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Bank of Japan

Outlook for Economic Activity and Prices

April 2017

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

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The Bank's View¹

Summary

- Japan's economy is likely to continue expanding and maintain growth at a pace above its potential, mainly through fiscal 2018, on the back of highly accommodative financial conditions and the effects of the government's large-scale stimulus measures, with the growth rates in overseas economies increasing moderately. In fiscal 2019, the economy is expected to continue expanding, although the growth pace is projected to decelerate due to a cyclical slowdown in business fixed investment and the effects of the scheduled consumption tax hike.²
- The year-on-year rate of change in the consumer price index (CPI, all items less fresh food) is likely to continue on an uptrend and increase toward 2 percent, mainly on the back of an improvement in the output gap and a rise in medium- to long-term inflation expectations.
- Comparing the current projections through fiscal 2018 with the previous ones, the projected growth rates and the projected rates of increase in the CPI are more or less unchanged.
- With regard to the risk balance, risks to both economic activity and prices are skewed to the downside. On the price front, the momentum toward achieving the price stability target of 2 percent is maintained, but is not yet sufficiently firm, and thus developments in prices continue to warrant careful attention.
- As for the conduct of monetary policy, the Bank will continue with "Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control," aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner. It will continue expanding the monetary base until the year-on-year rate of increase in the observed CPI (all items less fresh food) exceeds 2 percent and stays above the target in a stable manner. The Bank will make policy adjustments as appropriate, taking account of developments in economic activity and prices as well as financial conditions, with a view to maintaining the momentum toward achieving the price stability target.

¹ The text of "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on April 26 and 27, 2017.

² The April 2017 *Outlook for Economic Activity and Prices* (Outlook Report) assumes that the consumption tax will be raised to 10 percent in October 2019 and that a reduced tax rate will be applied to food and beverages -- excluding alcohol and dining-out -- and newspapers.

I. The Current Situation of Economic Activity and Prices in Japan

Japan's economy has been turning toward a moderate expansion. Overseas economies have continued to grow at a moderate pace, although emerging economies remain sluggish in part. In this situation, exports have been on an increasing trend. On the domestic demand side, business fixed investment has been on a moderate increasing trend with corporate profits and business sentiment improving in a wider range of industries. Private consumption has been resilient against the background of steady improvement in the employment and income situation. Meanwhile, housing investment and public investment have been more or less flat. Reflecting these increases in demand both at home and abroad, industrial production has been on an increasing trend, and labor market conditions have continued to tighten steadily. Financial conditions are highly accommodative. On the price front, the year-on-year rate of change in the CPI (all items less fresh food, and the same hereafter) has been about 0 percent. Inflation expectations have remained in a weakening phase.

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

A. Baseline Scenario of the Outlook for Economic Activity

With regard to the outlook, Japan's economy is likely to continue its moderate expansion. Through fiscal 2018, domestic demand is likely to follow an uptrend, with a virtuous cycle from income to spending being maintained in both the corporate and household sectors, on the back of highly accommodative financial conditions and fiscal spending through the government's large-scale stimulus measures. Business fixed investment is likely to continue increasing moderately, supported by accommodative financial conditions, heightened growth expectations, and increases in Olympic Games-related demand. Private consumption is expected to follow a moderate increasing trend as employee income continues to improve. Public investment is projected to increase through fiscal 2017, due mainly to the positive effects resulting from a set of stimulus measures, and thereafter remain at a relatively high level with Olympic Games-related demand. Meanwhile, the growth rates of overseas economies are expected to increase moderately as advanced economies continue growing steadily and a recovery in emerging economies takes hold gradually on the back of the steady growth in advanced economies and the effects of policy measures taken by emerging

economies. Exports are expected to continue their moderate increasing trend on the back of the improvement in overseas economies. In fiscal 2019, the pace of expansion in Japan's economy is projected to decelerate, mainly due to a slowdown in domestic demand. Specifically, business fixed investment is likely to decelerate, mainly reflecting cyclical adjustments in capital stock after the prolonged economic expansion, as well as Olympic Games-related demand peaking out; household spending is likely to turn to a decline in the second half of the fiscal year due to the effects of the scheduled consumption tax hike.³ Nevertheless, against the background that the increase in exports on the back of growth in overseas economies is expected to underpin the economy, the economy is expected to continue expanding, although the growth pace is projected to decelerate.

Reflecting this outlook, Japan's economy is likely to continue growing at a pace above its potential, mainly through fiscal 2018.⁴ Comparing the current projections through fiscal 2018 with the previous ones, the projected growth rates are more or less unchanged.

Looking at the financial conditions assumed in the above outlook, short- and long-term real interest rates are expected to be in negative territory throughout the projection period as the

³ The consumption tax hike scheduled to take place in October 2019 will affect the growth rates through the following two channels: (1) the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike and (2) the effects of a decline in real income. The negative impact on the projected growth rate for fiscal 2019 is expected to be smaller than that on the rate for fiscal 2014, when the last consumption tax hike took place. However, it should be noted that the impact of the consumption tax hike is highly uncertain and varies depending, for example, on the income situation and price developments.

⁴ In the April 2017 Outlook Report, the estimation method of Japan's potential growth rate and the output gap has been revised, given (1) the comprehensive revision to GDP statistics and (2) the revised capital stock data that reflect such revision. Under the new method, the potential growth rate is estimated to be in the range of 0.5-1.0 percent, revised upward from being in the range of 0.0-0.5 percent, as an increase in research and development investment in recent years and a rise in productivity are newly factored in. The output gap is estimated to be almost the same level as that based on the previous base year GDP statistics, since the utilization of production factors is evaluated as mostly unchanged. However, the estimates of both the potential growth rate and the output gap vary depending on the methodologies employed and could be revised as the sample period becomes longer over time. Thus, they should be subject to a considerable margin of error. For details, see "The Background" section of this Outlook Report.

Bank pursues "QQE with Yield Curve Control."⁵ Financial institutions' proactive lending attitudes as well as favorable conditions for corporate bonds and CP issuance are both likely to be maintained and support firms' and households' activities from the financial side. Thus, financial conditions are likely to remain highly accommodative.

The potential growth rate is expected to follow a moderate uptrend throughout the projection period against the backdrop of the following: progress in implementation of the government's growth strategy, including regulatory and institutional reforms; an increase in labor participation by women and the elderly under such strategy; and firms' continued efforts toward improving productivity and discovering potential domestic and external demand. Along with this, the natural rate of interest is projected to rise, thereby enhancing monetary easing effects.

B. Baseline Scenario of the Outlook for Prices

With regard to developments in the year-on-year rate of change in the CPI since the previous Outlook Report, prices of some consumer durable goods as well as services have shown somewhat weak developments in recent months. As for the outlook, however, it is likely to continue on an uptrend and increase toward 2 percent, mainly on the back of the improvement in the output gap and the rise in medium- to long-term inflation expectations. Comparing the current projections through fiscal 2018 with the previous ones, the projected rates of increase in the CPI are more or less unchanged. The timing of the year-on-year rate of change in the CPI reaching around 2 percent will likely be around the middle of the projection period -- that is, around fiscal 2018.⁶ Thereafter, the rate of change is expected to remain at around 2 percent.

⁵ Individual Policy Board members make their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding future policy. Specifically, each Policy Board member makes an assumption about the future path of short- and long-term interest rates based on their market rates, bearing in mind the difference in the outlook for prices between that presented in the Outlook Report and that of market participants.

⁶ By assuming that the rise in the consumption tax will be fully passed on to taxable items excluding those to which a reduced tax rate will be applied, the effects of the October 2019 consumption tax hike on the year-on-year rate of change in the CPI (all items less fresh food) for October 2019 onward is estimated to be 1.0 percentage point; the effect for fiscal 2019 is thus estimated to be half that, at 0.5 percentage point.

The background to these projections is as follows. First, medium- to long-term inflation expectations have remained in a weakening phase. Various market indicators and survey results indicate that medium- to long-term inflation expectations have not yet picked up clearly on the whole, although some of them show a rise in such expectations. As for the outlook, however, because of the following two factors, medium- to long-term inflation expectations are likely to follow an increasing trend and gradually converge to around 2 percent: (1) in terms of the adaptive component, the observed inflation rate is expected to rise as the output gap improves, also backed in part by developments in energy prices, and (2) in terms of the forward-looking component, the Bank will pursue monetary easing through its strong commitment to achieving the price stability target.⁷

Second, with regard to the output gap, which shows the utilization of labor and capital, after having been more or less unchanged at around 0 percent, it improved recently, turning positive at the end of 2016. In particular, the tightening of labor market conditions is becoming even more evident, as evidenced by the active job openings-to-applicants ratio approaching the peak level observed during the "asset bubble" period, and by the unemployment rate having declined to the range of 2.5-3.0 percent. In this situation, wages are rising moderately, as seen in the fact that many firms -- including small and medium-sized firms -- are expected to raise their base pay for the fourth consecutive year. Going forward, the output gap is expected to widen further within positive territory. This is likely to be supported by the further tightening of labor market conditions, due in part to the effects resulting from the set of stimulus measures becoming evident, in addition to an improvement in capacity utilization rates brought about by an increase in exports and production. Under such circumstances, a virtuous cycle between a moderate rise in the inflation rate and wage increases is likely to operate.

Third, regarding import prices, a pick-up in international commodity prices including crude oil prices since last spring is expected to push up the year-on-year rate of change in energy

⁷ Medium- to long-term inflation expectations can be regarded as consisting of two components: a forward-looking component, in which inflation expectations converge to the price stability target set by the central bank, and a backward-looking, or adaptive, component that reflects the observed inflation rate. For details, see the Bank's *Comprehensive Assessment: Developments in Economic Activity and Prices as well as Policy Effects since the Introduction of Quantitative and Qualitative Monetary Easing (QQE)* released in September 2016.

prices in the CPI for fiscal 2017, but this effect is likely to wane gradually. As for the impact of foreign exchange rates on consumer prices through import prices, the past yen depreciation is likely to increase upward pressure on prices, mainly in fiscal 2017.

III. Upside and Downside Risks to Economic Activity and Prices

A. Upside and Downside Risks to Economic Activity

The following are upside and downside risks to the Bank's baseline scenario regarding the economy. First, there is uncertainty regarding developments in overseas economies. Specifically, the following are considered as risks: the U.S. economic policies and their impact on global financial markets; developments in emerging and commodity-exporting economies; negotiations on the United Kingdom's exit from the European Union (EU) and their effects; prospects regarding the European debt problem, including the financial sector; and geopolitical risks. If these risks were to materialize, they could exert downward pressure on economic activity. On the other hand, as market participants and economic entities factor them in to a certain extent, the economy could deviate upward from the baseline scenario depending on how they play out.

Second, firms' and households' medium- to long-term growth expectations may be either raised or lowered depending on the following: efforts to address medium- to long-term issues such as the aging population; developments in regulatory and institutional reforms, particularly in the labor market; innovation in the corporate sector; and the employment and income situation.

Third, in the event that confidence in fiscal sustainability in the medium to long term declines, the economy may deviate downward from the baseline scenario through increasing concerns regarding the future and the rises in long-term interest rates associated with them. On the other hand, there is also a possibility that the economy will deviate upward from the baseline scenario if confidence in the path toward fiscal consolidation strengthens and concerns regarding the future are alleviated.

B. Upside and Downside Risks to Prices

Other than risks to economic activity, the specific factors that could exert upside and downside risks to prices are as follows. The first factor is developments in firms' and households' medium- to long-term inflation expectations. Although inflation expectations are likely to follow an increasing trend, there is uncertainty regarding the momentum to push up inflation expectations through the "adaptive expectation formation mechanism" given that the observed inflation rate has been somewhat weak recently. Therefore, there is a risk that firms' price- and wage-setting stance will be more cautious than the baseline scenario.

The second factor is the fact that there are items for which prices are not particularly responsive to the output gap. There is a particular concern about the continued dull responses of administered prices, some services prices, and housing rent, which might continue to constrain the acceleration of CPI inflation.

Third, developments in foreign exchange rates and international commodity prices going forward, as well as the extent to which such developments will spread to import prices and domestic prices, may lead prices to deviate either upward or downward from the baseline scenario.

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.⁸

The first perspective concerns an examination of the baseline scenario for the outlook. The year-on-year rate of change in the CPI is expected to increase toward 2 percent. The momentum toward achieving the price stability target is maintained, but is not yet sufficiently firm, and thus developments in prices continue to warrant careful attention.

⁸ As for the examination from two perspectives in the context of the price stability target, see the Bank's statement released on January 22, 2013, entitled "The 'Price Stability Target' under the Framework for the Conduct of Monetary Policy."

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. With regard to the outlook for economic activity, risks are skewed to the downside, particularly those regarding developments in overseas economies. With regard to the outlook for prices, risks are skewed to the downside, especially those concerning developments in medium- to long-term inflation expectations. Examining financial imbalances from a longer-term perspective, there is no sign so far of excessively bullish expectations in asset markets or in the activities of financial institutions. Furthermore, prolonged downward pressure on financial institutions' profits under the continued low interest rate environment could create risks of a gradual pullback in financial intermediation and of destabilizing the financial system. However, at this point, these risks are judged as not significant, mainly because financial institutions have sufficient capital bases.⁹

As for the conduct of monetary policy, the Bank will continue with "QQE with Yield Curve Control," aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner. It will continue expanding the monetary base until the year-on-year rate of increase in the observed CPI (all items less fresh food) exceeds 2 percent and stays above the target in a stable manner. The Bank will make policy adjustments as appropriate, taking account of developments in economic activity and prices as well as financial conditions, with a view to maintaining the momentum toward achieving the price stability target.

⁹ For details, see the Bank's *Financial System Report* (April 2017).

Forecasts of the Majority of Policy Board Members

y/y % chg.

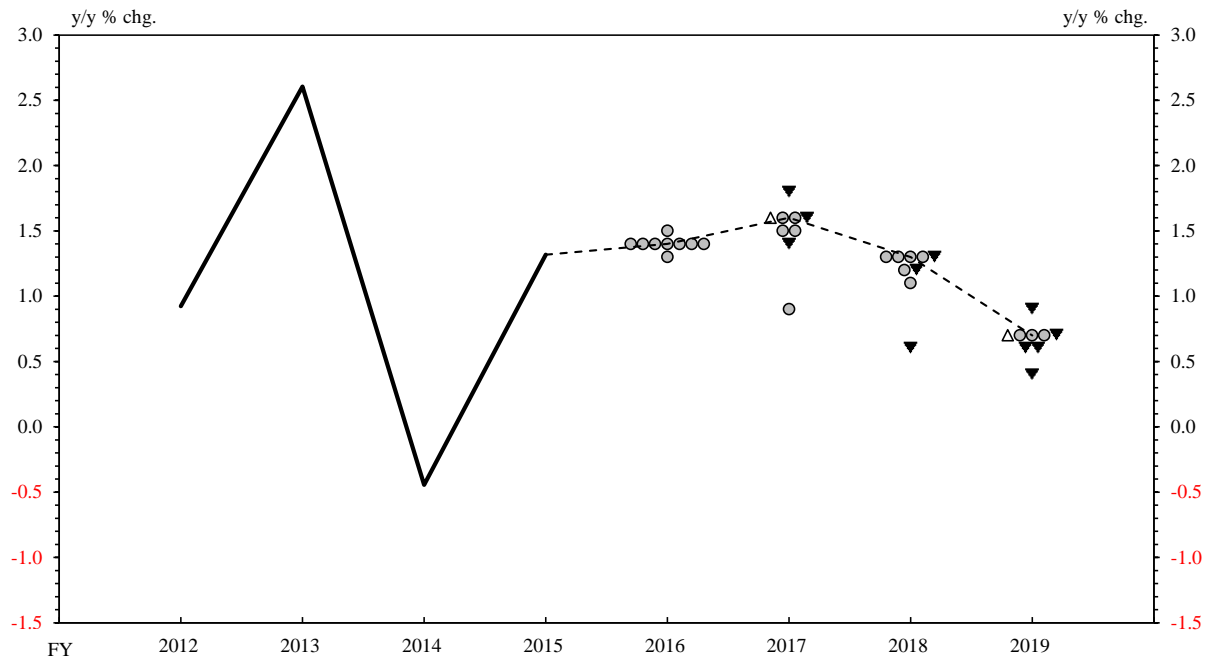
	Real GDP	CPI (all items less fresh food)	Excluding the effects of the consumption tax hike
Fiscal 2016	+1.4 to +1.4 [+1.4]	-0.3	
Forecasts made in January 2017	+1.2 to +1.5 [+1.4]	-0.2 to -0.1 [-0.2]	
Fiscal 2017	+1.4 to +1.6 [+1.6]	+0.6 to +1.6 [+1.4]	
Forecasts made in January 2017	+1.3 to +1.6 [+1.5]	+0.8 to +1.6 [+1.5]	
Fiscal 2018	+1.1 to +1.3 [+1.3]	+0.8 to +1.9 [+1.7]	
Forecasts made in January 2017	+1.0 to +1.2 [+1.1]	+0.9 to +1.9 [+1.7]	
Fiscal 2019	+0.6 to +0.7 [+0.7]	+1.4 to +2.5 [+2.4]	+0.9 to +2.0 [+1.9]

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

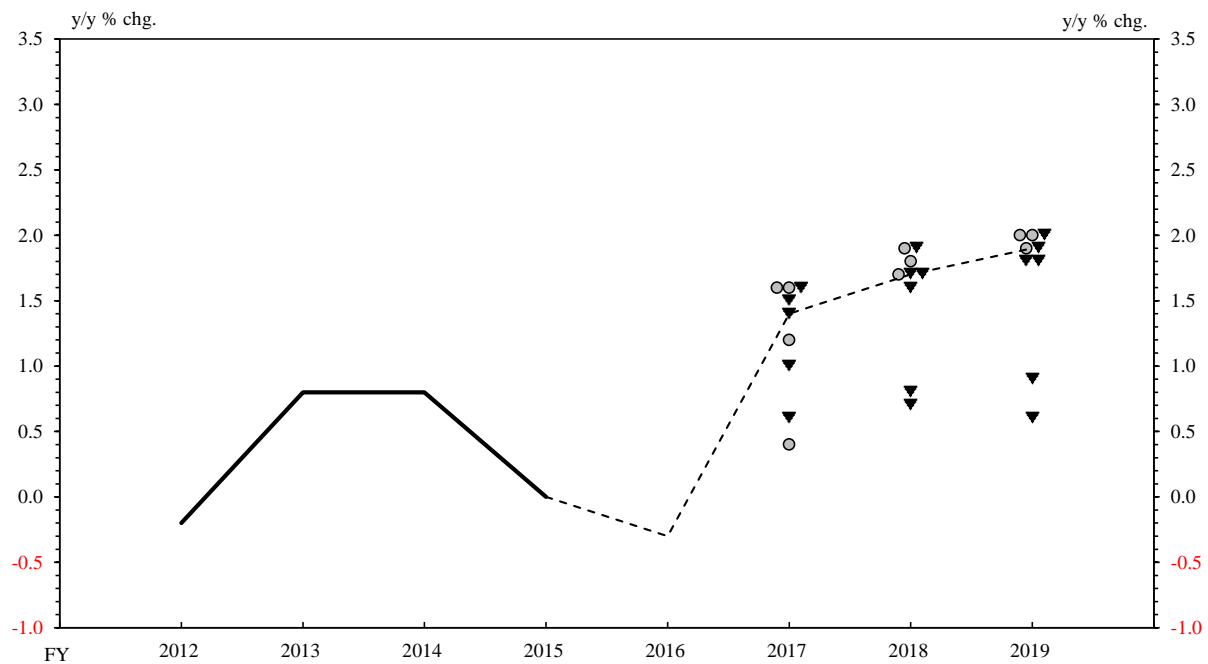
- The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which he or she attaches the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.
- Individual Policy Board members make their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding future policy. Specifically, each Policy Board member makes an assumption about the future path of short- and long-term interest rates based on their market rates, bearing in mind the difference in the outlook for prices between that presented in the Outlook Report and that of market participants.
- The consumption tax hike scheduled to take place in October 2019 -- to 10 percent -- and the reduced tax rate to be applied to food and beverages -- excluding alcohol and dining-out -- and newspapers are incorporated in the forecasts, but individual Policy Board members make their forecasts of the CPI based on figures excluding the direct effects of the consumption tax hike. The forecasts for the CPI for fiscal 2019 that incorporate the direct effects of the consumption tax hike are constructed as follows. First, the contribution to prices from the tax hike is mechanically computed on the assumption that the tax increase will be fully passed on for taxable items. The CPI will be pushed up by 0.5 percentage point. Second, this figure is added to the forecasts made by the Policy Board members.
- The CPI (all items less fresh food) for fiscal 2016 is computed based on the assumption that the year-on-year rate of increase for March is the same as that for February.

Policy Board Members' Forecasts and Risk Assessments

(1) Real GDP



(2) CPI (All Items Less Fresh Food)



- Notes: 1. Solid lines show actual figures, while dotted lines show the medians of the Policy Board members' forecasts (point estimates). However, the CPI (all items less fresh food) for fiscal 2016 is computed based on the assumption that the year-on-year rate of increase for March is the same as that for February.
2. The locations of \circ , Δ , and \blacktriangledown in the charts indicate the figures for each Policy Board member's forecasts to which he or she attaches the highest probability. The risk balance assessed by each Policy Board member is shown by the following shapes: \circ indicates that a member assesses "upside and downside risks as being generally balanced," Δ indicates that a member assesses "risks are skewed to the upside," and \blacktriangledown indicates that a member assesses "risks are skewed to the downside."
3. Figures for the CPI exclude the direct effects of the consumption tax hikes.

The Background¹⁰

I. The Current Situation of Economic Activity and Its Outlook

A. Economic Developments

Looking back at Japan's economy since the January 2017 Outlook Report, the real GDP growth rate for the October-December quarter of 2016 was 0.3 percent on a quarter-on-quarter basis and its annualized rate was 1.2 percent, representing positive growth for four consecutive quarters (Chart 1). With regard to domestic demand, private consumption had been somewhat sluggish, against the background of a surge in fresh food prices; however, improvement in external demand had become evident on the back of a pick-up in emerging economies. Thus, the real GDP growth rate as a whole was somewhat above the potential growth rate, which is estimated to be in the range of 0.5-1.0 percent. The output gap -- which captures the utilization of labor and capital -- had been more or less unchanged at around 0 percent, but it has improved for two consecutive quarters since mid-2016, due mainly to an increase in the manufacturing sector's capacity utilization, and was slightly positive for the October-December quarter (Chart 3).¹¹ Monthly indicators since January suggest that Japan's economy has been turning toward a moderate expansion with a positive output gap taking hold, as seen in (1) a continued increase in exports and production on the back of a cyclical improvement in the manufacturing sector on a global basis and (2) private consumption having reverted to its improving trend, due in part to a stabilization of fresh food prices.

Going forward, the underlying scenario of the outlook for Japan's economy from fiscal 2017 through fiscal 2018 is unchanged, in that the real GDP growth rate is projected to continue

¹⁰ "The Background" provides explanations of "The Bank's View" decided by the Policy Board of the Bank of Japan at the Monetary Policy Meeting held on April 26 and 27, 2017.

¹¹ In this Outlook Report, the Research and Statistics Department of the Bank of Japan revised the estimation method of Japan's output gap and potential growth rate. For the key points of the revision, see Box 1. Regarding details including the technical aspects, see the forthcoming Bank's research paper "Methodology for Estimating Output Gap and Potential Growth Rate: An Update."

Under the new method, the potential growth rate for the past few years is estimated to be in the range of 0.5-1.0 percent, revised upward somewhat significantly from the previous estimate. This reflects the higher total factor productivity (TFP) growth rate given the comprehensive revision to GDP statistics. For developments in Japan's TFP by industry in recent years, see Box 2.

to clearly exceed the potential on the back of stimulus effects of fiscal and monetary policies, as well as a rise in the growth rates of overseas economies. In fiscal 2019 -- for which the outlook was newly formulated -- albeit with considerable uncertainties, the economy is expected to continue expanding, although the growth rate is projected to decelerate from the previous fiscal year. This is likely to be attributable to (1) the decline in household spending due to the effects of the scheduled consumption tax hike, combined with (2) the deceleration in business fixed investment reflecting cyclical adjustments in capital stock as well as Olympic Games-related demand peaking out.¹² Comparing the current projections through fiscal 2018 with those presented in the previous Outlook Report, the projected growth rates are more or less unchanged.

Details of the outlook for each fiscal year are as follows. In fiscal 2017, the economy is expected to continue expanding firmly -- driven by an increase in demand at home and abroad -- against the background of the rise in the growth rates of overseas economies and the effects resulting from the set of stimulus measures. Looking at this in detail, the growth momentum in exports is likely to increase its firmness, mainly in IT-related goods and capital goods, on the back of the cyclical improvement in the manufacturing sector on a global basis. Under such circumstances, business fixed investment is projected to maintain its solid increase -- including in manufacturing, in which sluggishness had remained -- underpinned by monetary easing effects, Olympic Games-related demand, and effects

¹² The consumption tax hike scheduled to take place in October 2019 will have some impact on the growth rates, mainly that of household spending, through the following two channels: (1) the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike and (2) the effects of the decline in real income. At present, the negative impact of the consumption tax hike on the projected growth rate for fiscal 2019 is expected to be smaller than that on the rate for fiscal 2014, when the last consumption tax hike took place. This is mainly due to the following: (1) there are technical factors that, as the consumption tax hike is scheduled to take place in the middle of the fiscal year, the front-loaded increase and subsequent decline in demand prior to and after the hike will offset each other during the fiscal year, and the effects of the decline in real income will only emerge in the second half of the fiscal year; (2) the increase in the consumption tax rate is smaller than that of the previous tax hike and a reduced tax rate will be applied to some items; and (3) before the previous tax hike, there likely was a front-loaded increase in demand in anticipation of the second round of the tax hike. It should be noted, however, that the impact of the consumption tax hike is highly uncertain and varies depending, for example, on developments in consumer sentiment.

resulting from the set of stimulus measures such as projects conducted under the Fiscal Investment and Loan Program and tax reductions for capital investment. Meanwhile, public investment is likely to start rising moderately, as the effects resulting from the set of stimulus measures become evident. Private consumption is expected to increase its resilience due to an improvement in disposable income and the wealth effects resulting from the past rise in stock prices, as well as an increase in replacement demand for durable goods. As a result of these economic developments, in fiscal 2017, the real GDP growth rate is projected to clearly exceed the potential and the output gap is likely to widen further within positive territory.

In fiscal 2018, the economy is likely to maintain a moderate expansion with domestic and foreign demand increasing in a well-balanced manner. Exports are projected to continue increasing moderately, reflecting the improvement in overseas economies. Business fixed investment is also expected to continue to see a steady increase, on the back of accommodative financial conditions and Olympic Games-related demand. Private consumption will likely maintain its growth momentum, supported by an increase in disposable income resulting from an increase in a base pay rise. Meanwhile, public investment is likely to start declining because the positive effects resulting from the set of stimulus measures will diminish, but is projected to maintain its high level underpinned by Olympic Games-related demand. On this basis, the real GDP growth rate for fiscal 2018 is projected to continue exceeding the potential, although decelerate compared to the previous fiscal year, and the output gap is likely to continue improving.

In fiscal 2019, the growth pace is projected to decelerate, mainly due to a slowdown in domestic demand. Private consumption is expected to accelerate its pace of increase in the first half of the fiscal year, reflecting the front-loaded increase in demand prior to the scheduled consumption tax hike, and then start declining in the second half of the fiscal year, pushed down by the subsequent decline in demand following the tax hike and the effects of the decline in real income. Business fixed investment will likely decelerate under cyclical downward pressure resulting from capital stock adjustments, combined with the effects of Olympic Games-related demand peaking out. However, exports are projected to maintain their increasing trend on the back of steady growth in overseas economies, and thereby

underpin the economy. As a result of these developments, the economy is expected to continue expanding, although the growth rate is projected to decelerate from the previous fiscal year.

B. Developments in Major Expenditure Items and Their Background

Government Spending

Public investment has been more or less flat recently (Chart 4). In fiscal 2017, it is likely to continue rising moderately -- led by investment in measures for restoration and rebuilding following the Kumamoto Earthquake and a variety of infrastructure enhancements -- as the effects resulting from the set of stimulus measures gradually take hold. From fiscal 2018 onward, it is expected to start declining as the positive effects resulting from the set of stimulus measures diminish, and then remain more or less flat at a high level underpinned by Olympic Games-related construction.

Overseas Economies

Overseas economies have continued to grow at a moderate pace, although emerging economies remain sluggish in part (Chart 5). Business sentiment of manufacturing firms has continued on an improving trend on a global basis, and a pick-up in the trade volumes has been spreading globally (Charts 6 and 10 [1]). Looking at developments by major region, the U.S. economy has continued to recover firmly, mainly in household spending, owing to a steady improvement in the employment and income situation. The European economy also has continued to recover moderately, mainly in the household sector. The Chinese economy has continued to see stable growth on the whole, partly due to the effects of authorities' measures to support economic activity. Other emerging economies and commodity-exporting economies have continued to pick up on the whole, particularly reflecting a pick-up in exports, a bottoming out of commodity prices, and the effects of economic stimulus measures of those economies, although some economies have remained subdued.

In terms of the outlook, the growth rates of overseas economies are expected to increase moderately as advanced economies continue growing steadily and a recovery in emerging economies takes hold gradually on the back of the steady growth in advanced economies and the effects of policy measures taken by emerging economies. Looking at the weighted averages of the International Monetary Fund's (IMF's) April 2017 projections for real GDP growth rates of individual economies and regions, by value of exports from Japan, the growth rates of overseas economies are projected to increase moderately through 2018 and become stable at around 3.5 percent (Chart 5). Compared to the time when the January 2017 Outlook Report was published, the weighted average is more or less unchanged.

By major region, the U.S. economy is expected to continue to see firm growth driven by domestic private demand. The European economy will likely follow a moderate recovery trend, while uncertainty -- associated with political issues such as those regarding negotiations on the United Kingdom's exit from the EU and with the European debt problem, including the financial sector -- is likely to be a burden on economic activity. The Chinese economy is likely to broadly follow a stable growth path as authorities proactively carry out measures to support economic activity, mainly from the fiscal side. The growth rates of other emerging economies and commodity-exporting economies are likely to increase gradually, due mainly to the effects of the economic stimulus measures and the spread of the effects of steady growth in advanced economies.

Exports and Imports

Exports have been on an increasing trend, mainly on the back of the cyclical improvement in the manufacturing sector on a global basis led by IT-related goods, as well as inventory and capital stock adjustments progressing in emerging economies (Chart 7 [1]).¹³ By region, exports to advanced economies have been on a moderate increasing trend; those to emerging economies had been sluggish but a pick-up has become evident recently, led mainly by those to China as well as the NIEs and the ASEAN economies (Charts 7 [2] and

¹³ Real exports and real imports compiled by the Bank have been revised recently, in that the base year has been changed and the classification by region and goods has been revised. For details, see the Bank's research paper "Real Exports and Real Imports: Methodology and Tips for Analysis" released in April 2017.

8 [1]). By goods, the momentum in automobile-related exports has weakened somewhat; however, IT-related exports have increased -- mainly driven by parts for smartphones, data centers, and on-board equipment for motor vehicles -- and a pick-up in exports of capital goods has become evident, reflecting the global recovery trend in business fixed investment (Charts 8 [2] and 9).

Exports will likely continue their firm increase for the time being, as a global improvement in production and trade activity of the manufacturing sector becomes evident. Thereafter, Japan's exports are projected to continue on their moderate increasing trend, albeit with fluctuations resulting from the subsequent decline in IT-related demand following the current increase. As background to this, the growth rate of the world trade volume is likely to accelerate as a result of the rise in the growth rates of overseas economies; and Japan's share of exports is expected to follow a very moderate increasing trend, reflecting improvement in Japan's export competitiveness (Chart 10).¹⁴

Looking at this in detail, the world trade volume had tended to grow at a slower pace than world economic growth -- the so-called slow trade -- since 2011, but has accelerated its growth pace recently, mainly for Asia and the United States.¹⁵ Going forward, the pace of increase in the world trade volume is expected to be closer to that in world economic growth -- that is, a declining trend in the world trade volume to GDP ratio is likely to come to a halt -- albeit with fluctuations that mainly reflect the cycle of global demand for IT-related goods, as a pick-up in emerging and commodity-exporting economies becomes more evident.

Japan's share of exports in world trade has been on a rising trend recently, due in part to an increase in demand for IT-related goods, of which Japan has a large share in world trade volume, as well as to the effects of shifting production sites of automobile-related goods from overseas back to Japan. It is expected to follow a very moderate rising trend, as an uptrend in exports of capital goods -- in which Japan has a comparative advantage --

¹⁴ The world trade volume is calculated by adding up real imports in each country.

¹⁵ For details on slow trade, see the Bank's research paper "Slow Trade: Structural and Cyclical Factors in Global Trade Slowdown" released in December 2016.

becomes evident supported by a global recovery in business fixed investment, and as the past yen depreciation underpins export competitiveness.

Imports have been more or less flat, with a decline in those of raw materials reflecting an improvement in energy efficiency and an increase in those of such goods as IT-related ones offsetting each other (Chart 7 [1]). Going forward, they are expected to start increasing moderately, as an increase in domestic demand becomes evident.

External Balance

The nominal current account surplus has been more or less unchanged at a high level, as the decline in the surplus of the primary income balance that reflected the yen's appreciation until mid-2016 and the increase in the surplus of the trade balance offset each other (Chart 11 [3]). It will likely increase moderately on the back of improvement both in the trade balance that reflects the aforementioned outlook for exports and imports as well as in the income balance -- including an increase in direct investment income -- brought about by recovery in overseas economies.

Industrial Production

Industrial production has been on an increasing trend, reflecting an increase in demand at home and abroad as well as the progress in inventory adjustments, mainly in capital goods and producer goods (Charts 12 and 13). Transport equipment production has continued to increase firmly since the second half of 2016, albeit with fluctuations, against the background of firmness in shipments to advanced economies as well as in domestic shipments, and of a shift of production sites from overseas back to Japan (Chart 12 [2]). The production of electronic parts and devices has clearly increased, mainly driven by those for smartphones, data centers, and on-board equipment for motor vehicles. The production of machinery (i.e., "general-purpose, production and business oriented machinery" in the *Indices of Industrial Production*) has increased for a wider range of items, as seen in the fact that production of construction machinery has started to pick up recently, while that of semiconductor production equipment has maintained its firmness.

Industrial production will likely continue to increase firmly for the time being, backed by positive effects of the global improvement in production and trade activity of the manufacturing sector. Thereafter, it is projected to continue on a moderate increasing trend -- albeit with fluctuations that mainly reflect the effects of the cycle of global demand for IT-related goods -- as the pick-up in emerging economies becomes more evident and the effects resulting from the set of stimulus measures materialize.

Corporate Profits

Corporate profits have been improving. According to the *Financial Statements Statistics of Corporations by Industry, Quarterly* (FSSC), the ratio of current profits to sales for all industries and enterprises has clearly improved recently, supported by the pick-up in emerging economies and the past yen depreciation, and that for the October-December quarter of 2016 was at a historically high level (Chart 14). Under such circumstances, business sentiment has improved in a wider range of industries (Chart 15). The diffusion index (DI) for business conditions for all industries and enterprises in the March 2017 *Tankan* (Short-Term Economic Survey of Enterprises in Japan) suggested that business conditions have improved for three consecutive quarters, being at a favorable level last seen in March 2014 just prior to the latest consumption tax hike.

Corporate profits are projected to follow a steady increasing trend, supported by the increase in demand at home and abroad on the back of the rise in the growth rates of overseas economies and the effects resulting from the set of stimulus measures. Nevertheless, through the end of the projection period, the rate of increase in corporate profits is likely to slow, as the pace of expansion in Japan's economy is projected to decelerate, due in part to the effects of the scheduled consumption tax hike.

Business Fixed Investment

Business fixed investment has been on a moderate increasing trend as corporate profits have improved (Chart 16). The aggregate supply of capital goods and private construction completed (nonresidential) -- coincident indicators of machinery investment and construction investment, respectively -- have increased steadily, albeit moderately.

According to the March *Tankan*, firmness is seen in business fixed investment plans for fiscal 2016 as a whole; the plans for fiscal 2017, which were surveyed for the first time in the March *Tankan*, have turned out to be firm as well, especially those of large enterprises (Chart 17). For example, business investment (on the basis close to GDP definition; business investment -- including software as well as research and development investment, but excluding land purchasing expenses -- in all industries including the financial industry) increased by 1.3 percent in fiscal 2016, and business fixed investment plans for fiscal 2017 saw an increase of 1.9 percent (Chart 18). Reflecting firms' positive fixed investment stance, machinery orders and construction starts (in terms of planned expenses for private and nondwelling construction), as leading indicators, have continued a moderate increasing trend, albeit with large monthly fluctuations (Chart 19).

With regard to the outlook, business fixed investment is likely to continue increasing moderately on the back of (1) an improvement in corporate profits, (2) extremely stimulative financial conditions, such as low interest rates and accommodative lending attitudes, (3) the effects of fiscal measures including projects conducted under the Fiscal Investment and Loan Program and tax reductions for capital investment, and (4) moderate improvement in growth expectations.¹⁶ Specifically, an increase is likely to be seen in investment particularly (1) in redevelopment projects in view of the 2020 Tokyo Olympics, (2) in research and development for growth areas, (3) in labor-saving machinery and equipment in order to deal with labor shortages, and (4) for maintenance and replacement of equipment to address deterioration from aging.

From the viewpoint of the capital stock cycle, which is based on the assumption that investment will be undertaken in order to realize the level of capital stock necessary for production activity under the specific rate of expected growth, it is deemed that capital stock has been increasing moderately at a pace consistent with the expected growth rate,

¹⁶ The recent improvement in corporate profits is mainly attributable to an increase in sales volume -- that is, the increase in exports and production. Therefore, the upward pressure on business fixed investment would be stronger compared with that driven by an improvement in corporate profits brought about by an improvement in the terms of trade. For details, see "Corporate Profits and Business Fixed Investment: Why are Firms So Cautious about Investment?," Bank of Japan Review Series (2016-E-2).

which is about the same as the recent potential growth rate, estimated to be in the range of 0.5-1.0 percent (Chart 20 [1]). The pace of its accumulation is likely to be consistent with the expected growth rate that somewhat exceeds growth potential, and this reflects the continued highly accommodative financial conditions under "QQE with Yield Curve Control" and an increase in Olympic Games-related demand.¹⁷ Nonetheless, with cyclical adjustments in capital stock becoming evident and Olympic Games-related investment peaking out, downward pressure on business fixed investment is expected to intensify at the end of the projection period, unless the expected growth rate rises significantly.¹⁸

The Employment and Income Situation

Supply-demand conditions in the labor market have continued to tighten steadily and employee income has increased moderately. The rate of increase in the *Labour Force Survey*-based number of employees has remained at a high level of around 1.0-1.5 percent (Chart 21 [1]). Against this backdrop, the active job openings-to-applicants ratio has followed a steady uptrend, and a perception of labor shortage suggested by the employment conditions DI in the March *Tankan* has heightened further (Chart 21 [2] and [3]).¹⁹ The unemployment rate has continued on a moderate declining trend, albeit with some fluctuations, and has been in the range of 2.5-3.0 percent recently, which is slightly lower

¹⁷ The investment-GDP ratio of late seems to be less overheated than the level in the past economic expansion phase, suggesting that there is still room to some extent for a further increase (Chart 20 [2]).

¹⁸ In light of past Olympic Games host countries' experiences, Olympic Games-related construction investment is projected to increase during fiscal 2017 and fiscal 2018, and then peak out toward fiscal 2020. For details, see the Bank's research paper "Economic Impact of the Tokyo 2020 Olympic Games" released in January 2016.

¹⁹ The active job openings-to-applicants ratio for February 2017 stands at 1.43 times, marking the highest level since July 1991 (1.44 times); during the asset bubble period, the highest figure was registered in July 1990 (1.46 times).

than the structural unemployment rate (Chart 22 [1] and [2]).²⁰ Meanwhile, labor force participation rates -- especially those for women and the elderly -- have remained on an uptrend, albeit with fluctuations, after bottoming out around the end of 2012 (Chart 22 [3]). As Japan's economy is likely to continue on a growing trend at a pace above its potential, it is expected that the number of employees will keep increasing and that the supply-demand conditions in the labor market will further tighten.

On the wage side, total cash earnings per employee have risen moderately, albeit with some fluctuations (Chart 23 [1]). Specifically, scheduled cash earnings have maintained their moderate increase, due mainly to a rise in wages of full-time employees primarily at small and medium-sized firms (Chart 23 [2]).²¹ The rise in hourly cash earnings has accelerated moderately, albeit with fluctuations; the year-on-year rate of increase in hourly scheduled cash earnings of part-time employees, which are responsive to labor market conditions, has seen a steady acceleration, being in the range of 2.0-2.5 percent of late (Chart 23 [3]). Meanwhile, although real wages have been adversely affected recently by a rise in prices of fresh food and energy, the year-on-year rate of change has remained on an uptrend with fluctuations smoothed out (Chart 25 [1]).

With regard to the outlook for wages, the pace of increase in scheduled cash earnings of full-time employees is expected to accelerate, reflecting an improvement in base pay, as the supply-demand conditions in the labor market continue to tighten and corporate profits improve. The rate of increase in hourly scheduled cash earnings of part-time employees is also likely to accelerate steadily in response to further tightening of labor market conditions and an increase in minimum wages. Under this situation, overall employees' hourly cash earnings are projected to increase moderately at almost the same pace as labor productivity growth in nominal terms (Chart 42 [2]).

²⁰ The structural unemployment rate can be described in a variety of ways, but in Chart 22 (1), it is defined, based on the idea of the so-called Beveridge Curve, as one where the unemployment rate and the vacancy rate are equal to each other (i.e., when the aggregate supply-demand conditions in the labor market -- excluding unemployment arising from the mismatch between job openings and job applicants -- are judged as being in equilibrium). Therefore, the structural unemployment rate defined here differs from the concept of the Non-Accelerating Inflation Rate of Unemployment (NAIRU), and does not show a direct relationship with prices or wages.

²¹ For wage developments by firm size, see Box 3.

In light of the aforementioned employment and wage conditions, the rate of increase in employee income has accelerated moderately, albeit with fluctuations (Charts 24 [1] and 25 [2]). Going forward, throughout the projection period, the rate of increase is expected to continue rising at around the same rate as nominal GDP growth. The labor share will likely continue to be more or less unchanged throughout the projection period at around the current level, which is clearly below the long-term average (Chart 24 [2]).

Household Spending

Private consumption has been resilient against the background of steady improvement in the employment and income situation. From the viewpoint of gauging consumption activity in a comprehensive manner, the Consumption Activity Index (CAI, adjusting travel balance) -- which is calculated by combining various sales and supply-side statistics -- has followed a moderate increasing trend since the second half of 2016, albeit with monthly fluctuations (Chart 26).²² Looking at private consumption by type, durable goods have been on a moderate uptrend, mainly due to replacement demand for automobiles and household electrical appliances, whereas nondurable goods have seen somewhat weak developments for a prolonged period, particularly in clothes (Chart 27 [1]).²³ Meanwhile, services consumption has continued to increase moderately, albeit with fluctuations, reflecting a trend rise in communications charges as well as medical, health care, and welfare fees.

Turning to individual indicators, the aggregate supply of consumer goods -- that is, the supply-side statistics -- has increased moderately since the second half of 2016 (Chart 27 [2]). According to various sales statistics, retail sales value in real terms has been resilient, albeit with fluctuations (Chart 28). Sales at department stores, which had bottomed out, have started to pick up, reflecting a pick-up in sales to the wealthy brought about by the past rise in stock prices, and a recovery in demand from foreign visitors to Japan due to the past

²² For details of the CAI, see the Bank's research papers "The Consumption Activity Index" released in May 2016 and "The Consumption Activity Index: Improvements of Release Contents and Revisions of Compilation Methodology" released in October 2016.

²³ For details of a replacement cycle for durable goods, see the Bank's research paper "Recent Developments in Durable Goods Consumption: A Perspective from Spectrum Analysis" released in March 2017.

yen depreciation. Sales at supermarkets have been more or less flat with fluctuations smoothed out, while those at convenience stores have continued to rise firmly. Turning to durable goods, sales of automobiles have followed a steady uptrend, as replacement demand for environmentally friendly cars -- of which purchases had been encouraged by a tax reduction measure implemented after the global financial crisis -- has been stimulated by the effects of the introduction of new models (Chart 29 [1]). Sales of household electrical appliances also have been on a moderate increasing trend, backed by replacement demand for such items as televisions and personal computers. With regard to services consumption, travel had been somewhat weak due to terrorist attacks overseas and the effects of the Kumamoto Earthquake, but it has picked up recently; dining-out is gaining further increasing momentum recently (Chart 29 [2]). Looking at confidence indicators related to private consumption, the Consumer Confidence Index has picked up only moderately, mainly due to the past rise in stock prices and the stabilization of fresh food prices (Chart 30). The *Economy Watchers Survey* had improved on the back of the past yen depreciation and the past rise in stock prices, but has been somewhat weak, due in part to sluggish sales in spring apparel reflecting cool weather recently.

In the outlook, private consumption is expected to follow a moderate increasing trend, supported by a steady increase in employee income and the wealth effects stemming from the past rise in stock prices, as well as replacement demand for durable goods, albeit with fluctuations in the second half of the projection period due to the scheduled consumption tax hike.²⁴ The propensity to consume, which is calculated based on disposable income, had declined somewhat considerably after the latest consumption tax hike, but is expected to bottom out and then pick up very moderately, mainly reflecting a manifestation of the wealth effects and an increase in replacement demand for durable goods (Chart 26 [2]).

Housing investment has been more or less flat (Chart 31). Although an improvement in the employment and income situation and low housing loan rates are likely to underpin housing investment, it is expected to remain more or less flat when fluctuations due to the scheduled

²⁴ Regarding the wealth effects stemming from a rise in stock prices, see Box 5 in the April 2016 Outlook Report.

consumption tax hike are smoothed out, partly against the background of a decrease in demand for housing for rent that was motivated by inheritance tax savings.

II. The Current Situation of Prices and Their Outlook

Developments in Prices

The producer price index (PPI, adjusted for the effects of seasonal changes in electricity rates) has increased compared with three months earlier, reflecting developments in international commodity prices and foreign exchange rates (Charts 32 and 33 [1]). The year-on-year rate of increase in the services producer price index (SPPI, excluding international transportation) has been at around 0.5-1.0 percent, mainly due to a rise in prices for items related to selling, general and administrative expenses, as well as to fixed investment (Chart 33 [2]).

The year-on-year rate of increase in the CPI (all items less fresh food and energy) had remained on a decelerating trend, following the peak of 1.3 percent in November 2015; thereafter, the rate of change has been fluctuating in slightly positive territory recently (Chart 35 [1]).²⁵ Looking at this in detail, despite a pick-up in prices of clothes, improvement in goods prices has been limited on the whole against the backdrop of (1) firms remaining cautious in setting prices of food products -- mainly cooked food -- with the effects of a surge in fresh food prices remaining, and (2) somewhat weak developments in durable goods prices, due mainly to a reduction in sales prices of mobile phones (Charts 34 and 38 [1]).²⁶ General services have weakened on the whole, against the background that (1) housing rent has continued to decrease moderately, (2) moves to pass on the increase in labor costs -- including the rise in minimum wages -- to dining-out prices have

²⁵ The Ministry of Internal Affairs and Communications started to release the CPI excluding fresh food and energy retrospectively on March 3, 2017, when it released the January figure for Japan and the February figure for Tokyo. Figures that the Ministry of Internal Affairs and Communications had released are mostly the same as those that the Research and Statistics Department of the Bank of Japan had calculated and released; however, due to the method of rounding the index level, there is a slight difference in the timing at which the figures hit their peaks.

²⁶ In response to a surge in fresh food prices, retail stores appear to have reduced prices of a wider range of food products -- mainly cooked food -- and held a sale for those products for a long period in order to retain their customers.

been limited on the whole, and (3) a decline in charges for mobile phones, which are categorized in other services, has been evident in recent months.²⁷

The year-on-year rate of change in the CPI (all items less fresh food) has been about 0 percent (Chart 34 [1]). It has become slightly positive on the whole recently, reflecting a price rise in energy -- mainly petroleum products -- amid the rate of change in the CPI excluding fresh food and energy fluctuating in slightly positive territory (Chart 36).

The recent developments in the indicators for capturing the underlying trend in the CPI are as follows (Chart 35).²⁸ The rate of change in the trimmed mean has been fluctuating recently at around 0 percent or in slightly positive territory.²⁹ The mode has been in the range of 0.0-0.5 percent of late, and the weighted median has been at around 0 percent.³⁰ Looking at annual price changes across all items (less fresh food), the share of price-increasing items minus the share of price-decreasing items is starting to bottom out at around 20 percentage points.

The year-on-year rate of change in the GDP deflator has been around 0 percent (Chart 37 [1]). The year-on-year rate of change in the domestic demand deflator has remained slightly negative, mainly reflecting the CPI excluding fresh food but including energy prices having declined by the end of 2016 (Chart 37 [2]).

²⁷ The recent sluggish improvement in the CPI (all items less fresh food and energy) is largely attributable to a sectoral shock that is unique to the mobile phone market, including a decline in prices of and charges for mobile phones. For details, see Box 4.

²⁸ For more details on the core price indicators, see "Core Inflation and the Business Cycle," Bank of Japan Review Series (2015-E-6), and "Performance of Core Indicators of Japan's Consumer Price Index," Bank of Japan Review Series (2015-E-7).

²⁹ The effects of large relative price fluctuations are eliminated by simply excluding items that belong to a certain percentage of the upper and lower tails of the price fluctuation distribution (10 percent of each tail in this report).

³⁰ The mode is the inflation rate with the highest density in the distribution. The weighted median is the weighted average of the inflation rates of the items at around the 50 percentile point of the distribution.

The Environment surrounding Prices

In the outlook for prices, the main factors that determine inflation rates are assessed as follows. First, medium- to long-term inflation expectations have remained in a weakening phase. Various market indicators and survey results indicate that medium- to long-term inflation expectations have not yet picked up clearly on the whole, although some of them show a rise in such expectations. As for the outlook, however, because of the following two factors, medium- to long-term inflation expectations are likely to follow an increasing trend and gradually converge to around 2 percent: (1) in terms of the adaptive component, the observed inflation rate is expected to rise as the output gap improves, also backed in part by developments in energy prices, and (2) in terms of the forward-looking component, the Bank will pursue monetary easing through its strong commitment to achieving the price stability target.

Second, the output gap had improved for two consecutive quarters since mid-2016 and turned slightly positive in the October-December quarter. An improvement in the *Tankan* factor utilization index and various monthly indexes which indicate the utilization of labor and capital suggests that the output gap has expanded somewhat within positive territory in the January-March quarter of 2017 (Charts 3 [1] and 38 [2]). With regard to the outlook, the output gap is projected to widen further within that territory in fiscal 2017, on the back of (1) an improvement in capital utilization rates brought about by the increase in exports and production becoming quite apparent, and (2) a further tightening of labor market conditions, due to the effects resulting from the set of stimulus measures becoming evident. Thereafter, although the output gap is projected to continue expanding moderately within positive territory both on the capital and labor sides, reflecting an increase in domestic and foreign demand, such expansion is likely to pause in the second half of fiscal 2019 due to the effects of the scheduled consumption tax hike.

The third factor is developments in import prices (Charts 32 and 36 [2]). The past pick-up in crude oil prices is expected to push up the year-on-year rate of change in energy (petroleum products, electricity, and manufactured & piped gas) prices in the CPI, mainly in fiscal 2017, but this effect is likely to wane gradually. As for the impact of foreign exchange rates on consumer prices, the past yen depreciation will likely exert upward pressure for the time

being mainly on prices of items that are responsive to exchange rates, specifically durable goods.

The Outlook for Prices

With regard to the outlook for prices, the year-on-year rate of increase in the CPI (all items less fresh food and energy) is likely to start picking up at a gradual pace, on the back of the following developments in the short run: (1) the rate of increase in prices of goods that are responsive to economic activity and exchange rates, including food products and goods related to daily necessities, is expected to accelerate gradually due to a pick-up in private consumption; (2) the rate of decline in durable goods prices is expected to follow a decelerating trend, reflecting the past yen depreciation; and (3) moves to pass on the increase in labor costs to prices of general services, including dining-out and housework-related services, are likely to prevail. Thereafter, the year-on-year rate of change in the CPI is likely to increase toward around 2 percent, as inflation expectations gradually rise with an improvement in the output gap becoming evident.³¹

The year-on-year rate of change in the CPI (all items less fresh food) is likely to turn slightly positive. As the positive contribution of energy prices increases, albeit with fluctuations, and as the CPI inflation excluding fresh food and energy accelerates further, the rate of increase will likely accelerate clearly and reach around 2 percent at around the middle of the projection period -- that is, around fiscal 2018. Thereafter, it is expected to remain at around 2 percent. Comparing the current projections through fiscal 2018 with the ones in the January 2017 Outlook Report, the projected rates of increase in the CPI excluding fresh food are more or less unchanged.

Such projections are made under the same baseline scenario as before that the inflation rate will respond fairly clearly to the improvement in the output gap compared to the past and that the Phillips curve will gradually shift upward as inflation expectations rise through both

³¹ Housing rent and administered prices, both of which have a certain weight in the CPI, will likely continue showing relatively weak developments for some time, and this is likely to constrain the acceleration of the CPI inflation for all items less fresh food and energy as a whole (Chart 38 [1]). For further details, see Box 4 in the July 2016 Outlook Report.

the forward-looking and adaptive expectations formation mechanisms (Charts 38 [2] and 41).

With regard to the relationship between prices and nominal wages, the CPI and hourly nominal wages move almost in parallel in the long run and the relationship is stable (Chart 42 [1]). Specifically, there are interactive effects between rises in nominal wages and prices: firms try to pass on cost increases due to nominal wage increases by raising sales prices and households try to keep real income unchanged by demanding wage increases in line with price increases. Under this baseline scenario, hourly cash earnings -- especially scheduled cash earnings -- are expected to rise moderately, reflecting the tightening of labor market conditions and the rise in inflation expectations. The underlying rate of increase in the CPI is projected to accelerate gradually in a consistent manner with such wage developments.

III. Financial Developments in Japan

Financial Conditions

Financial conditions are highly accommodative.

Under "QQE with Yield Curve Control," the yield curve for Japanese government bonds (JGBs) has been in line with the current guideline for market operations, in which the short-term policy interest rate is set at minus 0.1 percent and the target level of 10-year JGB yields is around zero percent (Chart 43 [1]). That is, the yields for relatively short maturities have been stable in negative territory above minus 0.5 percent; the 10-year JGB yields, albeit having been under upward pressure temporarily, have generally been stable at around 0 percent in positive territory. Meanwhile, the 20-year JGB yields also have generally been stable in the range of 0.5-1.0 percent. The monetary base has been increasing at a high year-on-year growth rate of around 20 percent, and its amount outstanding as of end-March 2017 was 447 trillion yen, of which the ratio to nominal GDP was 83 percent (Chart 43 [2]).³²

³² It is assumed that the figure for nominal GDP is unchanged from the October-December quarter of 2016.

With such long- and short-term JGB yields, firms' funding costs have been hovering at extremely low levels. Issuance rates for CP have remained at extremely low levels (Chart 44 [1]). Conditions for CP issuance have been favorable, as suggested by the DI in the March *Tankan* having been at around the highest level since 2008, which is when it was introduced in the *Tankan*. Issuance rates for corporate bonds have remained at extremely low levels (Chart 44 [2]). Lending rates (the average interest rates on new loans and discounts) have been around historical low levels (Chart 45 [1]). In these circumstances, interest payments by firms have been at considerably low levels compared with their profits (Chart 45 [2]).

With regard to the availability of funds for firms, financial institutions' lending attitudes -- as perceived by large as well as small firms -- have been highly accommodative (Chart 46 [1]). In the *Tankan*, the DI for large firms has been at a high level of around the peak in the mid-2000s, and that for small firms has been at a high level last seen at the end of the 1980s. Firms' financial positions have been favorable for both large and small firms (Chart 46 [2]). In the *Tankan*, the DIs for both large and small firms have been at high levels that are almost the same as those seen around 1990.

Demand for funds such as those related to mergers and acquisitions of firms, as well as those for business fixed investment, including for real estate, has continued to increase. In these circumstances, the year-on-year rate of increase in the amount outstanding of bank lending has accelerated at a moderate pace to around 3 percent (Chart 47 [1]). Meanwhile, the year-on-year rate of increase in the aggregate amount outstanding of CP and corporate bonds has remained positive (Chart 47 [3]).

The year-on-year rate of change in the money stock (M2) has been in the range of 4.0-4.5 percent, as bank lending has increased (Chart 48 [1]). The ratio of M2 to nominal GDP has been on a moderate increasing trend (Chart 48 [2]).

Developments in Financial Markets

With regard to developments in global financial markets, long-term interest rates and stock prices had risen, mainly on the back of solid economic indicators reflecting a global economic recovery. After mid-March, however, they had generally been weak amid uncertainties regarding the new U.S. administration's economic policy and political situations in Europe, as well as geopolitical risks.

Yields on 10-year government bonds in the United States reached the range of 2.6-2.7 percent again, as the Federal Reserve raised the policy rate in mid-March following the rise in December 2016; however, amid uncertainties such as those regarding the new administration's economic policy, they have declined since then (Chart 49 [1]). Yields on 10-year government bonds in Germany also have declined somewhat, with fluctuations smoothed out.

With regard to credit spreads on interbank transactions, the LIBOR-OIS spreads for major currencies show the following developments: those for the U.S. dollar have declined moderately since the implementation of money market fund (MMF) reform in the United States, while those for the euro and the yen have remained at low levels (Chart 50 [3]). Premiums for U.S. dollar funding through the dollar/yen foreign exchange swap market have declined recently, although they have remained at relatively high levels as a trend, mainly due to the tight supply-demand conditions (Chart 50 [2]). Meanwhile, Japanese banks do not face quantitative constraints on foreign currency funding at this moment.

Stock prices in the United States had increased, reflecting solid economic indicators, but been weighed down after mid-March (Chart 51 [1]). Those in Europe have recovered to a level last seen in spring 2015. Japanese stock prices had been more or less flat but subsequently been weak, reflecting developments in foreign exchange rates. In the Japan real estate investment trust (J-REIT) market, prices have declined (Chart 51 [2]).

In foreign exchange markets, after having been more or less flat, the yen has appreciated somewhat against the U.S. dollar amid uncertainties such as those regarding the new U.S.

administration's economic policy (Chart 52). The yen has been more or less flat against the euro, with fluctuations smoothed out.

Land Prices

Land prices as a whole have almost stopped declining, while commercial land prices have risen. According to the *Land Market Value Publication* for 2017 (as of January 1), the year-on-year rate of change in commercial land prices has been positive for two consecutive years (Chart 53). Residential land prices have been flat compared with a year ago, after the year-on-year rate of change had been negative for eight consecutive years. In the three major metropolitan areas (Tokyo, Osaka, and Nagoya), the year-on-year rate of change in commercial land prices has accelerated in positive territory and that in residential land prices has remained positive. In nonmetropolitan areas, the year-on-year rate of decline in both commercial and residential land prices has decelerated for seven consecutive years.

(Box 1) The Revision to the Output Gap and the Potential Growth Rate

Reflecting (1) the retroactive revision of Japan's GDP statistics in December 2016, incorporating a revision of the benchmark year, as well as a switch to the 2008SNA and the regular annual revision, and (2) the newly available capital stock data (Quarterly Estimates of Net Capital Stocks of Fixed Assets) in line with the new 2008SNA guidelines and adjusted for economic depreciation, the Research and Statistics Department of the Bank of Japan recently re-estimated Japan's output gap and potential growth rate and revised the estimation method.³³

However, the basic approach employed by the Bank of calculating the output gap based on the slack in the utilization of capital and labor is unchanged through this revision. Specifically, the output gap is calculated based on the following formula:

Output gap = Capital input gap + Labor input gap

Capital input gap = Utilization gap in manufacturing + Utilization gap in nonmanufacturing

Labor input gap = Labor force participation rate gap + Employment rate gap + Hours worked gap

In the formula above, the following three items were subject to the revision: (1) the utilization gap in manufacturing, (2) the labor force participation rate gap, and (3) the hours worked gap.³⁴

(1) Revision to the utilization gap in manufacturing (Box Chart 1 [3])

Although the indices of production capacity for industrial production, which are used for measuring the utilization rate in manufacturing, reflect the disposal of physical equipment such as the retirement of equipment, the economic depreciation (obsolescence) of equipment is hardly taken into account. When this is taken into account, potential production capacity in

³³ For details, see the forthcoming Bank's research paper "Methodology for Estimating Output Gap and Potential Growth Rate: An Update."

