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Bank of Japan

Outlook for Economic Activity and Prices

October 2015

(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 growing at a pace above its potential from fiscal 2015 through fiscal 2016. Thereafter, through fiscal 2017, the economy is projected to maintain its positive growth, although with a slowing in its pace to around a level somewhat below the potential growth rate. The slowdown is due mainly to (1) the effects of a front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike planned in April 2017 and (2) cyclical deceleration.²
- The year-on-year rate of change in the consumer price index (CPI, for all items less fresh food and excluding the direct effects of the consumption tax hikes) is likely to be about 0 percent for the time being and, as the underlying trend in inflation steadily rises and the effects of the decline in crude oil prices dissipate, accelerate toward 2 percent -- the price stability target.³ Although the timing of reaching around 2 percent depends on developments in crude oil prices, it is projected to be around the second half of fiscal 2016, assuming that crude oil prices will rise moderately from the recent level. Thereafter, Japan's economy is expected to gradually shift to a growth path that sustains such inflation in a stable manner.
- Comparing the current projections with the previous ones, the projected growth rate for fiscal 2015 is lower due to the flattening of exports against the background of the slowdown in emerging economies and to the sluggishness in private consumption reflecting in part bad weather, but the projections for fiscal 2016 and 2017 are more or less unchanged. The projected rates of increase in prices for fiscal 2015 and 2016 are lower due mainly to the effects of the decline in crude oil prices, but the projection for fiscal 2017 is more or less unchanged.
- As for the conduct of monetary policy, quantitative and qualitative monetary easing (QQE) has been exerting its intended effects. The Bank will continue with QQE, 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 examine both upside and downside risks to economic activity and prices, and make adjustments as appropriate.

¹ The text of "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on October 30, 2015.

² The October 2015 *Outlook for Economic Activity and Prices* (Outlook Report) assumes that the consumption tax will rise to 10 percent in April 2017.

³ Individual Policy Board members make their forecasts based on the following assumption about crude oil prices. Dubai crude oil prices are expected to rise moderately from the recent 50 U.S. dollars per barrel to the range of 60-65 dollars per barrel toward the end of the projection period. Under this assumption, the contribution of energy items to the year-on-year rate of change in the CPI (all items less fresh food) is estimated to be around minus 0.9 percentage point for fiscal 2015, and around minus 0.2 percentage point for fiscal 2016. More specifically, this negative contribution is expected to lessen from the turn of 2016, and in the second half of fiscal 2016, the contribution is estimated to be around 0 percentage point.

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

A. Outlook for Economic Activity

Japan's economy has continued to recover moderately, although exports and production have been affected by the slowdown in emerging economies. Overseas economies -- mainly advanced economies -- have continued to grow at a moderate pace, despite the slowdown in emerging economies. Exports and industrial production have recently been more or less flat, due mainly to the effects of the slowdown in emerging economies. On the domestic demand side, the corporate sector has maintained its positive investment stance, with profits having increased to their highest level historically. In the household sector, against the background of steady improvement in the employment and income situation, private consumption has been resilient and housing investment has been picking up.

Looking ahead, domestic demand is likely to follow an uptrend, with a virtuous cycle from income to spending being maintained in both the household and corporate sectors, and exports are expected to start increasing moderately on the back of emerging economies moving out of their deceleration phase. Thus, Japan's economy is likely to continue growing at a pace above its potential from fiscal 2015 through fiscal 2016.⁴ Thereafter, through fiscal 2017, the economy is projected to maintain its positive growth, although with a slowing in its pace to around a level somewhat below the potential growth rate. The slowdown is due mainly to (1) the effects of a front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike planned in April 2017 and (2) cyclical deceleration.

The above projection assumes the following underlying developments.

First, as the Bank of Japan continues with QQE, aiming to achieve the price stability target of 2 percent as long as it is necessary for maintaining that target in a stable manner,

⁴ Japan's potential growth rate is estimated to be around 0.5 percent or lower recently under a specific methodology, and is expected to rise gradually toward the end of the projection period. However, the estimate of the potential growth rate varies depending on the methodologies employed and could be revised as the sample period becomes longer over time. Thus, it should be regarded as being subject to a considerable margin of error.

financial conditions are likely to remain accommodative and continue stimulating the economy.⁵

Second, overseas economies are expected to moderately increase their growth rates as it is likely that advanced economies will continue to see firm growth and emerging economies will move out of their deceleration phase on the back of the developments in advanced economies.

Third, public investment is expected to follow a moderate downtrend from the current relatively high level, and thereafter level off toward the end of the projection period.

Fourth, firms' and households' medium- to long-term growth expectations are expected to rise moderately against the backdrop of 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, firms' continued efforts toward improving productivity and discovering potential domestic and external demand, and steady progress in overcoming of deflation.

Given these assumptions, economic activity during the projection period can be elaborated on as follows. For fiscal 2015 through fiscal 2016, exports are expected to remain more or less flat for the time being, and after that they are likely to increase moderately as emerging economies are expected to move out of their deceleration phase and given support from past foreign exchange rate developments. With record profits seen at Japanese firms and monetary accommodation continuing to provide a boost, business fixed investment is projected to continue increasing, additionally supported by firms' positive stance on domestic investment. Private consumption is projected to rise moderately, led by continued steady improvement in the employment situation and a resultant increase in

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, markets have factored in that short-term interest rates will continue to be effectively 0 percent throughout the projection period. Markets also have been forecasting that long-term interest rates will hover at low levels throughout the projection period, although the market participants' outlook for prices behind such forecasts is lower than that presented in the Outlook Report. Each Policy Board member makes an assumption about the future path of long-term interest rates based on such market views, taking into account the difference in the forecasts for prices.

wages, and by the positive effects of the decline in energy prices through raising real income.⁶ Reflecting these developments in demand both at home and abroad, industrial production is expected to remain more or less flat for the time being, and after that it is likely to increase moderately.

Through fiscal 2017, the economy is likely to be affected by the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike scheduled to take place in April 2017, and the pace of increase in business fixed investment is likely to decline, reflecting a cycle in the accumulation of capital stock. However, exports are projected to continue increasing moderately owing to overseas economic growth, and domestic private demand is likely to be resilient, supported by accommodative financial conditions and heightened growth expectations. Meanwhile, Japan's potential growth rate is expected to follow a moderate increasing trend through the projection period, pushing up the economy's growth in the medium to long term. Reflecting these developments, the economy is projected to maintain its positive growth in fiscal 2017, although with a slowing in its pace to around a level somewhat below the potential growth rate.

Comparing the current projections with those in the July 2015 interim assessment, the projected growth rate for fiscal 2015 is lower due to the flattening of exports against the background of the slowdown in emerging economies and to the sluggishness in private consumption reflecting in part bad weather, but the projections for fiscal 2016 and 2017 are more or less unchanged.

B. Outlook for Prices

The year-on-year rate of change in the CPI for all items less fresh food has been about 0 percent, due to the effects of the decline in energy prices, but the underlying trend in

⁶ The effects of the two rounds of consumption tax hikes on the economic growth rate for each fiscal year are quantitatively estimated as follows: an increase of around 0.5 percentage point for fiscal 2013, a decrease of around 1.2 percentage points for fiscal 2014, an increase of around 0.3 percentage point for fiscal 2015, an increase of around 0.3 percentage point for fiscal 2016, and a decrease of around 0.8 percentage point for fiscal 2017. It should be noted that the effects of the consumption tax hikes are considerably uncertain, given that they depend partly on income conditions and price developments at each point in time, and therefore these estimates are subject to a considerable margin of error.

inflation has steadily been improving, as indicated, for example, by the year-on-year rate of change in the CPI for all items less fresh food and energy, which exceeds 1 percent.

Major factors that determine inflation rates into the future are evaluated as follows. First, the aggregate supply and demand balance (the output gap), which shows the utilization of labor and capital, has steadily followed an improving trend driven mainly by labor market developments, albeit under some downward pressure partly from the flattening of exports against the background of the slowdown in emerging economies.⁷ Specifically, the tightening trend in labor market conditions has continued, with the unemployment rate declining moderately to the range of 3.0-3.5 percent.⁸ Capacity utilization rates also seem to be on an uptrend amid a situation of Japan's economy continuing to recover moderately, while affected by adverse developments including the flattening of exports. Looking ahead, the output gap is likely to turn positive (in excess demand) toward the end of fiscal 2015, and move further into positive territory in fiscal 2016; thus, upward pressure on wages and prices due to the tightening of supply and demand conditions is likely to steadily increase. In fiscal 2017, the output gap is projected to be more or less unchanged in positive territory.

Second, medium- to long-term inflation expectations appear to be rising on the whole from a somewhat longer-term perspective. In response to such developments in inflation expectations, firms' wage- and price-setting stance has clearly changed, particularly from the turn of the fiscal year. In the annual labor-management wage negotiations, movements

⁷ There are two approaches to estimating the output gap: (1) estimating potential GDP and then measuring its difference from actual GDP and (2) directly measuring the utilization of production factors (labor and capital). As the output gap in the Outlook Report has been estimated based on the latter approach, changes in the GDP growth rate do not have a one-to-one relationship with the expansion/narrowing of the output gap. It should be noted that estimates of the output gap could differ depending on the specific methodology employed and data used and therefore they are subject to a considerable margin of error.

⁸ One measure used in assessing the degree of tightness in labor market conditions is the *structural unemployment rate*. In the labor market, there is always some mismatch between job openings and job applicants, and thus there is a certain number of unemployed even when the economy is booming. The unemployment rate at which no excess labor force is found, excluding the unemployment due to the mismatch, is called the structural unemployment rate. This rate is calculated to be in the range of 3.0-3.5 percent recently under a specific methodology. It should be noted that the estimated structural unemployment rate tends to change over time.

toward reflecting price developments as well as corporate performance and supply-demand conditions in the labor market on wages have been broadening, and the increase in wages including that in base pay this year was larger than last year at many firms. Firms' price-hiking behavior also has become widespread and sustained. These developments indicate the steady functioning of the mechanism in which inflation rises moderately accompanied by wage increases. Nevertheless, it should be noted that, given that firms have been seeing record profits and the unemployment rate has declined to the range of 3.0-3.5 percent, the pace of improvement in wages has been somewhat slow.

Looking ahead, as the Bank pursues QQE and the observed inflation rate rises, medium- to long-term inflation expectations are also likely to follow an increasing trend and gradually converge to around 2 percent -- the price stability target. Against this backdrop, firms' wage- and price-setting stance is likely to shift further toward raising wages and prices.

Third, through import prices, while past developments in foreign exchange rates will exert upward pressure on consumer prices, a decline in international commodity prices, including crude oil prices, will exert downward pressure on consumer prices for the time being.

Based on the above, the outlook for the year-on-year rate of change in the CPI (for all items less fresh food and excluding the direct effects of the consumption tax hikes, and the same hereafter) is as follows. It is likely to be about 0 percent for the time being and, as the underlying trend in inflation steadily rises and the effects of the decline in crude oil prices dissipate, accelerate toward 2 percent -- the price stability target. Although the timing of reaching around 2 percent depends on developments in crude oil prices, it is projected to be around the second half of fiscal 2016, assuming that crude oil prices will rise moderately from the recent level. Thereafter, the year-on-year rate of change in the CPI is likely to be around 2 percent on average.⁹ Comparing the current projections with those in the July 2015 interim assessment, the projected rates of increase in the CPI for fiscal 2015 and 2016 are lower due mainly to the effects of the decline in crude oil prices, but the projection for fiscal 2017 is more or less unchanged.

⁹ The effects of the scheduled consumption tax hike in April 2017 on prices can be mechanically estimated by assuming that the rise in the consumption tax will be fully passed on for all currently taxable items. On this basis, the year-on-year rate of change in the CPI will be pushed up by 1.3 percentage points in fiscal 2017.

II. Upside and Downside Risks

A. 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. Risks to future developments in overseas economies include the effects of the slowdown in emerging economies, particularly China, developments in the U.S. economy and the influences of its monetary policy response to them on the global financial markets, prospects regarding the European debt problem and the momentum of economic activity and prices in Europe, the effects of the decline in commodity prices, and geopolitical risks.

The second risk is the effects of the consumption tax hike scheduled to take place in April 2017. The effects on the economy of the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike, as well as of the decline in real income, may differ depending on consumer sentiment, the employment and income situation, and developments in prices.

Third, firms' and households' medium- to long-term growth expectations may be either raised or lowered depending on future developments in regulatory and institutional reforms, innovation in the corporate sector, and the employment and income situation surrounding the household sector.

Fourth, 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 rises in long-term interest rates that are unwarranted by economic fundamental conditions. 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 people's concerns regarding the future are alleviated.

B. Risks to Prices

In case the aforementioned upside and downside risks to the economy materialize, it is likely that prices will also be affected to a certain degree. Other 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. The baseline scenario assumes that, amid rises in observed inflation accompanied by wage increases, people's inflation expectations will rise further and gradually converge to around 2 percent -- the price stability target. However, the pace at which they will rise is subject to uncertainty over developments in observed prices and to the extent to which they will affect inflation expectations. On this point, there is a risk that the year-on-year rate of change in the CPI being about 0 percent for the time being, which owes to the effects of the decline in energy prices, might affect the pace of increase in inflation expectations. Regarding the relationship between wages and prices, the focal point is how rises in the underlying trend in inflation to date and the outlook for prices will be reflected in the annual labor-management wage negotiations toward fiscal 2016.

The second factor is developments in the output gap, particularly in labor market conditions. The baseline scenario assumes that, on the labor supply side, the recent increase in labor participation by the elderly and women and recent movements by firms to convert part-time employees into regular ones will continue to some extent, but there is uncertainty associated with this assumption, and depending on these developments, wages and prices could be affected.

The third factor is the responsiveness of inflation to the output gap. There is a risk that the pace of increase in inflation will deviate downward from the baseline scenario should firms become cautious in raising wages, reflecting uncertainties including future developments in overseas economies, or should consumers mount stronger resistance to an increase in sales prices under such circumstance. In addition, in the case of price rigidity of administered prices, some services prices, and rents for houses being more than expected, there is a possibility that the price rigidity will constrain the acceleration of CPI inflation.

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

III. 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.¹⁰

The first perspective concerns an examination of the baseline scenario for the outlook. Japan's economy is judged as likely to achieve around 2 percent inflation around the second half of fiscal 2016 and thereafter gradually shift to a growth path that sustains such inflation in a stable manner.

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. With regard to the baseline scenario for economic activity, risks are skewed to the downside, particularly those regarding developments in overseas economies. With regard to the baseline scenario for prices, there is considerable uncertainty, mainly in developments in medium- to long-term inflation expectations, and risks are skewed to the downside. Examining financial imbalances from a longer-term perspective, there is no sign at this point of excessively bullish expectations in asset markets or in the activities of financial institutions.¹¹ Nevertheless, in a situation where the amount outstanding of government debt has shown a cumulative increase, due attention needs to be paid to the fact that financial institutions' holdings of government bonds have remained at an elevated level, although they have been on a declining trend on the whole.

As for the conduct of monetary policy, QQE has been exerting its intended effects. The Bank will continue with QQE, 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 examine both upside and downside risks to economic activity and prices, and make adjustments as appropriate.

¹⁰ 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."

¹¹ For more details, see the October 2015 issue of the Bank's *Financial System Report*.

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 hikes
Fiscal 2015	+0.8 to +1.4 [+1.2]	0.0 to +0.4 [+0.1]	
Forecasts made in July 2015	+1.5 to +1.9 [+1.7]	+0.3 to +1.0 [+0.7]	
Fiscal 2016	+1.2 to +1.6 [+1.4]	+0.8 to +1.5 [+1.4]	
Forecasts made in July 2015	+1.5 to +1.7 [+1.5]	+1.2 to +2.1 [+1.9]	
Fiscal 2017	+0.1 to +0.5 [+0.3]	+2.5 to +3.4 [+3.1]	+1.2 to +2.1 [+1.8]
Forecasts made in July 2015	+0.1 to +0.5 [+0.2]	+2.7 to +3.4 [+3.1]	+1.4 to +2.1 [+1.8]

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

2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which 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.

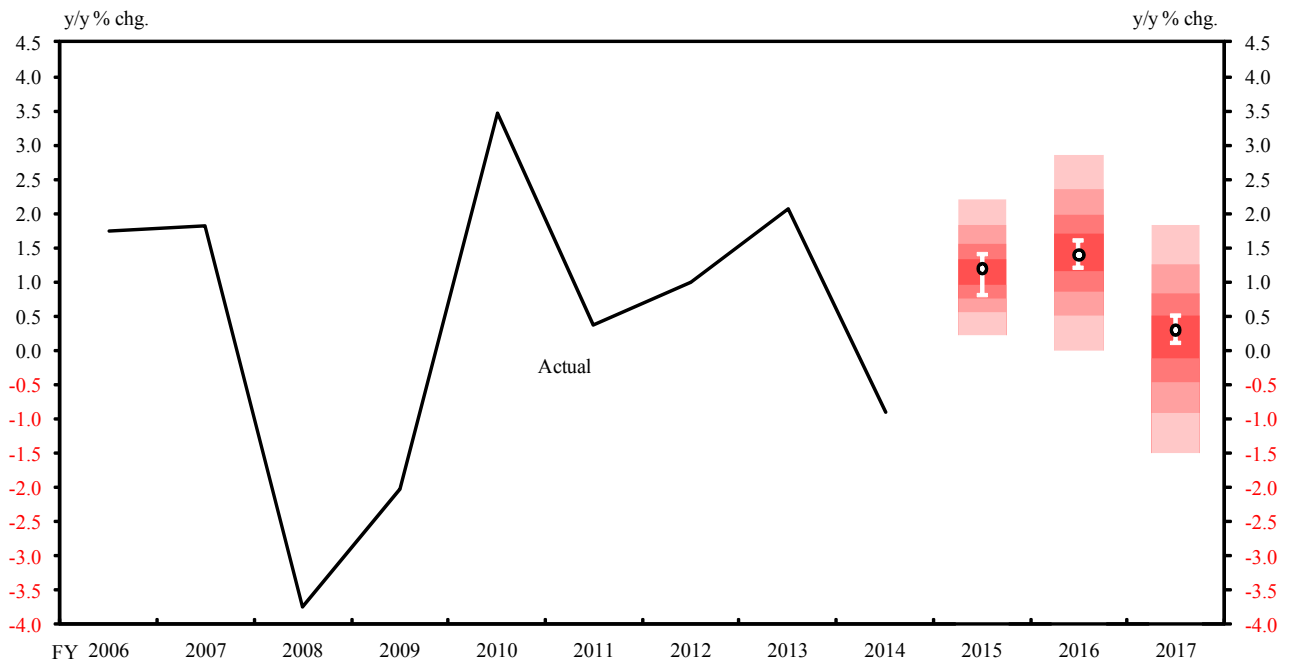
3. Individual Policy Board members make their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding future policy.

4. Dubai crude oil prices are expected to rise moderately from the recent 50 U.S. dollars per barrel to the range of 60-65 dollars per barrel toward the end of the projection period. Under this assumption, the contribution of energy items to the year-on-year rate of change in the CPI (all items less fresh food) is estimated to be around minus 0.9 percentage point for fiscal 2015, and around minus 0.2 percentage point for fiscal 2016. More specifically, this negative contribution is expected to lessen from the turn of 2016, and in the second half of fiscal 2016, the contribution is estimated to be around 0 percentage point.

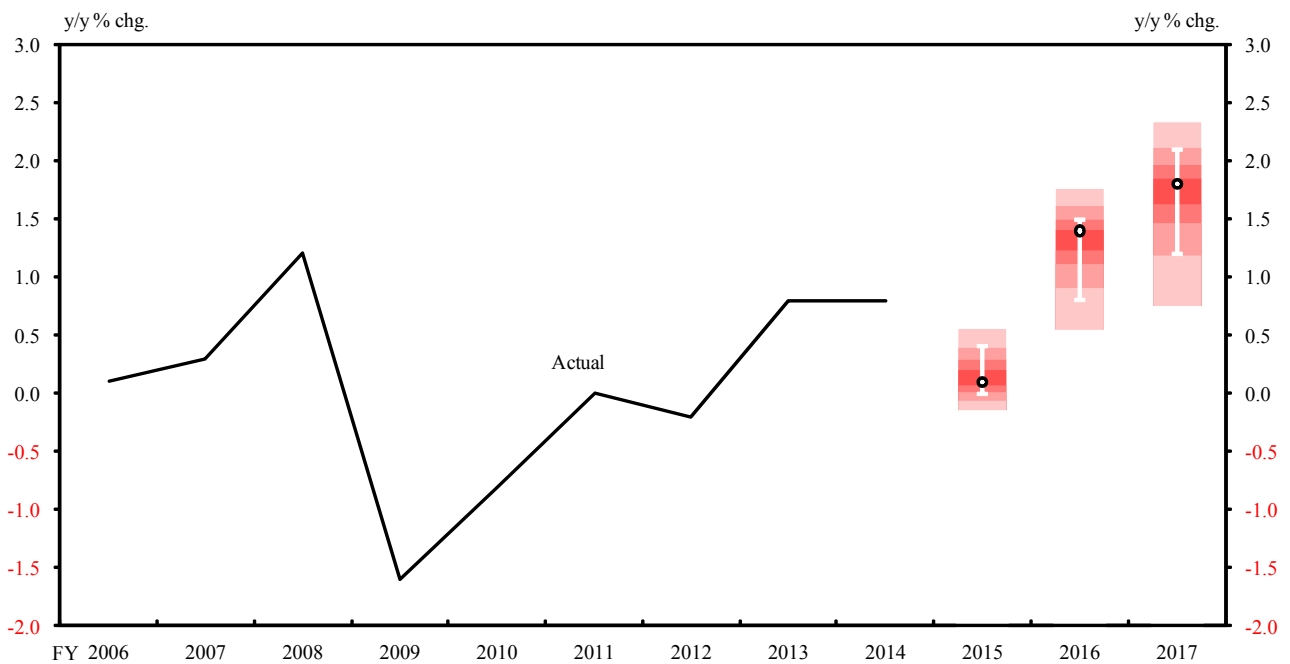
5. The consumption tax hike scheduled to take place in April 2017 -- to 10 percent -- is incorporated in the forecasts, but individual Policy Board members make their forecasts of the CPI based on figures excluding the direct effects of the consumption tax hike. The forecasts for the CPI for fiscal 2017 that incorporate the direct effects of the consumption tax hike are constructed as follows. First, the contribution to prices from each tax hike is mechanically computed on the assumption that the tax increase will be fully passed on for all taxable items. The CPI will be pushed up by 1.3 percentage points. Second, this figure is added to the forecasts made by the Policy Board members.

Forecast Distribution Charts of Policy Board Members

(1) Real GDP



(2) CPI (All Items Less Fresh Food)



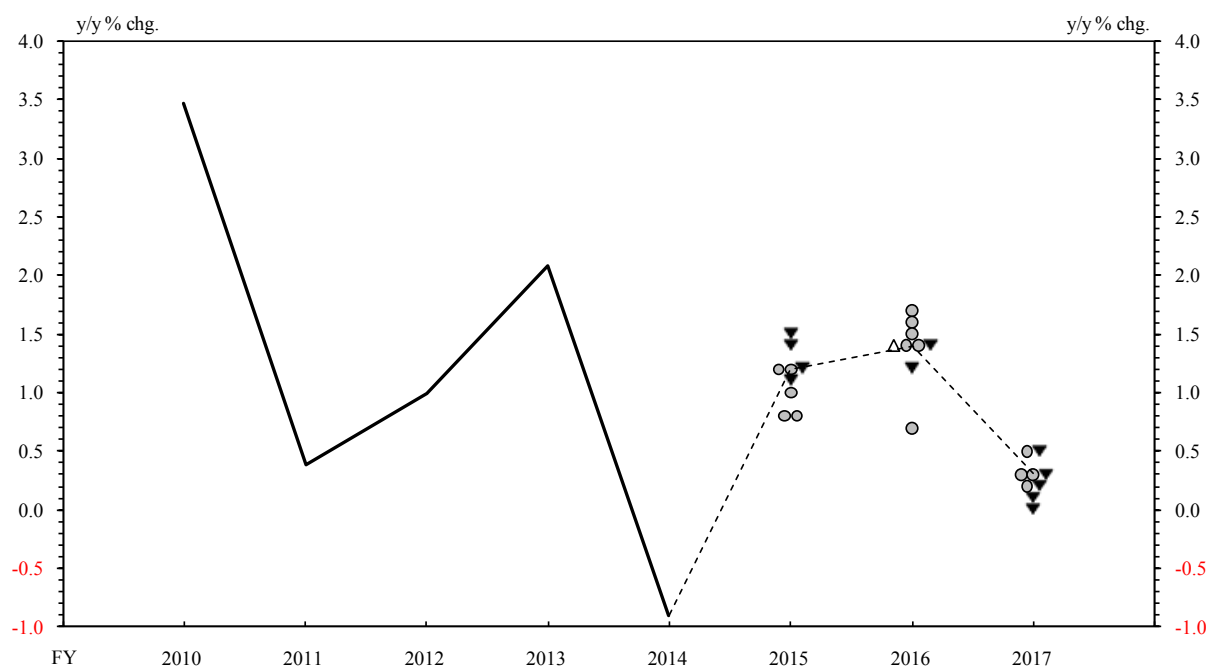
Notes: 1. The Forecast Distribution Charts are based on the aggregated probability distributions (i.e., the Risk Balance Charts) compiled from the distributions of individual Policy Board members, and constructed as follows. First, the upper and lower 10 percentiles of the aggregated distributions are trimmed. Second, the various percentiles of the aggregated distributions are color-coded as below.

Upper 40% to lower 40%	Upper 30% to 40% and lower 30% to 40%	Upper 20% to 30% and lower 20% to 30%	Upper 10% to 20% and lower 10% to 20%
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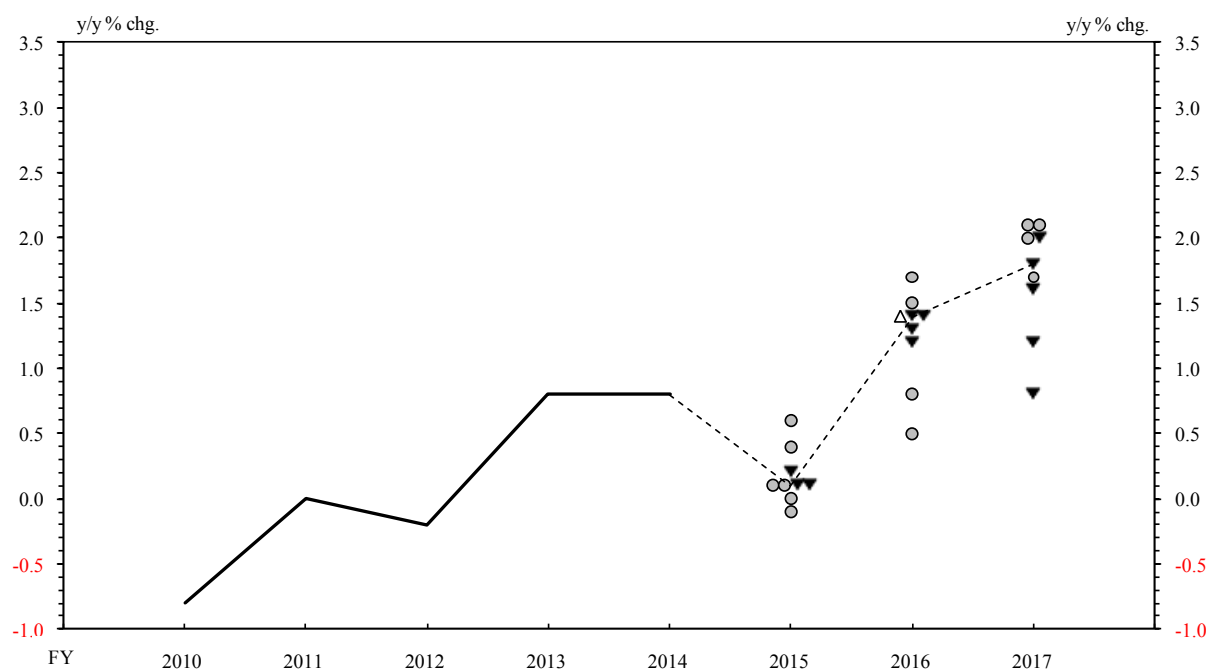
2. For the process of compilation of the Risk Balance Charts, see the box on page 9 of the April 2008 *Outlook for Economic Activity and Prices*.
3. The circles in the bar charts indicate the median of the Policy Board members' forecasts (point estimates). The vertical lines indicate the range of the forecasts of the majority of Policy Board members.
4. Figures for the CPI exclude the direct effects of the consumption tax hikes.

Policy Board Members' Forecasts and Risk Assessments

(1) Real GDP



(2) CPI (All Items Less Fresh Food)



Notes: 1. The Bank of Japan announced on June 19, 2015 in the "New Framework for Monetary Policy Meetings" that it would release from January 2016 the Policy Board Members' Forecasts and Risk Assessments, in replacement of the Forecast Distribution Charts of Policy Board Members. In this Outlook Report, the Bank released the former earlier than planned in order to enable a comparison between this release and future releases.

2. Solid lines show actual figures, while dotted lines show the medians of the Policy Board members' forecasts (point estimates).

3. The locations of ●, △, and ▼ 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: ● indicates that a member assesses "upside and downside risks as being generally balanced," △ indicates that a member assesses "risks are skewed to the upside," and ▼ indicates that a member assesses "risks are skewed to the downside."

4. Figures for the CPI exclude the direct effects of the consumption tax hikes.

The Background¹²

I. The Current Situation of Economic Activity and Its Outlook

A. Economic Developments

Looking back at Japan's economy since the July 2015 interim assessment, it continued to recover moderately, mainly on the domestic demand side, with a virtuous cycle from income to spending at work against the background of a marked improvement in corporate profits. However, since the slowdown in emerging economies exerted downward pressure on exports and production, the pace of improvement in Japan's economy was modest compared to that projected in the July 2015 interim assessment (Chart 1). The output gap -- which captures the utilization of labor and capital -- maintained its moderate improving trend, but deteriorated somewhat recently, primarily reflecting a decline in capital utilization of manufacturers due to the flattening of exports and production (Chart 2).

In the outlook, the projected growth rates were revised downward, especially for fiscal 2015, reflecting a revision to the projection of exports due to the slowdown in overseas economies driven by emerging economies. Nonetheless, there is no change in the baseline scenario that domestic private demand will follow its increasing trend, supported partly by the effects of monetary easing. The virtuous income-generating mechanism driven by the improvement in corporate profits is expected to be maintained, since the negative quantity effects of the export declines are to be offset by the positive price effects of crude oil price declines and the yen's depreciation. Real GNI -- representing the aggregate effect of these income formations -- has been rising recently at a faster pace than real GDP, and this is consistent with the aforementioned view that the effects of the crude oil price declines and the yen's depreciation exceed those of the flattening of exports (Chart 3). In the corporate sector, such an increase in aggregate income appears as an increase in current profits due to an improvement in the terms of trade and a rise in dividend income from foreign subsidiaries. The household sector also benefits from an increase in real income due to a decline in energy prices. These increases in the corporate and household sectors' income are expected to support their spending activities, such as business fixed investment and

¹² "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 October 30, 2015.

private consumption. Thus, with the virtuous cycle from income to spending at work, Japan's economy is likely to continue growing at a pace above its potential through fiscal 2016, despite being affected by the slowdown in emerging economies for the time being. In fiscal 2017, the economy is projected to maintain somewhat positive growth, although with a slowing in its pace to around a level somewhat below the potential growth rate, reflecting a fall in household spending due to the consumption tax hike and cyclical deceleration in business fixed investment.¹³

Details of the outlook for each fiscal year are as follows. In fiscal 2015, although external demand is likely to remain more or less flat, the economy is expected to grow at a pace well above its potential against the background of a steady increase in domestic private demand. The output gap is likely to turn positive toward the end of the fiscal year. Looking at each demand component, while exports are projected to remain more or less flat for the time being due to the effects of the slowdown in emerging economies, business fixed investment is expected to increase, supported by an improvement in corporate profits that is attributable

¹³ This report assumes that the consumption tax will rise to 10 percent in April 2017. The front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike is expected to occur mainly in household spending (private consumption and housing investment). Such fluctuation is projected to occur in a part of business fixed investment as well, particularly in family-owned firms and small firms that are eligible for the simplified tax system or the tax exemption.

The effects of the consumption tax hike in April 2014 on the economic growth rate are estimated to be as follows. After the front-loaded increase in demand pushed up the growth rate by about 0.5 percentage point in fiscal 2013, both the subsequent decline in demand and the decline in real income have pushed down the growth rate by about 1.2 percentage points in fiscal 2014. The growth rate is expected to be pushed up by about 0.3 percentage point in fiscal 2015 as the effects of the subsequent decline in demand will dissipate. It is worth noting that these estimated figures are subject to a considerable margin of error since quantitatively extracting the effects of the consumption tax hike in April 2014 is quite difficult. This is because (1) the expiration of some widely used computer operating systems and the strengthening of gas emission regulations caused demand fluctuations at that time and (2) the price rise including the consumption tax hike is likely to have made household sentiment cautious and affected consumption more negatively than explained by the decline in real income.

Given the difference in the increase in the tax rate, the effects of the consumption tax hike planned in April 2017 on the economic growth rate are projected to be a rise of about 0.3 percentage point in fiscal 2016 and a fall of about 0.8 percentage point in fiscal 2017, both about two-thirds of the estimated effects of the first round of consumption tax hikes.

to the decline in crude oil prices and the depreciation of the yen as well as by accommodative financial conditions. Private consumption is also likely to increase moderately, as real disposable income improves through base pay increases that are larger than in the previous year, increases in pension payments, and the decline in energy prices. Meanwhile, public investment is projected to continue its moderate downtrend.

In fiscal 2016, while public investment is projected to continue its downtrend, exports are expected to increase moderately, as emerging economies move out of their deceleration phase. Domestic private demand is likely to increase firmly, on the back of the rises in corporate profits and employee income. In addition, in the second half of the fiscal year, a front-loaded increase in demand prior to the consumption tax hike is expected to be seen again in both household spending and business fixed investment. Thus, the economy is projected to continue growing at a pace clearly above its potential.

In fiscal 2017, economic growth is projected to substantially weaken compared to the previous fiscal year. Business fixed investment is projected to be under stronger cyclical downward pressure. The consumption tax hike will bring about a decline in demand following the front-loaded increase and a decline in real income. However, it is likely that domestic private demand will maintain its underlying resilience because of monetary accommodation and heightened growth expectations. Investment related to hosting the Olympic Games is also likely to support domestic private demand. Exports are expected to continue increasing moderately. Thus, the economy is projected to see somewhat positive growth, albeit below the growth potential, and the output gap is expected to broadly maintain its positive level marked in the previous fiscal year.

B. Developments in Major Expenditure Items and Their Background

Government Spending

Public investment has entered a moderate declining trend, although it remains at a high level (Chart 4). Orders received for public construction have turned to a decrease, albeit with fluctuations. The amount of public construction completed, which reflects the progress of public works and changes in line with the orders with some time lag, has still

been at a high level with the effects of the large-scale projects remaining. In the outlook, although public investment will be underpinned to some degree by the implementation of the supplementary budget for fiscal 2014, it is projected to follow a moderate downtrend given that the level in fiscal 2014 was high. Nevertheless, in light of increasing demand for maintenance and replacement of social infrastructure and of investment related to hosting the Olympic Games, public investment is expected to decline more moderately than in the mid-2000s and level off toward the end of the projection period.

Overseas Economies

Overseas economies -- mainly advanced economies -- have continued to grow at a moderate pace, despite the slowdown in emerging economies (Charts 5 and 6). Looking at developments by major region, the U.S. economy has continued to recover, assisted by the firmness in household spending. The European economy has continued to recover moderately. The Chinese economy has continued to be in a state of deceleration due to downward pressure from an overhang of production capacities and inventory adjustments in the manufacturing sector. Other emerging economies and commodity-exporting economies have continued their subdued pace of growth as the effects of the slowdown in the Chinese economy spread to them. Such developments are especially evident in the economies that are vulnerable to the decline in commodity prices and geopolitical risks.

In the outlook, the pace of growth in overseas economies will remain relatively slow in 2015 due to the effects of the slowdown in emerging economies, particularly in China, and is expected to accelerate moderately thereafter as the positive effects of the recovery in advanced economies gradually spread to emerging economies. However, given that the expected growth rates of emerging economies have become lower, the capital stock accumulated amid the higher expected growth rates in the past is likely to continue to be excessive.¹⁴ Thus, firms' restrained stance toward fixed investment expenditure is likely to be seen globally throughout the projection period.

¹⁴ In particular, there appears to be considerable excess in capital stock in the raw materials sector, which had been accumulated when commodity prices had risen or remained at high levels since 2000.

By major region, the U.S. economy is expected to continue its firm recovery centered on the private sector, underpinned by accommodative financial conditions. The European economy is projected to continue to see moderate recovery, mainly on the back of improvement in the employment and income situation, as well as accommodative financial conditions. The Chinese economy is likely to broadly follow a stable growth path, albeit at a somewhat slower pace mainly in the manufacturing sector, as authorities carry out policy measures to support economic activity from both the fiscal and financial sides. Other emerging economies and commodity-exporting economies are expected to gradually increase their growth rates, due mainly to the effects of the recovery in advanced economies and the fiscal and monetary policy measures to stimulate the economy, although differences across countries and regions are likely to remain for the time being.

Exports and Imports

Exports have recently been more or less flat, due mainly to the effects of the slowdown in emerging economies, particularly in China (Charts 7 and 8). By region, while exports to advanced economies have maintained their moderate uptrend, albeit with fluctuations, those to emerging economies, particularly to East Asia, have shown somewhat sluggish movements.¹⁵

The export developments can be decomposed to the volume effect of global trade and the share effect of Japan's exports in global trade (Chart 9). First, the volume of global trade, especially imports in emerging and commodity-exporting economies, decreased significantly in the first half of 2015.¹⁶ This was attributable to the following: (1) emerging economies including China have generally increased the domestic production of manufactured parts and other goods that they mostly imported previously (i.e., the internalization of supply chains); (2) adjustments in excess production capacity and excess inventory in manufacturers in emerging economies has been exerting downward pressure on production of capital goods in advanced economies; and (3) IT-related demand has been weak globally (Chart 10). Second, the share of Japan's exports in global trade is pushed

¹⁵ For the impact of China's economic slowdown on Japan's exports, see Box 1.

¹⁶ The volume of global trade is calculated by adding up real imports in each country.

down by the recent adjustments in the manufacturing sector driven mainly by emerging economies, because such adjustments have relatively large negative effects on Japan's exports, reflecting the scale of its exports of manufactured parts, capital goods, and IT-related goods to emerging economies. Reflecting these developments in the volume of global trade and the share of Japan's exports in global trade, the pick-up in Japan's exports has paused.

In the outlook, exports are expected to be more or less flat for the time being, as the effects of weakening in global trade activity arising mainly from emerging economies are likely to remain; however, exports are projected to pick up gradually through the second half of fiscal 2015, owing to a moderate improvement in IT-related demand accompanying the sales of new models of smartphones and to a shift of production sites of automobiles for foreign markets back to Japan. After that, as the positive effects of the steady recovery in advanced economies are likely to spread to emerging economies, the Chinese economy is expected to move out of the current deceleration phase, supported by the effects of governmental measures to stimulate the economy, and this is expected to lead to a higher growth rate of the NIEs and the ASEAN economies. Therefore, the volume of global trade is projected to pick up gradually and Japan's exports consequently are likely to increase moderately. However, given the decline in the expected growth rate in emerging and commodity-exporting economies and the resulting excess production capacity, Japan's exports are expected to tend to mark a fall rather than a clear increase, especially for capital goods exports in which Japan has a comparative advantage, and thus the pace of increase in the share of Japan's exports within global trade is projected to be only moderate.

Meanwhile, the number of foreign visitors to Japan has continued to increase substantially, mainly from Asia, despite the slowdown in emerging economies, and the travel receipts that are categorized as exports of services in the balance of payments statistics have followed a clear improving trend. Such an increasing trend in the number of foreign visitors to Japan is likely to continue, supported by the depreciation of the yen and governmental measures to attract foreign tourists to Japan in view of hosting the 2020 Tokyo Olympics, and this is expected to underpin exports through an increase in the travel receipts.¹⁷

¹⁷ For the economic impact of hosting the 2020 Tokyo Olympics on Japan's economy, see Box 2.

Imports have remained on a moderate increasing trend, mainly reflecting developments in domestic demand. In the outlook, although the past developments in foreign exchange rates will be a restraining factor for the time being and the consumption tax hike will cause fluctuations, imports are expected to continue a moderate increasing trend, mainly reflecting developments in domestic demand.

External Balance

Looking at the nominal current account balance, the surplus of the current account balance had continued its clear expanding trend since the October-December quarter of last year onward, due to (1) the ongoing surplus in the primary income balance and (2) the improvement in the trade balance as a result of the pick-up in exports and of the decline in crude oil prices, in addition to (3) the improvement in travel balance (Chart 11 [1]). Recently, however, the expanding trend of the surplus has paused, reflecting the aforementioned developments in exports and imports. The current account surplus is likely to resume following a moderate expanding trend, reflecting a widening in the surplus of the income balance and also reflecting an improvement in the trade balance in nominal terms resulting from the decline in crude oil prices.¹⁸

Industrial Production

Industrial production has been more or less flat recently, due to the effects of the slowdown in emerging economies and to the weakness in global IT-related demand, and also to the prolonged inventory adjustments of small cars (Charts 12 and 13).

The outlook for industrial production is that it will remain more or less flat for the time being, as in the outlook for exports; however, it is likely to increase moderately thereafter,

¹⁸ Looking at the domestic saving-investment balance that by definition equals the current account balance, excess saving in the private sector during the projection period will likely narrow very moderately, albeit with fluctuations caused by the consumption tax hikes, while the deficit in the general government is expected to decrease markedly, partly due to an increase in tax revenue (Chart 11 [2]). Therefore, domestic excess saving as a whole is expected to follow a rising trend through the projection period.

as emerging economies move out of their deceleration phase and as the inventory adjustments progress.

Corporate Profits

Corporate profits have continued to improve markedly, underpinned by the decline in crude oil prices and the depreciation of the yen. According to the *Financial Statements Statistics of Corporations by Industry, Quarterly*, current profits aggregated across all industries and company sizes saw a sharp increase in the April-June quarter of 2015; the ratio of current profits to sales posted a record-high level (Chart 14). Business sentiment has generally stayed at a favorable level on the back of the improvement in corporate profits and resilience in domestic private demand, although somewhat cautious developments have been observed in some areas due to the slowdown in emerging economies and to the decline in international commodity prices (Chart 15).

Despite the slowdown in emerging economies exerting downward effects on the export volume, corporate profits are expected to follow a clear improving trend on the back of (1) the substantial improvement in the terms of trade, mainly due to the decline in crude oil prices; (2) the rise in dividend income and interest income from overseas business, the yen value of which is raised by the depreciation of the yen; and (3) the pick-up in sales volume (i.e., shipments), led by domestic demand. However, toward the end of the projection period, the growth rate of corporate profits is expected to gradually decline given that the economy will head for a cyclical deceleration and there will be a decline in demand in fiscal 2017 following the front-loaded increase prior to the consumption tax hike.

Business Fixed Investment

Business fixed investment has been on a moderate increasing trend as corporate profits have continued to improve markedly. The two coincident indicators of business fixed investment -- the aggregate supply of capital goods (on a basis excluding transport equipment) and business fixed investment reported by the *Financial Statements Statistics of Corporations by Industry, Quarterly* (in nominal terms) -- have been trending moderately upward, albeit with fluctuations (Chart 16). According to the fiscal 2015 business plans

indicated by the September 2015 Short-Term Economic Survey of Enterprises in Japan (*Tankan*), firms expect to see their profitability mark a record-high level, and their fixed investment stance is firm (Chart 17). The *Tankan* for this time of the year indicates that, by industry and size, large manufacturing firms continue to plan for quite high growth in business fixed investment for fiscal 2015. In addition, the investment plans of large nonmanufacturing firms and small firms have been revised upward compared to the June *Tankan*. On the basis of business investment (including software investment and excluding land purchasing expenses) in all industries including financial institutions, which is closer to the basis in GDP, firms plan to increase investment in 2015 by 8.4 percent (Chart 18). This number is the highest among plans in past September *Tankan* surveys since fiscal 2006. Against this backdrop, leading indicators, including machinery orders and construction starts, have maintained their moderate improving trend, if they are smoothed out (Chart 19).

Business fixed investment is projected to continue to see a moderate increase on the back of (1) a marked improvement in corporate profits, (2) stimulative financial conditions such as low interest rates and accommodative lending attitudes, and (3) manufacturers' positive stance on domestic investment in response to the continuation of the depreciated level of the yen. During the latter half of the projection period, as the capital stock accumulation becomes considerable, the pace of the cyclical increase in business fixed investment is projected to gradually slow down. If business fixed investment is assessed in light of corporate profits or cash flow, firms are still judged as maintaining their restrained fixed investment stance since the global financial crisis, but their stance is projected to gradually become more positive throughout the projection period in response to a moderate rise in growth expectations and the continuation of the low level of crude oil prices and the depreciated level of the yen (Chart 20).

It is also possible to assess the growth rates of business fixed investment from the viewpoint of the capital stock cycle, based on the assumption that the investment will be undertaken in order to realize the level of capital stock necessary for production activity under the specific rate of expected growth (Chart 21). For the time being, business fixed investment is likely to increase at the pace consistent with the assumption that firms' expected growth rates are

about the same level as the growth potential, which is estimated to be around 0.5 percent or lower. Thereafter, it is projected that firms will make fixed investment that is consistent with the expected growth rate at a level slightly above the potential growth rate. This takes into account the stimulating effects of the continued extremely accommodative financial conditions and the materialization of investment demand related to hosting the Olympic Games.

The Employment and Income Situation

Supply-demand conditions in the labor market have continued to improve steadily (Charts 22 and 23). According to the *Labour Force Survey*, the smoothed-out number of employees has been increasing in the range of 0.5 percent to around 1.0 percent on a year-on-year rate basis. Against this backdrop, the improving trend in the active job openings-to-applicants ratio has become evident. The employment conditions DI in the September *Tankan* also suggests that a perception of labor shortage has heightened steadily. The unemployment rates, particularly for the short-term, have been trending downward moderately, albeit with some fluctuations. As Japan's economy is likely to continue growing at a pace above its potential for some time, the number of employees is likely to continue increasing and the supply-demand conditions in the labor market are also expected to continue improving steadily.

On the wage side, total cash earnings per employee excluding special cash earnings have risen moderately (Chart 24).¹⁹ In particular, the year-on-year rate of increase in scheduled cash earnings as a whole has moderately accelerated in spite of continued downward pressure from an increase in the ratio of part-time workers, as the rate of increase in scheduled cash earnings of full-time employees has accelerated mainly due to the effects of the rise in base pay. Nevertheless, it should be noted that, given that firms have been

¹⁹ In the *Monthly Labour Survey*, year-on-year fluctuations in wage data, particularly for special cash earnings, have become larger since the latest replacement of samples for establishments with 30 or more employees, probably because of differences in the samples before and after the revision. This makes it somewhat difficult to assess actual wage developments. Nevertheless, taking into consideration the developments in other wage-related statistics and an improving trend in consumer sentiment in addition to the *Monthly Labour Survey*, there seems to have been no significant change in the uptrend of wages.

seeing record profits and the unemployment rate has declined to the range of 3.0-3.5 percent, the pace of improvement in wages has been somewhat slow (Chart 20).

The outlook is that an improvement in corporate profits and the tightening of labor market conditions become more evident and firms' stance of considering the underlying inflation trend in the annual labor-management wage negotiations takes hold. Such a situation will lead to a rise in base pay and an increase in wages of non-regular employees. Thus, hourly cash earnings of overall employees, especially scheduled cash earnings, are expected to increase.

Reflecting the increase in the number of employees and the improvement in wages, employee income has risen moderately, albeit with fluctuations (Chart 25). In light of the aforementioned prospects for employment and wages, the rate of increase in employee income is expected to moderately accelerate and, in the second half of the projection period, gradually stabilize at around the same rate as nominal GDP growth.

Household Spending

Private consumption has been resilient against the background of steady improvement in the employment and income situation. In the GDP statistics, after increasing for three consecutive quarters on a quarter-on-quarter basis, private consumption dropped in the April-June quarter of 2015 (Chart 26). However, this seems to be largely attributable to the effects of temporary factors such as bad weather and the sample bias of the demand-side statistics (the *Family Income and Expenditure Survey*) and to lackluster sales of small cars. Indeed, it can be assessed that there is no significant change in the underlying resilience in private consumption in light of the following facts: (1) consumer sentiment has maintained its improving trend, albeit with fluctuations, reflecting an increase in real disposable income due to a rise in nominal wages, an increase in pension payments, and the decline in energy prices; (2) sales statistics for July 2015 and thereafter have picked up overall as the effects of bad weather dissipated; and (3) an improving trend in services consumption such as dining-out has become clearer (Charts 27, 28, and 29).

Private consumption is projected to gradually increase its resilience toward the first half of fiscal 2016 on the back of a clear increase in real disposable income. The increase in real disposable income has not been seen for about two years and thus its upward effects on consumption are likely to be fairly large. In the second half of fiscal 2016, although real disposable income growth will be restrained mainly by a leveling off of the decline in energy prices, private consumption growth is expected to be relatively high, mainly due to a front-loaded increase in demand prior to the consumption tax hike. In contrast, in fiscal 2017, as there will be a subsequent decline in demand and a drop in real income due to the consumption tax hike, private consumption is likely to turn to a decline. This decline is projected to be less significant than that seen in fiscal 2014, but the extent is considerably uncertain.

Housing investment has been picking up (Chart 30). It is expected to continue doing so, underpinned by the continued steady improvement in the employment and income situation and the low levels of housing loan rates.²⁰

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 continued to decline relative to three months earlier since July, reflecting the decline in international commodity prices and the deterioration in supply-demand conditions of manufacturing goods in Asia (Chart 31 [1]). The year-on-year rate of increase in the services producer price index (SPPI, excluding international transportation) has been moving in the range of 0.5-1.0 percent, amid firms' continued positive spending stance on the back of the improvement in corporate profits (Chart 31 [2]).

²⁰ Among the effects of the consumption tax hike planned in April 2017, the degree of the front-loaded increase and subsequent decline in housing investment is likely to be somewhat smaller than that of the hike in April 2014, given that (1) a part of the front-loaded demand to avoid the effects of the second round of consumption tax hikes may have materialized to some extent before the first round and (2) the gift tax exemption related to housing acquisition funds has been extended and expanded. However, there is high uncertainty regarding the effects on housing investment, as in the case of private consumption.

The year-on-year rate of change in the CPI (all items less fresh food) has generally been about 0 percent since the turn of the year, with the following two factors broadly offsetting: (1) the further decline in energy prices, reflecting the decline in crude oil prices; and (2) positive developments in non-energy prices on the back of the improvement in the output gap and the pass-through of cost increases due to the depreciation of the yen (Chart 32). Looking at this in detail, developments in prices for goods, especially for food products and durable goods, have been improving steadily, reflecting the resilient private consumption and the pass-through of the cost increases due to the depreciation of the yen, while prices of petroleum products have declined further. The rate of increase in prices of general services has kept accelerating moderately, mainly due to wage-driven price increases in dining-out and other services, including accommodation and housework-related services, while rent prices have continued to decline slightly. Meanwhile, administered prices have been declining at a faster pace recently, mainly due to reductions in electricity prices and gas prices through the Fuel Cost Adjustment System.

As one of the indicators for capturing the underlying trend in the CPI, the rate of increase in the trimmed mean has risen very moderately since the turn of this year, albeit with some fluctuations, and has recently been around 0.5 percent (Chart 33).^{21,22} The year-on-year rate of increase in the CPI for all items excluding energy in addition to fresh food has risen again after bottoming out in the January-February period, when it marked an increase of 0.4 percent, and it stood at 1.2 percent in September, clearly surpassing the recent peak in February last year (an increase of 0.9 percent). The year-on-year rate of increase in the CPI for all items less food and energy has also been steadily rising after bottoming in April (an increase of 0.2 percent), and it stood at 0.9 percent in September. In addition, looking at annual price changes in all CPI items less fresh food, there is a marked increase since April in the share of price-increasing items minus the share of price-decreasing items. This currently exceeds 40 percentage points, clearly surpassing the recent peak in October 2008 (32 percentage points).

²¹ For the underlying trend in inflation, see Box 3.

²² The effects of large relative price fluctuations are eliminated by mechanically 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).

Meanwhile, the year-on-year rate of change in the GDP deflator has been positive, mainly due to the decline in the import deflator arising from the decline in crude oil prices (Chart 34). In contrast, the year-on-year rate of change in the domestic demand deflator has been around 0 percent recently, due to the effects of the decline in energy prices as well as the contribution of the consumption tax hike in April 2014 having become zero.

The Environment surrounding Prices

In the outlook for prices, the main factors that determine inflation rates are assessed as follows. First, the output gap is affected by the slowdown in emerging economies and is expected to remain slightly negative for the time being, mainly reflecting developments in the capital input gap of manufacturers. Toward the end of fiscal 2015, it is expected to exceed 0 percent, which is the level of the past long-term average, and return to positive territory (Charts 2 [1] and 35 [2]). Thereafter, reflecting a higher utilization of production inputs accompanying the economic expansion, the output gap is projected to steadily expand within positive territory. In fiscal 2017, it is likely to more or less level off, while remaining in positive territory, due to the slowdown of the growth rate to around a level somewhat below the potential growth rate against the backdrop of the consumption tax hike planned in April 2017.

