

Not to be released until 2:00 p.m.  
Japan Standard Time on Saturday,  
April 27, 2013.

April 27, 2013  
Bank of Japan

# **Outlook for Economic Activity and Prices**

April 2013

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

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

### **I. Baseline Scenario of the Outlook for Economic Activity and Prices in Japan<sup>2</sup>**

#### **A. Outlook for Economic Activity**

Japan's economy has stopped weakening and has shown some signs of picking up. Looking ahead, it is expected to return to a moderate recovery path around mid-2013, mainly against the background that domestic demand remains resilient due to the effects of monetary easing as well as various economic measures, and that growth rates of overseas economies gradually pick up. Thereafter, while the economy will be affected by the front-loaded increase and subsequent decline in demand prior to and after the two scheduled consumption tax hikes, it is likely to continue growing at a pace above its potential, as a trend, as a virtuous cycle among production, income, and spending is maintained.<sup>3</sup>

The above projection assumes the following underlying developments.

First, assuming that global financial markets remain generally stable, the growth rates of overseas economies, including the United States and China, are expected to gradually pick up, albeit moderately. Such developments overseas, as well as the yen's depreciation in the foreign exchange market, are likely to support an increase in Japan's exports.

Second, financial conditions are expected to ease further as the Bank of Japan steadily implements "quantitative and qualitative monetary easing." Specifically, quantitative and qualitative monetary easing is expected not only to work through such transmission channels as longer-term interest rates and asset prices, but also to lower real interest rates through a pick-up in expected inflation rates that is caused by fundamental changes in expectations. Such stimulative effects on private demand are likely to strengthen with

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<sup>1</sup> The text of "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on April 26, 2013.

<sup>2</sup> The projection period in this *Outlook for Economic Activity and Prices* (Outlook Report) has been extended by one year, through fiscal 2015.

<sup>3</sup> Japan's potential growth rate -- under a certain methodology -- is estimated to be "around 0.5 percent" on average during the projection period, and is expected to rise gradually toward the end of the projection period. However, it should be noted that estimates of the potential growth rate are subject to a considerable margin of error as they rely on the specific methodology employed and could change as more data for the relevant period become available.

improvement in economic conditions.

Third, public investment is expected to continue increasing at a high level for the time being, mainly reflecting various economic measures and increases in the budget associated with reconstruction after the earthquake disaster.

Fourth, firms' and households' medium- to long-term growth expectations are expected to rise moderately as the government's regulatory and institutional reforms make progress, and as firms' efforts to tap potential demand at home and abroad proceed.

Given these assumptions, in fiscal 2013 a virtuous cycle among production, income, and spending is expected to start working, triggered by increases in public investment and exports. More specifically, business fixed investment is likely to follow a moderate increasing trend against the background of improvements in corporate profits and monetary easing effects, including investment related to disaster prevention and energy, and replacement demand for aging equipment. Private consumption is expected to see increased resilience, owing to improvements in household sentiment and the elderly's large appetite for spending, and as it is gradually supported by improvement in employee income. Under these circumstances, Japan's economy is expected to return to a moderate recovery path around mid-2013. Thereafter, a considerable front-loaded increase in demand prior to the consumption tax hike is anticipated in the second half of the fiscal year. Consequently, the overall growth rate for fiscal 2013 is projected to be significantly elevated. From fiscal 2014 toward fiscal 2015, while affected by fluctuations in demand stemming from the scheduled consumption tax hikes, the economy is expected to continue growing at a pace above its potential, as a trend, as positive developments in domestic private demand are likely to continue, supported by increasing exports and monetary easing effects.<sup>4</sup> Comparing the current projection for the period through fiscal 2014 with that in the January

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<sup>4</sup> The consumption tax hikes will affect the economy mainly by generating a front-loaded increase and subsequent decline in demand prior to and after the tax hikes (an intertemporal substitution effect). The effect of the tax hikes on the economic growth rate for each fiscal year is estimated as follows: an increase of around 0.3 percentage point for fiscal 2013, a decrease of around 0.7 percentage point for fiscal 2014, and an increase of around 0.2 percentage point for fiscal 2015. However, it should be noted that these estimates are subject to considerable uncertainty given that they depend partly on income conditions and price developments at each point in time, and therefore are subject to a considerable margin of error.

2013 interim assessment, the growth rates are expected to be higher than the ones presented in January, mainly due to the introduction of quantitative and qualitative monetary easing, an improvement in financial market conditions, and an increase in public investment.

## **B. Outlook for Prices**

The year-on-year rate of change in the consumer price index (CPI, for all items less fresh food, and the same hereafter) has recently been around 0 percent or slightly negative.

Examining factors that determine future inflation rates, first, the aggregate supply and demand balance is expected to follow a moderate improving trend, causing excess demand over supply to expand toward the latter half of the projection period. Meanwhile, a tightening of labor supply and demand conditions is expected to become evident, and nominal wages are likely to see gradual upward pressure. Second, some recent indicators suggest a rise in medium- to long-term inflation expectations. These expectations are likely to continue on a rising trend under quantitative and qualitative monetary easing, gradually converging to around 2 percent -- the price stability target. Third, import prices are expected to continue rising during the projection period, reflecting upward pressure for the time being from developments in the foreign exchange market and assuming that international commodity prices will follow a moderate rising trend in line with global economic growth.

Based on these factors, the outlook for prices -- excluding the direct effects of the consumption tax hikes -- is as follows.<sup>5</sup> The year-on-year rate of change in the CPI is expected to follow a rising trend, reflecting factors such as the improvement in the aggregate supply and demand balance as well as the rise in medium- to long-term inflation expectations, and it is likely to reach around 2 percent -- the price stability target -- toward the latter half of the projection period. Comparing the current projection for the period through fiscal 2014 with that in the January 2013 interim assessment, the projected rates of change in the CPI are higher.

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<sup>5</sup> The effects of the two scheduled consumption tax hikes on prices can be mechanically estimated by assuming that the rise in the consumption taxes will be fully passed on for all currently taxable items. On this basis, the CPI will be pushed up by 2.0 percentage points in fiscal 2014 and 1.3 percentage points in the second half of fiscal 2015 (0.7 percentage point for fiscal 2015 as a whole).

## II. Upside and Downside Risks

### A. Risks to Economic Activity

The following are upside and downside risks to the Bank's aforementioned baseline scenario regarding the economy. The first concerns developments in global financial markets. While the tail risk that the European debt problem might lead to global financial market turmoil and a significant global economic downturn has decreased, there is still considerable uncertainty surrounding developments in Europe. Continued vigilance is warranted over future developments, including those in global financial markets.

Second, there is uncertainty regarding developments in overseas economies. The U.S. economy may post higher growth, mainly against the background of progress in balance-sheet repair, strengthening of monetary easing effects, especially in the housing market, and the positive impact of new energy sources. On the other hand, the economy may also register lower growth, mainly due to fiscal problems. Meanwhile, the pick-up in the growth rates for Europe and China may be delayed for longer than expected, as the effects of fiscal austerity measures continue in Europe, and China appears to be burdened with excess capital stock relative to its sustainable growth path. Even if the growth rates of overseas economies rise as expected, Japan's exports and industrial production might not be able to fully enjoy the benefits of higher growth in the case of a relative delay in the recovery of business fixed investment worldwide, considering that the share of capital goods and parts is high in Japan's economy.

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.

Fourth, the extent of the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hikes may differ significantly depending on developments in real income and prices at each point in time.

Fifth, 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 increases in people's 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 the path

toward fiscal consolidation becomes evident and people's concerns regarding the future are alleviated.

## **B. Risks to Prices**

As for upside and downside risks specific to prices, the first concerns the high uncertainty regarding developments in firms' and households' medium- to long-term inflation expectations. While there is a possibility that inflation expectations may not readily rise due to their possible formation reflecting moderate price declines in the past, there is also a possibility that they will rise relatively quickly in response to fundamental changes in expectations.

The second risk concerns uncertainty associated with the responsiveness of prices to the aggregate supply and demand balance. Attention needs to be paid to whether firms will raise prices and wages in accordance with the extent to which the supply and demand balance tightens under a highly competitive environment sustained over time.

The third risk concerns the high uncertainty regarding developments in import prices reflecting fluctuations in international commodity prices and foreign exchange rates, and the extent to which such developments are passed on to domestic prices.

## **III. Conduct of Monetary Policy**

The Bank assesses the aforementioned economic and price situation from two perspectives and then outlines its thinking on the future conduct of monetary policy with the price stability target in mind.

The first perspective concerns an examination of the baseline scenario for the outlook. Japan's economy is judged likely to achieve around 2 percent inflation and return to a sustainable growth path toward the latter half of the projection period.

The second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy. With regard to economic activity, upside and downside risks can be assessed as being balanced, although uncertainty remains high, including that regarding developments in overseas economies. Risks on the price front also can be assessed as being largely balanced, although considerable uncertainty surrounds

developments in medium- to long-term inflation expectations. 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. Nevertheless, due attention needs to be paid to the fact that financial institutions' holdings of government bonds remain at an elevated level while the amount outstanding of government debt has shown a cumulative increase.<sup>6</sup>

As for the future conduct of monetary policy, the Bank will continue with quantitative and qualitative monetary easing, aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner.<sup>7</sup> It will examine both upside and downside risks to economic activity and prices, and make adjustments as appropriate.

Such conduct of monetary policy will support the positive movements that have started to appear in economic activity and financial markets, contribute to a further pick-up in inflation expectations that appear to have risen, and lead Japan's economy to overcome deflation that has lasted for nearly 15 years.

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<sup>6</sup> For more details, see the April 2013 issue of the Bank's *Financial System Report*.

<sup>7</sup> In implementing quantitative and qualitative monetary easing, the Bank will purchase a considerable amount of Japanese government bonds (JGBs) from the market. Such JGB purchases are executed for the purpose of conducting monetary policy and not for the purpose of financing fiscal deficits. The Bank strongly expects that the government -- in line with the joint statement released with the Bank in January -- will steadily promote measures aimed at establishing a sustainable fiscal structure.



(Appendix)

**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 2012	+1.0 to +1.0 [+1.0]	-0.2	/	
Forecasts made in January 2013	+1.0 to +1.1 [+1.0]	-0.2 to -0.1 [-0.2]		
Fiscal 2013	+2.4 to +3.0 [+2.9]	+0.4 to +0.8 [+0.7]		
Forecasts made in January 2013	+1.9 to +2.5 [+2.3]	+0.3 to +0.6 [+0.4]		
Fiscal 2014	+1.0 to +1.5 [+1.4]	+2.7 to +3.6 [+3.4]		+0.7 to +1.6 [+1.4]
Forecasts made in January 2013	+0.6 to +1.0 [+0.8]	+2.5 to +3.0 [+2.9]		+0.5 to +1.0 [+0.9]
Fiscal 2015	+1.4 to +1.9 [+1.6]	+1.6 to +2.9 [+2.6]	+0.9 to +2.2 [+1.9]	

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

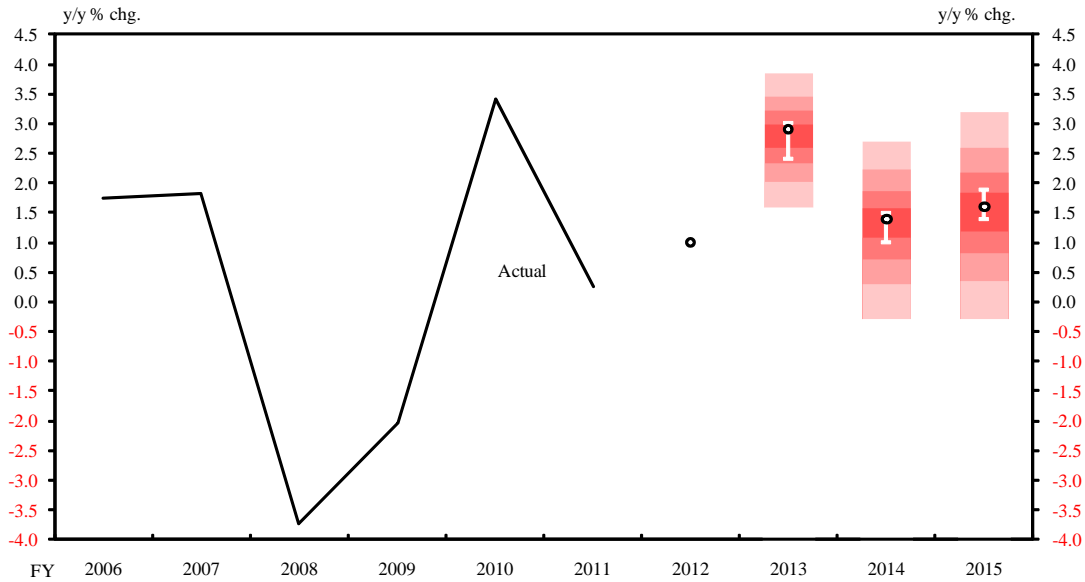
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which he or she attaches the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.
3. Individual Policy Board members make their forecasts assuming the effects of past policy decisions and with reference to views incorporated in financial markets regarding future policy.
4. The scheduled consumption tax hikes for April 2014 and October 2015 -- to 8 percent and 10 percent, respectively -- are incorporated in the forecasts. In terms of the outlook for the CPI, individual Policy Board members make their forecasts based on figures excluding the direct effects of the consumption tax hikes.
5. The forecasts for the CPI for fiscal 2014 and fiscal 2015 that incorporate the direct effects of the consumption tax hikes 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 for fiscal 2014 and fiscal 2015 will be pushed up by 2.0 percentage points and 0.7 percentage point, respectively. Second, these figures are added to the forecasts made by the Policy Board members.
6. The ranges shown below include the forecasts of all Policy Board members.

y/y % chg.

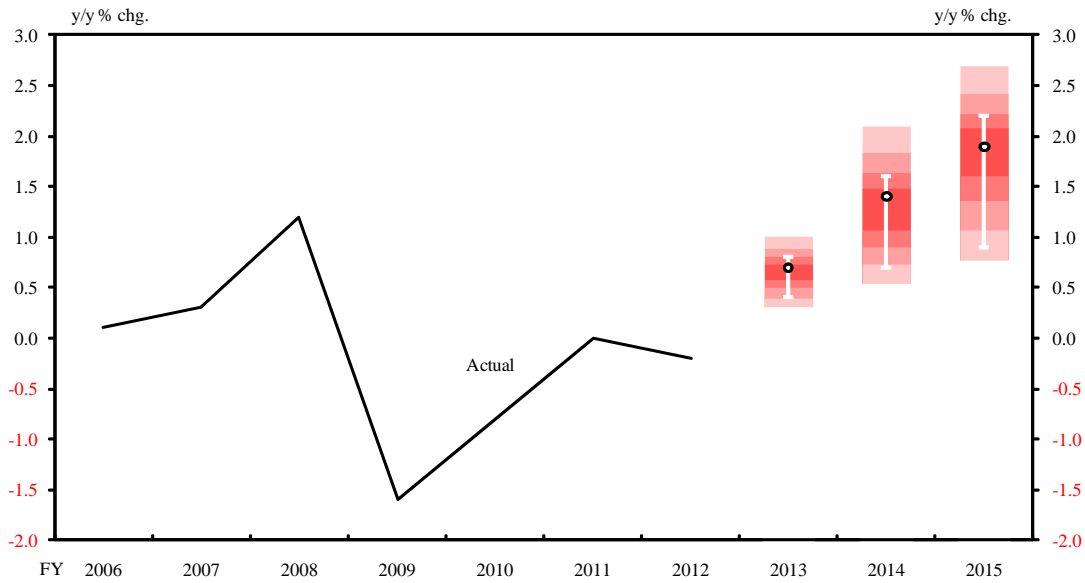
	Real GDP	CPI (all items less fresh food)	Excluding the effects of the consumption tax hikes	
Fiscal 2012	+1.0 to +1.1	-0.2	/	
Forecasts made in January 2013	+0.9 to +1.1	-0.2 to -0.1		
Fiscal 2013	+2.1 to +3.1	+0.4 to +1.0		
Forecasts made in January 2013	+1.8 to +2.5	+0.1 to +0.7		
Fiscal 2014	+0.6 to +1.7	+2.6 to +3.7		+0.6 to +1.7
Forecasts made in January 2013	+0.2 to +1.3	+2.4 to +3.0		+0.4 to +1.0
Fiscal 2015	+1.3 to +2.1	+1.5 to +3.0	+0.8 to +2.3	

## Forecast Distribution Charts of Policy Board Members

### (1) Real GDP



### (2) CPI (All Items Less Fresh Food)



Notes: 1. Based on the aggregated probability distributions (i.e., the Risk Balance Charts) compiled from the distributions of individual Policy Board members, the Forecast Distribution Charts are compiled as follows. First, upper and lower 10 percentiles of the aggregated distributions are trimmed and second, colors indicated below are used to show the respective percentiles of those distributions.

Upper 40% to lower 40%	Upper 30 to 40% & lower 30 to 40%	Upper 20 to 30% & lower 20 to 30%	Upper 10 to 20% & 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 in the bar charts indicate the range of the forecasts of the majority of Policy Board members.
4. The forecast for the CPI excludes the direct effects of the scheduled consumption tax hikes.

## **The Background**

### **I. Economic and Price Developments in the Second Half of Fiscal 2012**

#### *Economic Activity*

Looking back at Japan's economy during the period leading up to the present, economic activity had been relatively weak since summer 2012 on the back of the deceleration in overseas economies; however, it has stopped weakening recently and has shown some signs of picking up (Chart 1).

Specifically, overseas economies have been moving out of the deceleration phase that had continued since 2012 and are gradually heading toward a pick-up (Charts 2 and 3). In the U.S. economy, favorable signs are starting to spread from the household sector to the corporate sector, as business fixed investment shows signs of picking up with improvement in business sentiment while private consumption and housing investment remain firm. As for the Chinese economy, the deceleration phase has almost come to an end on the whole as the manufacturing sector -- which had long been under adjustment -- appears to have stopped weakening while domestic demand such as private consumption and infrastructure investment remains firm. Under these circumstances, the NIEs and the ASEAN economies have also shown signs that exports and production have stopped decreasing. Meanwhile, the European economy continues to recede slowly due mainly to the effects of fiscal austerity, although further deterioration in business and household sentiment is coming to a halt.

On the back of signs of overseas economies picking up, exports and industrial production -- which declined sharply in the second half of 2012 -- have stopped decreasing, also supported by the fact that the effects of bilateral relations between Japan and China have diminished and domestic sales of automobiles have recovered (Charts 4 and 5). Business fixed investment has shown some weakness on the whole. More specifically, it has been decreasing in manufacturing due to the effects of the earlier drop in exports and industrial production, while resilience has been observed in nonmanufacturing (Chart 6). In contrast, public investment has continued to increase, primarily in that related to reconstruction after the earthquake disaster, and housing investment has generally been picking up (Charts 7 and

8). Private consumption has seen increased resilience recently, reflecting an improvement in consumer sentiment and the recovery in car sales, while demand from the elderly has been firm (Chart 9). Reflecting the fact that domestic demand has been resilient and exports and industrial production have stopped decreasing, business sentiment has shown signs of improvement again (Chart 1 [2]).

Meanwhile, according to the *Tankan* (Short-Term Economic Survey of Enterprises in Japan), the diffusion indices (DIs) of production capacity and employment conditions, both of which are regarded as indicators for capturing utilization of labor and production capacity, have been on a moderate uptrend from a somewhat long-term perspective following the plunge caused by the Lehman shock (Chart 10). Looking at recent developments in detail, improvement had come to a halt mainly in the production capacity DI since summer 2012, but some signs of improvement have been observed more recently, mainly in the employment conditions DI. The estimated output gap has also generally exhibited similar movements (Chart 10 [3]).

### ***Prices***

On the price front, the year-on-year rate of decline in the domestic corporate goods price index (CGPI) widened toward mid-2012, reflecting the fall in international commodity prices and loosening of the supply and demand balance for raw materials in Asian markets. However, it has started to narrow again, mainly due to movements in foreign exchange rates (Chart 11 [1]). The year-on-year rate of change in the corporate services price index (CSPI, excluding international transportation) declined in the second half of 2012 as firms intensified moves to reduce expenses such as advertising, but the rate of decline has narrowed somewhat recently (Chart 11 [2]). With regard to the consumer price index (CPI, all items less fresh food), from a somewhat long-term perspective, the rate of decline has narrowed as a trend, reflecting the improving trend in the aggregate supply and demand balance; however, it has stopped improving since mid-2012, partly due to weakness in economic activity (Chart 12). Recently, the rate of change in the CPI has been slightly negative, due in part to the reversal of the previous year's increase in the prices of some durable and energy-related goods, while prices of food products have been weak, mainly

reflecting fierce price competition at large-scale stores (Chart 13). According to the trimmed mean<sup>8</sup> and the Laspeyres chain-weighted index,<sup>9</sup> as well as the private consumption deflator -- all of which are regarded as indicators for capturing trend changes in the CPI -- the rate of change in these indicators has been on a moderate improving trend from a somewhat long-term perspective, but it has stopped improving since mid-2012 (Chart 14 [1]). An indicator -- that represents the difference between the share of items in the CPI for which prices have risen from the previous year and that for which prices have declined -- is also on a gradual improving trend from a somewhat long-term perspective, although such improvement has paused since mid-2012 (Chart 14 [2]).

## II. Financial Developments

### *Quantitative and Qualitative Monetary Easing*

The Bank of Japan introduced "quantitative and qualitative monetary easing" in order to achieve the price stability target of 2 percent in terms of the year-on-year rate of change in the CPI at the earliest possible time, with a time horizon of about two years. More specifically, it decided to (1) adopt the monetary base control, (2) increase purchases of Japanese government bonds (JGBs) and extend their maturity, and (3) increase purchases of exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs). The Bank will continue with quantitative and qualitative monetary easing, 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.

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<sup>8</sup> The 10 percent trimmed mean is obtained by rearranging year-on-year rates of individual price changes in ascending order, excluding items corresponding to both the upper and lower 10 percent tails of weights and then taking weighted averages of the remaining items. This essentially eliminates the effects of large relative price fluctuations.

<sup>9</sup> The Laspeyres chain-weighted index is released as a reference for CPI. It is compiled as follows: (1) aggregates are produced after updating the weights of items of the base year and resetting the index level of individual items to 100 every year, and then (2) multiplying the previous year's chain-weighted index by the aggregated year-on-year figures obtained from the above calculation. Disregarding such factors as adopting and terminating items and revising model formulae, this is virtually equivalent to compiling an index in which the base year is updated every year.

As for the transmission channels of quantitative and qualitative monetary easing, the first channel is that the purchases of financial assets will encourage declines in interest rates across the yield curve and lower risk premia of asset prices. Second, both financial institutions and institutional investors are expected to change their investment behavior and rebalance their portfolios to loans and/or risk assets. This is referred to as a portfolio rebalancing effect. The third channel is to drastically change the expectations of markets and economic entities by clearly committing to achieving the price stability target at the earliest possible time and by continuing with massive asset purchases to underpin such a commitment.

These are expected to contribute to raising prices through lowering real interest rates and raising asset prices, thereby stimulating private demand, and through improving the aggregate supply and demand balance and raising inflation expectations.

### *Developments in Quantitative Financial Indicators*

Financial conditions are accommodative.

The monetary base has been increasing at a pace of more than 10 percent on a year-on-year basis since the beginning of 2013, as the Bank's asset purchases have made progress (Chart 15 [1]). Going forward, the Bank will conduct money market operations so that the monetary base will increase at an annual pace of about 60-70 trillion yen under the newly introduced quantitative and qualitative monetary easing.<sup>10</sup>

Meanwhile, domestic demand for working capital by firms has continued to rise, due in part to increased costs of raw materials, as well as demand for reconstruction funds including business fixed investment. Moreover, demand for funds associated with corporate takeover activities as well as gaining interests in natural resources has also continued to show an increase, reflecting firms' strategic efforts to strengthen their global businesses. In this situation, the year-on-year rate of increase in the amount outstanding of bank lending

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<sup>10</sup> Under this guideline, the monetary base -- for which the amount outstanding was 138 trillion yen at end-2012 -- is expected to reach 200 trillion yen at end-2013 and 270 trillion yen at end-2014.

has risen somewhat (Chart 16 [1]). The aggregate amount outstanding of CP and corporate bonds has been more or less around the year-ago level (Chart 16 [2]). Looking at CP and corporate bonds separately, the year-on-year rate of change in the amount outstanding of corporate bonds has been positive and that of CP has been negative, partly against a background of the previous year's shift from corporate bonds to CP.

With regard to the supply of funds to firms, financial institutions' lending attitudes -- as perceived by large as well as small firms -- have been on an improving trend, and the levels of various DIs have been above the average for the period since 2000 (Chart 17 [1]). The financial positions of firms, including small ones, have recovered on the whole, and the levels of various indicators have also basically been above the average for the period since 2000 (Chart 17 [2]).

As for money stock, the year-on-year rate of change in M2 has been increasing at a pace above that of M3, mainly reflecting an increase in bank lending (Chart 15 [2]).

### ***Developments in Financial Markets***

In global financial markets, as a result of introducing a range of backstop measures to address the European debt problem, including the European Stability Mechanism (ESM) and the European Central Bank's Outright Monetary Transactions (OMTs), the tail risk that financial market turmoil might cause a significant global economic downturn has decreased. While the outlook for the European debt problem continues to entail a high degree of uncertainty, investors' risk aversion appears to have abated.

Under this broad trend, stock prices around the world have been on a moderate uptrend, as observed in the U.S. stock prices that have been in the historically high range (Chart 18 [1]). Meanwhile, long-term interest rates in the United States and Germany have been hovering at historically low levels, reflecting the continued monetary easing by major central banks (Chart 19 [1]).

Looking at financial markets in Japan, market conditions have turned favorable due to the abatement of global investors' risk aversion and the Bank's policy decisions.

Short-term interest rates -- including those on term instruments with longer maturities -- have been kept low against the background of ample liquidity provision by the Bank (Chart 20 [1]). Credit spreads on interbank transactions have remained stable as the balance sheets of Japanese financial institutions have maintained their soundness (Chart 20 [2]). Conditions of foreign currency funding -- such as U.S. dollar and euro funding -- have also remained stable. Long-term interest rates declined partly due to speculation about monetary easing; they have been picking up somewhat recently (Chart 19 [2]).

Firms' funding costs have been hovering at low levels. The issuance spread for CP has been low on the whole, although that for some CP has remained somewhat wide, reflecting business conditions (Chart 21 [1]). The issuance spread for corporate bonds has been low overall, although it widened due to issuance of some large-scale bonds and of electric power company bonds at relatively high issuance rates (Chart 21 [2]). The average interest rates on new loans and discounts for both the short and long terms have been at low levels of around 1 percent (Chart 22 [1]). In these circumstances, interest payments by firms have been at sufficiently low levels in relation to their profits (Chart 22 [2]).

Stock prices started to rise in parallel with those overseas in the second half of 2012 and have been on a rising trend, partly reflecting improving outlook for corporate profits (Chart 18 [1]). In the J-REIT market, capital has continued to flow in, mainly through investment trust funds, against the background of an improving outlook for conditions in the business office market, and a rise in J-REIT prices has been accelerating since end-2012 (Chart 18 [2]).

In foreign exchange markets, the yen continued to appreciate against the U.S. dollar through last summer; however, it has then depreciated, temporarily reaching the 99-100 yen level (Chart 23). The yen has also depreciated against the euro and has been hovering around the 130 yen level in April.



Land prices have continued to decline both in metropolitan and nonmetropolitan areas, but the rate of decline has slowed gradually. Looking at the *Public Notice of Land Prices* for 2013 (as of January 1), both commercial and residential land prices have declined on a year-on-year basis in the three major metropolitan areas (Tokyo, Osaka, and Nagoya) as well as in nonmetropolitan areas, but the rate of decline has narrowed to almost 0 percent (Chart 24).

### **III. The Outlook for Economic Activity and Prices from Fiscal 2013 to Fiscal 2015**

#### ***The Outlook for Economic Activity and Prices***

Regarding the outlook for Japan's economy, it is expected to return to a moderate recovery path around mid-2013, mainly against the background that domestic demand remains resilient due to the effects of monetary easing as well as various economic measures, and that growth rates of overseas economies gradually pick up. Thereafter, while the economy will be affected by the front-loaded increase and subsequent decline in demand prior to and after the two scheduled consumption tax hikes, it is likely to continue growing at a pace above its potential, as a trend, as a virtuous cycle among production, income, and spending is maintained.<sup>11</sup>

More concretely, in fiscal 2013, a pick-up in economic activity is likely to spread across the economy, which is expected to return to a moderate recovery path around mid-2013. Public investment is likely to increase moderately as a trend throughout fiscal 2013. Exports will show clear signs of picking up, partly due to the rise in growth rates of overseas economies and the depreciation of the yen in foreign exchange markets, and are expected to continue increasing at a somewhat higher pace in fiscal 2013. Such an increase in exogenous demand is expected to support positive movements in domestic private demand through a pick-up in economic activity, and thereby an improvement in corporate profits as well as employee income.

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<sup>11</sup> As with the Outlook Report in October 2012, this report assumes that the consumption tax will rise to 8 percent in April 2014 and 10 percent in October 2015.

Specifically, business fixed investment -- underpinned by investment related to disaster prevention and energy -- is likely to follow a moderate increasing trend, as pent-up demand to undertake postponed replacement for aging equipment will emerge in tandem with an improvement in corporate profits. Private consumption is expected to see increased resilience, owing to such factors as a rise in stock prices, improvements in household sentiment, and the elderly's large appetite for spending, and as it is gradually supported by improvement in employee income.

Under such circumstances of a virtuous cycle in domestic private demand starting to take place, a considerable front-loaded increase in demand -- particularly in private consumption -- prior to the first round of the consumption tax hike is anticipated in the second half of fiscal 2013; consequently, the overall growth rate for fiscal 2013 is projected to be significantly elevated.<sup>12</sup>

From fiscal 2014 toward fiscal 2015, while affected by fluctuations in demand stemming from the scheduled consumption tax hikes, the economy is expected to continue growing at a pace above its potential, as a trend. More specifically, while public investment is expected to gradually move out of the leveling-off phase and start decreasing, exports are likely to continue increasing as overseas economies grow at a somewhat faster pace than the

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<sup>12</sup> The consumption tax hikes will affect the economy mainly by generating a front-loaded increase and subsequent decline in demand prior to and after the tax hikes (an intertemporal substitution effect). Specifically, in the second half of fiscal 2013, a front-loaded increase in demand prior to the first tax hike is expected to occur; in the first half of fiscal 2014, the growth rate is likely to decelerate markedly due to the subsequent decline. In fiscal 2015, a front-loaded increase in the first half of that year and subsequent decline in the second half -- prior to and after the second tax hike -- are also expected to take place. However, such a swing in demand in the second round is unlikely to be large, taking account of the fact that (1) the extent of the consumption tax hike in the second round is smaller than the first round and (2) a considerable part of the front-loaded increase in demand will take place prior to the first round. The effect of the tax hikes on the economic growth rate for each fiscal year is estimated as follows: an increase of around 0.3 percentage point for fiscal 2013, a decrease of around 0.7 percentage point for fiscal 2014, and an increase of around 0.2 percentage point for fiscal 2015. However, it should be noted that these estimates are subject to considerable uncertainty given that they depend partly on income conditions and price developments at each point in time, and therefore are subject to a considerable margin of error. For more details on the effect of the consumption tax hikes on the economy, see Box 3 of the Outlook Report in October 2012.

long-term historical average (Chart 3 [1]). Private consumption is expected to fluctuate due to the consumption tax hikes, and various tax burdens will exert downward pressure on real disposable income. Nevertheless, it is likely to remain on a moderate increasing trend, supported mainly by wage increases accompanied by tighter labor market conditions. Business fixed investment is likely to remain on an increasing trend on the back of positive synergy effects of rising growth expectations and monetary easing, although the pace of increase will gradually decline as capital stock accumulates.

Expressing the outlook in terms of the annual real GDP growth rate, this is projected to be around 3.0 percent for fiscal 2013 and around 1.5 percent for fiscal 2014 and fiscal 2015, above the potential growth rate considered to be around 0.5 percent. Comparing the current projection for the period through fiscal 2014 with that in the January 2013 interim assessment, the growth rates are expected to be higher than the ones presented in January, mainly due to the introduction of quantitative and qualitative monetary easing, an improvement in financial market conditions, and an increase in public investment.

The outlook for prices -- excluding the direct effects of the consumption tax hikes -- is as follows.<sup>13</sup> The year-on-year rate of change in the CPI is expected to follow a rising trend, reflecting factors such as the improvement in the aggregate supply and demand balance as well as the rise in medium- to long-term inflation expectations, and it is likely to reach around 2 percent -- the price stability target -- toward the latter half of the projection period. Comparing the current projection for the period through fiscal 2014 with that in the January 2013 interim assessment, the projected rates of change in the CPI are higher mainly due to an improvement in the aggregate supply and demand balance, a rise in inflation expectations, and the depreciation of the yen.

The following provides supplementary details on the assumptions and underlying mechanism of the outlook for economic activity and prices.

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<sup>13</sup> The effects of the two scheduled consumption tax hikes on prices can be mechanically estimated by assuming that the rise in the consumption taxes will be fully passed on for all currently taxable items. On this basis, the CPI will be pushed up by 2.0 percentage points in fiscal 2014 and 1.3 percentage points in the second half of fiscal 2015 (0.7 percentage point for fiscal 2015 as a whole). See Box 5 of the Outlook Report in October 2012 for effects of the consumption tax hikes on prices.

### *Government Spending*

Public investment has continued to increase, primarily in that related to reconstruction after the earthquake disaster (Chart 7). Going forward, it is expected to continue increasing in the first half of the projection period due to the effects of the supplementary budget for fiscal 2012 under the emergency economic measures, the budget for fiscal 2013 with higher weight on public investment, and the increased budget for reconstruction-related spending. However, it will be partly affected by bottlenecks on the supply side, including a labor shortage in the construction sector. In the latter half of the projection period, as the upward pressure of various economic policy measures will dissipate, public investment is expected to gradually start decreasing. Nonetheless, it will remain at a reasonable level against the background of higher demand for maintenance and replacement of social infrastructure.

Meanwhile, the level of the amount outstanding of government liabilities as a percentage of nominal GDP has already been high and is likely to increase further, even after having included the effects of the consumption tax hikes, mainly due to the increase in social security-related spending as a result of the aging population (Chart 25).

### *Overseas Economies*

As for the outlook, overseas economies, including the United States and China, are expected to gradually emerge from a pick-up phase and turn to a moderate recovery, assuming that global financial markets remain generally stable. In terms of growth rates, these economies are expected to grow at somewhat slower paces than those before the Lehman shock, because the effect of the bursting of the global credit bubble remains. Nonetheless, toward the latter half of the projection period, they are expected to grow at somewhat faster

paces than the past long-term averages (Chart 3 [1]).<sup>14</sup> By major country and region, the U.S. economy is expected to continue recovering at a moderate pace supported by accommodative financial conditions as pressures on balance-sheet repair among households ease gradually, reflecting improvement in the housing market, although the contractionary effect of fiscal austerity measures is likely to weigh on the economy. Regarding the European economy, a mild recession will continue for a while due to the effect of fiscal austerity; however, triggered by the recovery in exports, it is expected to gradually stop declining and start picking up, mainly in core countries in the euro area. Meanwhile, the Chinese economy is expected to register a somewhat higher growth rate as domestic demand remains firm and exports pick up; thereafter, it will likely remain stable. Due to spillover effects of the recovery in the United States and China, the NIEs and the ASEAN economies are likely to gain recovery momentum, underpinned by firm domestic demand.

The outlook for overseas economies, however, entails significant uncertainties, both upside and downside. The U.S. economy may post higher growth, mainly against the background of progress in balance-sheet repair, strengthening of monetary easing effects, especially in the housing market, and the positive impact of new energy sources. On the other hand, the economy may also register lower growth, mainly due to fiscal problems. Meanwhile, the pick-up in the growth rates for Europe and China may be delayed for longer than expected, as the effects of fiscal austerity measures continue in Europe, and China appears to be burdened with excess capital stock relative to its sustainable growth path. On this point, careful attention is required regarding the possibility that Japan's exports will be significantly affected if the downside risk in overseas economies materializes along with the yen's appreciation on the back of heightening risk aversion by investors.

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<sup>14</sup> Looking at the weighted averages of real GDP growth rates of respective economies and regions -- released by the IMF in April -- by value of exports from Japan, the growth rates of overseas economies are projected to accelerate moderately above the past long-term average, registering 3.6 percent in 2012, 3.8 percent in 2013, 4.5 percent in 2014, and 4.7 percent in 2015 (Chart 3 [1]). Nonetheless, because the after-effect of the bursting of the global credit bubble remains, the growth rate is likely to remain somewhat subdued even at the end of the projection period, compared with the pre-Lehman shock period. The average growth rate for the past 33 years -- from 1980 through 2012 -- was 4.1 percent and that for the 5 years before the Lehman shock (i.e., 2003-2007) was 5.2 percent.

### ***Exports and Imports***

Real exports of capital goods and parts have remained weak even recently, as they are susceptible to the situation of business fixed investment around the world. However, real exports as a whole have stopped decreasing as the effects of bilateral relations between Japan and China have subsided gradually and overseas economies have been heading toward a pick-up.

Looking at the developments in exports by region and type of goods, respectively, in the second half of 2012, exports to Europe and Asia showed substantial weakness while motor vehicles and their related goods -- to China -- and capital goods and parts as well as intermediate goods -- to Asia -- registered a marked decline (Charts 4 [2] and 26). This decline in exports is considered to have resulted from a number of factors: (1) the prolonged recession in Europe and its spillover to the overseas manufacturing sector through trade linkages; (2) global investment restraint on the back of increasing uncertainties; (3) the loosening of the supply and demand balance in Asian markets mainly as a result of the excess capacity problem in China; and (4) bilateral relations between Japan and China (Chart 27). At present, exports of motor vehicles and their related goods to China have picked up gradually as the effects of bilateral relations between Japan and China have subsided, while those of such goods to the United States and other regions including the Middle East remain firm. Supported by these factors, exports as a whole have stopped decreasing.

As for the outlook, exports are expected to gradually show clear signs of a pick-up against the background of a moderate rise in the growth rates for overseas economies, including their manufacturing sectors, and thereafter are projected to continue trending upward throughout the projection period. Meanwhile, in the foreign exchange market, the yen has depreciated to a level registered before the Lehman shock, and this development is expected to support exports with some time lag (Chart 3 [2]).

Going forward, however, the pace of increase in exports is likely to be somewhat subdued relative to the growth rates of overseas economies. This is due to (1) the effect of the expanded production abroad and (2) the restrained attitude toward business fixed

investment around the globe after the collapse of the credit bubble. Domestic firms' overseas production has been expanding in recent years at a remarkable pace against the background of their aim to capture overseas demand, as well as the yen's appreciation for the last several years (Chart 28).<sup>15</sup> In light of such developments, as for motor vehicles and their related goods, future increases in exports are expected to be more moderate compared with the period before the Lehman shock, as an increase in overseas demand will basically be met by the expanded production abroad. Exports of capital goods and parts are expected to increase during the projection period, as they appear to retain their high international competitiveness; however, an increased shift in production to overseas bases is considered to induce exports to a lesser extent, reflecting the effect of increasing local procurement. Firms' restrained attitude toward business fixed investment around the globe after the collapse of the credit bubble and the excess capacity facing some emerging economies are also likely to restrain growth in exports of capital goods. On this point, as the share of capital goods and parts is relatively high in Japan's economy, careful attention is required regarding the possibility of larger-than-expected declines in exports and industrial production if a global recovery in business fixed investment occurs later than expected mainly due to the heightened uncertainty (Chart 27 [3]).

Meanwhile, attention should continue to be paid to the bilateral relationship between Japan and China, although its impact on Japan's economy has become less visible with the pick-up in automobile-related exports to China.

On the other hand, real imports have been heading toward an increase again, after they temporarily declined toward end-2012 (Chart 4 [1]). Going forward, they are projected to register a moderate uptrend as domestic demand remains resilient and exports start to pick up.

### ***External and Saving-Investment Balances***

The trade balance, after having recorded a deficit in fiscal 2011 for the first time since fiscal

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<sup>15</sup> Going forward, there will be no material change in firms' tendency to expand overseas production and local procurement; however, due to recent depreciation of the yen, this trend may become somewhat moderate.

1979, moved somewhat deeper into deficit in fiscal 2012 (Chart 29 [1]). Contributing factors behind increasing trade deficits are (1) a decline in exports amid the prolonged slowdown in overseas economies, (2) a rise in import prices reflecting an increase in international commodity prices, and (3) an increase in imports of fuels as a result of successive halted operations at nuclear power plants. Looking at the current account balance, however, its surplus has remained intact despite increasing trade deficits, as the income balance has continued to register a relatively large surplus against the background of the accumulation of foreign assets.

As for the outlook, trade deficits are expected to narrow as a trend from a somewhat long-term perspective against the background of higher growth rates for overseas economies and the yen's depreciation in the foreign exchange market.<sup>16</sup> In addition, the income balance, denominated in yen, is likely to widen its surplus moderately as a trend, and accordingly the current account surplus is expected to widen at a mild pace.

Looking at a domestic saving-investment balance that conceptually corresponds to a current account balance, excess saving as a whole is expected to widen gradually throughout the projection period. This is because the deficit in the general government is expected to narrow partly due to an increase in tax revenue as a result of the consumption tax hikes, and the pace of its narrowing will be somewhat faster than the moderate pace at which excess saving in the private sector will narrow (Chart 29 [2]).

### ***The Environment surrounding Corporate Profits and Business Fixed Investment***

Corporate profits have remained steady on the whole, notably in domestic demand-oriented sectors, although the deceleration in overseas economies has still continued to affect manufacturing (Chart 30). As for the outlook, they are projected to continue on their improving trend against the background of resilient domestic demand, supported by a

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<sup>16</sup> In the short run, however, there will be some time lag for the export volume to increase after the yen's depreciation; thus, the deficit in the trade balance is expected to widen temporarily due to a rise in import prices and then start moving toward a narrowing (i.e., the J-curve effects).



pick-up in exports and movements in foreign exchange rates, while factors such as a rise in electricity prices exert downward pressure on profits.

Business fixed investment has shown some weakness on the whole, although resilience has been observed in nonmanufacturing. Meanwhile, in manufacturing, fixed investment has declined affected by the previous decrease in exports and industrial production (Chart 6). As for the outlook, although weakness in some sectors is likely to remain for the time being, business fixed investment is expected to continue increasing moderately as a trend against the background of improvements in corporate profits and monetary easing effects. It also will be underpinned by investment related to disaster prevention and energy. The underlying mechanism behind this outlook can be summarized as follows.

First, the effects of quantitative and qualitative monetary easing are expected to underpin business fixed investment during the projection period. In the context of investment profitability, the extent of monetary easing stimulus to investment is projected to strengthen gradually, reflecting a rise in the rate of return on capital due to economic recovery, together with declining real interest rates in reflection of a rise in inflation expectations (Chart 31 [1]). From the perspective of the availability of funds for firms, the financial positions of firms relative to business conditions remain favorable at a level equivalent to those in the second half of the 1980s, due partly to the effects of the reduction in debt outstanding. Thus the funding conditions of firms have been extremely accommodative (Chart 31 [2] and [3]).