³⁴ The estimation methods for the utilization gap in nonmanufacturing and the employment rate gap were not revised in essence (Box Chart 1 [1] and [2]).

manufacturing will be assessed lower, and thus the utilization rate will be higher.³⁵ In the revised estimates, the downward deviation in the utilization rate in manufacturing was adjusted by using the newly available information from the Quarterly Estimates of Net Capital Stocks of Fixed Assets and by referring to the estimation method of the utilization rate developed and published by the Federal Reserve.³⁶

(2) Revision to the labor force participation rate gap (Box Chart 2 [1])

The labor force participation rate has been rising clearly since the end of 2012, reflecting (1) the increasing numbers of dual-income households and (2) the elderly working until an older age. So far, the trend of the labor force participation rate had been estimated using the Hodrick-Prescott (HP) filter. However, doing so meant that, in order to identify breakpoints such as that observed around 2012 as turning points in the trend, it was necessary to wait until a considerable amount of time-series data had become available. Therefore, the approach was revised and, following the methodology of the Congressional Budget Office of the United States, a piecewise linear regression was adopted, which allows sharp breakpoints in the trend for each business cycle. This makes it possible to identify structural changes in a more timely manner as turning points in the trend.

(3) Revision to the hours worked gap (Box Chart 2 [2])

Until the revision, the measurement of trends in working hours took into account major working time regulations (such as the introduction of the five-day work week) and population aging as factors exerting downward pressure on the trends; however, the structural decline in working hours in recent years, due to the increase in married women who work only part-time and the redressing of long working hours through work-style reforms, was not sufficiently captured. Therefore, as part of the revision, the way in which trends in working hours are derived was modified in order to capture the decline in actual working hours over the past few years as a structural rather than a cyclical decline.

³⁵ Moreover, this trend appears to have become more pronounced in recent years, as the pace of obsolescence of capital has increased with the advances in information and communications technology.

³⁶ Charles Gilbert, Norman Morin, and Richard Raddock, "Industrial Production and Capacity Utilization: Recent Developments and the 1999 Revision," *Federal Reserve Bulletin*, Vol. 86, 2000, pp. 188-205.

A look at the revised output gap shows that, for the first half of the 2000s, these changes result in a slight downward revision of the output gap, while for the period following the global financial crisis they result in a slight upward revision, mainly due to the upward revision of the capital input gap and the hours worked gap (Box Chart 3). However, the upward revision for the last two years or so is relatively small, due in part to the downward revision of the labor force participation rate gap, and the overall picture for the most recent period is unchanged in that the output gap, after having been more or less flat at around 0 percent, has been improving for two consecutive quarters. Next, comparing the revised output gap estimates with those of other institutions shows that, while they are quite similar, some differences can be observed for some periods (Box Chart 4 [1]). This indicates that there are discrepancies in the measurement of the output gap that reflect differences in the data used and the estimation method. The chart also shows that, for recent years, the Bank's output gap estimate is close to the estimate made by the Organisation for Economic Co-operation and Development (OECD), which is on a 1993SNA basis.

Looking at the revised potential growth rate shows that, immediately after the global financial crisis, it temporarily dropped to about 0 percent, due mainly to the drop in capital input (Box Chart 5). However, it subsequently improved, mainly due to the increase in the capital stock including research and development as the economy recovered, as well as to the increase in the number of potential workers, particularly among the elderly and women. As a result, the potential growth rate in recent years has been estimated to be in the range of 0.5-1.0 percent, which is comparable to that in the first half of the 2000s, before the global financial crisis. Comparing the potential growth rates before and after the revision shows that, whereas for the period after the global financial crisis the changes result in a downward revision of the potential growth rate due mainly to the downward revision of the capital stock, they result in a rather large upward revision for the last few years, mainly reflecting a rise in the TFP growth rate associated with the comprehensive revision to GDP statistics (see Box 2 on developments in Japan's TFP in recent years). Comparing the revised estimates of the potential growth rate with the estimates of other institutions, the estimates by the Bank of Japan, the Cabinet Office, and the IMF, which already incorporate the effects of the SNA revision, are higher than the estimate by the OECD, which is based on the previous standard (Box Chart 4 [2]).

(Box 2) Developments in Japan's TFP in Recent Years

In this Outlook Report, Japan's TFP growth rate by industry was measured using GDP statistics based on the new base year, the capital stock series data, and the labor input data. Then, with reference to the previous studies in the United States, the TFP growth rate by industry was categorized into four groups: (1) the information technology (IT)-producing sector, (2) the IT-using sector, where IT usage is relatively high, (3) the sector where value-added is difficult to measure ("difficult-to-measure sector"), and (4) other (Box Chart 6 [1]).

The results of measurement suggest that the TFP growth rates in the IT-producing sector and IT-using sector have been decelerating since the middle of 2000s, as was stressed by Gordon (2016) and Fernald (2015) using the U.S. data. This implies that the effects of pushing up productivity by IT as "general purpose technology" appear to have been waning in recent years (Box Chart 6 [2] and [3]).³⁷ Currently, the industry that pushes up Japan's TFP, instead of IT-related industries, is construction, which enjoys favorable business conditions driven by such factors as Olympic Games-related investment and urban renewal-related investment. It should be noted, however, that the TFP growth rate of the construction industry is particularly difficult to measure accurately.

Specifically, it is pointed out that construction investment data in the GDP statistics have the following problems: (1) the data are basically estimated from the construction completed, mechanically assuming that progress has been made on schedule after orders and construction starts, but the construction completed may have been somewhat overestimated in recent years due to the delay in construction resulting from labor shortage; (2) the construction cost deflator used for deflating the nominal amount in real terms is calculated on a basis of input-cost, which mainly consists of labor costs and construction material costs, but may not fully reflect the rise in real estate and housing prices in recent years, and thus may be biased downward; and (3) investment for renovation and renewal,

³⁷ Robert J. Gordon, *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War*, Princeton University Press, 2016.

John G. Fernald, "Productivity and Potential Output before, during, and after the Great Recession," *NBER Macroeconomics Annual 2014*, Vol. 29, 2015, pp. 1-51.

which has been on the rise in recent years, is not fully reflected in the data. These problems are highlighted as one focus for statistics reform initiative recently, and are being debated to improve the accuracy of the data.³⁸

³⁸ For initiatives to improve the accuracy of the data for GDP statistics, see the Basic Policy for the Fundamental Reform of Economic Statistics released on December 21, 2016, by the Council on Economic and Fiscal Policy, and the interim report released on April 14, 2017, by the Council for the Promotion of Fundamental Reform of Economic Statistics.

(Box 3) Wage Developments by Firm Size

With regard to scheduled cash earnings of full-time employees by firm size, those at small and medium-sized firms have been accelerating their pace of increase firmly of late, although those at large firms -- which are significantly affected by the effects of a base pay rise -- have been somewhat sluggish (Box Chart 7 [1]).

At small and medium-sized firms, labor shortage is felt more strongly than at large firms, mainly for full-time employees, and thus the job vacancy rate is somewhat higher (Box Chart 7 [2]). Furthermore, there are more job changers at small and medium-sized firms in pursuit of higher wages (Box Chart 7 [3] and [4]). As a result of these developments, it appears to have become easier at small and medium-sized firms for the tightening of supply-demand conditions in the external labor market to directly lead to wage increases.

On the other hand, at large firms, where wages are set at relatively high levels and the risk of vacancy resulting from departure by their employees is lower, the responsiveness of wages to the tightening of labor market conditions remains low. Moreover, in general, the labor unions of large firms with high wages tend to place importance on job security in the long run over wage increases. In addition to these factors, it can be said that, since the base pay rise determined at the annual spring labor-management wage negotiations is largely affected by the observed CPI in the previous fiscal year, upward pressure on scheduled cash earnings at large firms remains sluggish.³⁹

³⁹ For the importance of inflation expectations -- especially the adaptive expectation formation -- in determining base pay rises, see Appendix 4 in the Bank's *Comprehensive Assessment: Developments in Economic Activity and Prices as well as Policy Effects since the Introduction of Quantitative and Qualitative Monetary Easing (QQE)* released in September 2016.

(Box 4) Recent Developments in the Mobile Phone Market and the CPI

As described in the main text, the year-on-year rate of change in the CPI (all items less fresh food and energy) has been fluctuating in slightly positive territory thus far, and has not yet seen a clear improvement. This is largely attributable to not only weakening in prices of food products, reflecting a surge in fresh food prices, but also to factors that are unique to the mobile phone market such as a decline in prices of mobile phones ("mobile phones") and in charges for mobile phones ("telephone charges (mobile phone)") (Box Chart 8 [3]).

Despite the fact that the year-on-year rate of decline in "mobile phones" in the import price index (IPI) has been decelerating, the rate of decline in "mobile phones" in the CPI has accelerated to a large extent recently, and this contains an improvement in durable goods prices as a whole in the CPI (Box Chart 8 [1]). These developments in "mobile phones" are contrary to those in durable goods prices other than "mobile phones," such as prices of household electrical appliances including televisions; reflecting the past yen depreciation, the rate of decline in durable goods prices other than "mobile phones" has been decelerating at a gradual pace with some time lag from the IPI.

The year-on-year rate of decline in "telephone charges (mobile phone)" also has been on an accelerating trend since 2016, exerting downward pressure on general services prices as a whole in the CPI (Box Chart 8 [2]). Since the weight of "telephone charges (mobile phone)" in the CPI has been on an uptrend, the impact of a reduction in telephone charges on the overall CPI has become much larger.

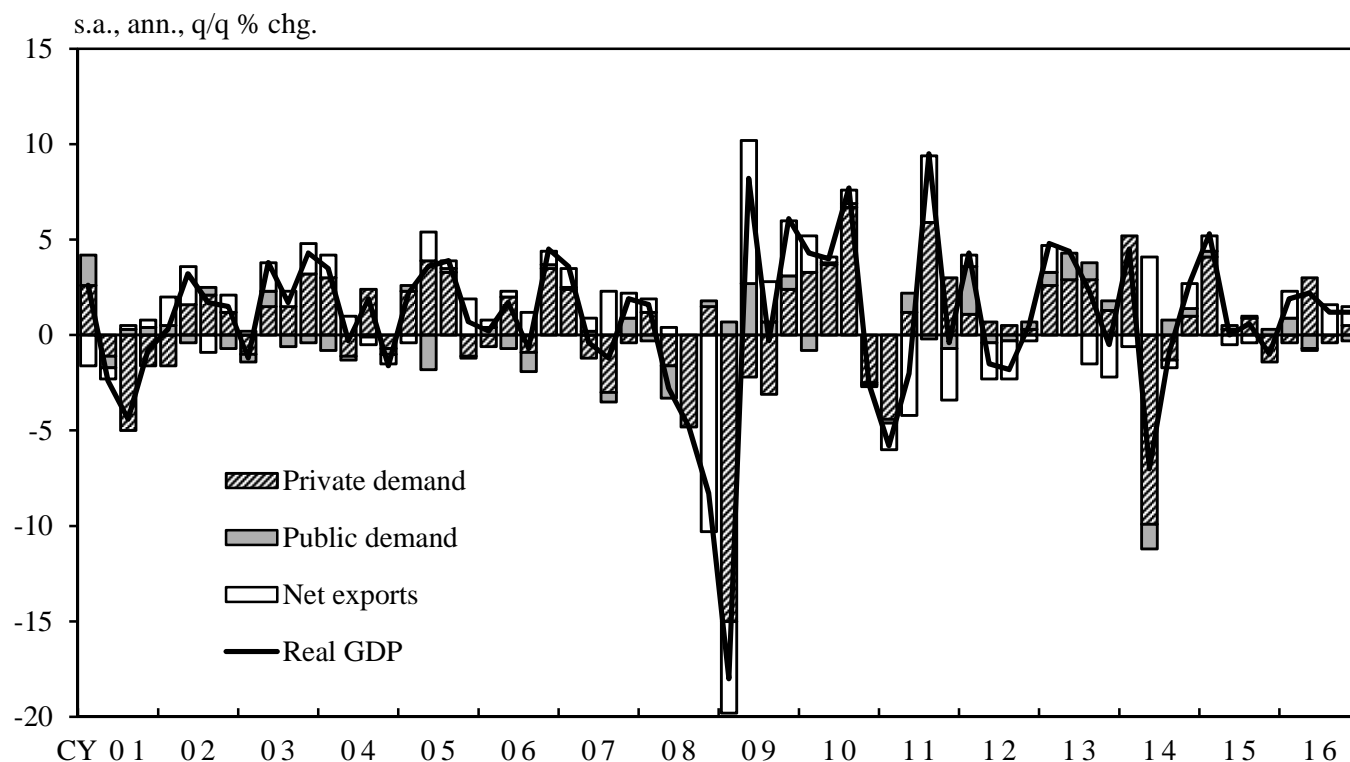
The reduction in prices of and charges for mobile phones seems largely attributable to intensifying competition among mobile phone carriers that reflects the spread of MVNOs (Mobile Virtual Network Operators). Therefore, it can be said that the recent declines in those prices and charges in the CPI have been brought about by a sectoral shock that is not so related to the output gap and inflation expectations, which determine developments in general prices from a somewhat long-term perspective.

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Real GDP

(1) Real GDP



(2) Components

s.a., q/q % chg.

	2015	2016			
	Q4	Q1	Q2	Q3	Q4
Real GDP	-0.2	0.5	0.5	0.3	0.3
[Annual rate]	[-1.0]	[1.9]	[2.2]	[1.2]	[1.2]
Domestic demand	-0.3	0.1	0.6	-0.1	0.1
Private demand	-0.3	-0.1	0.7	-0.1	0.1
Private consumption	-0.4	0.2	0.1	0.2	0.0
Non-resid. investment	0.0	-0.0	0.2	-0.0	0.3
Residential investment	-0.0	0.0	0.1	0.1	0.0
Private inventory	0.0	-0.3	0.3	-0.3	-0.2
Public demand	0.1	0.2	-0.2	0.0	-0.1
Public investment	-0.1	-0.1	0.0	-0.0	-0.1
Net exports of goods and services	0.0	0.3	-0.0	0.4	0.2
Exports	-0.1	0.1	-0.2	0.4	0.5
Imports	0.1	0.2	0.2	0.0	-0.2
Nominal GDP	-0.2	0.7	0.4	0.1	0.4

y/y % chg.

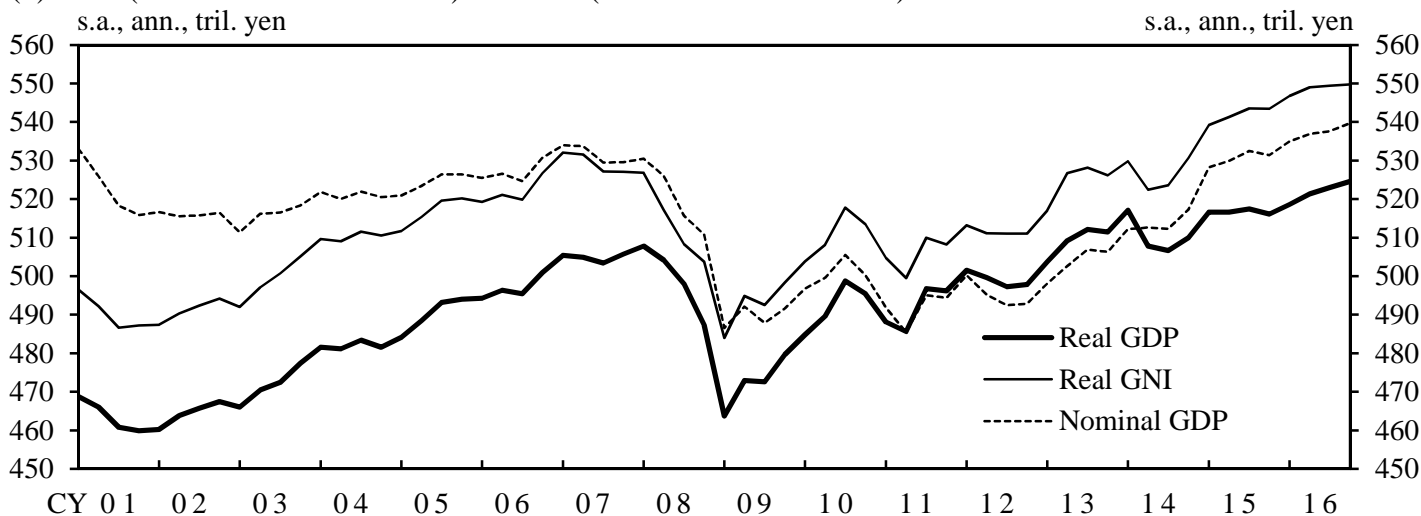
	2015	2016			
	Q4	Q1	Q2	Q3	Q4
GDP deflators	1.5	0.9	0.4	-0.1	-0.1
Domestic demand deflators	-0.0	-0.3	-0.7	-0.8	-0.3

Note: Figures of components in real GDP indicate contributions to changes in real GDP.

Source: Cabinet Office.

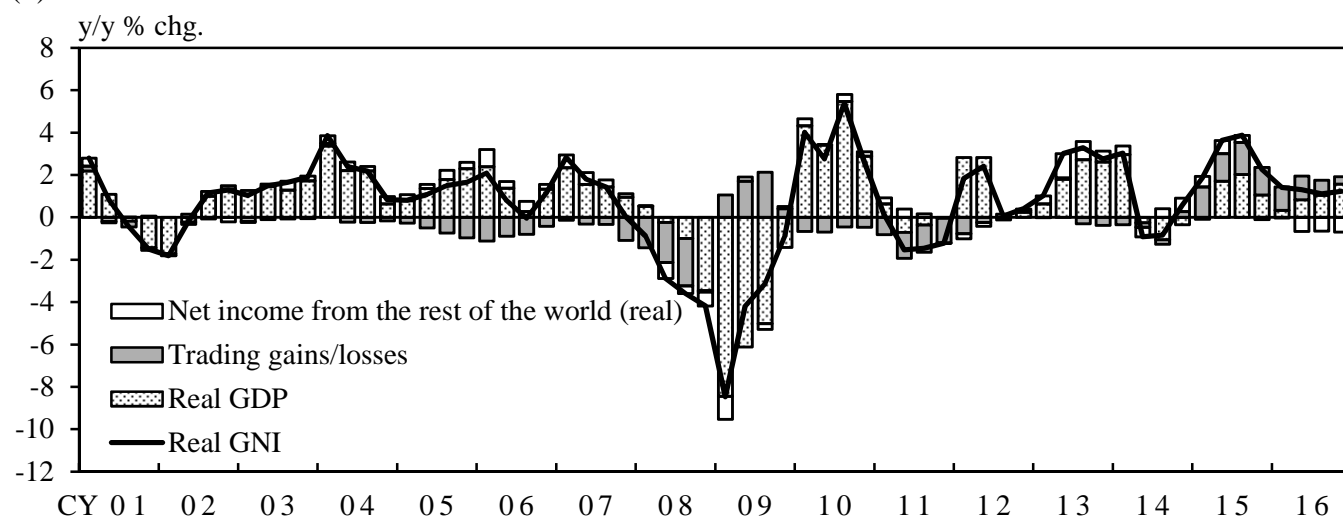
Aggregate Income Formation and Indexes of Business Conditions

(1) GDP (Gross Domestic Product) and GNI (Gross National Income)

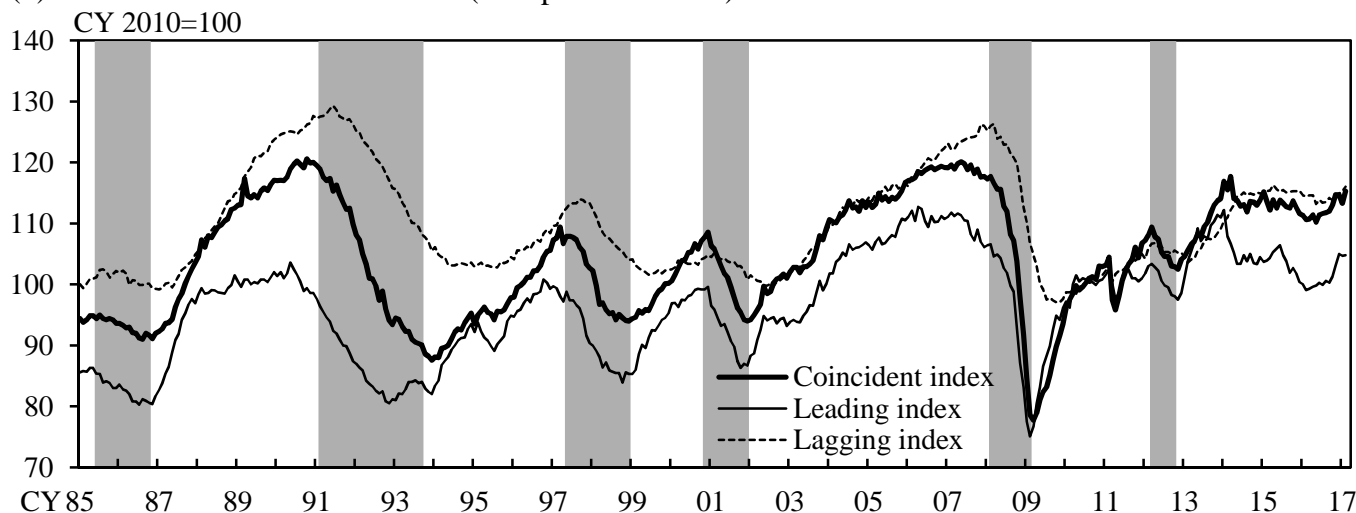


Note: Real GNI = real GDP + trading gains/losses + net income from the rest of the world (real)
 Trading gains/losses = nominal net exports / weighted average of export and import deflators - real net exports

(2) GNI



(3) Indexes of Business Conditions (Composite Indexes)

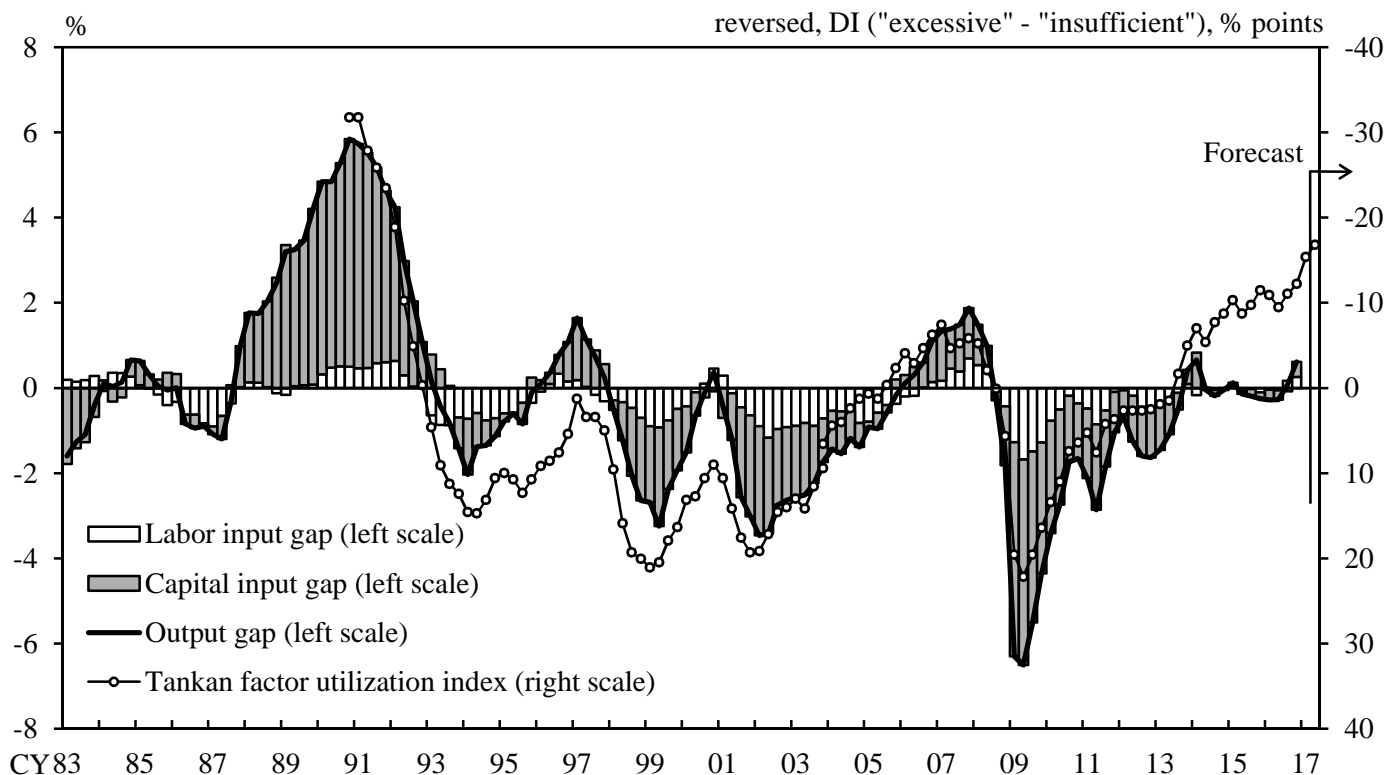


Note: Shaded areas indicate recession periods.

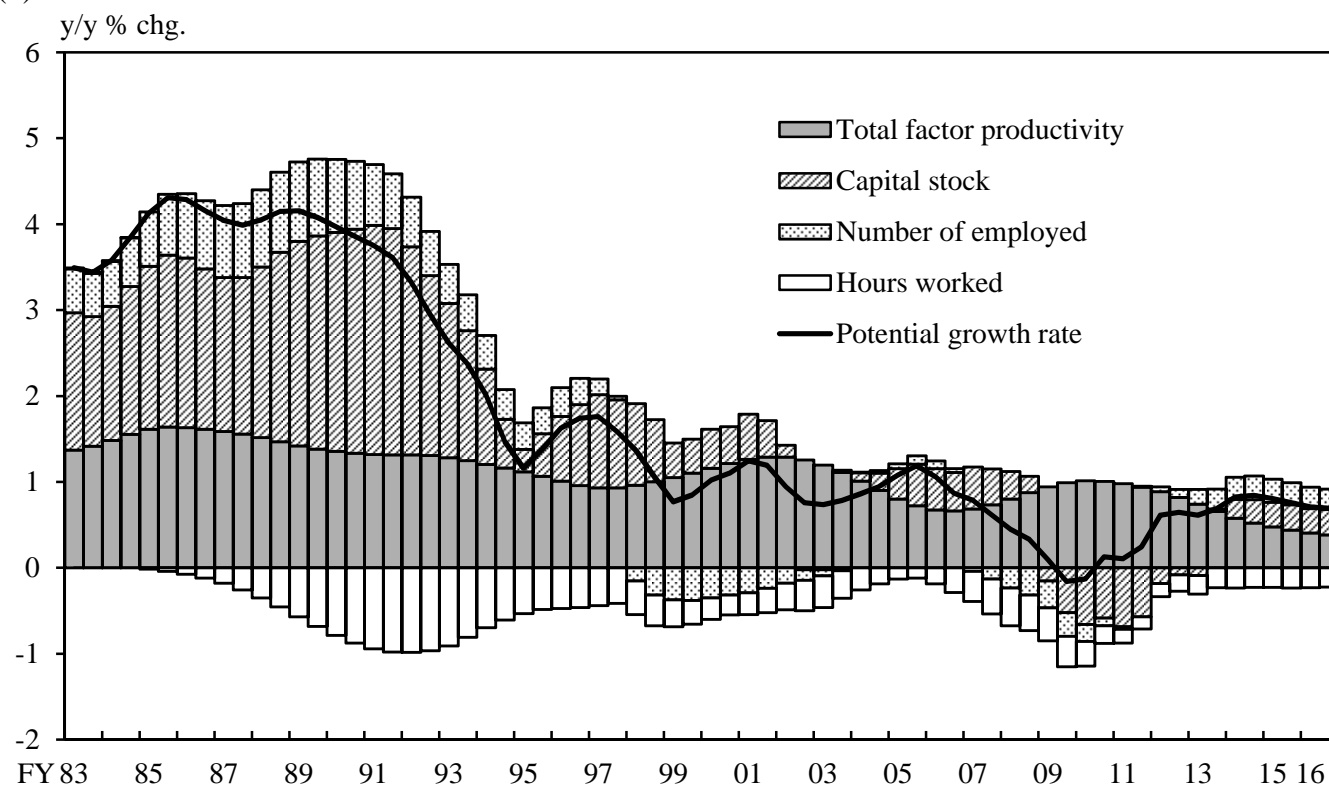
Source: Cabinet Office.

Output Gap and Potential Growth Rate

(1) Output Gap



(2) Potential Growth Rate



Notes: 1. The output gap and the potential growth rate are estimated by the Research and Statistics Department, Bank of Japan.

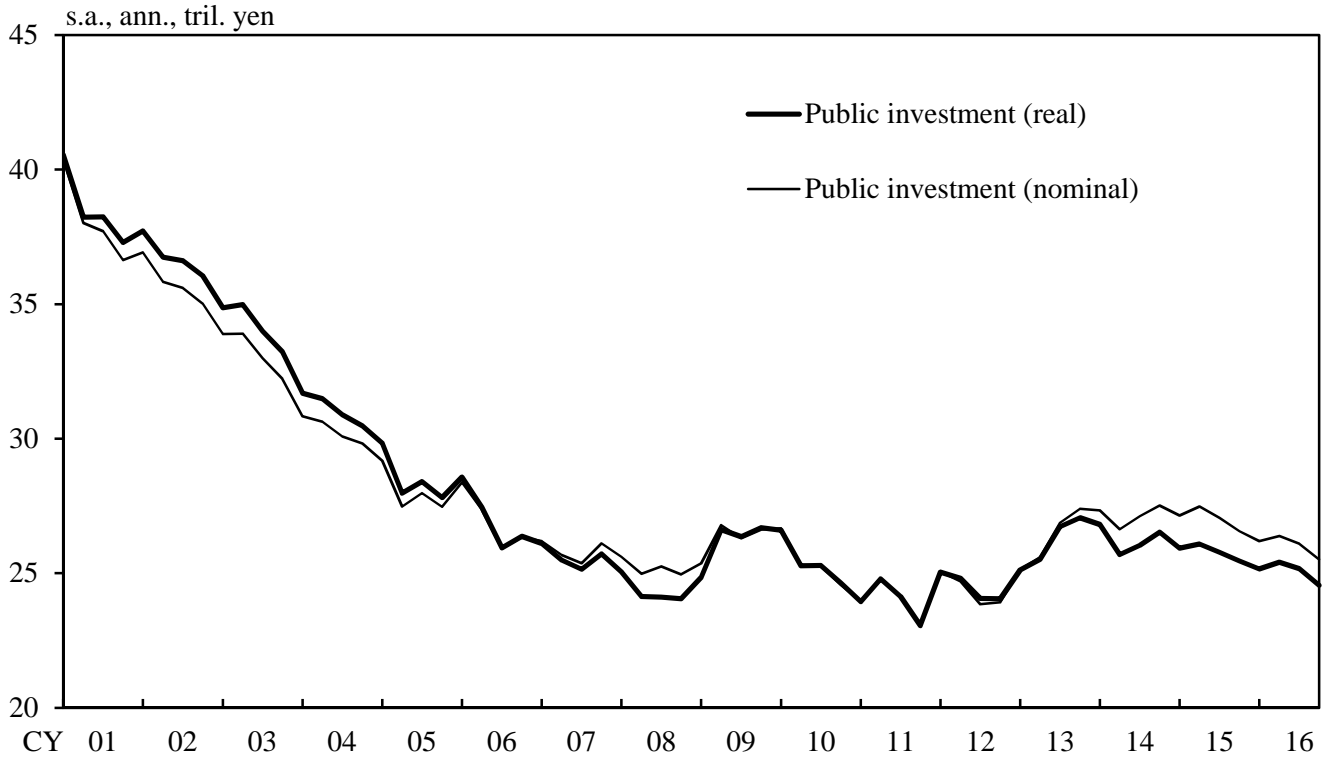
2. The Tankan factor utilization index is calculated as the weighted average of the production capacity DI and the employment conditions DI for all enterprises. The capital and labor shares in the "National Accounts" are used as weights. There is a discontinuity in the data in December 2003 due to a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

3. Figures for the second half of fiscal 2016 are those of 2016/Q4.

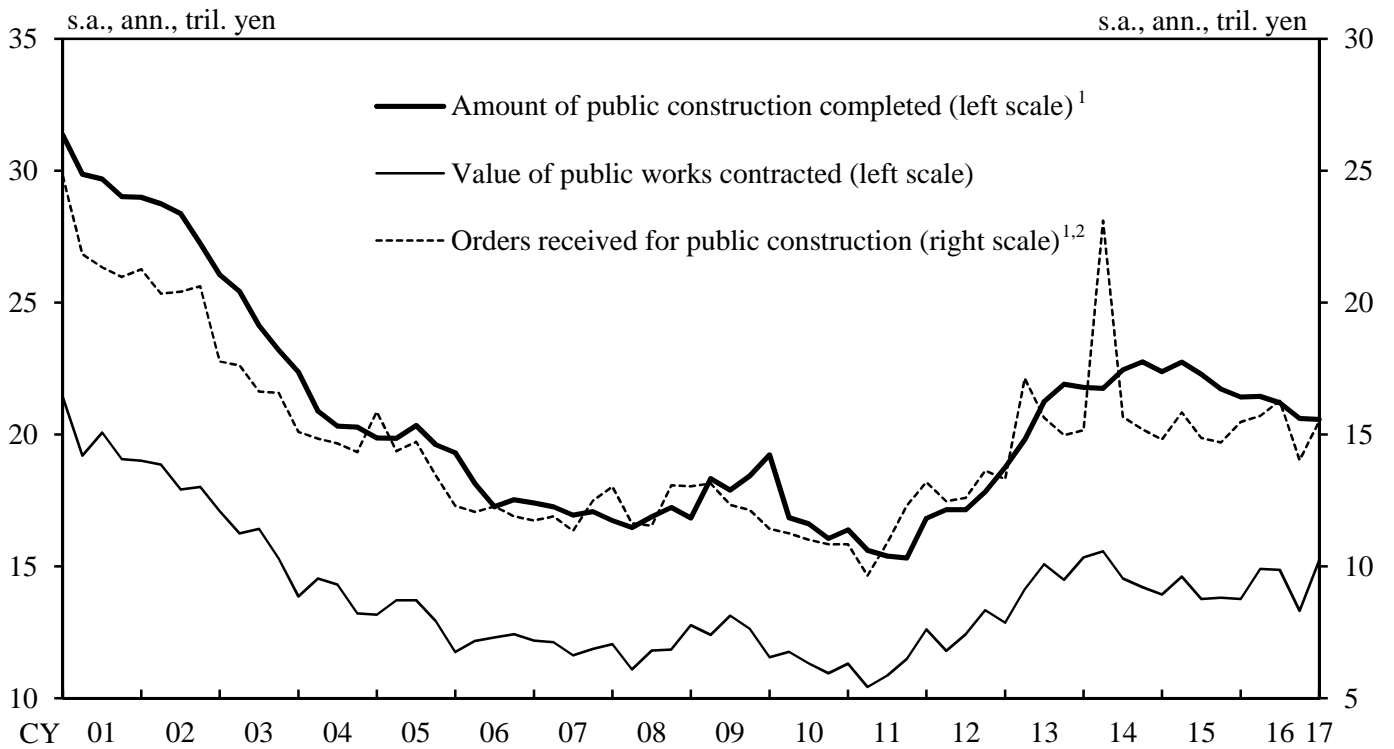
Sources: Cabinet Office; Bank of Japan; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; Research Institute of Economy, Trade and Industry.

Public Investment

(1) Public Investment (SNA Basis)



(2) Indicators of Public Investment



Notes: 1. Figures for 2017/Q1 are January-February averages.

2. Figures up to 2011/Q4 are adjusted to reflect changes in estimation methods.

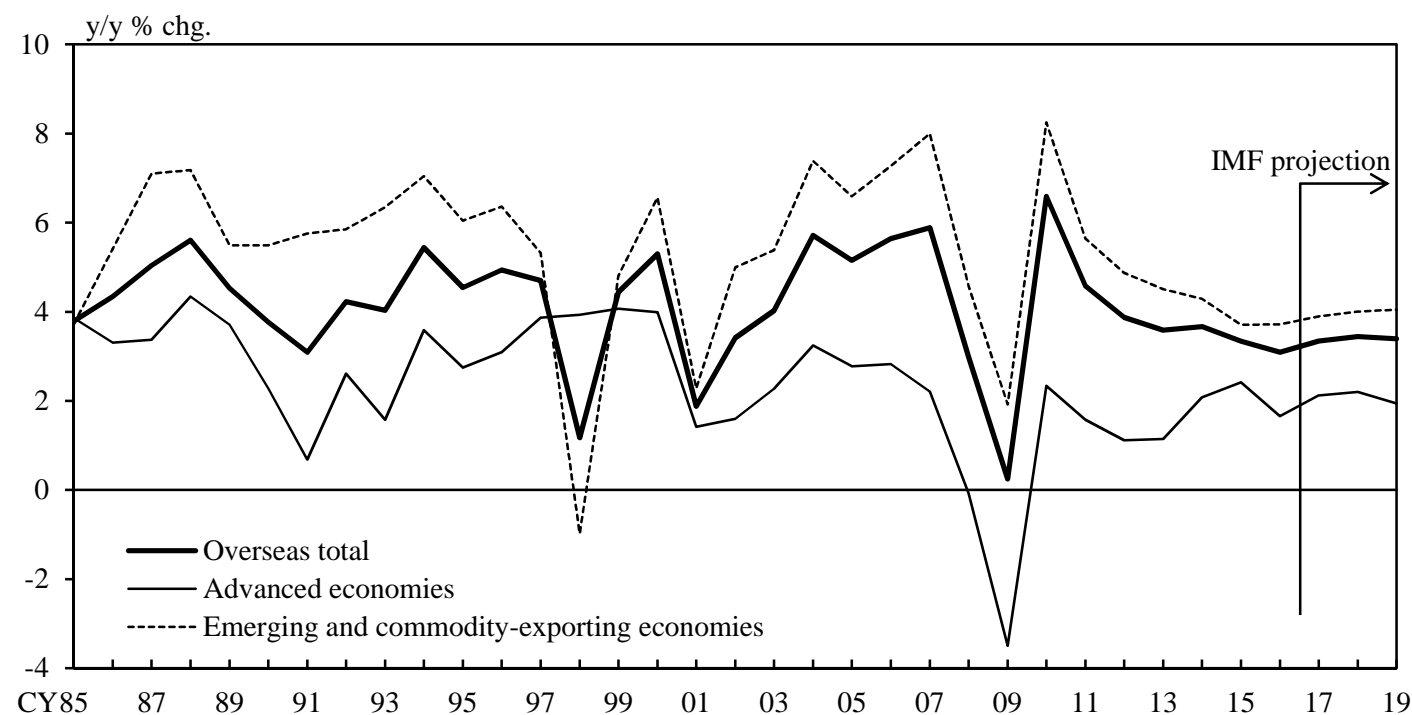
Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism; East Japan Construction Surety etc., "Public Works Prepayment Surety Statistics."

Overseas Economies

(1) Forecast of Real GDP Growth Rates by Major Country and Region

	Quarter (Actual, s.a., ann., q/q % chg.)					CY (Actual or Projection, y/y % chg.)			
	2016		2017			2016	2017	2018	2019
	Q1	Q2	Q3	Q4	Q1	Actual	IMF Projection		
Overseas total						3.1	3.3	3.4	3.4
							(3.3)	(3.5)	
Major economies <79.2>	2.6	3.7	3.9	4.0	n.a.	3.2	3.4	3.4	3.3
							(3.4)	(3.4)	
United States <20.2>	0.8	1.4	3.5	2.1	n.a.	1.6	2.3	2.5	2.1
							(2.3)	(2.5)	
Euro area and U.K. <10.3>	2.0	1.5	1.8	2.1	n.a.	1.8	1.8	1.6	1.6
							(1.6)	(1.6)	
East Asia <48.7>	3.4	5.1	4.5	5.1	n.a.	4.2	4.2	4.2	4.2
							(4.2)	(4.2)	
China <17.7>	5.3	7.8	7.4	7.0	5.3	6.7	6.6	6.2	6.0
							(6.5)	(6.0)	
NIEs <21.6>	1.6	3.0	2.5	4.2	n.a.	2.1	2.3	2.4	2.6
							(2.2)	(2.6)	
ASEAN4 <9.5>	4.2	4.8	3.8	4.0	n.a.	4.3	4.3	4.5	4.6
							(4.3)	(4.4)	
Other economies <20.8>						2.5	3.0	3.5	3.6
							(3.1)	(3.5)	

(2) Real GDP Growth Rates of Overseas Economies



Notes: 1. Figures are the weighted averages of real GDP growth rates using countries' share in Japan's exports as weights. Annual GDP growth rates are from the "World Economic Outlook (WEO)" as of April 2017, while figures in parentheses are as of January 2017. Since for some countries and regions the IMF does not provide projections in the January WEO, some figures in parentheses are imputed using information provided in the October 2016 WEO.

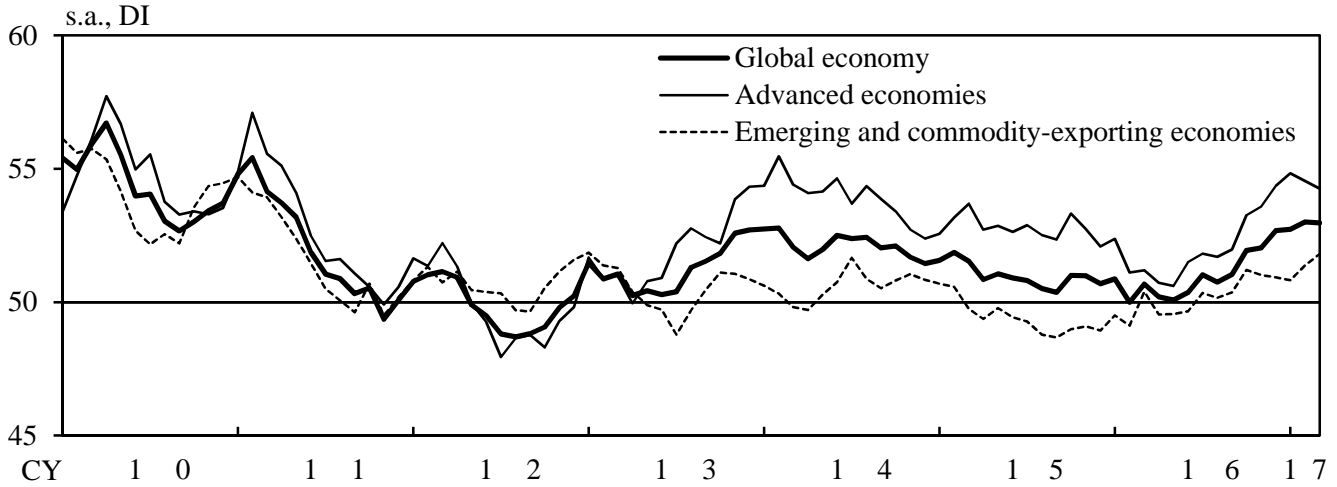
2. Figures in angular brackets show the share of each country or region in Japan's total exports in 2016.

3. Advanced economies consist of the United States, the euro area, and the United Kingdom. Emerging and commodity-exporting economies consist of the rest of the world economy.

Sources: IMF; Ministry of Finance; BEA; European Commission; National Bureau of Statistics of China, etc.

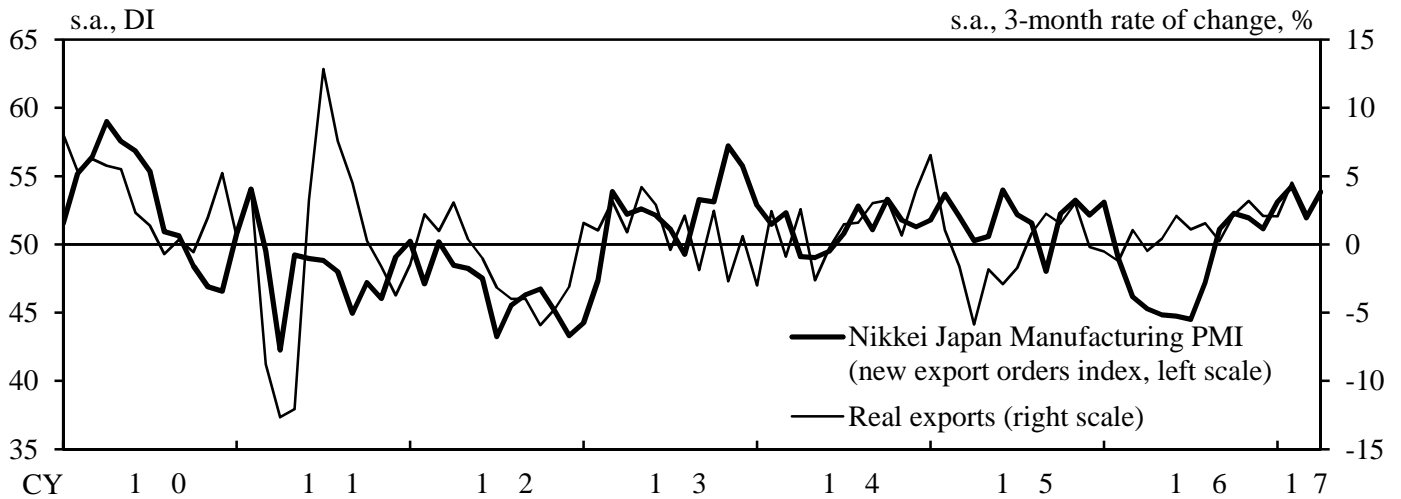
Environment Surrounding Exports

(1) Business Confidence (Manufacturing PMI)

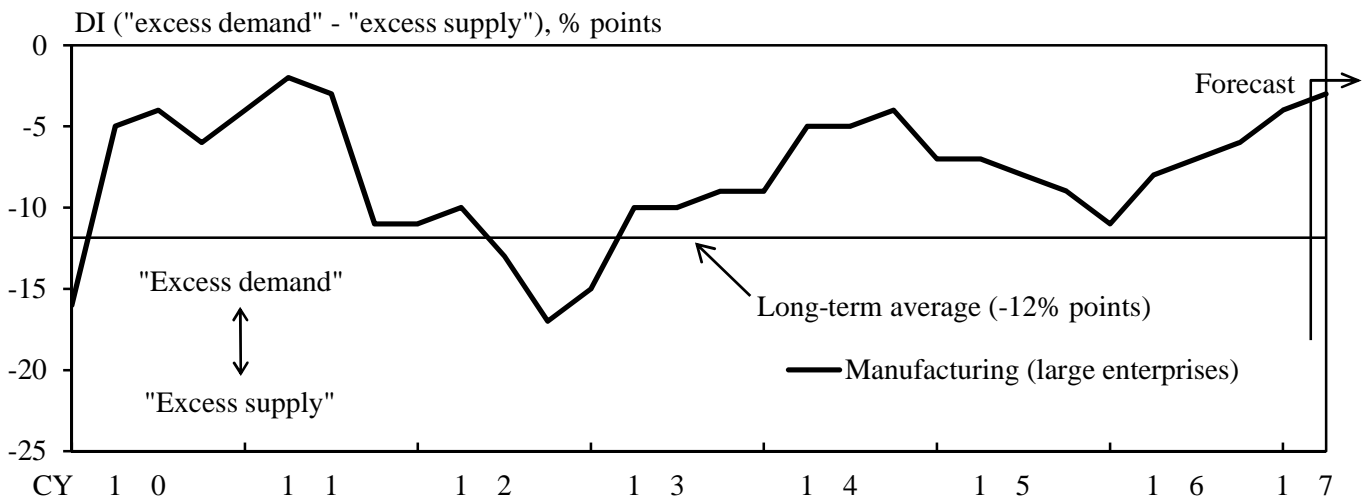


Note: Figures for the global economy are the J.P.Morgan Global Manufacturing PMI. Figures for advanced economies as well as emerging and commodity-exporting economies are calculated as the weighted averages of the Manufacturing PMI using PPP-adjusted GDP shares of world total GDP from the IMF as weights. Advanced economies consist of the United States, the euro area, the United Kingdom, and Japan. Emerging and commodity-exporting economies consist of 17 countries and regions, such as China, South Korea, Taiwan, Russia, and Brazil.

(2) New Export Orders PMI and Real Exports of Japan



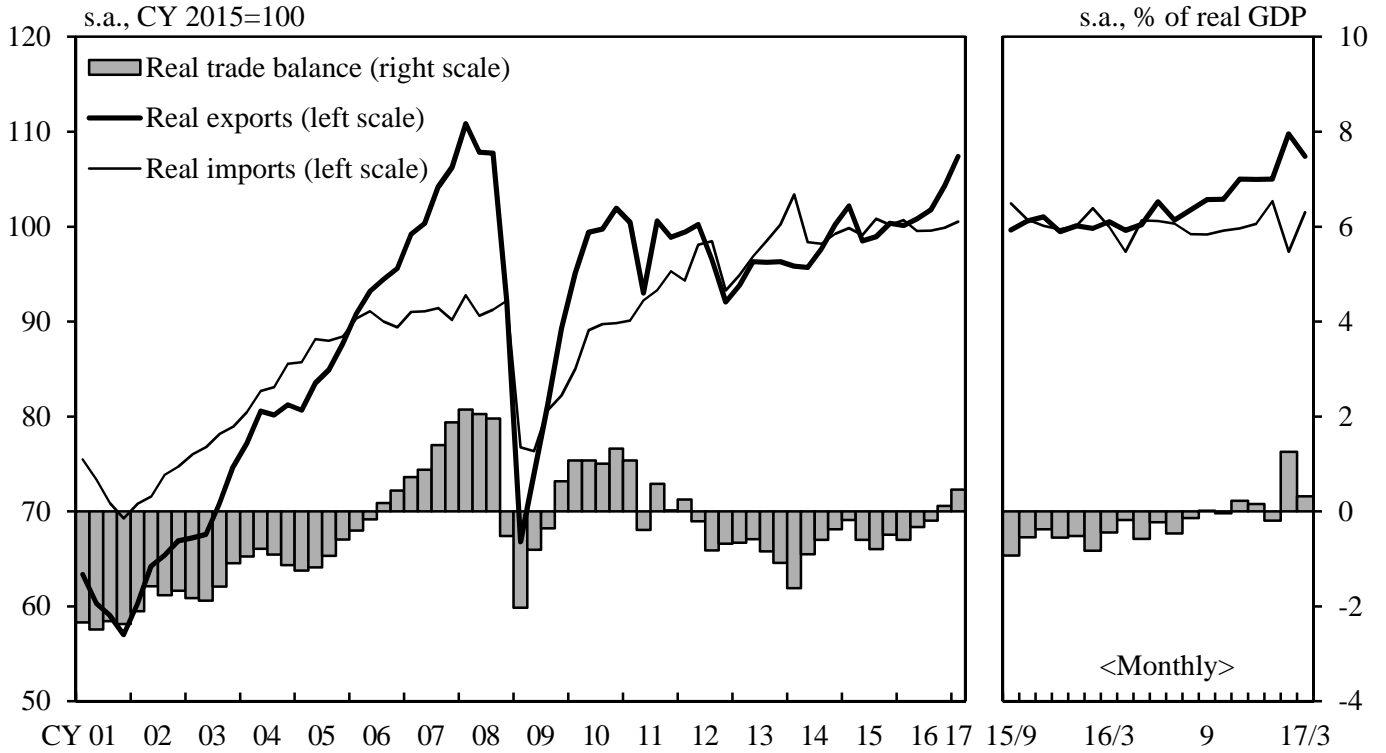
(3) Overseas Supply and Demand Conditions for Products (*Tankan*)



Sources: IHS Markit (© and database right IHS Markit Ltd 2017. All rights reserved.); IMF; Haver; Ministry of Finance; Bank of Japan.

Real Exports and Real Imports

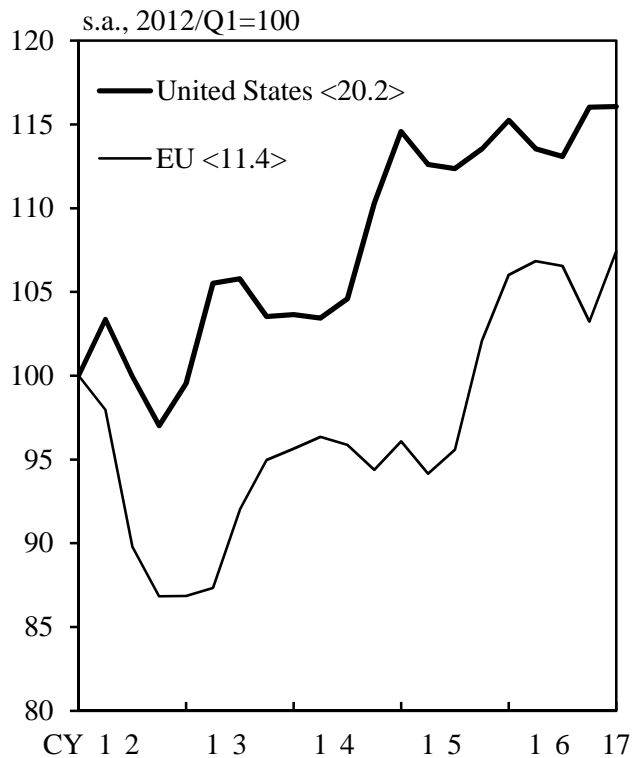
(1) Real Exports and Real Imports



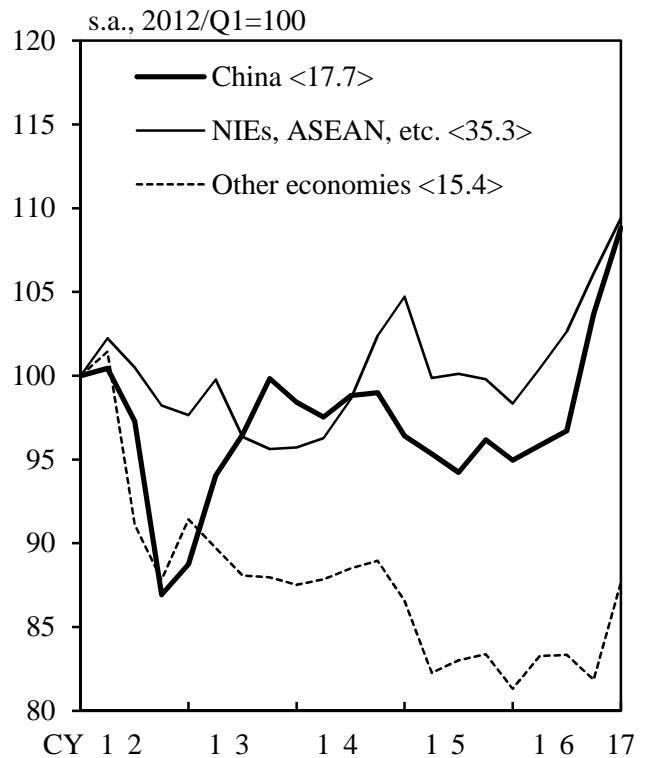
Note: Figures for the real trade balance (as a ratio of real GDP) from January 2017 onward are calculated using real GDP for 2016/Q4.

(2) Real Exports by Major Country and Region

(a) Advanced Economies



(b) Emerging and Commodity-Exporting Economies



Note: Figures in angular brackets show the share of each country or region in Japan's total exports in 2016.

Sources: Ministry of Finance; Bank of Japan; Cabinet Office.

Real Exports

(1) Breakdown by Region

		y/y % chg.		s.a., q/q % chg.				s.a., m/m % chg.			
		CY 2015	2016	2016 Q1	Q2	Q3	Q4	2017 Q1	2017 Jan.	Feb.	Mar.
United States	<20.2>	7.6	1.8	1.5	-1.5	-0.4	2.6	0.0	-0.1	2.0	-0.7
EU	<11.4>	1.7	9.8	3.9	0.8	-0.3	-3.1	4.1	2.9	5.8	2.9
Asia	<53.0>	0.8	2.1	-1.6	1.8	1.7	4.8	3.7	-1.2	7.0	-6.1
China	<17.7>	-3.2	3.3	-1.3	0.9	0.9	7.2	5.0	-3.3	13.7	-10.1
NIEs, ASEAN, etc.	<35.3>	2.9	1.5	-1.5	2.1	2.2	3.4	3.1	0.0	3.8	-4.1
Others	<15.4>	-5.0	-1.2	-2.5	2.4	0.1	-1.8	7.1	10.6	-3.9	13.7
Real exports		2.7	2.5	-0.2	0.7	0.9	2.5	3.0	0.0	4.6	-2.2

(2) Breakdown by Goods

		y/y % chg.		s.a., q/q % chg.				s.a., m/m % chg.			
		CY 2015	2016	2016 Q1	Q2	Q3	Q4	2017 Q1	2017 Jan.	Feb.	Mar.
Intermediate goods	<18.8>	-0.4	-0.4	-1.5	0.5	-0.1	-0.6	-1.1	-1.2	5.4	-6.0
Motor vehicles and related goods	<24.9>	1.3	2.7	-3.7	0.4	2.2	3.5	-0.2	-0.9	2.4	1.0
IT-related goods	<21.2>	-0.8	2.0	-1.1	1.4	2.1	4.4	4.4	1.9	5.4	-6.0
Capital goods	<17.1>	-2.4	1.0	1.2	1.3	-0.4	3.5	6.3	4.1	2.1	-2.7
Real exports		2.7	2.5	-0.2	0.7	0.9	2.5	3.0	0.0	4.6	-2.2

Notes: 1. Figures in angular brackets show the share of each country or region or each type of goods in Japan's total exports in 2016.

2. NIEs, ASEAN, etc. includes other Asian countries such as India and Bangladesh.

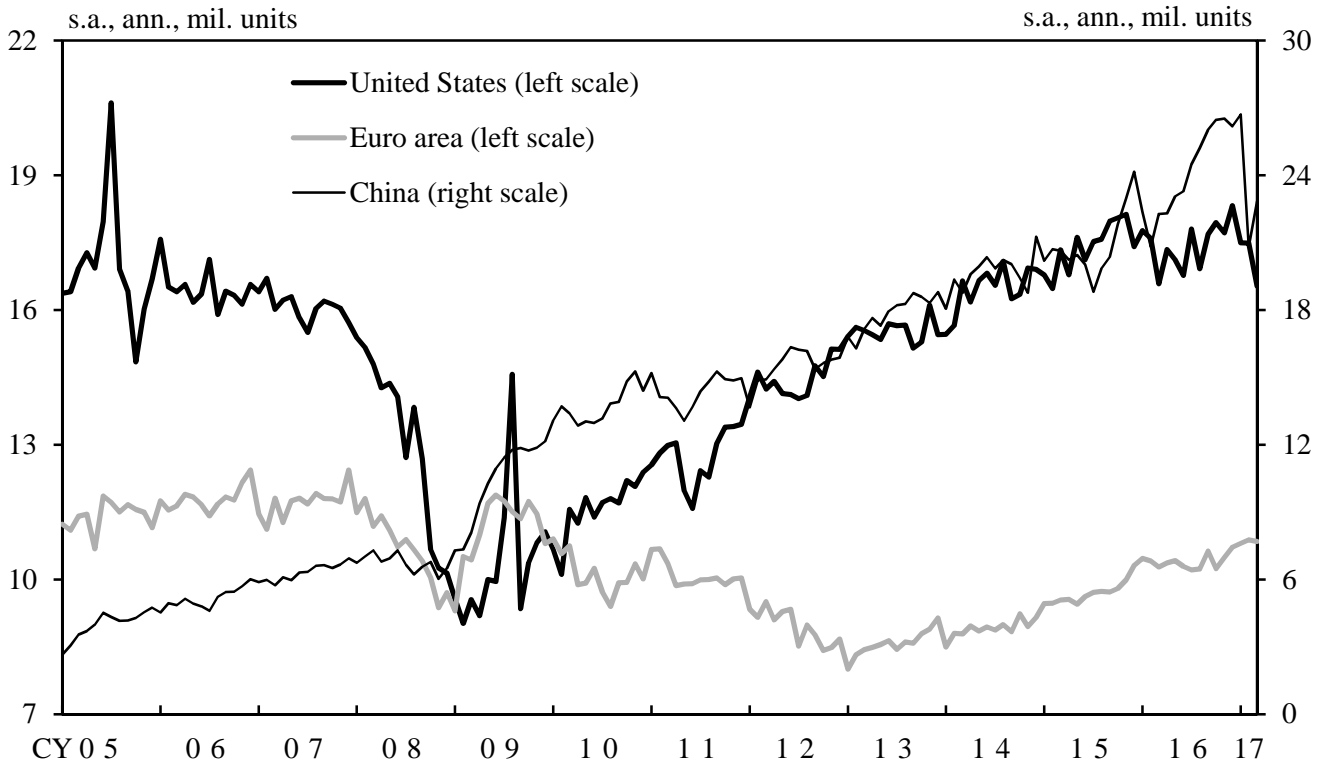
3. Motor vehicles and related goods include motor vehicles, parts of motor vehicles, and power generating machine.

4. IT-related goods include computers and units, telecommunication machinery, integrated circuits, visual apparatus, audio apparatus, and medical and optical instruments.