Second, medium- to long-term inflation expectations appear to be rising on the whole from a somewhat longer-term perspective. Recent developments in market-based indicators and various survey results indicate that inflation expectations have been flat on the whole despite a decline in crude oil prices, although some of them are somewhat weak (Charts 36 and 37). Firms' wage- and price-setting stances have been changing in response to improvements in inflation expectations, as evidenced by the fact that the increase in wages including base pay this fiscal year was larger than last fiscal year at many firms and that firms' price-hiking behavior from the turn of fiscal 2015 has become widespread and sustained. Looking ahead, as the Bank pursues QQE and the observed inflation rate rises, medium- to long-term inflation expectations are likely to follow an increasing trend and gradually converge to around 2 percent -- the price stability target.

The third factor is developments in import prices (Chart 38). The Bank assumes that Dubai crude oil prices will rise moderately from the recent 50 U.S. dollars per barrel to the range of 60-65 dollars per barrel toward the end of the projection period, although the volatility of the prices remains high and there is also a high degree of uncertainty ahead. Under this assumption, the negative contribution of energy items (petroleum products, electricity, and manufactured and piped gas) to the year-on-year rate of change in the CPI is expected to lessen from the turn of 2016, and in the second half of fiscal 2016, the contribution is estimated to be around 0 percentage point. As for the effects of developments in foreign exchange rates on consumer prices, the pass-through of cost increases due to the past depreciation of the yen is expected to continue, although it should tend to wane in fiscal 2016, against the backdrop of the increasing resilience of private consumption.

The Outlook for Prices

The outlook for prices (excluding the direct effects of the consumption tax hikes) is as follows (Chart 35). The year-on-year rate of increase in the CPI (all items less fresh food and energy) is projected to steadily accelerate to around 2 percent from the current level of slightly above 1 percent, because cost increases resulting from the depreciation of the yen and the rise in wages are expected to be reflected in prices on the back of the improvement in the output gap and the rise in inflation expectations. The year-on-year rate of change in the CPI (all items less fresh food) is projected to be about 0 percent or slightly above 0 percent in fiscal 2015, because the negative contributions of energy items are likely to offset the positive contributions of items other than fresh food and energy. The negative contributions of energy items are likely to remain for some time from the turn of fiscal 2016, but wane. Thus, the year-on-year rate of change in the CPI (all items less fresh food) is projected to reach around 2 percent around the second half of fiscal 2016 as the negative contribution of energy items dissipates. Thereafter, the rate of change is likely to be around 2 percent on average.

From the viewpoint of the relationship between inflation (the CPI, all items less fresh food and energy) and the output gap -- depicted by the so-called Phillips curve -- the inflation

rate is currently slightly above 1 percent, with the output gap being at about 0 percent (Chart 39). Throughout fiscal 2015, it is likely to accelerate at a faster pace than suggested by the improvement in the output gap, because cost increases in supply chains are expected to be passed on to final goods prices. Such developments were seen in fiscal 2013 following the rapid depreciation of the yen, which occurred immediately before the start of that fiscal year. In fiscal 2016, while the upward effects of the depreciation of the yen will dissipate gradually, the inflation rate is expected to display a stronger tendency to converge toward the medium- to long-term inflation expectations. Thus, the inflation rate is likely to moderately increase, broadly at a pace suggested by the improvement in the output gap. In fiscal 2017, as the inflation expectations are likely to converge to around 2 percent and the output gap is likely to be more or less unchanged, the inflation rate is expected to be around 2 percent. As such, in the baseline scenario, it is projected that the year-on-year rate of change in the CPI will respond fairly clearly to the improvement in the output gap and the Phillips curve will gradually shift upward reflecting a rise in medium- to long-term inflation expectations.

With regard to the relationship between prices and nominal wages, these move almost in parallel in the long run (Chart 40). The relationship among the CPI, hourly nominal wages, and labor productivity is stable. In light of this, the outlook is that a virtuous cycle between wage and price increases will gradually become clearer as wage negotiations take the underlying trend in inflation more into account. Specifically, hourly wages are expected to rise moderately, reflecting the tightening of labor market conditions and the rise in inflation expectations, and the underlying rate of increase in the CPI is projected to accelerate gradually in a consistent manner with such wage developments.

Land Prices

Land prices as a whole have been declining slightly, but the pace of decline has been slowing. Looking at the *Land Price Research by Prefectural Governments* for 2015 (as of July 1), in the three major metropolitan areas (Tokyo, Osaka, and Nagoya), the rate of increase in commercial land prices has accelerated on a year-on-year basis and residential land prices have also continued to rise, albeit slightly, on a year-on-year basis (Chart 41).

In nonmetropolitan areas, the year-on-year rate of decline in both commercial and residential land prices has been narrowing for four consecutive years.

III. Financial Developments in Japan

Financial Conditions

Financial conditions are accommodative.

With the Bank pursuing QQE, the monetary base has been increasing at a high year-on-year growth rate in the range of 30-35 percent (Chart 42).

Firms' funding costs have been hovering at low levels. The issuance spreads for CP and corporate bonds have been low, as favorable issuing conditions have continued against the backdrop of firm demand from investors (Chart 43). The average interest rates on new loans and discounts have been at historical low levels (Chart 44 [1]). In these circumstances, interest payments by firms have been at sufficiently low levels compared with their profits (Chart 44 [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 on an improving trend (Chart 45 [1]). The diffusion indexes (DIs) in the *Tankan* have improved to the levels generally in line with or above those of around 2006, which is the recent peak. Firms' financial positions have been favorable for both large and small firms (Chart 45 [2]). Various DIs have improved to the levels generally in line with or above the recent peak seen around 2006.

Demand for working capital by firms has continued to rise. There has also been an increase in demand for funds in sectors where there are prospects for high growth, such as the medical and nursing business, and for funds related to mergers and acquisitions of firms. In these circumstances, bank lending has continued to increase and this rise has expanded to a wider range of businesses, regions, and firm sizes. The year-on-year rate of change in its amount outstanding has been around 2.5-3.0 percent (Chart 46 [1]). By firm size, the

year-on-year rates of change in bank lending both to large and small firms have continued to be positive (Chart 46 [2]). Meanwhile, the aggregate amount outstanding of CP and corporate bonds has generally been at about the previous year's level, albeit with fluctuations (Chart 46 [3]). Looking at CP and corporate bonds separately, the year-on-year rate of change in the amount outstanding of CP remained positive until the middle of this year on the back of increased funding by leasing companies and consumer finance companies, but it has become negative recently, owing in part to a halt in the pace of increase in funding seen since the second half of 2014. The year-on-year rate of change in the amount outstanding of corporate bonds has been negative, partly resulting from the fact that issuers hold ample liquidity and that financial institutions' lending attitudes have been active.

The year-on-year rate of change in the money stock (M2) has been growing in the range of 3.5-4.5 percent, mainly reflecting the increase in bank lending (Chart 47 [1]). The ratio of M2 to nominal GDP has been on a moderate increasing trend (Chart 47 [2]).

Developments in Financial Markets

In global financial markets, amid continued accommodative financial conditions, long-term interest rates were generally low, and an uptrend in stock prices continued until the middle of this year; however, those markets have become fairly volatile globally, mainly reflecting a heightened concern over political and economic conditions in Greece and over uncertainty about the outlook for the Chinese economy.

Looking at respective financial markets, stock prices had continued trending upward until the middle of this year, with accommodative financial conditions underpinning the economy and business performance, but this was followed by considerable fluctuations, reflecting the heightened concern over political and economic conditions in Greece and over uncertainty about the outlook for the Chinese economy, as well as monetary policy developments in some countries (Chart 48 [1]).

Yields on 10-year government bonds in the United States and Germany increased somewhat up to the middle of this year on the back of a reversal of the low interest rate environment seen until then, but have declined thereafter against the background of the heightened risk aversion of investors, reflecting the increased volatility in global financial markets (Chart 49 [1]). Meanwhile, Japanese banks' foreign currency funding conditions have remained stable on the whole, although premiums for U.S. dollar funding through the dollar/yen foreign exchange swap market have risen due to the tightening in the supply-demand balance (Chart 50 [2]). The LIBOR-OIS spreads in the U.S. dollar and euro have generally remained at low levels (Chart 50 [3]).

Looking at financial markets in Japan, short-term interest rates -- including those on term instruments with longer maturities -- have been kept low as the Bank continues to provide ample liquidity (Chart 50 [1]). Yields on treasury discount bills (T-Bills) have been about 0 percent or in negative territory. Credit spreads on interbank transactions have remained stable as the balance sheets of Japanese financial institutions have maintained their soundness (Chart 50 [3]).

Yields on 10-year Japanese government bonds (JGBs) had risen somewhat, mainly reflecting the increase in U.S. long-term interest rates, but from mid-2015 onward, they declined somewhat against the backdrop of the declines in crude oil prices and in U.S. and European long-term interest rates, and recently have been around 0.3 percent (Chart 49).

Stock prices had continued their rising trend until the middle of this year but subsequently fluctuated considerably, affected by volatile stock prices seen globally (Chart 48 [1]). In the Japan real estate investment trust (J-REIT) market, prices had been firm until the middle of this year but have fluctuated considerably thereafter (Chart 48 [2]).

In foreign exchange markets, the yen had continued to depreciate moderately against the U.S. dollar until the middle of this year; however, as stock prices fell globally, and reflecting the heightened risk aversion of investors, the yen subsequently appreciated somewhat against the dollar and recently has been staying at broadly around 120 yen against the dollar (Chart 51). The yen had depreciated against the euro, reflecting a rise in

European long-term interest rates, but this was followed by a temporary appreciation due to the heightened concern over political and economic conditions in Greece; the yen has generally remained more or less unchanged against the euro.

(Box 1) Impact of China's Economic Slowdown on Japan's Exports

Japan's exports have been more or less flat amid the effects of the slowdown in the Chinese economy spreading to the NIEs and ASEAN countries through trade connections. Japan's exports of capital goods, in which it has a comparative advantage, have been sluggish, reflecting developments in exports of machine tools and construction machinery to East Asia. Exports of IT-related goods, which are mostly produced in the upstream stage of supply chains, have continued to decline recently, affected partly by the slowdown in final demand (e.g., smartphones) in China.

In order to quantitatively gauge the effects of the slowdown in the Chinese economy on Japan's exports, a simple vector autoregression (VAR) model is estimated. The model consists of China's electricity production, which can be regarded as a relatively reliable indicator of the actual condition in China's manufacturing sector, in addition to industrial production in the emerging Asian economies, real crude oil prices, the yen's real effective exchange rate, and Japan's real exports (Box Chart 1). The estimated response of each variable to a change in China's electricity production (1 percentage point downward deviation from the trend) includes (1) a slowdown of production activities in the emerging Asian economies, (2) a decline in crude oil prices, and (3) a sizeable decrease in Japan's real exports with a lag of one to two quarters.

(Box 2) Economic Impact of the Tokyo Olympics on Japan's Economy

The Tokyo Olympics to be held in 2020 are expected to exert favorable effects on Japan's economy, mainly through the following two demand channels.

The first is an increase in foreign visitors to Japan (Box Chart 2 [1] and [2]). The number of foreign visitors has been growing steadily recently against the background of an easing in visa requirements and of the depreciation of the yen. The government's target of reaching 20 million foreign visitors by 2020 almost certainly will be achieved. Nevertheless, considering what has been seen in other countries, there is still sufficient room for an increase in the number of foreign visitors to Japan, and it surely is possible to further promote tourism demand for Japan, mainly by reinforcing measures to attract foreign tourists in view of the Tokyo Olympics. In light of the experiences of other countries, the key to attracting tourists over the longer run, even after hosting the Olympic Games, is to take advantage of this hosting and promote nationwide touristic spots by establishing routes through which tourists visiting Japan for the Olympic Games can travel to regional areas as well as the Tokyo metropolitan area.

The second is an increase in construction investment related to the Olympic Games (Box Chart 2 [3] and [4]). This investment includes not only direct investment demand for building facilities for the Olympic Games, such as those of the National Olympic Stadium, sports facilities, and the Olympic Village that accommodates athletes, but also various types of indirect investment demand, which includes construction of new private hotels, enlargement and/or renovation of existing hotels, redevelopment in the Tokyo metropolitan area, construction of commercial facilities, and enhancement of transportation infrastructures. In light of past host countries' experiences, the construction investment related to the Olympic Games is projected to increase substantially during 2017 and 2018, and this increase in demand is likely to offset negative effects of the scheduled second round of consumption tax hikes in 2017 to some extent. However, after 2020, construction investment related to the Olympic Games is projected to decrease significantly; therefore, in order to avoid a substantial fluctuation in the business cycle due to a boom and bust in construction investment, new demand that is enough to offset a decline in construction

investment needs to be created through various measures that help strengthen economic growth (e.g., attracting foreign tourists).

(Box 3) Developments in the Underlying Trend in Inflation

The consumer price index (CPI) is published monthly and subject to the influence of various factors. In conducting monetary policy, it is necessary to properly gauge the developments in the underlying trend in inflation, which reflects changes in the output gap and inflation expectations, by excluding various short-term idiosyncratic disturbances from measured developments in the price index.

In order to capture the developments in the underlying trend in inflation, a variety of core price indicators are explored, but can be sorted out into two broad categories (Chart 33).²³ In the first approach, the core indicators are calculated by excluding the particular items identified beforehand as those with large volatile price fluctuations. The Bank of Japan has been putting focus on the CPI for all items less fresh food, but in the recent *Monthly Report of Recent Economic and Financial Developments*, the Bank has presented the CPI for all items excluding -- in addition to fresh food -- energy-related items consisting of petroleum products, electricity, and manufactured and piped gas, of which prices are very responsive to fluctuations in crude oil prices. In the United States, the core indicator that excludes food and energy from the headline price index draws much of the focus, and a similar indicator is also published monthly in Japan by the Ministry of Internal Affairs and Communications.

In the other approach, the core indicators are calculated by removing the influence of transitory relative price fluctuations from the price fluctuation distribution by item. These include (1) "trimmed mean," which mechanically discards a certain percentage from each tail of the price fluctuation distribution; (2) "mode," i.e., the value that corresponds to the highest frequency (density) in the distribution is regarded as a core indicator; and (3) "weighted median," which is the weighted average of price changes of the item at around 50 percentile point of the distribution. These indicators can be interpreted as those pointing to the magnitude of the shift of the price fluctuation distribution on the whole, reflecting the changes in the output gap and inflation expectations.

²³ See "Core Indicators of Japan's Consumer Price Index," Bank of Japan Review Series, 2006-E-7.

The core indicators in either category suggest that the year-on-year rate of increase steadily rises, reflecting the improvements in the output gap and the higher inflation expectations (Chart 33 and Box Chart 3). However, the pace of increase in the core indicators based on the price fluctuation distribution (trimmed mean, mode, and weighted median) is somewhat slower compared with others such as the CPI for all items less fresh food and energy. This indicates the following: (1) the accelerated rate of increase in the CPI for all items less fresh food and energy is driven by the price increase in items more susceptible to the improvements in the output gap and to the passing on of cost increases arising from the depreciation of the yen, and the distribution is skewed to the right (price increase); and (2) housing rents and some administered prices, of which weight in the CPI is not small, are not responsive to changes in the output gap and inflation expectations and have very high price rigidity; thus, it takes time for the distribution including these items to shift to the right (price increase) without being skewed.

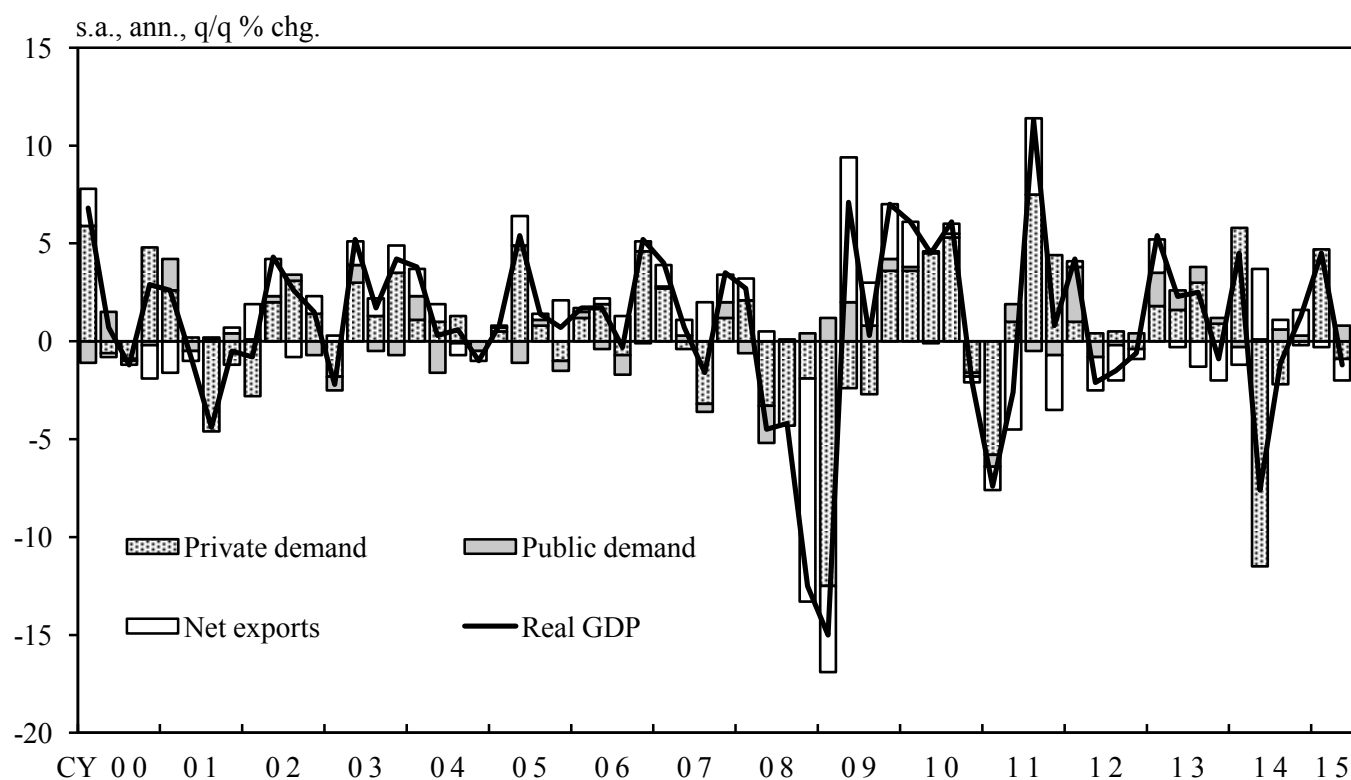
In order to empirically show these price properties, the hybrid Phillips curve is estimated, which incorporates, in addition to the output gap, both the backward- and forward-looking components of inflation expectations (Box Chart 4). The former is a component influenced by the track records in the past (i.e., persistence) and the latter component is medium- to long-term inflation expectations influenced by the inflation target. This estimation was conducted for four indicators: (1) the CPI (all items less fresh food and energy); (2) housing rents ("house rent [private & imputed rent]" in the chart); (3) administered prices excluding electricity and manufactured and piped gas ("public services [including water charges]" in the chart); and (4) the CPI for the price-elastic sector (the indicator that is calculated by excluding (2) and (3) from (1)). The estimates show that housing rents and administered prices respond little to the changes in the output gap (small α in the table) and their responsiveness to the forward-looking component of inflation expectations is very low (small β in the table), whereas they are significantly influenced by the past inflation rates (large $1 - \beta$ in the table). On the other hand, the price-elastic sector shows a large response to changes in the output gap, and the responsiveness to the forward-looking component of inflation expectations is also relatively strong. Thus, it is highly likely that the differences in the response to the changes in the output gap and inflation expectations among items have led to the differences in developments among the core indicators, accompanied by the skew of the price fluctuation distribution by item.

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Real GDP

(1) Real GDP



(2) Components

s.a., q/q % chg.

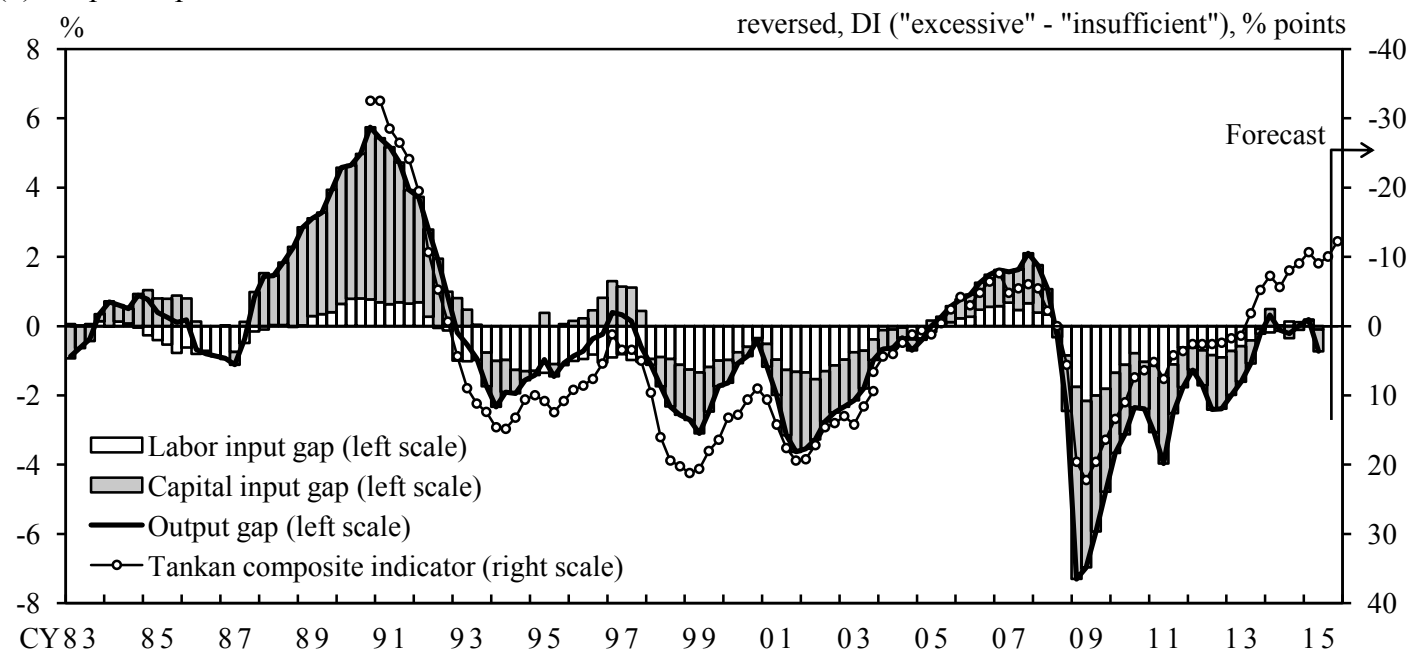
	2014			2015	
	Q2	Q3	Q4	Q1	Q2
Real GDP	-2.0	-0.3	0.3	1.1	-0.3
[Annual rate]	[-7.6]	[-1.1]	[1.3]	[4.5]	[-1.2]
Domestic demand	-2.8	-0.4	0.0	1.2	-0.0
Private demand	-2.9	-0.5	-0.1	1.2	-0.2
Private consumption	-3.1	0.2	0.2	0.2	-0.4
Non-resid. investment	-0.6	-0.0	0.0	0.4	-0.1
Residential investment	-0.4	-0.2	-0.0	0.0	0.1
Private inventory	1.2	-0.5	-0.2	0.5	0.3
Public demand	0.0	0.2	0.1	0.0	0.2
Public investment	0.0	0.1	0.0	-0.1	0.1
Net exports of goods and services	0.9	0.1	0.3	-0.1	-0.3
Exports	0.1	0.3	0.5	0.3	-0.8
Imports	0.8	-0.2	-0.2	-0.4	0.6
Nominal GDP	0.2	-0.6	0.8	2.1	0.1

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

Source: Cabinet Office, "National Accounts."

Output Gap and Potential Growth Rate

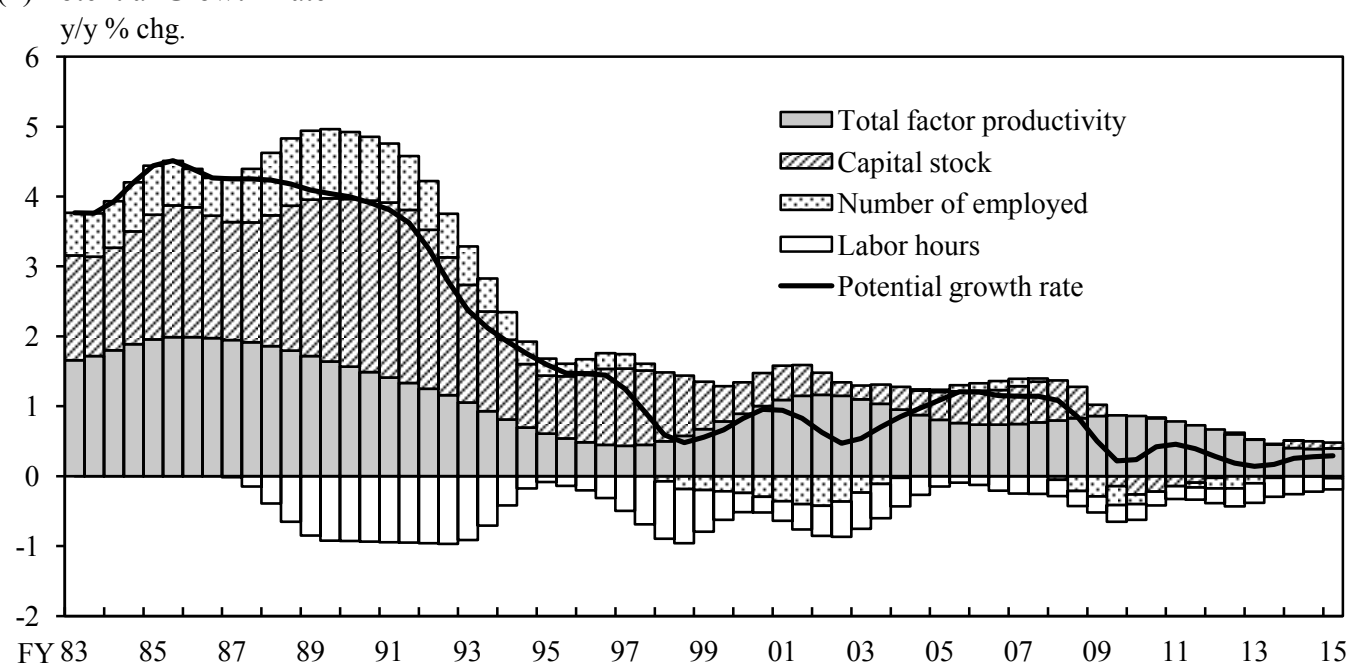
(1) Output Gap



Notes: 1. The output gap and the potential growth rate are estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3. The same applies to the chart below.

2. The Tankan composite indicator is calculated as the weighted average of the production capacity DI and employment conditions DI for all enterprises. The fiscal 1990-2013 averages of capital and labor shares in the "National Accounts" are used as weights. There is a discontinuity in the data for the December 2003 survey due to a change in the survey framework.

(2) Potential Growth Rate

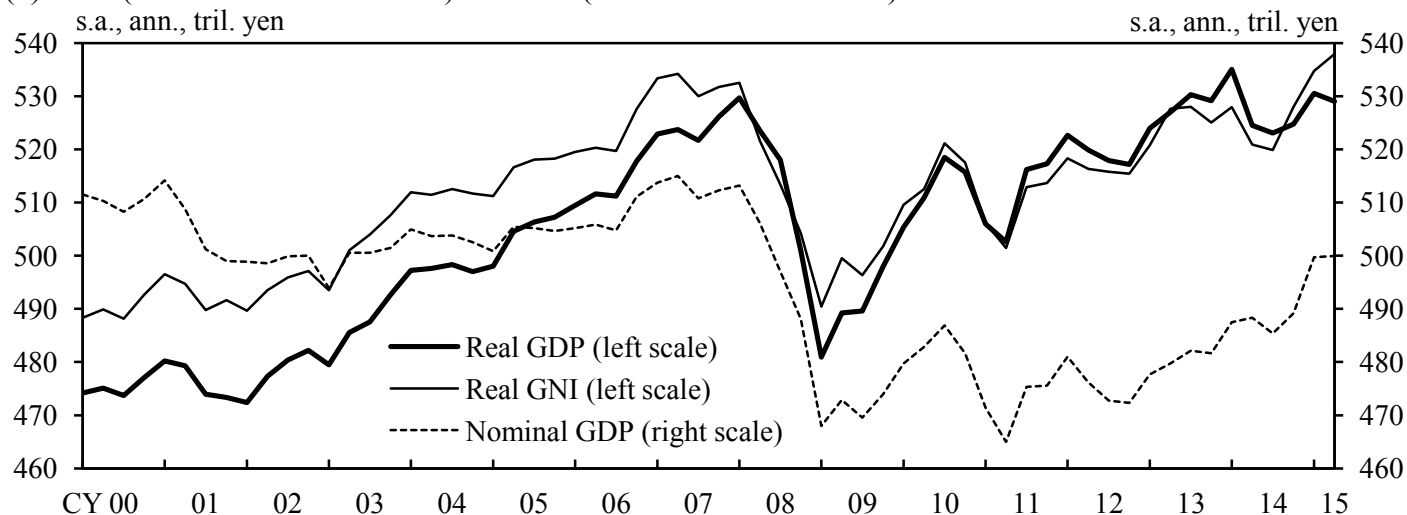


Note: Figures for the first half of fiscal 2015 are those of 2015/Q2.

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service"; Ministry of Economy, Trade and Industry, "Indices of Industrial Production"; Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan," etc.

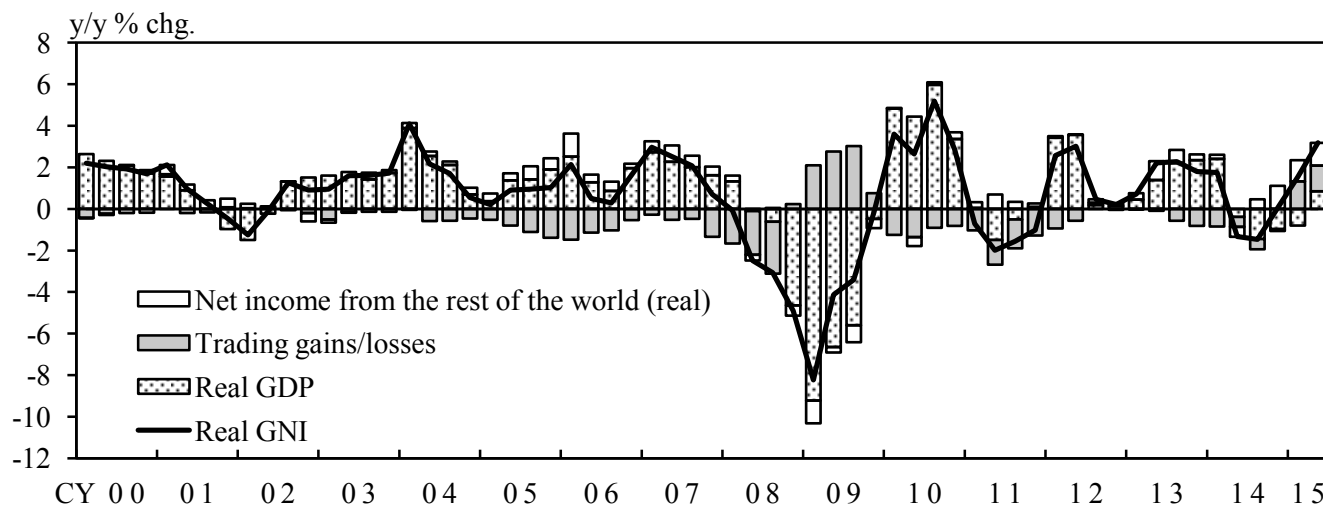
Aggregate Income Formation

(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
 The same applies to the charts below.

(2) GNI



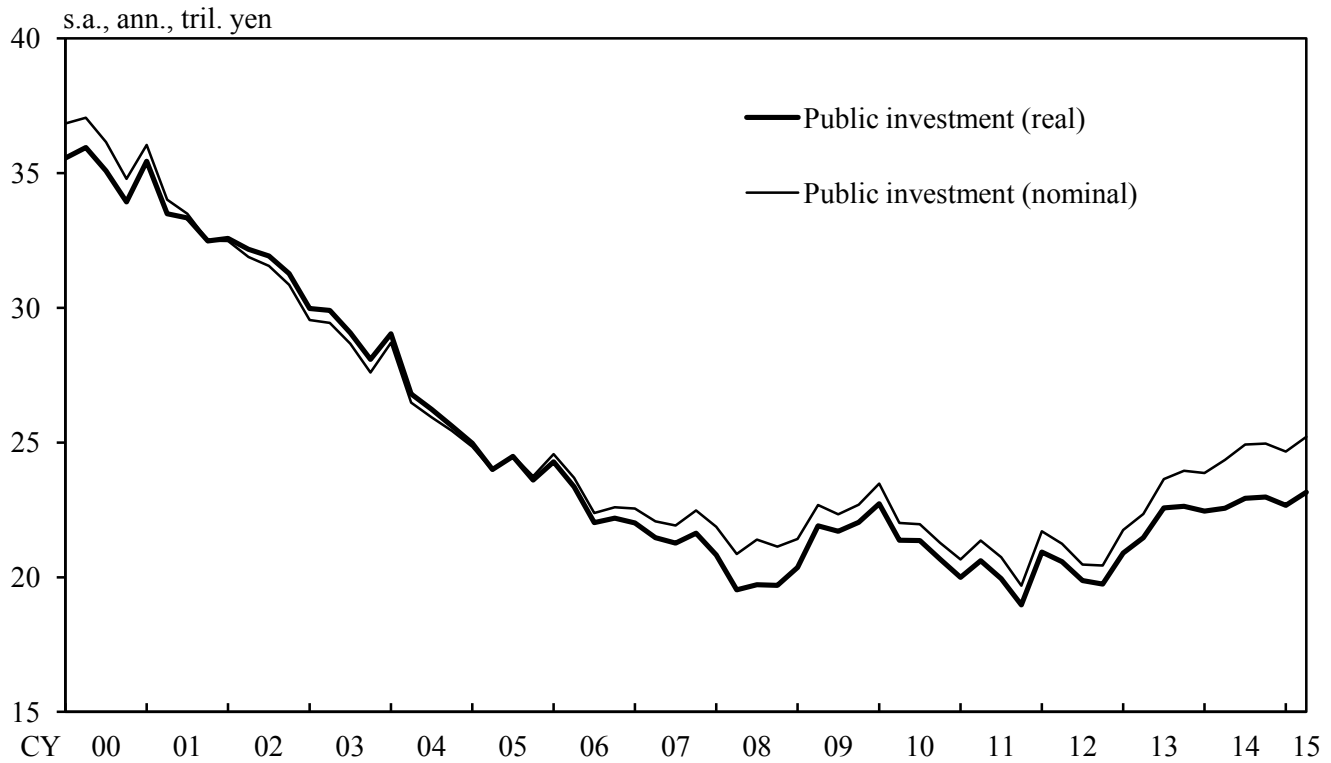
(3) Trading Gains/Losses



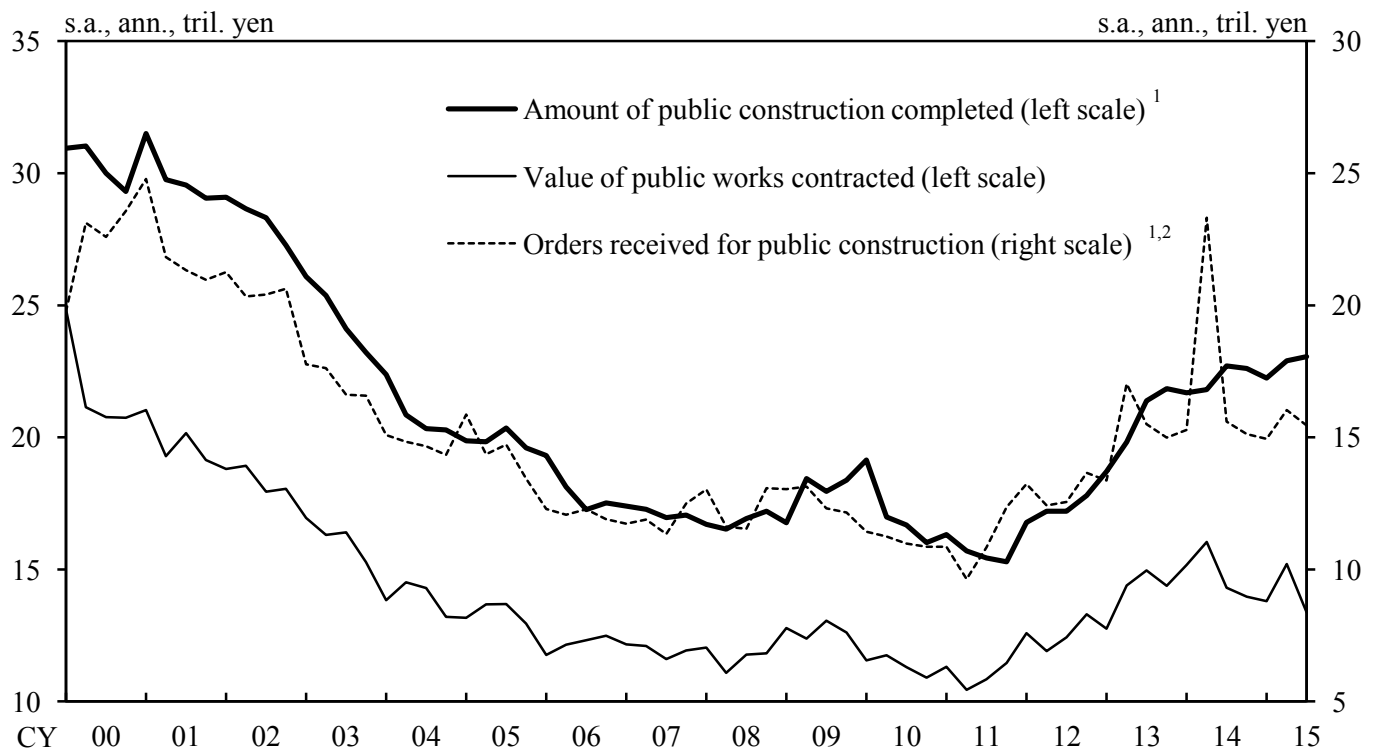
Source: Cabinet Office, "National Accounts."

Public Investment

(1) Public Investment (SNA Basis)



(2) Indicators of Public Investment



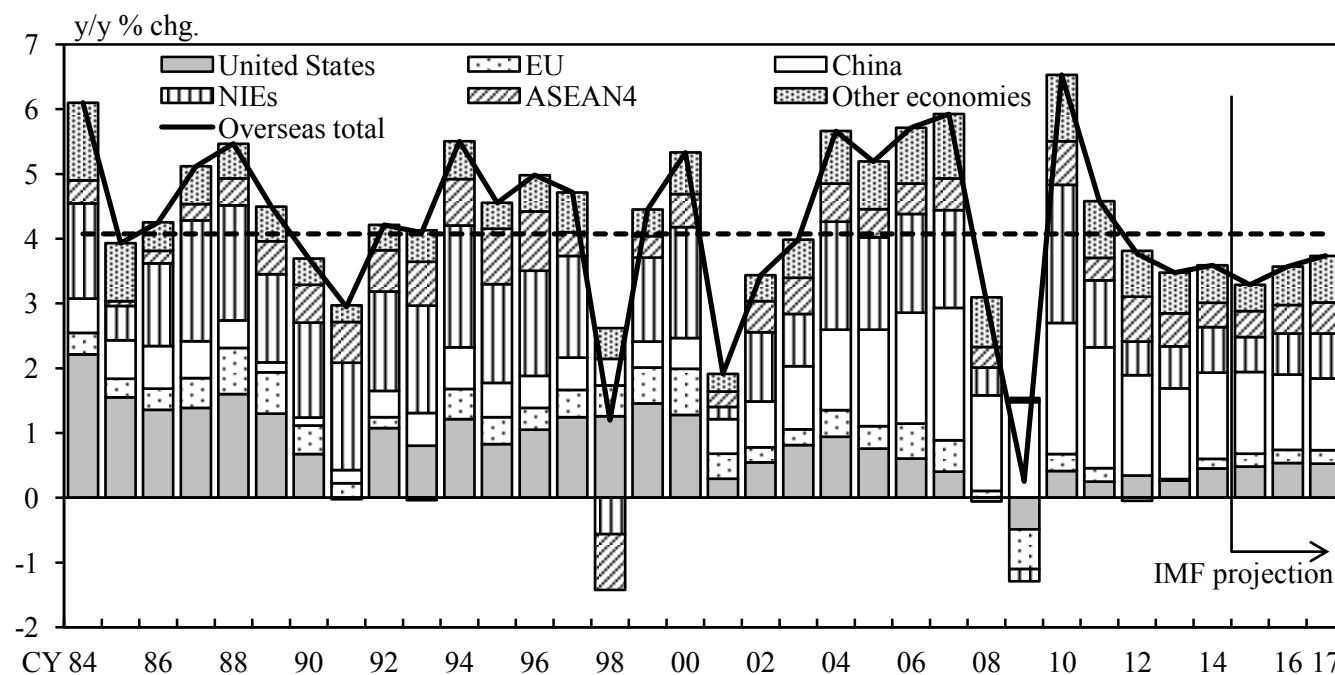
Notes: 1. Figures for 2015/Q3 are July-August averages.

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

Sources: Cabinet Office, "National Accounts"; East Japan Construction Surety, etc., "Public Works Prepayment Surety Statistics"; Ministry of Land, Infrastructure, Transport and Tourism, "Integrated Statistics on Construction Works," "Current Survey of Orders Received for Construction."

Overseas Economies

(1) Real GDP Growth Rates of Overseas Economies



Notes: 1. Figures for the overseas total are the weighted averages of real GDP growth rates using countries' share in Japan's exports as weights. GDP growth rates are from the "World Economic Outlook" as of October 2015. The same applies to the chart below.

2. The broken line indicates the average of 1980-2014 (4.1 percent).

(2) 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.)			
	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2014 Actual	2015 IMF Projection	2016 IMF Projection	2017 IMF Projection
Overseas total						3.6	3.3 (3.6)	3.6 (3.9)	3.7
Major economies <79.3>	4.7	3.6	2.8	3.0	n.a.	3.7	3.6 (3.9)	3.7 (4.0)	3.8
United States <18.7>	4.3	2.1	0.6	3.9	1.5	2.4	2.6 (2.5)	2.8 (3.0)	2.8
EU <10.4>	1.5	2.0	2.2	1.8	n.a.	1.4	1.9 (1.9)	1.9 (2.0)	2.0
East Asia <50.3>	5.5	4.5	3.7	2.9	n.a.	4.7	4.3 (4.8)	4.4 (4.8)	4.5
China <18.3>	7.8	7.0	5.3	7.4	7.4	7.3	6.8 (6.8)	6.3 (6.3)	6.0
NIEs <21.8>	4.5	1.8	3.0	-1.2	n.a.	3.2	2.5 (3.3)	2.9 (3.5)	3.1
ASEAN4 <10.2>	3.8	6.0	2.4	3.8	n.a.	3.4	3.9 (4.7)	4.3 (4.8)	4.7
Other economies <20.7>						2.9	2.1 (2.4)	3.0 (3.3)	3.6

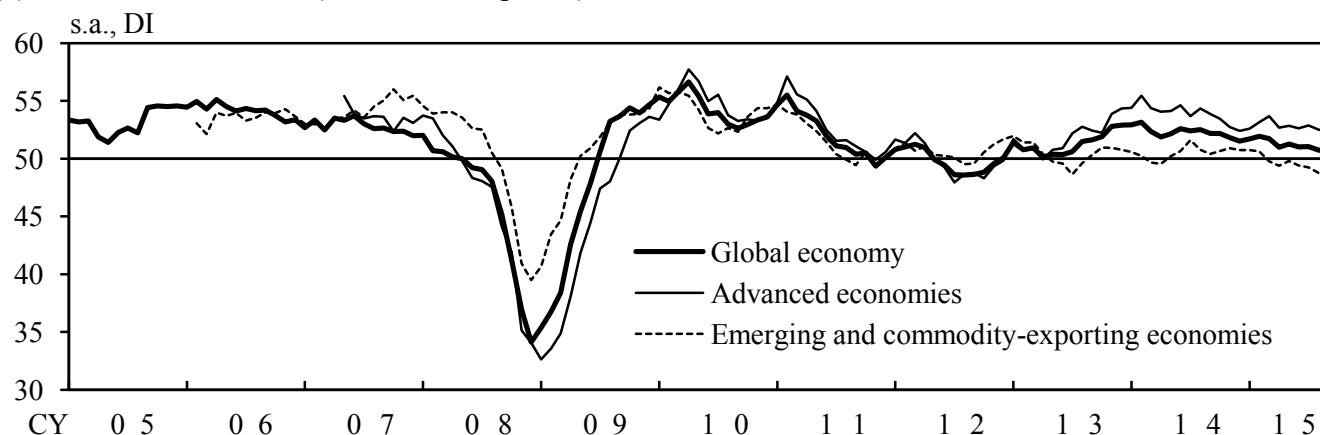
Notes: 1. Figures in angular brackets show countries' or regions' share in Japan's exports in 2014.

2. Figures in parentheses are projections as of July 2015. Figures as of July 2015 were not available for some countries and regions and figures as of April 2015 were used. Figures for the EU as of July 2015 are calculated using projections as of October 2015 and the difference between projections as of October and as of July.

Sources: IMF, "World Economic Outlook"; Ministry of Finance, "Trade Statistics," etc.

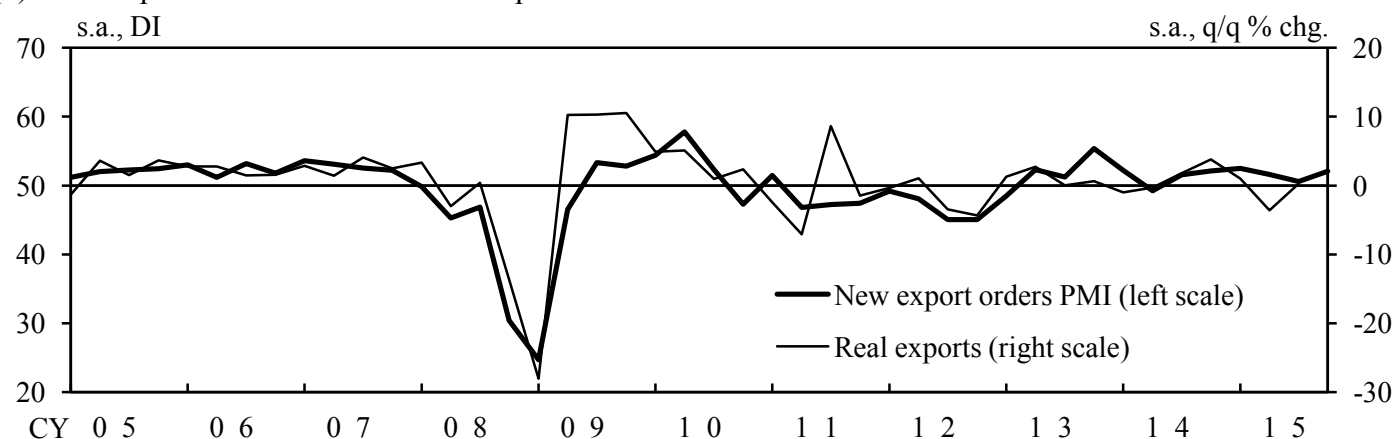
Environment Surrounding Exports

(1) Business Confidence (Manufacturing PMI)



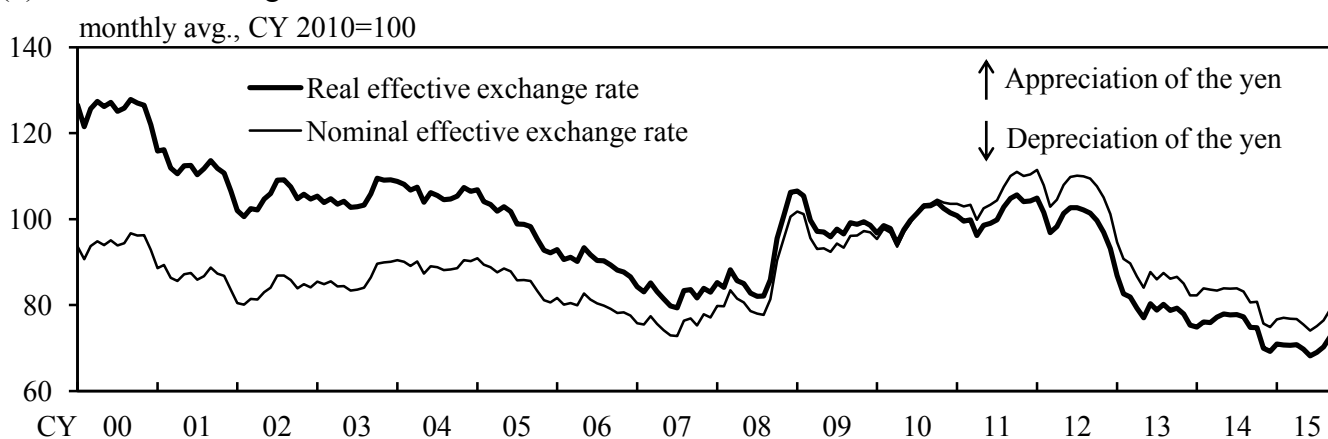
Note: Figures for the global economy are published by Markit. Figures for advanced economies as well as emerging and commodity-exporting economies are calculated as the weighted averages of the Markit PMI using PPP-adjusted GDP shares of world total GDP from the IMF as weights. Advanced economies are the euro area, Japan, the United Kingdom, and the United States. Emerging and commodity-exporting economies are Australia, Brazil, China, the Czech Republic, Hungary, India, Indonesia, Mexico, Poland, Russia, Singapore, South Korea, Taiwan, Turkey, and Vietnam.

(2) New Export Orders PMI and Real Exports



Note: The figure for 2015/Q4 is that of October.

(3) Effective Exchange Rates of the Yen

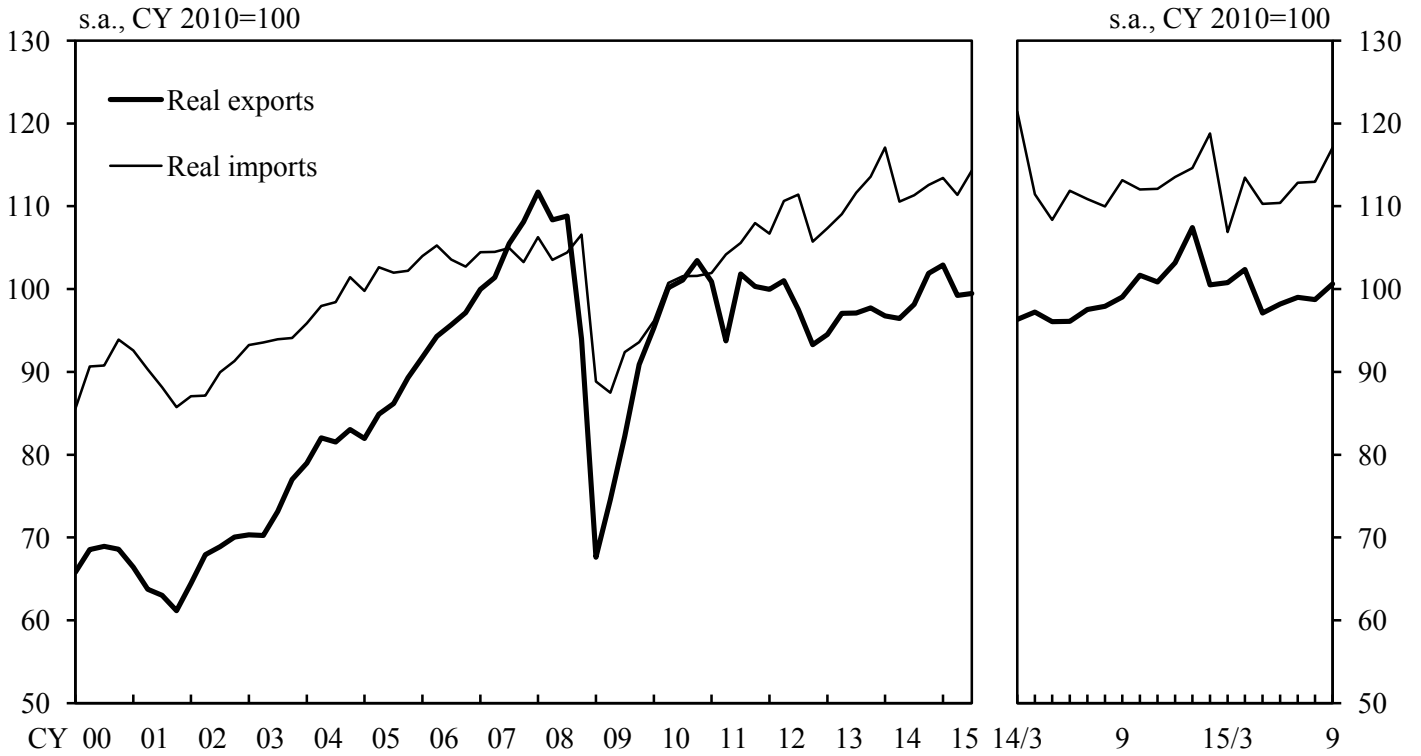


Note: Figures are based on the broad indices of the BIS effective exchange rates. Figures for October 2015 are calculated using the Bank of Japan's nominal effective exchange rate of the yen.

Sources: Markit (© and database right Markit Economics Ltd 2015. All rights reserved.); IMF, "World Economic Outlook"; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index"; Bank for International Settlements (BIS), etc.

