in the number of firms that pass on part of cost increases to selling prices. This box outlines the effects of the raw material cost increases on consumer prices.[26]

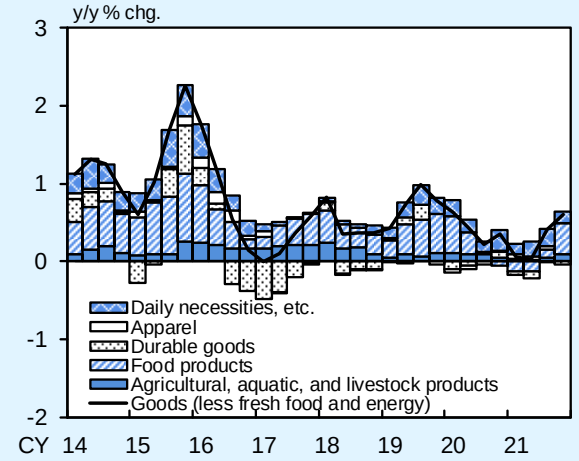
It is projected in this Outlook Report that a rise in upstream prices, such as raw material costs, will be passed on to the CPI, especially to items such as energy and food. That said, the baseline scenario is that the pace of the pass-through of cost increases is likely to be moderate and the year-on-year rate of increase in the CPI is expected to be quite low compared with the

Chart B2-1: Import Price Index (IPI)



Source: Bank of Japan.
Note: Figures for beverages and foods, etc. are those for "beverages & foods and agriculture products for food." Figures for petroleum and coal, etc. are those for "petroleum, coal & natural gas."

Chart B2-2: Developments in Goods Prices (CPI)



Source: Ministry of Internal Affairs and Communications.
Notes: 1. Figures exclude the effects of the consumption tax hikes.
2. Figures for 2021/Q4 are October-November averages.

[25] Developments in the import price index (IPI) show that, on a year-on-year basis, the recent rate of increase in Japan's import prices is mainly explained by an increase in prices in contract currency terms. The year-on-year rate of change in the IPI for December 2021 was 33.3 percent in contract currency terms and 41.9 percent in yen terms.

[26] Regarding the link between international commodity prices and domestic prices, see also Box 3 in the July 2021 Outlook Report.

producer price index (PPI).

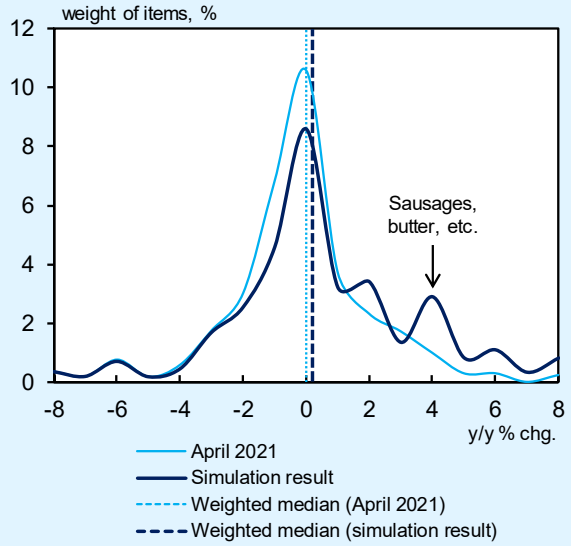
As the background to this, it can be pointed out that the pass-through of upstream price rises to selling prices for consumers has been observed thus far mainly in food prices, rather than in a wide range of items (Chart B2-2). That is, even though prices of metals and related products have risen markedly in the current phase, partly due to the increase in demand related to decarbonization, and have pushed up the PPI significantly, the pass-through to the CPI seems to have been small, at least in the short run. Using sparse estimation, the extent to which a rise in import prices pushes up the individual CPI items in the short run is examined (Chart B2-3).[27] The result shows that (1) the rise in import prices of beverages and food pushes up the prices of many CPI items categorized as food products (moreover, the prices of some items in food products with a high percentage of raw materials see particularly large increases), whereas (2) the impact of the rise in import prices of metals and related products is very small, mainly reflecting their low share in the costs of final products.