5. Capital goods include metalworking machinery, construction machines, electrical power machinery, semiconductor production equipment, and ships.

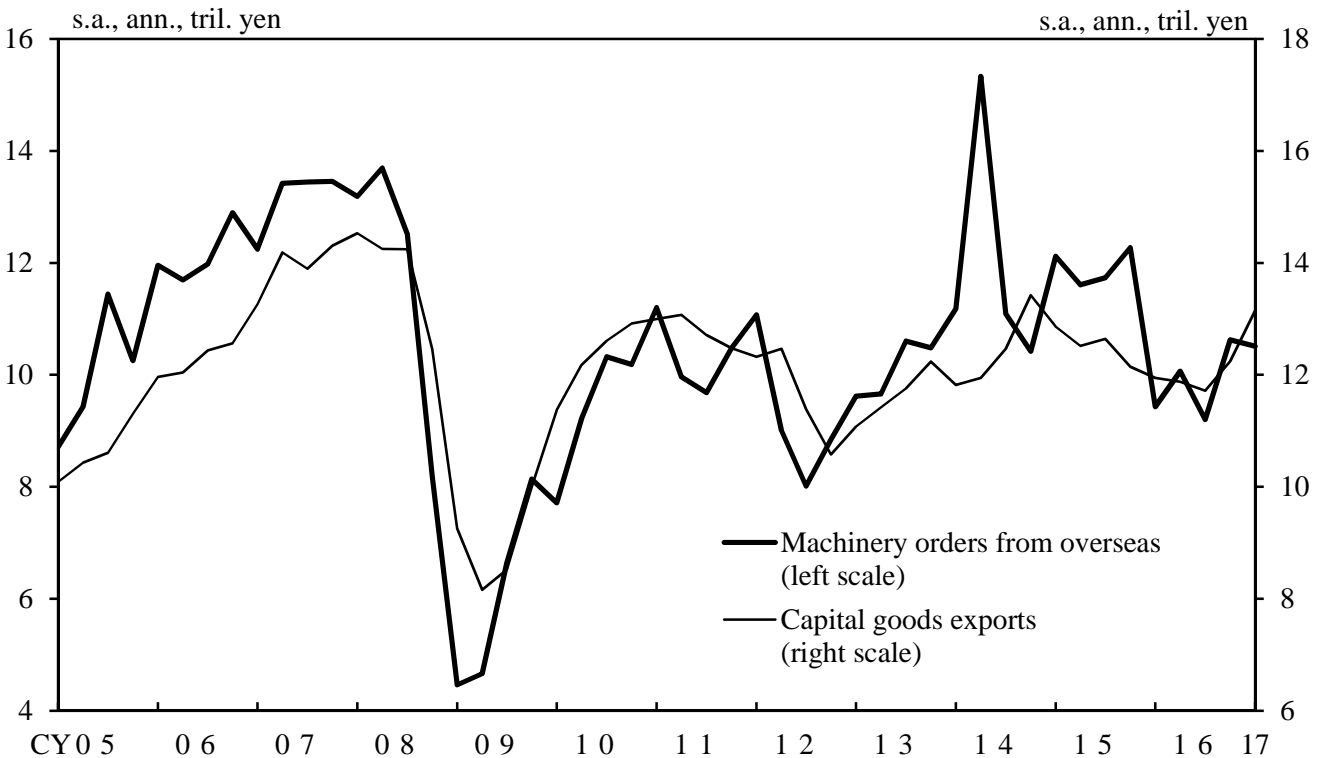
Overseas Motor Vehicle Sales and Exports of Capital Goods

(1) Motor Vehicle Sales in Major Economies



Note: Figures for the United States are based on motor vehicle sales excluding heavy trucks. Figures for the euro area are based on new passenger car registrations. Figures for China are based on passenger car sales.

(2) Machinery Orders from Overseas and Capital Goods Exports (Nominal)

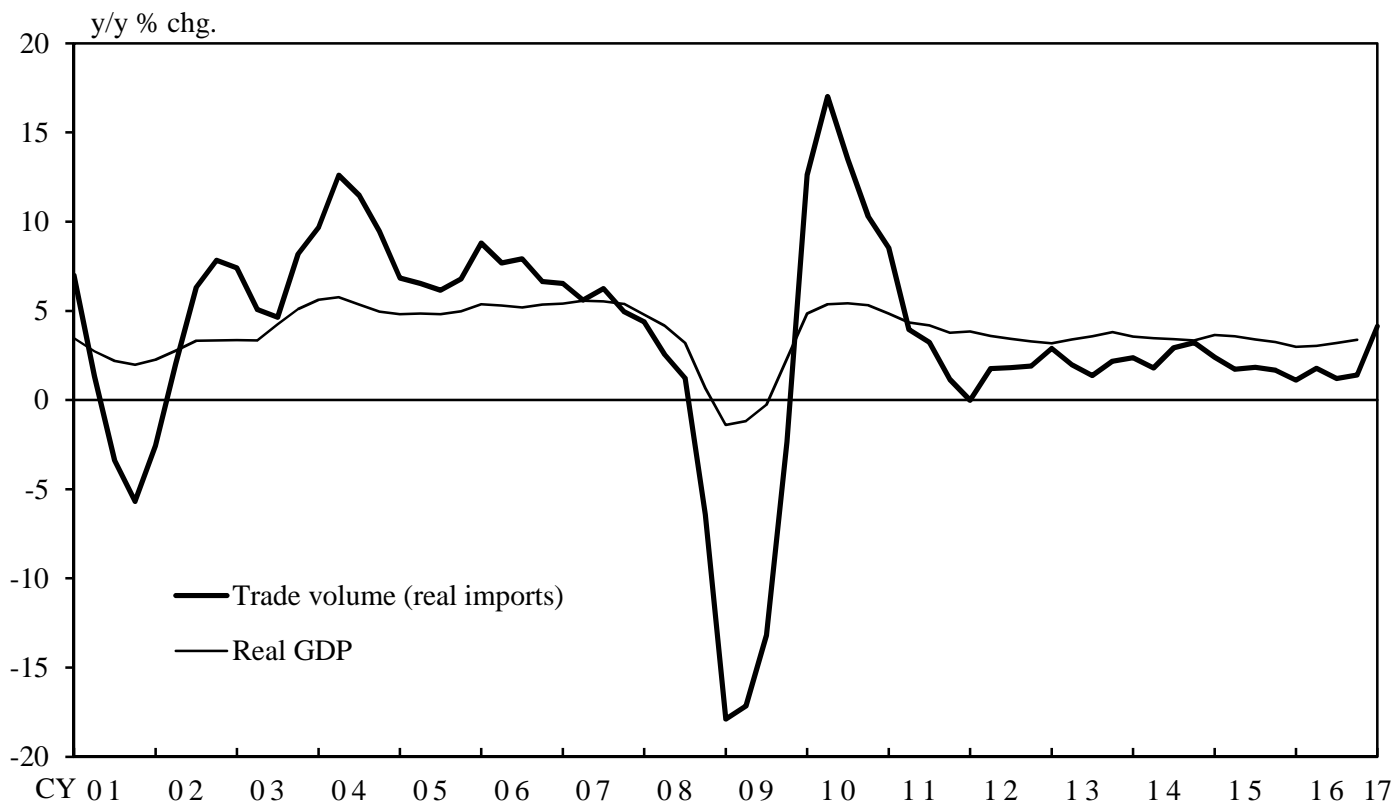


Note: The figure for machinery orders from overseas for 2017/Q1 is the January-February average.

Sources: BEA; ECB; China Association of Automobile Manufacturers; Ministry of Finance; Cabinet Office.

World Trade Volume and Japan's Share of Exports in World Trade

(1) Trade Volume and Real GDP of the World Economy



(2) Japan's Share of Exports in World Trade (Real)



Notes: 1. Figures for 2017/Q1 are January-February averages.

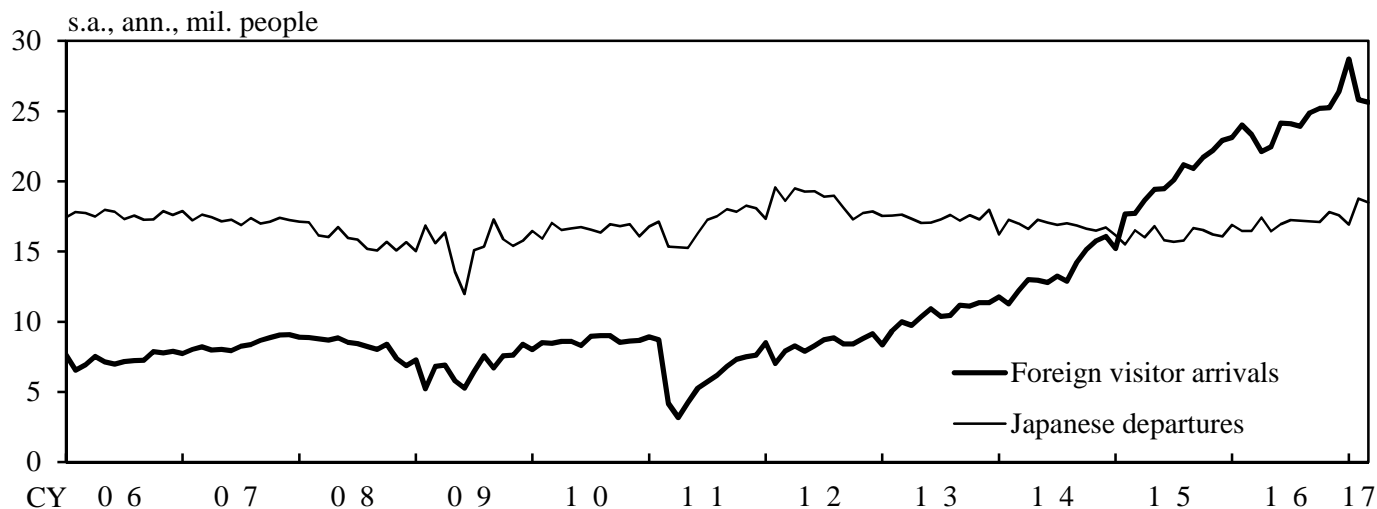
2. Real GDP for the world economy is calculated by the International Department of the Bank of Japan based on IMF data and national and regional GDP growth rates.

3. Japan's share of exports in world trade is obtained by dividing Japan's real exports by world real imports (2010 prices).

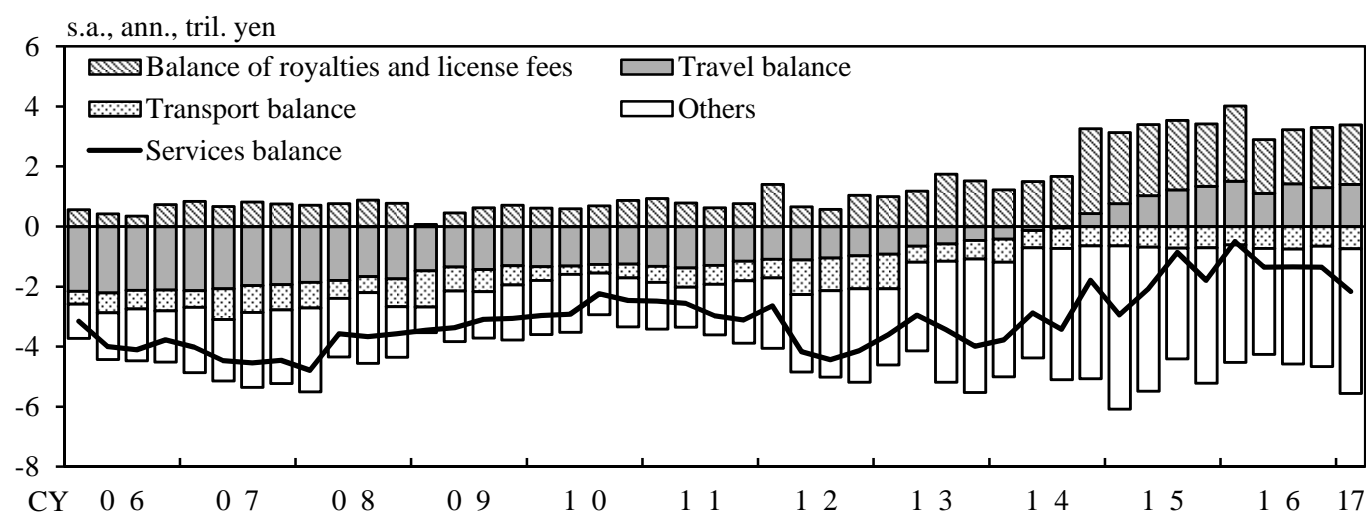
Sources: CPB Netherlands Bureau for Economic Policy Analysis; IMF, etc.

Services Balance and Current Account

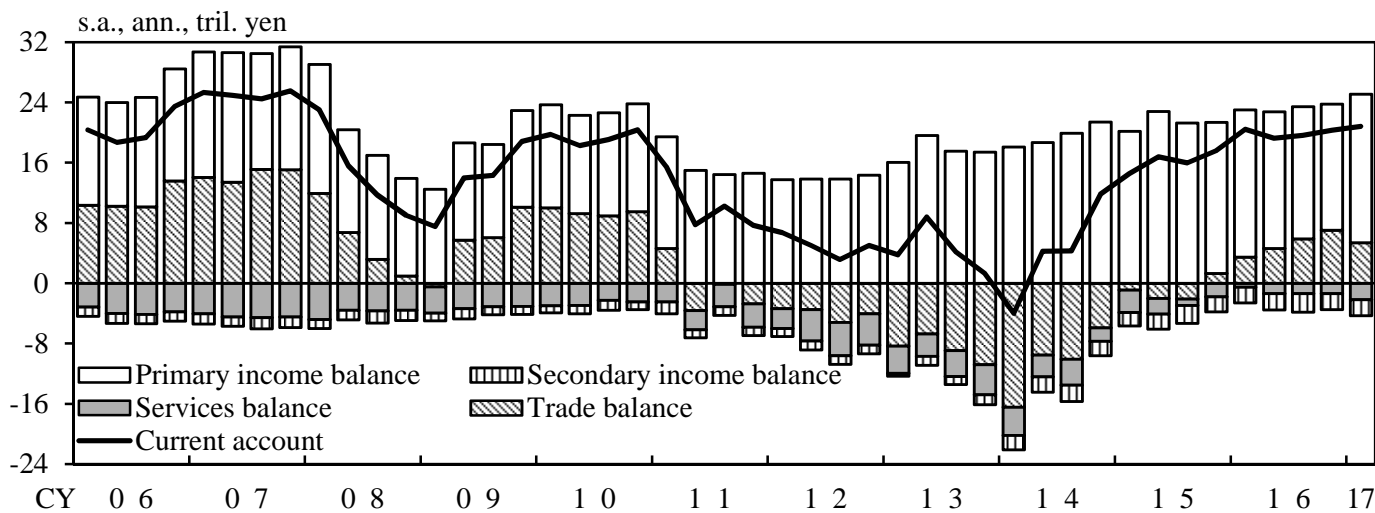
(1) Foreign Visitor Arrivals and Japanese Departures



(2) Services Balance



(3) Current Account

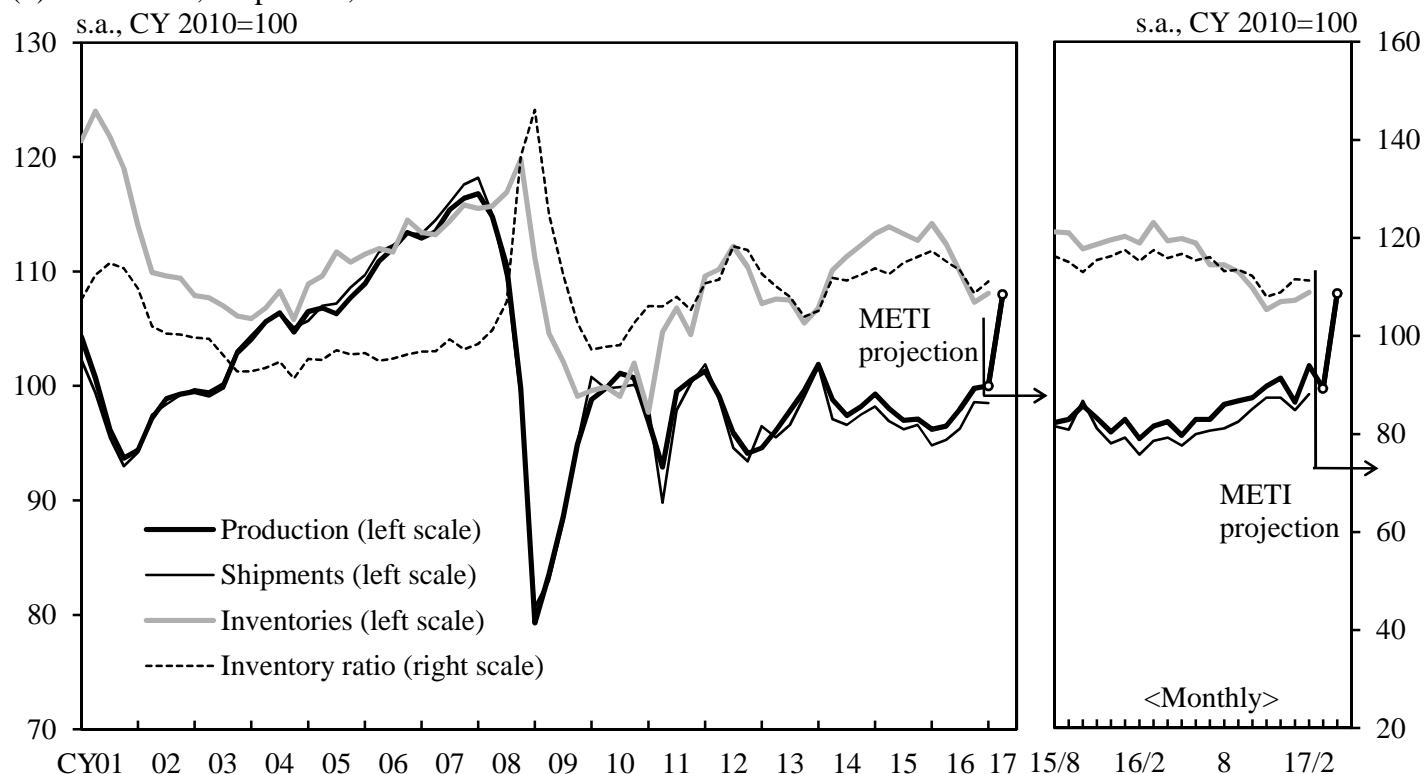


Note: Figures for 2017/Q1 are January-February averages.

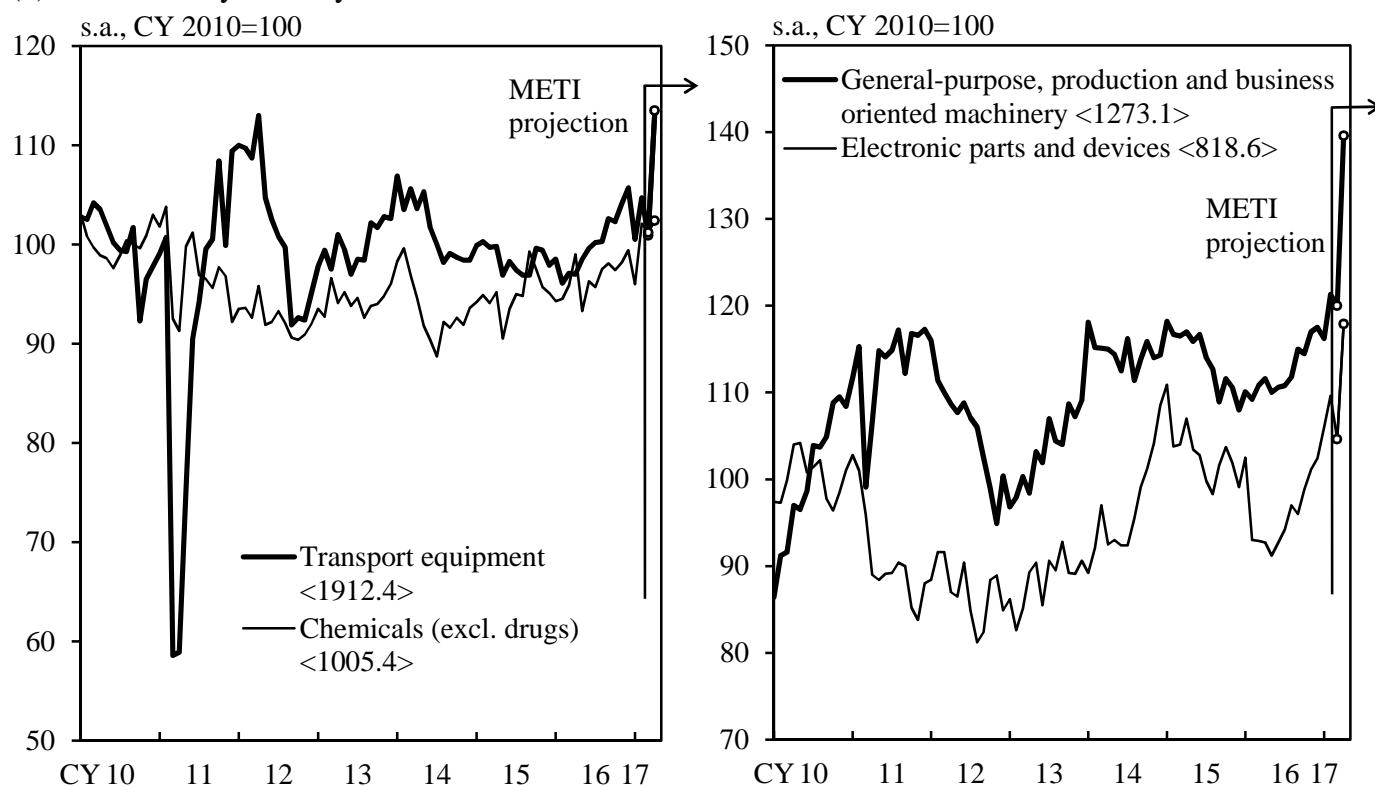
Sources: Japan National Tourism Organization (JNTO); Ministry of Finance and Bank of Japan.

Production, Shipments, and Inventories

(1) Production, Shipments, and Inventories



(2) Production by Industry



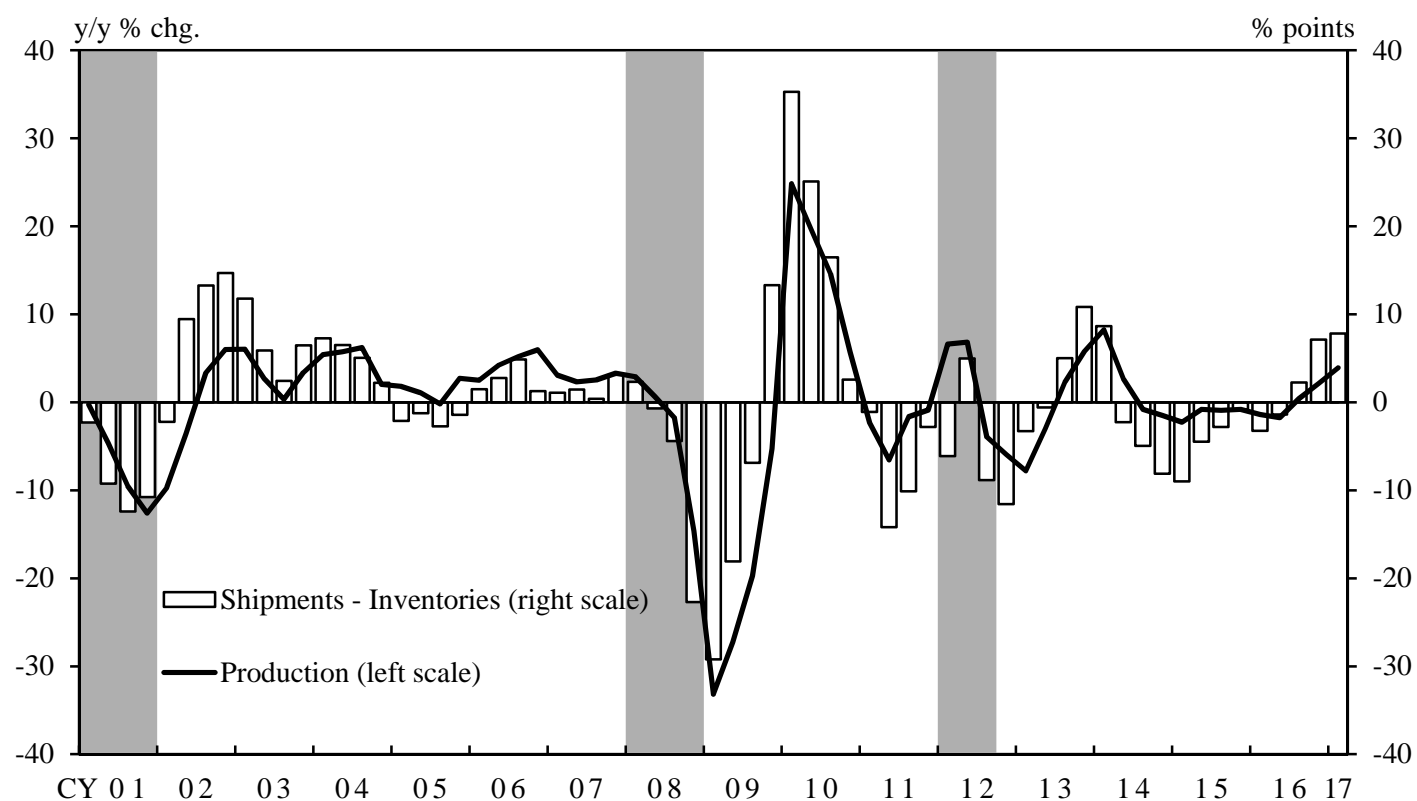
Notes: 1. Figures for the production for 2017/Q1 and 2017/Q2 and for March and April 2017 are calculated based on METI projections. The figure for 2017/Q2 is based on the assumption that production in May and June is the same as in April. The figure for the shipments for 2017/Q1 is the January-February average. Figures for the inventories and the inventory ratio for 2017/Q1 are those of February.

2. Figures in angular brackets show the value added weight in total production (=10,000).

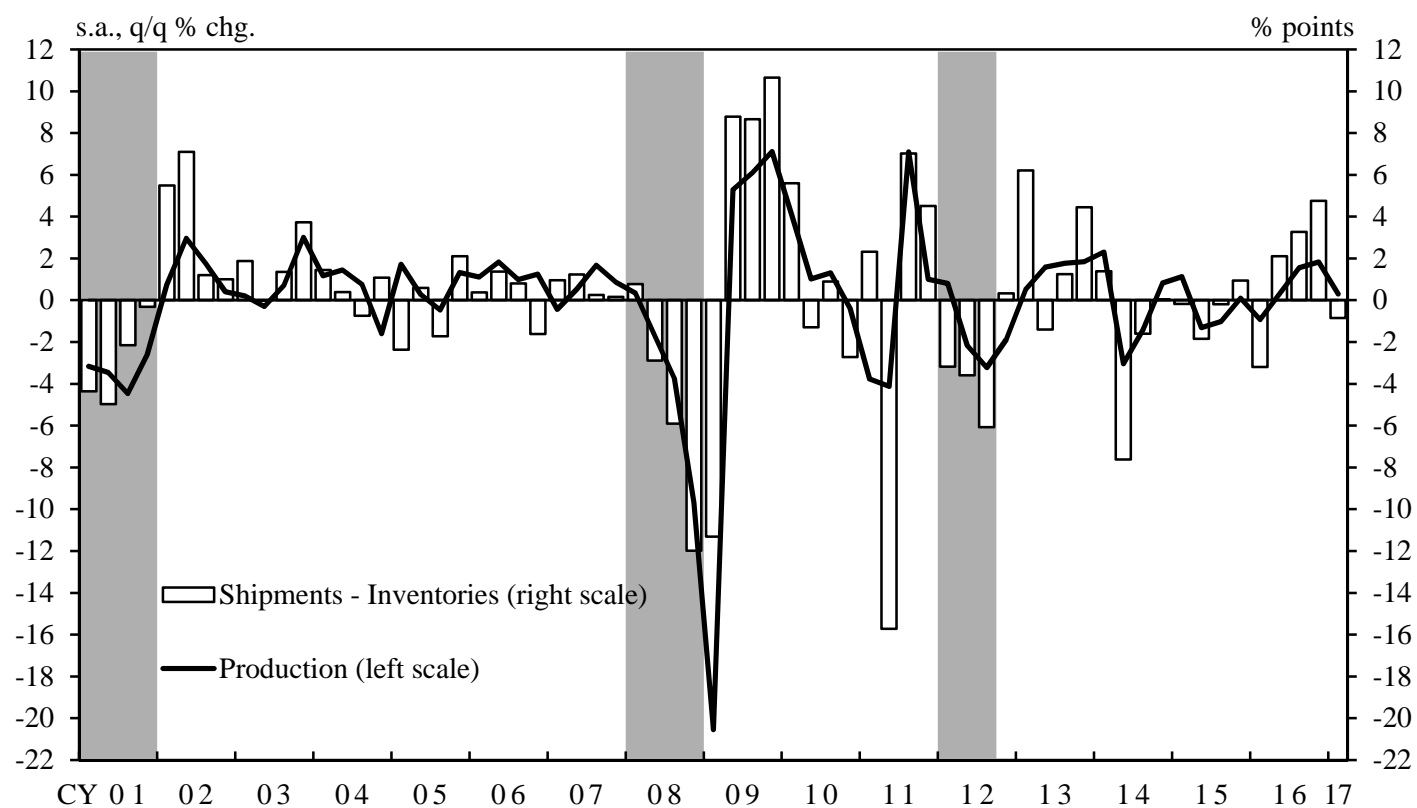
Source: Ministry of Economy, Trade and Industry (METI).

Shipment-Inventory Balance

(1) Changes from the Previous Year



(2) Changes from the Previous Quarter



Notes: 1. Shaded areas indicate recession periods.

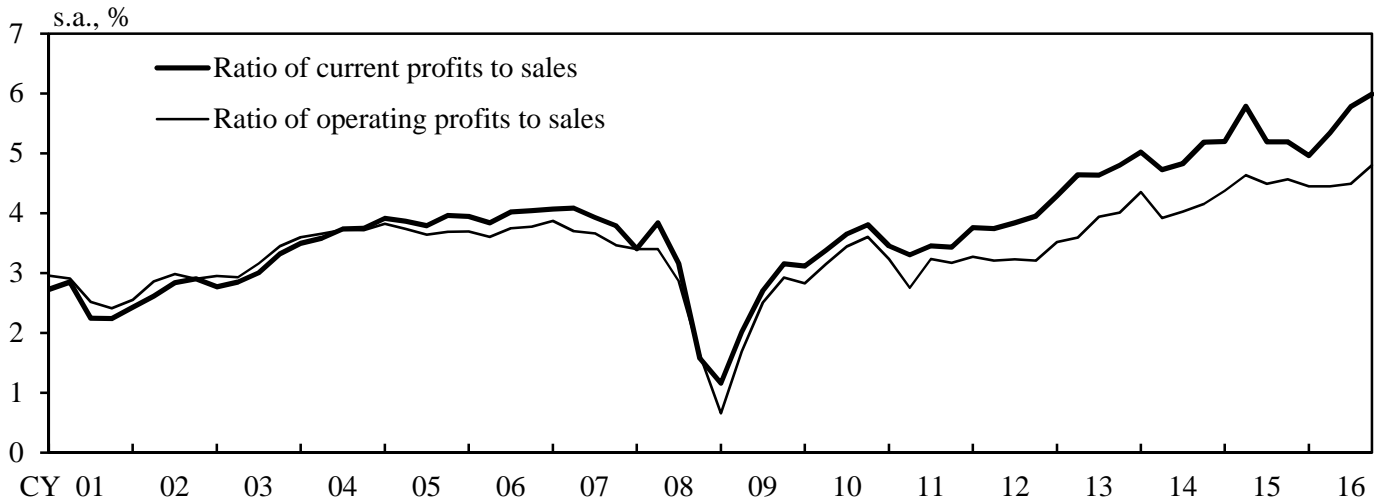
2. Figures for the production and the shipments for 2017/Q1 are January-February averages.

Figures for the inventories for 2017/Q1 are those of February.

Source: Ministry of Economy, Trade and Industry.

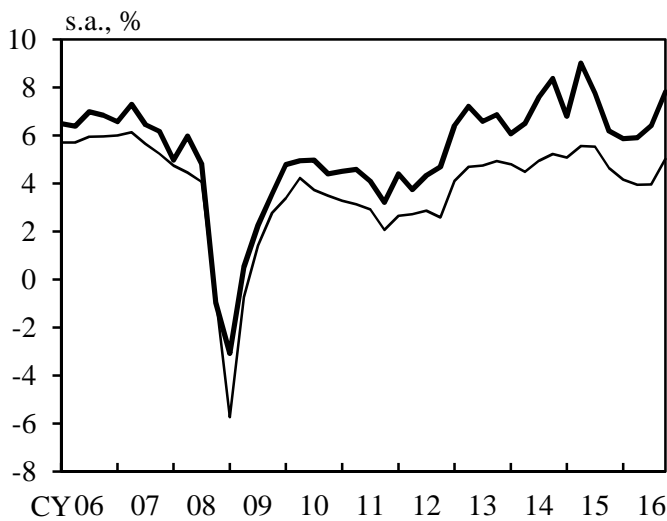
Corporate Profits, by Industry and Enterprise Size

(1) All Industries and Enterprises

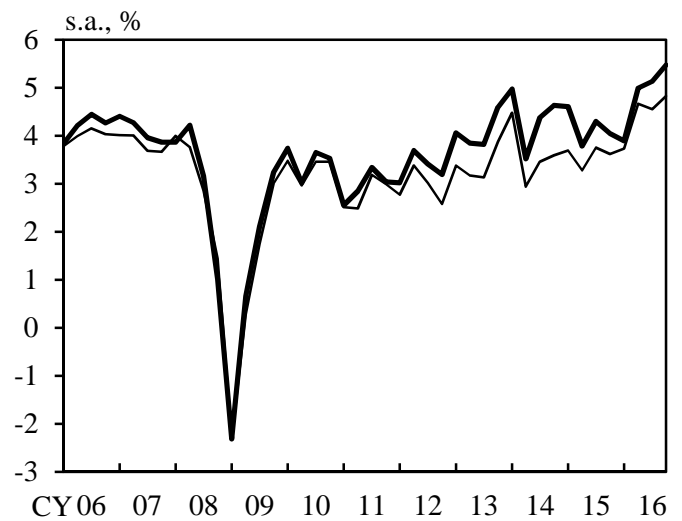


(2) Manufacturing

(a) Large Enterprises

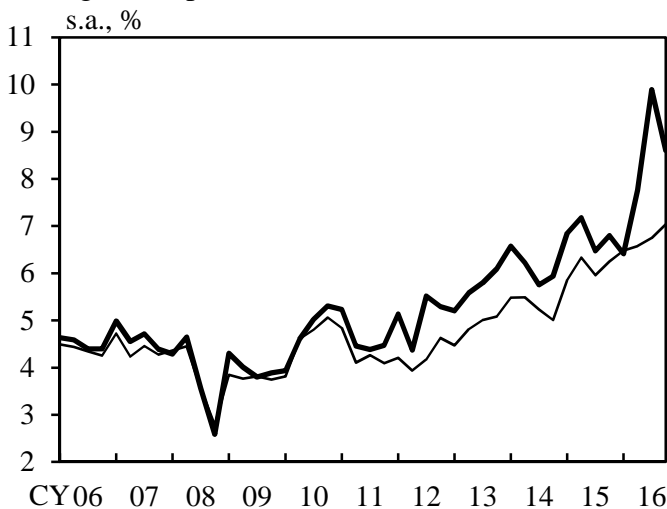


(b) Small and Medium-Sized Enterprises

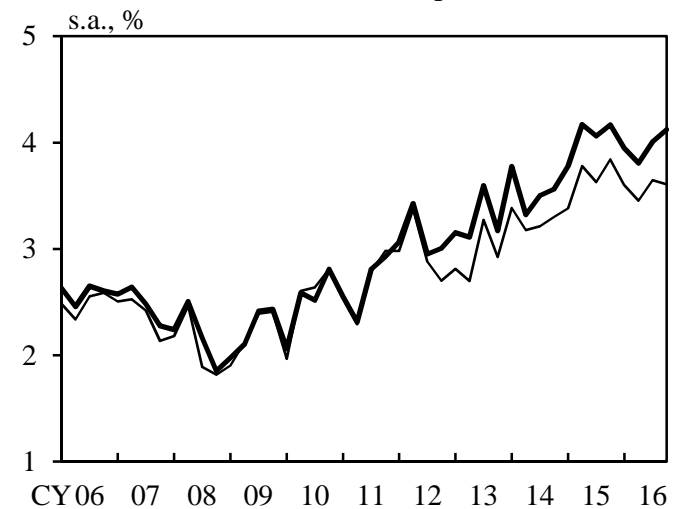


(3) Nonmanufacturing

(a) Large Enterprises



(b) Small and Medium-Sized Enterprises



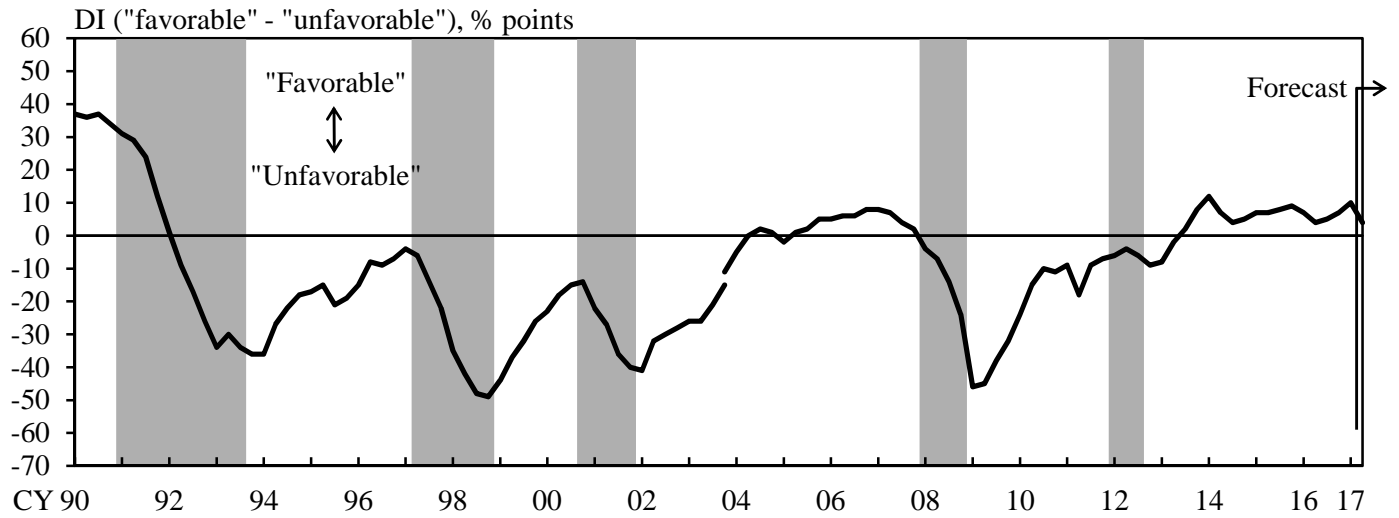
Note: Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly."

Excluding "Finance and Insurance."

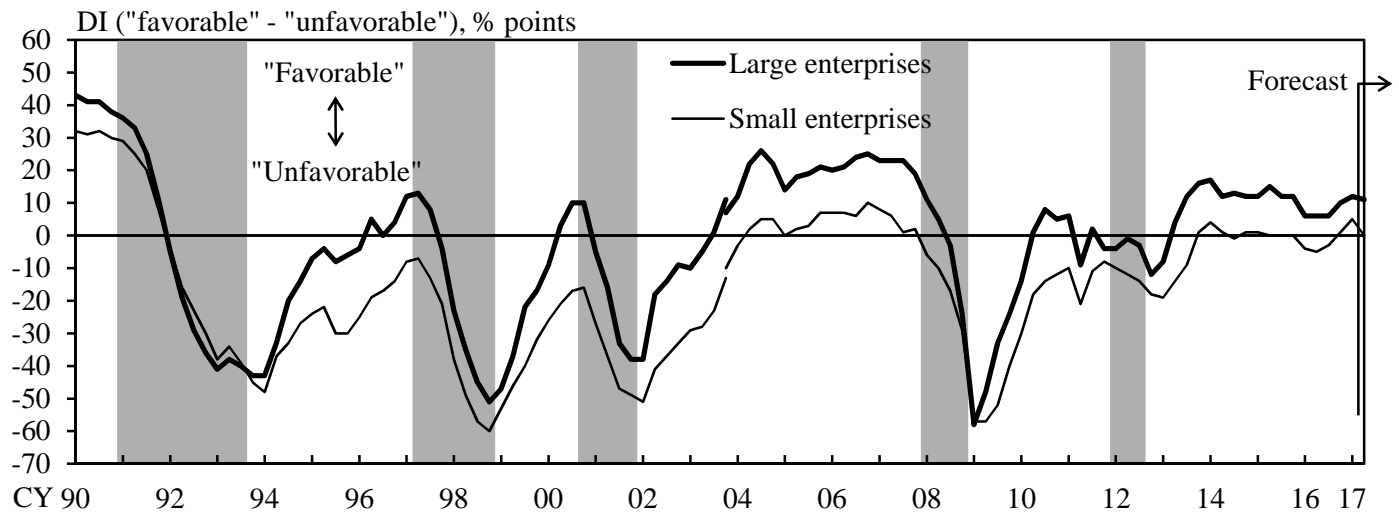
Source: Ministry of Finance.

Business Conditions

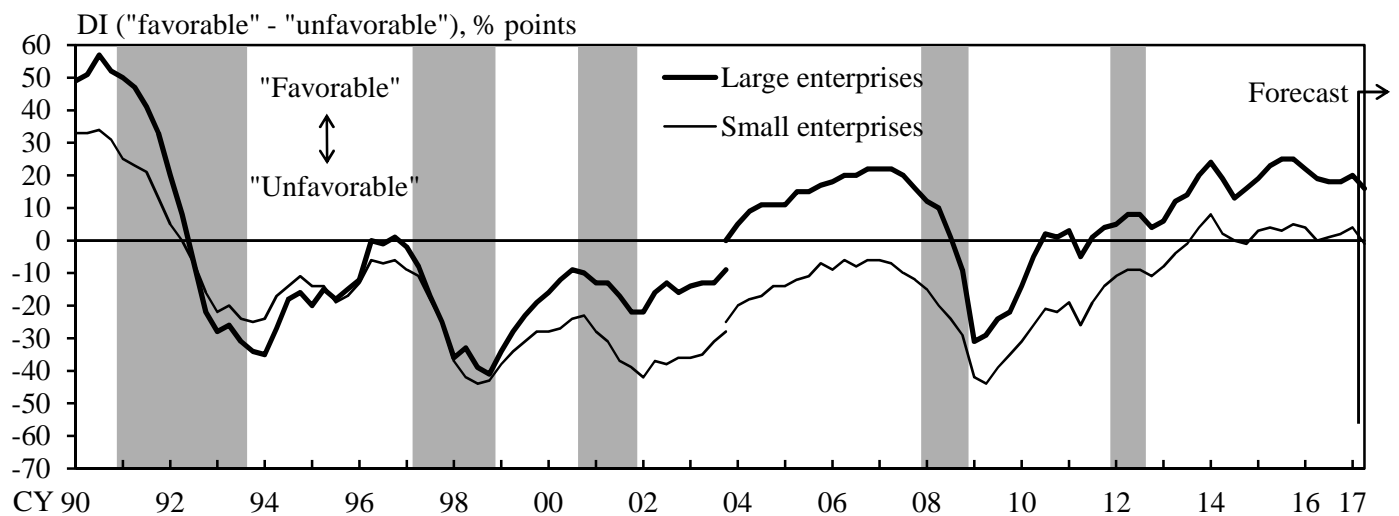
(1) All Industries and Enterprises



(2) Manufacturing



(3) Nonmanufacturing



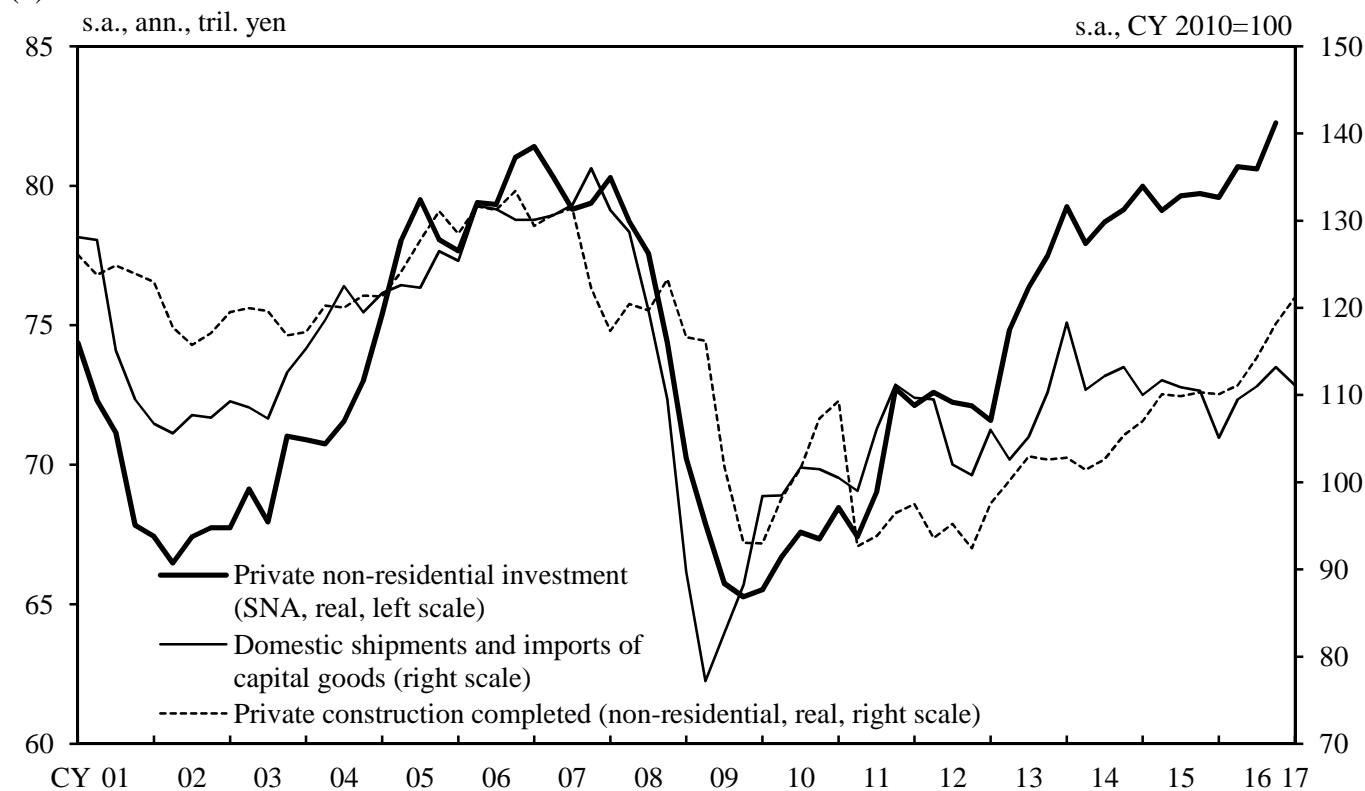
Notes: 1. Based on the *Tankan*. Shaded areas indicate recession periods.

2. There is a discontinuity in the data in December 2003 due to a change in the survey framework.

Source: Bank of Japan.

Coincident Indicators of Business Fixed Investment

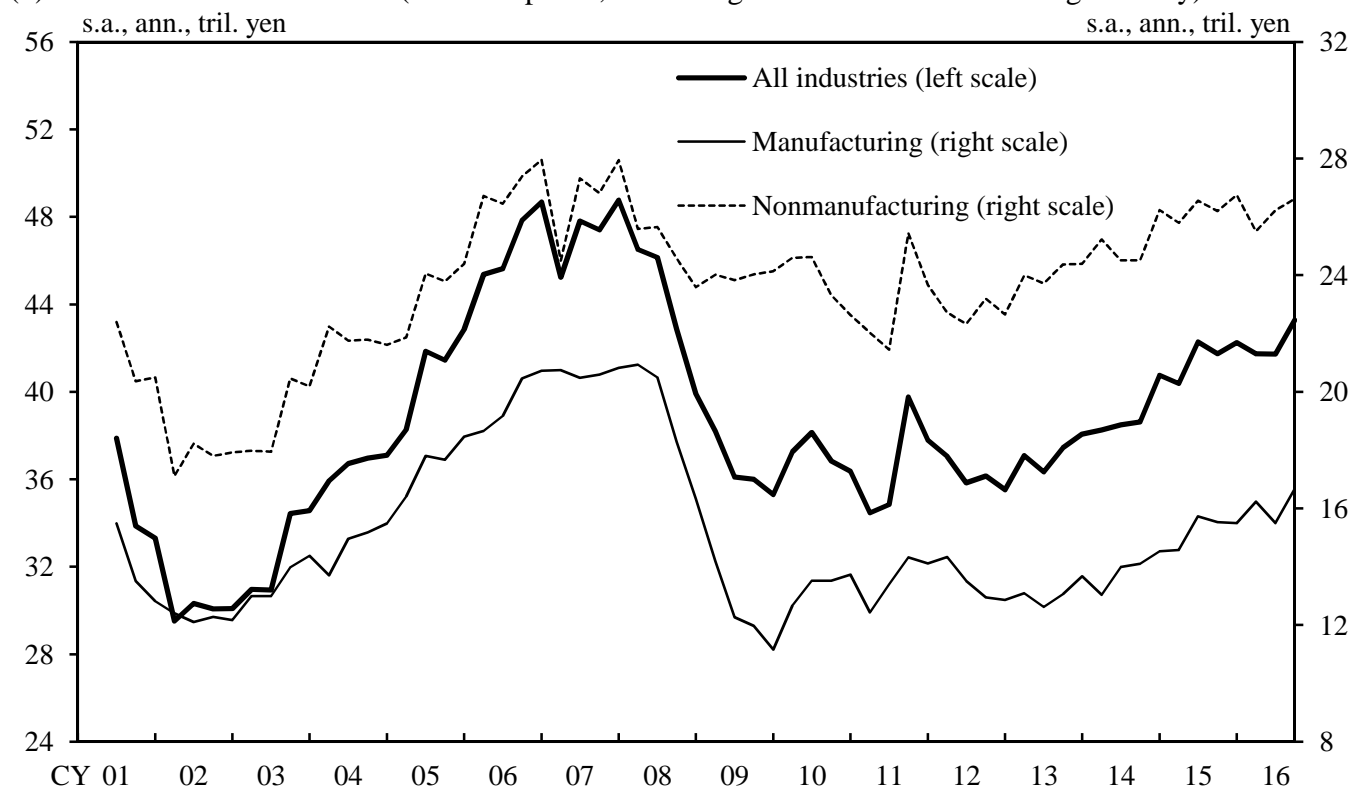
(1) Private Non-Residential Investment



Notes: 1. Real private construction completed is obtained by deflating the nominal amount by the Construction Cost Deflator.

2. Figures for 2017/Q1 are January-February averages.

(2) Business Fixed Investment (All Enterprises, Excluding Goods Rental and Leasing Industry)



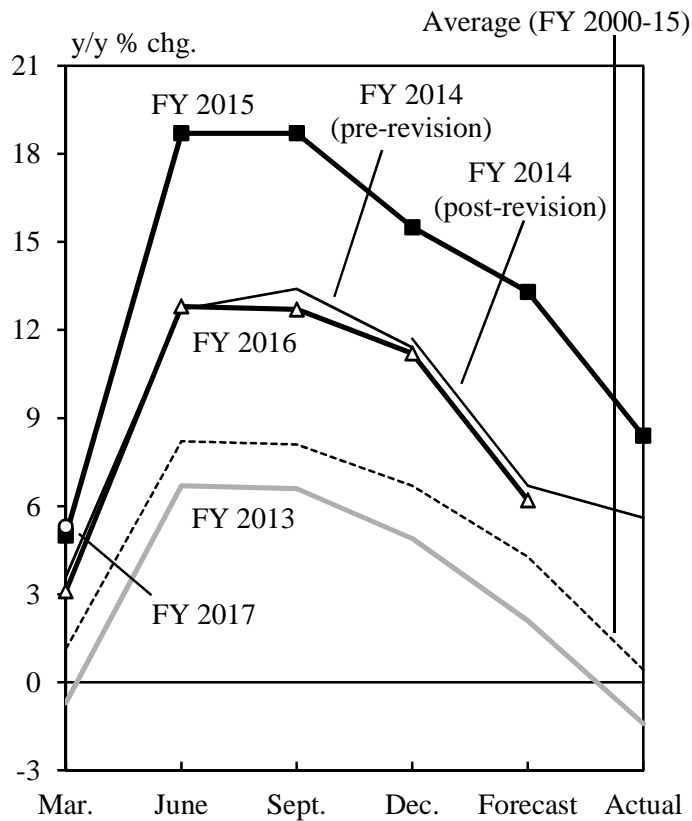
Note: Based on the "Financial Statements Statistics of Corporations by Industry, Quarterly."

Excluding "Finance and Insurance" and "Goods Rental and Leasing," and including software investment.

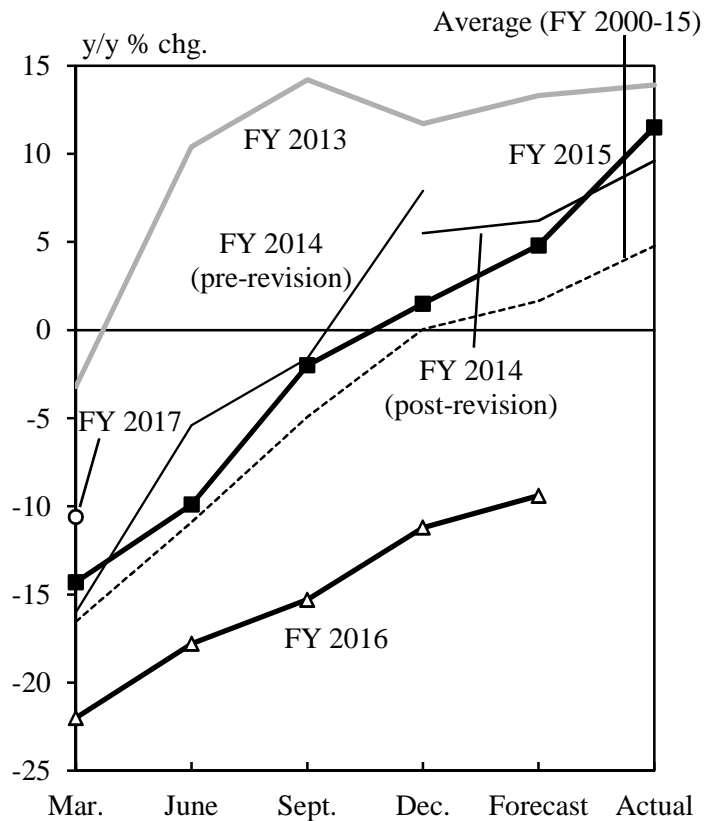
Sources: Cabinet Office; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism; Ministry of Finance.

Business Fixed Investment Plans, by Industry and Enterprise Size

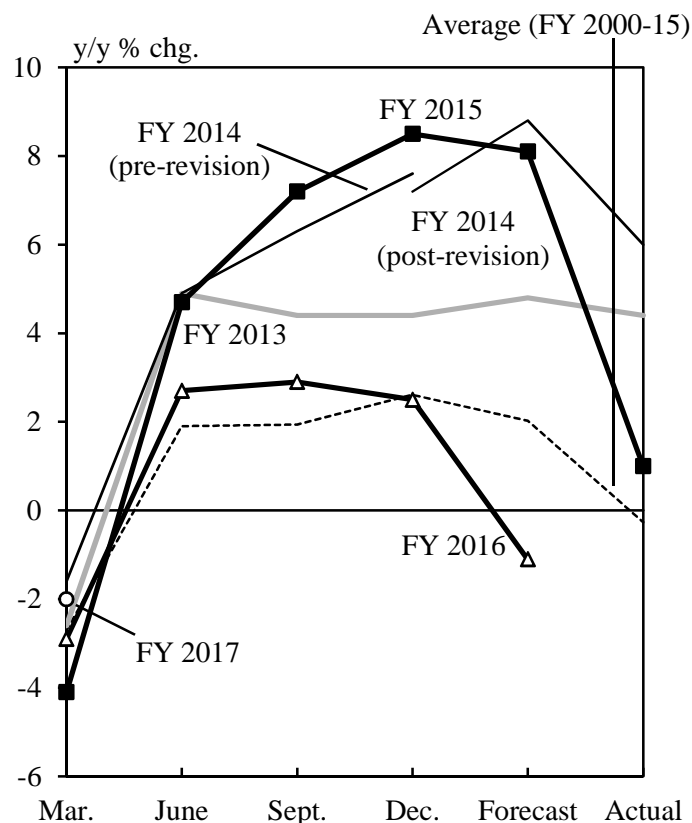
(1) Large Manufacturing Enterprises



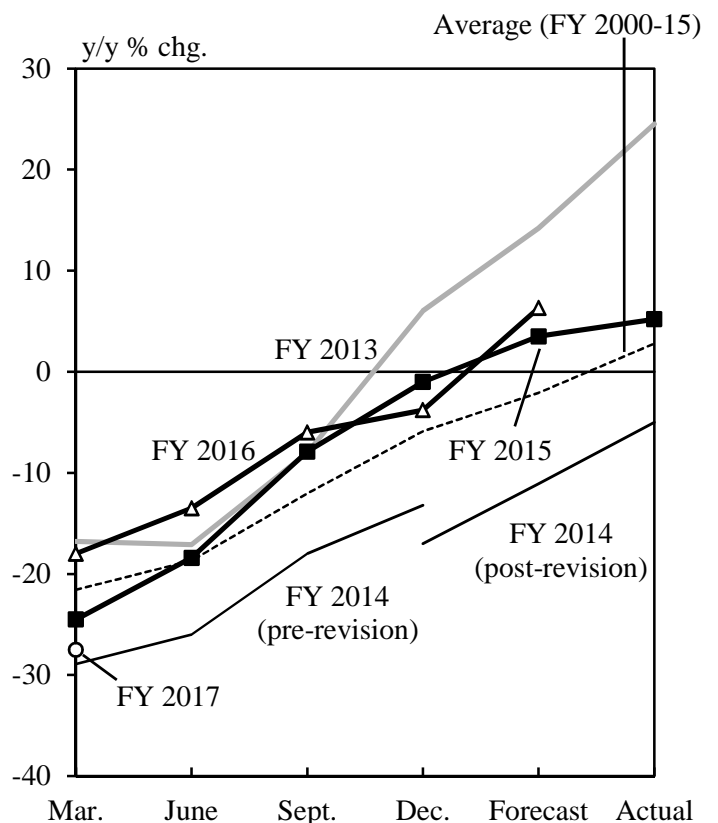
(2) Small Manufacturing Enterprises



(3) Large Nonmanufacturing Enterprises



(4) Small Nonmanufacturing Enterprises



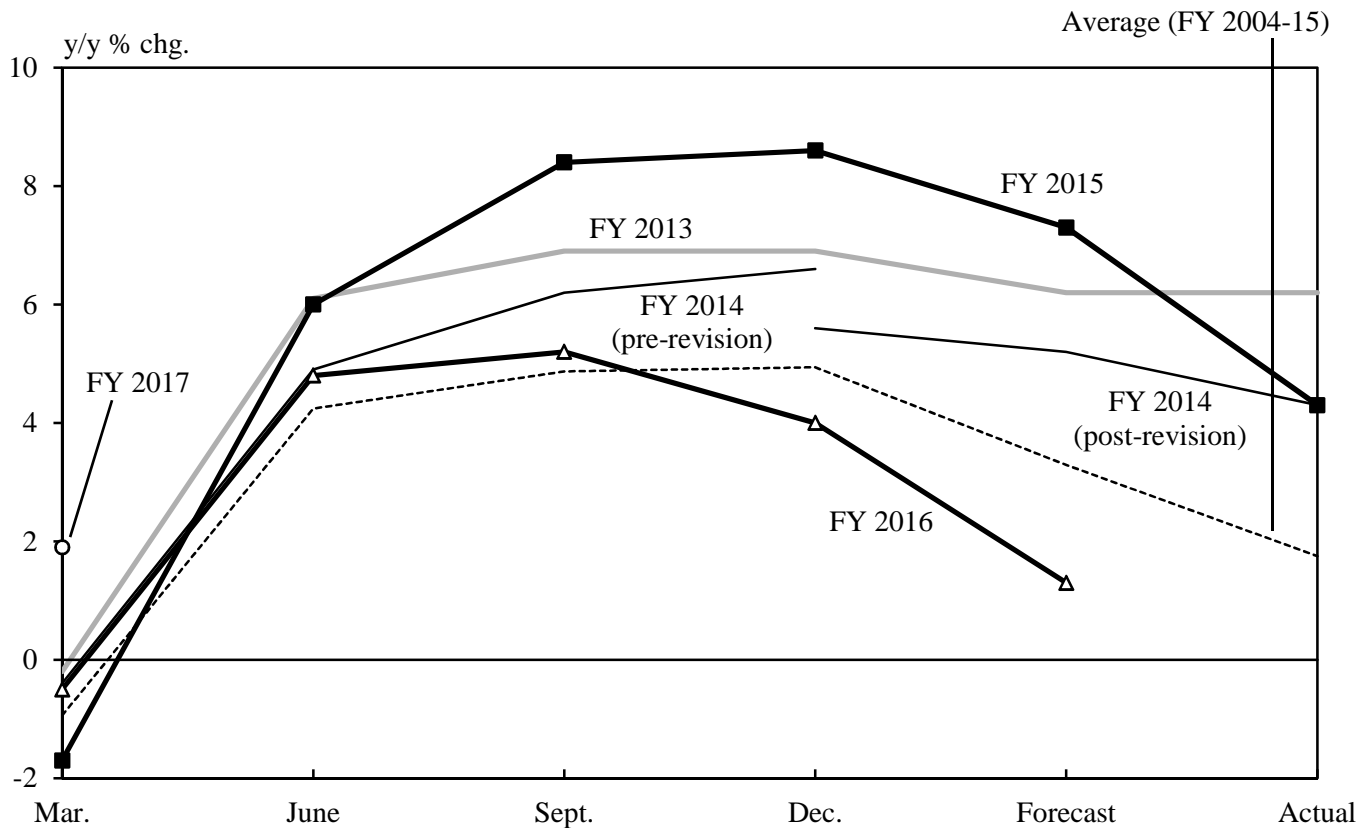
Notes: 1. Based on the *Tankan*. Figures include land purchasing expenses and exclude software and R&D investment.