Second, given that the level of business fixed investment has been low, as it has only just entered a recovery phase following the period of a plunge after the Lehman shock and the earthquake disaster, potential pent-up demand -- such as replacement of aging equipment -- is likely to emerge as corporate profits improve and uncertainties surrounding the prospects for the global economy gradually dissipate.

On this point, assuming that business fixed investment is executed in order to realize capital stock necessary for production, consistent with a certain growth expectation, the growth rate of business fixed investment is expected to be relatively high from the viewpoint of the

capital stock cycle, even if firms' expected growth rates remain at around 0.5 percent (Chart 32). The ratios of business fixed investment to nominal GDP and to cash flow remain relatively low compared with the long-term averages, suggesting that there appears to be room for these ratios to rise (Chart 33 [1] and [2]). Furthermore, the ratio of business fixed investment to capital stock hovered below a level consistent with the potential growth rate after the Lehman shock. As the potential growth rate rises very moderately toward the latter half of the projection period, business fixed investment is expected to gradually increase to a level consistent with the potential growth rate (Chart 33 [3]).<sup>17</sup>

Third, firms' medium- to long-term growth expectations are likely to rise moderately as efforts to strengthen competitiveness and growth potential gradually make progress, such as the government's regulatory and institutional reforms and business reconstruction by firms. Such heightening of expectations is likely to contribute to mitigating the decelerating pressure of business fixed investment as a result of capital stock accumulation.

### ***The Employment and Income Situation***

As for the employment and income situation, supply and demand conditions in the labor market have been on an improving trend on the whole, despite economic weakness in the second half of 2012. The employment conditions DI in the March *Tankan* moved into net "insufficient" territory for the first time since the September 2008 survey, and the job openings-to-applicants ratio -- which had ceased to improve since mid-2012 -- has resumed its moderate improving trend (Chart 34 [1] and [2]). This owes to the fact that, even in the phase where exports and industrial production have decreased, (1) labor demand in nonmanufacturing has been firm, reflecting resilient domestic demand, and (2) labor supply has been on a decreasing trend as a result of the aging of the population (Chart 34 [3]). Going forward, as the level of economic activity rises, the amount of labor input (i.e., [number of employees] times [number of hours worked]) is expected to increase (Chart 35 [1]). Against this background, supply and demand conditions in the labor market are likely to stay on an improving trend and the unemployment rate is expected to remain on a

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<sup>17</sup> See footnote 20 for the developments in the potential growth rate.

moderate declining trend (Chart 35 [2]).<sup>18</sup>

Reflecting those supply and demand conditions in the labor market, total cash earnings -- for which the year-on-year rate of change has been slightly negative recently -- are expected to be put under upward pressure gradually (Chart 36). During the first half of the projection period, the number of non-scheduled hours worked and hours worked by part-time employees will largely contribute to increasing wages as economic activity recovers. On the other hand, the severe corporate performance seen thus far will weigh on wages with a lag. Altogether, total cash earnings per employee will only improve moderately during this period. Toward the latter half of the projection period, however, total cash earnings per employee will likely show a clear uptrend. This is because scheduled cash earnings -- including an increase in base pay -- will start to show a clear increasing trend as the effects of tightening supply and demand conditions in the labor market emerge and inflation expectations rise, as described below.

Under these circumstances, employee income is expected to edge up gradually during the projection period (Chart 37). Labor share is expected to trend downward at a mild pace as the economy continues to recover; however, it is projected to stop declining toward the latter half of the projection period to around a level slightly above the average for 2004-2007, the latter half of the previous economic expansion phase (Chart 35 [3]).<sup>19</sup>

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<sup>18</sup> In Chart 35 [2], the aggregate supply and demand in the labor market is judged as being in equilibrium on the whole when the unemployment rate (i.e., the rate of the labor without jobs) is equal to the vacancy rate (i.e., the rate of vacancies). The unemployment rate in such an equilibrium can be regarded as the structural unemployment rate. In Japan, however, there has been a statistical tendency for the unemployment rate to consistently exceed the vacancy rate, and it should be noted that the structural unemployment rate estimated in this way is subject to a considerable margin of error.

<sup>19</sup> During the period between 2004 and 2007, deregulation in the labor market led to a sharp increase in nonregular employment -- mainly in those among temporary workers -- and thereby exerted downward pressure on wages. Unlike this period, downward pressure caused by these factors is considered to be less pronounced in the current phase.

### ***Households' Spending Behavior***

Private consumption has remained resilient since 2012 even amid lackluster developments in household income; more recently, it has seen increased resilience, assisted by the improvement in consumer sentiment (Chart 9). Regarding the outlook, private consumption is expected to be on an increasing trend on the whole, albeit with fluctuations -- mainly those in durable goods -- caused by the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hikes. Such outlook owes to a number of factors. First, consumption by the elderly is likely to support consumption as a whole on a sustainable basis, both from the demand side (i.e., strong appetite to consume among the baby-boom generation) and from the supply side (i.e., firms' capturing of the elderly's new demand) (Chart 38 [3]). Second, the recent rise in stock prices is expected to push up consumption through the improvement in consumer sentiment and the wealth effect. Third, toward the latter half of the projection period, an improving trend in employee income, which is expected to become increasingly evident through the course of economic recovery, will support consumption mainly by the working generation. Nonetheless, growth in nominal disposable income is projected to remain moderate due to tax rises and a higher burden of social security-related payments; moreover, the consumption tax hikes and electricity price rise are likely to push down real income (Chart 38 [1]). As a result, private consumption is basically expected to stay somewhat stronger relative to household income, and it is anticipated that the propensity to consume will inch up very gradually over the projection period (Chart 38 [2]).

Housing investment has generally been picking up (Chart 8). As for the outlook, housing investment is expected to continue to generally pick up -- albeit with fluctuations resulting from the consumption tax hikes -- as potential demand, which had been held down after the Lehman shock, gradually materializes, assisted in part by the reconstruction of disaster-stricken homes and by monetary easing effects.

### ***The Environment surrounding Prices***

In assessing the outlook for prices, the main factors that determine inflation rates are examined. First, from a somewhat long-term perspective, the aggregate supply and

demand balance had continued its gradual improving trend after the plunge resulting from the Lehman shock, but improvement has paused thereafter, reflecting weakness in economic activity in the second half of 2012 (Chart 39 [1]). Going forward, the balance is expected to follow a moderate improving trend during the projection period, reflecting that the economy will continue to grow at a pace above its potential, albeit with fluctuations resulting from the consumption tax hikes. On this basis, the aggregate supply and demand balance is likely to turn positive (i.e., excess demand) around the middle of the projection period, and the extent of excess demand is expected to expand toward the latter half of the projection period.<sup>20</sup>

Second, some indicators -- including the results of surveys conducted for market participants, economists, and households -- suggest a rise in the medium- to long-term inflation expectations recently. A survey result obtained from bond market participants indicates that the expected rate of inflation in the medium to long term appears to have started rising since end-2012, and breakeven inflation rates -- calculated as the yield spreads between the fixed-rate bonds and inflation-indexed bonds -- show a clear pick-up recently (Chart 40).<sup>21, 22</sup> Various survey results on household views also show some signs of a

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<sup>20</sup> Japan's potential growth rate had temporarily dropped to around 0 percent, partly due to a decline in the growth rate of capital stock reflecting the economic plunge after the Lehman shock (Chart 39 [2]). Since then, the rate has been picking up somewhat against the background of gradual recovery in economic activity. Based on a standard production function approach, Japan's potential growth rate is estimated to be "around 0.5 percent" on average during the projection period, and is expected to rise gradually toward the end of the projection period due to such factors as capital accumulation. However, it should be noted that estimates of the potential growth rate are subject to a considerable margin of error, as they greatly depend on the specific methodology employed and could change as more data for the relevant period become available.

<sup>21</sup> However, market liquidity of inflation-indexed bonds has declined markedly. Specifically, the market size of inflation-indexed bonds has shrunk from over 8 trillion yen at its peak to around 3.5 trillion yen recently, and the share of inflation-indexed bonds in the amount outstanding of JGBs issued is below 1 percent. Therefore, due attention to the interpretation of changes in breakeven inflation rates is necessary, as these are likely to be affected not only by changes in market participants' expected inflation rates but also by changes in the liquidity risk premium of inflation-indexed bonds to a non-negligible degree.

<sup>22</sup> It should be noted that breakeven inflation rates and some survey indicators of inflation expectations include the effects of the consumption tax hikes, and therefore due attention to the interpretation of these indicators is also necessary.

pick-up recently in the expected inflation rate in the short to medium term (Chart 41). As for the outlook, the medium- to long-term inflation expectations are likely to continue on a rising trend, gradually converging to around 2 percent -- the price stability target -- as the Bank has made a clear commitment to achieving the price stability target at the earliest possible time and continues making large-scale purchases of financial assets to underpin this commitment.

Third, import prices have been rising, reflecting international commodity prices and movements in foreign exchange rates (Chart 42). As for the outlook, international commodity prices are projected to follow a moderate rising trend against the background of a gradual pick-up in growth rates of overseas economies. Given these movements, import prices such as energy-related and food prices are also expected to continue on a moderate uptrend during the projection period as a whole.

Taking the above into account, as for the outlook for prices -- excluding the direct effects of the consumption tax hikes -- the year-on-year rate of increase in the CGPI is expected to widen for the time being, mainly due to the depreciation of the yen, and continue to rise moderately thereafter as overseas economies and the supply and demand conditions for products improve. The year-on-year rate of change in the CPI is expected to follow a rising trend, reflecting factors such as the improvement in the aggregate supply and demand balance as well as the rise in medium- to long-term inflation expectations, and it is likely to reach around 2 percent -- the price stability target -- toward the latter half of the projection period.<sup>23</sup>

Considering the outlook for prices in light of their correlation with the aggregate supply and demand balance -- depicted by the so-called Phillips curve -- the year-on-year rate of

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<sup>23</sup> The year-on-year rate of change in the chain-weighted CPI (see footnote 9) tended to be lower than that in the standard fixed-weighted CPI, and the gap became larger as more time passed from the base year. However, with regard to the latest weighted index (the base year for which is currently 2010), the gap between the chain-weighted CPI and the fixed-weighted CPI is expected to remain relatively small. This is because the weights of some items such as TVs -- for which prices tend to fall faster, and thus tend to generate a gap between the chain-weighted index and the fixed-weighted index -- have been declining since 2011, and the paces of the price falls themselves have become relatively small compared with some time ago.

change in the CPI is projected to rise in line with the previous positive correlation, accompanied by improvement in the supply and demand balance; at the same time, the Phillips curve itself is projected to gradually shift upward due to the rise in expected inflation rates (Chart 43). Nevertheless, given that Japan's economy has been mired in deflation for nearly 15 years, there is a high degree of uncertainty associated with (1) the responsiveness of prices to the aggregate supply and demand balance (i.e., the slope of the Phillips curve) and (2) developments in firm's and households' medium- to long-term inflation expectations (i.e., the extent to which the Phillips curve will shift upward), and due attention needs to be paid to whether the CPI will rise as expected.

Meanwhile, in terms of the relations between prices and nominal wages, a stable correlation is observed between the CPI and hourly wages -- namely, from a long-term perspective, they move almost in parallel to each other (Chart 44). In the aforementioned outlook, the rate of increase in the CPI is projected to pick up gradually while hourly wages are expected to rise moderately, reflecting the tightening of supply and demand conditions in the labor market and the rise in the general public's expected inflation rates. The relations between nominal wages and prices differ depending on developments in labor productivity. Specifically, the rate of increase in real wages -- calculated by subtracting the inflation rate from the rate of increase in nominal wages -- is determined by labor productivity growth in a long-term perspective. It is necessary to pay due attention to the possibility that the trend growth rate of labor productivity is likely to have structurally declined since the mid-1990s, compared with the prior period.

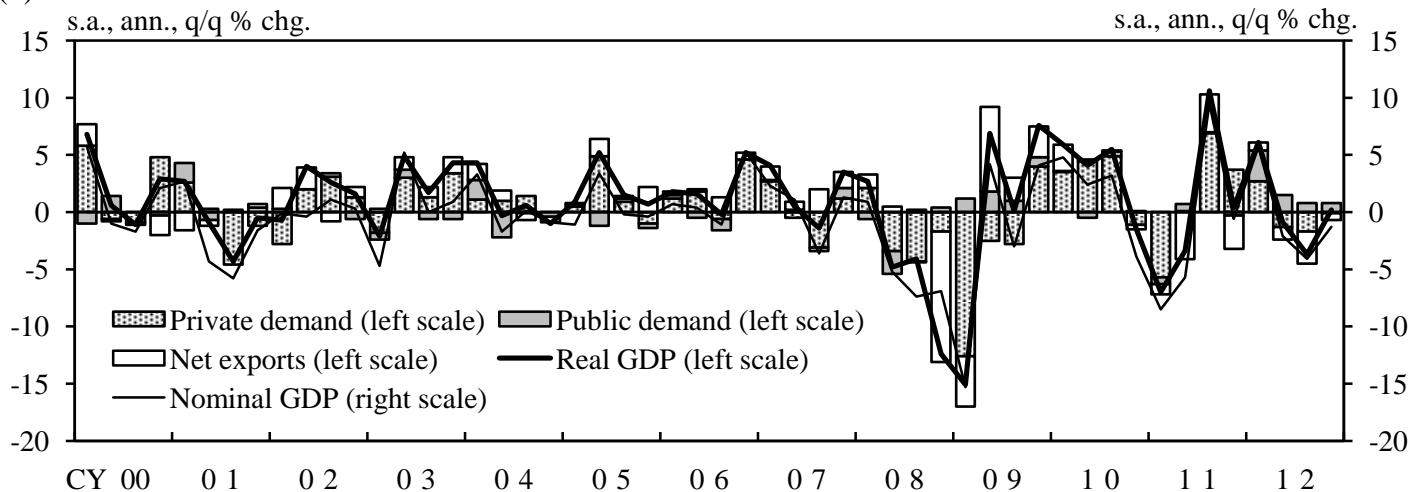
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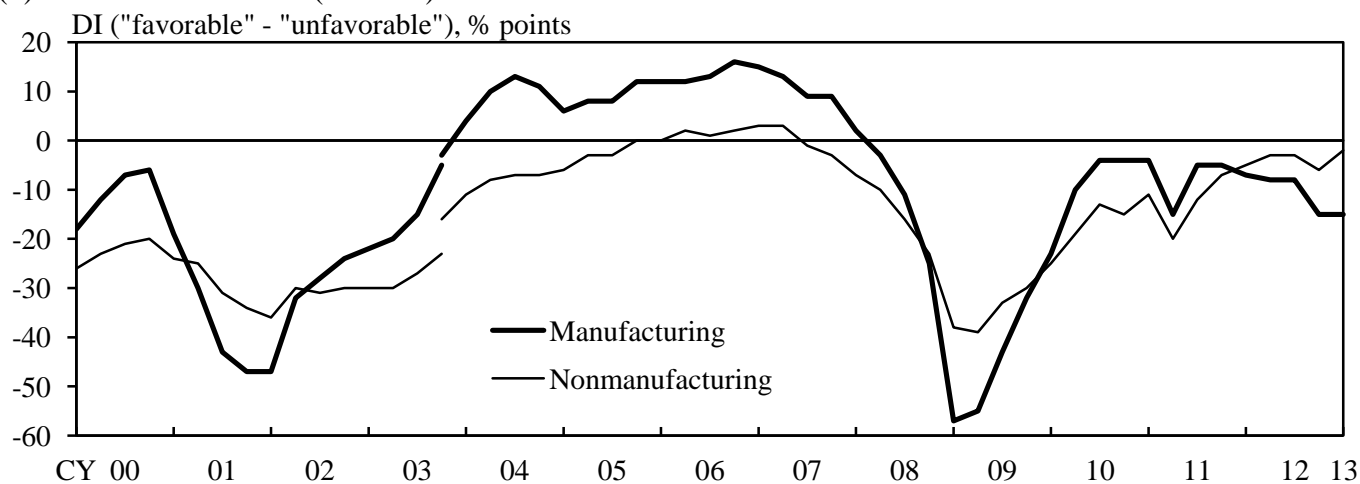


## GDP and Business Conditions

### (1) GDP

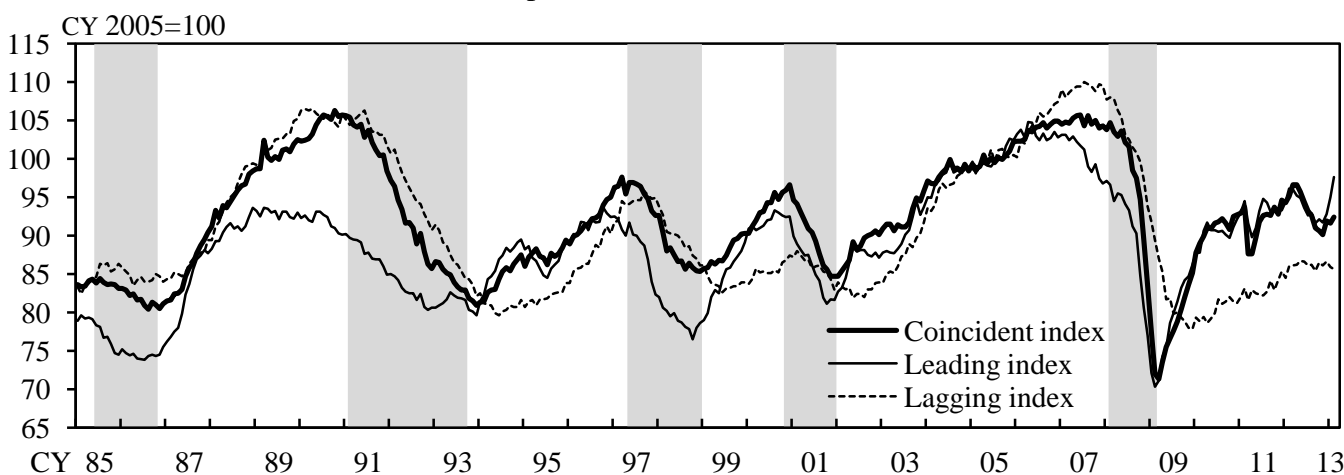


### (2) Business Conditions (*Tankan*)



Note: Data from the "Tankan" are based on enterprises of all sizes. The "Tankan" was revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis.

### (3) Indexes of Business Conditions (Composite Indexes, Cabinet Office)



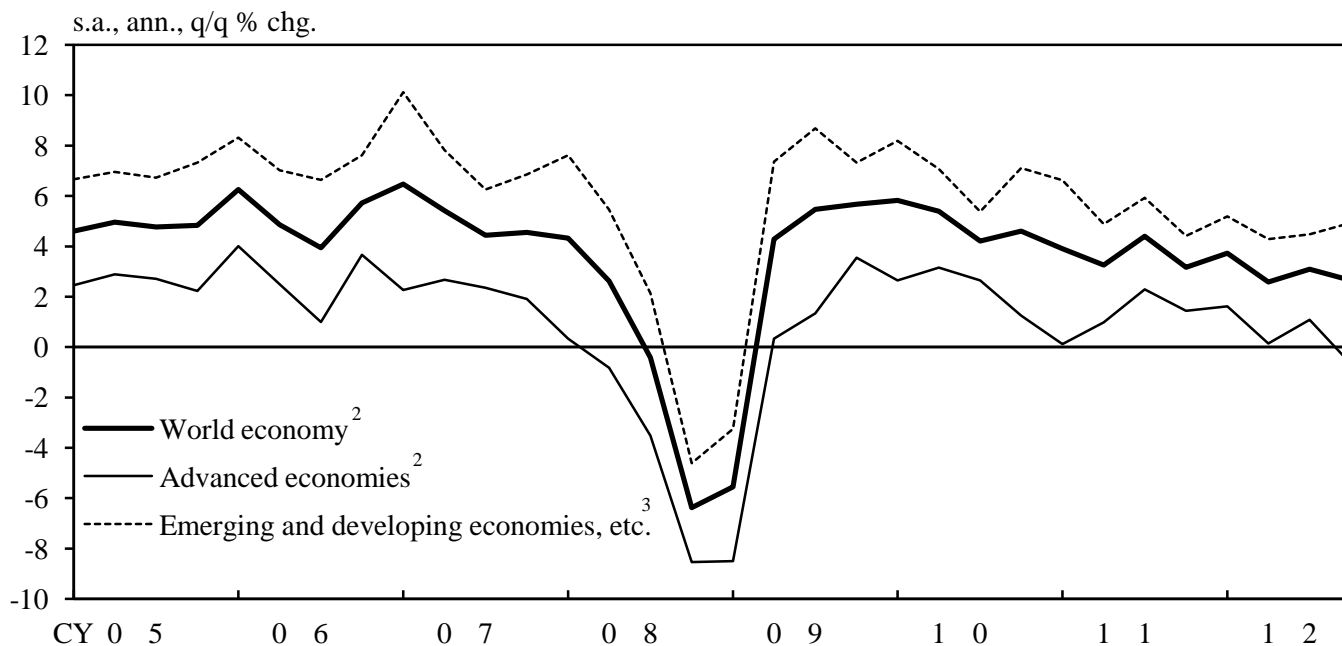
Note: Shaded areas indicate recession periods.

Sources: Cabinet Office, "National Accounts," "Indexes of Business Conditions";

Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan."

## Overseas Economies

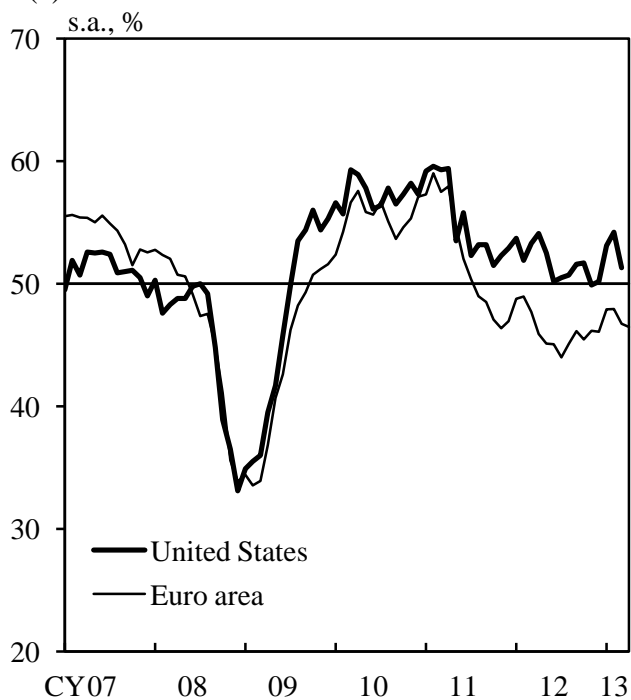
### (1) Real GDP Growth Rates of the World Economy<sup>1</sup>



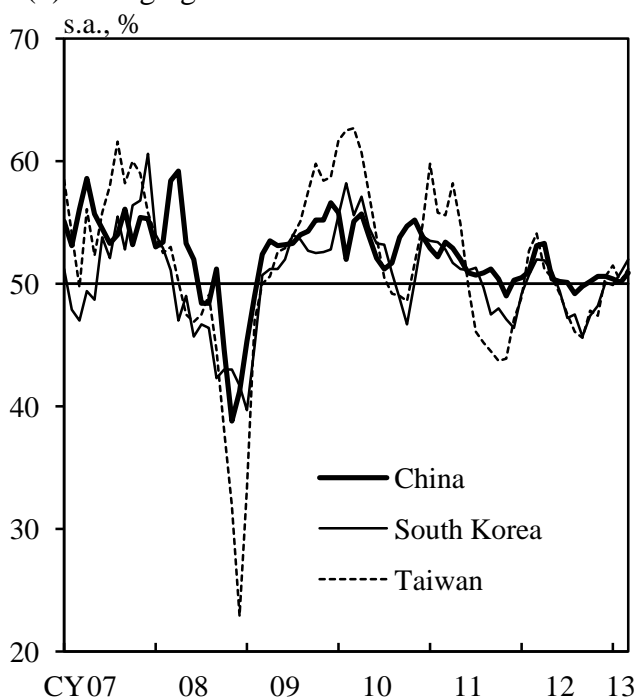
Notes: 1. Figures are calculated using GDP based on purchasing power parity (PPP) shares of the world total from the IMF.  
 2. The world economy covers 188 countries. The advanced economies are the United States, the euro area (17 countries), the United Kingdom, and Japan.  
 3. Including estimated quarterly growth rates based on historical annual data on real GDP growth rates.

### (2) Business Confidence (Manufacturing)

#### (a) Advanced Economies



#### (b) Emerging Economies



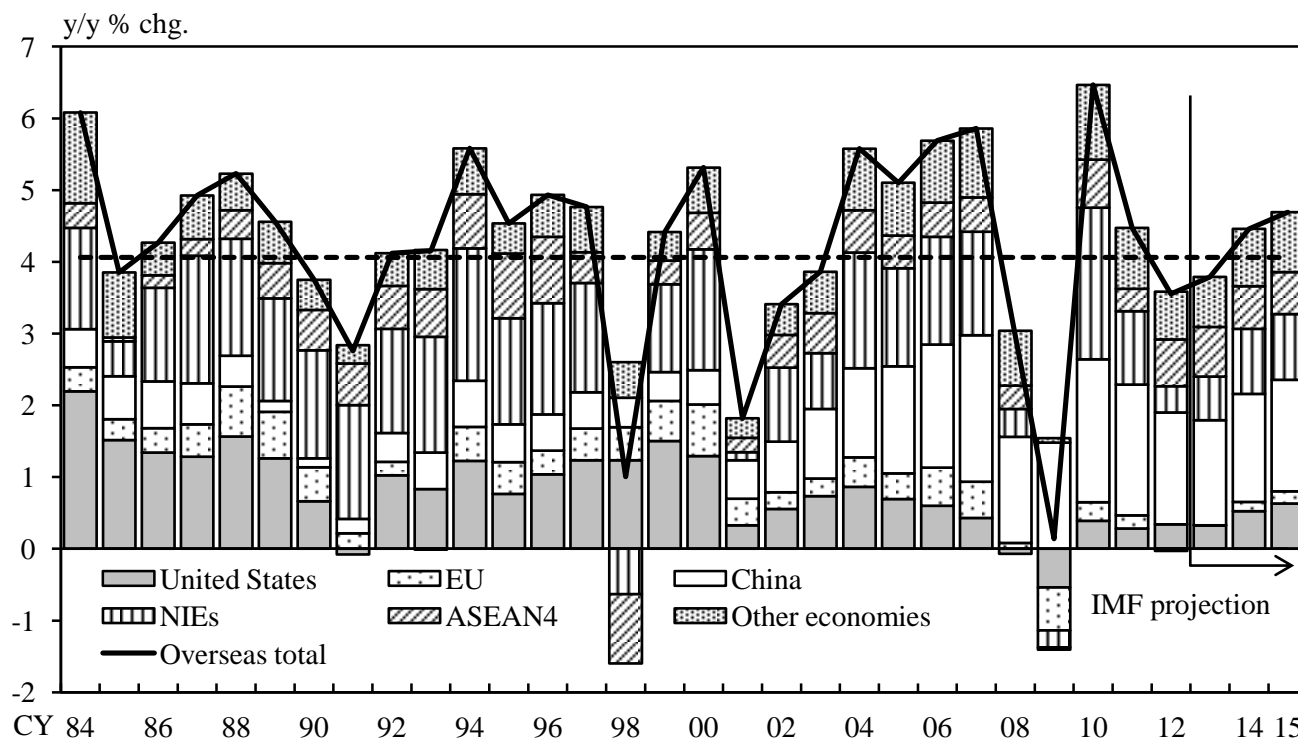
Notes: 1. Figures for the United States are based on the ISM Report on Business, those for China are based on the PMI published by the National Bureau of Statistics of China, and the others are based on the Markit PMI. A reading of 50 percent on these indices generally indicates a turning point between economic expansion and contraction.

2. The latest figure for the euro area is for April 2013, and those for the others are for March 2013.

Sources: IMF, "World Economic Outlook"; National Bureau of Statistics of China; Bloomberg; Markit (© and database right Markit Economics Ltd 2013. All rights reserved.), etc.

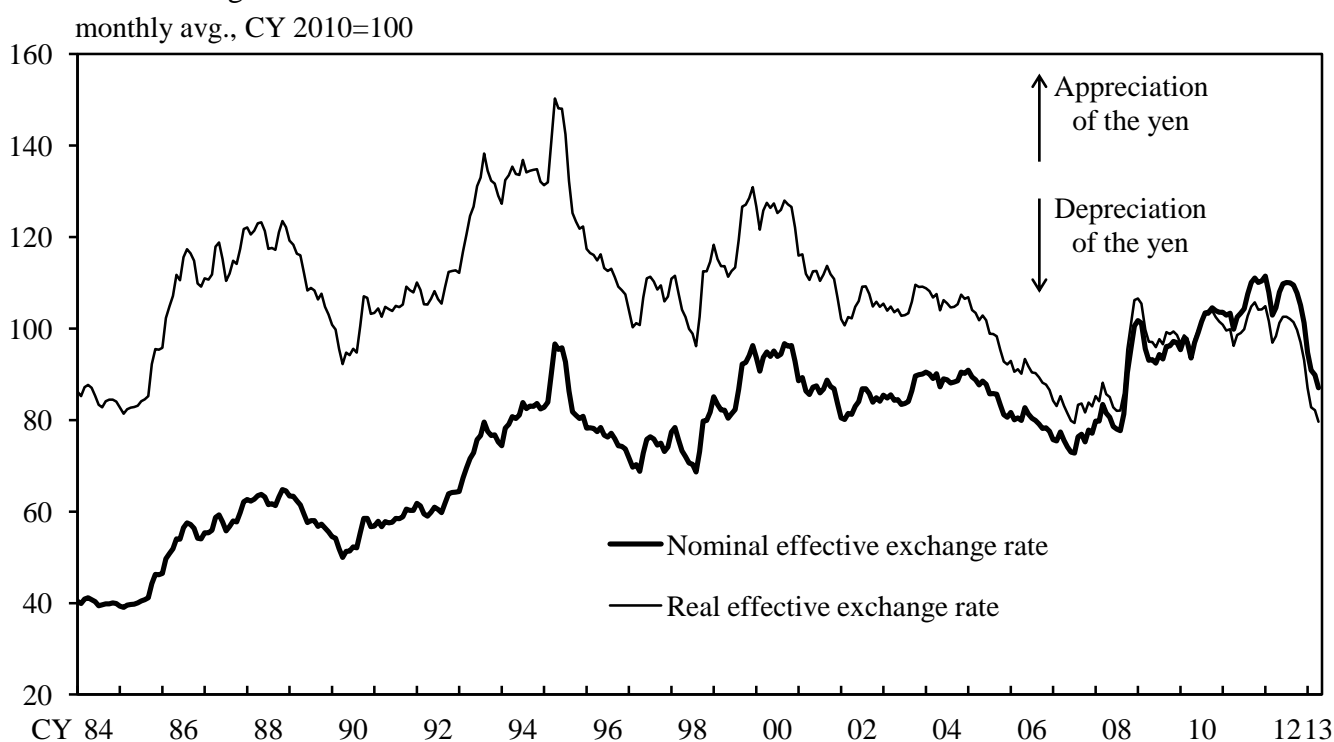
## Overseas Economies and Exchange Rates

### (1) Real GDP Growth Rates of Overseas Economies



Note: The figures for the overseas total are the weighted averages of real GDP growth rates by value of exports from Japan to each economy. The broken line indicates the average of 1980-2012 (4.1 percent).

### (2) Effective Exchange Rates of the Yen



Note: Figures are based on the broad indices of the BIS effective exchange rates, and those prior to 1994 are calculated using the narrow indices. Figures for April 2013 are calculated using the Bank of Japan's nominal effective exchange rate of the yen.

Sources: IMF, "World Economic Outlook"; Ministry of Finance, "Trade Statistics"; Bank for International Settlements; Bank of Japan.

## Exports and Imports

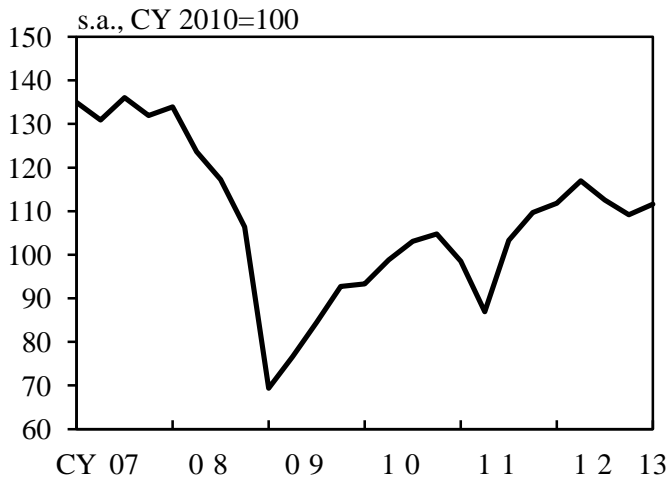
### (1) Real Exports and Real Imports



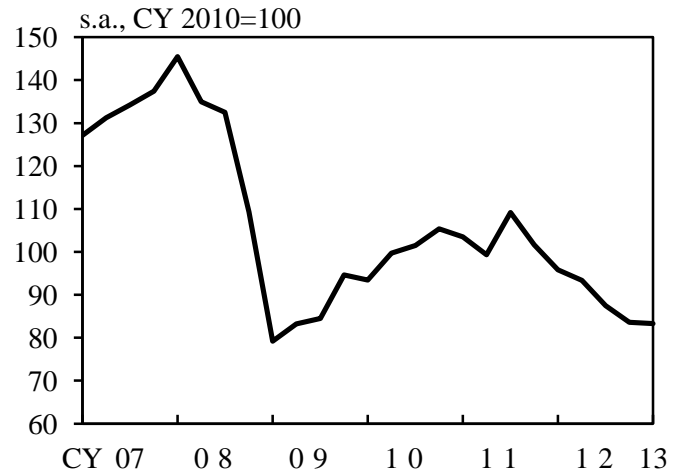
Note: Figures are seasonally adjusted by X-12-ARIMA. The same method applies to the charts below.

### (2) Real Exports by Region

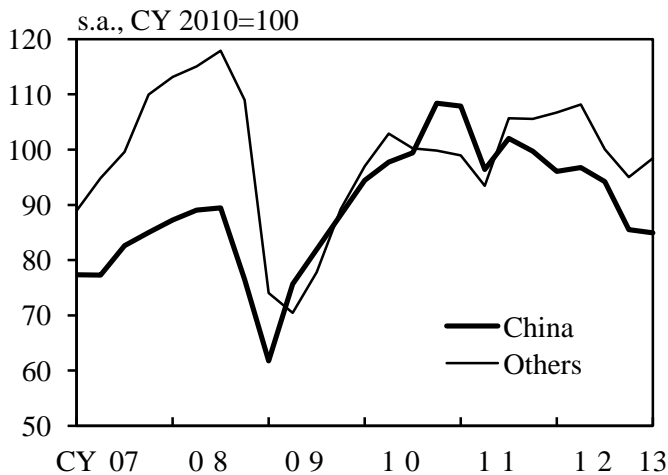
#### (a) United States (17.6%)



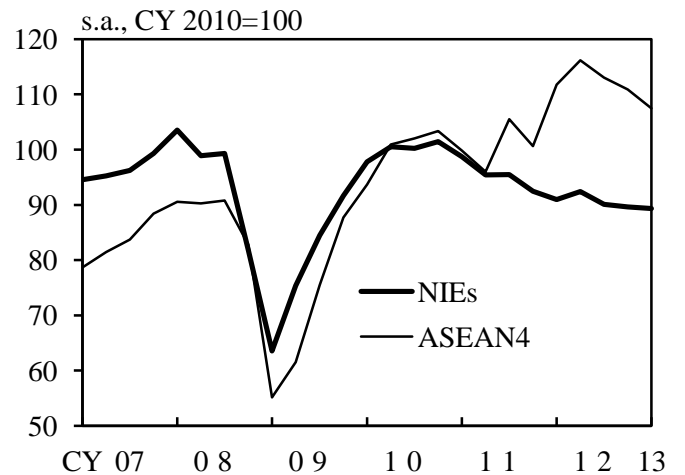
#### (b) EU (10.2%)



#### (c) China and Others (18.1%, 21.0%)



#### (d) NIEs and ASEAN4 (21.5%, 11.7%)

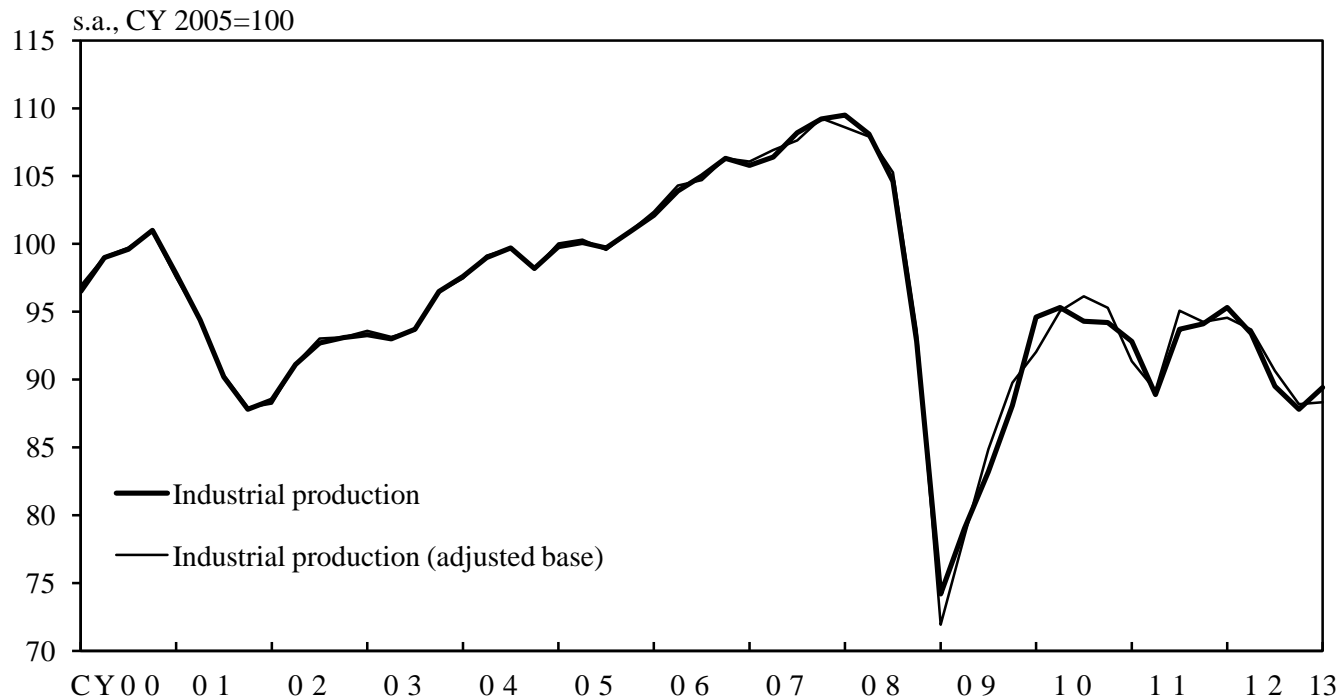


Note: Figures in the parentheses show shares of each economy in the total amount of exports in 2012.

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

## Production

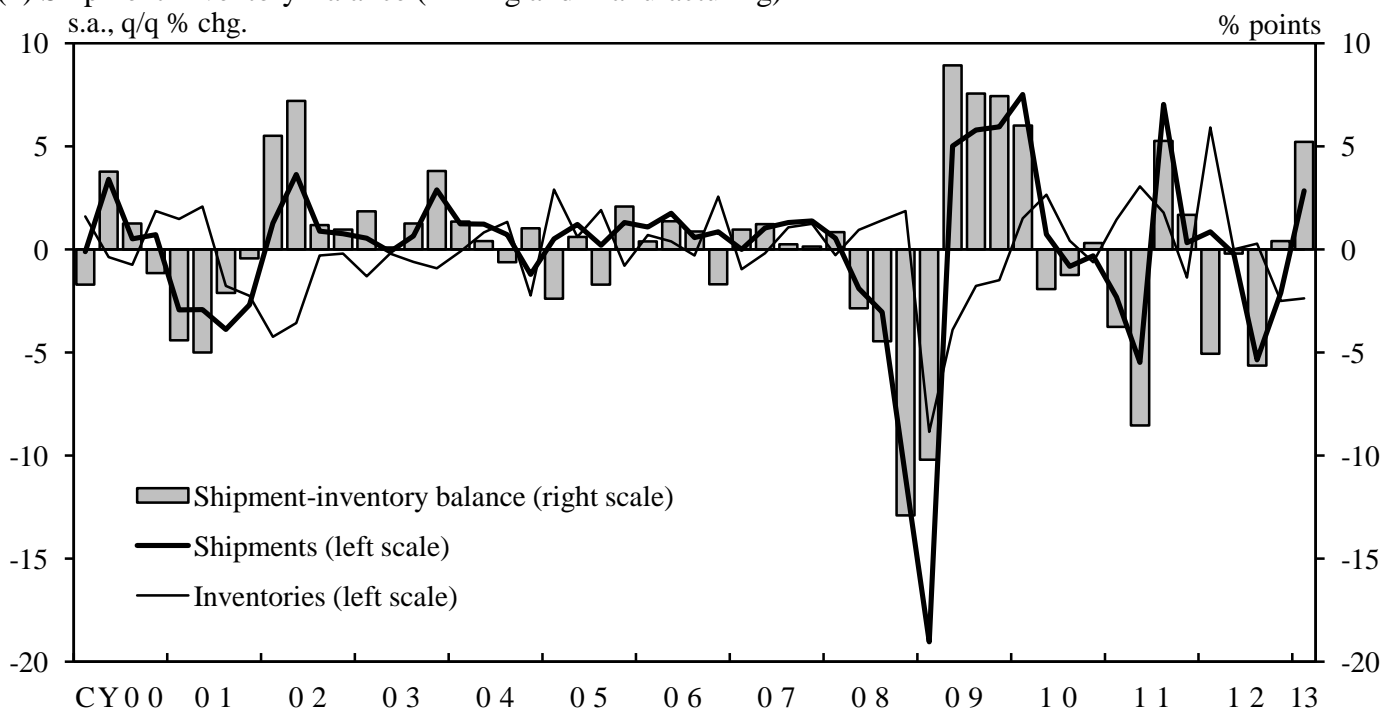
## (1) Industrial Production



Notes: 1. Industrial production (adjusted base) is calculated by detecting large fluctuations after the Lehman shock as outliers (estimation by the Research and Statistics Department, Bank of Japan).