That said, there are both upside and downside risks regarding the extent to which raw material cost increases will be passed on to the CPI. Along with the resumption of economic activity, price competition, which has been constrained during the pandemic, may resume. In general, a recovery in demand brings about price rises. That said, in the case of Japan -- where fierce price

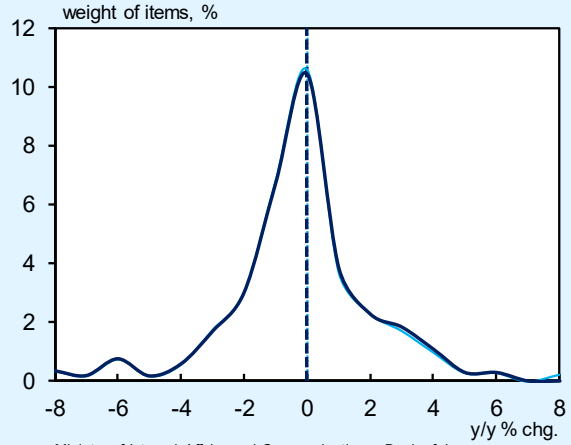
[27] Sparse estimation is an estimation method that selects only variables with high explanatory power from a large number of variables.

Chart B2-3: Price Change Distribution (CPI)

1. Impact of the Increase in the IPI for Beverages & Foods, etc. in the One-Year Period



2. Impact of the Increase in the IPI for Metals and Related Products in the One-Year Period

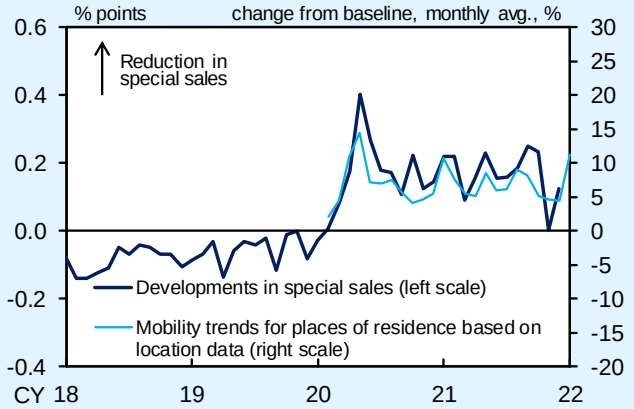


Sources: Ministry of Internal Affairs and Communications; Bank of Japan.
Note: The short-term impact of the increase in the IPI in the one-year period from October 2020 to October 2021 on the price change distribution for the CPI items is simulated using the result of sparse estimation, based on the price change distribution for the CPI items in April 2021. For the sparse estimation, a LASSO regression was conducted using the year-on-year rate of change in the CPI for each good excluding fresh food and energy as the dependent variable and that in the IPI for selected items (i.e., beverages & foods, etc., petroleum & coal, etc., metals & related products, textiles, lumber & wood products and forest products, and chemicals & related products; 6-month lag) and the real Consumption Activity Index as independent variables. The estimation period is January 2004-October 2021. The weight of items is that in the CPI (less fresh food, energy, and mobile phone charges).

competition was common at the retail level during normal times -- it can be expected that, as the impact of COVID-19 wanes and the number of people going out recovers, the resumption of price competition in some types of stores will curb the pace of retail price rises. On this point, the Nikkei CPINow, which captures price developments at retail stores such as supermarkets using point-of-sales (POS) data, suggests that there have been fewer special sales during the pandemic as a result of efforts to avoid creating crowds and due to the fall in the price elasticity of demand (Chart B2-4).[28]

On the contrary, there is also a possibility that raw material cost increases will be passed on to the CPI by more than expected. Firms' sentiment toward inflation has strengthened recently, as evidenced by the clearer uptrend in the Price Sentiment Index (PSI), which is based on comments from the *Economy Watchers Survey* (Chart B2-5).[29] The output prices DIs in the December *Tankan* also have risen, although not as much as the input prices DIs, and have reached the highest level since 1980 for the manufacturing industry and since 1991 for the