2. There is a discontinuity in the data in December 2014 due to a change in the survey sample.

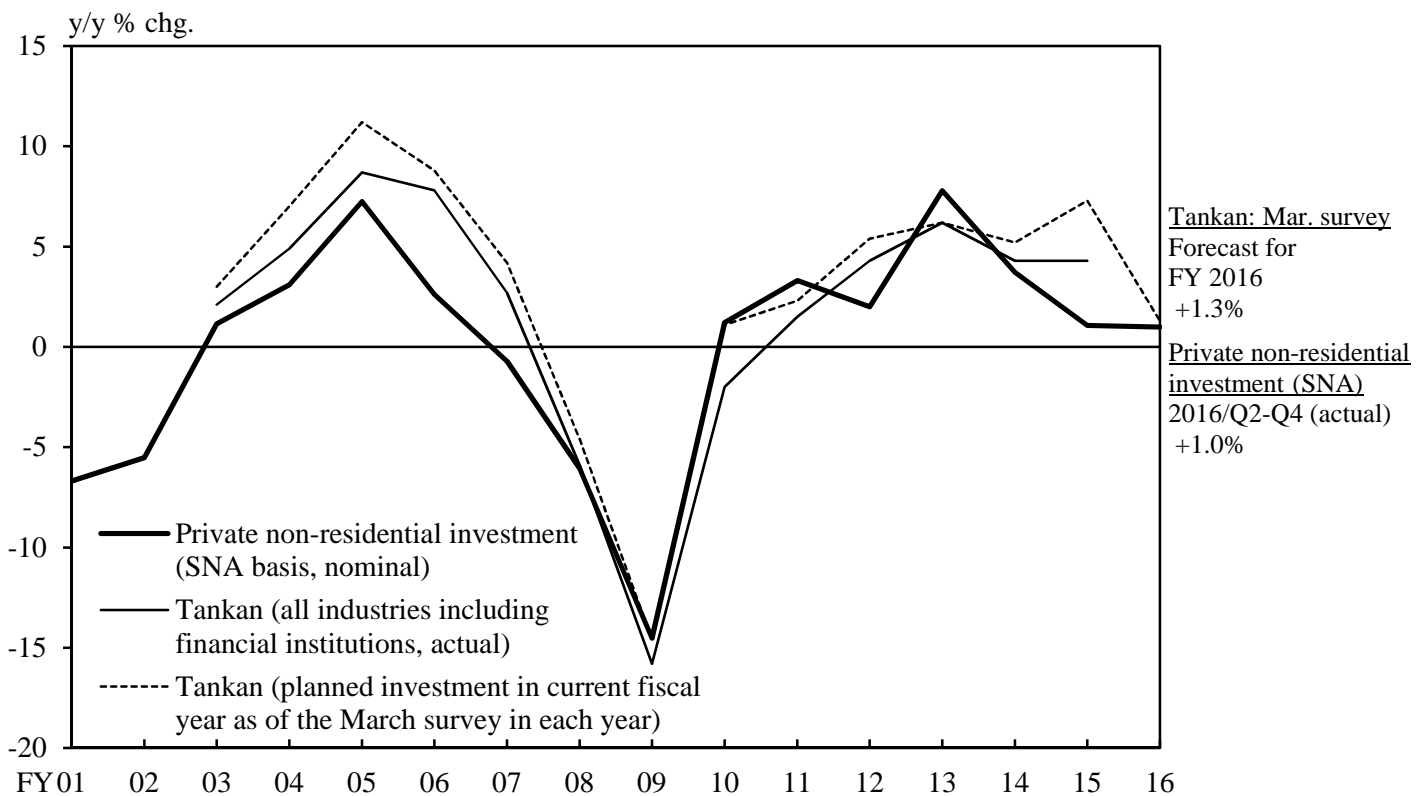
Source: Bank of Japan.

Business Fixed Investment Plans (All Industries and Enterprises)

(1) Developments in Business Fixed Investment Plans (*Tankan*, All Industries incl. Financial Institutions)



(2) Planned and Actual Business Fixed Investment

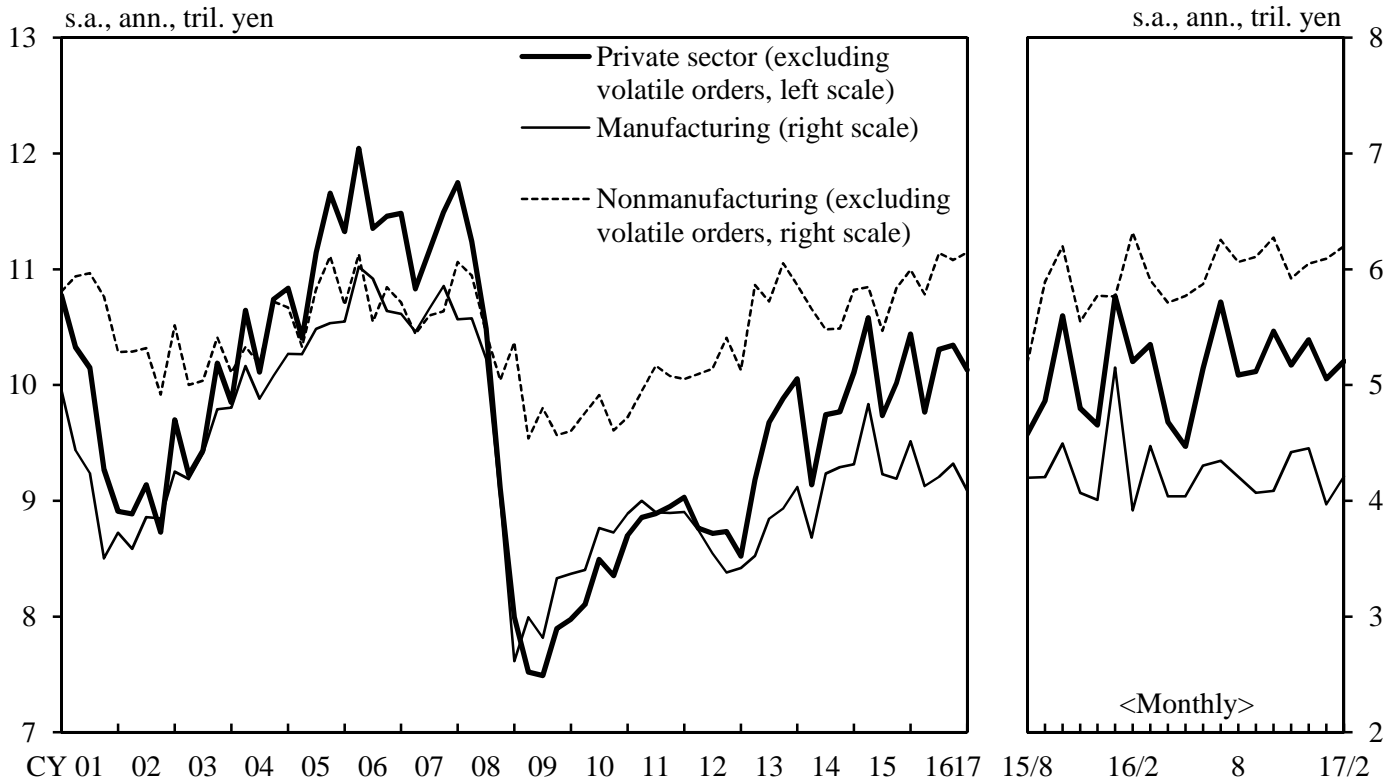


Note: Figures for the *Tankan* include software and R&D investment and exclude land purchasing expenses (R&D investment is not included until the December 2016 survey). In (1), there is a discontinuity in the data in December 2014 due to a change in the survey sample.

Sources: Bank of Japan; Cabinet Office.

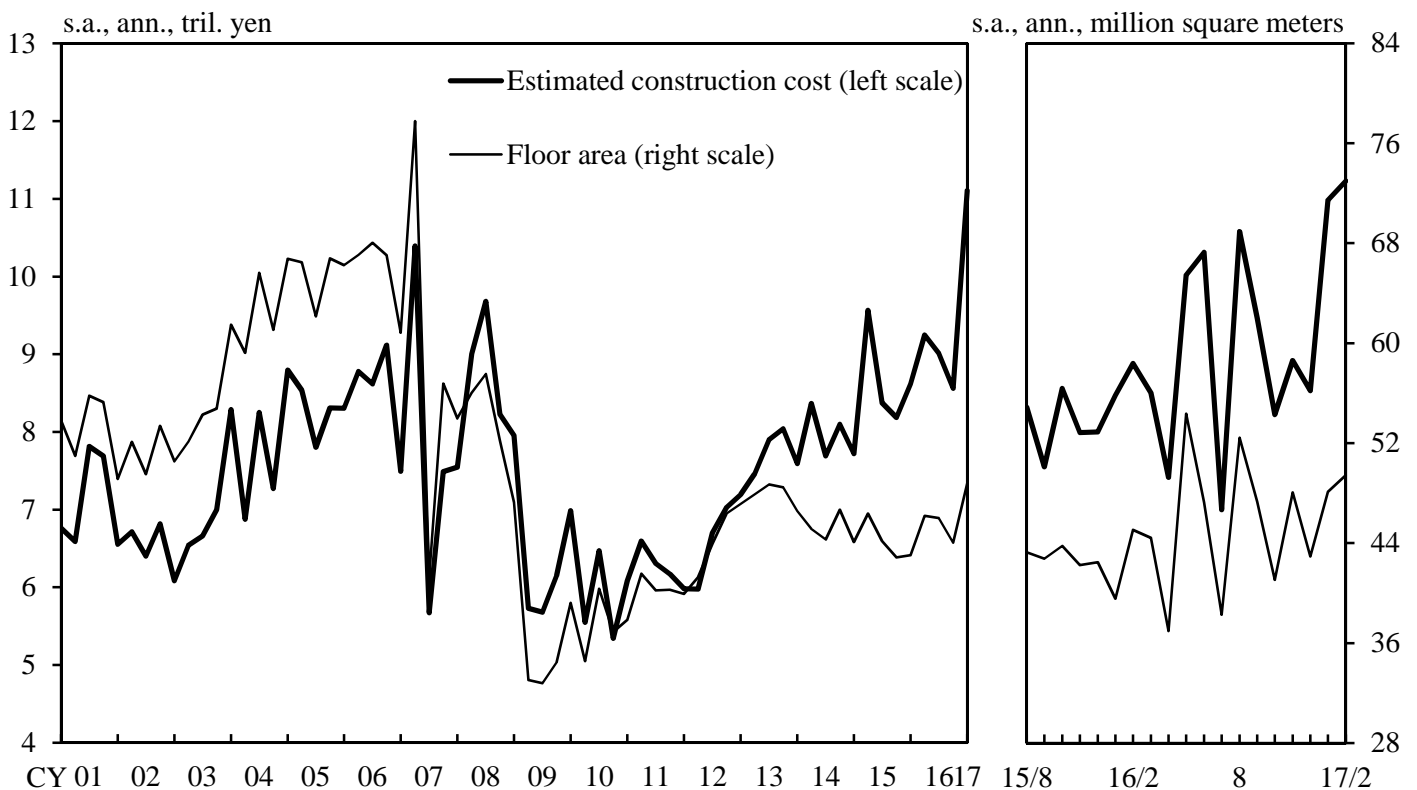
Leading Indicators of Business Fixed Investment

(1) Machinery Orders



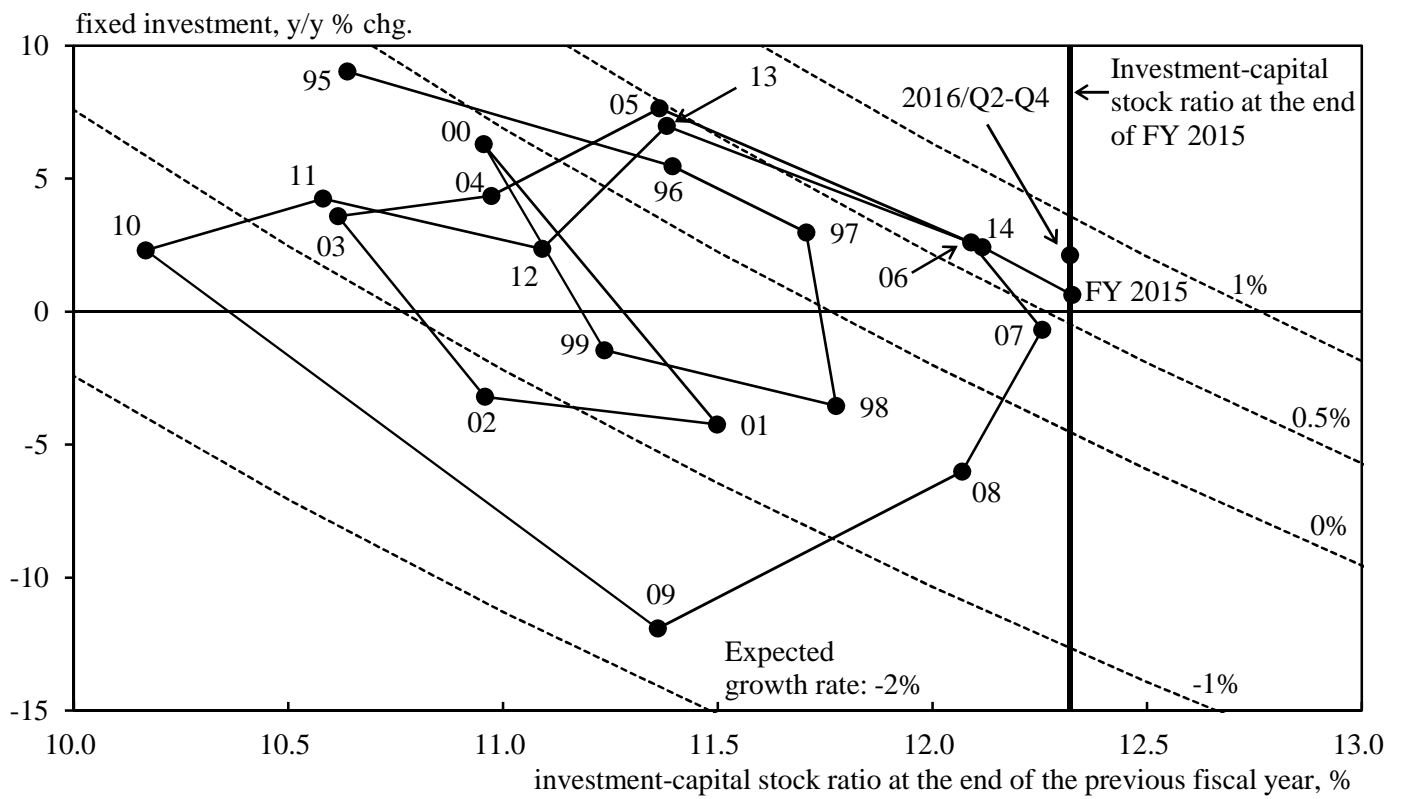
Notes: 1. Volatile orders: orders for ships and orders from electric power companies.
 2. Figures for 2017/Q1 are January-February averages. The same applies to the chart below.

(2) Construction Starts (Private, Nondwelling Use)



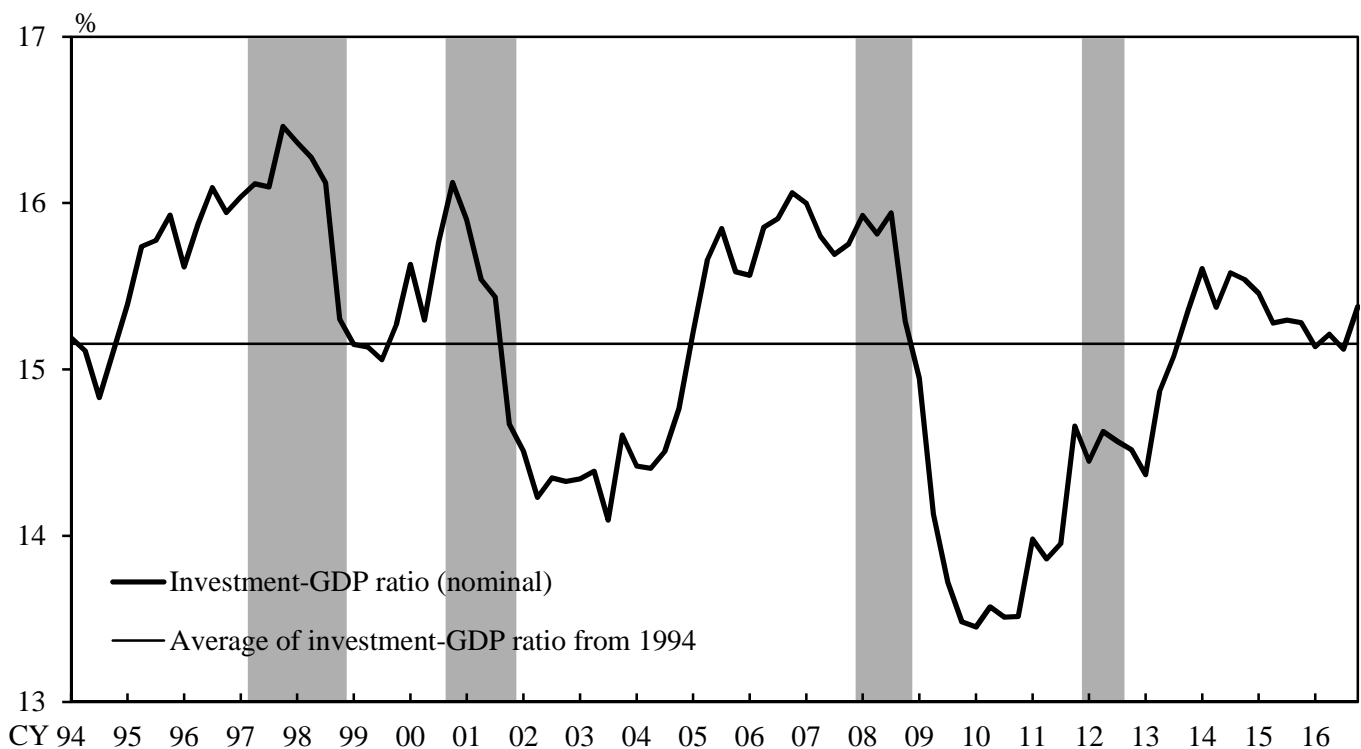
Capital Stock Cycles and Investment-GDP Ratio

(1) Capital Stock Cycles



Note: Each broken line represents the combination of the rate of change in fixed investment and the investment-capital stock ratio at a certain expected growth rate. For details, see "The Recent Increase in Business Fixed Investment in the Manufacturing Sector," Bank of Japan Review Series, 2006-J-17 (available in Japanese only).

(2) Investment-GDP Ratio

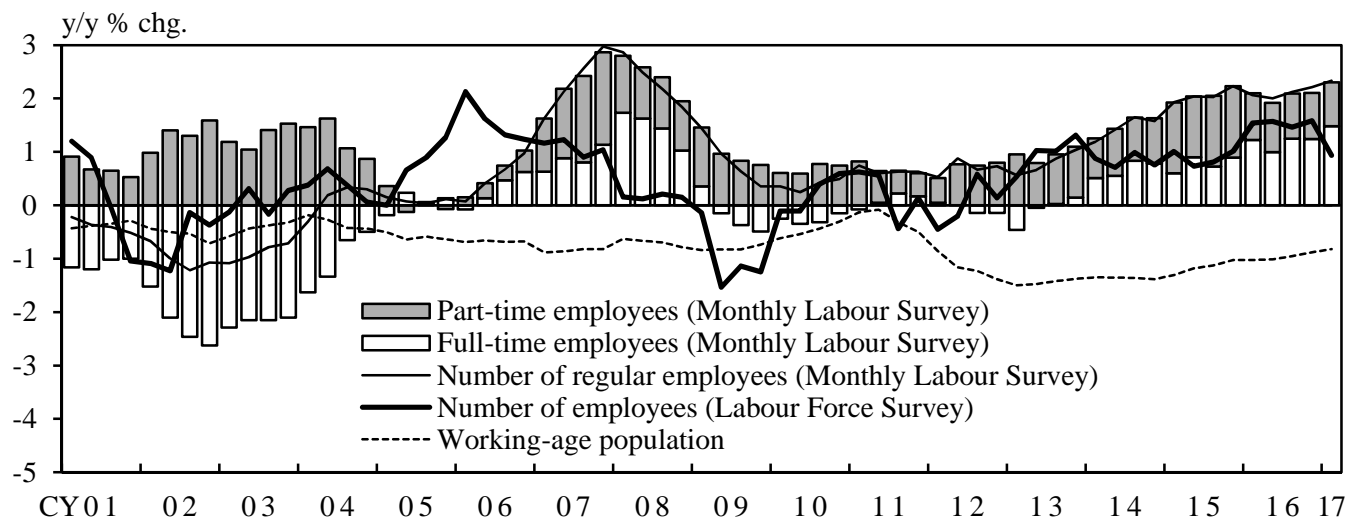


Note: Shaded areas indicate recession periods.

Source: Cabinet Office.

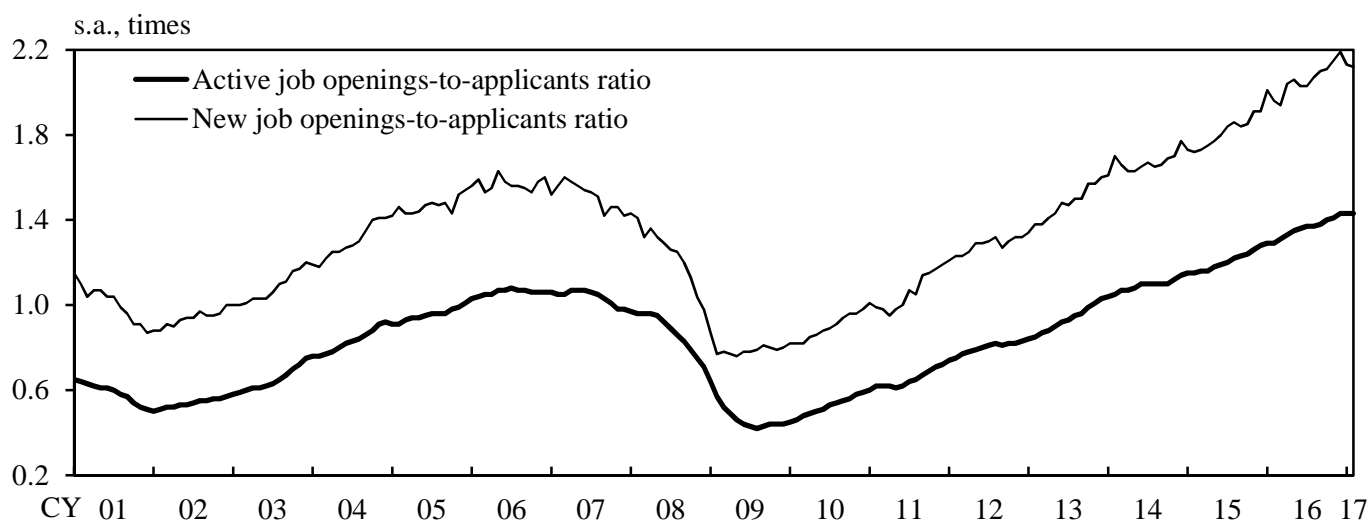
Employment and Labor Market Conditions

(1) Number of Employees

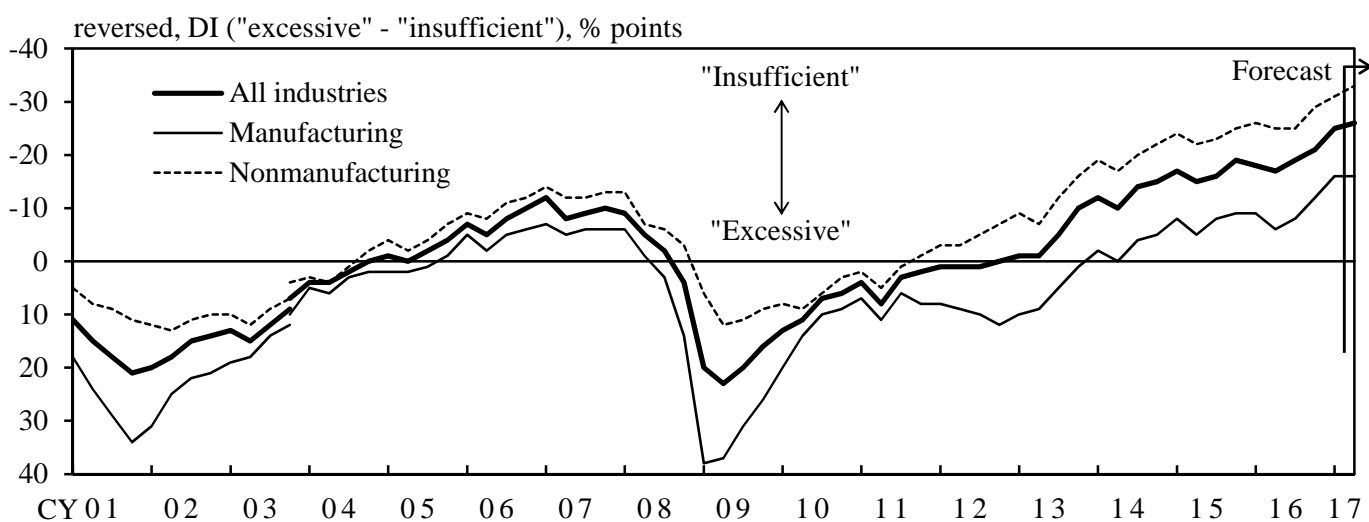


Note: Figures for 2017/Q1 are January-February averages.

(2) Job Openings-to-Applicants Ratio



(3) Employment Conditions DI (*Tankan*, Enterprises of All Sizes)

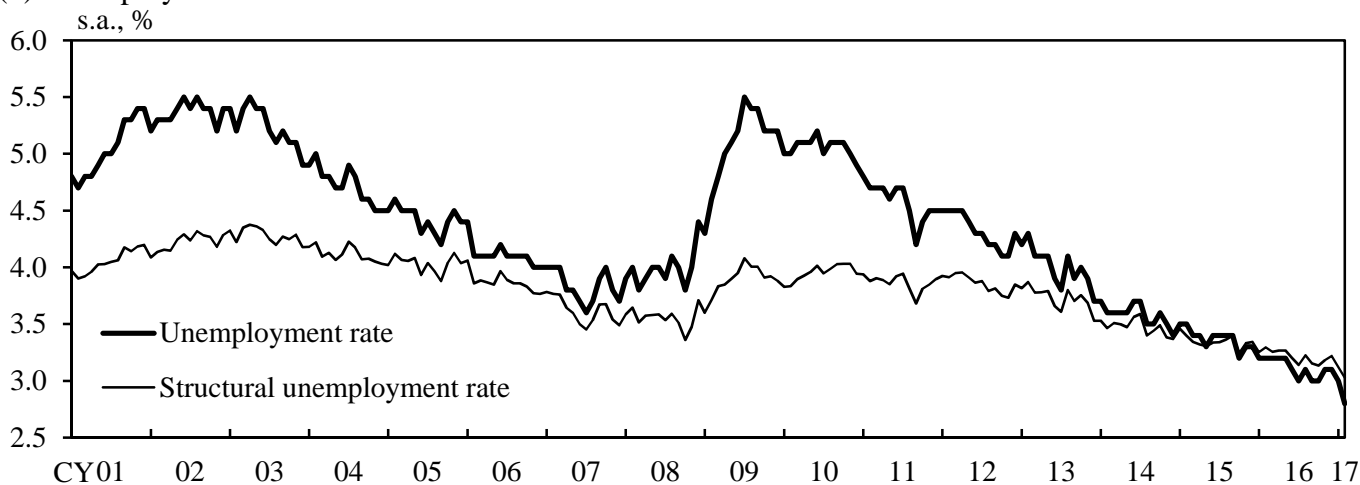


Note: There is a discontinuity in the data in December 2003 due to a change in the survey framework.

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

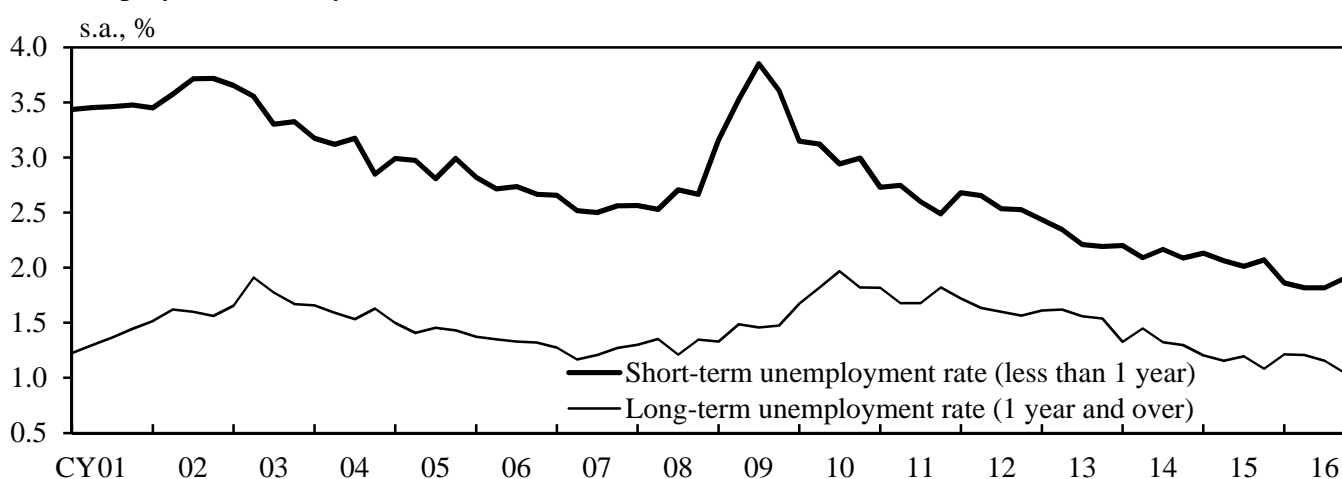
Unemployment Rate and Labor Force Participation Rate

(1) Unemployment Rate



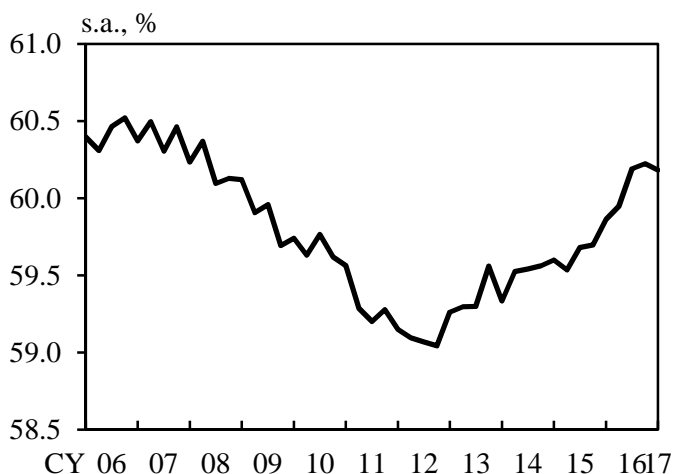
Note: The structural unemployment rate is estimated by the Research and Statistics Department, Bank of Japan.

(2) Unemployment Rate by Duration

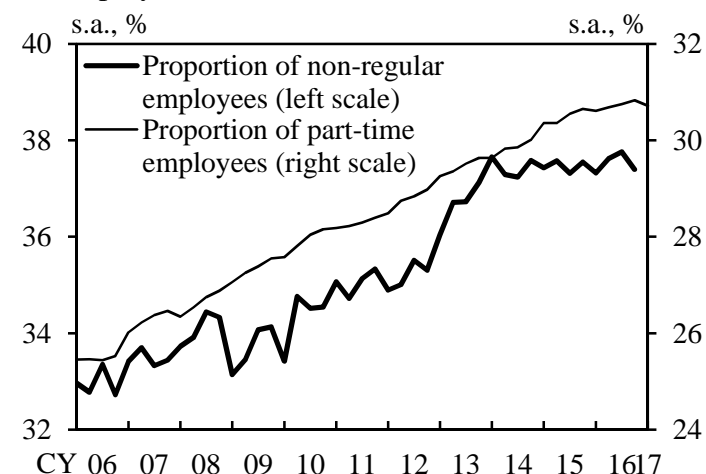


Note: Figures for unemployed persons by duration up through CY 2001 are not seasonally adjusted, since they are on a semiannual basis.

(3) Labor Force Participation Rate



(4) Proportion of Non-Regular and Part-Time Employees

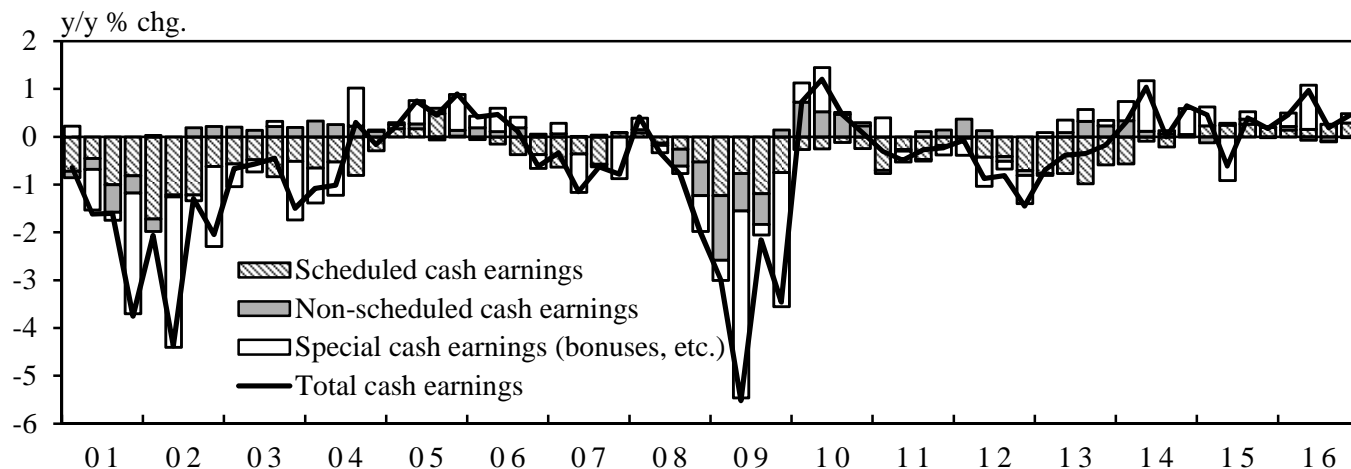


Note: Figures for the proportion of non-regular employees are based on the "detailed tabulation" in the "Labour Force Survey." Figures for 2017/Q1 are January-February averages.

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

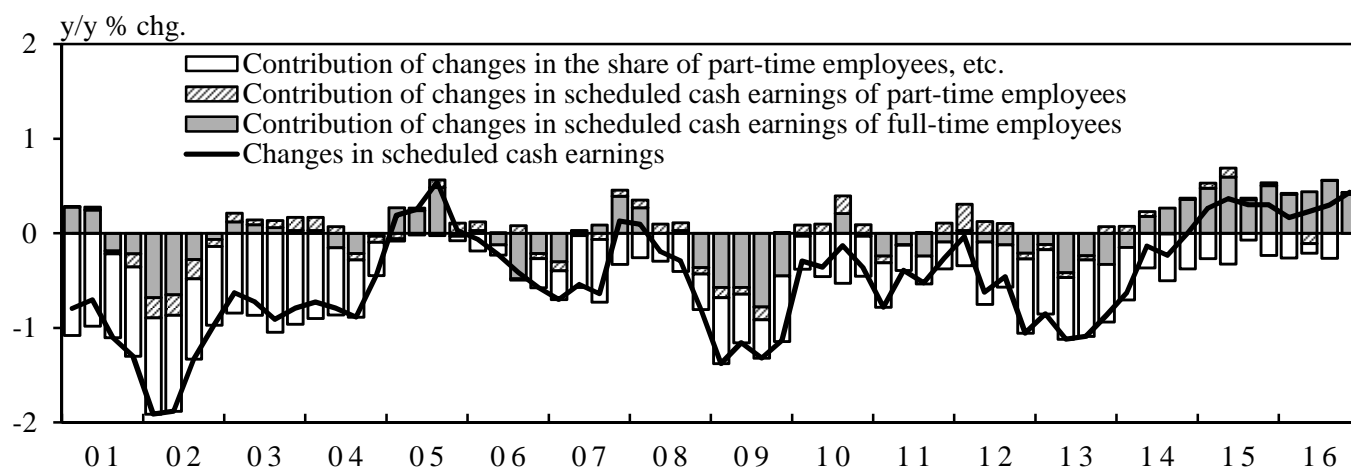
Nominal Wages

(1) Total Cash Earnings



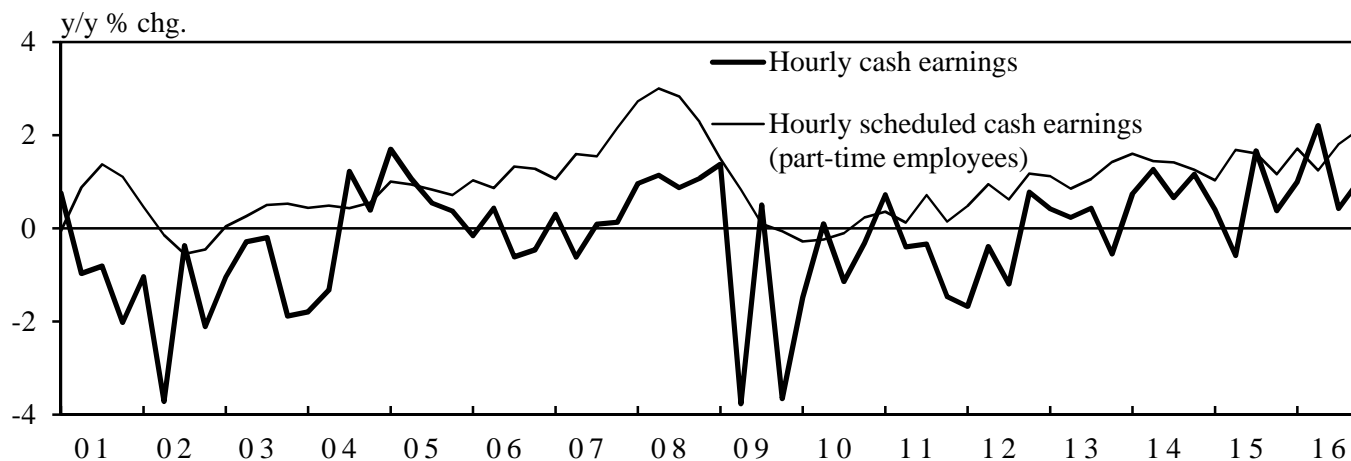
Note: Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.
The same definition applies to the charts below.

(2) Scheduled Cash Earnings



Note: The contribution of changes in scheduled cash earnings of part-time (full-time) employees is obtained by multiplying the year-on-year rate of changes in part-time (full-time) scheduled cash earnings and part-time (full-time) employees' share of total scheduled cash earnings in the previous year. The contribution of changes in the share of part-time employees, etc. is calculated as the residual.

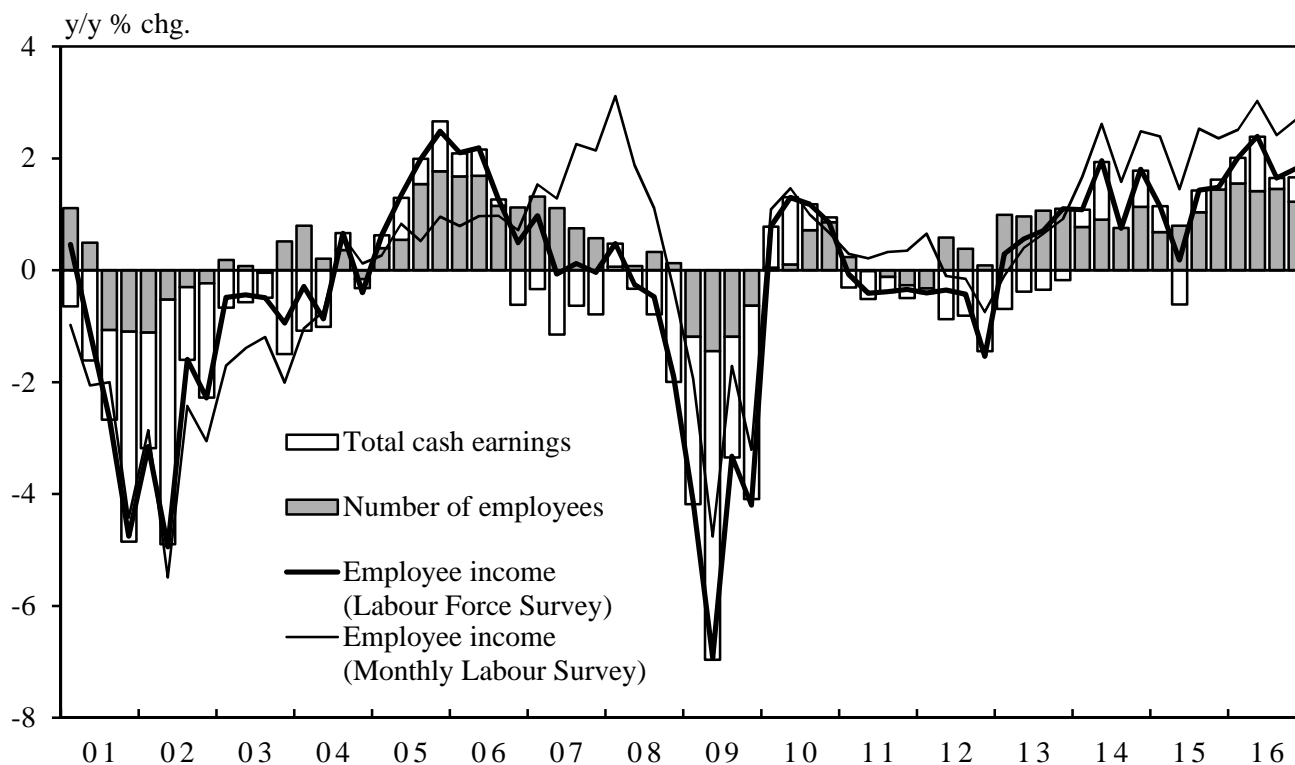
(3) Hourly Cash Earnings



Source: Ministry of Health, Labour and Welfare.

Employee Income

(1) Employee Income

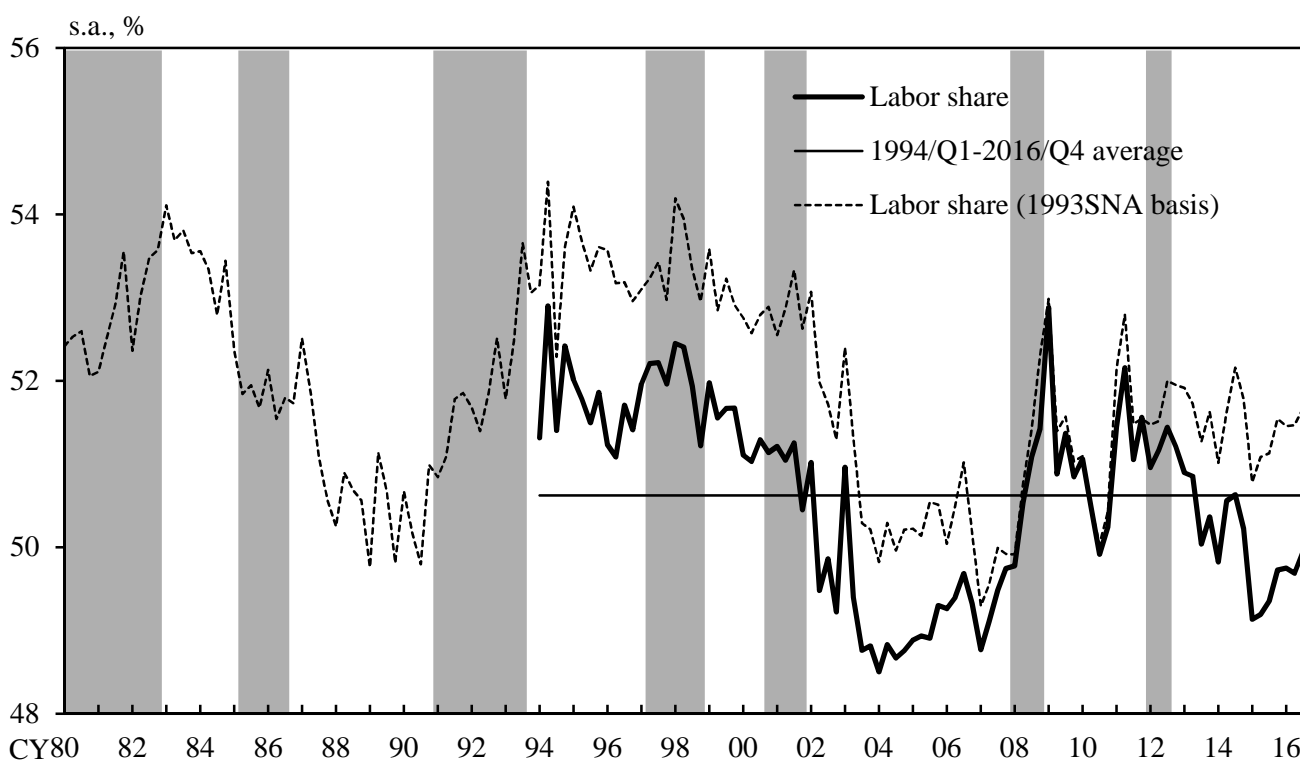


Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.

2. Employee income (Labour Force Survey) = number of employees (Labour Force Survey) × total cash earnings

Employee income (Monthly Labour Survey) = number of regular employees (Monthly Labour Survey) × total cash earnings

(2) Labor Share (SNA Basis)



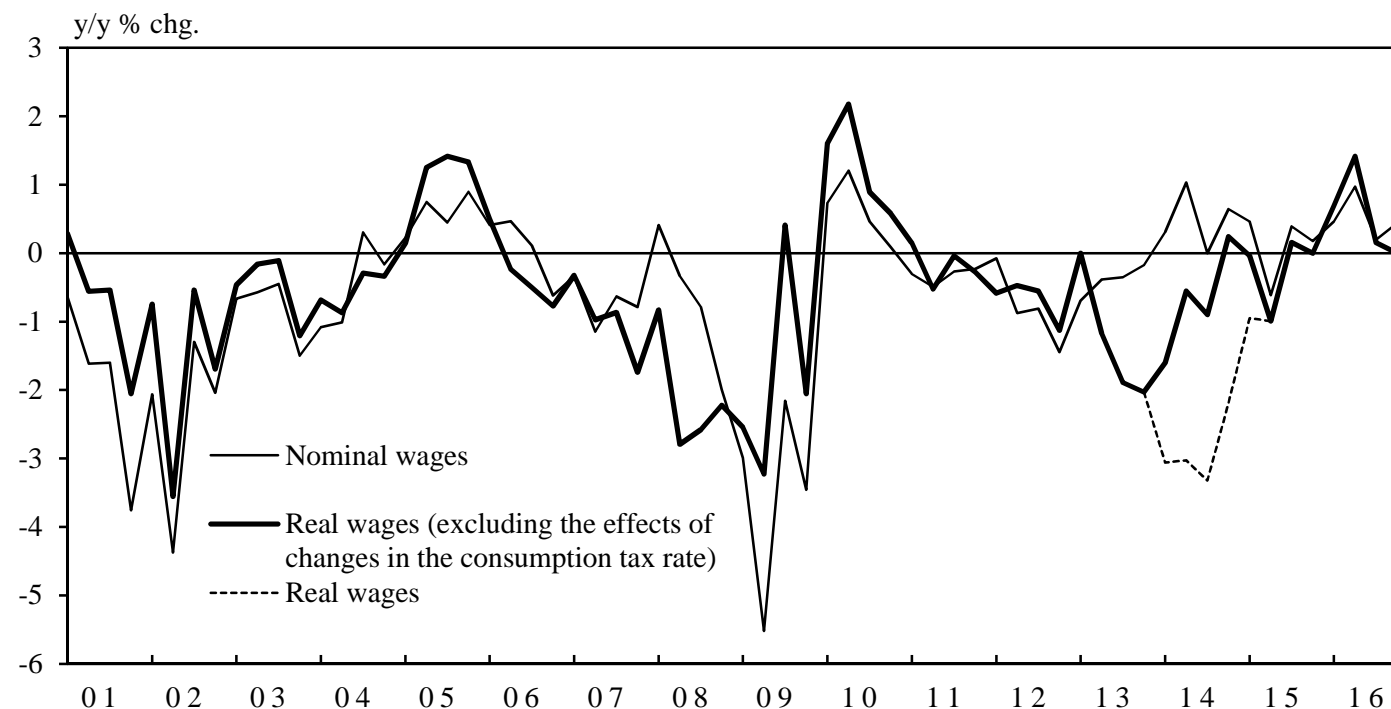
Notes: 1. Labor share = compensation of employees / nominal GDP × 100

2. Shaded areas indicate recession periods.

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

Real Wages and Real Employee Income

(1) Real Wages



(2) Real Employee Income



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

2. Real wages are obtained by deflating nominal wages by the CPI (less imputed house rent) and are taken from the Ministry of Health, Labour and Welfare.

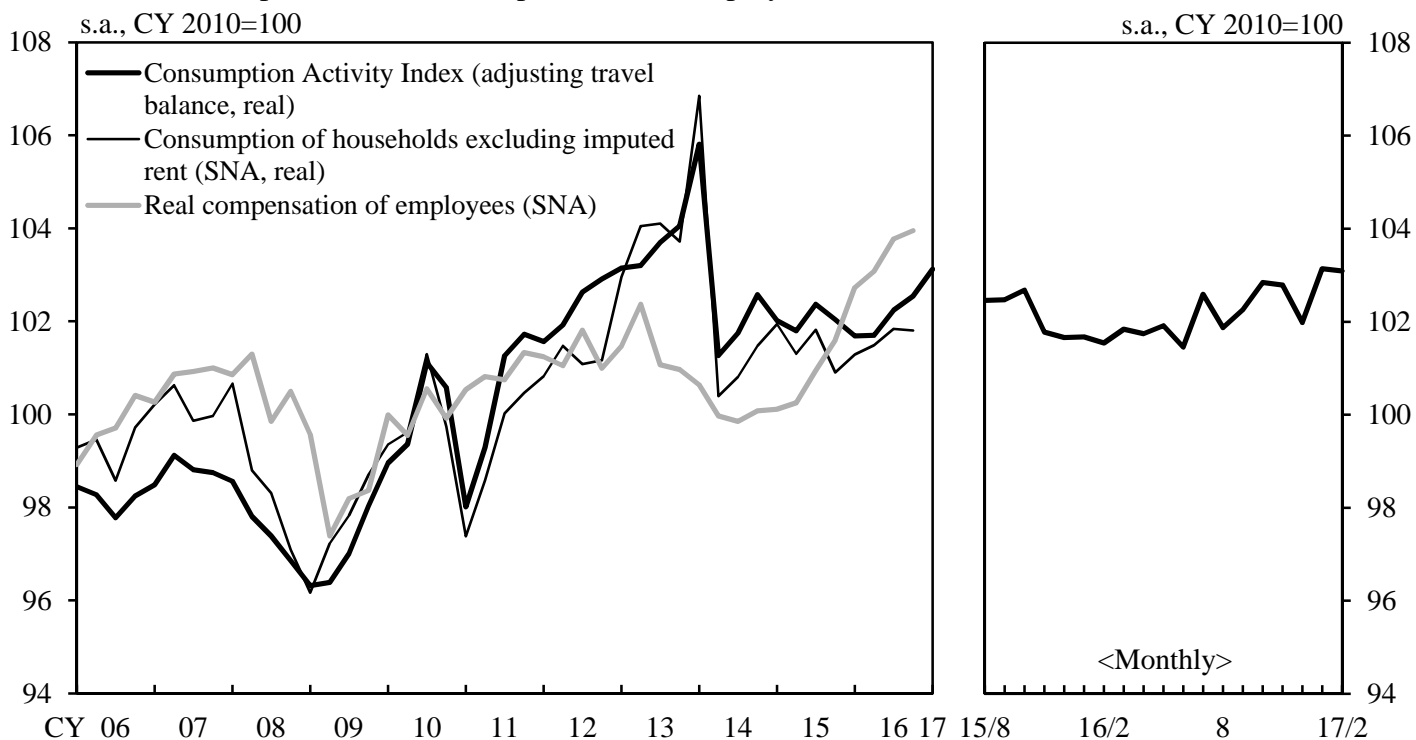
3. Nominal (real) employee income is obtained by multiplying nominal (real) wages and the number of employees (Labour Force Survey).

4. Real wages and real employee income (excluding the effects of changes in the consumption tax rate) are obtained by deflating nominal wages and nominal employee income by the CPI (less imputed house rent, adjusted to exclude the estimated effects of changes in the consumption tax rate).

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

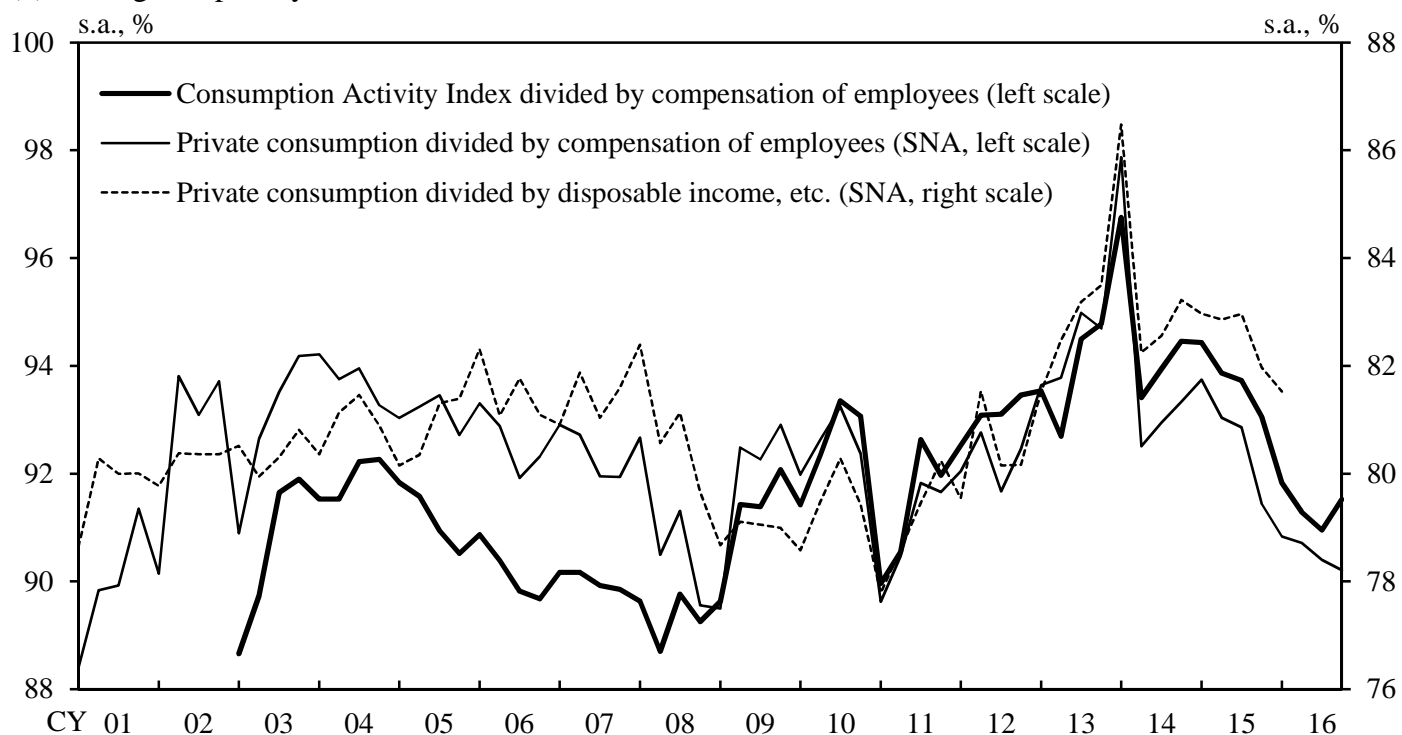
Private Consumption

(1) Private Consumption and Real Compensation of Employees



Notes: 1. Figures for the Consumption Activity Index (adjusting travel balance) exclude inbound tourism consumption and include outbound tourism consumption. Figures are as of April 20.
 2. The figure for 2017/Q1 is the January-February average.

(2) Average Propensity to Consume



Notes: 1. For the calculation, the Consumption Activity Index (nominal index, excluding inbound tourism consumption and including outbound tourism consumption) is converted into nominal values using SNA-based private consumption in 2010.
 2. Private consumption is consumption of households excluding imputed rent.
 3. "Disposable income, etc." is obtained by adding adjustment for the change in pension entitlements to disposable income.

Sources: Cabinet Office; Bank of Japan; Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications, etc.