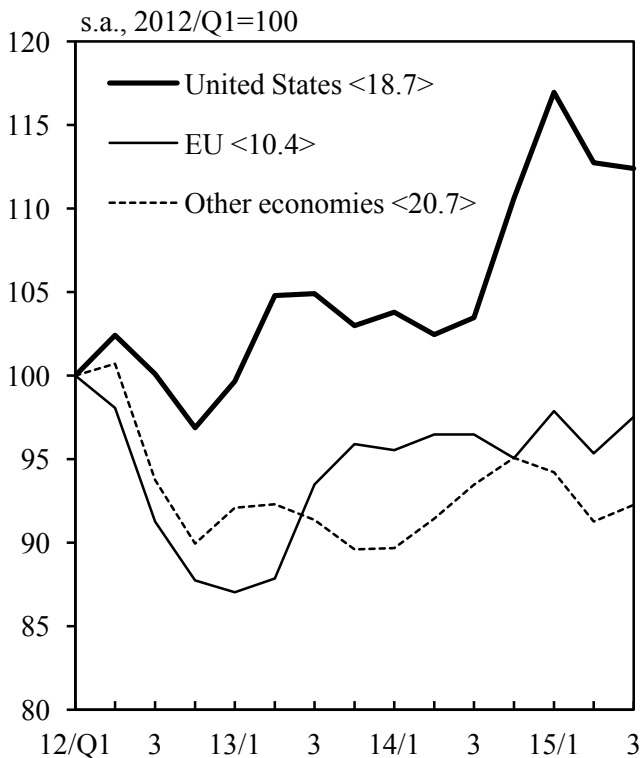
Real Exports and Real Imports

(1) Real Exports and Real Imports

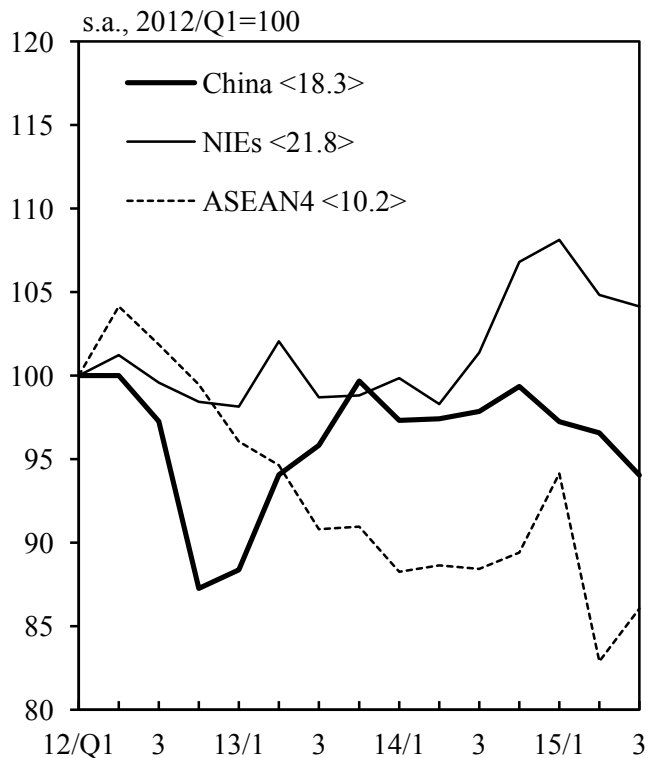


(2) Real Exports by Major Country and Region

(a) United States, EU, and Other Economies



(b) China, NIEs, and ASEAN4



Note: Figures in angular brackets show countries' and regions' share in Japan's total exports in 2014.

Sources: Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

Real Exports

(1) Breakdown by Region

		y/y % chg.		s.a., q/q % chg.					s.a., m/m % chg.		
		CY 2013	2014	2014 Q3	Q4	2015 Q1	Q2	Q3	2015 July	Aug.	Sept.
United States	<18.7>	2.8	1.8	1.0	6.9	5.7	-3.6	-0.3	0.7	-0.7	2.8
EU	<10.4>	-3.6	5.2	0.0	-1.5	3.0	-2.6	2.3	1.0	-4.3	0.1
East Asia	<50.3>	-3.0	1.1	1.5	3.1	0.8	-4.0	-0.5	-0.8	-0.3	3.2
China	<18.3>	-1.7	3.5	0.5	1.5	-2.1	-0.7	-2.6	-0.0	-3.4	4.4
NIEs	<21.8>	-1.0	2.0	3.1	5.4	1.2	-3.0	-0.7	-5.5	3.3	4.0
Korea	<7.5>	0.4	-3.9	2.8	5.1	-1.1	-4.4	-2.2	-5.1	3.8	1.3
Taiwan	<5.8>	-1.5	1.7	1.3	1.7	3.0	-1.3	3.9	4.7	-0.6	-3.6
Hong Kong	<5.5>	-1.4	8.7	3.9	4.3	3.0	-2.0	-1.8	-9.7	0.8	10.6
Singapore	<3.0>	-2.8	6.5	7.3	12.7	4.2	-6.7	-4.1	-16.6	13.3	11.3
ASEAN4	<10.2>	-8.5	-4.7	-0.2	1.1	5.3	-11.9	3.8	9.4	-2.6	-0.7
Thailand	<4.5>	-9.3	-7.8	1.6	0.8	5.8	-11.4	6.2	8.1	-4.4	2.5
Others	<20.7>	-5.0	1.2	2.2	1.7	-0.9	-3.1	1.1	6.3	-1.2	-2.4
Real exports		-1.9	1.7	1.8	3.8	1.0	-3.6	0.2	0.8	-0.3	1.9

Note: Figures in angular brackets show countries' and regions' share in Japan's total exports in 2014.

(2) Breakdown by Goods

		y/y % chg.		s.a., q/q % chg.					s.a., m/m % chg.		
		CY 2013	2014	2014 Q3	Q4	2015 Q1	Q2	Q3	2015 July	Aug.	Sept.
Intermediate goods	<20.9>	1.2	0.1	-0.5	2.3	1.2	-4.5	-0.2	1.9	1.7	-0.1
Motor vehicles and their related goods	<23.6>	-1.4	-1.4	2.5	-0.9	-1.1	-1.5	2.6	-0.5	-2.9	3.5
IT-related goods	<10.6>	-7.5	3.6	1.7	3.3	-0.3	-4.5	-1.4	-0.6	-2.8	7.7
Capital goods and parts	<27.8>	-5.8	3.1	2.3	3.7	-1.8	-4.6	-0.0	2.8	-1.1	-1.9
Real exports		-1.9	1.7	1.8	3.8	1.0	-3.6	0.2	0.8	-0.3	1.9

Notes: 1. Figures in angular brackets show the share of each type of goods in Japan's total exports in 2014.

2. IT-related goods consist of computers and units, telecommunication machinery, integrated circuits, visual apparatus, audio apparatus, and medical and optical instruments.

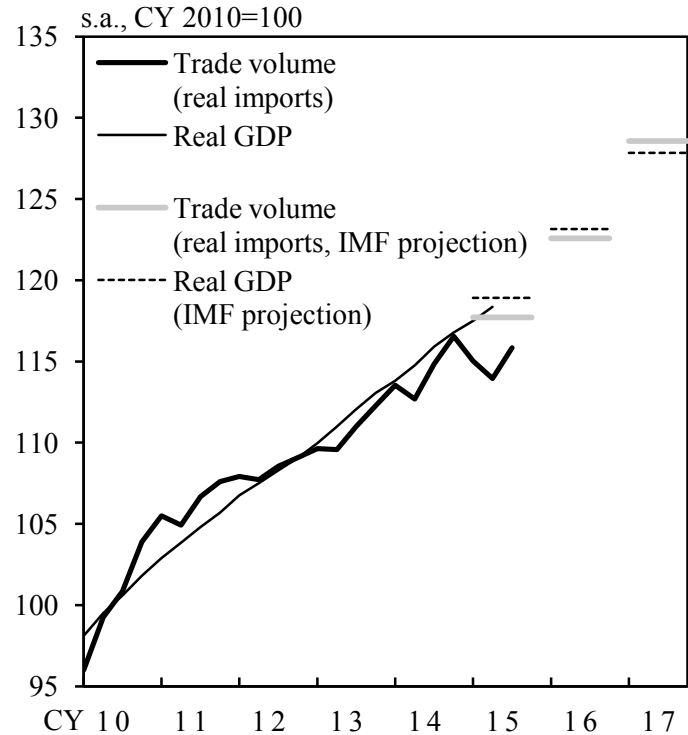
3. Capital goods and parts exclude IT-related goods, power generating machinery, and parts of motor vehicles.

Sources: Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

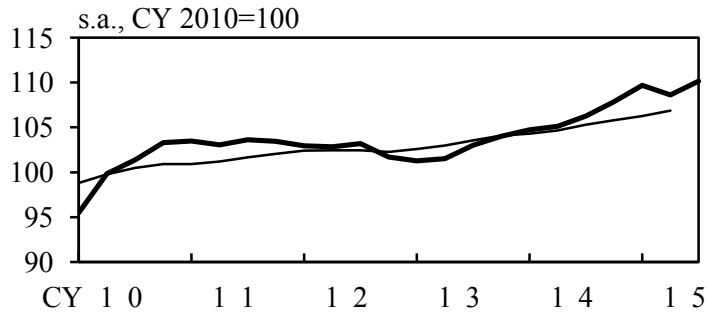
World Trade Volume and Japan's Share of Exports in World Trade

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

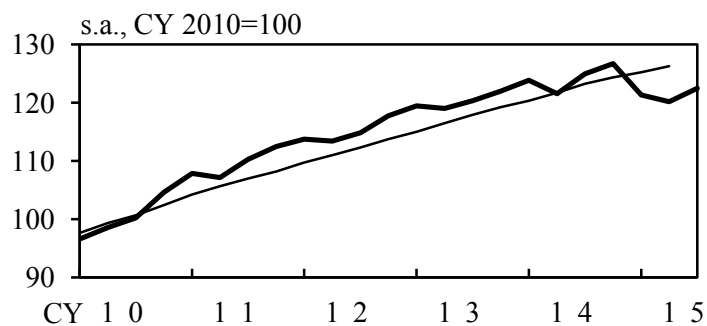
(a) World Economy



(b) Advanced Economies

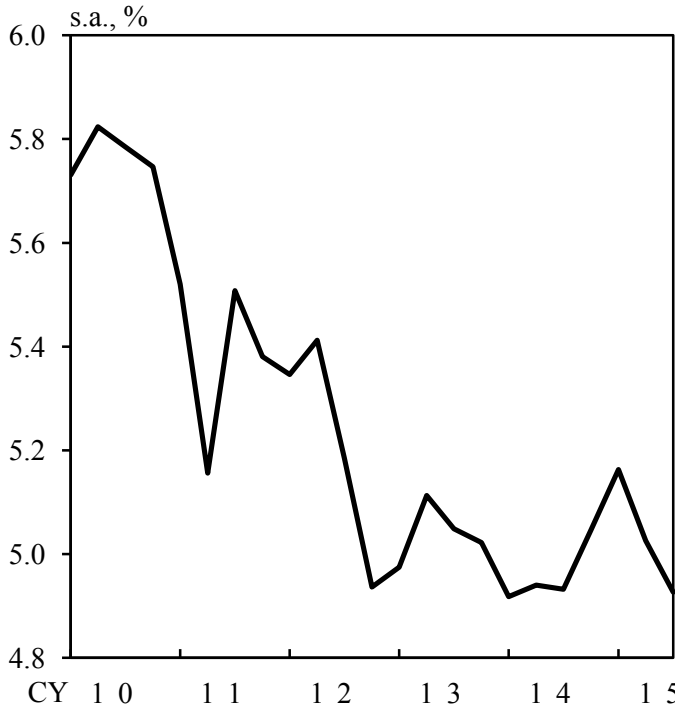


(c) Emerging and Commodity-exporting Economies

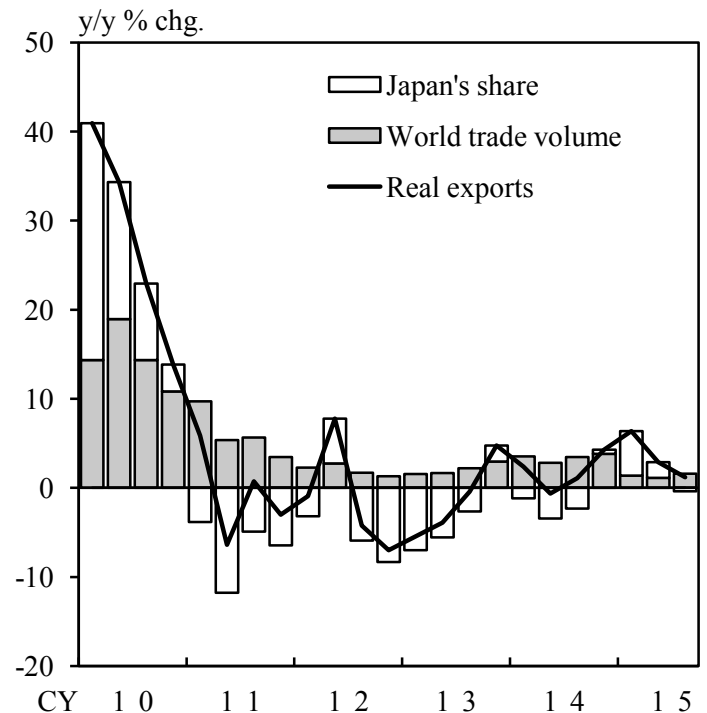


Notes: 1. Figures for the trade volume for 2015/Q3 are July-August averages. IMF projections are as of October 2015.
 2. Real GDP includes estimated quarterly growth rates based on historical annual data on growth rates.
 3. Advanced economies are the United States, the EU and Japan. Emerging and commodity-exporting economies consist of the rest of the world economy.

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



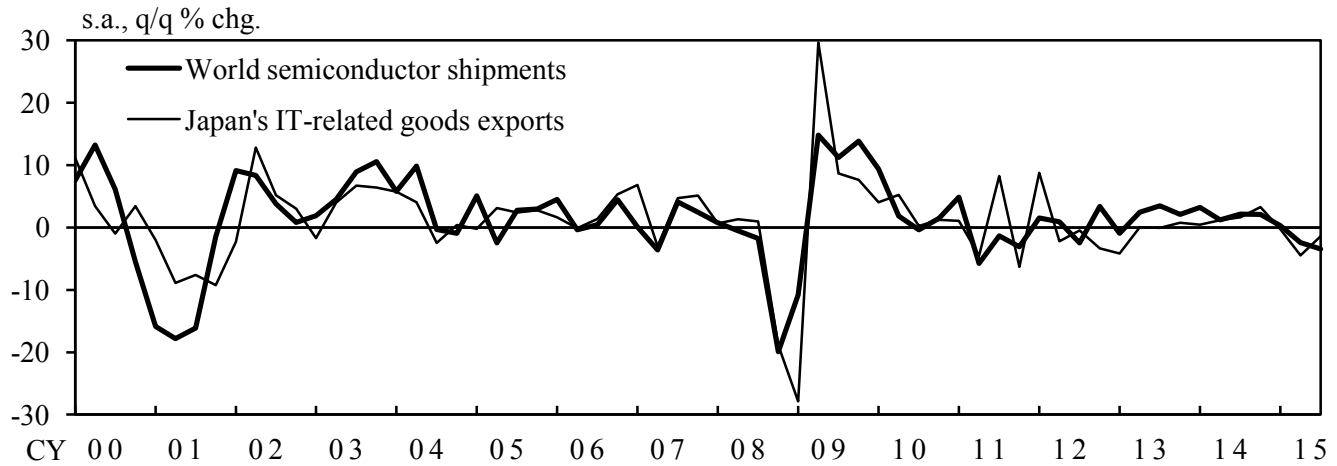
(3) Changes in Japan's Real Exports



Notes: 1. Figures for 2015/Q3 are July-August averages.
 2. Japan's share of exports in world trade is obtained by dividing Japan's real exports by world real imports. 2005 base.
 Sources: CPB Netherlands Bureau for Economic Policy Analysis; IMF; Eurostat; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index," etc.

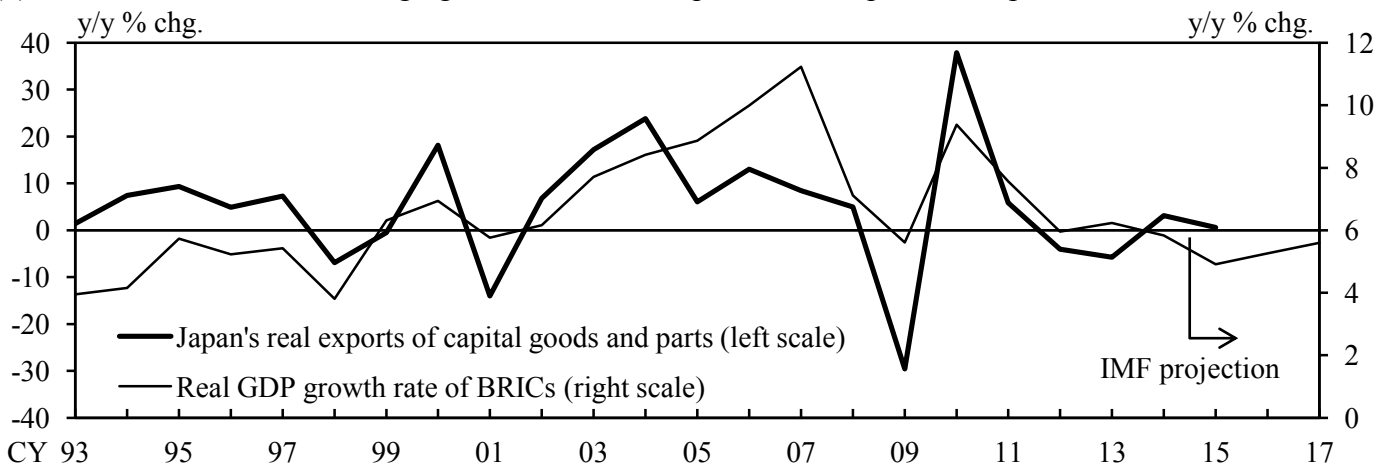
Exports of IT-Related Goods and Capital Goods

(1) World Semiconductor Shipments and IT-Related Goods Exports



Note: The figure for world semiconductor shipments for 2015/Q3 is the July-August average.

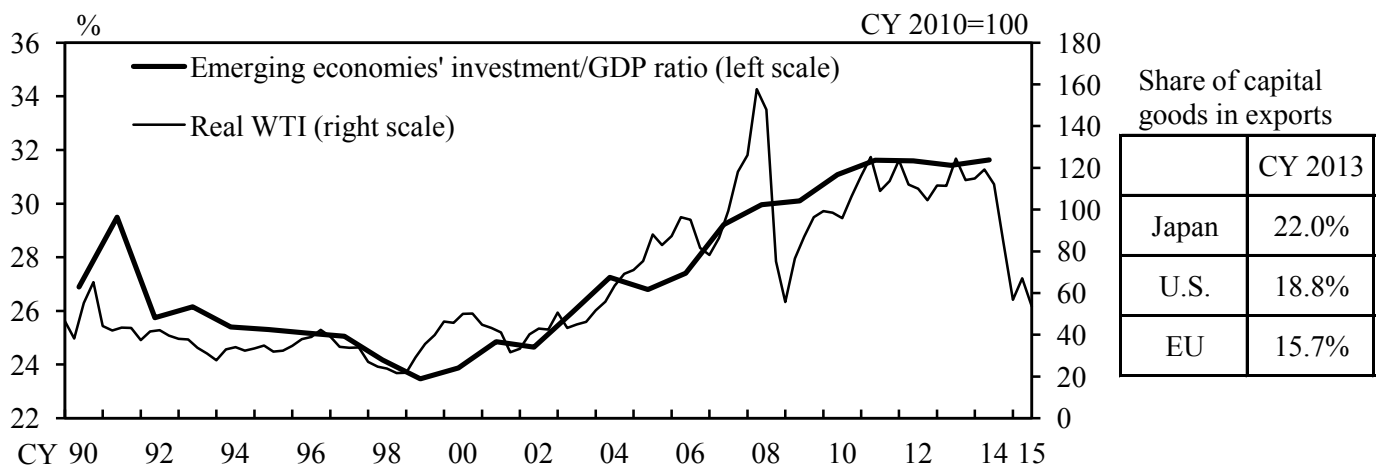
(2) GDP Growth Rates of Emerging Economies and Japan's Real Exports of Capital Goods and Parts



Notes: 1. The figure for Japan's real exports of capital goods and parts for 2015 is the January-September average.

2. The IMF projection is as of October 2015.

(3) Emerging Economies' Fixed Investment and Commodity Prices



Notes: 1. Emerging economies consist of 152 countries as classified by the IMF.

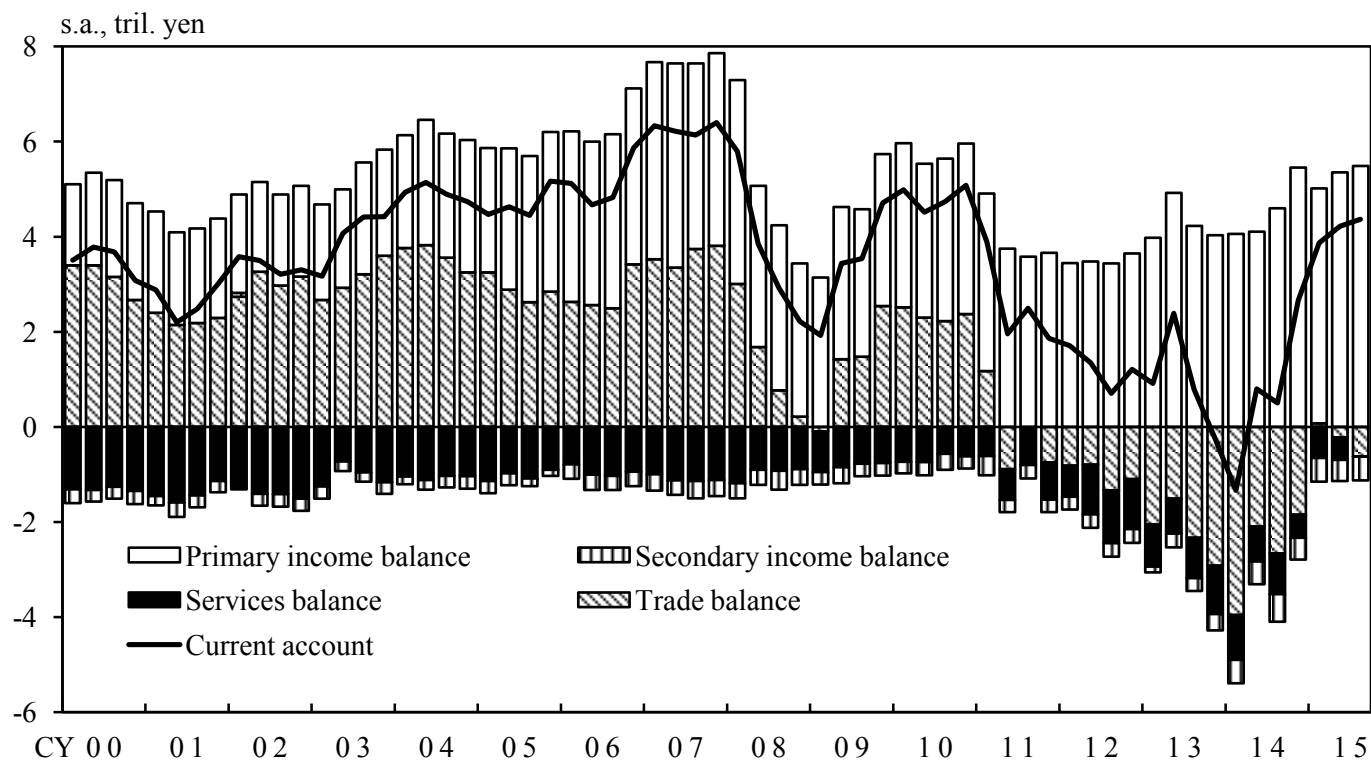
2. Real WTI oil prices are obtained by deflating nominal prices by the U.S. CPI (all items).

3. The share of capital goods in exports are based on the RIETI Trade Industry Database.

Sources: Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index"; WSTS; IMF; Bloomberg; BLS; Research Institute of Economy, Trade and Industry, "RIETI-TID 2013."

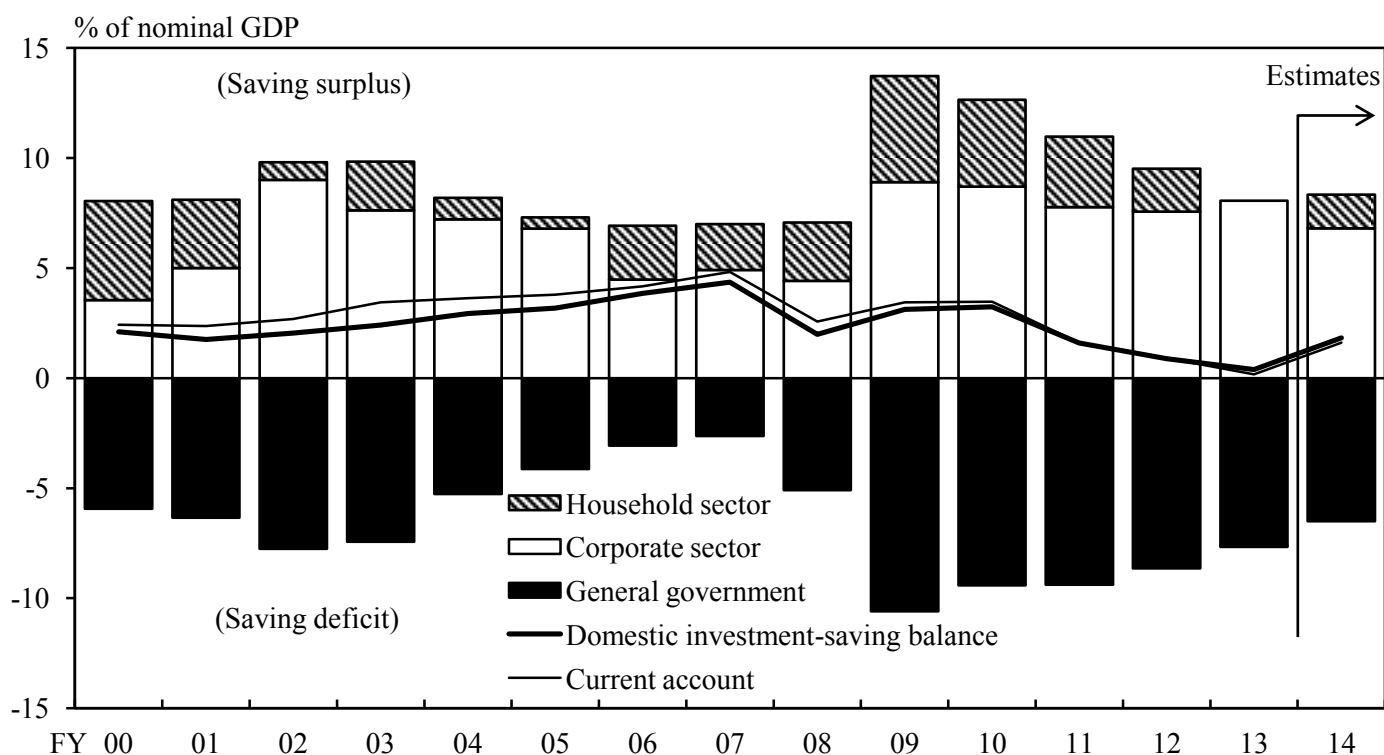
Current Account and Investment-Saving Balance

(1) Current Account



Note: Figures for 2015/Q3 are based on figures for July and August converted to quarterly data.

(2) Investment-Saving Balance



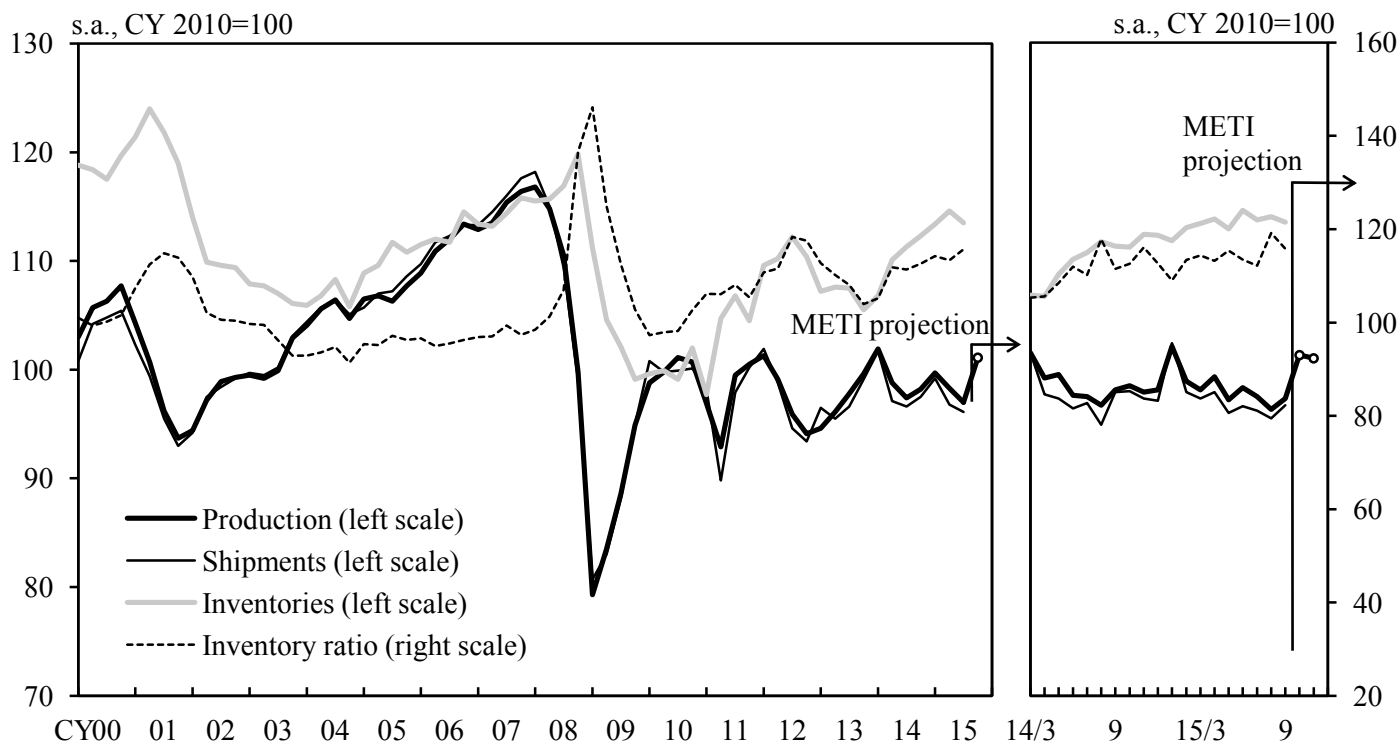
Notes: 1. Factors such as transfers of reserves from special accounts to the general account are excluded.

2. The figure of investment-saving balance for fiscal 2014 is an estimate because the annual report on National Accounts for 2014 has not yet been published.

Sources: Ministry of Finance and Bank of Japan, "Balance of Payments"; Cabinet Office, "National Accounts," etc.

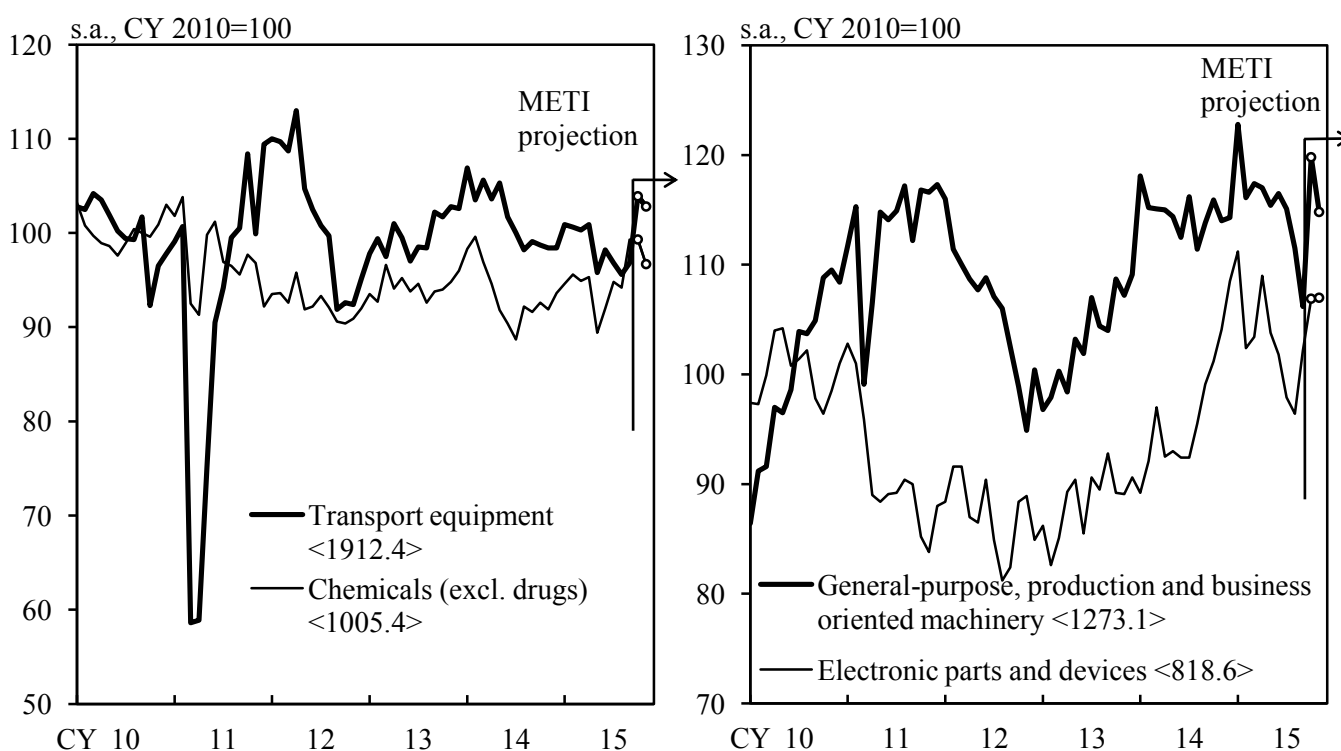
Production, Shipments, and Inventories

(1) Production, Shipments, and Inventories



Note: Figures for 2015/Q4 and October and November 2015 are calculated based on METI projections. The same applies to the charts below. The figure for 2015/Q4 is based on the assumption that the production level in December is the same as November.

(2) Production by Industry

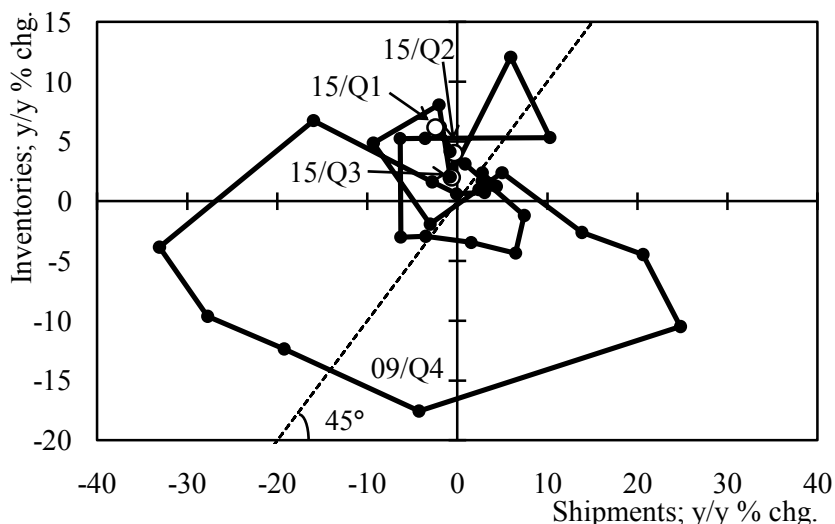


Note: Figures in angular brackets show the value added weight in total production (=10,000).

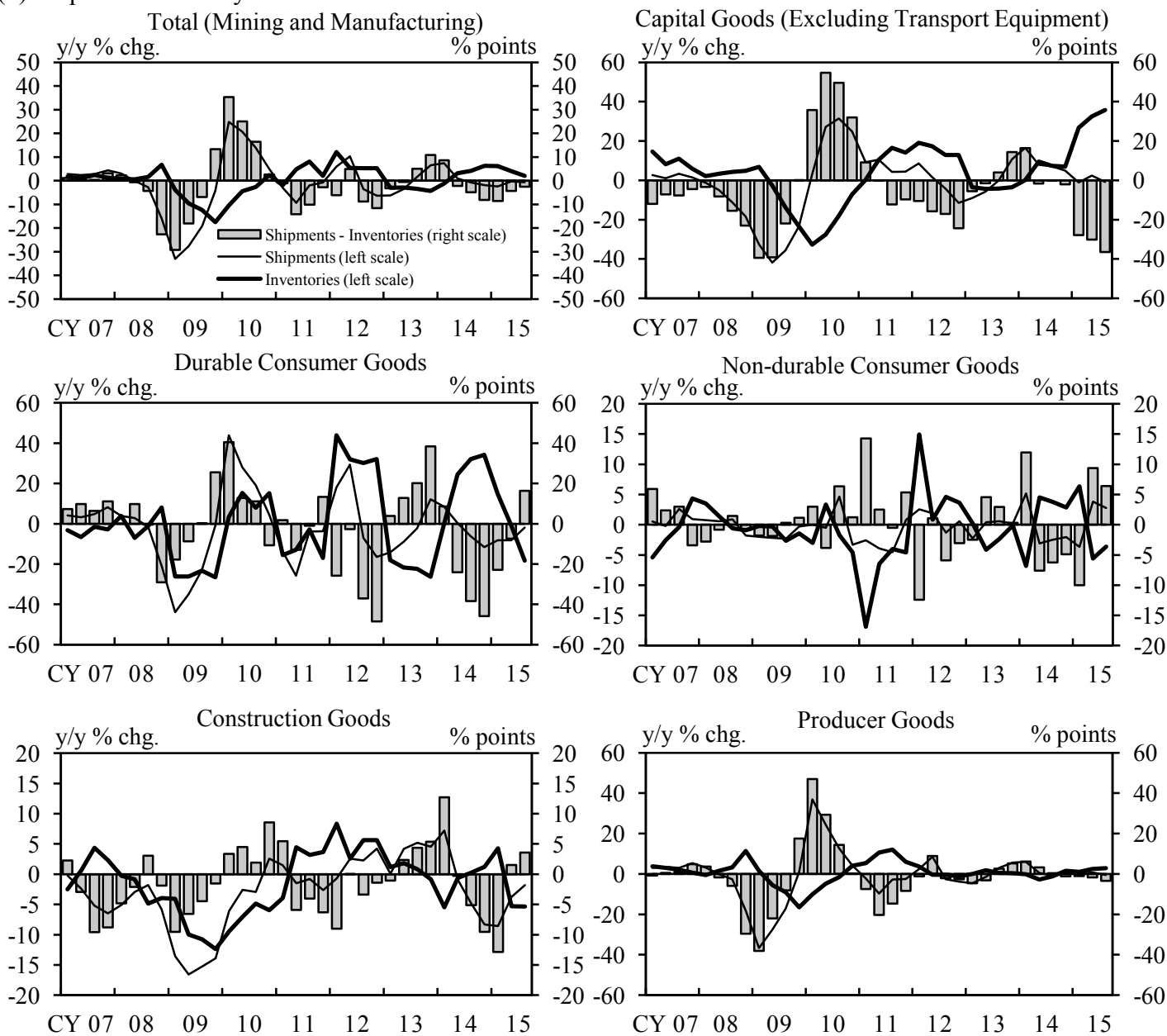
Source: Ministry of Economy, Trade and Industry (METI), "Indices of Industrial Production."

Inventory Cycle

(1) Inventory Cycle (Mining and Manufacturing)



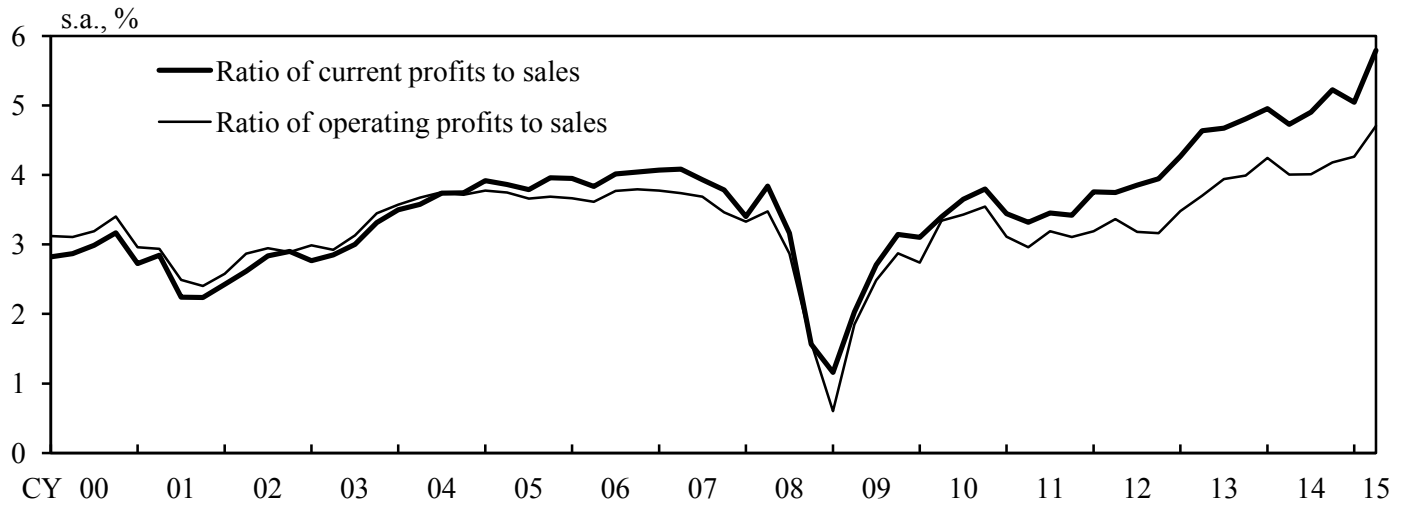
(2) Shipment-Inventory Balance



Source: Ministry of Economy, Trade and Industry, "Indices of Industrial Production."

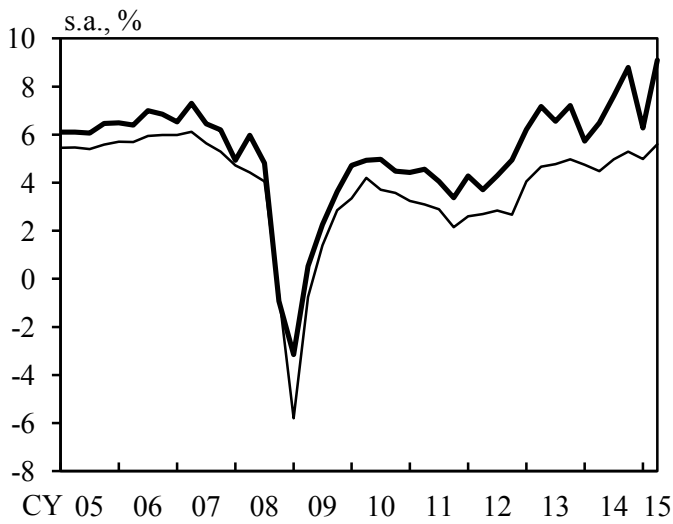
Corporate Profits

(1) All Industries and Enterprises

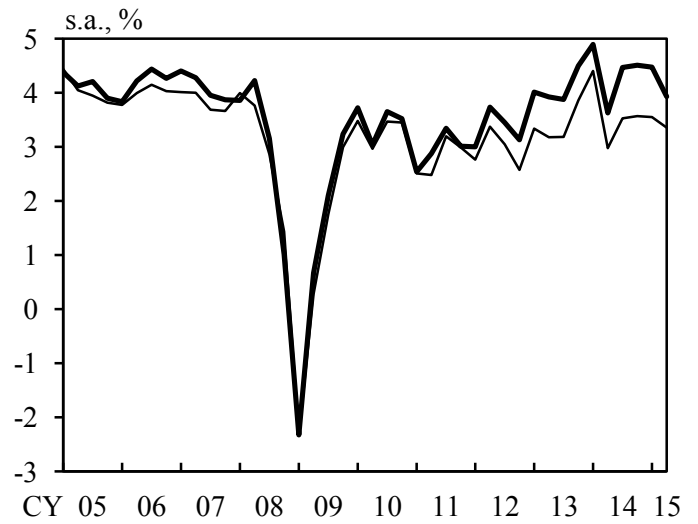


(2) Manufacturing

(a) Large Enterprises

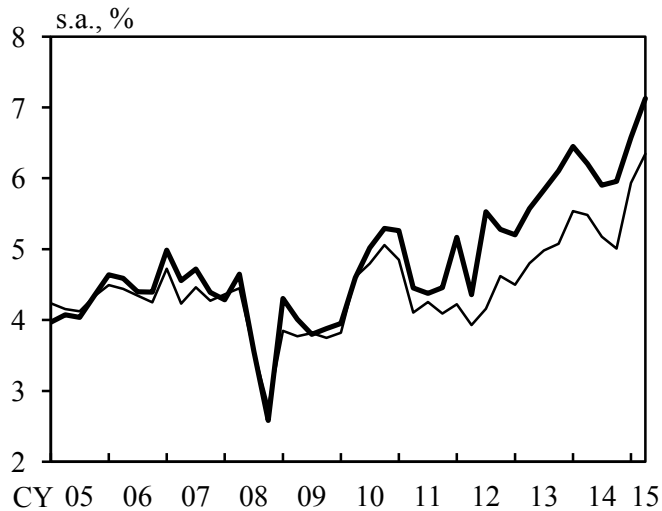


(b) Medium-Sized and Small Enterprises

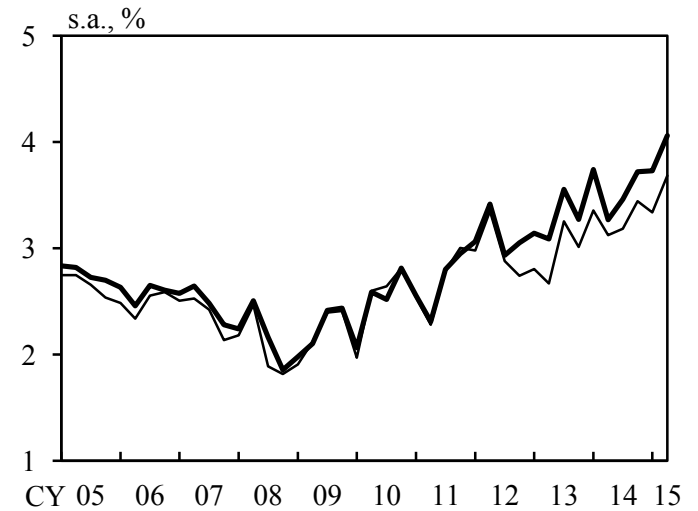


(3) Nonmanufacturing

(a) Large Enterprises



(b) Medium-Sized and Small Enterprises

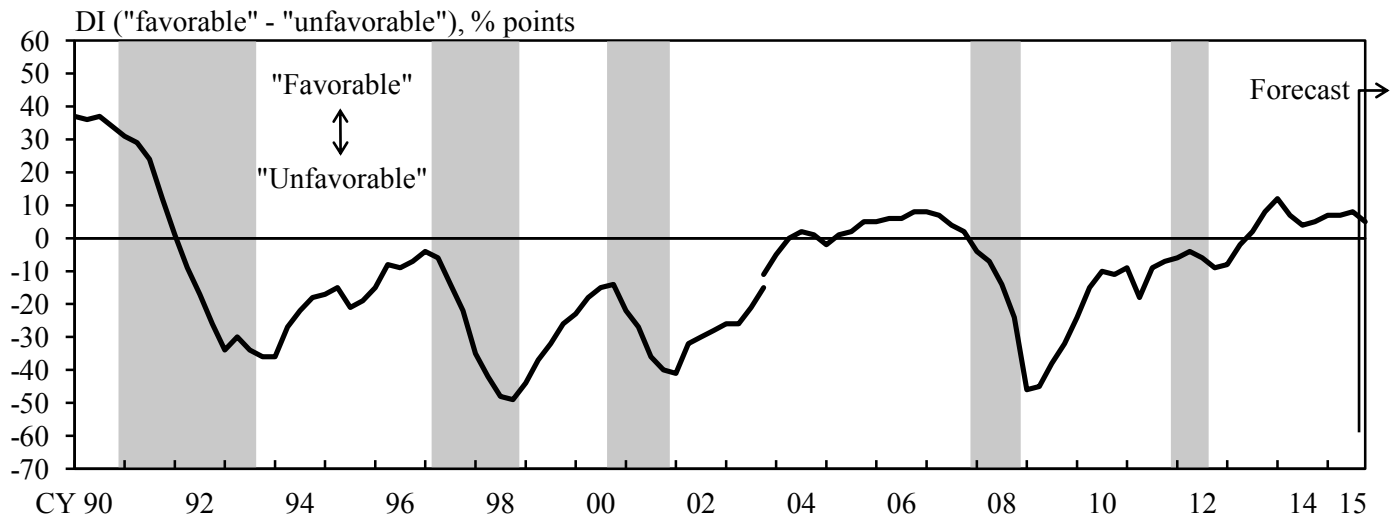


Note: Excluding "Finance and Insurance."

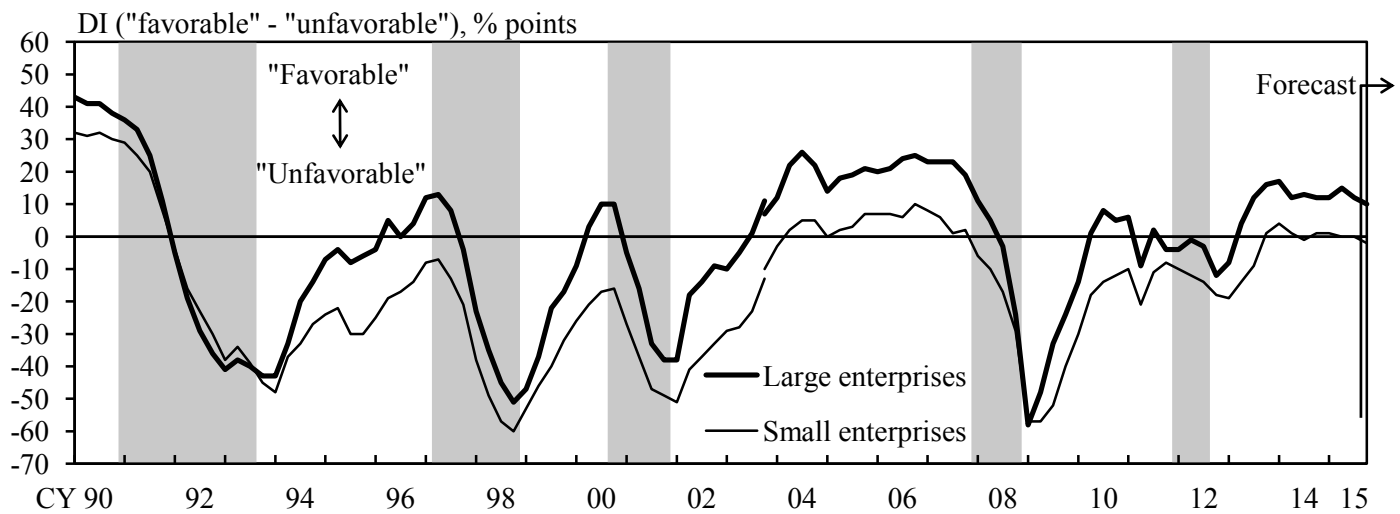
Source: Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

Business Conditions

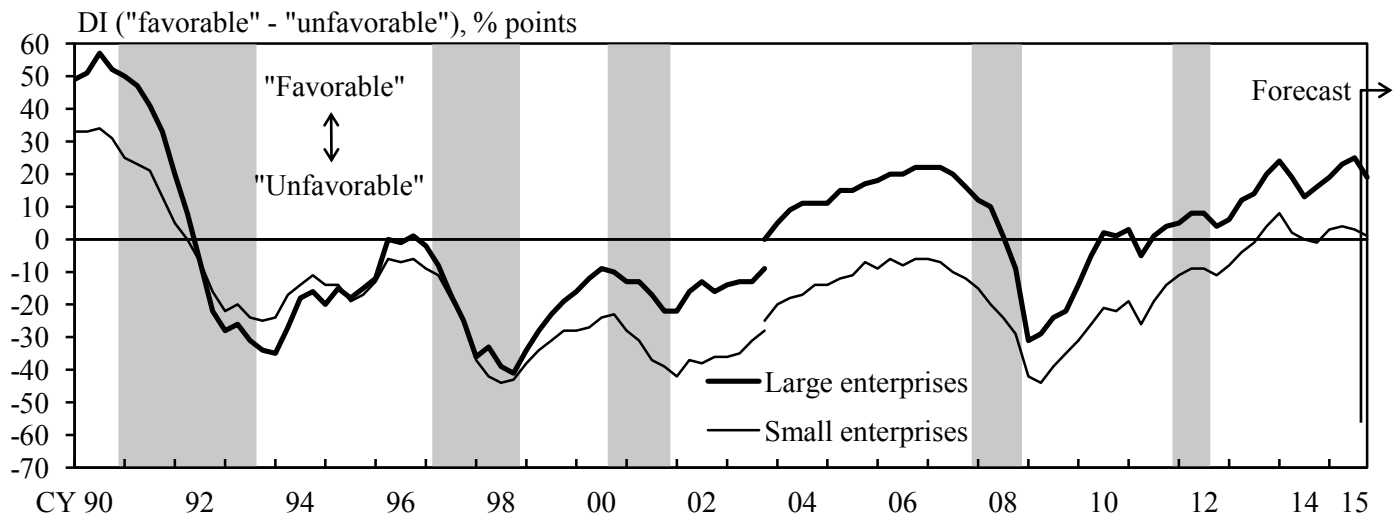
(1) All Industries and Enterprises



(2) Manufacturing



(3) Nonmanufacturing



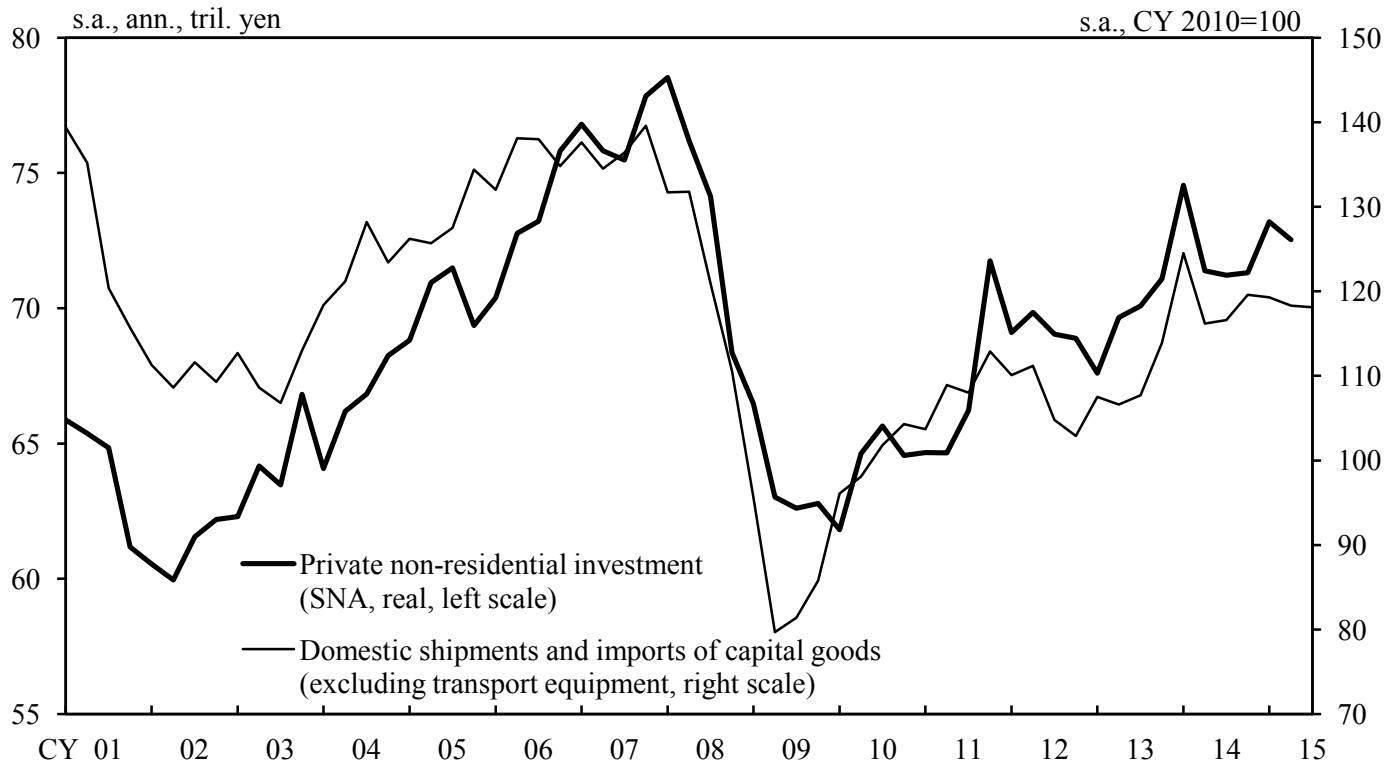
Notes: 1. There is a discontinuity in the data for the December 2003 survey due to a change in the survey framework.