2. Figures for 2013/Q1 are January-February averages.

## (2) Shipment-Inventory Balance (Mining and Manufacturing)



Notes: 1. Shipment-inventory balance = shipments (quarter-on-quarter percentage change) - inventories (quarter-on-quarter percentage change)

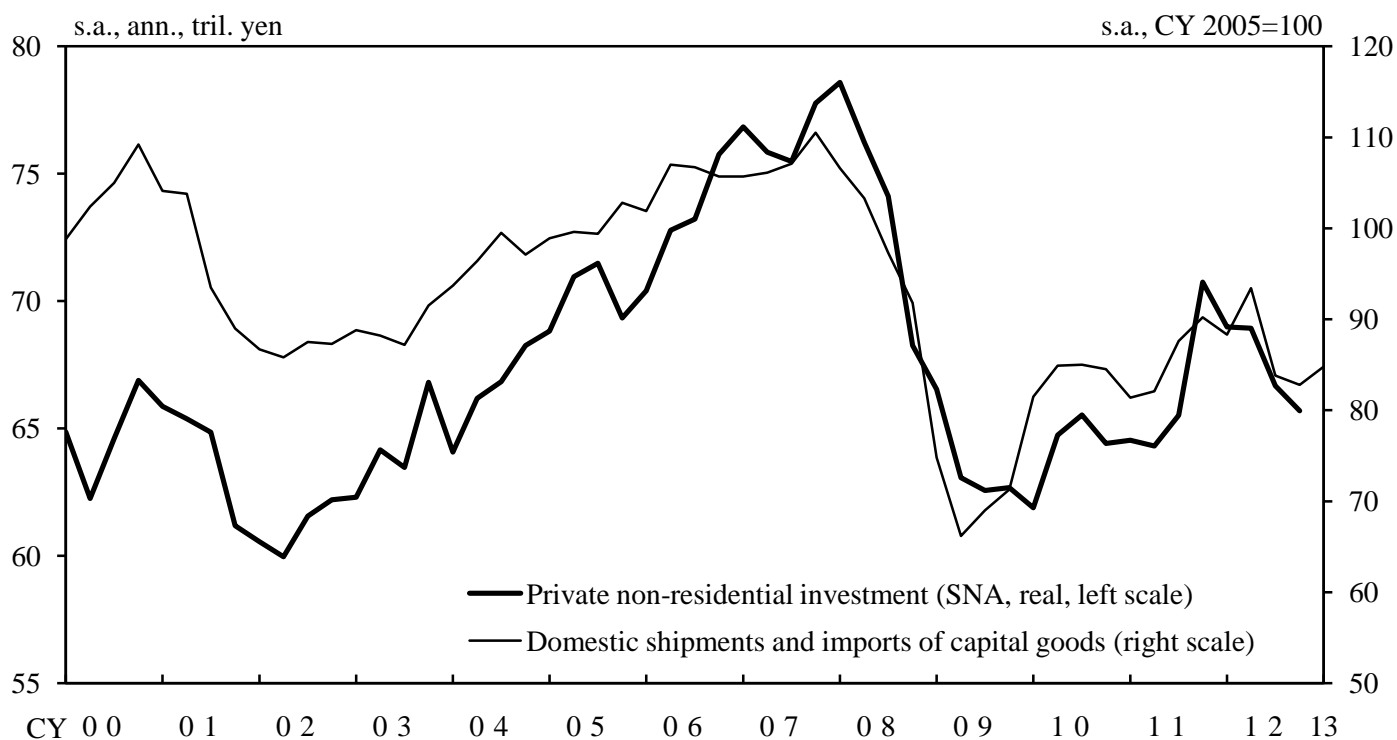
2. The figure for shipments for 2013/Q1 is the January-February average.

3. The figure for inventories for 2013/Q1 is that of February.

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

## Fixed Investment

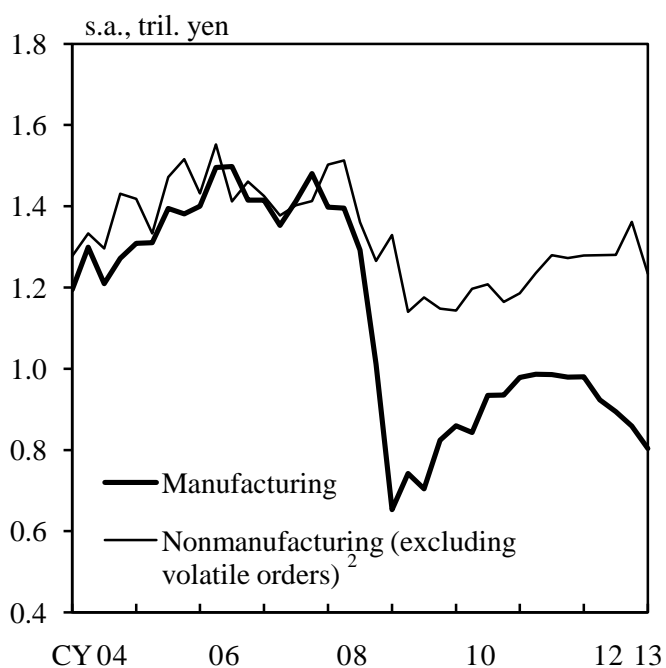
(1) Private Non-Residential Investment, and Domestic Shipments and Imports of Capital Goods



Note: The figure for 2013/Q1 is the January-February average.

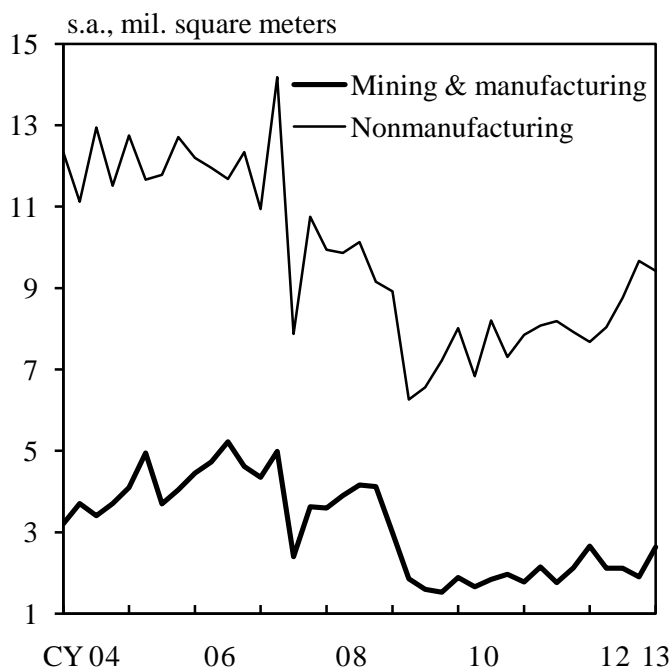
The same definition applies to the charts below.

(2) Machinery Orders<sup>1</sup>



(3) Construction Starts<sup>3</sup>

(Floor Area, Private, Nondwelling Use)



Notes: 1. Figures up to fiscal 2004 are estimated by the Cabinet Office.

2. Volatile orders: orders for ships and those from electric power companies.

3. Figures are seasonally adjusted by X-12-ARIMA.

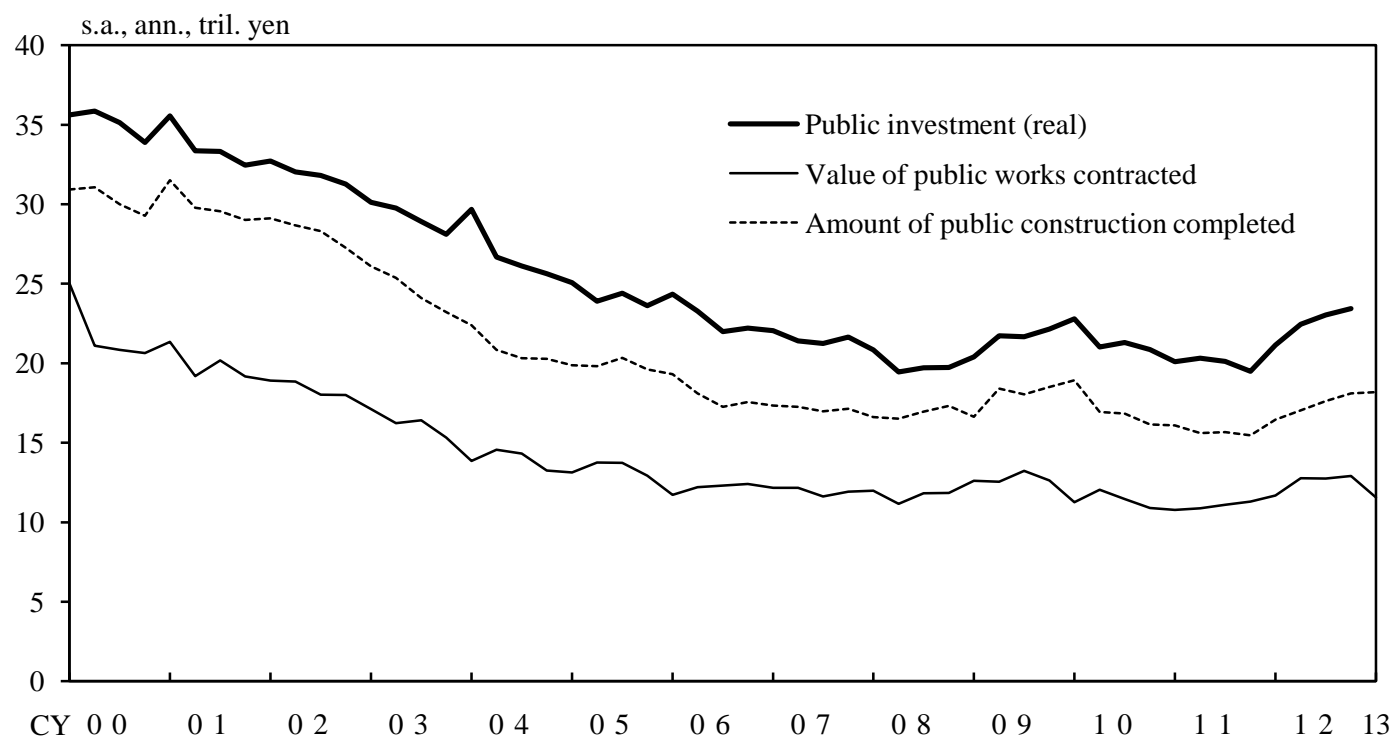
Sources: Cabinet Office, "National Accounts," "Orders Received for Machinery";

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

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

## Public Investment

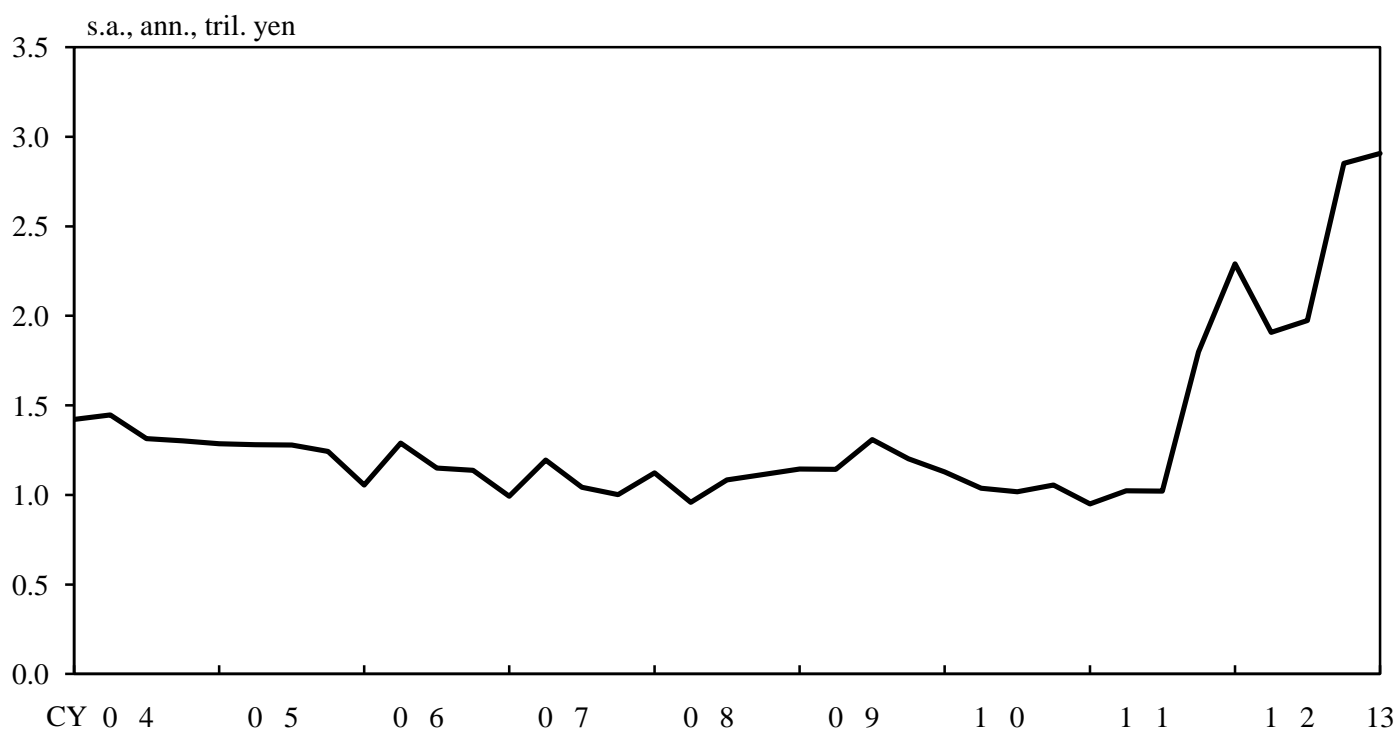
## (1) Indicators of Public Investment



Notes: 1. Figures for the value of public works contracted and the amount of public construction completed are seasonally adjusted by X-12-ARIMA.

2. The figure for the amount of public construction completed for 2013/Q1 is the January-February average.

## (2) Value of Public Works Contracted in the Tohoku Region



Note: Figures are seasonally adjusted by X-12-ARIMA.

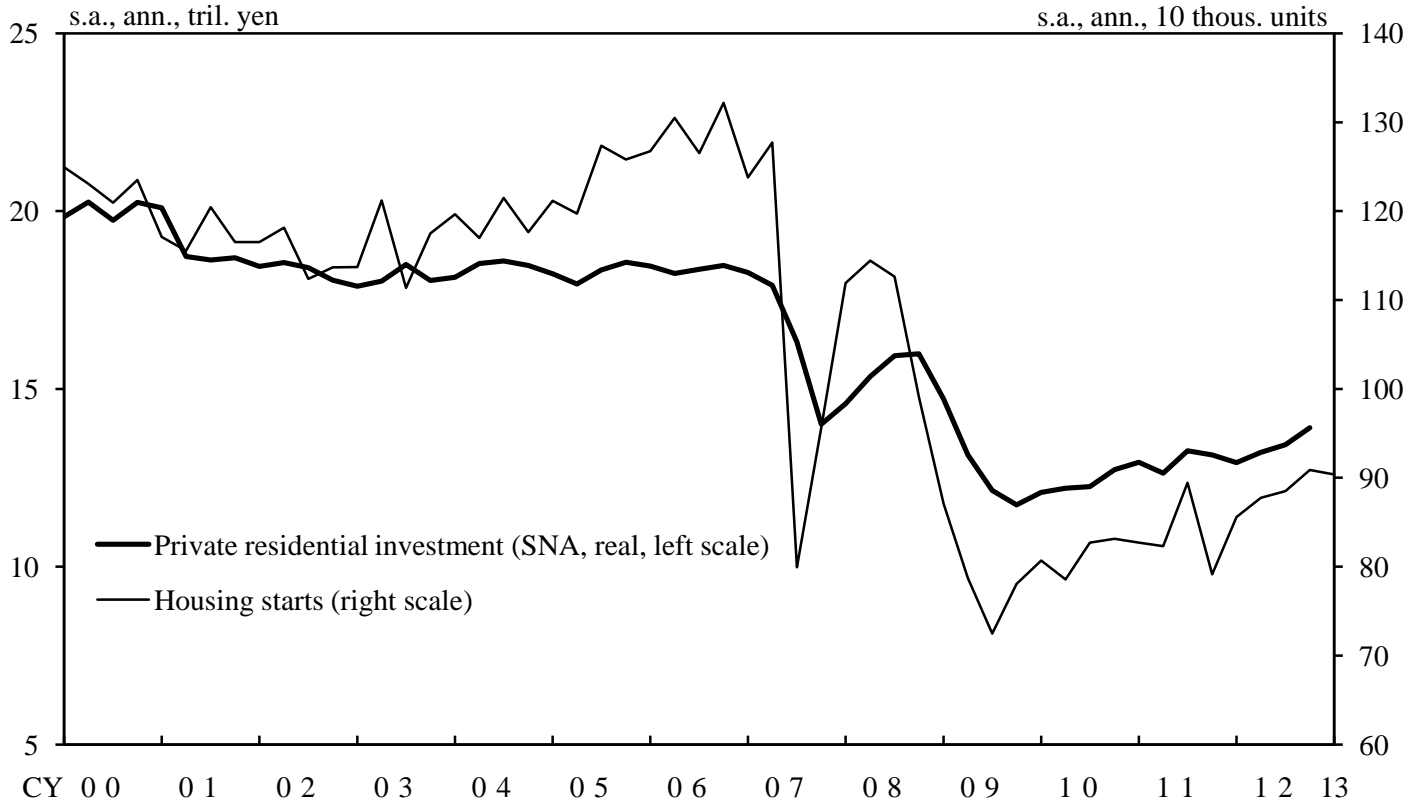
Sources: Cabinet Office, "National Accounts";

East Japan Construction Surety, etc., "Public Works Prepayment Surety Statistics";

Ministry of Land, Infrastructure, Transport and Tourism, "Integrated Statistics on Construction Works."

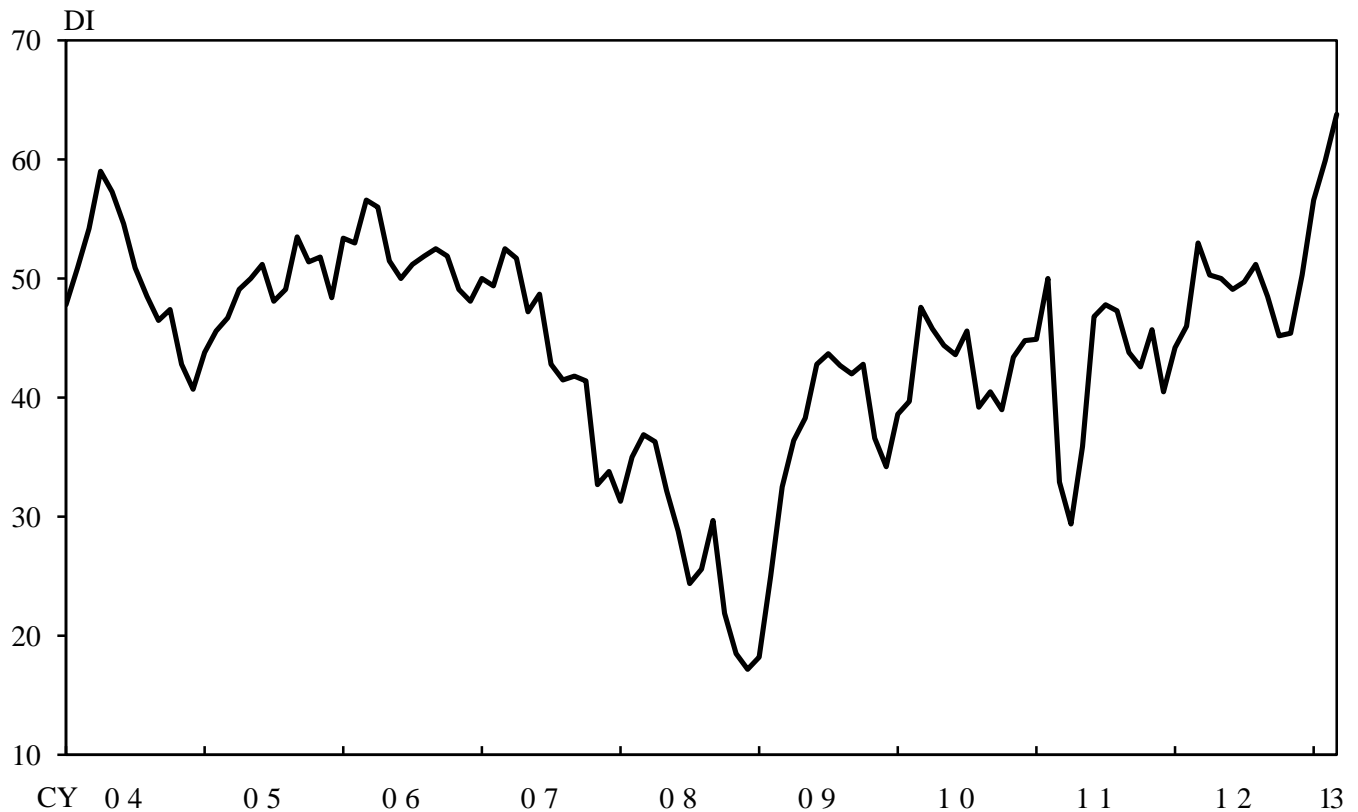
## Housing Investment

(1) Housing Starts and Private Residential Investment



Note: The figure for housing starts for 2013/Q1 is the January-February average.

(2) Economy Watchers Survey (Housing)

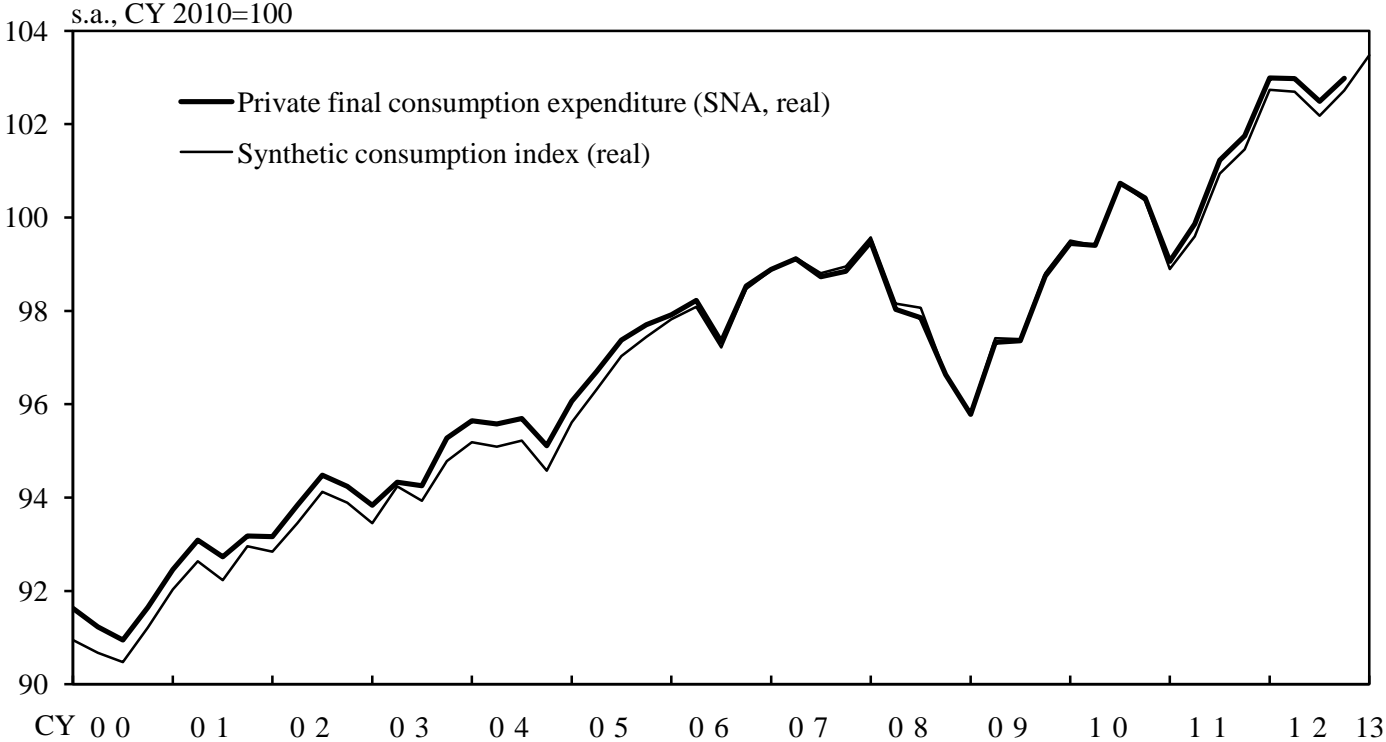


Sources: Ministry of Land, Infrastructure, Transport and Tourism, "Statistics on Building Construction Starts"; Cabinet Office, "National Accounts," "Economy Watchers Survey."



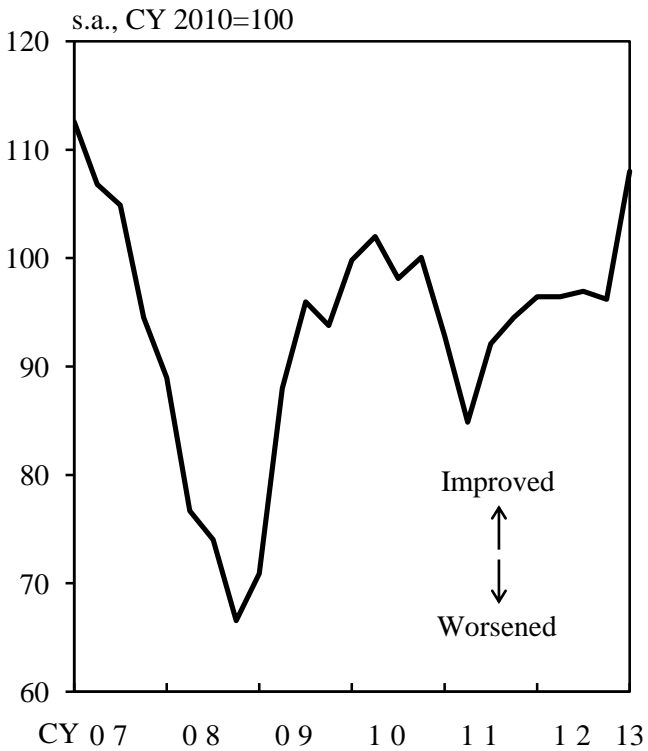
# Private Consumption

(1) Private Final Consumption Expenditure and Synthetic Consumption Index

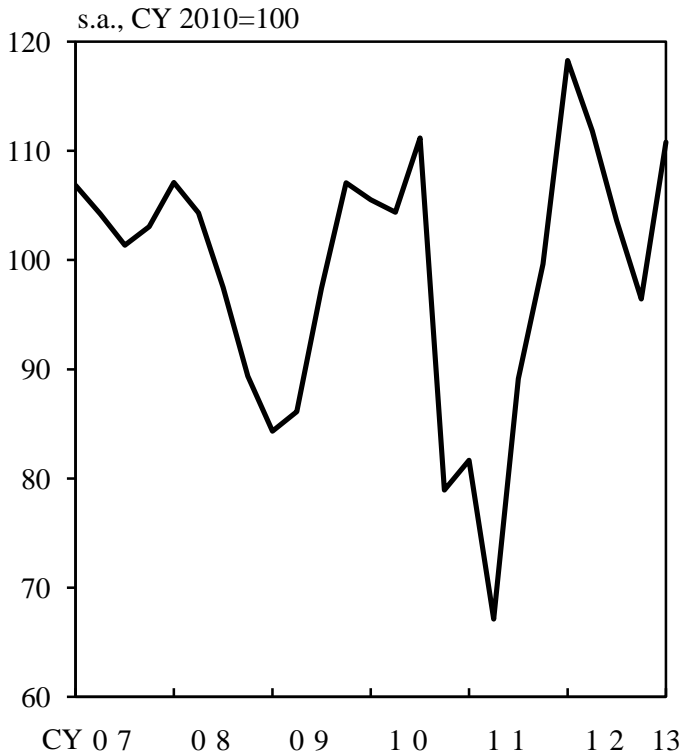


Note: The figure for the synthetic consumption index for 2013/Q1 is the January-February average.

(2) Consumer Confidence Index<sup>1</sup>



(3) New Passenger-Car Registrations<sup>2</sup>



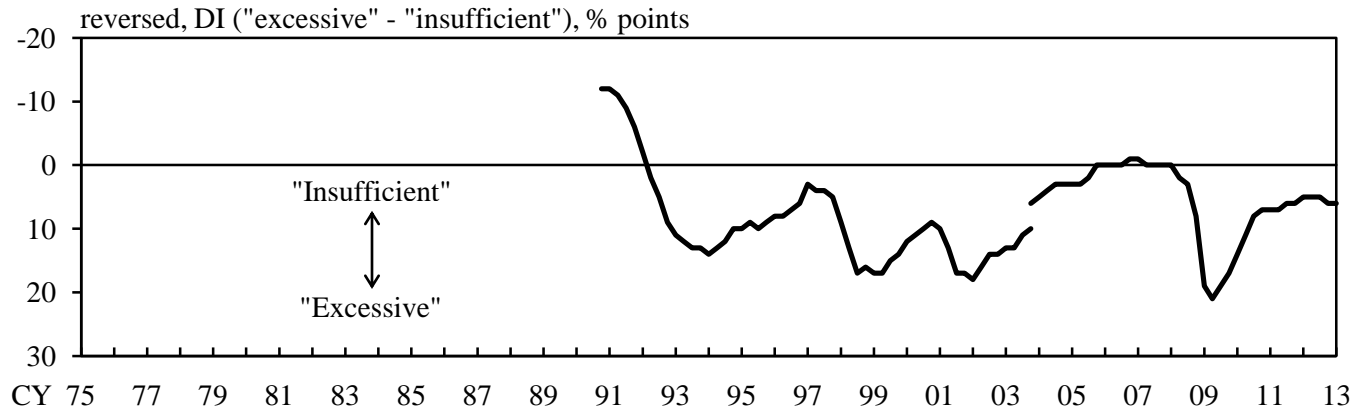
Notes: 1. Figures are the values for the third month of each quarter.

2. Including small cars with engine sizes of 660 cc or less. Figures are seasonally adjusted by X-12-ARIMA.

Sources: Cabinet Office, "National Accounts," "Synthetic Consumption Index," "Consumer Confidence Survey";  
 Japan Automobile Dealers Association, "Domestic Sales of Automobiles";  
 Japan Mini Vehicles Association, "Sales of Mini Vehicles."

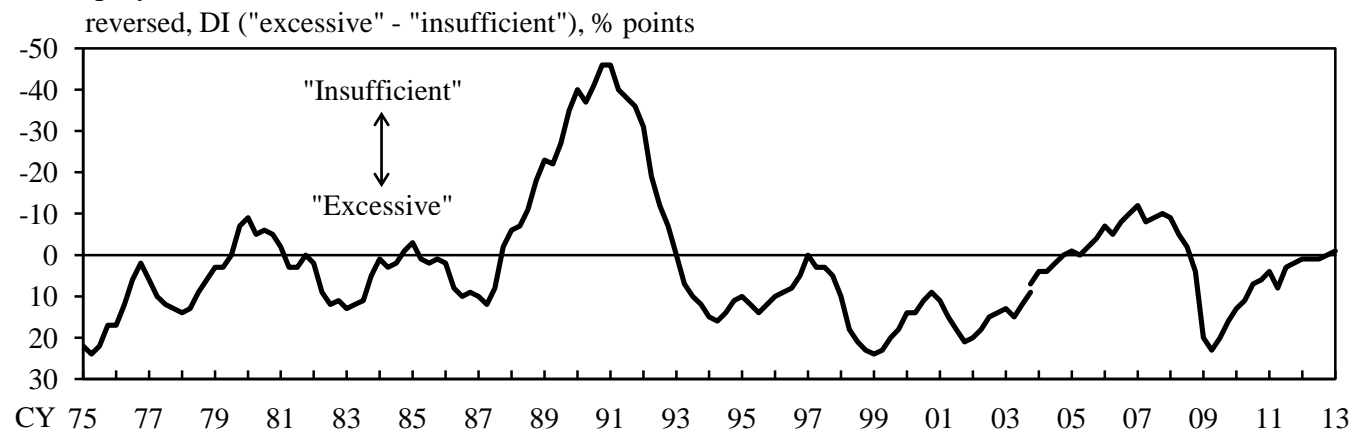
## Resource Utilization

### (1) Production Capacity DI

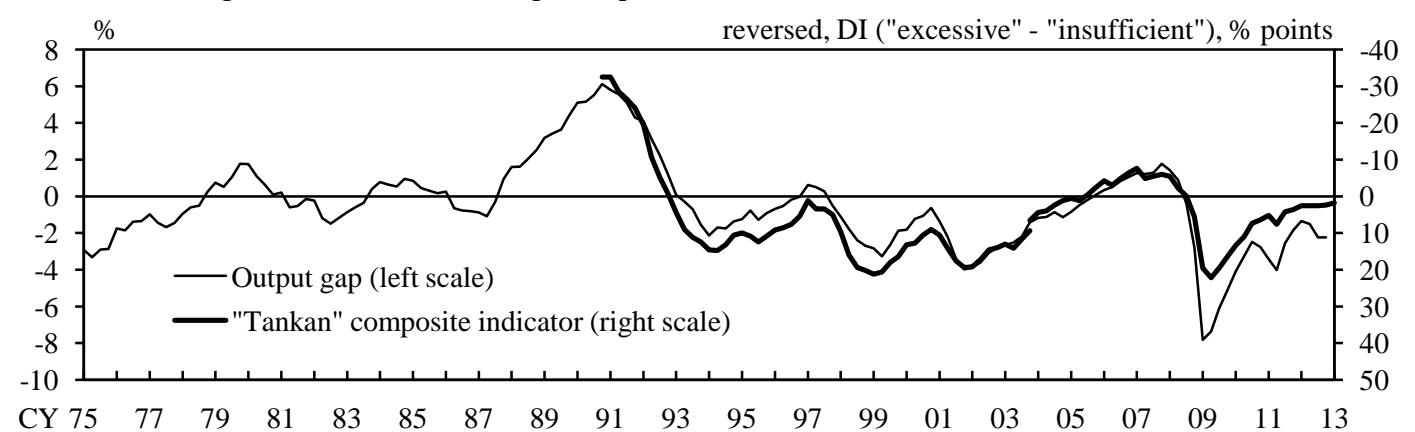


- Notes: 1. Figures for the DI are based on all enterprises. The same definition applies to the charts below.  
 2. The "Tankan" was revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis. The same definition applies to the charts below.

### (2) Employment Conditions DI



### (3) Tankan Composite Indicator and Output Gap

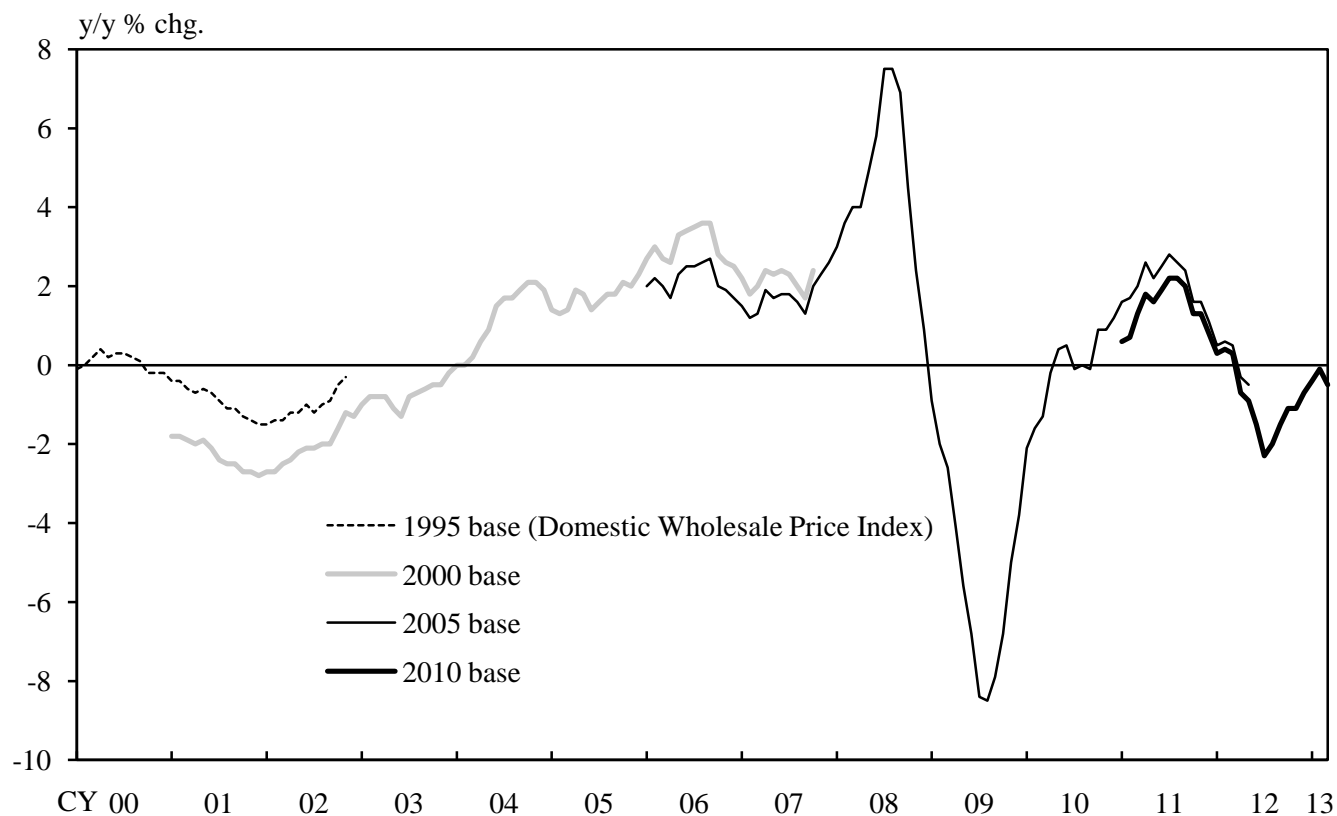


Note: Figures for the "Tankan" composite indicator are weighted averages of the production capacity DI and employment conditions DI. The fiscal 1990-2011 averages of capital and labor shares in "National Accounts" are used as the weight. The output gap is estimated by the Research and Statistics Department, 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.

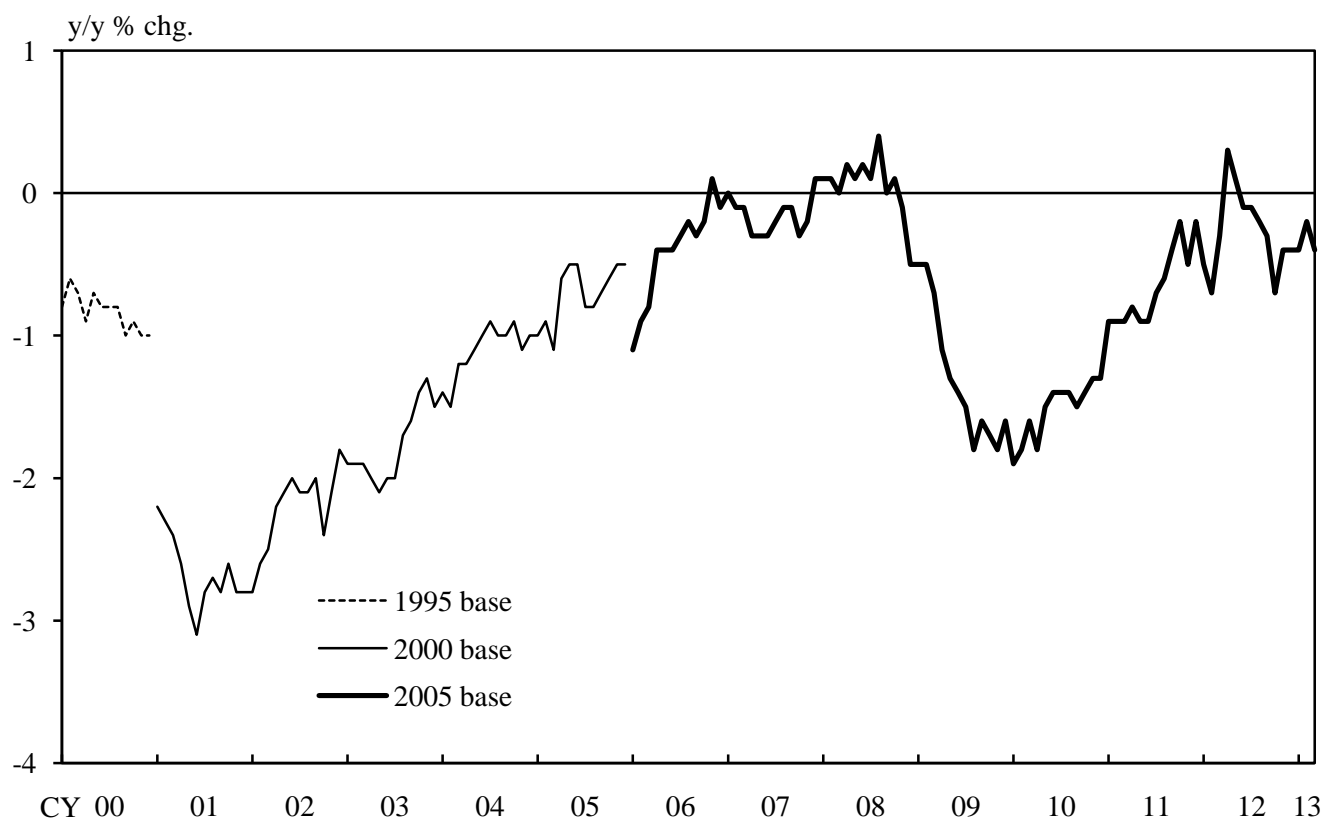
Sources: Cabinet Office, "National Accounts"; Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service"; Ministry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

## Domestic Corporate Goods Prices and Corporate Services Prices

(1) Domestic Corporate Goods Price Index



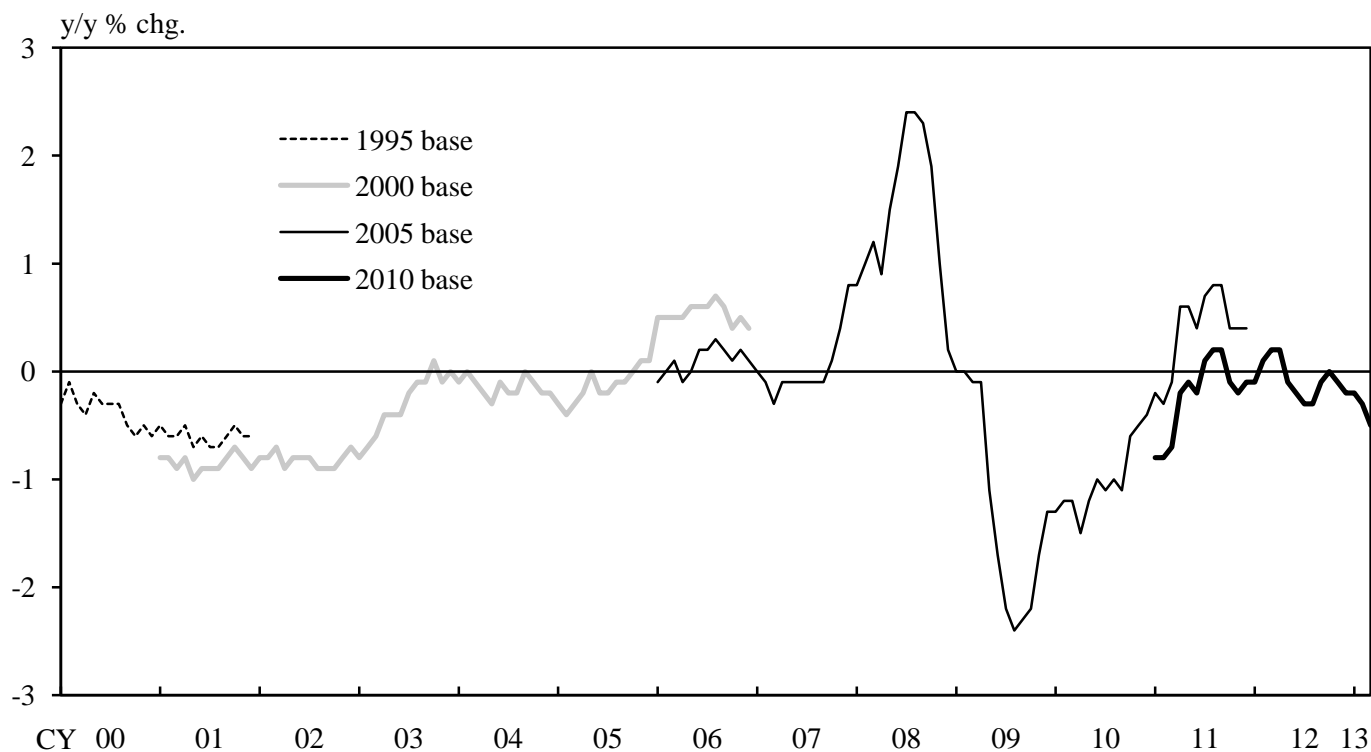
(2) Corporate Services Price Index (Excluding International Transportation)



Source: Bank of Japan, "Corporate Goods Price Index," "Wholesale Price Index," "Corporate Services Price Index."