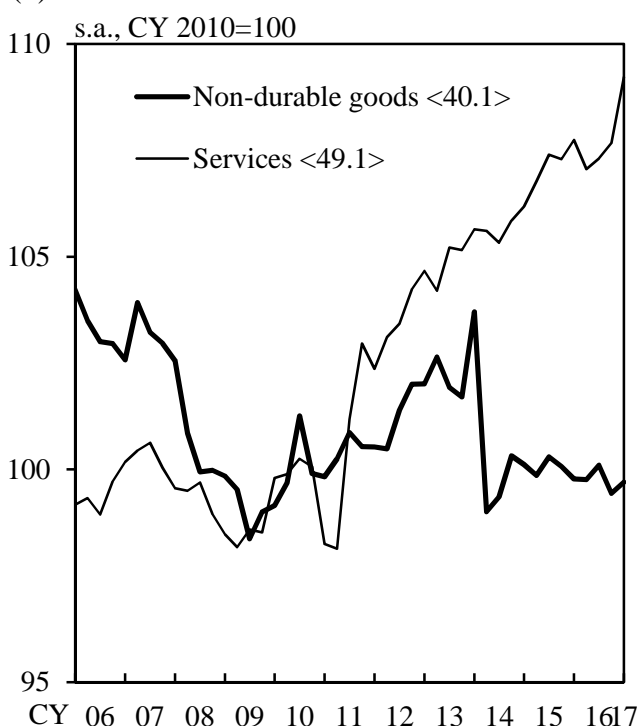
Private Consumption by Type and Supply and Demand Side Statistics

(1) Private Consumption by Type in the Consumption Activity Index (Real)

(a) Durable Goods

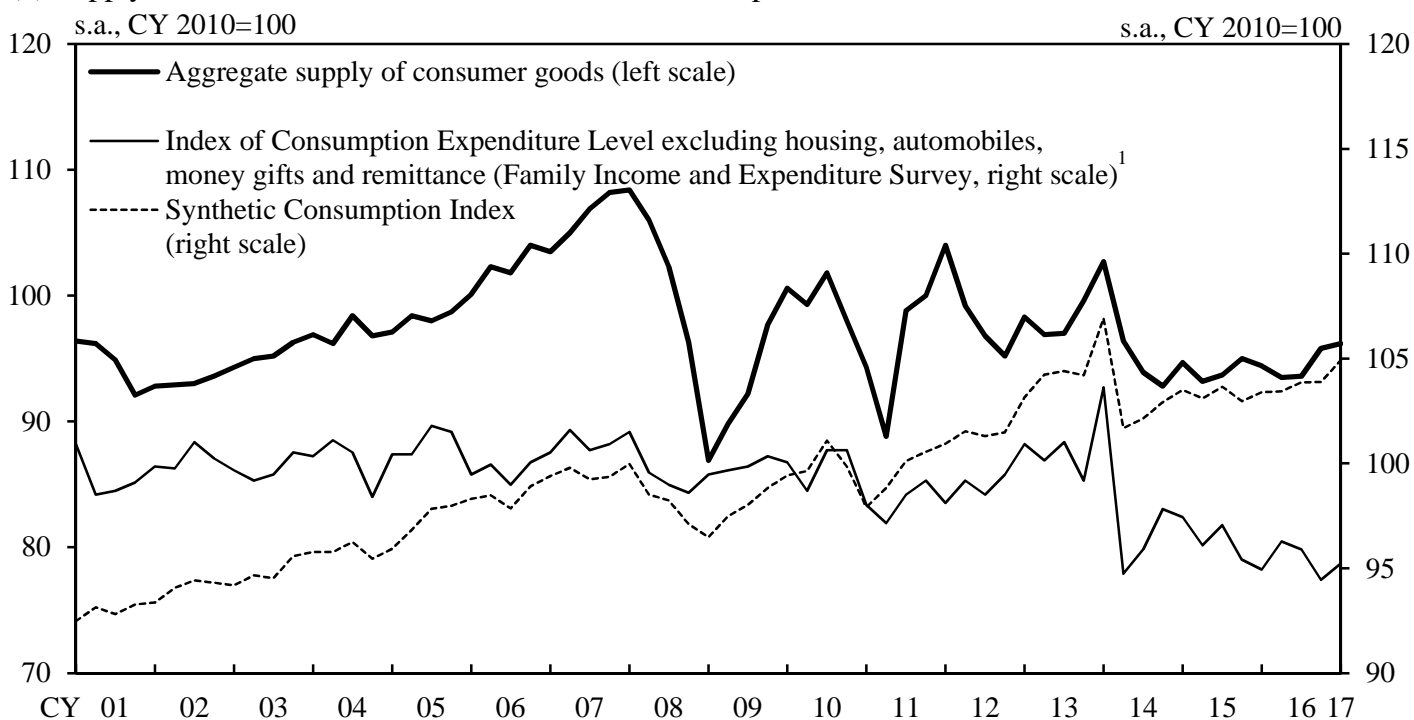


(b) Non-Durable Goods and Services



Notes: 1. Figures are as of April 20. Figures in angular brackets show the weights in the Consumption Activity Index.
 2. Non-durable goods include goods classified as "semi-durable goods" in the SNA.
 3. Figures for 2017/Q1 are January-February averages. The same applies to the chart below.

(2) Supply and Demand Side Statistics of Private Consumption

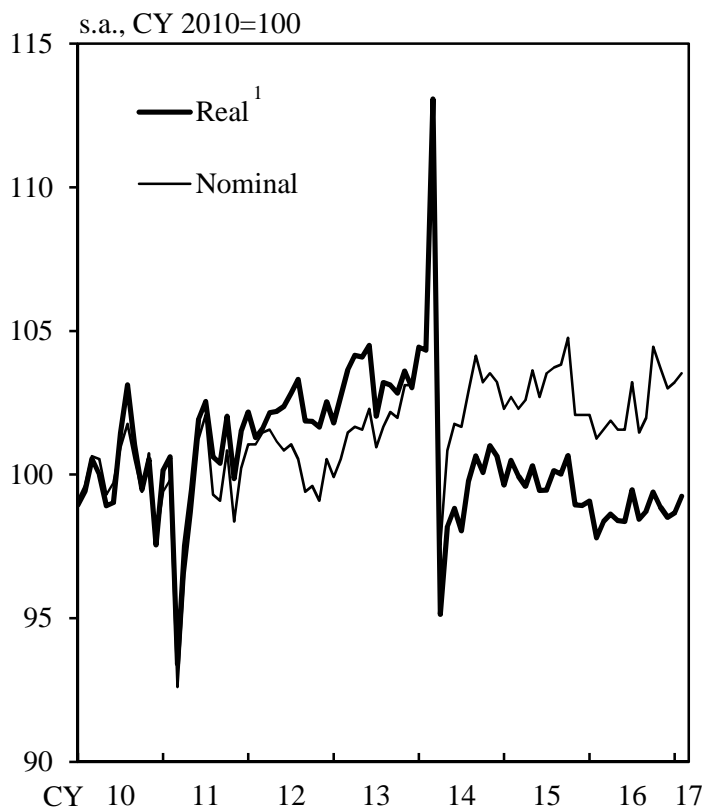


Note: 1. Figures are based on households with two or more persons and are adjusted using the distribution of households by number of household members and age group of the household head.

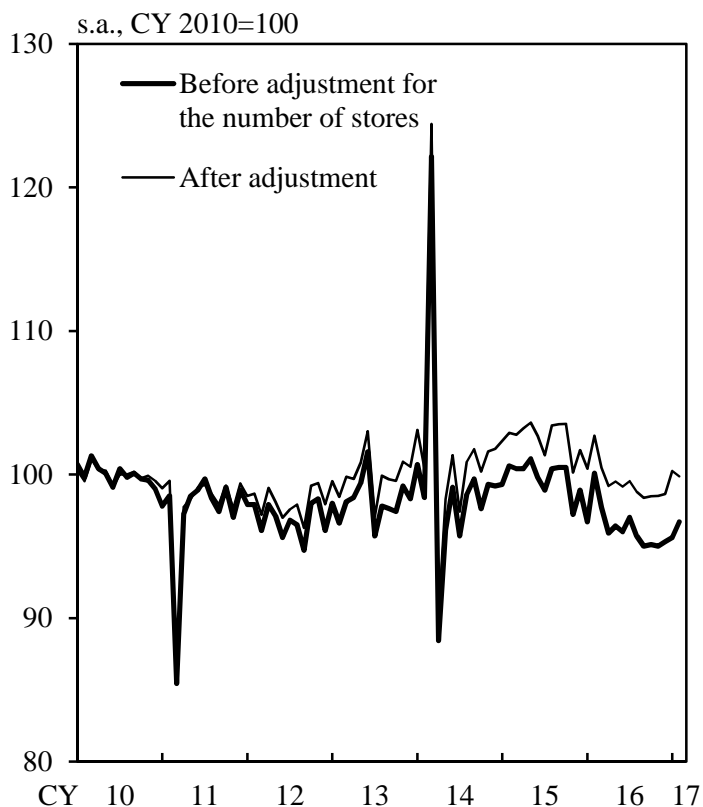
Sources: Cabinet Office; Bank of Japan; Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications, etc.

Sales Statistics (Current Survey of Commerce)

(1) Sales at Retail Stores

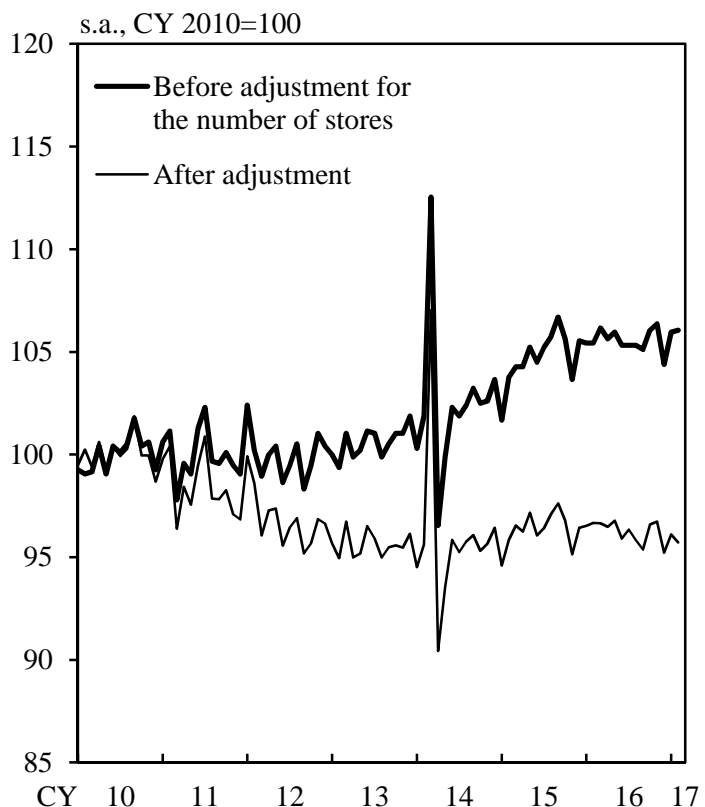


(2) Sales at Department Stores

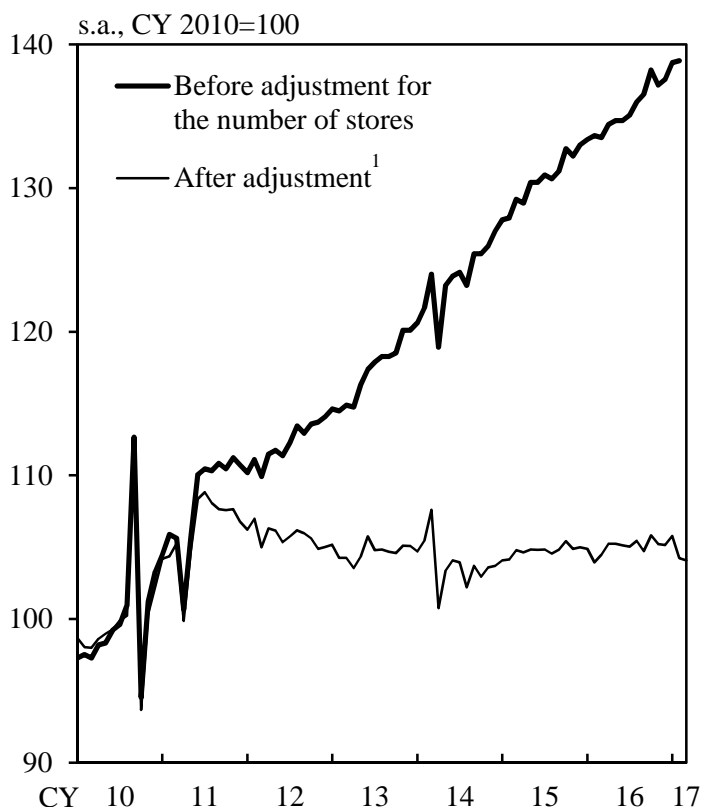


Note: 1. Real sales are obtained by deflating nominal sales by the CPI for goods (excluding electricity, gas & water charges).

(3) Sales at Supermarkets



(4) Sales at Convenience Stores



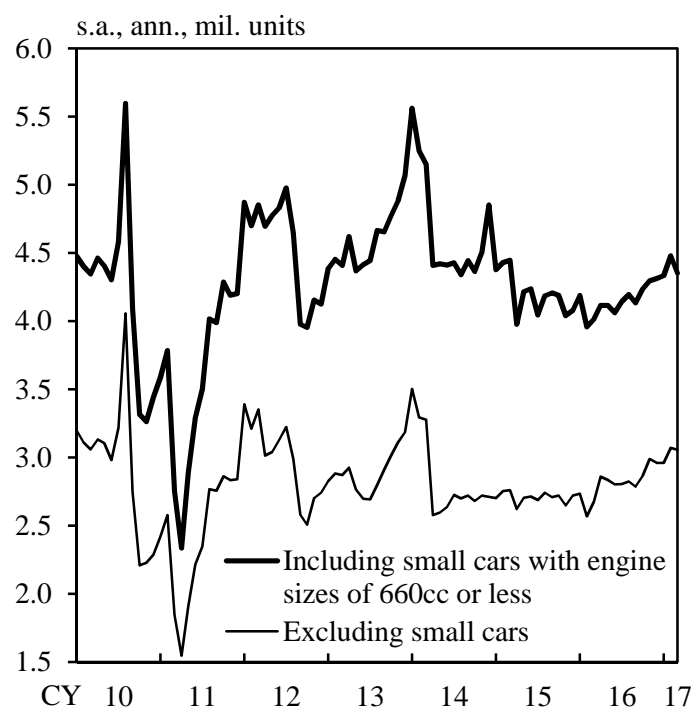
Note: 1. Figures are based on data published by the Japan Franchise Association.

Sources: Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications; Japan Franchise Association, "Convenience Store Statistics."

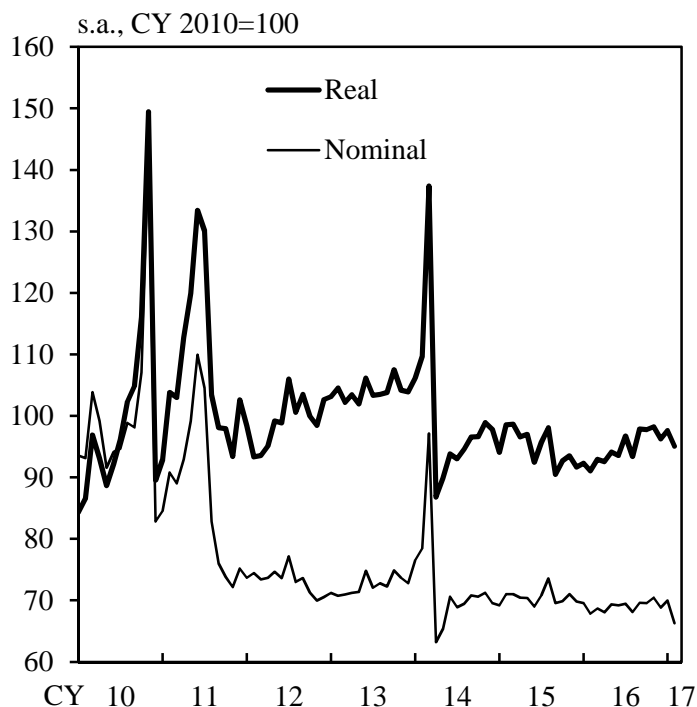
Consumption of Durable Goods and Services

(1) Consumption of Durable Goods

(a) New Passenger Car Registrations

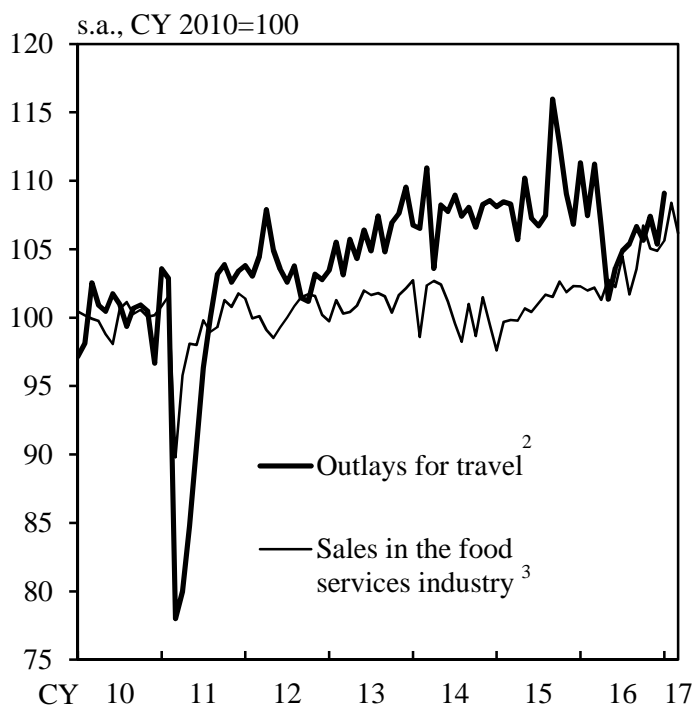


(b) Sales of Household Electrical Appliances¹

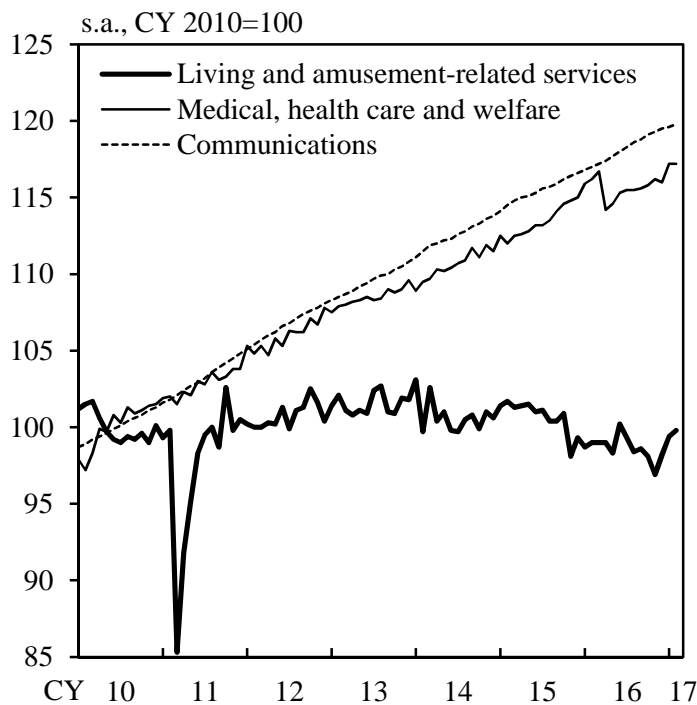


(2) Consumption of Services

(a) Travel and Food Services (Nominal)



(b) Indices of Tertiary Industry Activity



Notes: 1. Figures are based on the index of retail sales of machinery and equipment in the "Current Survey of Commerce."

Real sales are obtained by deflating the nominal index by the price index of related items in the CPI.

2. Excluding those by foreign travelers. Figures are calculated using the year-on-year rates of change released by the Japan Tourism Agency.

3. Figures are calculated using the year-on-year rates of change released by the Japan Food Service Association.

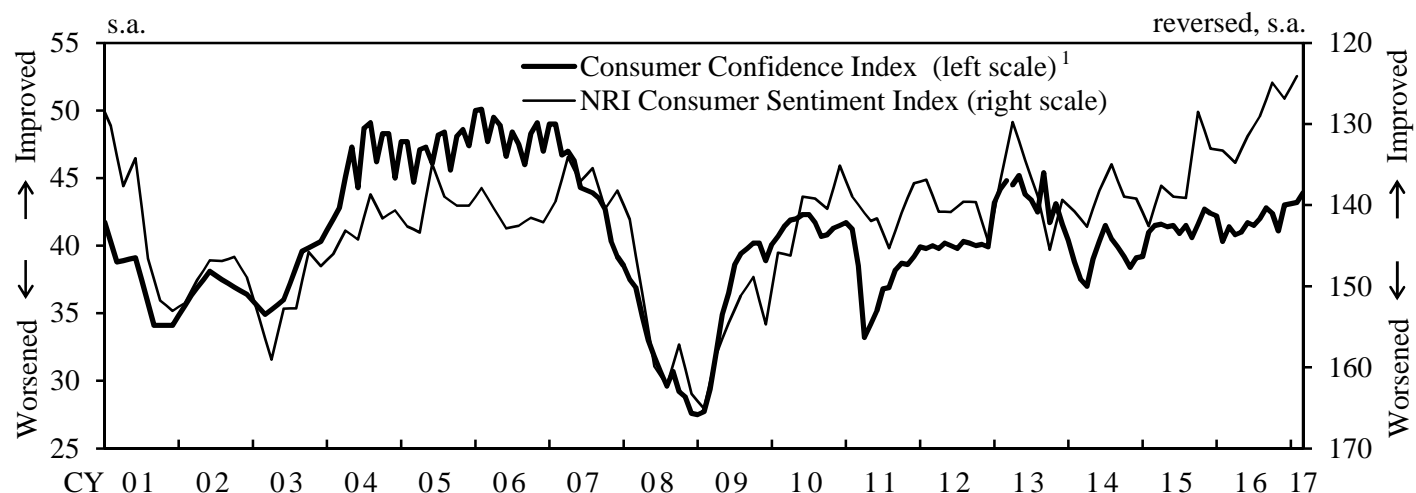
Sources: Japan Automobile Dealers Association; Japan Light Motor Vehicle and Motorcycle Association;

Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications; Japan Tourism Agency;

Japan Food Service Association, "Market Trend Survey of the Food Services Industry."

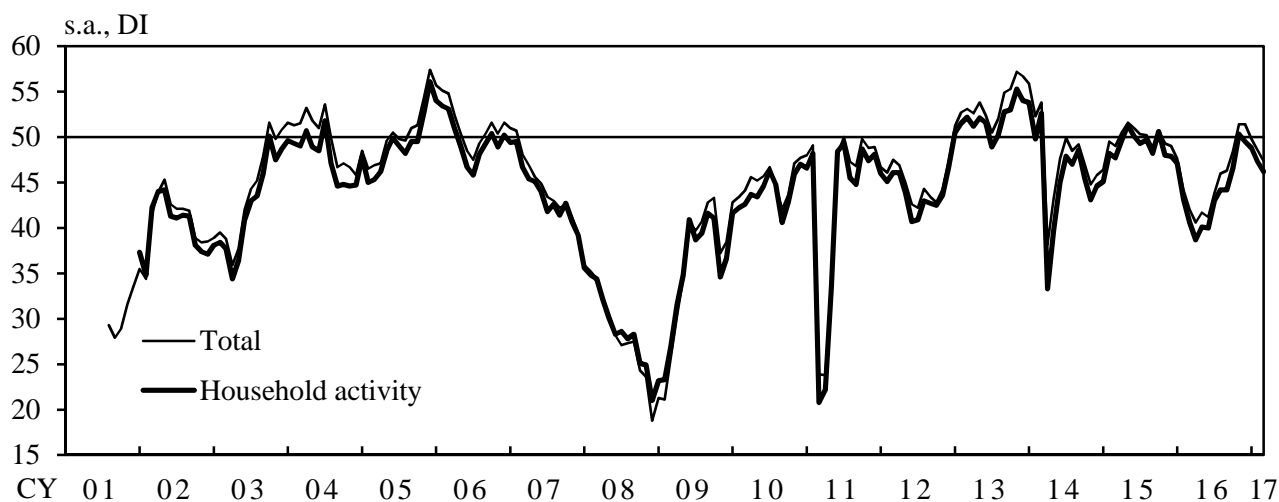
Confidence Indicators Related to Private Consumption

(1) Consumer Confidence Index and NRI Consumer Sentiment Index

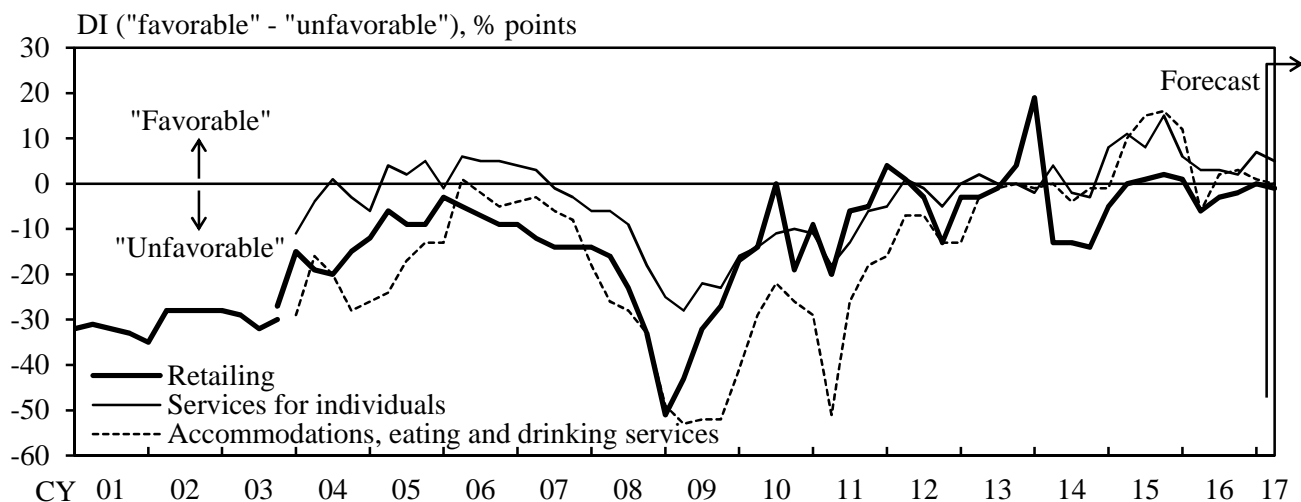


Note: 1. There is a discontinuity in the data in April 2013 due to a change in the survey method.

(2) DI for Current Economic Conditions (Economy Watchers Survey)



(3) Business Conditions of Industries Related to Private Consumption (*Tankan*, Enterprises of All Sizes)

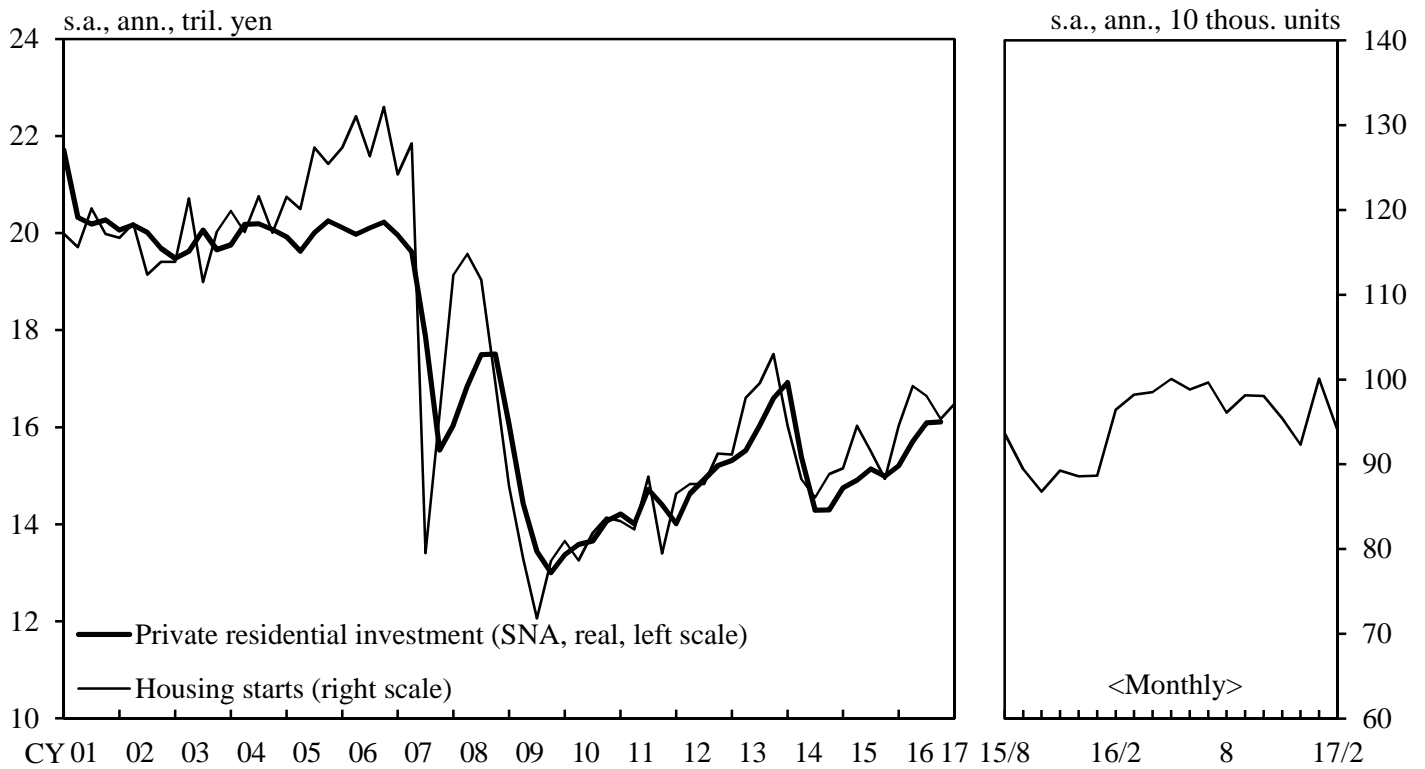


Note: There is a discontinuity in the data in December 2003 due to a change in the survey framework.

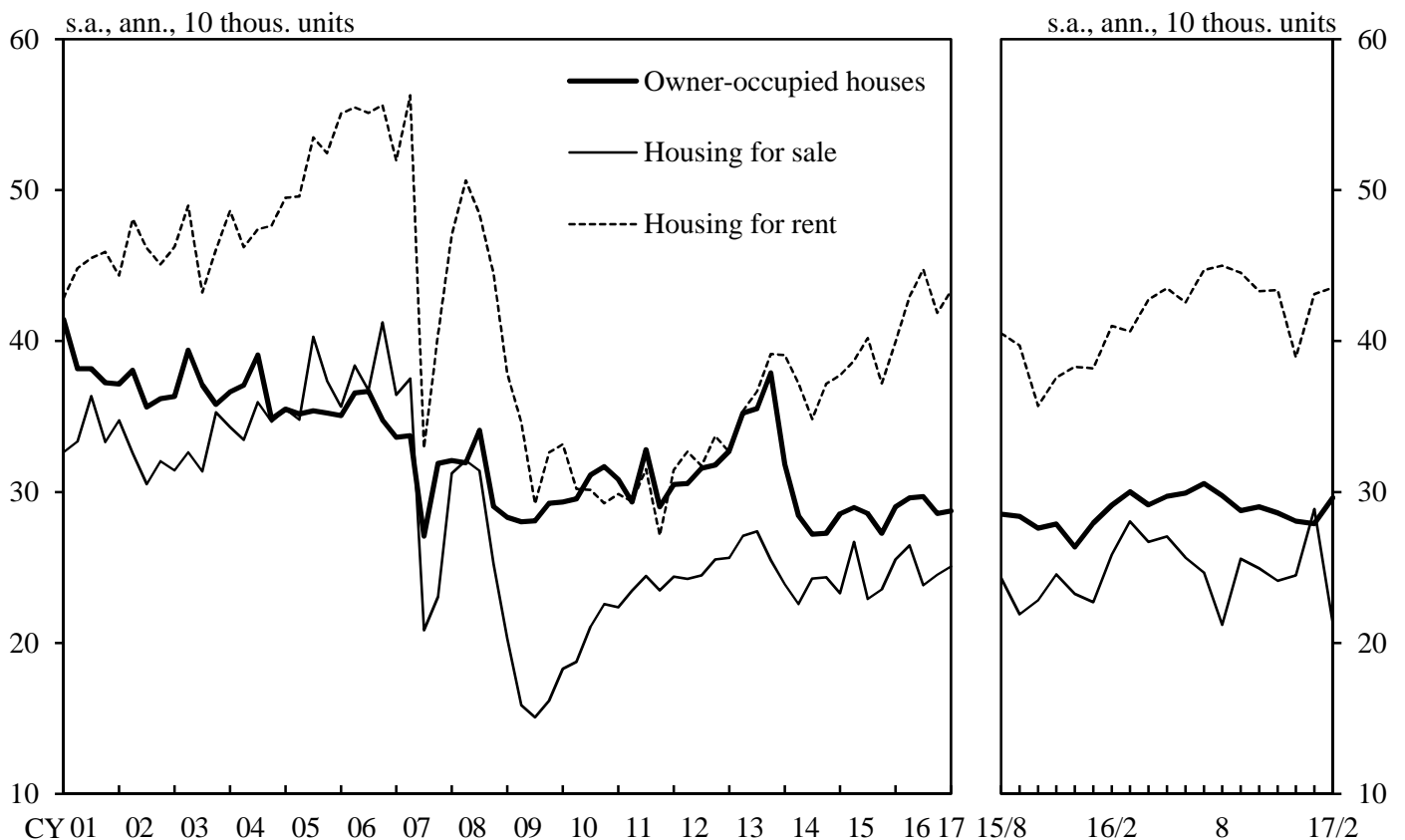
Sources: Cabinet Office; Bank of Japan; Nippon Research Institute (NRI), "Consumer Sentiment Survey."

Housing Investment

(1) Housing Starts and Residential Investment (SNA Basis)



(2) Composition of Housing Starts

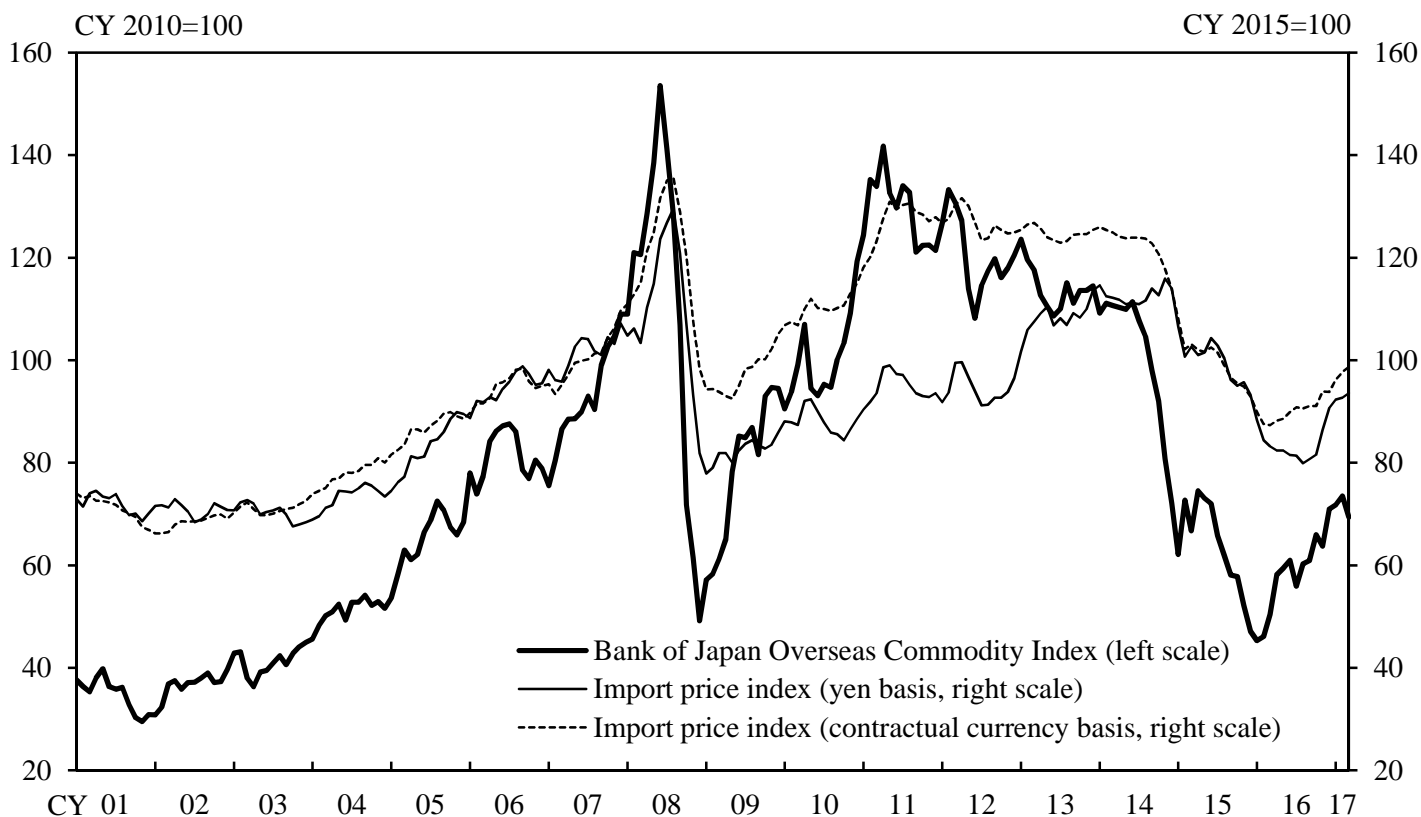


Note: Figures for housing starts for 2017/Q1 are January-February averages.

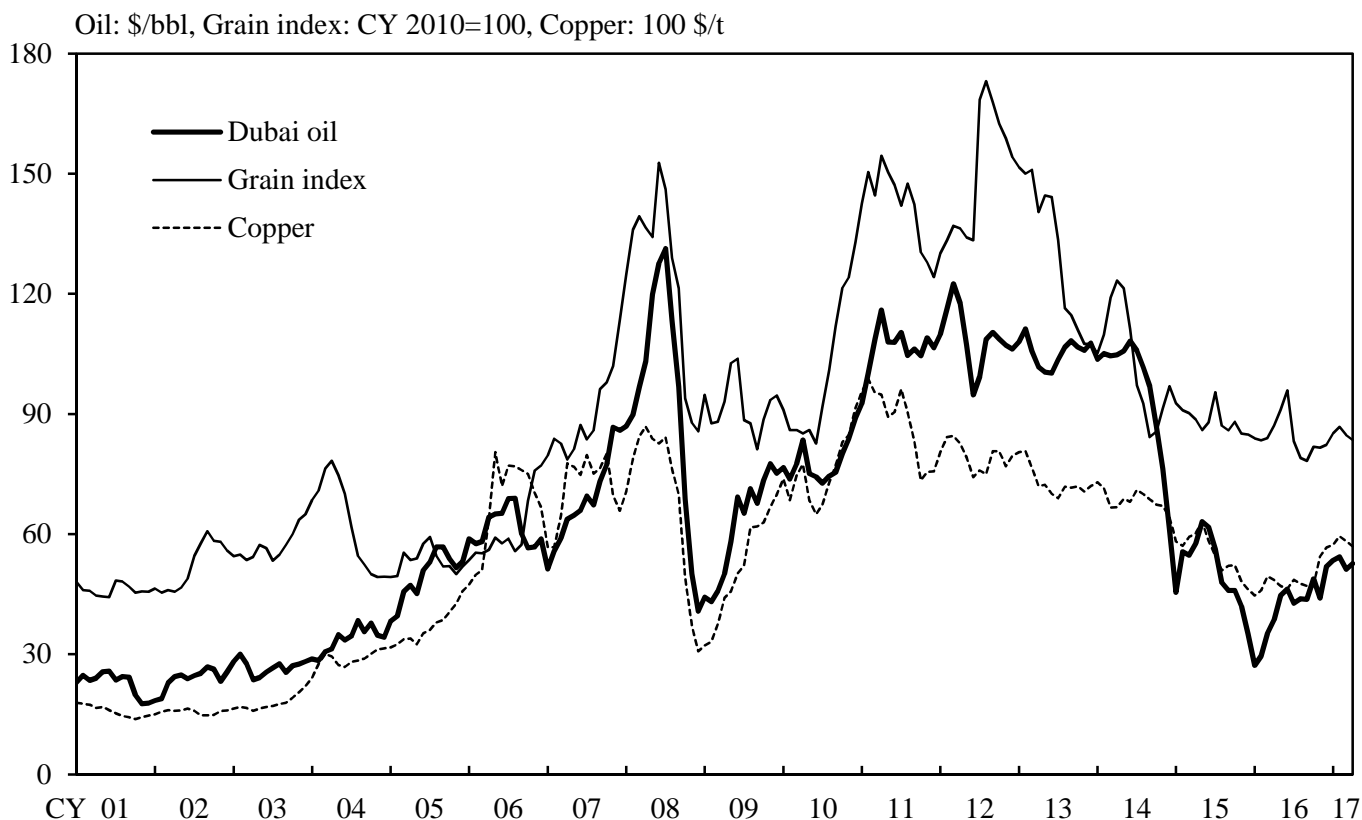
Sources: Cabinet Office; Ministry of Land, Infrastructure, Transport and Tourism.

Import Prices and International Commodity Prices

(1) Import Price Index and Overseas Commodity Index



(2) International Commodity Prices

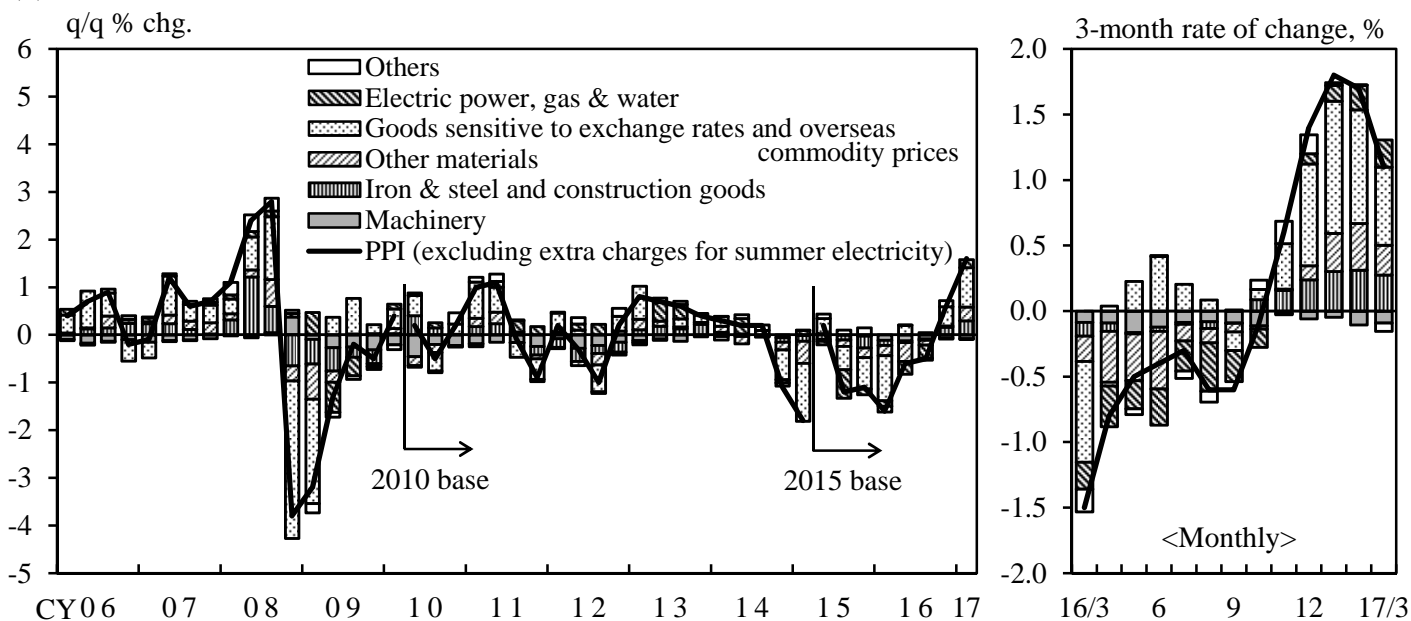


Note: Monthly averages. The grain index is the weighted average of the prices of three selected items (wheat, soybeans, and corn) in overseas commodity markets. The weights are based on the value of imports in the "Trade Statistics."

Sources: Nikkei Inc.; Bloomberg; Ministry of Finance; Bank of Japan.

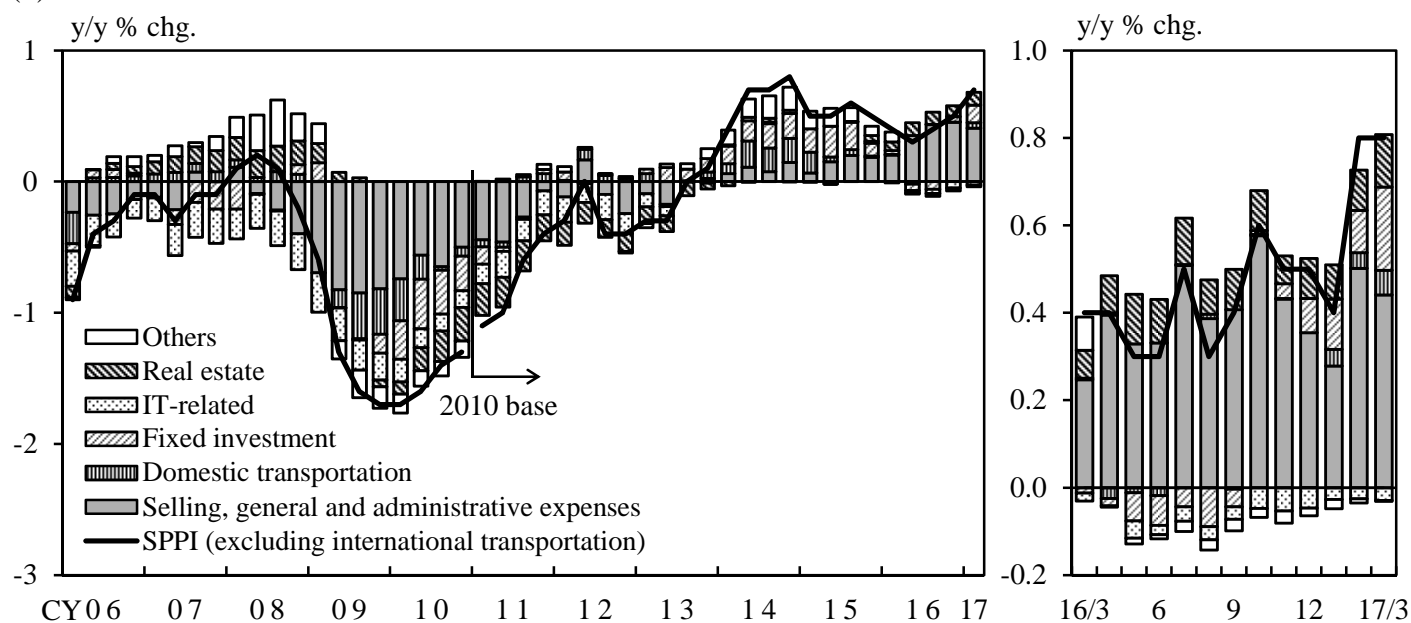
Producer Price Index and Services Producer Price Index

(1) Producer Price Index



- Notes: 1. Goods sensitive to exchange rates and overseas commodity prices: petroleum & coal products and nonferrous metals.
 2. Iron & steel and construction goods: iron & steel, metal products, ceramic, stone & clay products, lumber & wood products, and scrap & waste.
 3. Other materials: chemicals & related products, plastic products, textile products, and pulp, paper & related products.
 4. Machinery: general purpose machinery, production machinery, business oriented machinery, electronic components & devices, electrical machinery & equipment, information & communications equipment, and transportation equipment.
 5. Figures are adjusted to exclude the hike in electric power charges during the summer season from July to September.
 6. Figures are adjusted to exclude the effects of changes in the consumption tax rate. The same applies to the charts below.

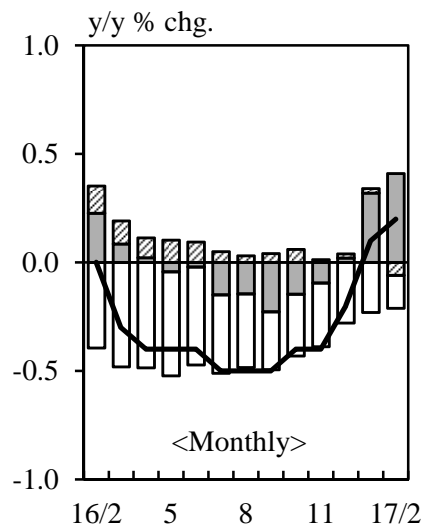
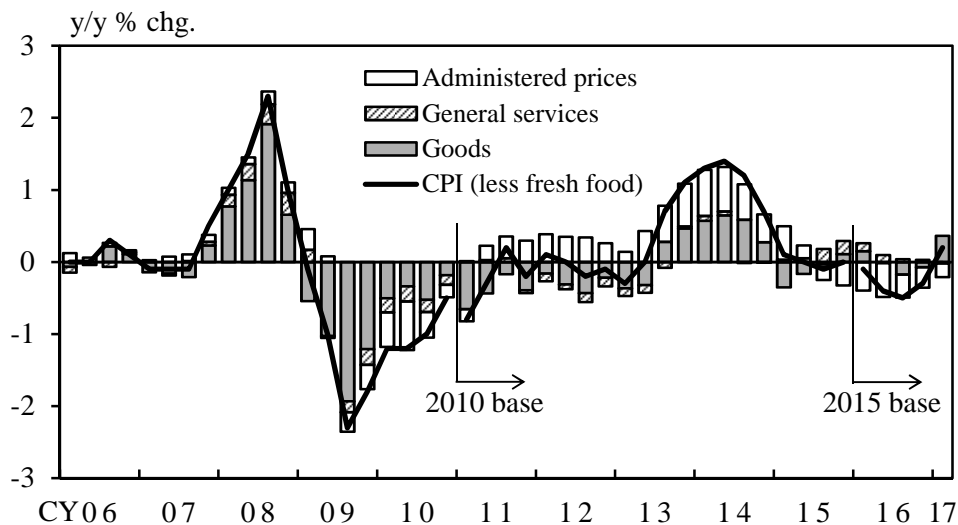
(2) Services Producer Price Index



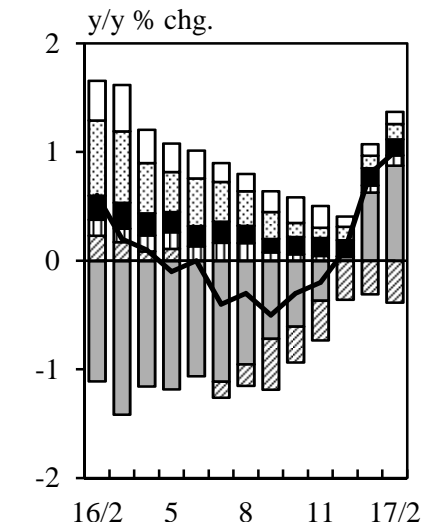
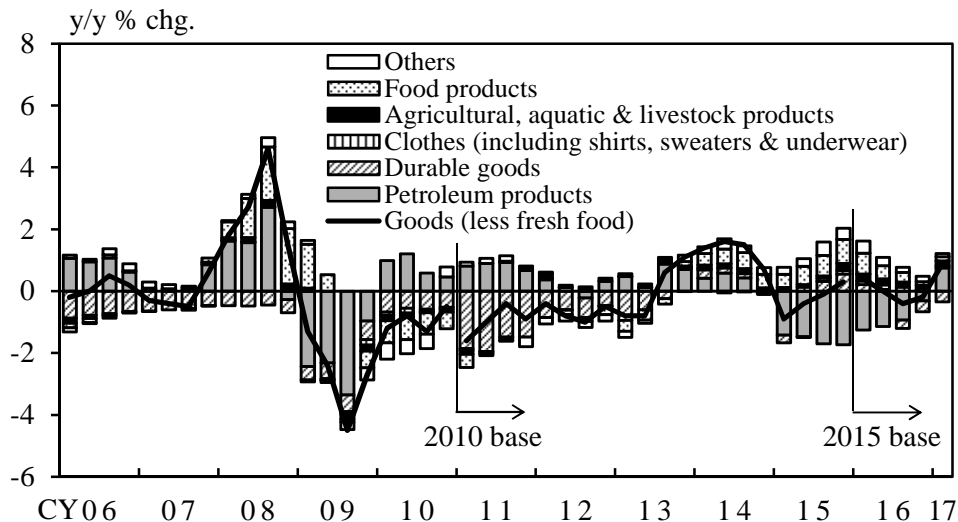
- Notes: 1. Selling, general and administrative expenses: information and communications (excluding newspapers and publishing), advertising services, other services (excluding plant engineering, and civil engineering and architectural services).
 2. Domestic transportation: transportation and postal services (excluding international transportation and passenger transportation).
 3. IT-related: leasing of computer and related equipment, and computer rental.
 4. Fixed investment: leasing and rental (excluding IT-related), and civil engineering and architectural services.

Consumer Price Index

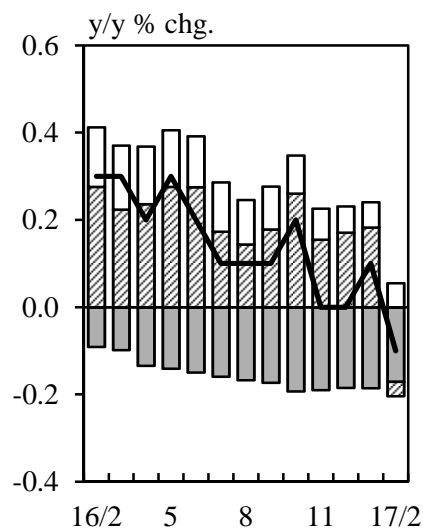
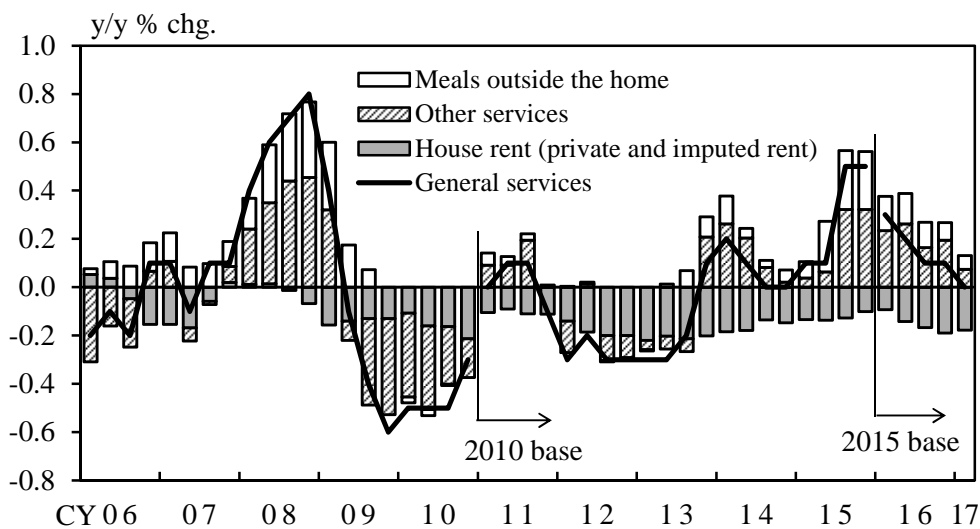
(1) All Items (Less Fresh Food)



(2) Goods (Less Fresh Food)



(3) General Services



Notes: 1. Figures for goods exclude electricity, manufactured & piped gas & water charges.

2. Administered prices consist of public services and electricity, manufactured & piped gas & water charges.

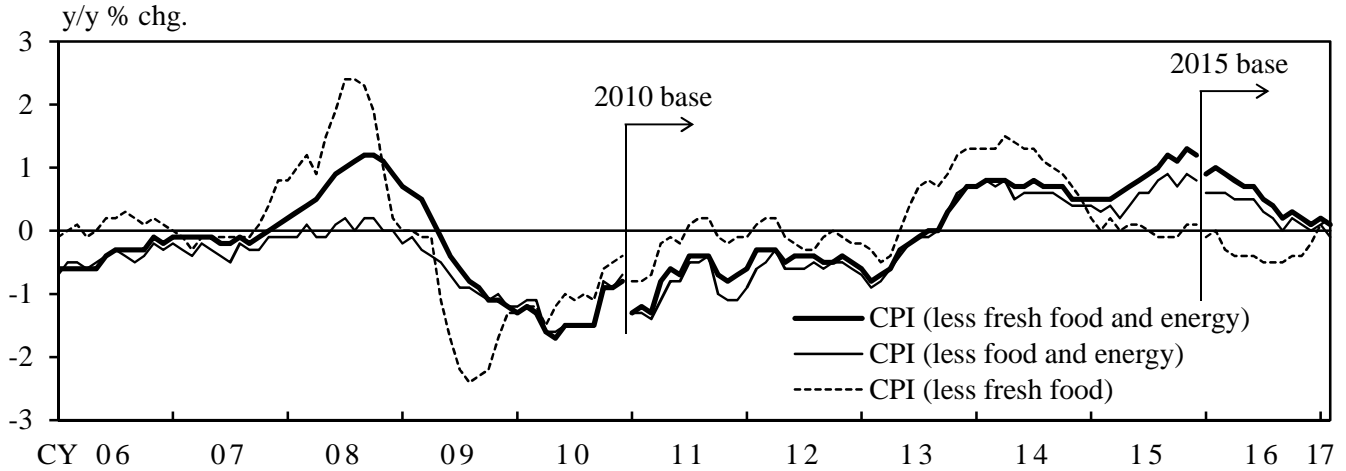
3. Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.

4. Figures for 2017/Q1 are January-February averages.

Source: Ministry of Internal Affairs and Communications.

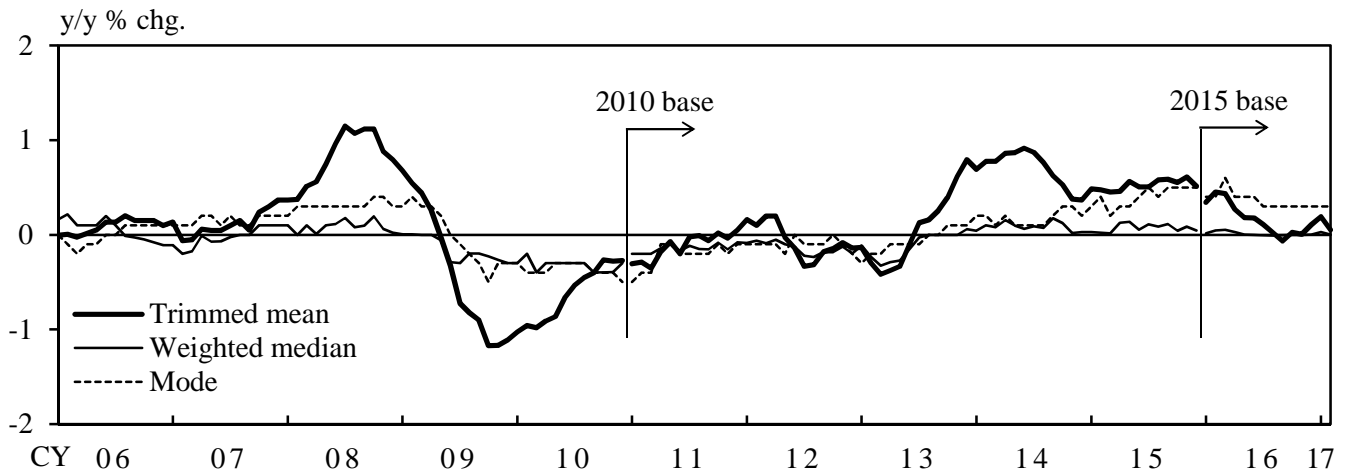
Measures of Underlying Inflation

(1) All Items (Less Fresh Food and Energy) and All Items (Less Food and Energy)



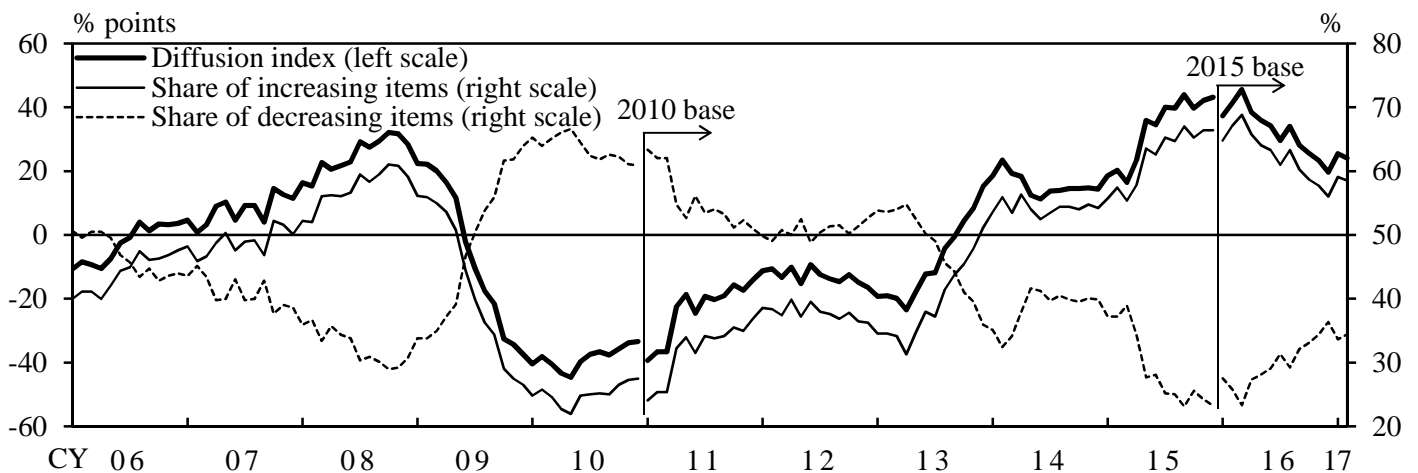
Note: Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate. The same applies to the charts below.

(2) Trimmed Mean, Weighted Median, and Mode



Note: The trimmed mean is obtained by excluding the upper and lower tails (here, the 10 percent tails) of the price change distribution adjusted for item's weight in the CPI. The weighted median is the weighted average of the inflation rates of the items at around the 50th percentile point of the distribution. The mode is the inflation rate with the highest density in the distribution.