Figures for 2015/Q4 are the forecasts in the September 2015 survey.

2. Shaded areas indicate recession periods.

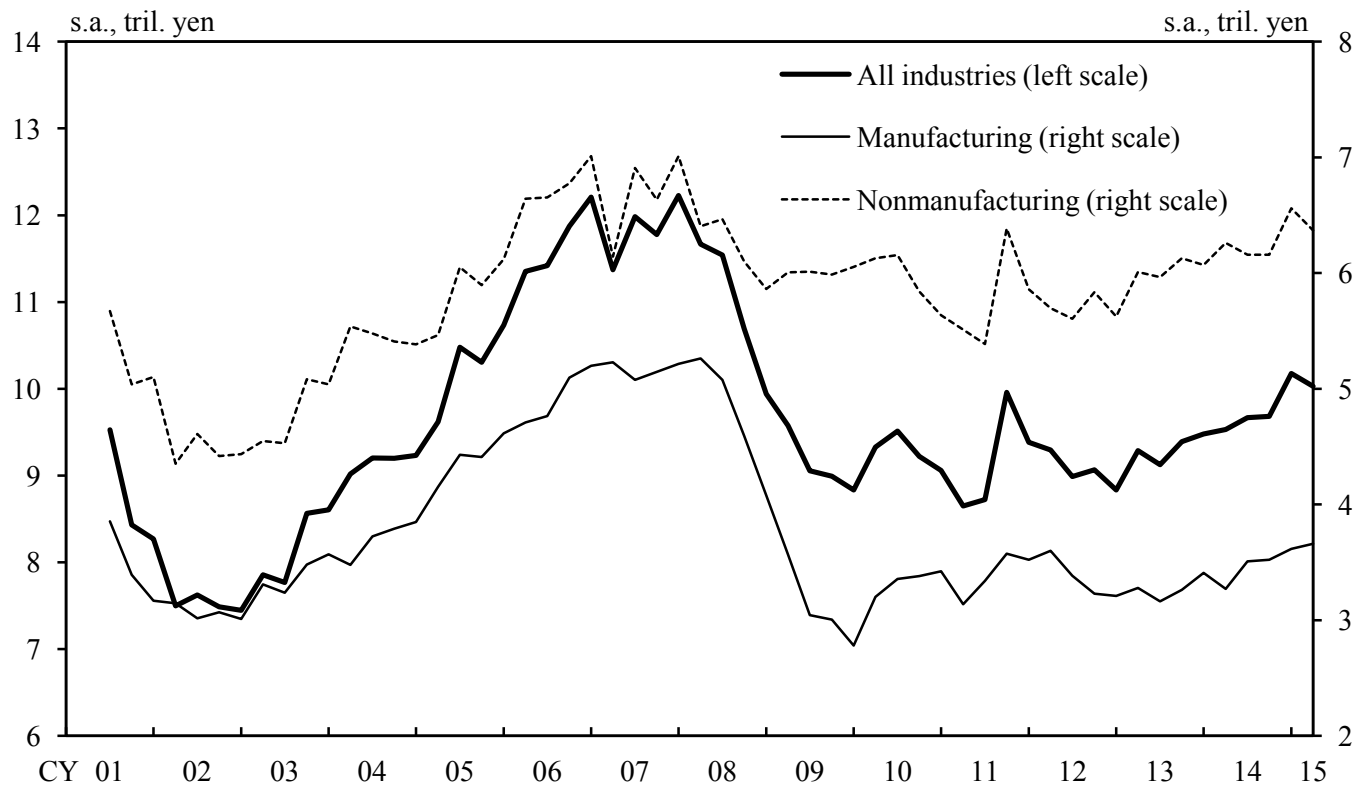
Coincident Indicators of Business Fixed Investment

(1) Private Non-Residential Investment (SNA Basis), and Domestic Shipments and Imports of Capital Goods



Note: The figure for 2015/Q3 is the July-August average.

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



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

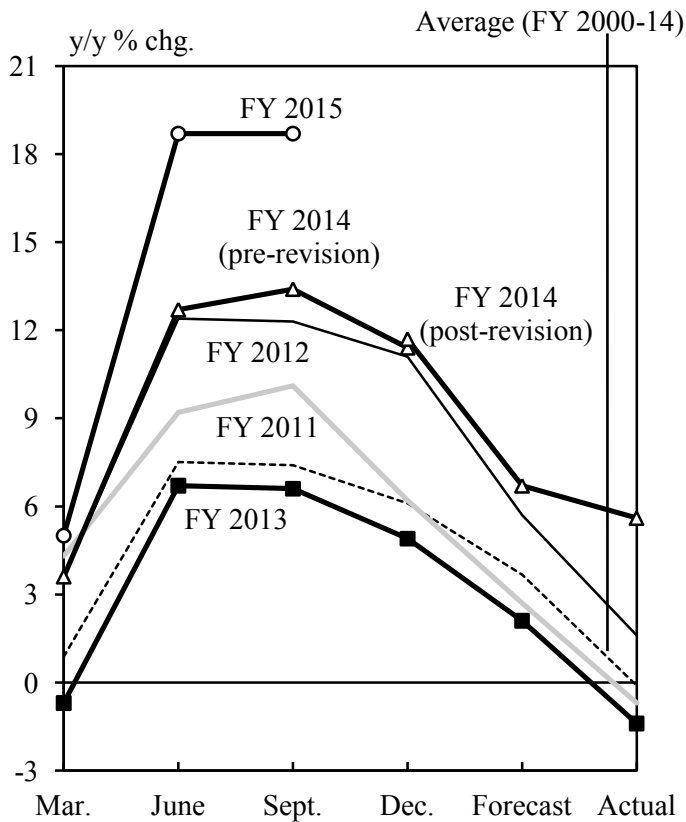
Sources: Cabinet Office, "National Accounts";

Ministry of Economy, Trade and Industry, "Indices of Industrial Domestic Shipments and Imports";

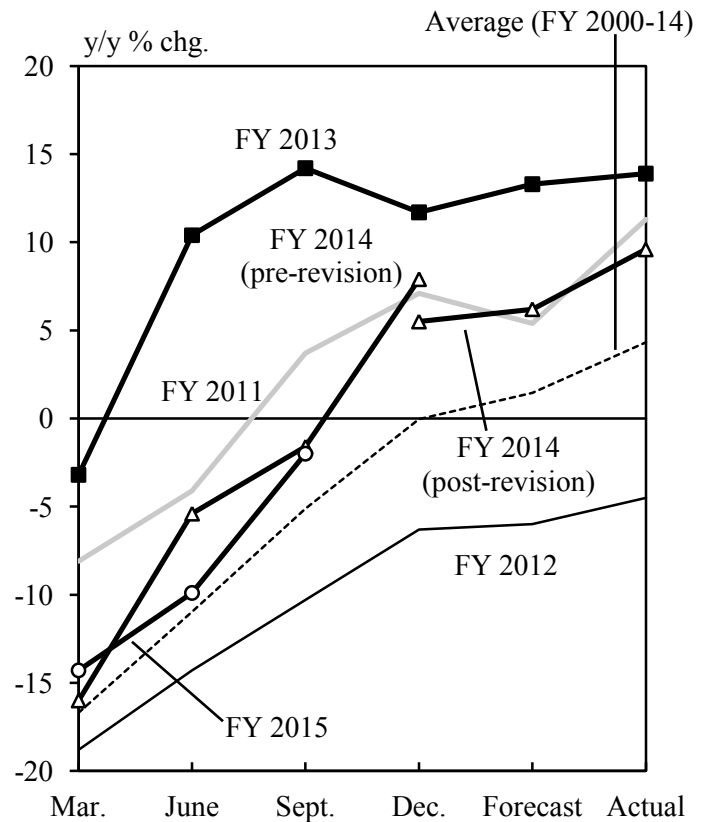
Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

Business Fixed Investment Plans, by Industry and Enterprise Size

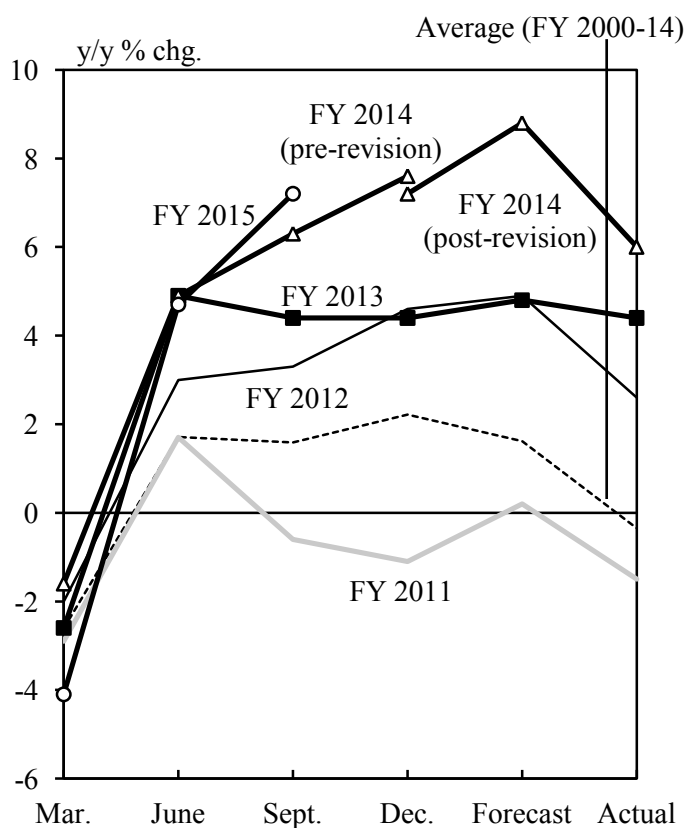
(1) Large Manufacturing Enterprises



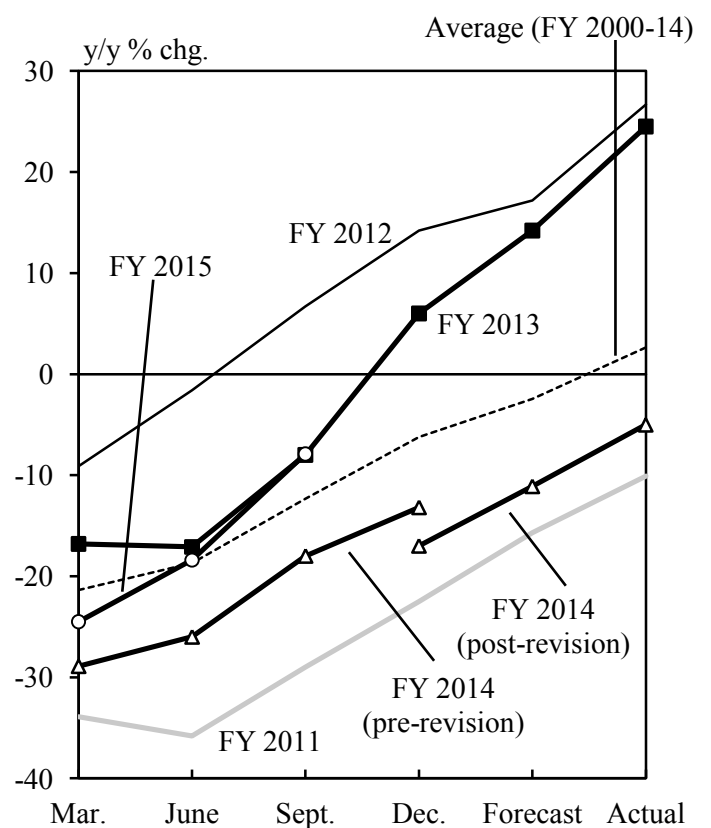
(2) Small Manufacturing Enterprises



(3) Large Nonmanufacturing Enterprises



(4) Small Nonmanufacturing Enterprises



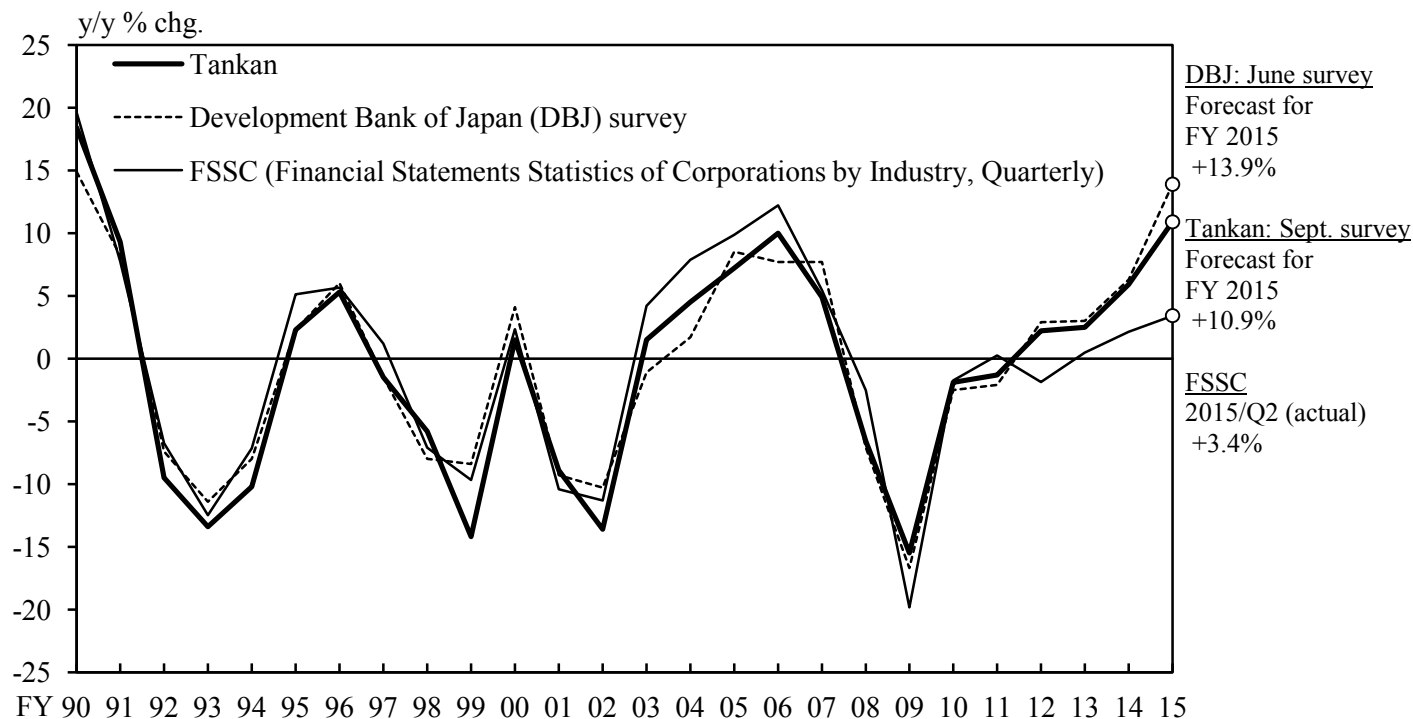
Notes: 1. Includes land purchasing expenses and excludes software investment.

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

Source: Bank of Japan, "Tankan, Short-term Economic Survey of Enterprises in Japan."

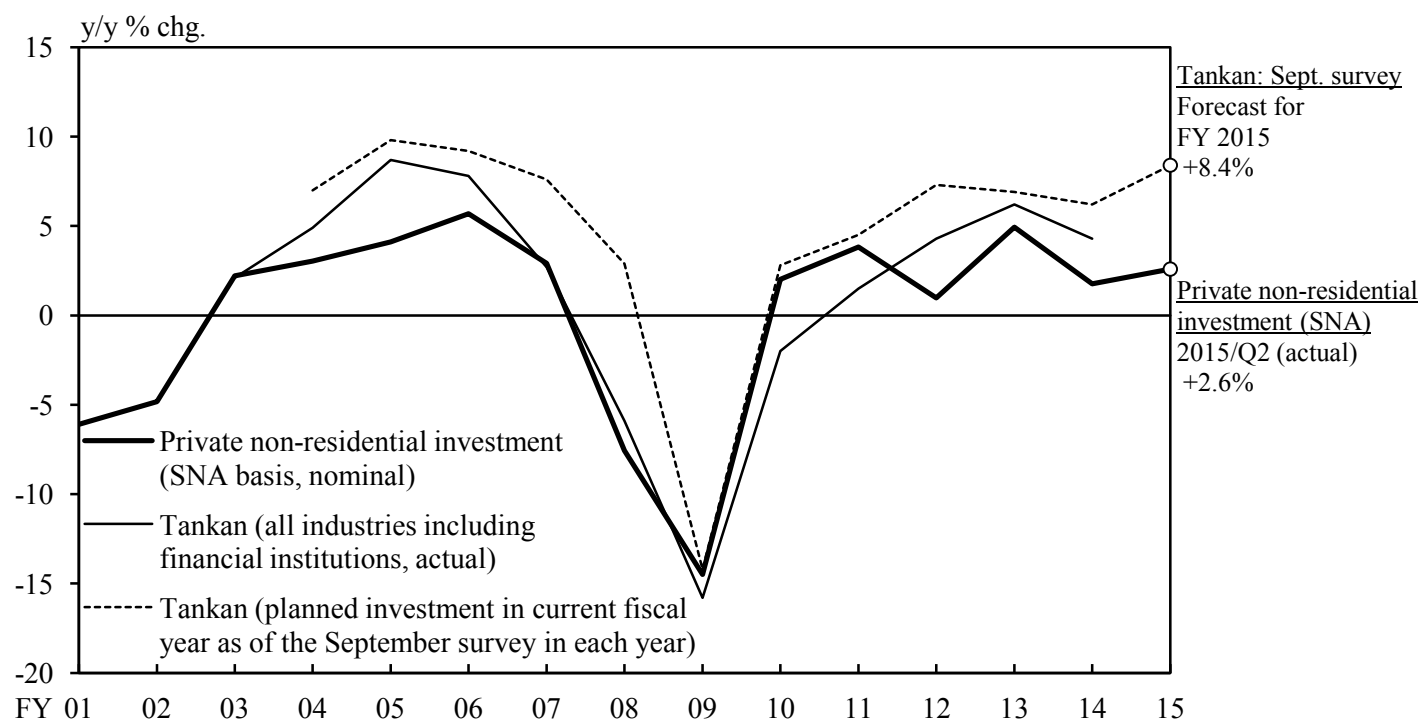
Planned and Actual Business Fixed Investment

(1) Planned and Actual Business Fixed Investment in Large Enterprises



Note: Data up to fiscal 2014 are actual changes from the previous fiscal year. Figures are for all industries and enterprises (excluding "Finance and Insurance"); software investment is excluded. Figures for the "Tankan" and the DBJ survey include land purchasing expenses. Figures for the FSSC exclude "Goods Rental and Leasing."

(2) Planned and Actual Business Fixed Investment on a Macroeconomic Basis

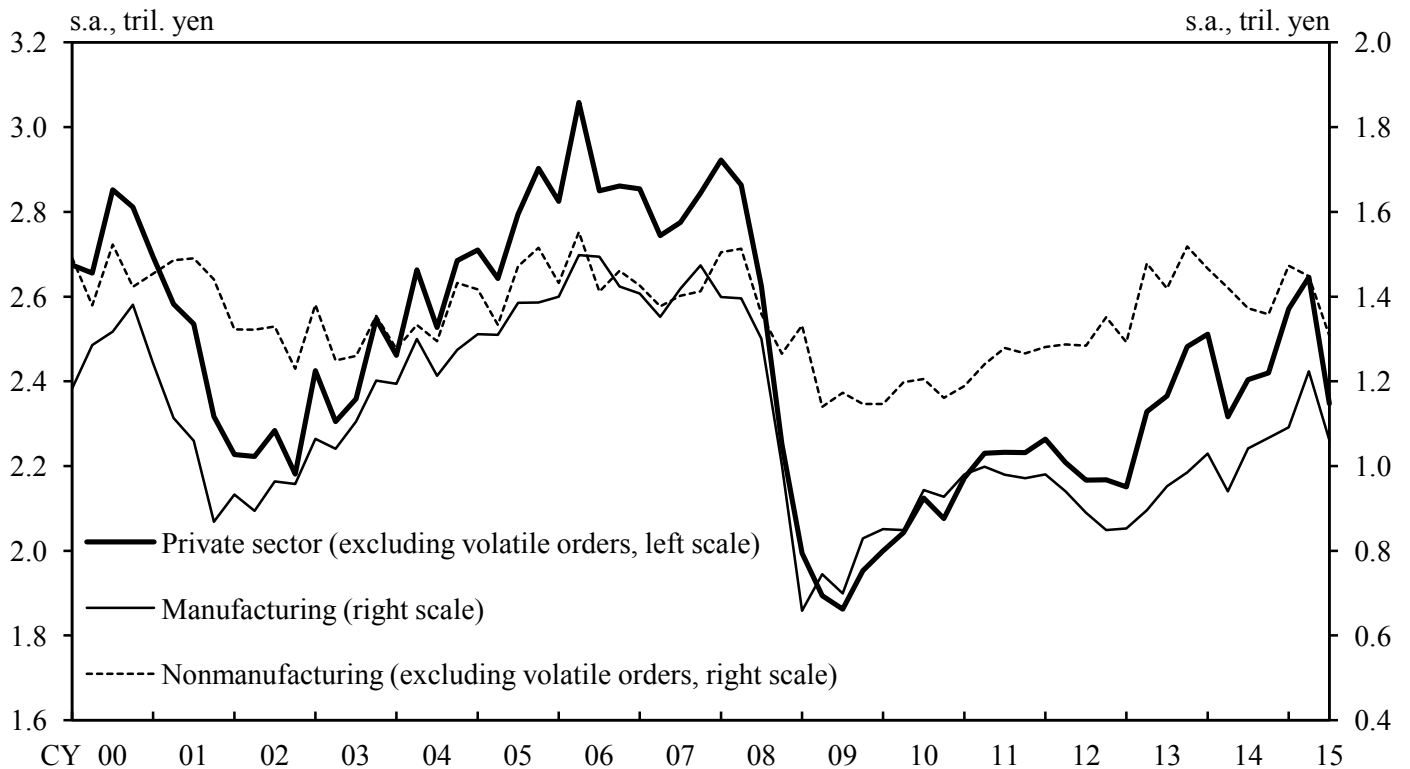


Note: Figures for the "Tankan" include software investment and exclude land purchasing expenses.

Sources: Cabinet Office, "National Accounts"; Bank of Japan, "Tankan, Short-term Economic Survey of Enterprises in Japan"; Development Bank of Japan, "Survey on Planned Capital Spending"; Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

Leading Indicators of Business Fixed Investment

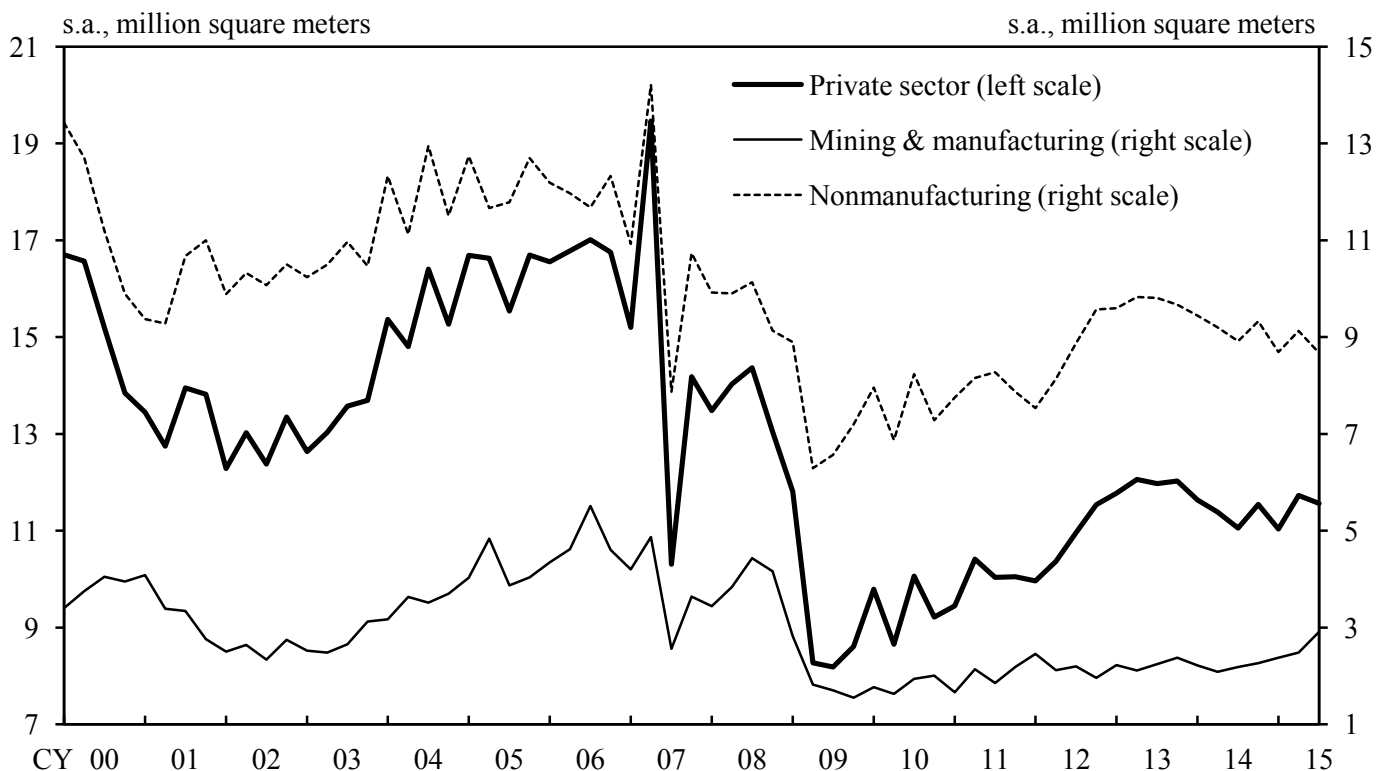
(1) Machinery Orders



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

2. Figures for 2015/Q3 are based on figures for July and August converted to quarterly data. The same applies to the chart below.

(2) Construction Starts (Floor Area, Private, Nondwelling Use)



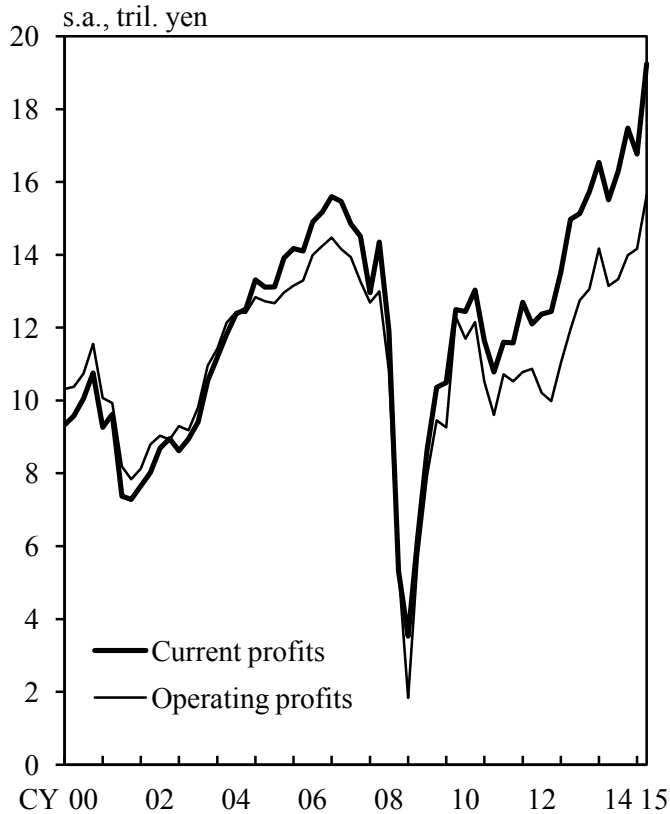
Note: Figures up to fiscal 2002 are adjusted to reflect changes in the Japan Standard Industrial Classification.

Sources: Cabinet Office, "Orders Received for Machinery";

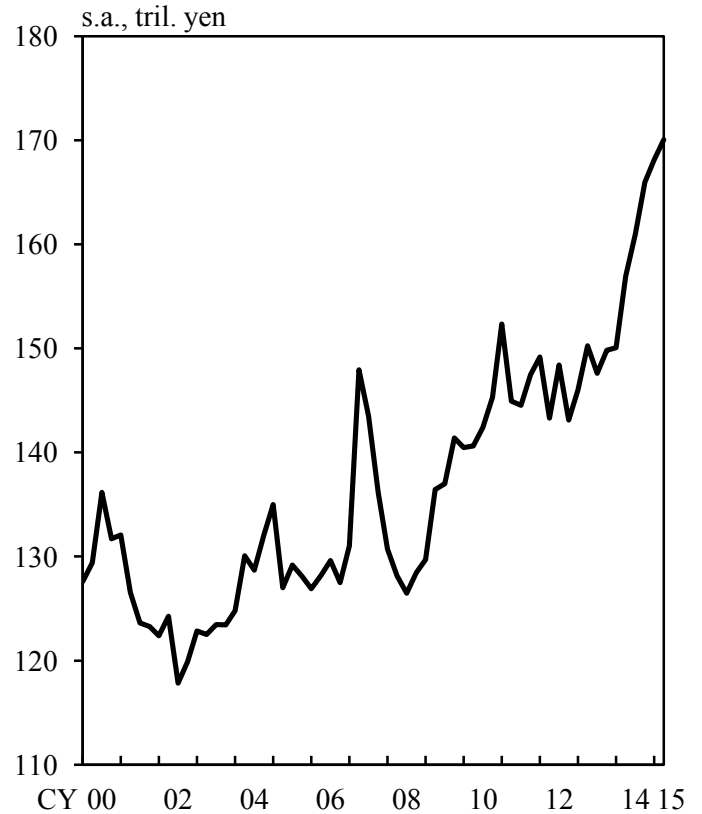
Ministry of Land, Infrastructure, Transport and Tourism, "Statistics on Building Construction Starts."

Corporate Profits, Business Fixed Investment, and Labor Costs

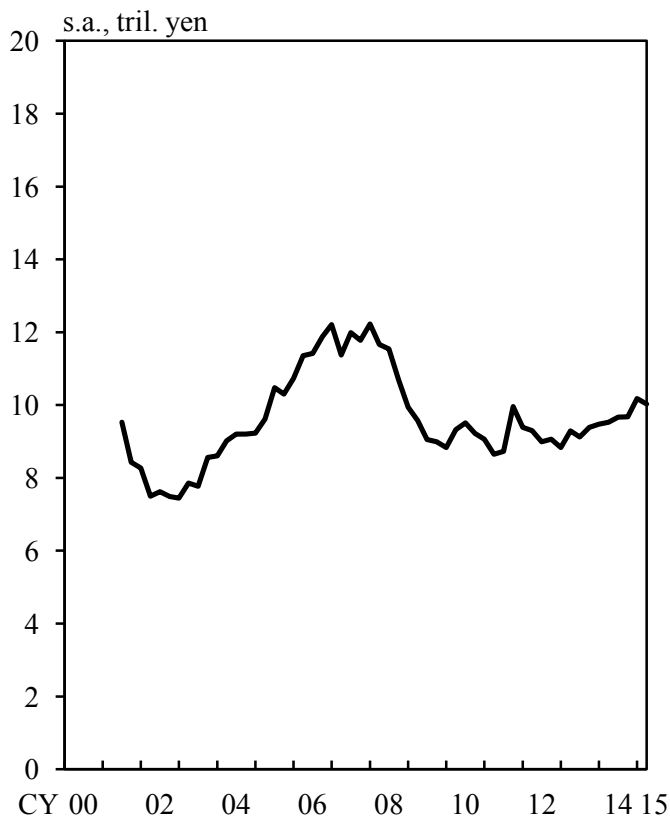
(1) Current Profits and Operating Profits



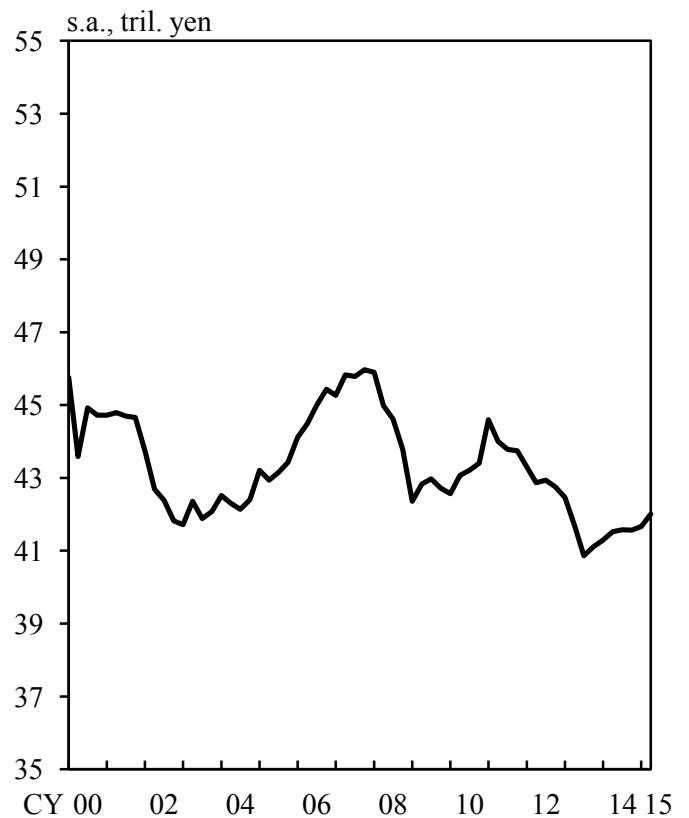
(2) Cash and Bank Deposits



(3) Business Fixed Investment



(4) Labor Costs

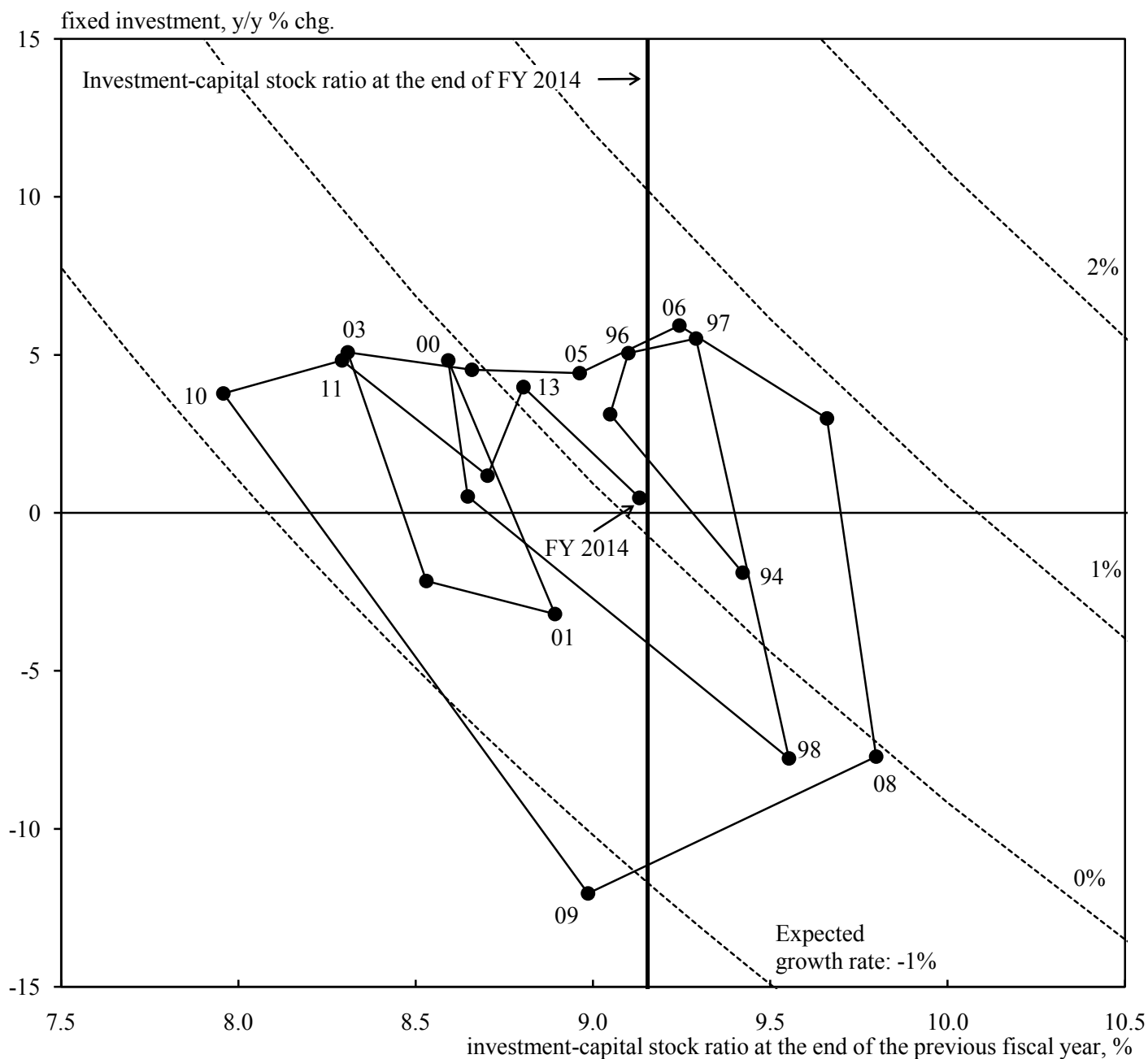


Notes: 1. Figures are for all industries and enterprises, excluding "Finance and Insurance."

2. Figures for business fixed investment include software investment, and exclude "Goods Rental and Leasing."

Source: Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

Capital Stock Cycles



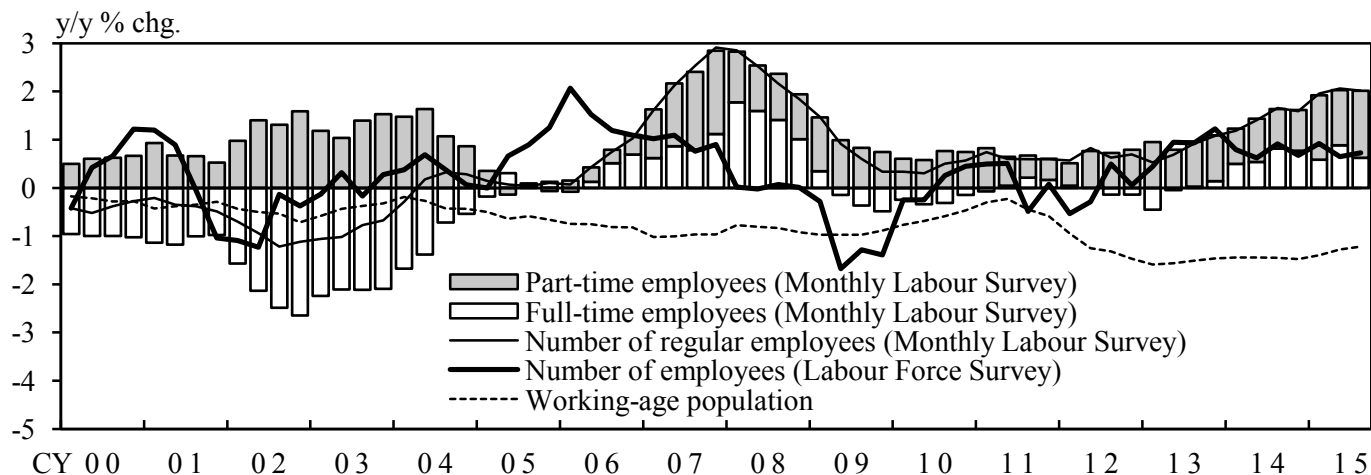
1. The capital stock cycles in the chart show the relationship between the investment-capital stock ratio and the year-on-year rate of change in fixed investment.
2. For a given expected growth rate, the relationship between the two variables follows a hyperbolic curve given by the following equation:

$$\text{Year-on-year rate of change in fixed investment (y-axis)} \times \text{investment-capital stock ratio at the end of the previous fiscal year (x-axis)} = \text{expected growth rate} + \text{trend growth rate of capital coefficient} + \text{depreciation rate}$$
3. What phase of the capital stock cycle fixed investment is in at a particular point in time can be determined by referring to the hyperbolic curve for the expected growth rate at that time.

Sources: Cabinet Office, "National Accounts";
 Research Institute of Economy, Trade and Industry, "Japan Industrial Productivity Database 2014."

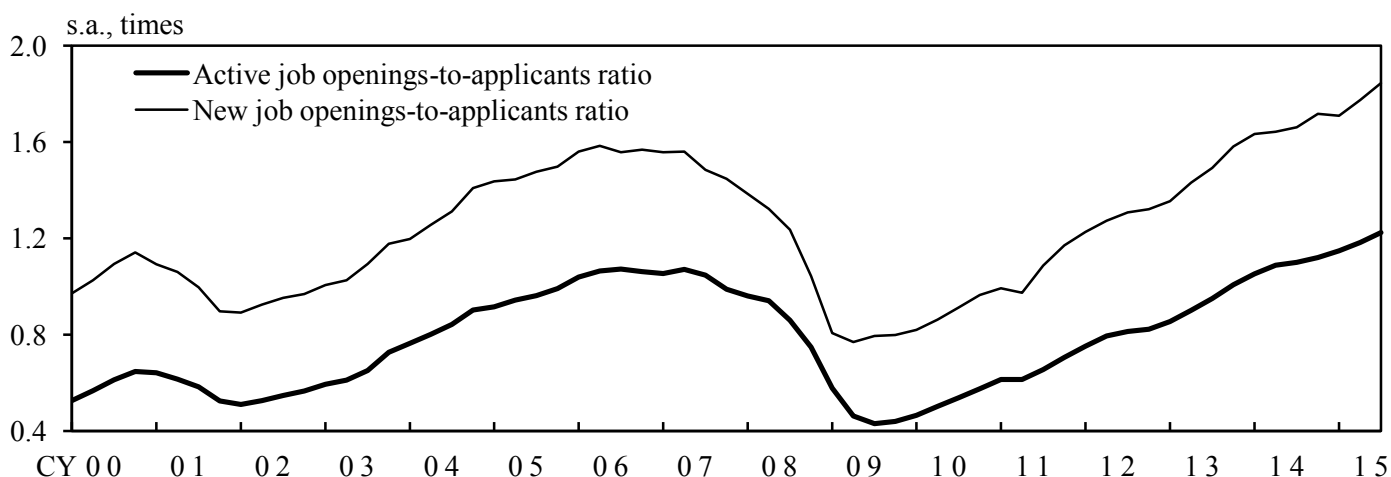
Employment and Labor Market Conditions

(1) Number of Employees

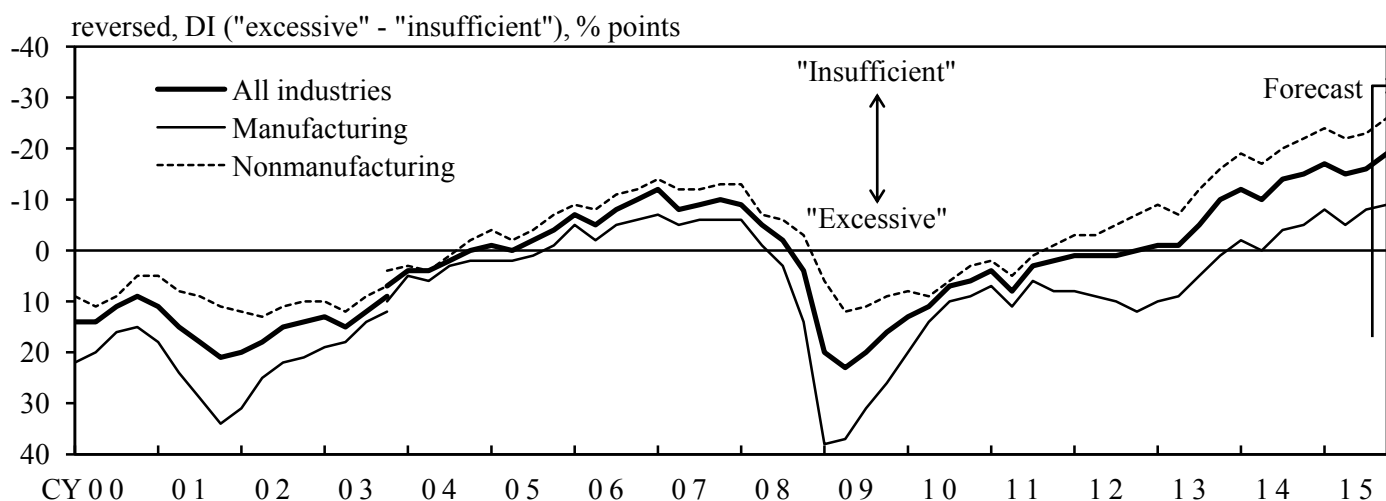


Note: Figures based on the "Monthly Labour Survey" for 2015/Q3 are July-August averages.

(2) Job Openings-to-Applicants Ratio



(3) Employment Conditions DI



Note: Figures are based on enterprises of all sizes. There is a discontinuity in the data for the December 2003 survey due to a change in the survey framework. Figures for 2015/Q4 are the forecasts in the September 2015 survey.

Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan."

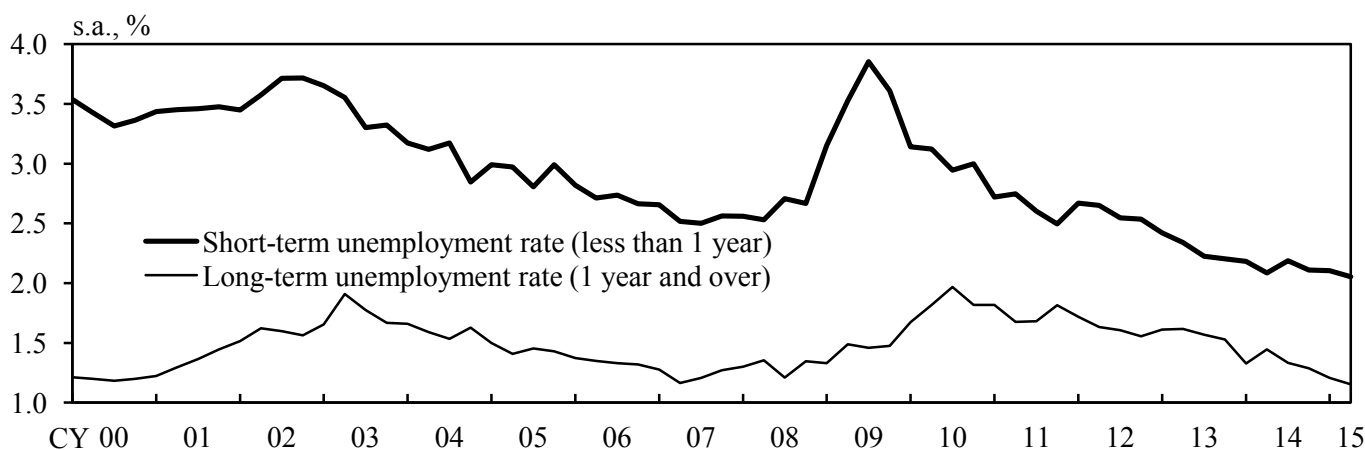
Unemployment Rate and Labor Force Participation Rate

(1) Unemployment Rate



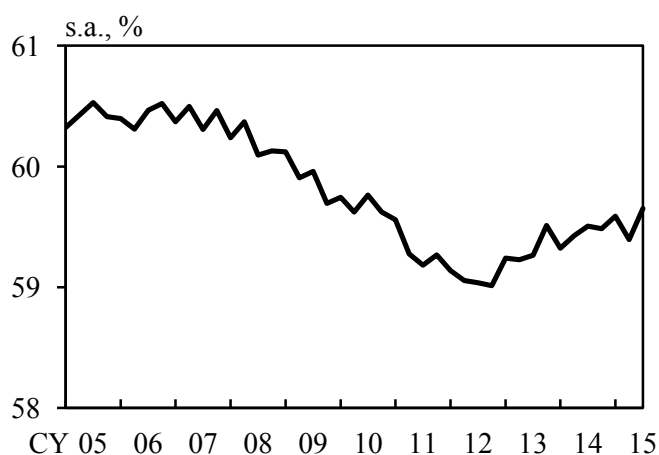
Note: The structural unemployment rate is defined as the level of the unemployment rate at which, based on the empirical relationship between them, the number of unemployed would equal the number of vacancies. Figures for the structural unemployment rate are estimates by the Research and Statistics Department, Bank of Japan.

(2) Unemployment Rate by Duration

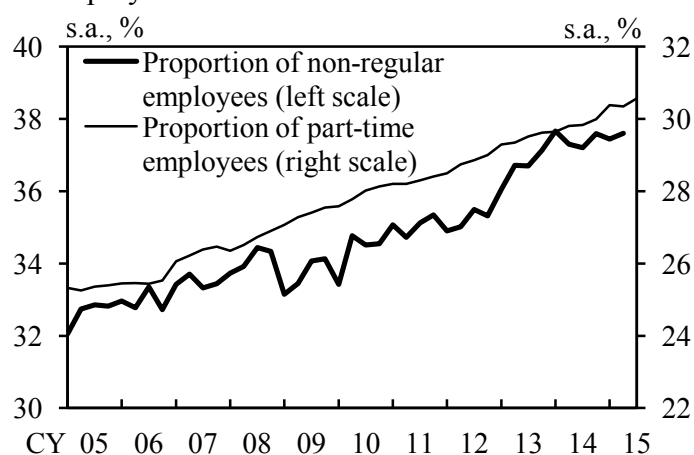


Note: Figures for unemployed persons by duration up through CY 2001 are not seasonally adjusted, since they are on a semiannual basis.

