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日本銀行
BANK OF JAPAN

Outlook for Economic Activity and Prices

April 2023

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

Outlook for Economic Activity and Prices (April 2023)

The Bank's View[1]

Summary

- Japan's economy is likely to recover moderately toward around the middle of fiscal 2023, supported by factors such as the materialization of pent-up demand, although it is expected to be under downward pressure stemming from past high commodity prices and a slowdown in the pace of recovery in overseas economies. Thereafter, as a virtuous cycle from income to spending gradually intensifies, Japan's economy is projected to continue growing at a pace above its potential growth rate. That said, the pace of growth is highly likely to decelerate gradually toward the end of the projection period.
- The year-on-year rate of increase in the consumer price index (CPI, all items less fresh food) is likely to decelerate toward the middle of fiscal 2023, with a waning of the effects of a pass-through to consumer prices of cost increases led by a rise in import prices. Thereafter, the rate of increase is projected to accelerate again moderately, albeit with fluctuations, as the output gap improves and as medium- to long-term inflation expectations and wage growth rise, accompanied by changes in factors such as firms' price- and wage-setting behavior.
- Comparing the projections through fiscal 2024 with those presented in the previous *Outlook for Economic Activity and Prices* (Outlook Report), the projected real GDP growth rates for fiscal 2022 and 2023 are lower, mainly due to a lower projection for private consumption, but the projected growth rate for fiscal 2024 is more or less unchanged. The projected year-on-year rates of increase in the CPI (all items less fresh food) for fiscal 2023 and 2024 are somewhat higher, mainly due to a higher projection for wages.
- Concerning risks to the outlook, there are extremely high uncertainties for Japan's economy, including developments in overseas economic activity and prices as well as developments in the situation surrounding Ukraine and in commodity prices. Under these circumstances, it is necessary to pay due attention to developments in financial and foreign exchange markets and their impact on Japan's economic activity and prices.
- With regard to the risk balance, risks to economic activity are skewed to the downside for fiscal 2023 but are generally balanced thereafter. Risks to prices are skewed to the upside for fiscal 2023 but are skewed to the downside for fiscal 2025.

[1] "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on April 27 and 28, 2023.

I. Current Situation of Economic Activity and Prices in Japan

Japan's economy has picked up, despite being affected by factors such as past high commodity prices. The pace of recovery in overseas economies has slowed. Although exports and industrial production have been affected by the developments in overseas economies, they have been more or less flat, supported by a waning of the effects of supply-side constraints. Corporate profits have been at high levels on the whole, and business sentiment has been more or less unchanged. In this situation, business fixed investment has increased moderately. The employment and income situation has improved moderately on the whole. Private consumption has increased moderately, despite being affected by price rises. Housing investment has been relatively weak. Public investment has been more or less flat. Financial conditions have been accommodative on the whole, although weakness in firms' financial positions has remained in some segments. On the price front, the year-on-year rate of increase in the CPI (all items less fresh food) is slower than a while ago, mainly due to the effects of pushing down energy prices from the government's economic measures, but it has been at around 3 percent recently owing to the effects of a pass-through to consumer prices of cost increases led by a rise in import prices. Inflation expectations have been more or less unchanged recently after rising.

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

A. Baseline Scenario of the Outlook for Economic Activity

Toward around the middle of fiscal 2023, Japan's economy is likely to recover moderately, supported by the materialization of pent-up demand, as well as by factors such as accommodative financial conditions and the government's economic measures, although it is expected to be under downward pressure stemming from past high commodity prices and a slowdown in the pace of recovery in overseas economies.

In the household sector, regarding the employment situation, the number of both regular and non-regular employees is likely to rise on the back of improvement in economic activity. In addition, wage growth is expected to increase, reflecting tightening labor market conditions and price rises. Due to these factors, employee income is projected to continue increasing. In this situation, although private consumption is expected to be affected by price rises, it is projected to continue increasing moderately. This is mainly because pent-up demand is likely to materialize, partly supported by household savings that had accumulated as a result of pandemic-related restrictions. Private consumption is also likely to be underpinned by the government's measures such as those to reduce the household burden of higher gasoline prices, electricity charges, and gas charges, and the domestic travel discount program.

In the corporate sector, exports and production are projected to be affected by the slowdown in the pace of recovery in overseas economies resulting mainly from the impact of global inflationary pressure and policy interest rate hikes by central banks. However, they are likely to be more or less flat due to factors such as a waning of the effects of supply-side constraints. Meanwhile, inbound tourism demand, which is categorized under services exports, is expected to continue increasing. Although past high raw material costs are projected to exert downward pressure, corporate profits are likely to remain at high levels on the whole -- albeit with variation across industries and firm sizes -- due to continued improvement in economic activity. In this situation, as accommodative financial conditions provide support and the effects of supply-side constraints wane, business fixed investment is expected to continue increasing, including investment to address labor shortages, digital-related investment, research and development (R&D) investment related to growth areas and decarbonization, and investment associated with strengthening supply chains.

From the second half of fiscal 2023, Japan's economy is projected to continue growing at a pace above its potential growth rate as a virtuous cycle from income to spending gradually intensifies in the overall economy. That said, the pace of growth is highly likely to decelerate gradually toward the end of the projection period due to a waning of the contribution from the materialization of pent-up demand, as well as to a waning of the effects of the government's economic measures.

In the household sector, employment is projected to continue increasing, but the pace of increase is likely to moderate gradually. This is because it will become more difficult for labor supply to increase, with labor force participation of women and seniors having advanced to a high degree thus far. That said, these developments will lead to an increased tightening of labor market conditions during the course of the economic recovery. In this situation, wage growth is expected to increase as a trend, partly reflecting price rises, and employee income is projected to continue increasing. Supported by the increase in employee income, private consumption is expected to keep increasing, although the pace of increase is likely to decelerate as the materialization of pent-up demand slows and the positive contribution of the government's various measures wanes.

In the corporate sector, exports and production are likely to return to an uptrend with overseas economies picking up. Inbound tourism demand is expected to continue increasing. Corporate profits are likely to follow an improving trend since domestic and external demand is expected to increase and downward pressure stemming from high raw material costs is likely to wane gradually. In this situation, with support from accommodative financial conditions, business fixed investment is projected to continue increasing. Toward the end of the projection period, it is expected to be under cyclical adjustment pressure stemming from the accumulation of capital stock, but investment to address labor shortages and investment that is not necessarily responsive to the business cycle, such as that related to decarbonization, are likely to increase steadily.

Meanwhile, public investment is expected to be more or less flat throughout the projection period, with expenditure related to building national resilience continuing. Government consumption is expected to decline temporarily in reflection of developments in expenditure related to COVID-19 and then gradually increase in reflection of an uptrend in healthcare and nursing care expenditures.

Looking at the financial conditions on which the above outlook is based, it is expected that they will remain accommodative as the Bank pursues Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control, and that this will support an increase in private demand.[2] 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 this situation, firms' financial positions are likely to follow an improving trend along with an economic recovery.

The potential growth rate is expected to rise moderately.[3] This is mainly because productivity is likely to increase due to advances in digitalization and investment in human capital, and because capital stock growth is projected to accelerate due to a rise in business fixed investment. These developments are likely to be encouraged by the government's various measures and by accommodative financial conditions.

B. Baseline Scenario of the Outlook for Prices

The year-on-year rate of change in the CPI (all items less fresh food) had been increasing since last year due to the effects of the pass-through to consumer prices of cost increases led by the rise in import prices. However, the rate of increase has decelerated recently, mainly due to the effects of pushing down energy prices from the government's economic measures. Since international commodity prices are lower than a while ago and the year-on-year rate of increase in the import price index has decelerated, it is projected that there will be a waning of the effects of the pass-through to consumer prices of cost increases led by the rise in import prices. For this reason, the year-on-year rate of increase in the CPI (all items less fresh food) is highly likely to decelerate toward the middle of fiscal 2023. Thereafter, it is projected to accelerate again moderately, albeit with fluctuations, as the output gap improves and as medium- to long-term inflation

[2] 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.

[3] Under a specific methodology, Japan's recent potential growth rate is estimated to be in the range of 0.0-0.5 percent. 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.

expectations and wage growth rise, accompanied by changes in factors such as firms' price- and wage-setting behavior.

The outlook for the CPI (all items less fresh food) depends on the assumptions regarding crude oil prices and the government's economic measures. Crude oil prices are assumed to decline moderately toward the end of the projection period with reference, for example, to developments in futures markets. The government's measures to reduce the household burden of higher gasoline prices, electricity charges, and gas charges are expected to push down the year-on-year rate of change in the CPI (all items less fresh food), mainly for the first half of fiscal 2023. For fiscal 2024, on the other hand, they are likely to push up the rate due to a waning of the effects of those measures pushing down CPI inflation of the previous year. In this regard, looking at the CPI (all items less fresh food and energy) -- which is not directly affected by fluctuations in energy prices -- the year-on-year rate of change is projected to be at around 2.5 percent for fiscal 2023 and then be in the range of 1.5-2.0 percent for fiscal 2024 and 2025.

The main factors that determine inflation rates are assessed as follows. The output gap, which captures the utilization of labor and capital, has been slightly negative. Based on the aforementioned outlook for economic activity, the gap is likely to turn positive around the middle of fiscal 2023 and expand moderately toward the end of the projection period, albeit at a gradually slowing pace. Under these circumstances, labor market conditions are expected to tighten, partly due to a deceleration in the pace of increase in labor force participation of women and seniors, and upward pressure on wages is projected to intensify. This is likely to put upward pressure on personnel expenses on the cost side and contribute to an increase in households' purchasing power.

Medium- to long-term inflation expectations have been more or less unchanged recently after rising moderately. The March 2023 *Tankan* (Short-Term Economic Survey of Enterprises in Japan) shows that the diffusion index (DI) for output prices has been at a high level, and firms' inflation outlook for general prices has also been at a high level, not only for the short term but also for the medium to long term. With regard to the annual spring labor-management wage negotiations this year, the provisional aggregate results compiled by the Japanese Trade Union Confederation (Rengo) show that the wage growth rate agreed in the negotiations thus far has been significantly higher than in the previous year, including base pay. Given that the formation of inflation expectations in Japan is largely adaptive, the increase in inflation seen thus far has brought about a rise in households' and firms' medium- to long-term inflation expectations. Regarding the outlook, even as actual inflation decelerates toward the middle of fiscal 2023, inflation expectations are likely to rise again moderately toward the end of the projection period, with improvement in the output gap and changes in firms' price- and wage-setting behavior and in labor-management wage negotiations. This will likely lead to a sustained rise in prices accompanied by wage increases.

III. Risks to Economic Activity and Prices

A. Risks to Economic Activity

Regarding the aforementioned baseline scenario of the outlook for economic activity, the main upside and downside risks that require attention are as follows.

The first is developments in overseas economic activity and prices and in global financial and capital markets. Although inflation rates in the United States and Europe are lower than a while ago, inflationary pressure has remained on a global basis. In this situation, overseas central banks have continued to raise their policy interest rates. On this point, it is expected in the baseline scenario that inflation rates around the world will decline gradually and that overseas economies will continue to grow, albeit at a moderate pace. That said, vigilance against the risk of inflation rates staying elevated through wage increases has remained high, mainly in advanced economies. In this situation, there is concern in global financial and capital markets over whether it is possible to contain inflation and maintain economic growth simultaneously. In addition, there was a phase when market participants' risk sentiment deteriorated, mainly due to the effects of issues surrounding some financial institutions in the United States and Europe. With central banks continuing to make policy interest rate hikes, there is also a risk that global financial conditions will tighten further, mainly through adjustments in asset prices, fluctuations in foreign exchange markets, changes in financial institutions' lending positions, and capital outflows from emerging economies, and that this will eventually lead to overseas economies deviating downward from the baseline scenario. Taking these risks into account, it is necessary to pay due attention to developments in financial and foreign exchange markets and their impact on Japan's economic activity and prices. Meanwhile, regarding China, where the resumption of economic activity has progressed rapidly, there are high uncertainties over the pace of materialization of pent-up demand in terms of both upside and downside risks.

The second factor is developments in the situation surrounding Ukraine and the associated developments in prices of commodities, including grains. Depending on the course of this situation, downward pressure on overseas economies, particularly the euro area, could heighten. In addition, although prices of commodities, including grains, have declined on the whole after reaching their peak around the middle of last year, there are extremely high uncertainties regarding the outlook, such as over geopolitical factors -- particularly the situation surrounding Ukraine -- and the effects of efforts by countries around the world toward addressing climate change. Given that Japan is an importer of commodities such as energy and grains (e.g., wheat), a rise in these prices due to supply factors puts greater downward pressure on the economy through an increase in import costs, as this rise is not accompanied by an expansion in external demand or an increase in exports. Such deterioration in the terms of trade squeezes corporate profits and households' real income, and this could lead business fixed investment and private consumption to deviate downward from the baseline scenario through more cautious spending behavior of firms and households. On the other hand, if prices of commodities, including grains, see a clearer downtrend, the economy could deviate upward.

The third factor considered from a somewhat long-term perspective is firms' and households' medium- to long-term growth expectations. It is expected that factors such as moves toward digitalization, which reflect the experience of COVID-19 and intensifying labor shortages, and progress on efforts with a view to decarbonization will change Japan's economic structure and people's working styles. Furthermore, the heightened geopolitical risks could change the trend of globalization, which has supported the growth of the global economy to date. Depending on how firms and households react to these changes, their medium- to long-term growth expectations, the potential growth rate, and the output gap could go either up or down.

B. Risks to Prices

If the aforementioned risks to economic activity materialize, prices also are likely to be affected. 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- and wage-setting behavior, which could exert either upward or downward pressure on prices. In the current inflationary phase, against the backdrop of high raw material costs, many firms have raised prices while giving consideration to price setting by competitors. Depending on how much upward pressure will be exerted by raw material costs and on how firms' inflation expectations will develop, the pass-through to consumer prices could continue longer than expected and lead prices to deviate upward from the baseline scenario. In addition, with labor market conditions tightening, it is possible that firms will further shift their wage-setting behavior toward raising wages, in view of factors such as recruitment and retention. Under these circumstances, there is a possibility that both wages and prices will deviate upward from the baseline scenario as moves to reflect not only price developments in wage setting but also wage developments in price setting become more widespread than expected. On the other hand, with prices of commodities, including grains, declining on the whole, medium- to long-term inflation expectations could decline through the mechanism of adaptive inflation expectations formation and this could affect firms' price-setting behavior. In addition, although a wage growth rate that is significantly higher than in the previous year is likely to be achieved as a result of this year's annual spring labor-management wage negotiations, if the behavior and mindset based on the assumption that prices and wages will not increase easily remain deeply entrenched, there is a risk that moves to increase wages will not strengthen as much as expected from next year and 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. This risk may lead prices to deviate either upward or downward from the baseline scenario. There are high uncertainties over, for example, the outlook for the global economy, and this could lead to significant fluctuations in international commodity prices. Including the possibility of inflation rates staying elevated on a global basis and of fluctuations in foreign exchange markets, how these factors will affect Japan's prices requires due attention.

IV. Conduct of Monetary Policy

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

The first perspective involves an examination of the baseline scenario of the outlook. The year-on-year rate of change in the CPI has been above 2 percent. The rate of increase, however, is expected to decelerate to a level below 2 percent toward the middle of fiscal 2023. Although it will take time, toward the end of the projection period, underlying CPI inflation is likely to increase gradually toward achieving the price stability target, mainly on the back of improvement in the output gap and rises in medium- to long-term inflation expectations and in wage growth.

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. Concerning risks to the outlook, there are extremely high uncertainties for Japan's economy, including developments in overseas economic activity and prices as well as developments in the situation surrounding Ukraine and in commodity prices. Under these circumstances, it is necessary to pay due attention to developments in financial and foreign exchange markets and their impact on Japan's economic activity and prices. With regard to the risk balance, risks to economic activity are skewed to the downside for fiscal 2023 but are generally balanced thereafter. Risks to prices are skewed to the upside for fiscal 2023 but are skewed to the downside for fiscal 2025. 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. Although attention is warranted on, for example, the impact of the tightening of global financial conditions, including the effects of the recent issues surrounding some financial institutions in the United States and Europe, the financial system is likely to remain highly robust on the whole, even in the case of an adjustment in the real economy at home and abroad and in global financial markets, mainly because Japanese financial institutions

[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."

have sufficient capital bases. When examining financial imbalances from a longer-term perspective, if downward pressure on financial institutions' profits, such as from low interest rates, the declining population, and excess savings in the corporate sector, becomes prolonged, this could create a risk of a gradual pullback in financial intermediation. On the other hand, under these circumstances, the vulnerability of the financial system could increase, mainly due to the search for yield behavior. Although these risks are judged as not significant at this point, it is necessary to pay close attention to future developments.[5]

As for the conduct of monetary policy, with extremely high uncertainties surrounding economies and financial markets at home and abroad, the Bank will patiently continue with monetary easing while nimbly responding to developments in economic activity and prices as well as financial conditions. By doing so, it will aim to achieve the price stability target of 2 percent in a sustainable and stable manner, accompanied by wage increases.

The Bank will continue with QQE with Yield Curve Control, aiming to achieve the price stability target, 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 maintain stability of financing, mainly of firms, and financial markets, and will not hesitate to take additional easing measures if necessary.

[5] For details, see the Bank's *Financial System Report* (April 2023).

(Appendix)

Forecasts of the Majority of the Policy Board Members

y/y % chg.

	Real GDP	CPI (all items less fresh food)	(Reference) CPI (all items less fresh food and energy)
Fiscal 2022	+1.2 to +1.2 [+1.2]	+3.0	+2.2
Forecasts made in January 2023	+1.9 to +2.0 [+1.9]	+3.0 to +3.0 [+3.0]	+2.1 to +2.1 [+2.1]
Fiscal 2023	+1.1 to +1.5 [+1.4]	+1.7 to +2.0 [+1.8]	+2.5 to +2.7 [+2.5]
Forecasts made in January 2023	+1.5 to +1.9 [+1.7]	+1.6 to +1.8 [+1.6]	+1.7 to +1.9 [+1.8]
Fiscal 2024	+1.0 to +1.3 [+1.2]	+1.8 to +2.1 [+2.0]	+1.5 to +1.8 [+1.7]
Forecasts made in January 2023	+0.9 to +1.3 [+1.1]	+1.8 to +1.9 [+1.8]	+1.5 to +1.8 [+1.6]
Fiscal 2025	+1.0 to +1.1 [+1.0]	+1.6 to +1.9 [+1.6]	+1.8 to +2.0 [+1.8]

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

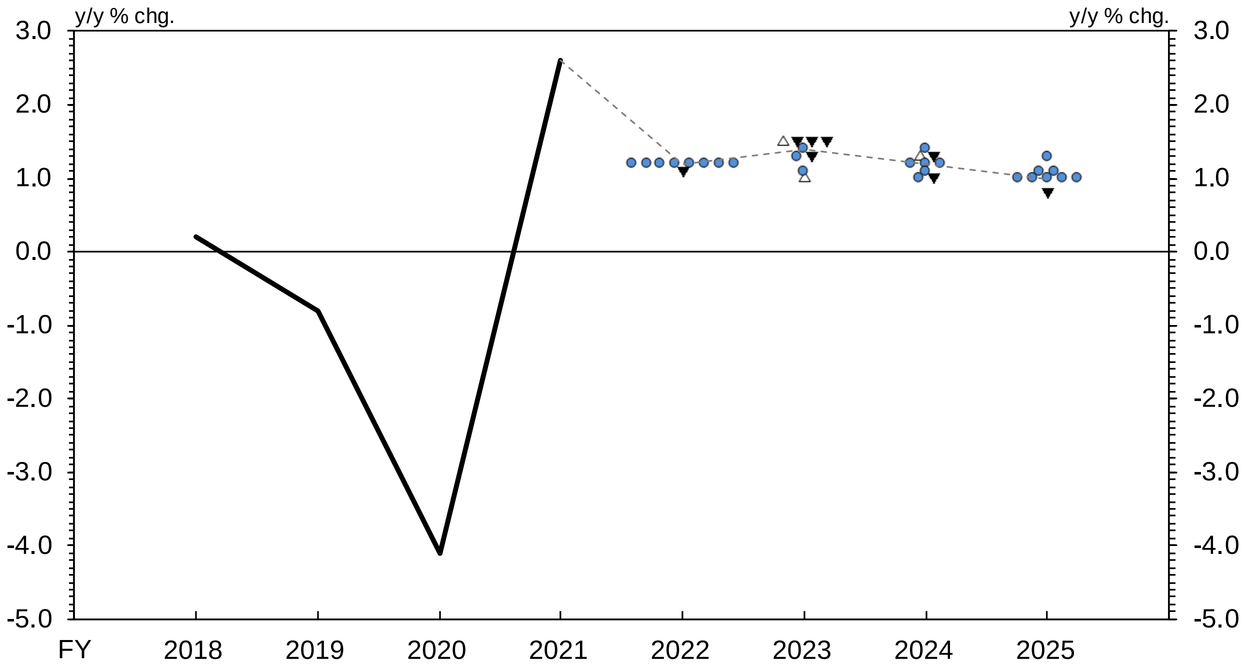
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which they attach the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.