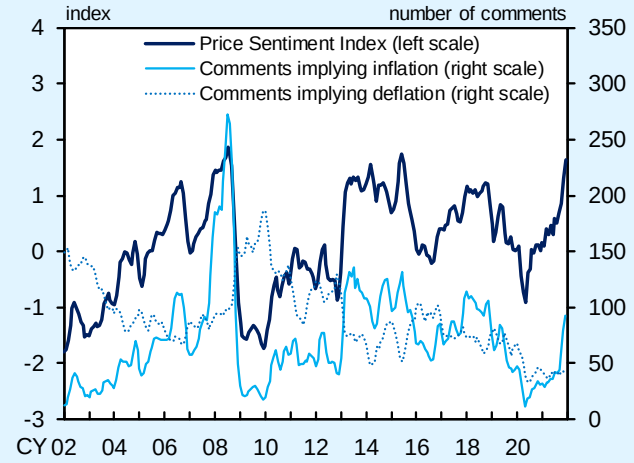
Chart B2-4: Mobility Trends and Developments in Special Sales



Sources: Nowcast, Inc., "Nikkei CPINow"; Google LLC *"Google COVID-19 Community Mobility Reports."* https://www.google.com/covid19/mobility/. Accessed: January 18, 2022.

Notes: 1. Developments in special sales are calculated as the difference between prices including those for special sales (the Nikkei CPINow T-index) and the most frequent prices in 28 days before/after the date (the Mode Index). Both are changes from two years earlier (annualized).
2. The baseline of mobility trends for places of residence based on location data is the median on the corresponding day of the week during the 5-week period from January 3 to February 6, 2020.

Chart B2-5: Price Sentiment Index



Source: Cabinet Office.

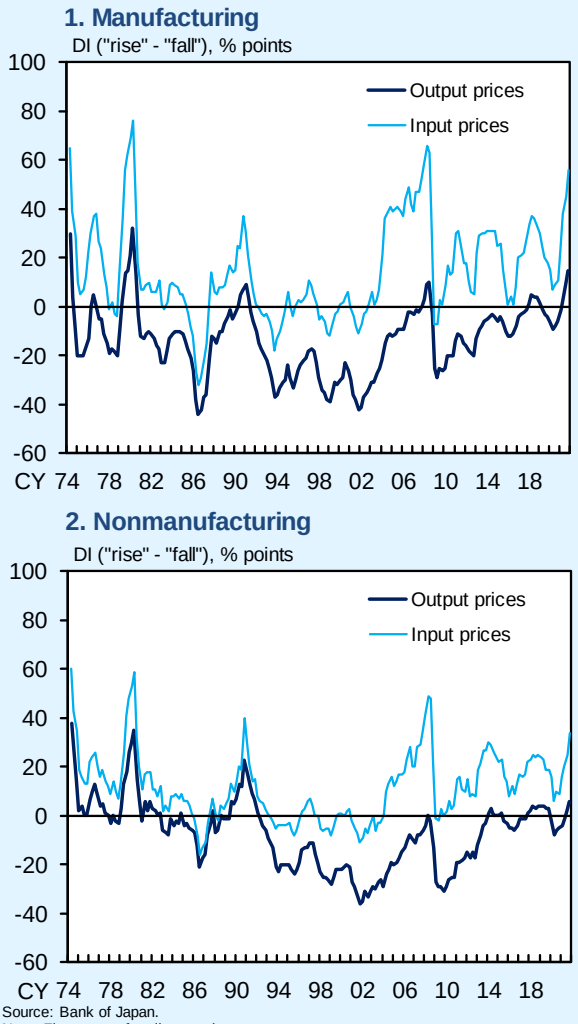
Note: The Price Sentiment Index is calculated as follows: Using the Naïve Bayes classifier, comments on current economic conditions in the *Economy Watchers Survey* are first classified into (A) comments implying inflation, (B) comments implying deflation, (C) comments implying zero inflation, and (D) comments not referring to price developments. The Price Sentiment Index is then calculated as (A-B) / (A+B+C)×100 and normalized (3-month backward moving averages).

