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Bank of Japan

Outlook for Economic Activity and Prices

April 2012

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

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The Bank's View¹

I. Introduction

This April 2012 issue of the *Outlook for Economic Activity and Prices* (Outlook Report) presents the outlook for Japan's economy through fiscal 2013. The Outlook Report first provides a description of developments in global financial markets and overseas economies that are affecting trends in Japan's economy, followed by the Bank of Japan's assessment of the nation's financial conditions. Next, taking these into account, the scenario for economic activity and prices considered to be the most likely by the Bank -- its baseline scenario -- is described, and upside and downside risks associated with the scenario are examined. Lastly, a summary of the Bank's basic thinking on the conduct of monetary policy is provided.

II. Global Financial Markets and Overseas Economies

Strains in global financial markets had intensified since last summer toward the end of 2011, mainly due to concern about the European debt problem. Governments and central banks around the globe have implemented various measures in response. The European Central Bank (ECB) conducted large-scale longer-term refinancing operations (LTROs) with a maturity of 36 months. With regard to Greece, which faced the most serious debt problem, restructuring of debts held by private creditors was implemented, and this allowed the European Union (EU) and the International Monetary Fund (IMF) to decide on the second financial support program. Progress was also made in efforts to enhance fiscal discipline as well as the financial capacity to respond to crises through provision of funds. Specifically, EU member states signed the Fiscal Compact and agreed to boost the lending capacity of the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM). Meanwhile, at the end of November 2011, six central banks including the Bank of Japan announced coordinated actions to address pressures in global money markets, such as a reduction of interest rates on the fixed-rate U.S. dollar funds-supplying operations. With the implementation of these measures, funding conditions for European and U.S. financial institutions have been improving and global financial markets have

¹ The text of "The Bank's View" was decided by the Policy Board at the Monetary Policy Meeting held on April 27, 2012.

generally regained stability, as evident in developments such as declines in short-term interest rates in the euro and U.S. dollar interbank markets. Government bond yields in countries facing serious fiscal situations have declined compared with the period from autumn 2011 toward the beginning of 2012, although upward pressure persists.

In such a circumstance, a tail risk -- namely, the likelihood of global financial market turmoil causing a significant global economic downturn -- has been decreasing after causing serious concern around the end of last year. Somewhat positive developments have been observed in the global economy, including the continued moderate improvement in the U.S. economy. Reflecting these developments, risk aversion among global investors has weakened compared with the second half of 2011, and positive market developments have been observed, including a pick-up in stock prices around the globe and in international commodity prices as well as a narrowing of credit spreads on corporate bonds in the U.S. and European markets. In the foreign exchange market, reflecting a reversal of extreme "flight to safe assets," the yen has depreciated somewhat against both the U.S. dollar and the euro compared with around the end of 2011.

Next, the pace of growth in overseas economies has moderated since spring 2011, mainly due to increased strains in global financial markets reflecting the effects of the European debt problem and to the effects of the earlier monetary tightening in emerging and commodity-exporting economies. More recently, although overseas economies have remained in a deceleration phase, some improvement has been observed. By region, the U.S. economy has continued to recover at a moderate pace. Specifically, in the corporate sector, business fixed investment has been increasing moderately against the background of solid corporate profits. In the household sector, private consumption has recently been firm, mainly due to a moderate improvement in employment, despite the continued burdens of balance-sheet repair. The sluggishness in the European economy remains strong mainly due to the effects of fiscal austerity measures. More recently, however, the economy generally stopped deteriorating further as financial markets have regained some stability. Emerging and commodity-exporting economies have maintained relatively high growth on the whole, and the pace of growth has stopped decelerating of late, as exports to advanced economies are no longer decreasing and domestic demand has been firm in a situation

where inflation rates have generally been on a declining trend.

In the Bank's baseline scenario, the pace of recovery in overseas economies is likely to gradually pick up led by emerging and commodity-exporting economies, on the assumption that global financial markets will generally remain stable. Therefore, the average annual growth rates of overseas economies during the projection period are forecast to be relatively high compared with past long-term averages.² When looking at a breakdown by country and region, the U.S. economy is likely to continue recovering at a moderate pace against the background of accommodative financial conditions, although the burdens of balance-sheet repair will remain. The European economy is likely to head toward a moderate recovery based on the assumption that the tail risk stemming from the debt problem will not materialize, but such momentum will likely be restrained by the continuation of fiscal austerity. Meanwhile, emerging and commodity-exporting economies are likely to maintain relatively high growth as the virtuous circle of production, income, and spending is expected to gradually strengthen, mainly against the background of a recovery in advanced economies and a receding of inflationary pressure, which in turn provides room for monetary easing.

III. Japan's Financial Conditions

Japan's financial conditions have continued to ease as the Bank has pursued powerful monetary easing. Specifically, market interest rates, including longer-term ones, have remained at extremely low levels, and firms' funding costs have declined moderately. Issuing conditions for CP have remained favorable. In the corporate bond market, issuing conditions continue to be generally favorable except for electric power companies, which face considerable uncertainty concerning their business environment. Firms continue to view financial institutions' lending attitudes as being on an improving trend, and have

² In January 2012, the IMF revised downward its September 2011 projections for global economic growth (calculated as the aggregate of purchasing power parity-weighted GDP growth projections for individual countries or regions), particularly those for European economies. Following this downward revision, the projections were revised upward in April 2012, albeit slightly. The global economy is projected to grow by 3.5 percent in 2012, and is expected to accelerate once again by 4.1 percent in 2013. For reference, the average growth rate during the 30 years since 1980 is 3.3 percent.

retained their recovered financial positions on the whole. Despite some differences depending on the size of firms, the respective indicators representing financial institutions' lending attitudes as perceived by firms and the financial positions of firms have been at levels exceeding the average for the period since 2000. As for credit demand, firms have shown signs of increasing their demand mainly for working capital and funds related to mergers and acquisitions. Looking at funding in the corporate sector, the year-on-year rate of change in the amount outstanding of bank lending, after turning positive at the end of 2011, has recently risen further. The year-on-year rate of change in the amount outstanding of CP and corporate bonds combined has generally been slightly positive.

As such, Japan's financial conditions have maintained stability and have not been significantly affected even during phases of heavy strains in global financial markets caused by the European debt problem. Such stability in financial conditions can be attributed to the reasonable amount of tolerance that Japan's financial system possesses for negative shocks, including an economic downturn, a stock price plunge, and a rise in long-term interest rates, as well as to the Bank's powerful monetary easing. In terms of the outlook, these accommodative financial conditions are expected to support a transition toward a self-sustaining recovery in domestic private demand. Taking into account the increasing global linkages of financial markets, however, it is necessary to maintain vigilance with regard to the possibility that global financial markets will affect Japan's financial system and its financial conditions, depending on developments.³

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

A. Outlook for Economic Activity

On the basis of the aforementioned developments in overseas economies and the financial environment at home and abroad, the following examines the scenario for Japan's economy that the Bank considers to be the most likely -- that is, the baseline scenario.

Japan's economic activity, after a further plunge caused by the Great East Japan Earthquake

³ For more details on the assessment of the financial system stability in Japan, see the April 2012 issue of the Bank's *Financial System Report*.

while in the process of recovering from the Lehman shock, picked up steadily until the beginning of autumn 2011 with the restoration of supply chains. Thereafter, in the second half of fiscal 2011, economic activity remained more or less flat mainly due to an adverse effect of the slowdown in overseas economies and the appreciation of the yen on exports and production. The growth rate for fiscal 2011 is expected to have been slightly negative, reflecting the post-quake economic downturn, as projected in the interim assessment in January 2012.

More recently, although Japan's economic activity has remained more or less flat, it has become increasingly evident that the economy is shifting toward a pick-up phase as positive developments have become widespread. Taking into account the recent developments, the outlook for Japan's economy can be described as follows. The economy is expected to return to a moderate recovery path in the first half of fiscal 2012 as the pace of recovery in overseas economies picks up, led by emerging and commodity-exporting economies, and as reconstruction-related demand after the earthquake disaster gradually strengthens. Specifically, exports are expected to resume an increasing trend, and a rise in reconstruction-related demand -- in terms of both public and private demand -- is expected to contribute to economic growth throughout the fiscal year. Under these circumstances, in fiscal 2012, the economy is likely to register a relatively high rate of growth, supported by gradually increasing momentum generated from the transmission mechanism in which the strength in production feeds through into income and spending. In fiscal 2013, the economy is expected to grow at a pace that is clearly above its potential as overseas economies continue to see relatively high growth, although the growth rate is expected to be somewhat lower than that in fiscal 2012 because the positive effects from reconstruction-related demand will gradually diminish.⁴ Growth rates for the 2012 and 2013 fiscal years are expected to be somewhat higher than the projection in the January 2012 interim assessment, especially for fiscal 2012, mainly due to slightly improved market conditions on the reduced risk of the European debt problem causing financial market

⁴ Japan's potential growth rate during the projection period is estimated to be "around 0.5 percent" based on a standard production function approach. However, 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.

turmoil.⁵ More detailed explanations of the outlook, broken down by the corporate and household sectors, are as follows.

Regarding the corporate sector, exports have remained more or less flat but positive developments have gradually come to be observed, as evidenced by the fact that they have already recovered from the plunge caused by the effects of the flooding in Thailand and global inventory adjustments in IT-related goods have almost reached completion. Regarding the outlook, exports are expected to resume an increasing trend as overseas economies are likely to emerge from the current deceleration phase and as downward pressure from the yen's appreciation gradually wanes. As for reconstruction-related demand, a part of this has already materialized, including for the restoration of disaster-stricken facilities, pent-up consumption demand following a temporary restraint after the disaster, and for the removal of debris as well as construction of temporary housing. With public investment recently beginning to increase, reconstruction-related demand is expected to gain further momentum.⁶ Against the background of such developments in demand at home and abroad, production and corporate profits are expected to increase, and business fixed investment is likely to continue rising at a moderate pace on the assumption that firms will maintain their medium- to long-term growth expectations.⁷

As for the employment and income environment surrounding the household sector, there has been improvement, as seen in the moderate rise in the ratio of job offers to applicants.

⁵ A potential increase in the consumption tax rate and its effects are not incorporated in the projections in this edition of the Outlook Report. The past experiences of Japan and other countries reveal a temporary rush in demand in the period preceding an increase in the consumption tax rate, which subsequently was reversed.

⁶ Looking at the reconstruction-related budget, most of what was presented in the Basic Guidelines for Reconstruction in response to the Great East Japan Earthquake -- namely, a total of at least 19 trillion yen or so over a period of five years -- has already been allocated through expenses related to the earthquake disaster in the supplementary budget for fiscal 2011 and in the initial budget for fiscal 2012. This large budget amounts to about 4 percent of Japan's overall GDP and over 60 percent of the total GDP of the four disaster-stricken prefectures (Iwate, Miyagi, Fukushima, and Ibaraki).

⁷ According to the "Annual Survey of Corporate Behavior" released by the Cabinet Office (survey conducted in January 2012), firms expect the average economic growth rate over the next three to five years to be around 1.5 percent, having risen somewhat compared with survey results obtained in 2011 before the earthquake.

Regarding the outlook, positive effects of a pick-up in economic activity, especially production, are likely to gradually spill over to the employment and income environment on the whole, although differences among regions -- including disaster-stricken areas -- and industries will likely remain. However, considering the possibility that the weakness in corporate performance for fiscal 2011 -- mainly due to the earthquake disaster, the slowdown in overseas economies, and the yen's appreciation -- will have lagged effects, improvement in the employment and income environment is expected to become evident only in the second half of fiscal 2012 onward. Private consumption has recently firmed up amid improvement in economic activity and the labor supply and demand situation from the plunge caused by the earthquake disaster, as well as in consumer sentiment. In addition to temporary factors such as the effects of demand-boosting measures for automobiles, this is attributed to gradual progress in capturing potential demand related to the aging population. With regard to the outlook, private consumption is expected to gradually increase at a faster pace against a backdrop of recovery in the employment and income environment. In the meantime, backed by low interest rates and a rise in reconstruction-related demand, housing investment will likely continue to increase moderately throughout the projection period.

B. Outlook for Prices

The Bank conducts monetary policy based on the principle that it should achieve price stability, thereby contributing to the sound development of the national economy. In doing so, the Bank publishes, in a numerical form, "the price stability goal in the medium to long term," which is the inflation rate that it judges to be consistent with price stability sustainable over the medium to long term. The Bank judges "the price stability goal in the medium to long term" to be in a positive range of 2 percent or lower in terms of the year-on-year rate of change in the consumer price index (CPI); more specifically, it has set a goal of 1 percent for the time being. With this "price stability goal in the medium to long term" in mind, the following examines the outlook for price developments.

Looking back at the developments in the CPI (for all items less fresh food, and hereafter) from a somewhat long-term perspective, the year-on-year rate of decline -- after reaching a historical trough of 2.4 percent in August 2009 -- has continued to slow consistently since around the end of 2009 with a gradual improvement in the degree of utilization of labor and

production capacity -- that is, the aggregate supply and demand balance of goods and services -- and has recently been at around 0 percent.

Regarding the outlook for the environment surrounding prices, as mentioned earlier the aggregate supply and demand balance is expected to continue improving with the economy's moderate recovery trend. Medium- to long-term inflation expectations can be assumed to remain stable throughout the projection period, given that the perceptions of market participants and economists have been stable, at around 1.0 percent, and that households have not changed their views notably. There has been a slight rise in international commodity prices, especially crude oil prices, mainly due to a heightening of geopolitical risk. Commodity prices are likely to follow a moderate rising trend against the background of an increase in demand for food and energy arising from growth in emerging economies.

As for the outlook for prices on the basis of the aforementioned environment, the domestic corporate goods price index (CGPI) is expected to continue rising moderately on a year-on-year basis throughout the projection period, reflecting a moderate increase in international commodity prices and the improvement in the aggregate supply and demand balance. On the assumption that medium- to long-term inflation expectations remain stable, the year-on-year rate of change in the CPI is expected to gradually rise to a range of above 0.5 percent and less than 1 percent toward the latter half of the projection period as the aggregate supply and demand balance improves. Thereafter, it will likely be not too long before the rate reaches the Bank's "price stability goal in the medium to long term" of 1 percent for the time being.

Comparing the current projection for the CPI with that in the January 2012 interim assessment, the year-on-year rate of change in the CPI is likely to be somewhat higher. This is partly because the economic projection has been revised somewhat upward, and this is expected to improve the aggregate supply and demand balance. The correction of the appreciation of the yen and a rise in crude oil prices also contributed to the upward revision in the CPI projection.

As mentioned earlier, price developments have been on an improving trend approaching the "price stability goal in the medium to long term," but some more time will be needed before the goal is achieved.⁸ In this regard, in terms of a mechanism in which strength in economic activity generates inflationary pressure, both cyclical and structural factors appear to play a role. In terms of a cyclical factor, there is still room for the aggregate supply and demand balance to improve given the significant economic downturn resulting from the recession following the bankruptcy of Lehman Brothers. Consequently, it is projected that, even with a moderate economic recovery going forward, the balance between the aggregate supply and demand will be largely restored only around the end of the current projection period, giving rise to clearer upward pressure on prices. In terms of a structural factor, it could be pointed out that the economic growth rate has been on a declining trend. While the aging of the population proceeds at a pace unprecedented in other countries, there has not been sufficient progress in efforts to strengthen the growth potential of the economy and the review of the social security system to enhance its sustainability. As a result, firms and households lowered their growth expectations, turning cautious in terms of their spending behavior. Such a situation is believed to have exerted downward pressure on prices.

V. Upside and Downside Risks

A. Risks to Economic Activity

The aforementioned outlook is the scenario the Bank considers to be the most likely -- in other words, its baseline scenario. The following upside and downside risks concerning the outlook for economic activity warrant attention.

The first risk concerns developments in overseas economies, including those in global financial markets and the impact of international commodity prices on economic activity. Although a tail risk of global financial market turmoil causing a significant global economic downturn has decreased, various challenges remain before the European debt problem, the fundamental cause of such risk, can be resolved. There is a possibility that credibility will be strengthened in markets, acting as an upside risk to the global economy, if steady

⁸ Looking at the annual rate of change in the CPI on a fiscal-year basis since the 1990s, the improvement of almost 1 percentage point within a year occurred only in periods when the consumption tax rate was raised or international commodity prices rose significantly.

progress is made -- while market stability is secured, mainly through provision of funds by the ECB -- in reforms such as an increase in competitiveness among peripheral countries and ensuring of fiscal sustainability. There is also a possibility that strains in global financial markets will intensify once again in the face of a reemergence of concern about the implementation of such reforms, acting as a downside risk to the global economy, and consequently Japan's economy.

In addition to the shocks arising from global financial markets described above, overseas economies continue to be surrounded by various other uncertainties. While the European economy may post higher growth, mainly supported by the strong global competitiveness of core euro area countries, there is also a downside risk due to fiscal austerity and a deterioration of financial conditions in peripheral countries. With regard to the U.S. economy, there is considerable uncertainty regarding the progress in balance-sheet repair. Pressure from such repair appears to have gradually receded given that five to six years have already passed since housing prices peaked. Momentum for economic recovery may therefore strengthen if the bottoming out of the housing market becomes evident together with improvement in employment conditions. On the other hand, there is a possibility that the pace of economic recovery will remain more moderate than expected due to further prolonged adjustments. There is also a high degree of uncertainty surrounding the future course of fiscal policy in the United States. Regarding emerging and commodity-exporting economies, there remains considerable uncertainty about whether these can make a soft landing by realizing price stability and economic growth at the same time. Taking into account the robust potential demand and significant room for supporting the economy through fiscal and monetary stimulus, these economies may grow at a faster pace if inflationary pressures recede swiftly. At the same time, the pace of growth may slow if inflationary pressures are not sufficiently contained, mainly due to a persistent rise in wages and high crude oil prices.

Meanwhile, with regard to international commodity prices, if prices such as those of crude oil rise further, mainly due to heightening geopolitical risk, downside risks to the global economy will increase; for Japan, which is a resource-importing country, deterioration in the terms of trade will weigh on corporate profits and households' real purchasing power.

In contrast, if the rise in international commodity prices reflects an expansion of the global economy, positive aspects such as an increase in exports might exceed a negative impact of deterioration in the terms of trade.

Second, there is uncertainty with regard to reconstruction-related demand. Recently, such demand, including public investment aimed at restoration of capital stock, has gradually been strengthening, as progress has been made in drawing up reconstruction plans and the supplementary budget is being executed. As for the outlook, while reconstruction-related demand is expected to become increasingly evident, these developments could be affected by various bottlenecks on the supply side, such as a shortage in construction workers. The extent to which the reconstruction-related demand will push the growth rate upward is subject to uncertainty at this point. The crucial question is whether it will simply end up as a temporary increase or lead to a continuous rise in private demand by lessening uncertainty about the future via a clearer path toward resuscitation of regional economies.

Third, there is uncertainty with regard to firms' and households' medium- to long-term growth expectations. Although no significant changes are assumed in the baseline scenario, changes in either direction are possible depending on future developments. For example, expansion in production and business operations overseas is expected to continue, considering that the capturing of global demand and relocation of global business operations to enhance efficiency are critical challenges facing firms. If such an expansion is not compensated for by new domestic production activities, however, firms' and households' medium- to long-term growth expectations regarding domestic demand and employment might decline. Similarly, with regard to problems concerning the supply and demand of electric power, there is a possibility that production will be restrained during periods of high electric power demand, such as in the summer, depending on various factors including the weather. Attention should be paid not only to such short-term effects but also to the chances of an eventual decline in medium- to long-term growth expectations. On the other hand, medium- to long-term growth expectations might improve if efforts in various areas aimed at strengthening the growth potential of Japan's economy -- such as exploring global demand, capturing the needs of the elderly population as well as diversified domestic demand, reviewing the operational risk management structure, and

making innovations in energy-related technologies and business models -- proceed in a steady manner and positive effects start to appear.

Fourth, there are various problems regarding Japan's fiscal sustainability. For example, taking into account that the household saving rate has stopped declining in recent years, regardless of the advance in the aging of the population, there is a possibility that the accumulation of government debt will generate public anxiety about the sustainability of the social security system as well as a future increase in the tax burden, thereby causing people's spending behavior to become cautious. In the event that the general public's confidence in fiscal sustainability declines, people's increasing anxiety about the future could lead the economy to deviate downward from the baseline scenario. On the other hand, if the medium- to long-term path toward fiscal consolidation becomes evident and the sustainability of the social security system improves, such anxiety will be alleviated and this would have a positive effect on the economy. Given the progress in the globalization of financial markets, market participants seem to be taking a more critical view of Japan's conduct of fiscal policy amid rising concern about public debt in many advanced countries. In this situation, should market participants come to believe that efforts to achieve fiscal consolidation are insufficient, this will lead to a rise in long-term interest rates, which will have adverse effects on financial institutions and consequently on Japan's economy as a whole.

B. Risks to Prices

There is also uncertainty regarding the outlook for prices, which could deviate either upward or downward from the projection. To begin with, if any of the aforementioned upside and downside risks to economic activity materialize, prices might be affected accordingly. There are also the following risks specific to prices. The first concerns developments in firms' and households' medium- to long-term inflation expectations. While the Bank judges that some more time will be needed before the year-on-year rate of increase in the CPI reaches 1 percent, in such an environment downward pressure may be exerted on actual prices and wages if firms and households increasingly expect that the pace of a rise in prices will remain slow. On the other hand, if efforts to strengthen growth potential succeed in bringing about differentiated new goods and services, potential demand

will materialize, leading to a rise in prices and possibly resulting in higher medium- to long-term inflation expectations. In such a scenario, the growth rate will increase and prices might deviate upward by even more than would be expected from the higher growth rate.

The second risk concerns developments in import prices. There is a possibility that crude oil prices will show large fluctuations, mainly reflecting geopolitical risk. Uncertainty also surrounds developments in other primary commodities, with potential for movement in either direction. Fluctuations in foreign exchange rates could also affect consumer prices, both directly through changes in import prices and indirectly through changes in economic activity.

VI. 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 goal in the medium to long term" in mind.

The first perspective from which the Bank assesses the situation is an examination of the baseline scenario for the outlook for economic activity and prices -- that is, the scenario considered to be the most likely -- through fiscal 2013. As noted earlier, Japan's economy is expected to return to a moderate recovery path in the first half of fiscal 2012 as the pace of recovery in overseas economies picks up, led by emerging and commodity-exporting economies, and as reconstruction-related demand after the earthquake disaster gradually strengthens. On the assumption that medium- to long-term inflation expectations remain stable, the year-on-year rate of change in the CPI is expected to gradually rise to a range of above 0.5 percent and less than 1 percent toward the latter half of the projection period as the aggregate supply and demand balance improves. Thereafter, it will likely be not too long before the rate reaches the Bank's "price stability goal in the medium to long term" of 1 percent for the time being. In comprehensively assessing the outlook for economic activity and prices described above, the Bank expects that Japan's economy will return to a sustainable growth path with price stability in the longer run.

The assessment from the second perspective involves an examination of the risks considered most relevant to the conduct of monetary policy, including risks that have a longer time horizon than in the first perspective.⁹ In the area of economic activity, although tail risks arising from the European debt problem have waned, a high degree of uncertainty remains concerning global financial markets and overseas economies. There is also a possibility that a further hike in international commodity prices will exert an adverse impact on domestic private demand, mainly through a decline in real purchasing power associated with deterioration in terms of trade. Furthermore, uncertainty is inherent in the reconstruction-related demand in terms of its pace of strengthening and the economic effects. Meanwhile, medium- to long-term growth expectations could either rise or fall depending on efforts to strengthen growth potential. Efforts to ensure fiscal sustainability could also significantly affect economic developments. On the price front, careful attention should be paid to future developments in international commodity prices and in medium- to long-term inflation expectations.

As for the future conduct of monetary policy, based on the examinations from the two perspectives described above, the Bank is committed to conducting appropriate policy aimed at overcoming deflation by pursuing powerful monetary easing and supporting efforts to strengthen the economy's growth potential.

First, the Bank aims to achieve its "price stability goal in the medium to long term" of 1 percent for the time being in terms of the year-on-year rate of increase in the CPI through the pursuit of powerful monetary easing, conducting its virtually zero interest rate policy and implementing the Asset Purchase Program mainly through the purchase of financial assets. The Bank will continue with this powerful easing until it judges the 1 percent goal to be in sight, on condition that it identifies no significant risk to the sustainability of economic growth, including from the accumulation of financial imbalances. In this regard, it is unlikely that a financial imbalance has been emerging as a result of excessive optimism at this point.¹⁰ At the same time, financial institutions hold a large amount of government

⁹ For example, the Bank examines risk factors that will significantly impact economic activity and prices when they materialize, although the probability of such risks arising is low.

¹⁰ For more details, see the April 2012 issue of the Bank's *Financial System Report*

bonds in a situation where the outstanding amount of government debt has accumulated to a substantially high level. Due attention needs to be paid to a possibility that some events will trigger a rise in long-term interest rates, which would cause significant damage to the economy and the financial system. From this viewpoint, it is important to maintain credibility in the conduct of monetary policy.

Second, while pursuing powerful monetary easing, the Bank will also engage in efforts to strengthen the foundations for Japan's economic growth as a central bank. Japan's economy currently confronts the long-term structural challenge of declining trend growth rates amid the situation of a rapidly aging population. In order to overcome this challenge and establish a new basis for economic growth, business firms need to become more innovative in an effort to add value to their activities and explore new sources of demand both at home and abroad. With the aim of supporting such positive movements by firms, the government should seek to create a more conducive environment and private financial institutions should make efforts to strengthen the foundation for economic growth. In addition, given that Japan's ratio of government debt to GDP is the largest among advanced economies, it is crucial to ensure fiscal sustainability over the medium to long term. As described above, it is important for business firms, financial institutions, the government, and the Bank each to continue exerting efforts within their respective roles.

(Appendix 1)

Forecasts of the Majority of Policy Board Members

y/y % chg.

	Real GDP	Domestic CGPI	CPI (all items less fresh food)
Fiscal 2011	-0.2 to -0.2 [-0.2]	+1.7	0.0
Forecasts made in January 2012	-0.4 to -0.3 [-0.4]	+1.8 to +1.9 [+1.8]	-0.1 to 0.0 [-0.1]
Fiscal 2012	+2.1 to +2.4 [+2.3]	+0.4 to +0.7 [+0.6]	+0.1 to +0.4 [+0.3]
Forecasts made in January 2012	+1.8 to +2.1 [+2.0]	-0.1 to +0.2 [+0.1]	0.0 to +0.2 [+0.1]
Fiscal 2013	+1.6 to +1.8 [+1.7]	+0.7 to +0.9 [+0.8]	+0.5 to +0.7 [+0.7]
Forecasts made in January 2012	+1.4 to +1.7 [+1.6]	+0.6 to +1.0 [+0.8]	+0.4 to +0.5 [+0.5]

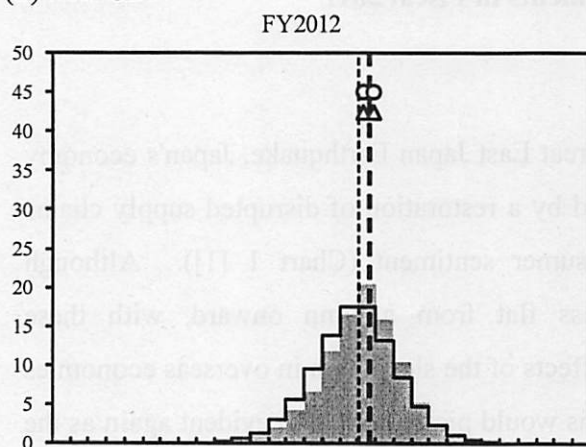
- Notes: 1. Figures in brackets indicate the median of the Policy Board members' forecasts (point estimates).
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate, namely, the figure to which he 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 with reference to the view of market participants regarding the future course of the policy interest rate -- a view that is incorporated in market interest rates.
4. The real GDP figures for fiscal 2011 are Policy Board members' estimates. The figures for the domestic CGPI and the CPI (all items less fresh food) are actual values.
5. The CPI using the Chain-Weighted Index Formula has also been released as a reference. Based on this chain-weighted index, the year-on-year rate of change in the CPI around fiscal 2013 may be slightly lower than the above forecasts based on the Fix-Weighted Index Formula.
6. The ranges shown below include the forecasts of all Policy Board members.

y/y % chg.

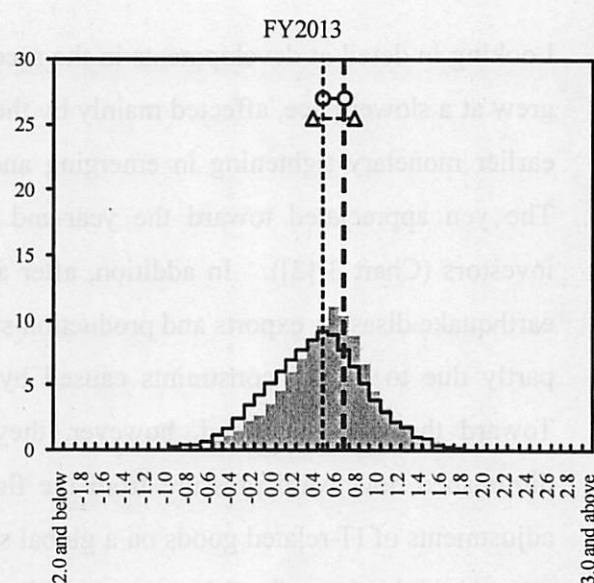
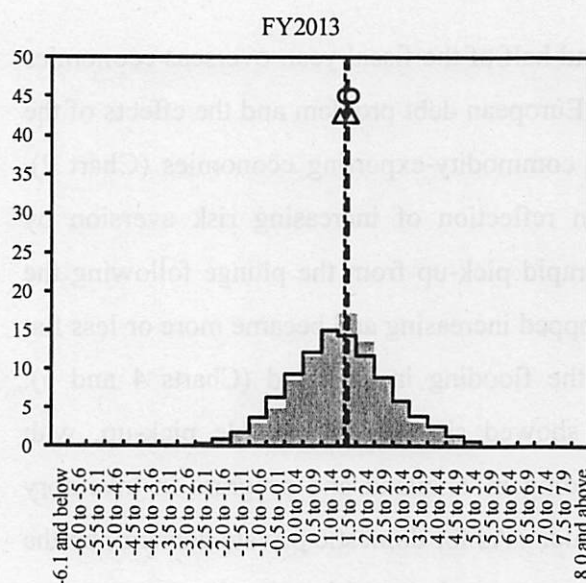
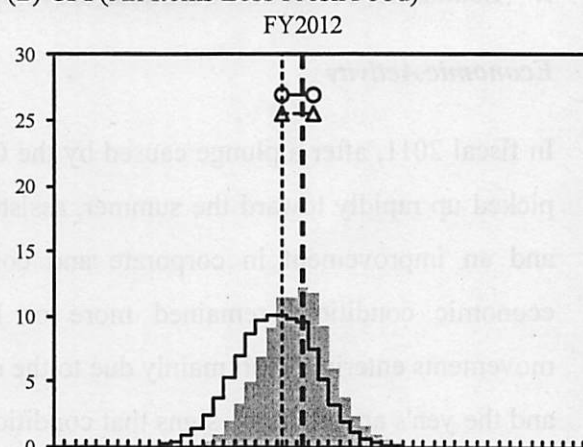
	Real GDP	Domestic CGPI	CPI (all items less fresh food)
Fiscal 2011	-0.2 to -0.1	+1.7	0.0
Forecasts made in January 2012	-0.5 to -0.3	+1.7 to +1.9	-0.1 to 0.0
Fiscal 2012	+2.1 to +2.4	+0.3 to +0.8	+0.1 to +0.4
Forecasts made in January 2012	+1.8 to +2.2	-0.2 to +0.2	-0.2 to +0.3
Fiscal 2013	+1.5 to +1.8	+0.6 to +1.0	+0.4 to +0.8
Forecasts made in January 2012	+1.4 to +1.8	+0.5 to +1.0	+0.2 to +0.6

Risk Balance Charts

(1) Real GDP



(2) CPI (All Items Less Fresh Food)



Notes: 1. Vertical axes in the charts represent probability (%), while horizontal axes represent the year-on-year percentage changes in the respective indicators. Bar charts represent the probability distributions in April 2012, and solid lines represent those in January 2012.

2. Heavy vertical dashed lines indicate the median of the Policy Board members' forecasts (point estimates).

○—○ indicates the range of the forecasts of the majority of Policy Board members. Δ—Δ indicates the range of the forecasts of all Policy Board members.

3. Thin vertical dashed lines indicate the median of the Policy Board members' forecasts (point estimates) in January 2012.

4. 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*.

The Background

I. Economic, Price, and Financial Developments in Fiscal 2011

Economic Activity

In fiscal 2011, after a plunge caused by the Great East Japan Earthquake, Japan's economy picked up rapidly toward the summer, assisted by a restoration of disrupted supply chains and an improvement in corporate and consumer sentiment (Chart 1 [1]). Although economic conditions remained more or less flat from autumn onward, with these movements entering a lull mainly due to the effects of the slowdown in overseas economies and the yen's appreciation, signs that conditions would pick up became evident again as the fiscal year-end approached.

Looking in detail at developments in the second half of the fiscal year, overseas economies grew at a slower pace, affected mainly by the European debt problem and the effects of the earlier monetary tightening in emerging and commodity-exporting economies (Chart 2). The yen appreciated toward the year-end in reflection of increasing risk aversion by investors (Chart 3 [2]). In addition, after a rapid pick-up from the plunge following the earthquake disaster, exports and production stopped increasing and became more or less flat, partly due to supply constraints caused by the flooding in Thailand (Charts 4 and 5). Toward the fiscal year-end, however, they showed signs of a possible pick-up, with diminished downward pressure from the flooding in Thailand and progress in inventory adjustments of IT-related goods on a global scale. As for domestic private demand, on the other hand, business fixed investment, private consumption, and housing investment were on an improving trend, mainly reflecting pent-up demand that had been restrained temporarily after the earthquake disaster (Charts 6, 7, and 8). Public investment, which had stopped declining after the disaster mainly due to the construction of temporary housing and restoration projects for social infrastructure, started to increase in January-March as the successive execution of the supplementary budgets progressed. Given that the strength in domestic demand continued beyond autumn, as described, corporate activity and business sentiment in the domestic demand-oriented sectors, particularly nonmanufacturing sectors, remained relatively firm (Charts 1 [2] and 9 [3]).

Reflecting these economic developments, utilization of labor and production capacity was restored during the summer to the level seen prior to the plunge caused by the disaster, and thereafter remained flat or on a very mild uptrend (Chart 10). Looking at the weighted average of the *Tankan* (Short-Term Economic Survey of Enterprises in Japan) diffusion indices (DIs) of production capacity and employment conditions, where indices are weighted by capital and labor shares, net "excessive production capacity" and net "excessive employment" shrank in September following an increase in June and remained on a very gradual declining trend, mainly in domestic demand-oriented sectors. The estimated negative balance of the aggregate supply and demand also started to shrink after a temporal widening following the earthquake.

Prices

On the price front, the year-on-year rate of increase in the domestic corporate goods price index (CGPI) expanded toward mid-2011, reflecting the rise in international commodity prices through spring (Chart 11 [1]). From autumn onward, however, the rate narrowed as international commodity prices fell back toward the end of the year. The year-on-year rate of change in the corporate services price index (CSPI, excluding international transportation) continued to be negative mainly in response to firms' cutbacks in expenses. However, the pace of decline slowed, albeit with fluctuations, mainly reflecting the relatively long-term recovery trend in corporate activity (Chart 11 [2]). The year-on-year rate of decline in the consumer price index (CPI) (all items less fresh food, hereafter the same) continued shrinking from around the end of 2009, and has recently been more or less at 0 percent (Chart 12 [1]). Similar trends can be confirmed more evidently in the trimmed mean¹¹ or the Laspeyres chain-weighted index,¹² both of which are less likely to be affected by the base-year change and therefore are more suitable for capturing fundamental price developments (Chart 12 [2]). A look at the year-on-year changes in items that

¹¹ 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. The 10 percent trimmed mean exhibits good performance, comparable to that of the price index for all items less fresh food, in measuring fundamental price developments after adjusting for temporary sources of disturbance and projecting the future direction of the overall price index.

¹² See Box 1 for details on the Laspeyres chain-weighted index.

comprise the CPI -- an indicator that subtracts the ratio of the number of items with declining prices from the number of items of rising prices -- confirms that, although the former is still larger than the latter, the indicator itself is on a gradual improving trend (Chart 13 [1]). Unit prices in the *Family Income and Expenditure Survey* also have been on an improving trend on average, albeit with large fluctuations (Chart 13 [2]).¹³ These developments in consumer prices can be interpreted as effects of the trend rise in international commodity prices and of the gradual improvement in the aggregate supply and demand balance feeding through to prices with a time lag, amid stable medium- to long-term inflation expectations among firms and households. Looking at a breakdown of the CPI with regard to goods, the year-on-year rate of decline slowed at a very mild pace on the whole toward the end of the fiscal year, since the positive contribution from petroleum products diminished somewhat, while prices of food products turned positive, albeit slightly, and the negative contribution from durable goods narrowed (Chart 14 [2]). As for services, the rate of change in housing rents continued to be slightly negative and prices for the eating out category remained more or less unchanged (Chart 14 [3]). The overall developments in services prices were shaped by the rate of change in prices for "other services," which started to become negative toward the end of fiscal 2011 after having increased at a somewhat faster pace toward the middle of the fiscal year, mainly due to price changes in overseas package tours. On the other hand, the year-on-year rate of increase in prices of public services gradually rose, mainly reflecting price changes in electricity and gas charges (Chart 14 [1]).

Financial Markets

In global financial markets, funding conditions for financial institutions have improved, as concern about liquidity funding by European financial institutions has receded thanks to ample liquidity provision by the European Central Bank (ECB) through the longer-term

¹³ In order to measure price changes for goods and services of the same quality, the CPI is compiled by either fixing items or adjusting prices to reflect quality changes when changing items. In contrast, such adjustments for quality changes are not made for unit prices in the *Family Income and Expenditure Survey*. The recent year-on-year rate of increase in unit prices of the *Family Income and Expenditure Survey* may be attributable not only to the fact that price declines have become less common, but also to moves by households to purchase high-end products of higher quality within the same category of item.

refinancing operations (LTROs) with a maturity of 36 months, as well as to certain progress in efforts to support Greece. At the same time, as for the European debt problem, it appears that some time is still needed to tackle such fundamental issues as building a stronger firewall, strengthening fiscal governance, and regaining competitiveness. Credit default swap premiums and spreads in long-term government bond yields against German government bonds for those countries with fiscal concerns have become generally lower than the levels in the period from last autumn to the start of this year, despite slight increases of late (Chart 15).

Global investors have become less risk averse since the start of the year, since a tail risk of the European debt problem causing significant global financial market turmoil has diminished and U.S. economic conditions have continued to improve moderately. U.S. and European stock prices have started to recover and implied volatility has also decreased significantly (Chart 16). In foreign exchange markets, the yen -- which had been bought through the end of last year as a safe asset -- has been sold while the euro and currencies of emerging and commodity-exporting economies have been bought back (Chart 17).

In the U.S. and European money markets, credit spreads on interbank transactions have shown a marked decline, partly due to the aforementioned 36-month refinancing operations by the ECB and coordinated actions taken by the Bank of Canada, Bank of England, Bank of Japan, ECB, U.S. Federal Reserve, and Swiss National Bank in November last year to lower interest rates applied to U.S. dollar funds-supplying operations (Chart 18 [1]). With regard to corporate finance, credit spreads have narrowed in the U.S. and European corporate bond markets since the start of the year in light of waning risk aversion by investors (Chart 18 [2]).

In the meantime, policy rates in the United States have remained at low levels. In Europe, in view of a negative feedback loop among the fiscal balance, the financial system, and the real economy taking place toward the end of last year, the ECB lowered its policy rate by 25 basis points in November and then again in December by the same amount. In December, with the aim of enhancing bank lending and liquidity in the euro funding market, the ECB decided to implement its 36-month refinancing operation, to reduce the reserve requirement

ratio, and to introduce measures to expand eligible collateral (Chart 19 [1]).

While the conduct of monetary policy varies among emerging and commodity-exporting economies, some central banks changed the policy direction from tightening to easing partly in response to a modest decline in inflation rates (Chart 19 [2]). Looking at emerging and commodity-exporting economies as a whole, inflationary pressures persist and there remained a high degree of uncertainty about the prospect of a soft landing, in which price stability and economic growth are realized at the same time.

The Bank of Japan has pursued significant monetary easing: at the Monetary Policy Meeting held in February 2012, the Bank clarified its policy stance by introducing "the price stability goal in the medium to long term" and announced that it would increase the total size of the Asset Purchase Program from about 55 trillion, to 65 trillion yen, with an increase of about 10 trillion yen in the Program earmarked for the purchase of Japanese government bonds. In these circumstances, looking at financial and capital markets in Japan, the overnight call rate has remained at an extremely low level in the money market, and the T-Bill rates -- including those with a 1-year maturity -- have stayed at around 0.1 percent (Chart 20 [1]).

Credit spreads on interbank transactions have remained stable as the balance sheets of Japanese financial institutions have maintained their soundness (Chart 18 [1]).

Premiums for U.S. dollar funding through the yen/dollar foreign exchange swap market rose toward the end of last year when market tensions regarding the European debt problem heightened, but they have declined markedly since the start of the year (Chart 20 [2]).

As for future short-term interest rates, these reflect market participants' view that short-term money market rates will remain at low levels for the next two to three years (Chart 20 [3]).

The Bank encouraged a decline in longer-term interest rates through its comprehensive monetary easing framework, and yields on 2-year government bonds have remained stable

at low levels of around 0.1 percent.¹⁴ Yields on 5-year government bonds have fallen to around 0.3 percent and those on 10-year government bonds have remained unchanged at low levels, at around 1 percent (Chart 21).

Stock prices have risen relative to the end of last year, as a recovery in U.S. stock prices has made foreign investors more aggressive and the exchange rate of the yen against the U.S. dollar has started to depreciate (Chart 22 [1] and [2]). In the Japanese real estate investment trust (J-REIT) market, prices rose slightly on investors' waning risk aversion (Chart 22 [3]).

In foreign exchange markets, the yen has somewhat depreciated against the U.S. dollar and the euro since the start of the year against the background of global investors' waning risk aversion (Chart 17).

Financial Conditions

Financial conditions in Japan have continued to ease on the whole.

Firms' funding costs have continued to decline moderately. In the CP market, issuing conditions have remained favorable with credit spreads having stayed stable at low levels (Chart 23 [1]). In the corporate bond market, the issuance spread has basically been at a low level, on a par with that prior to the disaster, although there were monthly fluctuations caused partly by issuances of investment corporation bonds (REIT bonds) that have a wide yield spread (Chart 23 [2]). Meanwhile, market conditions for bonds with low credit ratings have remained stable, although the issuance spread expanded slightly relative to around the middle of last year, when the market was somewhat overheated. As such, issuing conditions for corporate bonds have remained favorable on the whole. The average interest rates on new loans and discounts have continued their moderate downtrend, mainly reflecting declines in relatively long-term market interest rates (Chart 23 [3]).

¹⁴ Under the Asset Purchase Program, the Bank has purchased government bonds with a maturity of one to two years. This is because, looking at channels of fund-raising in the non-financial sector, bank lending with a maturity of three years and less has a large share in Japan while corporate bonds with a relatively long maturity as well as mortgage loans have a large share in the United States.

Although stimulative effects from low interest rates are still partly constrained given the current growth rates and prices, interest payments by firms have remained at sufficiently low levels in relation to their profitability (Chart 24).

With regard to the availability of funds for firms, financial institutions' lending attitudes as perceived by large as well as small firms have continued to improve, and the levels of various indicators have been above the average for the period since 2000 (Chart 25 [1]).

The financial positions of firms, including small ones, have recovered moderately on the whole, and the levels of various indicators have also been above the average for the period since 2000 (Chart 25 [2]).

In this situation, Japan's financial conditions have remained accommodative, unlike those in the United States and Europe, even at times when tensions grew in the global financial and capital markets due to the European debt problem. Credit spreads on corporate bonds have remained stable at low levels in Japan even during periods -- primarily during the second half of last year -- when the U.S. and European markets saw their spreads increase considerably (Chart 26). Also, the lending attitudes of financial institutions in the United States and Europe -- chiefly those of European ones -- notably became cautious from around the end of last year, although those of financial institutions in Japan were hardly affected by such overseas factors (Chart 27).

Within the aforementioned financial conditions, the demand for working capital by firms has lacked vigor overall, as they continued to restrain their business fixed investment within the range of their cash flow. Even in this situation, demand for working capital has risen, backed by the recovery in production activity since the quake, and that for funds related to mergers and acquisitions has also shown an increase reflecting firms' strategic efforts to strengthen their global businesses. Against this backdrop, the year-on-year rate of increase in the outstanding amount of bank lending has expanded (Chart 28 [1]). The amount outstanding of CP had registered a positive year-on-year growth rate, but then returned to the year-ago level due in part to an increase in redemptions toward the end of March (Chart 28 [2]). The year-on-year rate of change in the outstanding amount of corporate bonds has

recently been slightly negative, partly because some issuers have shifted to the CP market (Chart 28 [3]). Meanwhile, the amount of corporate bonds issued has been on a par with that of the previous year on the whole, with an increased variety of corporate bond issuers amid the extremely low level of issuance spreads (Chart 29).

The year-on-year change in the monetary base -- which had continued to realize double-digit growth -- fell back and registered a negative figure in March, albeit only marginally, from the year-ago level, which was high due to large liquidity provision since the disaster. In this regard, the level of the monetary base as a ratio to nominal GDP has remained within a historically high range. The year-on-year change in money stock (M2) has been in the range of 2.5-3.0 percent (Chart 30).