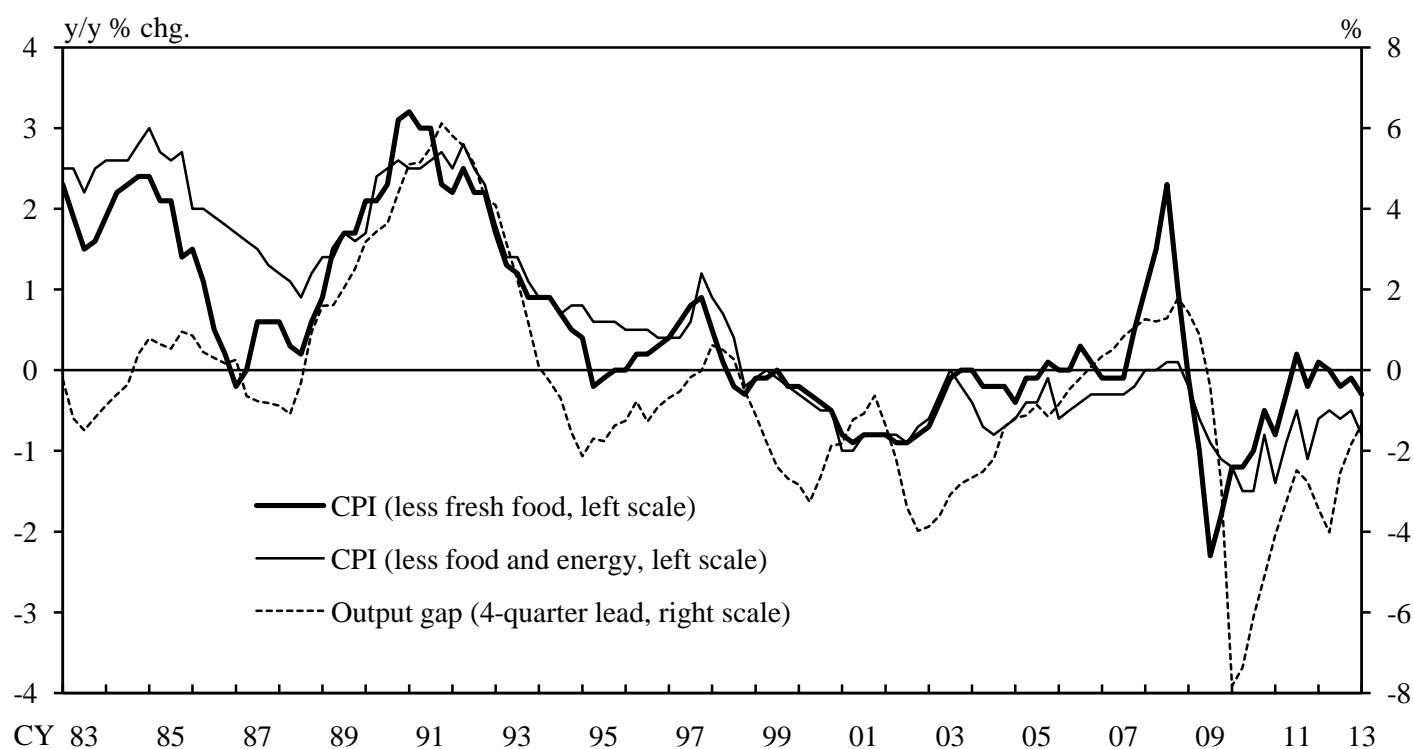
### Consumer Price Index (1)

(1) Consumer Price Index



Note: Less fresh food.

(2) Consumer Price Index and Output Gap

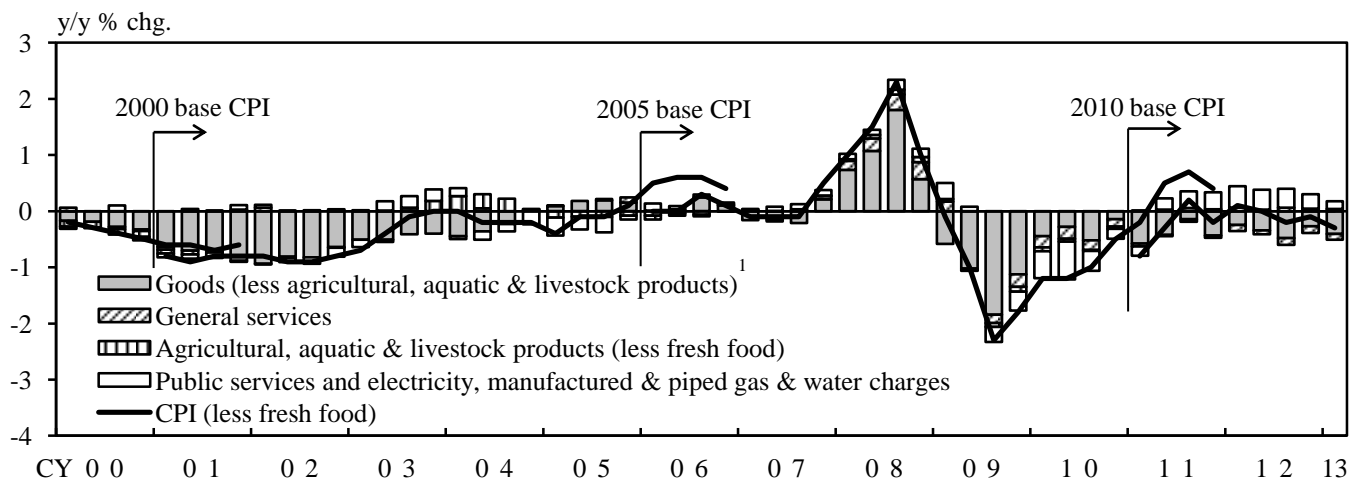


- Notes: 1. Figures for the CPI are adjusted to exclude the effect of changes in the consumption tax rate.
- 2. Alcoholic beverages are excluded from food.
- 3. The output gap is estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3.

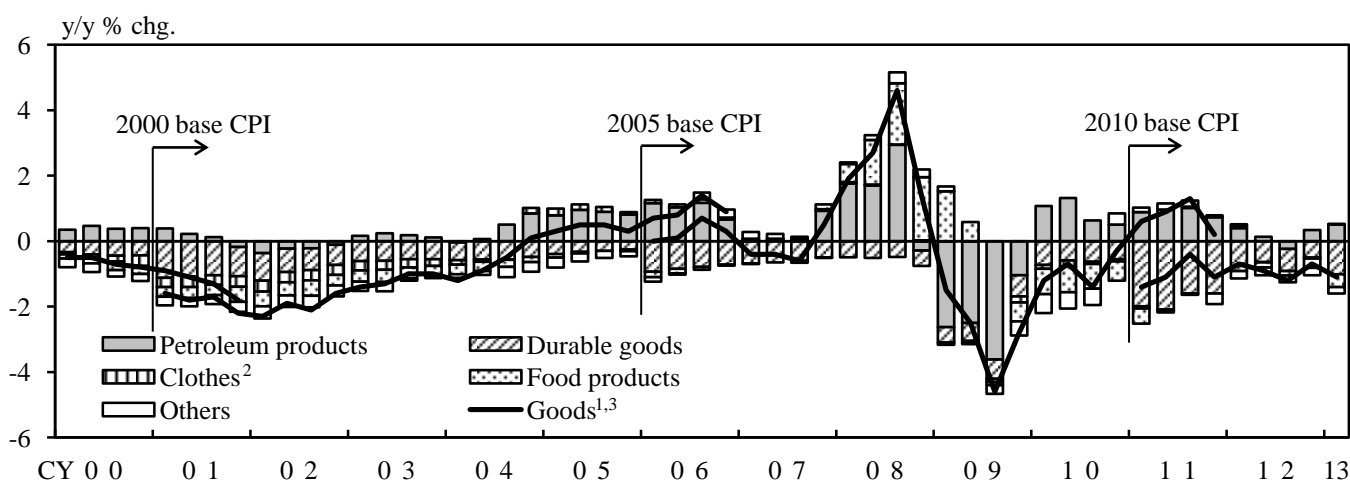
Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index"; Cabinet Office, "National Accounts," etc.

## Consumer Price Index (2)

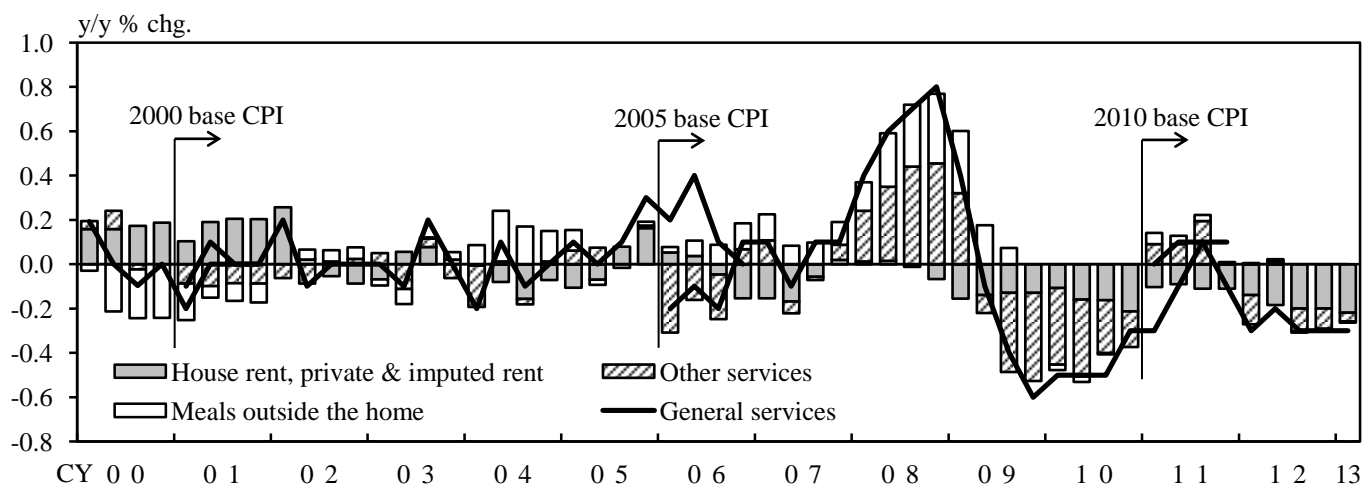
(1) Consumer Price Index (Less Fresh Food)



(2) Goods (Less Agricultural, Aquatic & Livestock Products)<sup>1</sup>



(3) General Services



Notes: 1. The items are basically the same as those defined by the Ministry of Internal Affairs and Communications. However, electricity, manufactured & piped gas & water charges are excluded from goods.

2. Including shirts, sweaters & underwear.

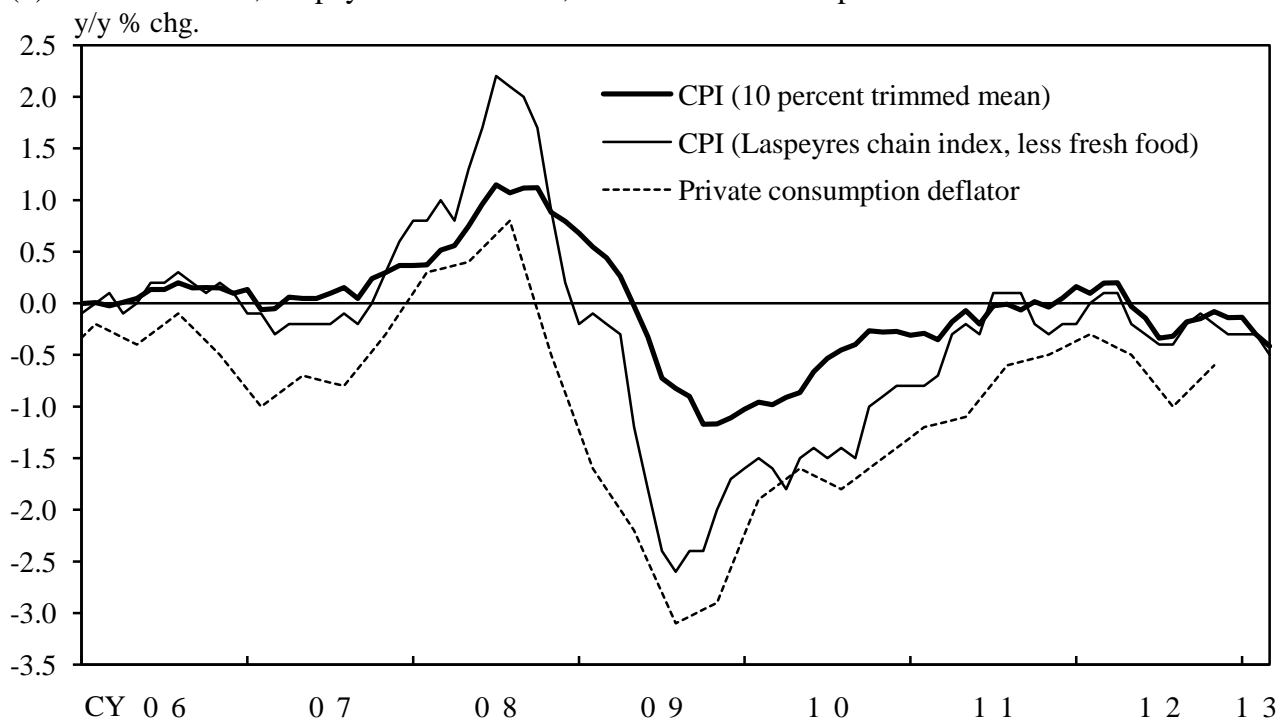
3. Less agricultural, aquatic & livestock products.

4. The year-on-year rates of change, other than those of the CPI (less fresh food) and general services, are calculated using published indices.

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

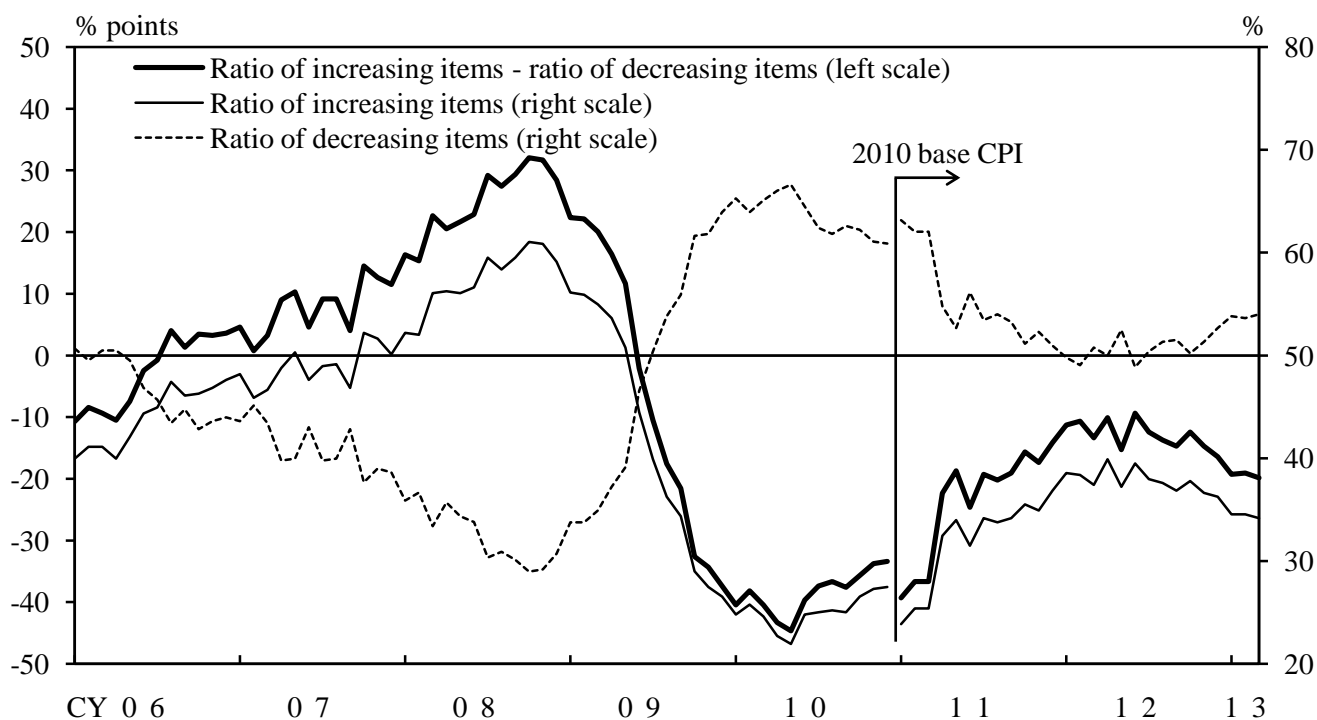
### Consumer Price Index (3)

(1) Trimmed Mean, Laspeyres Chain Index, and Private Consumption Deflator



- Notes: 1. Figures for the 10 percent trimmed mean are weighted averages of items; these items are obtained by rearranging year-on-year rates of price change in ascending order and then excluding items in both the upper and lower 10 percent tails by weight.
2. Figures for the Laspeyres chain index for 2006 are the year-on-year rates for the fixed-base method. The year-on-year figures for the Laspeyres chain index up to 2010 are on the 2005 base, and those from 2011 onward are on the 2010 base.

(2) Ratio of Increasing and Decreasing Items

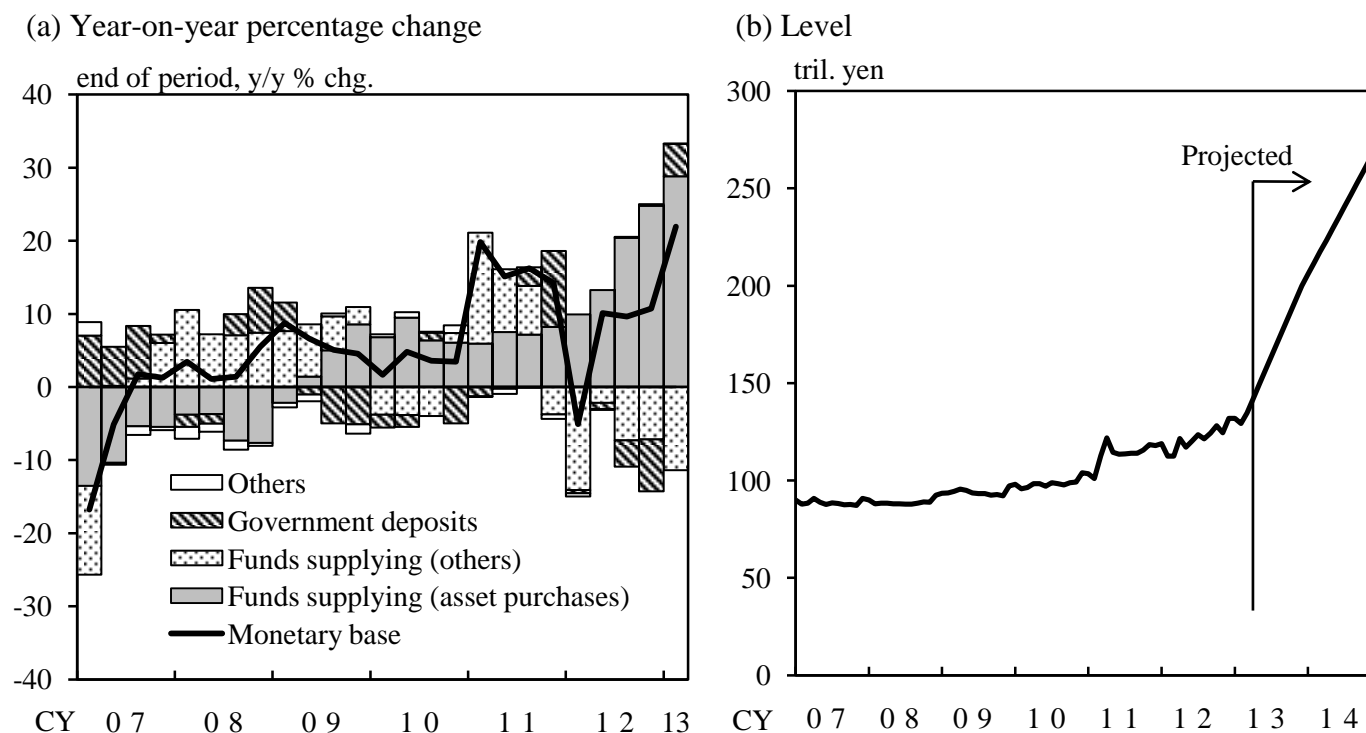


Note: Proportion of items whose year-on-year rates of price change increased/decreased. CPI less fresh food.

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

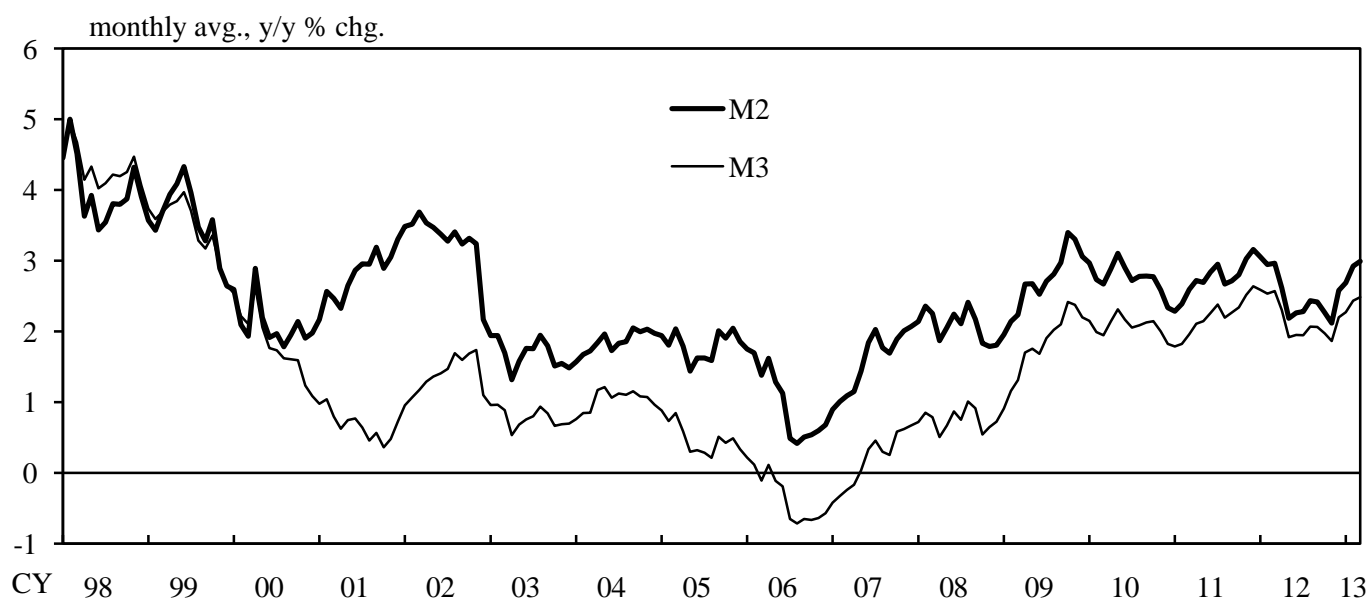
## Monetary Base and Money Stock

### (1) Monetary Base



- Notes: 1. Funds supplying (asset purchases) are the amounts outstanding of JGBs, T-Bills, ETFs, J-REITs, CP, and corporate bonds purchased.
2. Government deposits include sales of JGBs to the government under repurchase agreements and T-Bills underwritten by the Bank of Japan, etc.

### (2) Money Stock



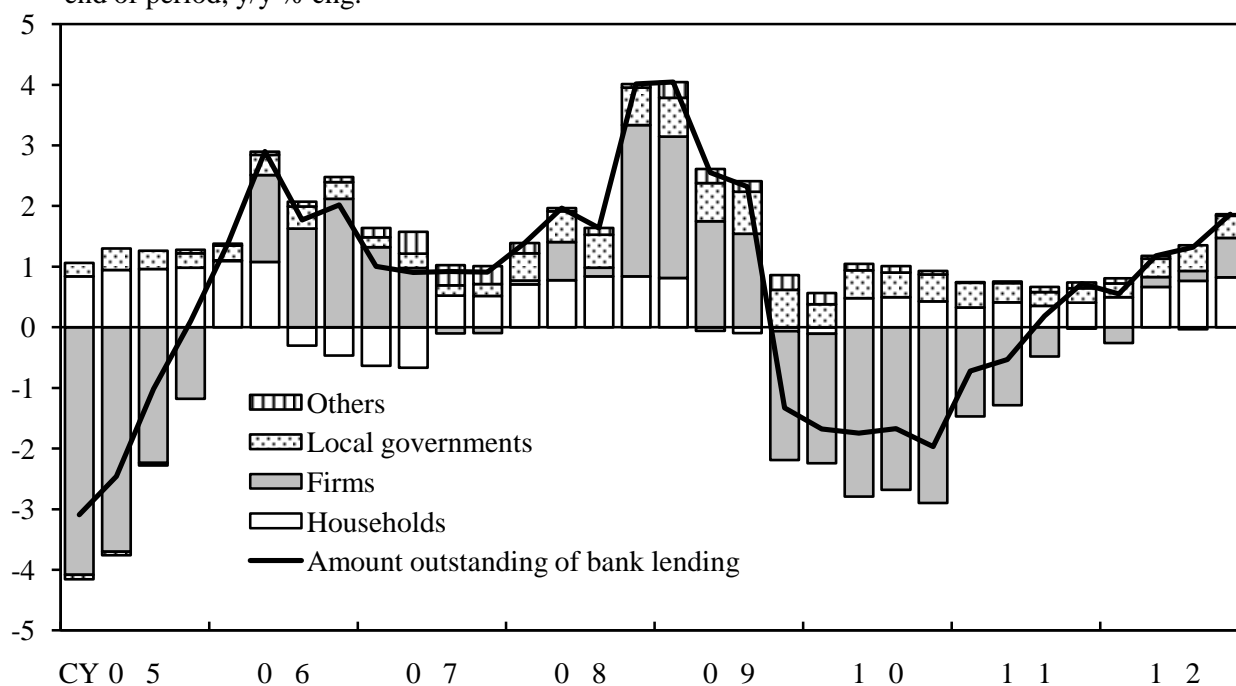
- Notes: 1. Figures for M2 up to March 2003 are the former series of the figures for M2+CDs.
2. Figures for M3 up to March 2003 are the former series of the figures for M3+CDs minus the figures for pecuniary trusts.

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

## Amount Outstanding of Bank Lending, CP, and Corporate Bonds

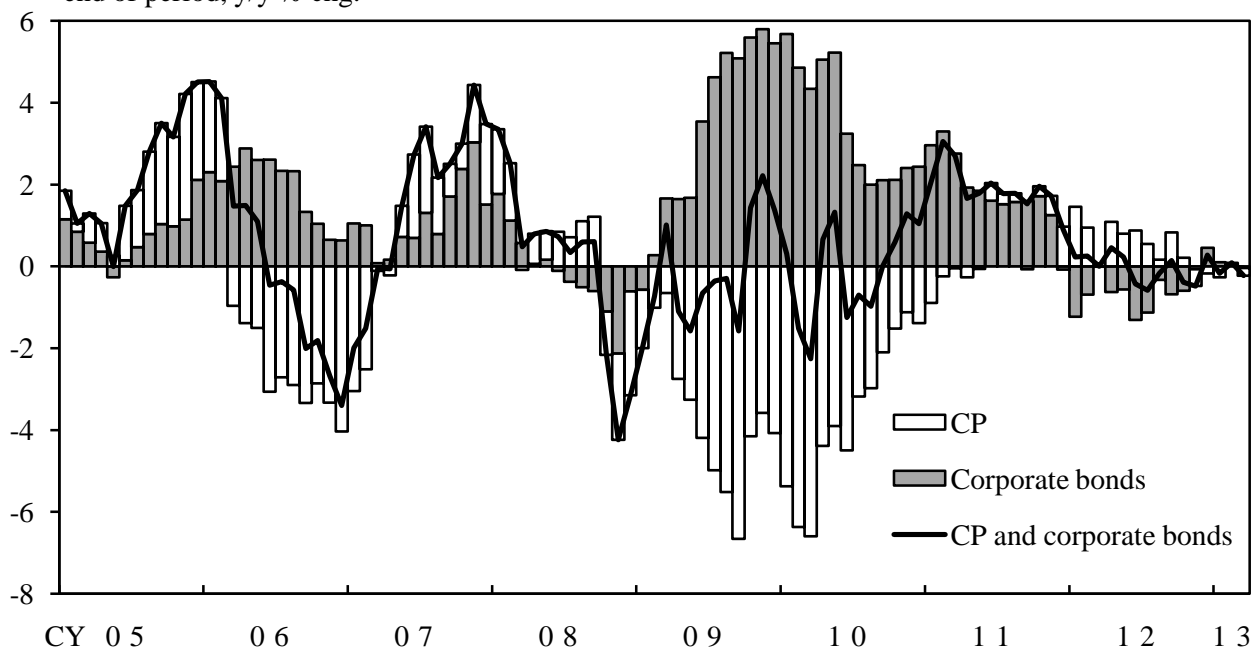
### (1) Lending by Domestic Commercial Banks

end of period, y/y % chg.



### (2) Amount Outstanding of CP and Corporate Bonds

end of period, y/y % chg.



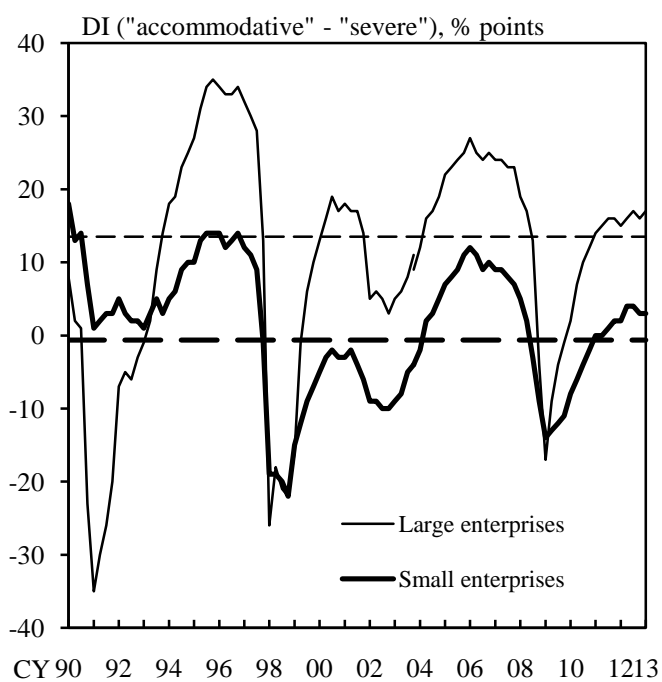
- Notes: 1. Figures for CP are those of short-term corporate bonds registered under the book-entry transfer system. Those issued by banks, securities companies, and others such as foreign corporations are excluded; ABCPs are included. Figures up to March 2008 are those compiled by the Bank of Japan.
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 are included. Domestic bonds are those registered at the book-entry transfer system. The series is spliced at April 2008 with the one published by the Japan Securities Dealers Association.

Sources: Bank of Japan, "Loans and Bills Discounted by Sector"; Japan Securities Depository Center; Japan Securities Dealers Association; I-N Information Systems.

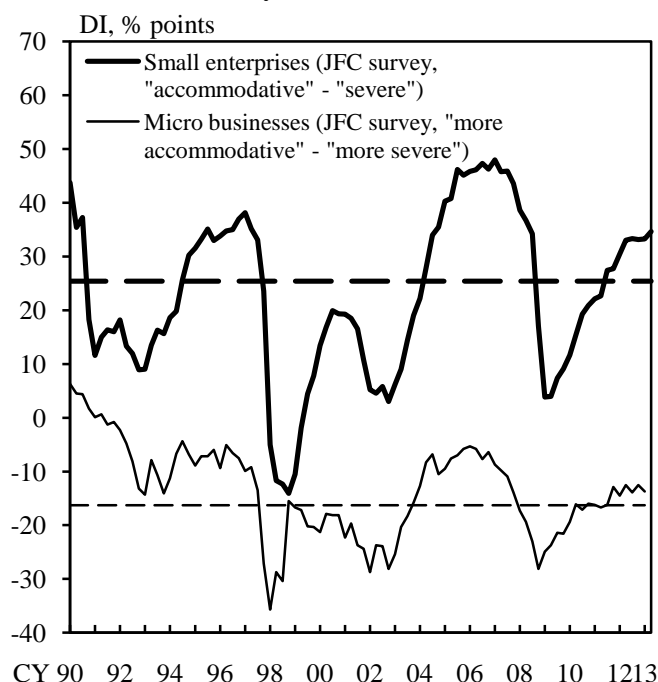


## Corporate Finance-Related Indicators

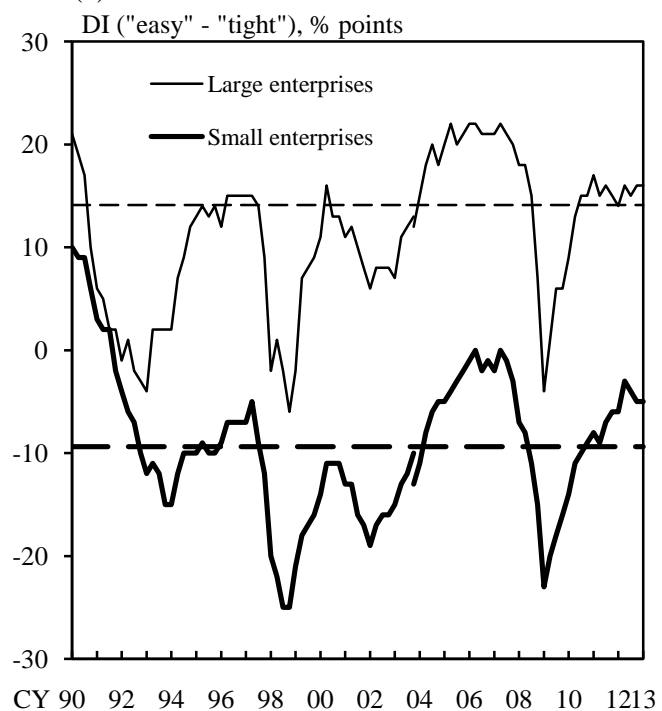
## (1) Lending Attitude of Financial Institutions as Perceived by Firms

(a) *Tankan*

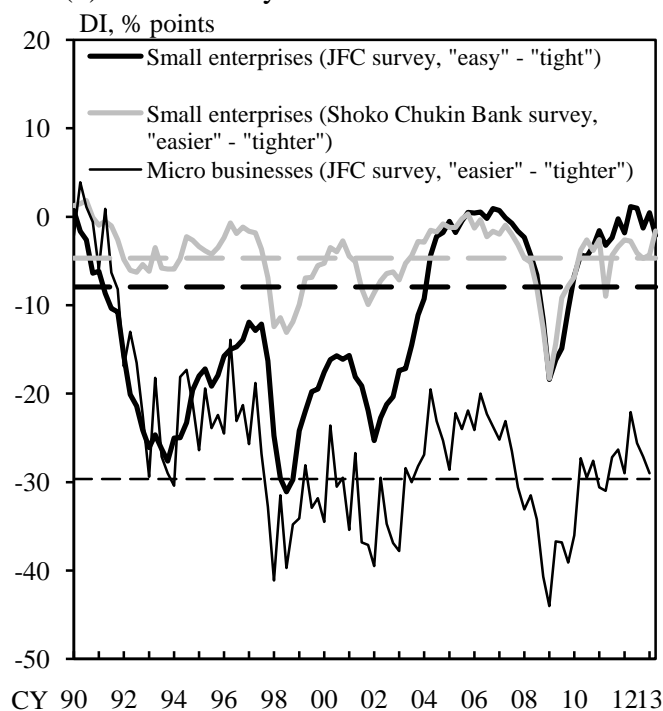
## (b) Other Surveys



## (2) Financial Position

(a) *Tankan*

## (b) Other Surveys



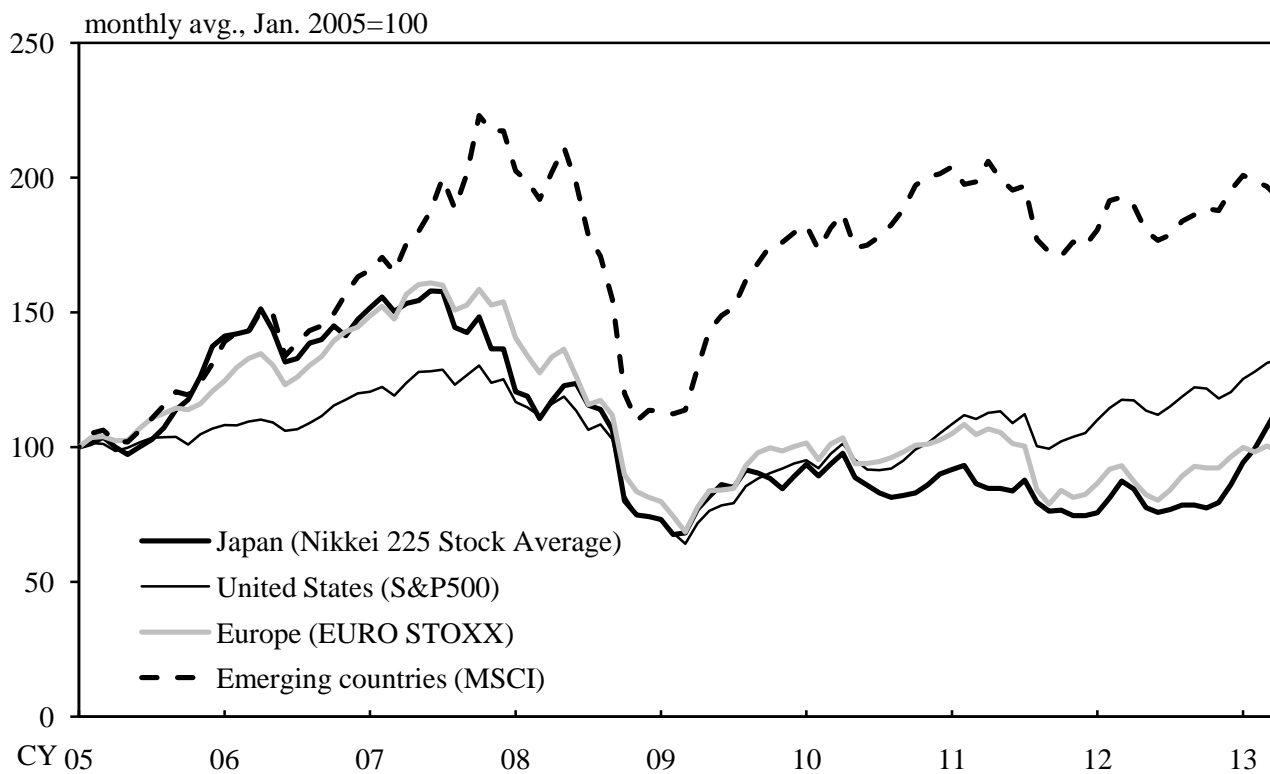
Notes: 1. Data from the "Tankan" are based on all industries. The "Tankan" was revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis. Broken lines are the averages since 2000.

2. Figures for 2013/Q2 are those of April.

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)."