[28] Among the Nikkei CPINow indices, the T-index captures selling prices including those for special sales, whereas the Mode Index tracks the most frequent prices during a certain period, which is regarded as exhibiting similar developments to list prices. This box therefore refers to the difference between these two indices as the effects of special sales. Technically, however, while the T-index covers all prices for special sales, the CPI compiled by the Ministry of Internal Affairs and Communications excludes prices for special sales which last for seven days or less. Therefore, the effects of special sales, calculated as the difference between the two Nikkei CPINow indices, are not entirely applicable to developments in the CPI.

[29] For details on the PSI, see "Extracting Firms' Short-Term Inflation Expectations from the Economic Watchers Survey Using Text Analysis," *Bank of Japan Working Paper Series*, no. 21-E-12, October 2021.

nonmanufacturing industry (Chart B2-6). Whether firms' strong sentiment toward inflation will lead to an increase in the CPI depends on factors such as consumers' tolerance for price rises. That said, it is necessary to take into account the possibility that prices will be pushed up by a faster-than-expected pass-through of cost increases.

Chart B2-6: Output and Input Prices (*Tankan*)



Source: Bank of Japan.
Note: Figures are for all enterprises.

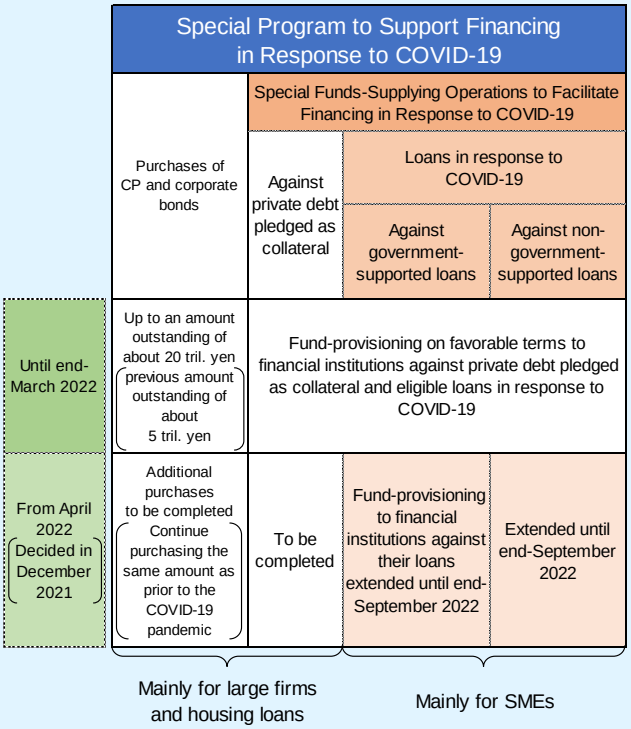
(Box 3) Developments in Corporate Financing since the Outbreak of COVID-19

Financial conditions surrounding Japanese firms became less accommodative immediately after the outbreak of COVID-19 in spring 2020, but they have continued to improve since then owing to various policy responses. This box summarizes developments in corporate financing since the outbreak.

In general, a major negative shock, like a pandemic, affects firms' financial conditions as follows. While such a shock increases firms' precautionary demand for liquidity in response to heightened uncertainties, it also leads to deterioration in their funding conditions, particularly through a decline in sales and a reduction in risk-taking by financial institutions. In fact, during the Global Financial Crisis, financial institutions' lending attitudes deteriorated significantly, and the CP market experienced a rise in issuance rates and a fall in the amount outstanding (Charts 52, 53, and 55). This stress on corporate financing also had a negative impact on firms' spending behavior, exacerbating the economic downturn. Immediately after the outbreak of COVID-19 in spring 2020, there were signs of heightened stress, as shown in a rise in CP issuance rates.