(3) Labor Force Participation Rate



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

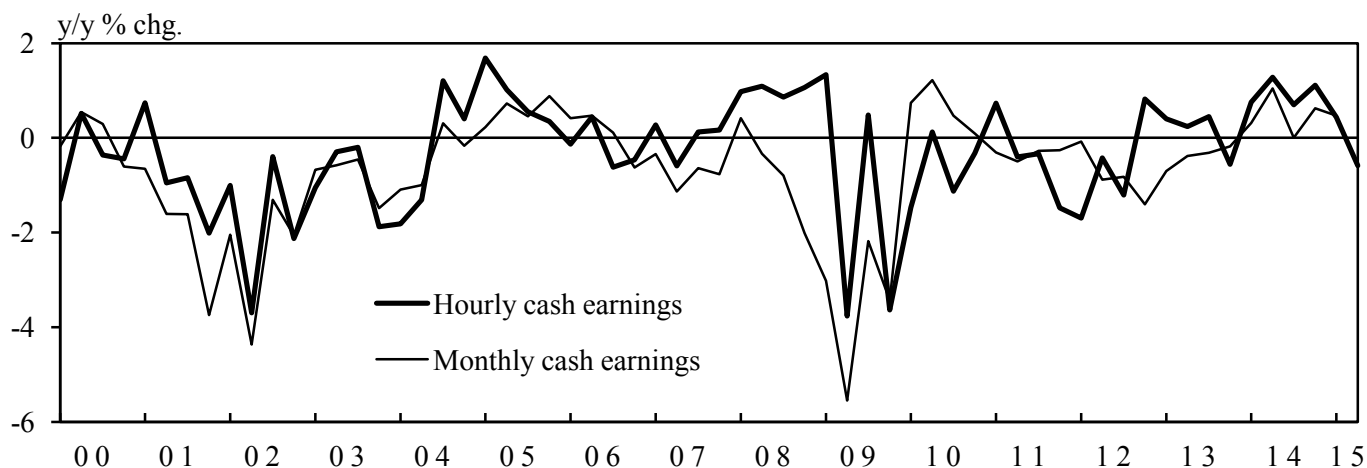


Note: Figures for the proportion of non-regular employees are based on the "detailed tabulation" in the "Labour Force Survey." The figure for the proportion of part-time employees for 2015/Q3 is the July-August average.

Sources: Ministry of Internal Affairs and Communications, "Labour Force Survey";
Ministry of Health, Labour and Welfare, "Report on Employment Service," "Monthly Labour Survey."

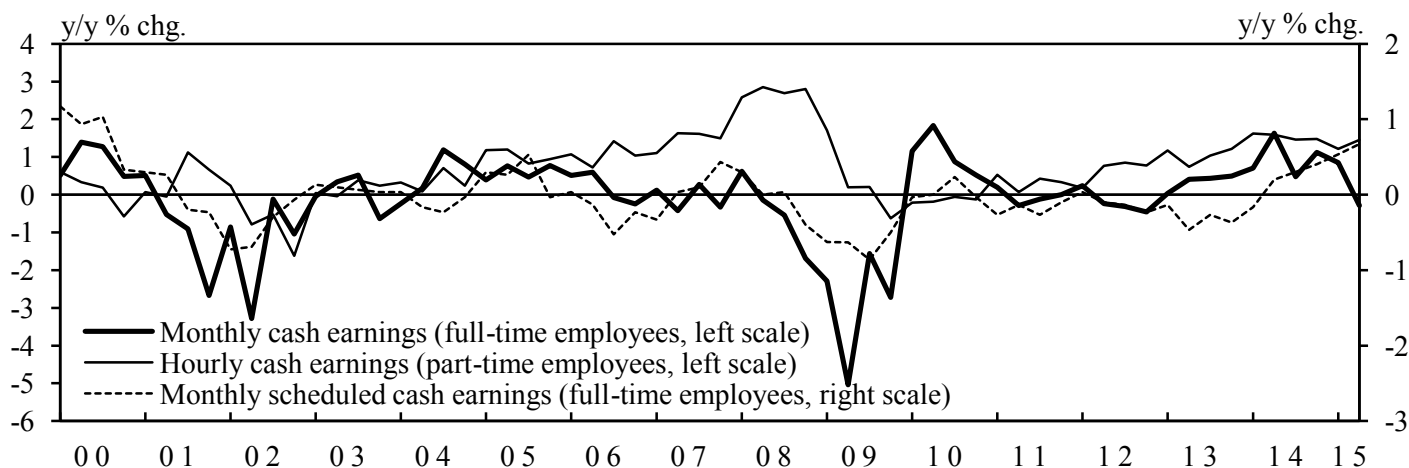
Wages

(1) Total

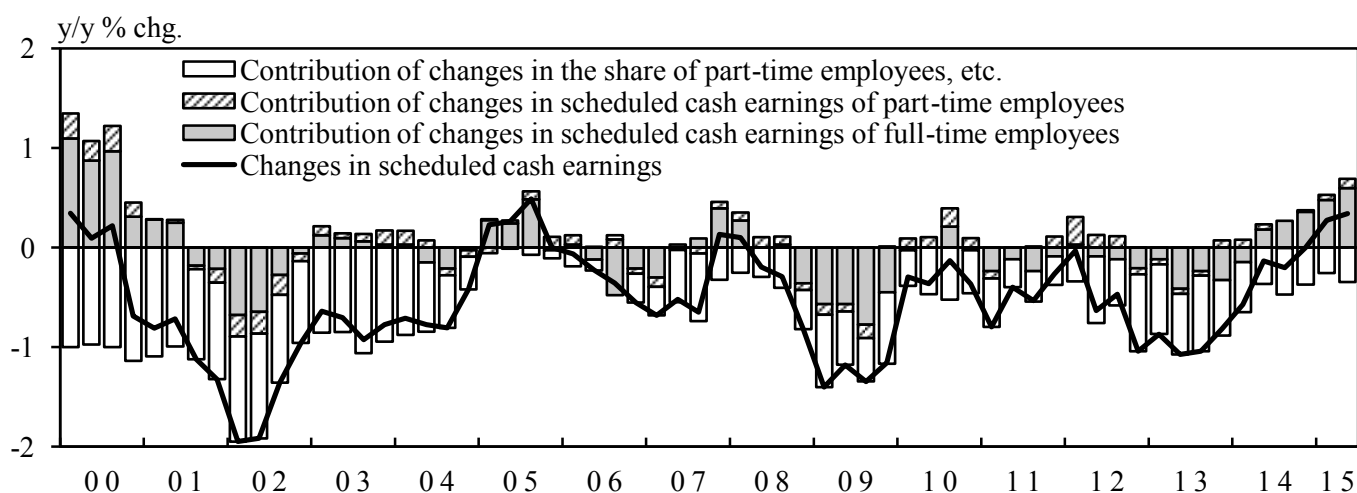


Note: Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.
The same definition applies to the charts below.

(2) Cash Earnings by Type of Worker



(3) Scheduled Cash Earnings

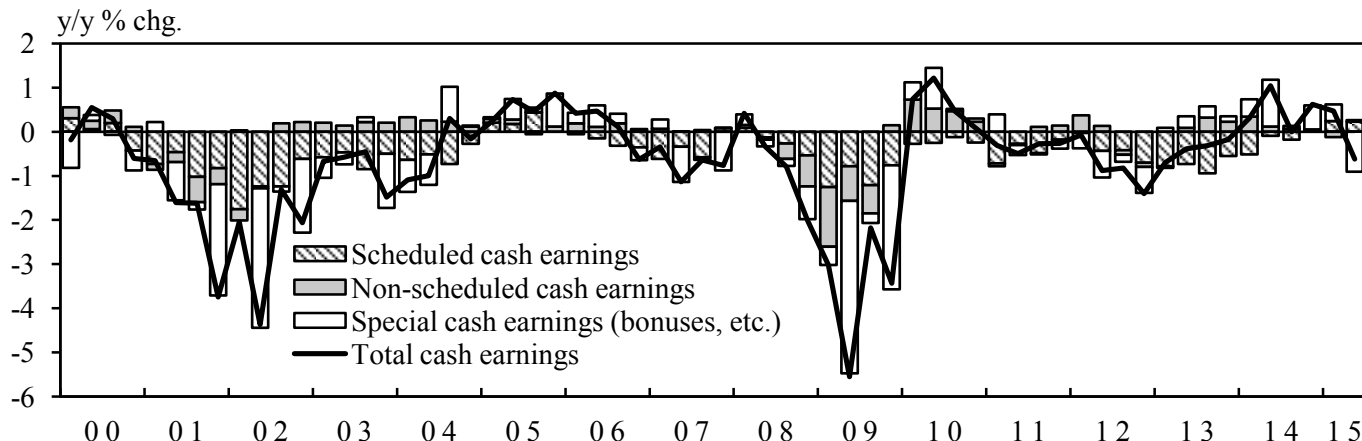


Note: The contribution of changes in scheduled cash earnings of part-time (full-time) employees is obtained by multiplying the year-on-year rate of changes in part-time (full-time) scheduled cash earnings and part-time (full-time) employees' share of total scheduled cash earnings in the previous year.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

Source: Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

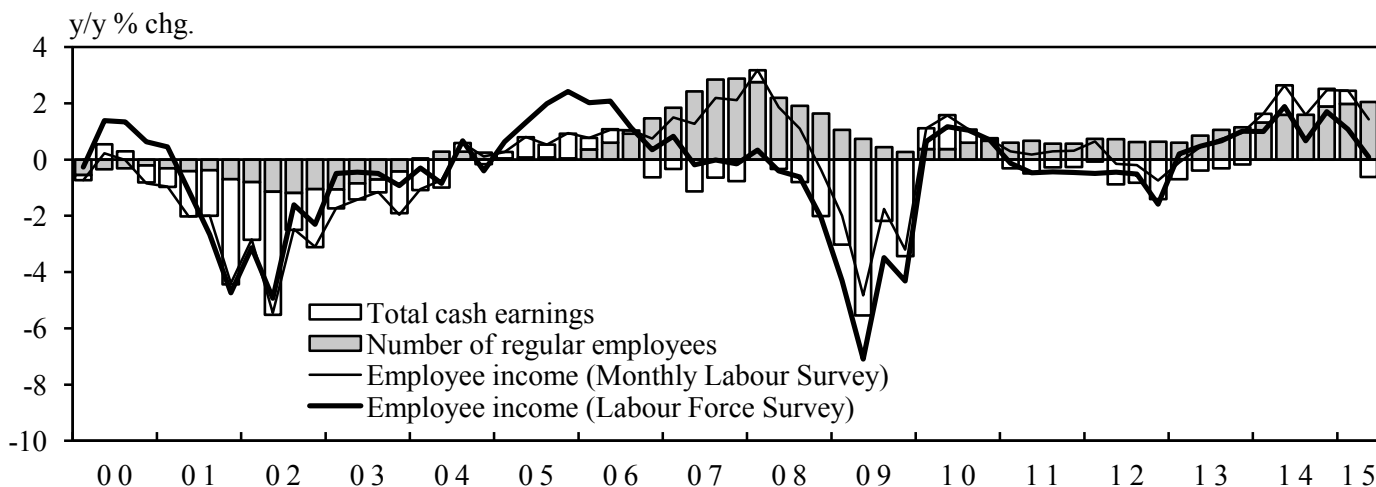
Employee Income

(1) Total Cash Earnings



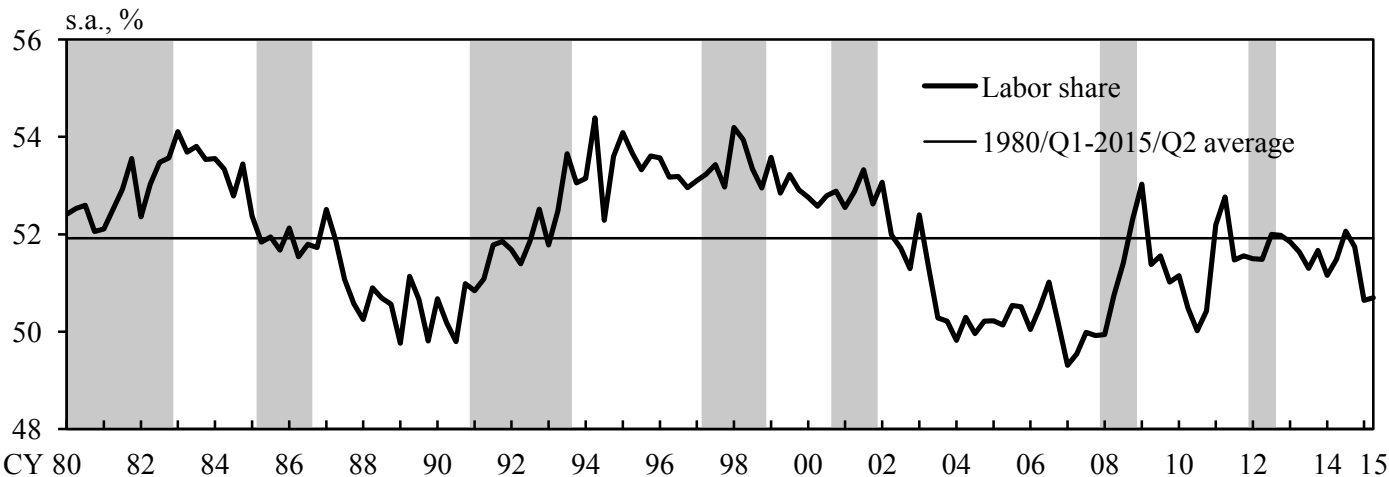
Note: Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.
The same definition applies to Chart 25 (2).

(2) Employee Income



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

(3) Labor Share (SNA Basis)

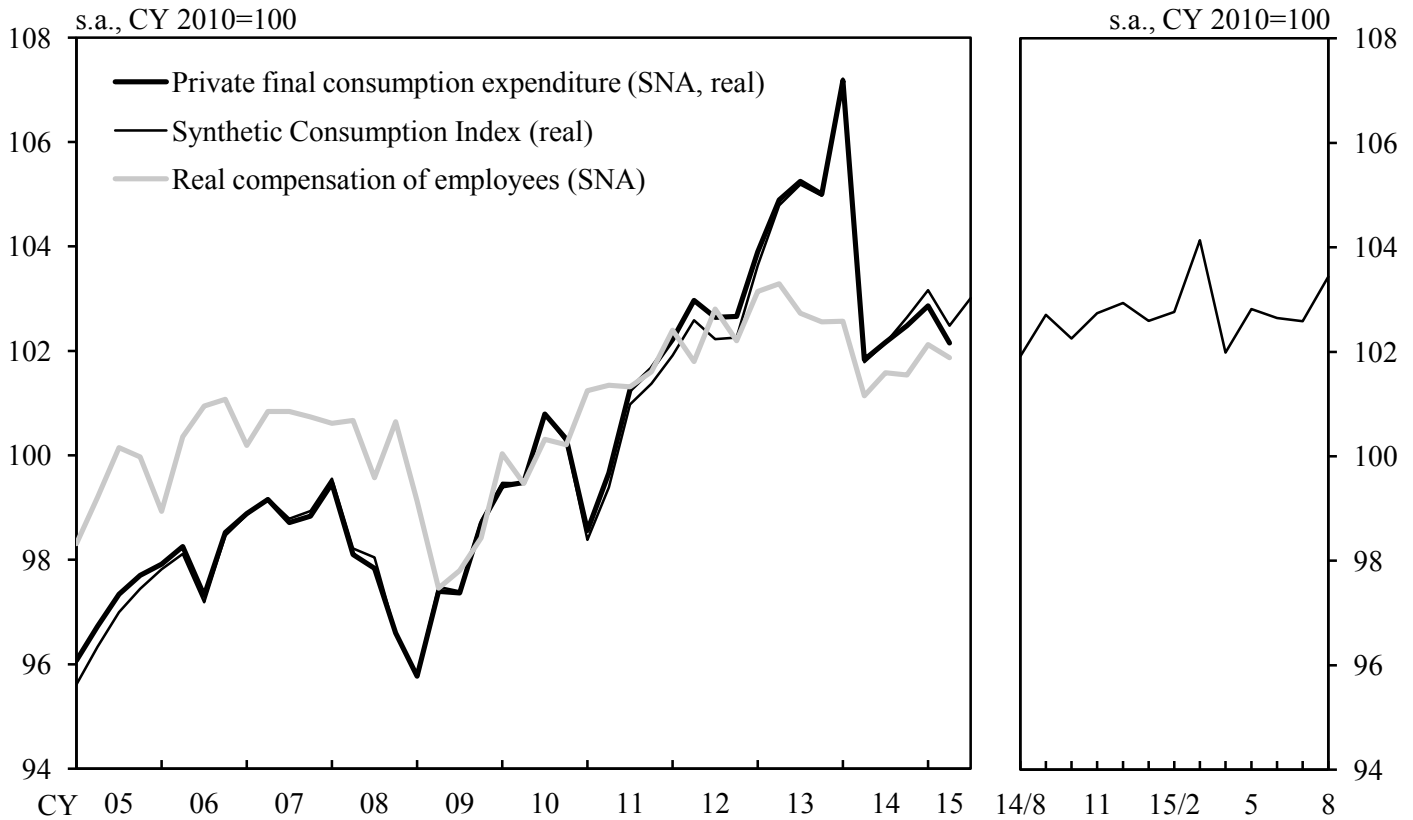


Notes: 1. Labor share = compensation of employees / nominal GDP × 100
2. Shaded areas indicate recession periods.

Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Cabinet Office, "National Accounts."

Private Consumption (SNA Basis)

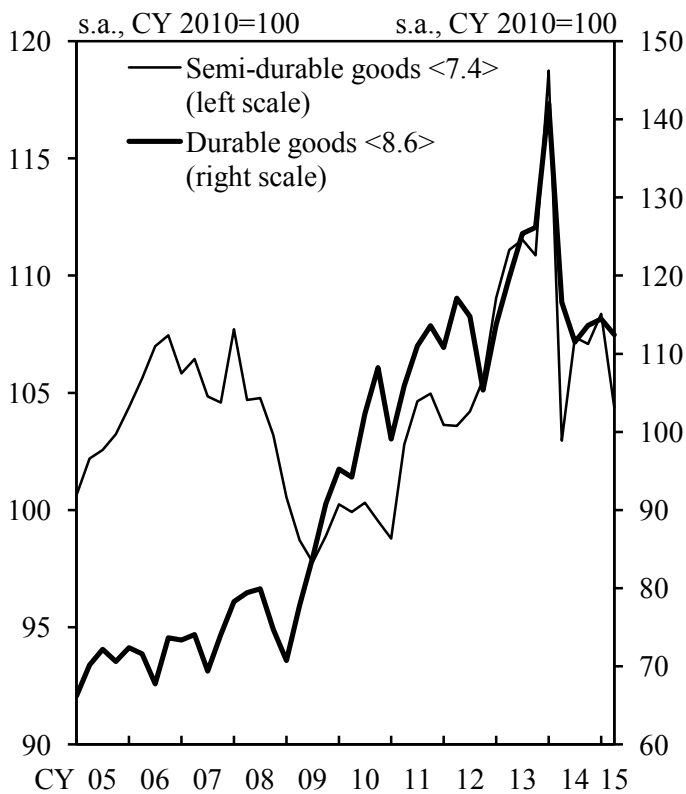
(1) Private Consumption and Real Compensation of Employees



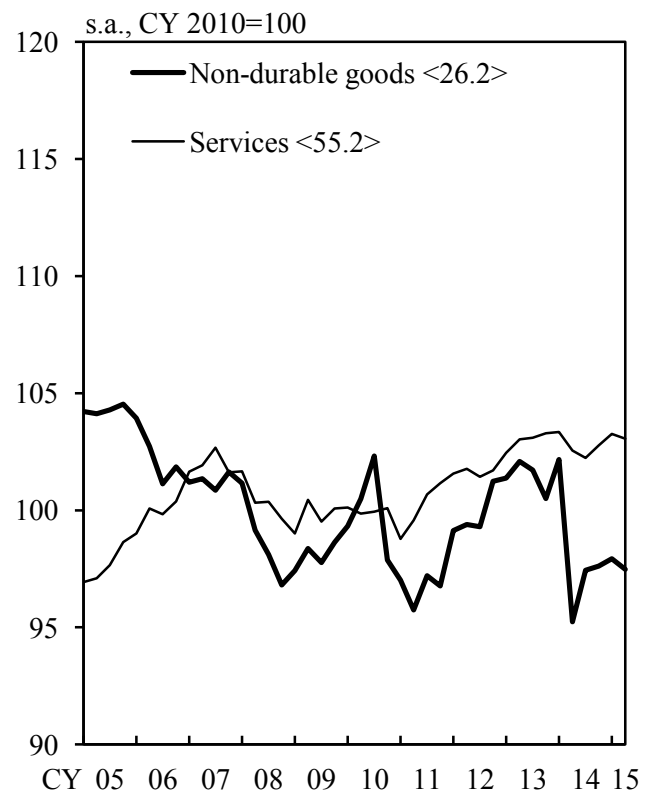
Note: The figure for 2015/Q3 is the July-August average.

(2) Consumption Expenditure by Type (Real)

(a) Durable and Semi-Durable Goods



(b) Non-Durable Goods and Services

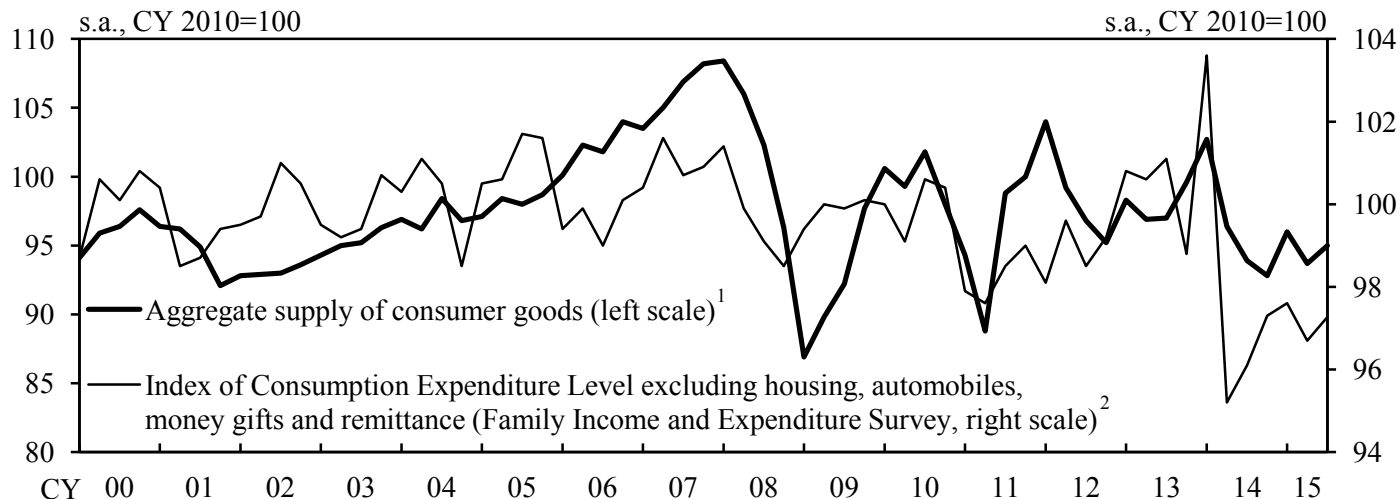


Note: Figures in angular brackets show the share in private final consumption expenditure in 2014.

Source: Cabinet Office, "National Accounts," "Synthetic Consumption Index."

Private Consumption on the Supply and Demand Sides

(1) Aggregate Supply of Consumer Goods and Consumption Expenditure

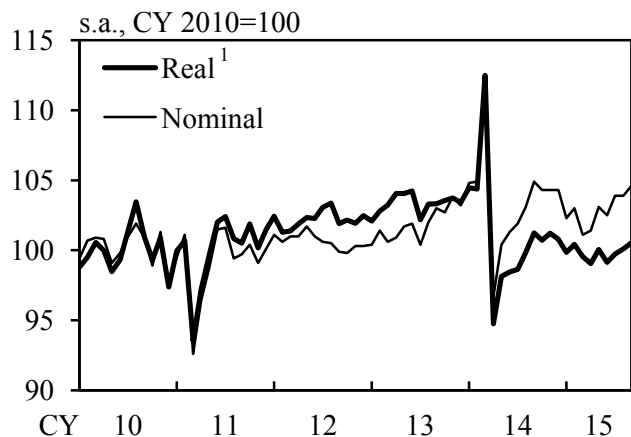


Notes: 1. The figure for 2015/Q3 is the July-August average.

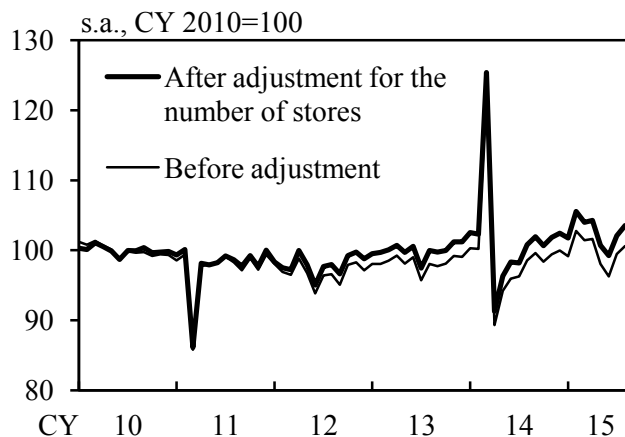
2. Figures are based on two-or-more-person households, and are adjusted using the distribution of households by number of household members and age group of household head.

(2) Current Survey of Commerce

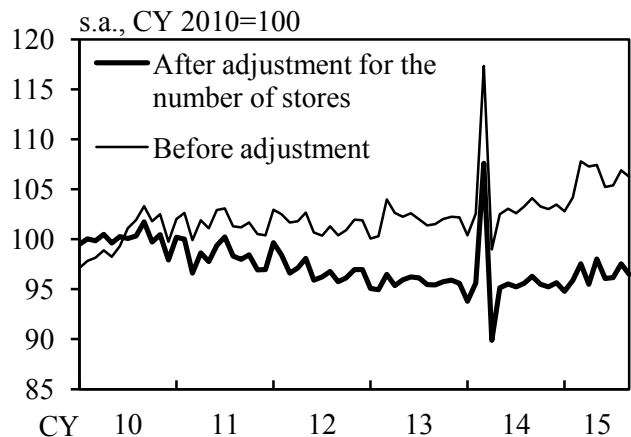
(a) Sales at Retail Stores



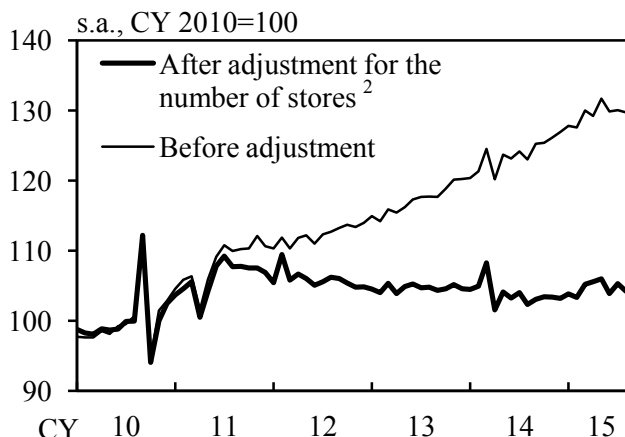
(b) Sales at Department Stores



(c) Sales at Supermarkets



(d) Sales at Convenience Stores



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

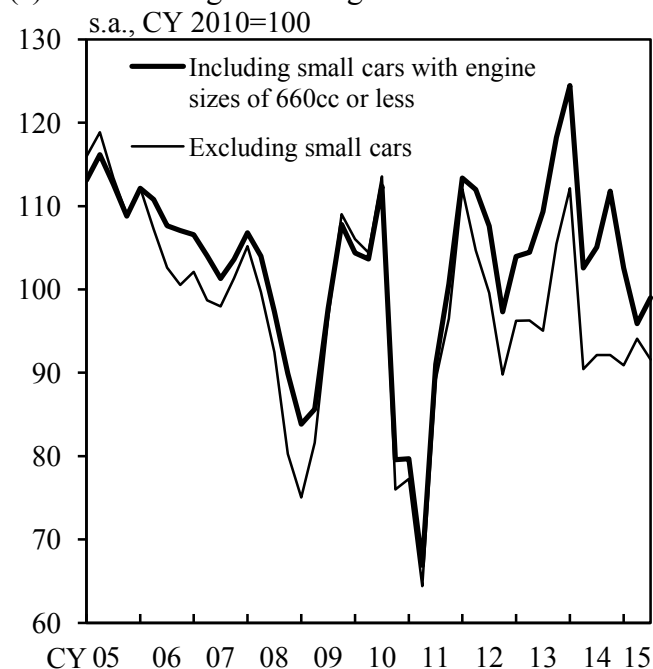
2. Figures are based on the data published by the Japan Franchise Association.

Sources: Ministry of Internal Affairs and Communications, "Family Income and Expenditure Survey," "Consumer Price Index"; Ministry of Economy, Trade and Industry, "Indices of Industrial Domestic Shipments and Imports," "Current Survey of Commerce"; Japan Franchise Association, "Convenience Store Statistics."

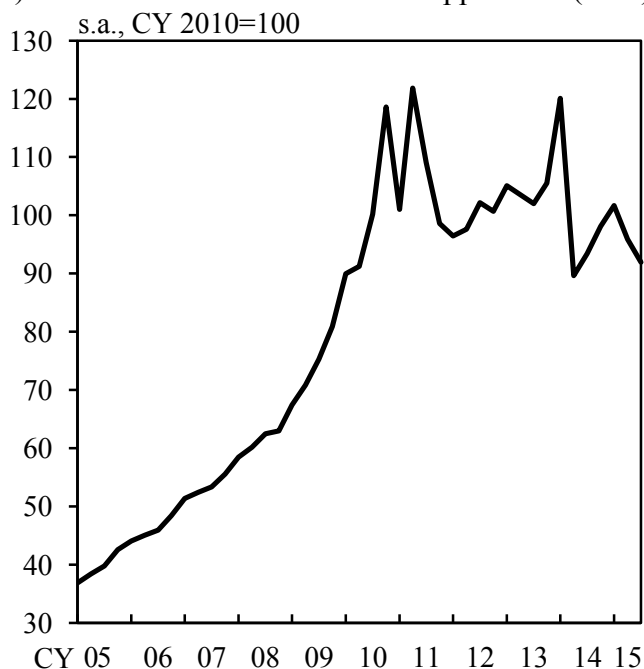
Consumption Expenditure by Type

(1) Consumption of Durable Goods

(a) New Passenger-Car Registrations



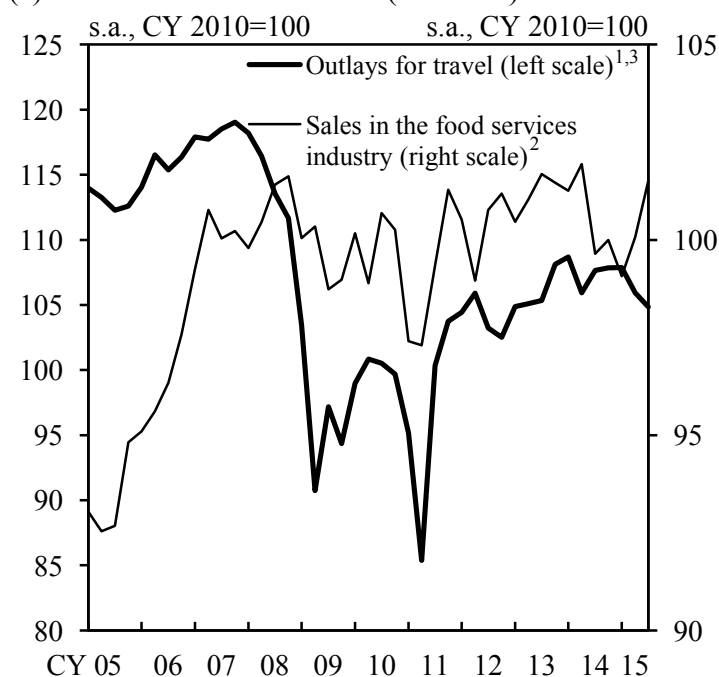
(b) Sales of Household Electrical Appliances (Real)¹



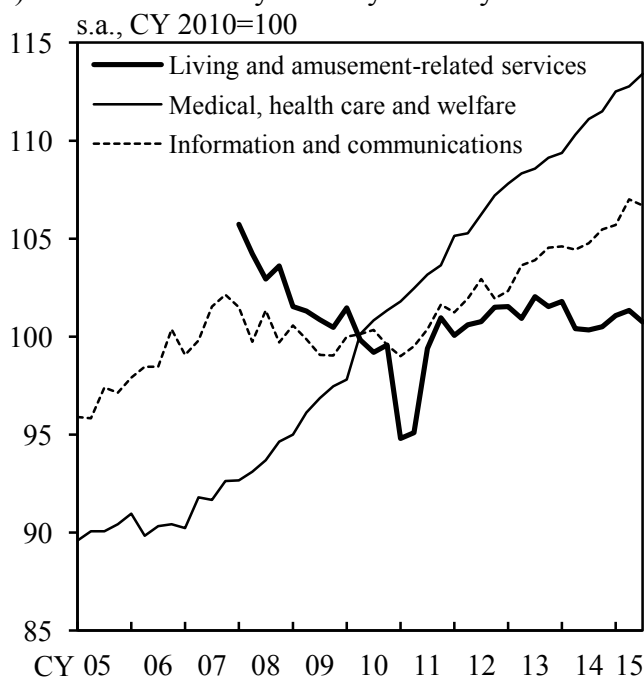
Note: 1. Real sales of household electrical appliances are obtained by deflating the index of retail sales of machinery and equipment in the "Current Survey of Commerce" by the price index of corresponding items in the CPI.

(2) Consumption of Services

(a) Travel and Food Services (Nominal)



(b) Indices of Tertiary Industry Activity³



Notes: 1. Excluding those by foreign travelers. Figures are calculated using the year-on-year rates of change released by the Japan Tourism Agency.

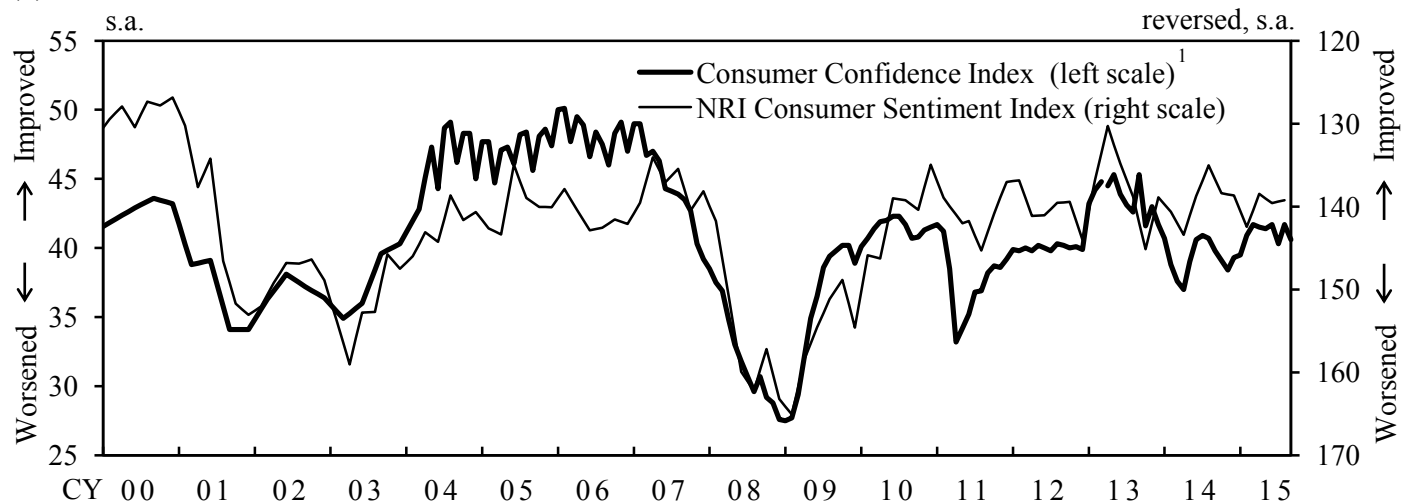
2. Figures are calculated using the year-on-year rates of change released by the Japan Food Service Association.

3. Figures for 2015/Q3 are July-August averages.

Sources: Ministry of Economy, Trade and Industry, "Current Survey of Commerce," "Indices of Tertiary Industry Activity"; Ministry of Internal Affairs and Communications, "Consumer Price Index"; Japan Automobile Dealers Association, "Domestic Sales of Automobiles"; Japan Tourism Agency, "Major Travel Agents' Revenue"; Japan Food Service Association, "Market Trend Survey of the Food Services Industry)," etc.

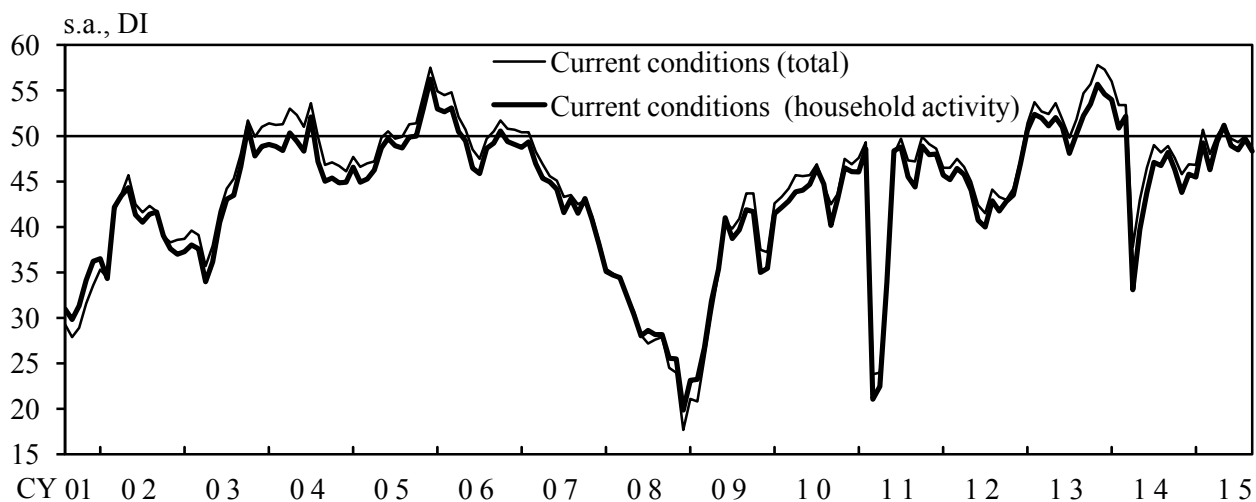
Confidence Indicators Related to Private Consumption

(1) Consumer Confidence Index and NRI Consumer Sentiment Index

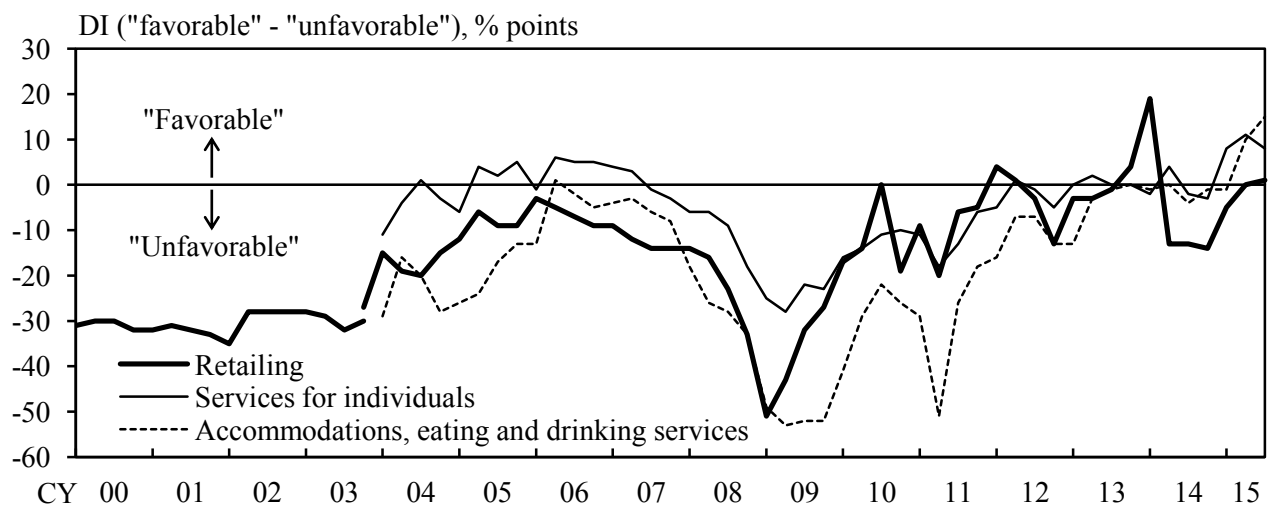


Note: 1. There is a discontinuity in the data for the April 2013 survey due to a change in the survey method.

(2) Economy Watchers Survey



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

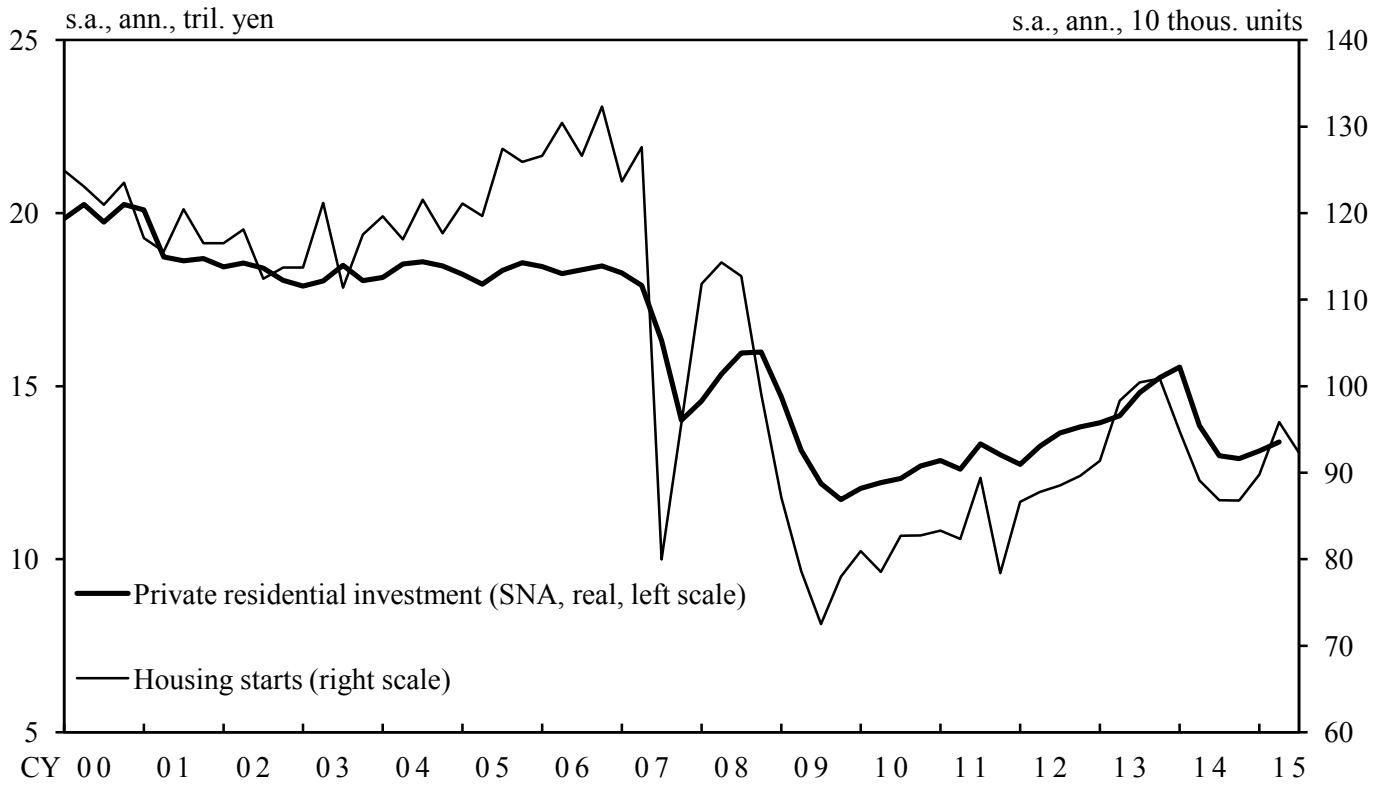


Note: There is a discontinuity in the data for the December 2003 survey due to a change in the survey framework.

Sources: Nippon Research Institute (NRI), "Consumer Sentiment Survey";
 Bank of Japan, "*Tankan*, Short-Term Economic Survey of Enterprises in Japan";
 Cabinet Office, "Consumer Confidence Survey," "Economy Watchers Survey."

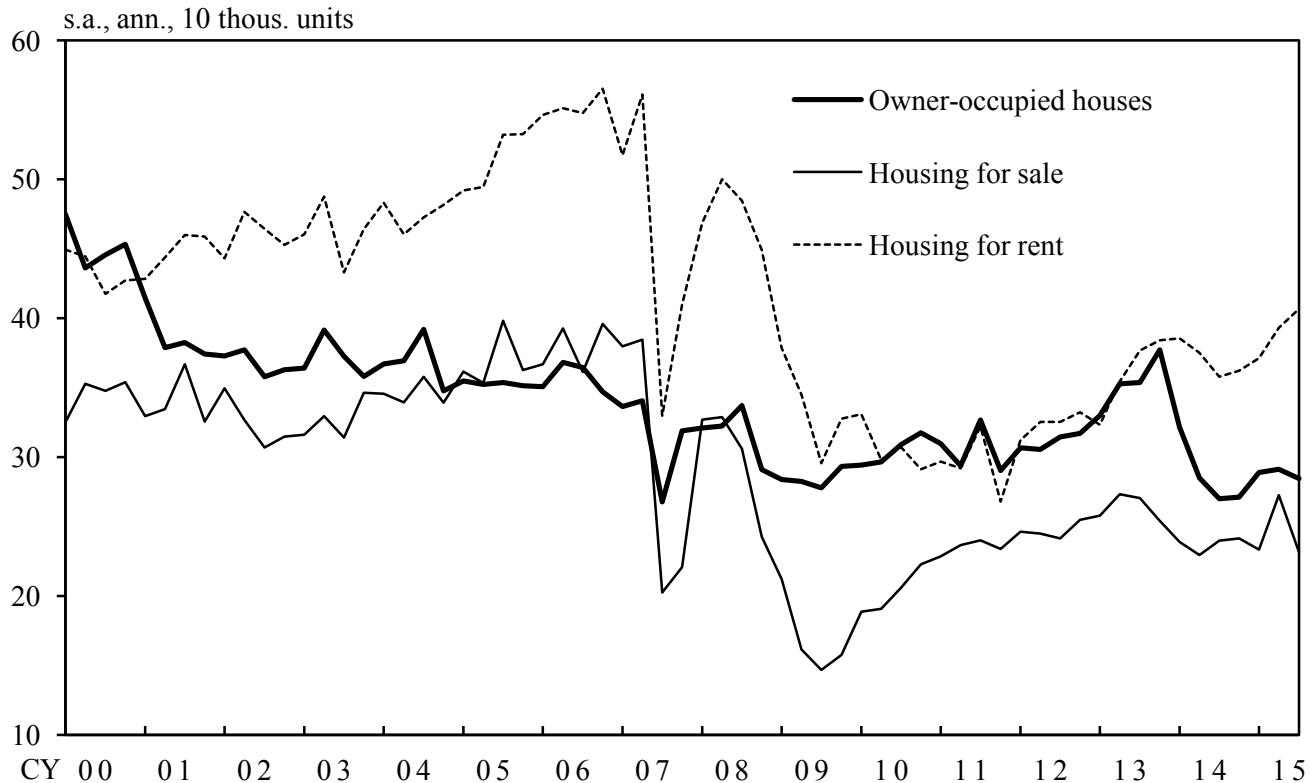
Housing Investment

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



Note: The figure for housing starts for 2015/Q3 is the July-August average. The same applies to the chart below.

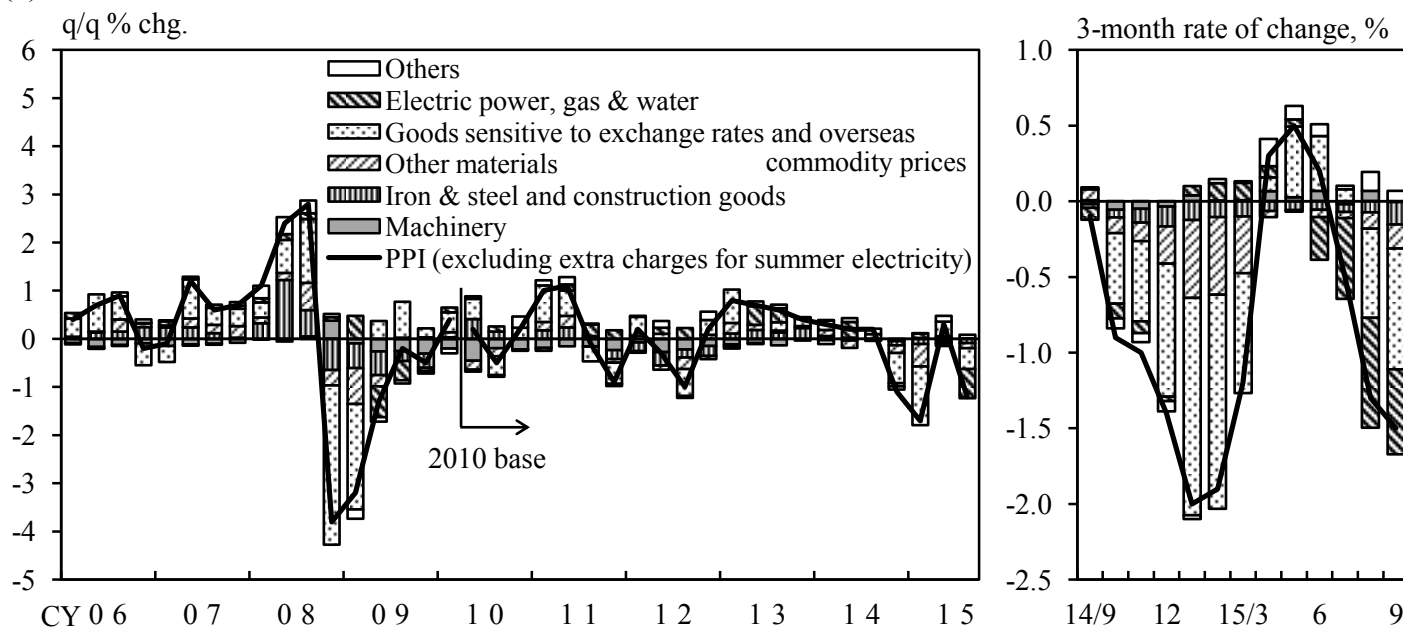
(2) Composition of Housing Starts



Sources: Cabinet Office, "National Accounts";
 Ministry of Land, Infrastructure, Transport and Tourism, "Statistics on Building Construction Starts."

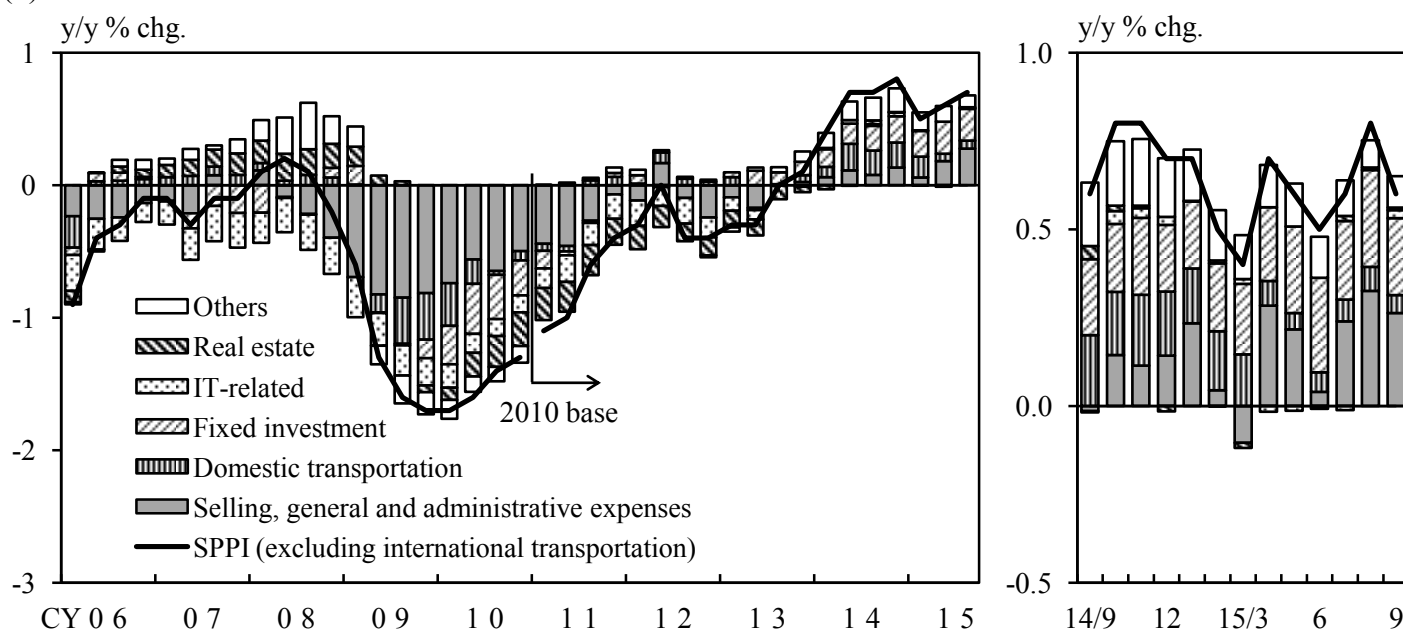
Producer Price Index and Services Producer Price Index

(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 direct effects of the consumption tax hike, using indices excluding the consumption tax. The same applies to the charts below.