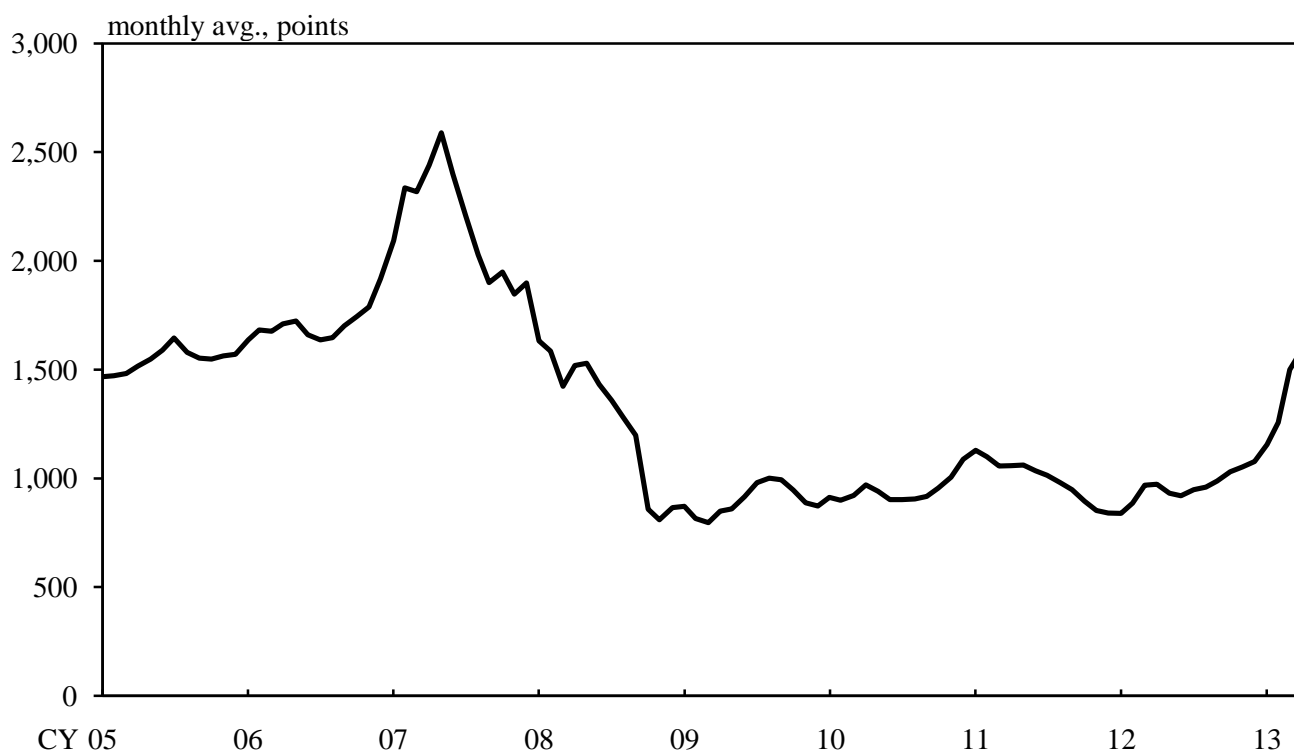
## Stock Prices and J-REIT Prices

### (1) Stock Prices



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

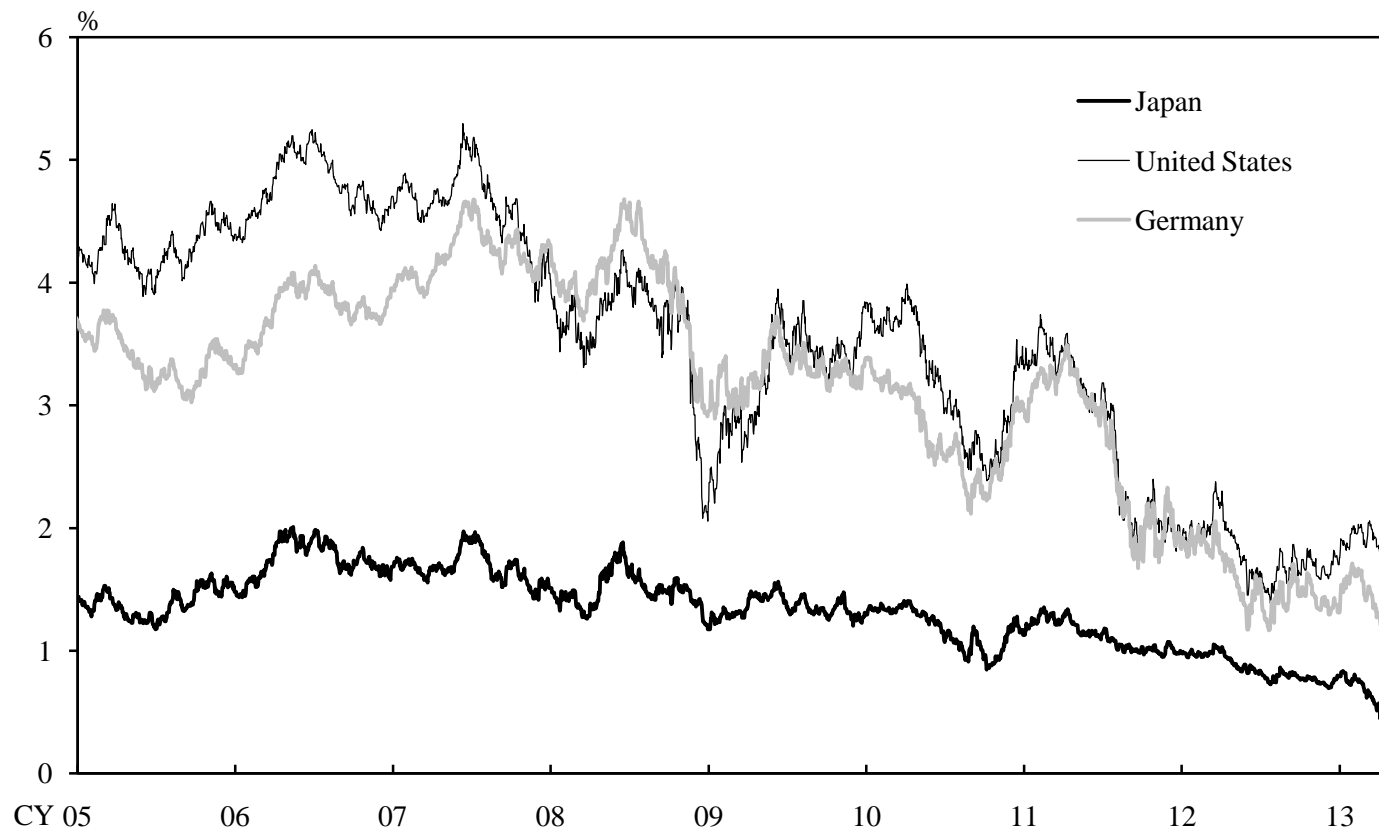
### (2) TSE REIT Index



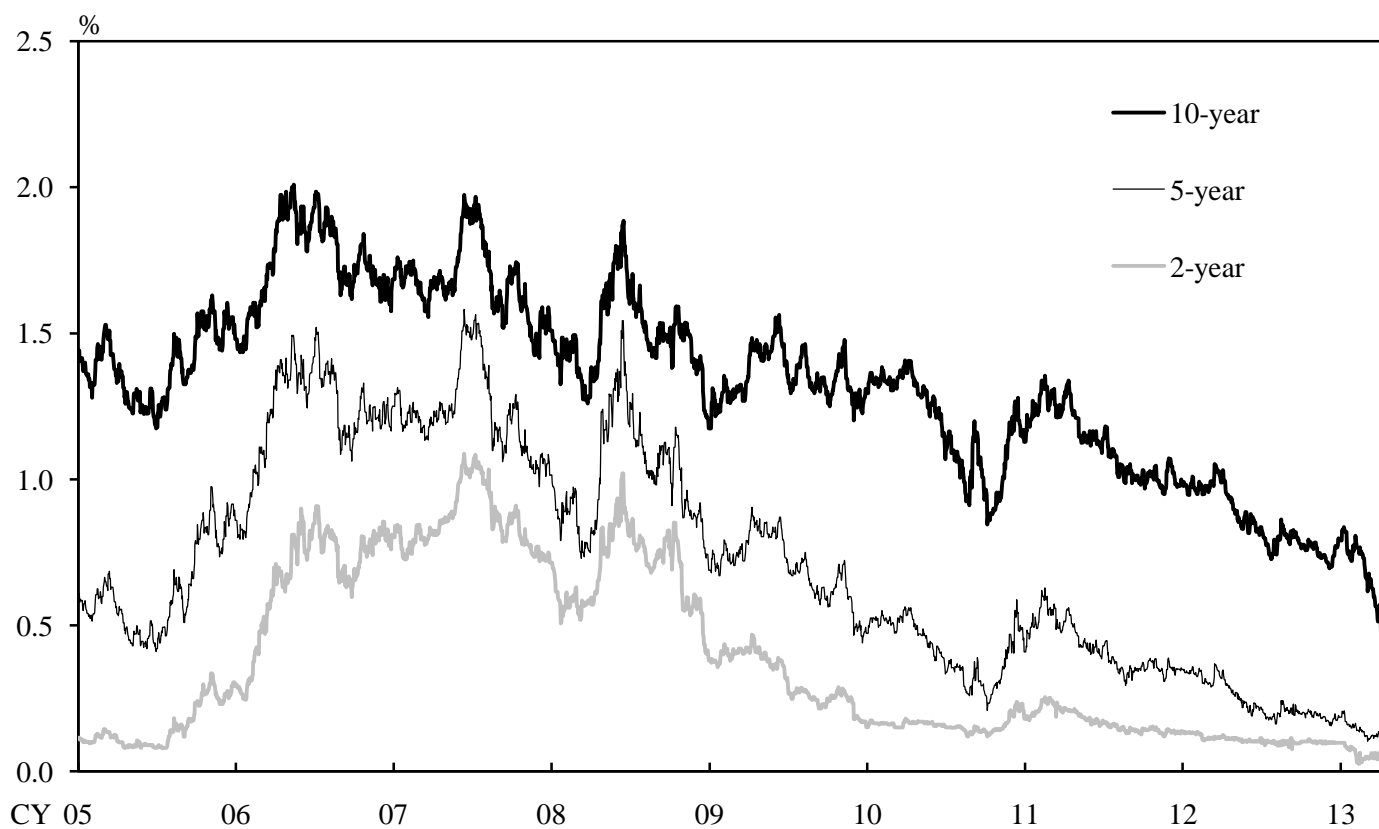
Source: Bloomberg.

## Long-Term Interest Rates

(1) Long-Term Interest Rates in Major Economies (10-Year Government Bond Yields)



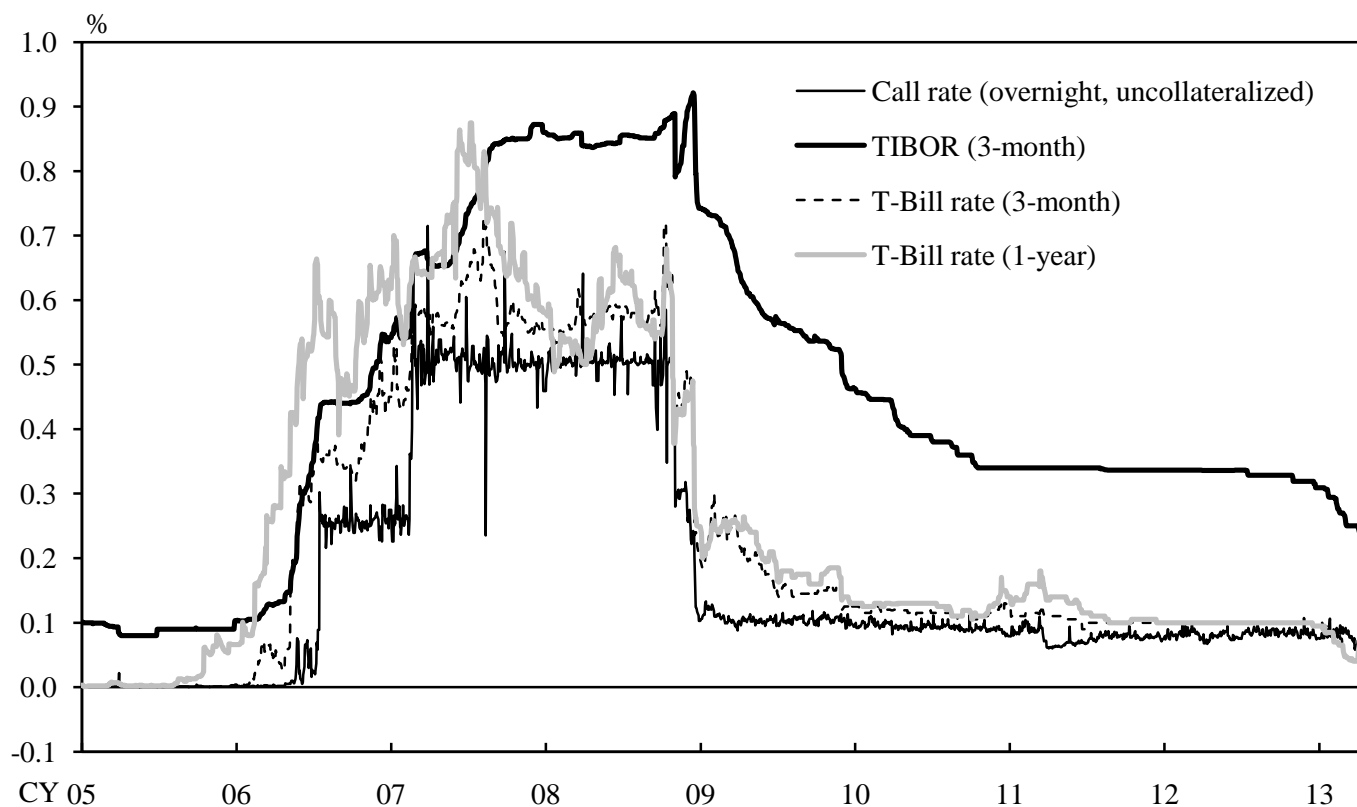
(2) Japanese Government Bond Yields



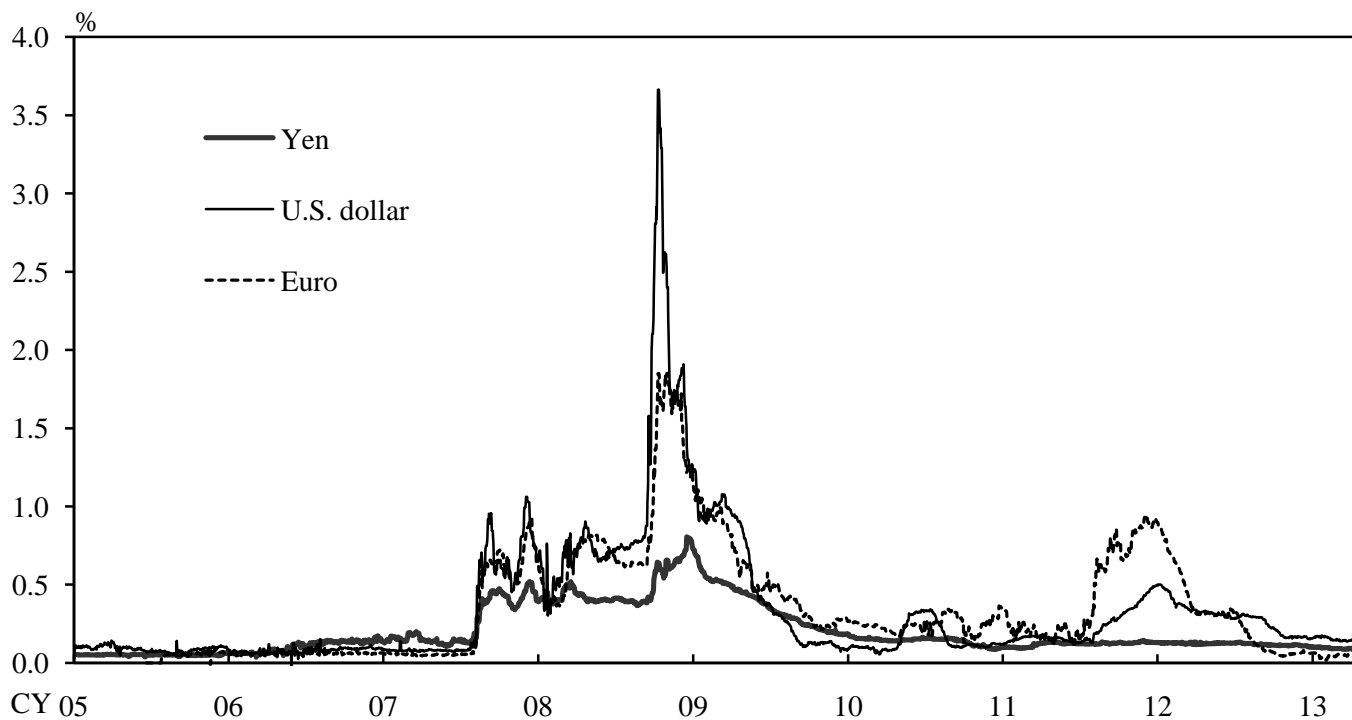
Source: Bloomberg.

## Short-Term Interest Rates

(1) Short-Term Interest Rates



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

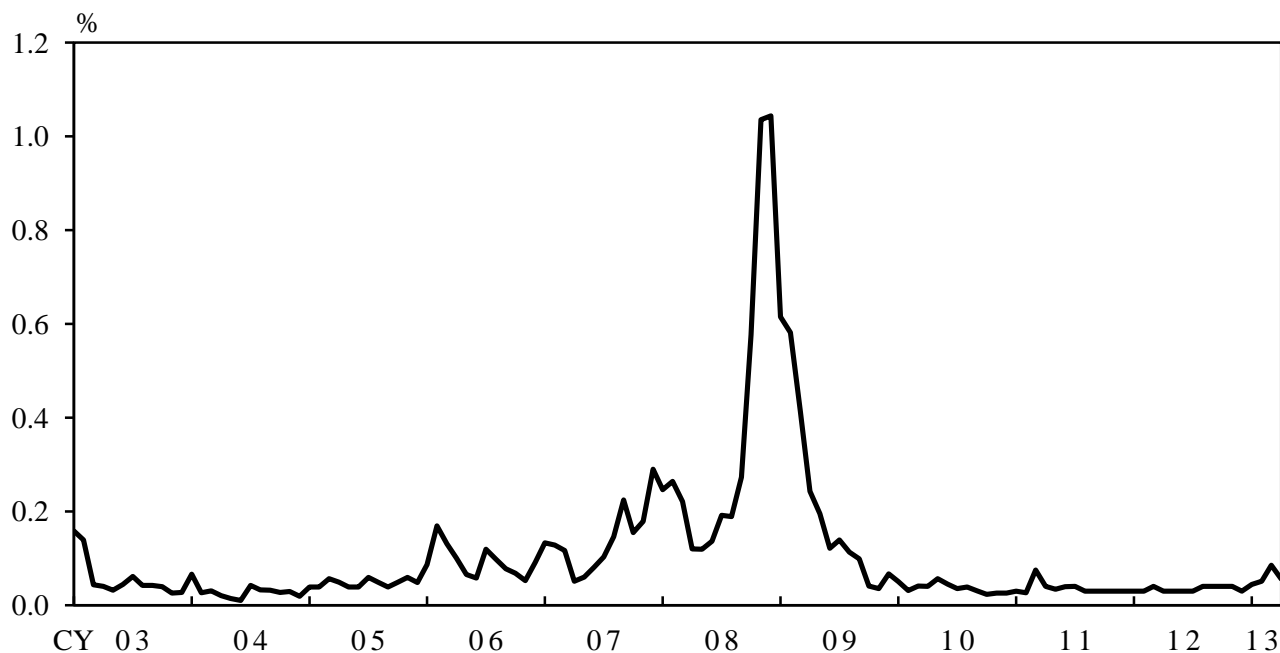


Note: The credit spreads for term instruments are LIBOR (3-month) minus yields on overnight index swaps (3-month).

Sources: Bank of Japan; Bloomberg.

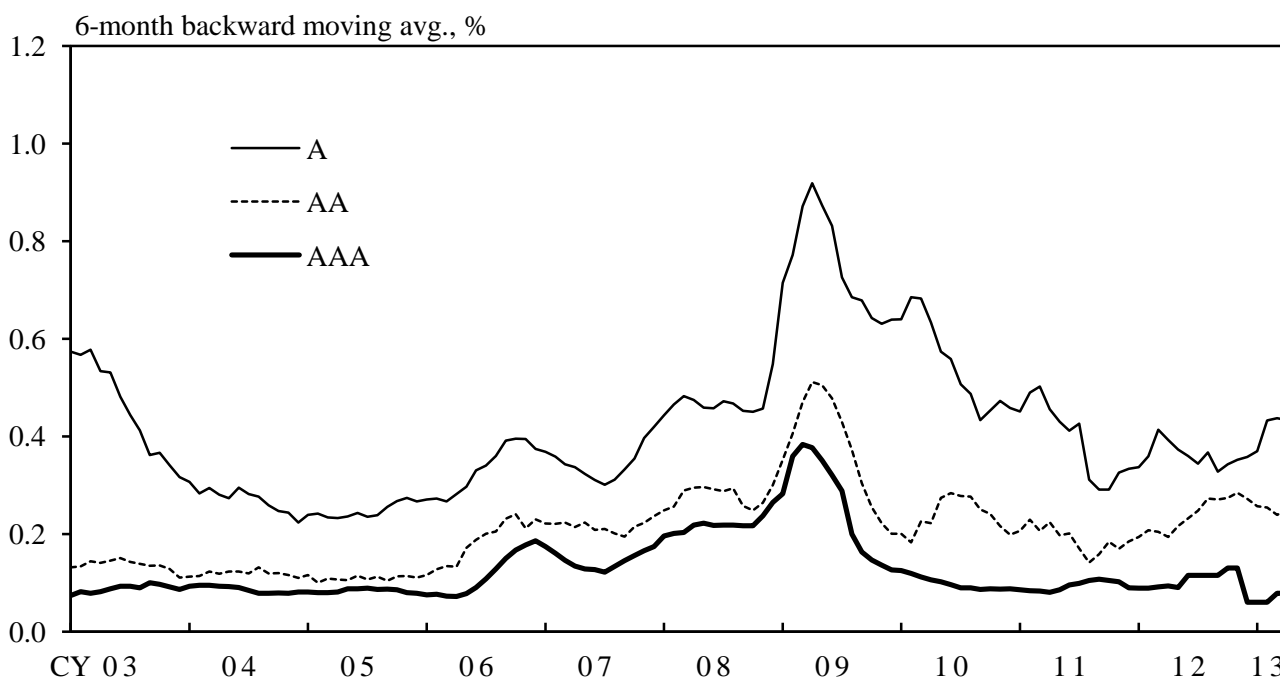
## Spreads for CP and Corporate Bonds

### (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 treasury discount bills (3-month). Figures from October 2009 are the average issuance rate of CP (3-month, rated a-1) minus the yield on treasury discount bills (3-month).

### (2) Issuance Spreads for Corporate Bonds

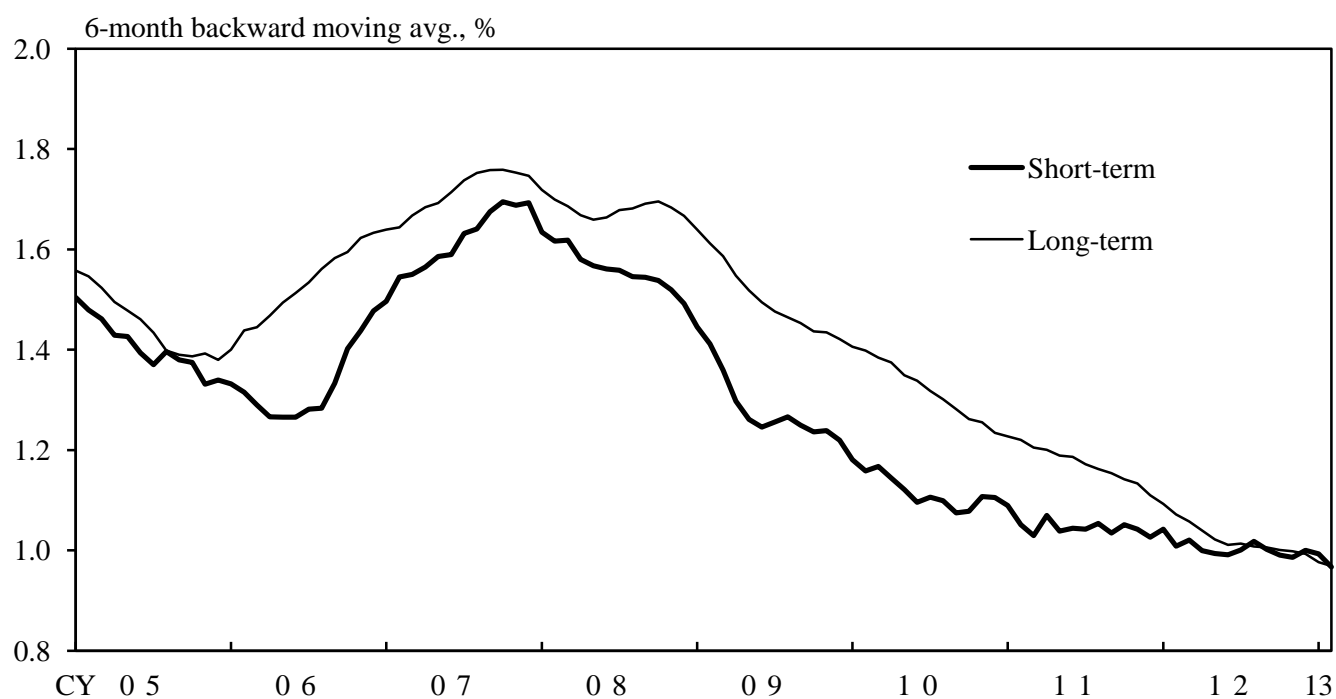


- Notes: 1. The issuance spreads for corporate bonds are the issuance rate of these bonds minus the government bond yield.  
 2. Figures are the average of all maturities issued in domestic markets, based on the launch date.  
 3. Bonds issued by banks and securities companies, etc., are excluded.  
 4. Bonds are classified by the highest ratings among Moody's, S&P, R&I, and JCR.

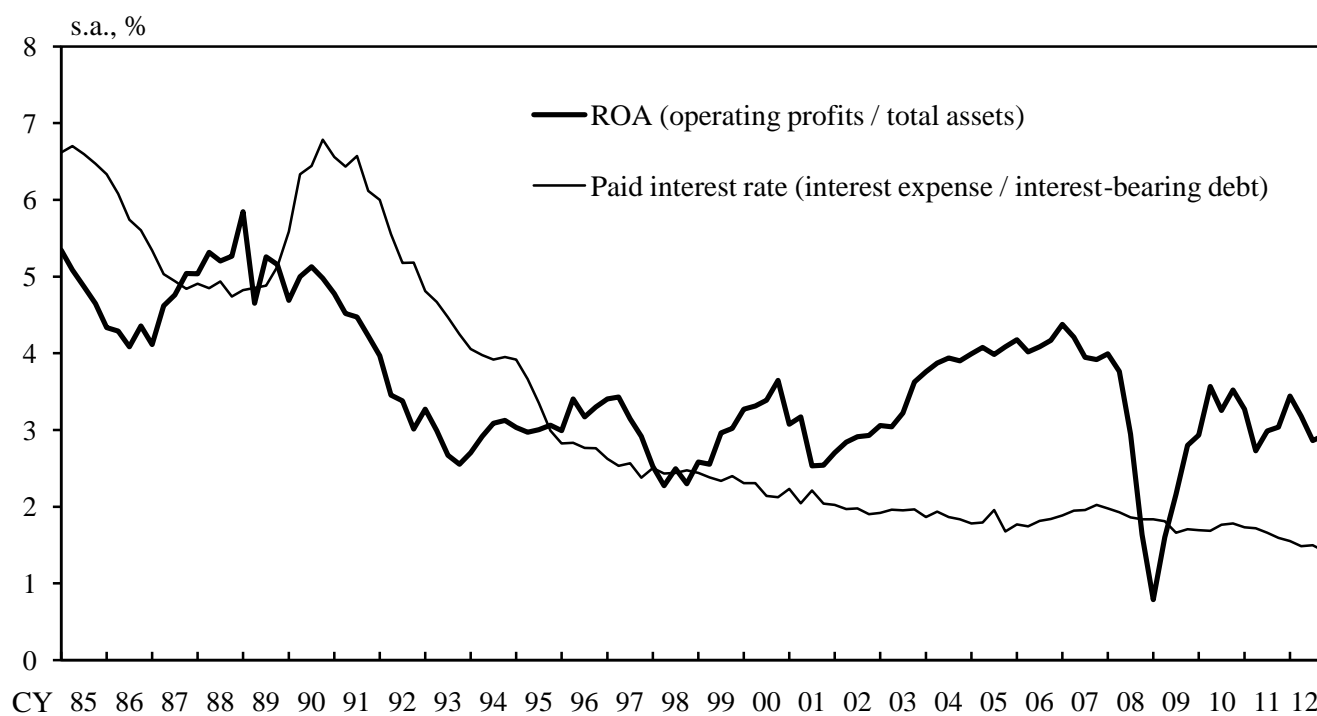
Sources: Bank of Japan, "Average Yields on Newly Issued Domestic Commercial Paper,"; Japan Securities Depository Center; Capital Eye, Ltd.; I-N Information Systems; Bloomberg.

## Bank Lending Rates

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



### (2) ROA and Paid Interest Rate



Notes: 1. Figures are taken from the "Financial Statements Statistics of Corporations by Industry, Quarterly," and are based on all-size enterprises and all industries. Finance and insurance are excluded.

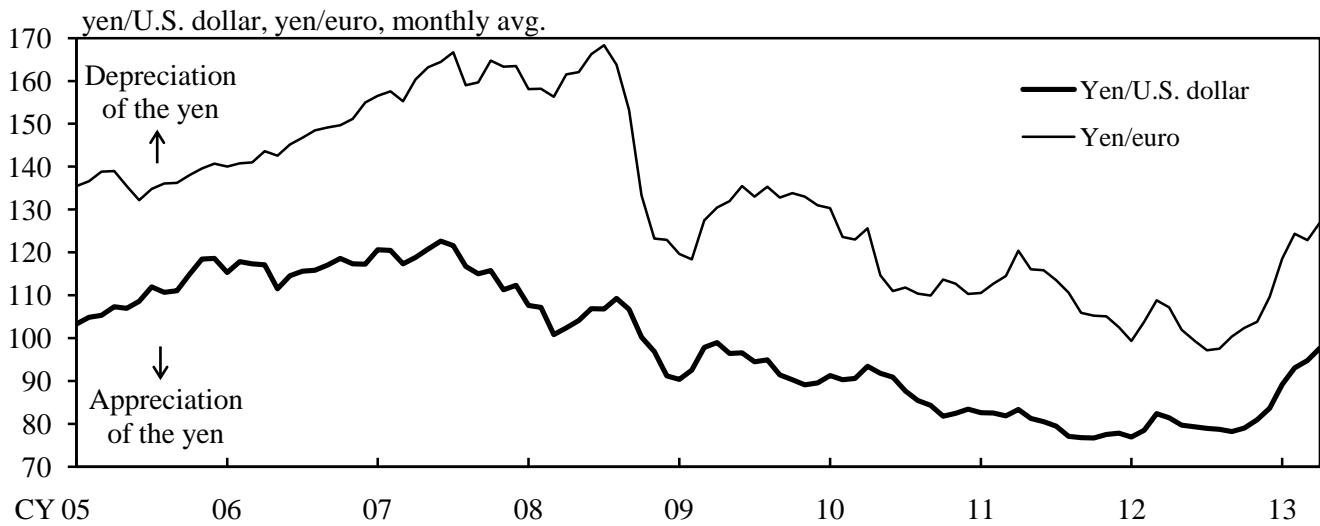
2. Interest-bearing debt is the sum of long- and short-term borrowings, corporate bonds, and bills receivable discounted outstanding.

Sources: Bank of Japan, "Average Contract Interest Rates on Loans and Discounts";

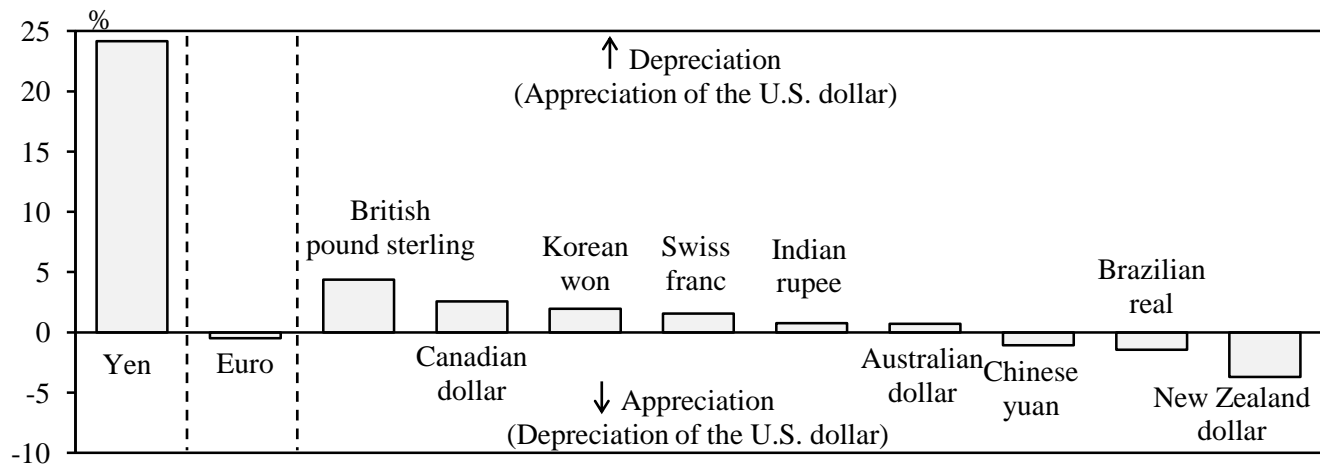
Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

## Exchange Rates

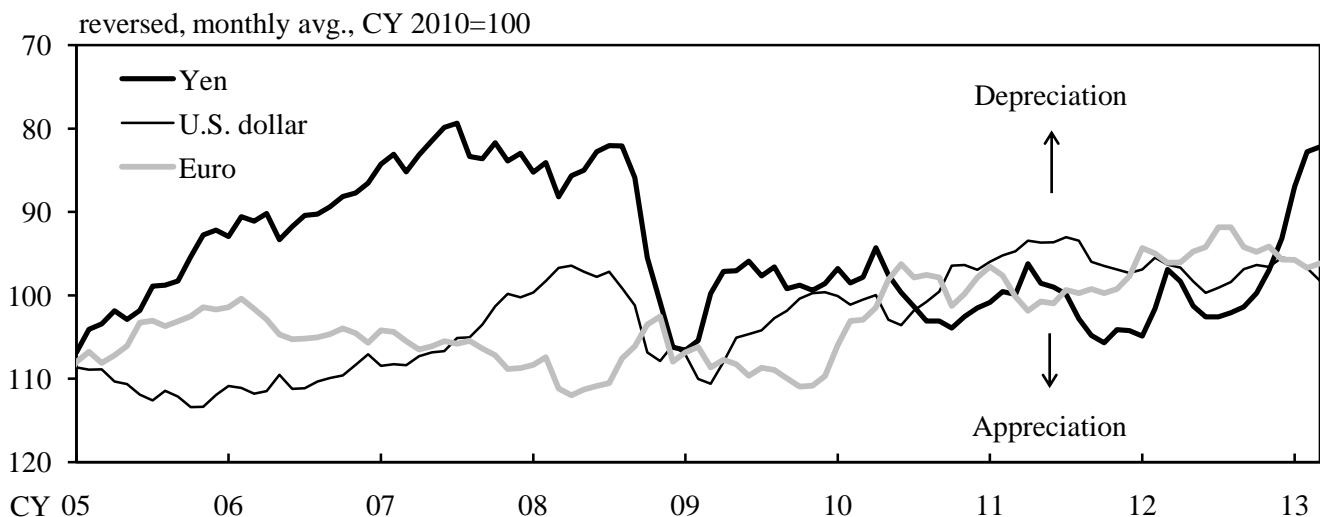
### (1) Yen/U.S. Dollar and Yen/Euro



### (2) Rates of Change in Individual Currencies against the U.S. Dollar (since the End of October 2012)



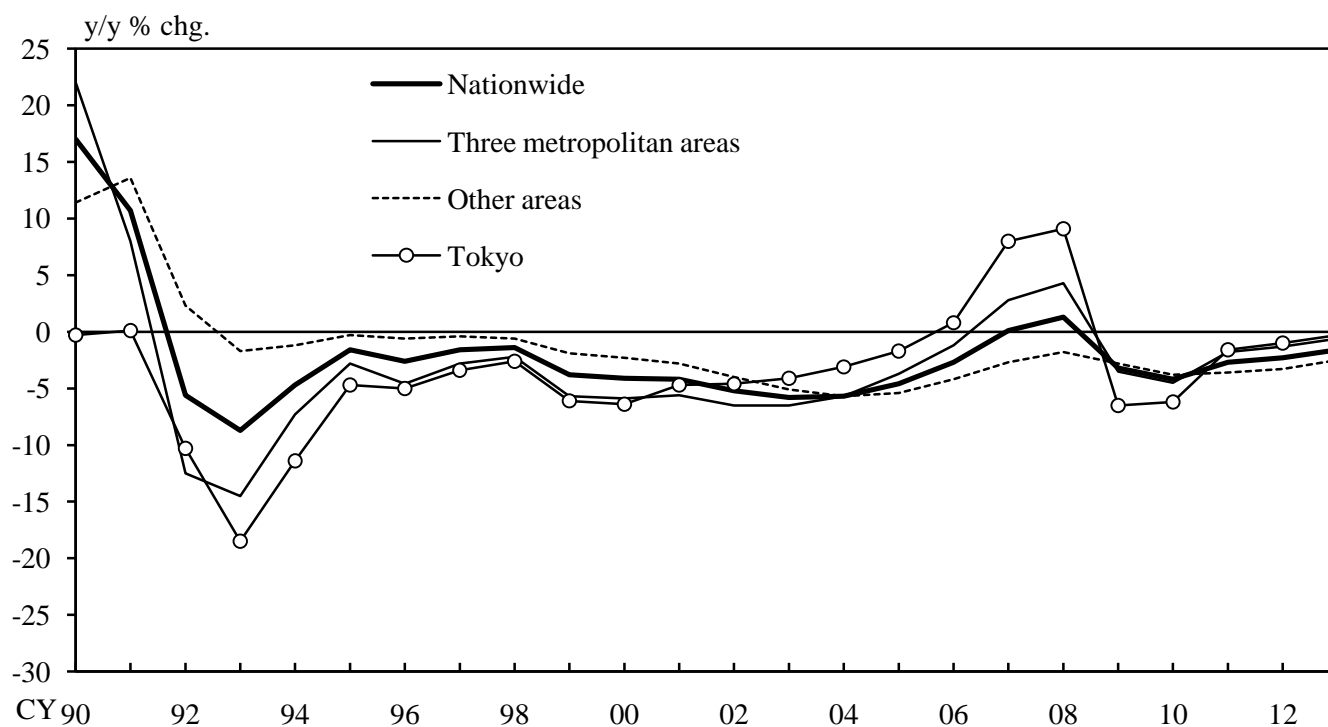
### (3) Real Effective Exchange Rates



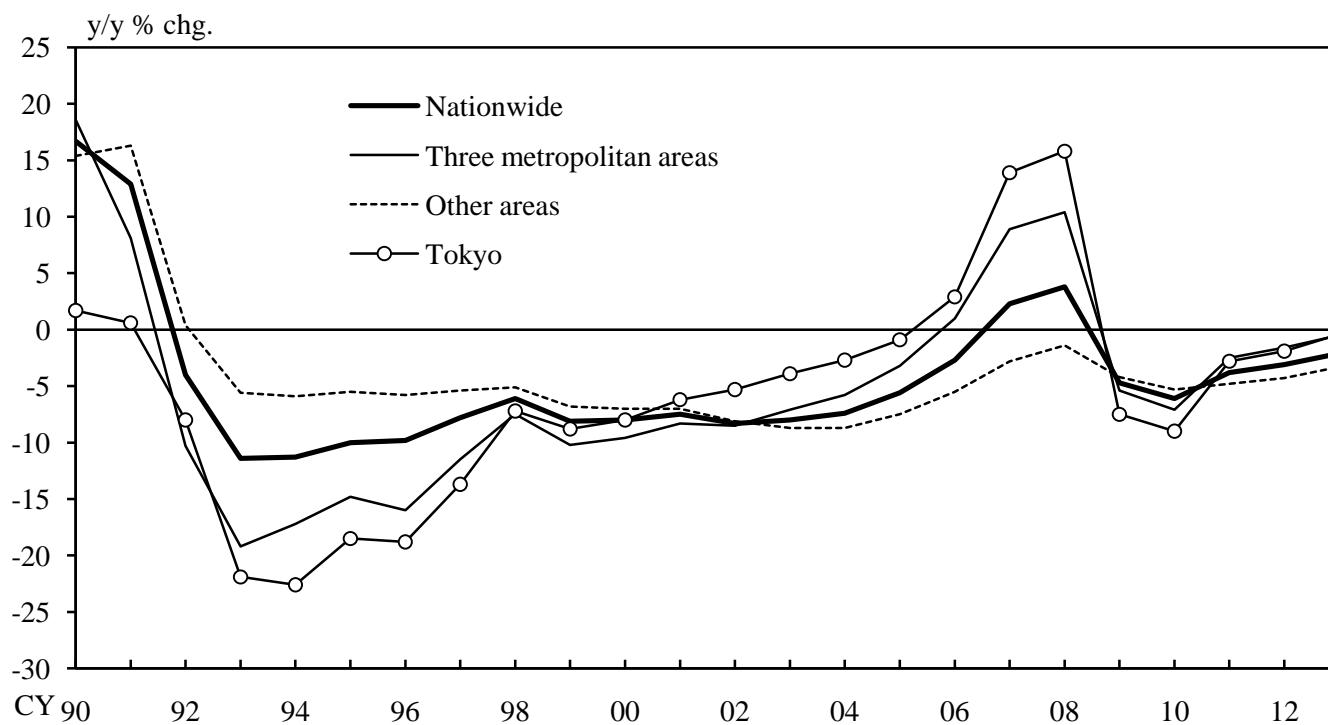
Note: The real effective exchange rates are based on the broad indices of the BIS effective exchange rate.  
Sources: Bank for International Settlements; Bank of Japan; Bloomberg.

# Land Prices

## (1) Residential Land



## (2) Commercial Land



Notes: 1. Figures are as of January 1.

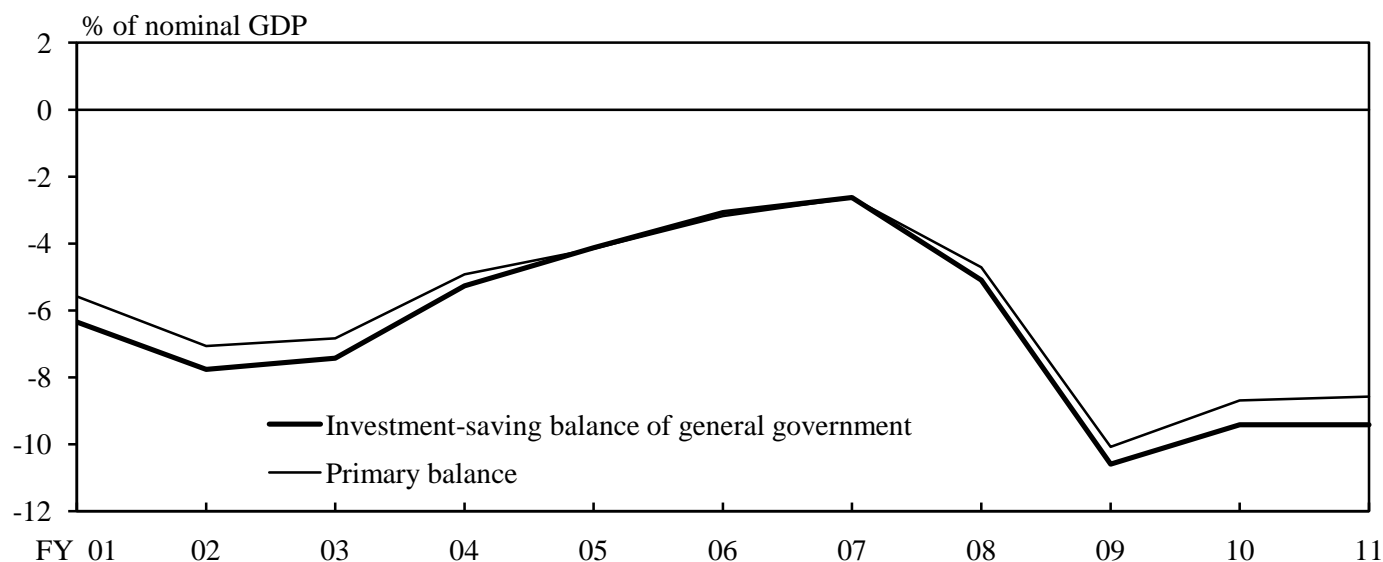
2. Three metropolitan areas: the Tokyo area (Tokyo, Kanagawa, Saitama, Chiba, and Ibaraki prefectures), the Osaka area (Osaka, Hyogo, Kyoto, and Nara prefectures), and the Nagoya area (Aichi and Mie prefectures). Other areas: other than the three metropolitan areas.

Source: Ministry of Land, Infrastructure, Transport and Tourism, "Public Notice of Land Prices."