In order to address this situation, the Bank has supported financing, mainly of firms, since March 2020 (Chart B3-1). Namely, it introduced the Special Program to Support Financing in Response to the Novel Coronavirus (COVID-19)

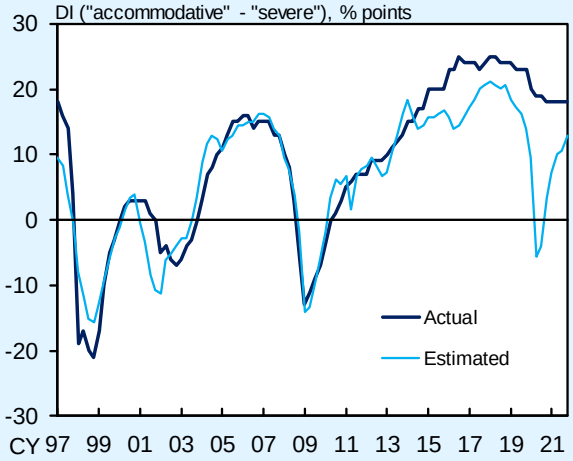
Chart B3-1: Corporate Financing Support by the Bank



-- hereafter, the Special Program. This program consists of a substantial increase in purchases of CP and corporate bonds and the Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19), through which the Bank actively provides funds on favorable terms to financial institutions that make loans in response to COVID-19.

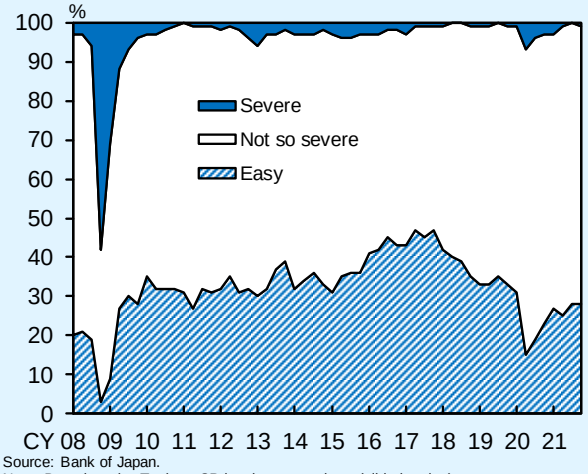
As a result of this response by the Bank, as well as measures by the government and the efforts of financial institutions, the environment for external funding surrounding firms has generally remained accommodative compared with past downturns. For example, financial institutions' lending attitudes as perceived by firms have remained accommodative despite the deterioration in business sentiment (Chart B3-2). In addition, CP issuance rates, which had risen immediately after the outbreak of COVID-19, turned to a downtrend relatively quickly after the Bank increased its CP purchases. Developments in the DI for issuance conditions for CP in the *Tankan* show that the proportion of respondents who answered that conditions were "severe" rose somewhat immediately after the COVID-19 outbreak but has remained at a low level since then (Chart B3-3). In the meantime, as private financial institutions responded actively to the rise in firms' precautionary demand for funds by increasing loans, the amount of corporate funding, particularly through bank lending, increased significantly, but this surge has recently begun to moderate (Chart B3-4).

Chart B3-2: Lending Attitudes of Financial Institutions as Perceived by Firms



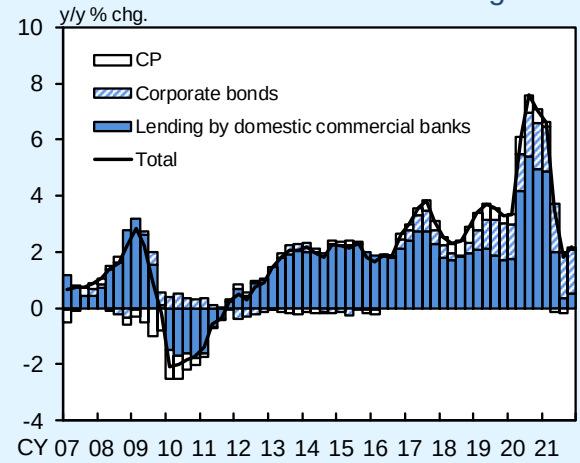
Source: Bank of Japan.
Note: Based on the *Tankan*. All industries and enterprises. Estimated figures are obtained by regressing the lending attitudes DI on the business conditions DI. The estimation period is March 1997-March 2013.