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

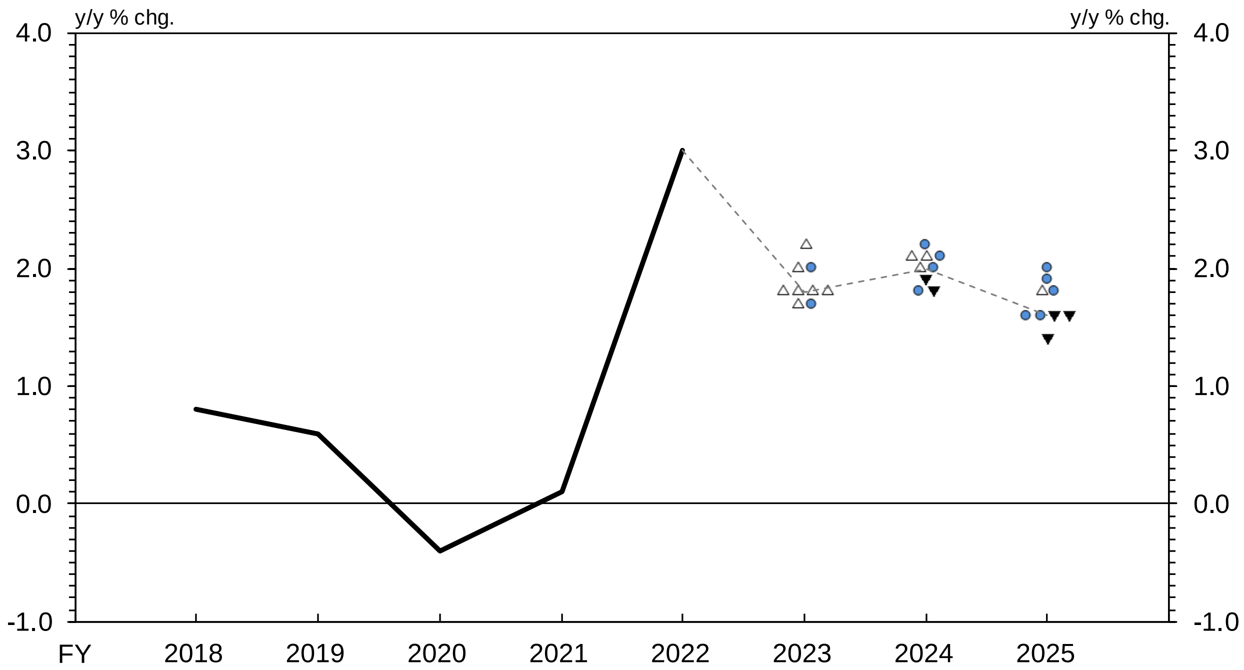
4. The CPI figures for fiscal 2022 are actual values.

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[6]

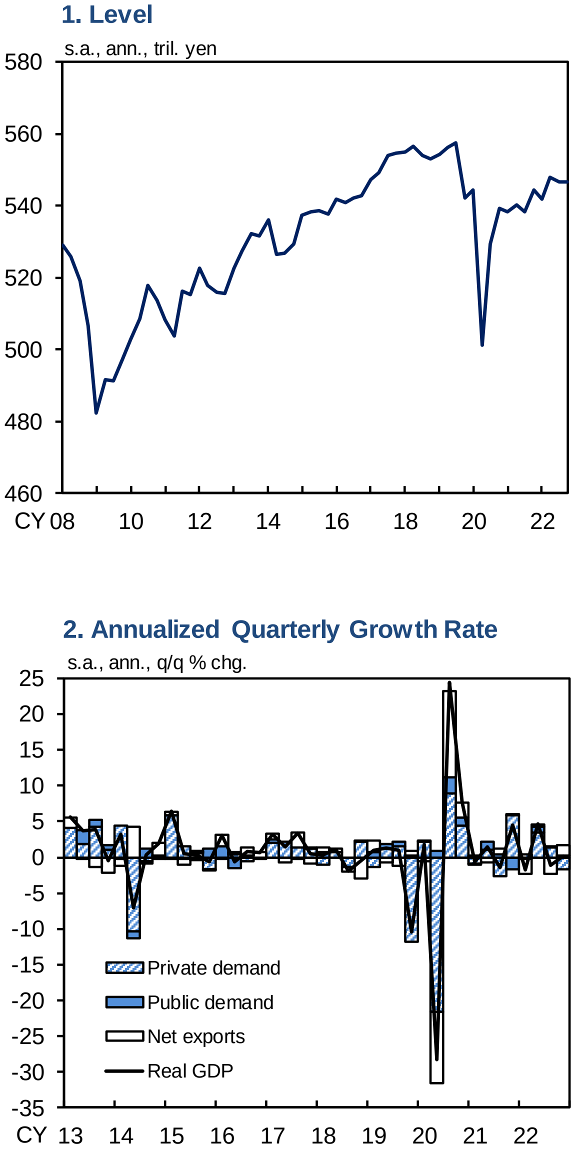
I. Current Situation of Economic Activity and Its Outlook

A. Economic Developments

Japan's economy has picked up, despite being affected by factors such as past high commodity prices.

Real GDP decreased slightly for the July-September quarter of 2022, registering minus 0.3 percent on a quarter-on-quarter basis and minus 1.1 percent on an annualized basis (Chart 1). It was then flat for the October-December quarter, registering 0.0 percent on a quarter-on-quarter basis and 0.1 percent on an annualized basis. It should be noted that this is largely the result of a significant negative contribution of inventory investment for the October-December quarter. Looking at final demand, although business fixed investment made a small negative contribution to GDP growth, mainly reflecting its decline following the previous increase that was due to large-scale projects, private consumption and exports increased with progress in the resumption of economic activity while public health was being protected, and with a waning of the effects of supply-side constraints. Meanwhile, the output gap -- which captures the utilization of labor and capital -- for the October-December quarter expanded somewhat within negative territory from the previous quarter (Chart 2). This is mainly because the capacity utilization rate for the

Chart 1: Real GDP



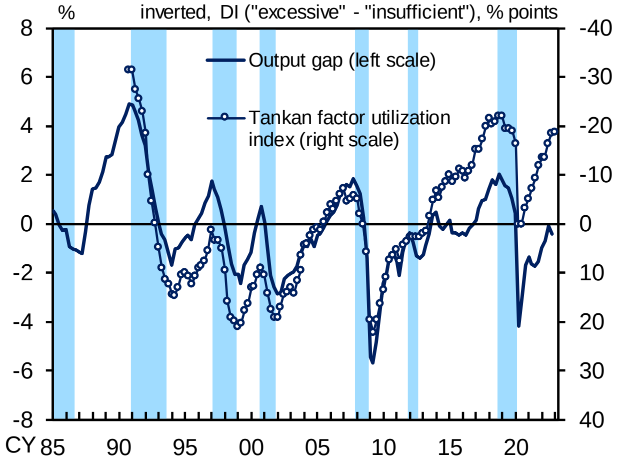
Source: Cabinet Office.

[6] "The Background" provides explanations of "The Bank's View" decided by the Policy Board at the Monetary Policy Meeting held on April 27 and 28, 2023.

manufacturing industry declined, which partly reflects its decline following the rise in the previous quarter.

Monthly indicators and high-frequency data since then suggest that Japan's economy has continued to pick up. In the corporate sector, although exports and production have been affected by a slowdown in the pace of recovery in overseas economies, they have been more or less flat, supported by the waning of the effects of supply-side constraints. Corporate profits have remained at high levels on the whole, when the effects of factors such as foreign exchange rate movements are smoothed out. Business sentiment has been more or less unchanged on the whole, as it has deteriorated in the manufacturing industry but has continued to improve in the nonmanufacturing industry. In this situation, business fixed investment has increased moderately. The business fixed investment plans in the March 2023 *Tankan* indicate that the year-on-year rate of change in investment for fiscal 2022 is expected to be clearly positive at above 10 percent and that the rate of change in planned investment for fiscal 2023 -- which was surveyed for the first time in this *Tankan* -- is firmly positive. In the household sector, the employment and income situation has improved moderately on the whole, and an uptrend in nominal employee income has gradually become clear. In this situation, private consumption has continued to increase moderately, despite being affected by price rises. In sum, although Japan's economy has been affected by factors such as the slowdown in the pace of recovery in overseas economies and past high commodity prices, a virtuous cycle from

Chart 2: 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.

income to spending has been operating in both the corporate and household sectors.

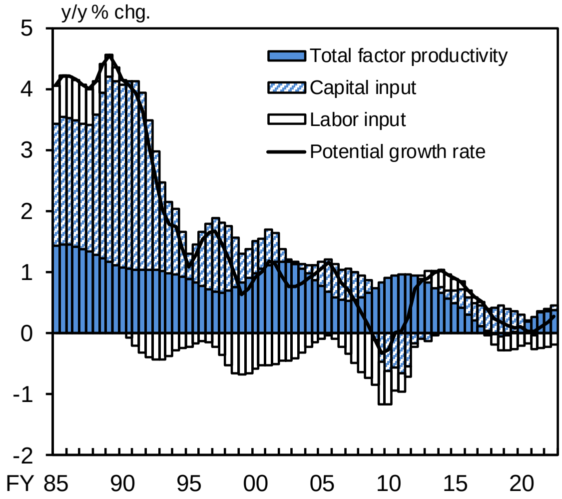
Japan's economy is likely to recover moderately toward around the middle of fiscal 2023, supported by the materialization of pent-up demand, as well as by factors such as accommodative financial conditions and the government's economic measures, although it is expected to be under downward pressure stemming from past high commodity prices and the slowdown in the pace of recovery in overseas economies.[7] From the second half of fiscal 2023, with the impact of past high commodity prices fading and overseas economies picking up, Japan's economy is projected to continue growing at a pace above its potential growth rate as a virtuous cycle from income to spending gradually intensifies in the overall economy. That said, the pace of growth is highly likely to decelerate gradually toward the end of the projection period due to a waning of the contribution from the materialization of pent-up demand, as well as to a waning of the effects of the government's economic measures. Comparing the projections with those presented in the previous Outlook Report, the projected growth rates for fiscal 2022 and 2023 are lower. This mainly reflects the fact that the pace of materialization of pent-up demand has moderated for private consumption. The lower projections also reflect, for example,

[7] The government formulated the Comprehensive Emergency Measures to Counter Soaring Crude Oil and Other Prices under the COVID-19 Pandemic in April 2022, the Comprehensive Economic Measures for Overcoming Price Increases and Revitalizing the Economy in October 2022, and additional measures toward overcoming price increases in March 2023. The implementation of the budget based on these measures is expected to mainly push up government consumption and private consumption, and thereby support economic activity.

exports being pushed down by factors such as a decline in global demand for IT-related goods. The projected growth rate for fiscal 2024 is more or less unchanged.

The potential growth rate seems to have been in the range of 0.0-0.5 percent recently (Chart 3). 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 growth in capital stock has decelerated as a result of past declines in business fixed investment. As for the outlook, the potential growth rate is expected to rise moderately. This is based on the projection that, although there will be less room for the number of employed persons to increase, (1) the TFP growth rate will increase moderately, mainly on the back of advances in digitalization and a resulting improvement in efficiency of resource allocation, as well as an expansion in investment in human capital, (2) the decline in working hours will come to a halt in reflection of the diminishing effects of working-style reforms, and (3) growth in capital stock will accelerate. These developments are likely to be encouraged by the government's various measures and by accommodative financial conditions. However, in terms of labor, it is highly uncertain what kind of working style will take hold going forward, given the experience of COVID-19 and with demographic changes. In addition, in the corporate sector, it is expected that factors such as moves toward digitalization, which reflect the experience of COVID-19 and labor shortages, and progress on efforts with a view to decarbonization will change Japan's economic and industrial structures; however, there remain high uncertainties over the extent of

Chart 3: Potential Growth Rate



Source: Bank of Japan.
Note: Figures are staff estimates. Figures for the second half of fiscal 2022 are those for 2022/Q4.

advancement and sustainability of innovation and sectoral reallocation of production factors, both of which aim at adapting to changes in the economic and industrial structures. It is also possible that the heightened geopolitical risks and other factors will have a significant impact on corporate behavior. 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 fiscal 2023, Japan's economy is likely to recover moderately, supported by the materialization of pent-up demand, as well as by factors such as accommodative financial conditions and the government's economic measures, although the impact of past high commodity prices and the slowdown in the pace of recovery in overseas economies is expected to exert downward pressure on Japan's economy toward around the middle of the fiscal year. Although goods exports are projected to be affected by the slowdown in the pace of recovery in overseas economies, they are likely to be more or less flat toward around the middle of fiscal 2023, due to factors such as a waning of the effects of supply-side constraints. Thereafter, goods exports are likely to return to an uptrend with overseas economies picking up. Inbound tourism demand, which is categorized under services exports, is projected to keep increasing as travel demand recovers globally. Business fixed investment is also expected to continue increasing, with corporate profits being at high levels on the whole and with the materialization of demand for investment that had been postponed during the pandemic. In the household sector, nominal employee income is likely to continue rising. This is because the number of both regular and non-regular employees is projected to rise on the back of improvement in economic activity, and wage growth is expected to increase, reflecting tightening labor market conditions and price rises. In addition, downward pressure on households' real income stemming from high prices is projected to ease on the back of a waning of the effects of a pass-through to consumer prices of cost increases led by a rise in import prices, as well as the continued effects of pushing down energy prices from the government's economic measures. In this situation, private consumption is expected to keep increasing moderately. This is mainly because it is projected that pent-up demand will continue to materialize, partly supported by household savings that had accumulated as a result of pandemic-related restrictions. Government spending is expected to decline, reflecting a reduction in expenditure related to COVID-19, although it is likely to be supported by progress in construction related to building national resilience and by an uptrend in healthcare and nursing care expenditures.

In fiscal 2024, although the effects of the government's economic measures are likely to wane, Japan's economy is expected to continue growing at a pace above its potential growth rate, with overseas economies picking up and accommodative financial conditions being maintained. Goods exports are likely to increase moderately on the back of the pick-up in overseas economies. Inbound tourism demand is projected to keep increasing. Business fixed investment is also expected to continue increasing, including investment to address labor shortages, digital-related investment, investment related to growth areas and decarbonization, and investment associated with strengthening supply chains. In the household sector, nominal employee income is likely to continue increasing steadily. This is because wage growth is expected to remain relatively high, although it will gradually become more difficult for labor supply to increase, with labor force participation of women and seniors having advanced to a high degree thus far. In this situation, private consumption is likely to continue increasing moderately, although it is projected that a waning of the effects of the government's economic measures pushing down prices of the previous year will push down real income through price rises, and that pent-up demand will wane. Government spending is expected to turn to a moderate increase on the back of progress in construction related to building national resilience and an uptrend in healthcare and nursing care expenditures.

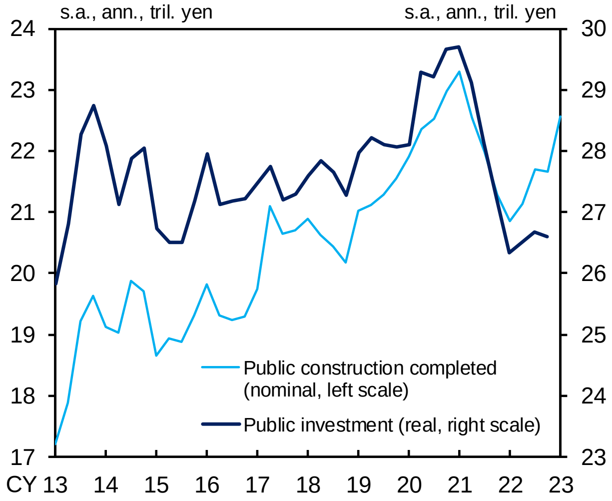
In fiscal 2025, although domestic and external demand is expected to continue increasing, the growth pace of Japan's economy is likely to slow somewhat, mainly due to a peaking-out of pent-up demand. Goods exports are likely to increase moderately, with overseas economies continuing to grow. Inbound tourism demand is projected to keep increasing. Business fixed investment is also expected to continue increasing, mainly for investment to address labor shortages and investment related to growth areas and decarbonization; however, the pace of increase is projected to slow somewhat, partly because it is likely to be pushed down by adjustment pressure on capital stock. Although pent-up demand is likely to peak out, private consumption is projected to continue increasing moderately, with the income situation continuing to improve, supported by wage increases. Government spending is expected to keep increasing moderately on the back of an uptrend in healthcare and nursing care expenditures.

B. Developments in Major Expenditure Items and Their Background

Government Spending

Public investment has been more or less flat (Chart 4). With progress in construction based on the government's economic measures, including construction related to building national resilience, the amount of public construction completed -- a coincident indicator of public investment -- has continued to be more or less flat from a somewhat long-term perspective, but has increased recently, partly due to fluctuations stemming from large-scale projects. After continuing to decrease, the value of public works contracted -- a leading indicator of public investment -- has increased recently due to the effects of large-scale projects. Orders received for public construction have also increased recently, partly due to fluctuations stemming from the effects of large-scale projects.

Chart 4: Public Investment



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.
Note: The figure for 2023/Q1 is the January-February average.

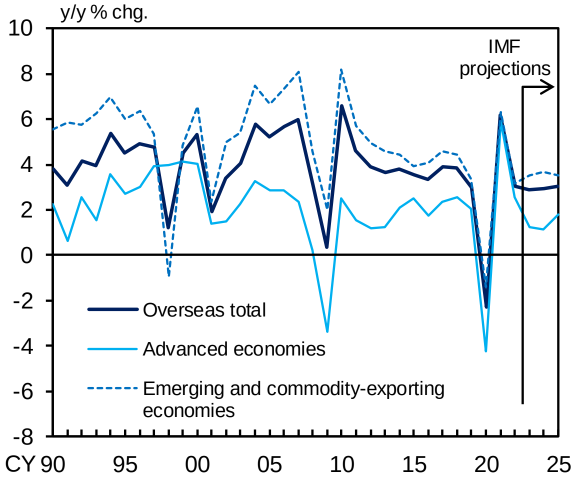
As for the outlook, public investment is likely to be more or less flat, with expenditure related to building national resilience continuing.[8] Government consumption is projected to see a temporary lowering in its level due to a reduction in expenditure related to COVID-19, such as regarding vaccination. Thereafter, however, government consumption is likely to return to an increasing trend, reflecting an uptrend in healthcare and nursing care expenditures.

[8] 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 fiscal 2025. The government's economic measures decided by the Cabinet in October 2022 also include efforts to implement the acceleration measures.