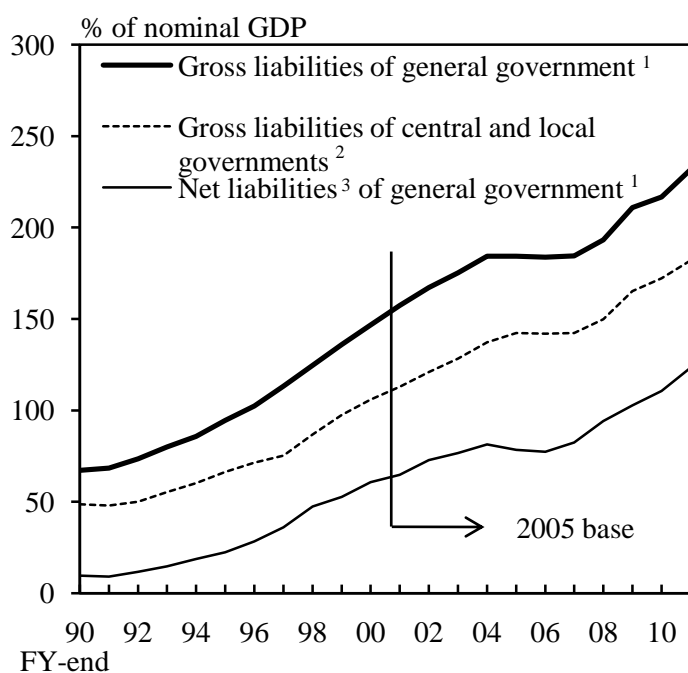
## Government Liabilities

### (1) Fiscal Balance



Note: The following factors are excluded from the investment-saving balance of the general government: (1) redemption of JGBs held by the Deposit Insurance Corporation of Japan (fiscal 2001 and 2002); (2) transfer of assets and liabilities of the Japan Expressway Holding and Debt Repayment Agency to the general account (fiscal 2008); (3) transfer of reserves in the special account for the Fiscal Investment and Loan Program (public financial institutions) to the special account for the government debt consolidation fund of the general government (fiscal 2006 and 2008); (4) transfer of reserves in the special account for the Fiscal Investment and Loan Program to the general account of the general government (fiscal 2009-11); and (5) transfer of assets of the Japan Railway Construction, Transport and Technology Agency to the general account of the general government (fiscal 2011).

### (2) Government Liabilities in Japan



### (3) Liabilities of the General Government<sup>1,4</sup>

	Fiscal balance	Gross liabilities	Net liabilities <sup>3</sup>
Japan	-9.3	205.3	125.3
United States	-10.2	102.2	81.6
Germany	-0.8	86.4	51.3
United Kingdom	-8.3	99.9	67.8
Italy	-3.8	119.8	94.1
France	-5.2	100.0	63.0
Canada	-4.3	83.4	32.3

Notes: 1. General government consists of the central government, local governments, and social security funds.

2. Outstanding debt reported in "Economic and Fiscal Projections for Medium to Long Term Analysis (August 2012)" and "The fifth meeting of the Council on Economic and Fiscal Policy."

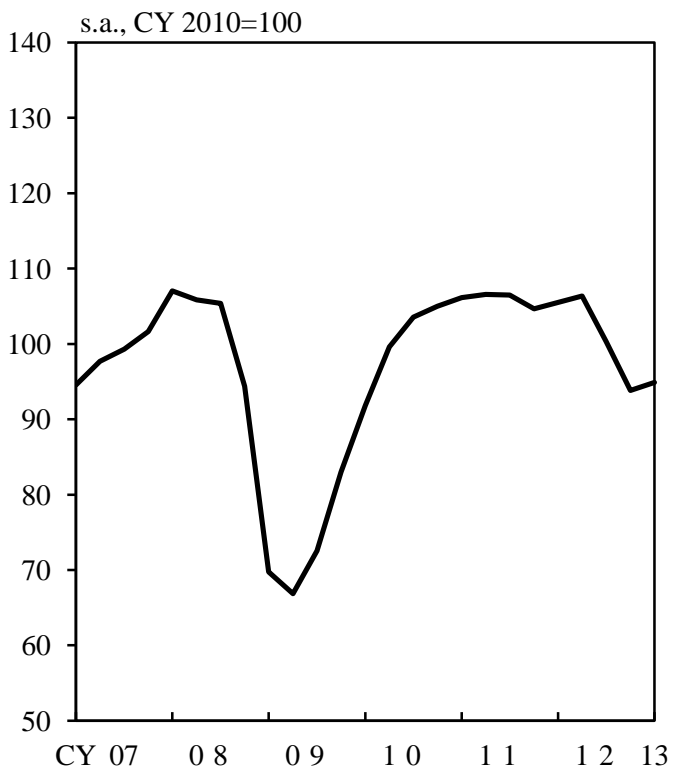
3. Gross liabilities minus financial assets.

4. Fiscal balance and government liabilities (of the general government) are the OECD projections in CY 2011.

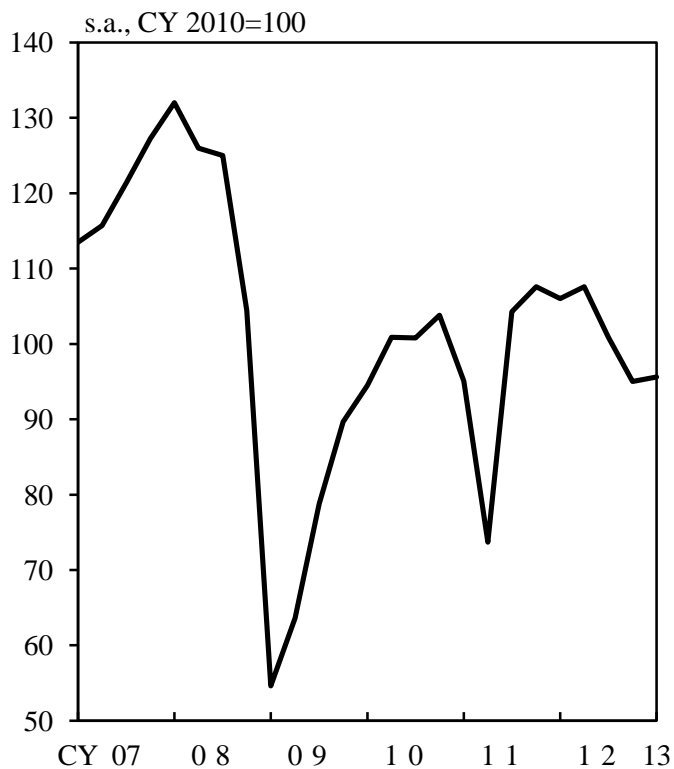
Sources: Cabinet Office, "National Accounts," "Economic and Fiscal Projections for Medium to Long Term Analysis"; OECD, "Economic Outlook," etc.

### Real Exports by Goods

(1) Capital Goods and Parts (29.3%)

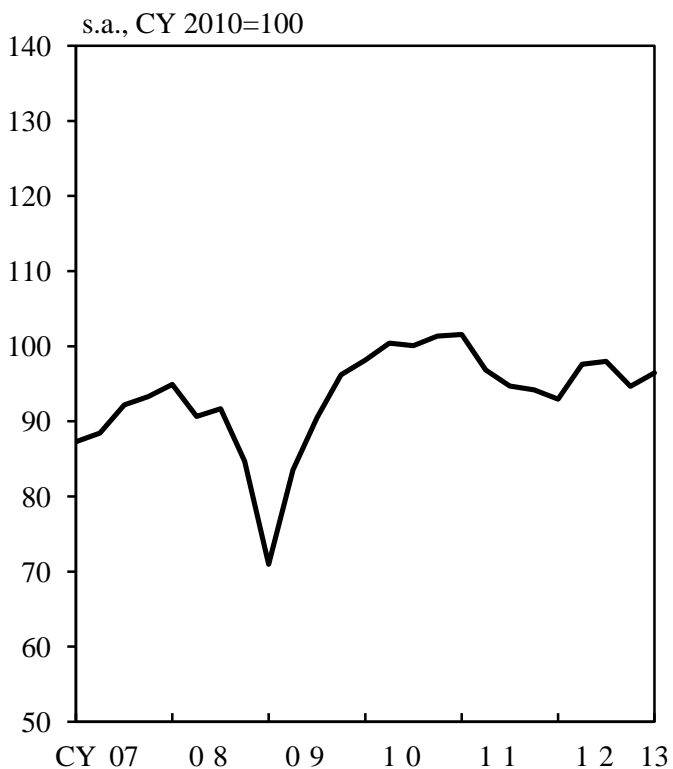


(2) Motor Vehicles and Related Goods (23.4%)

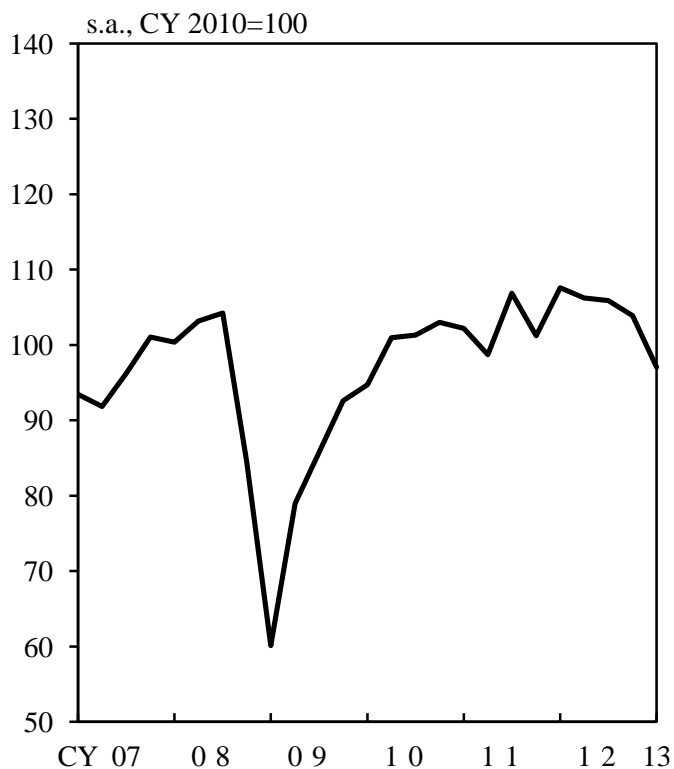


Note: Figures are seasonally adjusted by X-12-ARIMA. Figures in the parentheses show shares of each type of goods in the total amount of exports in 2012. The same definition applies to the charts below.

(3) Intermediate Goods (20.4%)

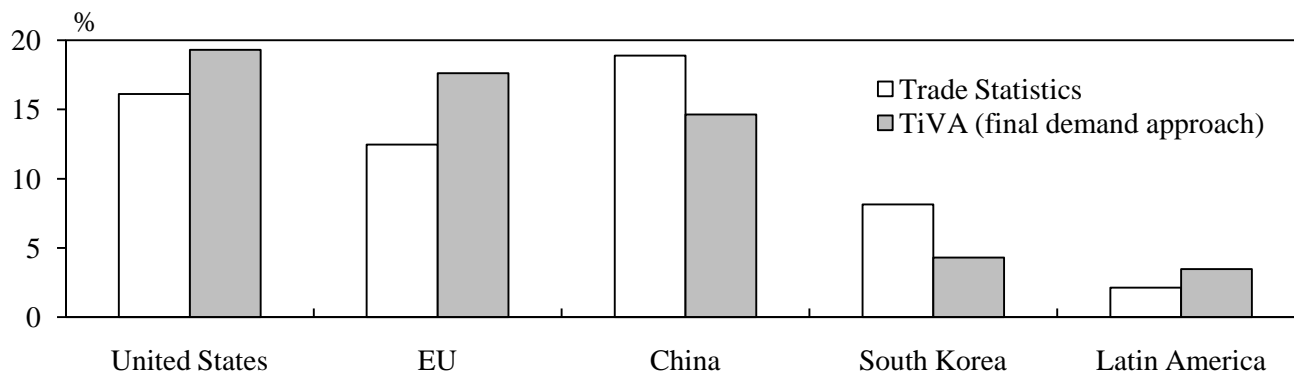


(4) IT-Related Goods (11.2%)



## Environment surrounding Exports

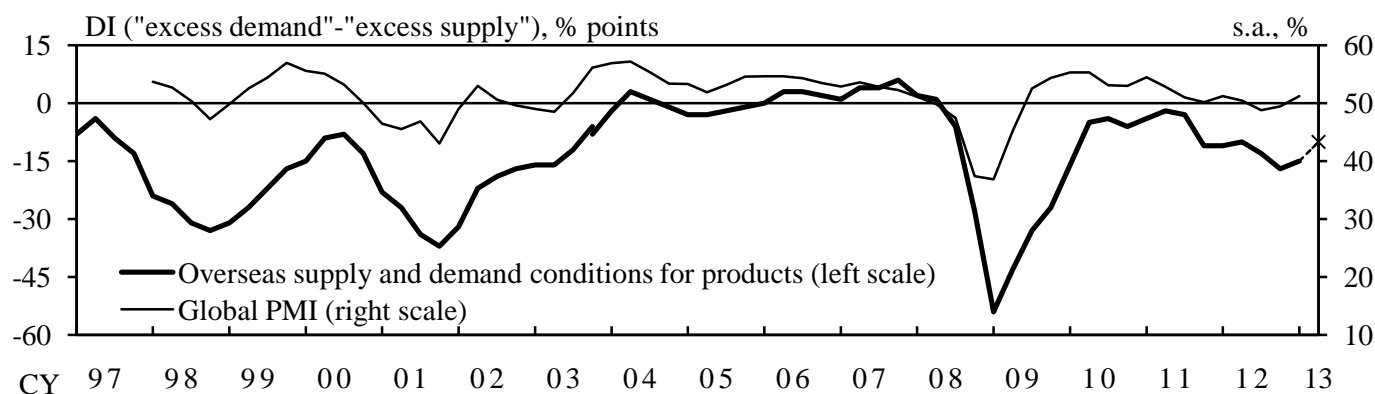
### (1) Export Shares by Region (CY 2009)



Notes: 1. TiVA is a series of statistics to measure trade in value-added terms; that is, trade volume is estimated based on where the value of products is added, and where products are eventually demanded in global production networks and supply chains. For instance, when intermediate goods made in Japan are exported from Japan to country A, and after further processing are eventually consumed in country B, the volume of Japan's exports of intermediate goods is recorded as those for country B in TiVA instead of country A in Trade Statistics.

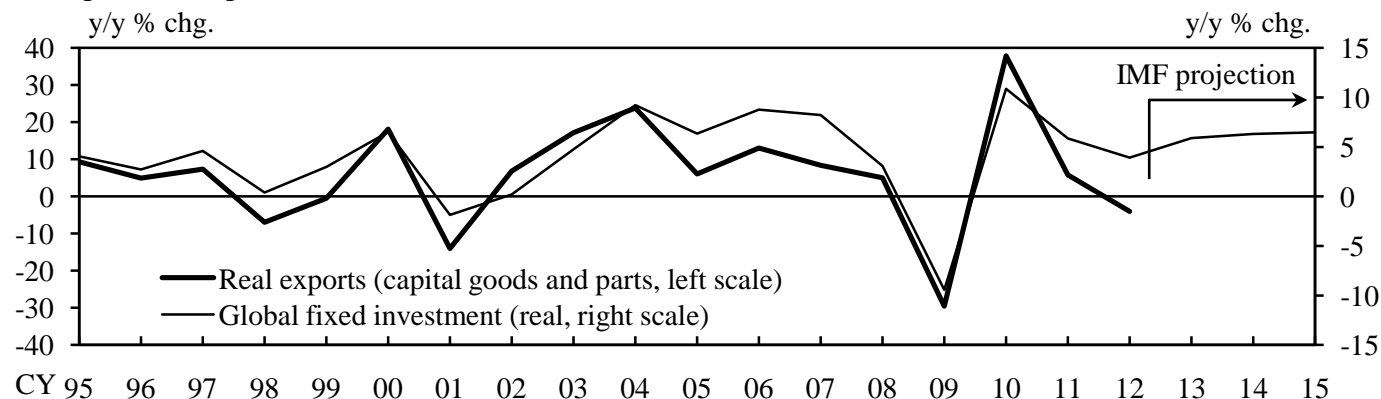
2. The economies in Latin America are Mexico, Brazil, and Chile.

### (2) Overseas Supply and Demand Conditions for Products, and Global PMI



Note: Figures for overseas supply and demand conditions for products are based on large manufacturing enterprises from the "Tankan." The figure for 2013/Q2 is the forecast at the March 2013 Survey.

### (3) Exports of Capital Goods and Parts, and Global Fixed Investment



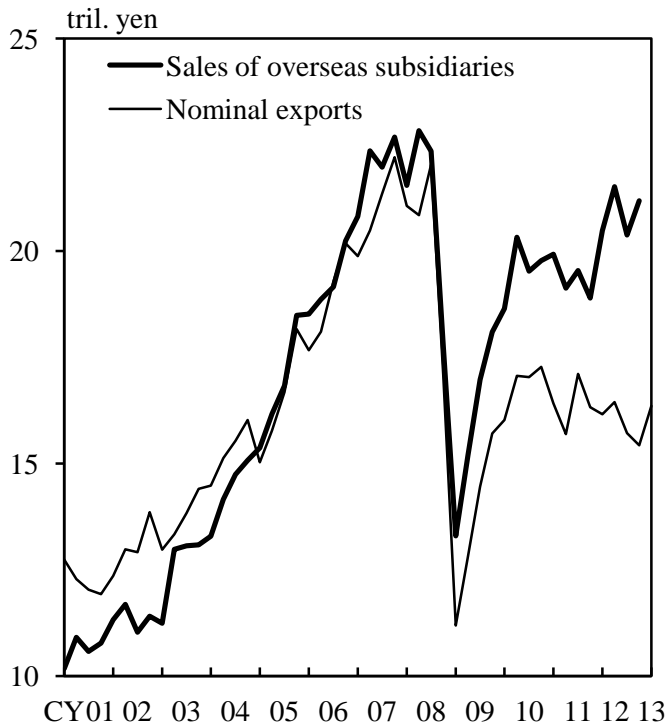
Note: Figures for global fixed investment are calculated using the world GDP growth rate and the ratio of investment to world GDP from "World Economic Outlook."

Sources: Ministry of Finance, "Trade Statistics"; Bank of Japan, "Corporate Goods Price Index", "Tankan, Short-Term Economic Survey of Enterprises in Japan"; OECD, "OECD-WTO Trade in Value Added (TiVA)"; IMF, "World Economic Outlook"; Markit (© and database right Markit Economics Ltd 2013. All rights reserved.).

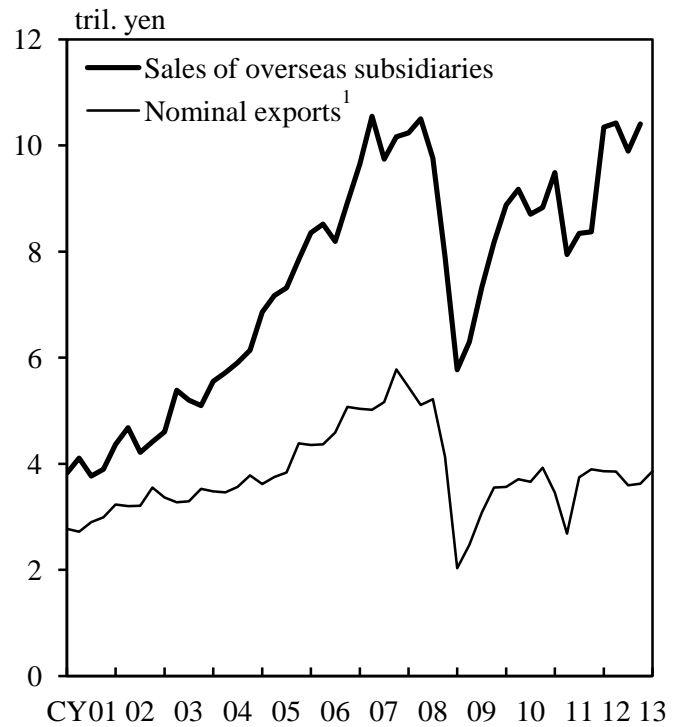
## Overseas Shift in Production and Exports

### (1) Sales of Overseas Subsidiaries and Japan's Exports

#### (a) Total

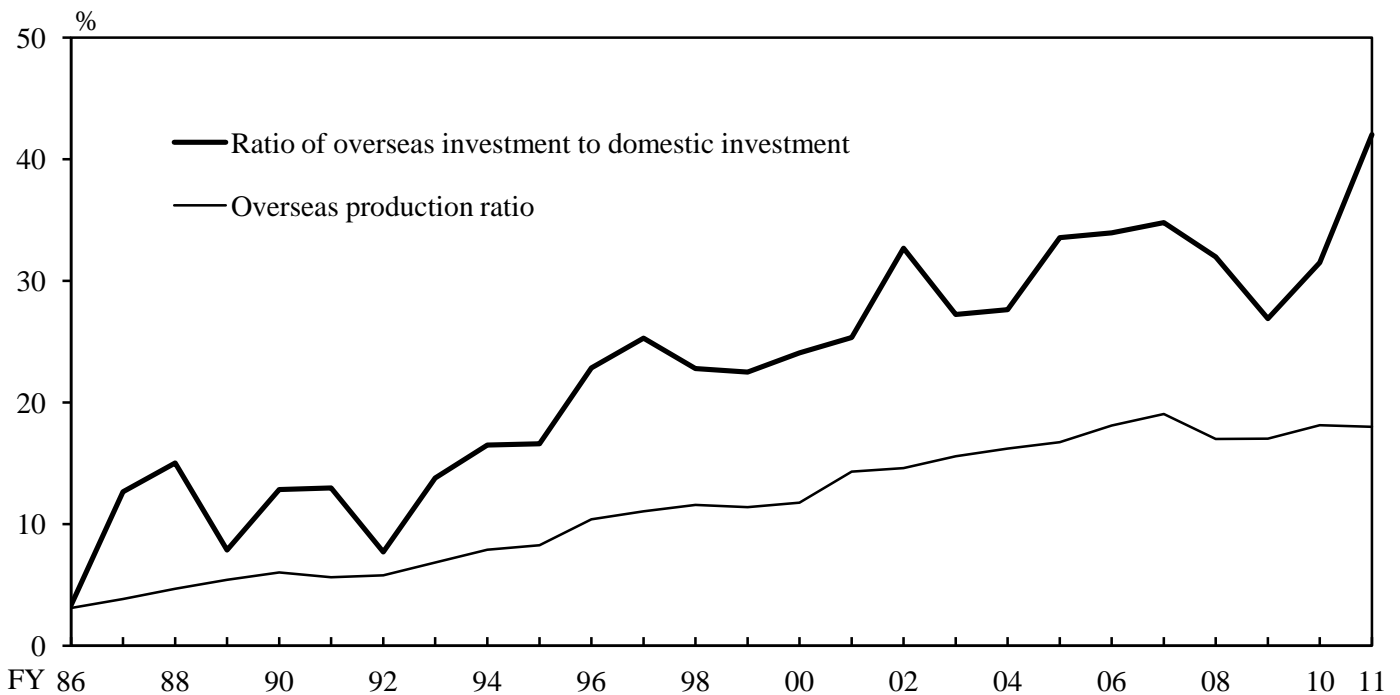


#### (b) Transportation Equipment



Note: 1. Figures are those of motor vehicles and related goods.

### (2) Overseas Shift in Production (Manufacturing)



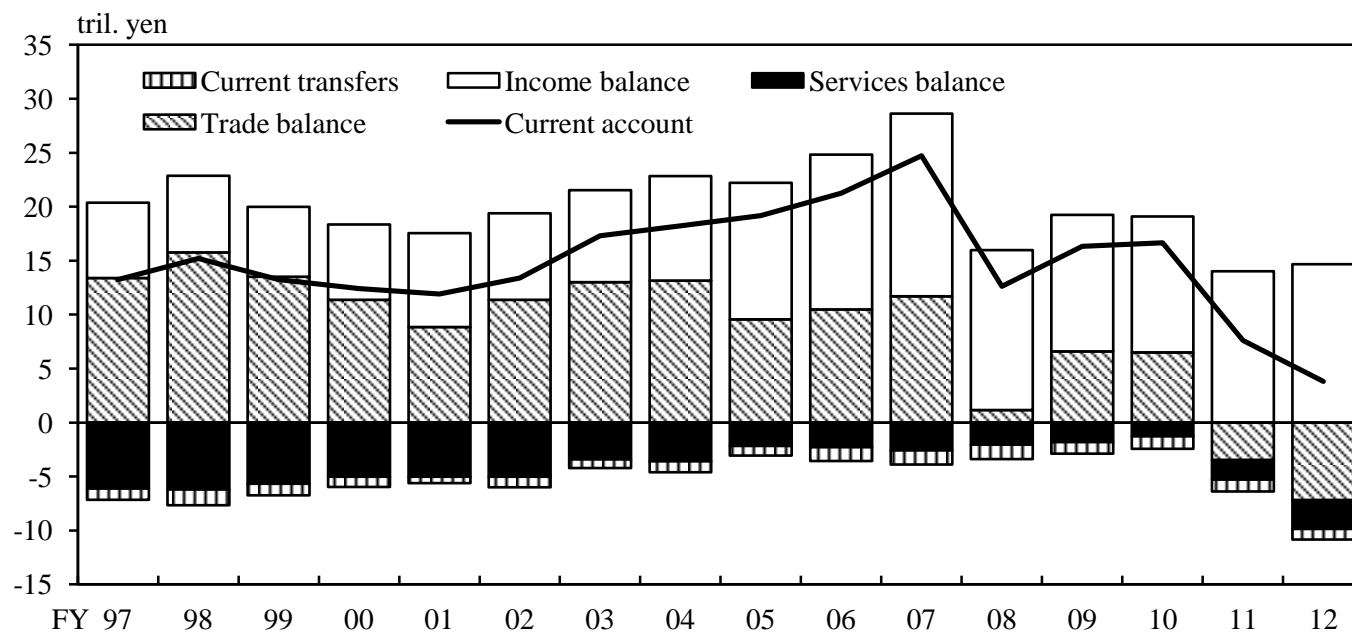
Note: Overseas production ratio

$$= \text{sales of overseas subsidiaries} / (\text{sales of overseas subsidiaries} + \text{sales of domestic companies}) \times 100$$

Sources: Ministry of Economy, Trade and Industry, "Quarterly Survey of Overseas Subsidiaries," "Survey of Overseas Business Activities"; Ministry of Finance, "Trade Statistics," "Financial Statements Statistics of Corporations by Industry, Annually," etc.

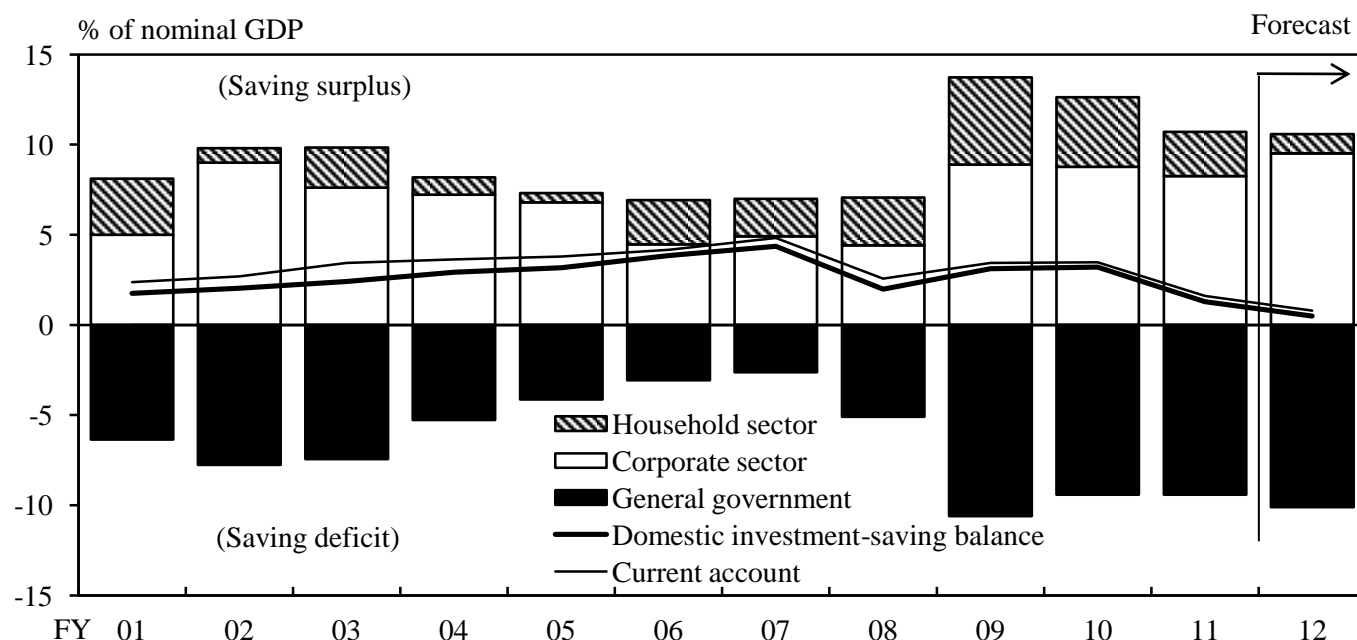
## Current Account and Investment-Saving Balance

### (1) Current Account



Note: Figures for fiscal 2012 are April 2012-February 2013 averages in annual amount.

### (2) Investment-Saving Balance



Notes: 1. The same factors described in Chart 25(1) are excluded.

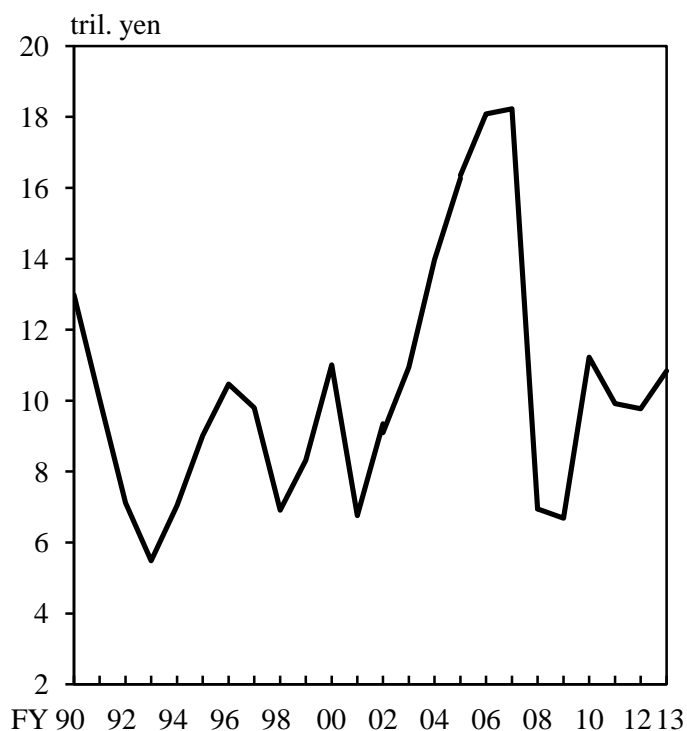
2. The figures for the investment-saving balance of the general government for fiscal 2012 are based on the "Economic and Fiscal Projections for Medium to Long Term Analysis (August 2012)." The figure for the balance of the household sector is estimated by subtracting private consumption expenditure and private residential investment from personal disposable income, which is calculated using the nominal disposable income in Chart 38. The figure for the balance of the corporate sector is the residue.

3. Figures for nominal GDP, private consumption expenditure and private residential investment for fiscal 2012 are calculated using the year-on-year rate of change for 2012/Q2-Q4. The domestic investment-saving balance for fiscal 2012 is estimated by subtracting +0.3 percentage point (the difference between the domestic investment-saving balance and the current account in fiscal 2011) from the current account.

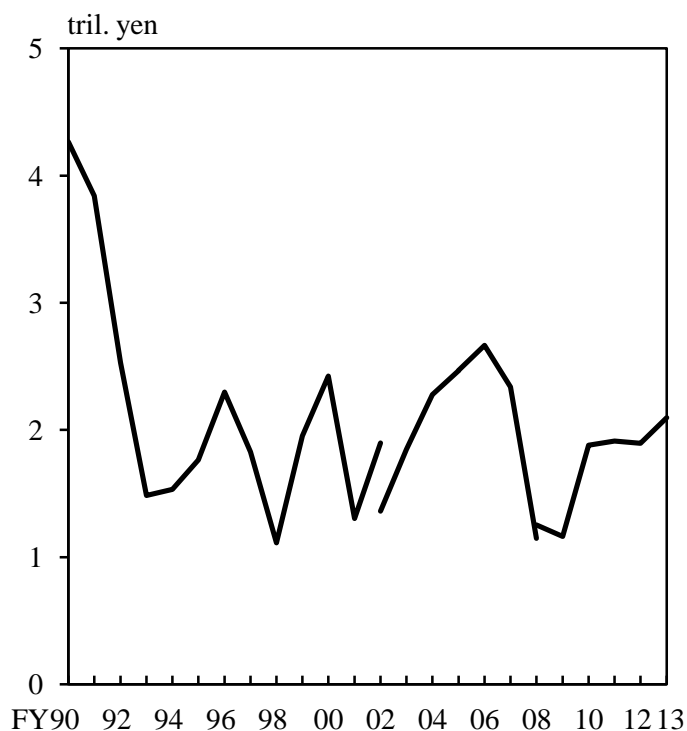
Sources: Cabinet Office, "National Accounts," "Economic and Fiscal Projections for Medium to Long Term Analysis"; Ministry of Finance and Bank of Japan, "Balance of Payments."

## Corporate Profits

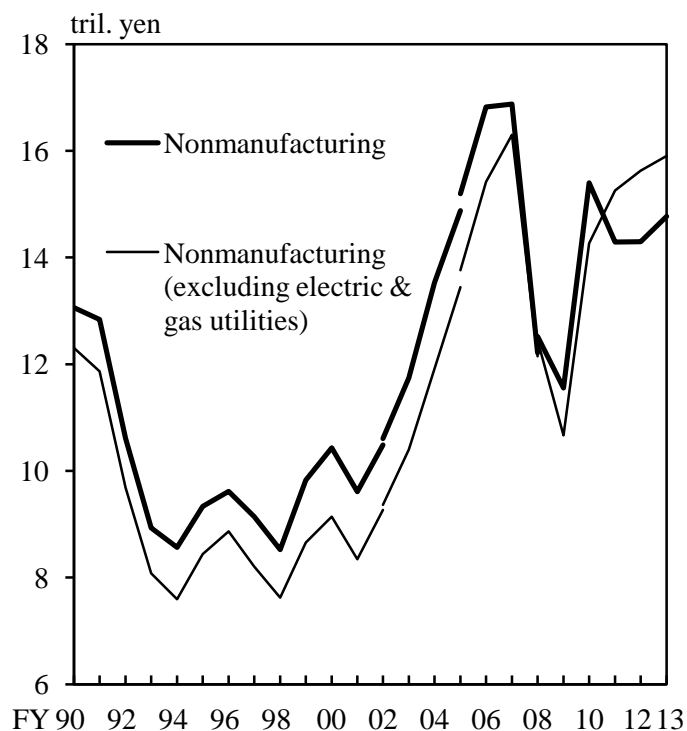
(1) Large Manufacturing Enterprises



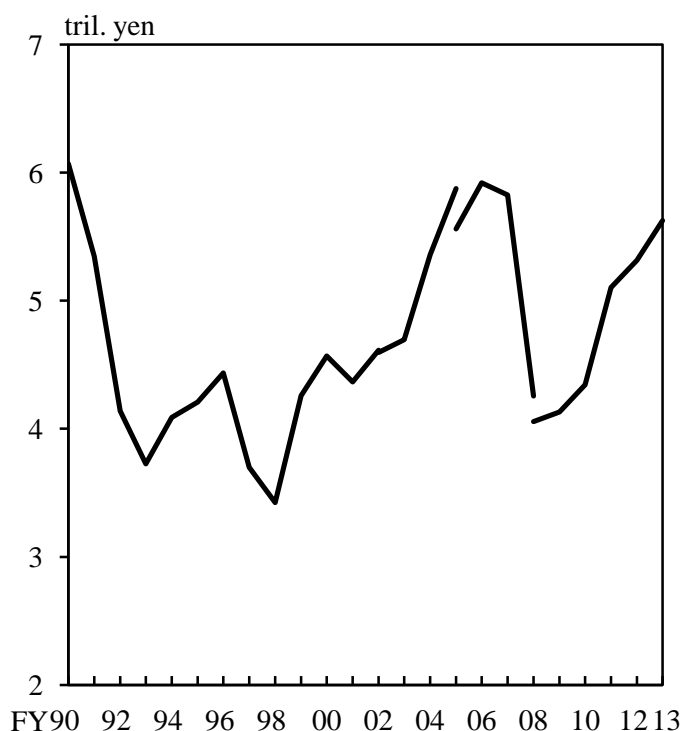
(2) Small Manufacturing Enterprises



(3) Large Nonmanufacturing Enterprises



(4) Small Nonmanufacturing Enterprises



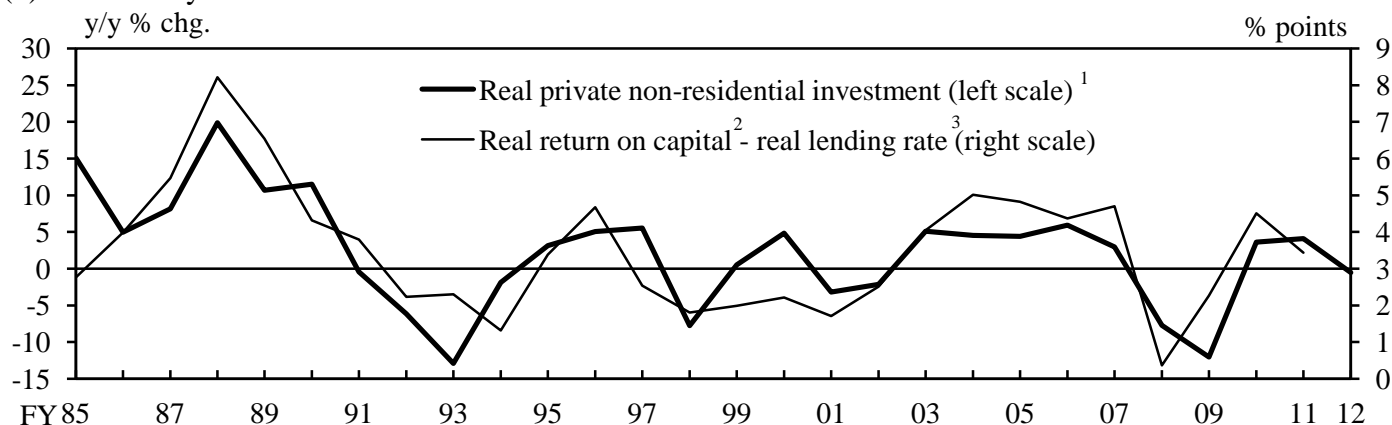
Notes: 1. Based on current profits. Figures for fiscal 2012 and fiscal 2013 are the forecasts in the March 2013 survey.

2. In the March 2004 survey, the "Tankan" underwent major revisions, including the addition of new sample enterprises to the survey. In the March 2007 and March 2010 surveys, regular revisions were made to the sample enterprises. The data show some discontinuities that coincided with these timings.

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

## Monetary Easing and Business Fixed Investment

### (1) Profitability of Investment and Business Fixed Investment

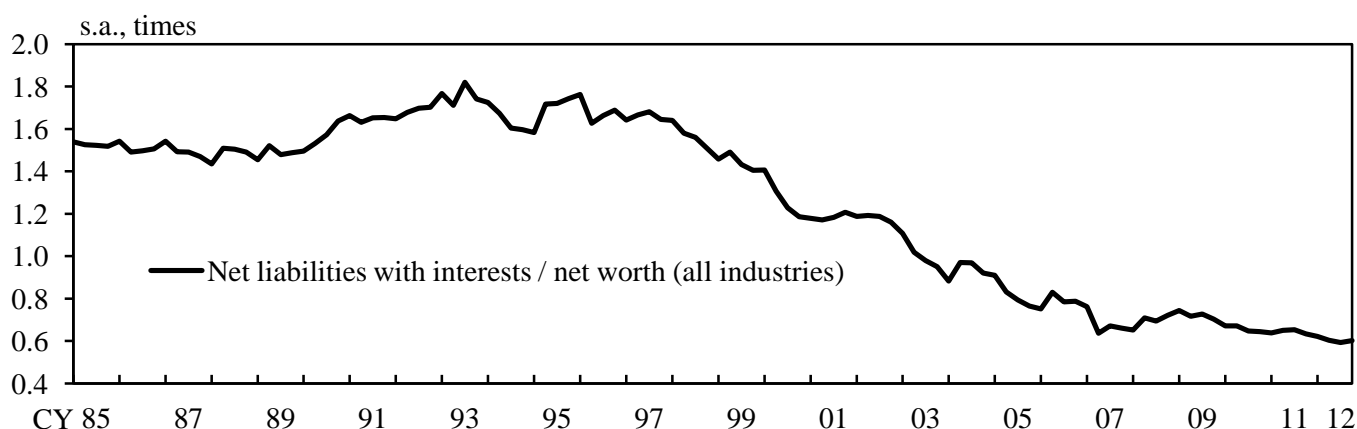


Notes: 1. The figure for fiscal 2012 is the 2012/Q2-Q4 average.

2. Real return on capital = real operating surplus / real capital stock × 100

3. Real lending rate = long-term prime lending rate - year-on-year rate of change in the domestic demand deflator (1 year ahead)

### (2) Financial Situation of Corporations

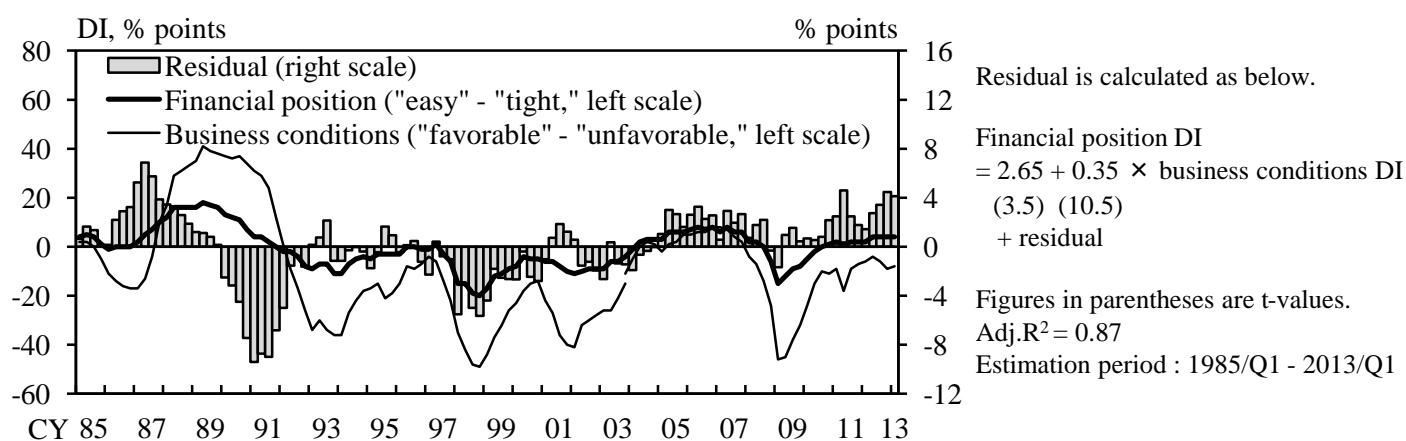


Notes: 1. Net liabilities with interests = bonds + long-term and short-term borrowings - cash and deposits

Net worth = capital stock + capital surplus + earned surplus

2. Figures are seasonally adjusted by X-11.

### (3) Financial Position DI and Business Conditions DI



Residual is calculated as below.