Land prices have continued to decline both in metropolitan and nonmetropolitan areas, but the rate of decline has begun to narrow gradually. Looking in detail at the *Public Notice of Land Prices* for 2012 (as of January 1), the year-on-year rate of decline has slowed somewhat for commercial and residential land prices in the three major metropolitan areas (Tokyo, Osaka, and Nagoya), as well as in nonmetropolitan areas (Chart 31). As for the 23 wards of Tokyo on a semiannual basis, the pace of decline in land prices has slowed compared with six months ago.

II. The Outlook for Economic Activity and Prices from Fiscal 2012 through Fiscal 2013

The Outlook for Economic Activity and Prices

As for the outlook, Japan's economy is expected to return to a moderate recovery path in the first half of fiscal 2012, supported by gradually increasing momentum from the transmission mechanism in which the strength in production feeds through into income and spending as the pace of recovery in overseas economies picks up, led by emerging and commodity-exporting economies, and as reconstruction-related demand after the earthquake disaster gradually strengthens. For fiscal 2012 as a whole, the economy is projected to register relatively high growth, since exports and private domestic demand will post fairly strong growth and public investment will make positive contributions due to

reconstruction-related demand. The relatively high growth in exports and private domestic demand is mainly supported by a rebound from fiscal 2011, which was affected by supply constraints caused by the earthquake disaster and the flooding in Thailand.¹⁵ As for fiscal 2013, the economy is expected to continue to clearly outpace the potential growth rate led by strong demand overseas, especially in emerging and commodity-exporting economies, although the growth rate is expected to be lower than that in fiscal 2012 since upward momentum from reconstruction-related demand will diminish gradually.

Expressing the outlook in terms of the annual real GDP growth rate, this is projected to be in the ranges of 2.0-2.5 percent and 1.5-2.0 percent for fiscal 2012 and fiscal 2013, respectively. The projected growth rates, particularly the rate for fiscal 2012, are expected to be somewhat higher than those in the January 2012 interim assessment.

As for the outlook in terms of price indices, the year-on-year rate of increase in the CGPI is expected to continue increasing moderately. On the assumption that medium- to long-term inflation expectations remain stable, the year-on-year rate of change in the CPI is expected to gradually rise to a range of above 0.5 percent and less than 1 percent toward the latter half of the projection period as the aggregate supply and demand balance improves. Thereafter, it will likely be not too long before the rate reaches the Bank's "price stability goal in the medium to long term" of 1 percent for the time being. Compared with the January 2012 interim assessment, the projection for the CGPI is somewhat higher for fiscal 2012, due to effects of the subsequent increase in international commodity prices and some reversal of the yen's appreciation, but almost unchanged for fiscal 2013. The projections for the CPI are somewhat higher as well for fiscal 2012 and 2013, owing to some upward revisions to the growth outlook and associated improvement in the aggregate supply and demand balance, as well as effects of some reversal of the yen's appreciation and the increase in international commodity prices.

¹⁵ This economic outlook is based on the assumption that economic activity will not be constrained by a deterioration in the supply and demand balance of electricity. The productivity per unit of electricity consumption has risen sharply thanks to efforts to conserve electricity after the disaster (Chart 32).

Given these economic and price developments, the pace of growth in nominal income is expected to recover at a moderate pace.

The following provides supplementary details on the underlying mechanism of developments in economic activity and prices.

Government Spending

As for reconstruction expenditures, most of the budget for related projects -- amounting to at least 19 trillion yen for the first five years designated in the Basic Guidelines for Reconstruction in response to the Great East Japan Earthquake -- was allocated for each of the following budgets: the first supplementary budget for fiscal 2011 of approximately 4 trillion yen; the second supplementary budget of approximately 2 trillion yen; the third supplementary budget of approximately 9.2 trillion yen; and the budget for fiscal 2012 of approximately 3.8 trillion yen. The value of public works contracted -- a measure that reflects public orders -- has been on the rise since the middle of fiscal 2011, albeit with fluctuations, and the amount of public construction completed -- which reflects the progress of public works -- has also started to increase since the turn of the year (Chart 33 [1]). With the execution of disaster-related expenditures in full scale, public investment overall is projected to maintain its high level throughout fiscal 2012.¹⁶

Overseas Economies

From spring 2011 onward, the pace of growth in overseas economies has decelerated, due mainly to increased tensions in the global financial markets caused by the European debt problem and to the effects of earlier monetary tightening in emerging and commodity-exporting economies. Recently, however, overseas economies have shown some improvement, although they still have not emerged from a deceleration phase.

The baseline scenario regarding the outlook for overseas economies is that their growth rates are expected to rise gradually led by emerging and commodity-exporting economies

¹⁶ As a result, the amount outstanding of government debt -- which is already high -- is projected to rise even further (Chart 33 [3] and [4]).

and the average growth rate for the projection period is projected to be somewhat higher than the past long-term average (Chart 3 [1]). By country and region, the U.S. economy is expected to continue recovering at a modest pace supported mainly by its accommodative financial conditions, although pressures from balance-sheet repair will persist. The recovery in the European economy is likely to be constrained even with the assumption that any tail risk related to the debt problem will not materialize, since the debt problem will weigh on the real economy through continued fiscal austerity. Meanwhile, emerging and commodity-exporting economies are likely to achieve relatively high growth as a self-sustaining virtuous cycle of production, income, and spending will gradually gain further momentum, assisted mainly by the improvement in advanced economies and by decreased inflationary pressures, which in turn provide room for monetary easing.

Exports and Imports

Real exports have remained more or less flat so far, but some positive signs have started to emerge gradually; for example, the negative impact from the flooding in Thailand has been overcome and global inventory adjustments for IT-related goods are about to end (Chart 34). As mentioned above, overseas economies have shown some improvement, and furthermore, the appreciation of the yen has been reversed somewhat from a while ago. Taking these factors into account, exports are expected to edge up as the pace of recovery in overseas economies picks up, led by emerging and commodity-exporting economies and as the adverse effects of the yen's appreciation gradually diminish.

In recent years, however, the competitiveness of Japanese products has been trending downward, mainly due to emerging economies catching up. Looking at Japan's competitiveness in terms of the global share of Japanese manufacturers and the coefficient of international competitiveness based on the balance between exports and imports, capital goods have maintained high competitiveness on the whole (Charts 35 and 36). As for IT-related goods and household electrical appliances, however, the global share of Japanese manufacturers has trended downward, including the period when the yen depreciated in the mid-2000s. The coefficient of competitiveness shows that the competitiveness of IT appliances including TVs has fallen markedly of late, following that of conventional household appliances. As for iron and steel, the global share of Japanese products has

declined while the coefficient of China's international competitiveness has risen. Regarding automobile-related goods, the coefficient of competitiveness remains high due to limited imports, but the global share of Japanese automobiles appears to have fallen slightly since the Lehman shock, partly due to a reversal of the yen's depreciation and to the effects of supply constraints caused mainly by the earthquake disaster and the flooding in Thailand. This downtrend in Japan's foreign competitiveness is projected to somewhat reduce the pace of increase in exports in relation to the pace of recovery in overseas economies.

On the other hand, real imports have been on a rising trend (Chart 4). This is mainly attributable to (1) increased imports of fuels due to the cessation of operations at nuclear power plants, (2) a rise in imports of Asian products with improved quality and supply capacity, chiefly in intermediate goods, triggered by import substitution following the disaster and the yen's appreciation, and (3) elevated demand for new products (such as smartphones and tablet PCs) by foreign manufacturers. These factors contributing to the increase in imports are projected to remain for a while, although import substitution and the effects of the yen's appreciation will gradually diminish. In these circumstances, real imports are expected to continue their uptrend throughout the projection period, aided by the ongoing rise in domestic demand as well as a gradual recovery in exports and production.

External and Saving-Investment Balances

In terms of the trade balance, a deficit is projected for fiscal 2011-- the first such deficit since fiscal 1979 (Chart 37). This is largely attributable to (1) a rise in prices of imports in reflection of high international commodity prices, (2) a decline in real exports due to supply constraints caused by the earthquake disaster and the flooding in Thailand, and (3) an increase in real imports due to growing fuel imports as a result of the cessation of operations at nuclear power plants. As for the outlook, although the downward pressure of real exports from supply constraints will be resolved, domestic demand is expected to be relatively strong, supported mainly by restoration demand, and imports of fuels due to the cessation of operations at nuclear power plants will continue to affect the trade balance. Consequently, the pace of decline in the trade deficit is projected to remain modest even though the possibility of further expansion is small.

In this situation, Japan's current account surplus is expected to stay more or less unchanged for the time being and then increase somewhat toward fiscal 2013. The current account surplus will remain in place since the income balance will continue to register a relatively large surplus thanks to the accumulation of external assets. As for the outlook, the income surplus is expected to somewhat shrink for the time being as the yield on external assets will decline with a time lag following a slowdown in overseas economies (Chart 38). After that, however, the income surplus is expected to expand at a mild pace, primarily in direct investment profits, reflecting a pick-up in the pace of recovery in overseas economies.

Looking at a saving-investment balance that conceptually corresponds to a current account balance, excess saving will continue on the whole throughout the projection period since the private sector will display excess saving on a large scale even though the general government will continue to register a significant deficit (Chart 39).¹⁷ Looking at the saving rate and the investment rate individually, the overall saving rate in Japan is projected to hover at around 0 percent, since the saving rate of the household sector is to decline moderately, mainly because of an increase in consumption and the aging of the population, while the negative saving rate of the government sector is expected to shrink reflecting an increase in tax revenue associated with economic recovery (Chart 40).¹⁸ In contrast, the investment rate -- which on a net basis excludes depreciation of fixed capital -- is expected to remain in negative territory as a whole despite the fact that its rate of decline will narrow, assisted by the recovery in housing investment in the household sector and business fixed investment in the corporate sector. This implies that the amount of new domestic fixed investment will become smaller than the depreciation of fixed capital -- in other words, causing a decline in capital stock. This decline partly reflects a drop in households' housing stock in line with the population decrease. It also reflects the fact that firms prioritize the accumulation of capital stock overseas rather than that at home as a means of strengthening their global businesses, in view of a gap between investment returns at home and abroad. Looking at the economy as a whole, the saving rate is projected to outpace the

¹⁷ See Box 2 for the relationship between the current account and saving-investment balances.

¹⁸ Details of past movements in a saving-investment balance by sector are described in Box 3.

investment rate for the coming period -- a movement consistent with the projection that the current account balance will continue to register a surplus.

The Environment Surrounding Corporate Profits and Business Fixed Investment

Corporate profits have been more or less flat as a whole, although they have varied by industry and size. Profits at manufacturers -- mainly large ones -- have been somewhat weak while those at nonmanufacturers -- excluding electric power companies -- have remained relatively strong (Chart 41). On a fiscal-year basis, profits are projected to resume their gradual uptrend from fiscal 2012 onward, assisted by increases in demand and production, after having plunged in fiscal 2011, chiefly in large manufacturing firms and electric power companies, mainly due to the earthquake disaster, the flooding in Thailand, the slowdown in overseas economies, and the yen's appreciation.

Business fixed investment has been on a moderate increasing trend, aided by the restoration of disaster-stricken facilities. From a somewhat long-term perspective, business fixed investment is seemingly in a recovery phase following the period of a plunge after the Lehman shock and projected to continue on a moderate increase in the coming period, supported by a recovery in economic activity and corporate profits (Chart 42). Business fixed investment plans for fiscal 2012 (including software investment and excluding land purchasing expenses) in the March *Tankan* also reveal that firms' initial plans were set higher than those in past years and were on a par with the average of fiscal 2004-2007, when the economy was in a recovery phase.

Despite constraints from a shift of production overseas, manufacturers' business fixed investment is expected to remain on an uptrend on the condition that uncertainty regarding overseas economies decreases and that production and profits pick up, since the level of investment has been squeezed considerably. As for nonmanufacturers, business fixed investment is projected to move gradually upward, aided by relatively strong domestic demand. For the sectors related to communications in particular, an increase in their investment is expected due to the upsurge in demand for smartphones. Business fixed investment associated with businesses targeting the elderly is also expected to emerge eventually. Meanwhile, as for disaster-related investment, restoration of damaged

equipment in disaster-stricken areas has shown certain progress. The repair and reconstruction of private equipment is projected to progress even further, primarily because of infrastructure construction in significantly damaged areas being in full swing. Areas other than disaster-stricken ones, mainly in the Tokyo metropolitan areas, are also expected to see an increase in investment for strengthening earthquake resistance and business continuity systems, as well as investment for strengthening privately owned electrical power facilities and that related to electricity conservation.

Judging from various representative indicators, the projected moderate increase in future business fixed investment is basically consistent with similar movements in the past as well as medium- to long-term growth potential (Charts 43 and 44). First of all, the ratio of business fixed investment to GDP is projected to gradually move above the average since 2000, which is also roughly consistent with the ratios seen in past economic recovery phases. The ratio of business fixed investment to cash flow generally matches the current level of firms' expected growth rates. Comparing the projected increase in business fixed investment with the long-term equilibrium level estimated from the potential growth rate, such investment is expected to rise toward the second half of the projection period to a level close to that of the long-term equilibrium, after having declined to a considerably low level following the Lehman shock. Long-term equilibrium may change depending on the potential growth rate and growth expectations. Business fixed investment might possibly become higher than projected should medium- to long-term growth potential and, consequently, growth expectations increase, assisted by progress in regulatory reform and business reconstruction, whereas a downshift in growth expectations could reduce business fixed investment.

Foreign Investment Activities of Firms

The foreign investment of firms grew sharply in 2011 despite lackluster profits due to the disaster. The amount of foreign direct investment reveals that 2011 recorded the second largest amount following that in 2008 (Chart 45 [1]). Firms also significantly increased their mergers and acquisitions abroad (Chart 45 [2]). This aggressive foreign investment stance taken by firms is partly attributable to the yen's appreciation but, more fundamentally, is driven by efforts to expand their global business networks in order to capture local

demand overseas (Chart 45 [3]). So far, the profitability of foreign direct investment has been higher than that of domestic investment (Chart 45 [4]). If firms will be more actively engaged in highly profitable foreign investment to capture local demand overseas, their profitability will increase on a consolidated basis and, in terms of the external balance, the income surplus will also expand to a profound degree. It should be noted, however, that high profit-earning opportunities entail risks and foreign investment activity requires appropriate risk management.

The Employment and Income Situation and Households' Spending Behavior

As for the employment and income situation, supply and demand conditions in the labor market have shown signs of improvement, mainly due to relatively strong domestic demand, while compensation of employees has been more or less flat (Charts 46 and 47). In terms of the outlook, the labor market conditions are expected to continue improving in accordance with economic recovery, which, together with a pick-up in corporate profits, will gradually exert positive effects on compensation of employees. For the time being, however, compensation of employees is likely to remain more or less flat mainly due to (1) the lagged effects of lackluster business performance in fiscal 2011, mainly in bonuses, and (2) reductions in public employees' salaries. Taking into account that the labor share has recently remained high, an improvement in compensation of employees is expected to become evident only from the second half of fiscal 2012, even though economic activity will start to recover from the first half of the fiscal year.

The current high labor share is affected by developments in both wages and employment. Regarding wages, winter bonuses for fiscal 2011 were relatively higher in relation to the performance of corporate profits. This was because (1) the favorable corporate performance of fiscal 2010 largely determined winter bonuses, whereas the lackluster performance of fiscal 2011 was not reflected so much, especially among large manufacturing firms, and (2) the construction sector, which has enjoyed favorable reconstruction-related demand, showed relatively strong business performance (Chart 47 [3]). The first factor might be due to the fact that many firms decide their summer and winter payments combined, which means that the annual amount of bonuses paid was mostly decided prior to the earthquake. These firms are likely to restrain their bonus

payments for fiscal 2012, taking account of their business performance in fiscal 2011 (Chart 47 [4]). On the employment side, labor productivity per worker has diverged considerably downward from the long-term trend, since employment was basically retained during fiscal 2011 despite sluggish economic activity caused mainly by the earthquake disaster and the flooding in Thailand (Chart 48 [1] and [2]). From a macroeconomic perspective, this indicates a continuing situation of excess labor in the economy. As a result, the paces of recovery in employment and decline in the unemployment rate are expected to remain modest for the time being despite a recovery in economic activity in the coming period (Chart 48 [3]). In addition, an increased mismatch in employment, notably in disaster areas, could slow the paces of recovery in employment and decline in the unemployment rate even further.¹⁹

Private consumption has firmed up recently despite sluggish growth in household income (Charts 7 and 49). Against this background basically lies a recovery in economic activity and the labor market conditions following the plunge in the period after the disaster, as well as an improvement in consumer confidence. In addition, this is affected by multiple factors such as (1) pent-up demand and increased consumption related to restoring one's quality of life in disaster areas, (2) changes in consumer attitudes after the disaster (the so-called *kizuna* consumption, which promotes ties among people), (3) rising consumption among the elderly, (4) policy effects including subsidies for purchasing energy efficient cars, and (5) the merits of the yen's appreciation.²⁰

A closer picture of the rise in consumption by the elderly reveals that their significance on consumption has grown steadily, as the ratio of the elderly to the total population has edged up every year and as the elderly in the 65 years and older cohort comprise about 30 percent of private consumption; by including the 60 years and older cohort, this figure adds up to somewhat over 40 percent (based on the *Family Income and Expenditure Survey*) (Chart 50 [1] and [2]). According to the life-cycle hypothesis, consumption by the elderly depends more on assets than income flows, which makes their consumption more resilient against

¹⁹ See Box 4 for the employment situation in disaster areas.

²⁰ For information collected from firms regarding this firmness in consumption, see "Recent developments in private consumption and its background (available in Japanese only)" (*Regional Economic Report*, April 2012).

changes in business conditions. In fact, the 60 years and older cohort's propensity to consume is significantly higher than for younger cohorts (Chart 50 [3]). The rise in the number of the elderly with a high propensity to consume exerts consistent upward pressure on the propensity to consume within the macroeconomy (Chart 50 [4]). Furthermore, a recent feature in this regard is that the elderly's propensity to consume has trended upward (Chart 50 [3]). As for the increase in the first half of the 2000s, this might have been affected by receding anxiety among the elderly as a result of the introduction of the Public Nursing Care Insurance. In contrast, the rise in recent years is mainly due to the fact that the "baby boom generation" (the so-called "active senior citizens") -- already with a high propensity to consume -- has reached the elderly cohort, and that firms have made gradual but successful progress in the areas of businesses targeted at the elderly.²¹

Regarding the outlook from a macroeconomic aspect, private consumption is expected to edge up as the employment and income situation heads toward gradual improvement, assisted by the economic recovery, despite downward pressure from reduced salaries for public employees. In terms of the factors mentioned above supporting recent firmness in consumption, it is difficult to evaluate changes in consumer attitudes, and although the policy effects and the benefits of the yen's appreciation will stay in place for the time being, they are expected to diminish gradually.²² On the other hand, pent-up demand and consumption related to restoring one's quality of life in the disaster areas are of a temporal nature, but they are likely to stay at a certain level given that restoration in disaster areas will become full-fledged. The gradual progress on the business side to capture demand of the elderly is expected to have sustaining effects, to a certain degree, on consumption by the elderly. Assisted by these factors, private consumption is projected to grow somewhat higher than household income throughout the projection period.

²¹ See Box 5 for private consumption of the elderly.

²² Following the Lehman shock, the yen has appreciated considerably in a cumulative manner and this has exerted downward pressure on prices of import goods on a yen basis. At the same time, however, since international commodity prices and goods prices denominated in local currencies have risen, yen-denominated prices of import goods have not necessarily declined in line with the pace of the yen's appreciation. Therefore, although many consumers and retailers observe some benefits of the yen's appreciation, they have pointed out that these are less evident compared to past phases of rapid appreciation of the yen.

Housing investment has recently been picking up (Chart 8). As for the outlook, housing investment is expected to move gradually upward since housing demand -- which was held down temporarily after the disaster -- will be restored and reconstruction of damaged houses will gradually become evident. The increase will also be supported by the effects of incentives to purchase homes.

The Environment Surrounding Prices

International commodity prices have risen, particularly in crude oil prices, from their bottom around the end of last year due to lessened uncertainty regarding the global economy and to increased geopolitical risks surrounding the situation in Iran (Chart 51). From a relatively long-term perspective, international commodity prices are projected to move gradually upward in line with growth in overseas economies. Given these movements in international commodity prices, domestic energy and food prices are also expected to continue a moderate uptrend.

As for the expected inflation rate in the medium to long term, a survey conducted among market participants and economists shows that this has been stable over the past few years, at around 1 percent (Chart 52).²³ Another survey conducted among households indicates that the rate has been more or less unchanged recently (Chart 52 [1]).

From a somewhat long-term perspective, the aggregate supply and demand balance has maintained its gradual improving trend after the plunge resulting from the Lehman shock despite fluctuations caused by various factors such as the earthquake disaster (Chart 53 [1]). As for the outlook, the balance is projected to see consistent improvement as Japan's economic growth continues to outpace the potential growth rate.²⁴

²³ See Box 6 for various indicators to measure inflation expectations.

²⁴ 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 53 [2]). Since then, the rate has been gradually increasing as a result of recoveries in the growth of capital stock and potential labor input against the background of gradual economic recovery. Japan's potential growth rate during the projection period is estimated to be "around 0.5 percent" based on a standard production function approach. However, 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.

As for the CPI outlook, on the assumption that medium- to long-term inflation expectations remain stable at around 1 percent, the year-on-year rate of change is expected to gradually rise to a range of above 0.5 percent and less than 1 percent toward the latter half of the projection period as the aggregate supply and demand balance improves. Thereafter, it will likely be not too long before the rate reaches the Bank's "price stability goal in the medium to long term" of 1 percent for the time being.

In the relatively long run, there is a broad positive correlation between the CPI and the aggregate supply and demand balance. In fact, the year-on-year rate of decline in the CPI has been slowing gradually so far against a backdrop of moderate improvement in the aggregate supply and demand balance (Chart 54 [1]). A similar relationship can be found for the chain-weighted CPI, which is less affected by the base-year change (Chart 54 [2]). However, in terms of the duration required for the CPI to rise by 1 percentage point after turning toward improvement, this was about one year in the second half of the 1980s, when the level of the aggregate supply and demand balance was high and the pace of increase was rapid, whereas it took roughly two years in the mid-1990s, when the level was low and the pace was slow (Chart 55). Based on these past episodes, the expectation is that it will take some time before the year-on-year rate of change in the CPI -- currently at around 0 percent -- reaches 1 percent.

In the past, the year-on-year rate of change in the chain-weighted CPI tended to become lower than that in the fixed-weighted CPI, and the gap became larger as more time passed from the base year, which is currently 2010. Based on this observation, the year-on-year rate of change in the chain-weighted CPI in around 2013 may be slightly lower than the forecast in this Outlook Report, which is based on the fixed-weighted CPI. As illustrated in Box 1, however, the gap between the chain-weighted CPI and the fixed-weighted CPI is expected to remain relatively small with the current base year of 2010, since the weights of some items such as TVs -- which show large price falls -- have been declining since 2011.

(Box 1) The Laspeyres Chain-Weighted Index of Consumer Prices

In contrast to the fixed-weighted index, the Laspeyres chain-weighted index (hereafter, chain-weighted index) of consumer prices is compiled after completing the annual exercises of (1) updating weights of individual items²⁵ and (2) rebasing index levels of individual items by setting those in December last year at 100.²⁶ These exercises have the following merits in judging the trend in price developments.

(Merit of Updating Weights)

One merit of the chain-weighted index is that it reflects the recent structure of consumers' expenditures because weights are updated every year. Looking at changes in the expenditure structure, expenditures for durable consumption goods such as TVs increased significantly in 2010 due to the eco-point system -- that is, subsidies for purchasing energy efficient products -- but declined sharply in 2011 in the absence of such incentives (Chart 56 [2] and [3]). The fixed-weighted index continues to use the weights in an unusual year such as 2010 for five years, which results in overvaluation of the impact of prices of consumer durable goods. In this regard, the effect of a temporary factor such as the eco-point system will not last in the chain-weighted index because of the annual update of weights of items in expenditures.

(Merit of Rebasing Index Levels)

When the prices of some products such as TVs and personal computers continue to decline persistently and significantly, the impact of the declines on the year-on-year change in the overall price index gradually diminishes because the index levels of the concerned products decline with the lapse of time. Therefore, the year-on-year rate of change tends to be larger in the fixed-weight index compared to the chain-weighted index, and such a

²⁵ New weights are calculated based on various statistics including the *Family Income and Expenditure Survey* for the previous year.

²⁶ This treatment was introduced for the first time for the Laspeyres chain-weighted index with the base year of 2010. In the chain-weighted index with the base year of 2005, index levels were rebased such that the average for the previous calendar year became 100.

divergence becomes larger as it grows more distant from the base year (Chart 56 [1]).²⁷ At the time of a base-year change for the fixed-weight index, the index levels for those products are instantaneously reset, at 100, from the low levels that reflect cumulative declines over five years, and this results in a discontinuous increase in the impact of price declines for those products causing a break in year-on-year changes in the overall index. On the other hand, in the case of the chain-weighted index, a base-year change does not cause such a large break in data because index levels are rebased every year.

²⁷ In the next year of the base-year change, developments in the fixed-weight index and the chain-weighted index are almost identical. To be more precise, however, there are some differences because the fixed-weight index rebases the average index for a previous calendar year at 100 while the chain-weighted index rebases the index for December of the previous year at 100.

(Box 2) Current Account and Saving-Investment Balances

(Concept of Current Account and Saving-Investment Balances)

Developments in a current account balance of a national economy correspond to those in a saving-investment balance. National economic activities can be simply described as follows.

$$\text{National income} = \text{Consumption} + \text{Investment} + \text{A current account balance} \text{ ---- (a)}$$

That is, where saving can be obtained by subtracting consumption from national income and a gap between the saving and investment is a saving-investment balance, which is identical to a current account balance.

$$\text{National income} - \text{Consumption} = \text{Saving} \text{ ---- (b)}$$

Combining (a) and (b) yields the following equation.

$$\text{Saving} - \text{Investment} = \text{A saving-investment balance} = \text{A current account balance} \text{ ---- (c)}$$

Therefore, excess saving in a national economy, where saving exceeds investment, corresponds to a current account surplus. Looking at developments in current account and saving-investment balances in Japan, there has been a continuing situation of a current account surplus and corresponding excess saving (Chart 39). The relationship between the two variables is not a causal one in which, for example, a current account balance comes first and a saving-investment balance is determined later. Instead, the two variables are determined simultaneously as a result of activities of individual economic entities such as households, firms, and the government.

(Points to Note When Assessing Current Account and Saving-Investment Balances)

Japan's current account and saving-investment balances have been under the spotlight recently, reflecting a decline in the current account surplus, a shift to overseas production,

and rising concern about a possible decline in household saving rates amid an aging population and low fertility. Based on the conceptual understanding described above, the following are points to note when assessing current account and saving-investment balances.

- 1) A shift of production overseas does not necessarily lead to a decline in a current account surplus. While it reduces a current account surplus through a decline in the trade balance associated with declining exports, a shift of production overseas also increases the surplus through an increase in the income balance, including an increase in dividends from foreign affiliates. If an expansion of production overseas leads to success in capturing more global demand, an increase in the income balance could more than offset a decline in the trade balance. Looking at this from a saving-investment balance, a shift of production overseas supports national income through an increase in the income balance while restraining domestic investment, which could result in an increase in excess saving.
- 2) A decline in the household saving rate associated with an aging population and low fertility does not necessarily lead to a decline in the current account surplus. An aging population and low fertility cause a decline in the household saving rate through a rising share of the elderly for which consumption depends more on accumulated assets than income, while causing a decline in the household investment rate because of less housing investment. The overall impact of these effects on the saving-investment balance for households is not known a priori. Furthermore, as the population decline associated with an aging population and low fertility reduces Japan's potential growth rate, firms may accelerate their shift of production overseas to capture global demand. In this case, since domestic investment will be reduced, as described above, excess saving by the national economy could increase.
- 3) Given that gross external assets and net external assets have accumulated to almost 580 trillion yen and 260 trillion yen, respectively, the income balance from these assets has surpassed 10 trillion yen in recent years (Chart 38). For the time being, it is possible to maintain a large surplus in the income balance thanks to the income from the external

assets, and consequently the current account surplus will likely continue unless there is a further significant increase in the trade deficit. If direct investment with high profitability, especially that in emerging economies, rises as a result of Japanese firms' expansion of global businesses, a surplus in the income balance could increase further.

(Box 3) Developments in Saving-Investment Balances by Sector

Looking at long-term developments in the saving-investment balance, Japan has continued to record excess saving (= a current account surplus) at a time when saving and investment rates have been on a declining trend (Chart 40 [1]). Developments in saving and investment rates in the household, corporate, and government sectors are as follows.

(Household Sector)

Excess saving had decreased toward the 2000s, with the saving rate having declined due to the aging population while the investment rate remained unchanged (Chart 40 [2]). From the latter half of the 2000s onward, however, the investment rate has declined, reflecting decreasing housing investment, while the saving rate has increased against a background of restrained consumption despite various income transfers, including the supplementary income payments. As a result, excess saving expanded. This is seemingly attributable to households' rising concern about their future, reflecting a business slump after the Lehman shock as well as a rising fiscal deficit, which restrained both housing investment and consumption. Looking at the propensity to consume by age of householders, while the group of those aged 60 years and older increased their propensity to consume, as described later, the group of those younger than 60 reduced their propensity to consume (i.e., there was a rise in the saving rate) (Chart 50 [3]).

(Corporate Sector)

From the latter half of the 1980s to the first half of the 1990s, excess investment continued, reflecting a tremendous increase in fixed investment during the bubble period (Chart 40 [3]). After the bursting of the bubble, excess saving continued throughout the 2000s as (1) firms restrained their fixed investment in the process of balance-sheet repair, and (2) an improvement in corporate profits as the result of business restructuring and a cutback in labor costs led to an increase in saving. After the Lehman shock, excess saving in the corporate sector has expanded, as the investment rate dropped while the saving rate has remained more or less unchanged.

(Government Sector)

The saving-investment balance for the government sector recorded excess saving around 1990, reflecting a sharp increase in saving associated with a rise in tax revenue (Chart 40 [4]). Thereafter, excess investment (= a fiscal deficit) has increased significantly, as tax revenue fell sharply due to the bursting of the bubble while successive fiscal stimuli have kept the investment rate high. Excess investment (= a fiscal deficit) shrank at one point in the mid-2000s, reflecting an increase in tax revenue due to economic recovery and cuts in fiscal expenditures, but expanded again after the Lehman shock due to a sharp fall in tax revenue and an increase in various social benefits.

(Box 4) Employment Situation in Disaster Areas

Employment conditions in disaster areas deteriorated soon after the earthquake disaster but have recently shown signs of improvement (Chart 57 [1]). In the three disaster-stricken prefectures in the Tohoku region (Iwate, Miyagi, and Fukushima), job offers have increased significantly in a wide range of sectors, especially the construction sector, and the pace of improvement in the ratio of job offers to applicants has been faster than the national average (Chart 57 [2]). At the same time, however, the rise in labor demand has not yet fully led to an increase in employment.

This is partly attributable to the fact that the skills required in those construction-related sectors that are increasing job offers to meet the reconstruction-related demand are markedly different from those required in the industries job seekers were engaged in before the disaster, such as marine product processing, agriculture, and fishing. There is also a possibility that the increase in employment is relatively slow because the maximum term of unemployment benefits was extended by 210 days, and this has kept growth in labor supply at low levels (Chart 57 [3]).

Labor supply is expected to recover because the term of unemployment benefits is approaching expiration for an increasing number of the unemployed. At the same time, however, it appears that some time will be required to correct the skill mismatch. The tightening of demand and supply of labor in specific sectors such as the construction sector may exert persistent upward pressure on wages in those sectors (Chart 57 [4]).

(Box 5) Aging of Population and Private Consumption

Distinguishing features of private consumption in the recent period are the rising importance of consumption by the elderly and a trend rise in their propensity to consume (Chart 50 [3]). Evidence of the elderly's increasing willingness to consume is supported by the following analysis using panel data for different age cohorts.

A cohort-based analysis that uses panel data for different age cohorts allows us to separately analyze (1) common characteristics in each age bracket regardless of birth year (the age effect) and (2) characteristics unique to a generation born in specific years (the generation effect).

As for the age effect, it has been observed that a propensity to consume tends to be low in working-age cohorts and high in older ones (Chart 58 [1][a]). This observation is consistent with a life-cycle hypothesis. The working-age cohort saves in preparation for retirement by restraining their expenses such that these are less than their income. On the other hand, as for the older-age cohort, the propensity to consume (= consumption divided by income) is higher, as this cohort's consumption depends on accumulated assets because the levels of their income -- mainly comprised of pension benefits -- are low compared to those of the working-age population.

As for the generation effect, our analysis shows that the baby boom generation, which is comprised of people who were born soon after the end of World War II, has a high propensity to consume compared to other generations (Chart 58 [1][b]). The recent rise in the elderly's propensity to consume seemingly reflects the fact that the generation showing a high propensity to do so, the so-called "active senior citizens," is part of the elderly category.

Comparing the composition of consumption by the elderly with that of other age groups, it is notable that the shares are high for "social expenses," "medical care," "food," and "accommodation services & package tours" (Chart 58 [2]). With the aim of taking advantage of the elderly's strong willingness to consume, especially in service industries,

firms have been strengthening their capacity to develop and supply goods and services targeted at the active senior citizens in recent years.

(Box 6) Various Indicators to Measure Inflation Expectations

Inflation expectations, which indicate how households and firms see future inflation prospects, provide important information with regard to the conduct of monetary policy.²⁸ First, inflation expectations affect such decision making as consumption by households and investment by firms, and consequently business fluctuations through changes in real interest rates, which reflect future price developments. Even when nominal interest rates are unchanged, financial conditions can tighten or ease if real interest rates change in reflection of changes in inflation expectations. Second, inflation expectations affect actual inflation rates through wage- and price-setting behavior. When firms and households expect to see price changes in the future, they consider such changes when making decisions on prices and wages.

From the above two perspectives, medium- to long-term inflation expectations are more important than their short-term counterpart. In terms of their impact on business conditions, this is because real interest rates have a significant effect on the purchases of consumer durable goods as well as machinery and construction equipment, which involve intertemporal decision making with a significantly long time horizon. In terms of their impact on actual prices, medium- to long-term inflation expectations are important because the price-setting behavior of firms and consumption by households are considered to be largely determined by such expectations -- in other words, the general public's perception of prices as established within the society.

There are basically two approaches to measuring inflation expectations: conducting surveys of households, firms, or economists and/or deriving them from price information in financial markets (Chart 59 [1]). It is important to measure inflation expectations in a comprehensive manner by checking a variety of indicators without focusing too much on a specific one, bearing in mind their strengths and weaknesses.

²⁸ For a more detailed explanation of indicators for inflation expectations in Japan and abroad, please see "On Inflation Expectations" Bank of Japan Review Series (2008-J-15) and "Usefulness of Surveys regarding Medium- to Long-term Inflation Expectations" Bank of Japan Review Series (2011-J-8), both of which are available only in Japanese.

For example, when asked about the prospects for output prices and input prices, firms have a bias toward providing more unfavorable prices for themselves. Such survey data are known to have a certain usefulness in projecting short-term prospects of the CGPI. On the other hand, it has been pointed out that short-term inflation expectations by households tend to be influenced by short-term price developments of frequently purchased items such as gasoline and foods.²⁹

Inflation expectations by economists are useful and widely utilized by central banks, including the Bank, because not only short-term projections but also medium- to long-term projections covering five or ten years are available. However, there is also a weakness in terms of how such inflation expectations by economists are related to actual consumption by households and the price- and wage-setting behavior of firms. Furthermore, if economists respond to surveys based on the economic theory that "inflation rates will, in a medium to long run, converge to the rate pursued by a central bank," then a central bank's examination of such expectations represents nothing more than looking at itself in the mirror (the "looking into the mirror problem").

Inflation expectations derived from price information in financial markets, such as prices for inflation-indexed government bonds and inflation-linked swap transactions, are an indicator of summarized views held by a variety of market participants. At the same time, however, due attention is needed because they are significantly affected by market liquidity.

In particular, market liquidity for inflation-indexed government bonds in Japan significantly declined after the Lehman shock because overseas financial institutions, which used to be major holders of the bonds, reduced their positions sharply. Thereafter, against a backdrop of increasing deflationary pressures associated with the global financial crisis, domestic investors have generally stayed away from investing in inflation-indexed government bonds for which principals are not guaranteed at the time of redemption. Against this background, new issuance of inflation-indexed government bonds has been suspended since

²⁹ It should also be noted that it is not clear whether households and firms respond to surveys after taking into account changes in the quality of goods and services. When compiling price indices, improvement in quality is adjusted by lowering prices accordingly in order to measure price changes with constant quality.

August 2008 and the buy-back operations of inflation-indexed government bonds by the national debt consolidation fund have been conducted on a significant scale. As a result, the market size of inflation-indexed government bonds in Japan has declined from more than 8 trillion yen at the peak, to less than 4 trillion yen in the recent period, and its share in the total outstanding amount of Japanese government bonds has become less than 1 percent, which is very different from the situation in the United States (Chart 59 [2]).³⁰ In such a market environment with extremely low market liquidity, a larger liquidity premium is added to the yield of inflation-indexed government bonds compared to the fixed coupon-bearing government bonds. Therefore, the break-even inflation rate (BEI), which is calculated as a yield difference between the fixed coupon-bearing government bonds and inflation-indexed government bonds and often used as a proxy for inflation expectations, has a nonnegligible downward bias. Furthermore, changes in the BEI could be affected by changes not only in inflation expectations but also in differences in market liquidity of the fixed coupon-bearing government bonds and inflation-indexed government bonds.

Regarding inflation-linked swap transactions, while relatively active transactions are taking place in the United States, the transaction volume in Japan is small due to limited demand for the purpose of hedging inflation risk, and market prices are not available from information vendors.

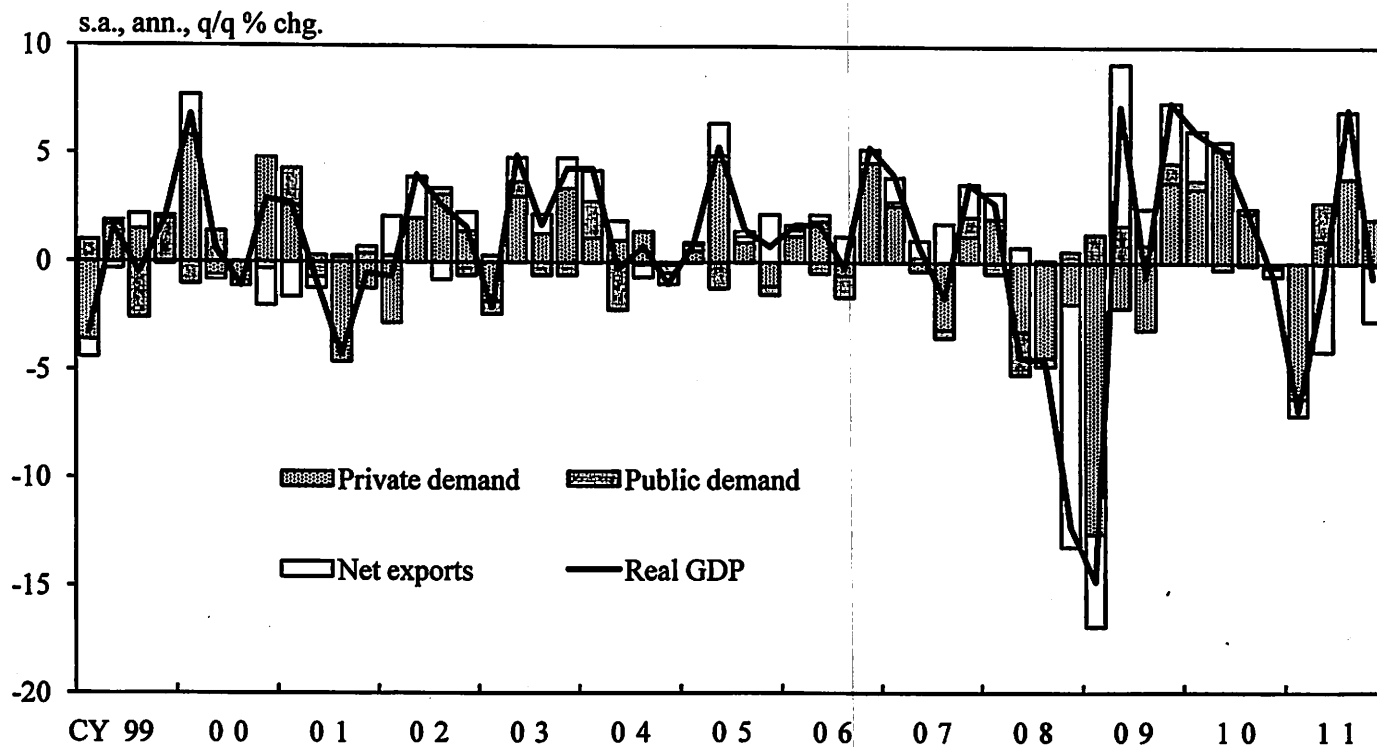
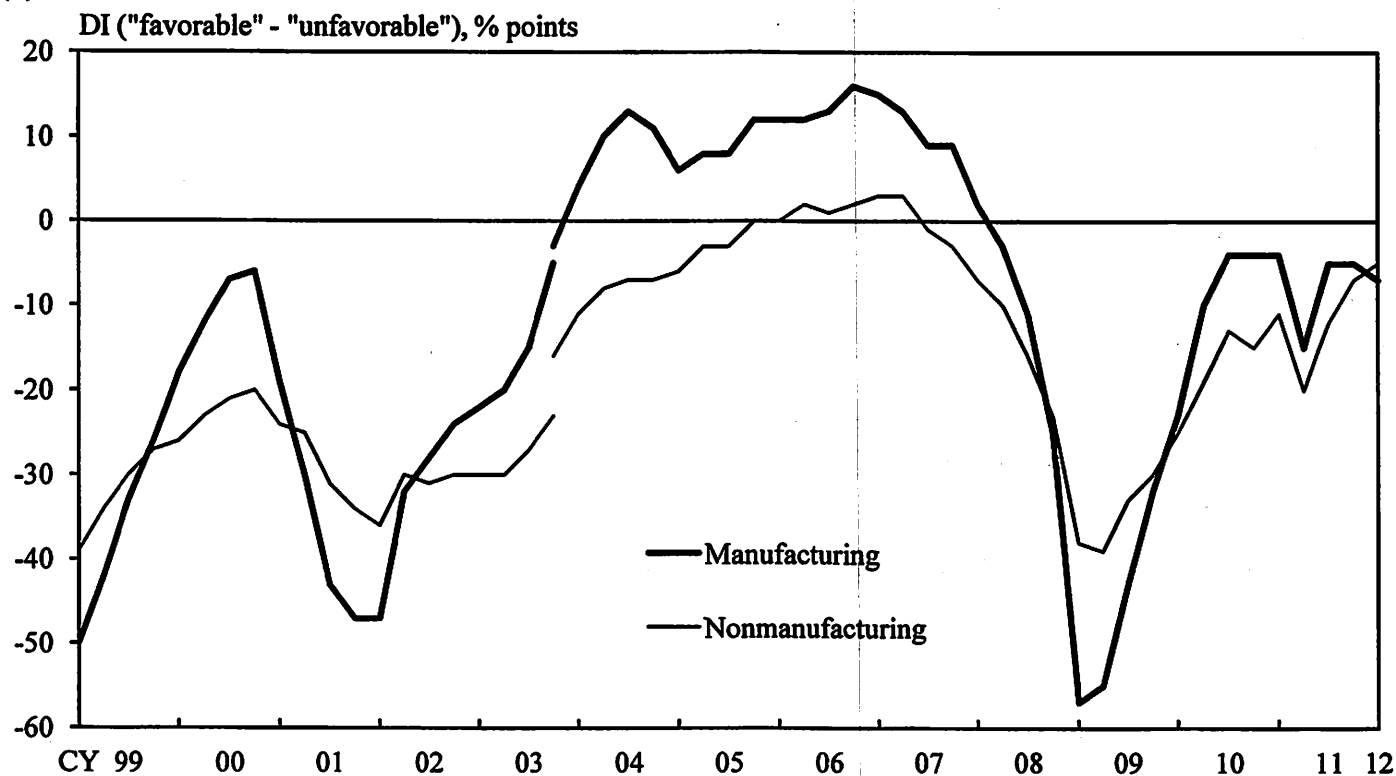
³⁰ The Ministry of Finance of Japan has changed the product design of inflation-indexed government bonds, for example, by setting a floor for the amount of principal at the time of redemption. In order to resume the issuance of inflation-indexed government bonds, the Ministry has been conducting a practical examination involving market participants.