Chart B3-3: Issuance Conditions for CP



Source: Bank of Japan.
Note: Based on the *Tankan*. CP-issuing enterprises (all industries).

Chart B3-4: Private Sector Funding

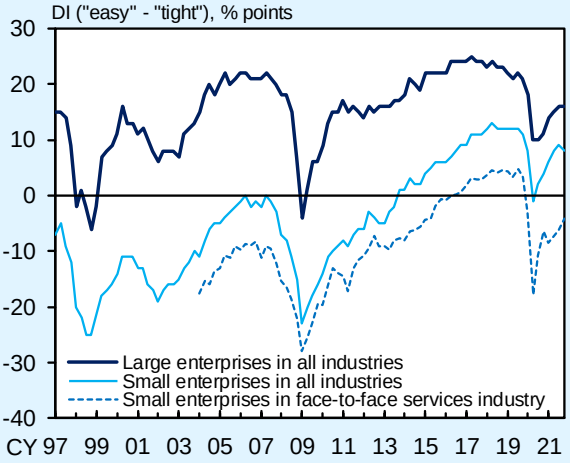


Sources: Bank of Japan; Japan Securities Depository Center; Japan Securities Dealers Association; I-N Information Systems.
Note: Figures for lending by domestic commercial banks include those for lending to local governments.

Against this backdrop, firms' financial positions deteriorated immediately after the outbreak of COVID-19 but have continued to improve as economic activity has resumed (Chart B3-5). The number of corporate bankruptcies has remained at a historically low level despite the decline in economic activity (Chart B3-6).

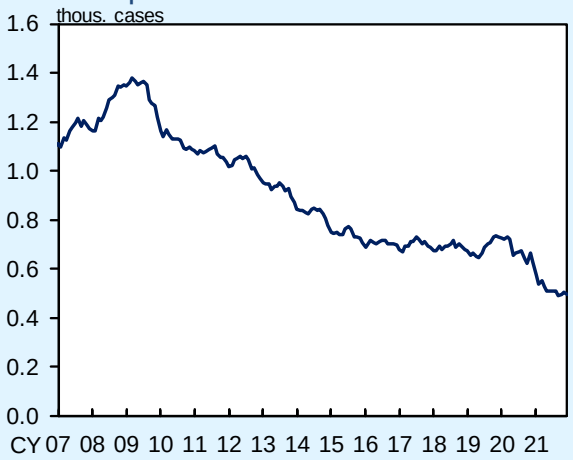
That said, when focusing on small and medium-sized firms in industries susceptible to the impact of COVID-19, their financial positions have started improving but remain weak. In particular, the DI for financial positions of small firms in the face-to-face services industry continued to register a relatively large negative figure in the latest December *Tankan*. Given this situation, while the Special Program was set to expire at the end of March this year, the Bank, with a view to continuing to do its utmost to support financing, mainly of small and medium-sized firms, decided in December last year to extend by six months the part of the program that supports financing of these firms (Chart B3-1).

Chart B3-5: Financial Positions



Source: Bank of Japan.
Note: Based on the *Tankan*. Figures for small enterprises in the face-to-face services industry are the weighted averages of the DIs for retailing, transport & postal activities, services for individuals, and accommodations, eating & drinking services. For figures up through December 2006, the weight of each industry for the March 2007 survey is used.

Chart B3-6: Number of Corporate Bankruptcies



Source: Tokyo Shoko Research Ltd.
Note: Figures show 6-month backward moving averages.