Overseas Economies

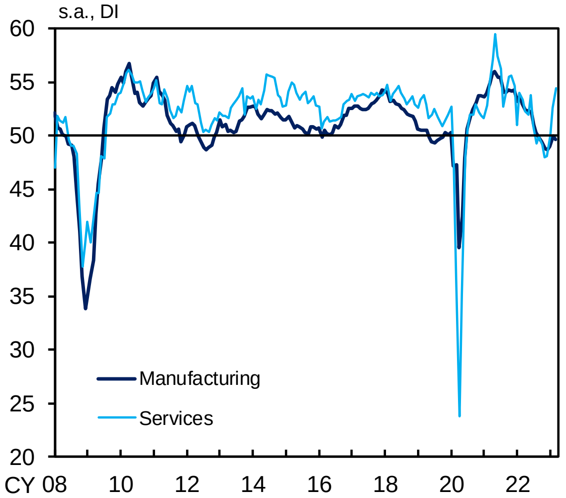
The pace of recovery in overseas economies has slowed (Chart 5). By region, the U.S. economy has remained on a slowing trend, in reflection of price rises and continued policy interest rate hikes, although firmness has been seen in private consumption. European economies have slowed moderately despite concern over energy supply easing, as they have continued to be affected by the situation surrounding Ukraine. The Chinese economy has picked up despite continued adjustments in its real estate market, as moves toward normalization of economic activity have been seen with the impact of COVID-19 waning. The pace of improvement in emerging and commodity-exporting economies other than China has slowed on the whole; although domestic demand has continued to improve moderately in these economies, exports have slowed, particularly of IT-related goods. Among those in Asia, which are closely related to Japan's economy, the ASEAN economies have continued to improve, particularly in domestic demand, whereas in the NIEs economies, the pace of improvement in domestic demand has decelerated, while there has been a slowdown in exports, particularly of IT-related goods. Looking at the Global PMI to see the current situation for the global economy, figures for the services industry have picked up, mainly for China, and have been above 50 -- the break-even point between improvement and deterioration in business conditions -- while figures for the manufacturing industry have been around 50 (Chart 6). The world trade volume has decreased, reflecting the effects of the slowdown in the pace of recovery in overseas economies and inventory adjustments in IT-related goods (Chart 7).

Chart 5: Overseas Economies



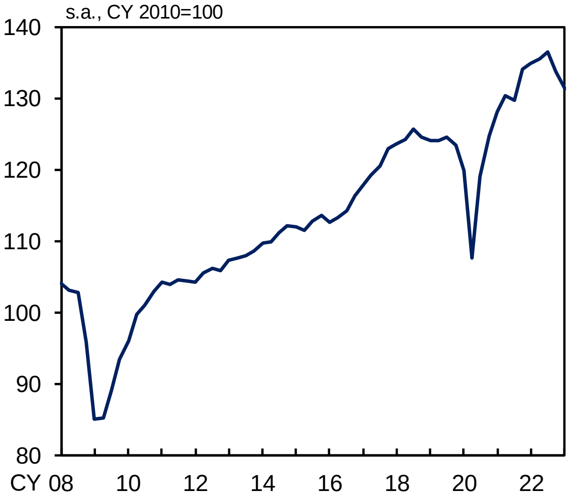
Sources: IMF; Ministry of Finance.
Note: Figures are the weighted averages of real GDP growth rates using countries' share in Japan's exports as weights. The real GDP growth rates are compiled by the IMF, and the rates from 2023 onward are its projections in the April 2023 *World Economic Outlook* (WEO). 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.

Chart 6: Global PMI



Source: Copyright © 2023 by S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved.
Note: Figures for manufacturing are the J.P.Morgan Global Manufacturing PMI. Figures for services are the J.P.Morgan Global Services Business Activity Index.

Chart 7: World Trade Volume

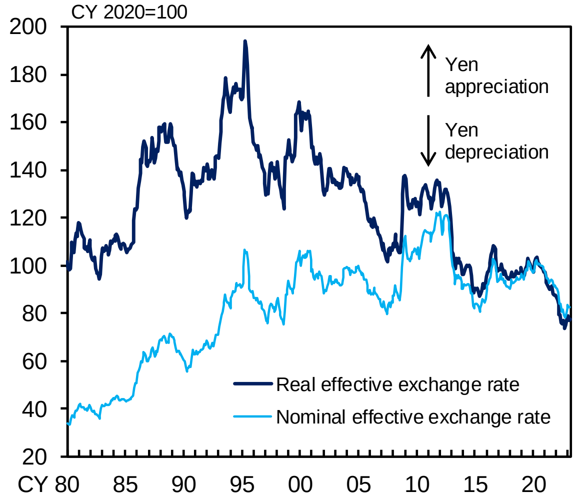


Source: CPB Netherlands Bureau for Economic Policy Analysis.
Note: Figures for the world trade volume are those for world real imports. The figure for 2023/Q1 is the January-February average.

As for the outlook, the pace of recovery in overseas economies is projected to remain slow toward around the middle of fiscal 2023. This will likely occur mainly due to inflationary pressure remaining on a global basis and continued policy interest rate hikes by central banks, as well as to the impact of the situation surrounding Ukraine. By region, the U.S. economy is expected to remain on a slowing trend due to price rises and the impact of policy interest rate hikes. European economies are also likely to remain on a slowing trend, reflecting the situation surrounding Ukraine and the impact of policy interest rate hikes. On the other hand, the Chinese economy is projected to continue picking up as the normalization of economic activity progresses, although adjustment pressure is expected to remain on the employment and income side and in the real estate market. Meanwhile, the pace of improvement in emerging and commodity-exporting economies other than China is likely to continue slowing, partly in reflection of external demand slowing, although the resumption of economic activity is expected to underpin domestic demand.

Thereafter, overseas economies are projected to pick up gradually. This is mainly because downward pressure on advanced economies is likely to ease as inflation rates decline, due primarily to dissipation of the impact of past high commodity prices and to the effects of policy interest rate hikes by central banks, and because the normalization of economic activity in China is expected to continue.

Chart 8: 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.

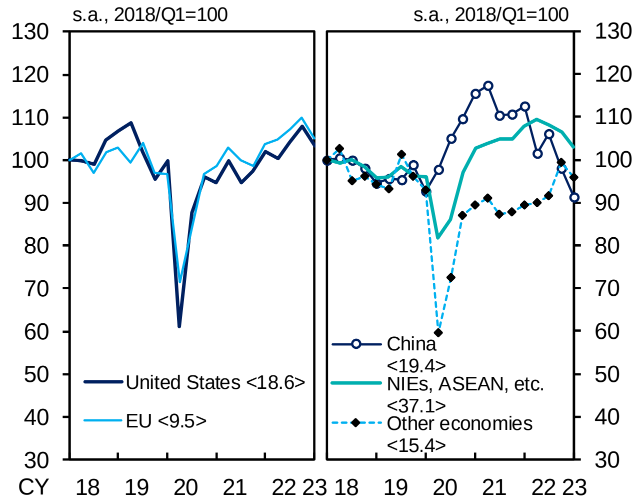
Exports and Imports

Although exports have been affected by the slowdown in the pace of recovery in overseas economies, they have been more or less flat, supported by a waning of the effects of supply-side constraints (Chart 9). By region, exports to advanced economies have followed an uptrend on the back of the waning of the effects of supply-side constraints, albeit with fluctuations resulting mainly from exports of automobile-related goods (Chart 10). As for exports to emerging economies, those to China have continued to be somewhat weak, particularly for intermediate and capital goods, mainly against the background of strict public health measures to contain the spread of COVID-19; however, they have shown signs of bottoming out recently. Exports to the NIEs, the ASEAN economies, and some other Asian economies have been relatively weak, against the background of weakness in global demand for IT-related goods. By goods, although exports of automobile-related goods have been pushed down mainly by the effects of issues at some production sites, they have somewhat rebounded recently with the waning of the effects of supply-side constraints stemming from the tightness in global supply and demand conditions for semiconductors used in automobiles (Chart 11). Regarding exports of capital goods, with major semiconductor manufacturers postponing business fixed investment, exports of semiconductor production equipment have continued to see a decline in their levels following the sharp increase last summer. However, on the whole, capital goods exports have been at relatively high levels, supported by high levels of order backlogs. Exports of IT-related goods are at relatively lower levels than a while ago, with adjustment pressure

Chart 9: Real Exports and Imports

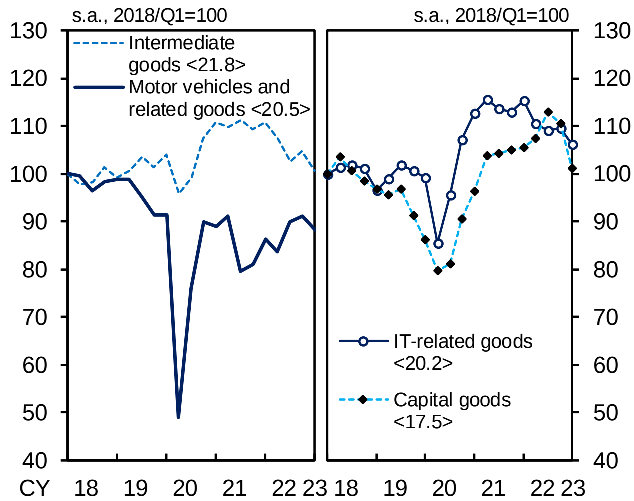
Sources: Bank of Japan; Ministry of Finance; Cabinet Office.
Note: Based on staff calculations.

Chart 10: 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 2022.
2. Figures for the EU exclude those for the United Kingdom for the entire period.

Chart 11: 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 2022.

remaining on electronic parts, such as semiconductors mainly for smartphones and personal computers, although demand for automobile-related goods has been firm. Exports of intermediate goods have been on a downtrend against the background of weakness in global demand for IT-related goods.

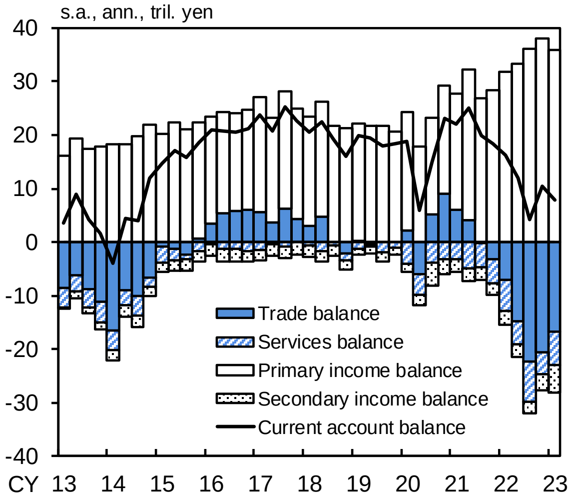
Although exports are projected to be affected by the slowdown in the pace of recovery in overseas economies, they are likely to be more or less flat toward around the middle of 2023, due to factors such as the waning of the effects of supply-side constraints. Thereafter, exports are likely to return to an uptrend as overseas economies pick up.

Imports have continued on an uptrend, reflecting a pick-up in domestic demand (Chart 9). They are expected to follow a moderate uptrend on the back of developments in demand induced by increases in domestic demand and exports.

External Balance

The nominal current account balance has been more or less flat recently, after its surplus had continued to decrease significantly, owing to factors such as the impact of high commodity prices (Chart 12). Although the trade balance has improved somewhat recently, mainly on the back of a decline in import prices, it has continued to register a significant deficit, with goods exports being more or less flat. Despite improvement in the travel balance due to an increase in inbound tourism demand, the services balance has been more or less flat because payments for digital-related services have been on an

Chart 12: Current Account



Source: Ministry of Finance and Bank of Japan.
Note: Figures for 2023/Q1 are January-February averages.

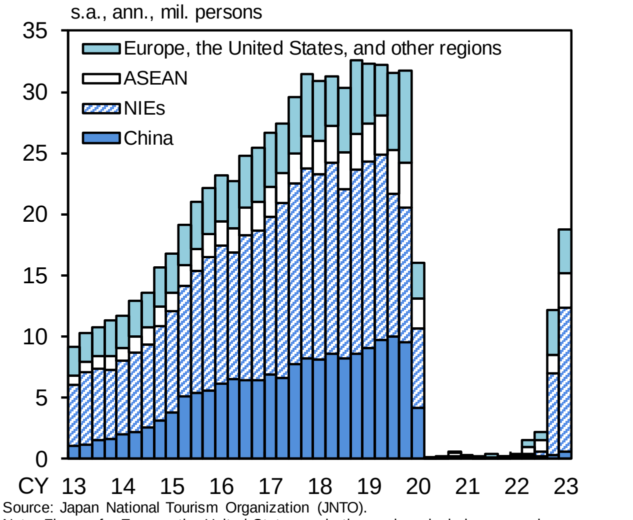
increasing trend (Chart 13). Meanwhile, the surplus in the primary income balance has remained at a high level.

The nominal current account balance is likely to follow a moderate improving trend. This is based on the projection that (1) the surplus in the primary income balance will increase moderately, (2) the trade deficit will decline moderately due to factors such as an increase in goods exports, and (3) the deficit in the services balance will decrease due to the increase 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 14).

Industrial Production

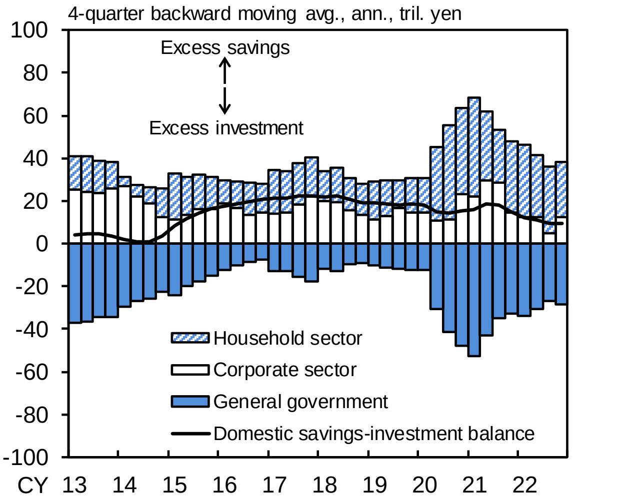
Although industrial production has been affected by the slowdown in the pace of recovery in overseas economies, it has been more or less flat, supported by a waning of the effects of supply-side constraints (Chart 15). By major industry, despite a gradual easing of the tightness in global supply and demand conditions for semiconductors used in automobiles, production of "transport equipment" has been relatively weak recently, due mainly to the effects of issues at some production sites. Production of "electrical machinery, and information and communication electronics equipment" has been on an uptrend, mainly for on-board equipment for motor vehicles. Supported by high levels of order backlogs, production of "general-purpose, production, and

Chart 13: Number of Inbound Visitors



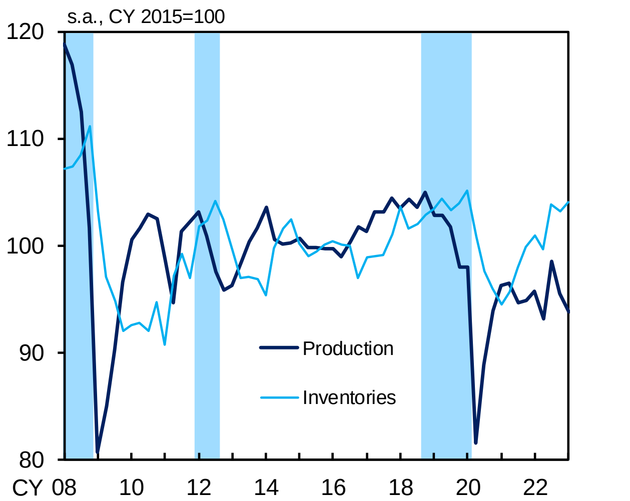
Source: Japan National Tourism Organization (JNTO).
Note: Figures for Europe, the United States, and other regions include seasonal adjustment errors.

Chart 14: Savings-Investment Balance



Source: Bank of Japan.

Chart 15: Industrial Production

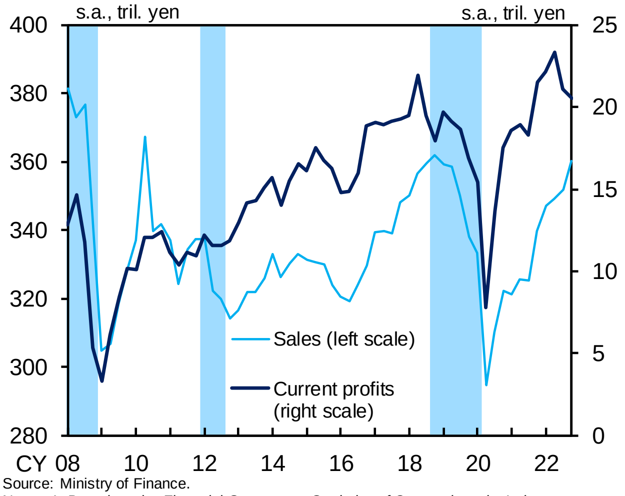


Source: Ministry of Economy, Trade and Industry.
Note: Shaded areas denote recession periods.

business-oriented machinery" has been at a relatively high level, despite a lowering of its level from that recorded in the middle of last year, when it surged. On the other hand, with adjustment pressure remaining, particularly on memory for smartphones and personal computers, production of "electronic parts and devices" has continued on a declining trend despite firm demand related to automobiles, although the pace of decline has slowed. Production of "chemicals (excluding medicine)" has been relatively weak, mainly reflecting weakness in global demand for IT-related goods.

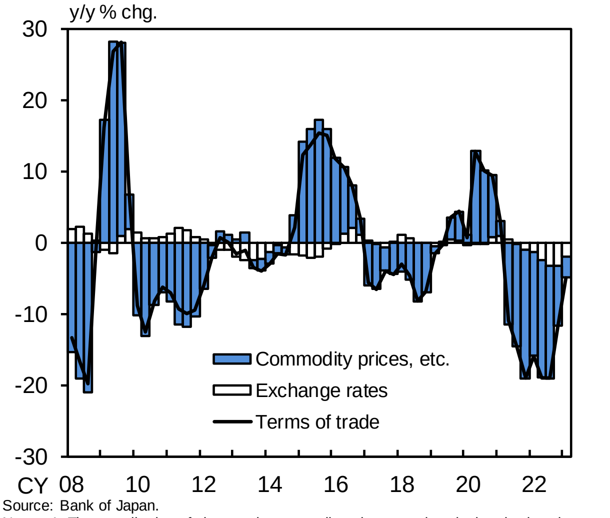
Chart 16: Indicators Related to Corporate Profits

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 Terms of Trade



Source: 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 changes in exchange rates is calculated using the difference between export/import price indexes on a yen basis and those on a contract currency basis.
2. Terms of trade = Export price index on a yen basis / Import price index on a yen basis

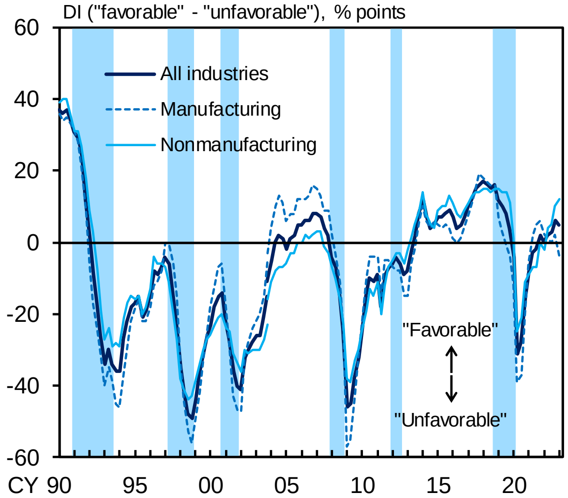
Although industrial production is projected to be affected by the slowdown in the pace of recovery in overseas economies, it is likely to be more or less flat toward around the middle of 2023, due to factors such as the waning of the effects of supply-side constraints. Thereafter, production is likely to return to an uptrend as overseas economies pick up.

Corporate Profits

Corporate profits have been at high levels on the whole. According to the *Financial Statements Statistics of Corporations by Industry, Quarterly*, current profits for all industries and enterprises for the October-December quarter of 2022 declined slightly from the previous quarter, but they continued to be at high levels (Chart 16[1]). In detail, current profits have been pushed up by progress in the pass-through of cost increases to selling prices and improvement in the terms of trade that reflects a decline in import prices, in addition to the waning of the effects of supply-side constraints (Chart 16[2]). On the other hand, current profits have been pushed down by factors such as the slowdown in the pace of recovery in overseas economies and foreign exchange losses due to the yen's appreciation. By industry and firm size, although operating profits of large manufacturers have been more or less flat at high levels, their current profits have declined significantly, reflecting a deterioration in non-operating profits that has resulted mainly from the yen's appreciation. Despite being affected by the appreciation, current profits of small and medium-sized manufacturers have been more or less flat on the whole, with progress in the pass-through of cost increases to selling prices and the waning of the effects of supply-side constraints. As for nonmanufacturers, current profits of large firms have increased. This is mainly because the deficit in the electric and gas utilities industry -- which was significant for the previous quarter -- has decreased due to a decline in fuel prices and hikes in electricity and gas charges, and because there was receipt of a significant amount of dividends from overseas subsidiaries in the shipping industry. Meanwhile, current profits of large firms in the services industry have decreased due to cost increases resulting from higher food prices and electricity charges, although sales in the industry have been pushed up by price hikes and increased private consumption. Current profits of small and medium-sized nonmanufacturers have been more or less flat. This is because, as with large firms in the services industry, current profits for small and medium-sized firms in that industry have decreased, while current profits in the construction industry have increased, mainly reflecting progress in the pass-through of cost increases to selling prices.