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Real GDP and Business Conditions

(1) Real GDP

(2) Business Conditions^{1,2}

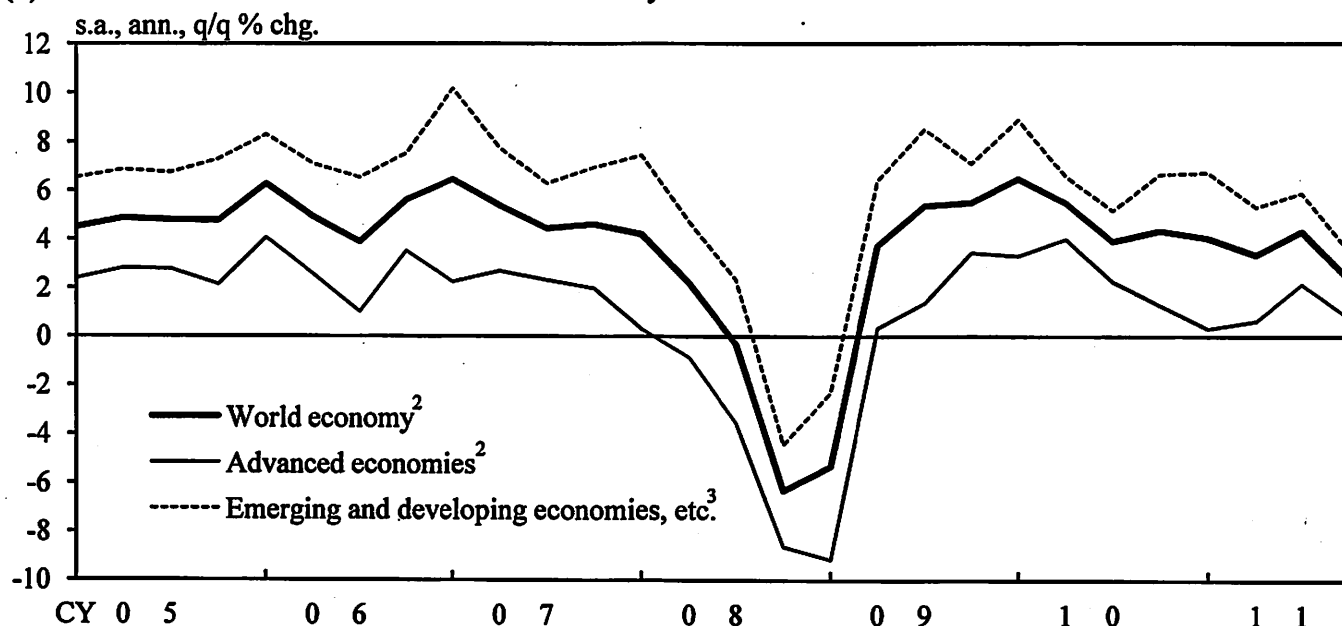
Notes: 1. Figures are based on the "Tankan," aggregates of all business sizes.

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.

Sources: Cabinet Office, "National Accounts";

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

Overseas Economies

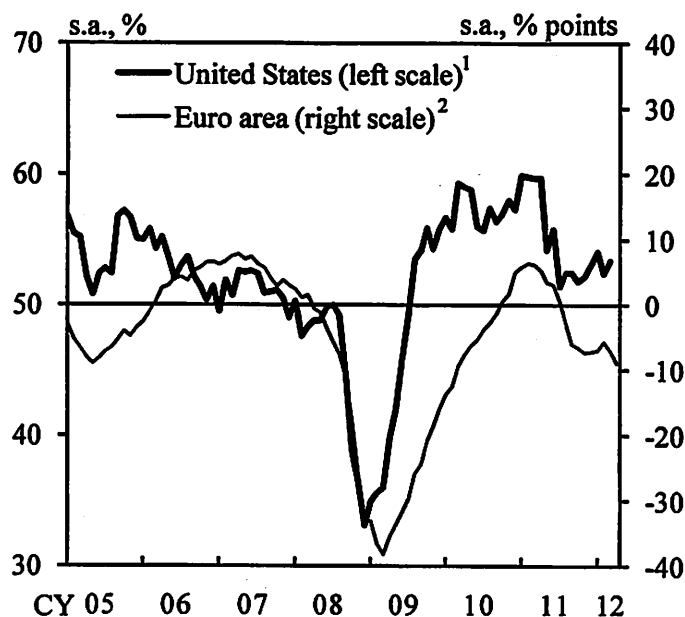
(1) Real GDP Growth Rates of the World Economy¹

Notes: 1. Figures are calculated using GDP based on purchasing power parity (PPP) shares of the world total from the IMF.

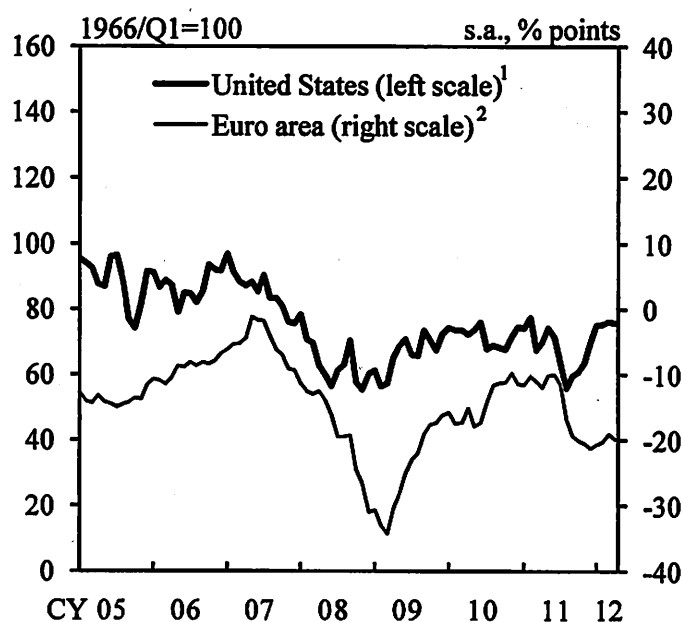
2. World economy covers 184 countries. Advanced economies are the United States, euro area (17 countries), United Kingdom, and Japan.

3. Including estimated quarterly growth rates based on historical annual data of real GDP growth rates.

(2) Business Confidence



(3) Consumer Confidence



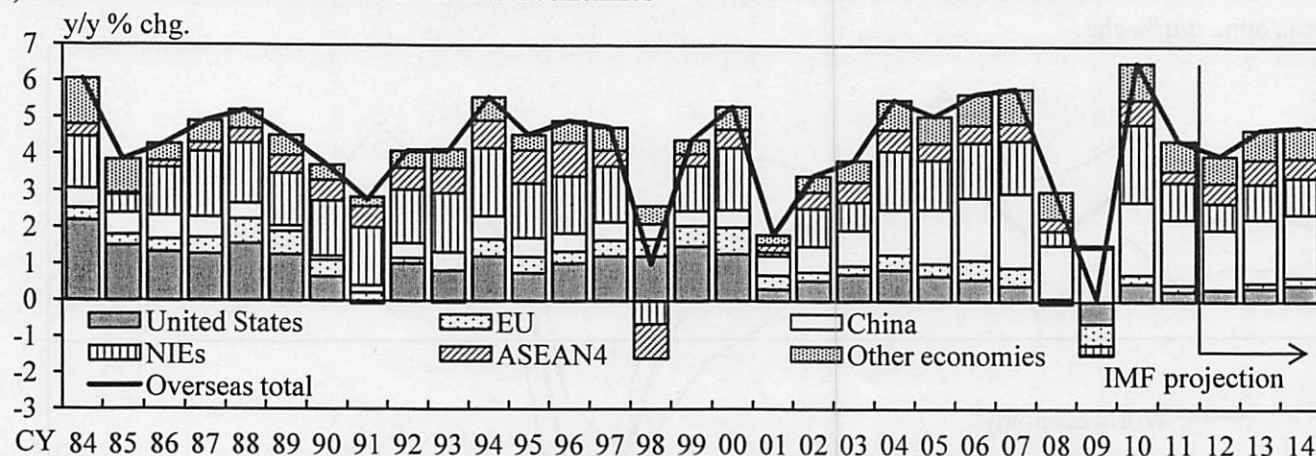
Notes: 1. Figures for business confidence are the Manufacturing ISM Report on Business, and those for consumer confidence are the Thomson Reuters/University of Michigan Consumer Sentiment Index. A reading of 50 percent on the ISM index generally indicates a turning point between economic expansion and decline in the manufacturing sector.

2. Taken from the Economic Sentiment Indicator of the European Commission. Figures for business confidence are the Industrial Confidence Indicator, and those for consumer confidence are the Consumer Confidence Indicator. A reading of 0 percentage points generally indicates a turning point between economic expansion and decline.

Sources: IMF, "World Economic Outlook"; European Commission; Thomson Reuters; HAVER, etc.

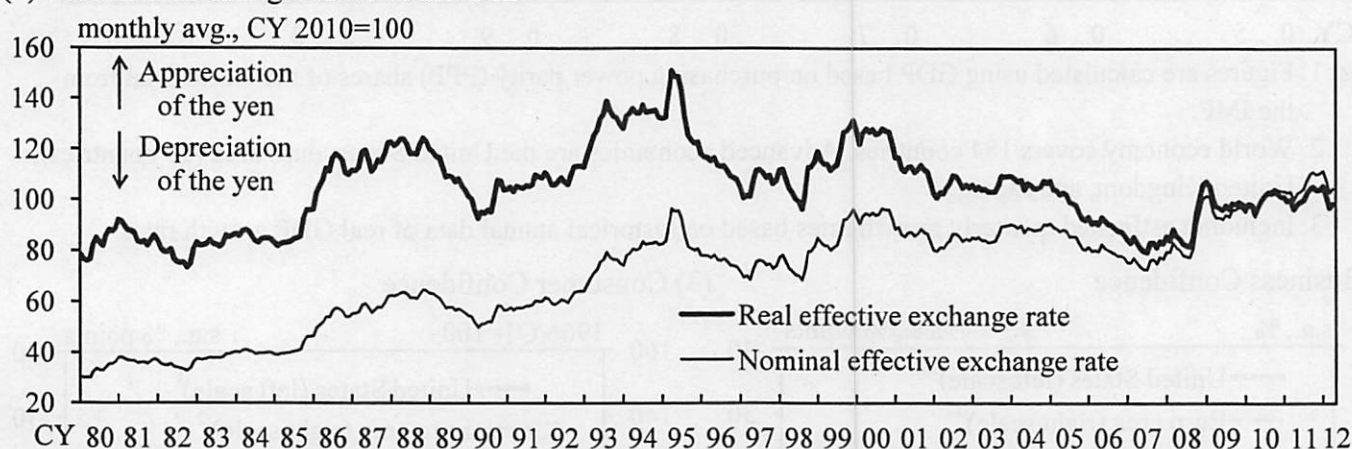
Overseas Economies and Exchange Rates

(1) Real GDP Growth Rates of Overseas Economies



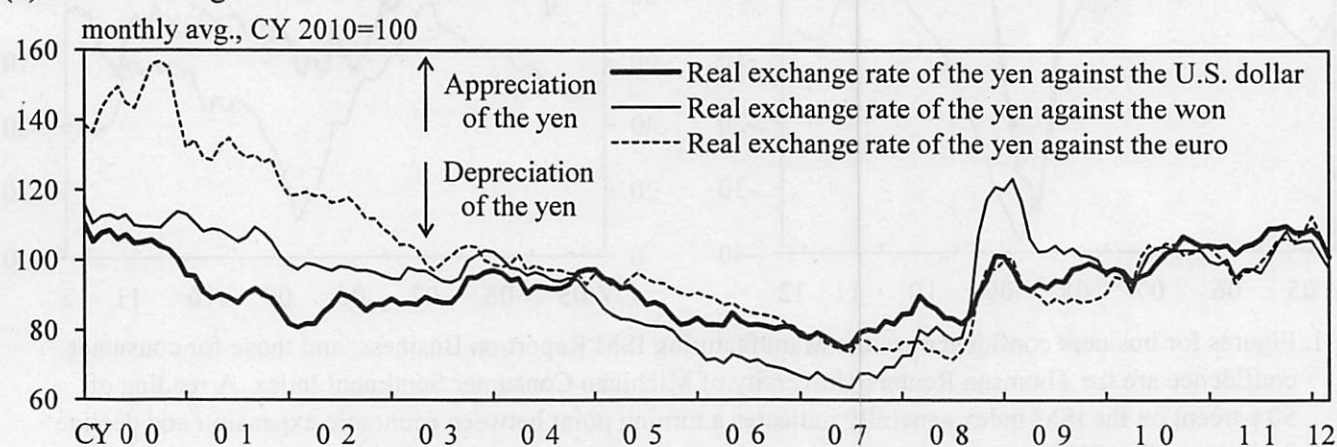
Note: Real GDP growth rate of the overseas total is the weighted average of real GDP growth rates by value of exports from Japan to each economy.

(2) Effective Exchange Rates of the Yen



Note: The effective exchange rates 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 2012 are calculated using the Bank of Japan's nominal effective exchange rate of the yen.

(3) Real Exchange Rates of the Yen

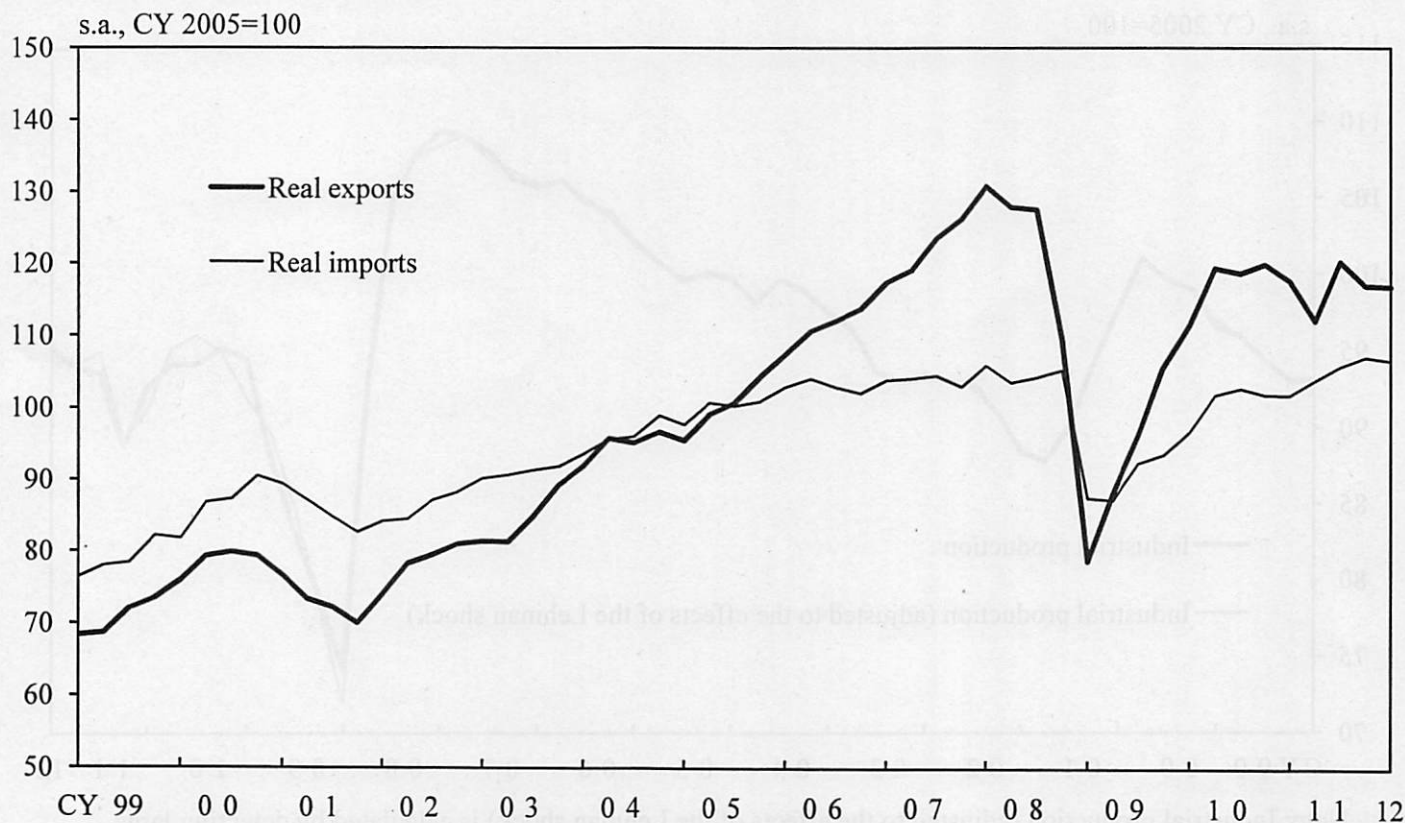


Note: Figures are calculated as the yen's nominal exchange rate against a currency multiplied by (Japan's CPI / the corresponding countries' or regions' CPI). The CPI of each country and region is based on the index of all items.

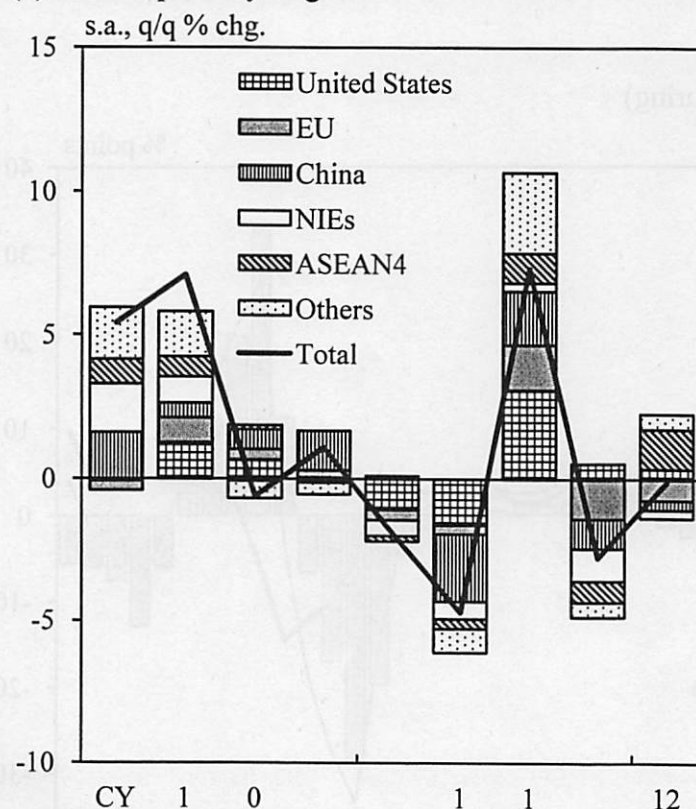
Sources: IMF, "World Economic Outlook"; Ministry of Finance, "Trade Statistics"; Bank for International Settlements; Bank of Japan; CEIC; Ministry of Internal Affairs and Communications, "Consumer Price Index"; Bloomberg; etc.

Exports and Imports

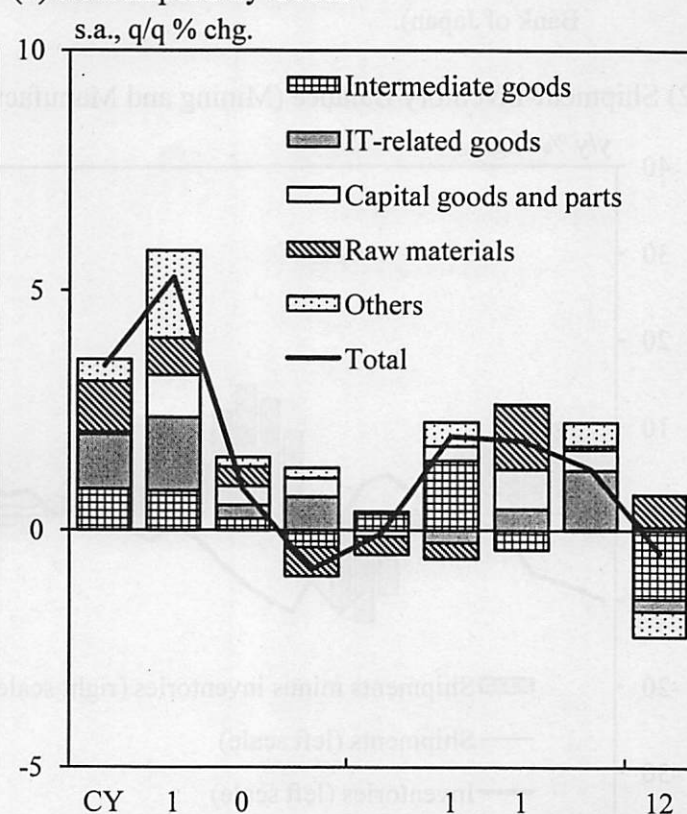
(1) Real Exports and Real Imports



(2) Real Exports by Region



(3) Real Imports by Goods

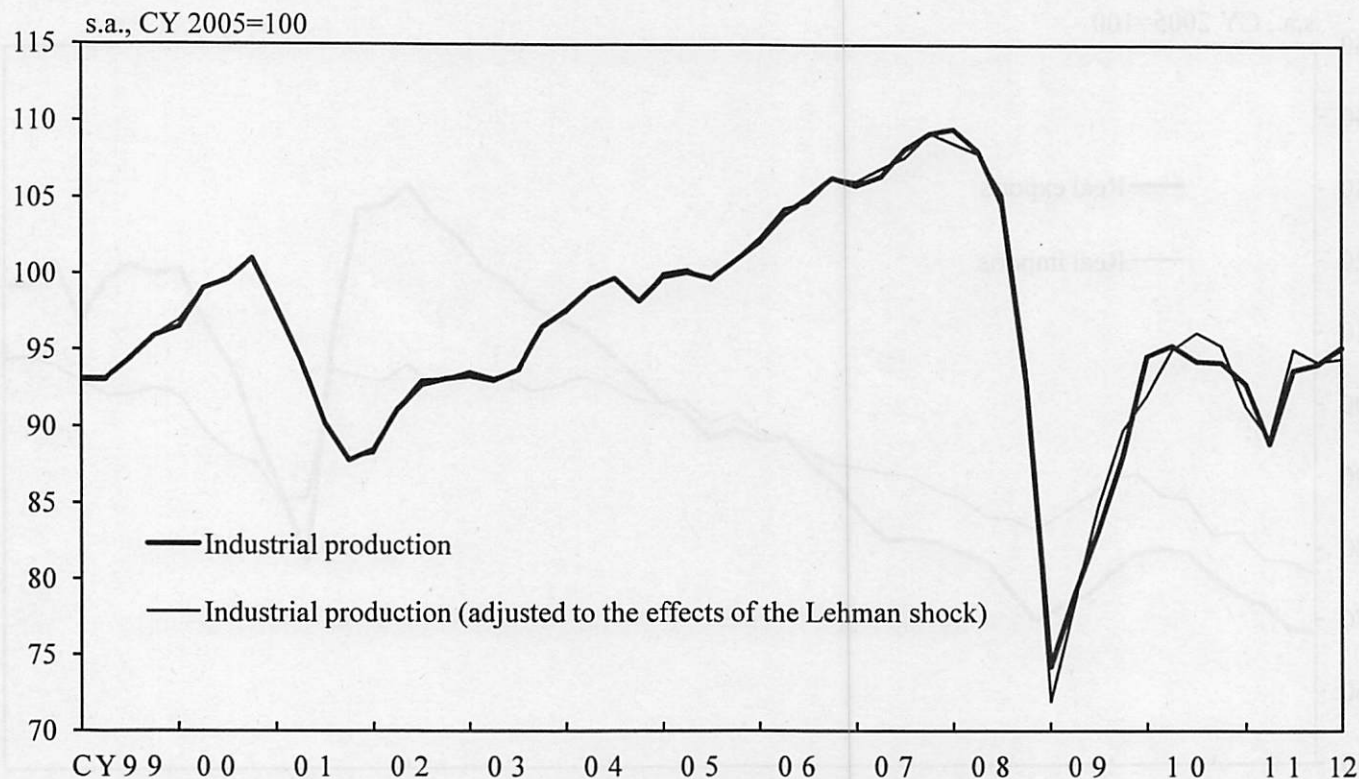


Note: The seasonally adjusted figures for real exports and real imports have been retroactively revised due to the regular annual revision of the previous year's data in the "Trade Statistics." Figures by region or goods, however, have not been revised.

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

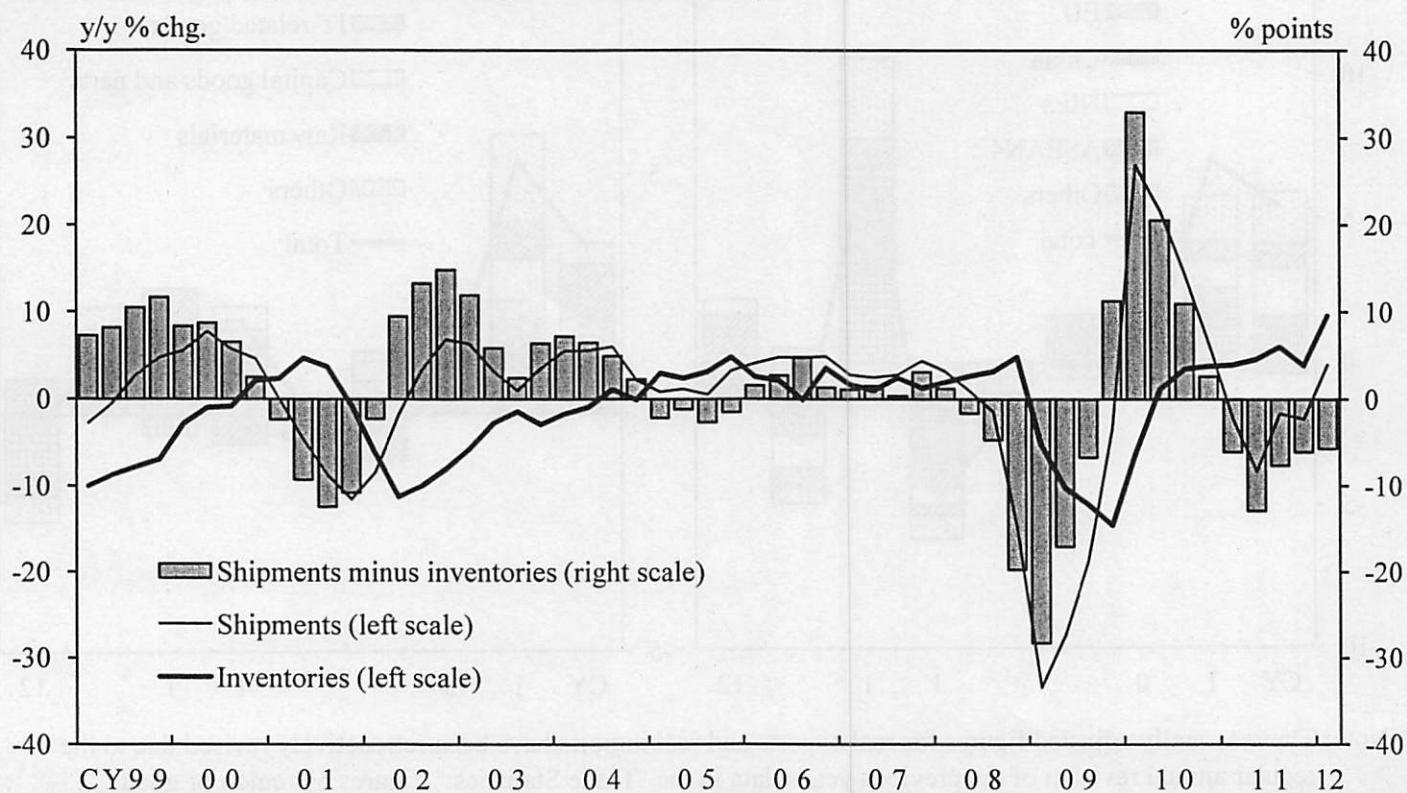
Production

(1) Industrial Production



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

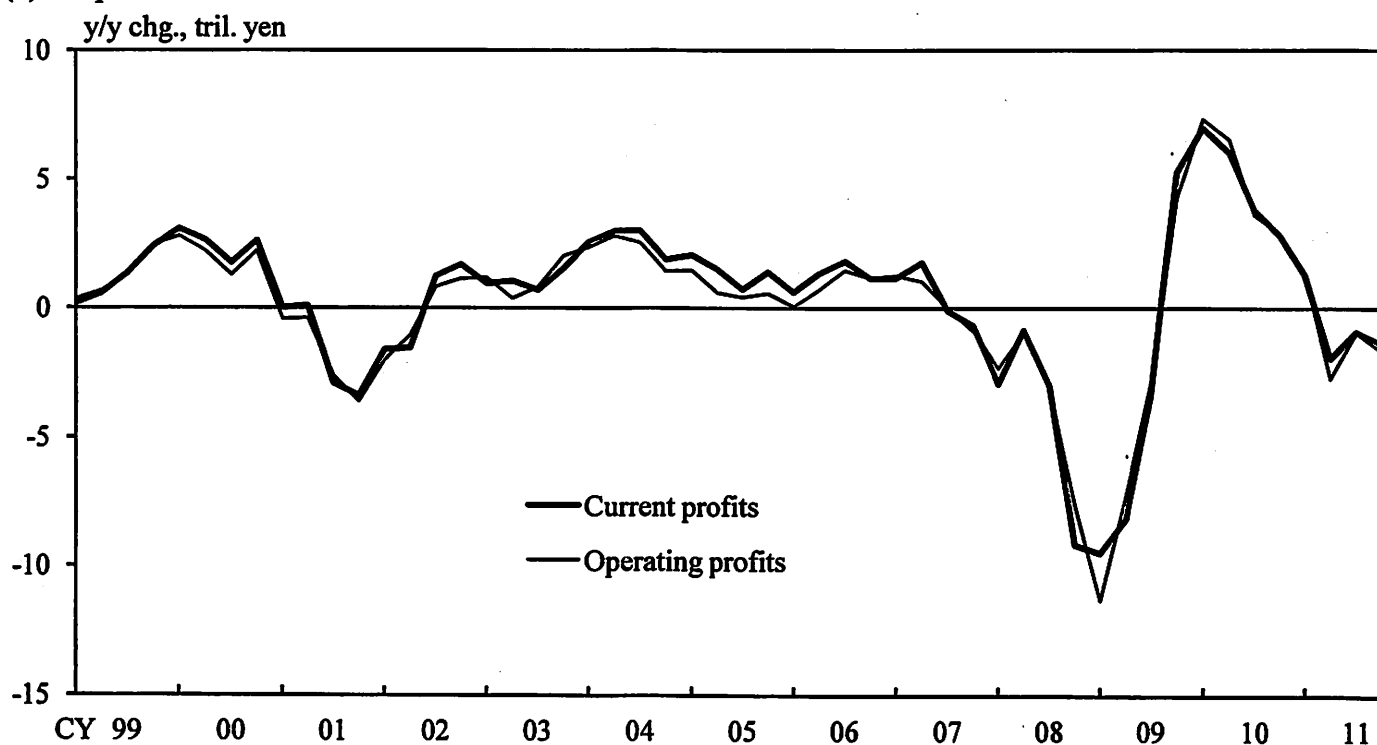
(2) Shipment-Inventory Balance (Mining and Manufacturing)



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

Corporate Profits and Fixed Investment

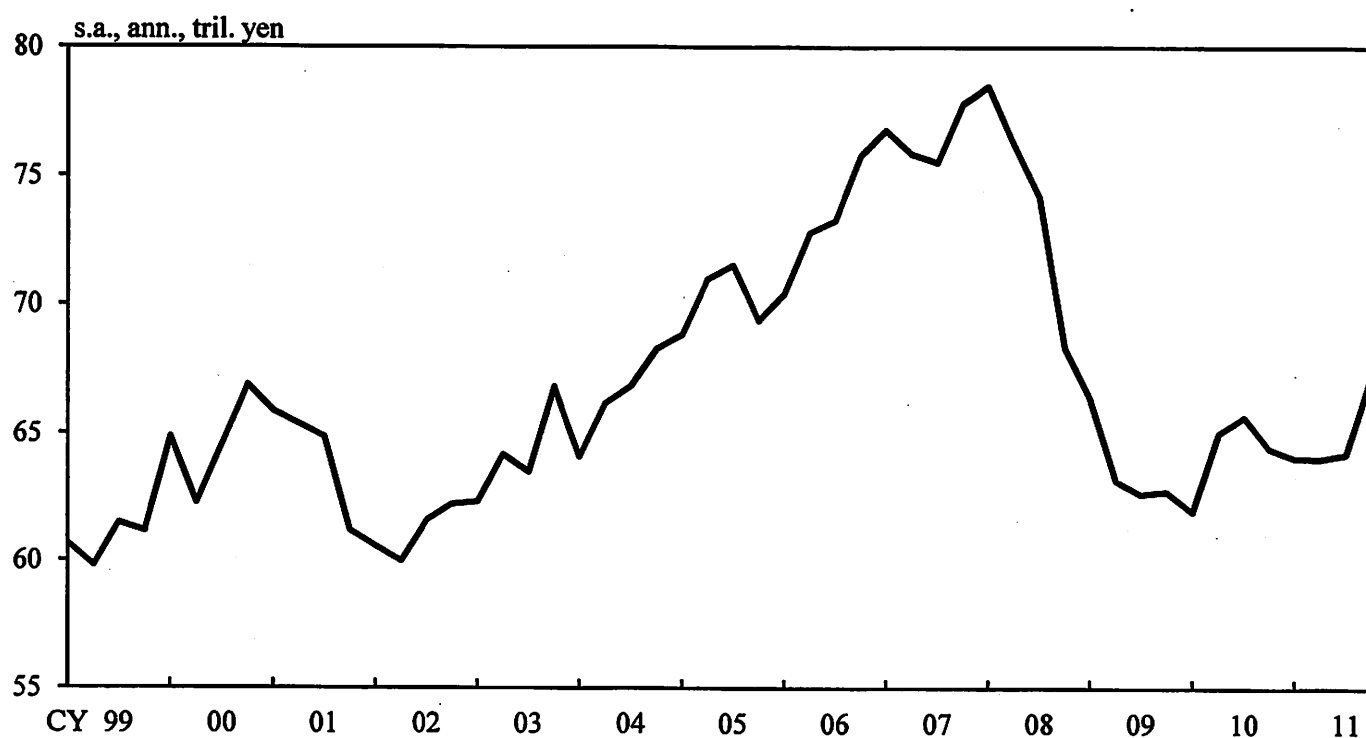
(1) Corporate Profits



Notes: 1. Based on all-size enterprises and all industries.

2. Taken from the "Financial Statements Statistics of Corporations by Industry, Quarterly." Figures exclude finance and insurance.

(2) Fixed Investment

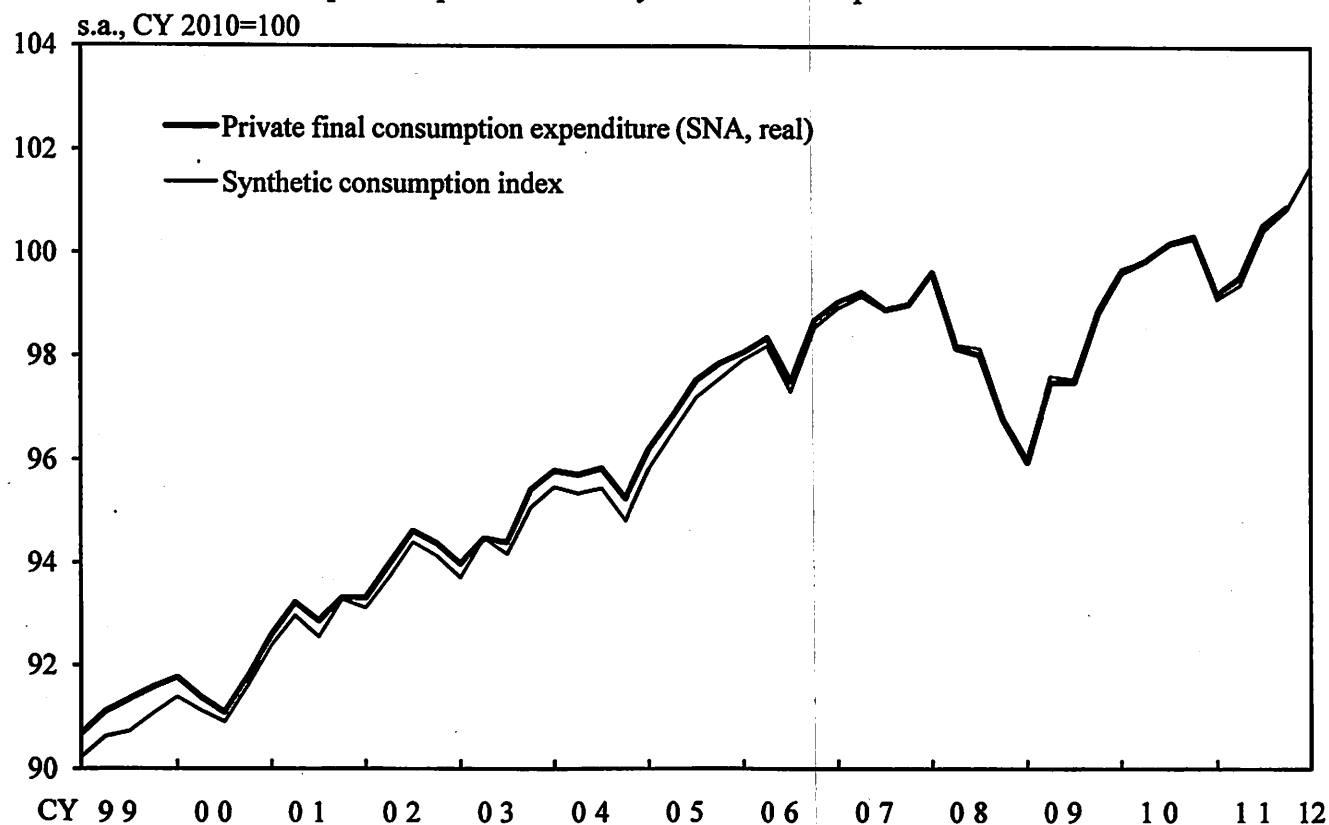


Note: Taken from "National Accounts." The figure is real private non-residential investment.

Sources: Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly"; Cabinet Office, "National Accounts."

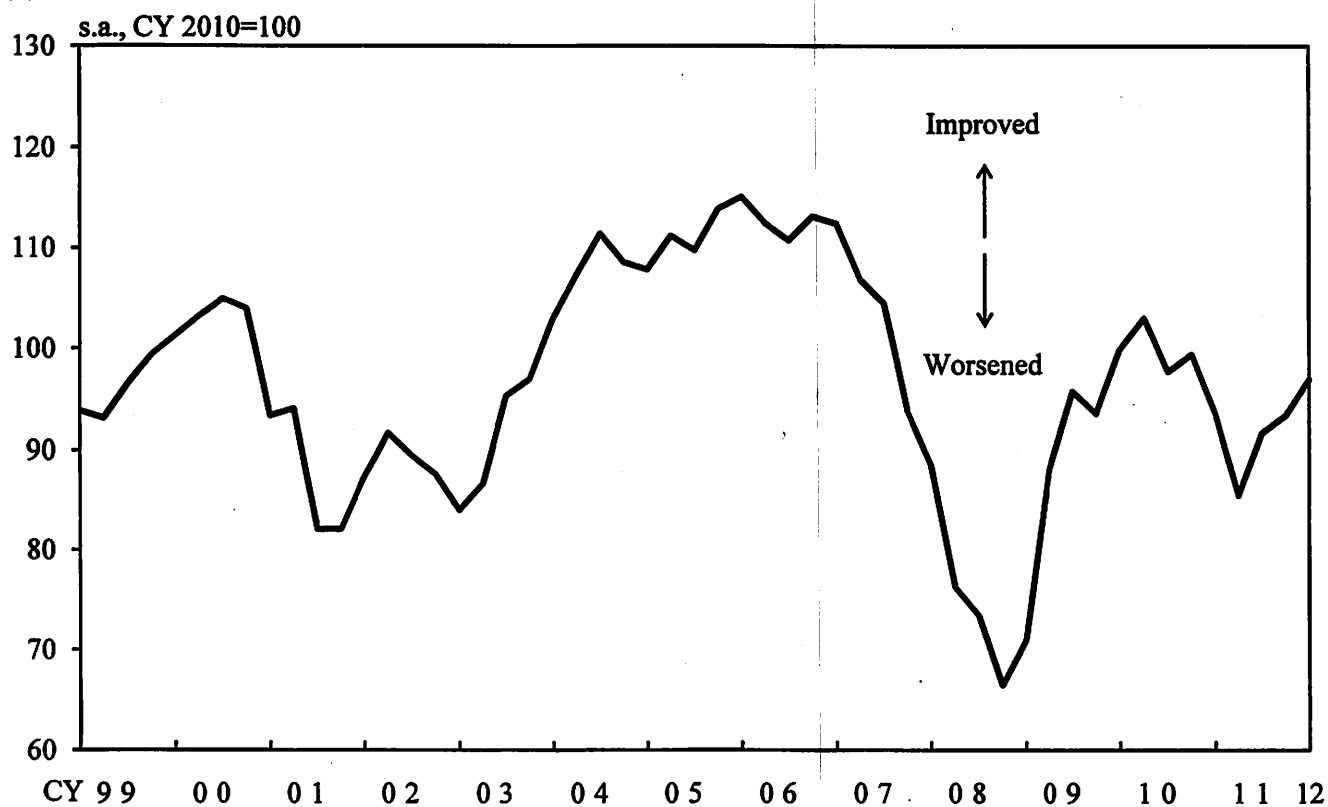
Private Consumption

(1) Private Final Consumption Expenditure and Synthetic Consumption Index



Note: The figure for the synthetic consumption index for 2012/Q1 is the January-February average in quarterly amount.

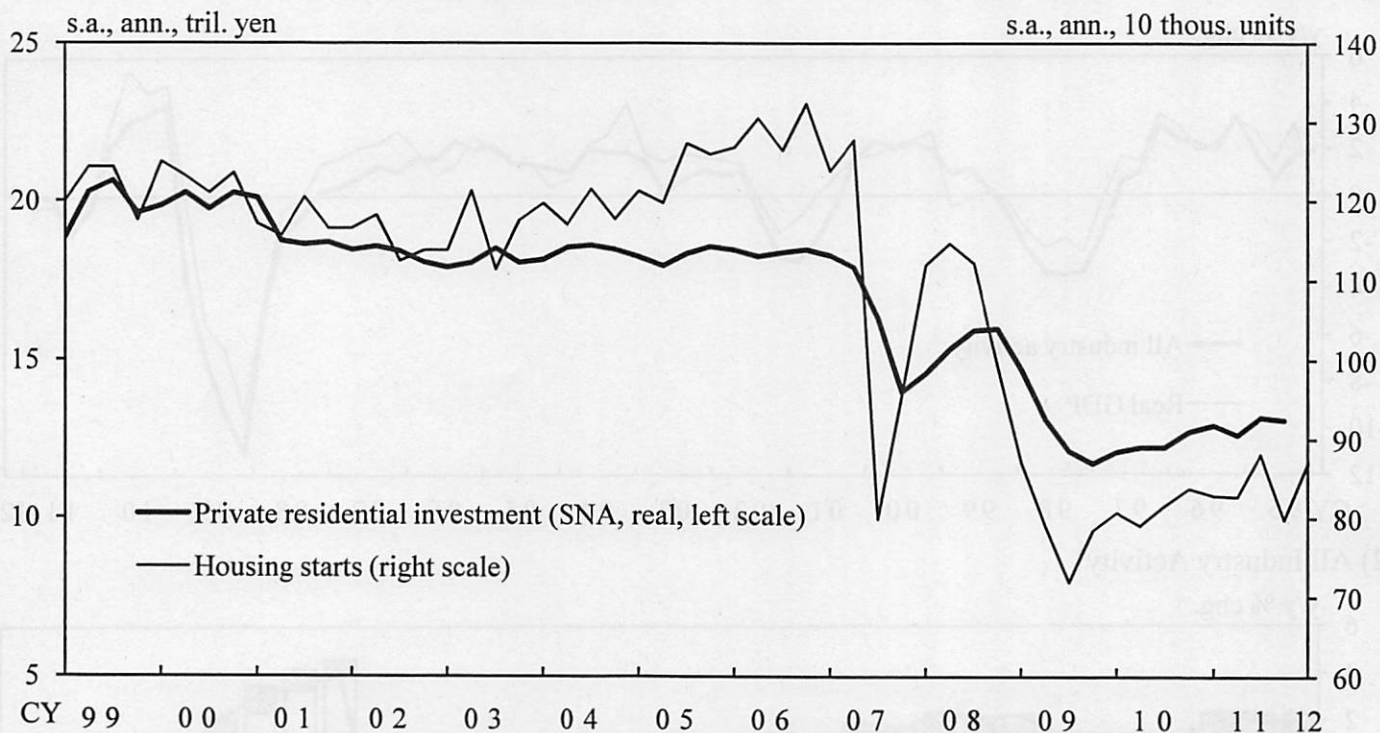
(2) Consumer Confidence Index



Sources: Cabinet Office, "National Accounts," "Consumer Confidence Survey," "Synthetic Consumption Index."

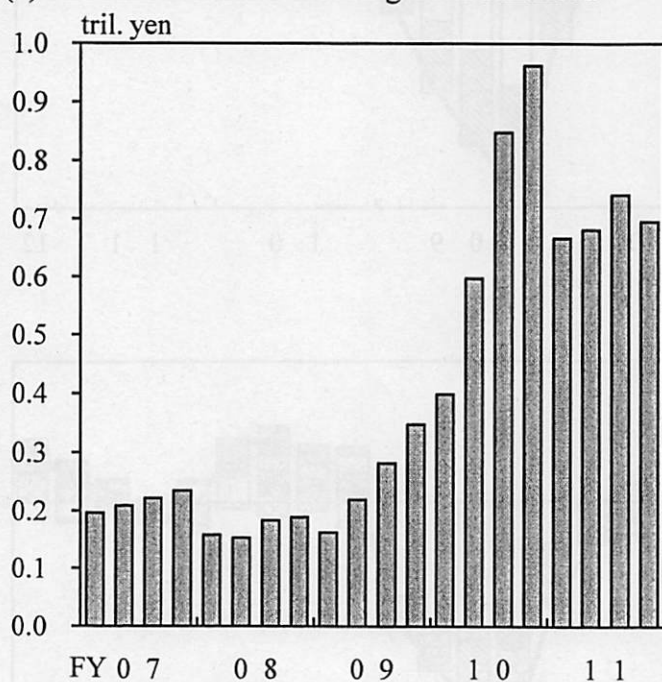
Housing Investment

(1) Housing Starts and Private Residential Investment

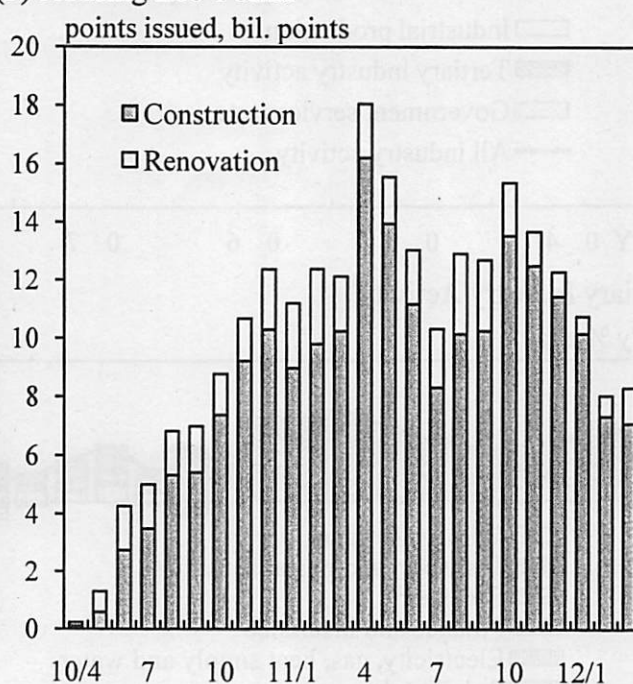


Note: The figure for housing starts for 2012/Q1 is the January-February average.