(2) Services Producer Price Index

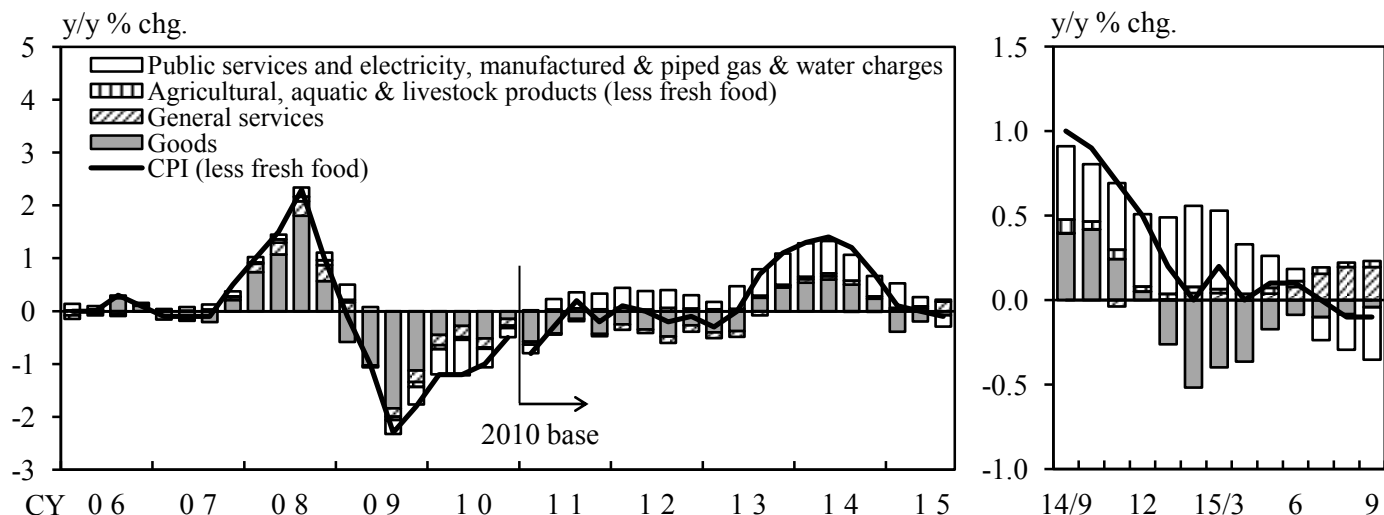


- Notes: 1. Selling, general and administrative expenses: information and communications (excluding newspapers and publishing), advertising services, other services (excluding plant engineering, and civil engineering and architectural services).
 2. Domestic transportation: transportation and postal 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.

Sources: Bank of Japan, "Corporate Goods Price Index," "Services Producer Price Index."

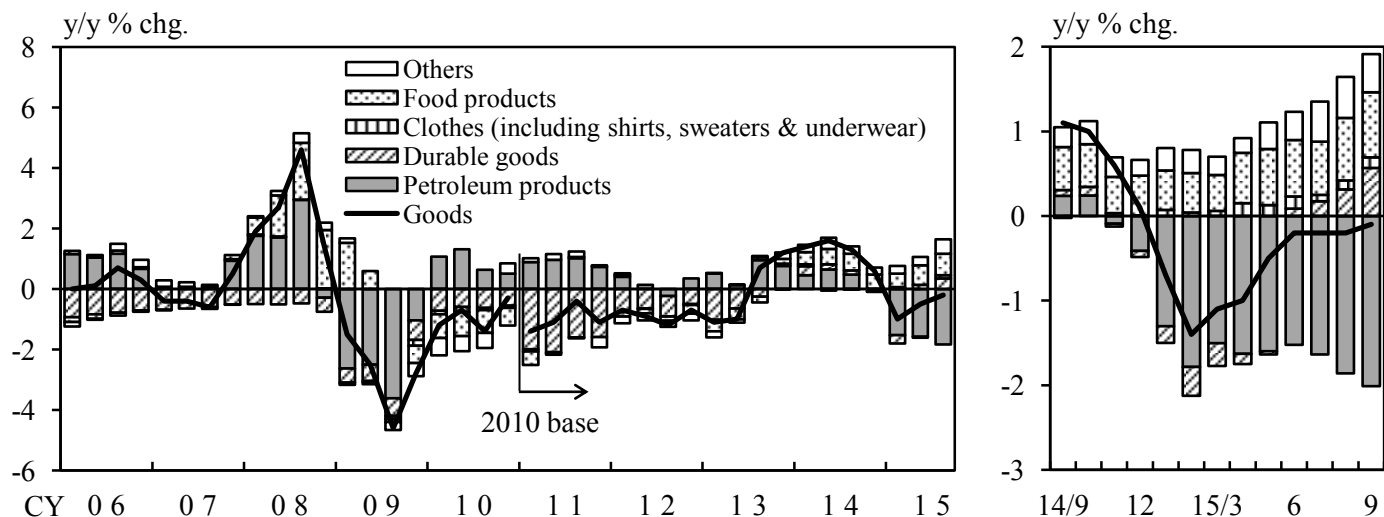
Consumer Price Index

(1) All Items (Less Fresh Food)

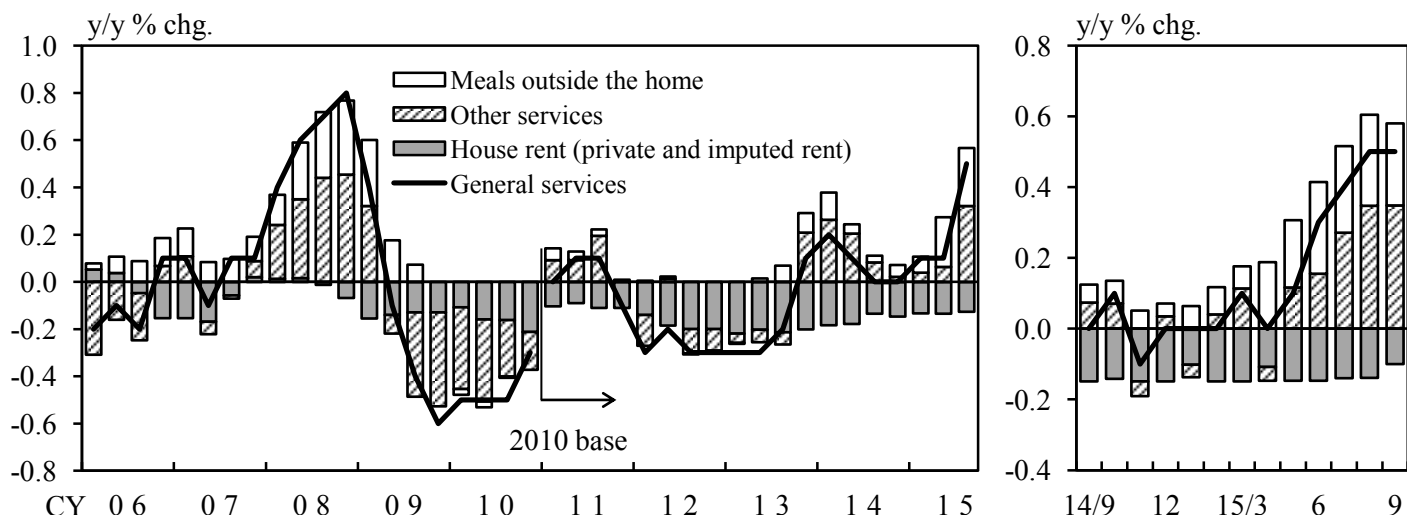


- Notes: 1. Figures for goods exclude agricultural, aquatic & livestock products and electricity, manufactured & piped gas & water charges. The same applies to the charts below.
 2. Figures for the CPI are adjusted to exclude the estimated effect of changes in the consumption tax rate. The same applies to the charts below.

(2) Goods

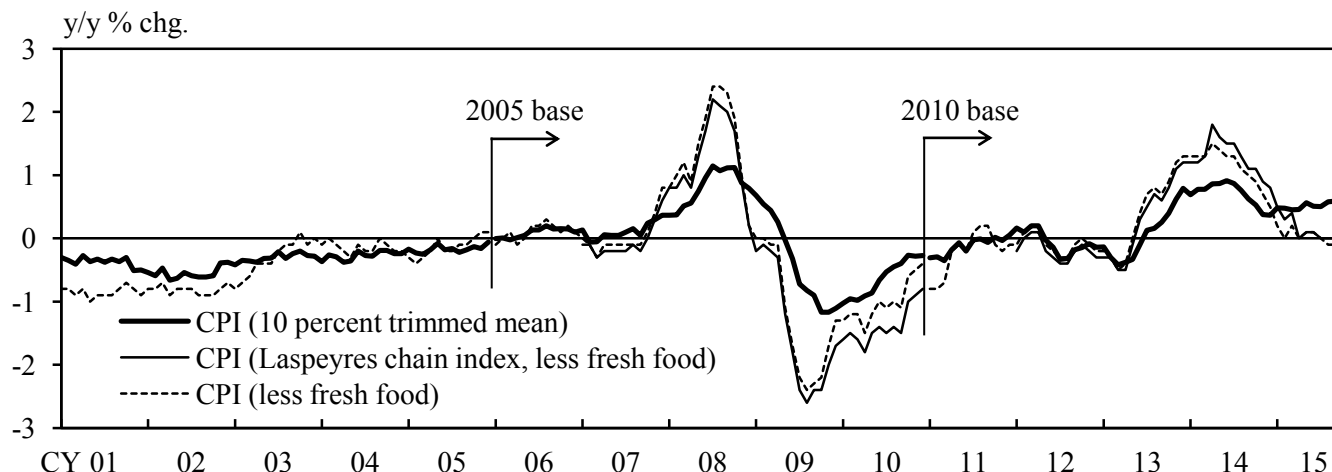


(3) General Services



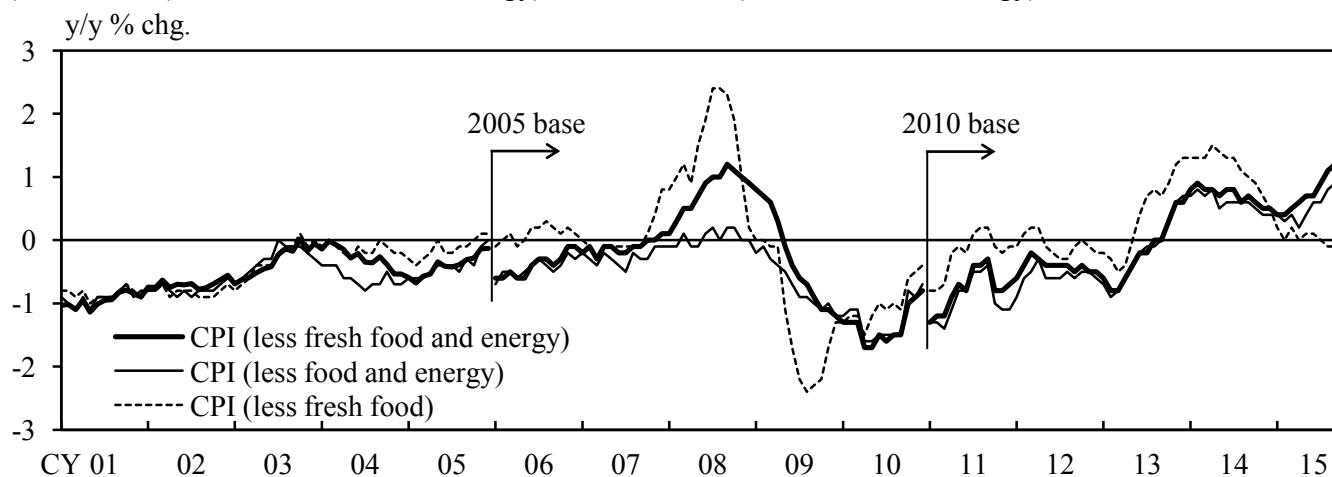
Measures of Underlying Inflation

(1) Trimmed Mean and Laspeyres Chain Index



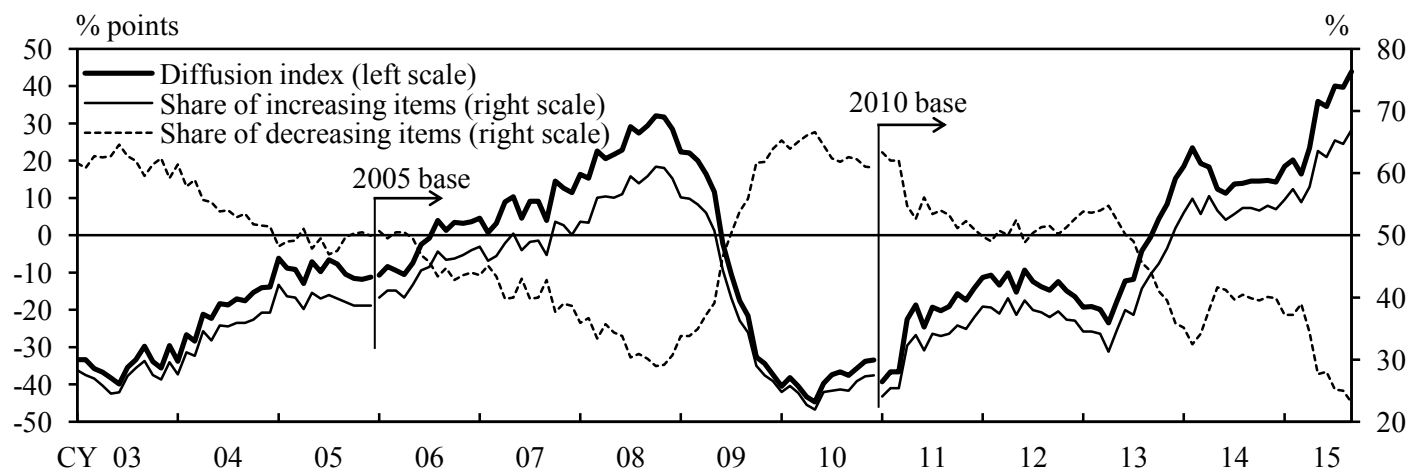
- Notes: 1. Figures for the 10 percent trimmed mean are the weighted averages of the year-on-year price changes in individual items making up the CPI. Items are arranged in ascending order of their year-on-year rate of price change and those falling into the upper and lower 10 percent tails by weight are trimmed.
 2. Figures for the CPI are adjusted to exclude the estimated effect of changes in the consumption tax rate. The same applies to the charts below.

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



Note: Figures for the CPI (less fresh food and energy) are calculated by the Research and Statistics Department, Bank of Japan.

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

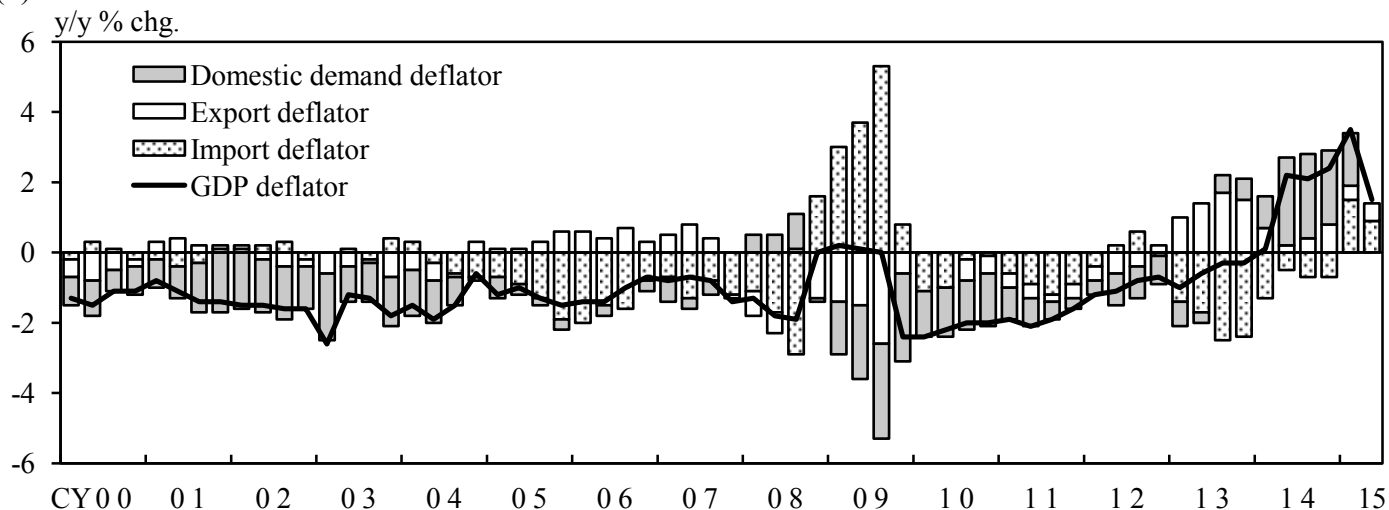


Note: The share of increasing/decreasing items is the share of items in the CPI (less fresh food) whose price indices increased/decreased from a year earlier.

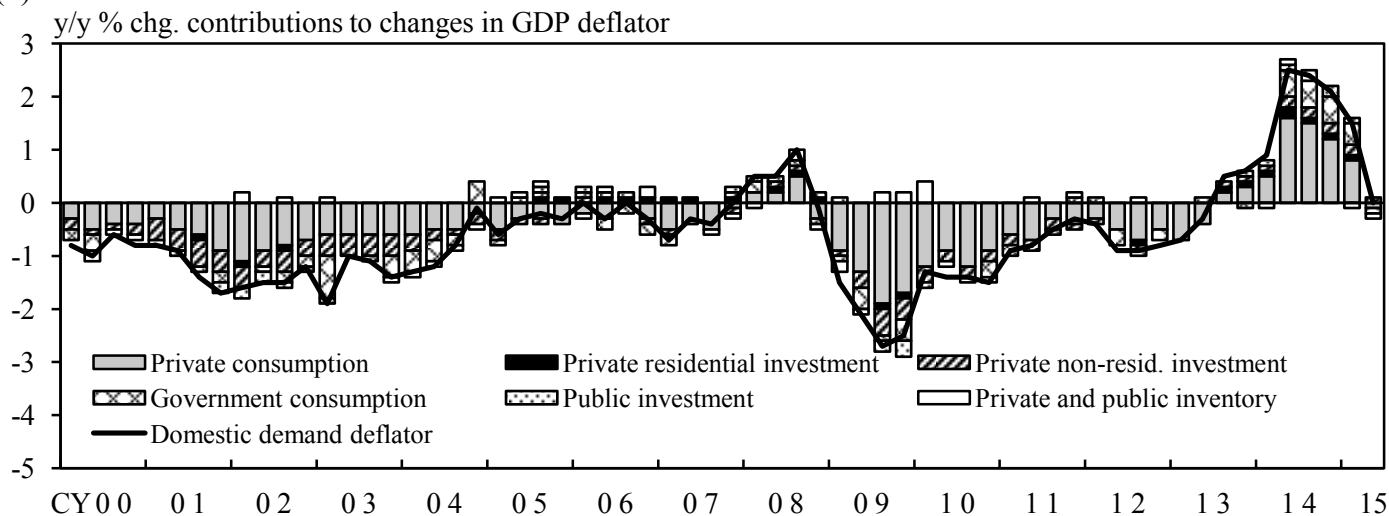
Source: Ministry of Internal Affairs and Communications, "Consumer Price Index."

GDP Deflator

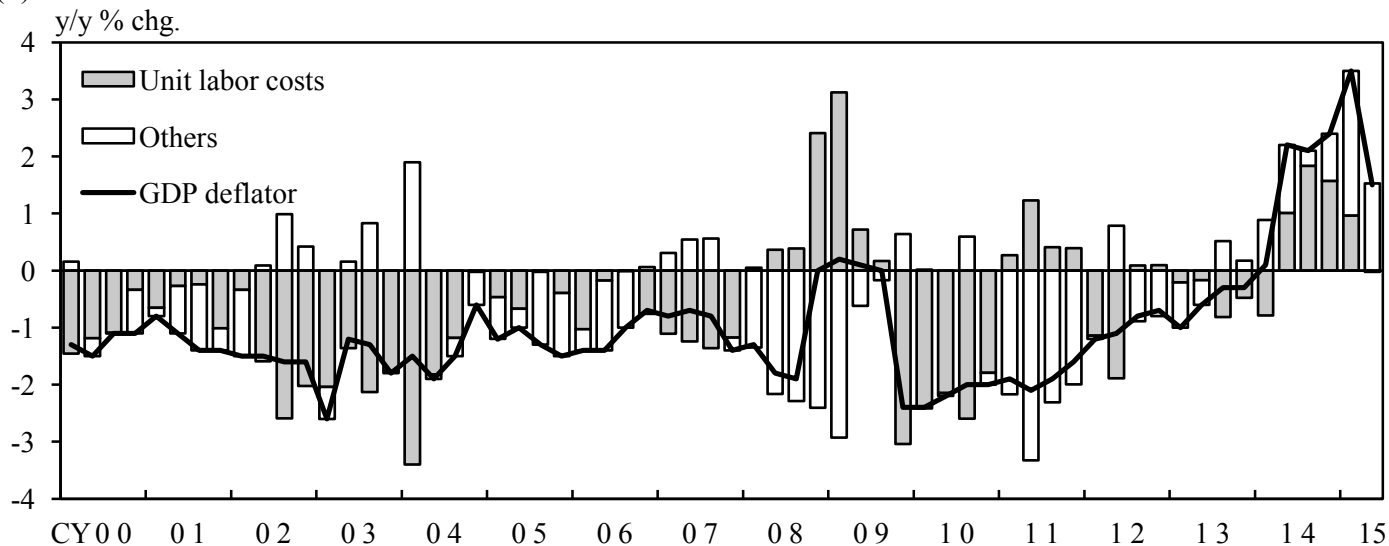
(1) GDP Deflator



(2) Domestic Demand Deflator



(3) GDP Deflator and Unit Labor Costs

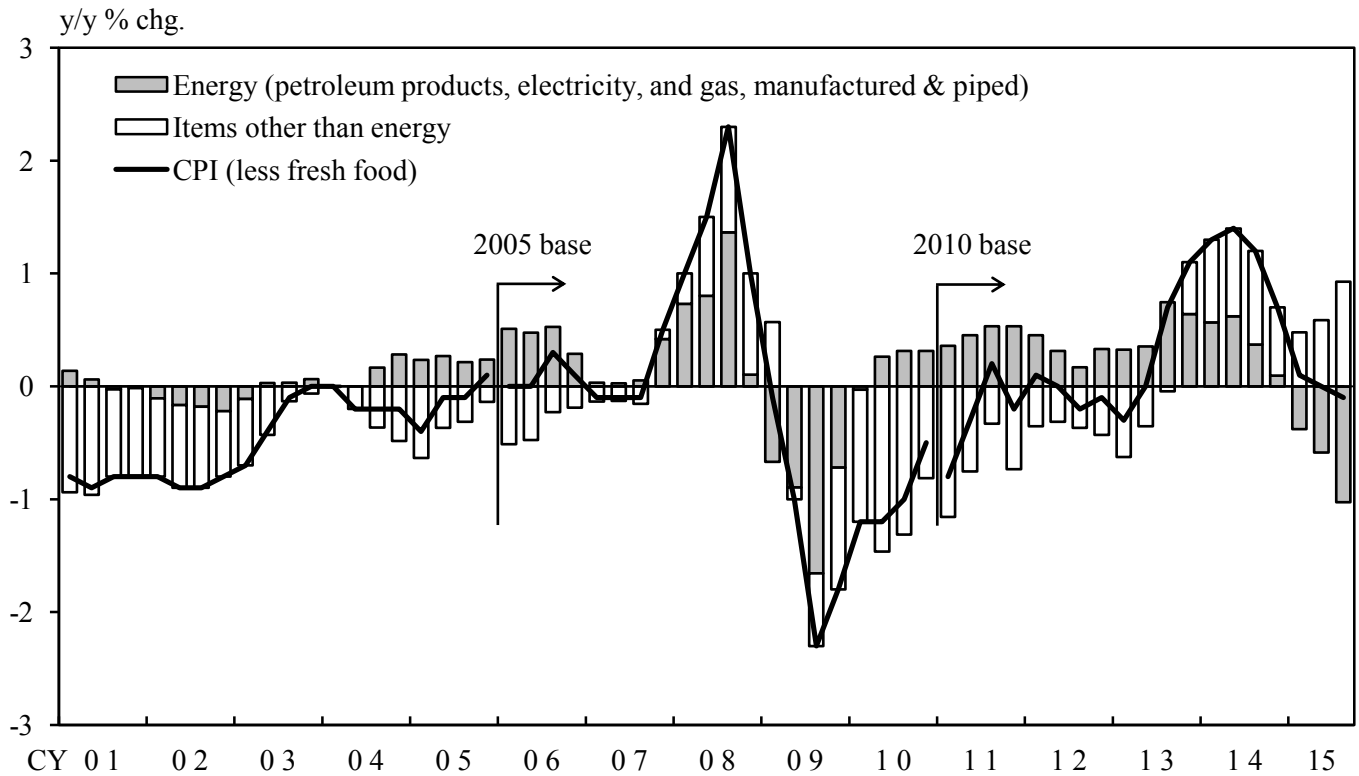


Note: Unit labor costs = nominal compensation of employees (SNA basis) / real GDP

Source: Cabinet Office, "National Accounts."

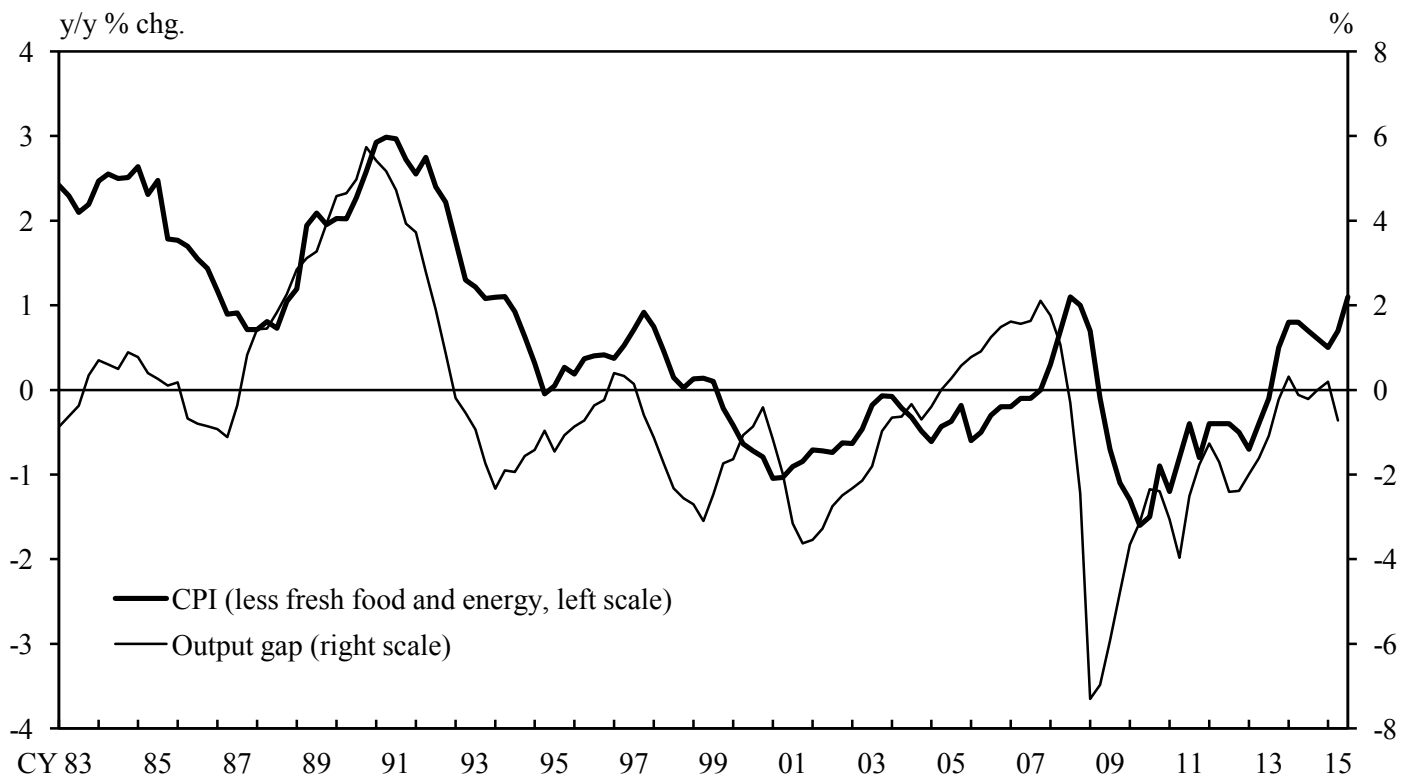
Consumer Price Index and Output Gap

(1) Consumer Price Index



Notes: 1. Figures for energy up to 2005/Q4 are calculated using the year-on-year rate of price change of each component.
 2. Figures for the CPI are adjusted to exclude the estimated effect of changes in the consumption tax rate. The same applies to the chart below.

(2) Consumer Price Index and Output Gap



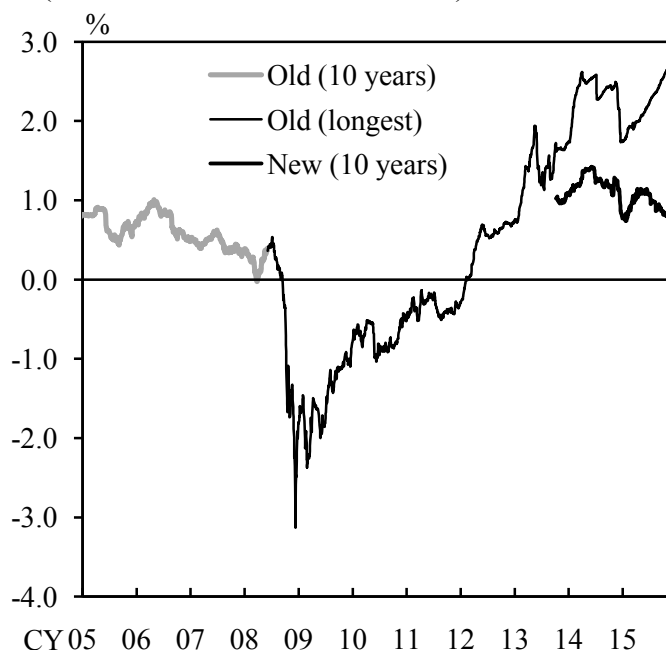
Notes: 1. Figures for the CPI (less fresh food and energy) are calculated by the Research and Statistics Department, Bank of Japan.
 2. The output gap is estimated by the Research and Statistics Department, Bank of Japan.

Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index"; Cabinet Office, "National Accounts," etc.

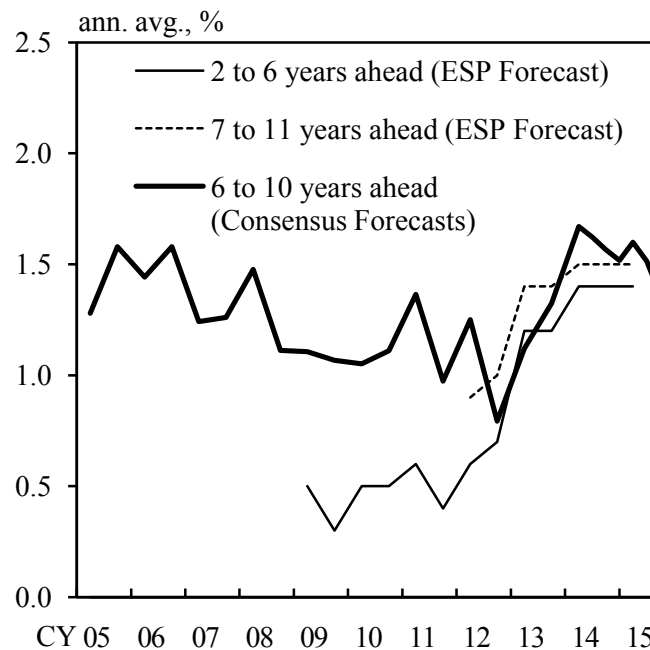
Inflation Expectations (1)

(1) Market Participants

(BEI for Inflation-Indexed JGBs)¹



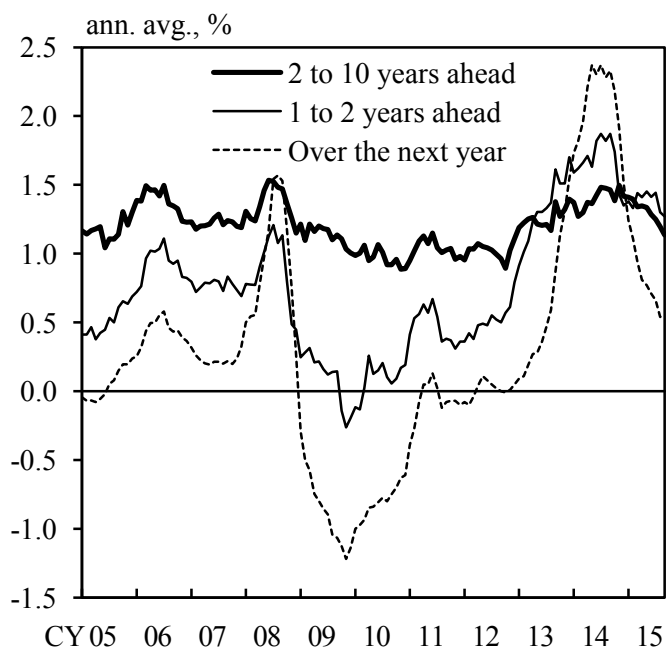
(2) Economists²



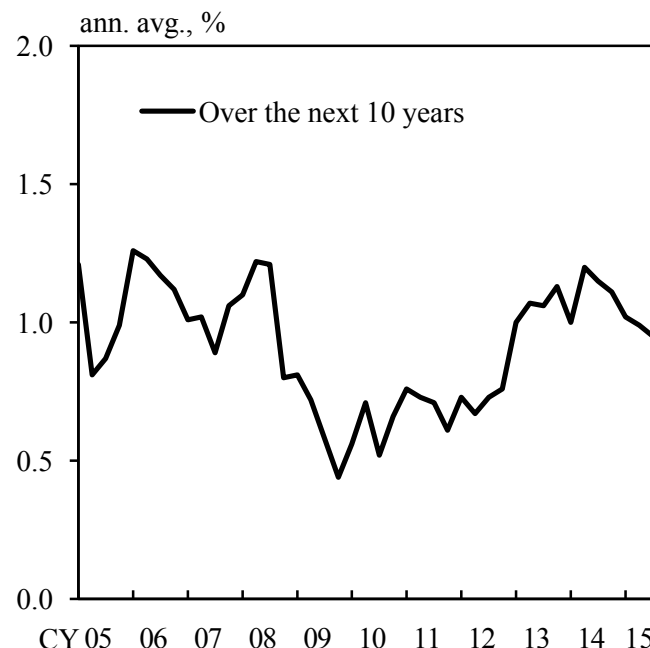
Notes: 1. BEI (break-even inflation) rates are yield spreads between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs. Inflation-indexed JGBs issued since October 2013 are designated as "new," while the rest are designated as "old." Figures for "old (longest)" are calculated using yield data 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



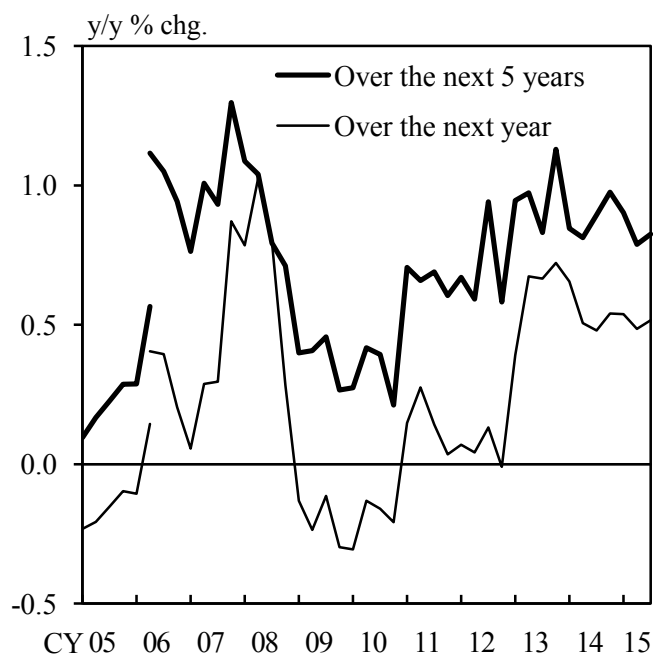
Note: From the September 2013 survey, the QUICK Monthly Market Survey (Bonds) has asked respondents to include the effects of the consumption tax hikes. Figures for the survey by Mizuho Securities exclude the effects of the consumption tax hikes.

Sources: Consensus Economics Inc., "Consensus Forecasts"; JCER, "ESP Forecast"; QUICK, "QUICK Monthly Market Survey (Bonds)"; Mizuho Securities, "Investor Survey"; Bloomberg.

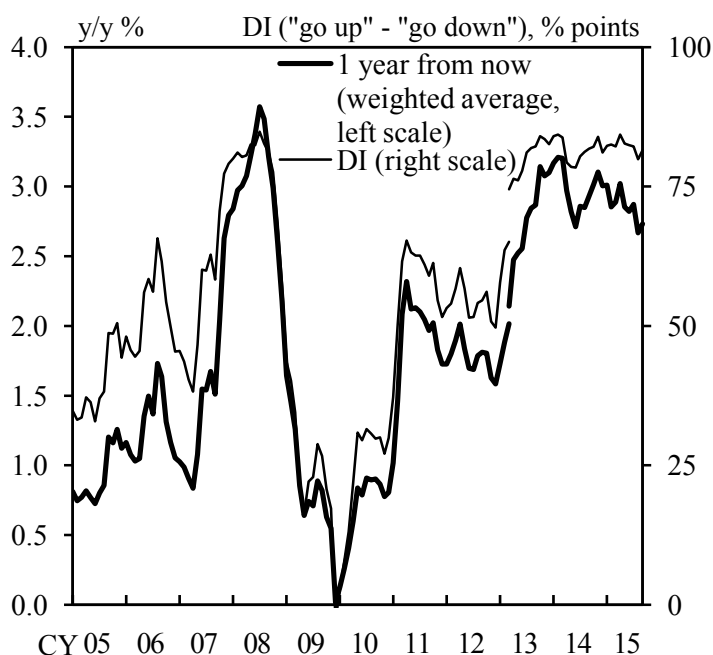
Inflation Expectations (2)

(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. For details, see "On Inflation Expectations," Bank of Japan Review Series, 2008-J-15 (available in Japanese only).

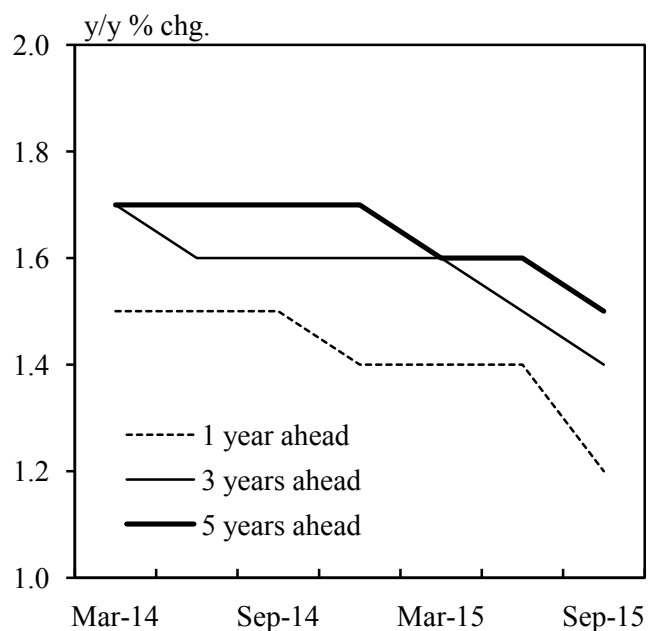
2. From the June 2013 survey, the Opinion Survey has asked respondents to exclude the effects of the consumption tax hikes.

3. Figures are for all households.

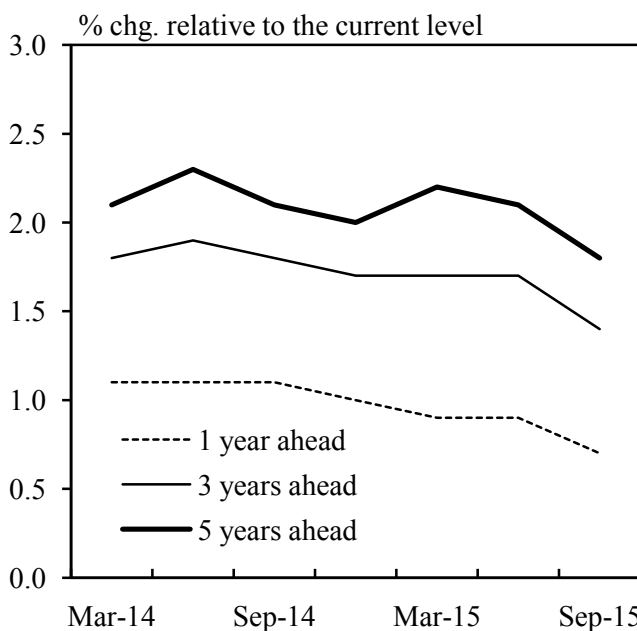
4. The weighted average is calculated based on the following assumption: survey responses chosen by households as their expected inflation rates -- "-5% or below," "from -5% to -2%," "from -2% to 0%," "from 0% to +2%," "from +2% to +5%," and "+5% or above" -- indicate inflation rates of -5%, -3.5%, -1%,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

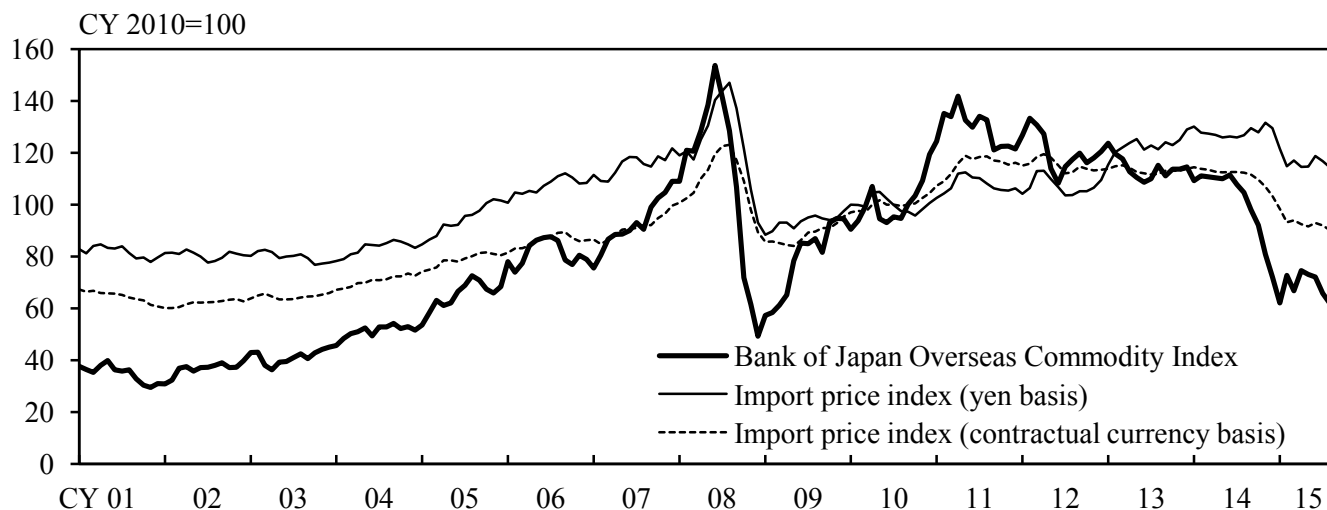
Sources: Bank of Japan, "*Tankan*, Short-Term Economic Survey of Enterprises in Japan,"

"Opinion Survey on the General Public's Views and Behavior"; Cabinet Office, "Consumer Confidence Survey";

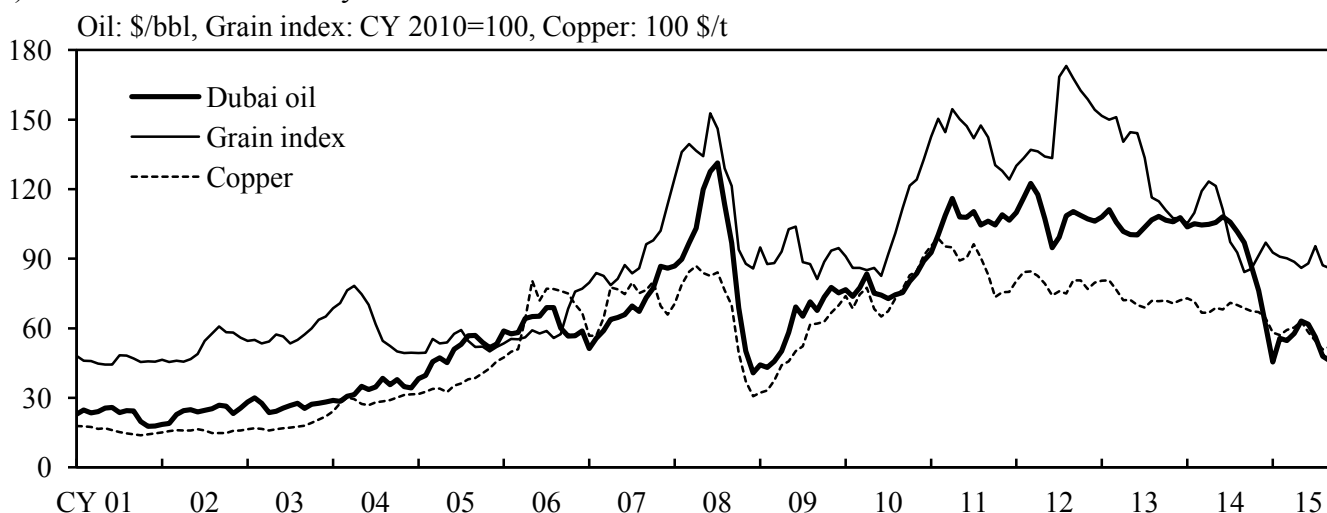
Ministry of Internal Affairs and Communications, "Consumer Price Index."

Import Prices and International Commodity Prices

(1) Import Price Index and Overseas Commodity Index

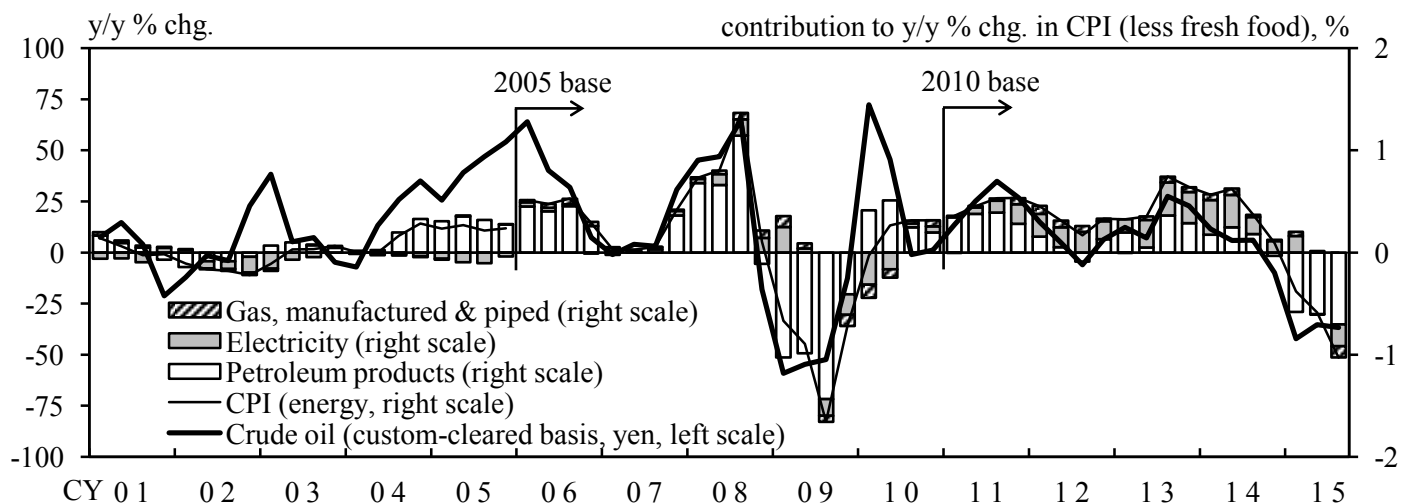


(2) International Commodity Prices



Note: 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."

(3) Crude Oil Prices and Energy Prices



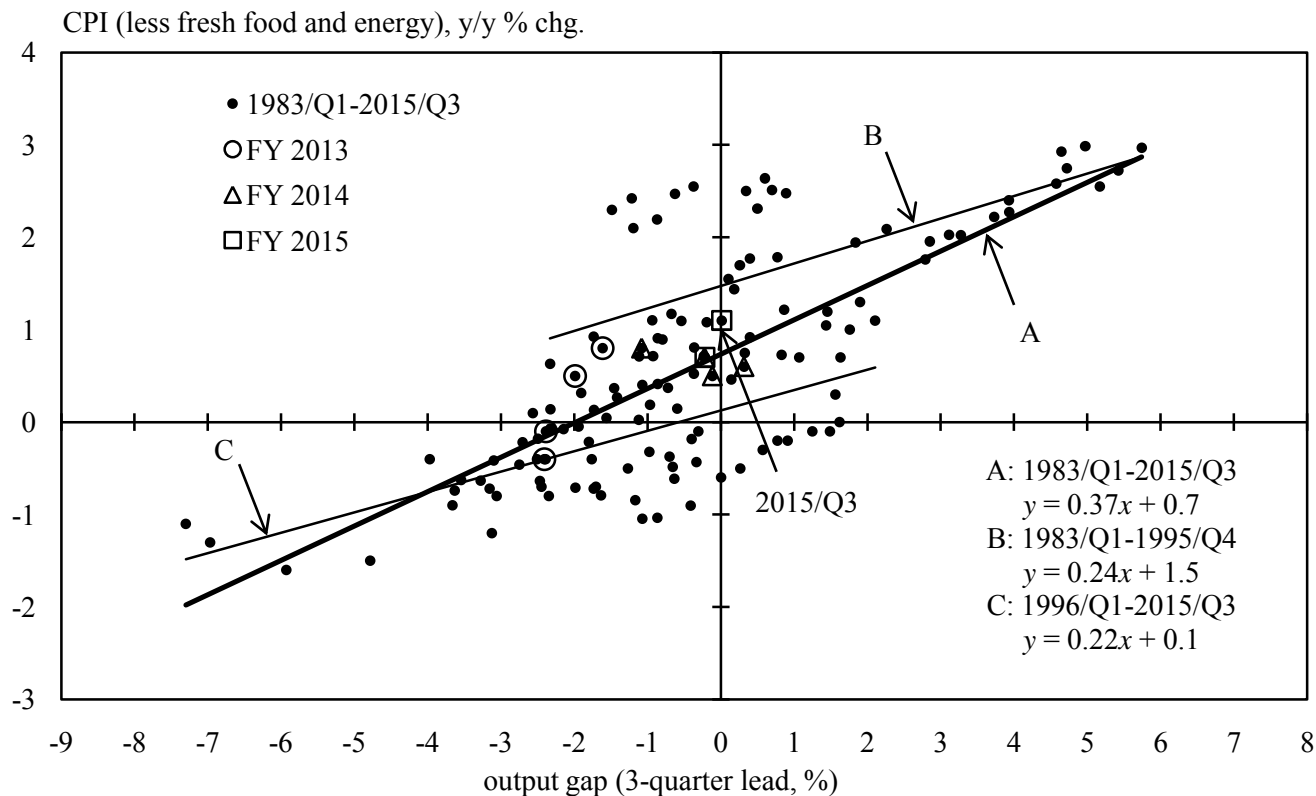
Notes: 1. Figures for the CPI (energy) up to 2005/Q4 are calculated using the year-on-year rate of price change of each component.