Business sentiment has been more or less unchanged. According to the March *Tankan*, the DI for business conditions for all enterprises has deteriorated for manufacturing but has continued to improve for nonmanufacturing (Chart 17). Although there has been a waning of the effects of supply-side constraints and progress in the pass-through of cost increases to selling prices, the DI for manufacturing has deteriorated for large firms in particular. This is because, with the impact of past high commodity prices remaining, attention in the manufacturing industry has been drawn to the slowdown in the pace of recovery in overseas economies and continued adjustment pressure on IT-related goods. Looking at industries where the DIs have improved, that for transportation machinery has improved as the tightness in global supply and demand conditions for semiconductors used in automobiles has eased gradually. In addition, the progress in the pass-through of cost increases to selling prices has pushed up such DIs as that for small firms in the food and beverages industry. Turning to industries where the DIs have deteriorated, the impact of past high commodity prices has continued to be observed in a wide range of industries. In addition, the DIs for industries such as chemicals, iron and steel, general-purpose machinery, and electrical machinery have deteriorated, mainly in reflection of the slowdown in the pace of recovery in overseas economies and continued adjustment pressure on IT-related goods, and this has pushed down the DI for overall manufacturing. The DI for nonmanufacturing has continued to improve on the whole as the impact of COVID-19 has waned further and cost increases have been passed on to selling prices, although the impact of past high commodity prices has continued to be observed.

Chart 17: Business Conditions



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

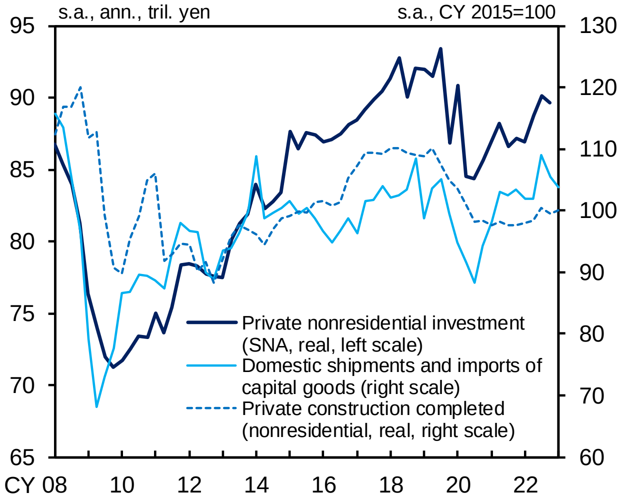
The DIs for retail and for services for individuals, which are private consumption-related industries, have improved, partly due to a hike in selling prices, with private consumption following a moderate uptrend, mainly due to a waning of the impact of COVID-19 and the implementation of the government's domestic travel discount program. On the other hand, the DIs for industries such as transport and postal activities have deteriorated somewhat owing to the impact of past high commodity prices.

Regarding the outlook for corporate profits, they are expected to be at high levels on the whole for the time being, partly due to a recovery in Japan's economy and the progress in the pass-through of cost increases to selling prices, although they are likely to be affected by cost increases resulting mainly from past high commodity prices and by a slowdown in the pace of recovery in overseas economies. Thereafter, as the effects of the deterioration in the terms of trade stemming from the rise in commodity prices wane gradually, corporate profits are projected to improve, reflecting a recovery in the level of economic activity.

Business Fixed Investment

Business fixed investment has increased moderately (Chart 18). With the effects of supply-side constraints waning, the aggregate supply of capital goods -- a coincident indicator of machinery investment -- has been on an uptrend, mainly led by digital- and labor saving-related investments, although it has decreased from the level recorded in the middle of last year, when investment in semiconductor production

Chart 18: Coincident Indicators of Business Fixed Investment



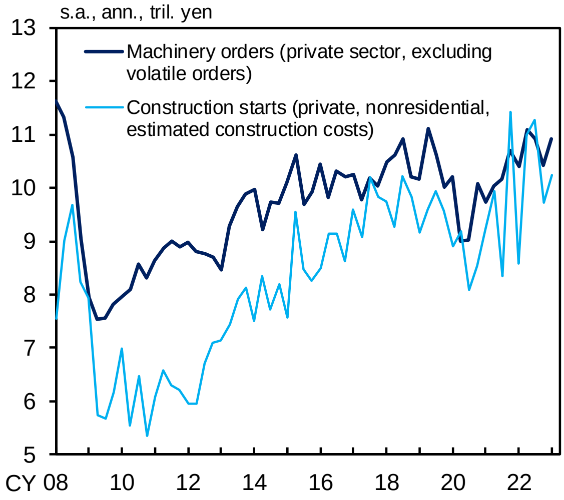
Sources: Cabinet Office; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.

Notes: 1. Figures for 2023/Q1 are January-February averages.
2. Figures for real private construction completed are based on staff calculations using the construction cost deflators.

equipment surged. Private construction completed (nonresidential) -- a coincident indicator of construction investment -- has been on a moderate uptrend, mainly due to a rise in construction of logistics facilities on the back of an expansion in e-commerce and to progress in urban redevelopment projects.

Machinery orders -- a leading indicator of machinery investment -- have increased, when fluctuations are smoothed out (Chart 19). By industry, orders by "electrical machinery" have decreased, mainly affected by production adjustments for semiconductor memory. However, orders by the manufacturing industry overall have been on an uptrend, mainly led by "general-purpose, production, and business-oriented machinery," reflecting factors such as projections that digital-related demand will increase in the medium to long term. With regard to orders by the nonmanufacturing industry, digital- and labor saving-investments have followed an uptrend, and orders for projects that had been postponed due to COVID-19 have been seen in industries such as transportation. Construction starts (in terms of planned expenses for private and nonresidential construction) -- a leading indicator of construction investment -- have increased, albeit with fluctuations. This is due to an uptrend in construction of logistics and other facilities and to progress in urban redevelopment projects. Looking at the March *Tankan*, planned business fixed investment for fiscal 2022 (on the basis close to GDP definition; business fixed investment -- including software and R&D investments but excluding land purchasing expenses -- for all industries and enterprises including financial institutions) shows

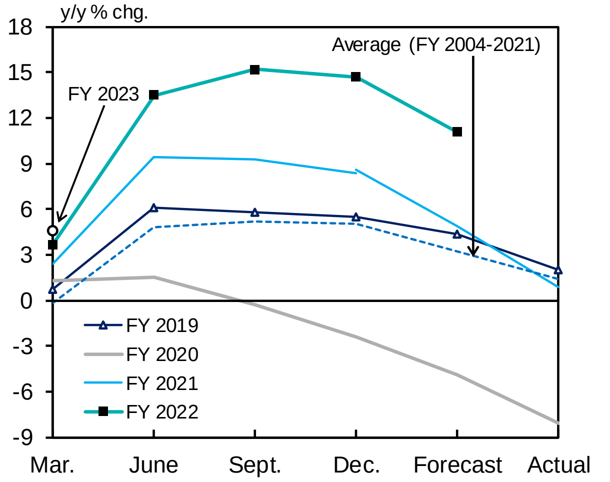
Chart 19: Leading Indicators of Business Fixed Investment



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 2023/Q1 are January-February averages.

a year-on-year rate of increase of 11.1 percent (Chart 20). Although this is a downward revision from the previous survey conducted last December, the rate of change in investment for fiscal 2022 is expected to be significantly positive for both manufacturing and nonmanufacturing industries. The first survey of investment plans for fiscal 2023, released in the March *Tankan*, shows that the year-on-year rate of increase in business fixed investment for all industries and enterprises, including financial institutions, is expected to be 4.6 percent, indicating a relatively high increase compared with previous March *Tankan* surveys.

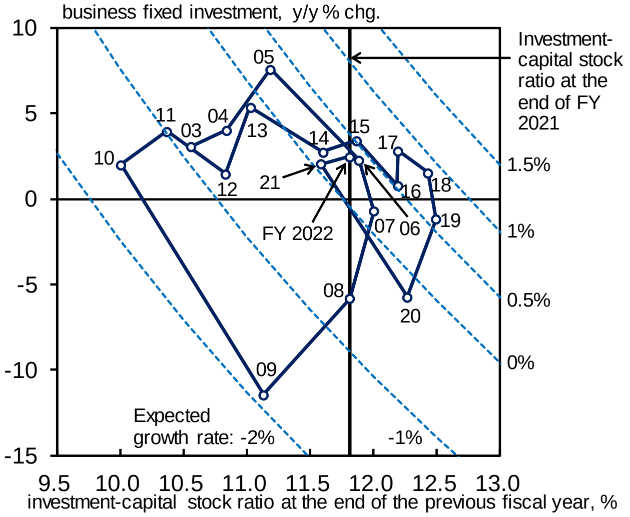
Chart 20: Developments in Business Fixed Investment Plans



Source: Bank of Japan.
Notes: 1. Based on the *Tankan*. All industries including financial institutions.
2. Including software and R&D investments and excluding land purchasing expenses. R&D investment is not included before the March 2017 survey.
3. There is a discontinuity in the data for December 2021 due to a change in the survey sample.

With regard to the outlook, as corporate profits remain at high levels on the whole, business fixed investment is expected to continue increasing for the time being, mainly on the back of accommodative financial conditions. Toward the end of the projection period, such investment is projected to continue increasing, partly due to a rise in investment that is not necessarily responsive to the business cycle, although the pace of increase is likely to slow, reflecting cyclical adjustment pressure stemming from the accumulation of capital stock (Chart 21). Specifically, investment that is expected to be undertaken during the projection period includes (1) investment induced by the increase in domestic and external demand; (2) labor-saving and efficiency-improving investment to address labor shortages and IT-related investment to digitalize business activities; (3) construction investment in logistics facilities, resulting from expanding e-commerce, and in offices and commercial facilities due to redevelopment projects; (4) investment in growth areas and to address environmental issues, such as

Chart 21: 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 2022 is the 2022/Q2-Q4 average.

decarbonization; and (5) semiconductor-related investment that is mainly aimed at strengthening supply chains and that also reflects government support.[9]

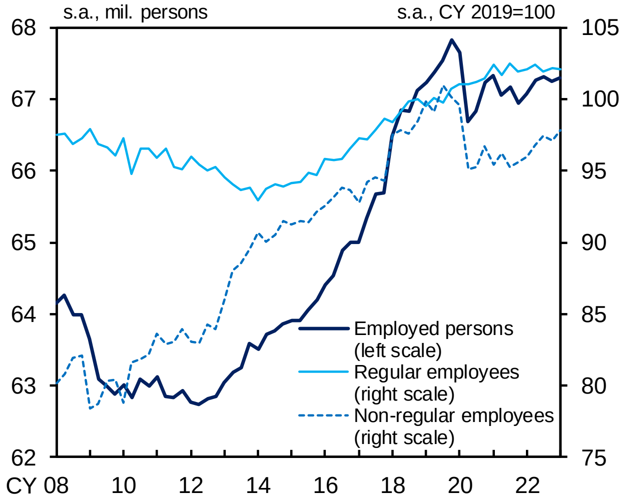
Employment and Income Situation

The employment and income situation has improved moderately on the whole.

Regarding the number of employed persons, that of regular employees has followed a moderate uptrend, mainly in the medical, healthcare, and welfare services industry and in the information and communications industry, both of which have faced a severe labor shortage (Chart 22). The number of non-regular employees has risen moderately, mainly in the face-to-face services industry and the medical, healthcare, and welfare services industry. Total hours worked per employee have been more or less flat, when fluctuations due to the number of weekdays are smoothed out. With regard to labor market conditions, the unemployment rate has been in the range of 2.5-3.0 percent (Chart 23). The active job openings-to-applicants ratio has followed a moderate uptrend, as the number of job offerings for regular employees has been firm in industries with labor shortages and as that for part-time employees has increased, including in the face-to-face services industry (Chart 24). Meanwhile, the labor force participation rate has been on a moderate uptrend, particularly for women, when fluctuations are smoothed out (Chart 23).

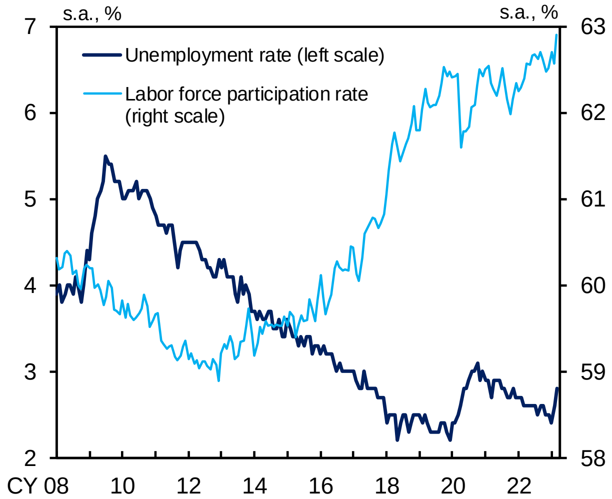
[9] Box 3 examines the relationship between labor shortages and business fixed investment.

Chart 22: Number of Employed Persons



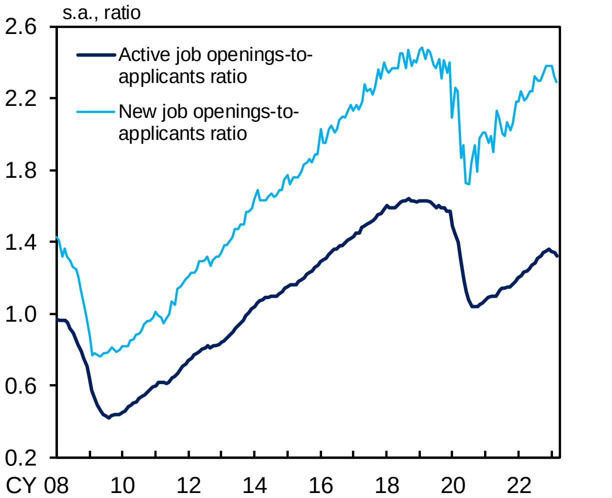
Source: Ministry of Internal Affairs and Communications.
Note: Figures for regular employees and non-regular employees prior to 2013 are based on the "detailed tabulation" in the *Labour Force Survey*.

Chart 23: Unemployment Rate and Labor Force Participation Rate



Source: Ministry of Internal Affairs and Communications.

Chart 24: Job Openings-to-Applicants Ratio

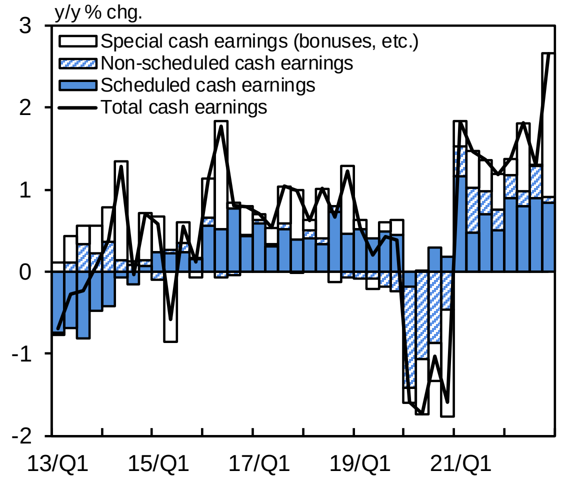


Source: Ministry of Health, Labour and Welfare.

With regard to the outlook for the number of employees, regular employees are likely to continue increasing, mainly in industries with labor shortages, such as medical, healthcare, and welfare services, information and communications, and construction. Non-regular employees, such as in the face-to-face services industry, are also likely to continue increasing along with a recovery in economic activity. However, with labor force participation of women and seniors having advanced to a high degree thus far, the pace of increase in the number of overall employees is projected to decelerate gradually, partly because it will become more difficult for labor supply to increase, reflecting factors such as demographic changes. Under these circumstances, the unemployment rate is expected to follow a moderate declining trend on the back of the recovery in economic activity.

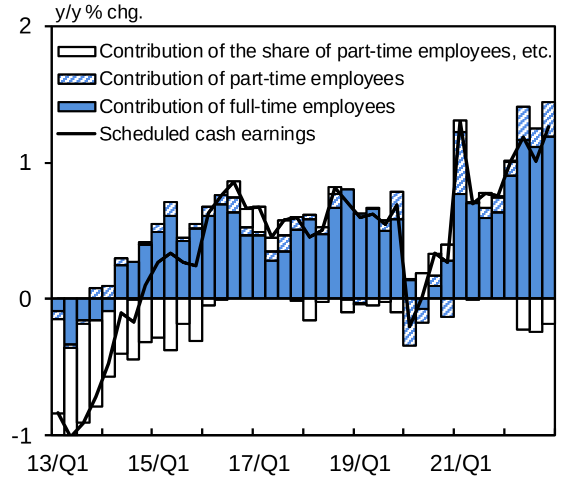
On the wage side, total cash earnings per employee have increased moderately, reflecting a pick-up in overall economic activity (Chart 25).[10] The year-on-year rate of change in scheduled cash earnings has continued to increase moderately (Chart 26). Looking at the breakdown, the rate for full-time employees has been at around 1.5 percent, with concern over continued labor shortages. The year-on-year rate of change in hourly scheduled cash earnings for part-time employees has been at around 2.5 percent, when fluctuations are smoothed out, as labor market conditions have tightened. Non-scheduled cash earnings have continued to increase in reflection of improvement in economic activity. Special cash

Chart 25: 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 26: 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.

[10] Wages in the *Monthly Labour Survey* are assessed on the basis of continuing observations, which are less susceptible to fluctuations due to sample revisions.

earnings (bonuses) have increased significantly for a wide range of industries and firm sizes, and their year-on-year rate of increase has registered the largest figure since 1991. This seems to be attributable to lump-sum payments by some firms in response to price rises, or "inflation allowances," in addition to improvement in business performance.

With regard to the outlook for wages, it is expected that the wage growth rate resulting from this year's annual spring labor-management wage negotiations will be significantly higher than in the previous year, including base pay.[11] As a result, the rate of increase in scheduled cash earnings is likely to accelerate clearly through this summer. These earnings are projected to continue increasing firmly from fiscal 2024, in reflection of price rises and with labor market conditions continuing to be tight, due in part to the slowdown in the pace of increase in labor force participation of women and seniors.[12] Non-scheduled cash earnings are likely to increase moderately, reflecting improvement in economic activity. Special cash earnings (bonuses) are likely to increase, with corporate profits following an improving trend, although the rate of increase is projected to decelerate temporarily compared with fiscal 2022, when special cash earnings increased significantly due in part to payment of "inflation allowances." Taking all of these factors into account, the rate of increase in total cash earnings per employee is projected to accelerate.

[11] Box 1 outlines developments in the annual spring labor-management wage negotiations this year.

[12] Box 2 examines the linkage between wages and prices.

In light of the aforementioned employment and wage conditions, employee income has improved in nominal terms (Chart 27). In real terms, the year-on-year rate of change in employee income has remained negative in reflection of price rises, but the rate of decline has slowed recently on the back of high levels of special cash earnings paid at the end of last year. With regard to the outlook, nominal employee income is likely to continue increasing in reflection of an acceleration in nominal wage growth. In real terms, the year-on-year rate of change in employee income is projected to gradually turn positive toward the middle of fiscal 2023, as inflation declines and nominal employee income improves.

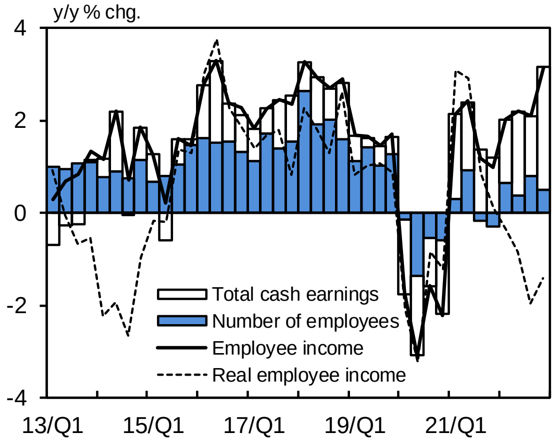
Household Spending

Private consumption has increased moderately, despite being affected by price rises.