(2) Amount of Flat 35 Housing Loan Financed



(3) Housing Eco-Points

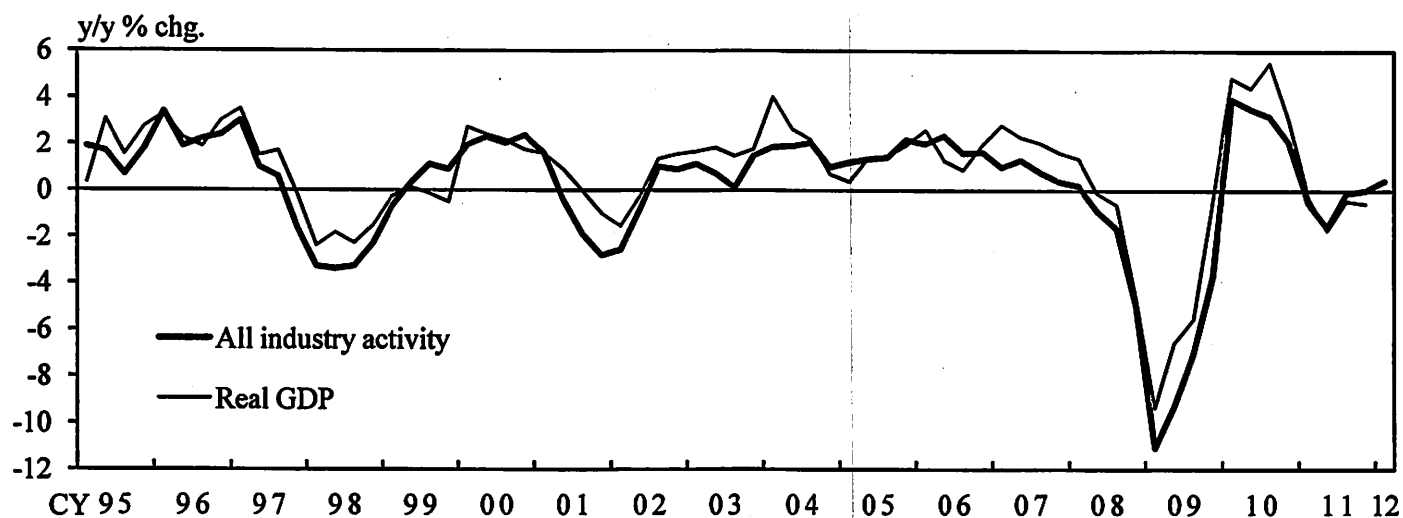
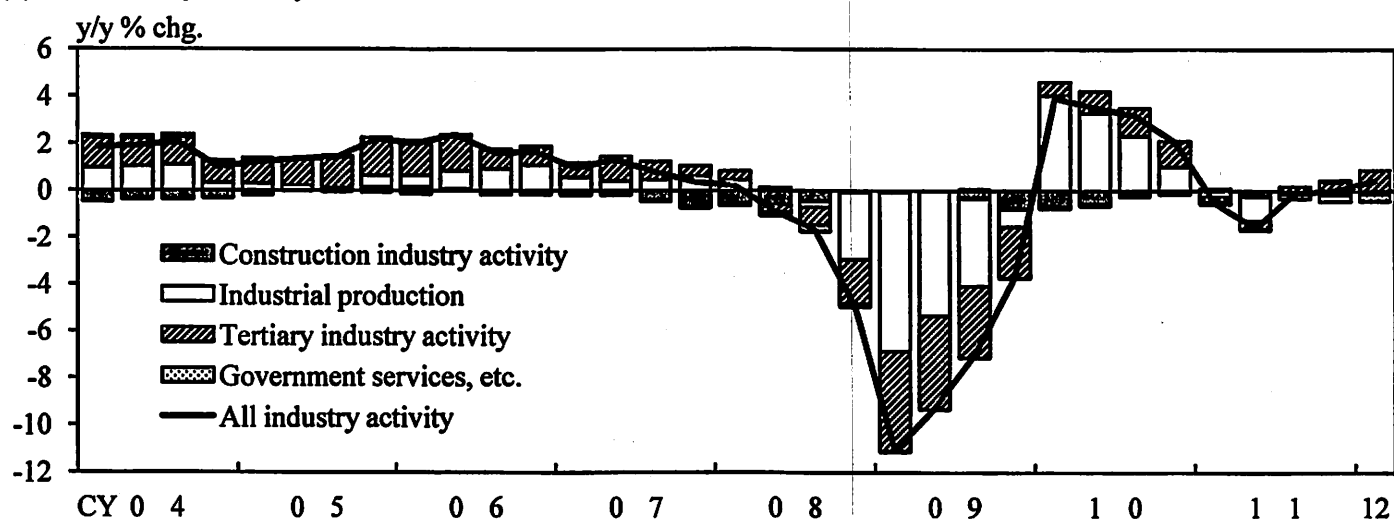
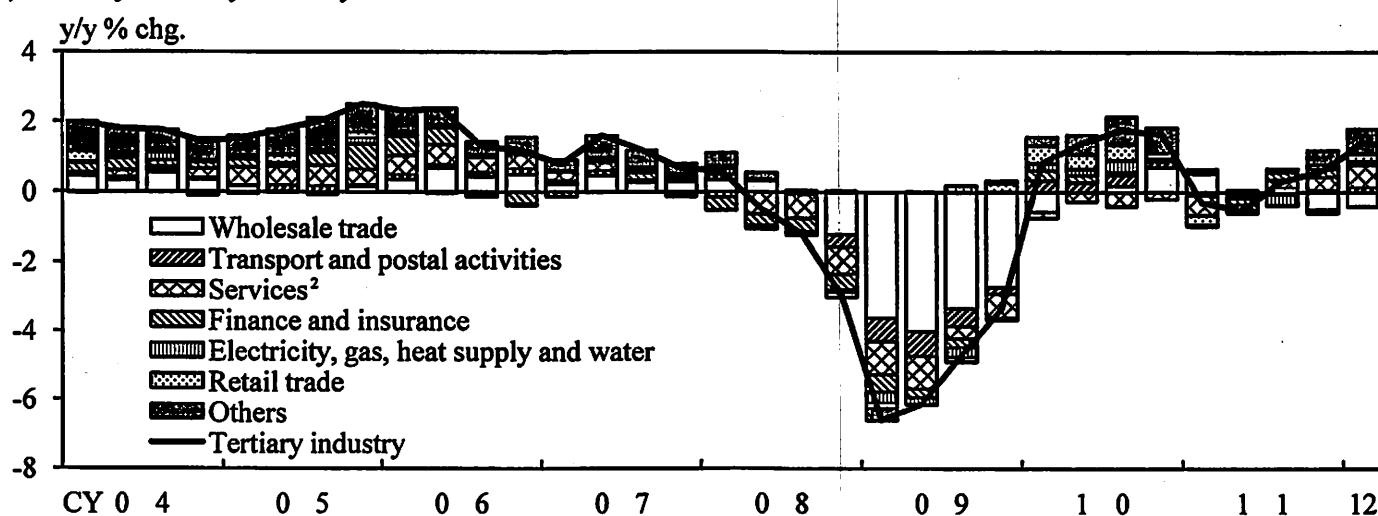


Notes: 1. Flat 35 is the long-term fixed-rate mortgage financed by the Japan Housing Finance Agency in cooperation with private financial institutions. It is available for new construction or purchase of houses that meet certain criteria. The borrowing period is 15-35 years.

2. Housing eco-points are provided for new construction or renovation of houses that meet certain energy-saving criteria. These points can be exchanged with energy-saving products, or goods produced in areas damaged by the Great East Japan Earthquake.

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

All Industry Activity

(1) All Industry Activity and Real GDP¹(2) All Industry Activity¹(3) Tertiary Industry Activity¹

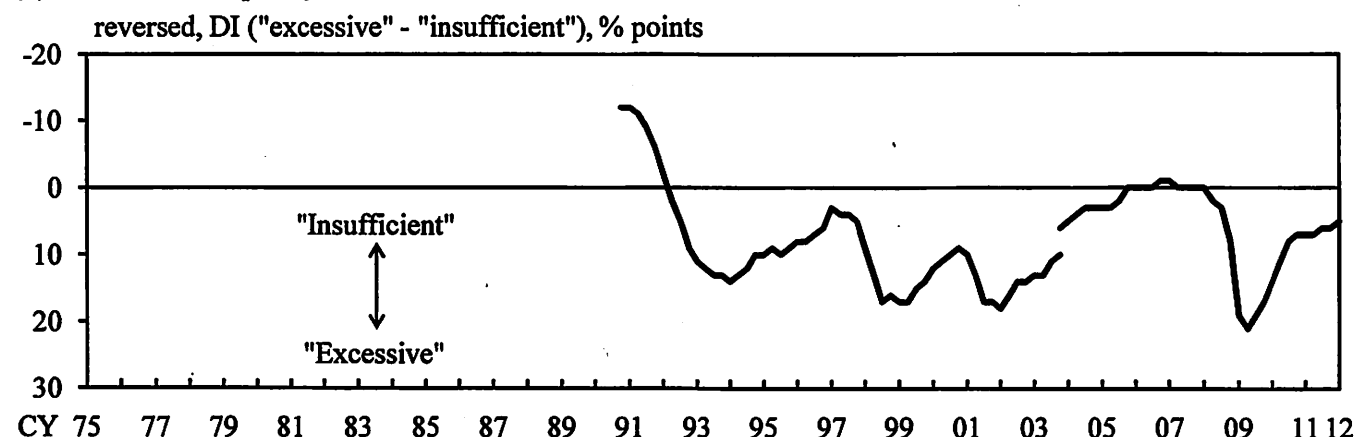
Notes: 1. Figures for 2012/Q1 are January-February averages.

2. Consisting of scientific research, professional and technical services; living-related and personal services and amusement services; and miscellaneous services (except government services, etc.).

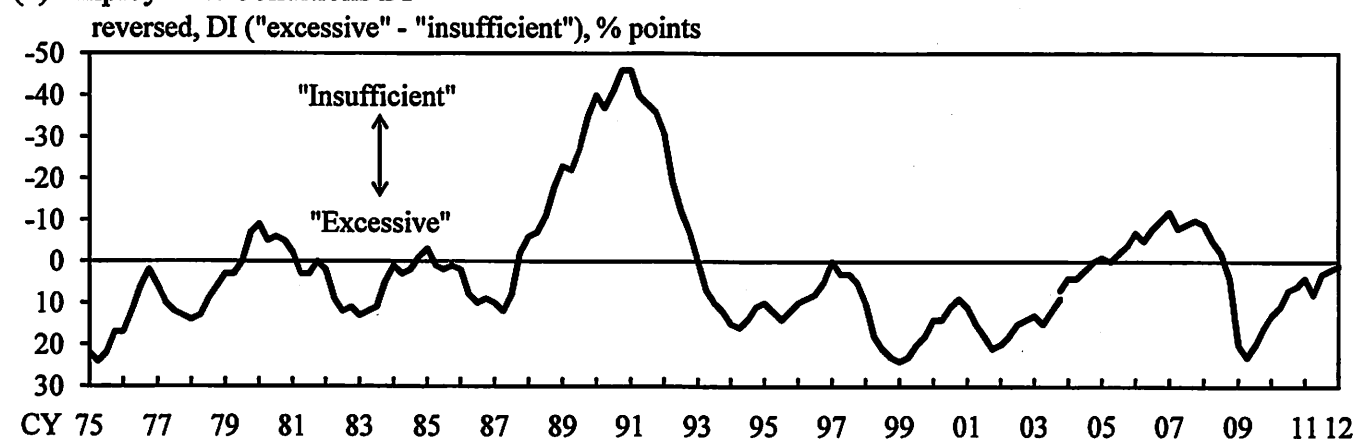
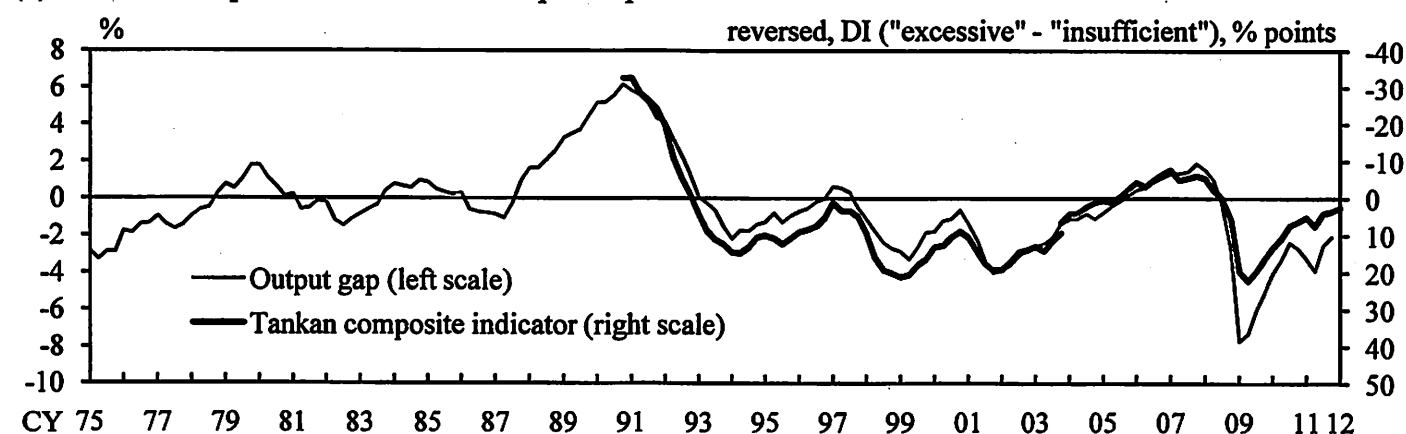
Sources: Ministry of Economy, Trade and Industry, "Indices of All Industry Activity," "Indices of Tertiary Industry Activity"; Cabinet Office, "National Accounts."

Resource Utilization

(1) Production Capacity DI



(2) Employment Conditions DI

(3) *Tankan* Composite Indicator and Output Gap

Notes: 1. Figures for the DI are based on all-size enterprises and all industries.

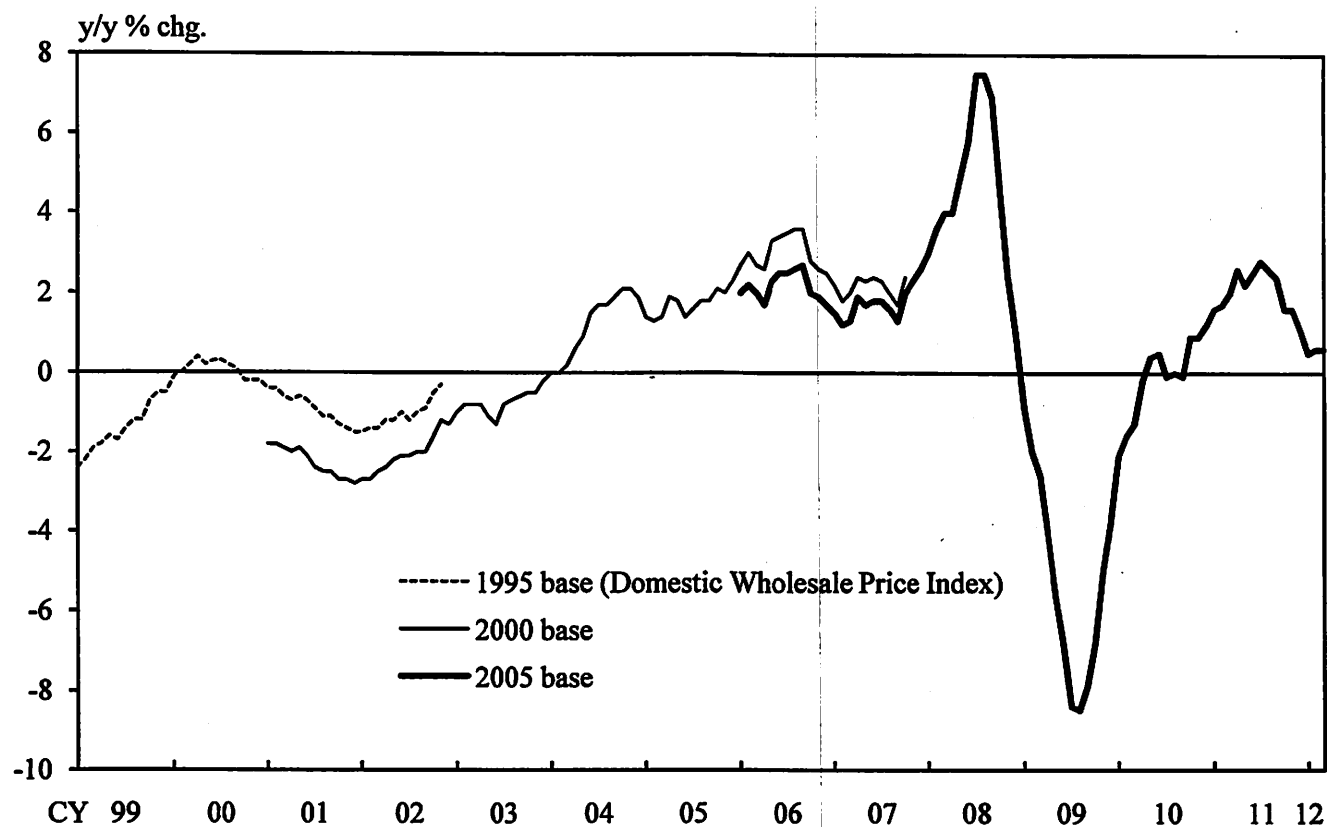
2. Figures for the *Tankan* composite indicator are weighted averages of the production capacity DI and employment conditions DI. The fiscal 1990-2010 averages of capital and labor shares in the National Accounts are used as the weight. The output gap is estimated by the Research and Statistics Department, 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.

3. 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.

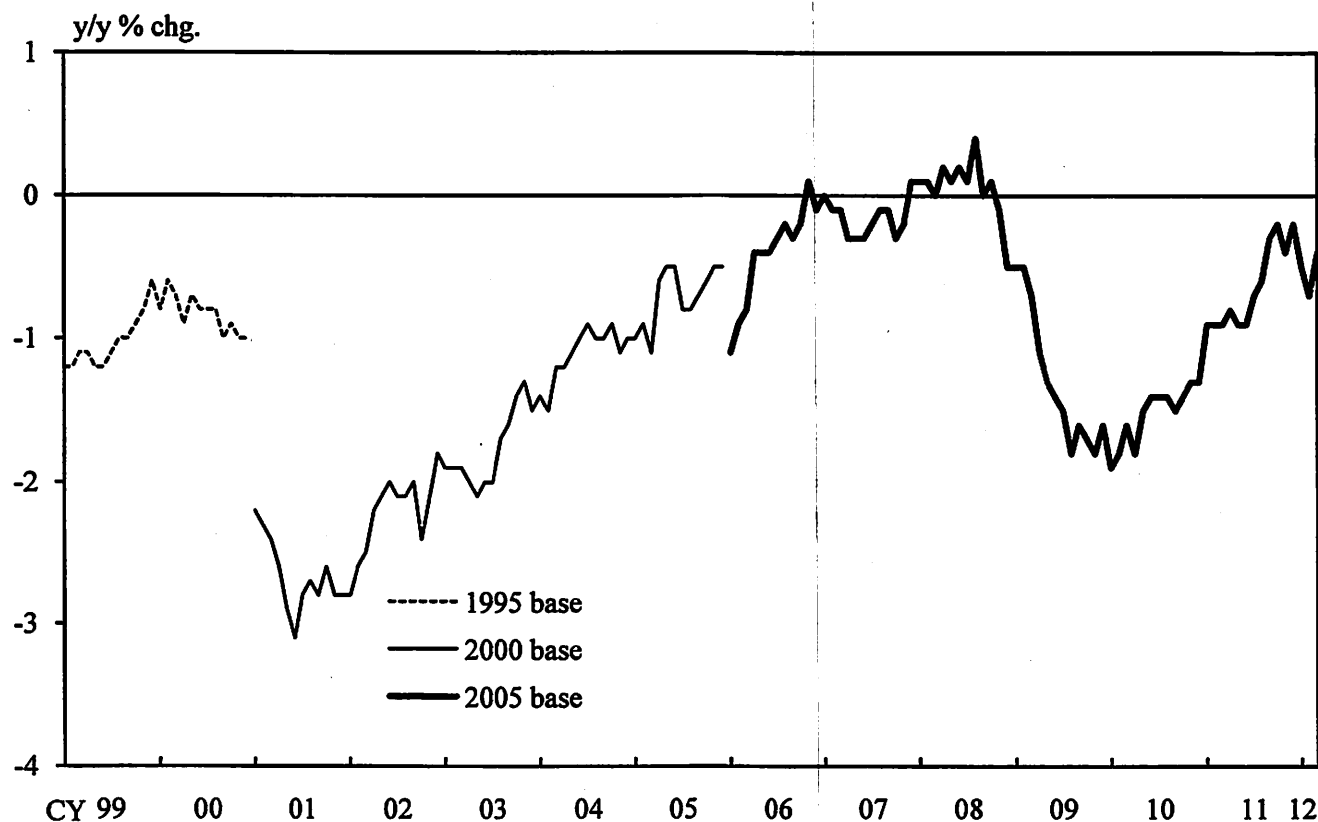
Sources: Cabinet Office, "National Accounts"; Bank of Japan, "*Tankan*, Short-Term Economic Survey of Enterprises in Japan"; Ministry of Internal Affairs and Communications, "Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service"; Ministry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

Corporate Prices

(1) Domestic Corporate Goods Price Index



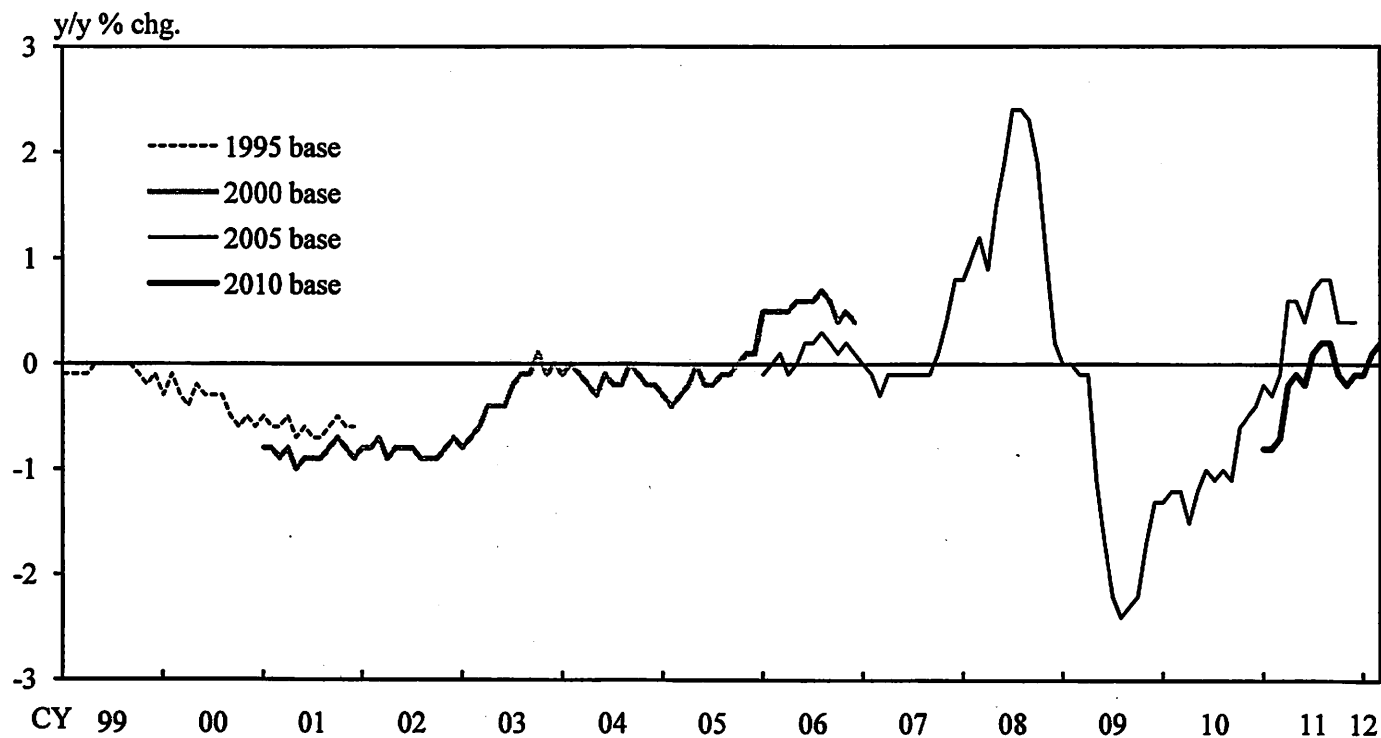
(2) Corporate Services Price Index (Excluding International Transportation)



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

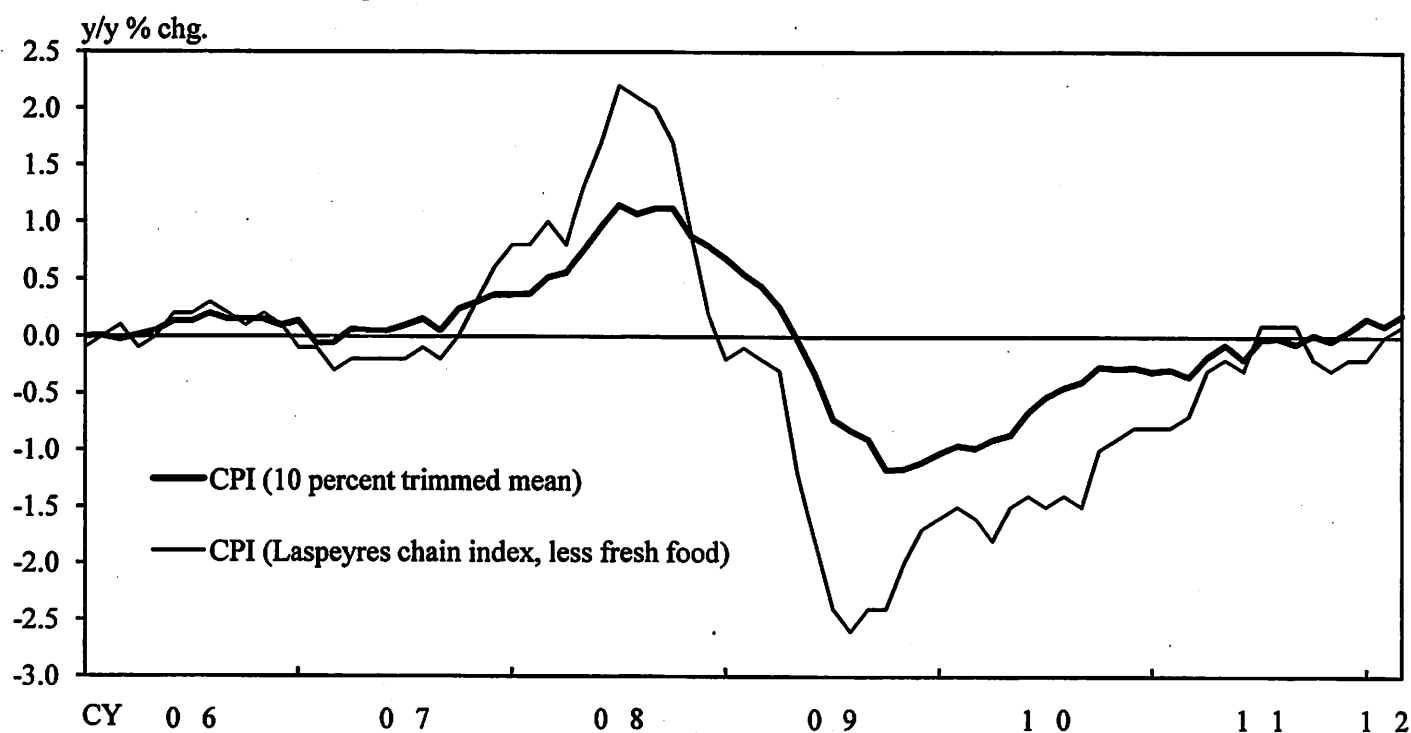
Consumer Price Index (1)

(1) Consumer Price Index



Note: Less fresh food.

(2) Trimmed Mean and Laspeyres Chain Index



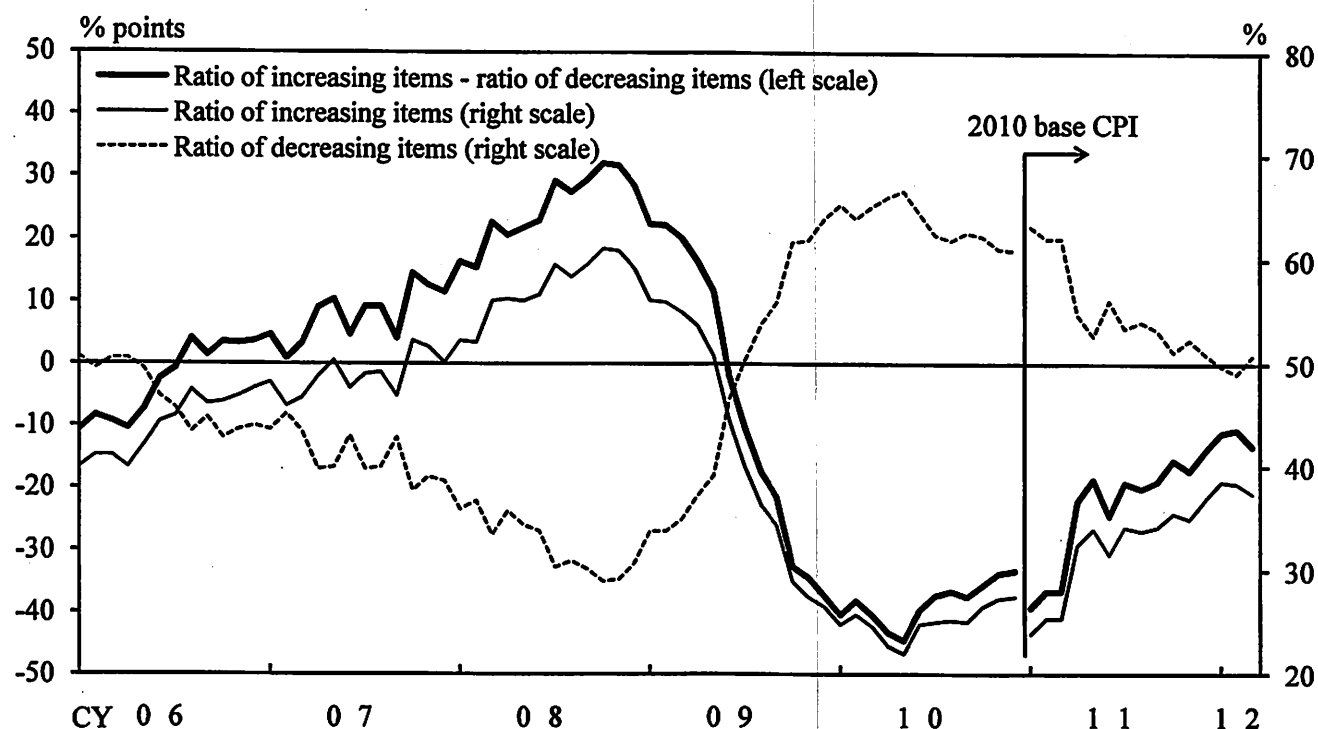
Notes: 1. Figures for the 10 percent trimmed mean are weighted averages of items; these items are obtained by rearranging year-on-year rates of price change in ascending order and then excluding items in both the upper and lower 10 percent tails by weight.

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.

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

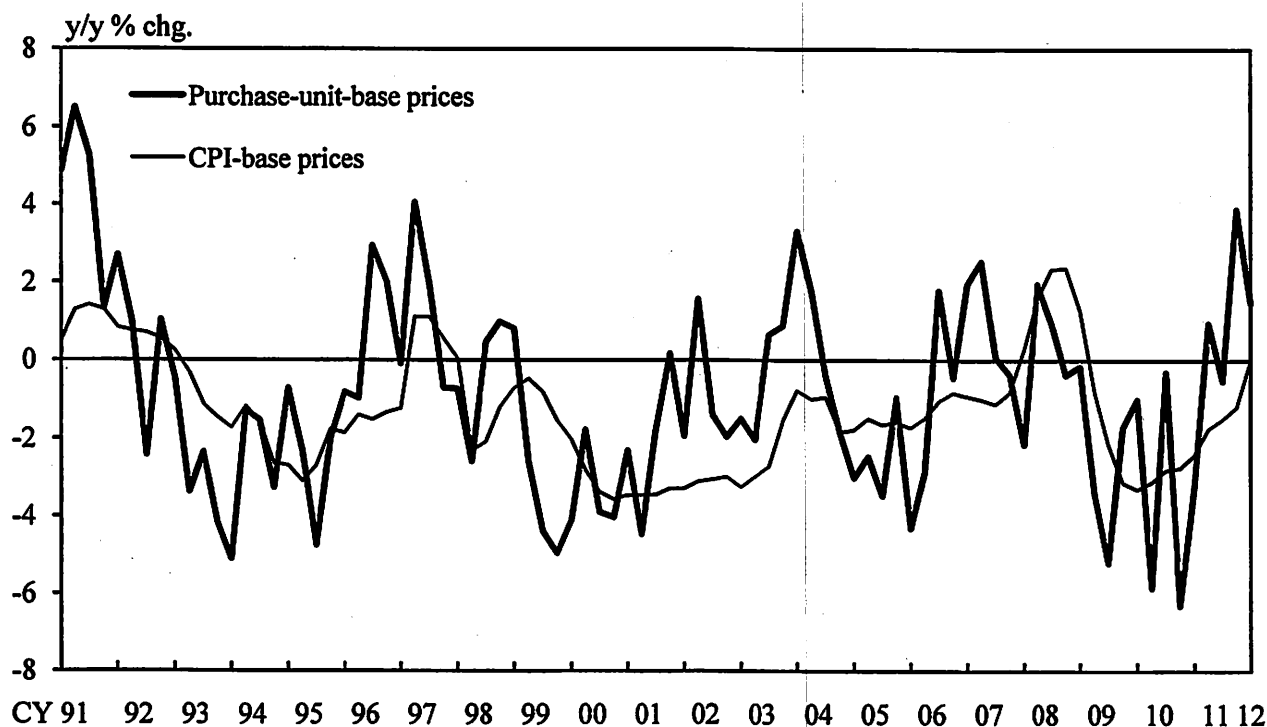
Consumer Price Index (2)

(1) Ratio of Increasing and Decreasing Items



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

(2) Goods Prices Facing Consumers



Notes: 1. Figures are the weighted average of the items of food products, agricultural, aquatic & livestock products (less fresh food), clothes, durable goods, and other goods that are continuously available in both the CPI and the "Family Income and Expenditure Survey."

2. Definitions of the items are basically the same as those published by the Ministry of Internal Affairs and Communications.

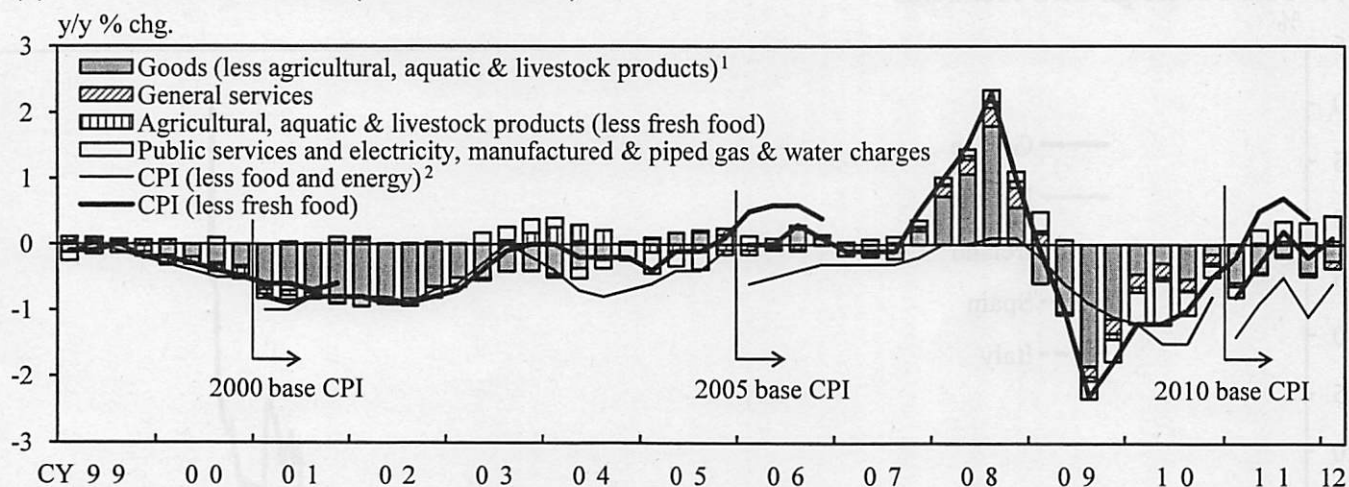
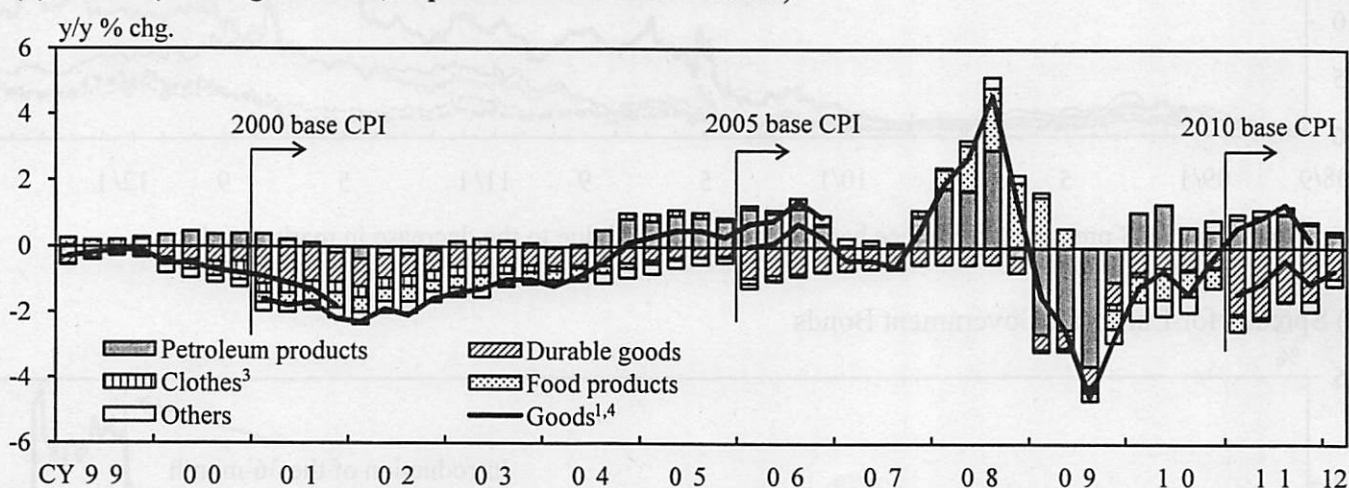
3. Other goods exclude clothes (including shirts, sweaters & underwear); food products; agricultural & aquatic products; durable goods; petroleum products; and electricity, gas & water charges.

4. Figures for 2012/Q1 are January-February averages.

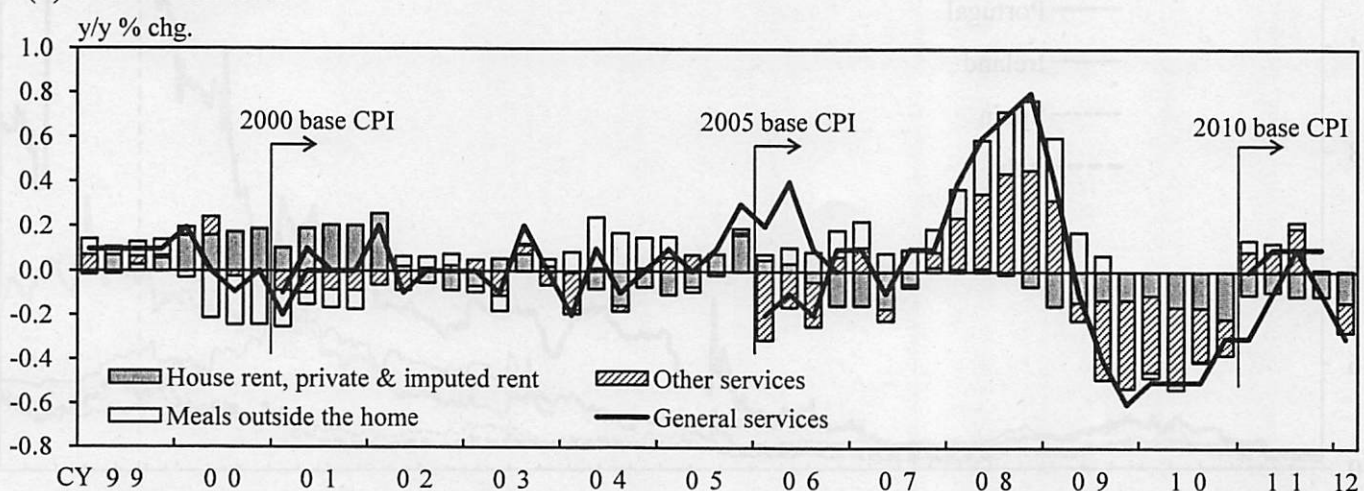
Source: Ministry of Internal Affairs and Communications, "Consumer Price Index," "Family Income and Expenditure Survey."

Consumer Price Index (3)

(1) Consumer Price Index (Less Fresh Food)

(2) Goods (Less Agricultural, Aquatic & Livestock Products)¹

(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. Alcoholic beverages are excluded from food.

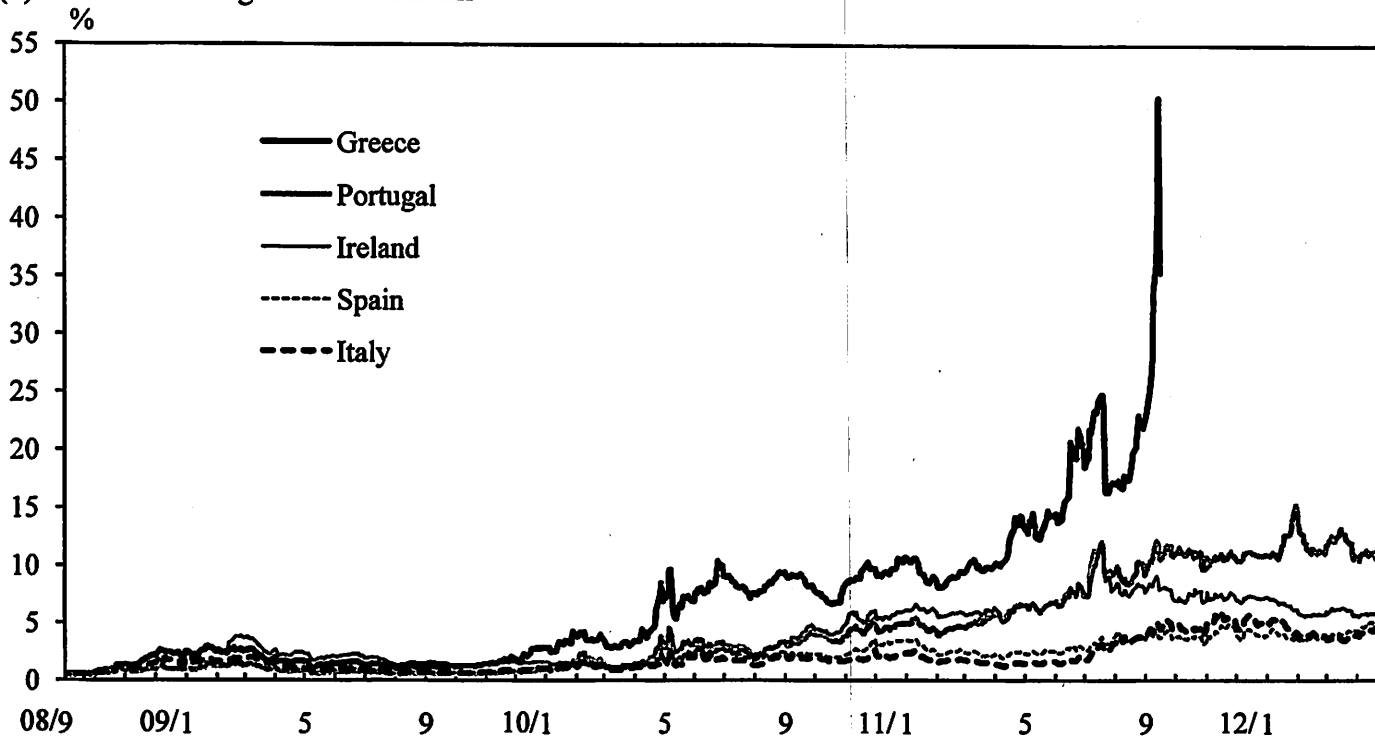
3. Including shirts, sweaters & underwear.