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

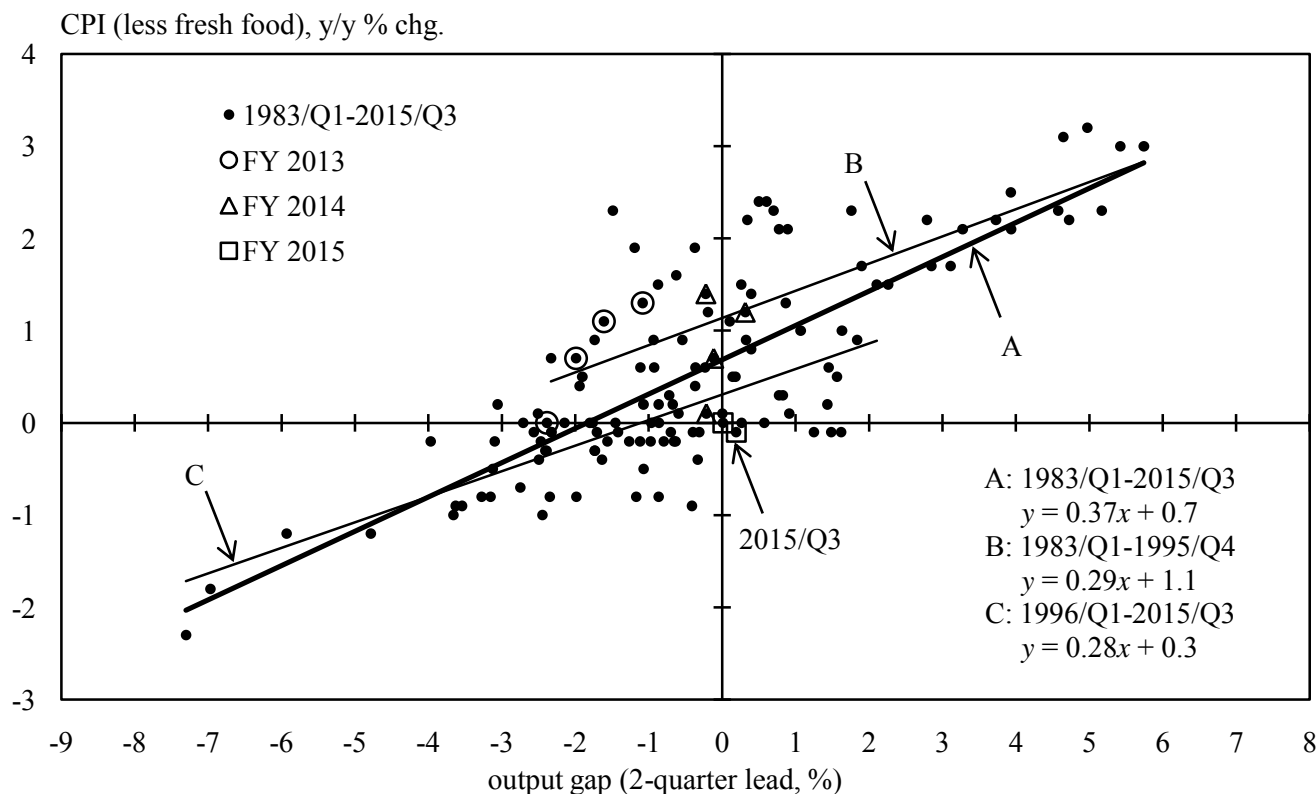
Sources: Bank of Japan, "Bank of Japan Overseas Commodity Index," "Corporate Goods Price Index"; Ministry of Finance, "Trade Statistics"; Ministry of Internal Affairs and Communications, "Consumer Price Index," etc.

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)

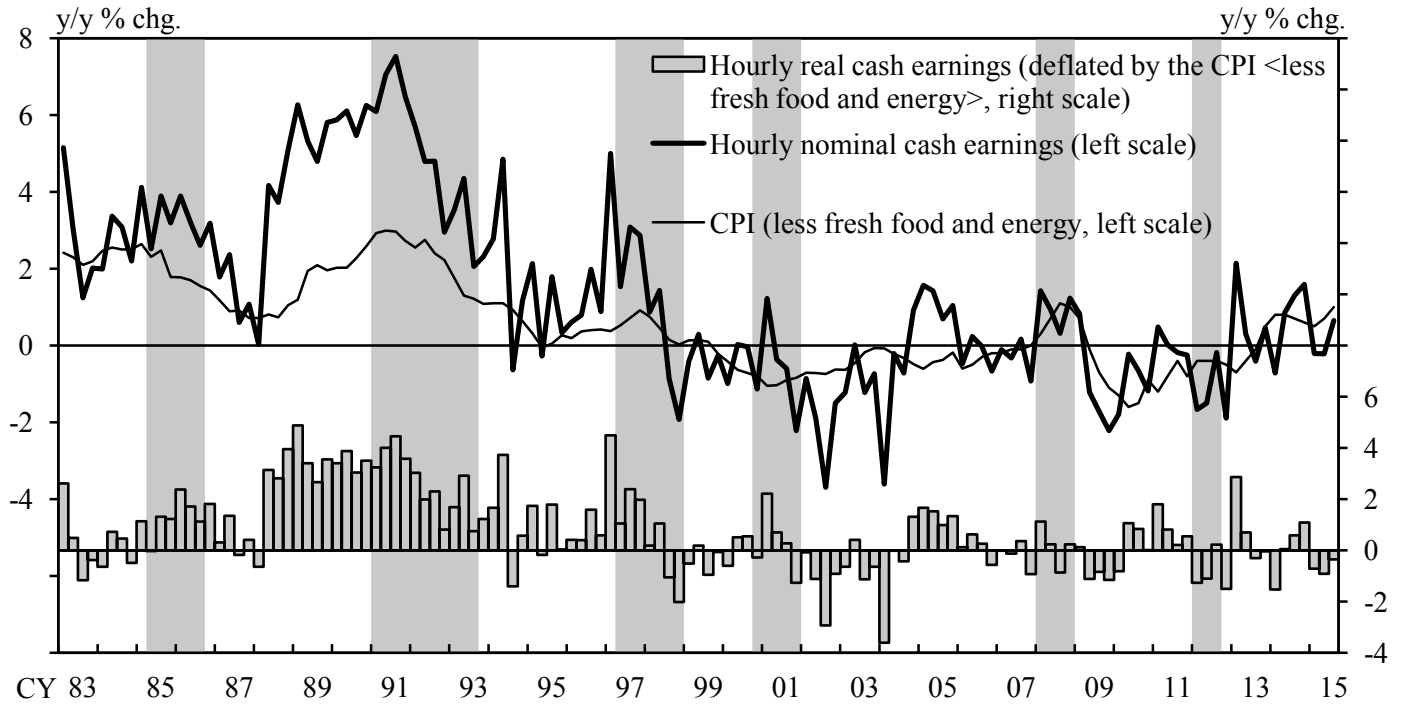


- Notes: 1. Figures for the CPI (less fresh food and energy) are calculated by the Research and Statistics Department, Bank of Japan.
 2. The output gap is estimated by the Research and Statistics Department, Bank of Japan.
 3. The number of lags is chosen so that the cross-correlation between the output gap and the CPI is maximized.
 4. Figures for the CPI are adjusted to exclude the estimated effect of changes in the consumption tax rate.

Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index"; Cabinet Office, "National Accounts," etc.

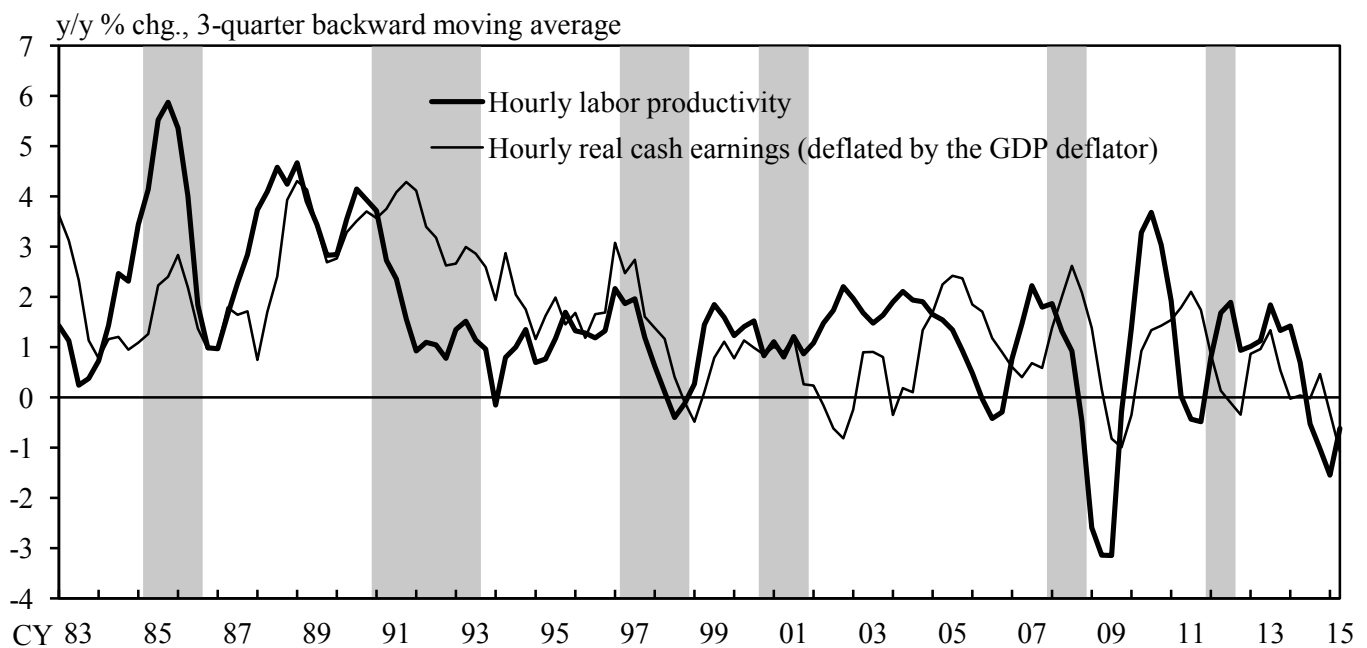
Prices and Wages

(1) CPI and Nominal Cash Earnings



- 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 (less fresh food and energy) are calculated by the Research and Statistics Department, Bank of Japan. Those are adjusted to exclude the estimated effect of changes in the consumption tax rate.
 3. Shaded areas indicate recession periods. The same applies to the chart below.
 4. Figures for 2015/Q3 are July-August averages.

(2) Real Cash Earnings and Labor Productivity

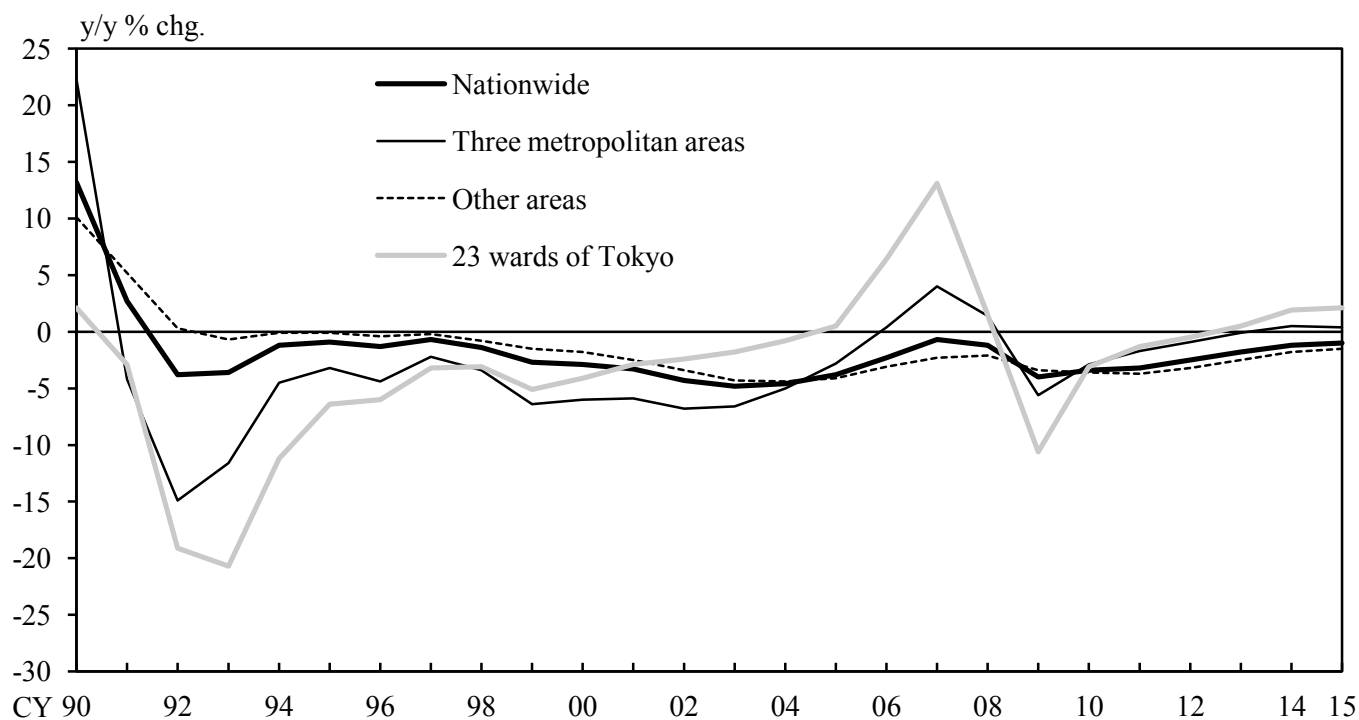


- Notes: 1. Hourly labor productivity = real GDP / (number of employees <Labour Force Survey> × total hours worked <Monthly Labour Survey>)
 2. Figures for the GDP deflator are adjusted to exclude the effect of the change in the consumption tax rate in 2014. This adjustment is based on the estimation by the Cabinet Office in July 2015.

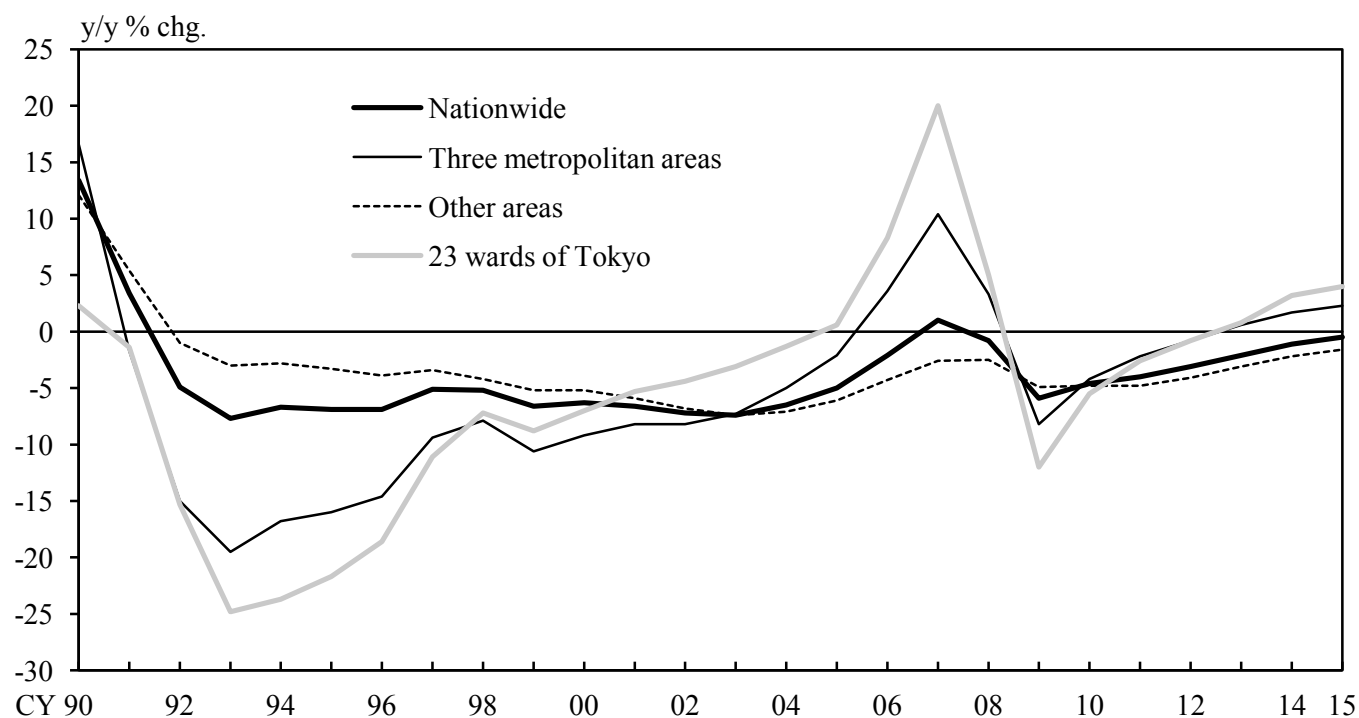
Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index," "Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey"; Cabinet Office, "National Accounts."

Land Prices

(1) Residential Land



(2) Commercial Land



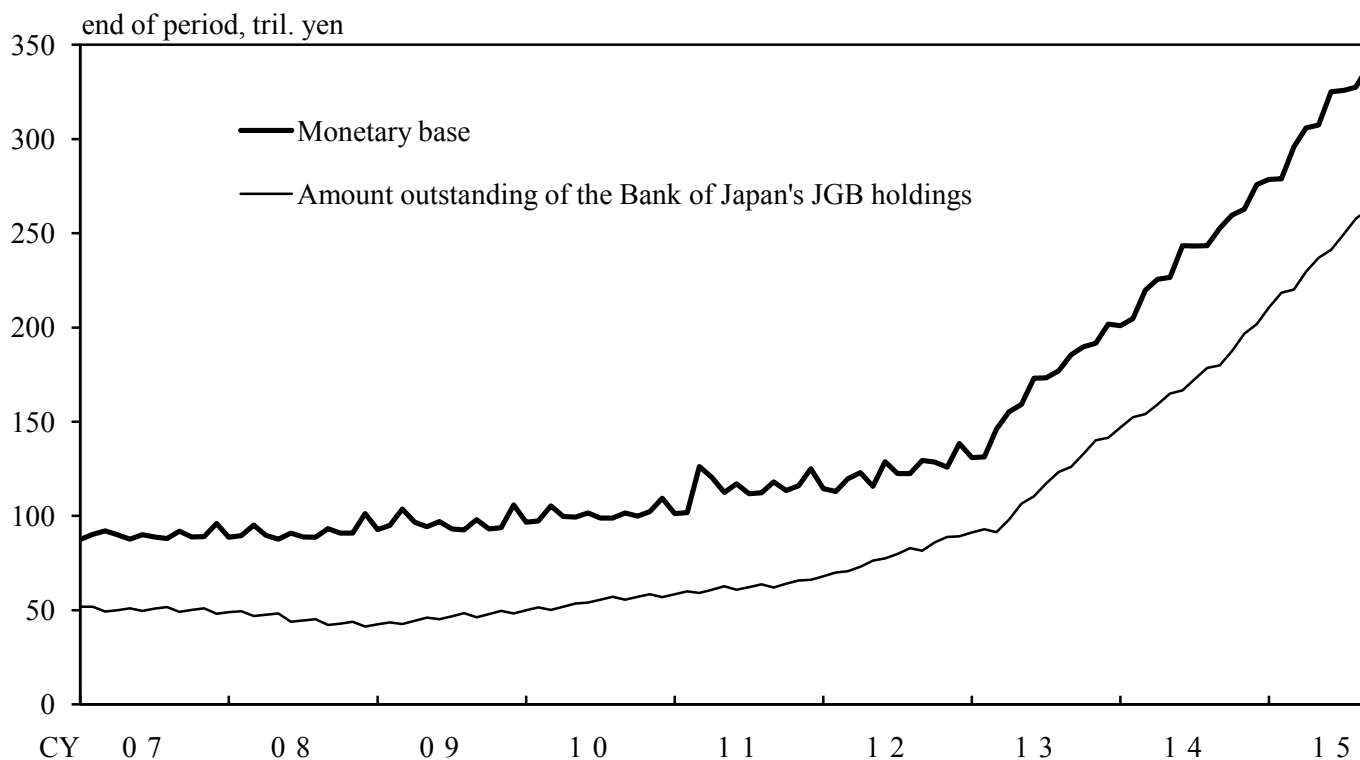
Notes: 1. Figures are as of July 1.

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

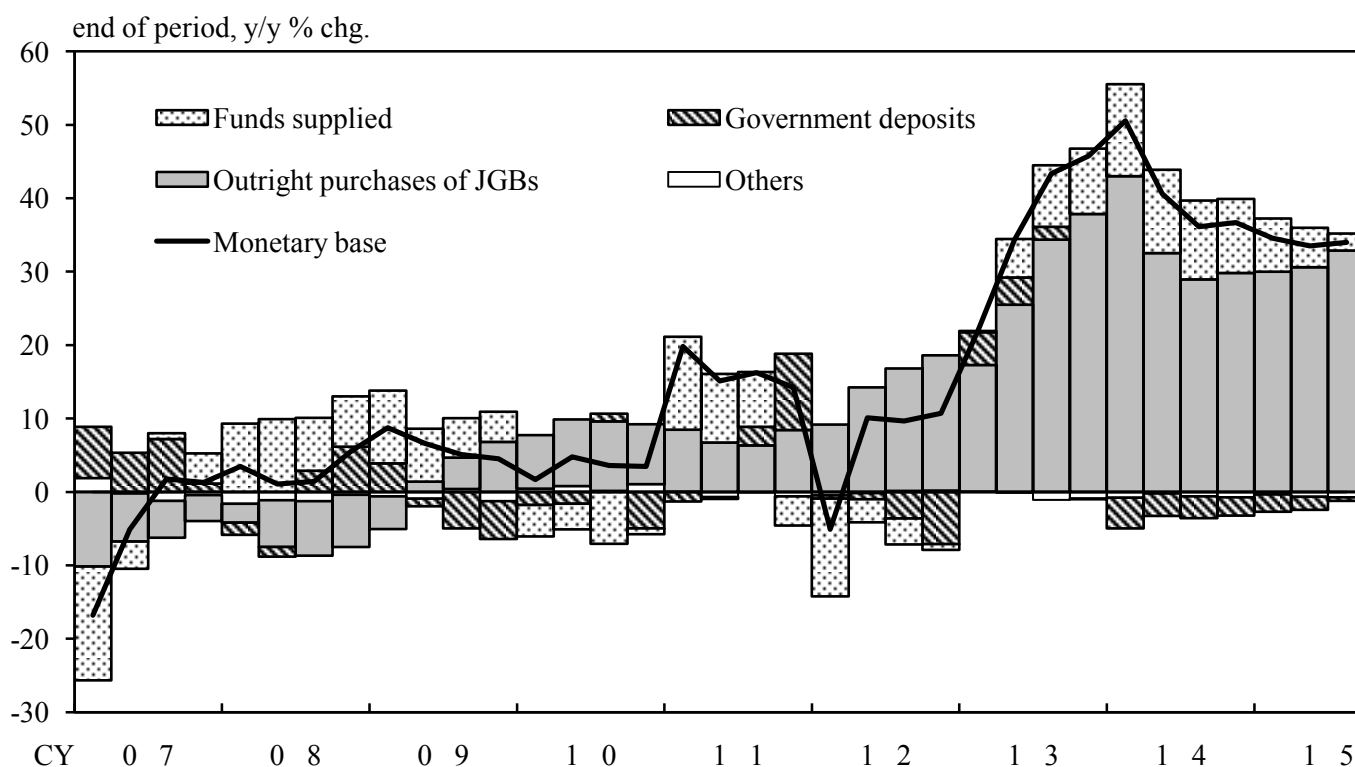
Source: Ministry of Land, Infrastructure, Transport and Tourism, "Land Price Research by Prefectural Governments."

Monetary Base and JGB Purchases

(1) Expansion in the Monetary Base and JGB Holdings



(2) Year-on-Year Percentage Change in the Monetary Base



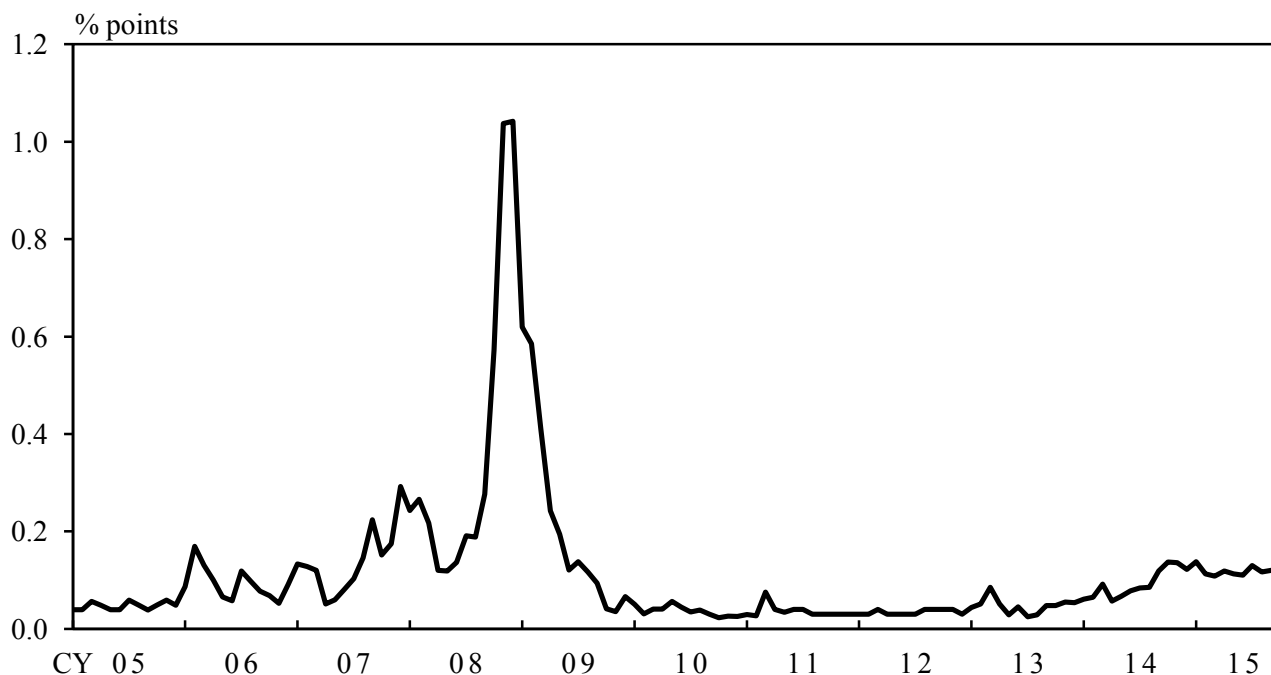
Notes: 1. Funds supplied are calculated by adding the amounts outstanding of (1) assets purchased through market operations (excluding outright purchases of JGBs), (2) funds-supplying operations against pooled collateral, and (3) the Loan Support Program, etc.

2. Government deposits mainly include sales of JGBs to the government under repurchase agreements and T-Bills underwritten by the Bank of Japan.

Source: Bank of Japan, "Monetary Base and the Bank of Japan's Transactions," "Bank of Japan Accounts."

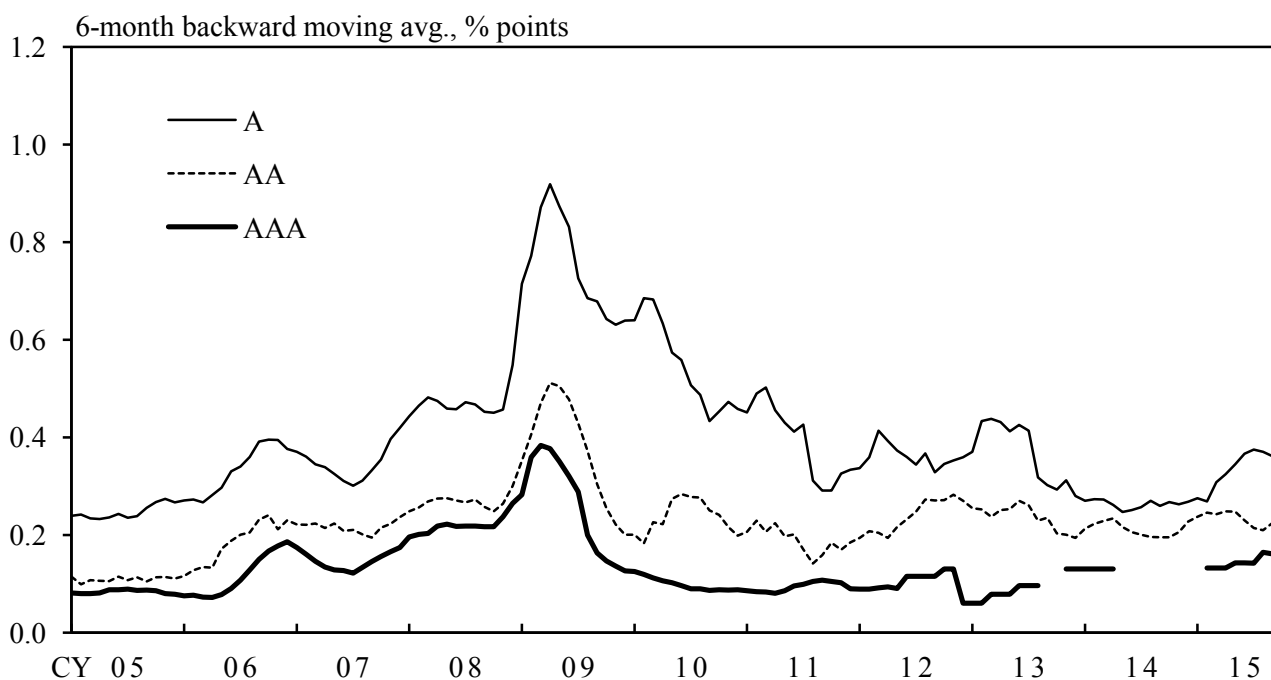
Spreads for CP and Corporate Bonds

(1) Issuance Spreads for CP



Note: Figures up to September 2009 are the average issuance rate of CP (3-month, rated a-1 or higher) minus the yield on T-Bills (3-month). Figures from October 2009 are the average issuance rate of CP (3-month, rated a-1) minus the yield on T-Bills (3-month).

(2) Issuance Spreads for Corporate Bonds by Securities Rating

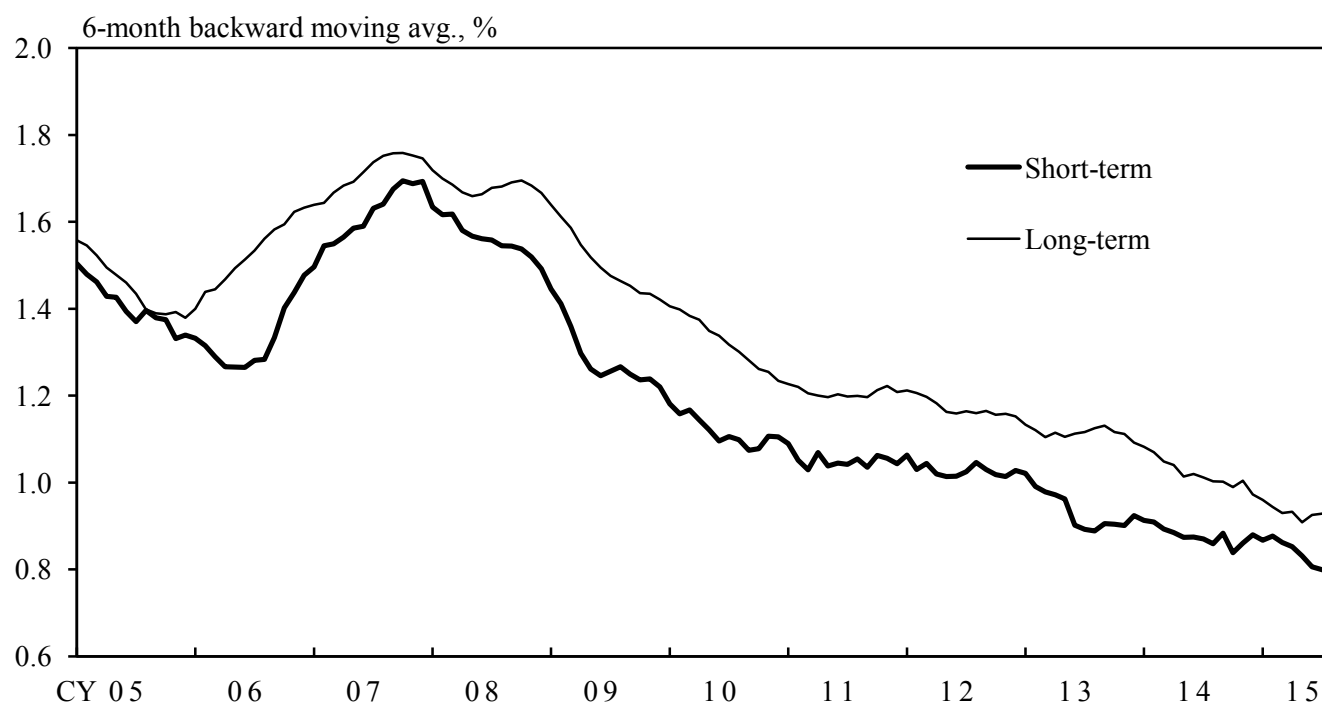


- Notes: 1. The issuance spreads for corporate bonds are the issuance rate of these bonds minus the government bond yield.
 2. Figures are the average of all maturities issued in domestic markets, based on the launch date.
 3. Bonds issued by banks and securities companies, etc., are excluded.
 4. Bonds 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.

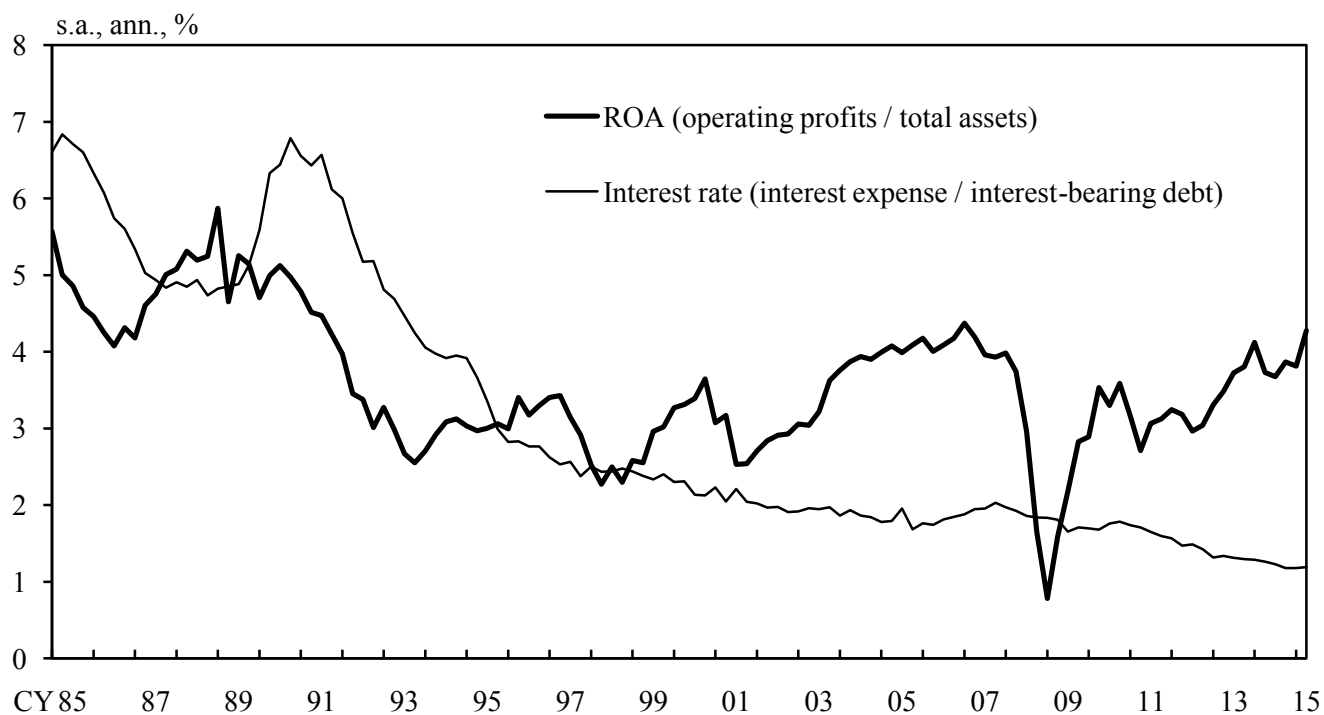
Sources: Bank of Japan, "Average Yields on Newly Issued Domestic Commercial Paper"; Japan Securities Depository Center; Capital Eye, Ltd.; I-N Information Systems; Bloomberg.

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.

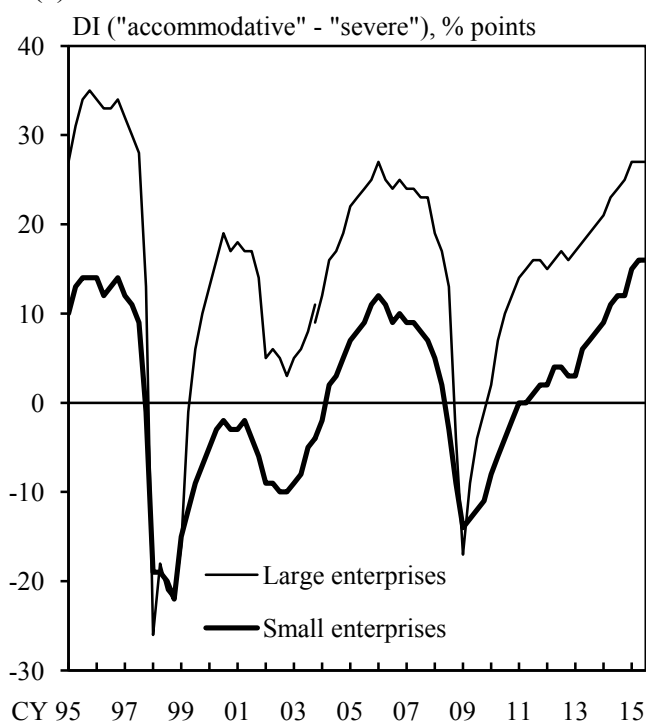
2. Interest-bearing debt is the sum of long- and short-term borrowings, corporate bonds, and bills receivable discounted outstanding.

Sources: Bank of Japan, "Average Contract Interest Rates on Loans and Discounts";
Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

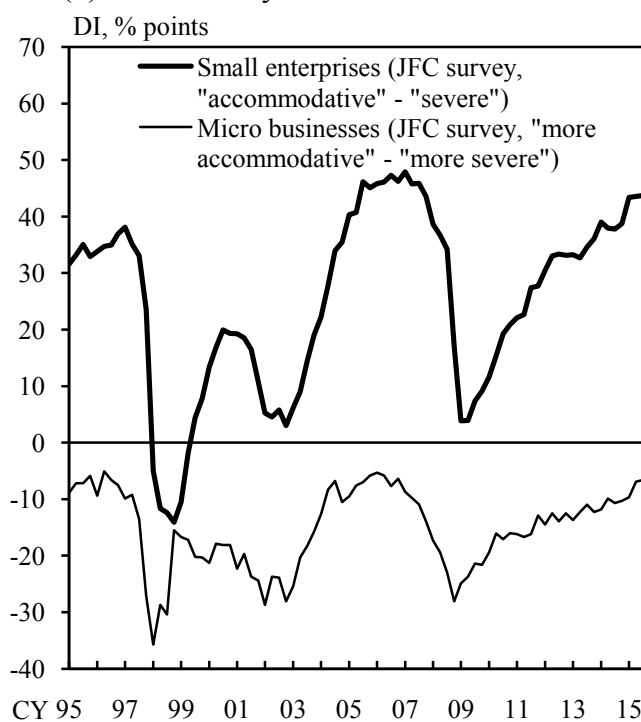
Corporate Finance-Related Indicators

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

(a) *Tankan*

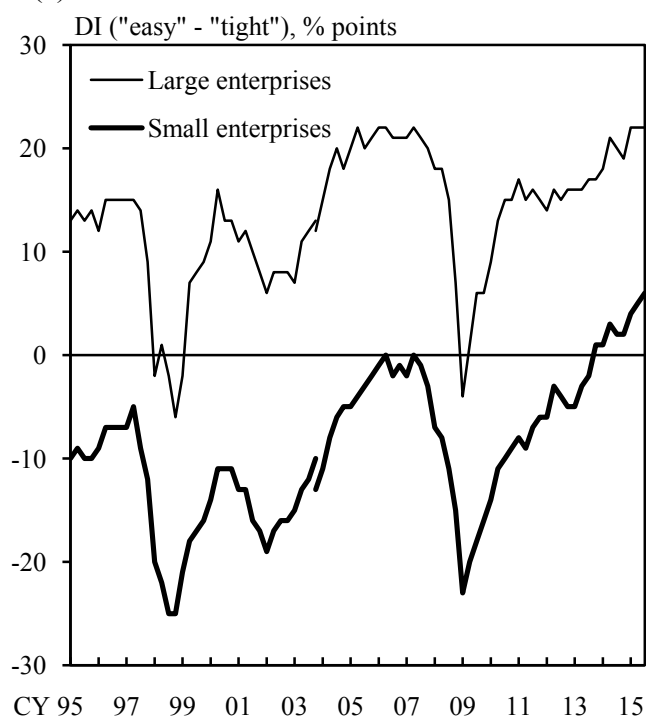


(b) Other Surveys

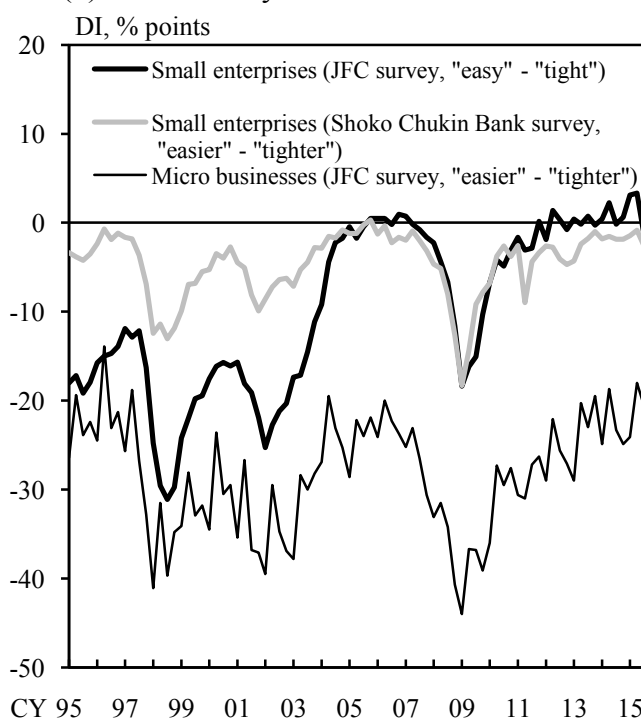


(2) Financial Position

(a) *Tankan*



(b) Other Surveys



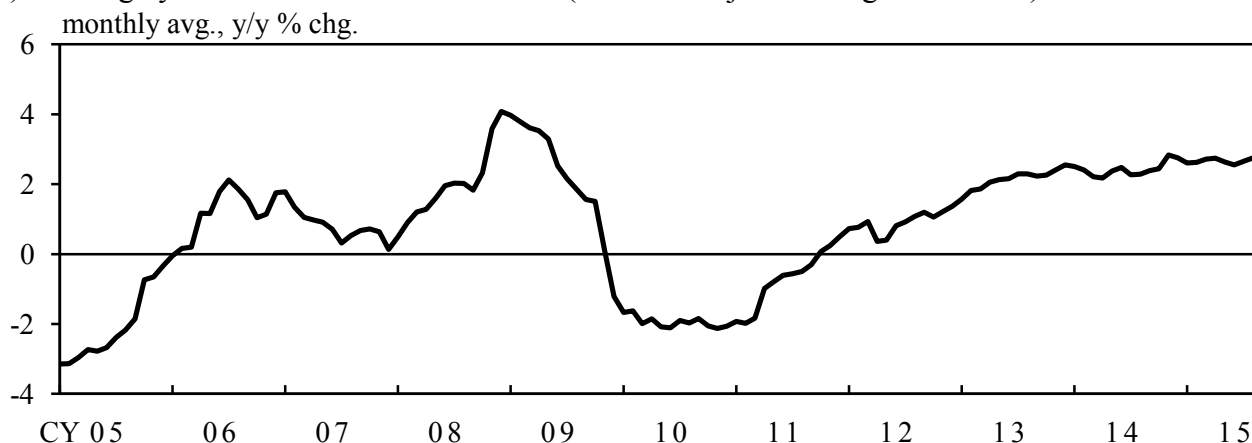
Notes: 1. Data from the "Tankan" are based on all industries. There is a discontinuity in the data for the December 2003 survey due to a change in the survey framework.

2. Figures for 2015/Q4 are those of October.

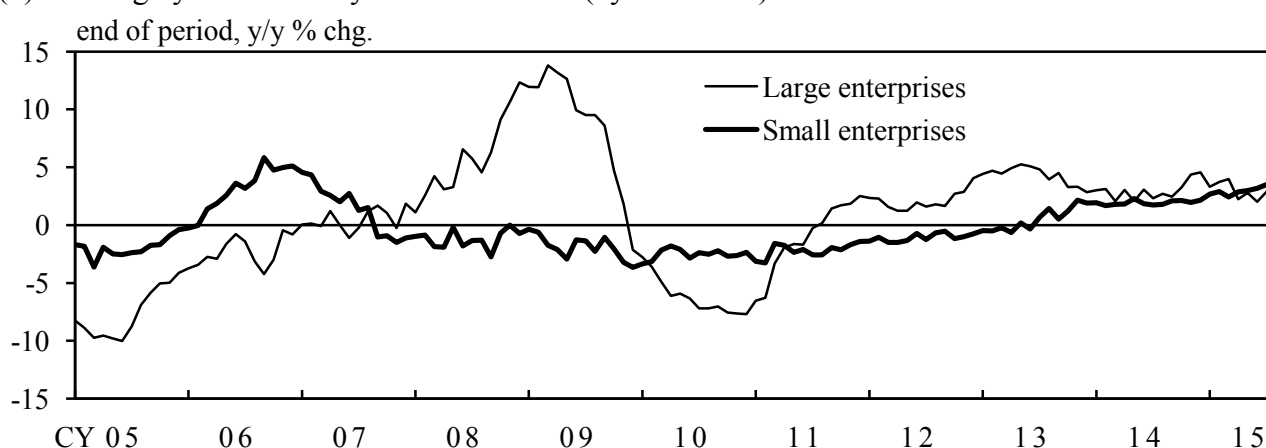
Sources: Bank of Japan, "*Tankan*, Short-Term Economic Survey of Enterprises in Japan"; Shoko Chukin Bank, Ltd., "Business Survey Index for Small and Medium-Sized Businesses"; Japan Finance Corporation (JFC), "Monthly Survey of Small Businesses in Japan," "Quarterly Survey of Small Businesses in Japan (For Micro Businesses)."

Amount Outstanding of Bank Lending, CP, and Corporate Bonds

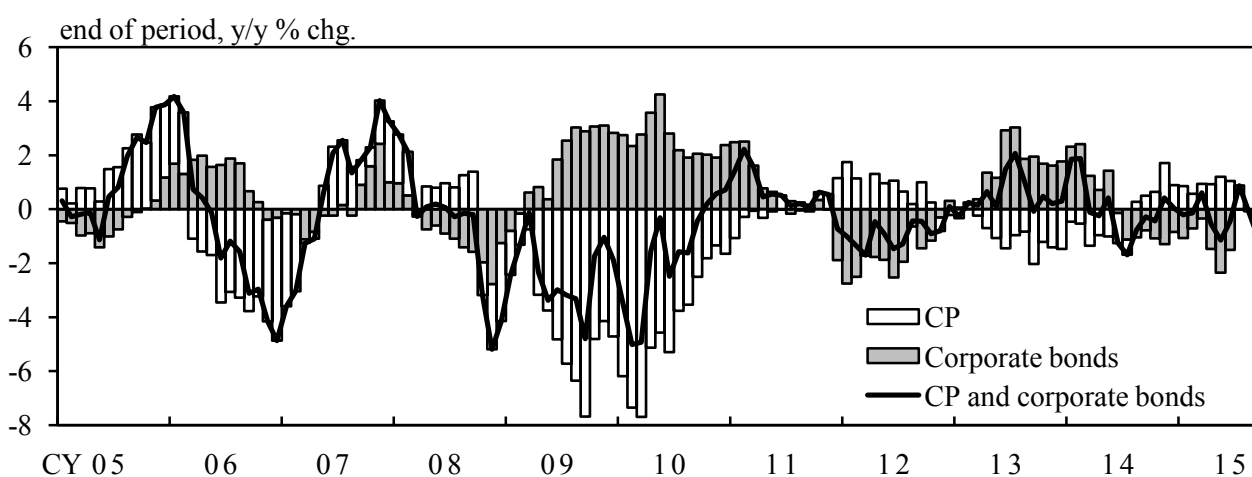
(1) Lending by Domestic Commercial Banks (Total of Major and Regional Banks)



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



(3) Amount Outstanding of CP and Corporate Bonds



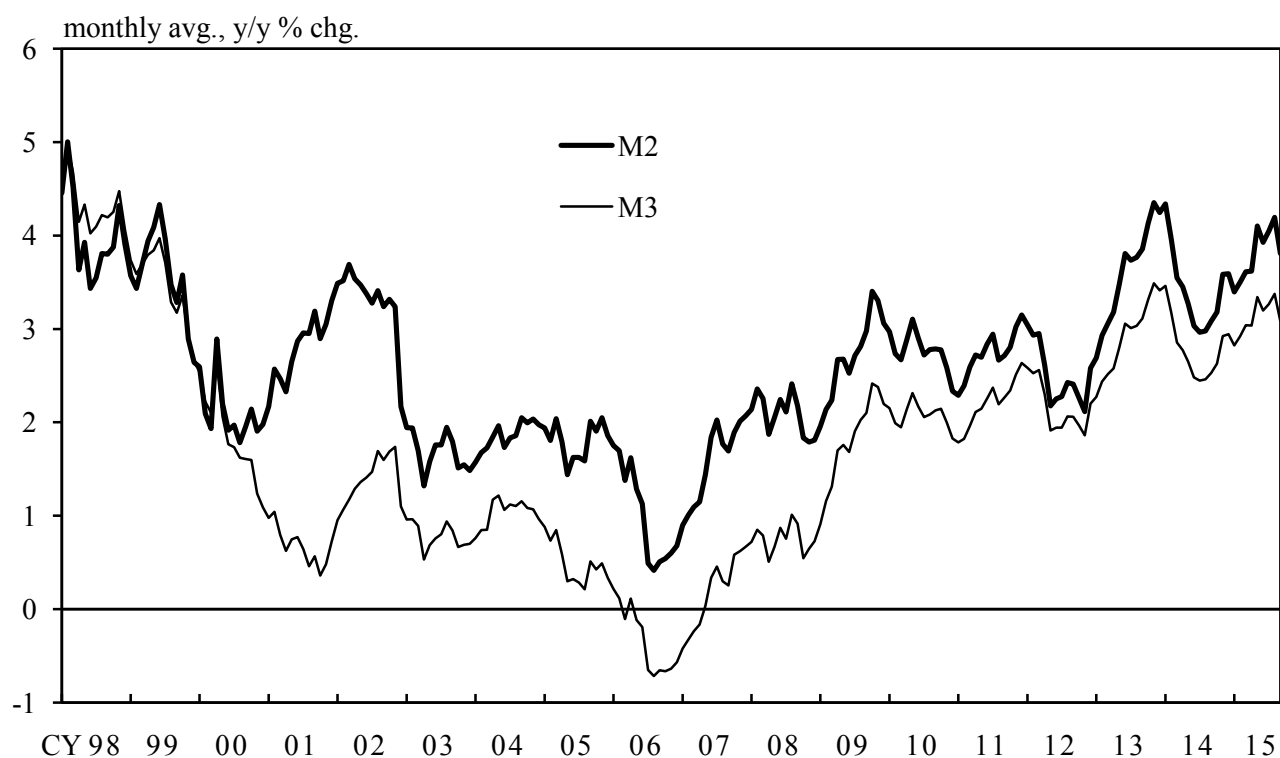
Notes: 1. Figures for CP are those of short-term corporate bonds registered under the book-entry transfer system. Those issued by banks, securities companies, and others such as foreign corporations are excluded; ABCP is included. Figures up to March 2008 are those compiled by the Bank of Japan.

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.

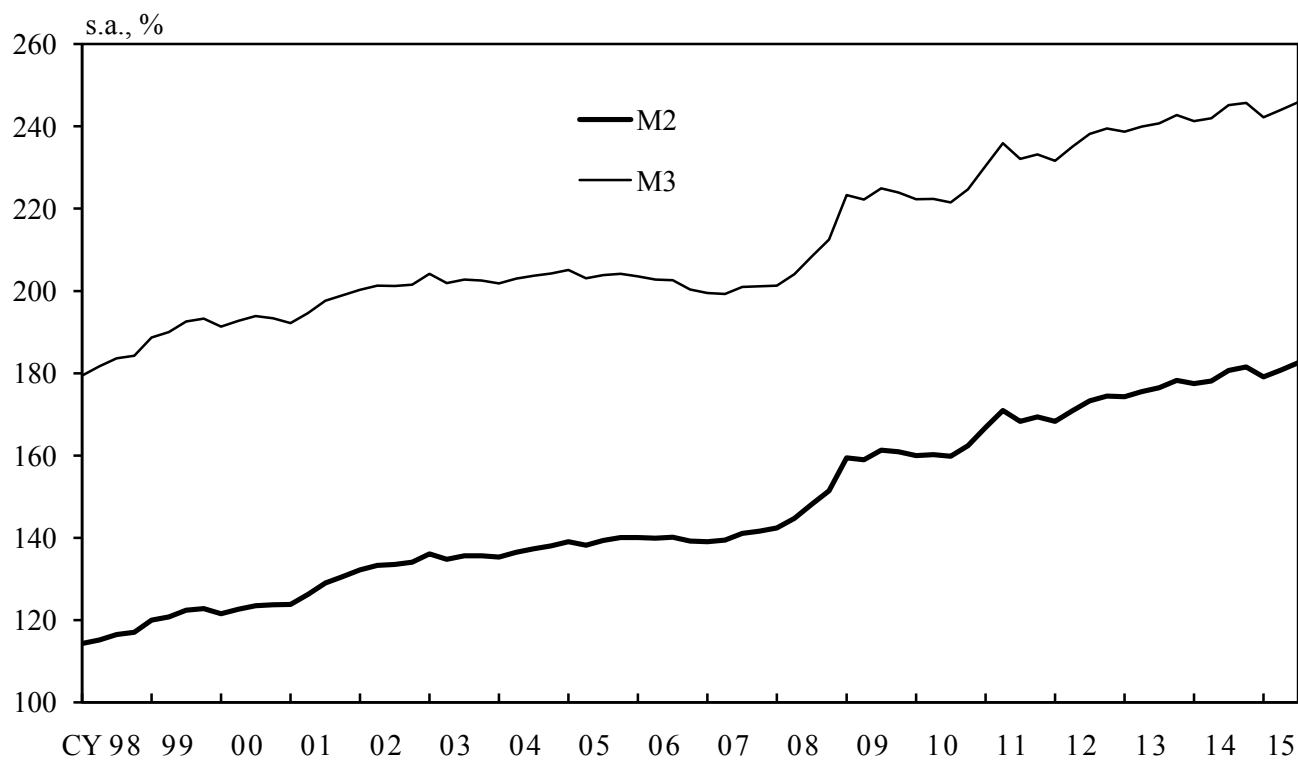
Sources: Bank of Japan, "Principal Figures of Financial Institutions," "Deposits, Vault Cash, and Loans and Bills Discounted"; Japan Securities Depository Center; Japan Securities Dealers Association; I-N Information Systems.