The Consumption Activity Index (CAI, travel balance adjusted) -- which is calculated by combining various sales and supply-side statistics from the viewpoint of gauging Japan's consumption activity in a comprehensive manner -- increased moderately for the October-December quarter of 2022, partly because the government's domestic travel discount program has made a positive contribution (Charts 28 and 29). [13] It then increased slightly for the January-February period of 2023 relative to the October-December quarter of 2022. Looking at subsequent developments in private consumption from various sources, such

[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.

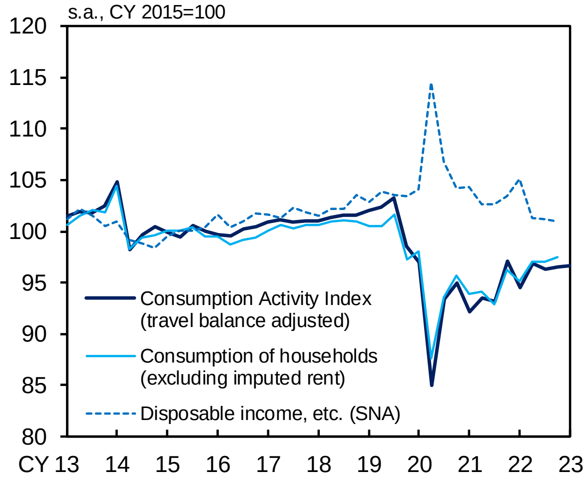
Chart 27: Employee Income



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

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

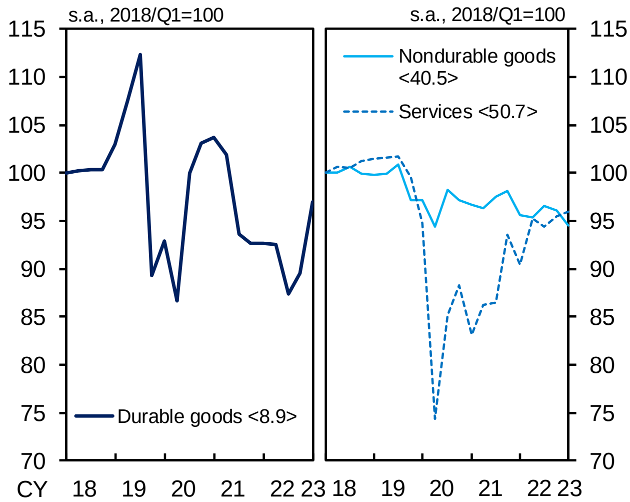
Chart 28: Real Private Consumption



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 2023/Q1 is the January-February average.
2. "Disposable income, etc." consists of disposable income and adjustment for the change in pension entitlements, and real values are obtained using the deflator of consumption of households.

Chart 29: Consumption Activity Index (CAI, Real)



Sources: Bank of Japan, etc.

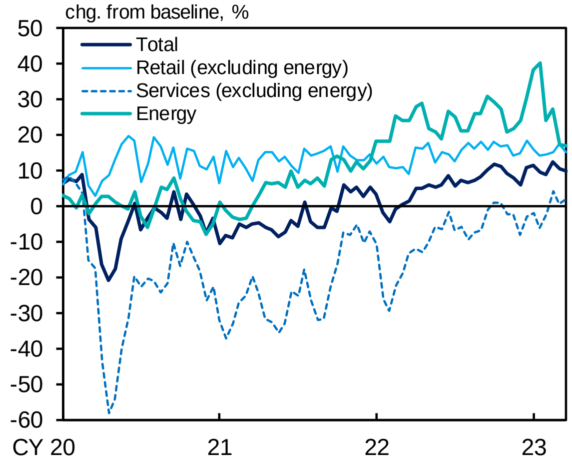
Notes: 1. Based on staff calculations. Figures in angular brackets show the weights in the CAI. Figures for 2023/Q1 are January-February averages.
2. Nondurable goods include goods classified as semi-durable goods in the SNA.

as high-frequency indicators, statistics published by industry organizations, and anecdotal information from firms, consumption seems to have continued on a moderate uptrend (Chart 30). This is mainly because the impact of COVID-19 has waned further and improvement in the income situation has started to become more evident, partly in light of the annual spring labor-management wage negotiations.

By type, consumption of durable goods has picked up, mainly on the back of a waning of supply-side constraints (Chart 29). Specifically, the number of new passenger cars sold has risen, as the tightness in global supply and demand conditions for semiconductors used in automobiles has gradually eased. Sales of household electrical appliances have rebounded. This is mainly because sales of game consoles have risen, reflecting factors such as the waning of supply-side constraints, and because demand for energy-saving electrical appliances has increased in reflection of higher electricity charges. Consumption of nondurable goods has seen relatively weak developments in beverages and food, clothes, and other items, partly due to the effects of high prices.

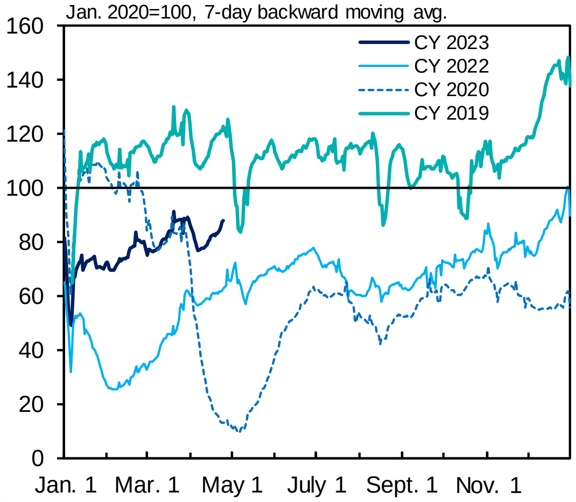
Services consumption has increased moderately with the impact of COVID-19 waning (Charts 29, 30, and 31). Despite being affected by price rises, dining-out has been on a moderate increasing trend on the whole. This is suggested by the fact that the number of families dining at, for example, chain restaurants has risen in reflection of an easing in the COVID-19 situation, and dining at *izakaya* (Japanese-style bars) has picked up

Chart 30: 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. The baseline is the average for the corresponding half of the month for fiscal 2016 through fiscal 2018.
2. Figures for the total and for services exclude telecommunications, and figures for energy consist of those for fuel, electricity, gas, heat supply, and water. Based on staff calculations.

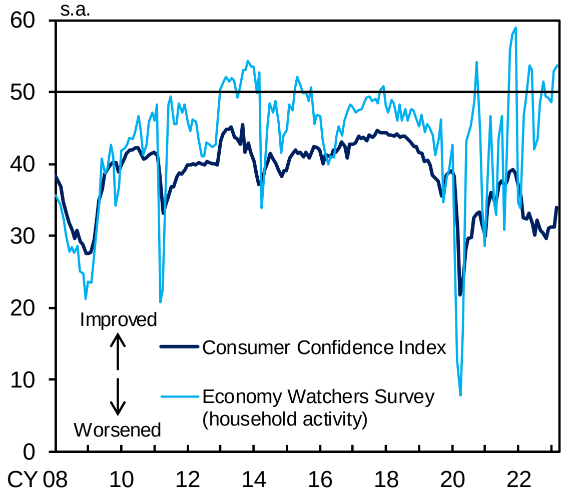
Chart 31: Mobility Trends in Downtown Areas



Source: Agoop Corp.
Notes: 1. Figures are the sum of the differences in the number of visitors between 9 p.m. and 4 a.m. on the following day in 53 downtown areas.
2. The latest figure is the average for April 19-25.

moderately. Domestic travel increased for the October-December quarter of 2022, partly due to the effects of the domestic travel discount program, and then turned out to be more or less flat for the January-February period of 2023, partly owing to a lowering of the discount rate applied in the program. Thereafter, however, domestic travel has shown signs of a pick-up, including travel demand during the spring vacation. Overseas travel has remained at a low level, but has continued to increase moderately.

Chart 32: Confidence Indicators Related to Private Consumption



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

Looking at confidence indicators related to private consumption, the Consumer Confidence Index has improved, mainly on the back of improvement in consumer perception of "employment" and "income growth" (Chart 32). The *Economy Watchers Survey* -- which asks firms for their views on the direction of the economy -- shows that the current economic conditions DI (household activity-related) has improved, mainly in reflection of the easing in the COVID-19 situation and a rise in inbound tourism demand, although concern over the impact of price rises has contributed to pushing down the DI.

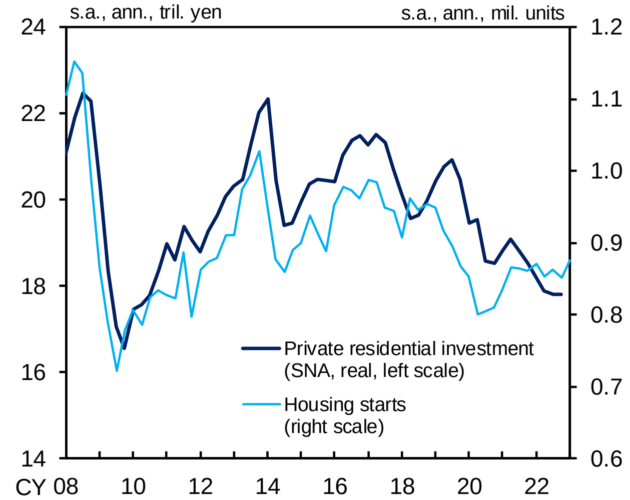
Regarding the outlook, although private consumption is expected to be affected by price rises, it is projected to continue increasing moderately, partly supported by household savings that had accumulated as a result of pandemic-related restrictions, with nominal employee income continuing to improve. Private consumption is also likely to be underpinned by the government's measures to reduce the household burden of higher gasoline prices, electricity charges, and gas charges, the domestic travel discount program, and government subsidies for those with low incomes. In addition, the upcoming reclassification in early May of COVID-19 as a Class V infectious disease under the Infectious Disease Control Law is likely to push up consumption and consumer sentiment. Although pent-up demand is likely to wane, private consumption is expected to continue increasing moderately from the middle of the projection period as employee income keeps improving. The propensity to consume is first likely to rise to a level that somewhat exceeds the average level seen before the pandemic, partly due to the withdrawals of household savings that had accumulated as a result of pandemic-related restrictions (Chart 33). From the middle of the projection period, it is expected to gradually return to the average level seen before the pandemic.

Housing investment has been relatively weak, mainly due to a rise in housing prices (Chart 34). Specifically, the number of housing starts -- a leading indicator of housing investment -- has been more or less flat on the whole, but that for owned houses -- for which prices per house are high -- has followed a downtrend. Housing investment is likely to follow a moderate declining trend in reflection of a rise in housing prices and demographic developments, although accommodative financial conditions are expected to provide support.

Chart 33: Average Propensity to Consume

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

Chart 34: Housing Investment



Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.
Note: The figure for 2023/Q1 is the January-February average.

II. Current Situation of Prices and Their Outlook

Developments in Prices

With the impact of past high commodity prices and yen depreciation gradually waning, the quarter-on-quarter rate of increase in the producer price index (PPI, adjusted for the effects of seasonal changes in electricity rates) has slowed, partly due to the effects of the government's measures to reduce the household burden of higher electricity and gas charges (Chart 35). The year-on-year rate of increase in the services producer price index (SPPI, excluding international transportation) has accelerated somewhat to around 1.5 percent, mainly on the back of a pick-up in economic activity and a rise in personnel expenses.

The year-on-year rate of increase in the CPI (all items less fresh food) is slower than a while ago, mainly due to the effects of pushing down energy prices from the government's economic measures, but it has been at around 3 percent recently owing to the effects of the pass-through to consumer prices of cost increases led by the rise in import prices (Chart 36). The rate of increase in the CPI (all items less fresh food and energy, excluding temporary factors such as the effects of the government's domestic travel discount program) has accelerated, reflecting a continued pass-through to selling prices of increases in costs such as of raw materials (Chart 37).[14]

[14] The CPI figures excluding temporary factors are calculated by excluding (1) the effects of the consumption tax hike and policies concerning the provision of free education, (2) the effects of travel subsidy programs, and (3) mobile phone charges from the CPI (all items less fresh food) and the CPI (all items less fresh food and energy).

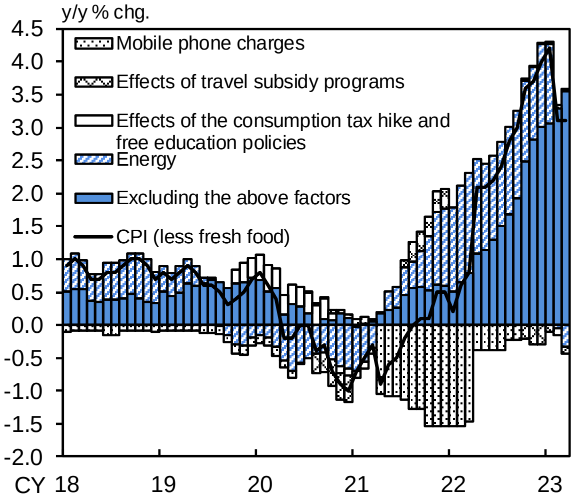
Chart 35: Inflation Indicators

y/y % chg.

	22/Q2	22/Q3	22/Q4	23/Q1
Consumer Price Index (CPI)				
Less fresh food	2.1	2.7	3.7	3.5
Excluding temporary factors	2.6	3.1	4.1	3.6
Less fresh food and energy	0.9	1.5	2.8	3.5
Excluding temporary factors	1.3	1.9	3.1	3.6
Producer Price Index (q/q % chg.)	2.9	1.8	2.9	0.4
Services Producer Price Index	1.3	1.4	1.3	1.5
GDP Deflator	-0.3	-0.4	1.2	
Domestic demand deflator	2.7	3.2	3.4	

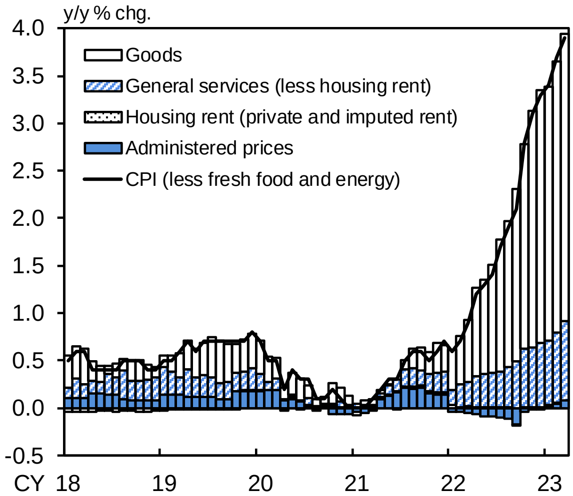
Sources: Ministry of Internal Affairs and Communications; Bank of Japan; Cabinet Office.
Notes: 1. Figures for the producer price index (PPI) are adjusted for the hike in electric power charges during the summer season. Figures for the services producer price index (SPPI) exclude international transportation.
2. The CPI figures excluding temporary factors are staff estimates and exclude mobile phone charges and the effects of travel subsidy programs.

Chart 36: 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.

Chart 37: CPI (Excluding Temporary Factors)

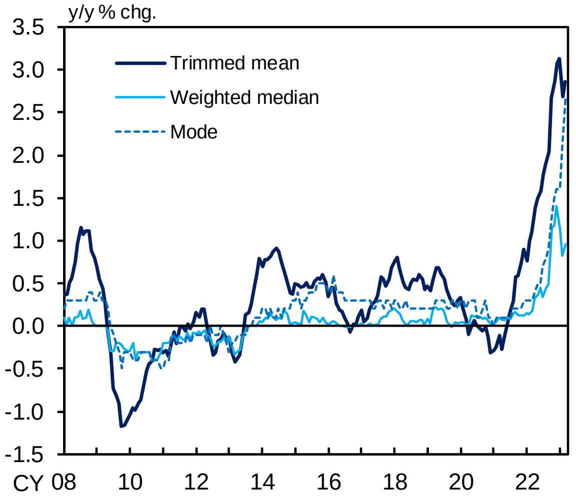


Source: Ministry of Internal Affairs and Communications.
Notes: 1. Administered prices (less energy) consist of "public services" and "water charges."
2. The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and travel subsidy programs.

Looking at the breakdown of developments in the year-on-year rate of change in the CPI (all items less fresh food and energy, excluding temporary factors), the rate of increase in goods prices has accelerated on the whole, as the pass-through of cost increases to selling prices has continued for a wide range of items; specifically, the rates of increase for items such as daily necessities have continued to accelerate, while the rates of increase for food and durable goods have decelerated. The rate of increase in general services prices has remained on an accelerating trend against the backdrop of a continued pass-through of higher raw material costs and personnel expenses, mainly for dining-out, housework-related services (e.g., services related to housing repairs and maintenance), and hotel charges. Although water and sewerage charges for some local governments have declined somewhat, the year-on-year rate of change in administered prices has been at around 0 percent in reflection of a hike in fire and earthquake insurance premiums.

The indicators for capturing the underlying trend in the CPI have exhibited the following developments (Chart 38).[15] The trimmed mean of the year-on-year rate of change in the CPI increased to slightly more than 3 percent due to price hikes in a wide range of goods and services,

Chart 38: Various Measures of Core Inflation

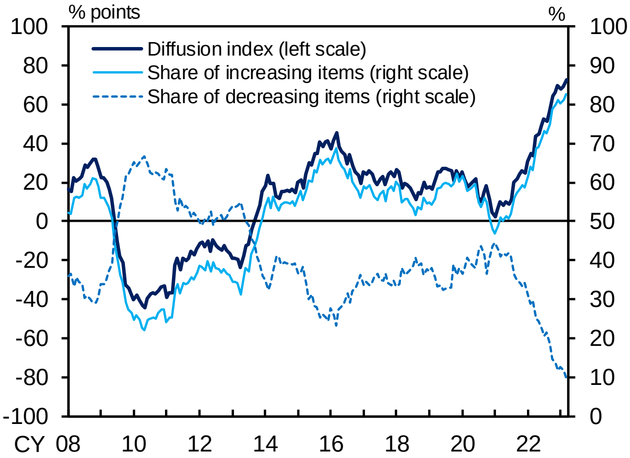


Sources: Bank of Japan; Ministry of Internal Affairs and Communications.
Note: Based on staff calculations using the CPI excluding the effects of the consumption tax hikes, policies concerning the provision of free education, and travel subsidy programs. The CPI figures from April 2020 onward are staff estimates and exclude the effects of measures such as free higher education introduced in April 2020.

[15] 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 travel subsidy programs.

and since then has decreased somewhat, partly due to the effects of the government's measures to reduce the household burden of higher electricity and gas charges. The mode and the weighted median, which are less susceptible to developments in certain CPI items, have been in the range of 2.5-3.0 percent and around 1 percent, respectively. Looking at the year-on-year price changes across all CPI items (less fresh food), the share of price-increasing items minus the share of price-decreasing items has been at a high level in positive territory because costs such as of raw materials have been passed on to a wide range of goods and services prices (Chart 39).

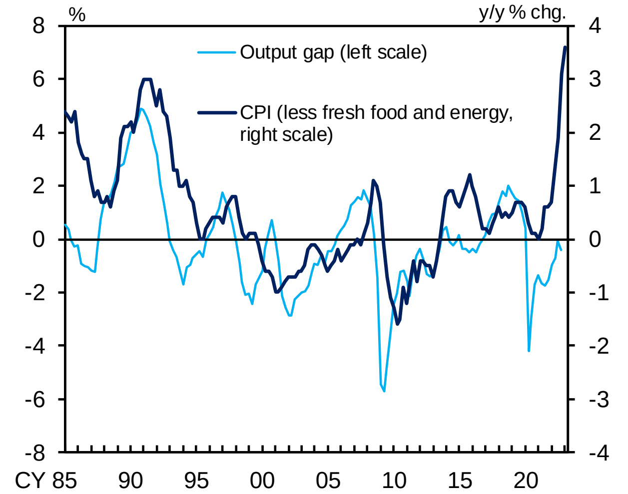
Chart 39: Diffusion Index of Price Changes



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 travel subsidy programs. 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.

Meanwhile, the year-on-year rate of change in the domestic demand deflator has been at around 3.5 percent (Chart 35). By component, the private consumption deflator has been at around 3.5 percent on a year-on-year basis. The rates of increase in such deflators as for business fixed investment have remained at high levels. The year-on-year rate of change in the GDP deflator has turned positive and registered around 1 percent; specifically, the rate of increase in the domestic demand deflator has remained relatively high, while the rate of increase in the import deflator has slowed in reflection of developments in crude oil prices, for example.