4. Less agricultural, aquatic & livestock products.

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

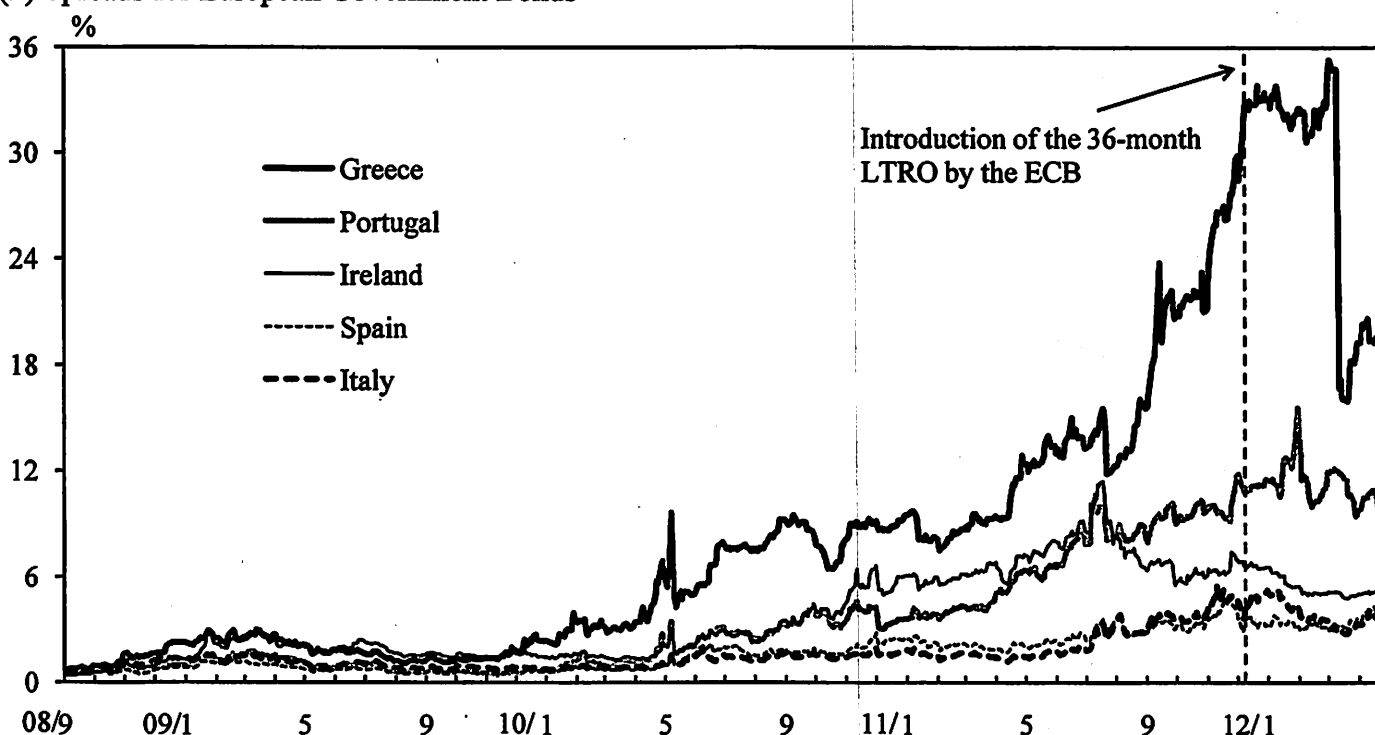
Sovereign Risk Premiums

(1) 5-Year Sovereign CDS Premiums



Note: The CDS premium for Greece has been discontinued due to the decrease in market trades.

(2) Spreads for European Government Bonds



Notes: 1. The spreads for government bonds are the yield spreads for 10-year government bonds issued by European countries minus those issued by Germany.

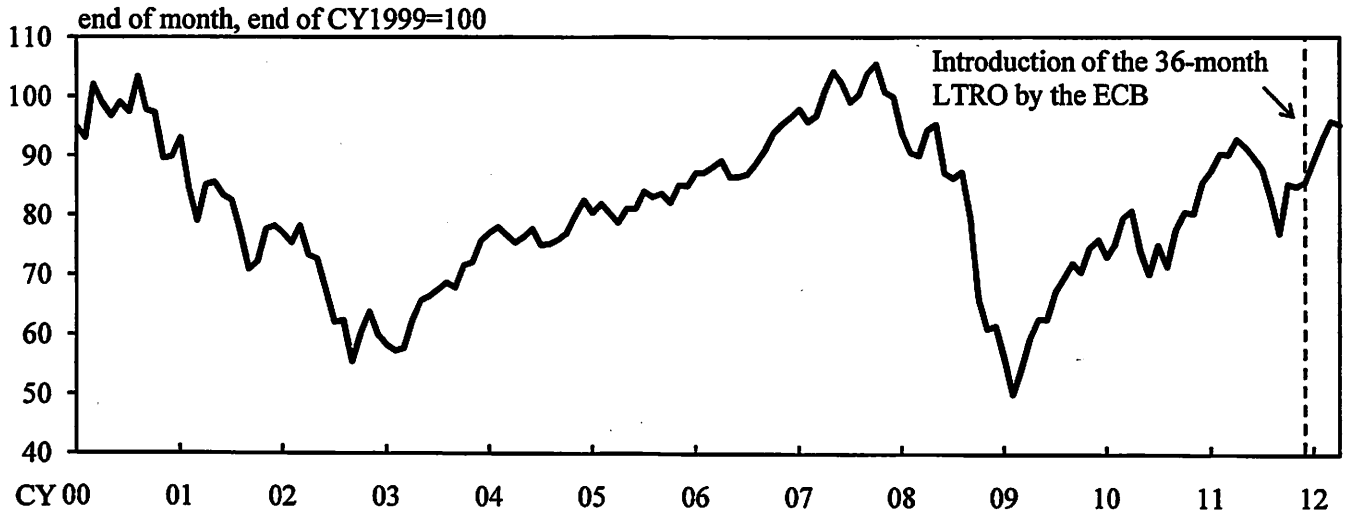
2. The spreads for Irish bonds after October 12, 2011 were calculated using 9-year government bonds due to the suspension of market issuance since October 2010.

3. The spreads for Greek bonds narrowed significantly after the restructuring of government debt on March 12, 2012.

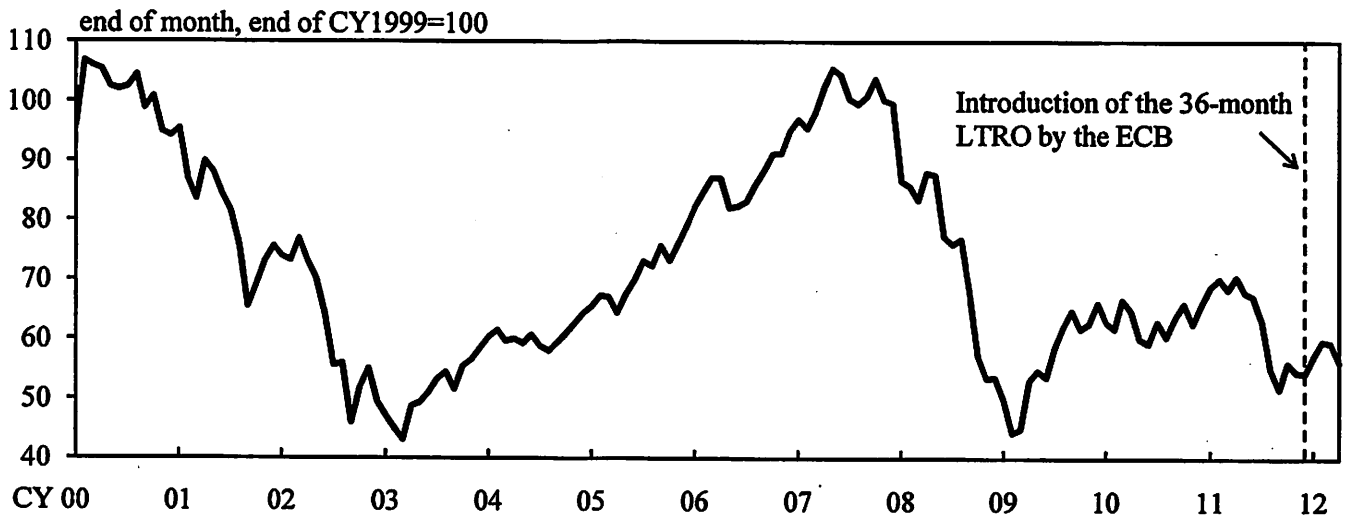
Source: Bloomberg.

Stock Prices in the United States and Europe, and Volatility

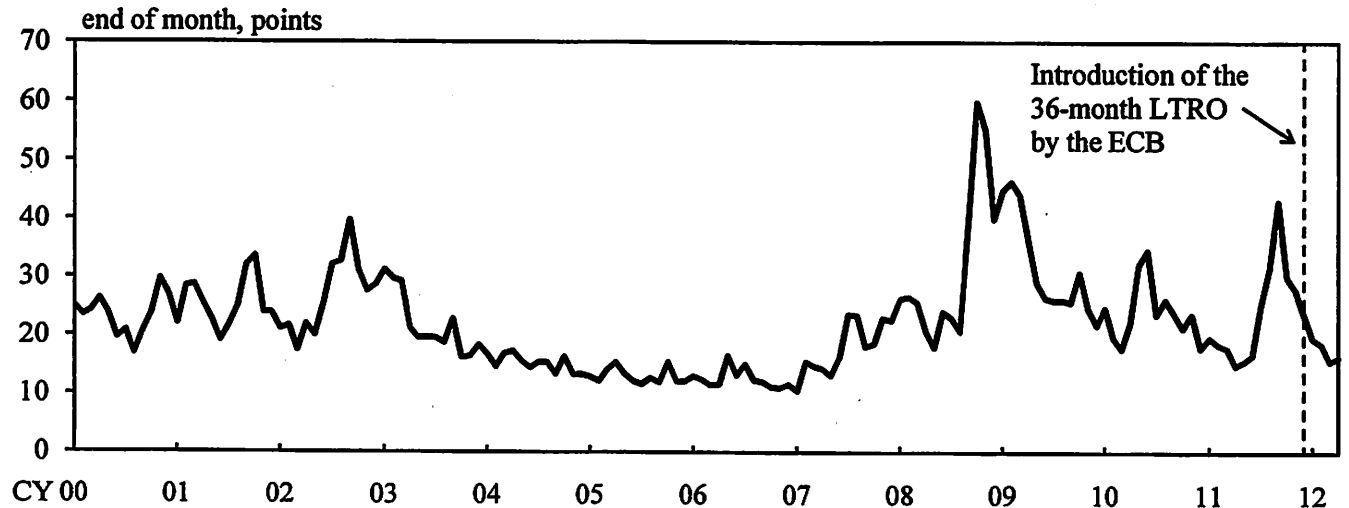
(1) Stock Prices in the United States (S&P500)



(2) Stock Prices in Europe (EURO STOXX)



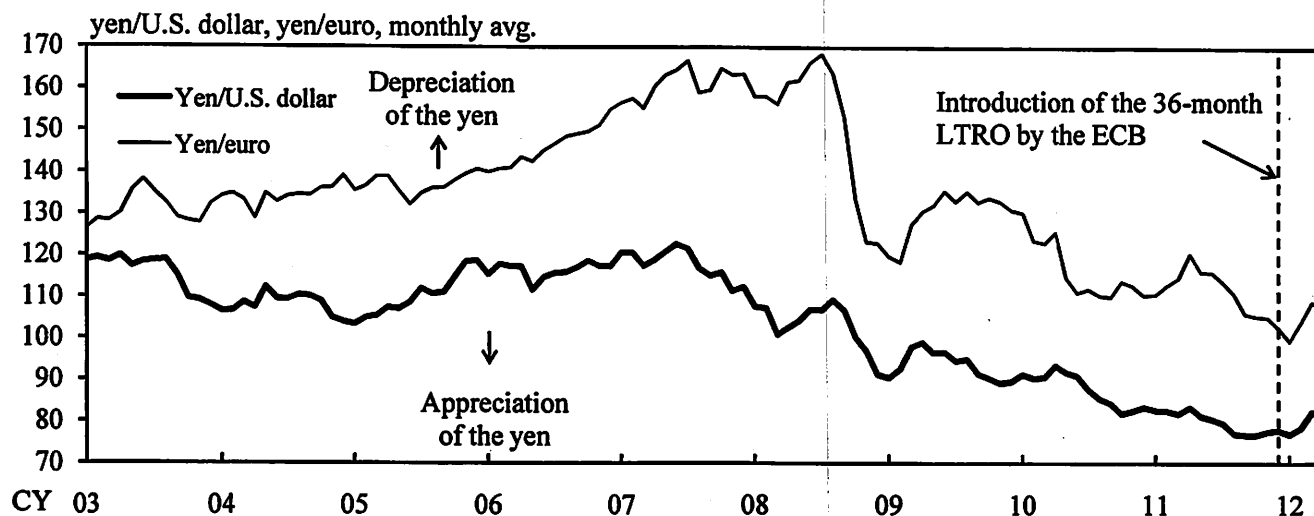
(3) Implied Volatility of Stock Prices in the United States (VIX Index)



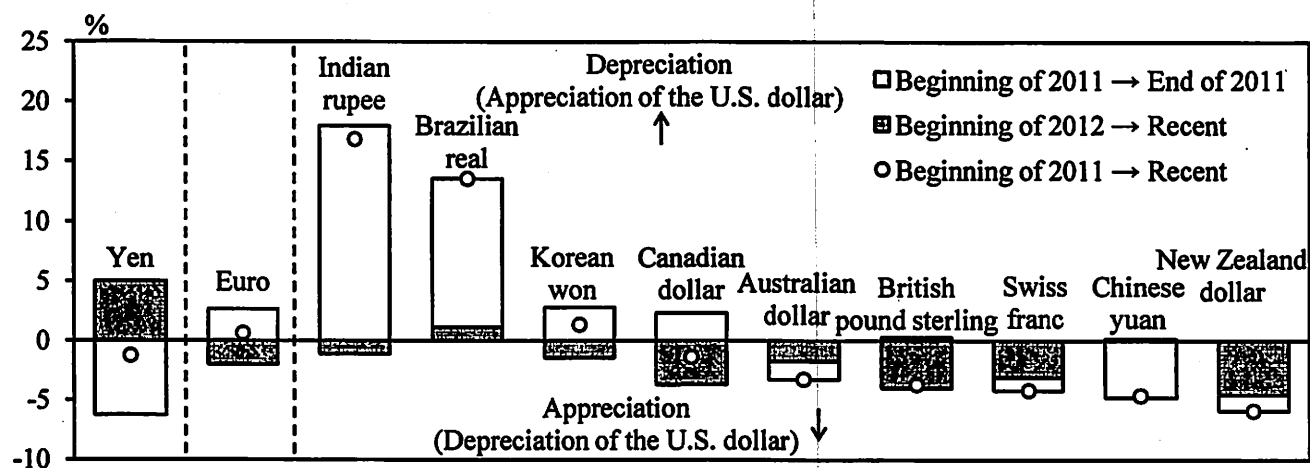
Source: Bloomberg.

Exchange Rates

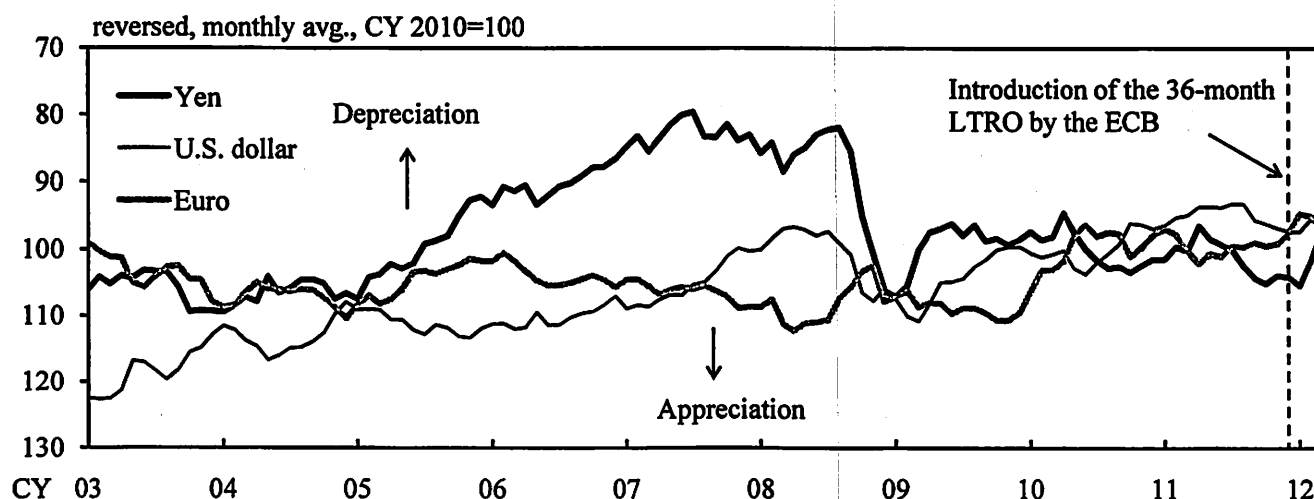
(1) Yen/U.S. Dollar and Yen/Euro



(2) Rates of Change in Individual Currencies against the U.S. Dollar (Since the Beginning of 2011)



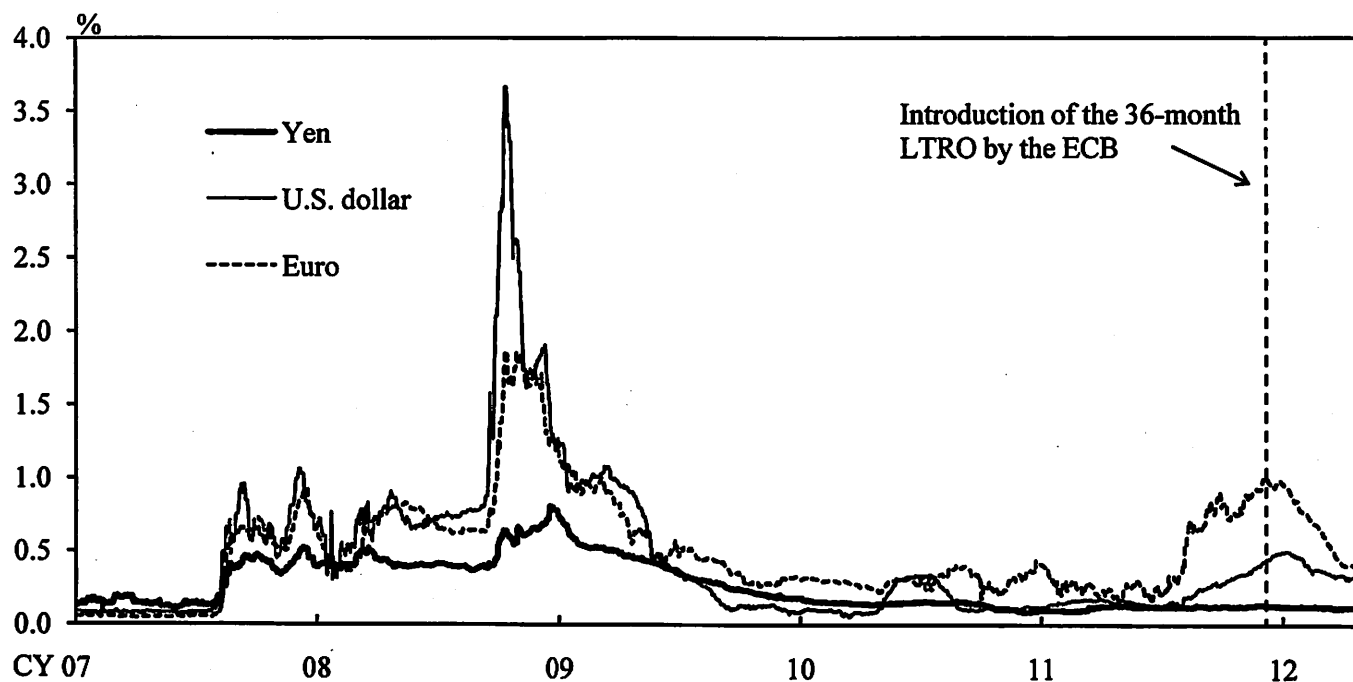
(3) Real Effective Exchange Rate



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.

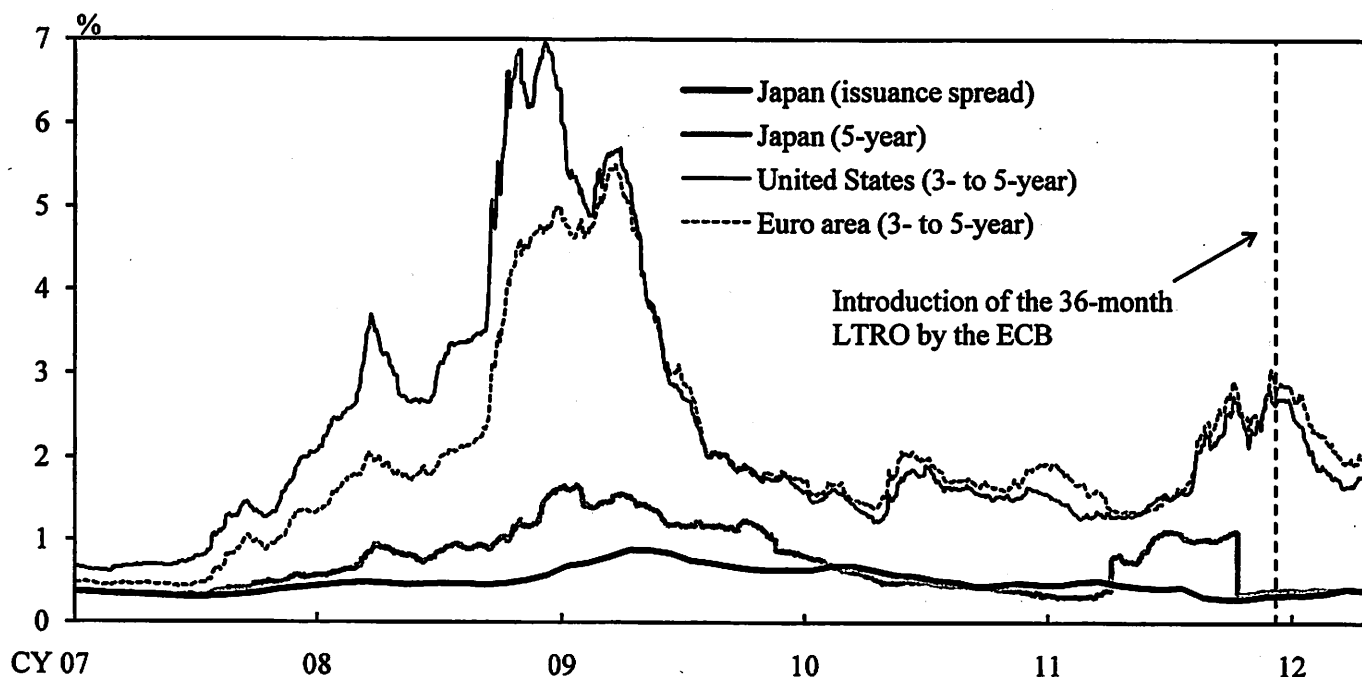
Credit Spreads in Financial Markets of Major Economies

(1) 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).

(2) Credit Spreads for Corporate Bonds in Major Economies

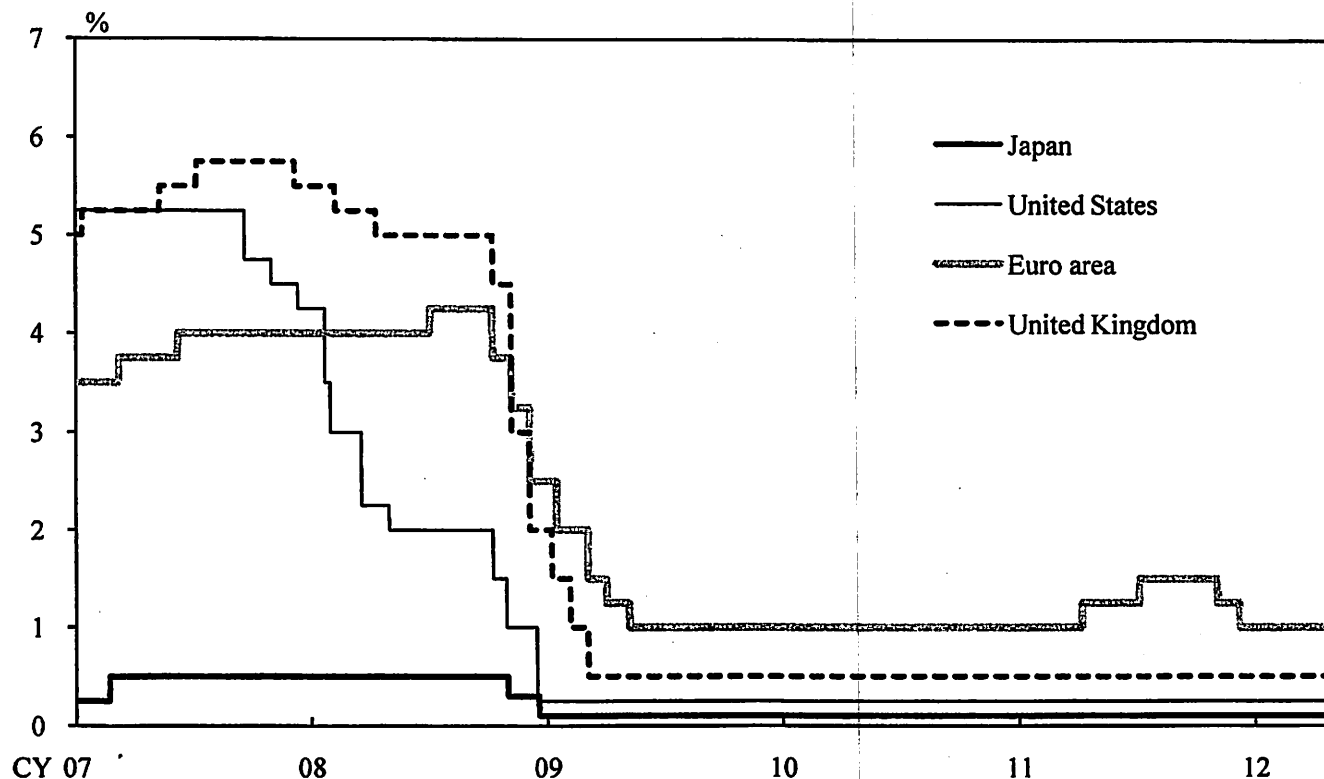


- Notes:
1. The credit spreads for corporate bonds (rated A) are the corporate bond yields minus the government bond yields. The indicated ratings of corporate bonds in Japan are of R&I, and those in the United States and the euro area are of Moody's, S&P, and Fitch.
 2. For the issuance spread, see Chart 23.
 3. The credit spread in Japan fluctuated significantly because of a change in the credit rating of some firms with wide spreads.

Sources: Japan Securities Dealers Association; Capital Eye Ltd.; I-N Information Systems; Bloomberg.

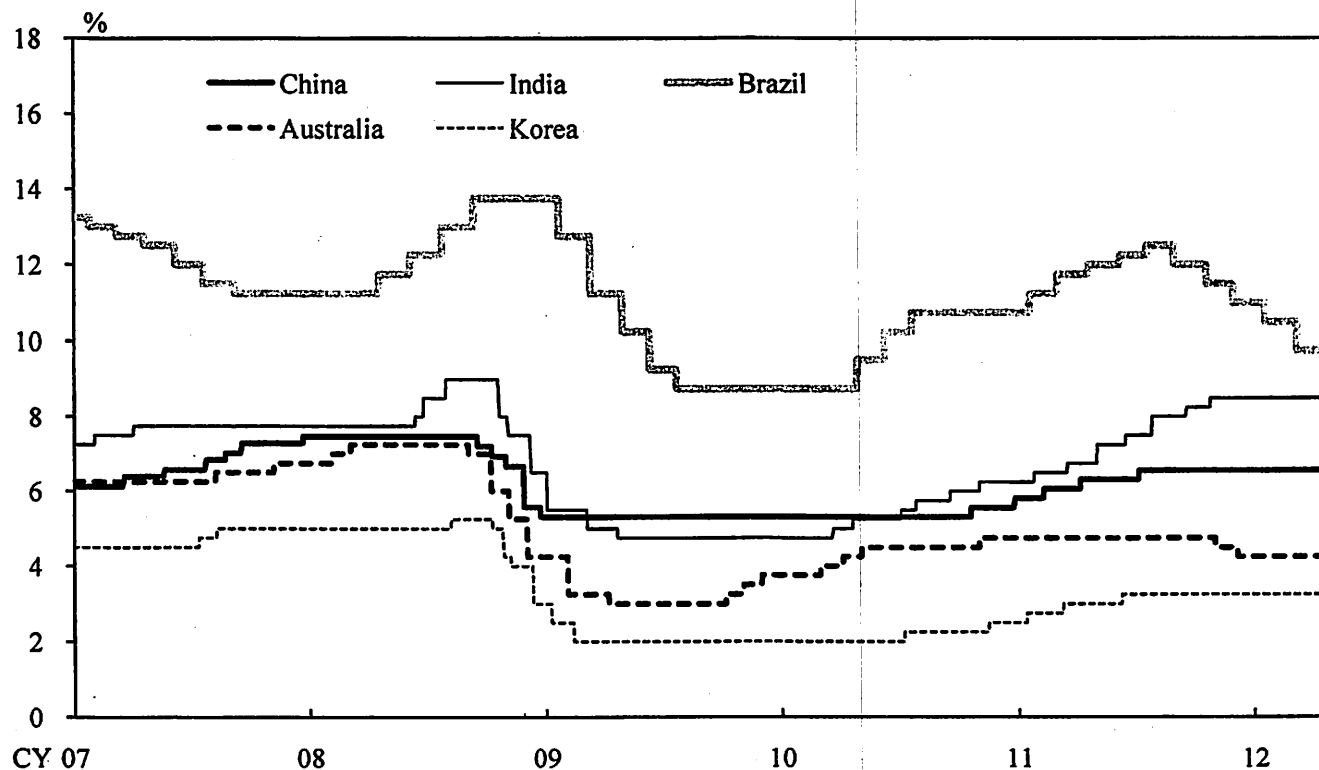
Policy Interest Rates

(1) Advanced Economies



Note: In the United States, from December 16, 2008, the target range for the federal funds rate is 0 to 0.25 percent and the interest rate applied to reserve balances is 0.25 percent. In Japan, from October 5, 2010, the Bank of Japan has encouraged the uncollateralized overnight call rate to remain at around 0 to 0.1 percent and the interest rate applied to the complementary deposit facility is 0.1 percent.

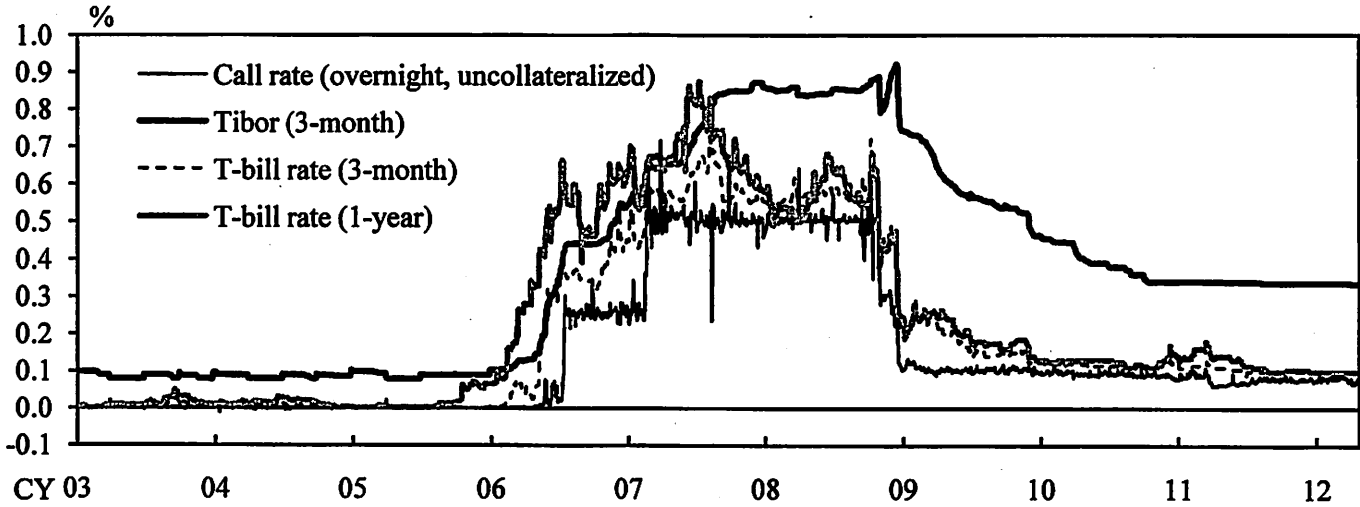
(2) Emerging and Commodity-Exporting Economies



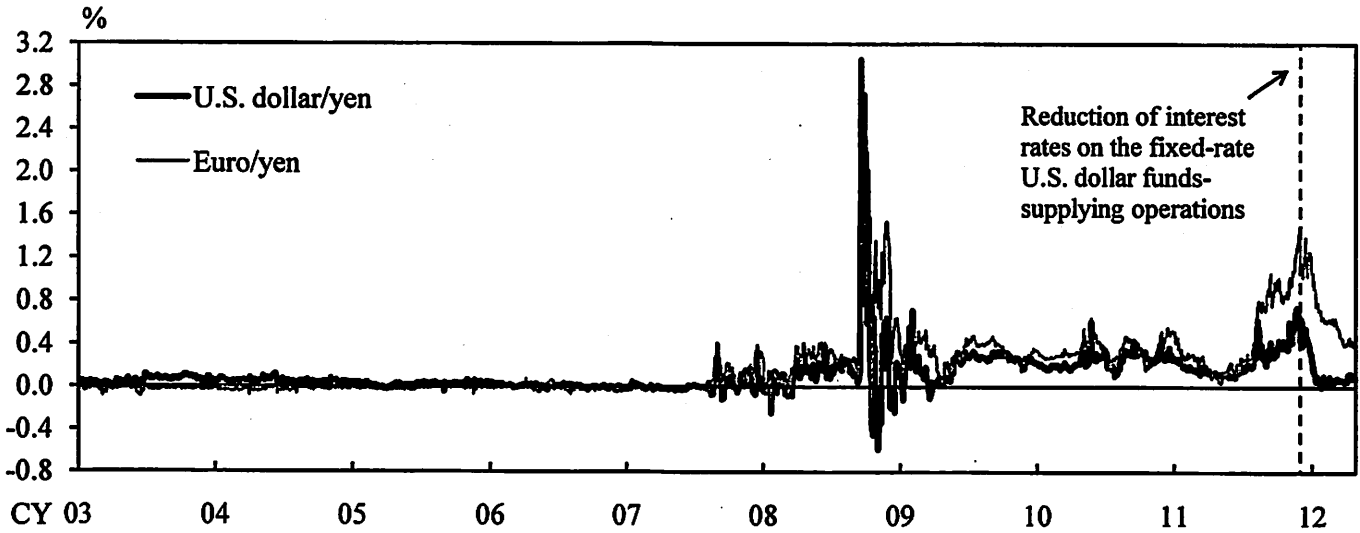
Sources: Bank of Japan; Bloomberg.

Short-Term Interest Rates

(1) Short-Term Interest Rates

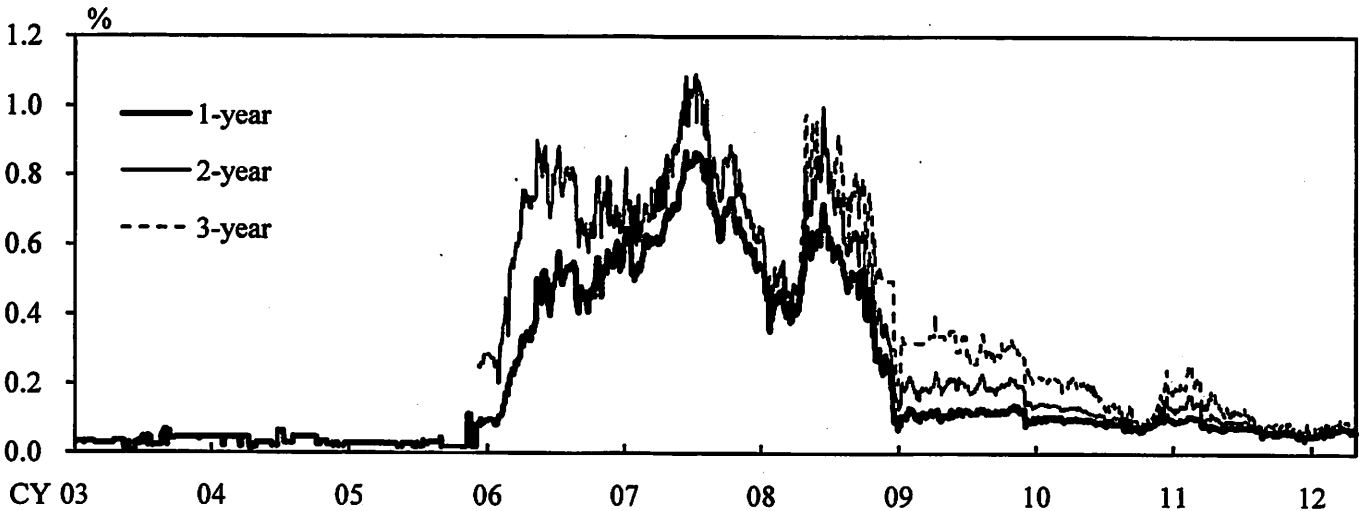


(2) Dollar Funding Premiums through Foreign Exchange Swaps



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

(3) Japanese Yen OIS Rates

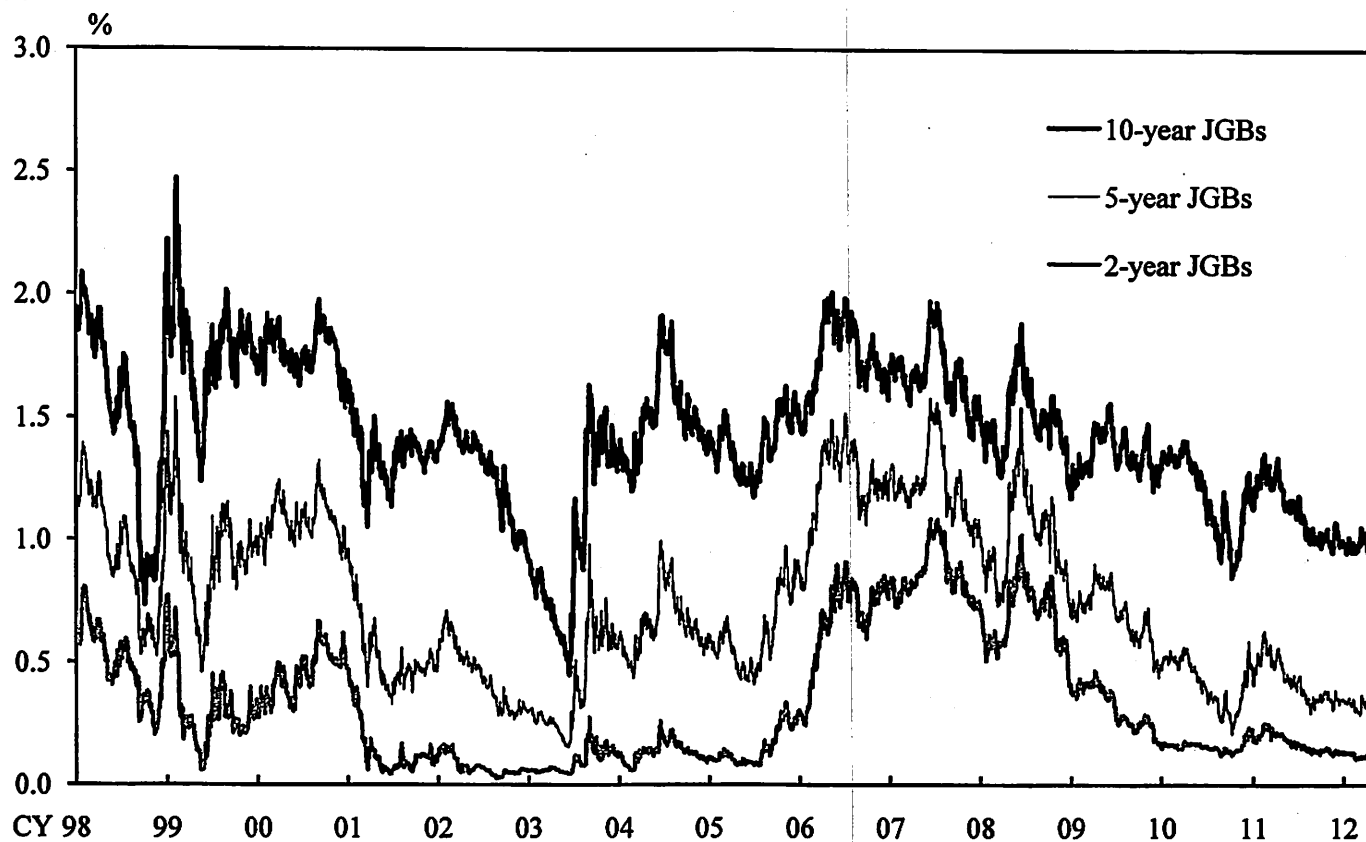


Note: 2- and 3-year Japanese yen OIS rates lack some data partly due to low trading volumes.

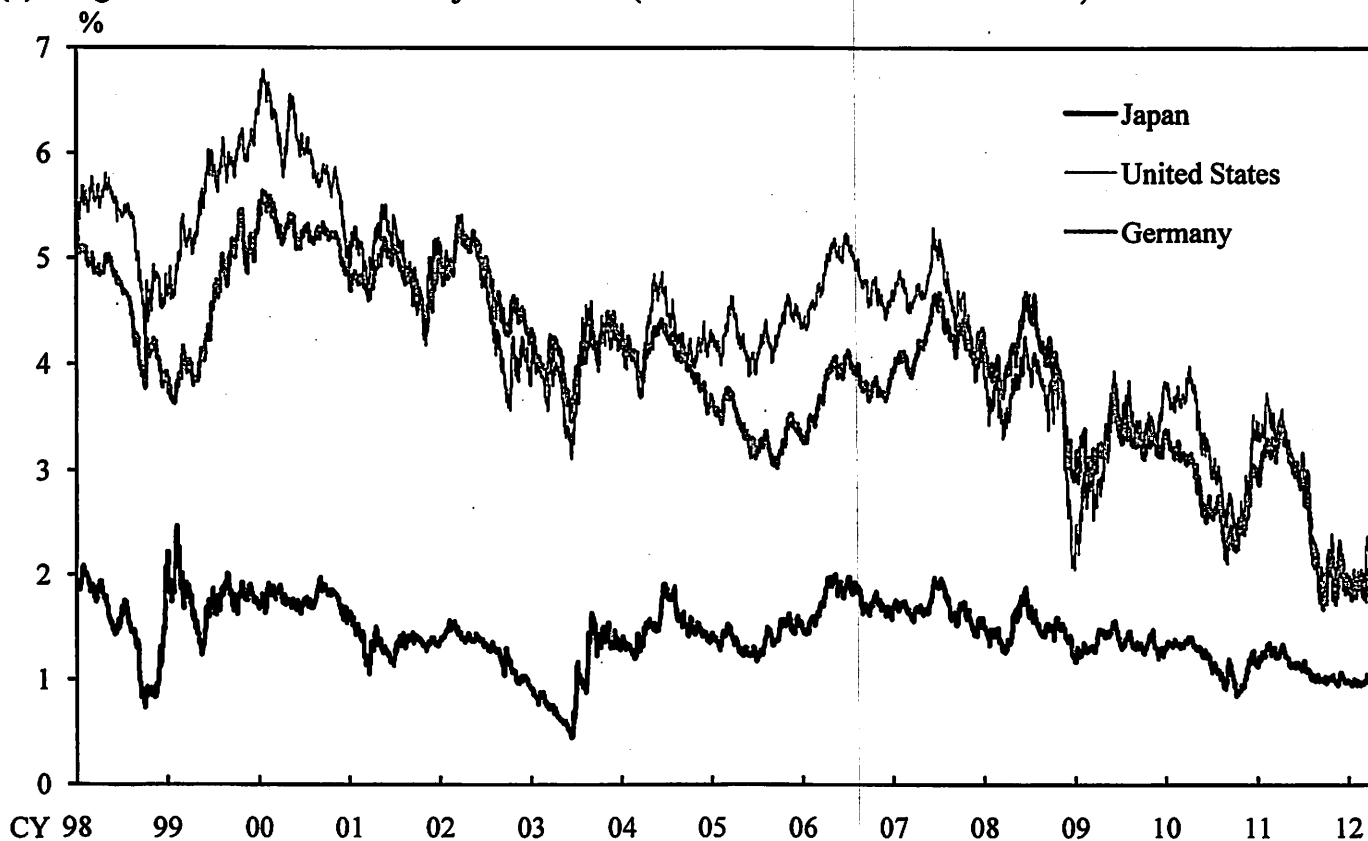
Sources: Bank of Japan; Bloomberg.