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.

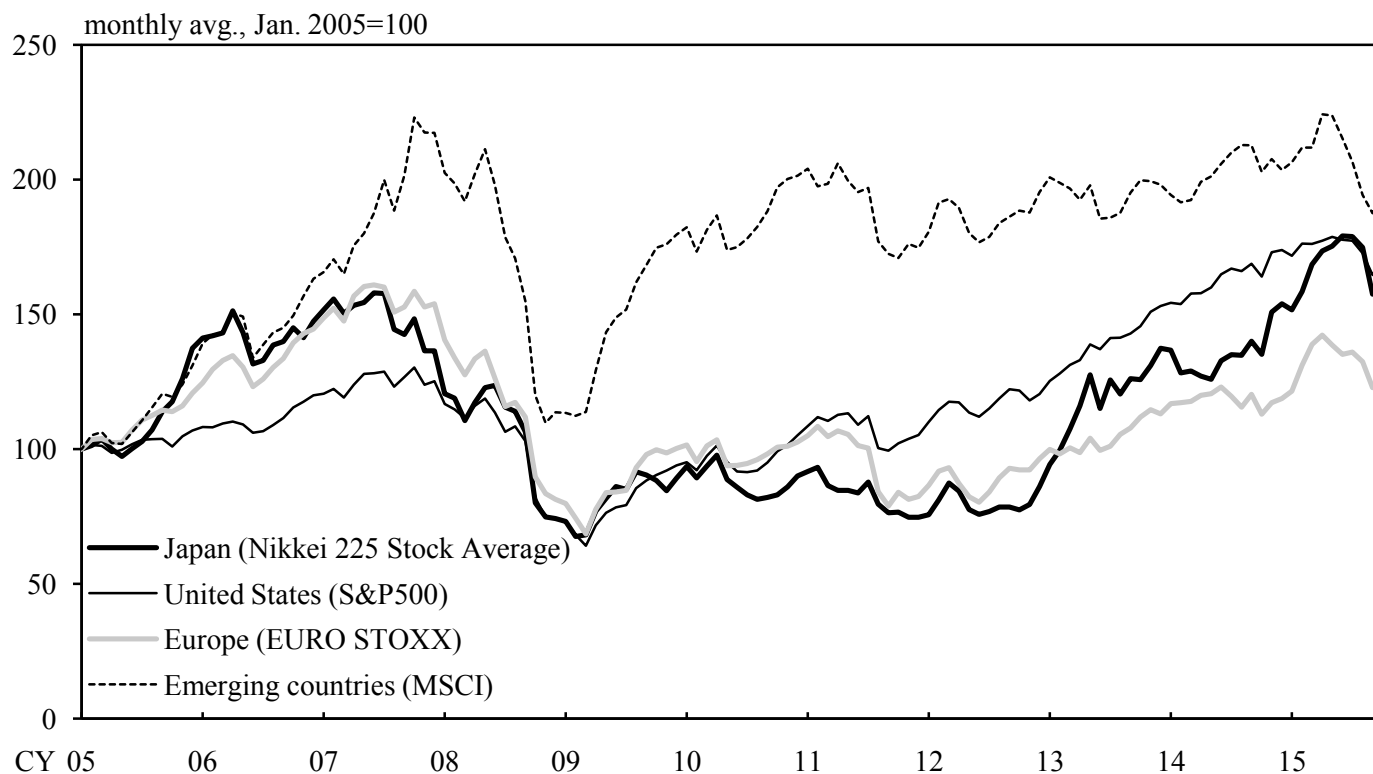
2. Figures for M3 up to March 2003 are the former series of the figures for M3+CDs minus the figures for pecuniary trusts.

3. The figure for nominal GDP in 2015/Q3 is assumed to be unchanged from the previous quarter.

Sources: Bank of Japan, "Money Stock"; Cabinet Office, "National Accounts."

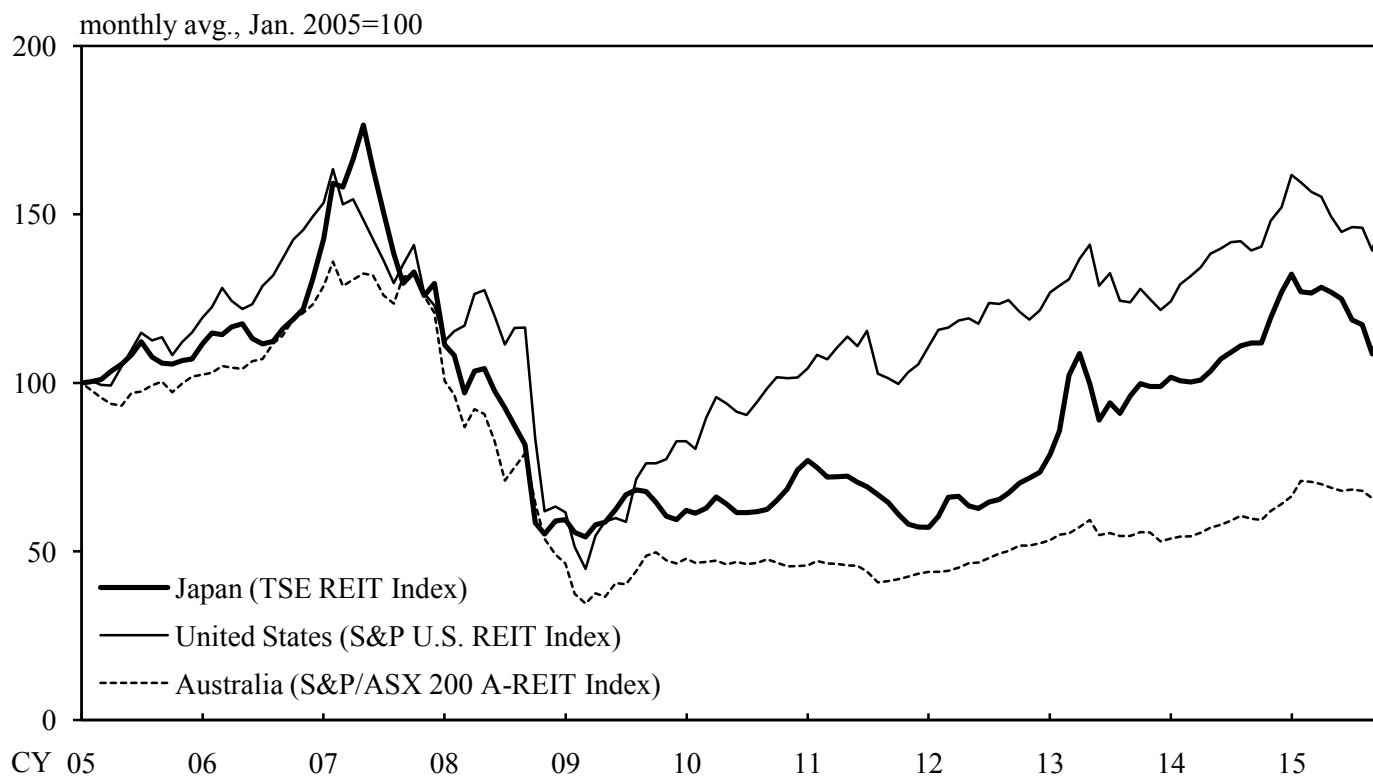
Stock Prices and REIT Prices

(1) Selected Stock Prices



Note: Figures for emerging countries are from the MSCI Emerging Markets Index denominated in the local currencies.

(2) Selected REIT Indexes



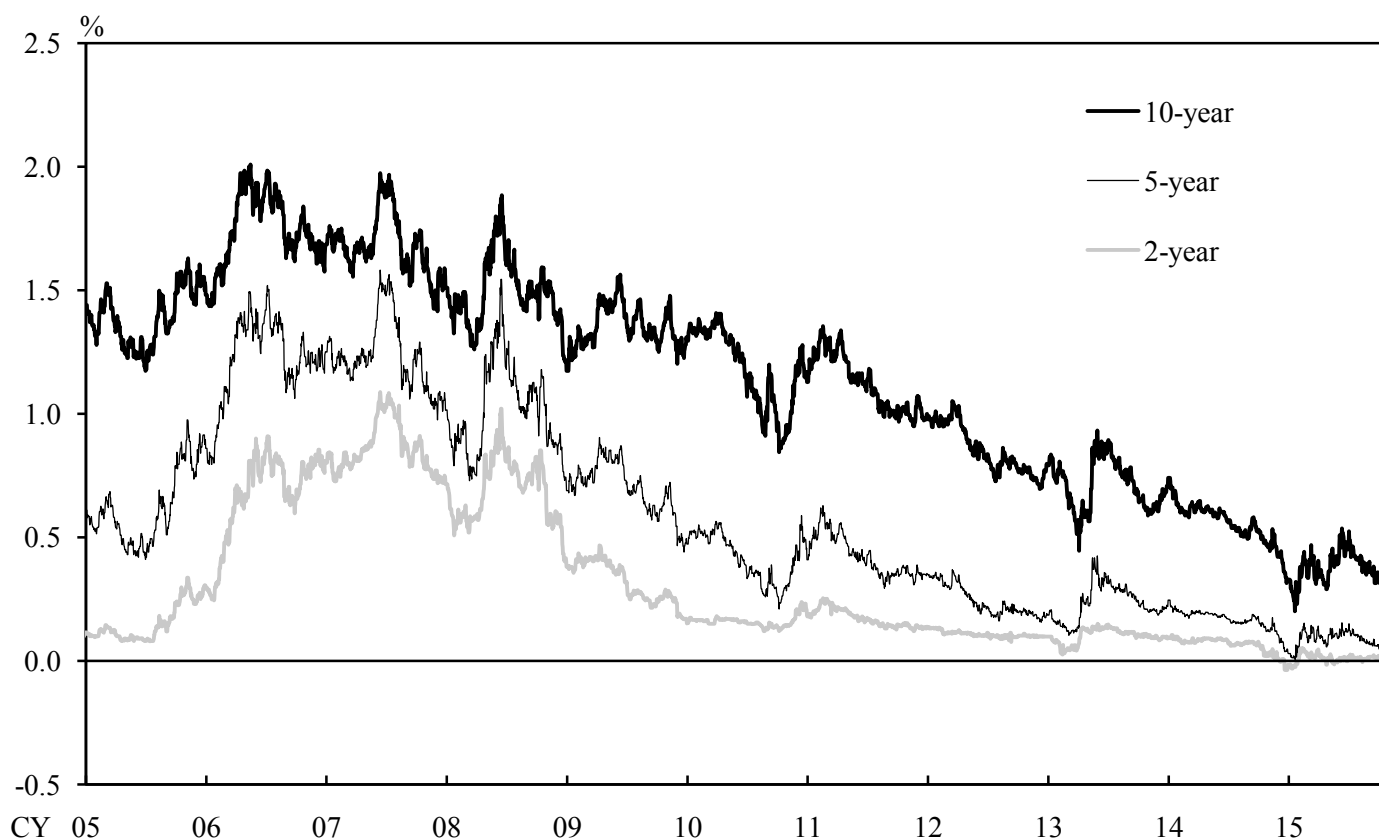
Source: Bloomberg.

Nominal Benchmark Yields

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



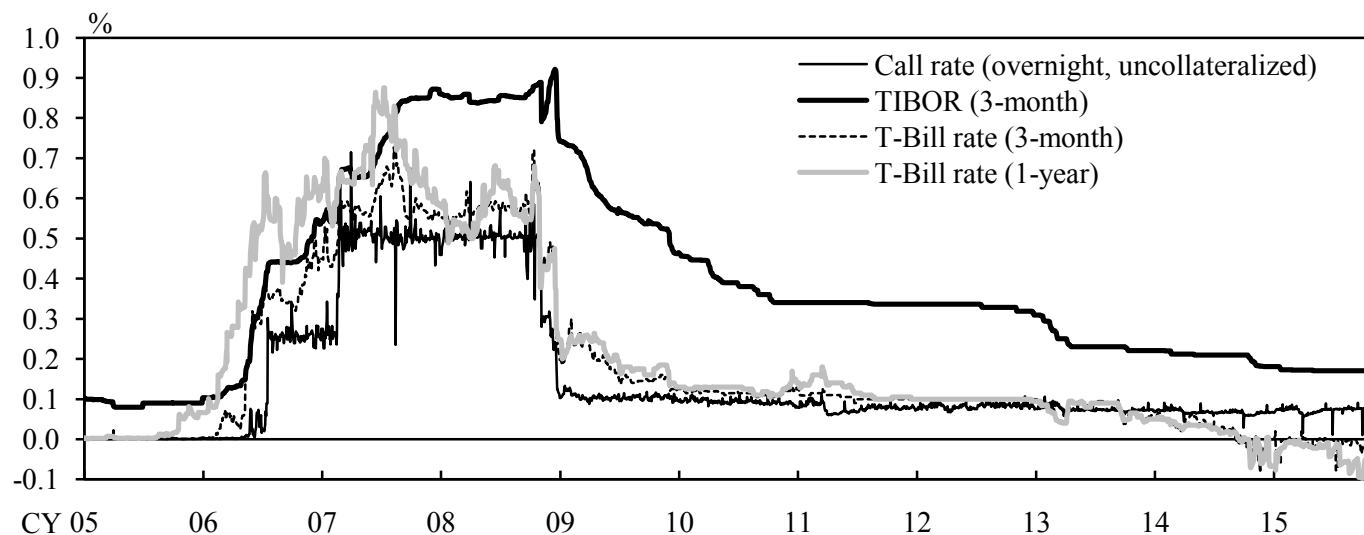
(2) JGB Yields



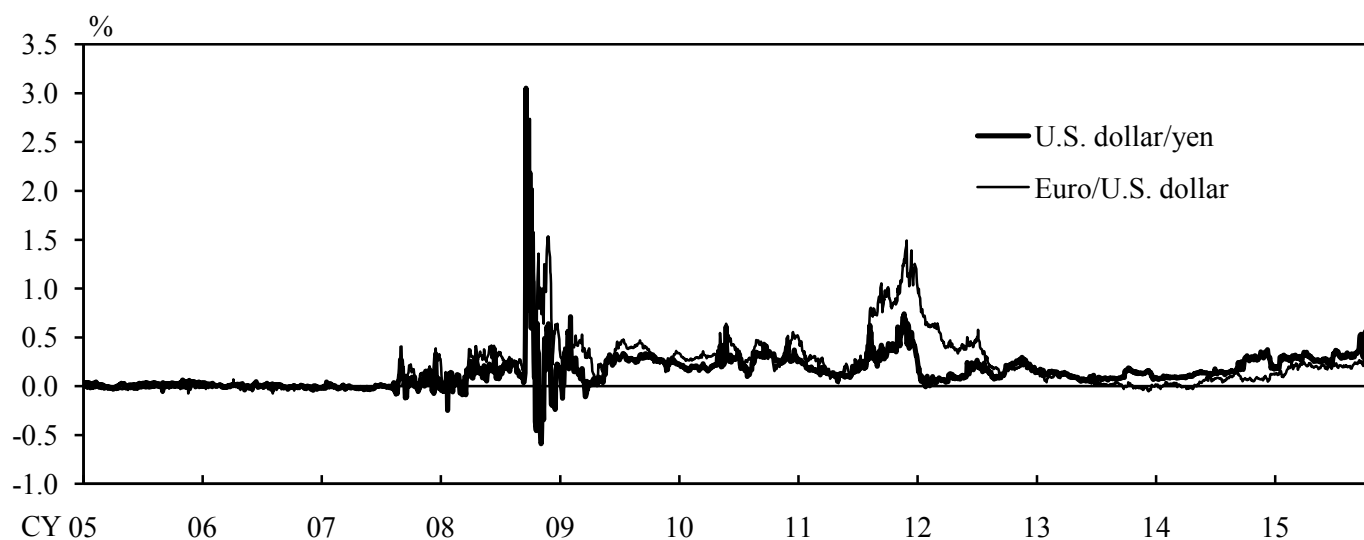
Source: Bloomberg.

Money Market Rates

(1) Short-Term Interest Rates

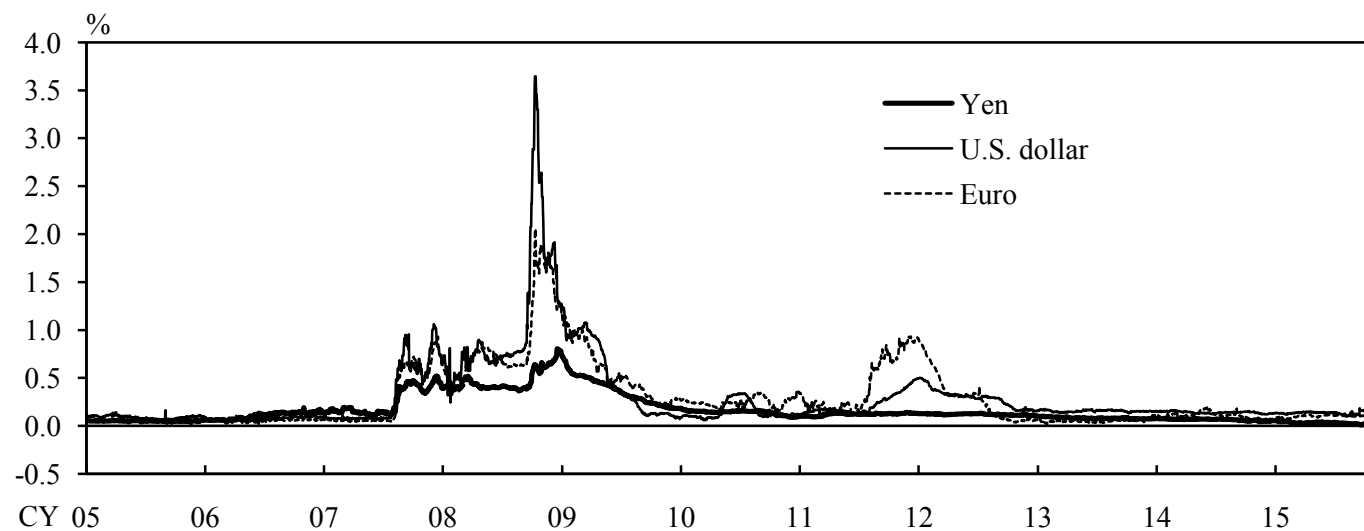


(2) Dollar Funding Premiums through Foreign Exchange Swaps



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

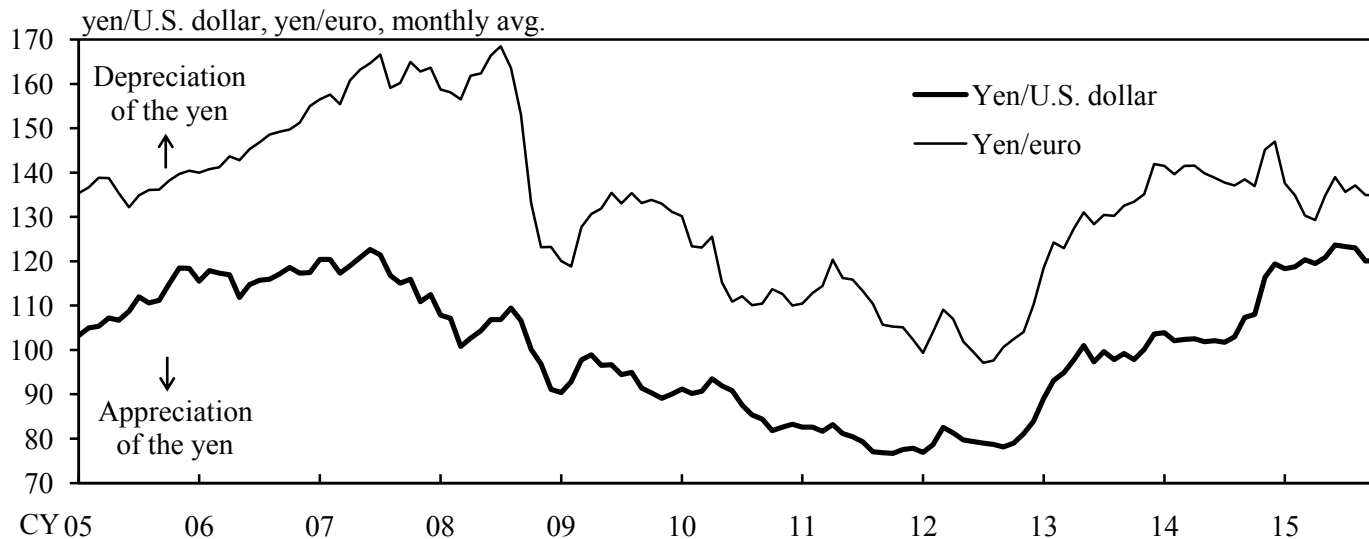
(3) Credit Spreads for Yen-, Dollar-, and Euro-Denominated Term Instruments



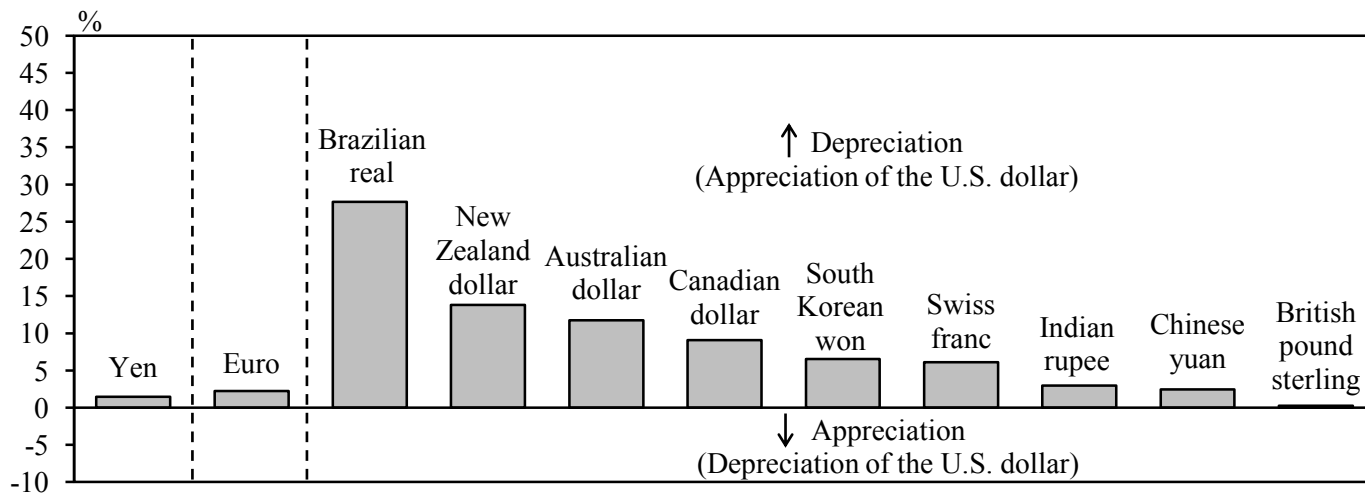
Note: The credit spreads for term instruments are LIBOR (3-month) minus yields on overnight index swaps (3-month).
Sources: Bank of Japan; Bloomberg.

Exchange Rates

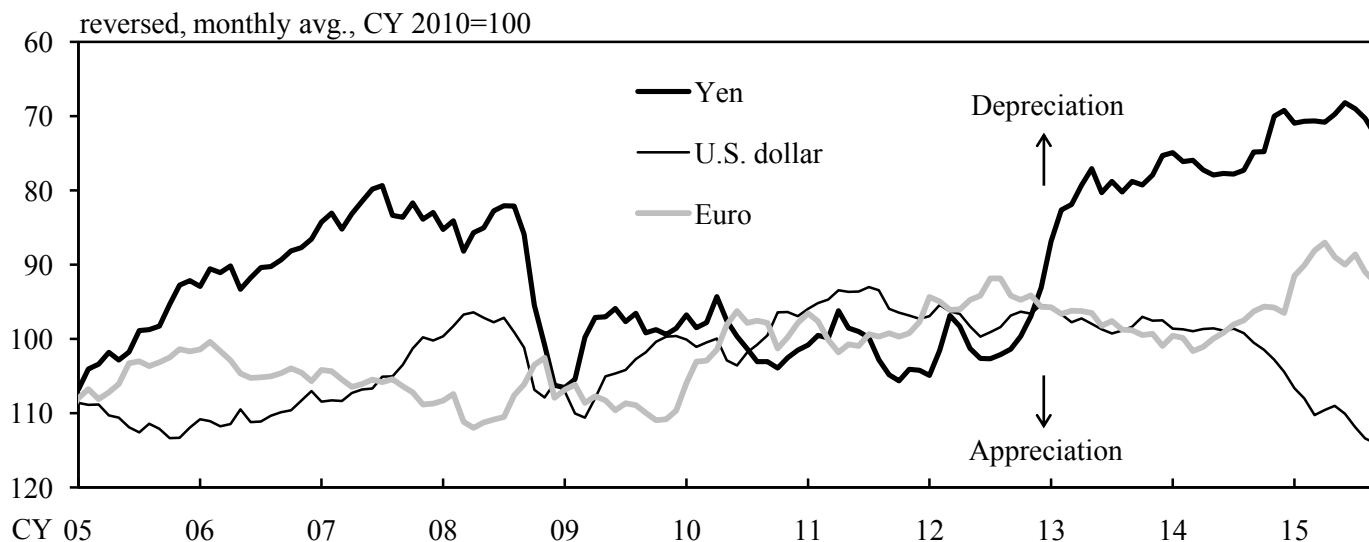
(1) Yen/U.S. Dollar and Yen/Euro



(2) Rates of Change in Selected Currencies against the U.S. Dollar (Since the End of April 2015)



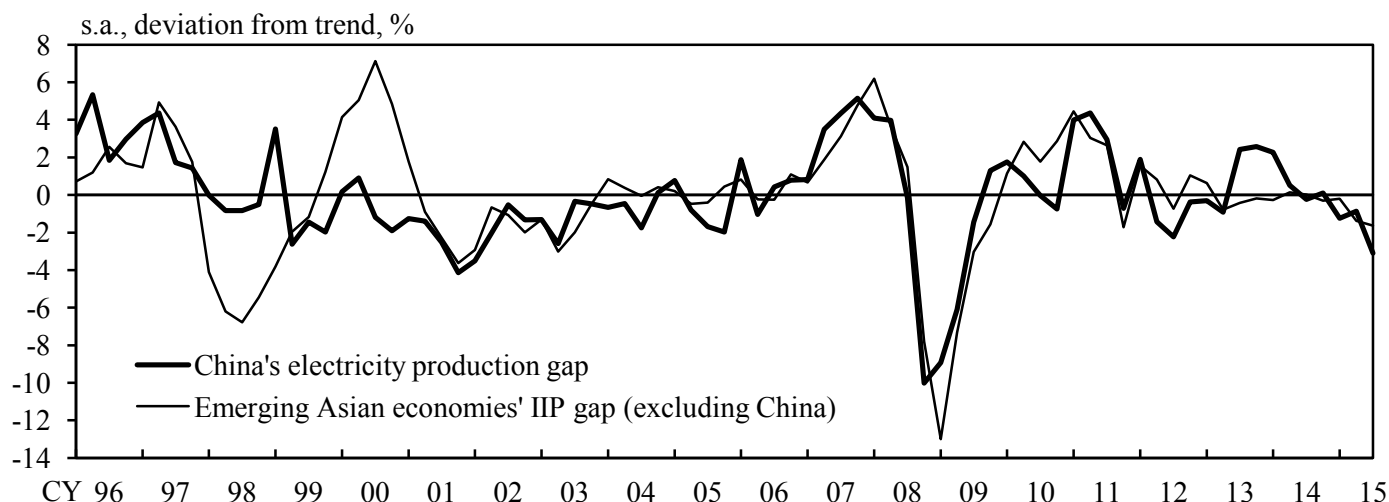
(3) Real Effective Exchange Rates



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.

Impact of China's Economic Slowdown on Japan's Real Exports

(1) Economic Activity of China and Emerging Asian Economies



Notes: 1. Gaps are calculated as deviation rates from HP-filtered trends.

2. The figure for emerging Asian economies' IIP gap (excluding China) for 2015/Q3 is the July-August average.

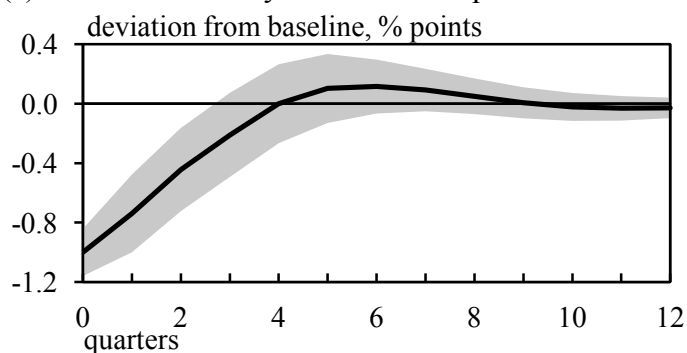
(2) VAR Model Estimation Results

Variables: 1. China's electricity production gap; 2. Emerging Asian economies' IIP gap; 3. Real WTI (q/q % chg.); 4. Yen's real effective exchange rate (q/q % chg.); 5. Japan's real exports (q/q % chg.)
Shock identification is based on Cholesky decomposition in the above order.

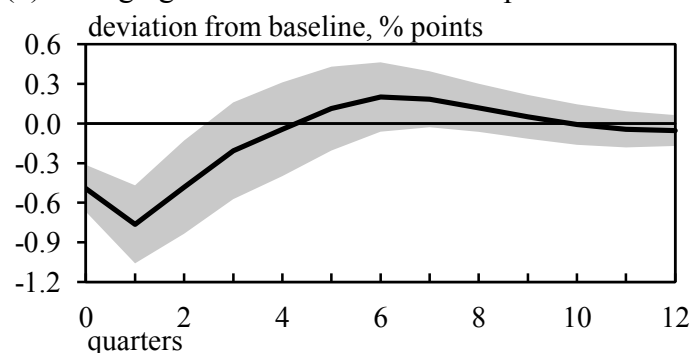
Sample period: 1996/Q1-2015/Q2

• Responses to a 1% Point Decrease in China's Electricity Production Gap

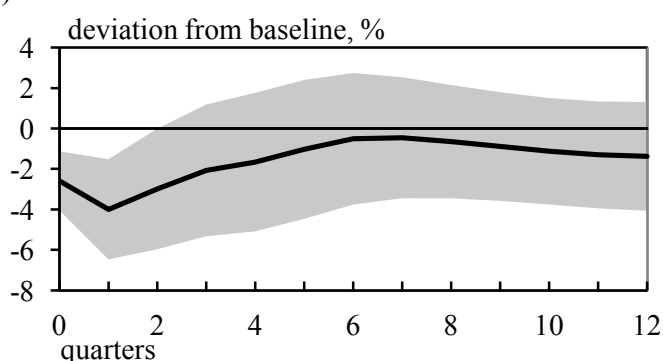
(a) China's Electricity Production Gap



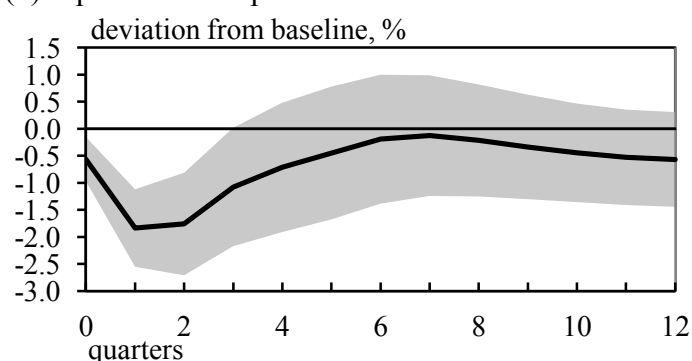
(b) Emerging Asian Economies' IIP Gap



(c) Real WTI



(d) Japan's Real Exports



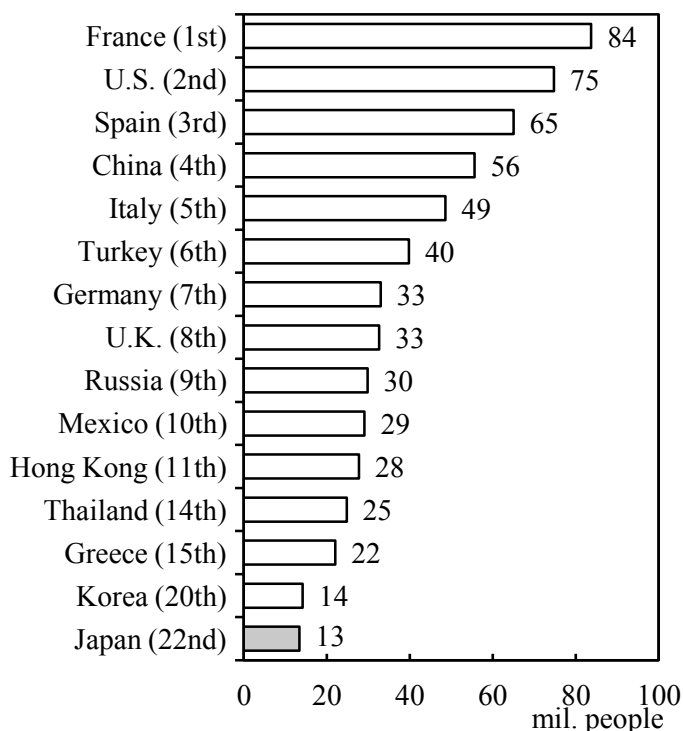
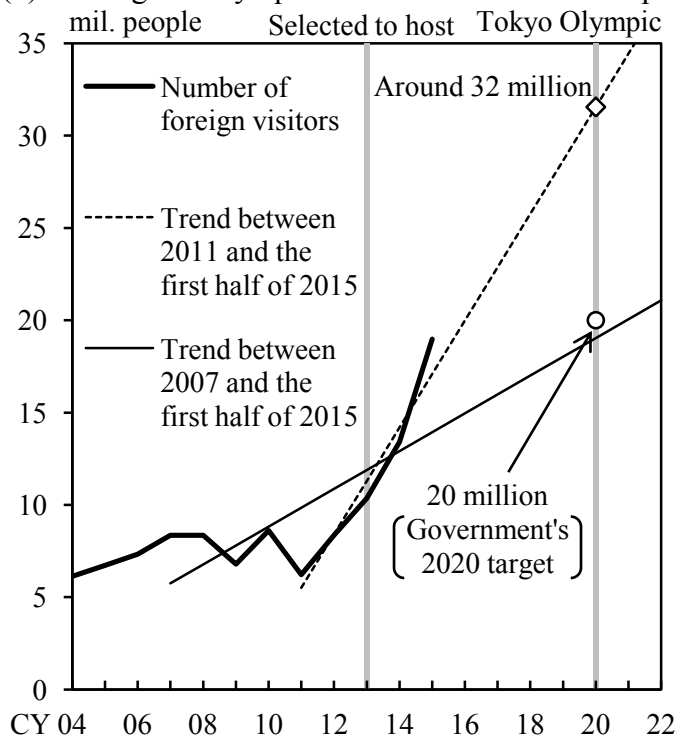
Notes: 1. Real WTI oil prices are obtained by deflating nominal prices by the U.S. CPI (all items).

2. Shaded areas indicate 95 percentile bands.

Sources: Bloomberg; BLS; CEIC; CPB Netherlands Bureau for Economic Policy Analysis; World Bank; Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index."

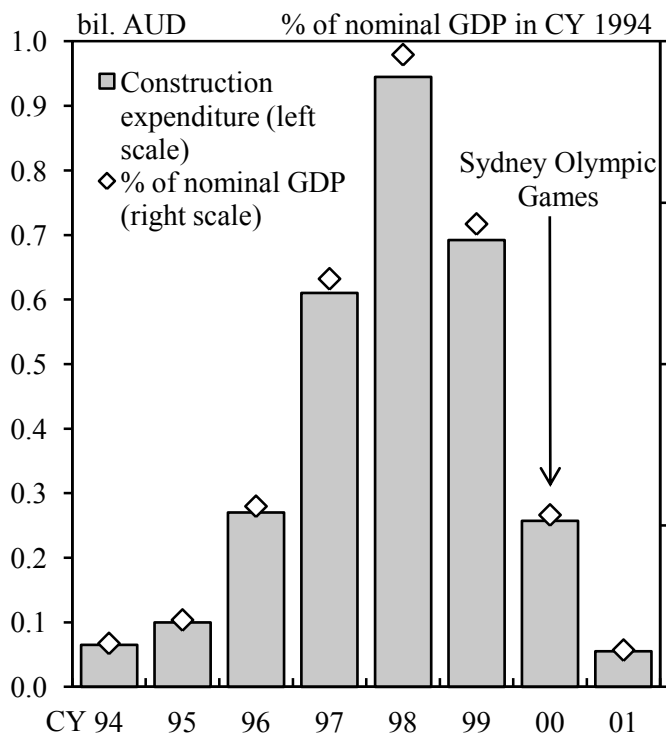
Economic Impact of the Tokyo 2020 Olympic Games

(1) Hosting the Olympic Games and Visitors to Japan (2) Top International Visitor Destinations (2014)

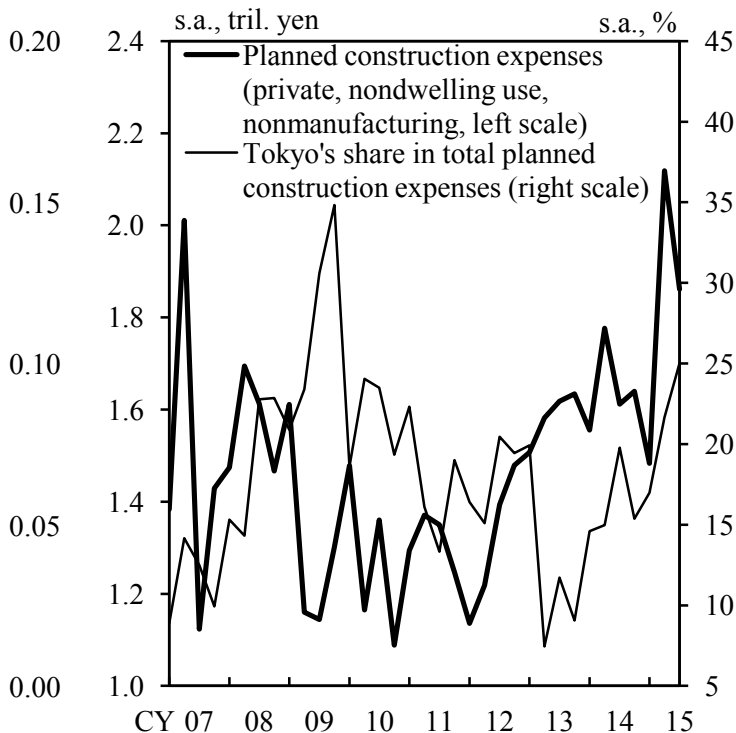


Note: In (1), the number of foreign visitors to Japan in 2015 is annualized based on January-September seasonally adjusted data.

(3) Construction Expenditure for Olympic Games



(4) Construction Starts in Nonmanufacturing Sector



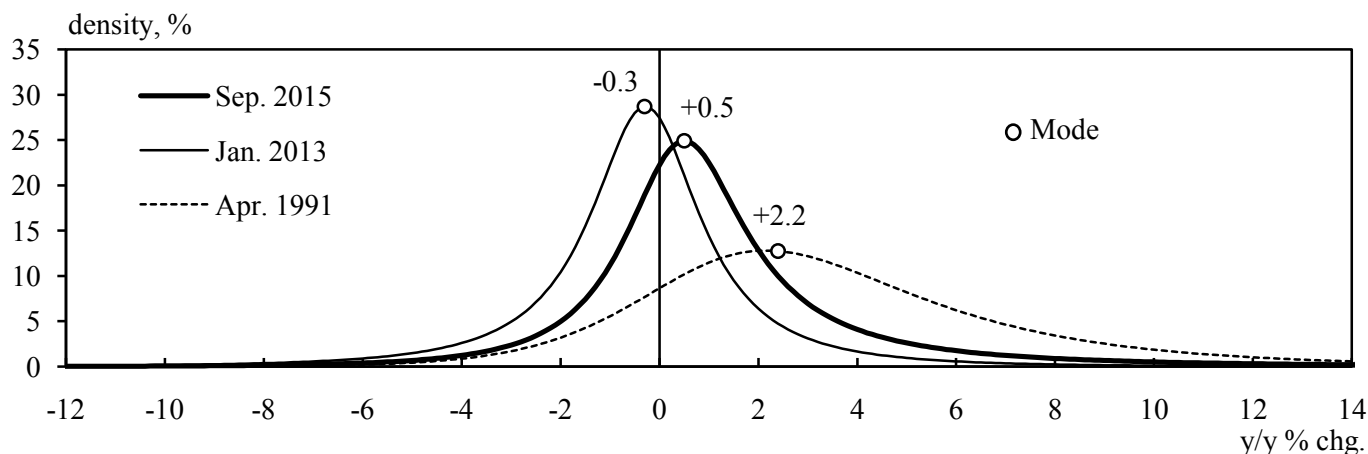
Notes: 1. Figures for (3) are based on Madden and Crowe (1998), who modeled construction patterns linked to the Sydney Olympic Games, focusing in particular on Olympics venues.

2. In (4), figures for 2015/Q3 are based on figures for July and August converted to quarterly data.

Sources: Japan National Tourism Organization (JNTO); World Tourism Organization; Australian Bureau of Statistics; Ministry of Land, Infrastructure, Transport and Tourism, "Statistics on Building Construction Starts"; Madden and Crowe (1998), "Estimating the Economic Impact of the Sydney Olympic Games."

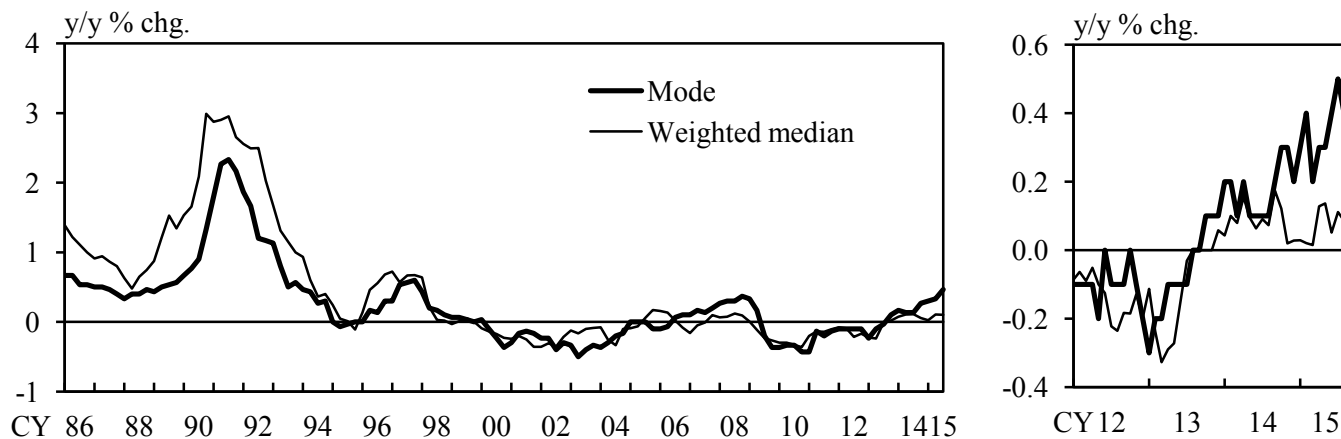
Distributions of Price Changes and Measures of Underlying Inflation

(1) Distributions of Price Changes in Individual CPI Items



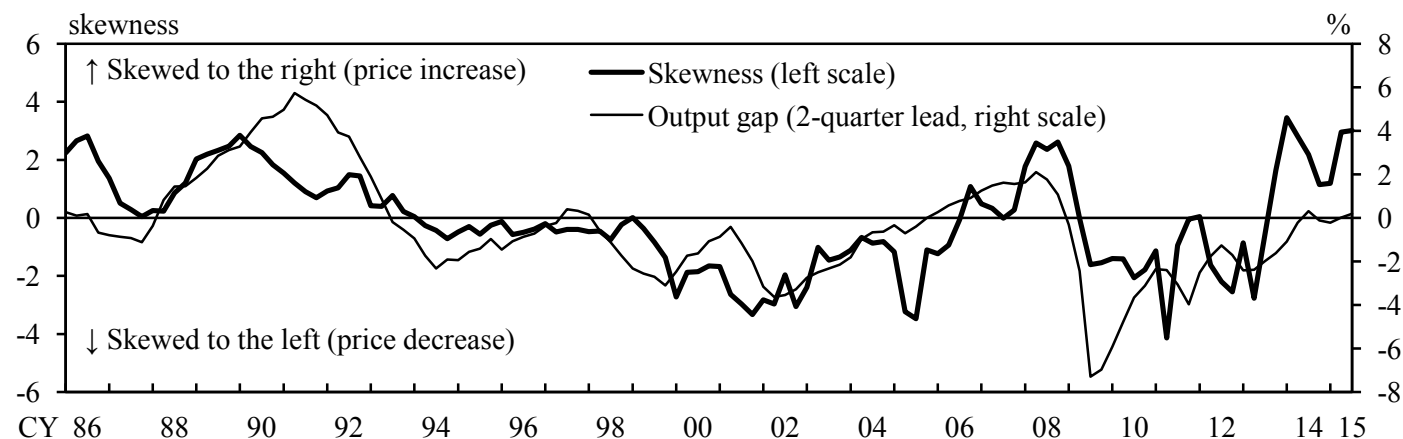
Notes: 1. The distributions of year-on-year rate changes in individual CPI (less fresh food) items are fitted to the normal inverse Gaussian distribution.
 2. The individual CPI items are adjusted to exclude the estimated effect of changes in the consumption tax rate. The same applies to the charts below.

(2) Various Measures of Core Inflation



Notes: 1. The mode of the distributions is estimated in (1). The weighted median is calculated using the year-on-year price changes and weights of individual CPI items in each base year. For the period before 2005, the year-on-year price changes of minor groups and subgroups are used.
 2. Figures for quarterly data are 3-month averages of monthly year-on-year price changes.

(3) Skewness of the Distributions and the Output Gap



Notes: 1. The skewness of the distributions is estimated in (1). Figures are 3-month averages of monthly estimated data.
 2. The output gap is estimated by the Research and Statistics Department, Bank of Japan.

Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index"; Cabinet Office, "National Accounts," etc.

Phillips Curve Estimation Results and Recent Price Developments

(1) Estimation Equation and Results

$$\text{CPI (y/y, \%)} = c \text{ (constant)}$$

$$+ \alpha \times \text{output gap (lagged 2-quarter, \%)}$$

$$+ \beta \times \text{mid- to long-term inflation expectations (6 to 10 years ahead, annual average, \%)}$$

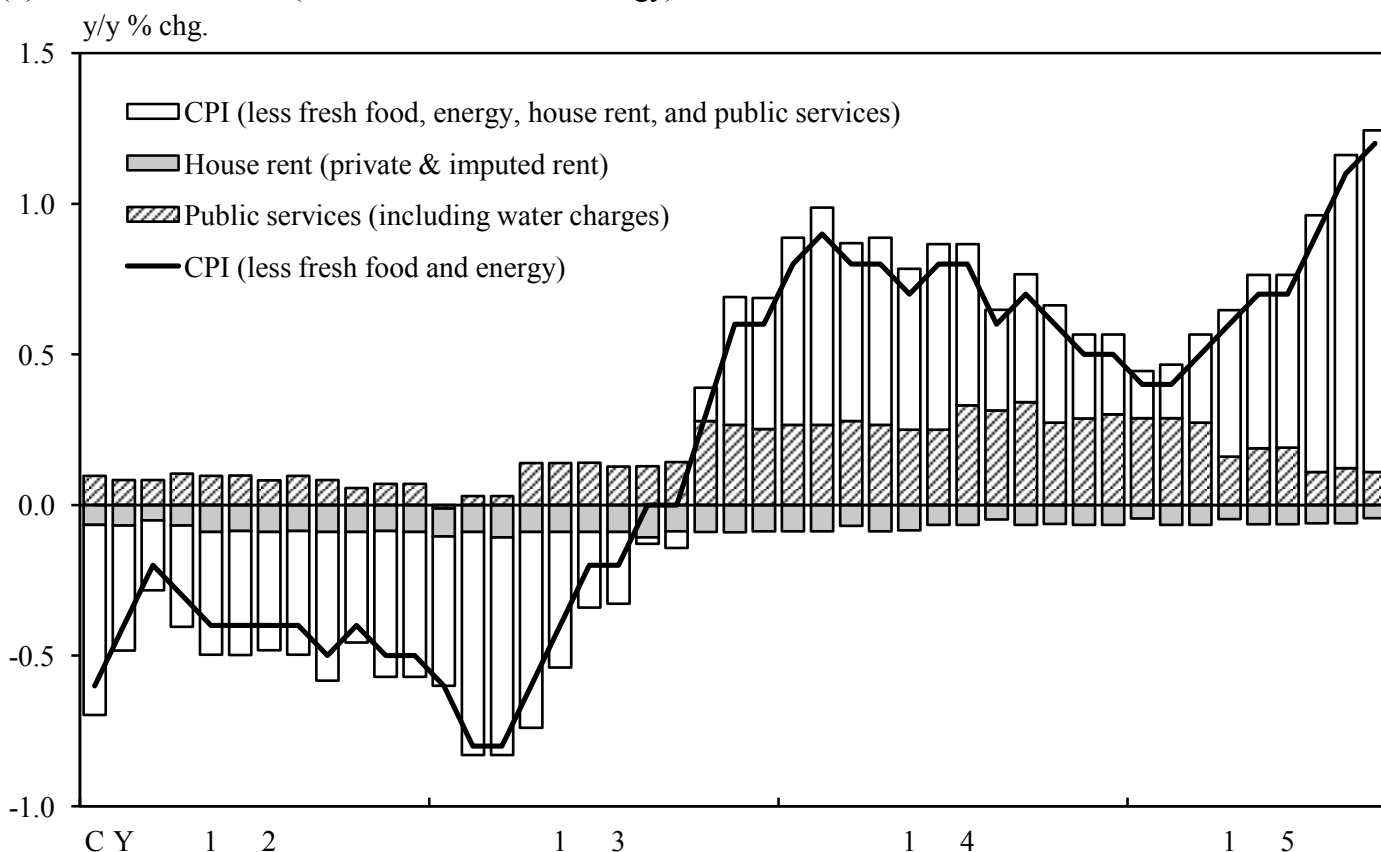
$$+ (1-\beta) \times \text{own lagged value (4-quarter average, y/y, \%)}$$

Estimation period: 1991/Q1 - 2015/Q2 (quarterly data)

CPI	Weight (per 10,000)	c	α	β	1- β	Adj. R-squared
CPI (less fresh food and energy)	8,832	-0.38 ***	0.11 ***	0.37 ***	0.63 ***	0.87
CPI (less fresh food, energy, house rent, and public services)	5,707	-0.53 ***	0.17 ***	0.47 ***	0.53 ***	0.83
House rent (private & imputed rent)	1,825	-0.14 ***	0.02 *	0.10 ***	0.90 ***	0.96
Public services (including water charges)	1,300	-0.29 *	-0.01	0.33 ***	0.67 ***	0.32

- Notes: 1. The output gap is estimated by the Research and Statistics Department, Bank of Japan.
 2. The price indices used in the estimation are calculated by the Research and Statistics Department, Bank of Japan. The same applies to the chart below.
 3. The price indices used in the estimation are adjusted to exclude the estimated effect of changes in the consumption tax rate. The same applies to the chart below.
 4. *** and * denote statistical significance at the 1% and 10% levels, respectively.

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



Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index";
 Cabinet Office, "National Accounts," "Consensus Economics Inc.," "Consensus Forecasts," etc.

Economic Assessment by Region (Regional Economic Report)

Region	Assessment in July 2015	Changes from the previous assessment	Assessment in October 2015
Hokkaido	The economy has been recovering moderately.	⇒	The economy has been recovering moderately.
Tohoku	The economy has been recovering moderately.	⇒	The economy has been recovering moderately.
Hokuriku	The economy has been recovering.	⇒	The economy has continued to recover.
Kanto-Koshinetsu	The economy has continued to recover moderately.	⇒	The economy has continued to recover moderately, although exports and production have been affected mainly by the slowdown in emerging economies.
Tokai	The economy has continued to recover steadily.	⇒	The economy has continued to recover steadily, due to a significant increase in business fixed investment and to a pick-up in housing investment and private consumption, although exports and production have been affected mainly by the slowdown in emerging economies.
Kinki	The economy has been recovering.	⇒	The economy has been recovering, although exports and production have been affected by the slowdown in emerging economies.
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/rer151019.htm/>).

Source: Bank of Japan, "Regional Economic Report (Summary) October 2015."