(3) Diffusion Index (Share of Increasing Items minus Share of Decreasing Items)

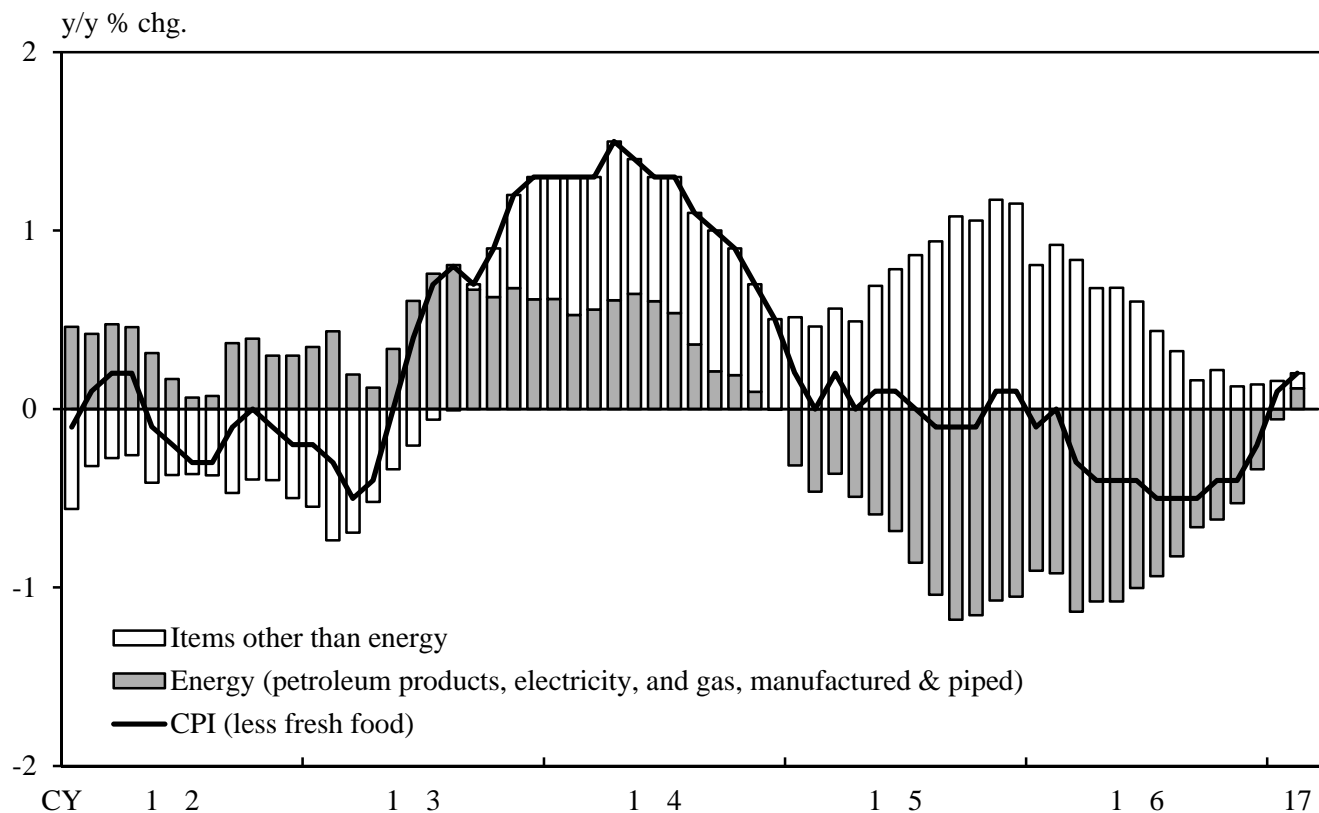


Note: The share of increasing/decreasing items is the share of items in the CPI (less fresh food) whose price indices increased/decreased from a year earlier.

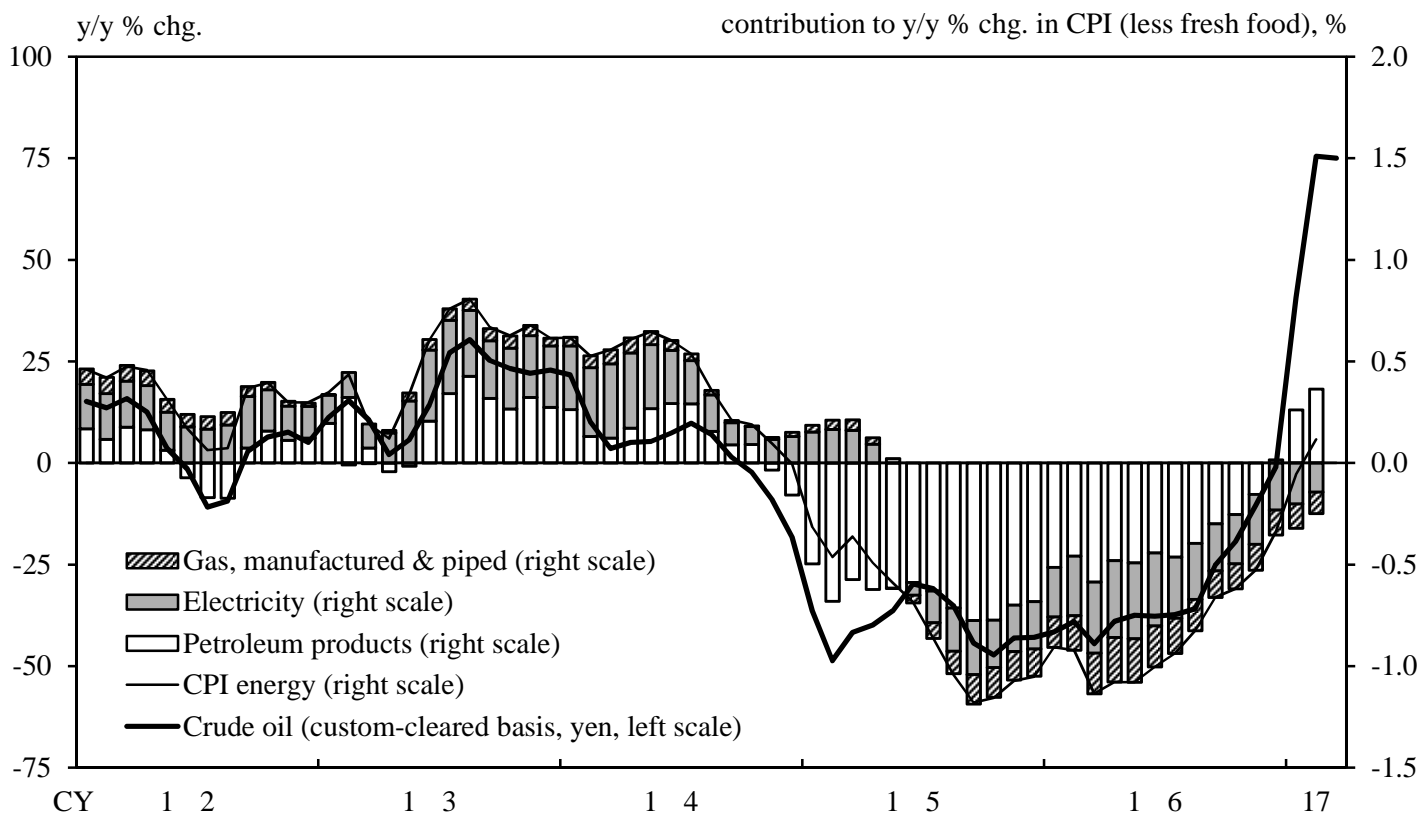
Source: Ministry of Internal Affairs and Communications.

Consumer Price Index and Energy Prices

(1) Consumer Price Index



(2) Crude Oil Prices and Energy Prices

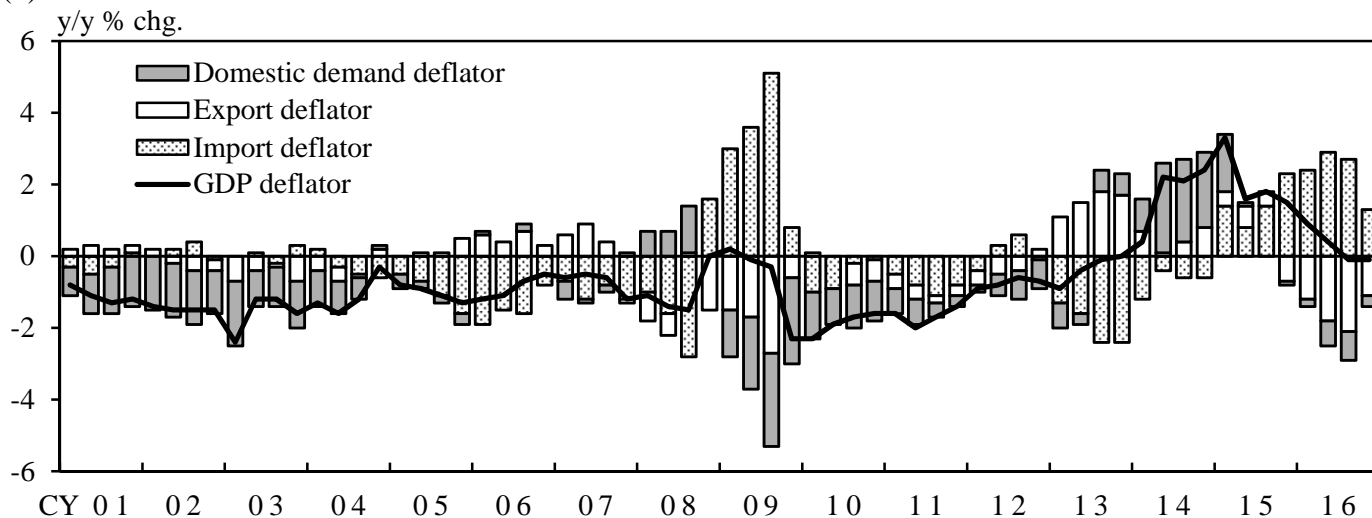


Note: Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.

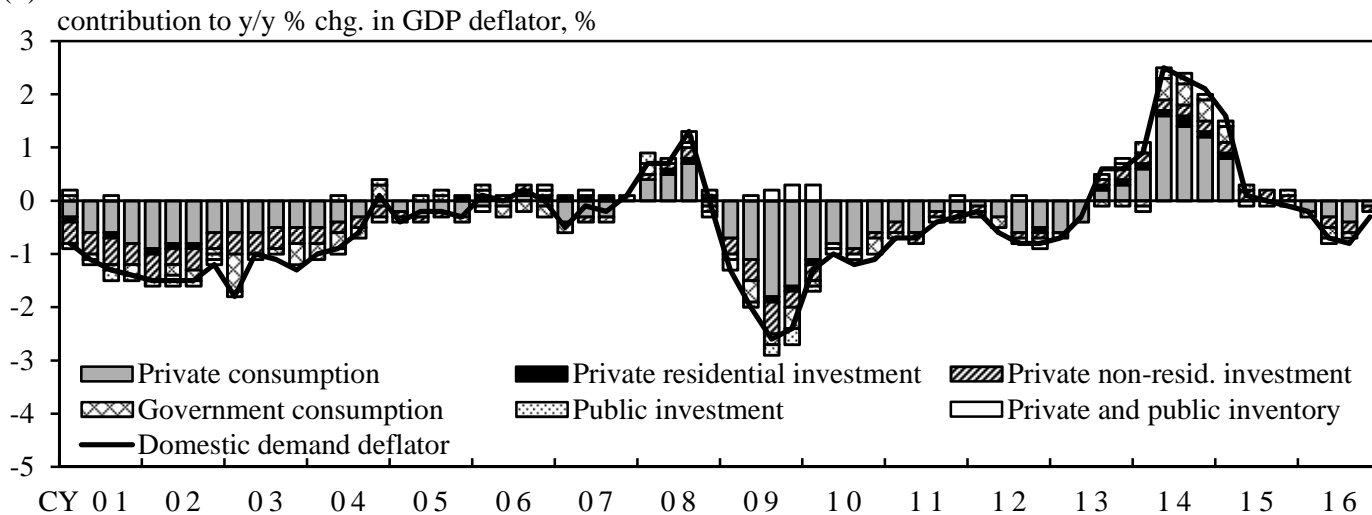
Sources: Ministry of Internal Affairs and Communications; Ministry of Finance.

GDP Deflator

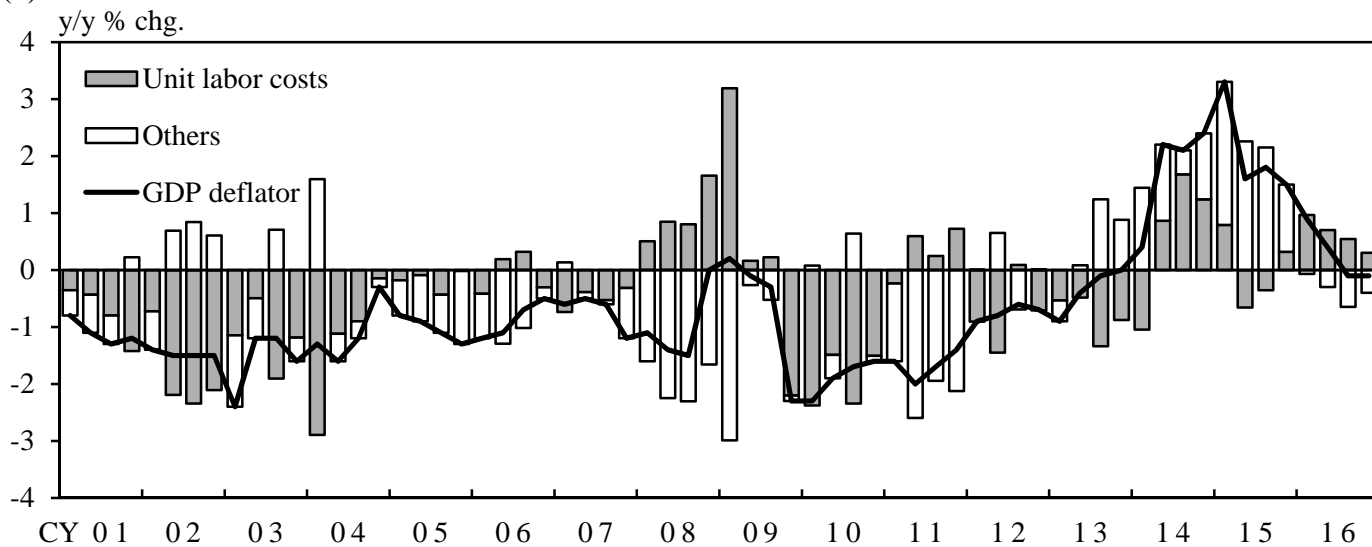
(1) GDP Deflator



(2) Domestic Demand Deflator



(3) GDP Deflator and Unit Labor Costs

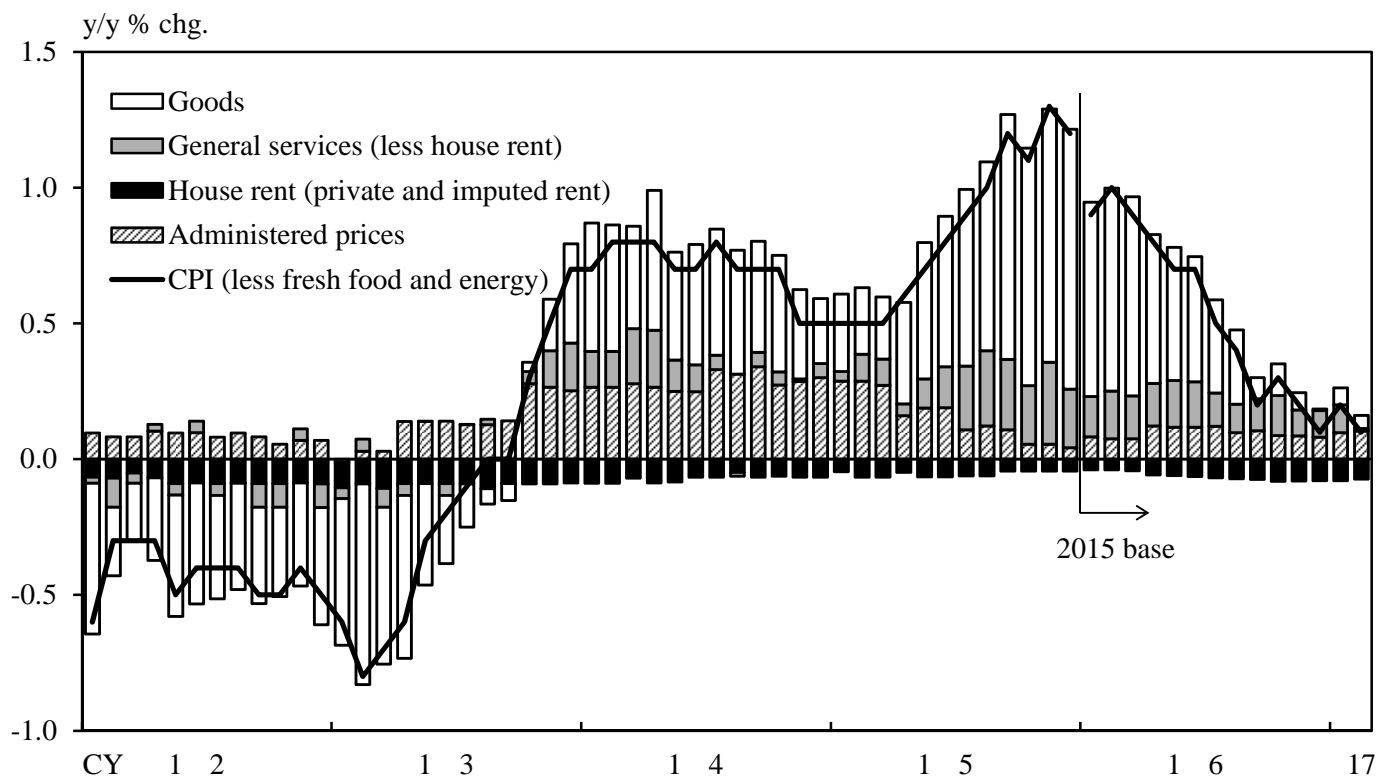


Note: Unit labor costs = nominal compensation of employees / real GDP

Source: Cabinet Office.

Consumer Price Index and Output Gap

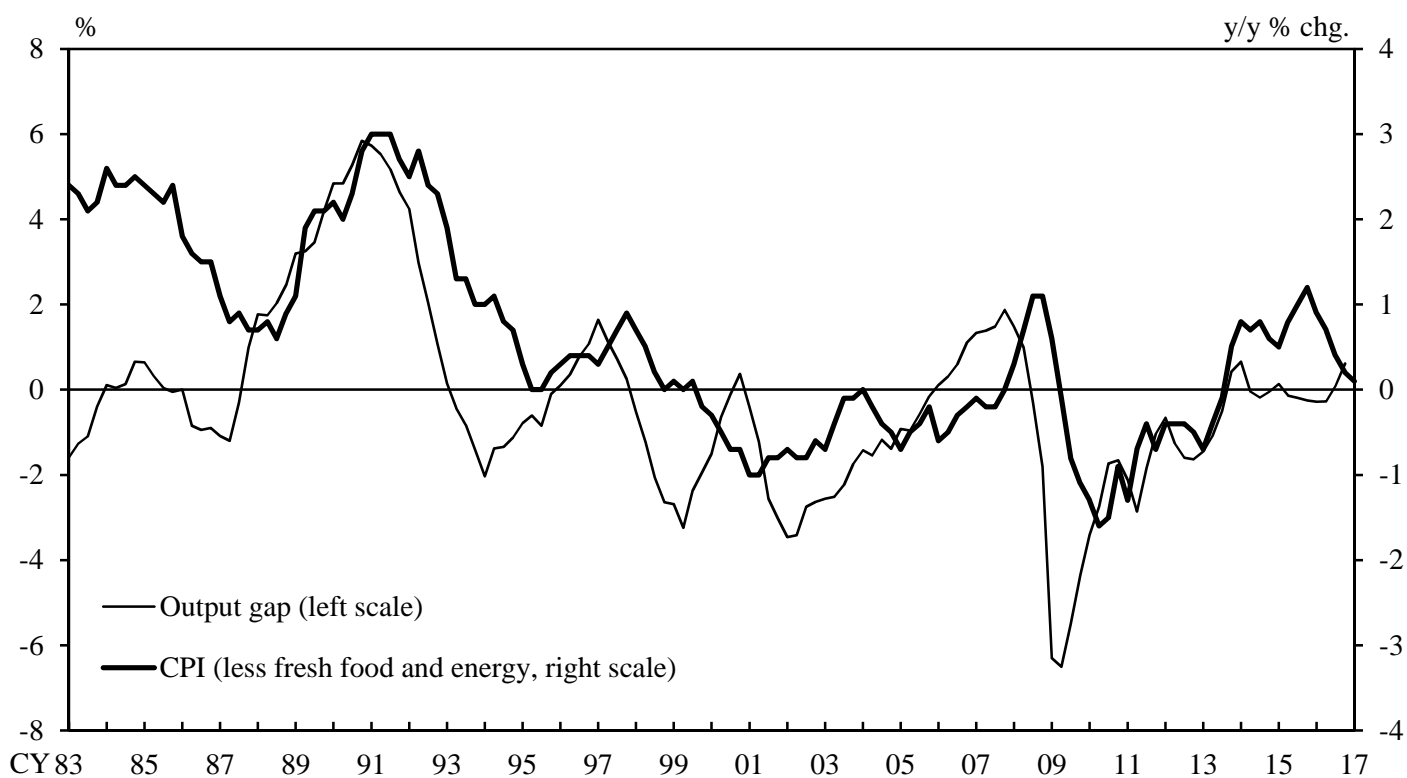
(1) Breakdown of CPI (Less Fresh Food and Energy)



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

2. Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate. The same applies to the chart below.

(2) Consumer Price Index and Output Gap



Notes: 1. The output gap is estimated by the Research and Statistics Department, Bank of Japan.

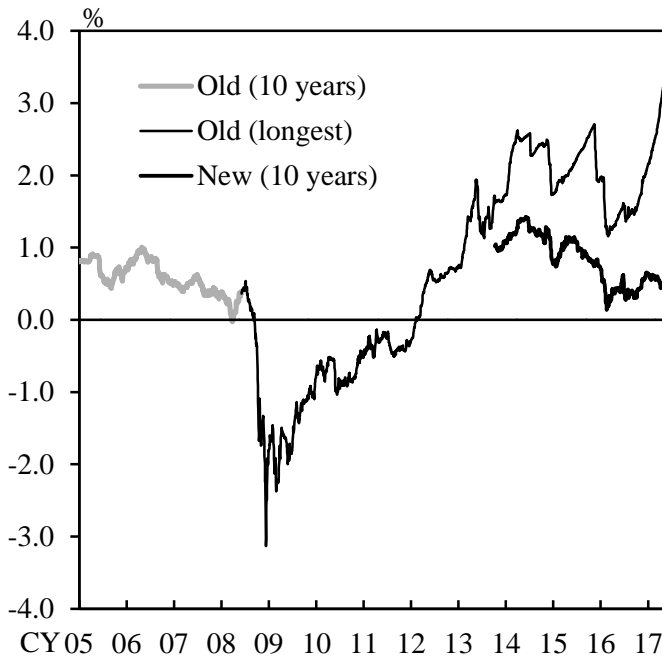
2. Figures for 2017/Q1 are January-February averages.

Sources: Ministry of Internal Affairs and Communications; Cabinet Office, etc.

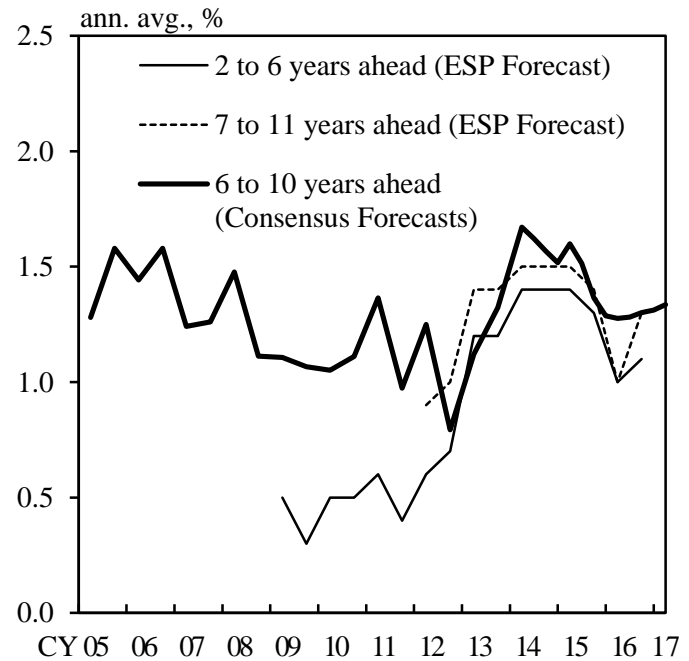
Inflation Expectations (1)

(1) Market Participants

(BEI for Inflation-Indexed JGBs)¹



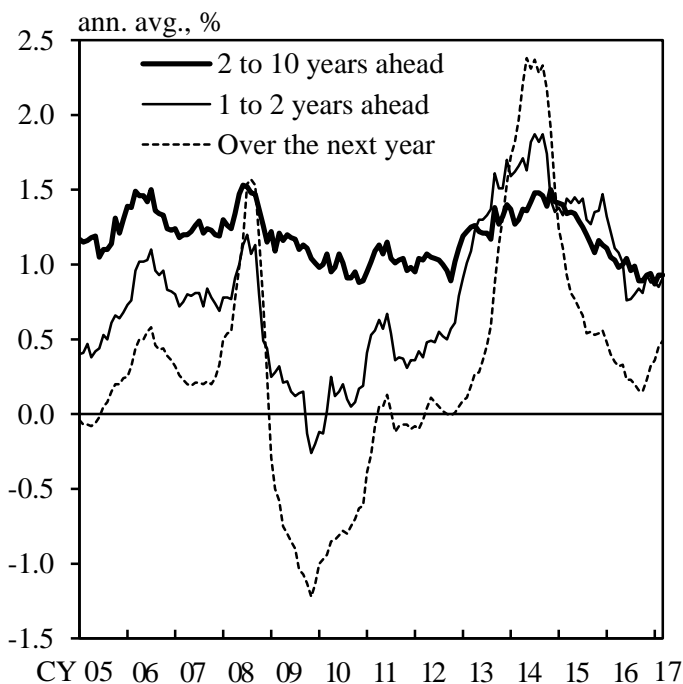
(2) Economists²



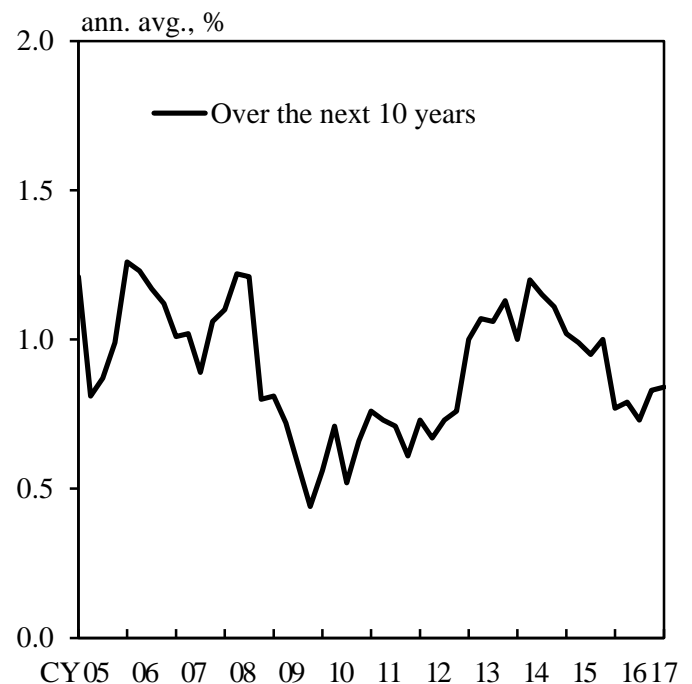
Notes: 1. BEI (break-even inflation) rates are yield spreads between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs. Inflation-indexed JGBs issued since October 2013 are designated as "new," while the rest are designated as "old." Figures for "old (longest)" are calculated using yield data for issue No. 16 of inflation-indexed JGBs, which matures in June 2018.
 2. Figures for the "Consensus Forecasts" are compiled every January, April, July, and October. Those up through April 2014 were compiled every April and October. Figures for the "ESP Forecast" are compiled every June and December, and exclude the effects of the consumption tax hikes.

(3) Market Participants

(a) QUICK Survey



(b) Survey by Mizuho Securities

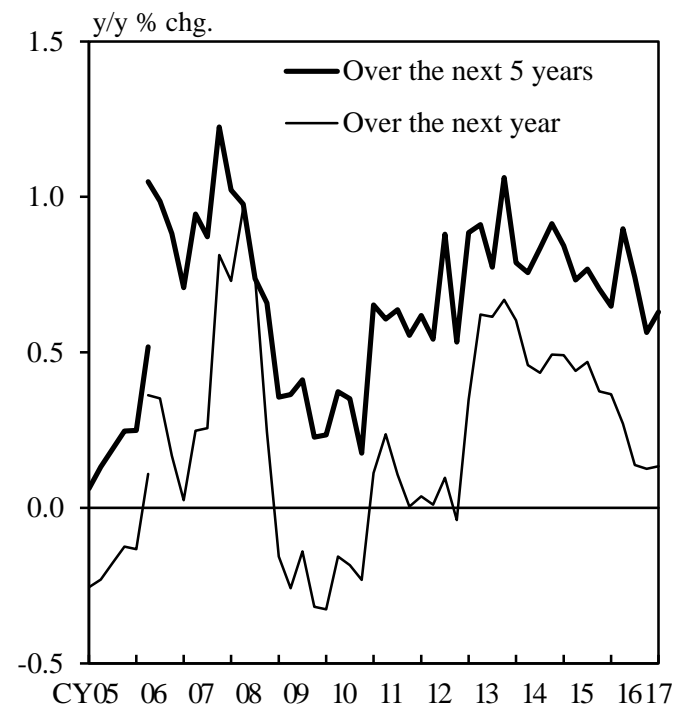


Note: From the September 2013 survey, the "QUICK Monthly Market Survey (Bonds)" asks respondents to include the effects of the consumption tax hikes. Figures for the survey by Mizuho Securities exclude the effects of the consumption tax hikes.
 Sources: Consensus Economics Inc., "Consensus Forecasts"; JCER, "ESP Forecast"; QUICK, "QUICK Monthly Market Survey (Bonds)"; Mizuho Securities, "Investor Survey"; Bloomberg.

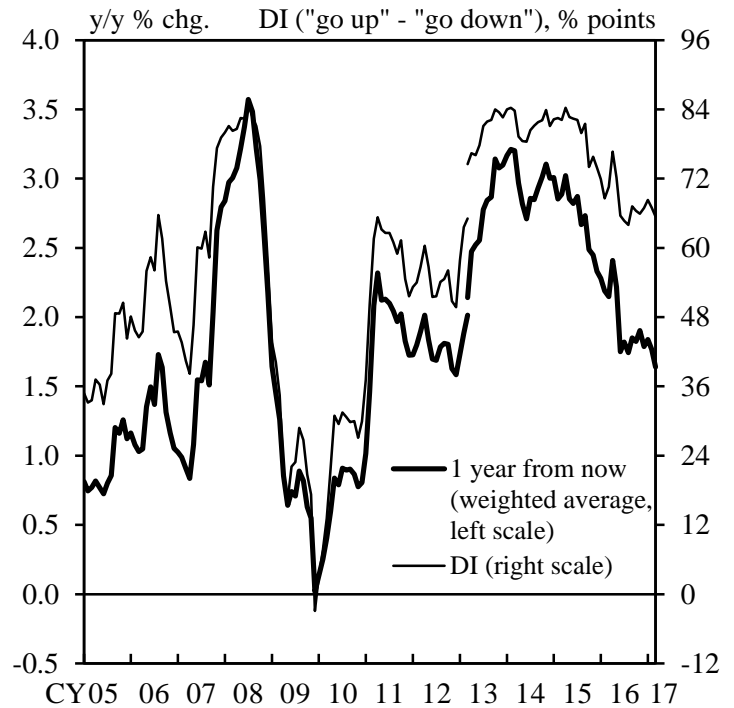
Inflation Expectations (2)

(1) Households

(a) Opinion Survey on the General Public's Views and Behavior^{1,2}



(b) Consumer Confidence Survey^{3,4}



Notes: 1. Figures are estimated using the modified Carlson-Parkin method.

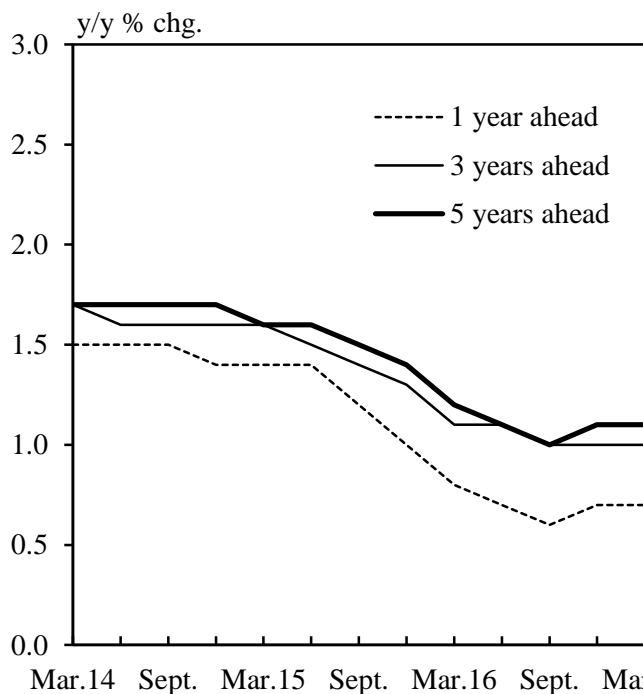
2. From the June 2013 survey, the "Opinion Survey" asks respondents to exclude the effects of the consumption tax hikes.

3. Figures are for all households.

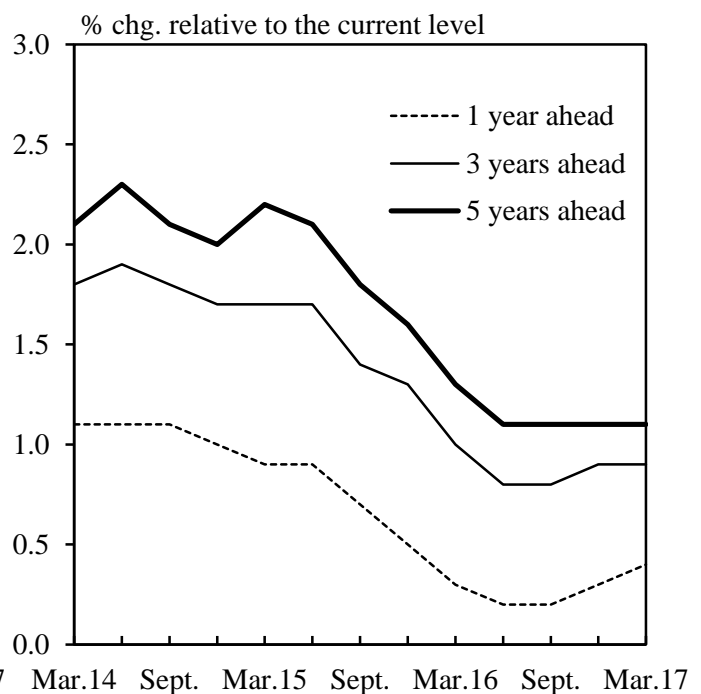
4. The weighted average is calculated based on the following assumption: survey responses chosen by households as their expected inflation rates -- "-5% or below," "from -5% to -2%," "from -2% to 0%," "from 0% to +2%," "from +2% to +5%," and "+5% or above" -- indicate expected inflation rates of -5%, -3.5%, -1%, +1%, +3.5%, and +5%, respectively.

(2) Enterprises (*Tankan*, All Industries and Enterprises, Average)

(a) Outlook for General Prices



(b) Outlook for Output Prices

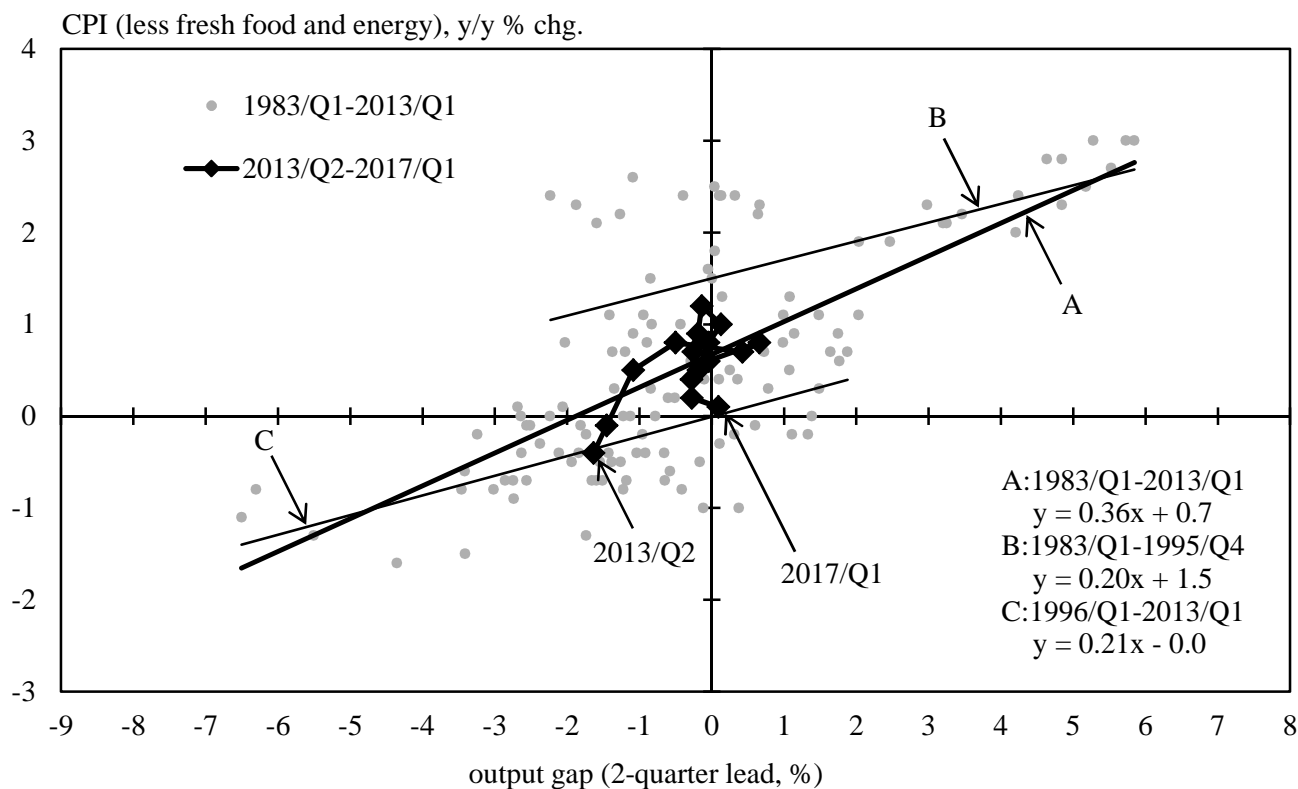


Note: Figures exclude the effects of the consumption tax hikes.

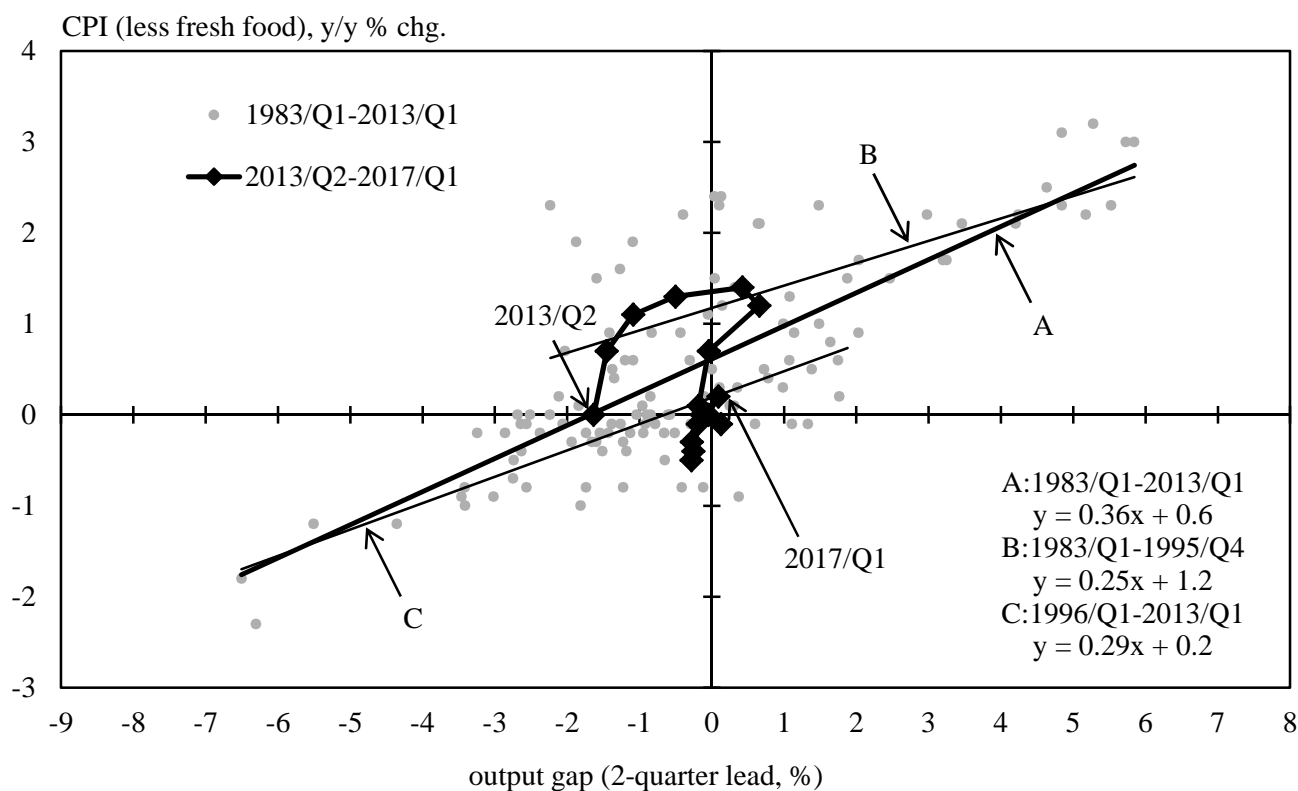
Sources: Bank of Japan; Cabinet Office; Ministry of Internal Affairs and Communications.

Output Gap and Inflation Rate

(1) Phillips Curve (CPI All Items Less Fresh Food and Energy)



(2) Phillips Curve (CPI All Items Less Fresh Food)



Notes: 1. The output gap is estimated by the Research and Statistics Department, Bank of Japan.

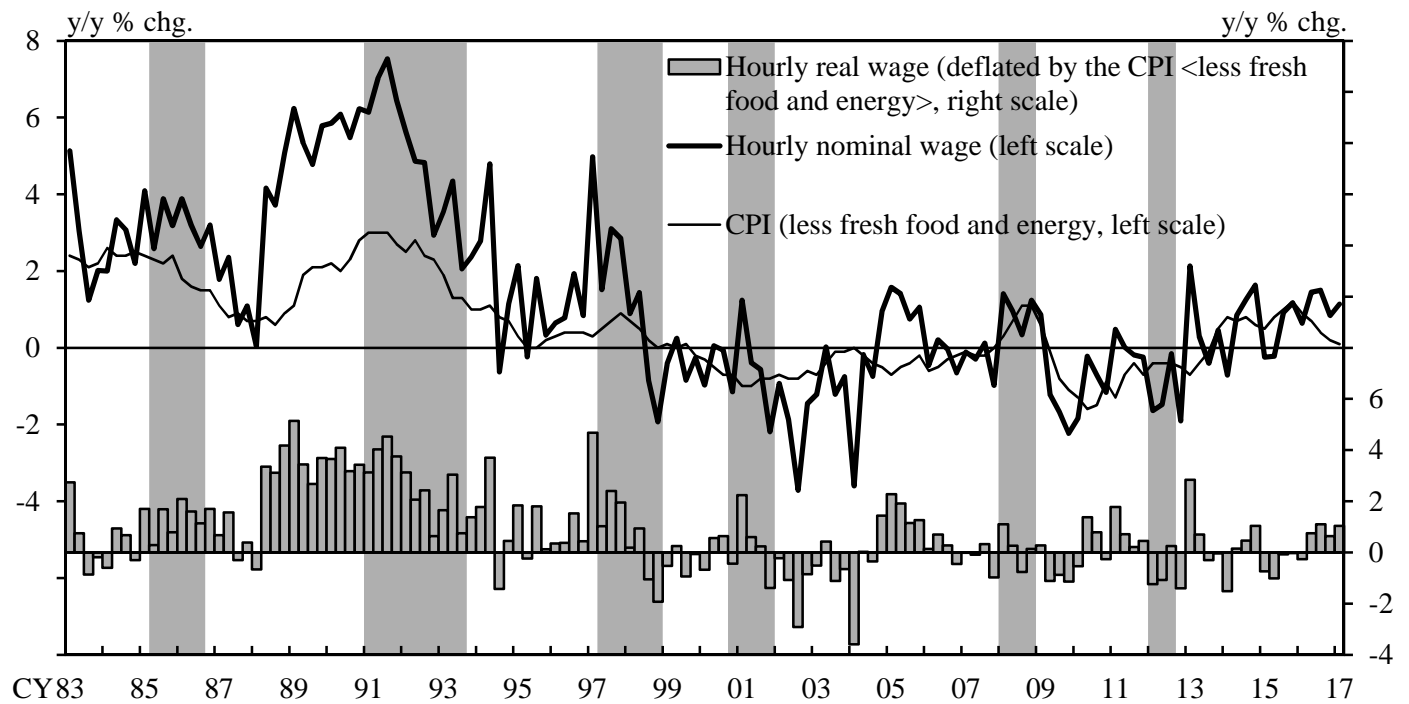
2. Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.

3. Figures for the CPI for 2017/Q1 are January-February averages.

Sources: Ministry of Internal Affairs and Communications; Cabinet Office, etc.

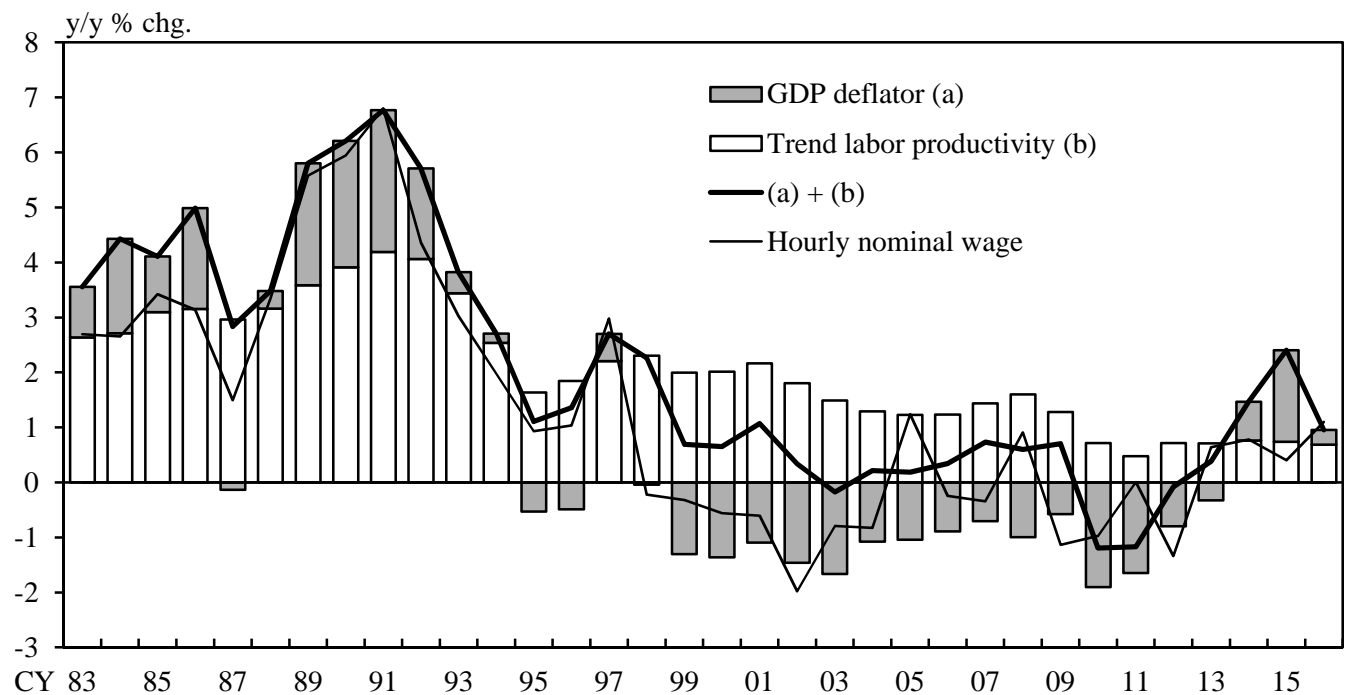
Prices and Wages

(1) CPI and Nominal Wage



- Notes: 1. Figures based on the "Monthly Labour Survey" up through 1990/Q4 are for establishments with 30 or more employees. The same applies to the chart below.
 2. Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.
 3. Shaded areas indicate recession periods.
 4. Figures for 2017/Q1 are January-February averages.

(2) Trend Labor Productivity and Hourly Nominal Wage

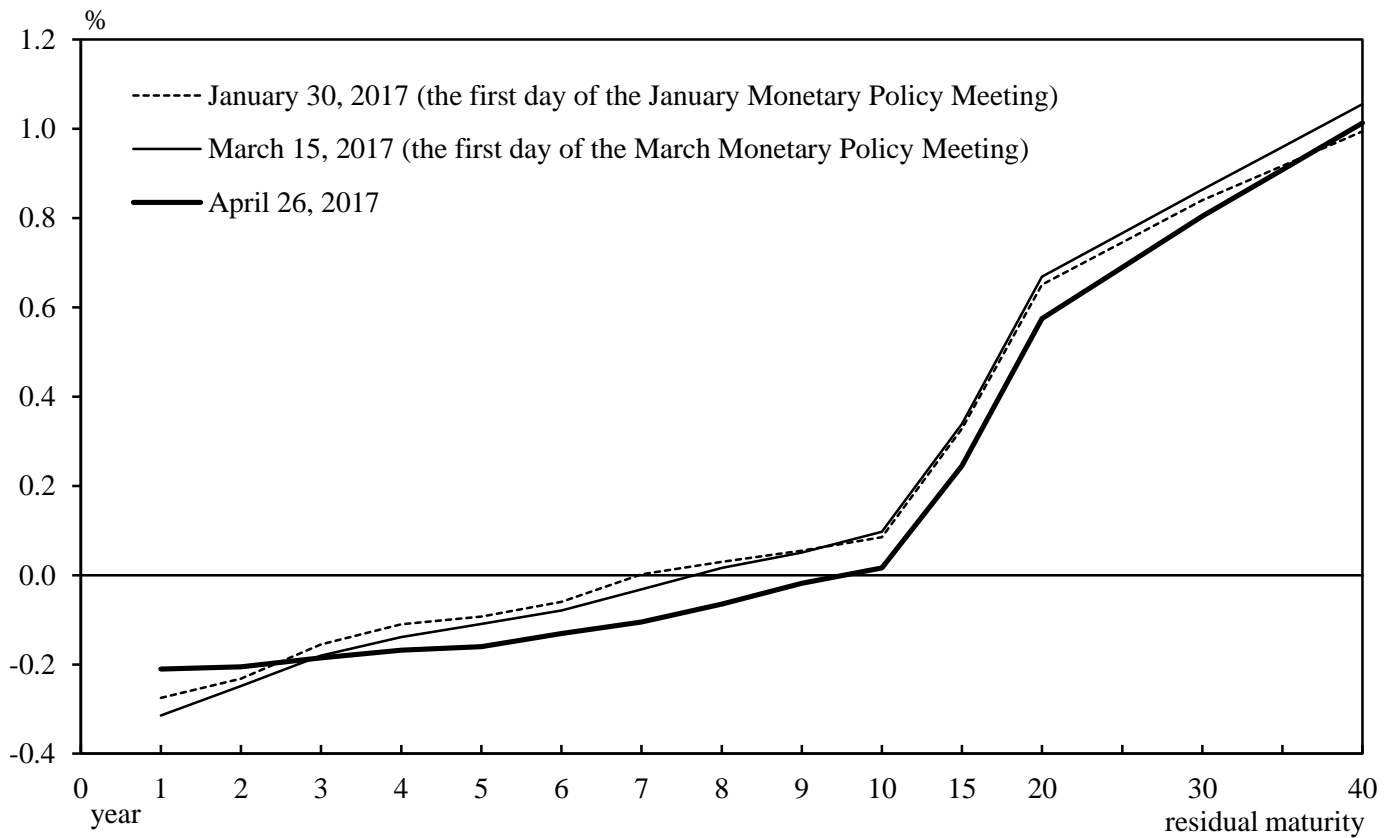


- Notes: 1. The trend labor productivity is estimated by the Research and Statistics Department, Bank of Japan.
 2. Figures for the GDP deflator are adjusted to exclude the effects of the consumption tax hike in 2014. This adjustment is based on estimates by the Cabinet Office in January 2017.

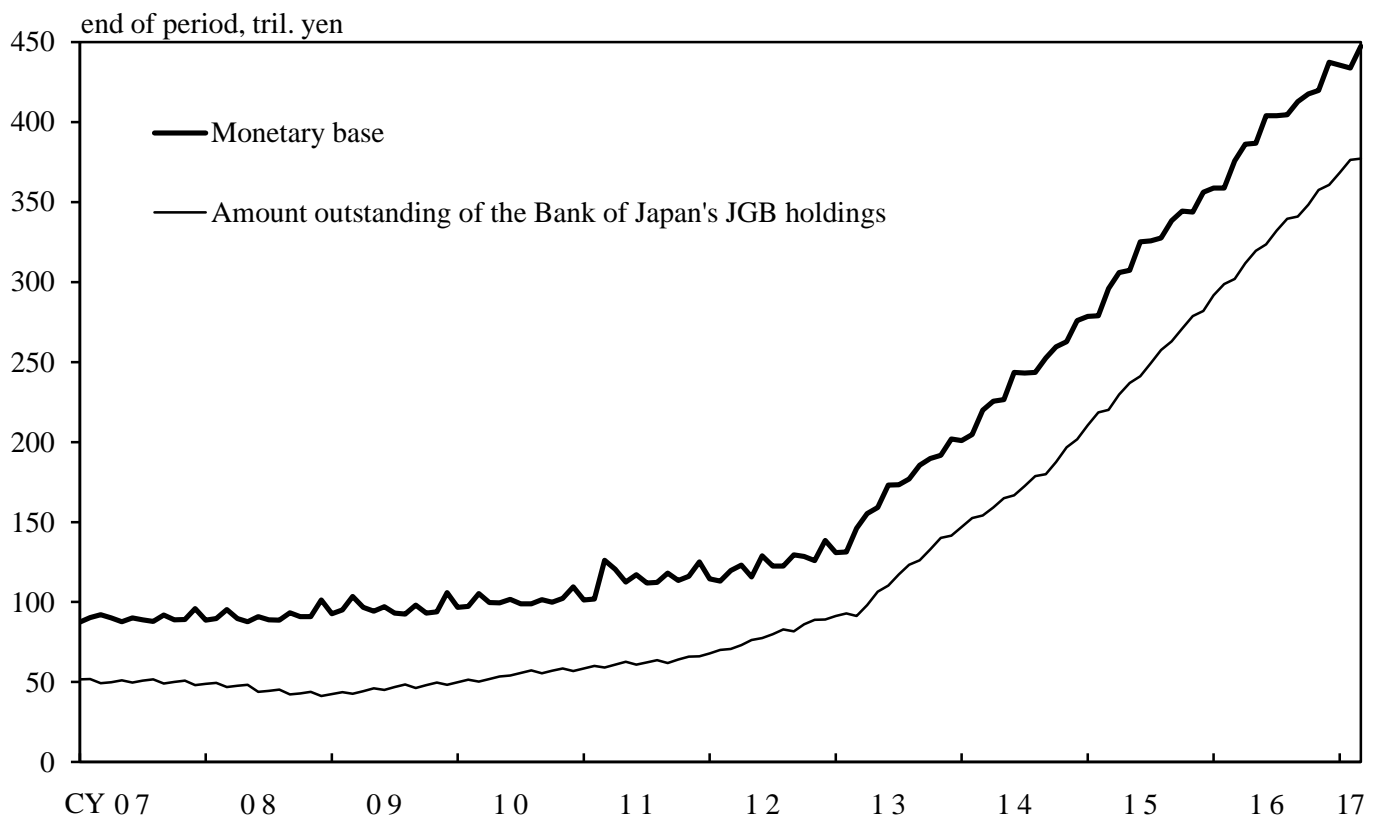
Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Cabinet Office.

Yield Curve and Monetary Base

(1) Yield Curve



(2) Expansion in the Monetary Base and JGB Holdings

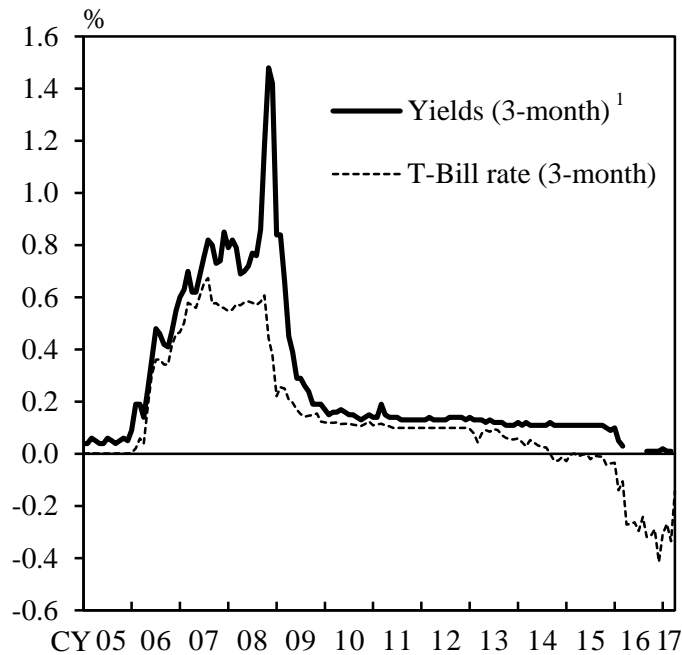


Sources: Bank of Japan; Bloomberg.