Chart 40: 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 travel subsidy programs.
2. Figures for the output gap are staff estimates.

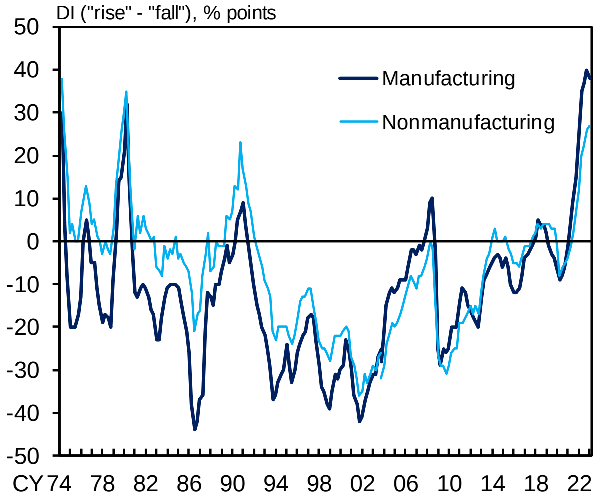
Environment Surrounding Prices

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 middle of fiscal 2023 and then continue to expand moderately, albeit at a gradually slowing pace (Charts 2 and 40).

Second, medium- to long-term inflation expectations have been more or less unchanged recently after rising moderately. The March *Tankan* shows that the output prices DI has been at a high level (Chart 41). It also shows that firms' inflation outlook for general prices has also been at a high level, not only for the short term but also for the medium to long term (Chart 42). In addition, as mentioned earlier, the wage growth rate resulting from this year's annual spring labor-management wage negotiations is expected to be significantly higher than in the previous year, including base pay. Given that the formation of inflation expectations in Japan is largely adaptive, the increase in inflation seen thus far has brought about a rise in households' and firms' medium- to long-term inflation expectations. Regarding the outlook, inflation expectations are likely to rise again moderately toward the end of the projection period, with improvement in the output gap and changes in firms' price- and wage-setting behavior and in labor-management wage negotiations. This will likely lead to a sustained rise in prices accompanied by wage increases.

Third, the year-on-year rate of increase in the import price index has decelerated clearly recently, reflecting, for example, relatively lower prices than a while ago, such as of crude oil, with these lower prices resulting partly from the slowdown in the pace of recovery in the global economy (Charts 43 and 44). Looking at the final demand-intermediate demand (FD-ID) price indexes, the rates of change have been more or

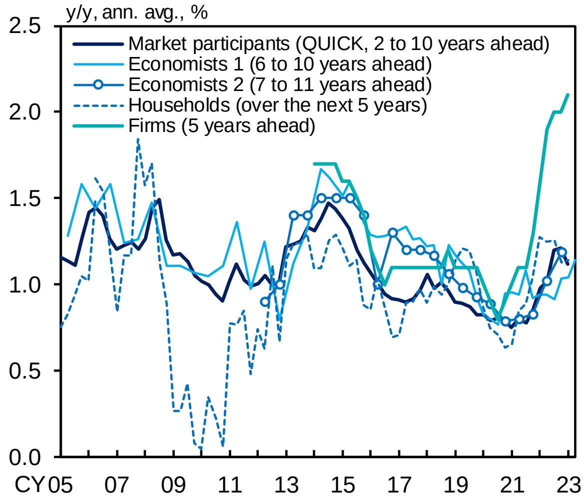
Chart 41: Output Prices



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

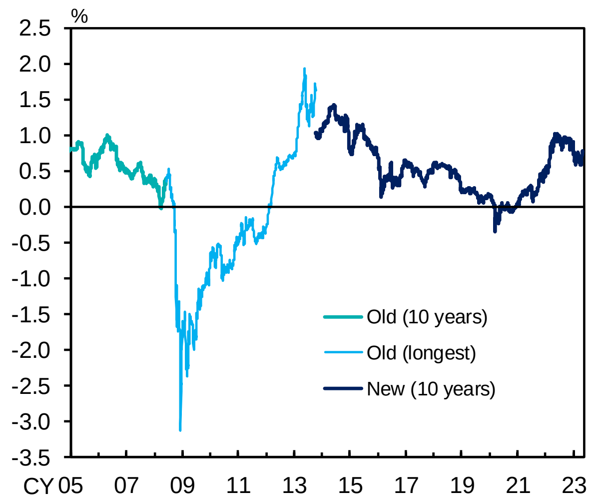
Chart 42: Inflation Expectations

1. 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 for a 5-choice question.
3. Figures for firms show the inflation outlook of enterprises for general prices (all industries and enterprises, average) in the *Tankan*.

2. 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.

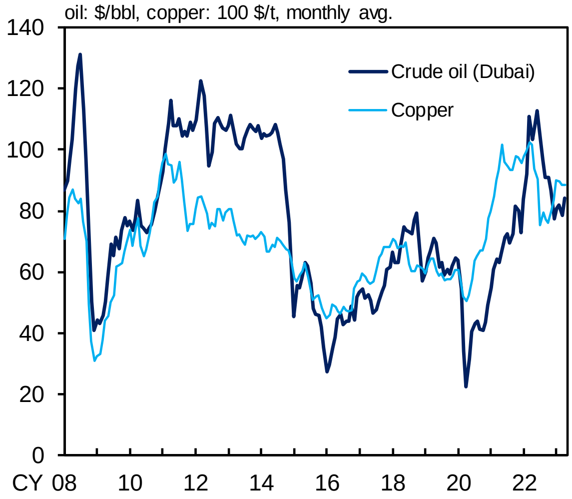
less flat even in the indexes for stages 3 and 4 of the ID, which show developments in relatively downstream stages of the production process (Chart 45). This reflects a decline in imported goods prices and the subsequent waning of upward pressure of costs from the upstream stages of the production process. Given these developments, the upward pressure on the CPI stemming from import prices is expected to gradually wane. However, there are high uncertainties over the pace and timing of the waning, since the degree of cost increases in the recent past has been large and firms' price-setting stance has been changing.[16]

Meanwhile, the year-on-year rate of change in energy prices (e.g., gasoline prices and electricity charges) has been negative recently, mainly because the government has continued to provide gasoline subsidies and, in February this year, introduced the measures to reduce the household burden of higher electricity and gas charges.[17] As for the outlook, energy prices will be pushed up if the hikes in regulated electricity

[16] For the characteristics of firms' price-setting stance in the current phase, see also Box 3 in the October 2022 Outlook Report.

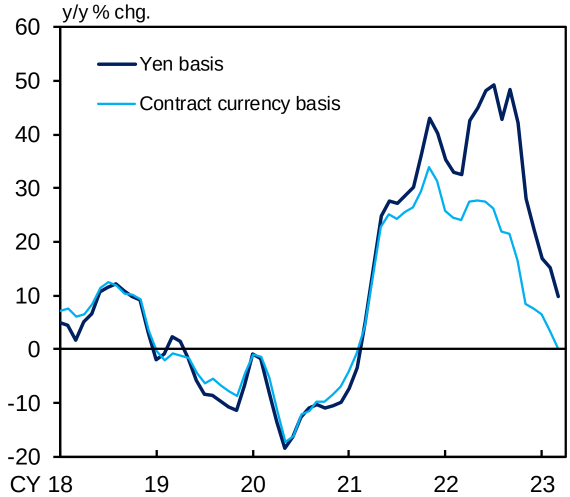
[17] With regard to gasoline subsidies, the government has introduced a measure to provide subsidies to petroleum distributors and importers as funds to contain a sharp rise in their selling prices when the nationwide average for retail gasoline prices exceeds the benchmark price (168 yen per liter). It has decided to continue with this measure until the end of May 2023 while lowering the upper limit of the subsidies. The government has announced that it will gradually scale back the gasoline subsidies from June. With regard to electricity charges, through its measures to reduce the household burden, electricity charges will be cut by 7 yen per kilowatt-hour (roughly a 20 percent discount per month for typical households) for the period from February through September 2023 and by 3.5 yen per kilowatt-hour for October. Regarding manufactured and piped gas charges, roughly similar measures to reduce the household burden have been introduced.

Chart 43: International Commodity Prices



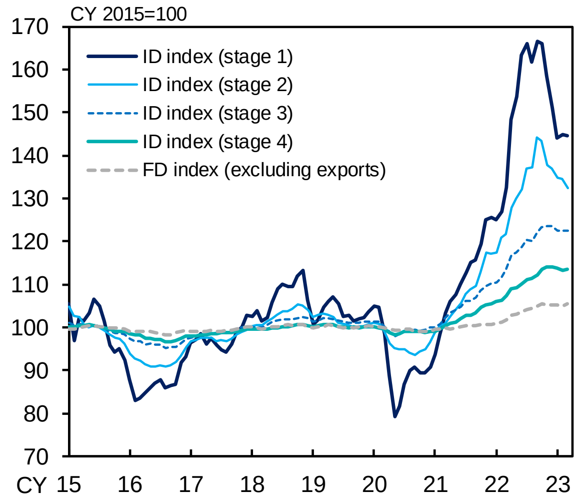
Sources: Nikkei Inc.; Bloomberg.

Chart 44: Import Price Index



Source: Bank of Japan.

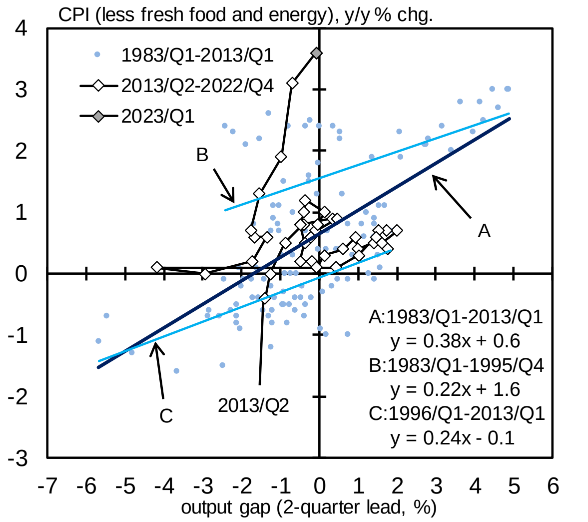
Chart 45: FD-ID Price Indexes (All Commodities)



Source: Bank of Japan.

rates that power companies are currently applying for are approved by the government. However, the year-on-year rate of decline in energy prices is first likely to moderately accelerate toward the middle of fiscal 2023, considering recent developments in commodity prices and a reduction by the government in the rate of renewable energy surcharges on electricity. Assuming that the government's various measures will be scaled back, the rate of change in energy prices is then highly likely to turn positive -- mainly due to a waning of the effects of the government measures pushing down such prices toward the middle of fiscal 2023 -- and accelerate clearly toward the middle of fiscal 2024. Thereafter, the rate of increase is expected to decelerate rapidly as the effects of the fluctuations in the rate of change caused by the government measures diminish. Subsequently, in light of developments in the futures market, the rate of change is projected to remain slightly negative toward the end of the projection period.

Chart 46: 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 travel subsidy programs.
2. Figures for the output gap are staff estimates.

Outlook for Prices

Based on this underlying scenario, the uptrend in the year-on-year rate of increase in the CPI (all items less fresh food and energy) is projected to gradually come to a halt as the effects of past cost increases led by a rise in import prices wane in steps, and the rate of increase is likely to decelerate through the second half of fiscal 2023. Thereafter, the rate is projected to accelerate again moderately, as the output gap continues to improve and as medium- to long-term inflation expectations and wage growth rise, accompanied by changes in factors such as firms' price- and wage-setting behavior (Chart 46).

On this basis, taking account of the aforementioned developments in energy prices, the year-on-year rate of increase in the CPI (all items less fresh food) is likely to decelerate toward the middle of fiscal 2023 because it is projected that (1) the negative contribution of energy prices will increase and (2) there will be a gradual waning of pressure on firms to pass on the cost increases led by the rise in import prices. Toward the middle of fiscal 2024, the rate of increase in this CPI is projected to accelerate, as (1) the rate of increase in energy prices accelerates clearly, mainly due to the waning of the effects of the government's various measures pushing down such prices toward the middle of fiscal 2023, and as (2) the rate of increase in the CPI (all items less fresh food and energy) accelerates moderately. Thereafter, the rate of increase in the CPI (all items less fresh food) is expected to decelerate clearly for a while as the effects of the fluctuations in the rate of change in energy prices caused by the government measures diminish. Toward the end of the projection period, however, the rate of increase in this CPI is likely to accelerate again moderately, with that in the CPI (all items less fresh food and energy) continuing to accelerate moderately.

III. Financial Developments in Japan

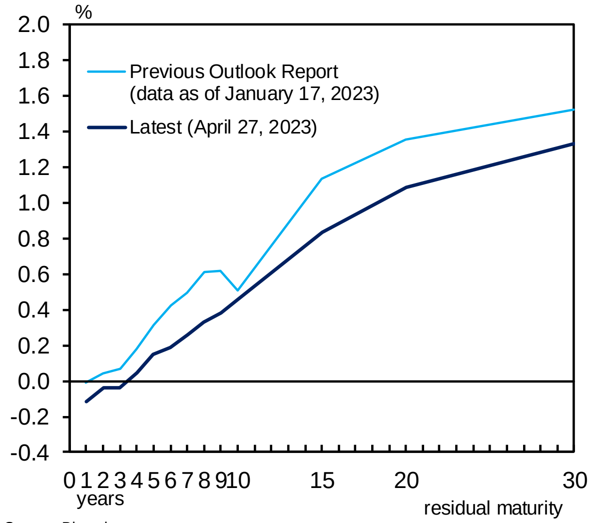
Financial Conditions

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

Under QQE with Yield Curve Control, the shape of the yield curve for Japanese government bonds (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 47). Specifically, the Bank has conducted market operations nimbly; it has purchased a necessary amount of JGBs without setting an upper limit, including through fixed-rate purchase operations for consecutive days, and has made use of the Funds-Supplying Operations against Pooled Collateral, which was enhanced at the Monetary Policy Meeting held in January 2023. Under these circumstances, the yields for relatively short maturities have been in slightly negative territory, and the 10-year JGB yields have been in the range of around plus and minus 0.5 percentage points from 0 percent.

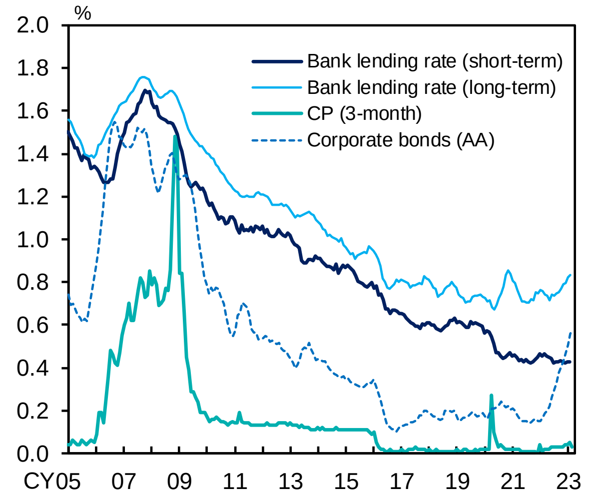
Firms' funding costs have been hovering at extremely low levels (Chart 48). Issuance rates for CP have been at extremely low levels, as issuance conditions have remained favorable. The DI for issuance conditions for CP in the *Tankan* has shown a slight rise in net "easy" conditions, as the increase in demand for working capital in reflection of high commodity prices has moderated somewhat. In the corporate bond

Chart 47: Yield Curves



Source: Bloomberg.

Chart 48: 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.

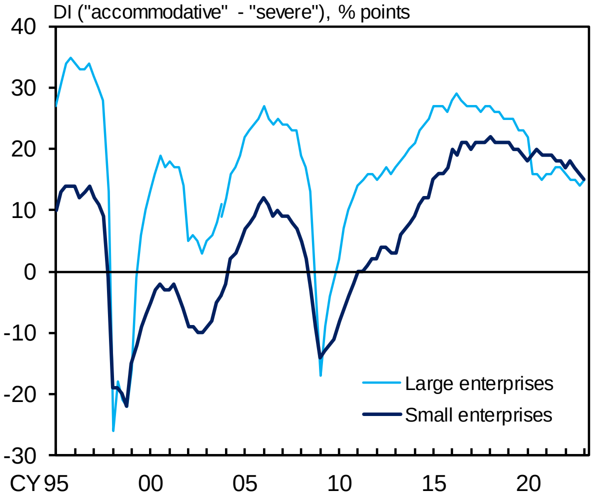
3. Figures for bank lending rates and issuance yields for corporate bonds are 6-month backward moving averages.

market, although a shortening of issuance maturities has been observed, issuance conditions have been favorable on the whole, as the widening of issuance spreads has paused. Meanwhile, lending rates (the average interest rates on new loans and discounts) have been at extremely low levels for short-term loans and discounts, while they have increased somewhat for long-term loans.

The DI in the *Tankan* for financial institutions' lending attitudes as perceived by firms suggests that such attitudes have remained accommodative on the whole (Chart 49). The DI for firms' financial positions in the *Tankan* suggests that, although weakness has remained in some segments, the positions have been at improved levels on the whole, supported by a pick-up in economic activity (Chart 50). By industry, as a wide range of industries have been pushed down by the impact of past high raw material costs, the DI for manufacturing has continued to deteriorate, partly due to the effects of the slowdown in the pace of recovery in overseas economies, whereas that for nonmanufacturing has remained on an improving trend, owing to the pick-up in economic activity.

Regarding firms' demand for funds, demand for working capital has increased in reflection of the pick-up in economic activity and past high raw material costs. In this situation, the year-on-year rate of increase in the amount outstanding of bank lending has been in the range of 3.0-3.5 percent (Chart 51). That in the aggregate amount outstanding of CP and corporate bonds has decelerated, registering around 3 percent, mainly

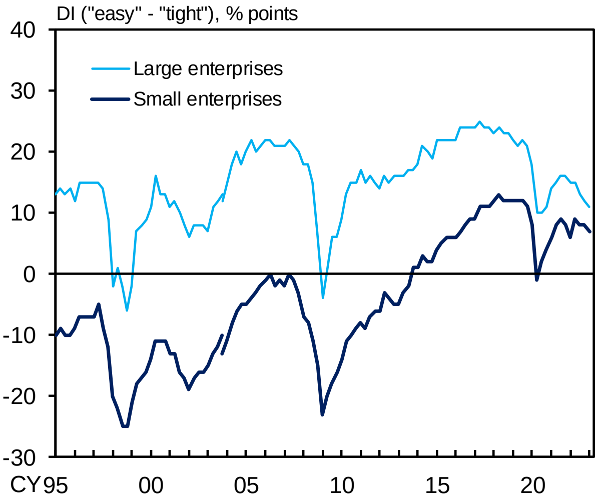
Chart 49: Lending Attitudes of Financial Institutions as Perceived by Firms



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.

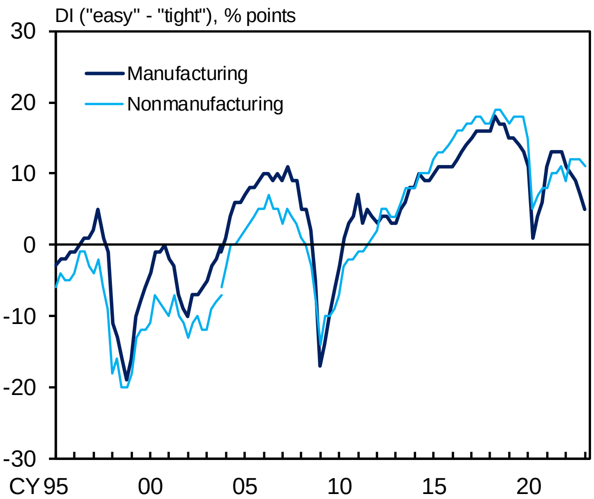
Chart 50: Firms' Financial Positions

1. By Firm Size



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.