Financial position DI  
 $= 2.65 + 0.35 \times \text{business conditions DI}$   
 (3.5) (10.5)  
 + residual

Figures in parentheses are t-values.

Adj.R<sup>2</sup> = 0.87

Estimation period : 1985/Q1 - 2013/Q1

Note: Figures for the DI are based on all enterprises. The "Tankan" was revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis.

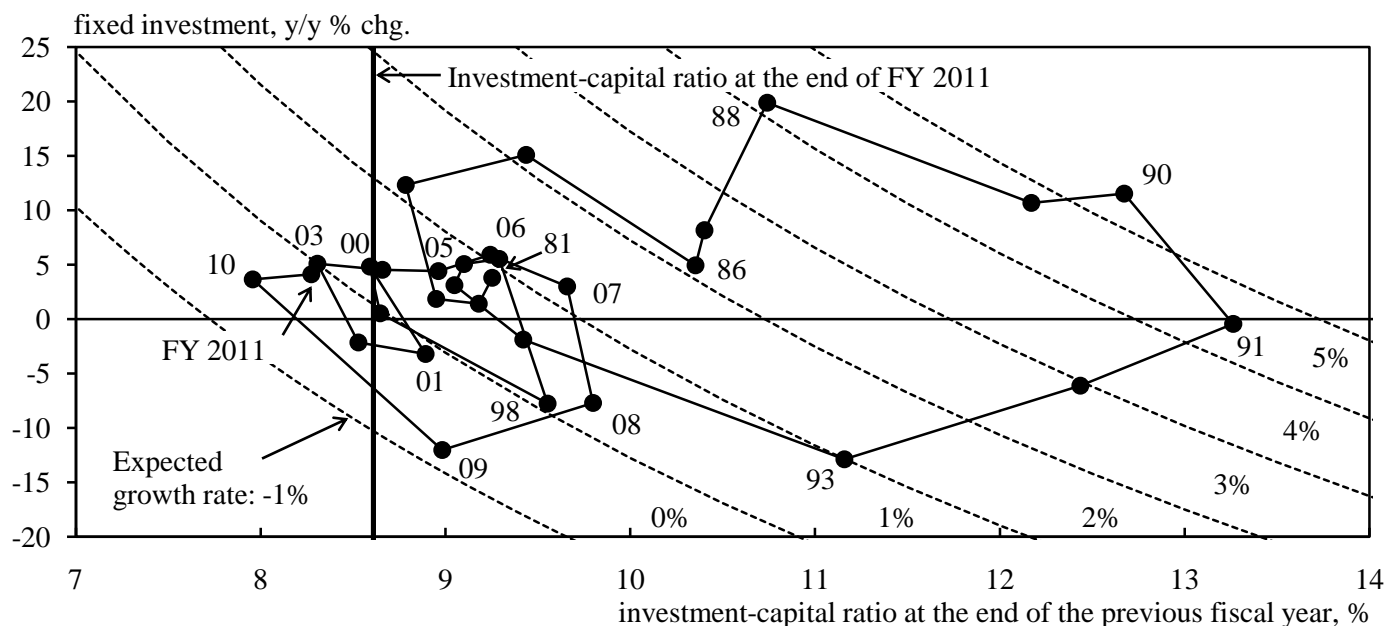
Sources: Cabinet Office, "National Accounts";

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

Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan," etc.

## Capital Stock Cycles and Business Fixed Investment Plans

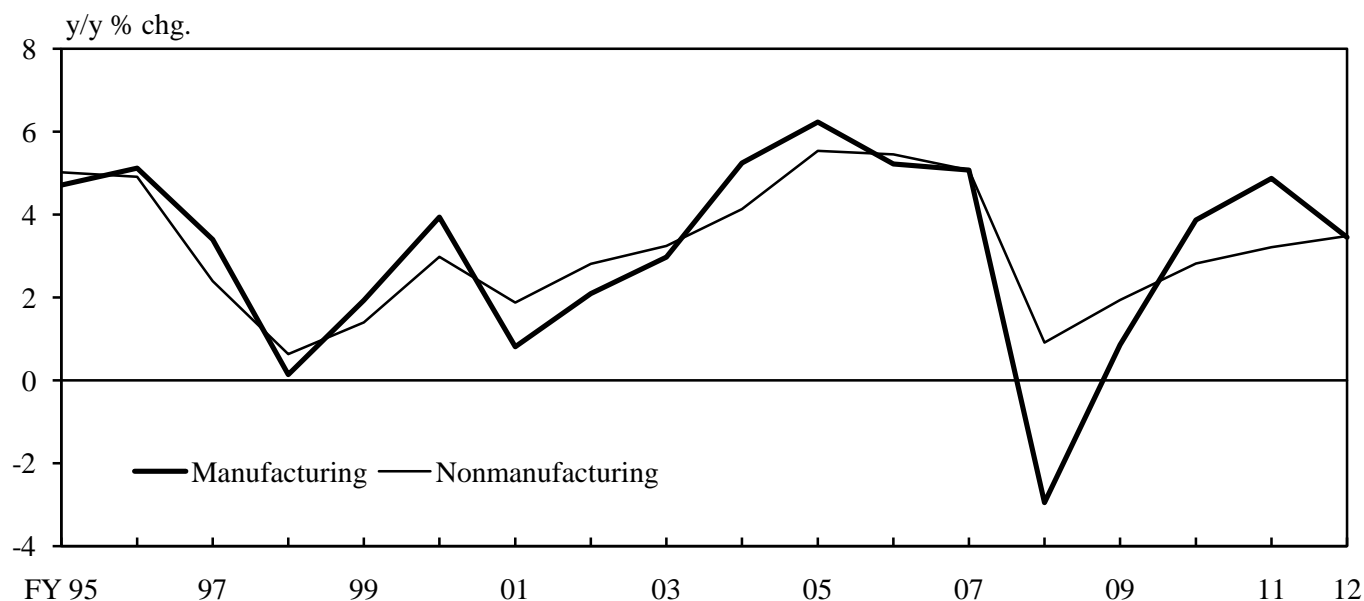
### (1) Capital Stock Cycles



1. Capital stock cycles in the chart show the relationship between the investment-capital ratio and the year-on-year rate of change in fixed investment.
2. As these variables have the following relation, a hyperbolic curve can be drawn for a given expected growth rate.  

$$\text{Year-on-year rate of change in fixed investment (y-axis)} \times \text{investment-capital ratio at the end of the previous fiscal year (x-axis)} = \text{expected growth rate} + \text{trend growth rate of capital coefficient} + \text{depreciation rate}$$
3. The phase of fixed investment at a certain time can be evaluated in relation to the hyperbolic curve corresponding to the expected growth rate at that time.

### (2) Business Fixed Investment Plans



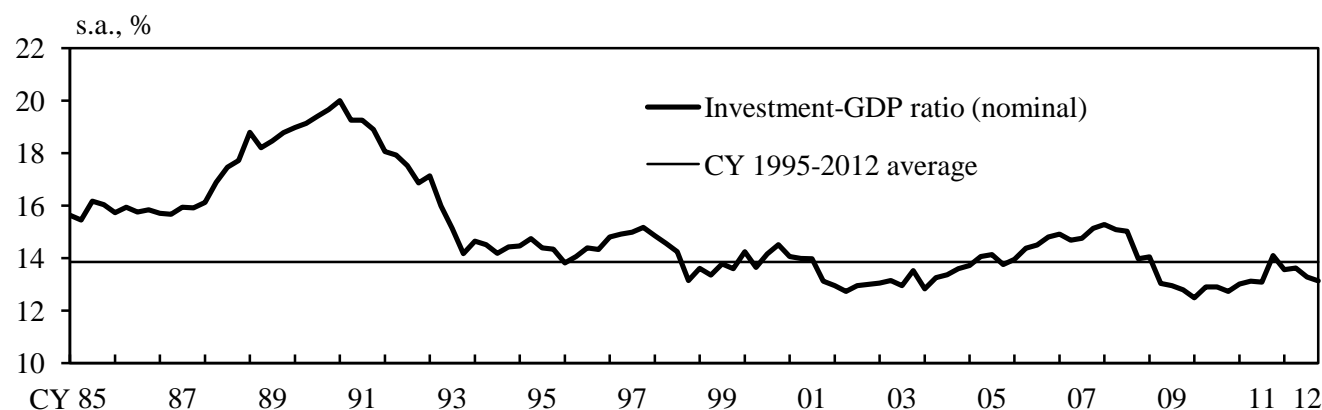
Note: Figures are based on "Annual Survey of Corporate Behavior," and represent average growth rates of the next three years. For instance, figures for fiscal 2012 represent the annualized growth rate forecasts for fiscal 2013-15.

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

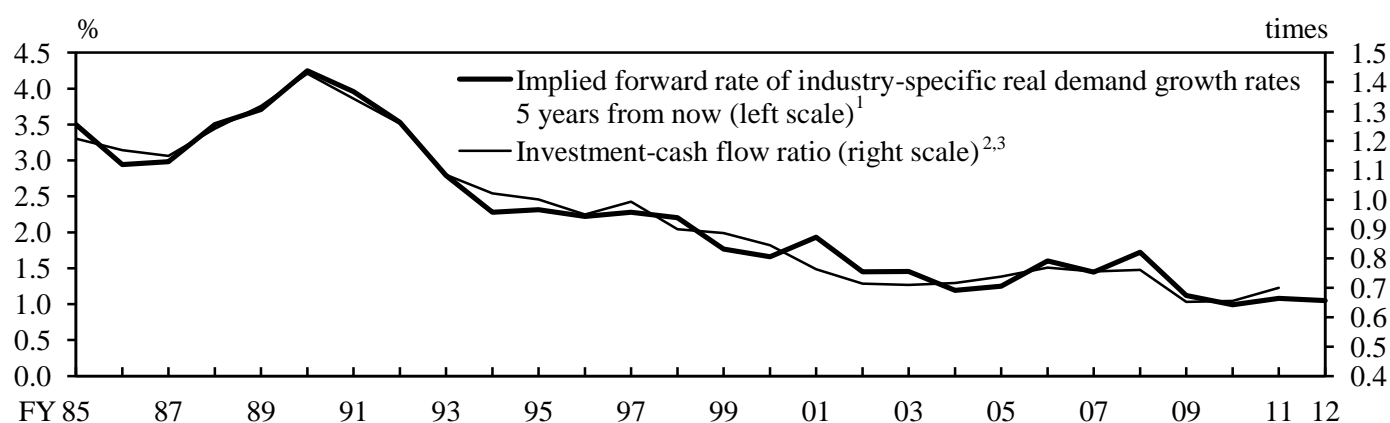


## Business Fixed Investment

### (1) Investment-GDP Ratio (Nominal)



### (2) Cash Flow and Business Fixed Investment



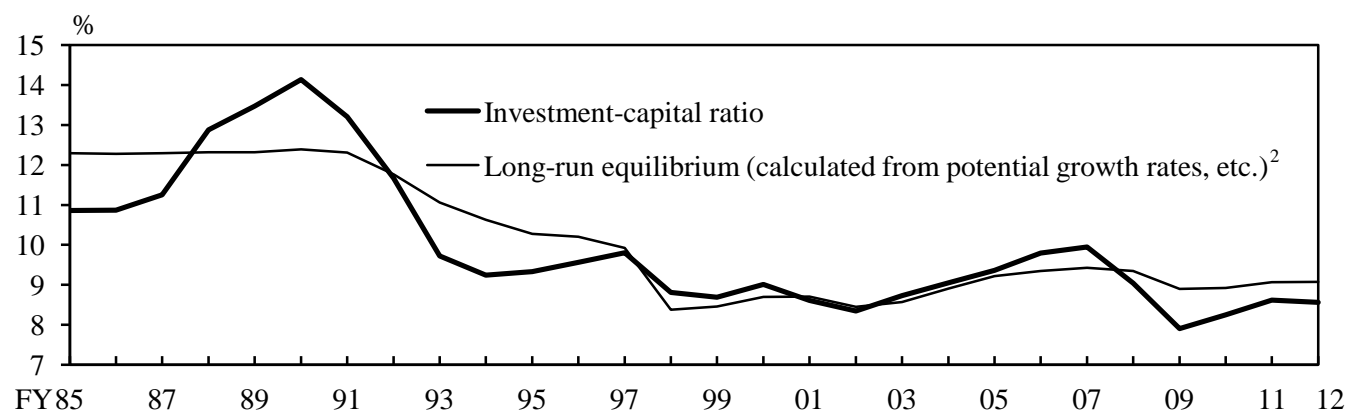
Notes: 1. Calculated using the "Annual Survey of Corporate Behavior." The survey period is January or February in each fiscal year.

2. Taken from "National Accounts."

3. Cash flow = consumption of fixed capital + (operating surplus + net property income) / 2

Figures up to fiscal 2000 are based on the 2000 base.

### (3) Investment-Capital Ratio ( $I_t / K_{t-1}$ )<sup>1</sup>



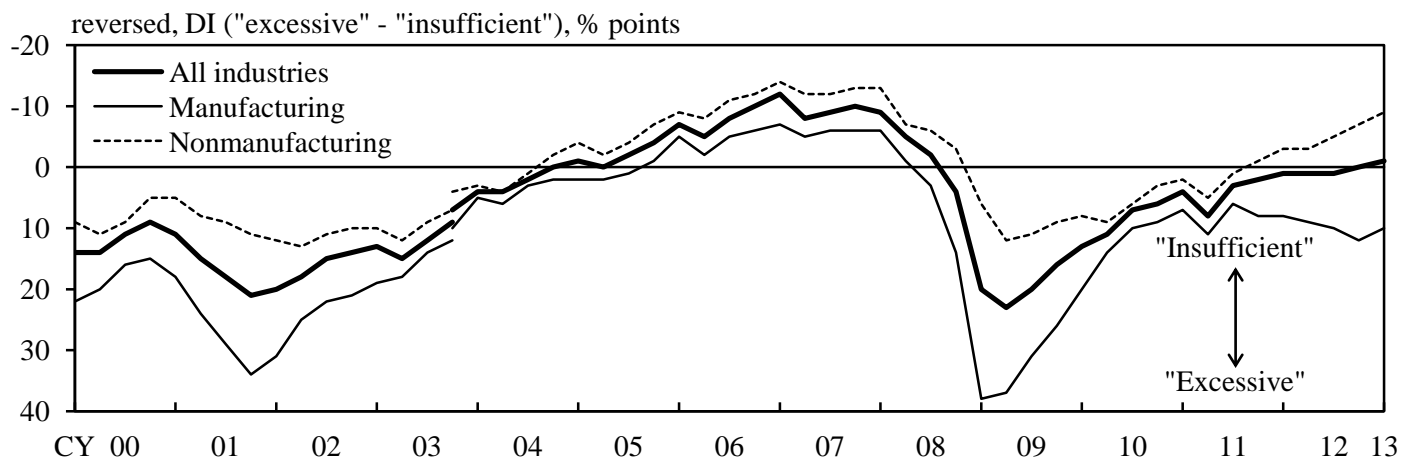
Notes: 1. Figures for fiscal 2012 are 2012/Q2-Q4 averages.

2.  $(I_t / I_{t-1}) \cdot (I / K)_{t-1}$  = expected growth rate + trend growth rate of capital coefficient + depreciation rate (see the explanation in Chart 32). The investment-capital ratio consistent with the potential growth rate can be expressed as  $I_t / K_{t-1}$  = potential growth rate + trend growth rate of capital coefficient + depreciation rate. The long-run equilibrium is calculated using this equation.

Sources: Cabinet Office, "National Accounts," "Annual Survey of Corporate Behavior";  
Research Institute of Economy, Trade and Industry, "Japan Industrial Productivity Database," etc.

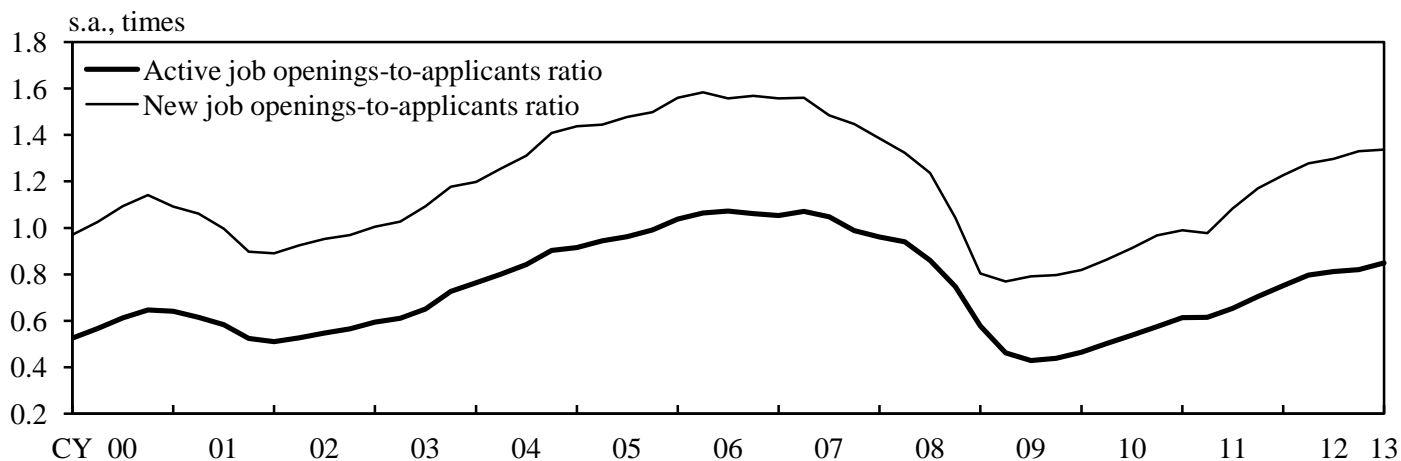
## Labor Supply and Demand (1)

### (1) Employment Conditions DI



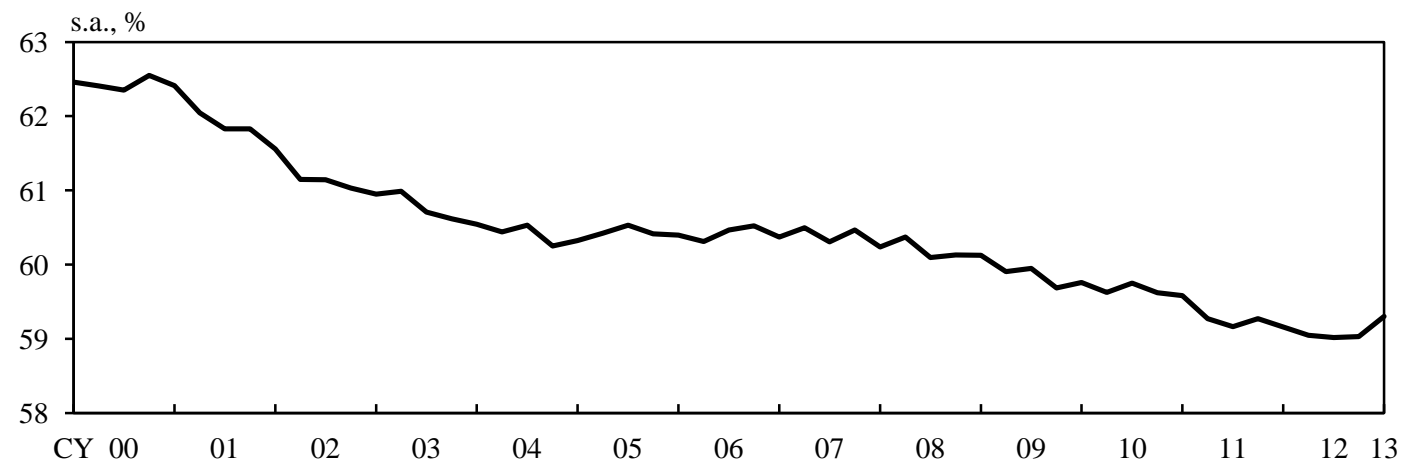
Note: Data from the "Tankan" are based on enterprises of all sizes. The "Tankan" was revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis.

### (2) Job Openings-to-Applicants Ratio



Note: Figures for 2013/Q1 are January-February averages. The same definition applies to the chart below.

### (3) Labor Force Participation Rate

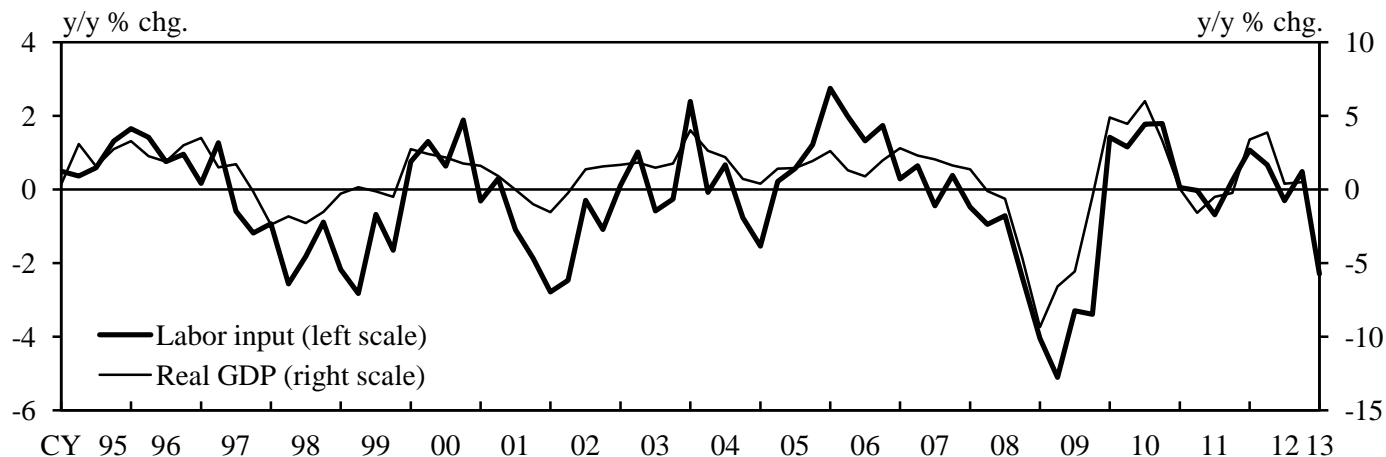


Notes: 1. Labor force participation rate = labor force / population of 15 years old or more  $\times$  100  
 2. Figures are seasonally adjusted by X-12-ARIMA.

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

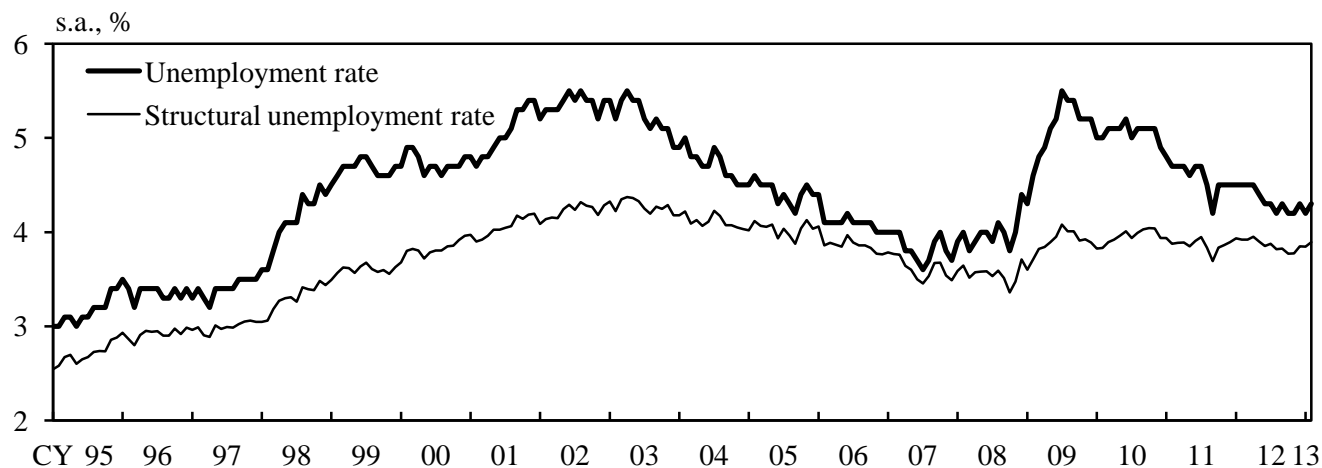
## Labor Supply and Demand (2)

### (1) Labor Input and Real GDP



Notes: 1. Labor input = number of employees (Labour Force Survey) × total hours worked  
 2. The figure for labor input for 2013/Q1 is the January-February average.

### (2) Unemployment Rate



Note: The structural unemployment rate is defined as the level of the unemployment rate where the number of vacancies equals that of the unemployed, given the empirical relationship between job vacancies and unemployment (estimation by the Research and Statistics Department, Bank of Japan). It captures frictional unemployment and unemployment caused by the mismatch between supply and demand in the labor market.

### (3) Labor Share



Note: Labor share = compensation of employees / nominal GDP × 100

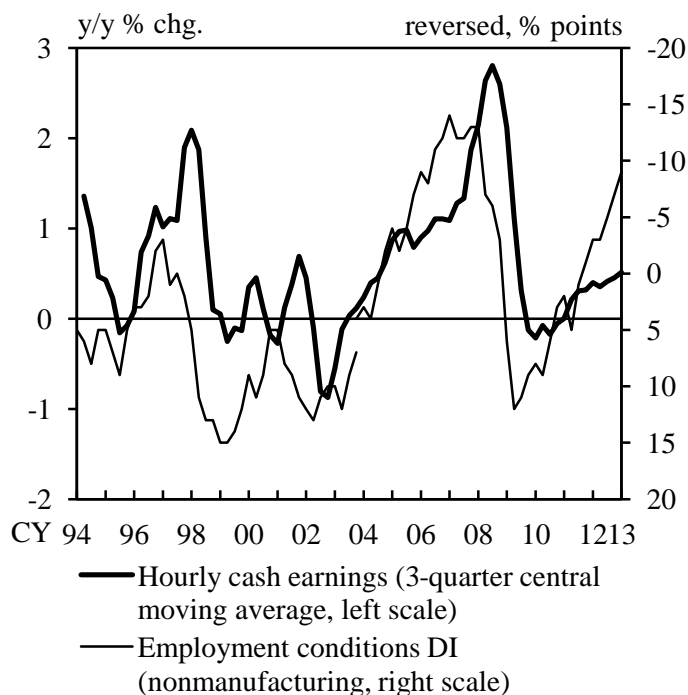
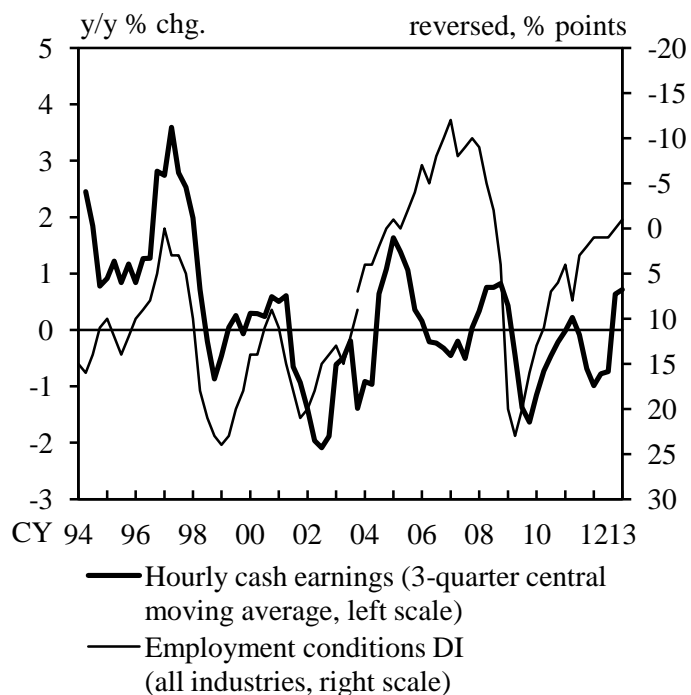
Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service."

## Environment surrounding Wages

### (1) Employment Conditions DI and Hourly Cash Earnings

#### (a) Full-Time Employees

#### (b) Part-Time Employees

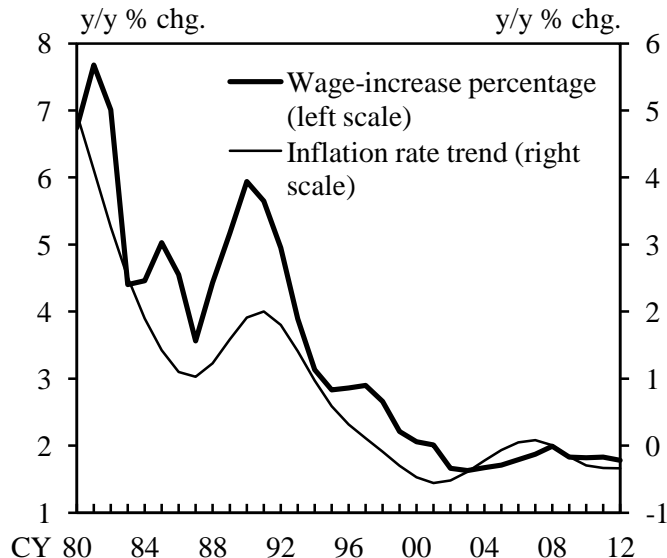
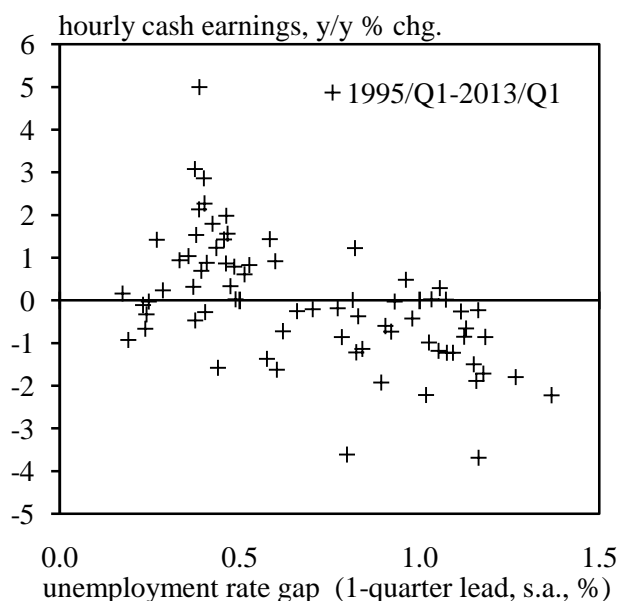


Notes: 1. For the definition of the employment conditions DI, see Chart 34.

2. Figures for the hourly cash earnings for 2013/Q1 are 2-quarter backward moving averages.

### (2) Unemployment Rate Gap<sup>1</sup> and Hourly Cash Earnings<sup>2</sup>

### (3) Wage-Increase Percentage<sup>3</sup> and Inflation Rate Trend<sup>4</sup>



Notes: 1. Unemployment rate gap = unemployment rate - structural unemployment rate  
For the definition of the structural unemployment rate, see Chart 35.

2. The figure for 2013/Q1 is the January-February average.

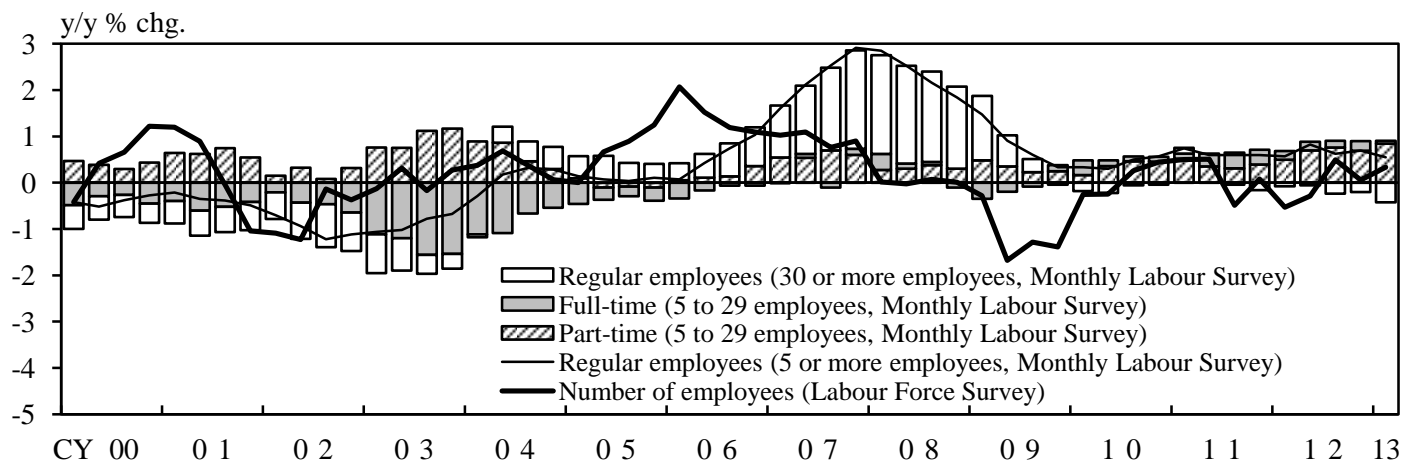
3. The average rate of the spring wage increase in principal private enterprises.

4. Calculated by applying the HP filter to the year-on-year rates of change in the CPI (all items).

Sources: Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service," "Conditions Relating to Spring Wage Increase (Shunto) (Principal Enterprises)"; Ministry of Internal Affairs and Communications, "Labour Force Survey," "Consumer Price Index."

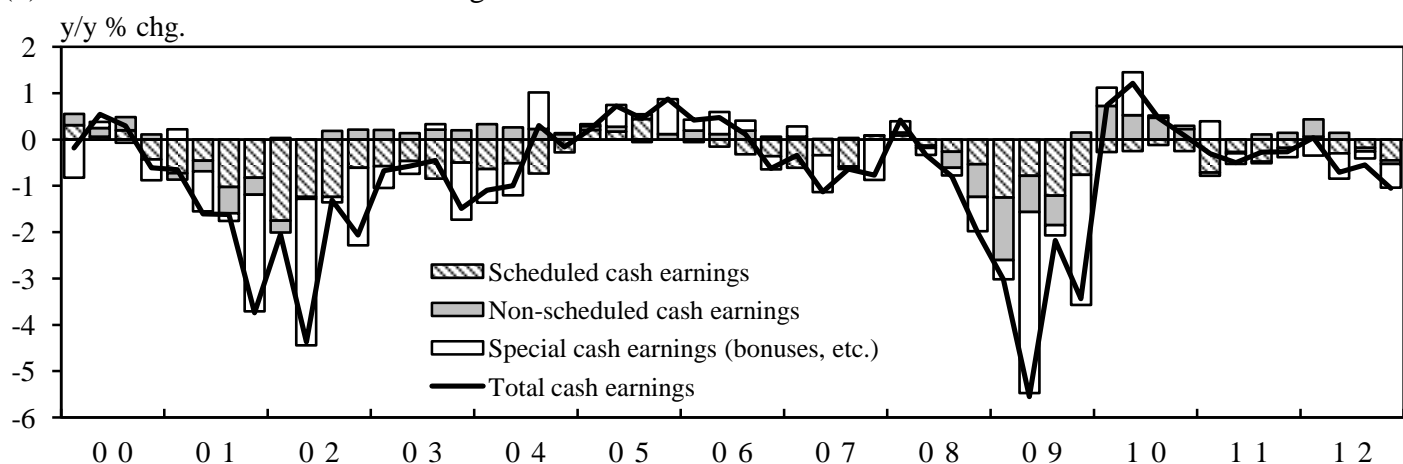
## Employee Income

### (1) Number of Employees



Note: Figures for 2013/Q1 are January-February averages.

### (2) Breakdown of Total Cash Earnings

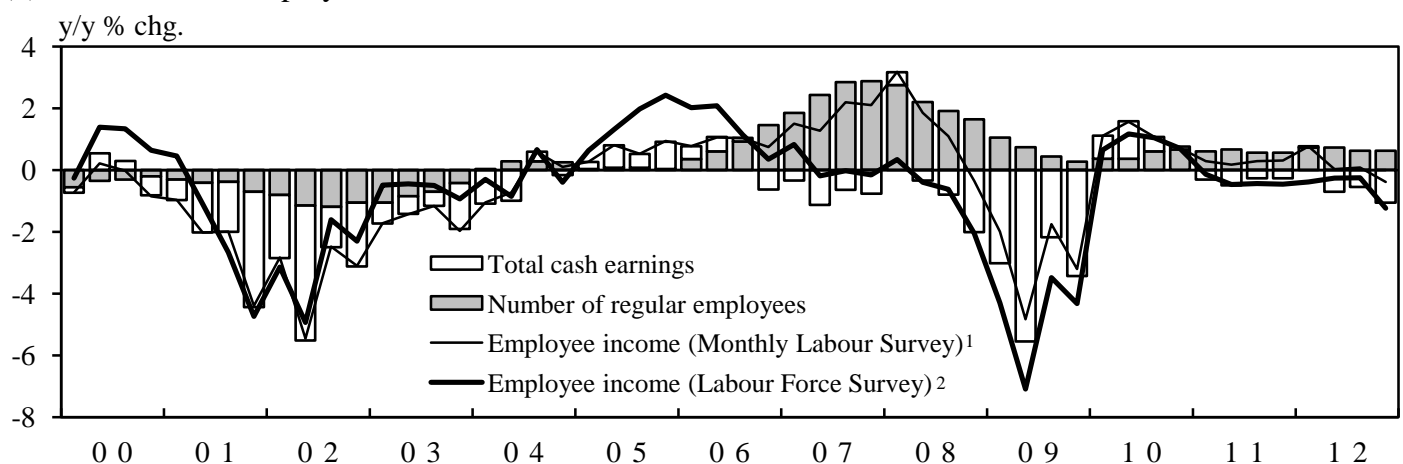


Note: Data from the "Monthly Labour Survey" are for establishments with at least five employees.

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

The same definition applies to the chart below.

### (3) Breakdown of Employee Income



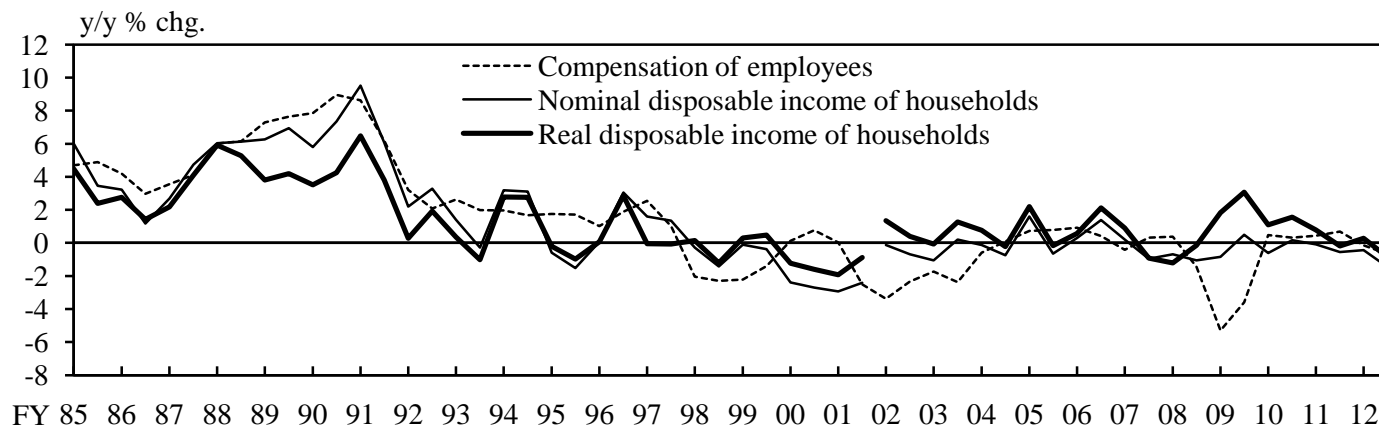
Notes: 1. Calculated as the "number of regular employees" (Monthly Labour Survey) times "total cash earnings" (Monthly Labour Survey).

2. Calculated as the "number of employees" (Labour Force Survey) times "total cash earnings" (Monthly Labour Survey).

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

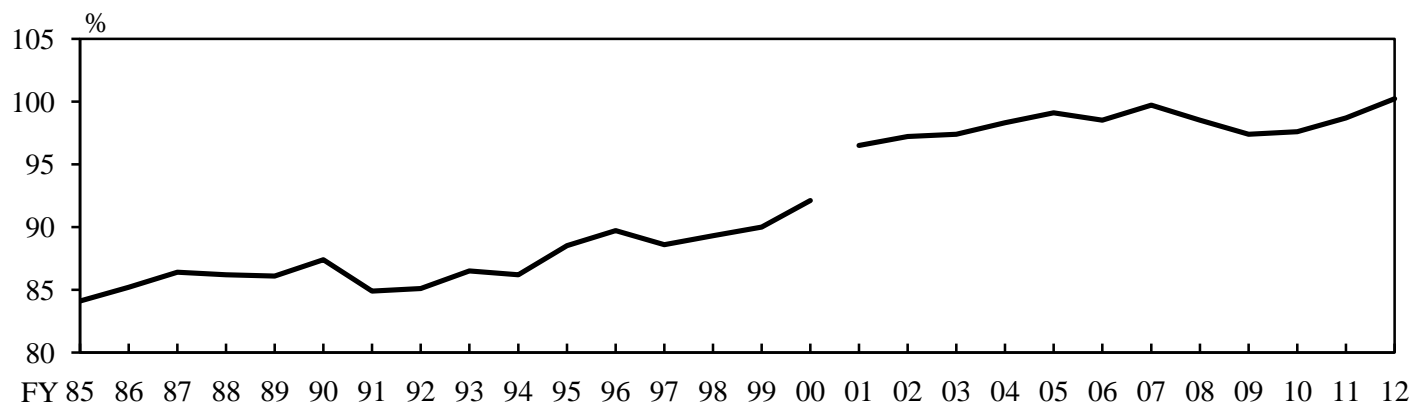
## Disposable Income of Households and Propensity to Consume

### (1) Compensation of Employees and Disposable Income of Households



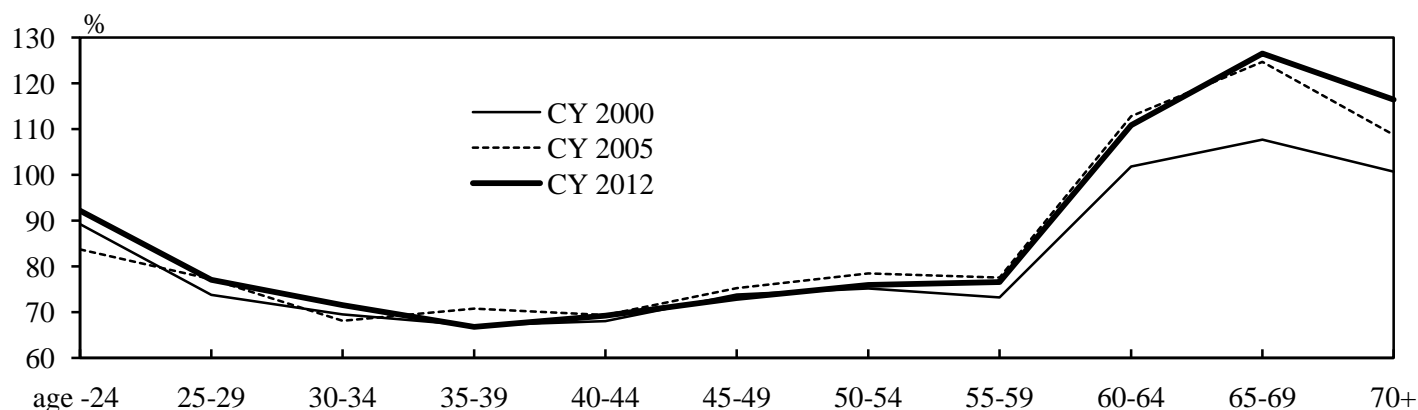
- Notes: 1. The figure for compensation of employees for the second half of fiscal 2012 is the year-on-year rate of change in 2012/Q4.  
 2. Figures for disposable income of households up through fiscal 2001 are on the 2000 base. From fiscal 2002, they are on the 2005 base.  
 3. Figures for fiscal 2012 are estimated by the Research and Statistics Department, Bank of Japan. They include estimated transfers of income from the government to households through the economic policy packages. The same procedure applies to (2).