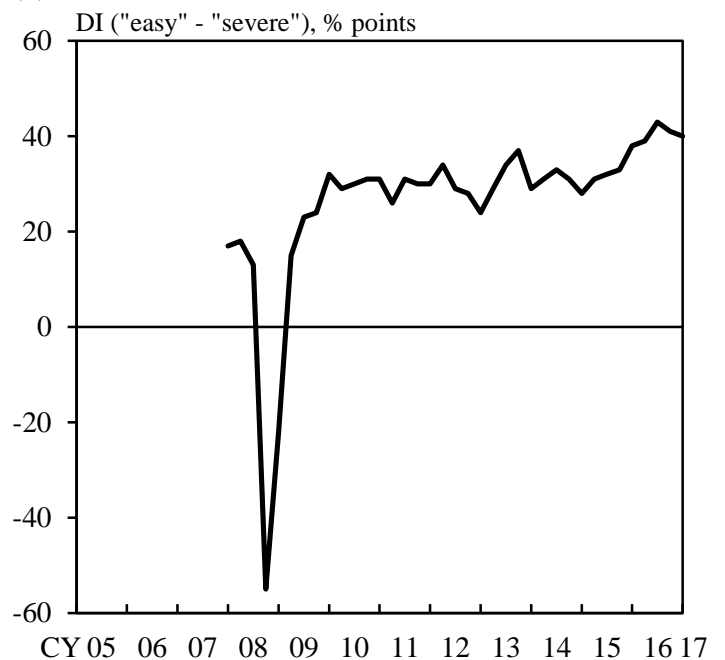
Issuance Conditions for CP and Corporate Bonds

(1) Issuance Yields and Conditions for CP Issuance

(a) Yields



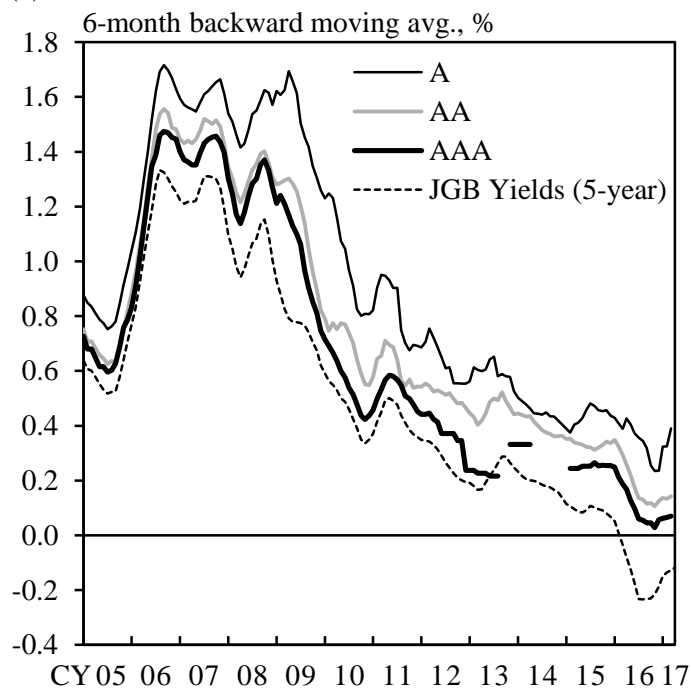
(b) Conditions for CP Issuance²



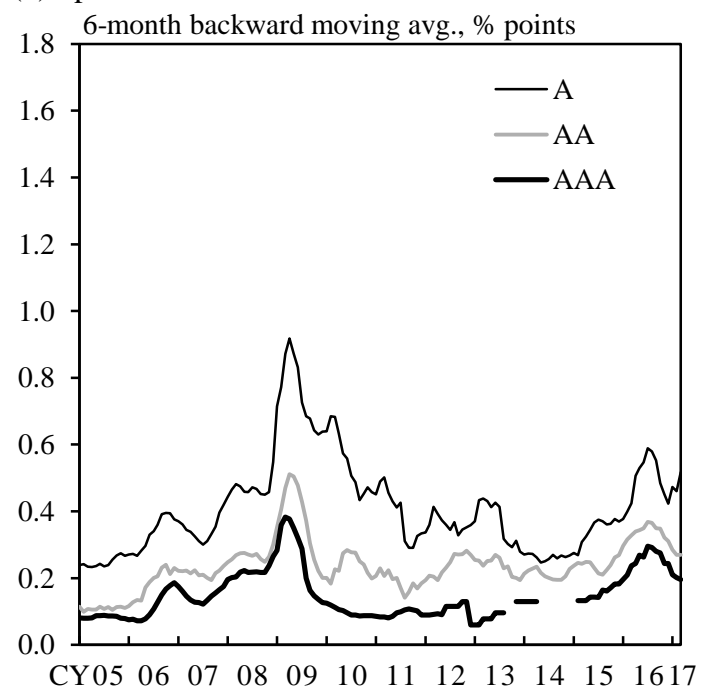
Notes: 1. The break in the line from April 2016 to August 2016 is due to the suspension of the publication of data during this period. Figures up to September 2009 are the average issuance rates of CP (3-month, rated a-1 or higher). Figures from October 2009 are the average issuance rates of CP (3-month, rated a-1).
 2. Based on the *Tankan*. Figures are for all industries and large enterprises, and are based on responses of CP-issuing enterprises.

(2) Issuance Yields and Spreads for Corporate Bonds by Securities Rating

(a) Yields



(b) Spreads

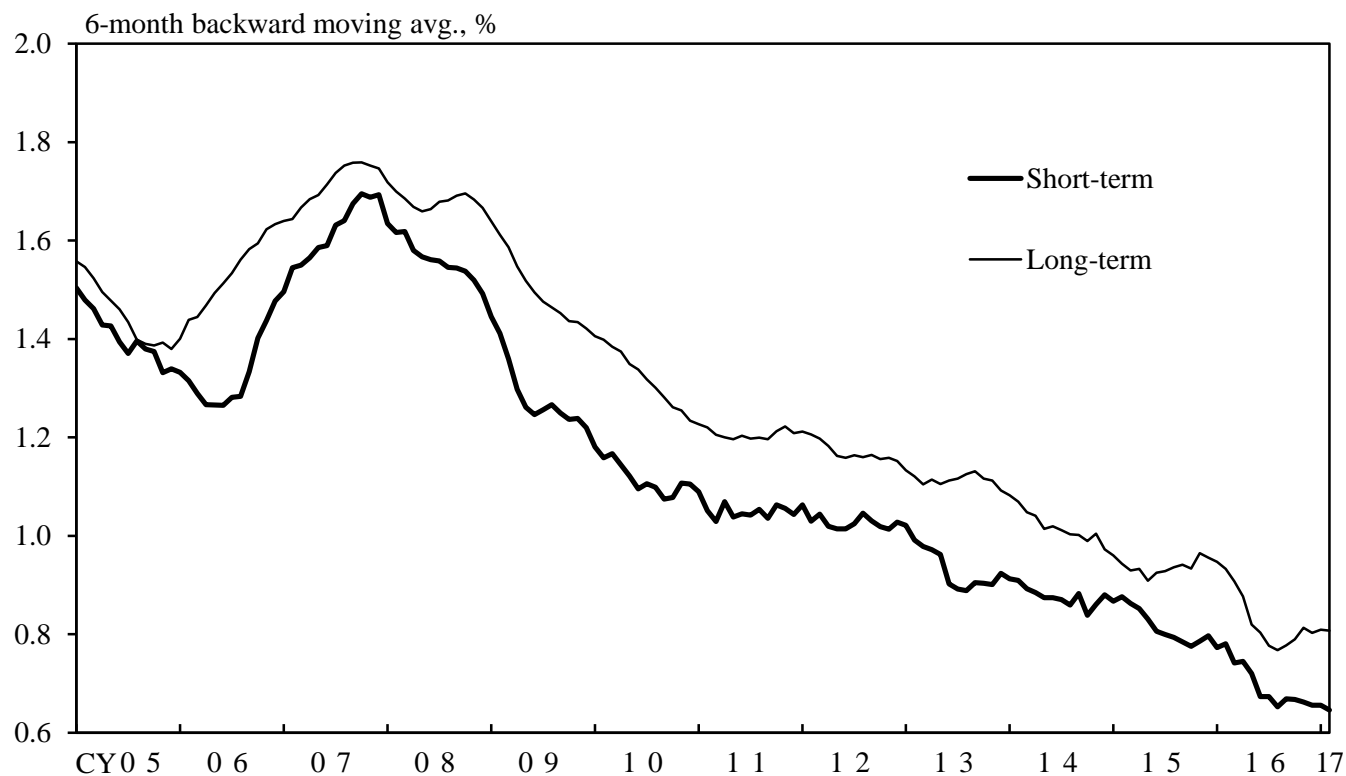


Notes: 1. Figures are the averages for domestically issued bonds launched on a particular date.
 2. Bonds issued by banks and securities companies, etc., are excluded.
 3. The issuance spreads for corporate bonds are the issuance rate of these bonds minus the government bond yield.
 4. Bonds are classified based on the highest rating among the ratings from Moody's, S&P, R&I, and JCR.
 5. Breaks in a line indicate periods when bonds were not issued for six or more months.

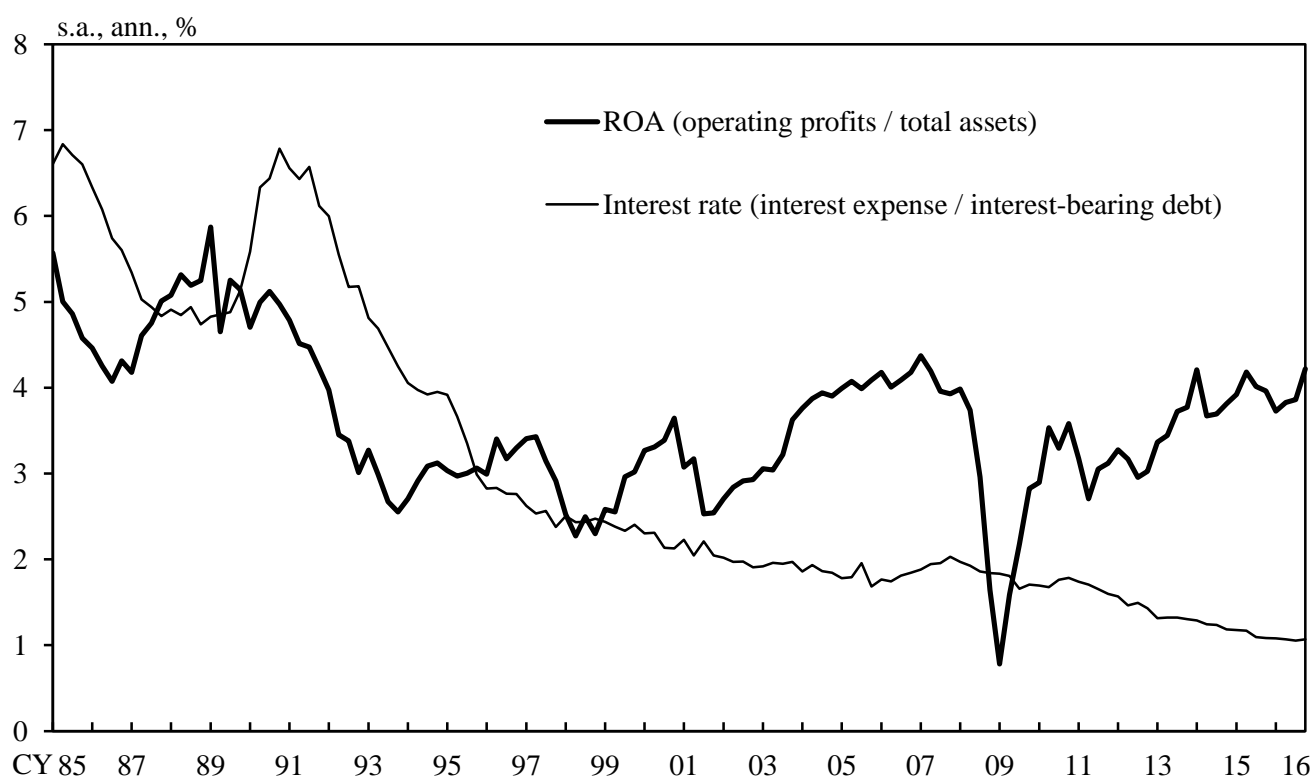
Sources: Bank of Japan; Japan Securities Depository Center; Capital Eye; I-N Information Systems; Bloomberg.

Bank Lending Rates

(1) Average Contract Interest Rates on New Loans and Discounts



(2) ROA and Interest Rate



Notes: 1. Figures are taken from the "Financial Statements Statistics of Corporations by Industry, Quarterly," and are the total for enterprises of all sizes and in all industries. The finance and insurance industry is excluded.

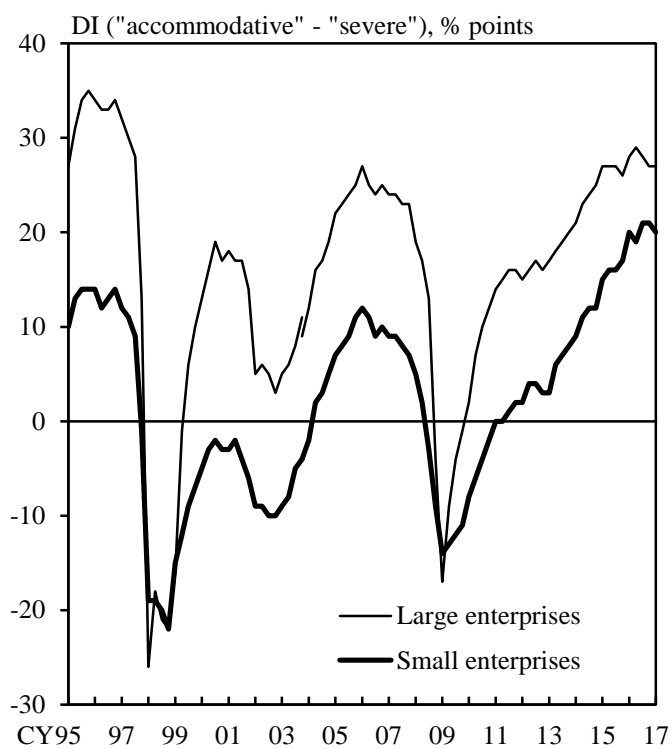
2. Interest-bearing debt is the sum of long- and short-term borrowings, corporate bonds, and bills receivable discounted outstanding.

Sources: Bank of Japan; Ministry of Finance.

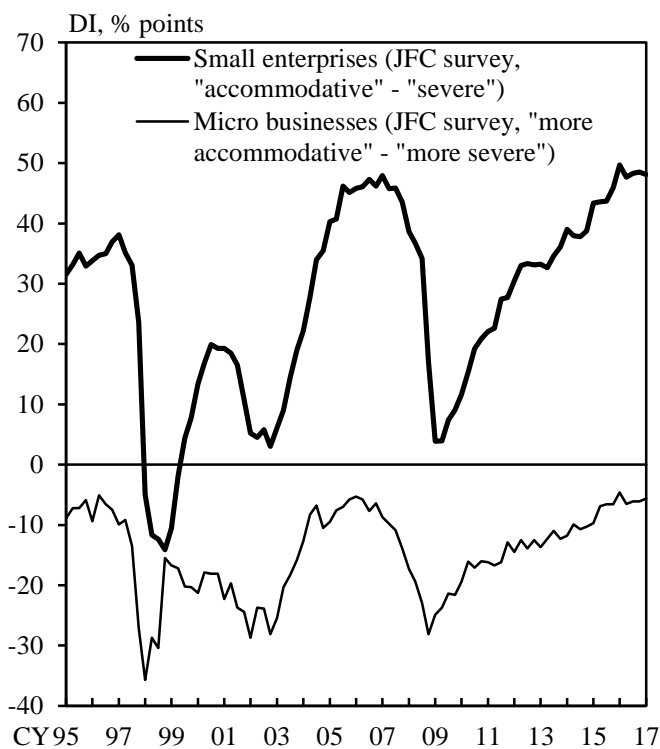
Corporate Finance-Related Indicators

(1) Lending Attitude of Financial Institutions as Perceived by Firms

(a) *Tankan*

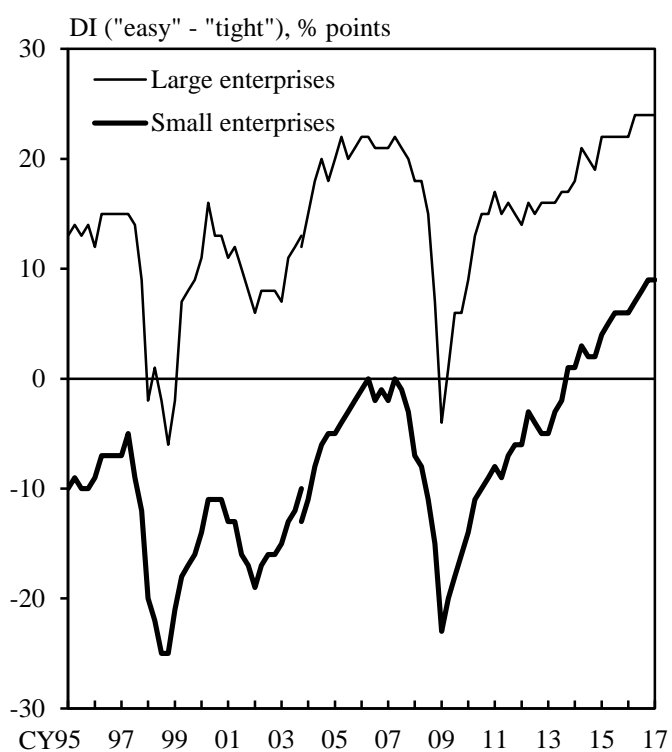


(b) Other Surveys

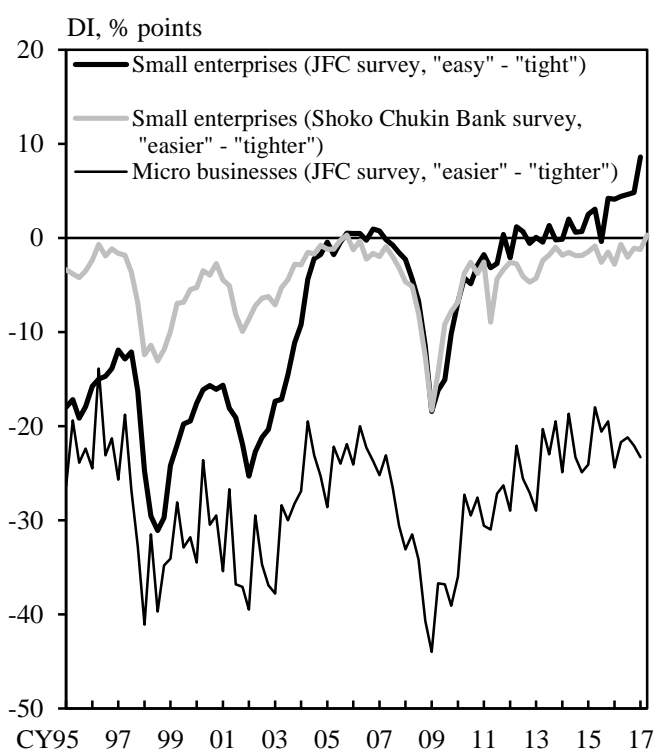


(2) Financial Position

(a) *Tankan*



(b) Other Surveys



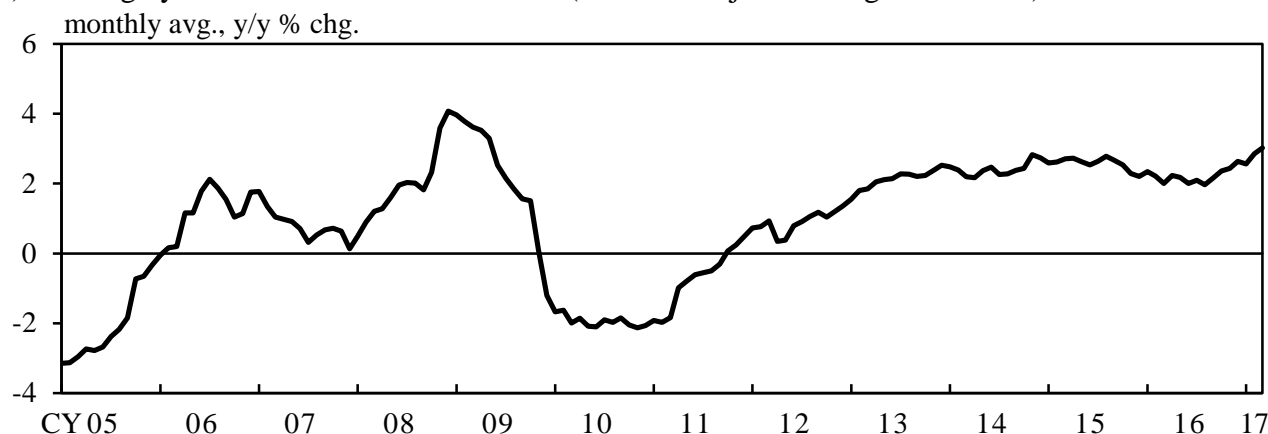
Notes: 1. Data from the *Tankan* are based on all industries. There is a discontinuity in the data in December 2003 due to a change in the survey framework.

2. The figure for 2017/Q2 is that of April.

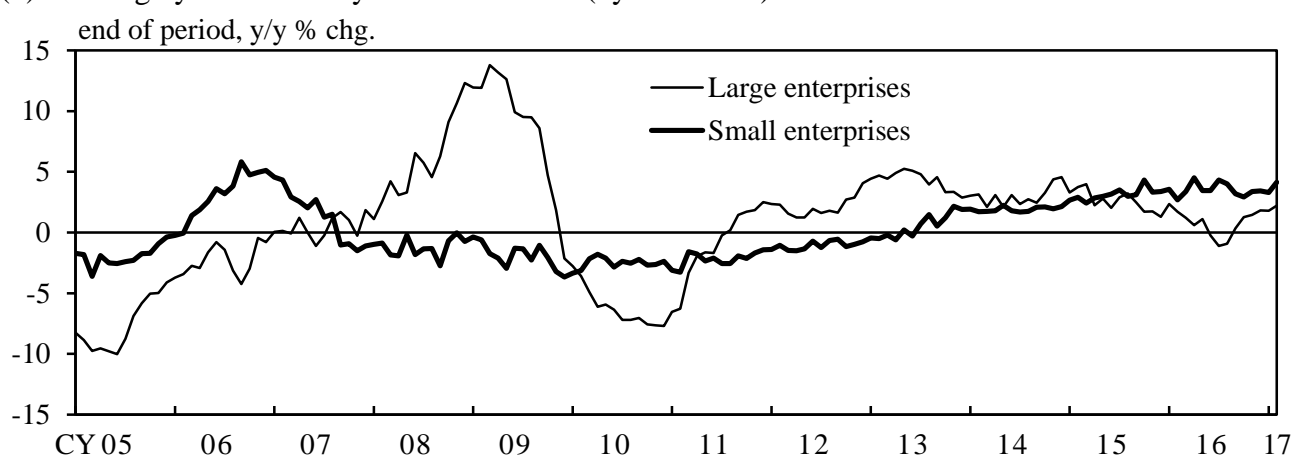
Sources: Bank of Japan; Shoko Chukin Bank; Japan Finance Corporation (JFC).

Amount Outstanding of Bank Lending, CP, and Corporate Bonds

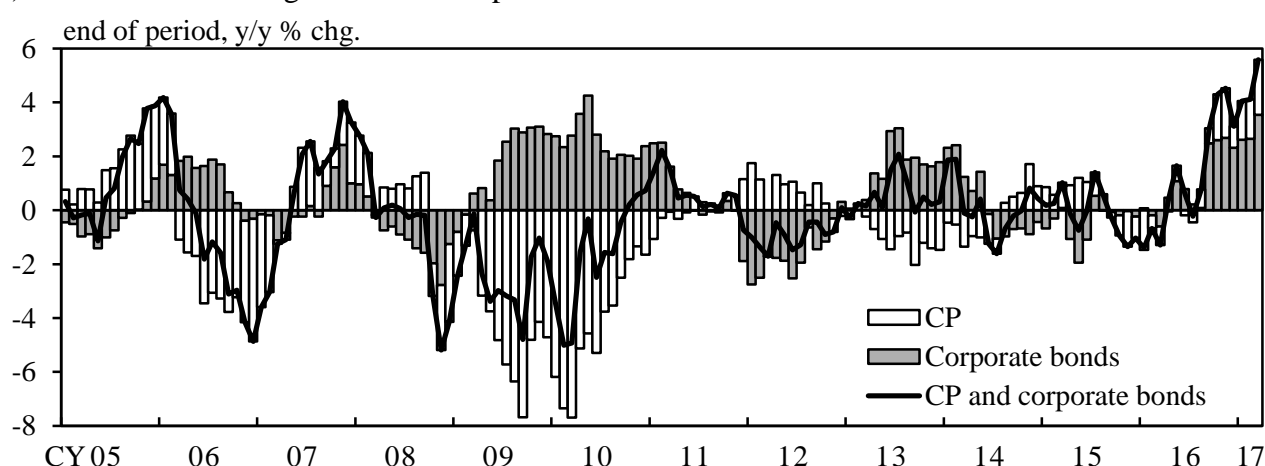
(1) Lending by Domestic Commercial Banks (Total of Major and Regional Banks)



(2) Lending by Domestically Licensed Banks (by Firm Size)



(3) Amount Outstanding of CP and Corporate Bonds



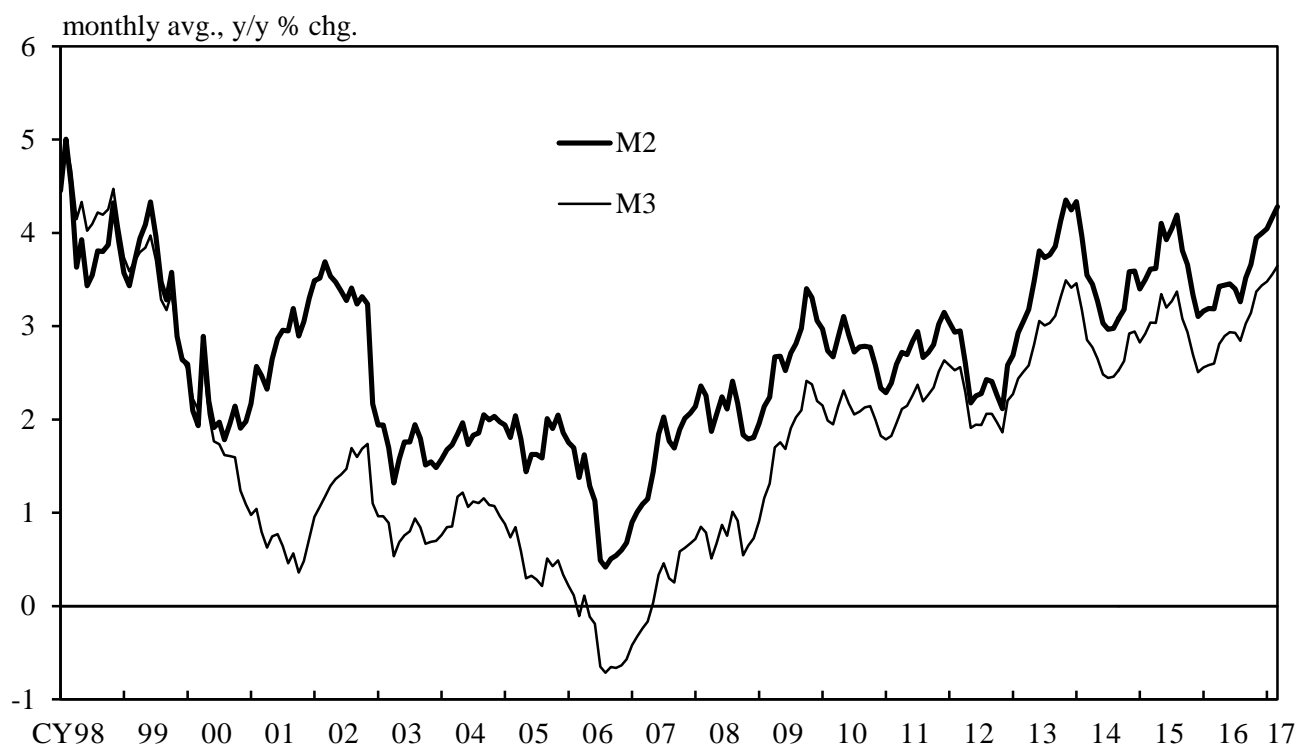
Notes: 1. Figures for CP are those for short-term corporate bonds registered under the book-entry transfer system. Those issued by banks, securities companies, and others such as foreign corporations are excluded; ABCP is included. Figures up to March 2008 are those compiled by the Bank of Japan.

2. Figures for corporate bonds are calculated based on the sum of straight bonds issued in both domestic and overseas markets. Bonds issued by banks and insurance companies are excluded. Domestic bonds are those registered under the book-entry transfer system. The figures for corporate bonds are obtained by splicing figures up to April 2008 published by the Japan Securities Dealers Association with figures from May 2008 published by the Japan Securities Depository Center. Figures up to April 2008 are adjusted to be consistent with figures from May 2008.

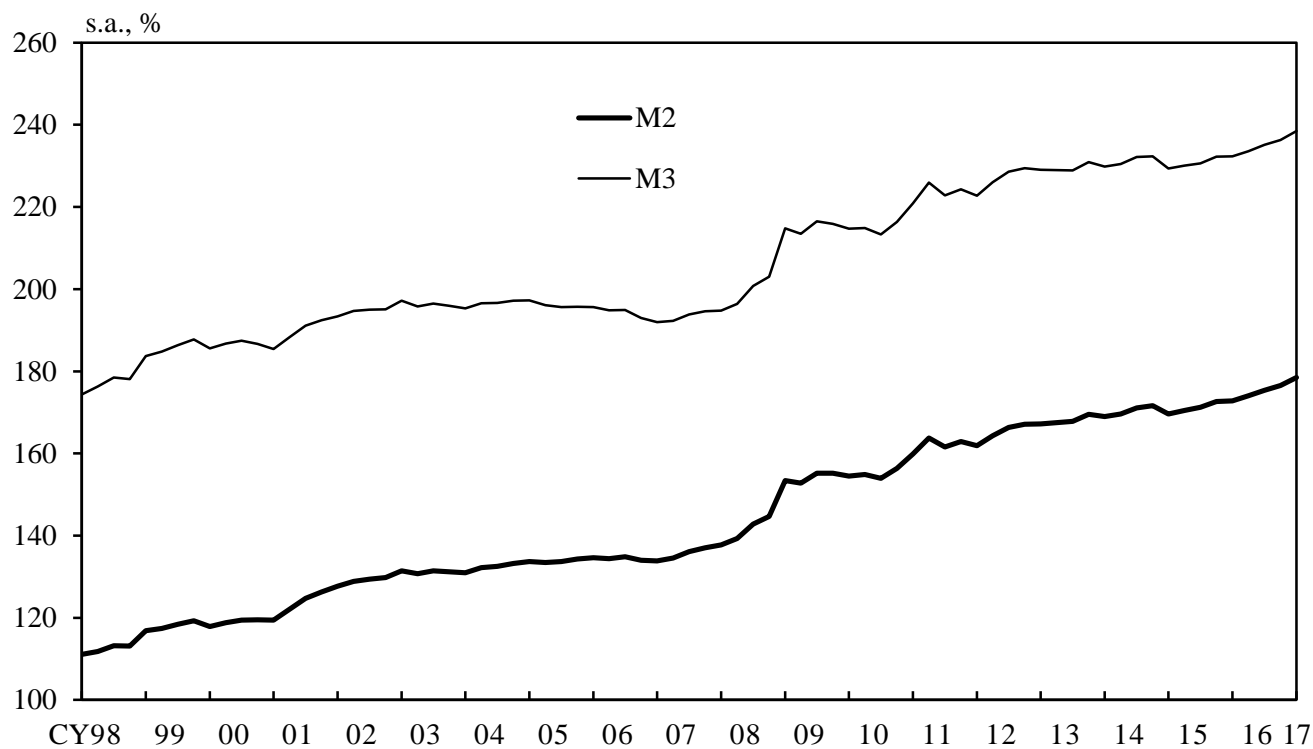
Sources: Bank of Japan; Japan Securities Depository Center; Japan Securities Dealers Association; I-N Information Systems.

Money Stock

(1) Changes from a Year Earlier



(2) Ratio of Money Stock to Nominal GDP



Notes: 1. Figures for M2 up to March 2003 are the former series of the figures for M2+CDs.

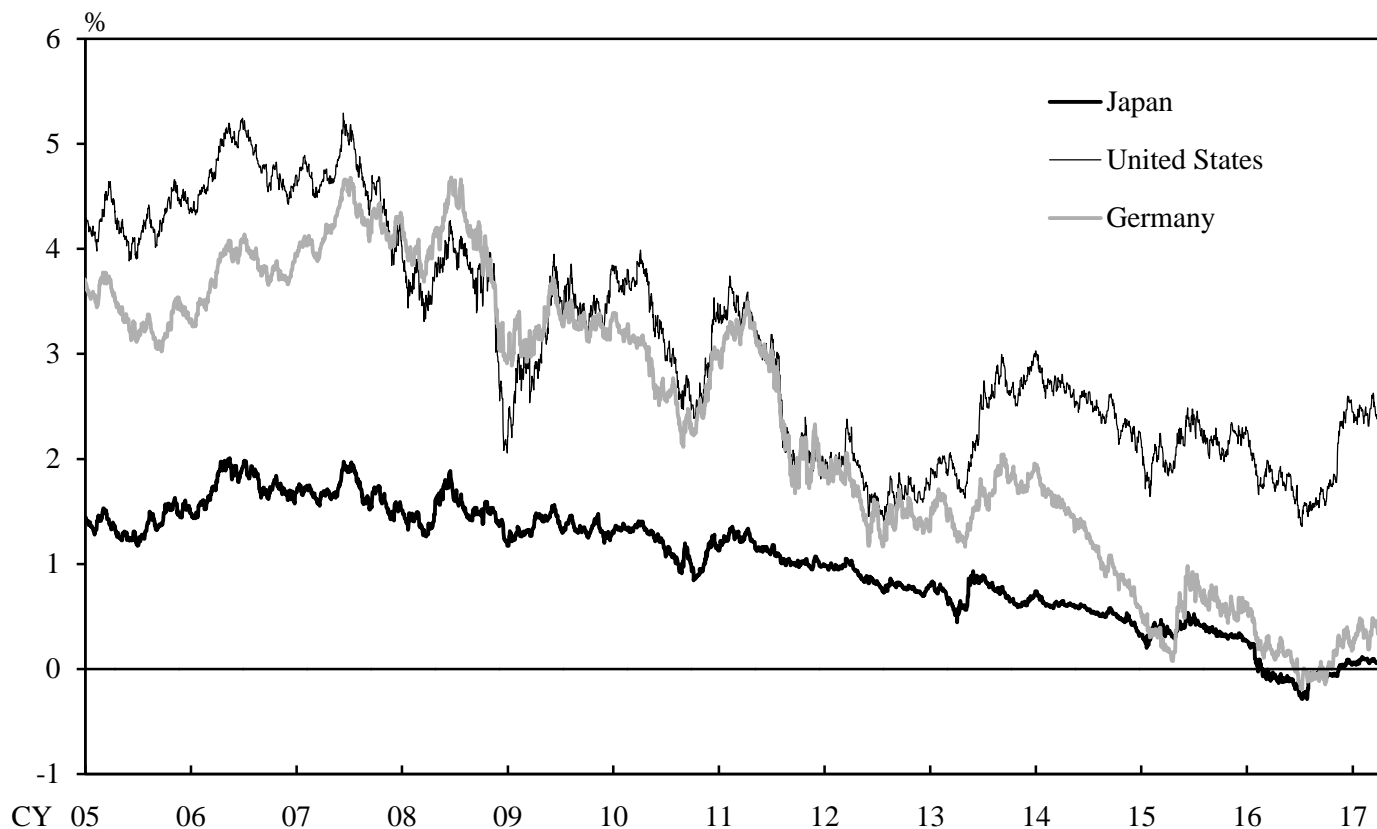
2. Figures for M3 up to March 2003 are the former series of the figures for M3+CDs minus the figures for pecuniary trusts.

3. The figure for nominal GDP in 2017/Q1 is assumed to be unchanged from the previous quarter.

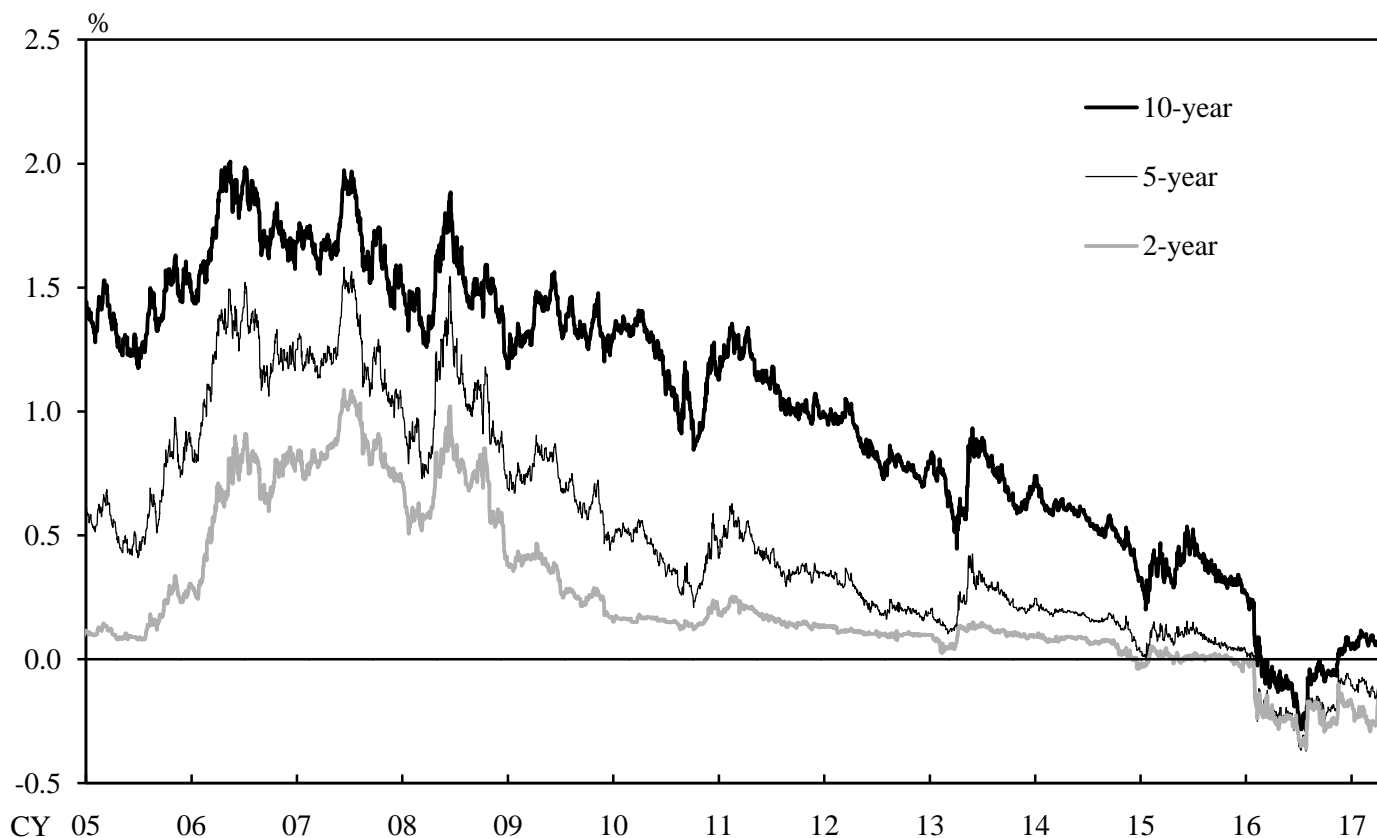
Sources: Bank of Japan; Cabinet Office.

Nominal Benchmark Yields

(1) 10-Year Government Bond Yields in Selected Advanced Economies



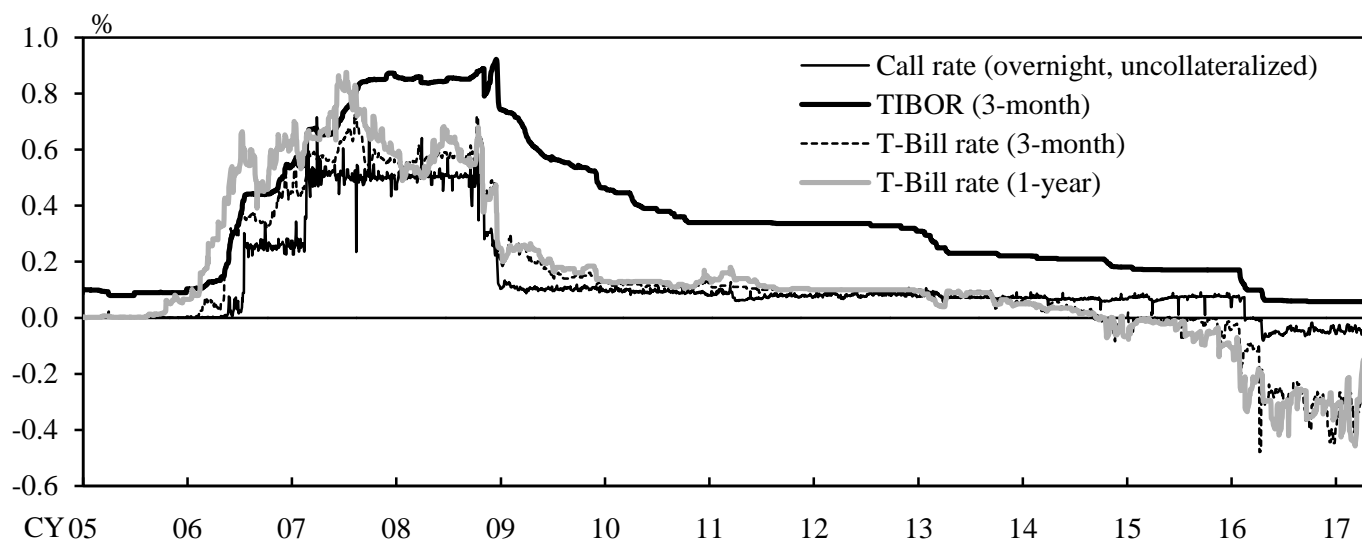
(2) JGB Yields



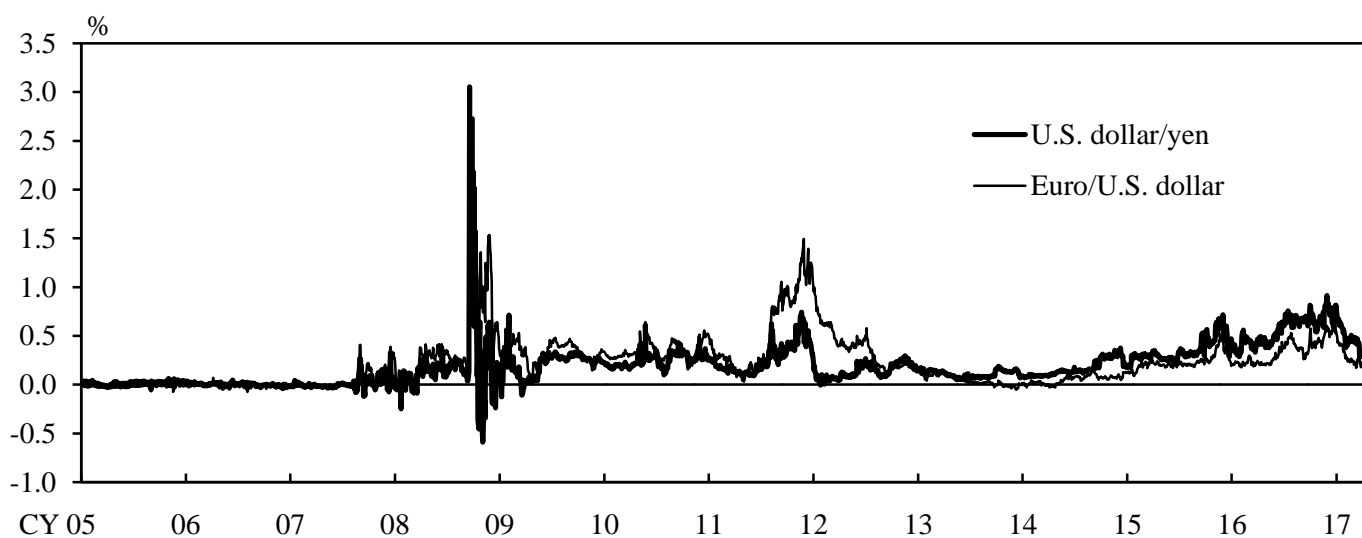
Source: Bloomberg.

Money Market Rates

(1) Short-Term Interest Rates

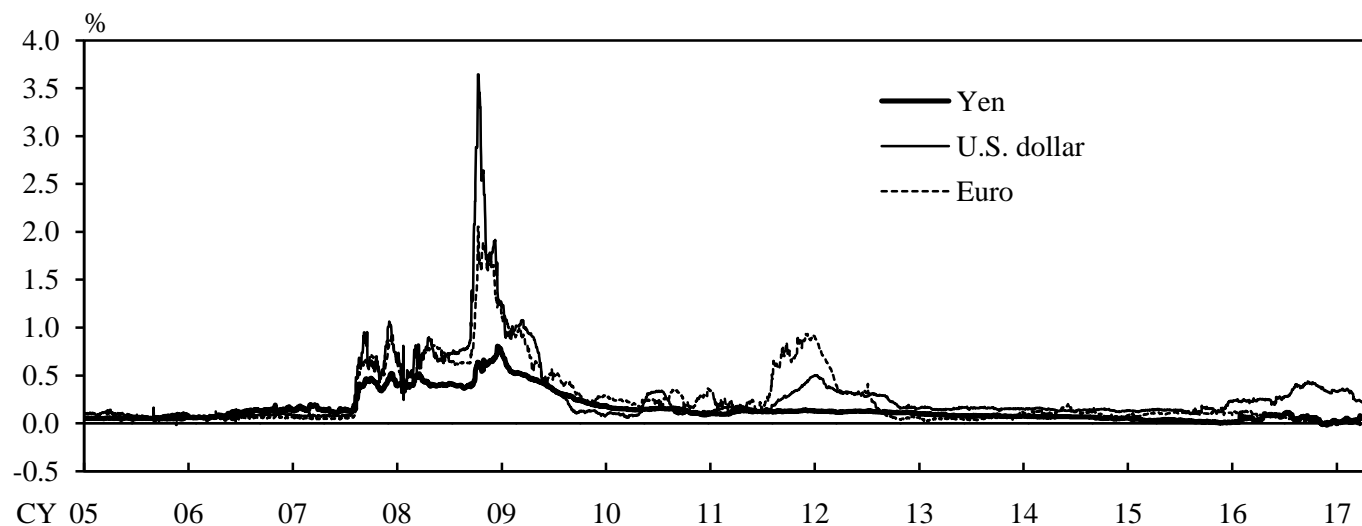


(2) Dollar Funding Premiums through Foreign Exchange Swaps



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

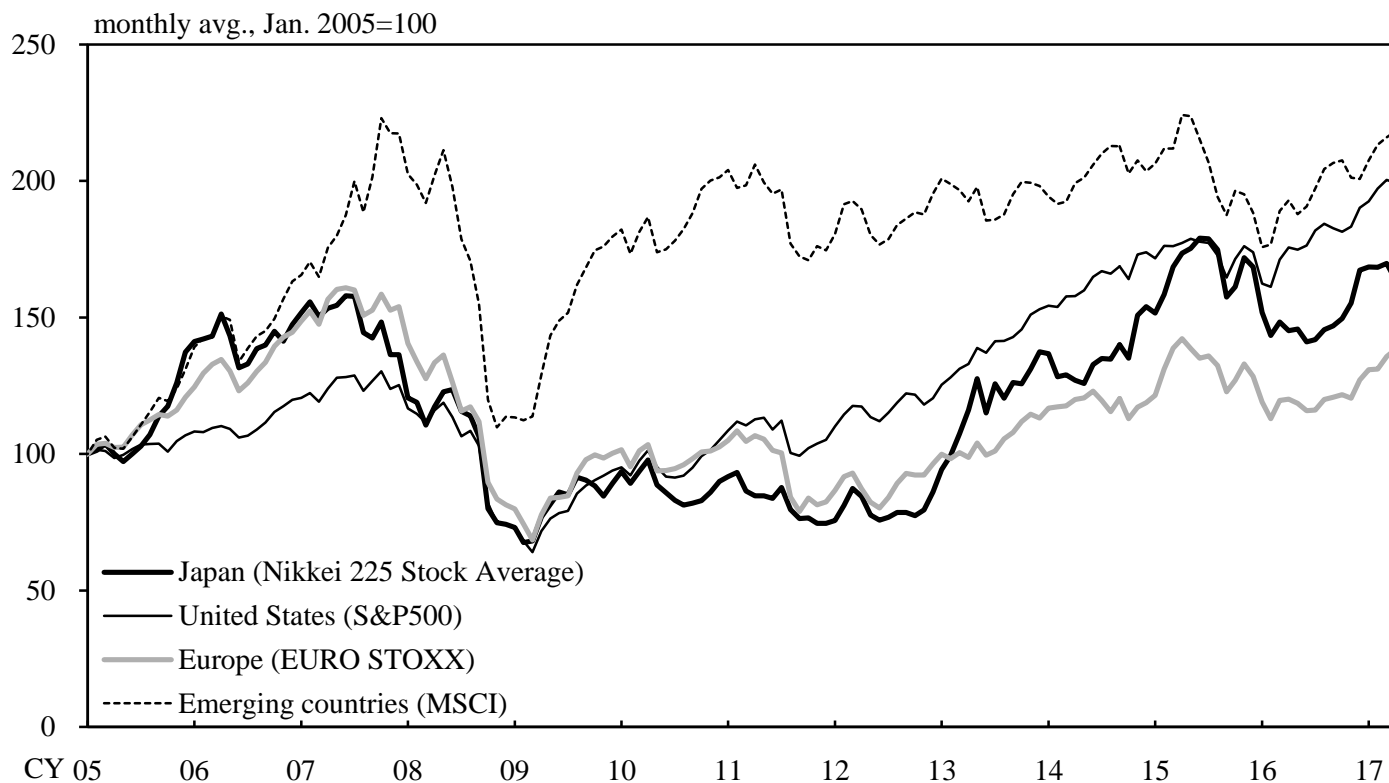
(3) Credit Spreads for Yen-, Dollar-, and Euro-Denominated Term Instruments



Note: The credit spreads for term instruments are LIBOR (3-month) minus yields on overnight index swaps (3-month).
Sources: Bank of Japan; Bloomberg.

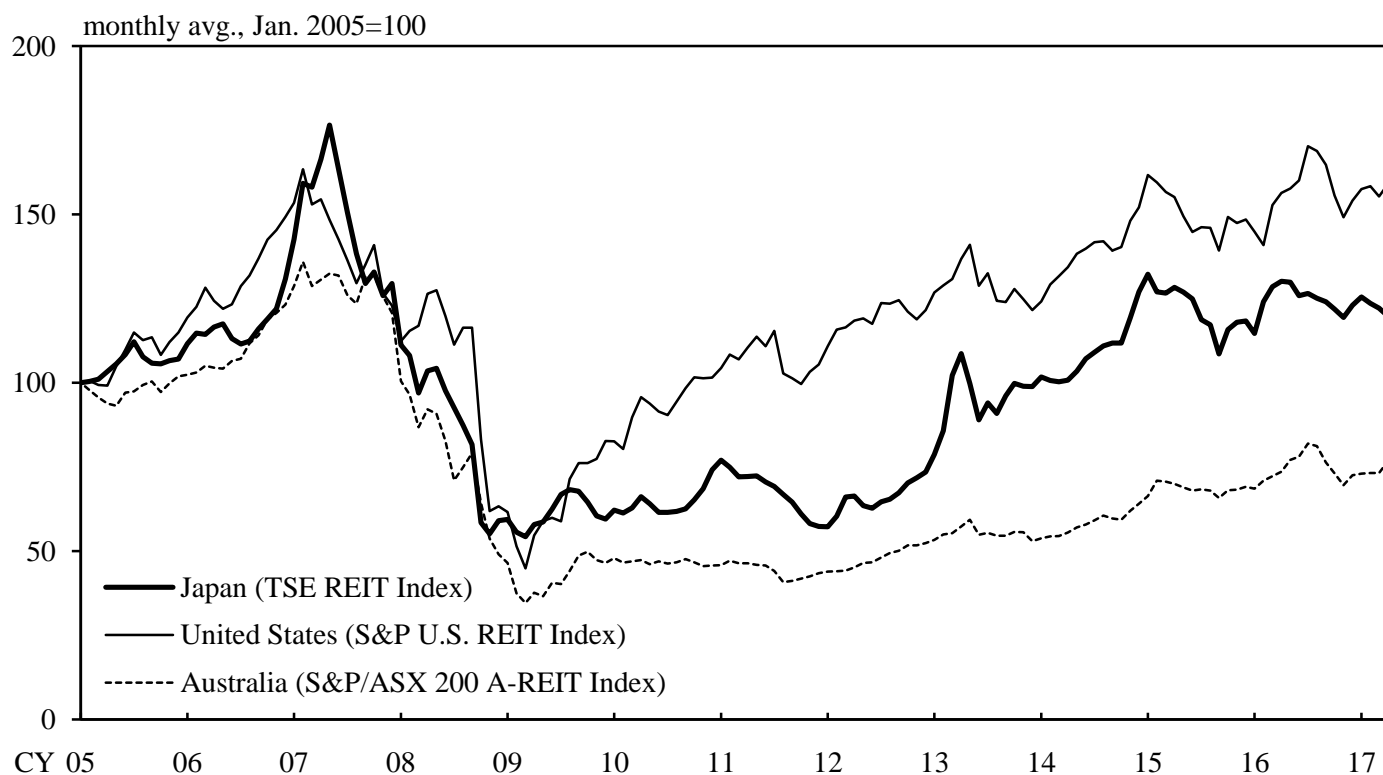
Stock Prices and REIT Prices

(1) Selected Stock Prices



Note: Figures for emerging countries are based on the MSCI Emerging Markets Index calculated in the local currencies.

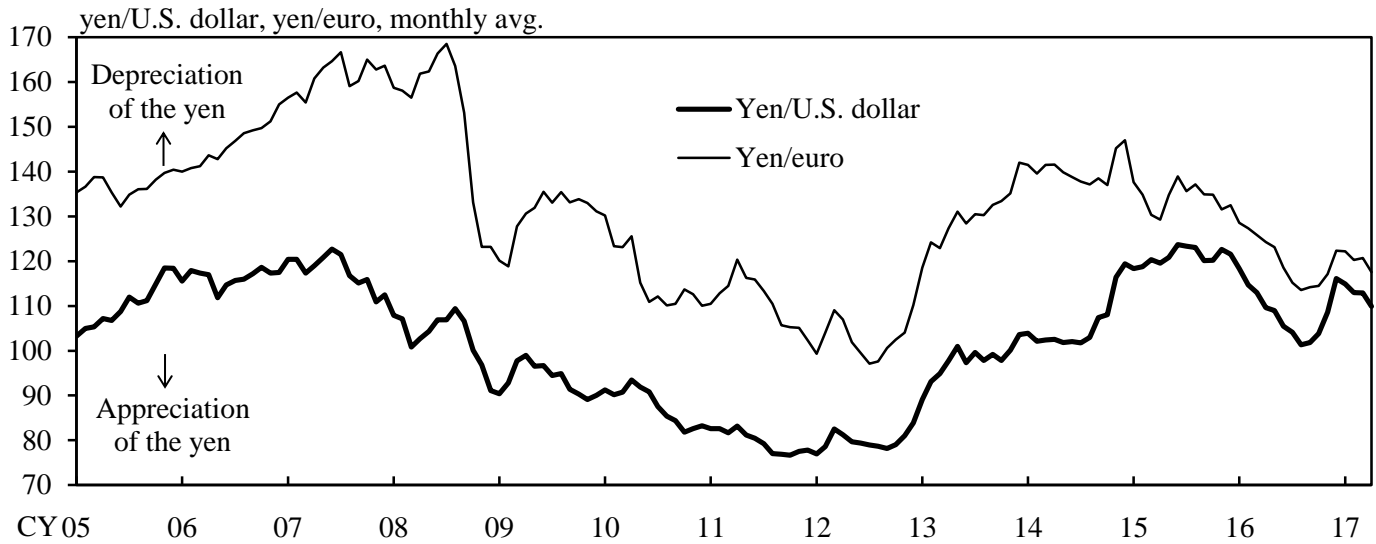
(2) Selected REIT Indexes



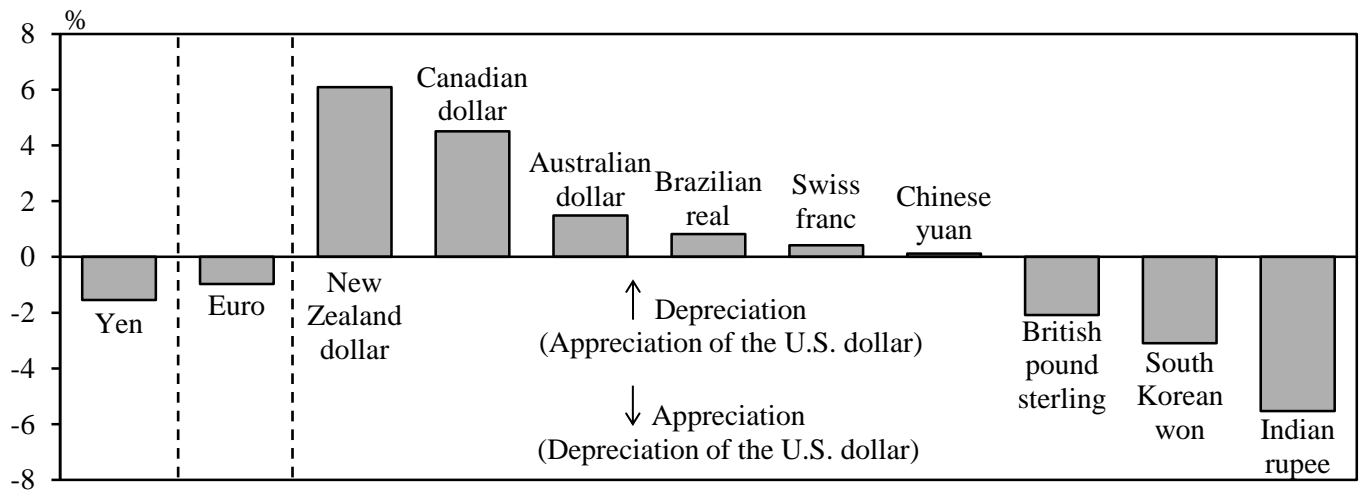
Source: Bloomberg.