Long-Term Interest Rates

(1) Government Bond Yields

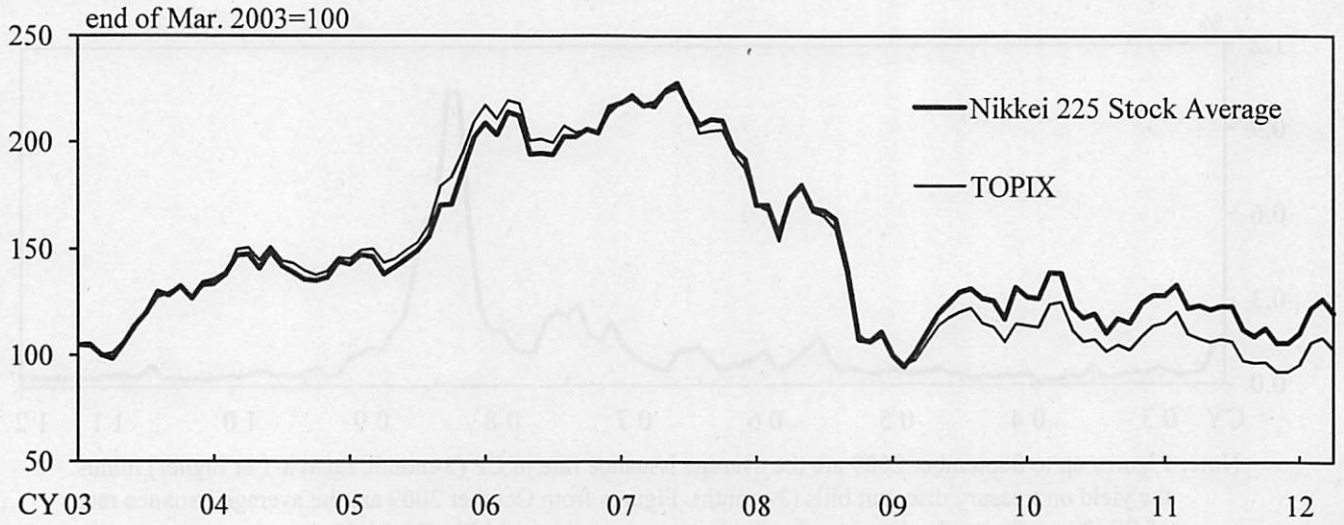


(2) Long-Term Interest Rates in Major Countries (10-Year Government Bond Yields)



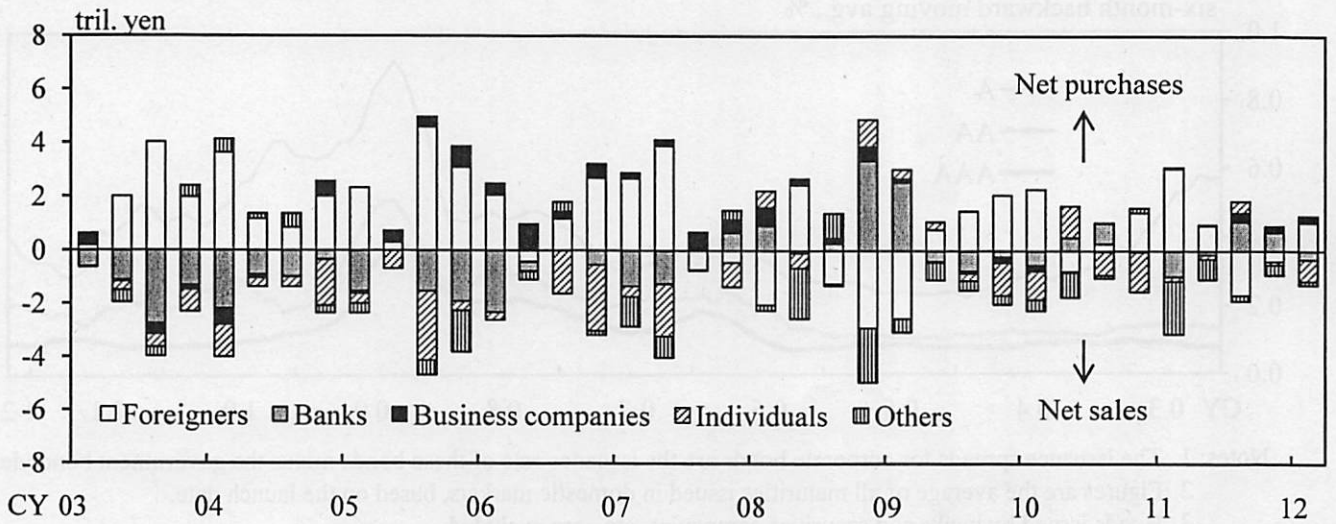
Stock Prices and the J-REIT Market

(1) Stock Prices



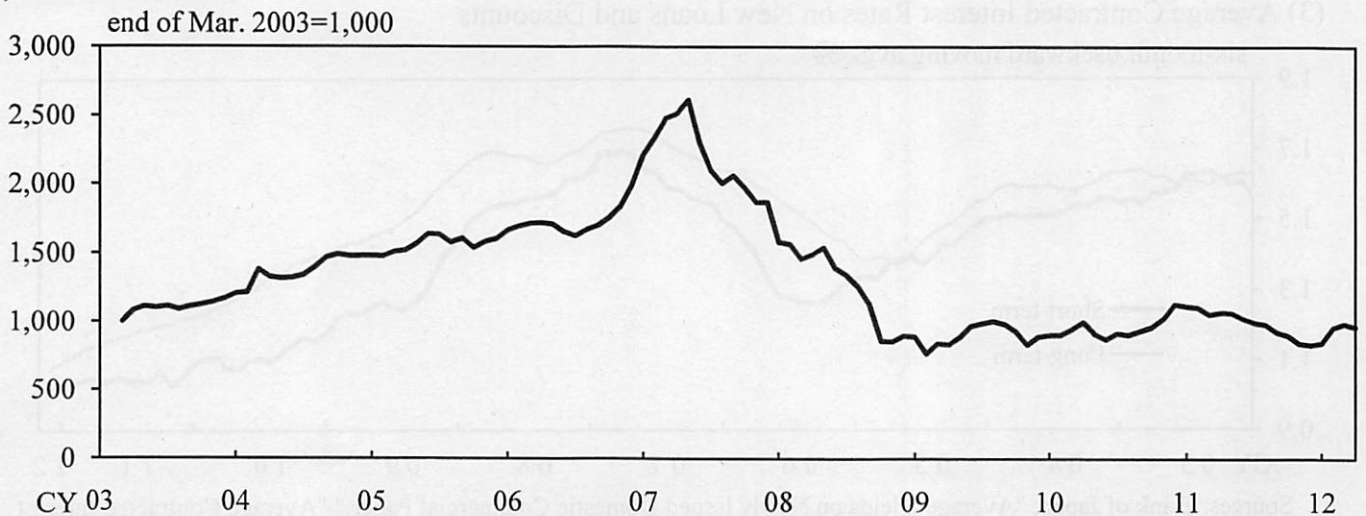
Note: The data are as of month-end.

(2) Trading Volume by Investor Type



Note: Figures are the sum of the first and second sections of the Tokyo, Osaka, and Nagoya stock exchanges.

(3) TSE REIT Index

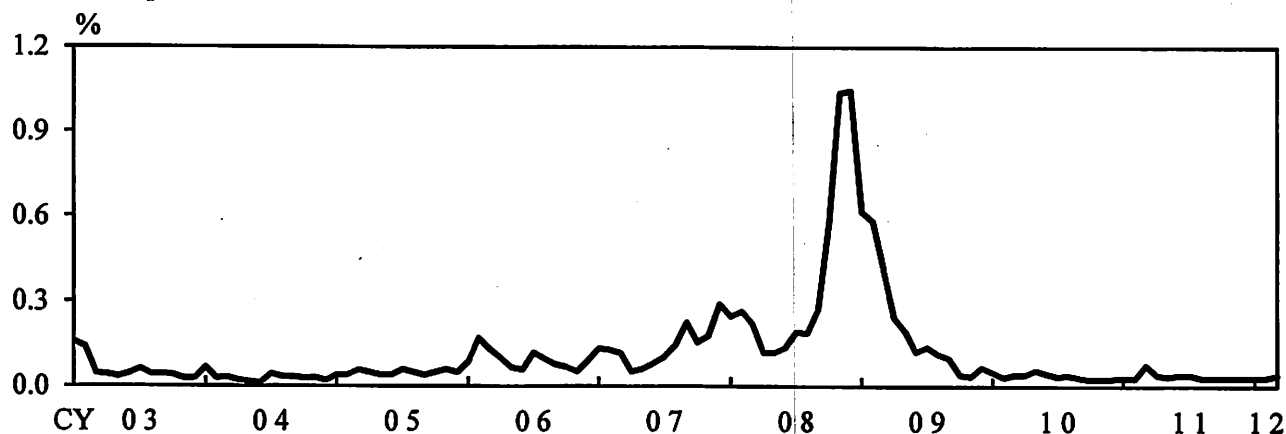


Note: The data are as of month-end.

Sources: Nikkei Inc.; Tokyo Stock Exchange; Bloomberg.

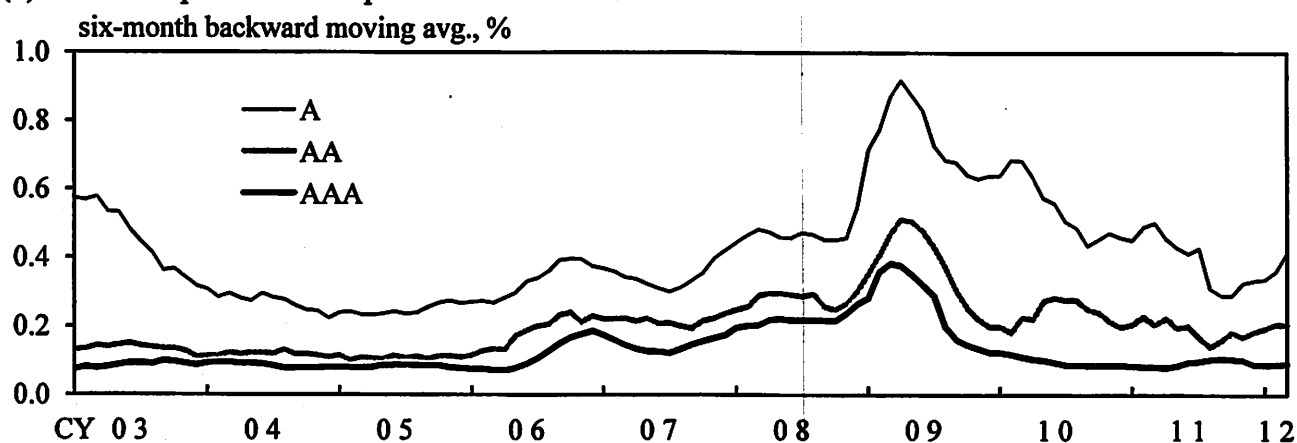
Spreads for CP and Corporate Bonds, and Bank Lending

(1) Credit Spreads for CP



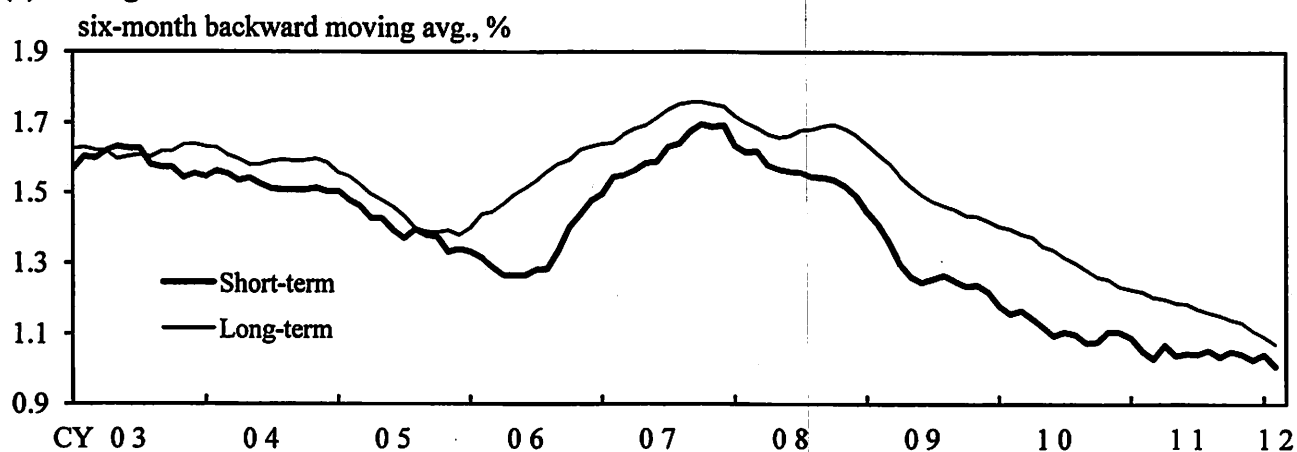
Note: Figures up to September 2009 are the average issuance rate of CP (3-month, rated a-1 or higher) minus the yield on treasury discount bills (3-month). Figures from October 2009 are the average issuance rate of CP (3-month, rated a-1) minus the yield on treasury discount bills (3-month).

(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.

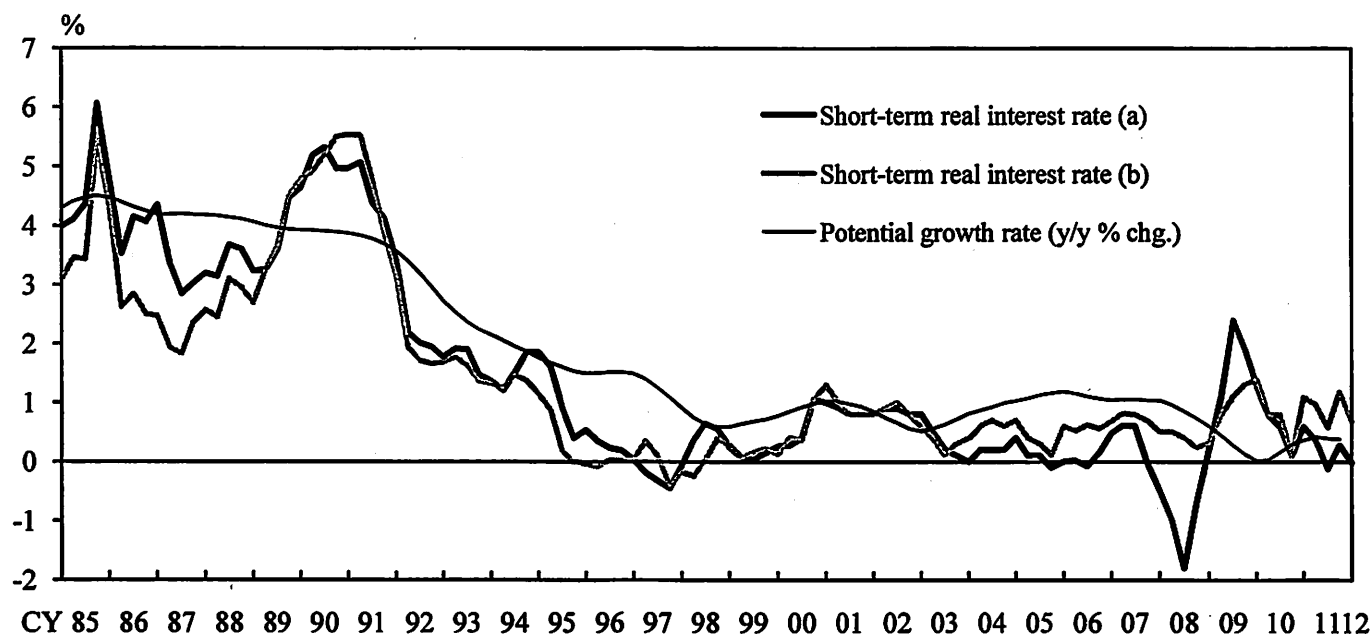
(3) Average Contracted Interest Rates on New Loans and Discounts



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

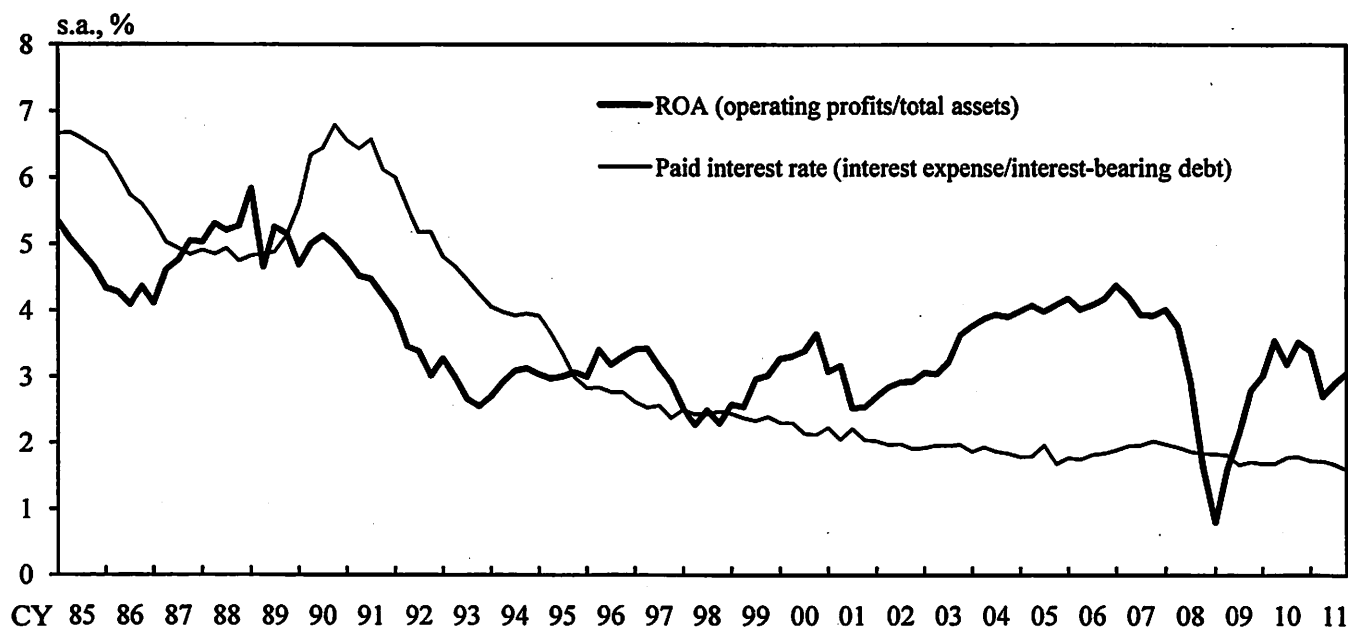
Interest Rates and Economic Activity

(1) Short-Term Real Interest Rate and Potential Growth Rate



- Notes: 1. Short-term real interest rate (a) = call rate (overnight, uncollateralized) - year-on-year percentage change in the CPI (all items less fresh food)
2. Short-term real interest rate (b) = call rate (overnight, uncollateralized) - year-on-year percentage change in the CPI (all items less food [alcoholic beverages are excluded from food] and energy)
3. Figures for the CPI are adjusted to exclude the effects of changes in the consumption tax rate. From 2001/Q1, high school fees are excluded.
4. The potential growth rate is estimated by the Research and Statistics Department, Bank of Japan.

(2) ROA and Paid Interest Rate

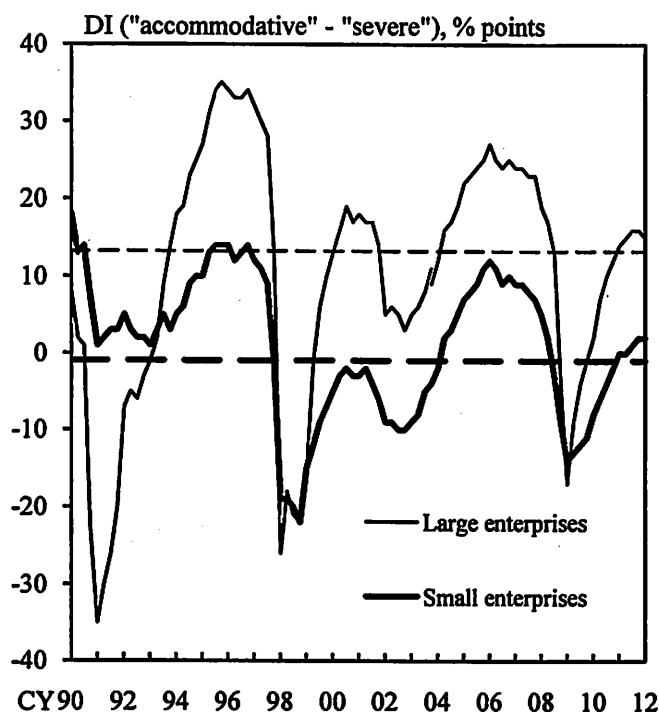


- Notes: 1. Figures are taken from the "Financial Statements Statistics of Corporations by Industry, Quarterly," and are based on all-size enterprises and all industries. Finance and insurance are excluded.
2. Interest-bearing debt is the sum of long- and short-term borrowings, corporate bonds, and bills receivable discounted outstanding.

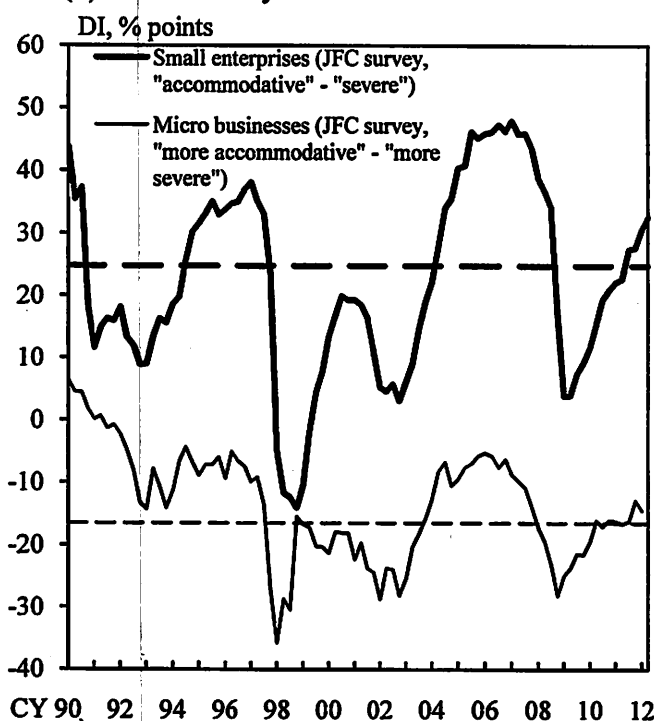
Sources: Ministry of Internal Affairs and Communications, "Consumer Price Index"; Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly"; Bank of Japan.

Corporate Finance-Related Indicators

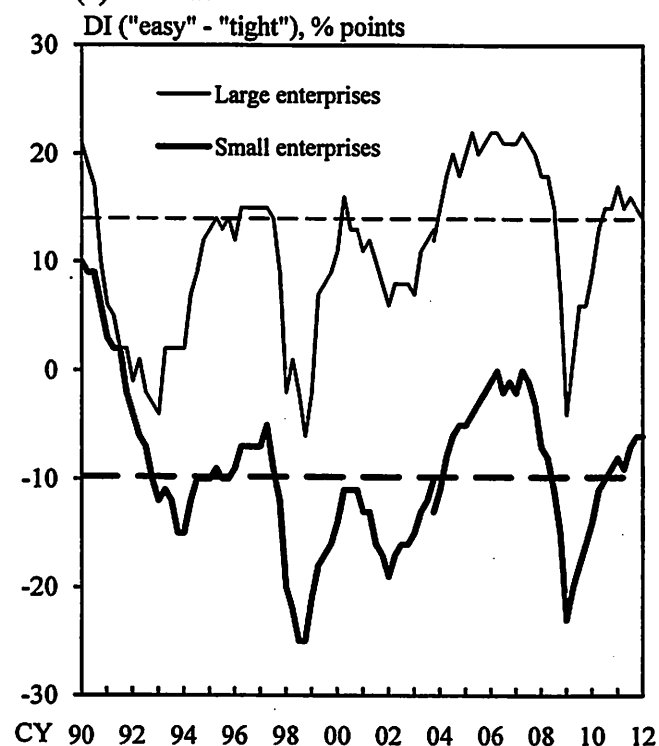
(1) Lending Attitude of Financial Institutions as Perceived by Firms

(a) *Tankan*

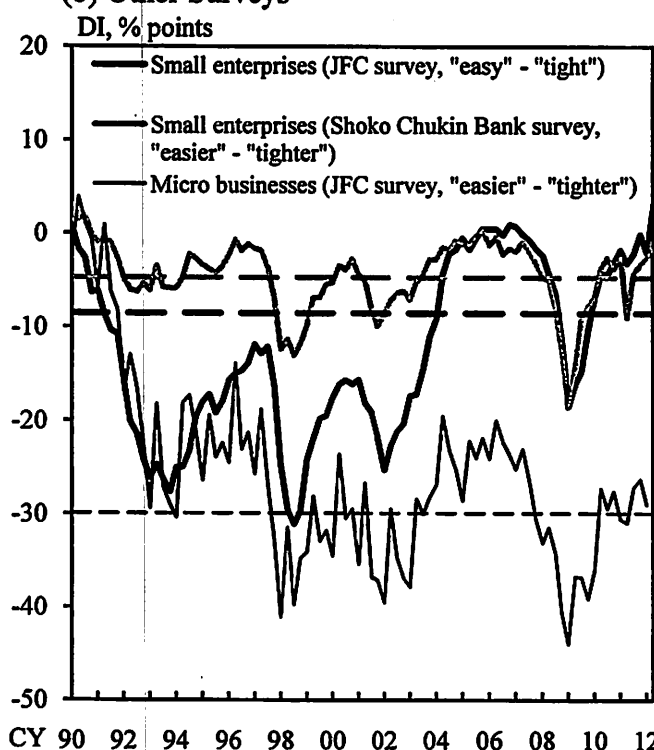
(b) Other Surveys



(2) Financial Position

(a) *Tankan*

(b) Other Surveys

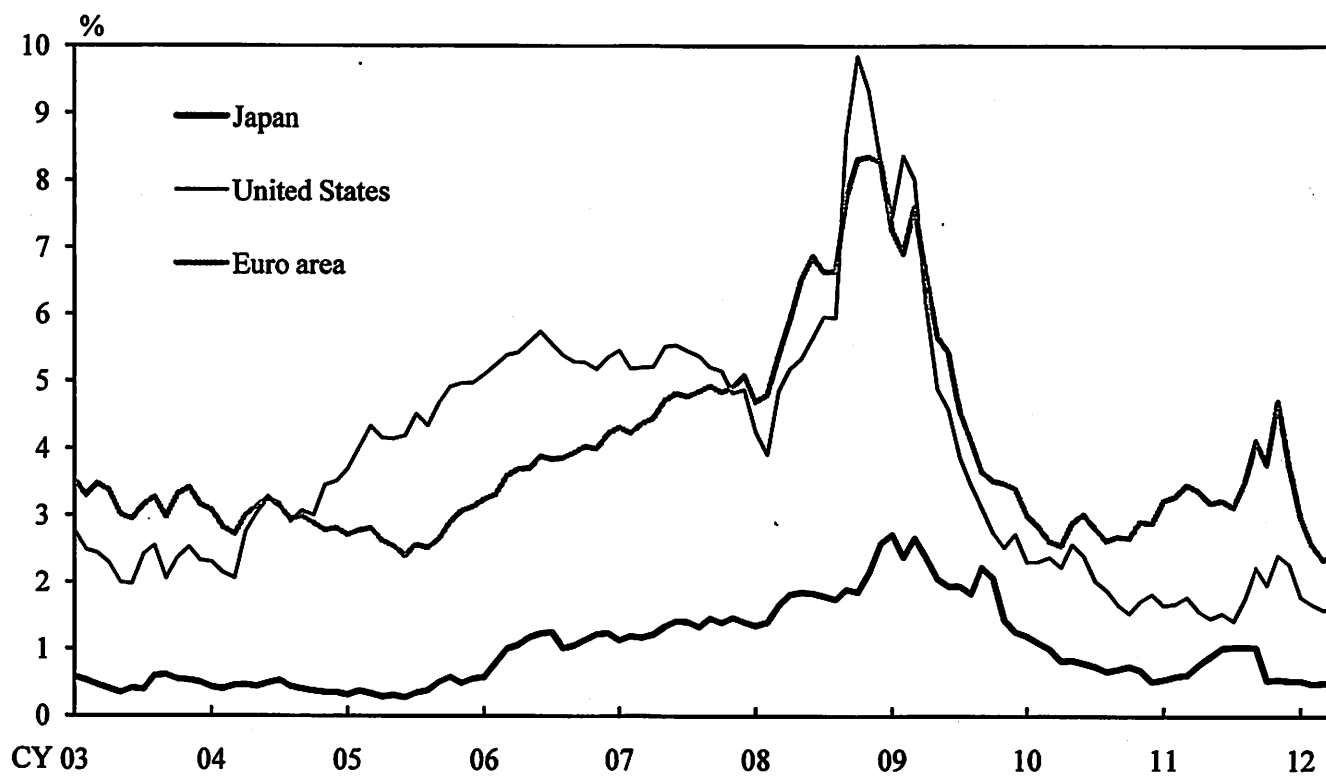


Note: Data of the "Tankan" are based on all industries. The "Tankan" was revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis. Broken lines are the averages since 2000.

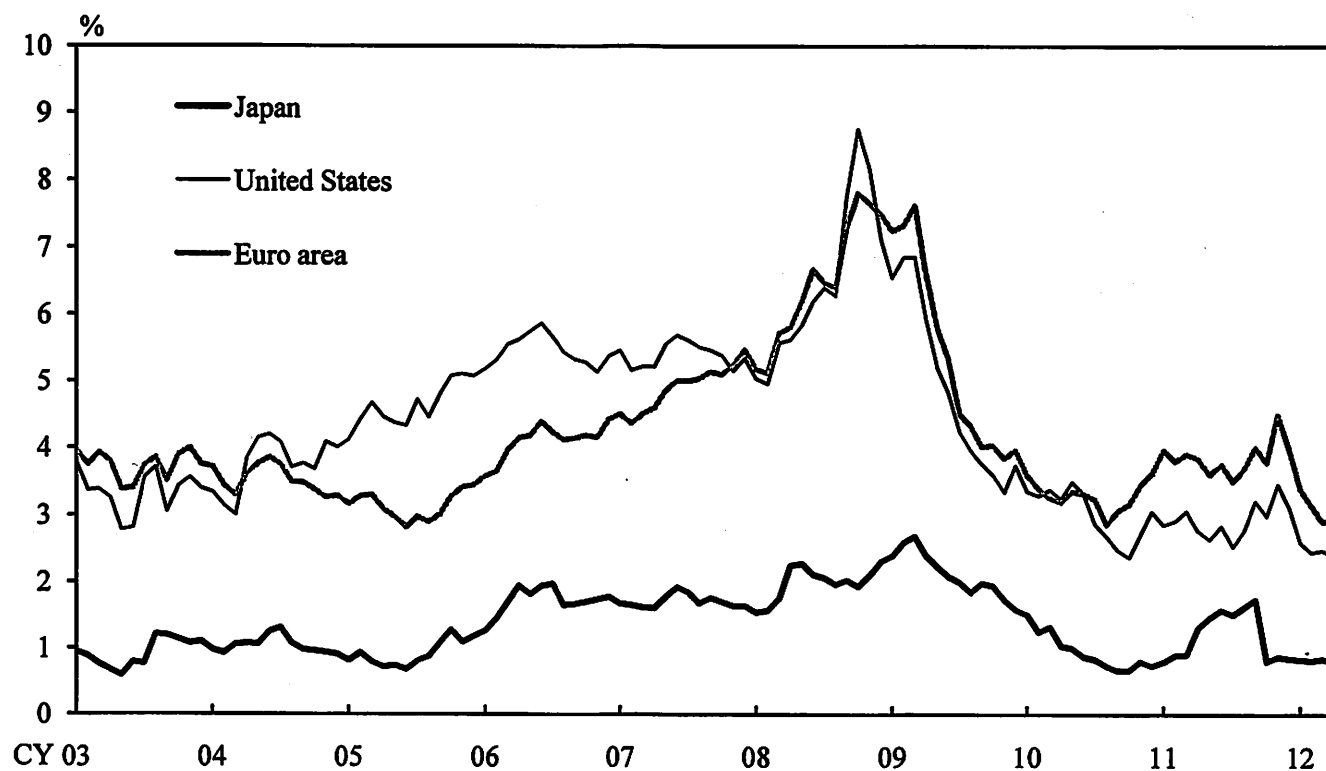
Sources: Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan"; Shoko Chukin Bank, Ltd., "Business Survey Index for Small and Medium-Sized Businesses"; Japan Finance Corporation (JFC), "Monthly Survey of Small Businesses in Japan," "Quarterly Survey of Small Businesses in Japan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

Interest Rates on Corporate Bonds

(1) 2-year



(2) 5-year



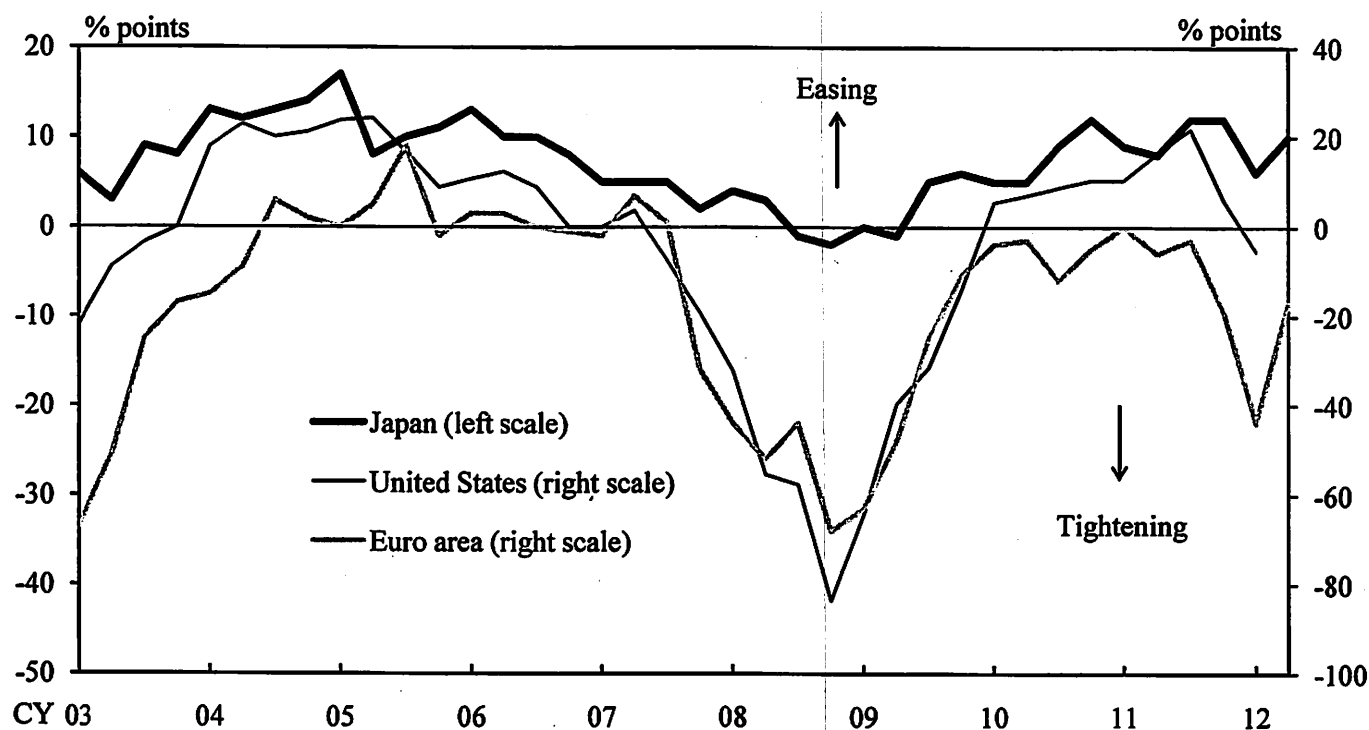
Notes: 1. Credit ratings are those rated A. The indicated ratings in Japan are of R&I, and those in the United States and the euro area are of Moody's, S&P, and Fitch.

2. Japan's yields declined after rising significantly following the Great East Japan Earthquake in March 2011, mainly reflecting the widening of spreads in some electric power companies and the abatement of such effect due to the downgrading of their credit ratings.

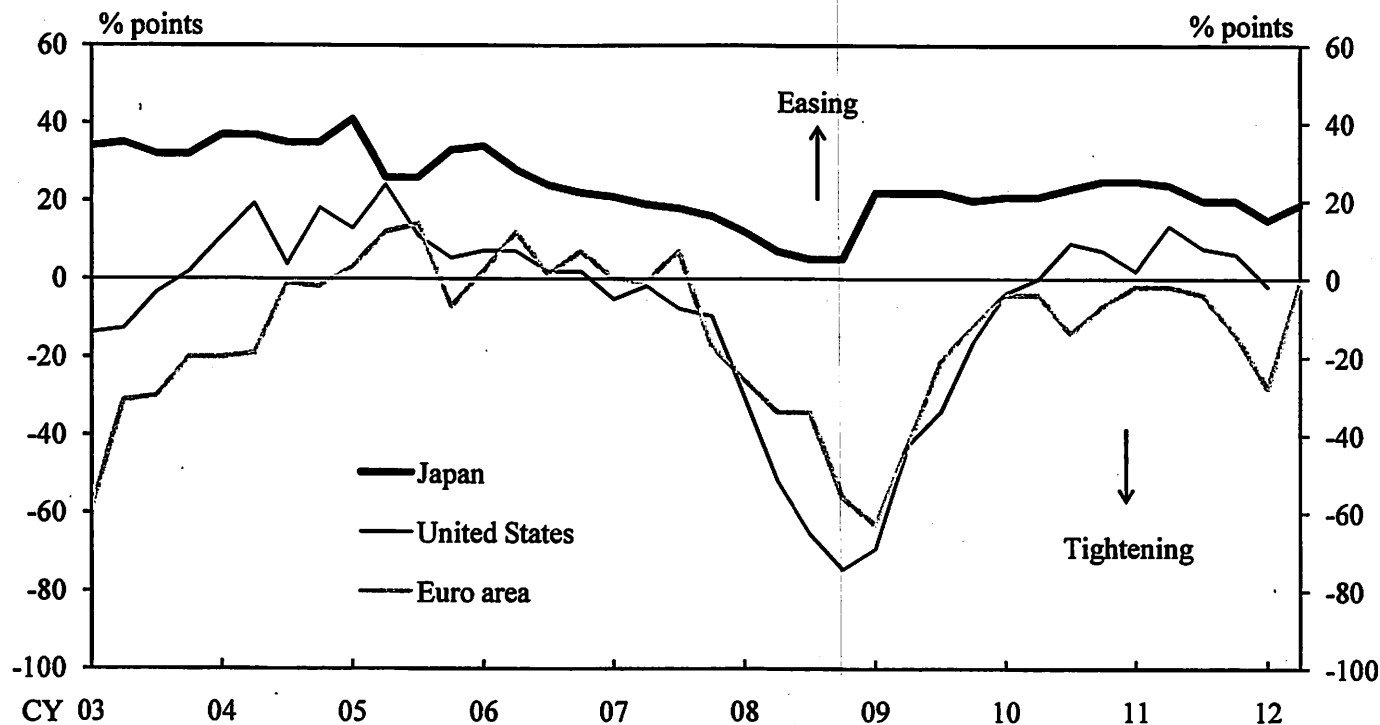
Source: Bloomberg.

Bank Lending Practices

(1) Bank Lending to Large Firms



(2) Bank Lending to Small and Medium-Sized Firms



Notes: 1. For the United States, (1) is based on large and medium-sized firms and (2) is based on small firms.

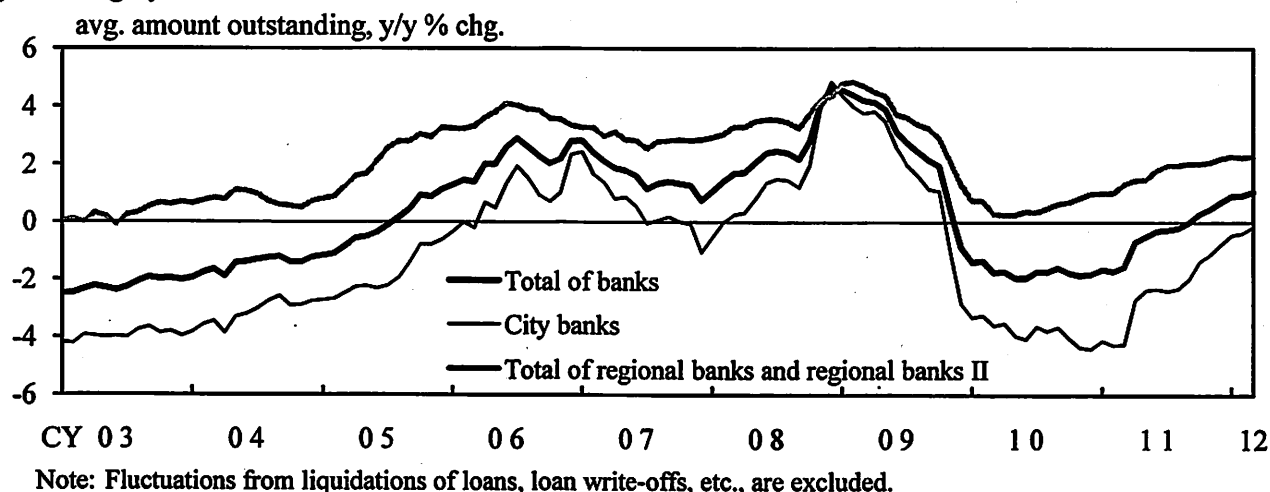
2. Japan: "eased considerably" + $0.5 \times$ "eased somewhat" - $0.5 \times$ "tightened somewhat" - "tightened considerably"

3. United States and euro area: "eased considerably" + "eased somewhat" - "tightened somewhat" - "tightened considerably"

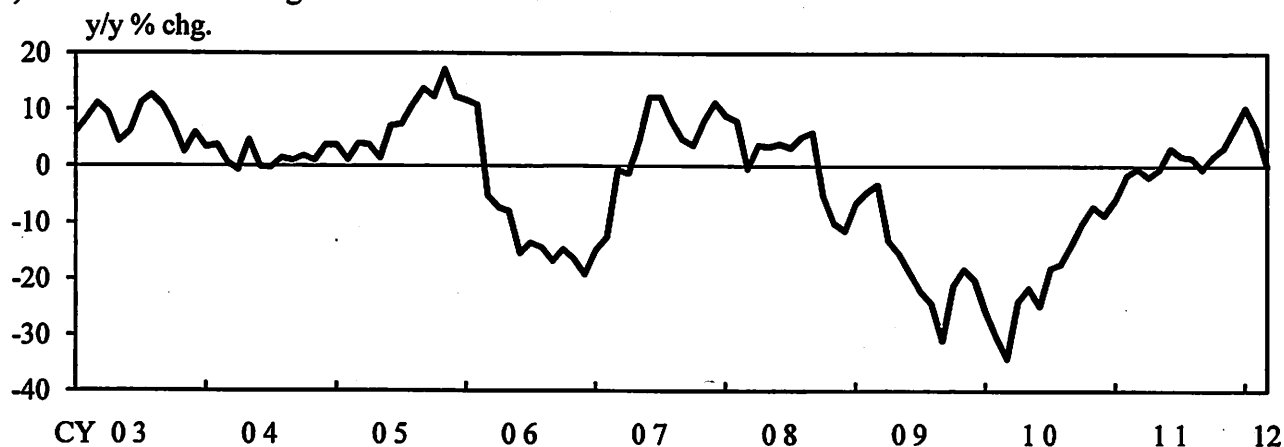
Sources: Bank of Japan, "Senior Loan Officer Opinion Survey on Bank Lending Practices at Large Japanese Banks"; Federal Reserve Board; European Central Bank.