2. By Industry

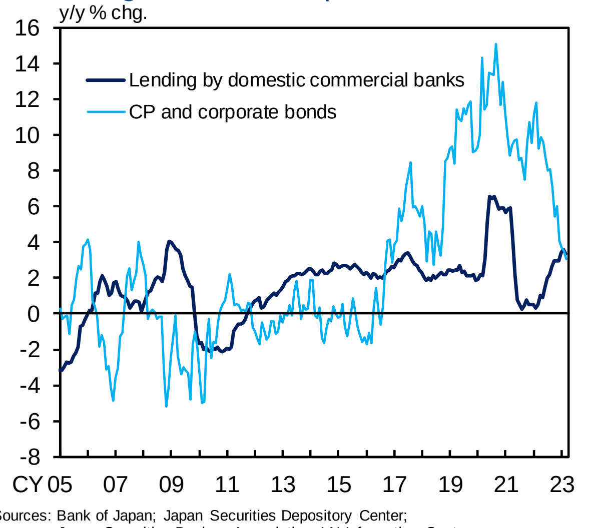


Source: Bank of Japan.
Note: Based on the *Tankan*. All enterprises. There is a discontinuity in the data for December 2003 due to a change in the survey framework.

because of subdued issuance by energy-related firms.

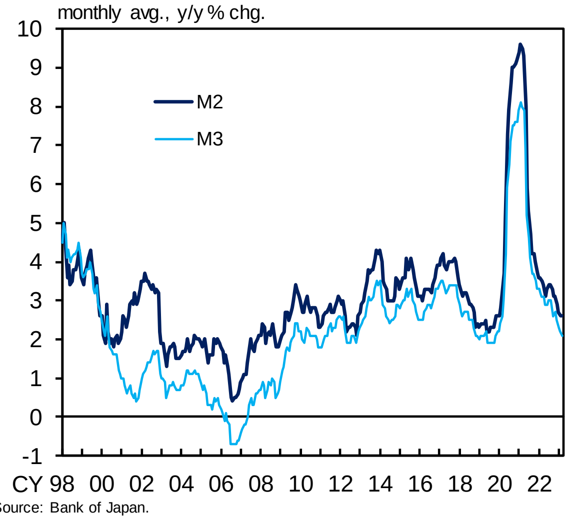
The year-on-year rate of decline in the monetary base has decelerated. This is because JGB purchases have increased, while the amount outstanding of funds provided through the Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19) has declined. The amount outstanding of the monetary base was 676 trillion yen, of which the ratio to nominal GDP was 121 percent.[18] The year-on-year rate of change in the money stock (M2) has been at around 2.5 percent, mainly because fiscal spending has pushed it up and the amount outstanding of bank lending has increased (Chart 52).

Chart 51: 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 52: Money Stock



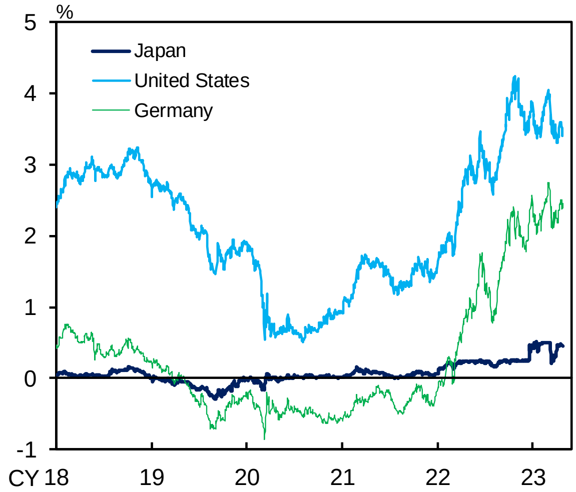
Source: Bank of Japan.

[18] The amount outstanding of the monetary base is as of end-March 2023. Nominal GDP is the figure for the October-December quarter of 2022.

Developments in Financial Markets

Global financial markets have fluctuated significantly, mainly because market attention has continued to be drawn to uncertainties over the monetary policy of central banks in the United States and Europe and to a slowdown in the global economy, and because market sentiment became cautious in mid-March in reflection of issues surrounding some financial institutions in the United States and Europe.

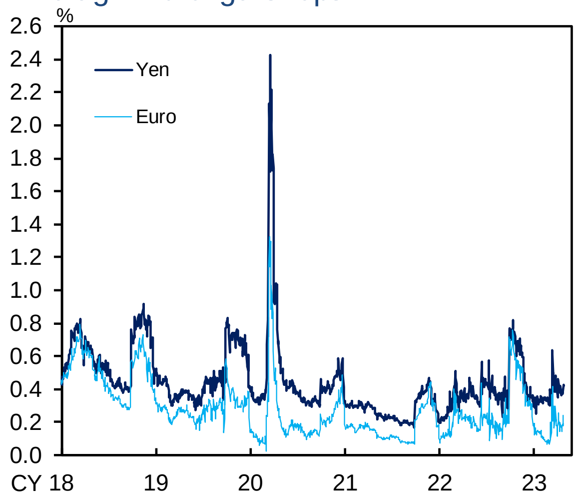
Chart 53: 10-Year Government Bond Yields in Selected Advanced Economies



Source: Bloomberg.

Yields on 10-year government bonds in the United States and Europe rose toward early March, mainly reflecting stronger-than-expected economic indicators. However, the yields have subsequently declined, because, as a result of issues surrounding some financial institutions in the United States and Europe, market attention has been drawn to downward pressure on economic activity and prices stemming from a tightening of financial conditions (Chart 53).

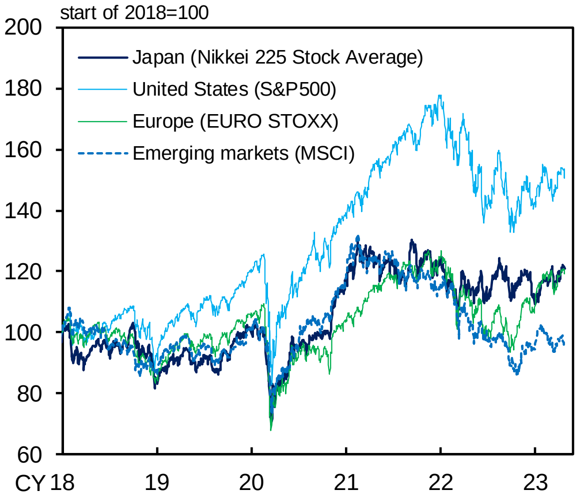
Chart 54: Dollar Funding Premiums through Foreign Exchange Swaps



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.

Premiums for U.S. dollar funding through the dollar/yen foreign exchange swap market have remained at low levels, despite expanding somewhat (Chart 54).

Chart 55: Selected Stock Price Indices



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

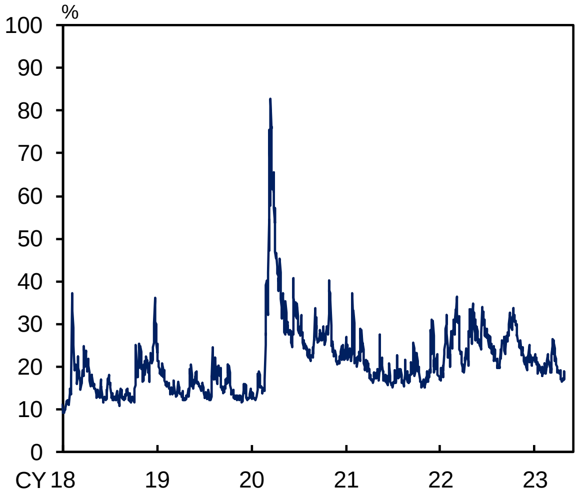
Stock prices in the United States and Europe have risen, albeit with fluctuations, mainly reflecting a decline in inflation rates and diminished concern over the issue of energy supply (Charts 55 and 56). Meanwhile, financial stock prices have declined considerably since mid-March, when market attention was drawn to issues surrounding some financial institutions in the United States and Europe. Stock prices in

Japan have increased, partly reflecting the yen's depreciation, albeit with fluctuations in line with those seen in the United States and Europe. Stock prices in emerging economies have declined on the whole.

Prices of Japan real estate investment trusts (J-REITs) have been more or less flat on the whole (Chart 57).

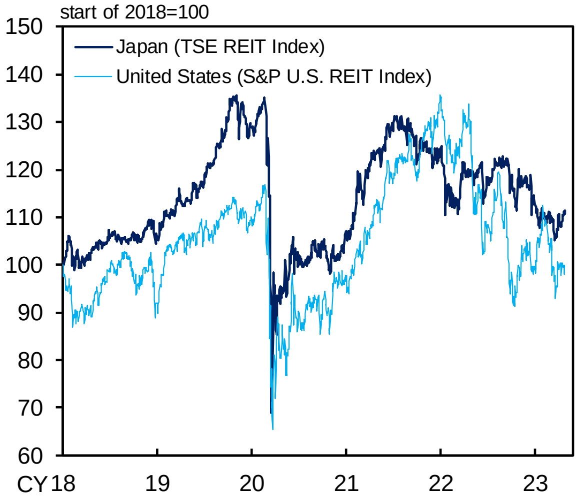
In foreign exchange markets, the yen has depreciated against the U.S. dollar, albeit with fluctuations, reflecting developments in the yield differential between Japan and the United States (Chart 58). The yen has also depreciated against the euro.

Chart 56: Stock Market Volatility (VIX)



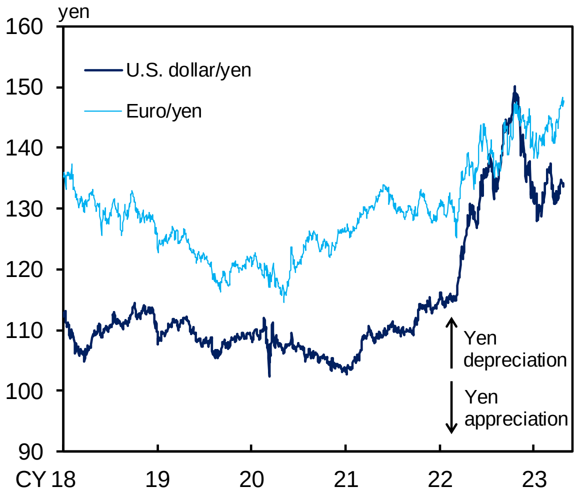
Source: Bloomberg.

Chart 57: Selected REIT Indices



Source: Bloomberg.

Chart 58: U.S. Dollar/Yen and Euro/Yen

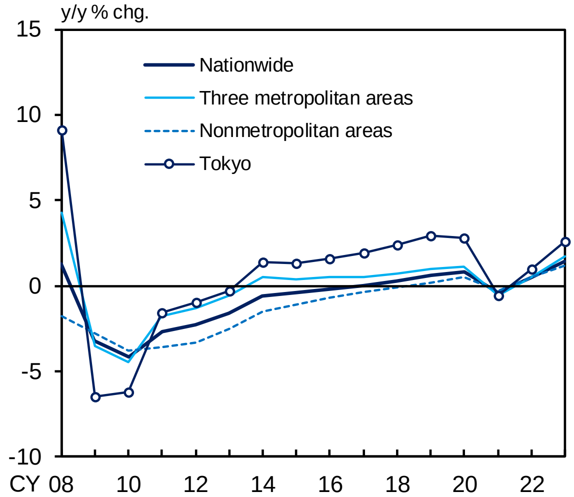


Source: Bloomberg.

Land Prices

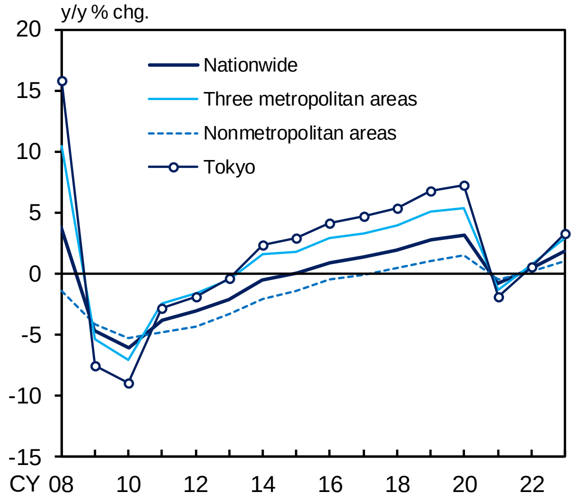
Land prices have increased, reflecting the pick-up in economic activity. According to the *Land Market Value Publication* for 2023 (as of January 1), the year-on-year rates of increase in both residential and commercial land prices have accelerated (Charts 59 and 60). In the three major metropolitan areas (Tokyo, Osaka, and Nagoya), the year-on-year rates of increase in both residential and commercial land prices have accelerated. Likewise, in nonmetropolitan areas, the year-on-year rate of increase in residential land prices has registered its highest level since 1992, led by the rate in major cities, and the rate of increase in commercial land prices has also accelerated.

Chart 59: Residential Land Prices



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

Chart 60: Commercial Land Prices



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

(Box 1) Developments in Spring Labor-Management Wage Negotiations

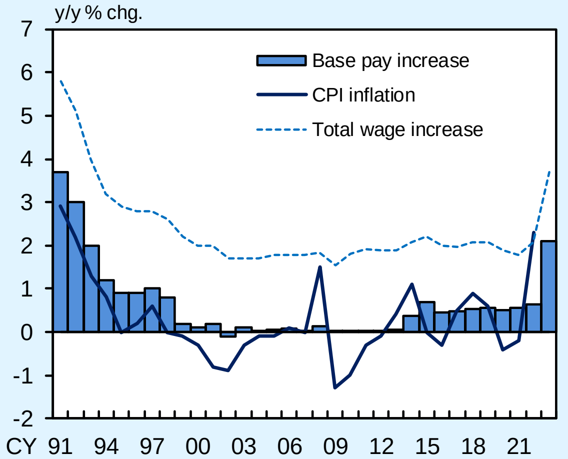
Developments in the annual spring labor-management wage negotiations this year show that, as labor market conditions have tightened, many firms -- with a view to recruiting and retaining employees -- agreed to relatively high wage increases in reflection of the recent rise in prices. The average rate of increase in wages for regular employees in labor unions that belong to the Japanese Trade Union Confederation (Rengo) -- which mainly consists of labor unions of large firms -- marked the highest level in about 30 years (Chart B1-1[1]). A breakdown of the negotiation results indicates that not only firms with more than 1,000 union members but also smaller firms saw high rates of wage increases (Chart B1-1[2]). In addition, compensation of not only regular employees but also part-time employees has clearly improved.

Many small and medium-sized firms (hereafter referred to as "SMEs"), which have low union membership rates, conduct their wage negotiations from April onward. Therefore, at this point, the full picture of wage revisions is not yet clear. The pace of improvement in corporate profits has been slower at SMEs than at large firms, and this may suppress the growth rate of wages at SMEs (Chart B1-2). On the other hand, wages of regular employees at SMEs tend to be more responsive to a tightening of labor market conditions than those at large firms.[19] In this regard, it is worth noting that the job vacancy rate

[19] See Box 3 in the January 2023 Outlook Report for differences in the determination of wages between large firms and SMEs.

Chart B1-1: Results of Spring Wage Negotiations

1. Developments over Time



Sources: Japanese Trade Union Confederation (Rengo); Central Labour Relations Commission; Ministry of Internal Affairs and Communications.
Notes: 1. Figures for CPI inflation are for all items less fresh food, excluding the effects of the consumption tax hikes, etc.
2. Figures for base pay and total wage increases from 1991 to 2013 are those published by the Central Labour Relations Commission, while those from 2014 to 2023 are figures released by Rengo (the figures for 2023 are from Rengo's fourth aggregation).

2. Results by Type of Employment and Firm Size

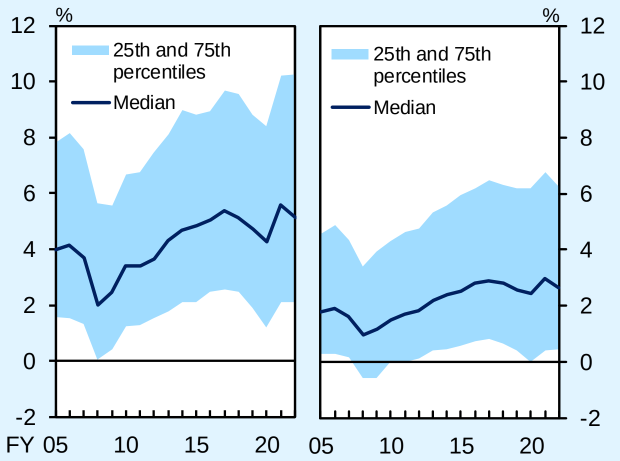
total wage increase, %

	CY 2022	CY 2023
Regular employees	2.1	3.7
1,000 or more	2.1	3.7
300 to 999	2.0	3.6
100 to 299	2.0	3.5
99 or less	1.9	3.0
Part-time employees	2.3	5.4

Source: Japanese Trade Union Confederation (Rengo).
Note: The figures for 2023 are from Rengo's fourth aggregation. The figures for the breakdown by the number of regular employees are aggregated values based on the number of union members. Part-time employees include fixed-term employees.

Chart B1-2: Ratio of Current Profits to Sales

1. Large Enterprises **2. Small Enterprises**

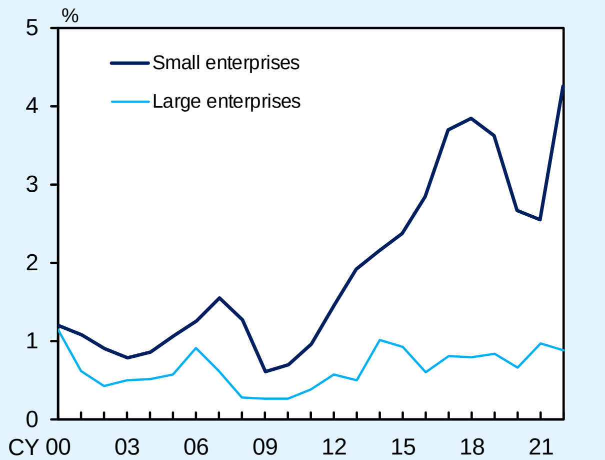


Source: Bank of Japan.
Note: Based on the *Tankan* (all industries). The figures for fiscal 2022 are forecasts from the March 2023 survey.

for SMEs has risen considerably, suggesting that the labor shortages they face have become more acute (Chart B1-3). These developments have been particularly pronounced in industries such as face-to-face services where demand has increased with the waning of the impact of COVID-19 (Chart B1-4). The tightening of labor market conditions is projected to push up wages at SMEs, particularly in these industries.

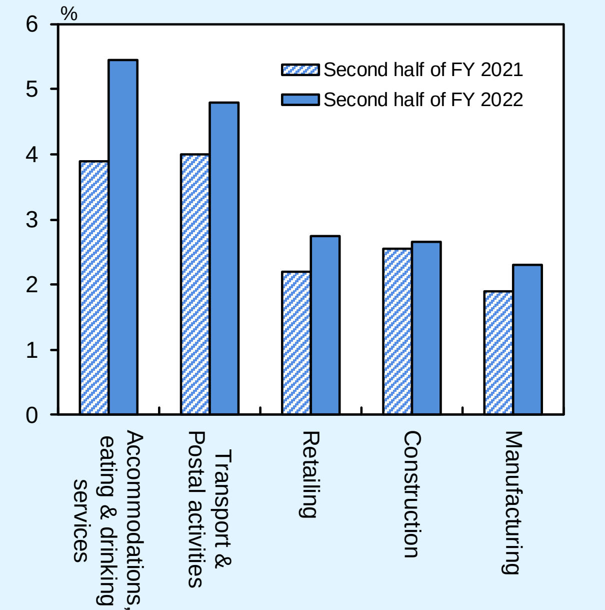
The results of wage negotiations will likely be reflected in actual wages through this summer (Chart B1-5). Although there remain uncertainties regarding factors such as the future course of wage revisions at SMEs, it is highly likely that the growth rate of scheduled cash earnings will increase clearly this year, and this is likely to underpin private consumption.

Chart B1-3: Vacancy Rates for Full-Time Positions



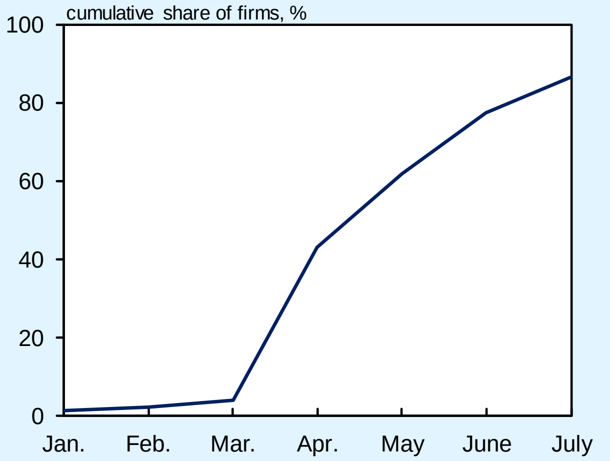
Source: Ministry of Health, Labour and Welfare.
Note: Figures for 2022 are those for the first half of 2022. Large enterprises are enterprises with 1,000 or more employees. Small enterprises are enterprises with 5 to 99 employees.