Exchange Rates

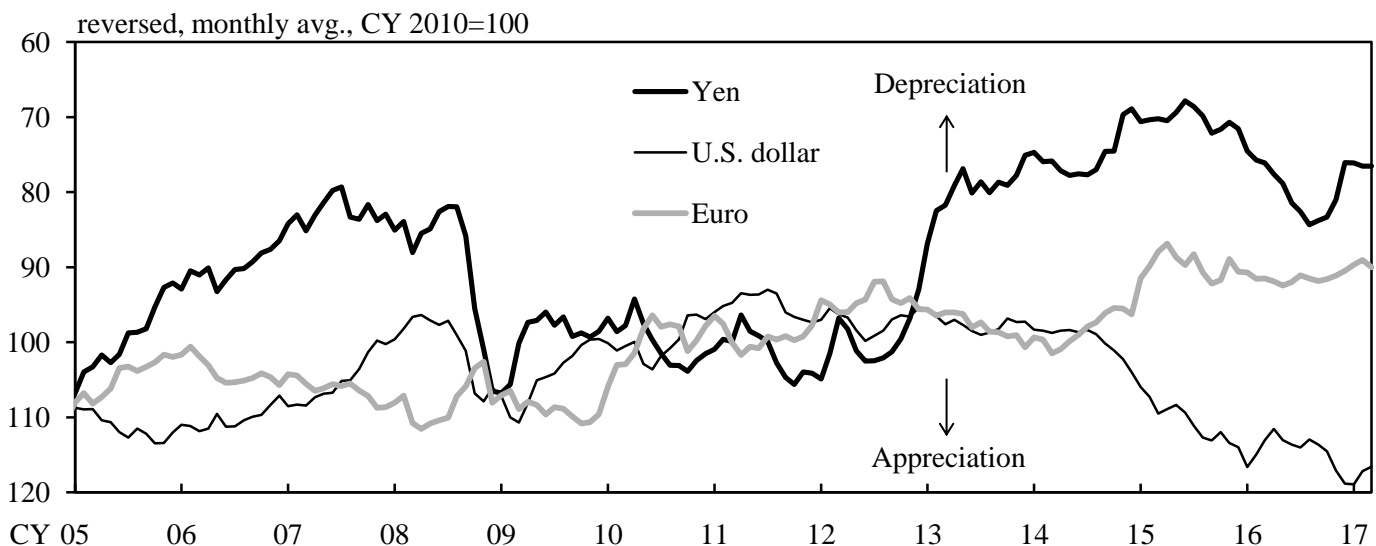
(1) Yen/U.S. Dollar and Yen/Euro



(2) Rates of Change in Selected Currencies against the U.S. Dollar (Since the End of January 2017)



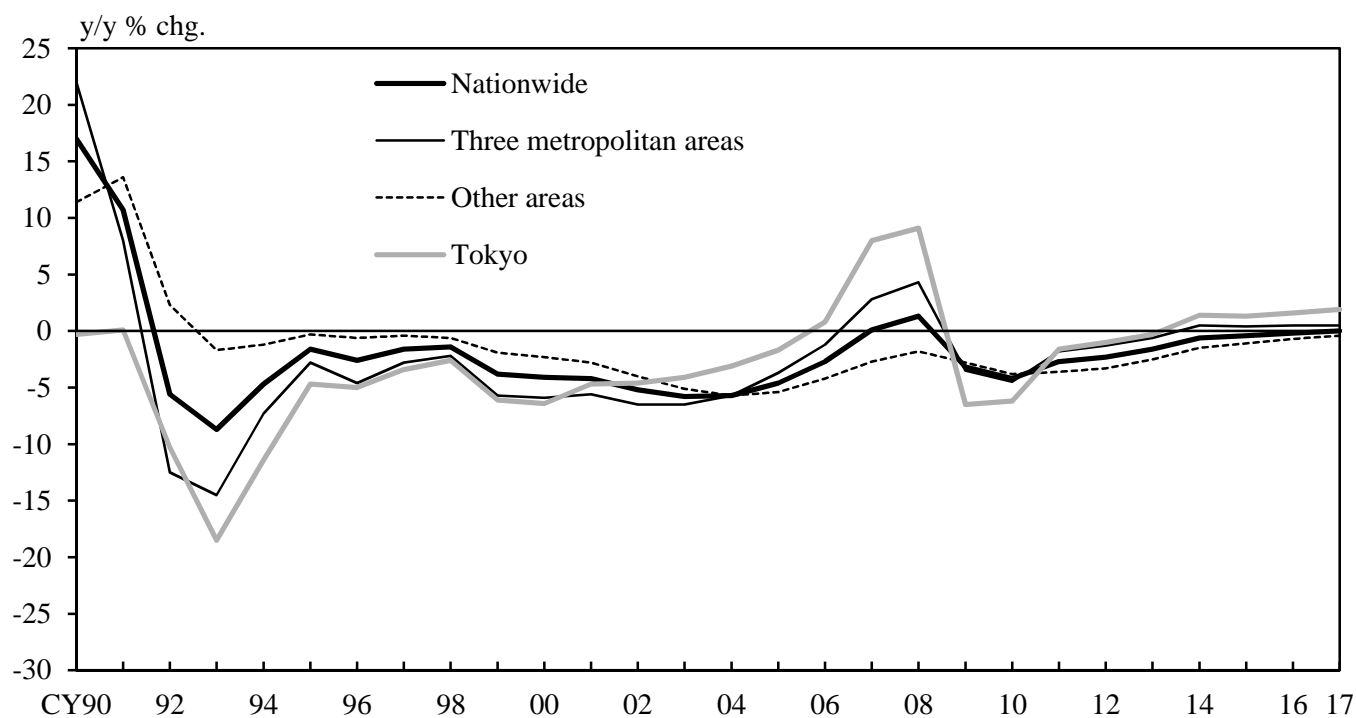
(3) Real Effective Exchange Rates



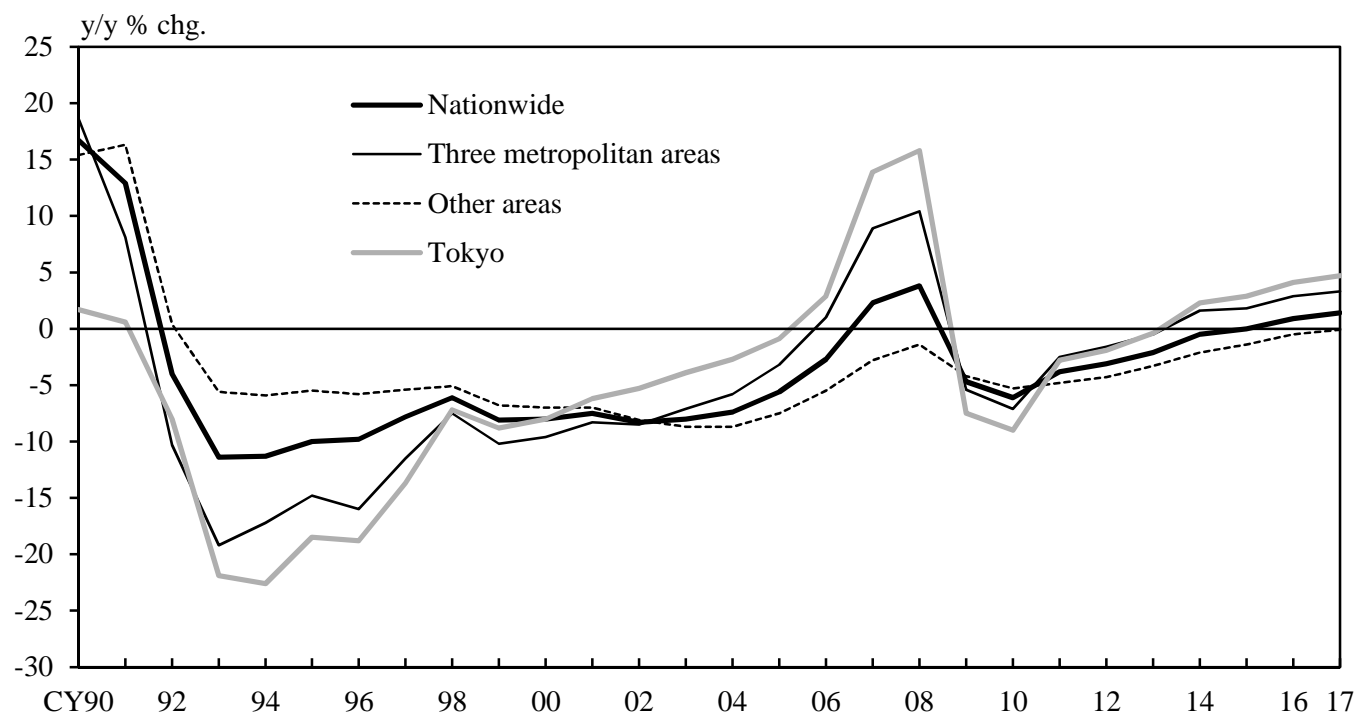
Note: The real effective exchange rates are based on the broad indices of the BIS effective exchange rate.
 Sources: Bank for International Settlements (BIS); Bloomberg.

Land Prices

(1) Residential Land



(2) Commercial Land



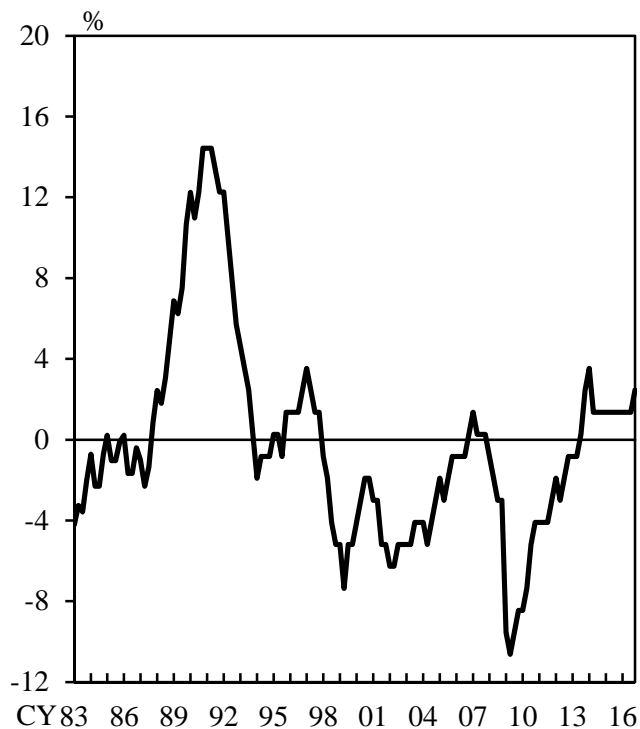
Notes: 1. Based on the "Land Market Value Publication." Figures are as of January 1.

2. Three metropolitan areas: the Tokyo area (Tokyo, Kanagawa, Saitama, Chiba, and Ibaraki prefectures), the Osaka area (Osaka, Hyogo, Kyoto, and Nara prefectures), and the Nagoya area (Aichi and Mie prefectures). Other areas: other than the three metropolitan areas.

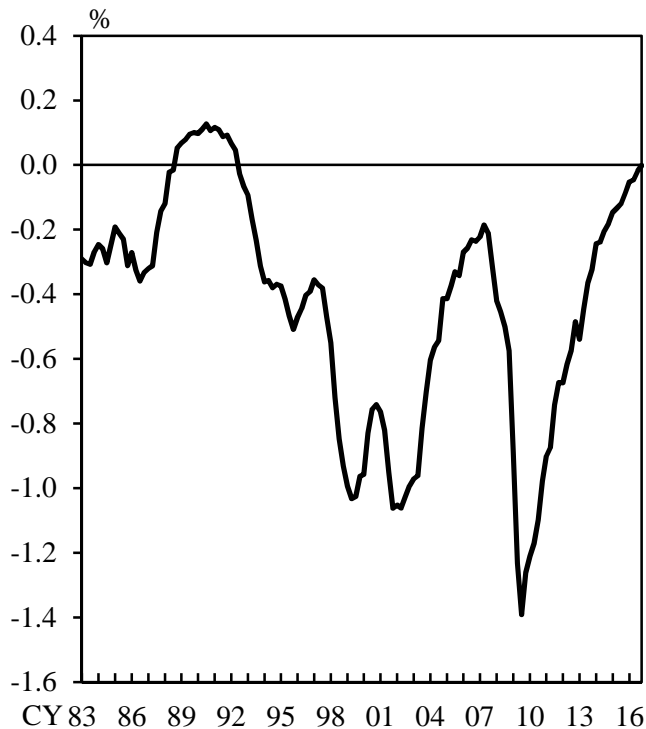
Source: Ministry of Land, Infrastructure, Transport and Tourism.

Labor and Capital Input Gap (1)

(1) Utilization Gap in Nonmanufacturing (Unrevised)

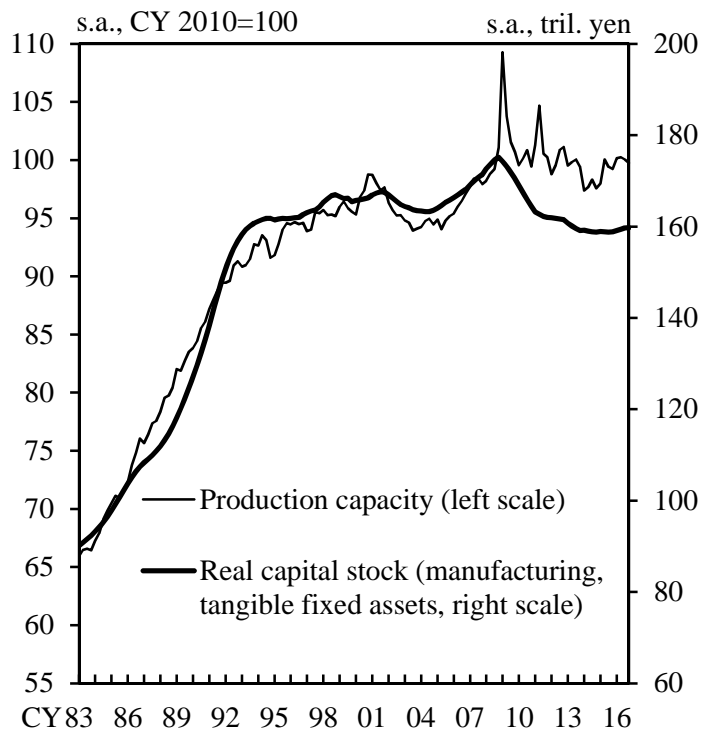


(2) Employment Rate Gap (Unrevised)

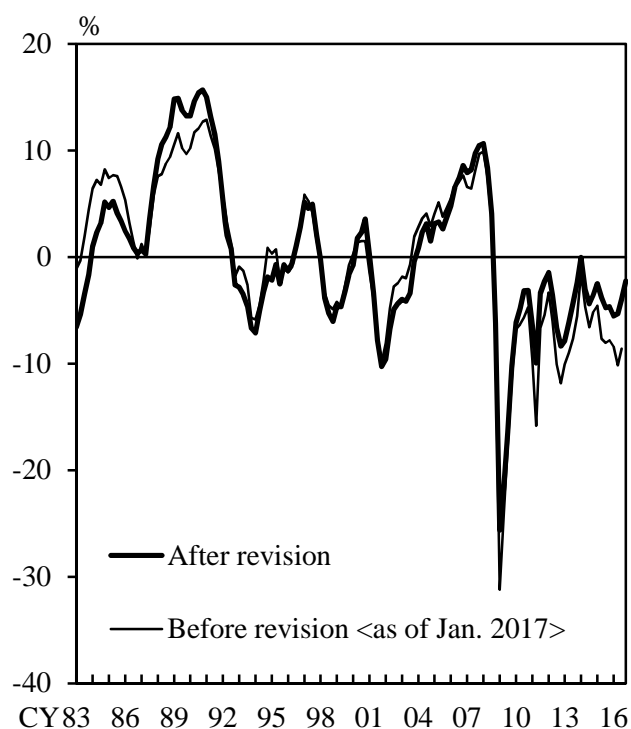


(3) Revision of Utilization Gap in Manufacturing

(a) Production Capacity and Capital Stock



(b) Utilization Gap in Manufacturing



Notes: 1. Production capacity in (3) is obtained by dividing the production index by the operating ratio index.

2. Real capital stock is estimated by the Research and Statistics Department, Bank of Japan using the "Quarterly Estimates of Net Capital Stocks of Fixed Assets" and the "Net Capital Stocks of Fixed Assets classified by Institutional Sectors and Economic Activities."

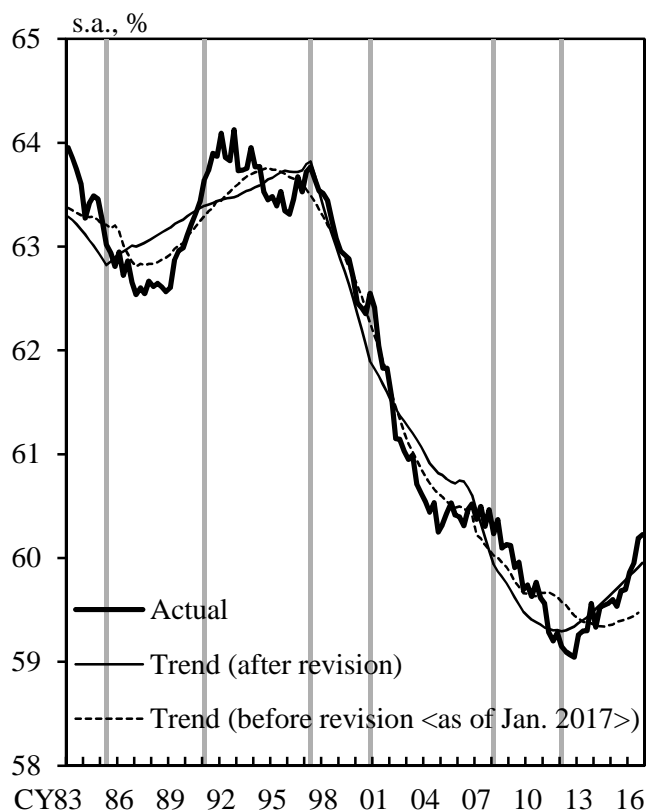
Sources: Cabinet Office; Bank of Japan; Ministry of Internal Affairs and Communications;

Ministry of Economy, Trade and Industry; Research Institute of Economy, Trade and Industry.

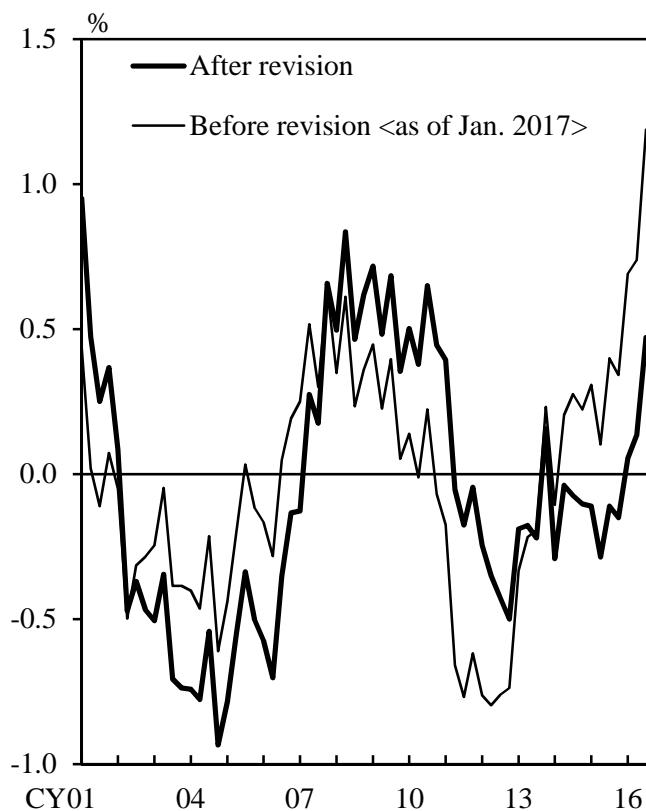
Labor and Capital Input Gap (2)

(1) Revision of Labor Force Participation Rate Gap

(a) Actual Labor Force Participation Rate and Its Trend

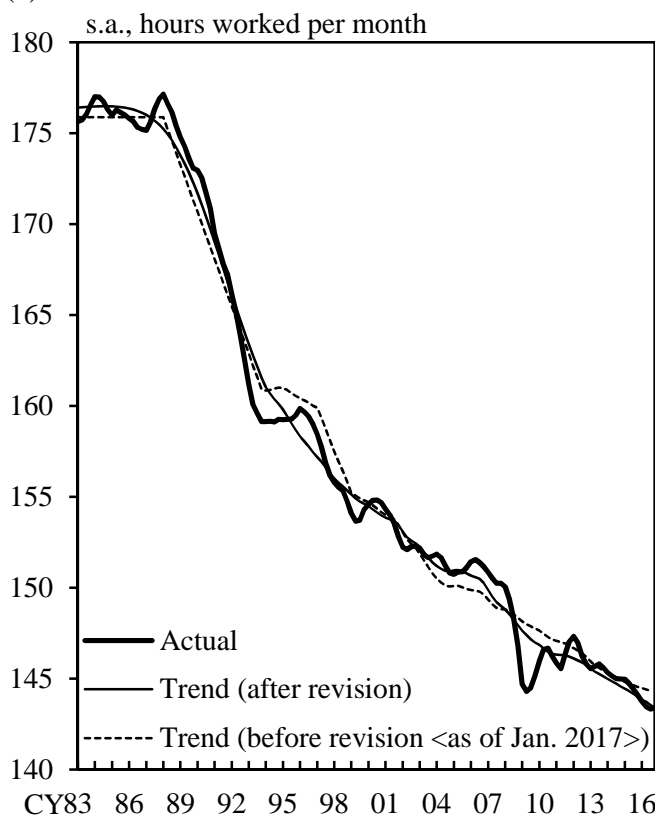


(b) Labor Force Participation Rate Gap

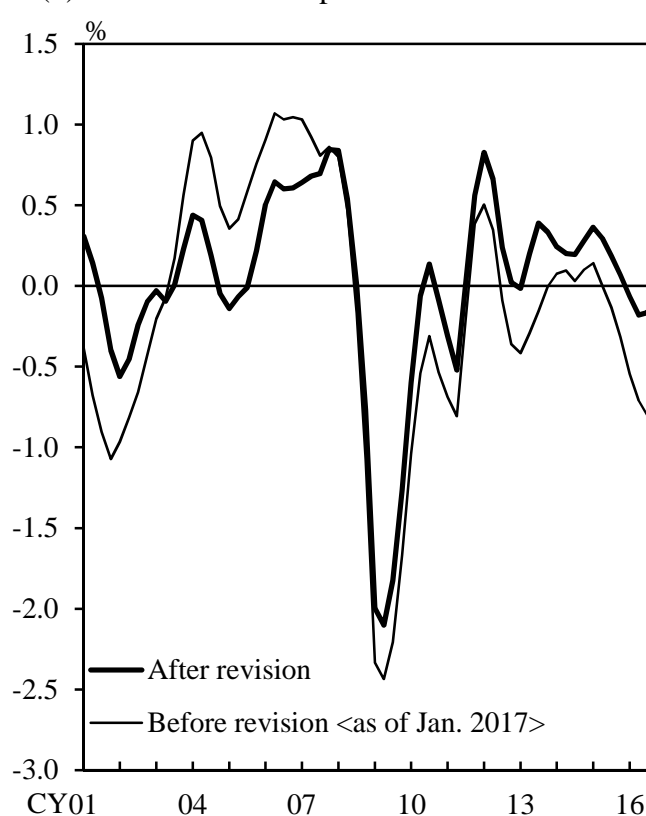


(2) Revision of Hours Worked Gap

(a) Actual Hours Worked and Their Trend



(b) Hours Worked Gap



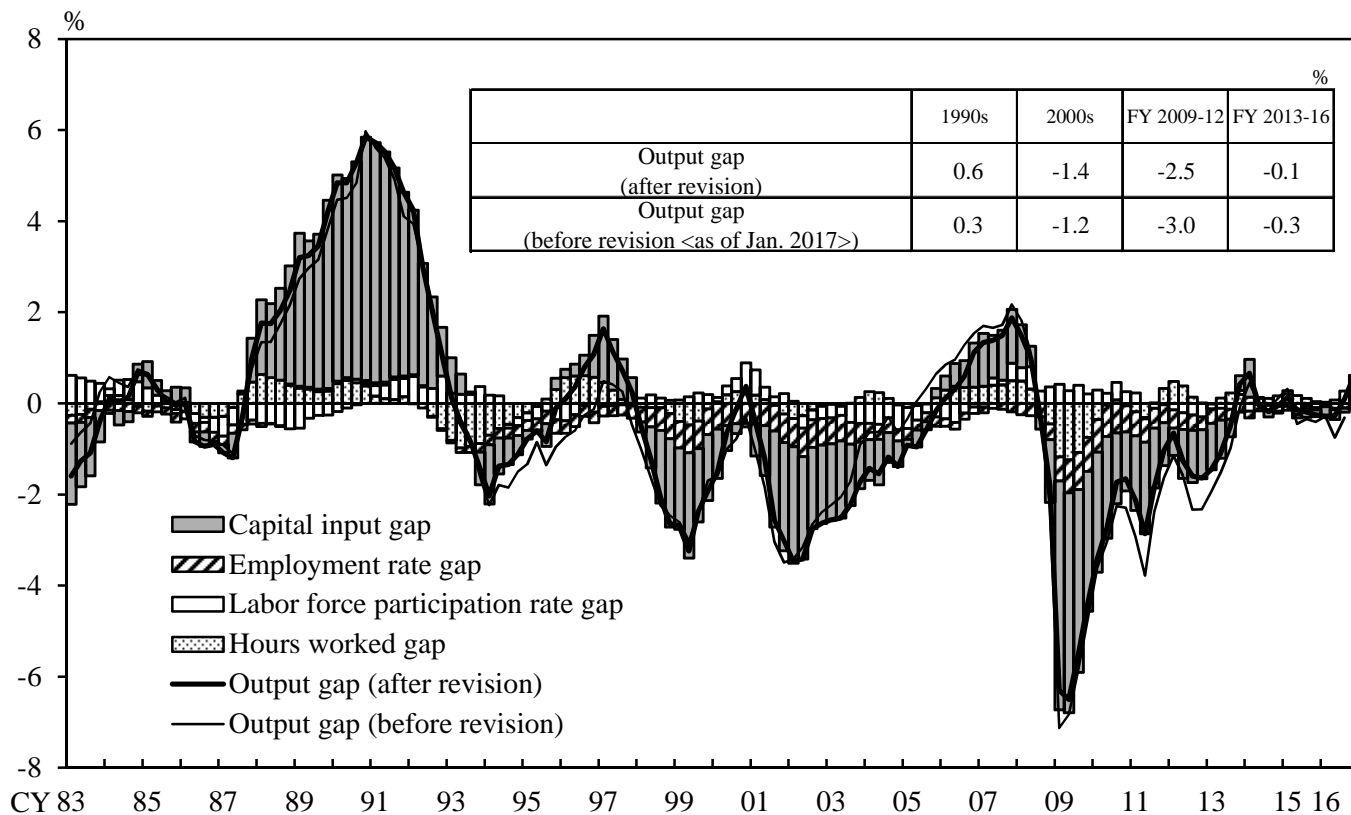
Notes: 1. The vertical lines in (1) indicate business-cycle peaks.

2. Actual hours worked in (2) are seasonally adjusted, and irregular spikes were eliminated from the original series.

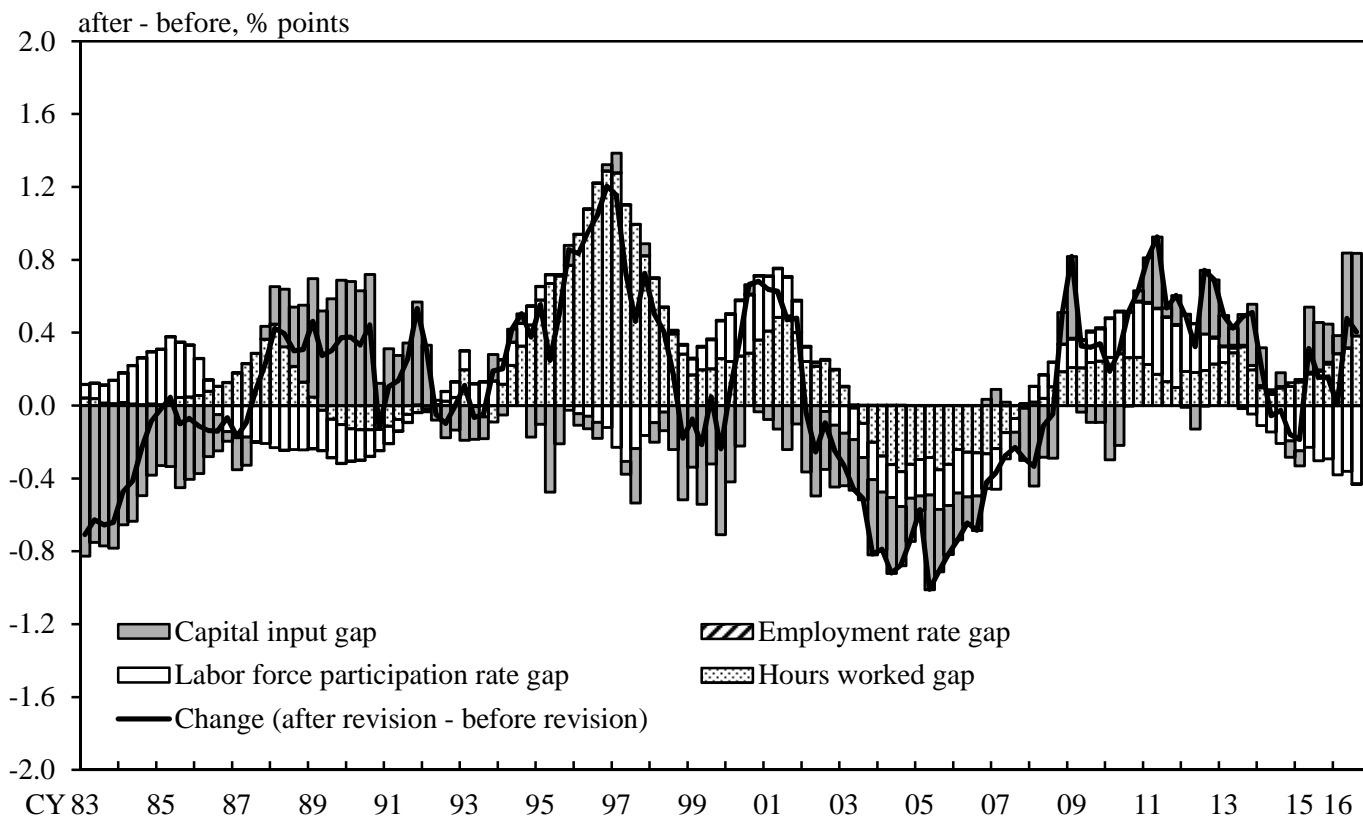
Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.

Revision of the Output Gap

(1) Output Gap



(2) Difference between the Output Gap Before and After the Revision

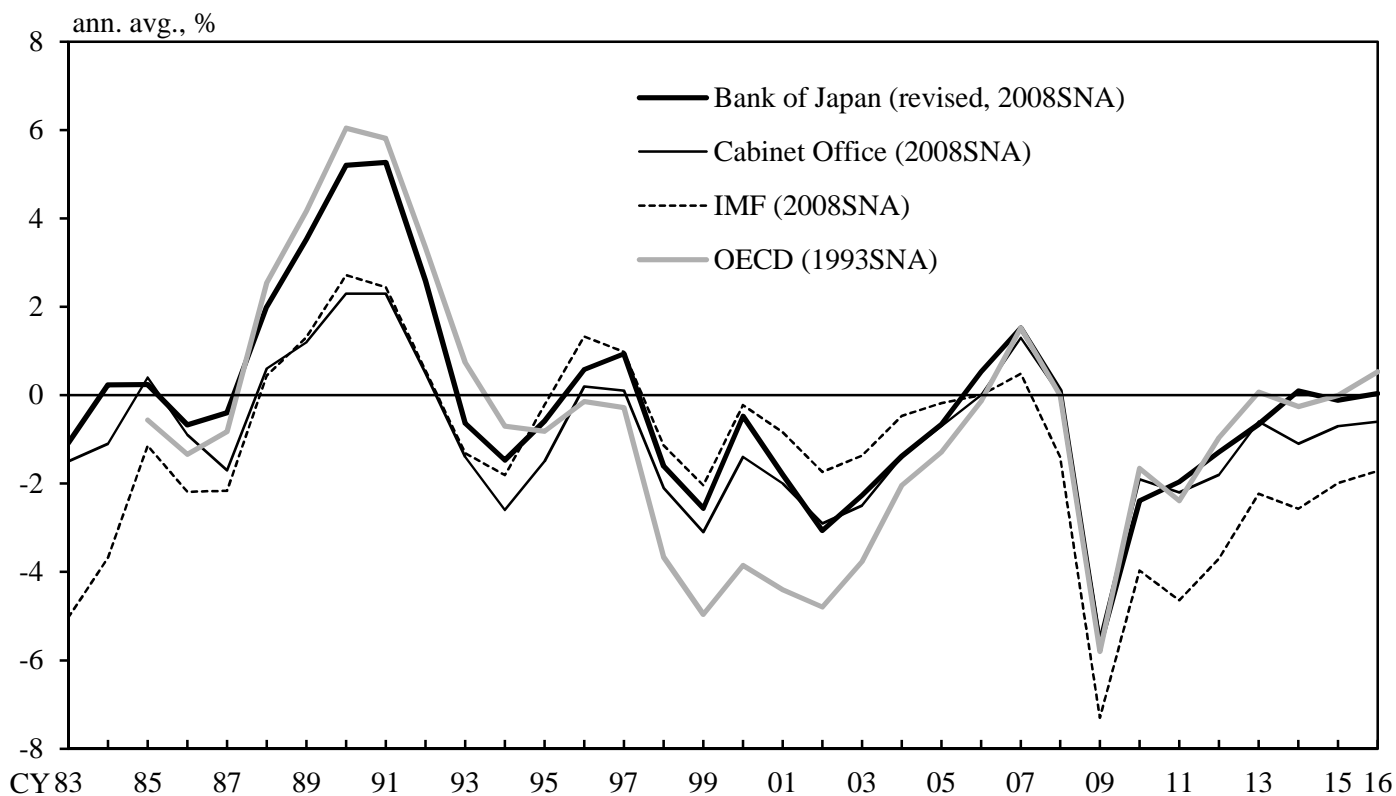


Note: Figures for before revision <as of Jan. 2017> are up to 2016/Q3.

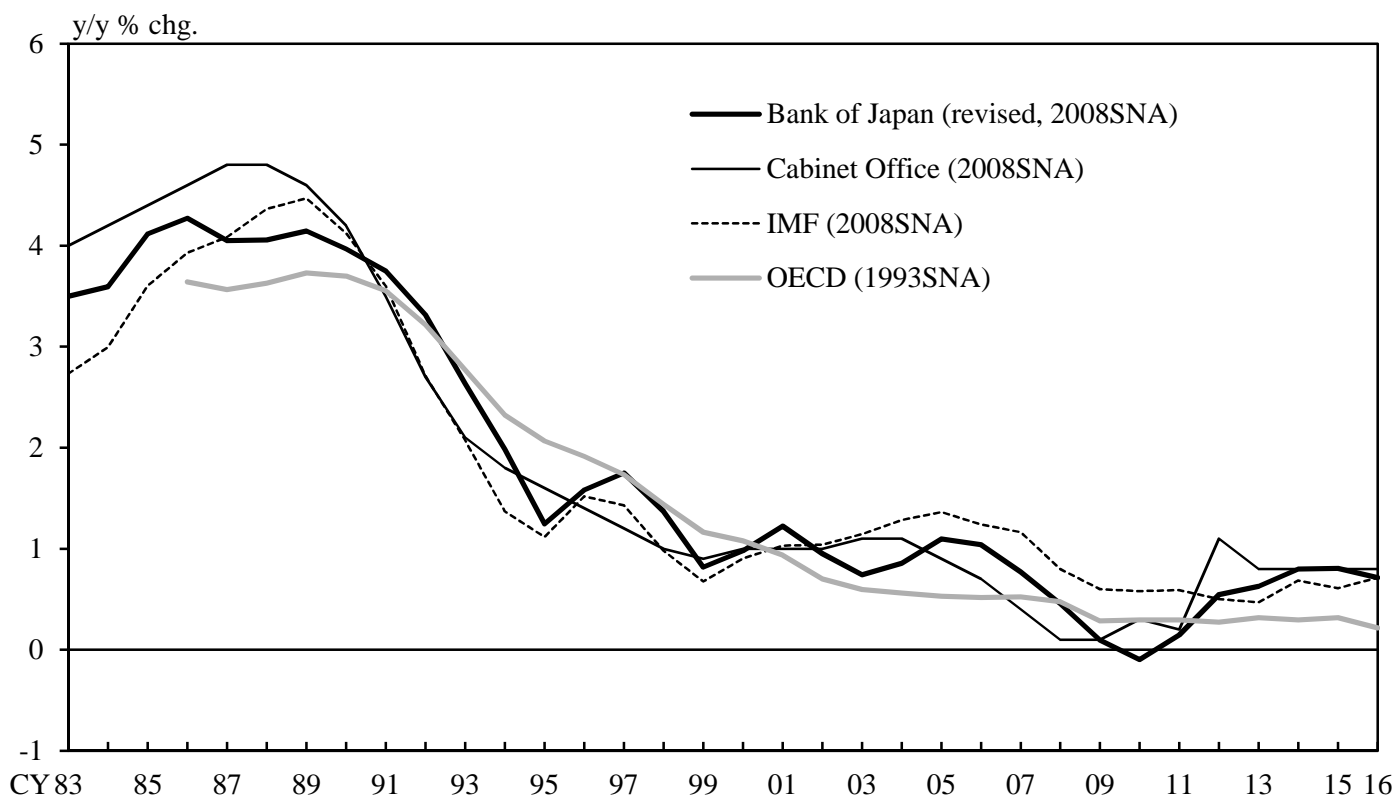
Sources: Cabinet Office; Bank of Japan; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; Research Institute of Economy, Trade and Industry.

Various Estimates of the Output Gap and Potential Growth Rate

(1) Output Gap



(2) Potential Growth Rate

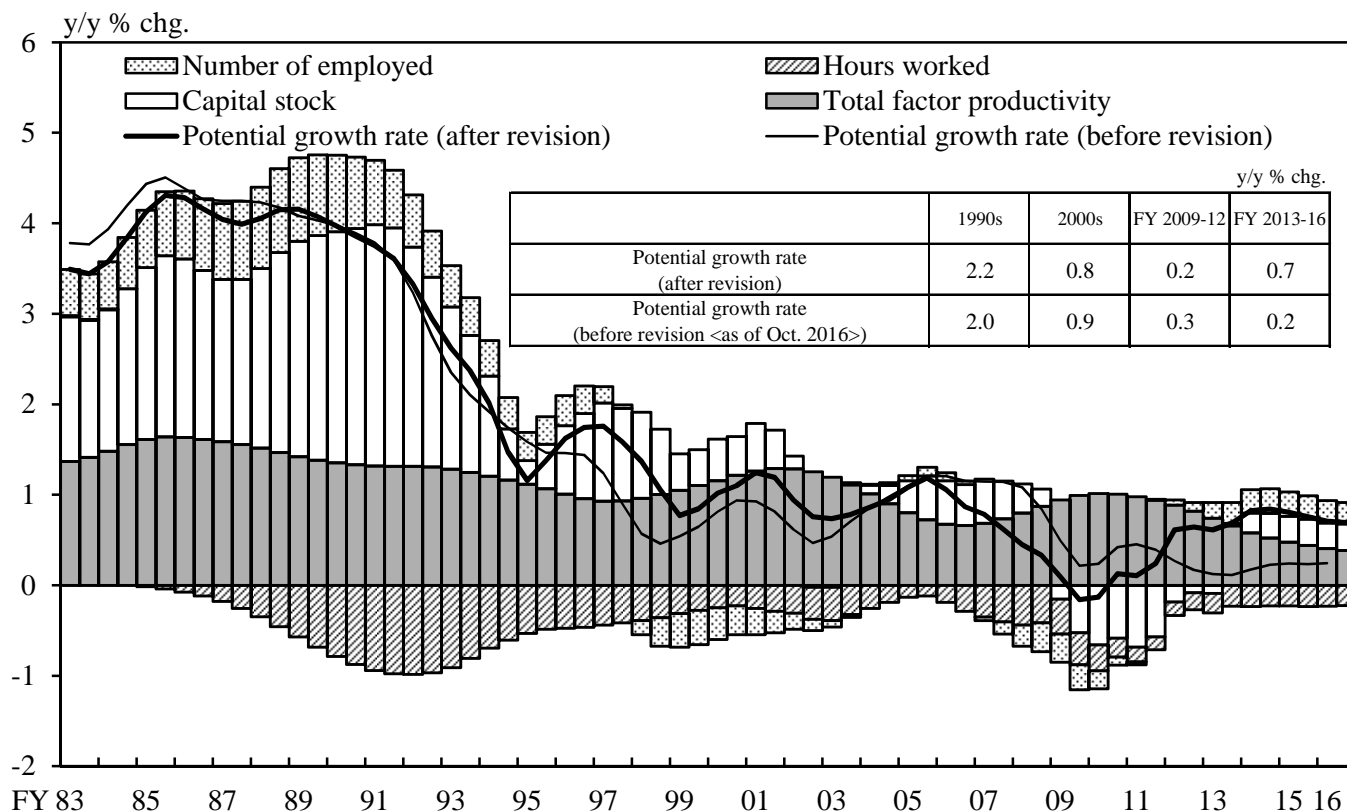


Note: Figures for the IMF are based on the April 2017 "World Economic Outlook." Figures for the OECD are based on the November 2016 "Economic Outlook." Figures for the OECD do not reflect the comprehensive revision of the SNA statistics, and those for 2016 are projections.

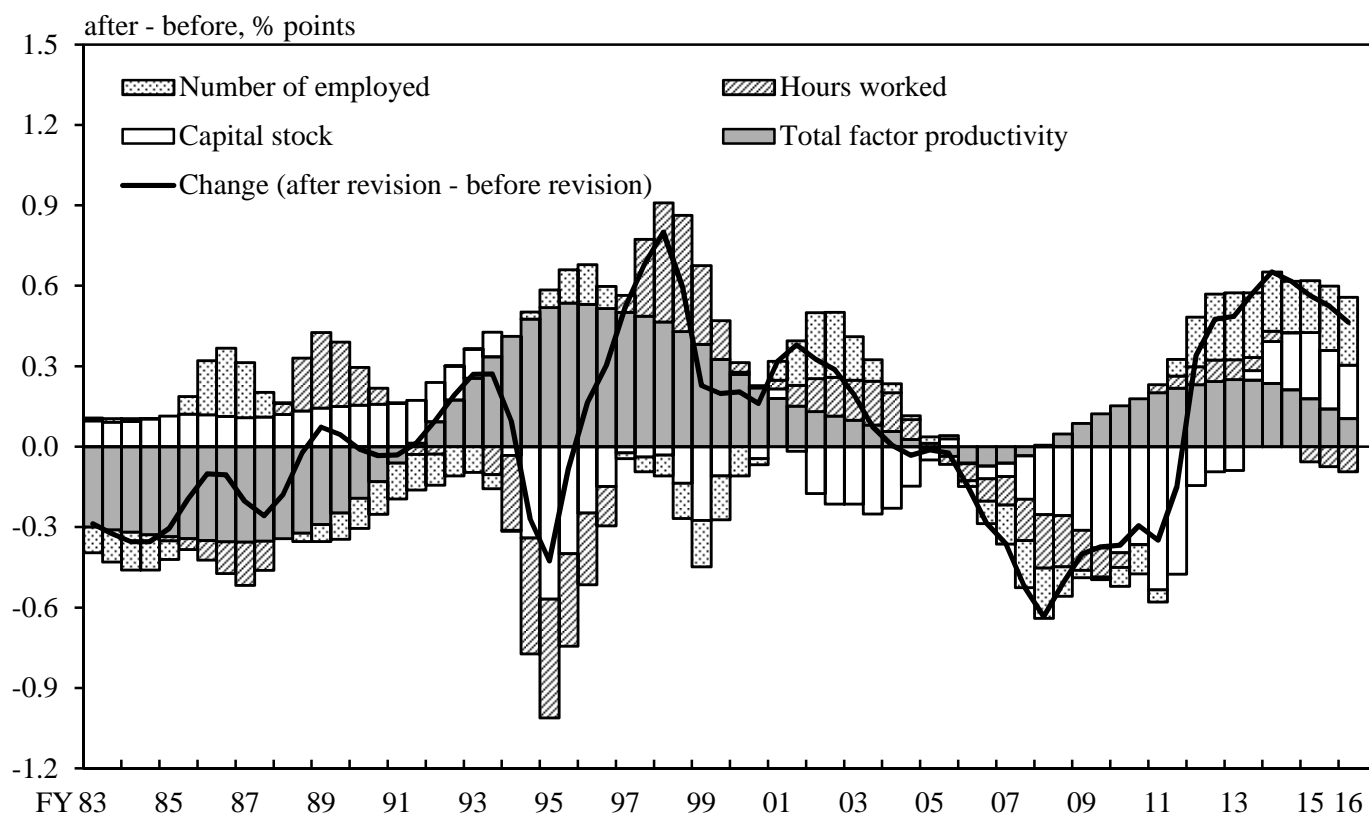
Sources: Cabinet Office; IMF; OECD, etc.

Revision of the Potential Growth Rate

(1) Potential Growth Rate



(2) Difference between the Potential Growth Rate Before and After the Revision



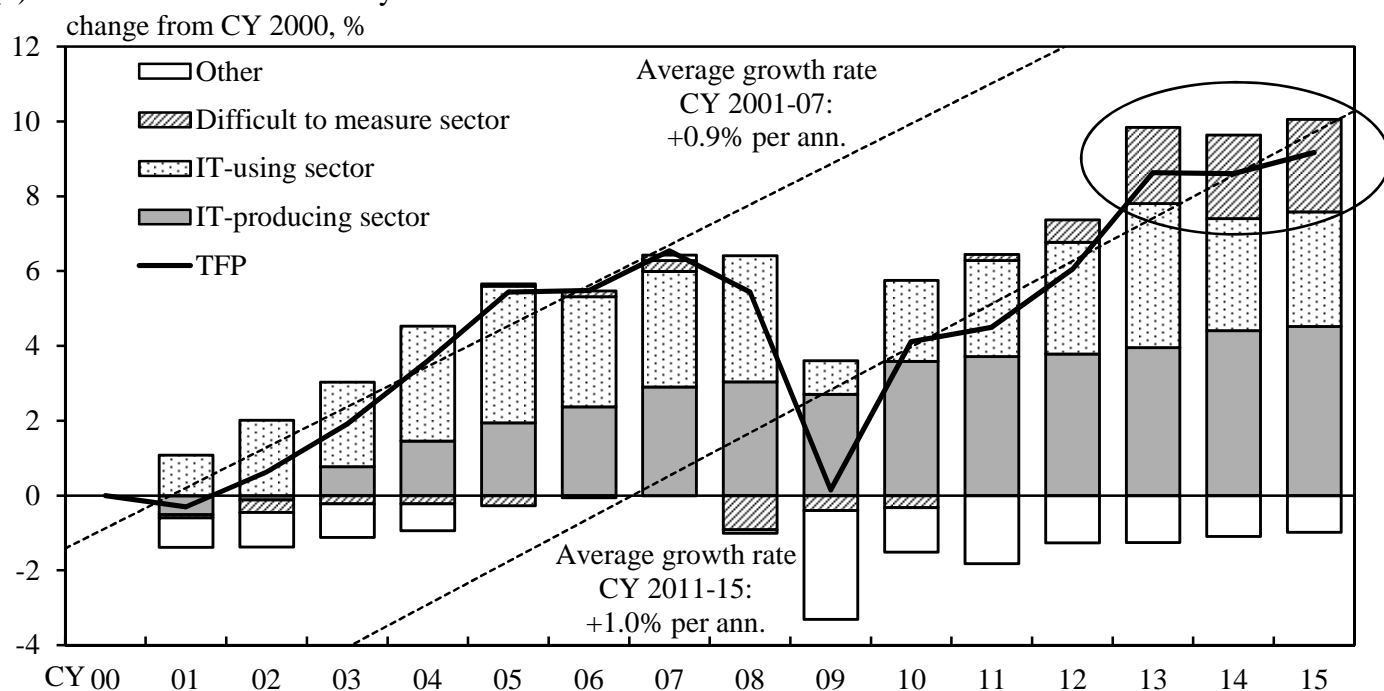
Note: Figures for the second half of fiscal 2016 are those of 2016/Q4. Figures for before revision <as of Oct. 2016> are up to 2016/Q2.
 Sources: Cabinet Office; Bank of Japan; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; Research Institute of Economy, Trade and Industry.

Total Factor Productivity (TFP)

(1) Classification of Industries

IT-producing sector (3 industries) GDP share: 4%	Electronic components and devices; electrical machinery, equipment and supplies; information and communication electronics equipment
IT-using sector (9 industries) GDP share: 49%	9 industries in which the ratio of software investment to GDP is relatively high: Information and communications; transport and postal services; wholesale and retail trade; accommodation and food service activities; professional, scientific and technical activities; electricity, gas and water supply and waste management service; chemicals; textile products; other manufacturing
Difficult to measure sector (3 industries) GDP share: 26%	3 industries whose GDP is difficult to measure: Construction; real estate; finance and insurance
Other (9 industries) GDP share: 21%	Food products and beverages; pulp, paper and paper products; petroleum and coal products; non-metallic mineral products; basic metal; fabricated metal products; general-purpose, production and business oriented machinery; transport equipment; other service activities

(2) Cumulative TFP Growth by Sector



(3) Average Growth Rate of TFP

Annualized average growth rate, %	CY 1995-00	CY 2001-05	CY 2006-10	CY 2011-15
Overall	1.0	1.1	-0.2	1.0
IT-producing sector	8.4	9.0	7.7	4.9
IT-using sector	1.3	1.5	-0.6	0.4
Difficult to measure sector	-0.5	-0.2	-0.0	2.1
Other	0.6	0.1	-1.0	0.2

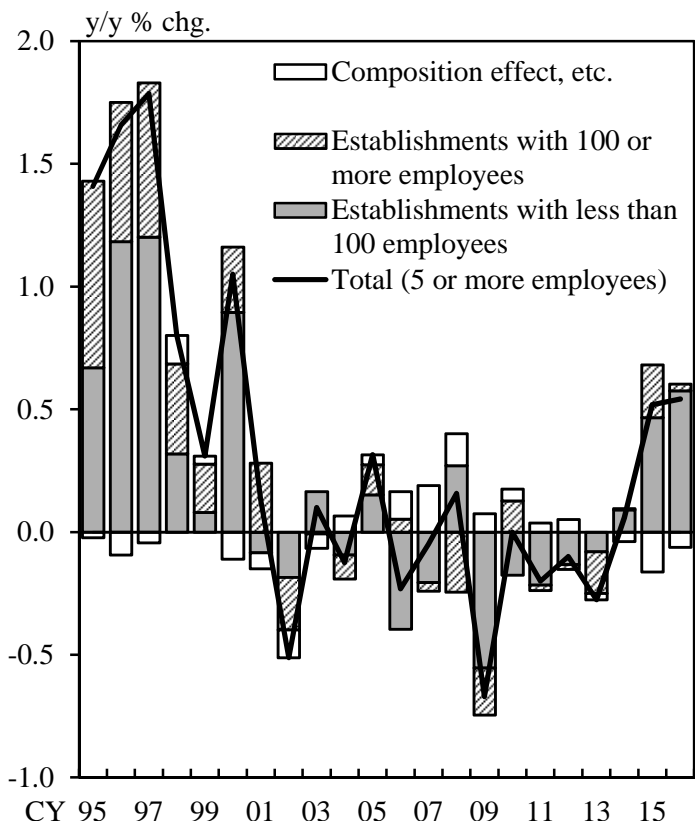
Notes: 1. TFP is measured as the Solow residual using SNA data classified by economic activity in the "Annual Report on National Accounts."

2. The GDP shares in the "Classification of Industries" are for 2015. The following 5 industries are excluded in the analysis above: agriculture, forestry and fishing; mining; public administration; education; and human health and social work activities.

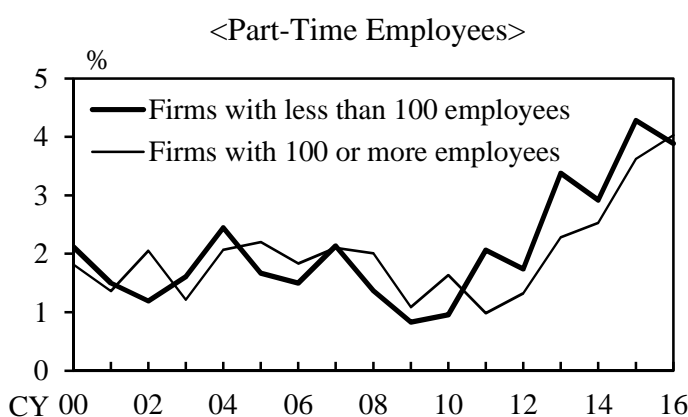
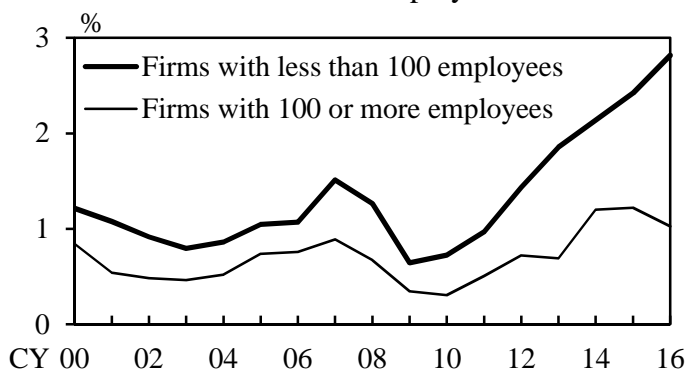
Source: Cabinet Office.

Wage Developments by Firm Size

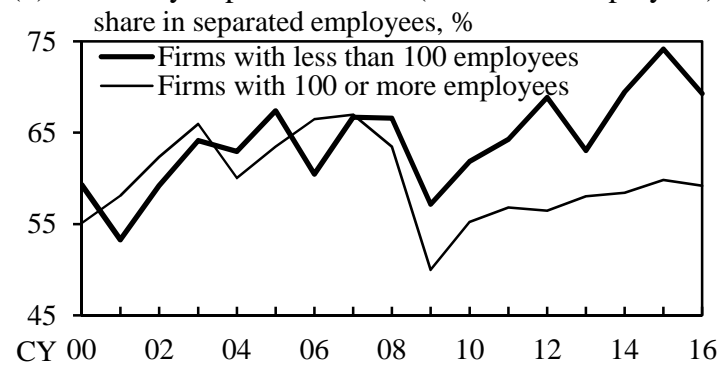
(1) Scheduled Cash Earnings (Full-Time Employees)



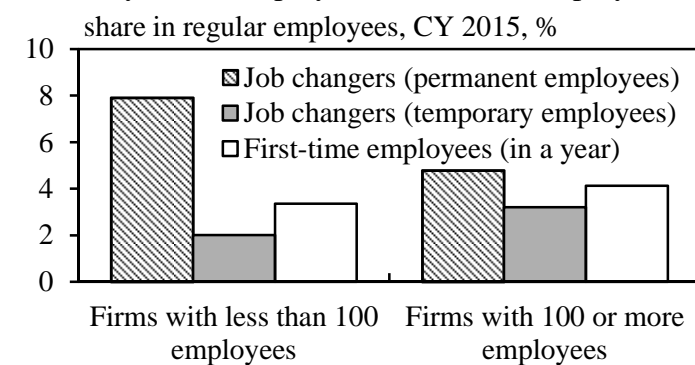
(2) Job Vacancy Rate by Firm Size
<Full-Time Employees>



(3) Voluntary Separation Ratio (Full-Time Employees)



(4) Newly Hired Employees (Full-Time Employees)



(5) Wage Changes DI of Job Changers

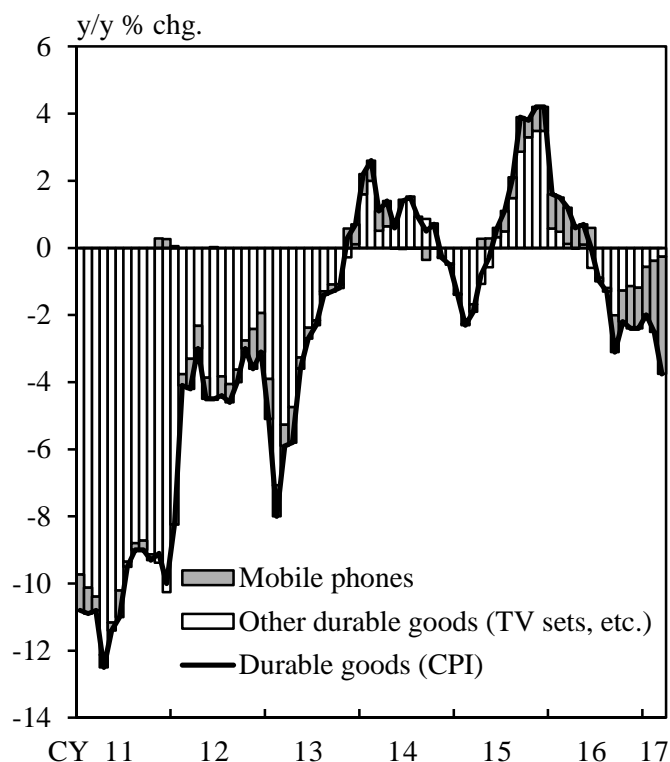


Notes: 1. Figures in (1) are based on the Monthly Labour Survey. The other charts are based on the Survey on Employment Trends.
2. Job vacancy rate (at the end of June each year) = number of unfilled vacancies / number of regular employees.
3. The voluntary separation ratio is the share of those leaving their job for personal reasons (excluding family reasons).
4. Wage changes DI = share of job changers whose wage increased - share of job changers whose wage decreased.
5. Figures for CY 2016 in (3) and (5) are the average of the second half of CY 2015 and the first half of CY 2016.

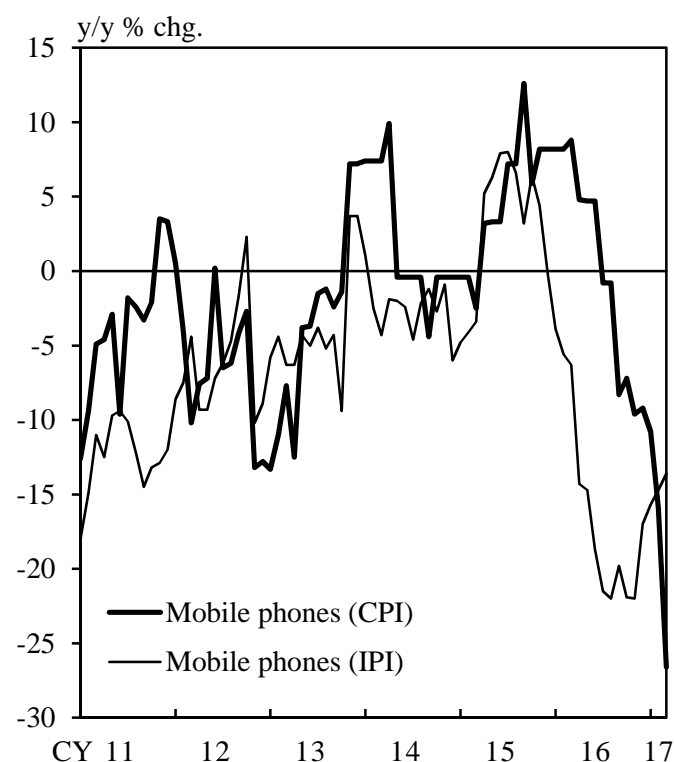
The Mobile Phone Market and the Consumer Price Index

(1) Durable Goods Prices

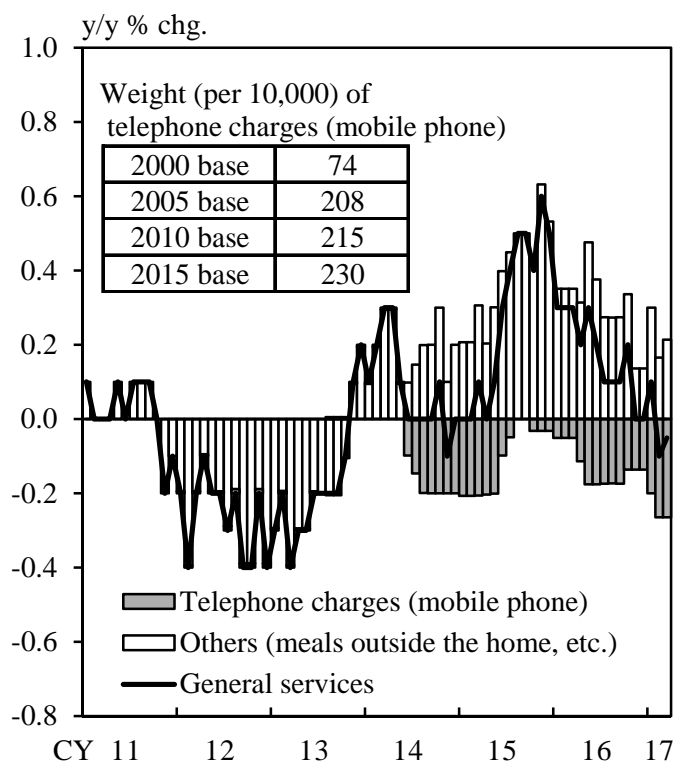
(a) Total



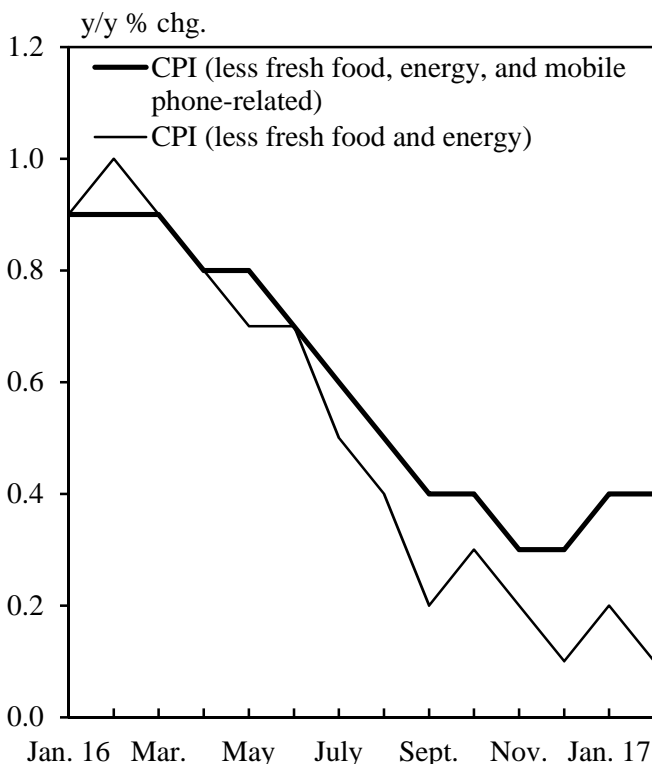
(b) Mobile Phones



(2) Mobile Communication Charges



(3) CPI All Items Less Fresh Food, Energy, and Mobile Phone-Related



Notes: 1. Figures for the CPI for March 2017 in (1) and (2) are estimated using March 2017 figures (preliminary) for the ku-area of Tokyo.

2. Mobile phone-related consists of "mobile phones" and "telephone charges (mobile phone)."

3. Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.

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

Economic Assessment by Region (Regional Economic Report)

Region	Assessment in January 2017	Changes from the previous assessment	Assessment in April 2017
Hokkaido	The economy has been recovering moderately.	⇒	The economy has been recovering moderately.
Tohoku	The economy has continued its moderate recovery trend.	⇒	The economy has continued its moderate recovery trend.
Hokuriku	The economy has continued to recover.	↗	The economy has been expanding moderately.
Kanto-Koshinetsu	The economy has continued its moderate recovery trend.	⇒	The economy has continued its moderate recovery trend.
Tokai	The economy has been expanding moderately.	⇒	The economy has been expanding moderately.
Kinki	The economy has been recovering moderately.	⇒	The economy has been recovering moderately.
Chugoku	The economy has been recovering moderately.	⇒	The economy has been recovering moderately.
Shikoku	The economy has continued to recover moderately.	⇒	The economy has continued to recover moderately.
Kyushu-Okinawa	The economy has been recovering moderately.	⇒	The economy has been recovering moderately.

Note: The Regional Economic Report (Summary) is available on the Bank of Japan's web site (<http://www.boj.or.jp/en/research/brp/rer/rer170410.pdf>).

Source: Bank of Japan.