Amount Outstanding of Bank Lending, CP, and Corporate Bonds

(1) Lending by Domestic Commercial Banks

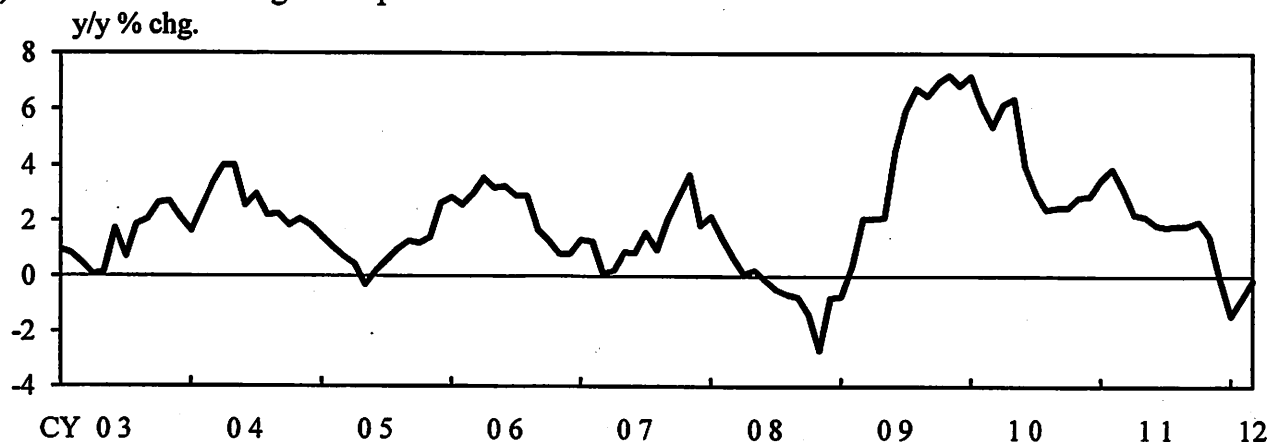


(2) Amount Outstanding of CP



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

(3) Amount Outstanding of Corporate Bonds

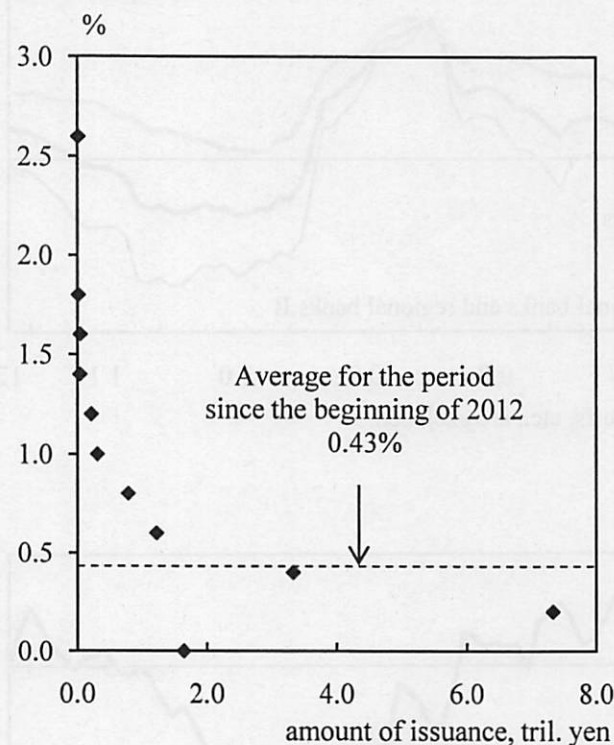


Note: Figures are calculated based on the sum of straight bonds issued in both domestic and overseas markets. Bonds issued by banks are included. Domestic bonds are those registered under the book-entry transfer system. The series is spliced at April 2008 with the one published by the Japan Securities Dealers Association.

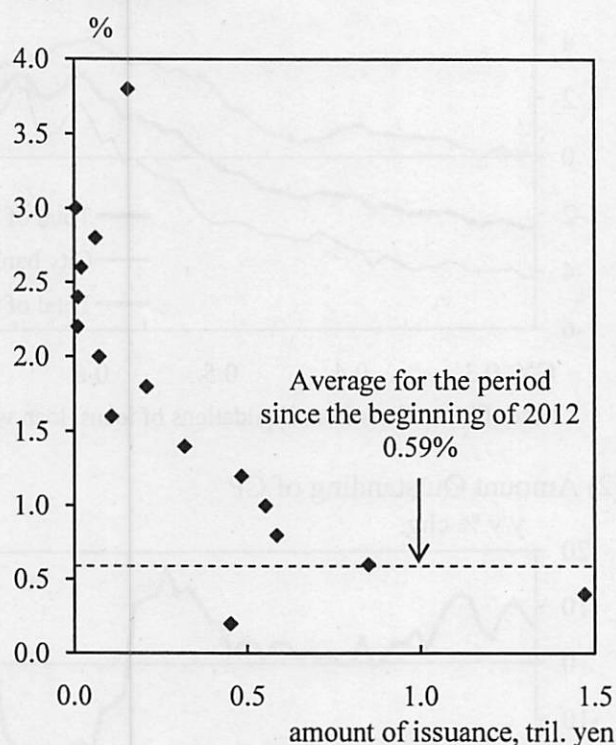
Issuance Spreads for and Amount of Corporate Bonds

(1) Issuance Spreads for Corporate Bonds^{1,2,3,4,5}

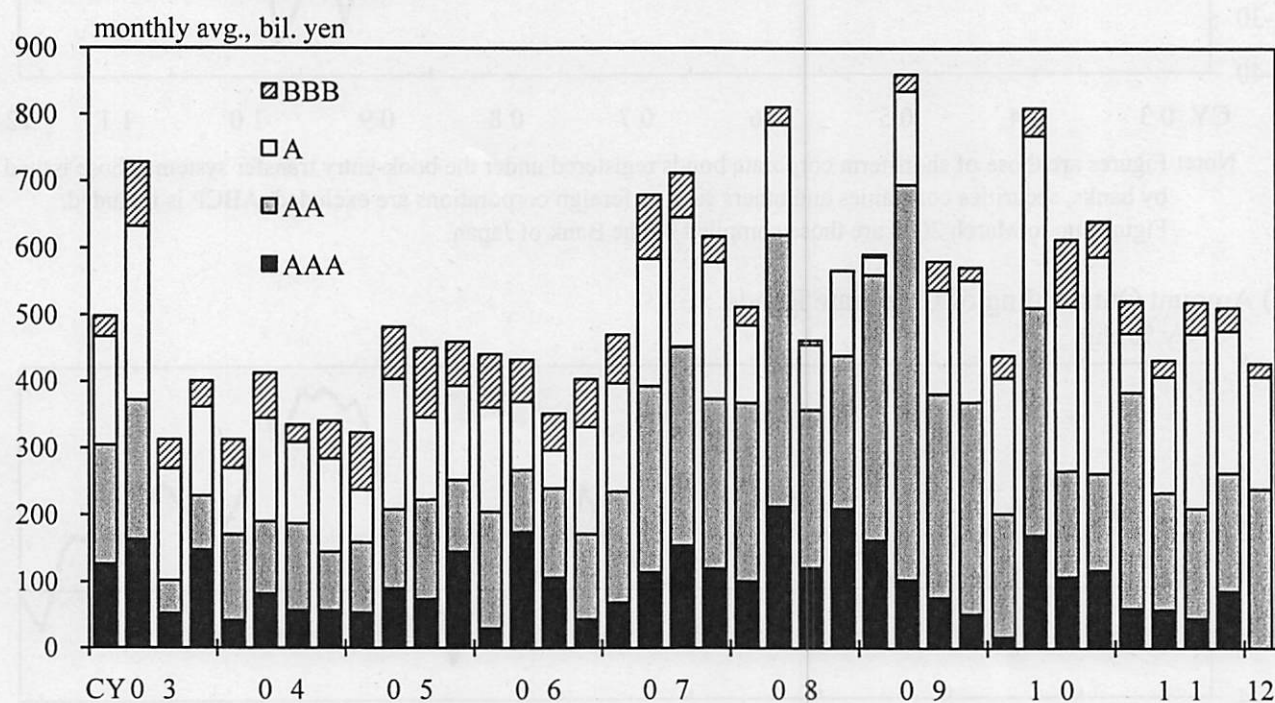
(a) A-Rated



(b) BBB-Rated



(2) Amount of Corporate Bonds^{5,6,7}

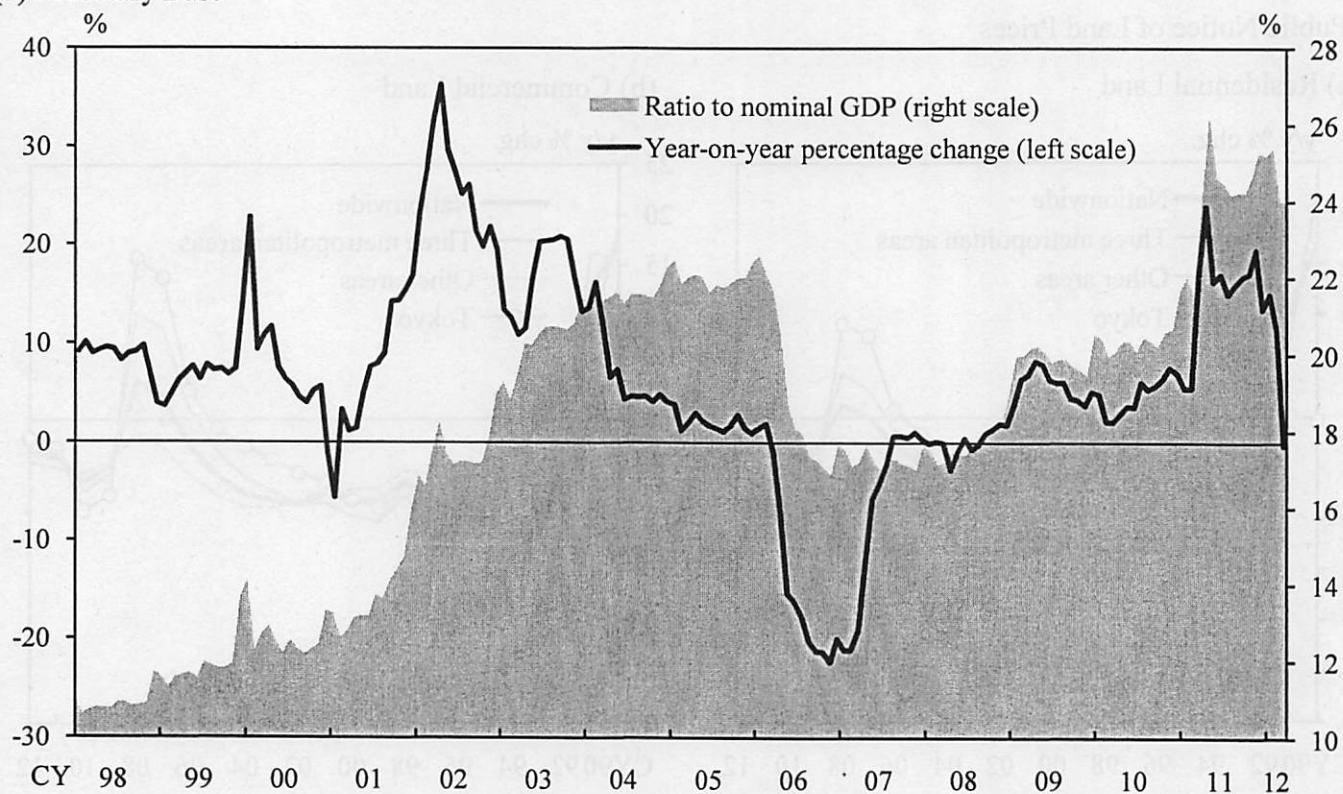


- Notes: 1. The issuance spreads for corporate bonds are the issuance rate of these bonds minus the government bond yield.
 2. Figures are the average of all maturities issued in domestic markets, based on the launch date.
 3. Bonds issued by banks and securities companies, etc., are excluded.
 4. The aggregation period is January 2002-March 2012. Figures are plotted in increments of 0.2 percentage.
 5. Bonds are classified by the highest ratings among Moody's, S&P, R&I, and JCR.
 6. Figures are the sum of straight bonds issued in domestic markets, based on the launch date.
 7. Bonds issued by banks are excluded.

Sources: Capital Eye, Ltd.; I-N Information Systems.

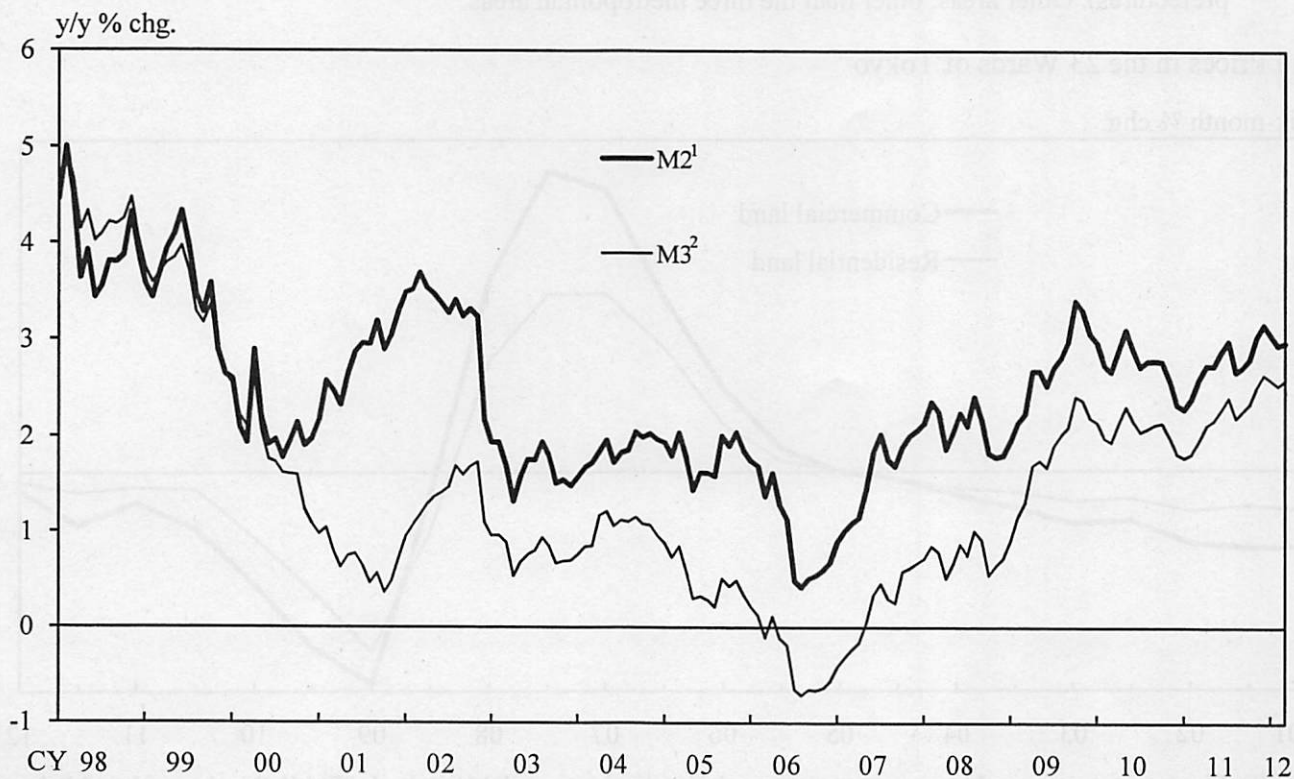
Monetary Base and Money Stock

(1) Monetary Base



Note: Figures for nominal GDP for 2012/Q1 are those for 2011/Q4.

(2) Money Stock



Notes: 1. Figures for M2 up to March 2004 are the former series of the figures for M2+CDs.

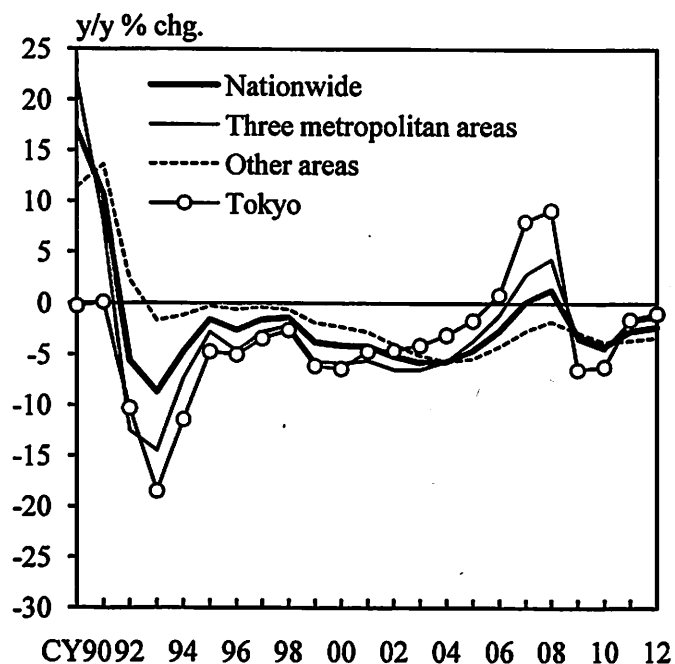
2. Figures for M3 up to March 2004 are the former series of the figures for M3+CDs minus the figures for pecuniary trusts.

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

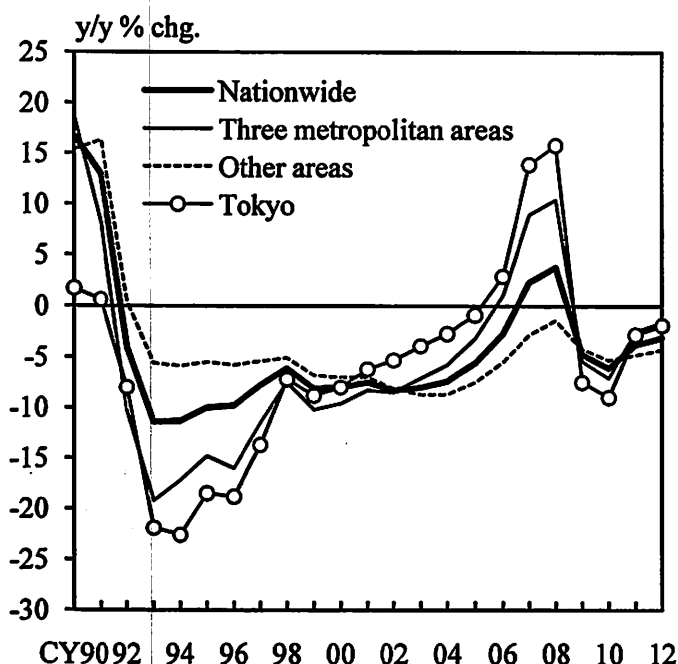
Land Prices

(1) Public Notice of Land Prices

(a) Residential Land



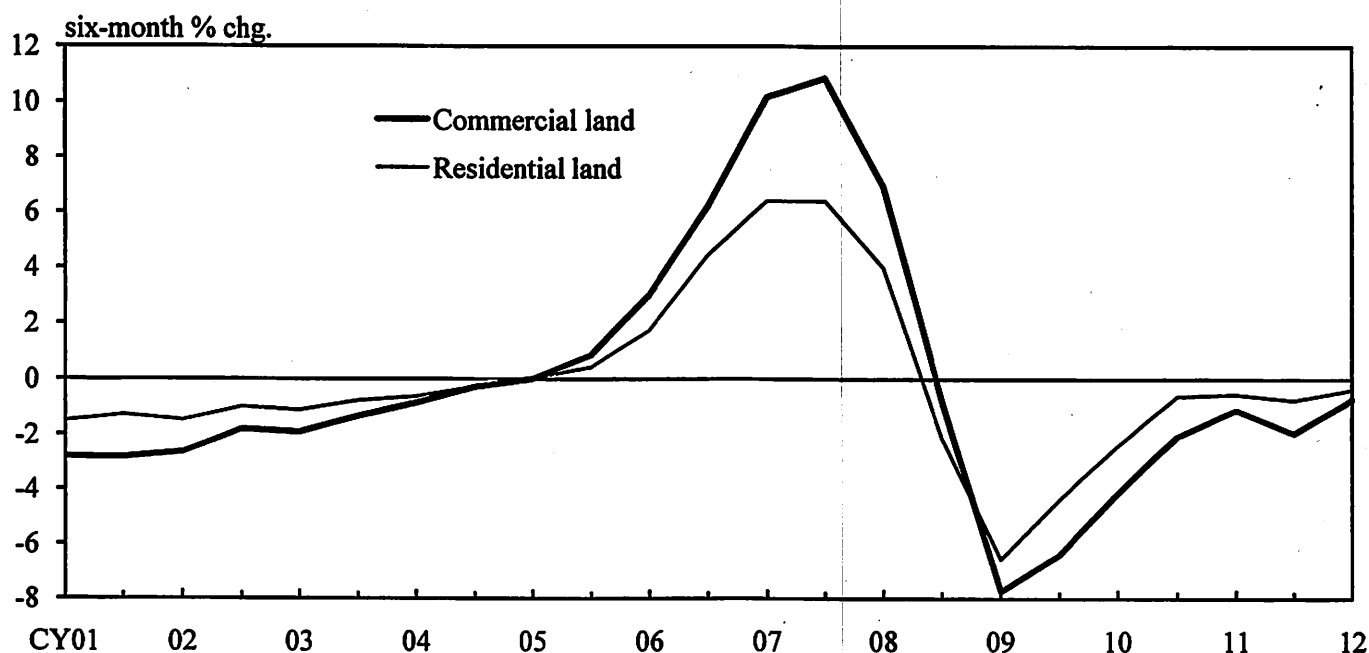
(b) Commercial Land



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.

(2) Land Prices in the 23 Wards of Tokyo

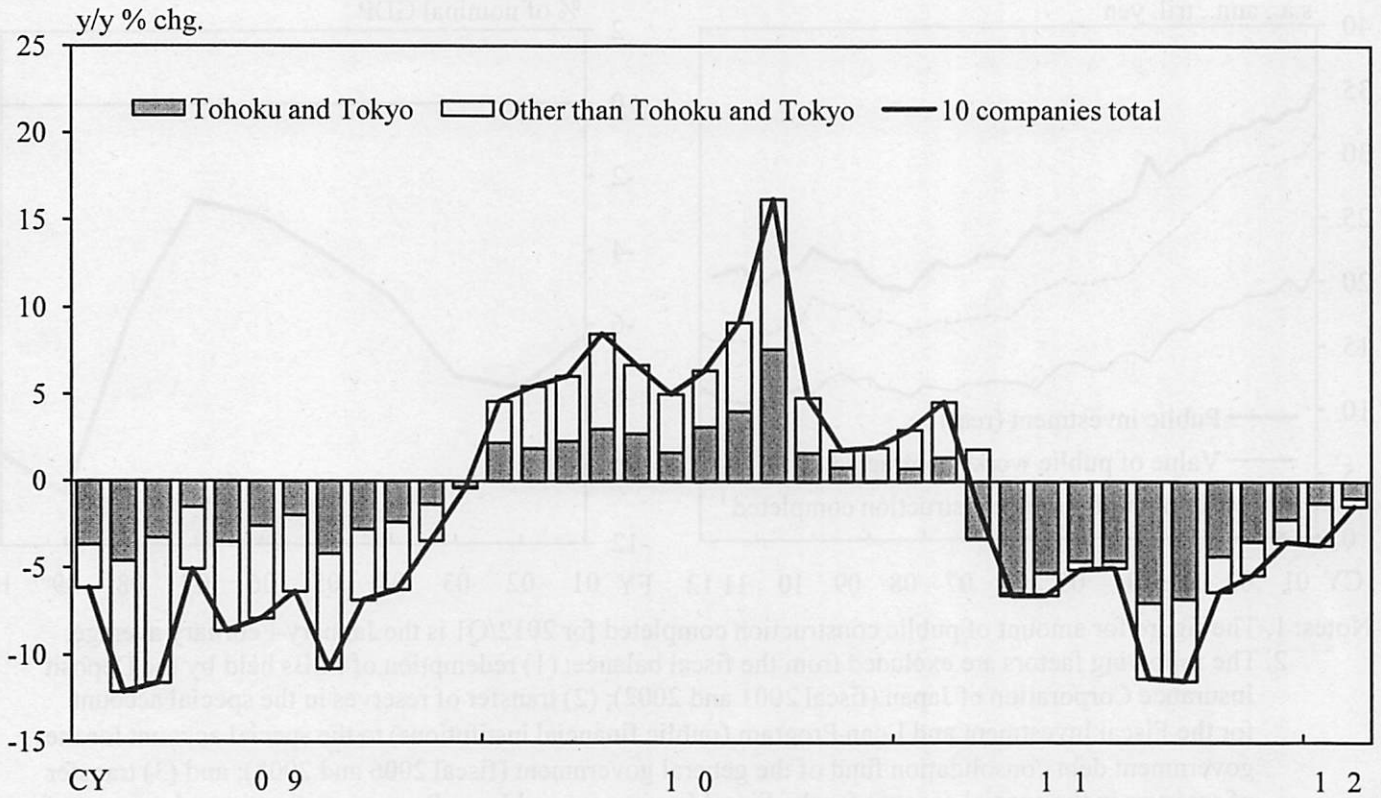


Note: Figures are six-month percentage changes in land prices available in both "Public Notice of Land Prices" and "Land Price Survey by Prefectural Governments" (residential: 45 points; commercial: 34 points).

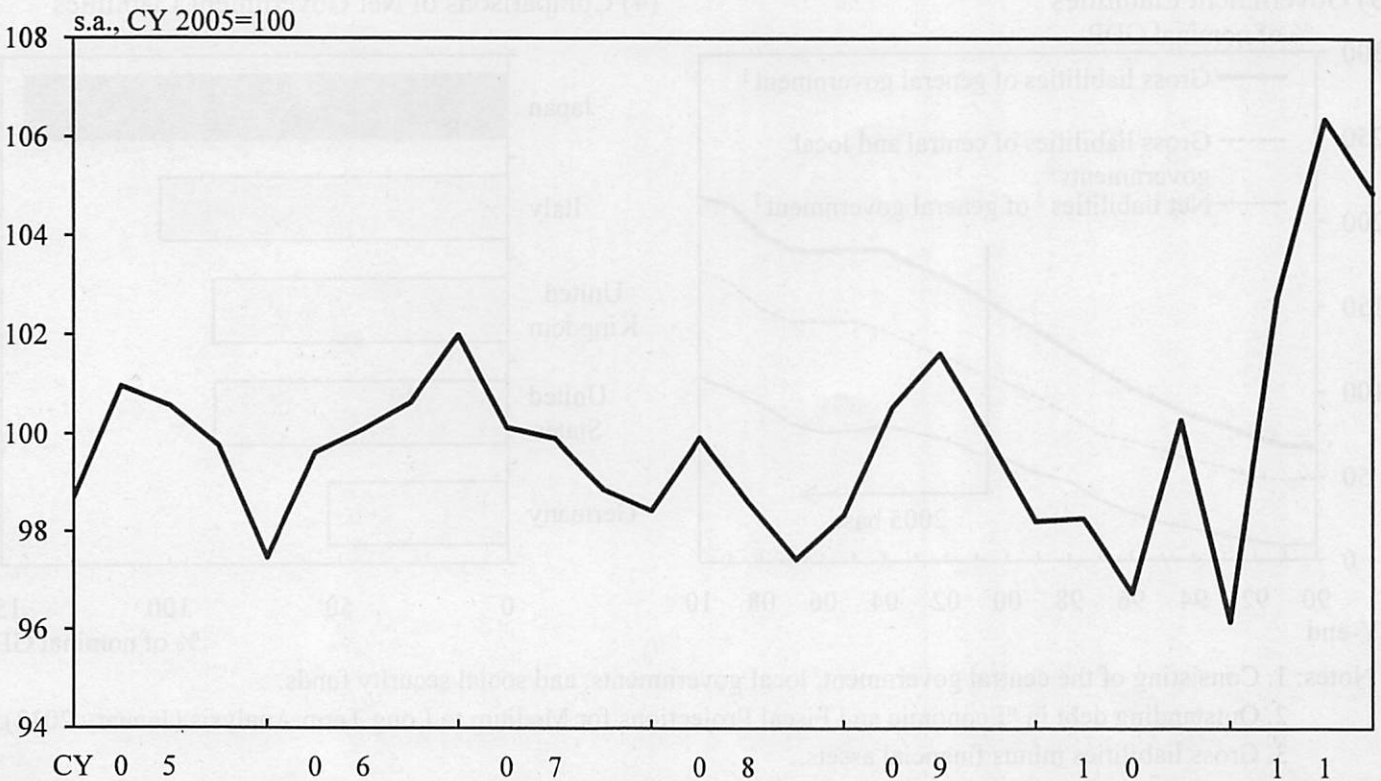
Source: Ministry of Land, Infrastructure, Transport and Tourism, "Public Notice of Land Prices," "Land Price Survey by Prefectural Governments."

Power Demand

(1) Electric Power Consumption (10 Companies Total)



(2) Electric Productivity (Real GDP / Electric Power Consumption¹ [10 Companies Total])

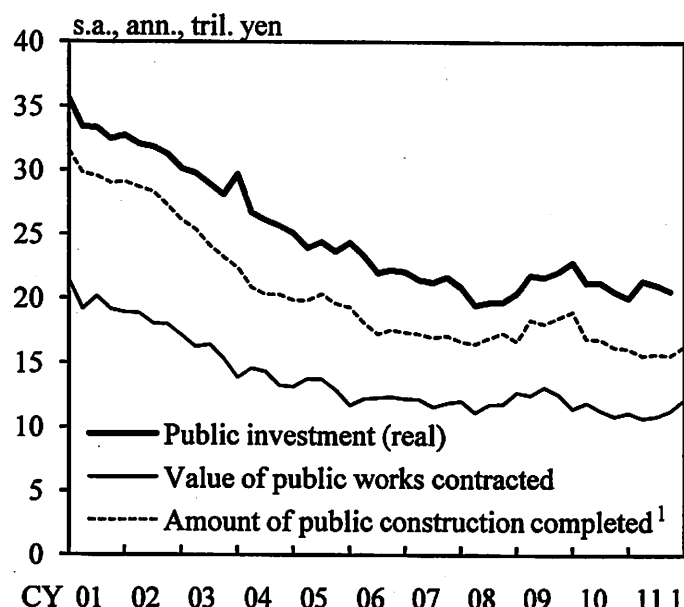
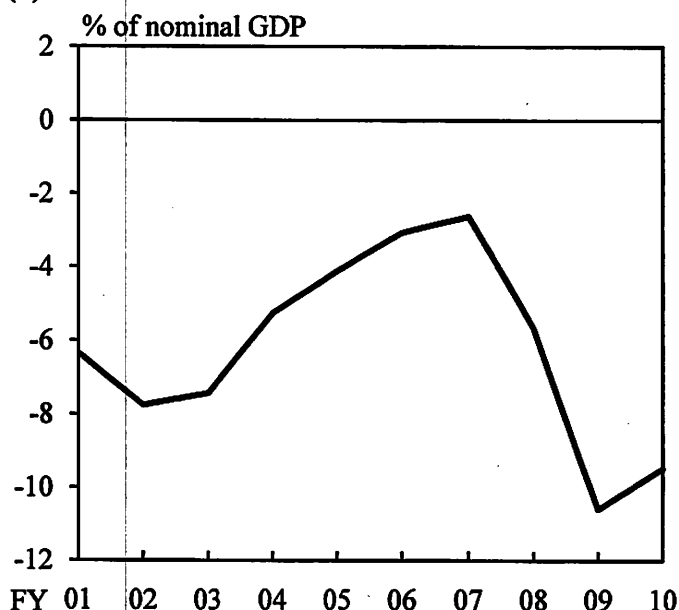


Note: 1. Seasonally adjusted by X-12-ARIMA.

Sources: The Federation of Electric Power Companies of Japan, "Electricity Demand";
Cabinet Office, "National Accounts."

Public Investment and Government Liabilities

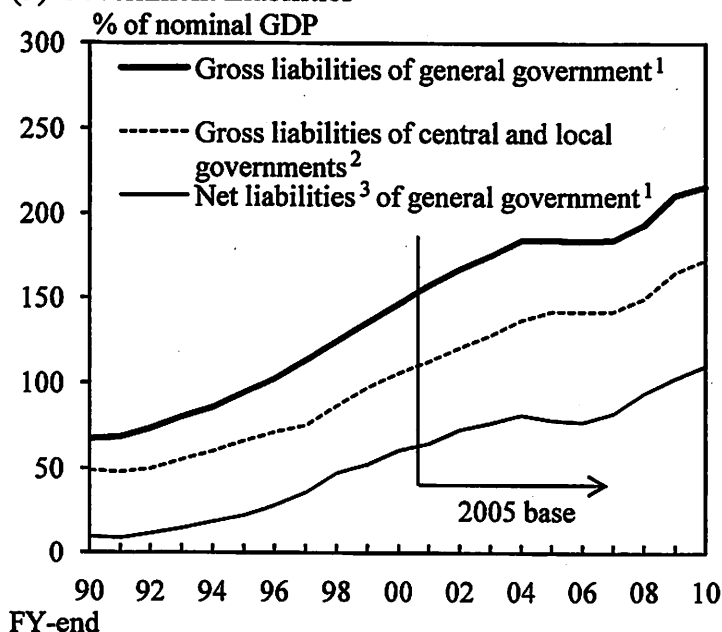
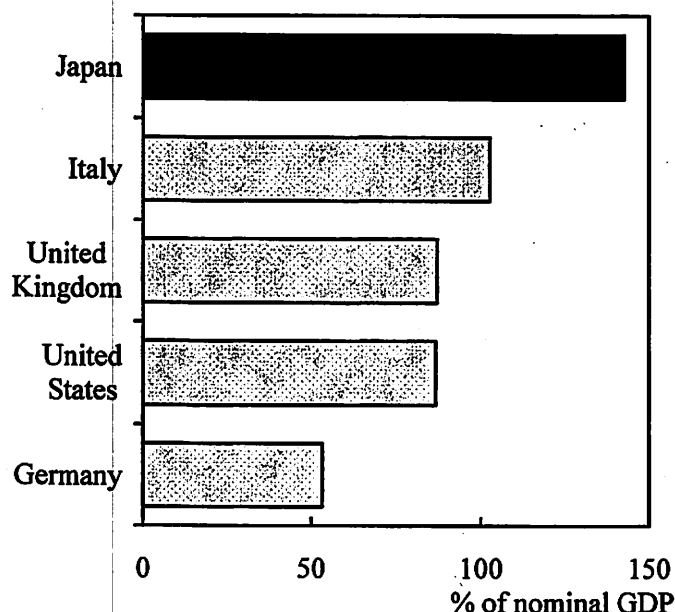
(1) Public Investment

(2) Fiscal Balance²

Notes: 1. The figure for amount of public construction completed for 2012/Q1 is the January-February average.

2. The following factors are excluded from the fiscal balance: (1) redemption of JGBs held by the Deposit Insurance Corporation of Japan (fiscal 2001 and 2002); (2) 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); and (3) transfer of reserves in the special account for the Fiscal Investment and Loan Program to the general account of the general government (fiscal 2009 and 2010).

(3) Government Liabilities

(4) Comparisons of Net Government Liabilities⁴

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

2. Outstanding debt in "Economic and Fiscal Projections for Medium to Long Term Analysis (January 2012)."

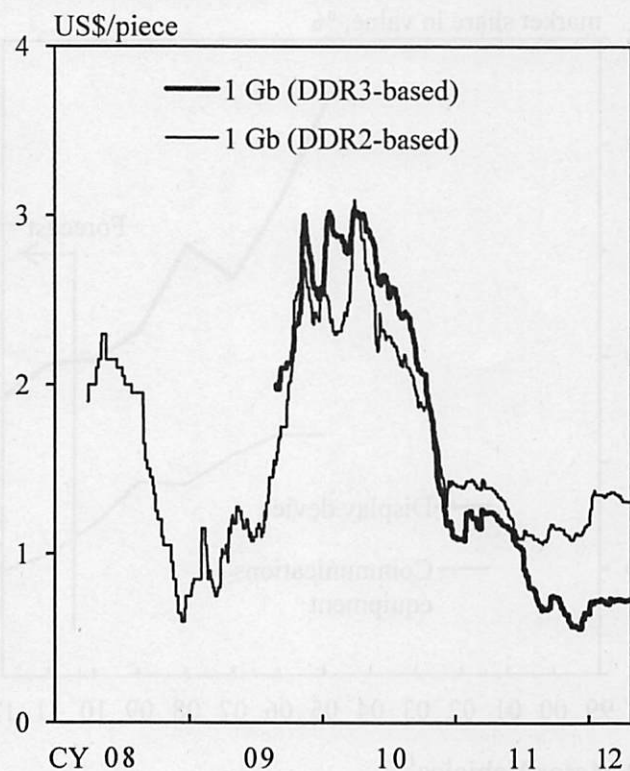
3. Gross liabilities minus financial assets.

4. Government liabilities (of the general government) are the IMF projections in calendar 2013.

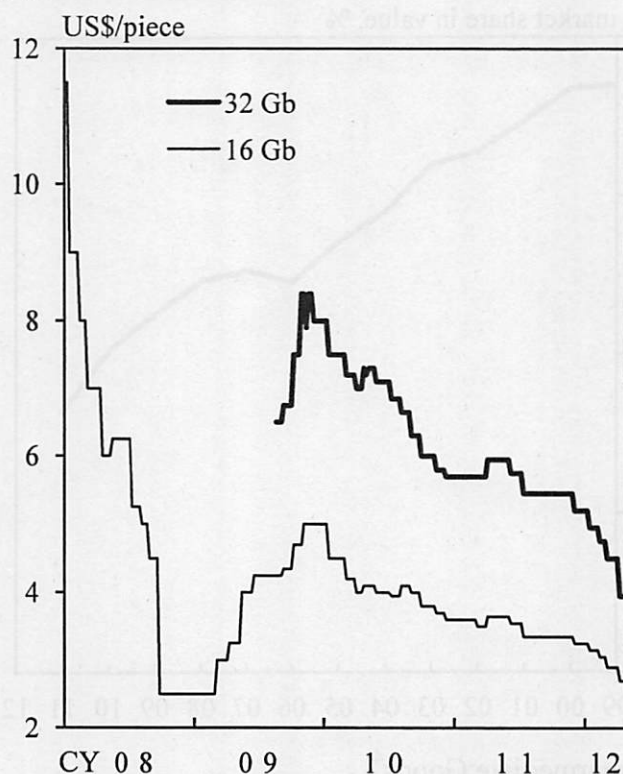
Sources: Cabinet Office, "National Accounts," "Economic and Fiscal Projections for Medium to Long Term Analysis"; East Japan Construction Surety, etc., "Public Works Prepayment Surety Statistics"; Ministry of Land, Infrastructure, Transport and Tourism, "Integrated Statistics on Construction Works"; IMF, "World Economic Outlook."

Cycle of Global Demand for IT-Related Goods

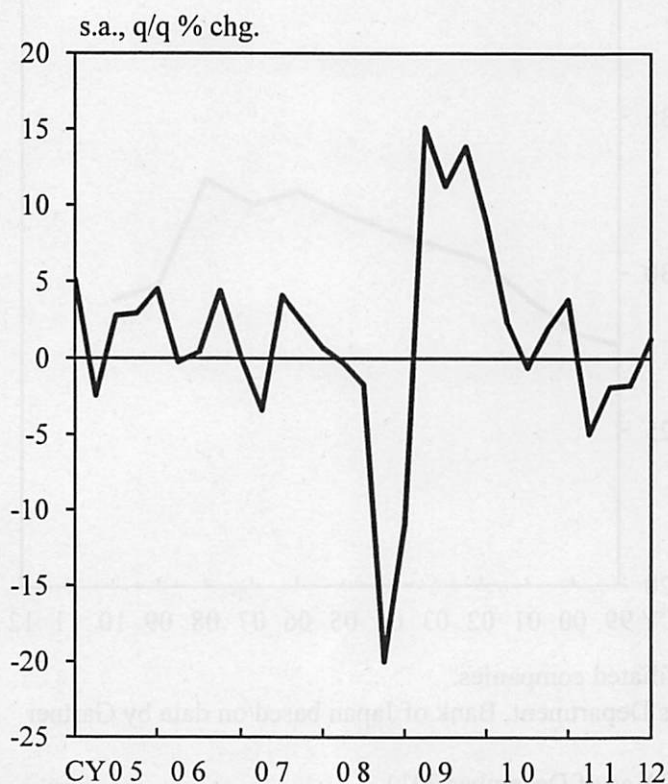
(1) DRAM Spot Prices



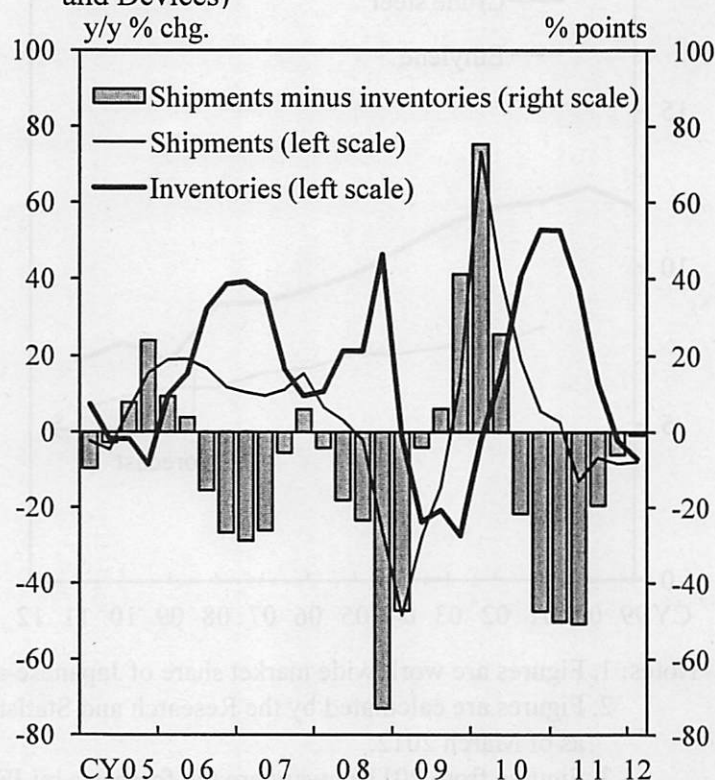
(2) NAND Flash Prices



(3) World Semiconductor Shipments



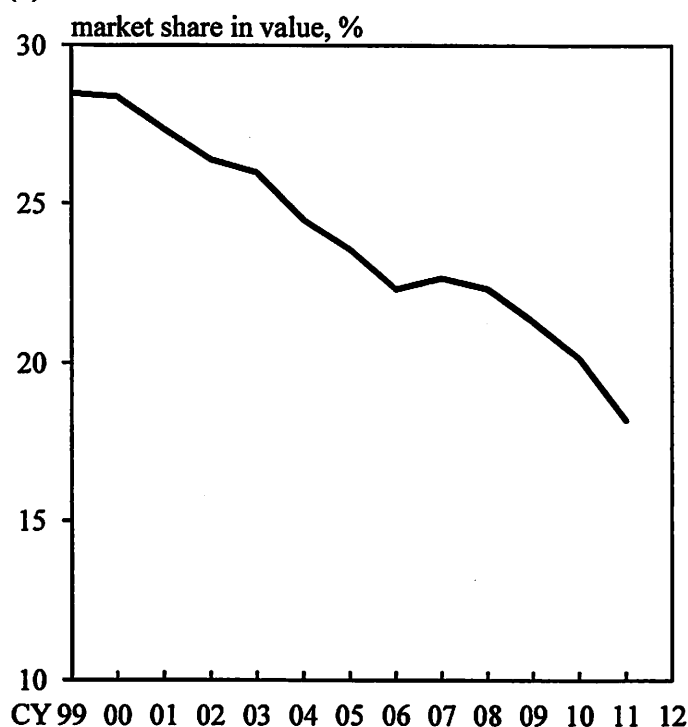
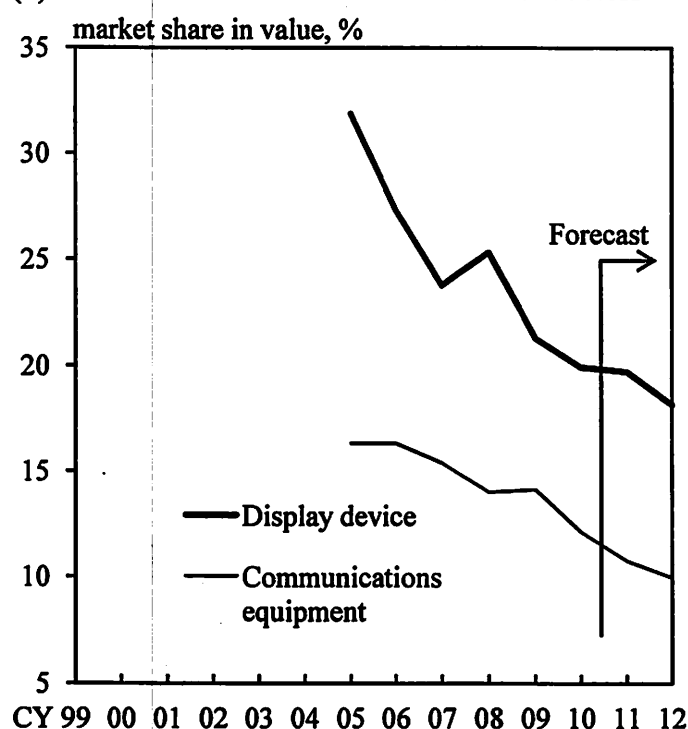
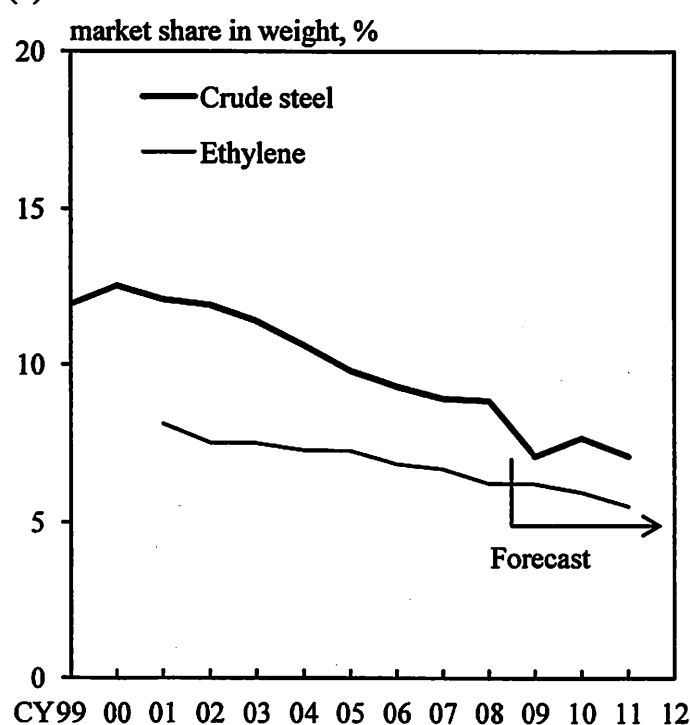
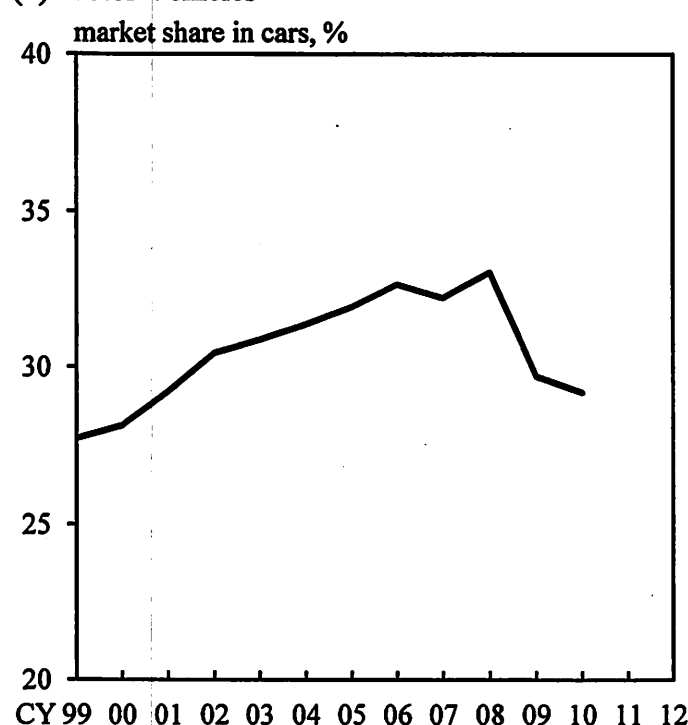
(4) Shipment-Inventory Balance (Electronic Parts and Devices)



Note: The figure for world semiconductor shipments for 2012/Q1 is the January-February average converted into a quarterly amount.