Chart B1-4: Vacancy Rates (by Industry)



Source: Ministry of Health, Labour and Welfare.

Chart B1-5: Timing When Agreed Wage Revisions Are Reflected in Actual Wages



Source: Ministry of Health, Labour and Welfare.

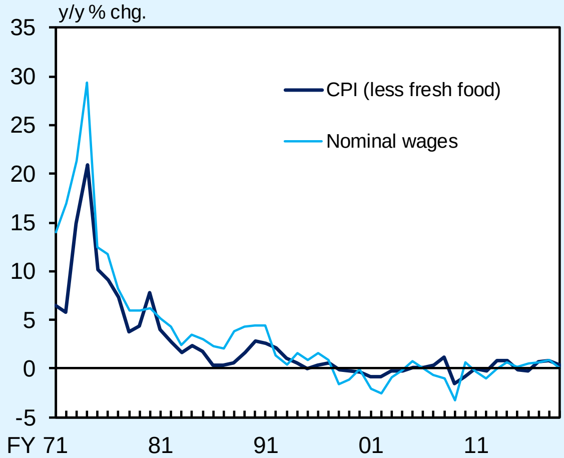
(Box 2) Linkage between Wages and Prices: Past Experience and Future Issues

The growth rates of wages and prices have declined since the 2000s in Japan, with both hovering at around 0 percent (Chart B2-1).[20] Under these circumstances, wages have not shown a statistically significant response to a rise in prices, and vice versa (Chart B2-2). In a situation where the mindset and behavior based on the assumption that wages and prices will not increase easily have been entrenched in society, it seems that the shocks that brought about a rise in wages or prices have been perceived as temporary ones, inhibiting the mechanism whereby wages and prices interact and gradually push each other up.

That said, there have been signs recently of change in the relationship between wages and prices. As shown in Box 1, moves to reflect the recent price rises in wages have been clearly observed in the annual spring labor-management wage negotiations this year. Estimating a simple base pay function using long-term time-series data as a benchmark for capturing the effects of price rises on wages shows that the actual base pay increase this year is far larger than the estimated value (Chart B2-3). This suggests that, at least this year, firms have been more likely to reflect price rises in wages than in the past. In

[20] At the Bank's workshop on "Issues Surrounding Price Developments during the COVID-19 Pandemic" held in March 2022, it was suggested that the interaction between wages and prices has been weak in Japan in recent years. For a summary of the workshop, see the Bank's research paper "Characteristics of Price Developments in Japan: Summary of the First Workshop on 'Issues Surrounding Price Developments during the COVID-19 Pandemic,'" released in May 2022.

Chart B2-1: Developments in Wages and Prices



Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.
Note: The CPI figures are staff estimates and exclude the effects of the consumption tax hikes and policies concerning the provision of free education. Figures for nominal wages are for establishments with 30 or more employees up through fiscal 1990, and with 5 or more employees from fiscal 1991 onward.

Chart B2-2: Linkage between Wages and Prices

Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; OECD; Bank of Japan.
Note: Cumulative impulse responses of the CPI (less fresh food) and hourly contractual cash earnings (adjusted for productivity) are estimated by local projection. The output gap and import prices are employed as control variables. ** indicates that the results are statistically significant at the 5 percent level, while the broken lines indicate that the results are not statistically significant.

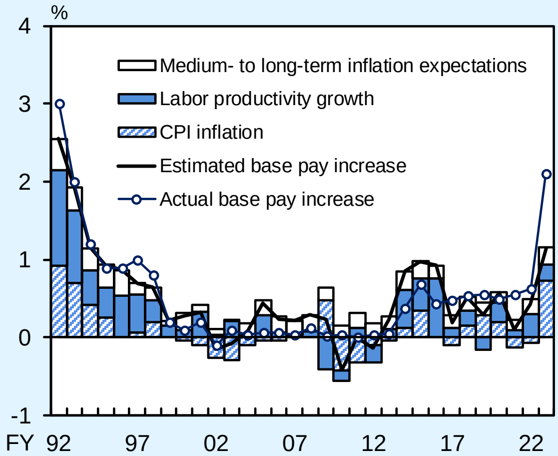
addition, moves to raise prices to pass on wage increases have started to be seen in some services and other industries.

In considering the outlook for prices, with economic activity continuing to improve, it is necessary to carefully examine whether the cycle in which prices and wages push each other up will continue and whether the linkage between them will increase to a sufficient degree.

In particular, close attention needs to be paid to whether moves to reflect price rises in wages, as observed in this year's annual spring labor-management wage negotiations, will continue. Labor shortages have been acute recently and are highly likely to become more structurally severe in the future.[21] In addition, labor market mobility has been gradually increasing, as seen in the growth in the labor market for job changers. These changes in the labor market may make moves to reflect price developments in wages widespread, as firms push forward with efforts to recruit and retain employees.

It is also necessary to examine whether the effects of wages on prices, which have started to be seen recently, will spread. Services prices are key in this regard. The rate of change in services prices has remained at around 0 percent since the end of the 1990s because such prices have become stickier, as evidenced by the significant

Chart B2-3: Estimation of Base Pay Increases



Sources: Central Labour Relations Commission; Japanese Trade Union Confederation (Rengo); Ministry of Internal Affairs and Communications, etc.

Notes: 1. Figures for CPI inflation are for all items less fresh food, excluding the effects of the consumption tax hikes, etc. Figures for actual base pay increases from fiscal 1992 to 2013 are those published by the Central Labour Relations Commission, while those from fiscal 2014 to 2023 are figures released by Rengo (the figure for fiscal 2023 is from Rengo's fourth aggregation).

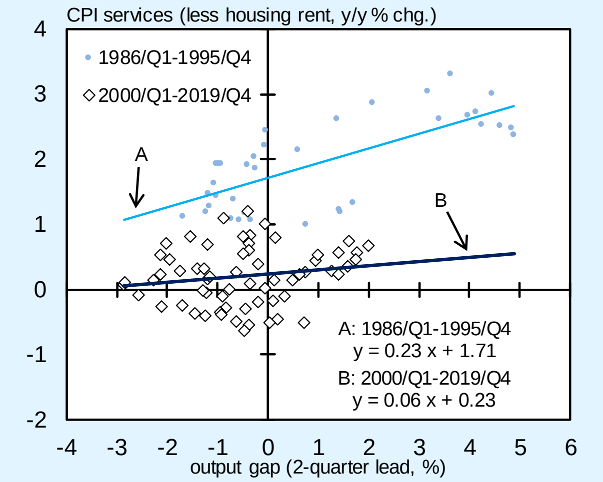
2. The wage growth function for the estimation of base pay increases is specified as shown below. Estimation period: FY 1992-2022. *** indicates that the coefficient estimates are statistically significant at the 1 percent level.

Base pay increase = 0.32*** × CPI inflation (t-1)
+ 0.24*** × Nominal labor productivity growth (t-1)
+ 0.15*** × Medium- to long-term inflation expectations (t-1)

[21] For details on the current situation of and outlook for labor market conditions, see Box 2 in the January 2023 Outlook Report.

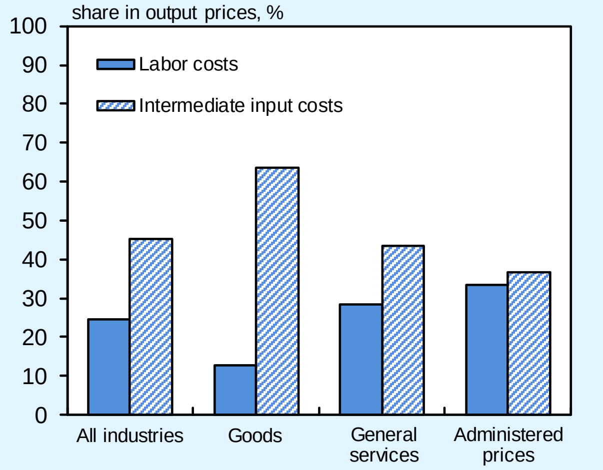
decline in their sensitivity to macroeconomic supply and demand conditions (Chart B2-4). Therefore, it is important to see whether services prices will rise in a sustainable manner. Calculating the cost structures of items that make up the CPI using the input-output tables shows that, while intermediate input costs account for a large share of costs in the case of goods, it is labor costs that account for a large share in the case of services and administered prices (Chart B2-5).[22] With private consumption continuing to increase, supported by the improvement in incomes accompanied by wage increases, close attention needs to be paid to whether the upward pressure on costs stemming from such wage increases will be reflected in selling prices, especially in the services industry.

Chart B2-4: Output Gap and Services Inflation



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.
Notes: 1. Observations for the one-year periods following the consumption tax hikes and for the period of the Global Financial Crisis are excluded.
2. Figures for the output gap are staff estimates.

Chart B2-5: Cost Structure of Output Prices



Source: Ministry of Internal Affairs and Communications.
Notes: 1. Figures are based on the decomposition of output prices, which correspond to consumer prices, into intermediate input costs, labor costs, operating surplus, etc., using the *2015 Input-Output Tables for Japan*.
2. Figures for all industries, goods, and administered prices exclude fuel retailing, electricity, gas, etc. Those for general services exclude housing rent.

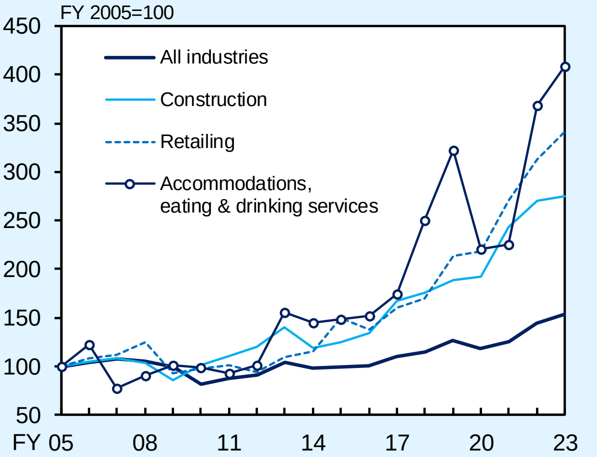
[22] Intermediate input costs are calculated by aggregating the costs for the production of various consumer goods and services. For details, see Box 3 in the July 2022 Outlook Report and Box 3 in the April 2022 Outlook Report.

(Box 3) Labor Shortages and Business Fixed Investment

With labor market conditions in Japan continuing to tighten, wages have been under upward pressure. Given that labor shortages are expected to continue, firms have been moving ahead with labor-saving and efficiency-improving investments to replace labor with capital (machines).

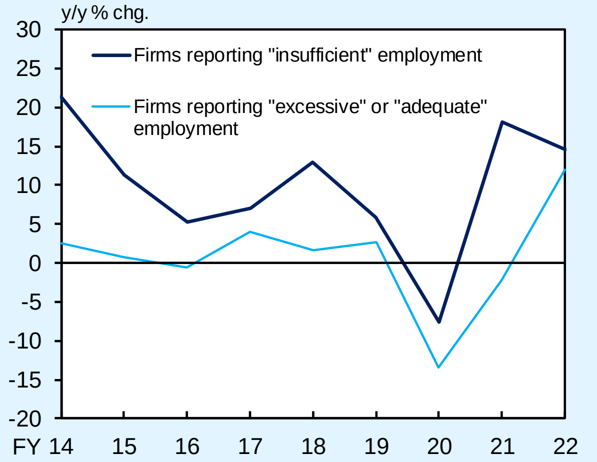
Labor-saving investment was already following an uptrend during the phase of economic recovery and labor shortages before the pandemic.[23] Recently, in the accommodations as well as eating and drinking services industries and the retailing industry, where labor shortages have been acute, firms' efforts to address this issue through the use of digital technology have been accelerating (Chart B3-1). Moreover, analyzing microdata from the *Tankan* surveys suggests the following. First, firms facing more acute labor shortages have been more active in making business fixed investment (Chart B3-2). Second, among such firms, the longer they have faced labor shortages, the more active they have tended to be in making such investment (Chart B3-3). Given these factors, since labor market conditions are highly likely to remain tight going forward, it can be said that there is large potential demand for labor-saving investment to address labor shortages, which is projected to underpin business fixed investment.

Chart B3-1: Software Investment



Source: Bank of Japan.
Note: Based on the *Tankan*. All enterprises. The figures for fiscal 2022 and 2023 are forecasts from the March 2023 survey.

Chart B3-2: Investment Depending on Firms' Assessment of Labor Shortages



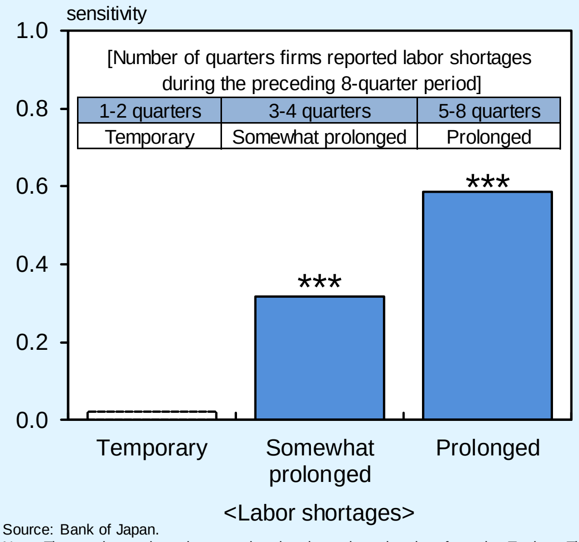
Source: Bank of Japan.
Note: The chart shows business fixed investment (including software investment and excluding land purchasing expenses) aggregated based on firms' assessment of their employment level at the beginning of the fiscal year using microdata from the *Tankan*. The figures for fiscal 2022 are forecasts from the March 2023 survey.

[23] See, for example, Box 4 in the July 2018 Outlook Report.

That said, it should be noted that there are uncertainties over the size and pace at which such potential demand will materialize. The following points should also be kept in mind regarding future developments in business fixed investment.

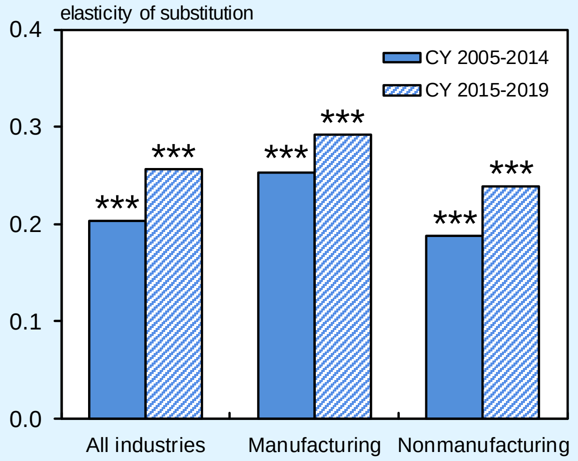
The first is whether labor-saving investment will be hampered by factors such as a lack of highly skilled personnel. Estimating the elasticity of substitution between labor and capital -- i.e., the degree to which changes in relative prices due to, for example, wage increases lead to substitution between the two -- shows that the elasticity has increased since the mid-2010s (Chart B3-4). This suggests that, with labor shortages intensifying, firms' efforts to make up for such shortages with capital have started to accelerate. That said, the elasticity estimates for Japan are lower than those for the United States obtained in preceding studies. [24] While there are various possible explanations, one likely reason is a lack of highly skilled personnel in Japan with sufficient skills to develop and use labor-saving software. In fact, the *Tankan* shows that firms' actual software investment recently has been falling far short of their plans as a trend, suggesting the possibility that firms have been unable to make as much progress with digitalization as they had planned (Chart B3-5).

Chart B3-3: Labor Shortages and Business Fixed Investment



Source: Bank of Japan.
Note: The results are based on panel estimation using microdata from the *Tankan*. The dependent variable is the ratio of business fixed investment to sales. Explanatory variables are as follows: dummy variables for the number of quarters firms reported that they had "insufficient" employment during the preceding two-year period as well as firms' assessment of their business conditions, production capacity, and financial positions. The estimation period is from fiscal 2008 to 2021. *** indicates that the results are statistically significant at the 1 percent level, while the broken line indicates that the result is not statistically significant.

Chart B3-4: Elasticity of Substitution between Labor and Capital

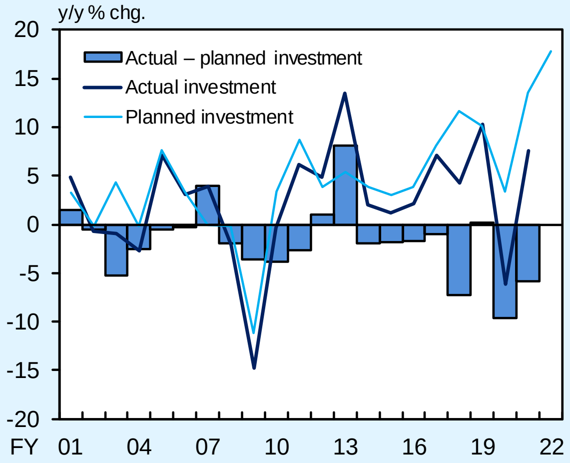


Source: Cabinet Office.
Note: Figures are estimated from the capital intensity and the relative price of capital to labor using industry-level panel data (manufacturing: 7 industries; nonmanufacturing: 9 industries; all industries: 16 industries). The legend shows the estimation periods. *** denotes statistical significance at the 1 percent level.

[24] See, for example, Knoblach, M., Roessler, M., and Zwerschke, P., "The Elasticity of Substitution between Capital and Labour in the US Economy: A Meta-Regression Analysis," *Oxford Bulletin of Economics and Statistics* 82, no. 1 (2020): 62-82. The study examines the estimates of the elasticity of substitution between labor and capital in the United States obtained in preceding studies. The median of the estimates is around 0.7, but it should be noted that, since estimates differ across studies, such comparisons need to be interpreted with considerable latitude.

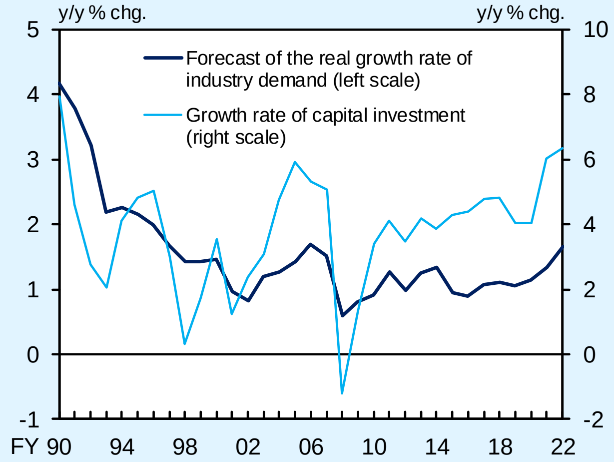
The second point to keep in mind is whether firms' medium- to long-term growth expectations will hold up. If the declining population, which is one of the reasons for labor shortages, leads firms to expect the domestic market to stagnate, this may push down business fixed investment, including labor-saving investment. That said, at least among large firms, forecasts of the medium- to long-term growth rate of industry demand have followed an improving trend, and the growth rate of planned medium-term investment has been at its highest level in about 30 years (Chart B3-6). Moreover, business fixed investment plans for fiscal 2023 in the *Tankan* indicate that investment this fiscal year is likely to be at a high level. Firms therefore appear to be planning to invest actively to, for example, capture global demand and make efforts toward decarbonization and digitalization.

Chart B3-5: Planned and Actual Software Investment



Source: Bank of Japan.
Note: Based on the *Tankan*. All industries and enterprises. Figures for planned investment are as of the December survey of each year.

Chart B3-6: Annual Survey of Corporate Behavior



Source: Cabinet Office.
Note: The chart shows the average of firms' forecasts of the real growth rate of industry demand over the next five years and of the growth rate of firms' planned capital investment over the next three years.