### (2) Propensity to Consume



Note: Figures are on a "National Accounts" basis. They are on the 2000 base up through fiscal 2000 and on the 2005 base from fiscal 2001 onward.

### (3) Propensity to Consume by Age

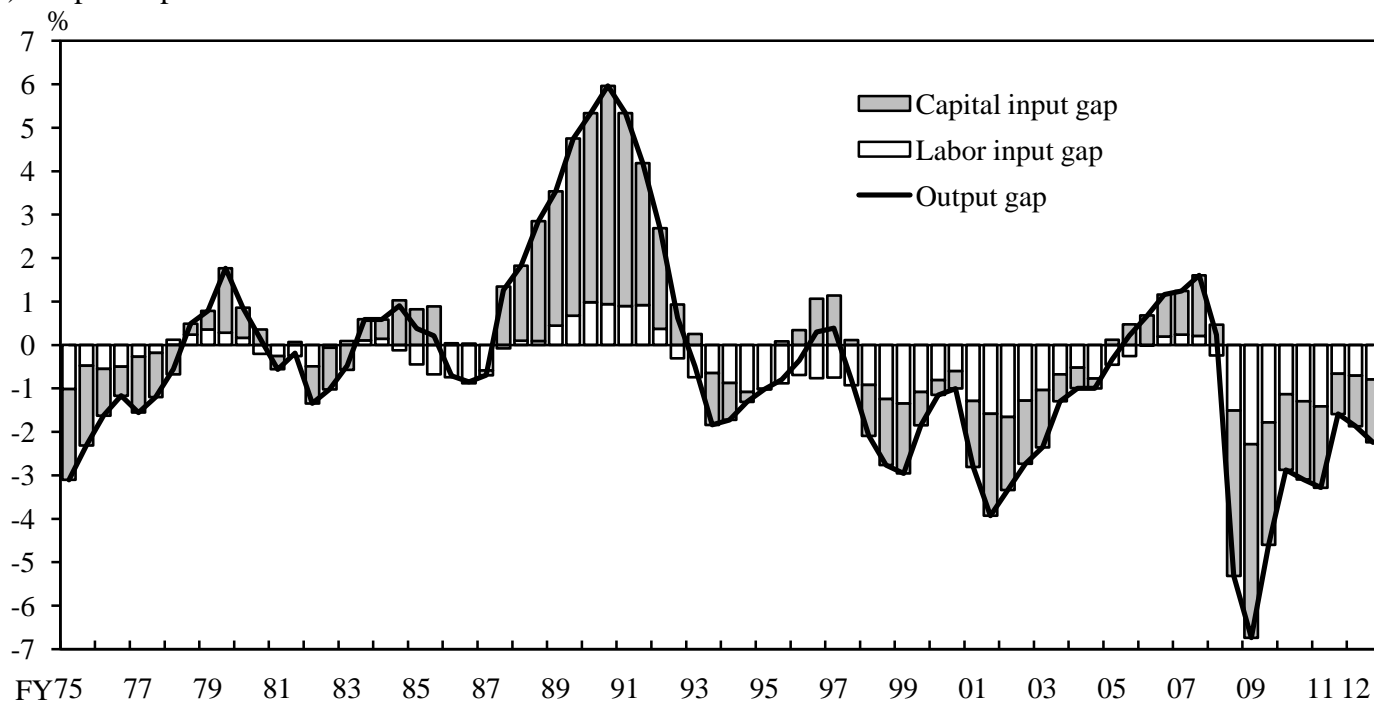


Note: Figures are on a "Family Income and Expenditure Survey" basis. Calculated by using consumption expenditure and disposable income that are the weighted averages of workers' households and no-occupation households.

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications, "Consumer Price Index," "Family Income and Expenditure Survey"; budgets for fiscal 2009-12, etc.

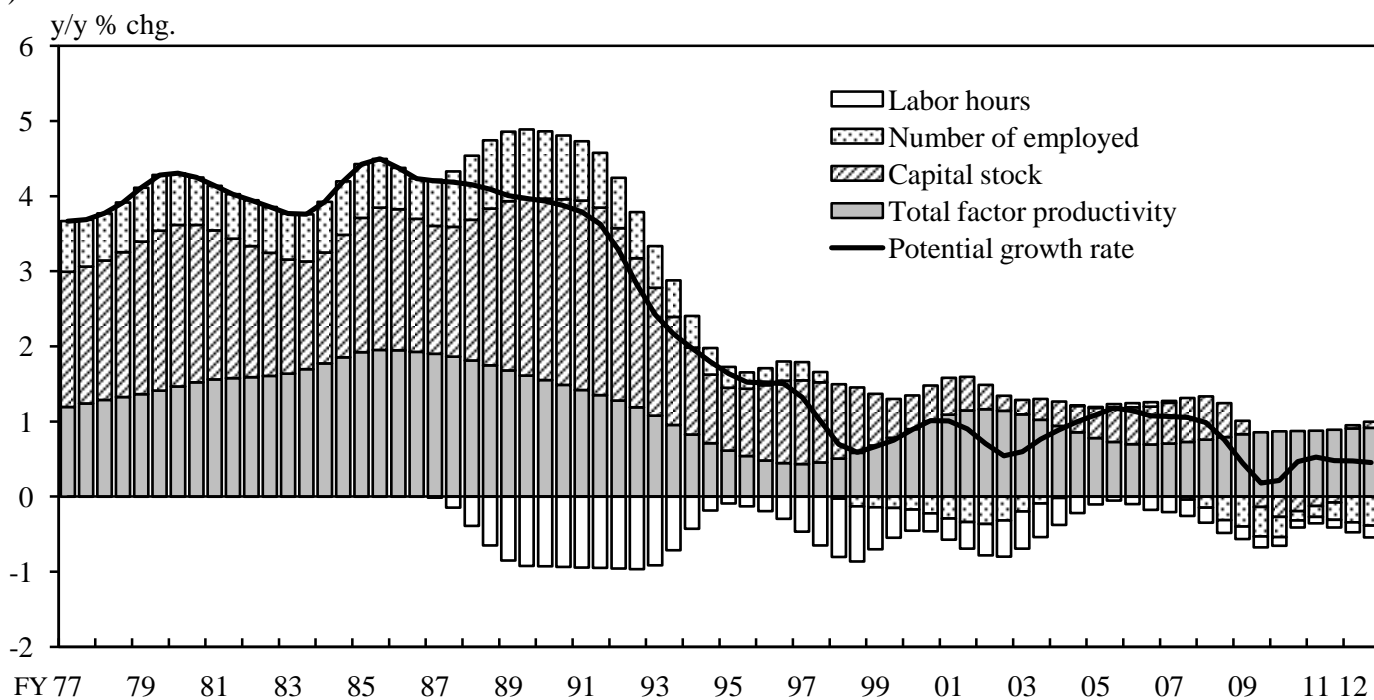
## Output Gap and Potential Growth Rate

## (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 definition applies to the chart below.
2. Figures for the second half of fiscal 2012 are those of 2012/Q4. The same rule applies to the chart below.

## (2) Potential Growth Rate

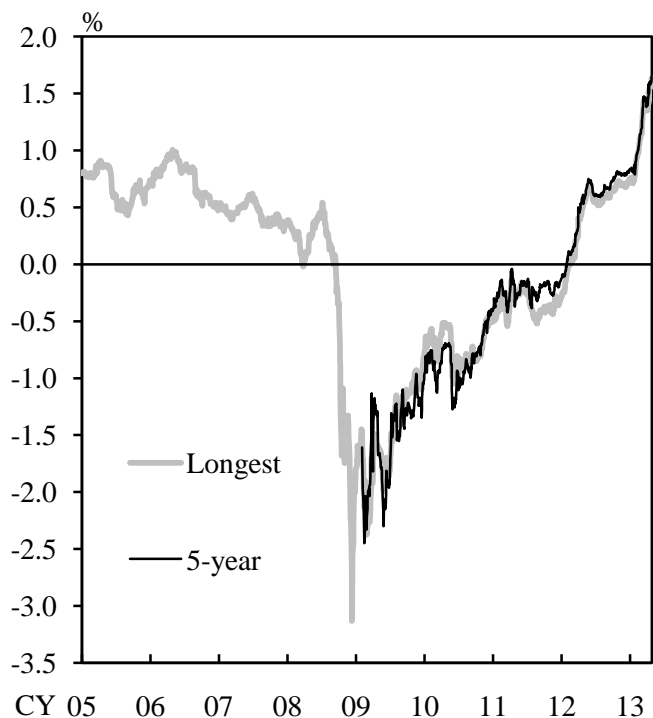


Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service"; Ministry of Economy, Trade and Industry, "Indices of Industrial Production"; Bank of Japan,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

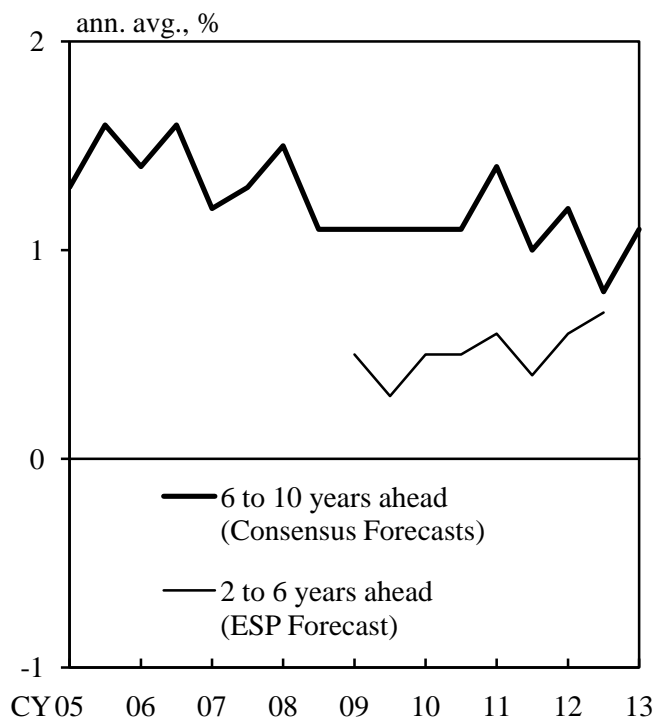
## Inflation Expectations (1)

(1) Market Participants

(BEI for Inflation-Indexed JGBs)<sup>1</sup>



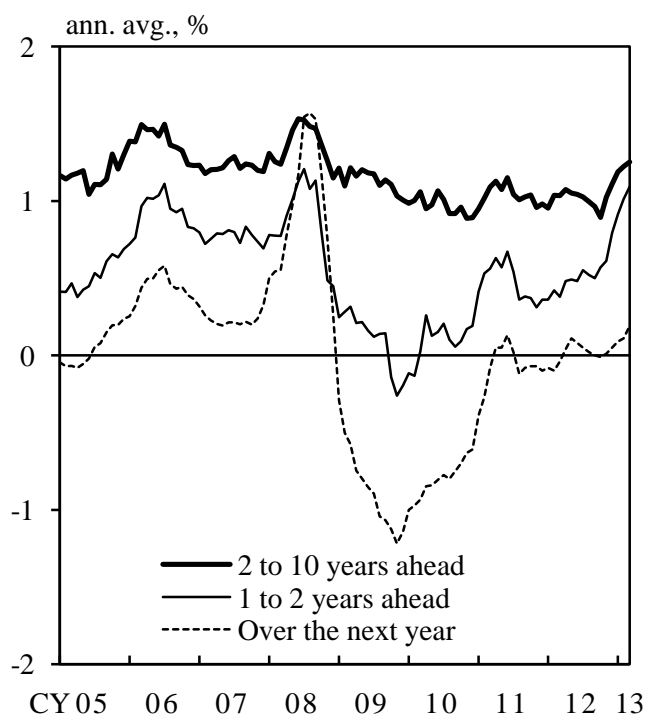
(2) Economists



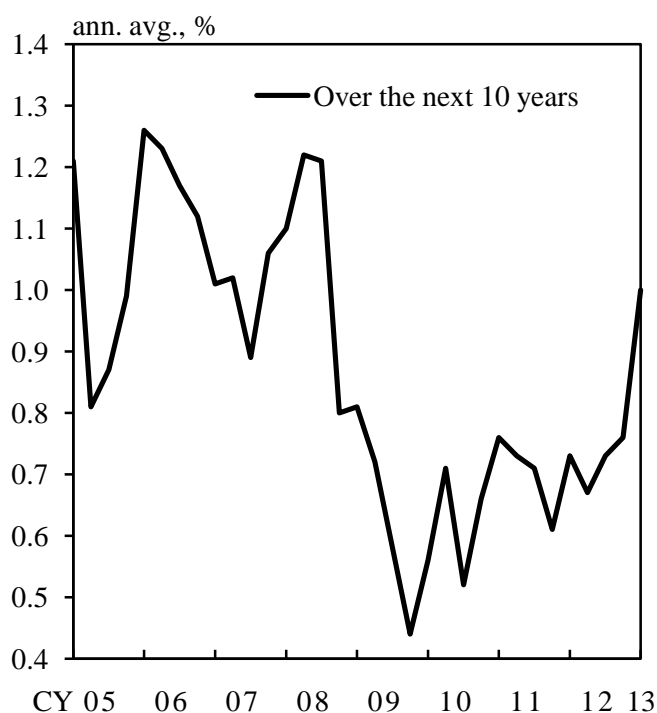
Note: 1. Yield spreads between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs. Figures for "Longest" are calculated using yield data for the inflation-indexed JGBs that have the longest maturity at each period.

(3) Market Participants

<Quick Bond Monthly Survey>



<Survey by Mizuho Securities><sup>1</sup>



Note: 1. Figures exclude the effects of consumption tax hikes.

Sources: QUICK, "Quick Bond Monthly Survey"; JCER, "ESP Forecast";

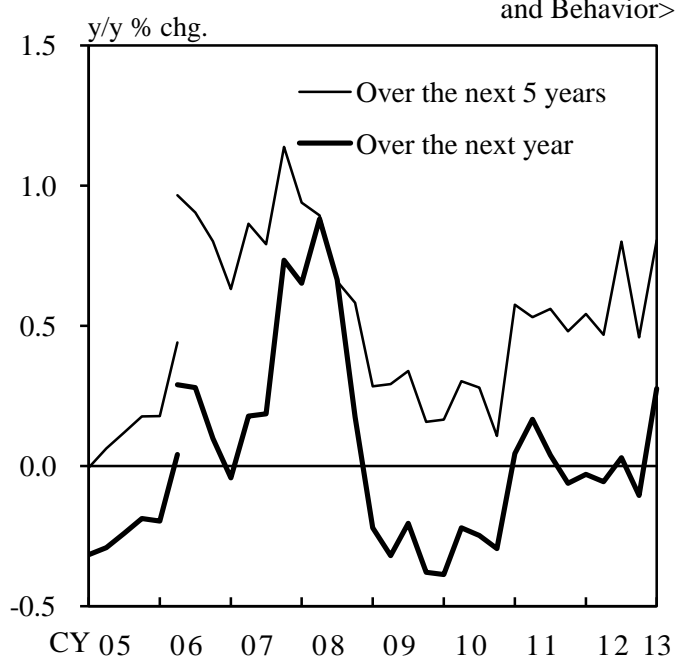
Consensus Economics Inc., "Consensus Forecasts"; Bloomberg; Mizuho Securities, "Investor Survey."



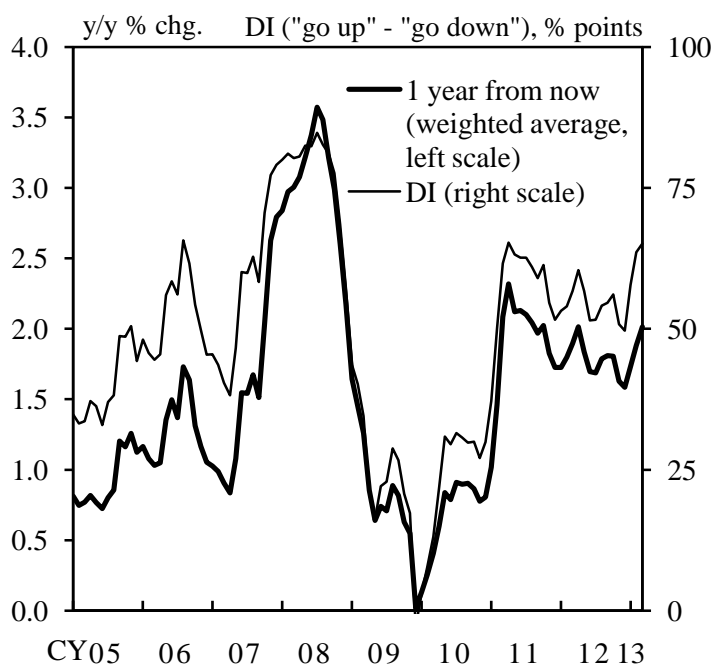
## Inflation Expectations (2)

### (1) Households

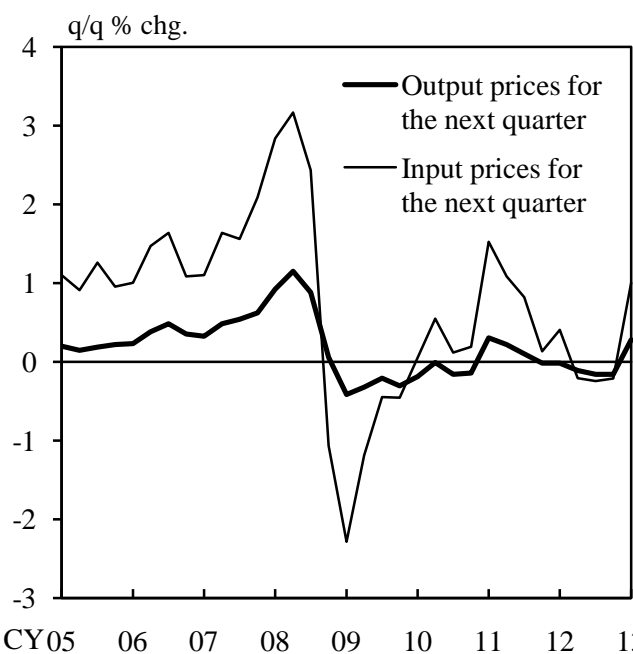
<Opinion Survey on the General Public's Views and Behavior><sup>1</sup>



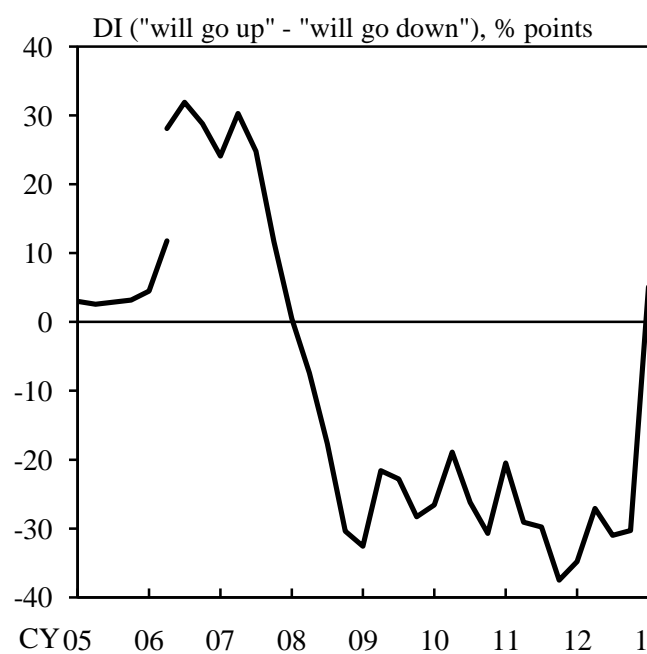
<Consumer Confidence Survey><sup>2, 3</sup>



### (2) Enterprises (*Tankan*)<sup>1</sup>



(Reference) Household Expectations for Land Prices  
<Opinion Survey on the General Public's Views and Behavior>



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).

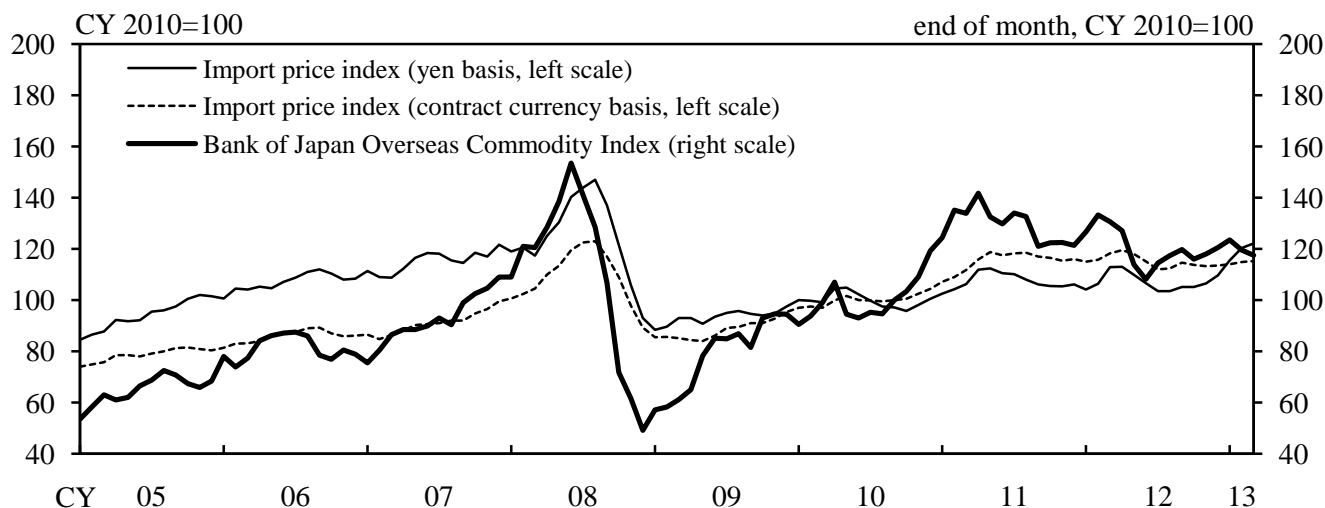
2. Figures are for all households.

3. 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.

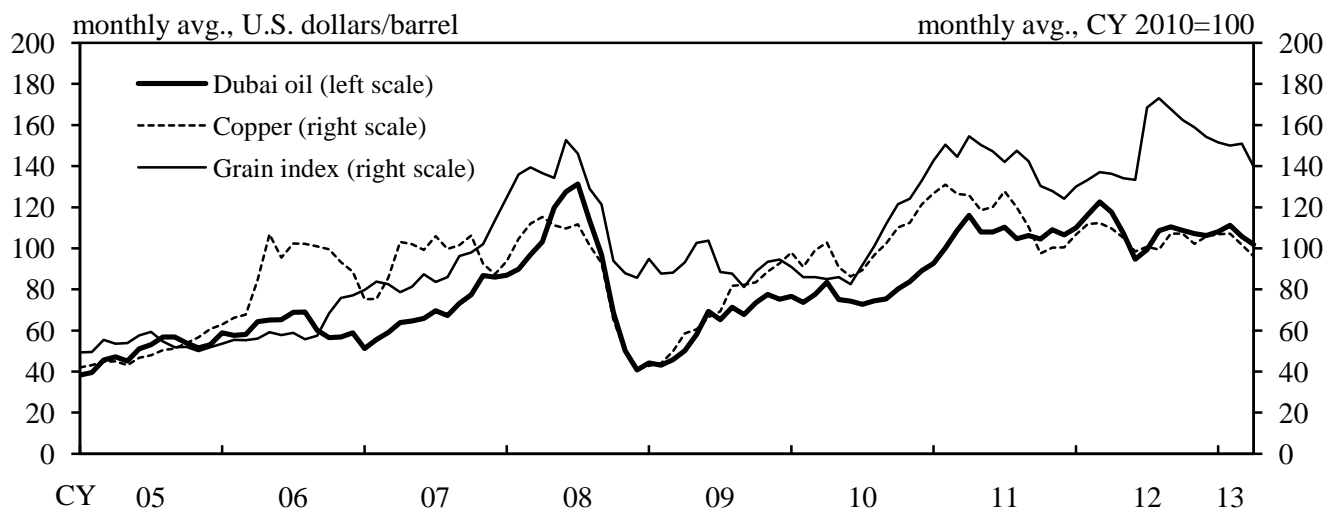
Sources: Bank of Japan, "*Tankan*, Short-Term Economic Survey of Enterprises in Japan," "Opinion Survey on the General Public's Views and Behavior," "Corporate Goods Price Index"; Ministry of Internal Affairs and Communications, "Consumer Price Index"; Cabinet Office, "Consumer Confidence Survey."

## Import Prices and International Commodity Prices

(1) Import Price Index and Overseas Commodity Index

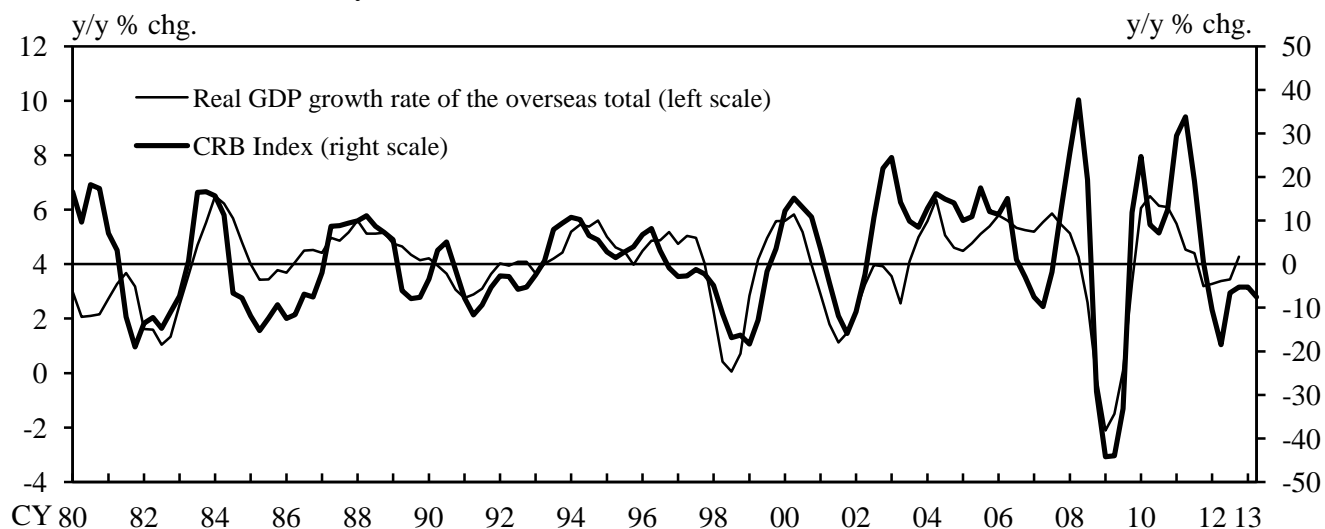


(2) Oil, Nonferrous Metal and Grain Prices



Note: The grain index is the weighted average of 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 of Japan.

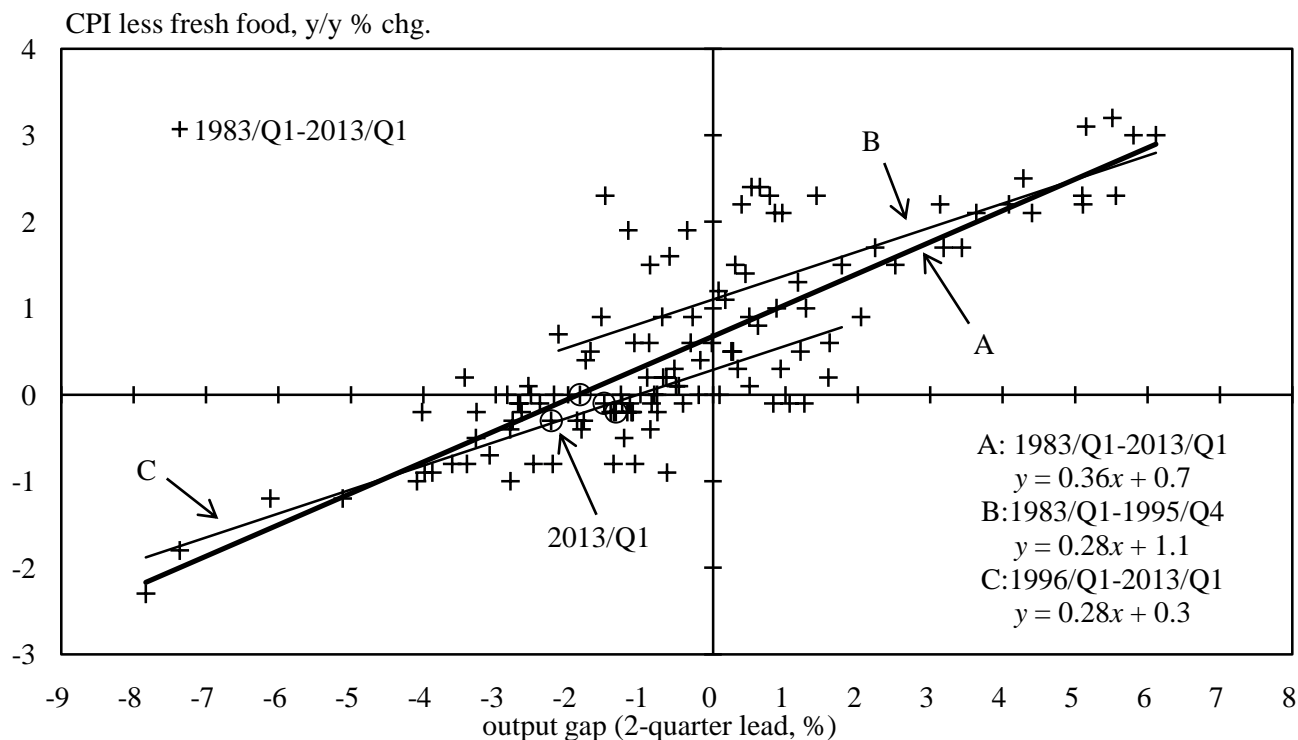
(3) International Commodity Prices and Overseas Economies



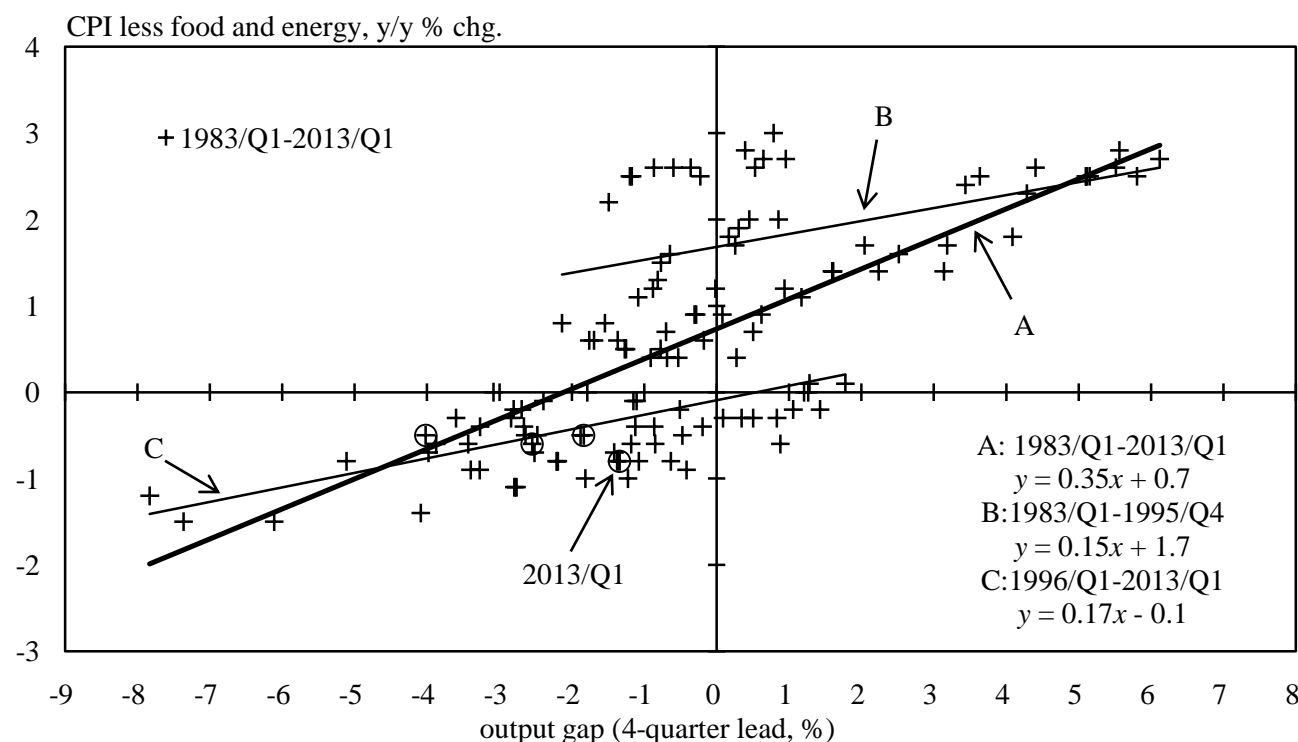
Sources: Bank of Japan, "Corporate Goods Price Index," "Bank of Japan Overseas Commodity Index"; IMF, "World Economic Outlook," etc.

## Output Gap and Inflation Rate

(1) Phillips Curve (CPI Less Fresh Food)<sup>1,2,3,4</sup>



(2) Phillips Curve (CPI Less Food and Energy)<sup>1,2,3,4</sup>

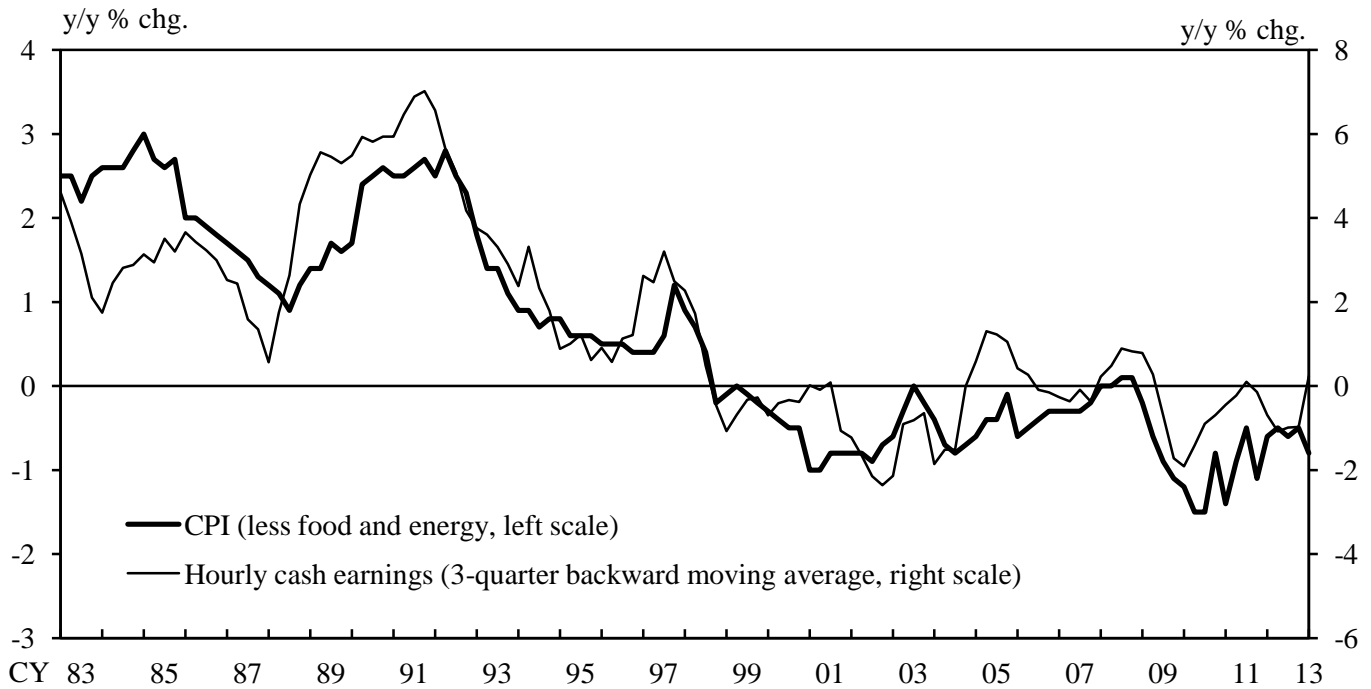


- Notes: 1. The circled marks are the latest four positions.  
 2. Figures for the CPI are adjusted to exclude the effect of changes in the consumption tax rate.  
 3. The output gap is estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3.  
 4. The number of lags is chosen so that the cross-correlation between the output gap and the CPI is maximized.

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

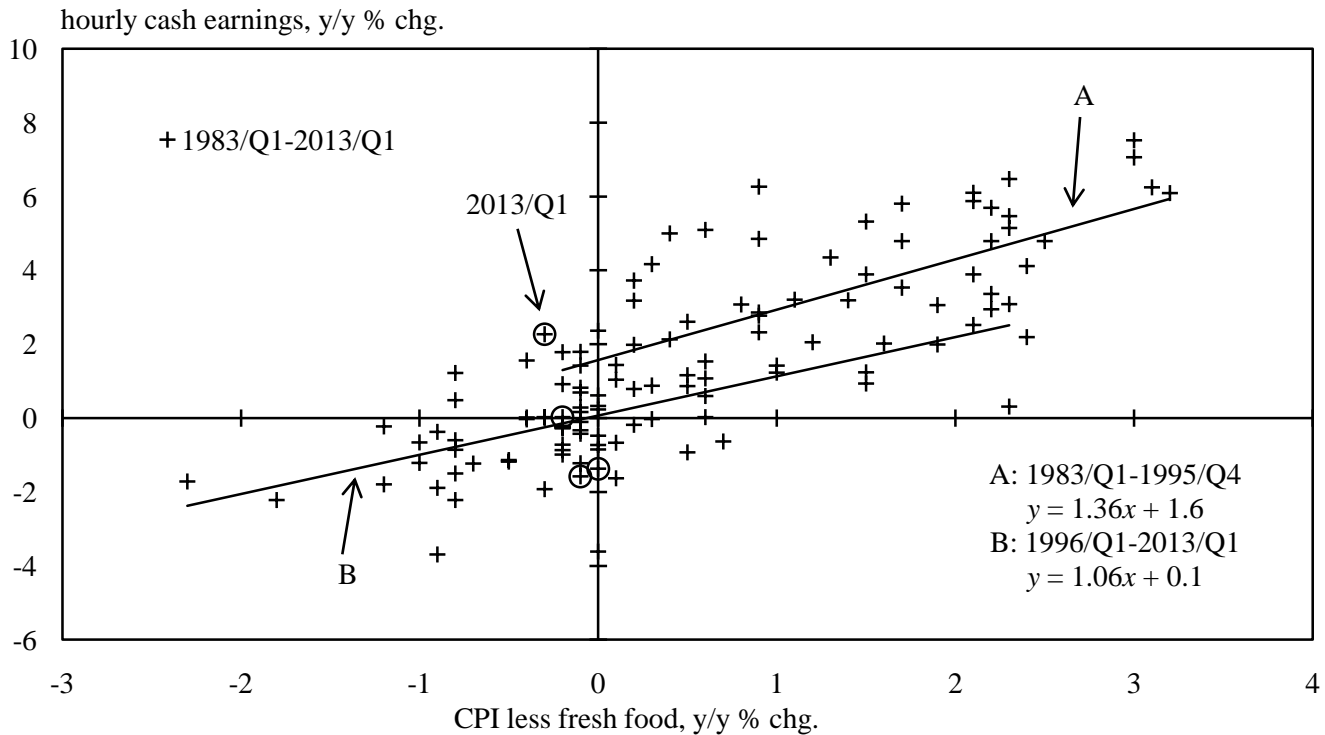
## Prices and Wages

### (1) CPI (Less Food and Energy) and Hourly Cash Earnings



- Notes: 1. Figures for 2013/Q1 are January-February averages. The same definition applies to the chart below.  
 2. Figures for the CPI are adjusted to exclude the effect of changes in the consumption tax rate. The same definition applies to the chart below.  
 3. Figures for hourly cash earnings up through 1990/Q4 are those for establishments with 30 or more employees. The same definition applies to the chart below.










### (2) CPI (Less Fresh Food) and Hourly Cash Earnings



Note: The circled marks are the latest four positions.

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

## Economic Assessment by Region (Regional Economic Report)

Region	Assessment in January 2013	Changes from the previous assessment	Assessment in April 2013
Hokkaido	The economy has been relatively weak in some aspects, although it has continued to pick up.		The economy has continued to pick up.
Tohoku	The recovery in economic activity has come to a pause.		The economy has begun to recover with production having stopped declining.
Hokuriku	The economy has been weakening somewhat.		The economy has shown some signs of picking up.
Kanto-Koshinetsu	The economy has been weakening somewhat.		The economy has stopped weakening.
Tokai	The economy has been relatively weak as a whole.		The economy has been picking up moderately.
Kinki	The economy has been relatively weak.		The economy has remained relatively weak, but signs of picking up have gradually become widespread.
Chugoku	The economy has been weakening somewhat.		The economy has started to pick up as a whole, albeit with differences depending on the industry and size of firms.
Shikoku	The pick-up in economic activity has come to a pause, and the economy has shown signs of weakness.		The economy has been resilient, although it has shown some signs of weakness.
Kyushu-Okinawa	The economy has continued to be more or less unchanged as a whole.		The economy has continued to be more or less unchanged as a whole, but it has shown some signs of picking up, mainly in domestic demand-oriented sectors.

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/rer130415.htm/>).

Source: Bank of Japan, "Regional Economic Report (Summary) April 2013."