Sources: Nikkei Financial QUEST; WSTS;
Ministry of Economy, Trade and Industry, "Indices of Industrial Production."

Worldwide Market Share of Japanese-Affiliated Companies

(1) Semiconductor^{1,2}(2) IT-Related Goods Other than Semiconductors^{1,3}(3) Intermediate Goods⁴(4) Motor Vehicles¹

Notes: 1. Figures are worldwide market share of Japanese-affiliated companies.

2. Figures are calculated by the Research and Statistics Department, Bank of Japan based on data by Gartner as of March 2012.

3. Figures from 2011 onward are the forecasts by JEITA as of December 2011.

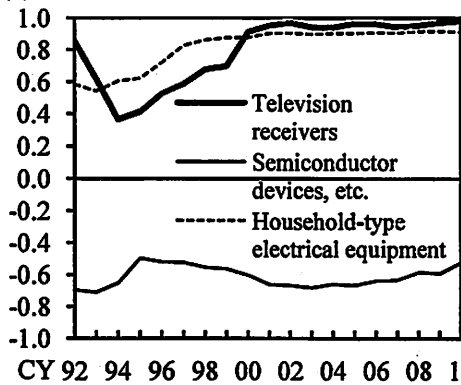
4. Figures are worldwide market shares of domestic products in Japan. Figures of ethylene from 2009 onward are the forecasts by the Ministry of Economy, Trade and Industry as of May 2010.

Sources: Gartner; JEITA, "Production Forecasts for the Global Electronics and Information Technology Industries"; JISF; World Steel Association; OICA; Ministry of Economy, Trade and Industry, "Future Trends in Global Demand for and Supply of Petrochemical Products."

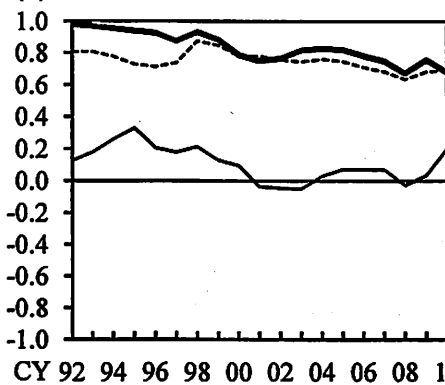
International Competitiveness Coefficient

(1) Household-Type Electrical Equipment and IT-Related Goods¹

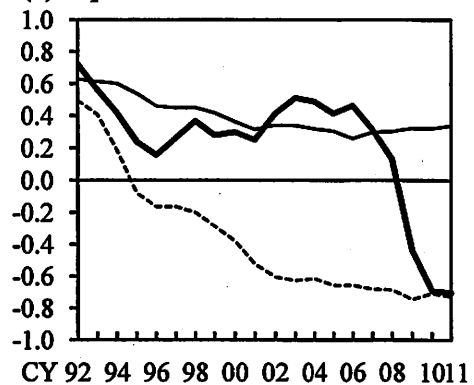
(a) China



(b) Korea

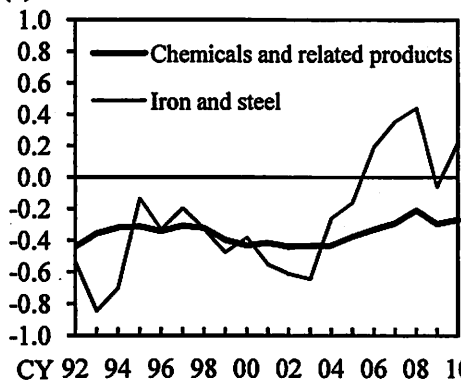


(c) Japan

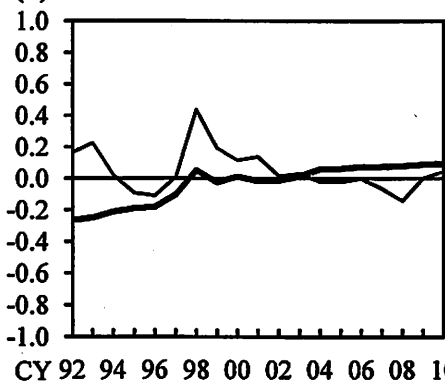


(2) Intermediate Goods¹

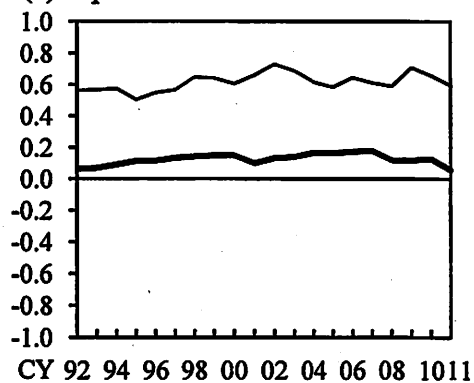
(a) China



(b) Korea

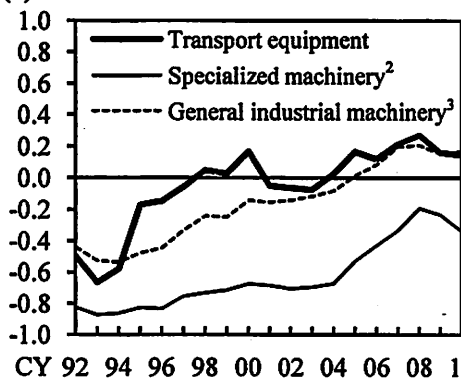


(c) Japan

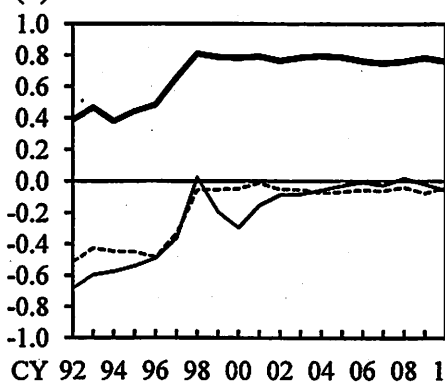


(3) Capital Goods and Motor Vehicles and Their Related Goods¹

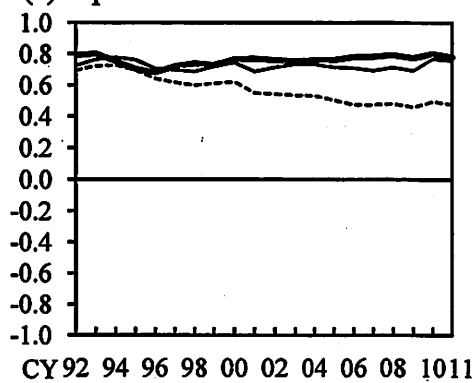
(a) China



(b) Korea



(c) Japan



International Competitiveness Coefficient (ICC)

ICC: Net export value divided by the sum of export value and import value. The closer the value of ICC is to one, the greater the competitiveness.

$$ICC_{it} = (AX_i - AM_i) / (AX_i + AM_i)$$

ICC_{it} : Country A's ICC of goods i , AX_i : Country A's exports of goods i , AM_i : Country A's imports of goods i

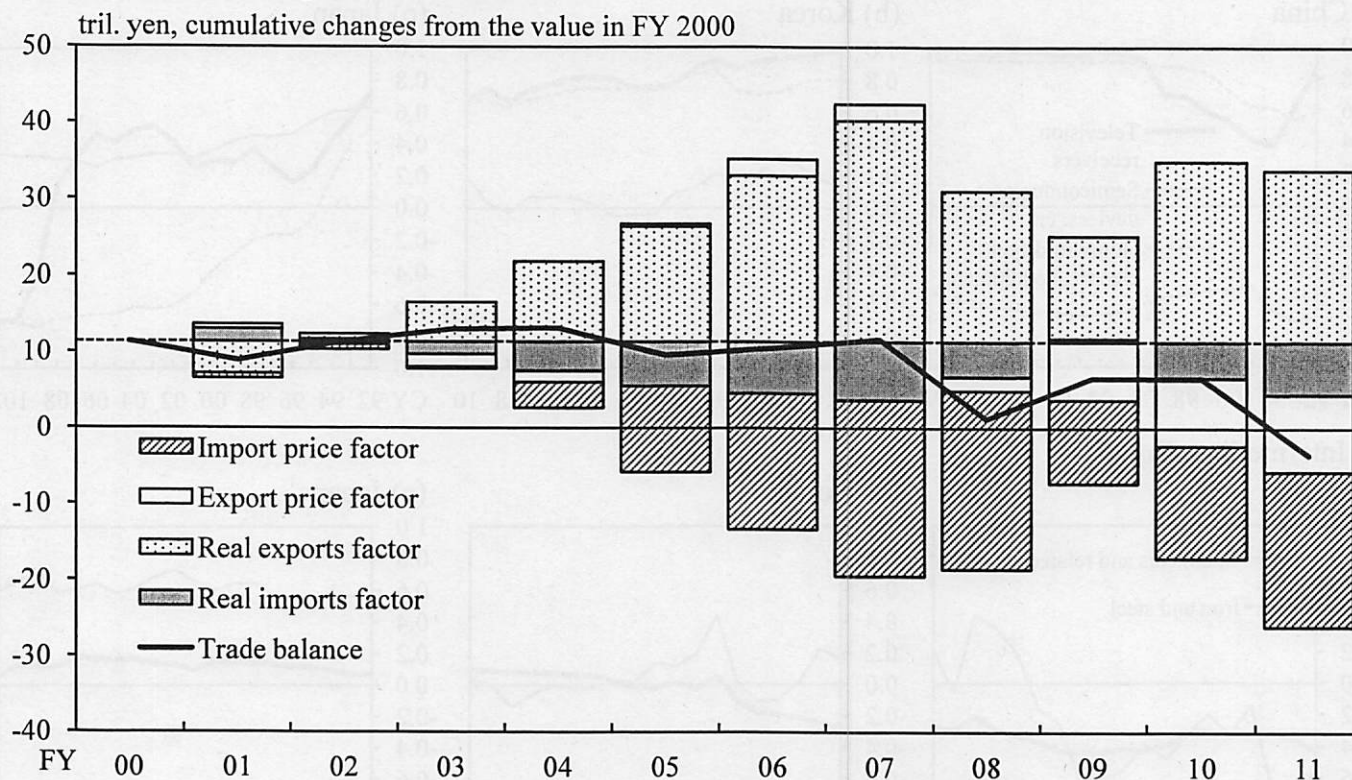
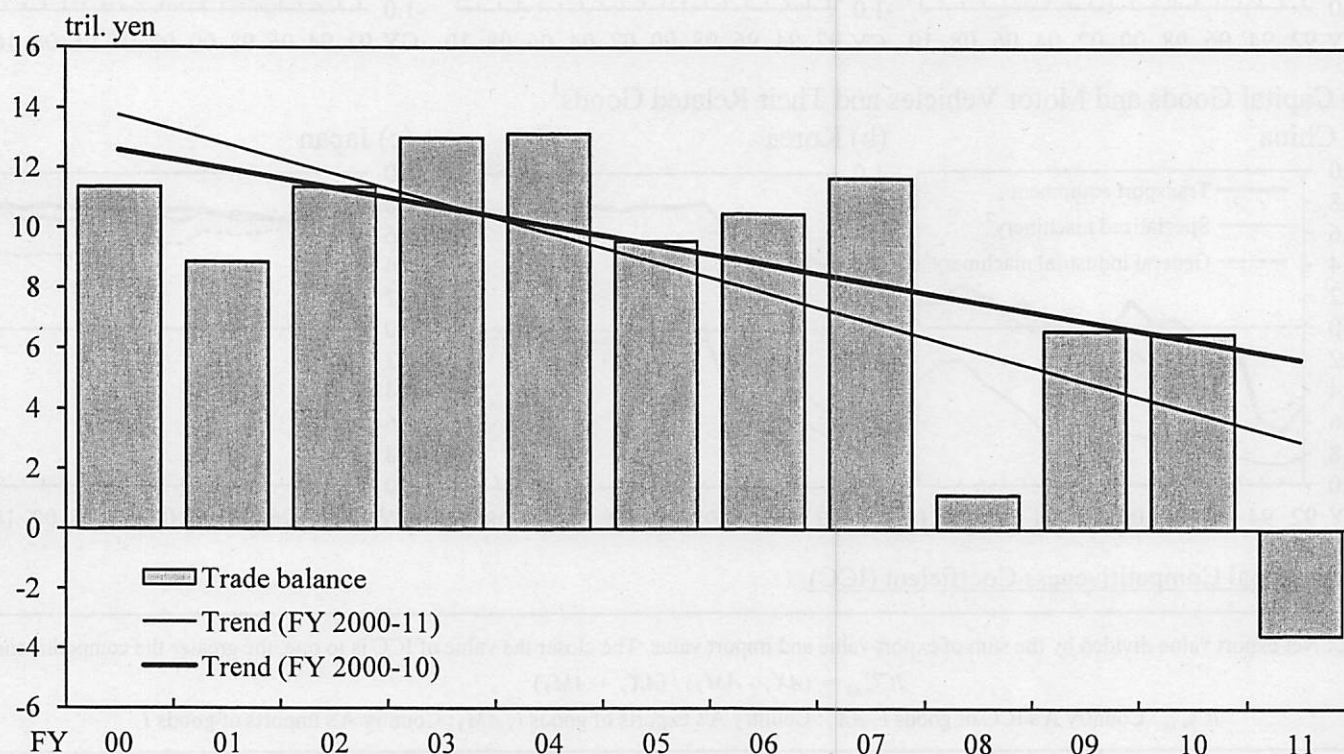
Notes: 1. Figures are based on the SITC Rev.3 classification.

2. Machinery specialized for particular industries and metalworking machinery. Examples of the former include construction and mining machinery, semiconductor manufacturing equipment, agricultural machinery, and printing and bookbinding machinery.

3. General industrial machinery and equipment. Examples include heating and cooling equipment, mechanical handling equipment, pumps, and bearings.

Source: United Nations, "Comtrade."

Trade Balance

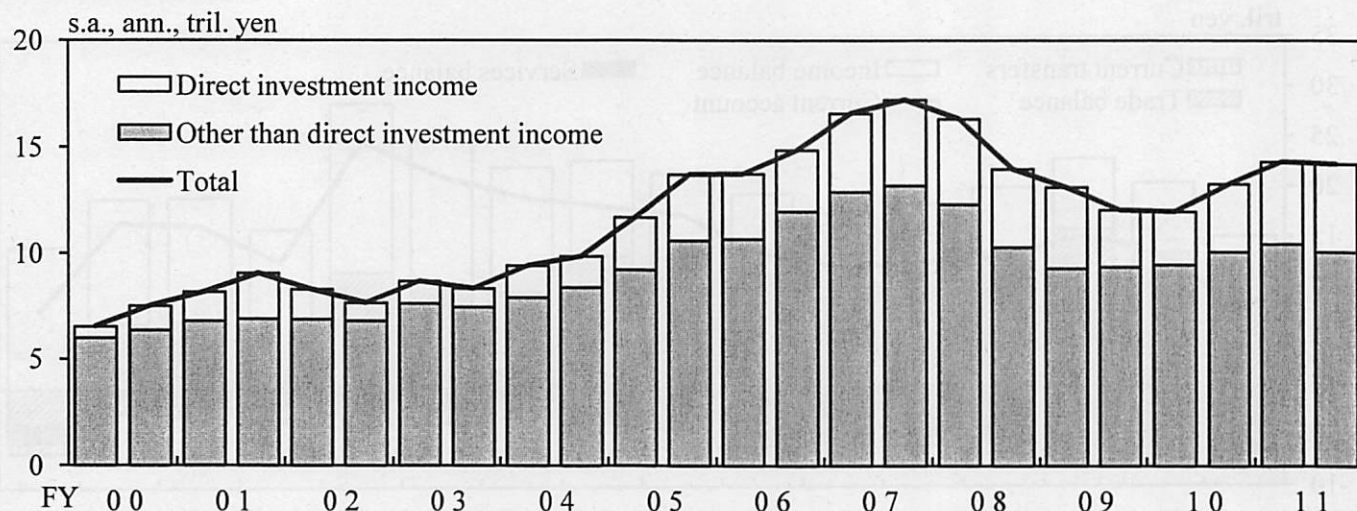
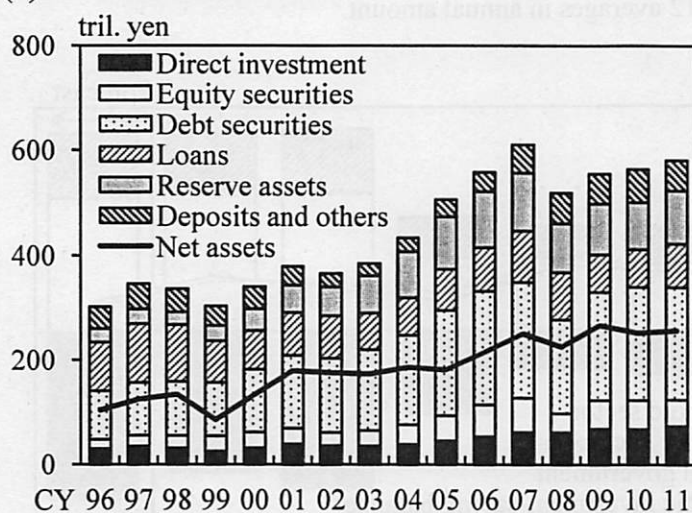
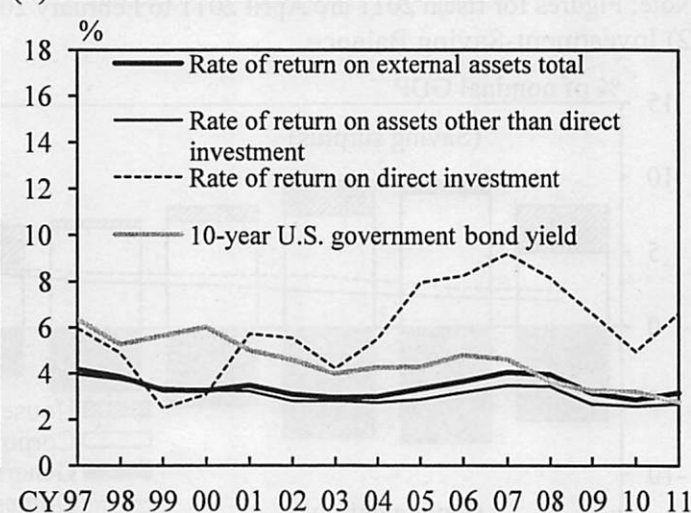
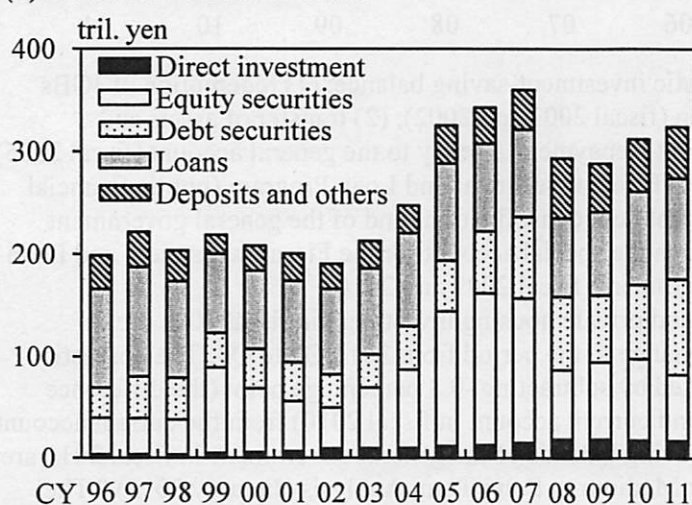
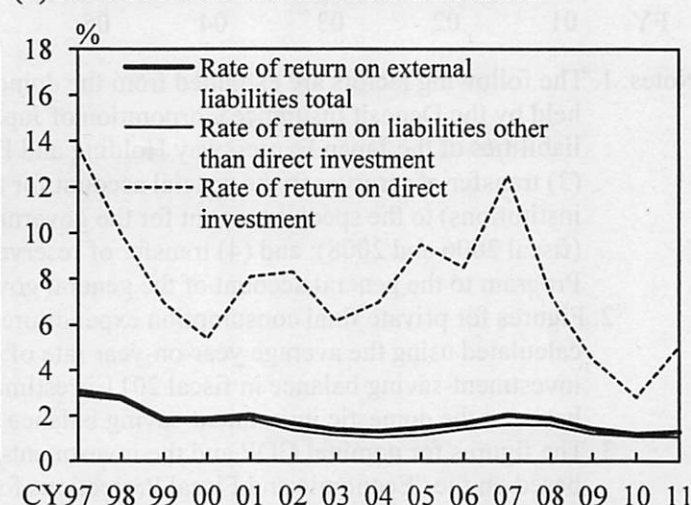
(1) Breakdown of Changes in Trade Balance^{1,2}(2) Trend of Trade Balance¹

Notes: 1. Figures for the trade balance are based on the "Balance of Payments." Figures for fiscal 2011 are April 2011-February 2012 averages in annual amount.

2. Cross terms between the export (import) price factor and the real exports (imports) factor are included in the export (import) price factor. Figures for the trade balance are the actual value and those for each factor are cumulative changes from the value in fiscal 2000. The dashed line indicates the level of trade balance for fiscal 2000.

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

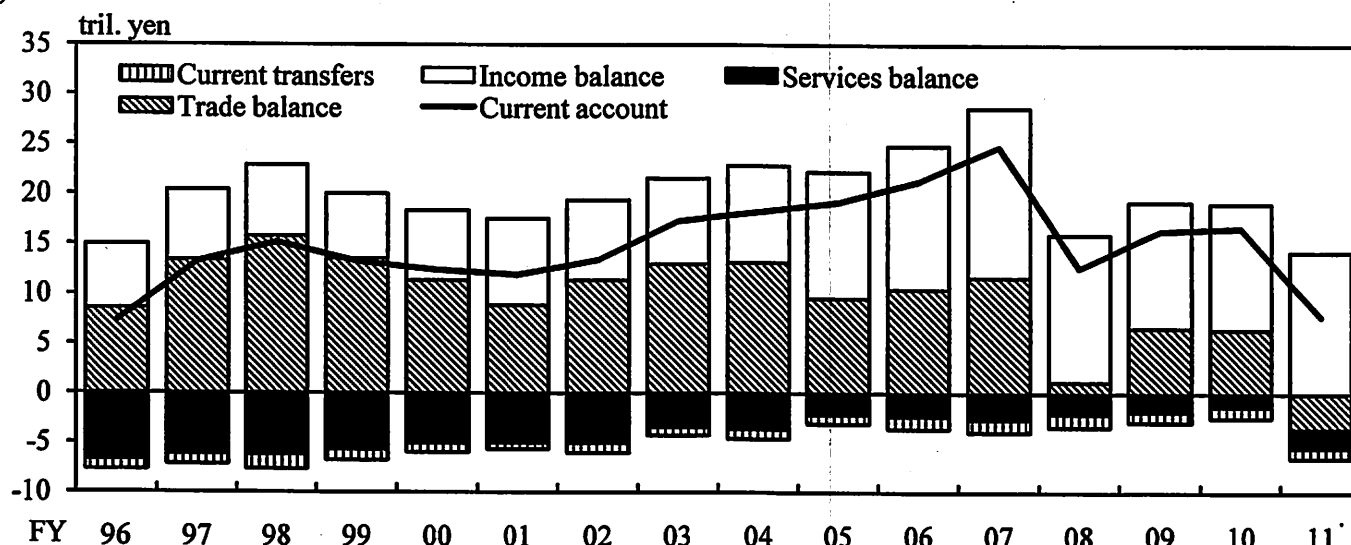
Income Balance and International Investment Position

(1) Income Balance¹(2) External Assets Total²(3) Rate of Return on External Assets^{2,3}(4) External Liabilities Total²(5) Rate of Return on External Liabilities^{2,3}

- Notes: 1. Figures for the second half of fiscal 2011 are October 2011-February 2012 averages in annual amount.
 2. Figures for 2011 are based on the quarterly estimate of the international investment position at the end of December (preliminary estimate). Financial derivatives are excluded from the quarterly estimate.
 3. Figures are calculated as income divided by average assets (liabilities) at the beginning and end of the year.

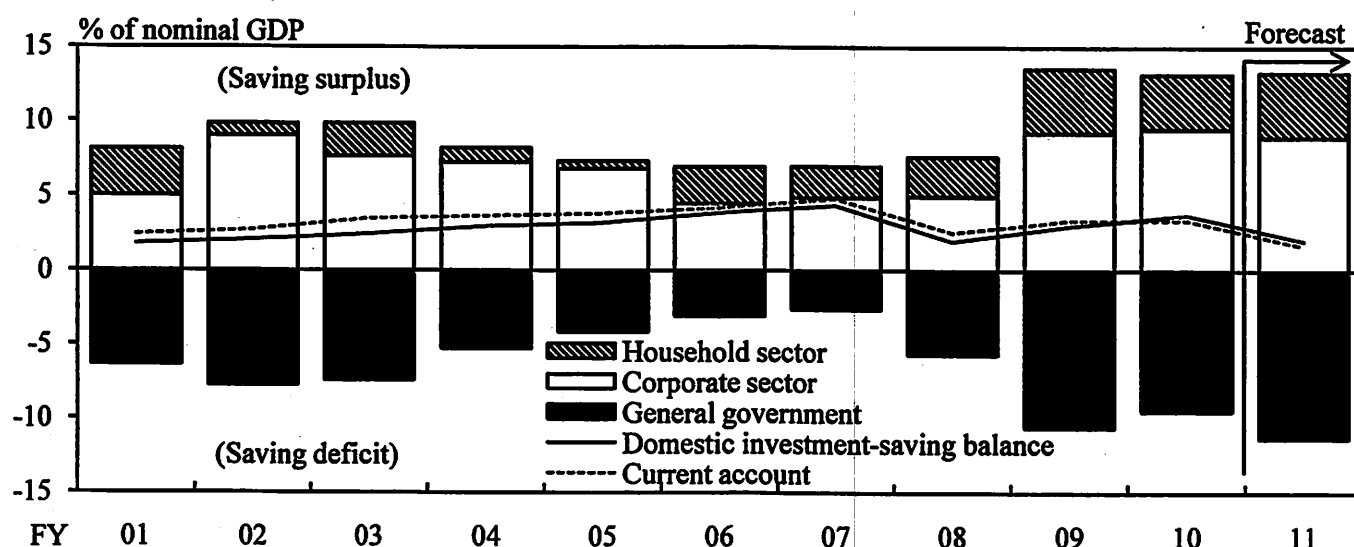
Current Account and Investment-Saving Balance

(1) Current Account



Note: Figures for fiscal 2011 are April 2011 to February 2012 averages in annual amount.

(2) Investment-Saving Balance



Notes: 1. The following factors are excluded from the domestic investment-saving balance: (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 2005); (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); and (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 and 2010).

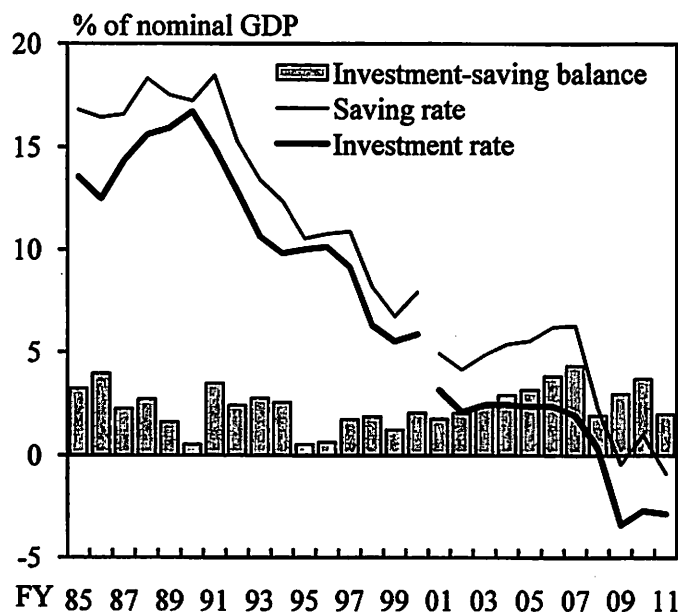
2. Figures for private final consumption expenditure and private housing investment in fiscal 2011 are calculated using the average year-on-year rate of change in the period from 2011/Q2 to Q4. The domestic investment-saving balance in fiscal 2011 is estimated by subtracting -0.3 percentage point (the difference between the domestic investment-saving balance and current account in fiscal 2010) from the current account.

3. The figures for nominal GDP and the investment-saving balance of the general government in fiscal 2011 are based on the "Economic and Fiscal Projections for Medium to Long Term Analysis (January 2012)." The figure for the balance of the household sector is estimated by subtracting private final consumption expenditure and private housing investment from personal disposable income, which is calculated by the nominal disposable income in Chart 49. The figure for the balance of the corporate sector is the residue.

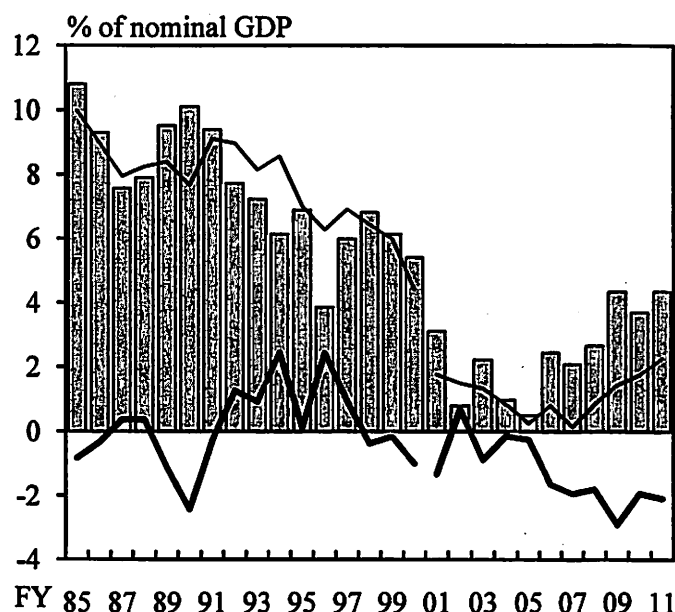
Sources: Cabinet Office, "National Accounts," "Economic and Fiscal Projections for Medium to Long Term Analysis"; Ministry of Finance and Bank of Japan, "Balance of Payments."

Investment-Saving Balance of Each Sector

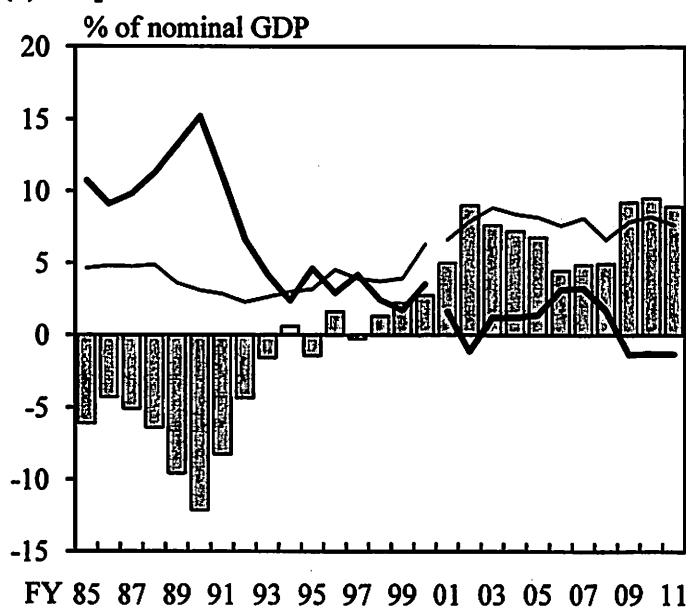
(1) Total



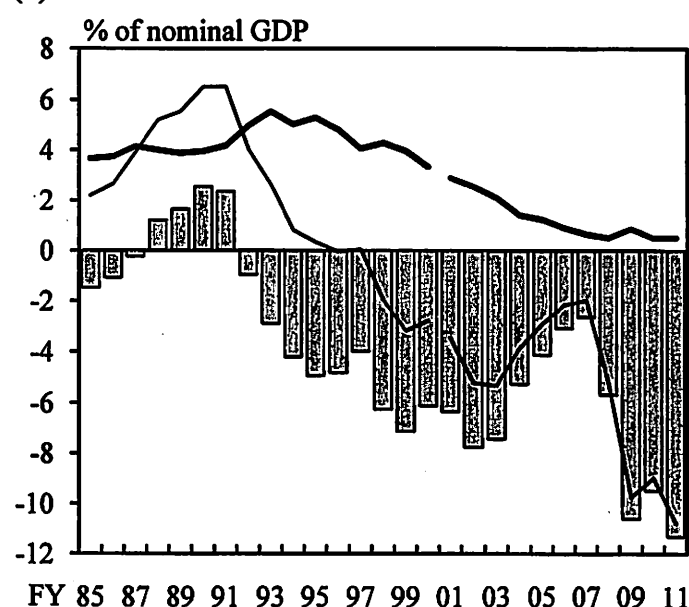
(2) Household Sector



(3) Corporate Sector



(4) General Government

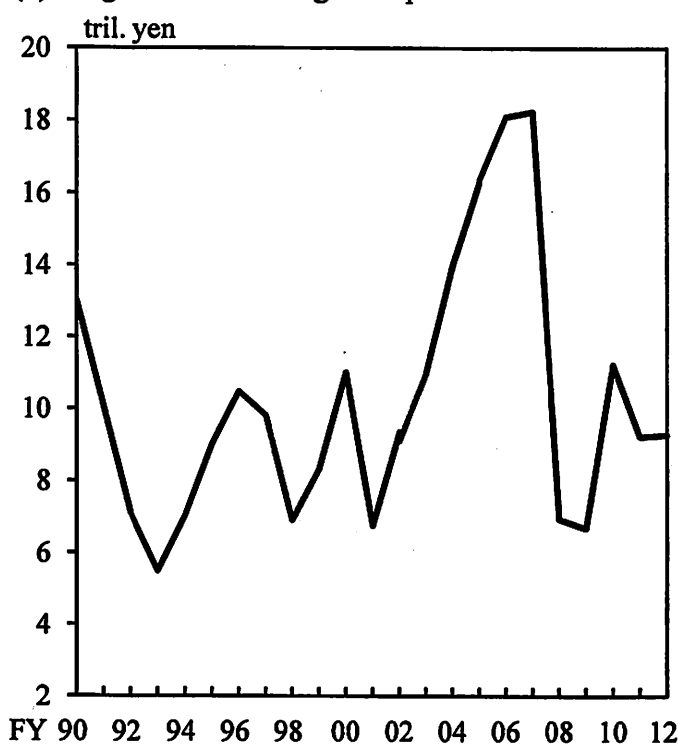


- Notes: 1. Investment rate = (gross domestic fixed capital formation - consumption of fixed capital + land investment + inventory investment) / nominal GDP
2. The following factors are excluded from the domestic investment-saving balance: (1) redemption of JGBs held by the Deposit Insurance Corporation of Japan (from fiscal 1998 to 2002); (2) transfer of Japan National Railway's long-term debt (fiscal 1998) and cumulative debt of the National Forestry Project (state-owned forests and fields) (fiscal 1998) to the general account of the general government; (3) transfer of assets and liabilities of the Japan Expressway Holding and Debt Repayment Agency to the general account (fiscal 2005); (4) 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); and (5) transfer of reserves in the special account for the Fiscal Investment and Loan Program to the general account of the general government (fiscal 2009 and 2010).
3. Figures up to fiscal 2000 are on the 2000 base, and those from fiscal 2001 are on the 2005 base.
4. Figures in fiscal 2011 are forecasts. For the estimation procedure, see Chart 39.

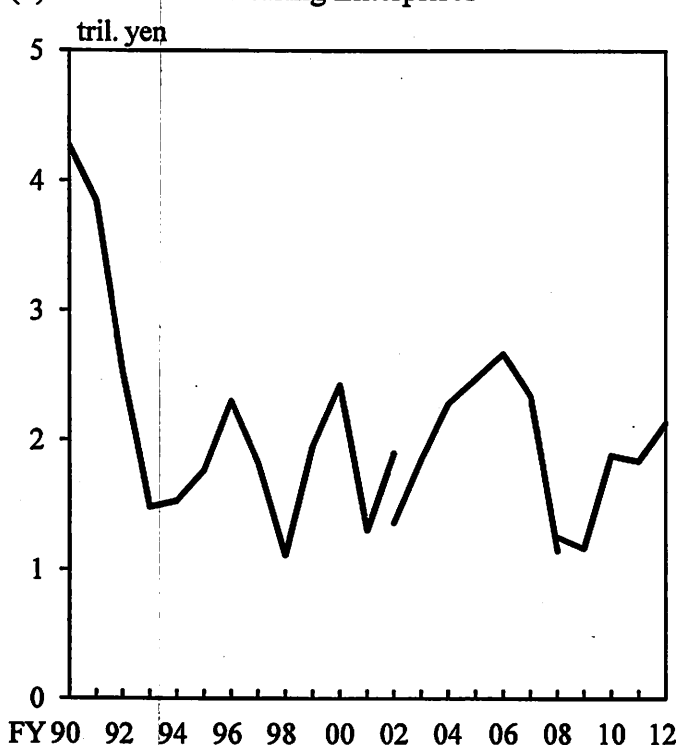
Sources: Cabinet Office, "National Accounts," "Economic and Fiscal Projections for Medium to Long Term Analysis"; Ministry of Finance and Bank of Japan, "Balance of Payments."

Corporate Profits

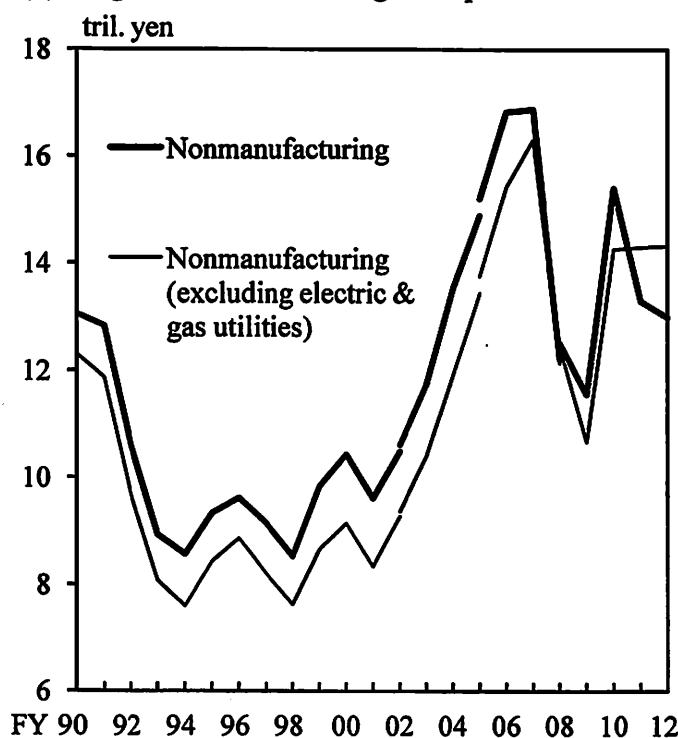
(1) Large Manufacturing Enterprises



(2) Small Manufacturing Enterprises



(3) Large Nonmanufacturing Enterprises



(4) Small Nonmanufacturing Enterprises



Notes: 1. Based on current profits.

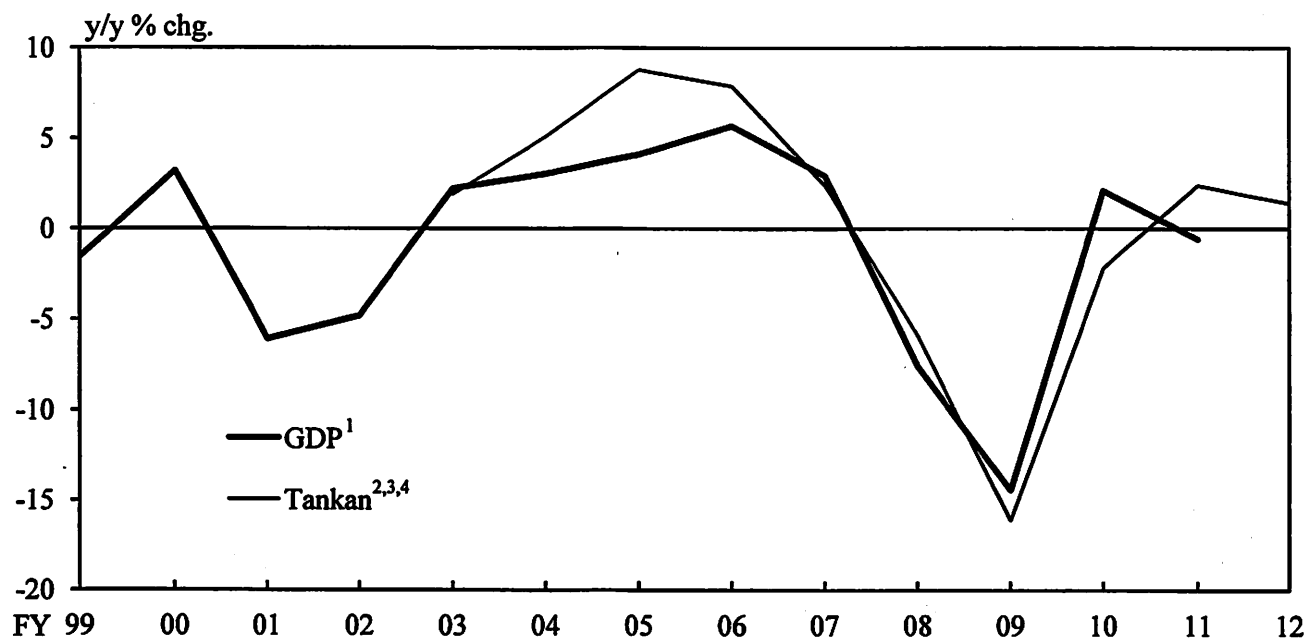
2. Figures for fiscal 2011 and fiscal 2012 are the forecasts in the March 2012 survey.

3. 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.

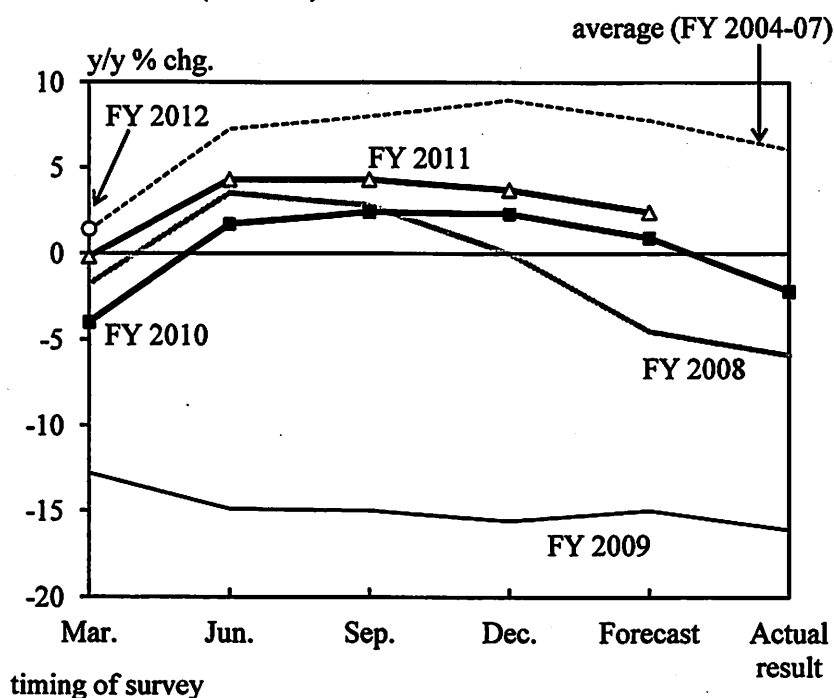
Source: Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan."

Business Fixed Investment Plans as Surveyed

(1) Business Fixed Investment



(2) Business Fixed Investment Plans (*Tankan*)^{2,3,5}



Notes: 1. Taken from "National Accounts." The figure is nominal private non-residential investment. That for fiscal 2011 is the 2011/Q2-Q4 average.

2. Based on all-size enterprises and all industries. Figures include software investment and exclude land purchasing expenses.

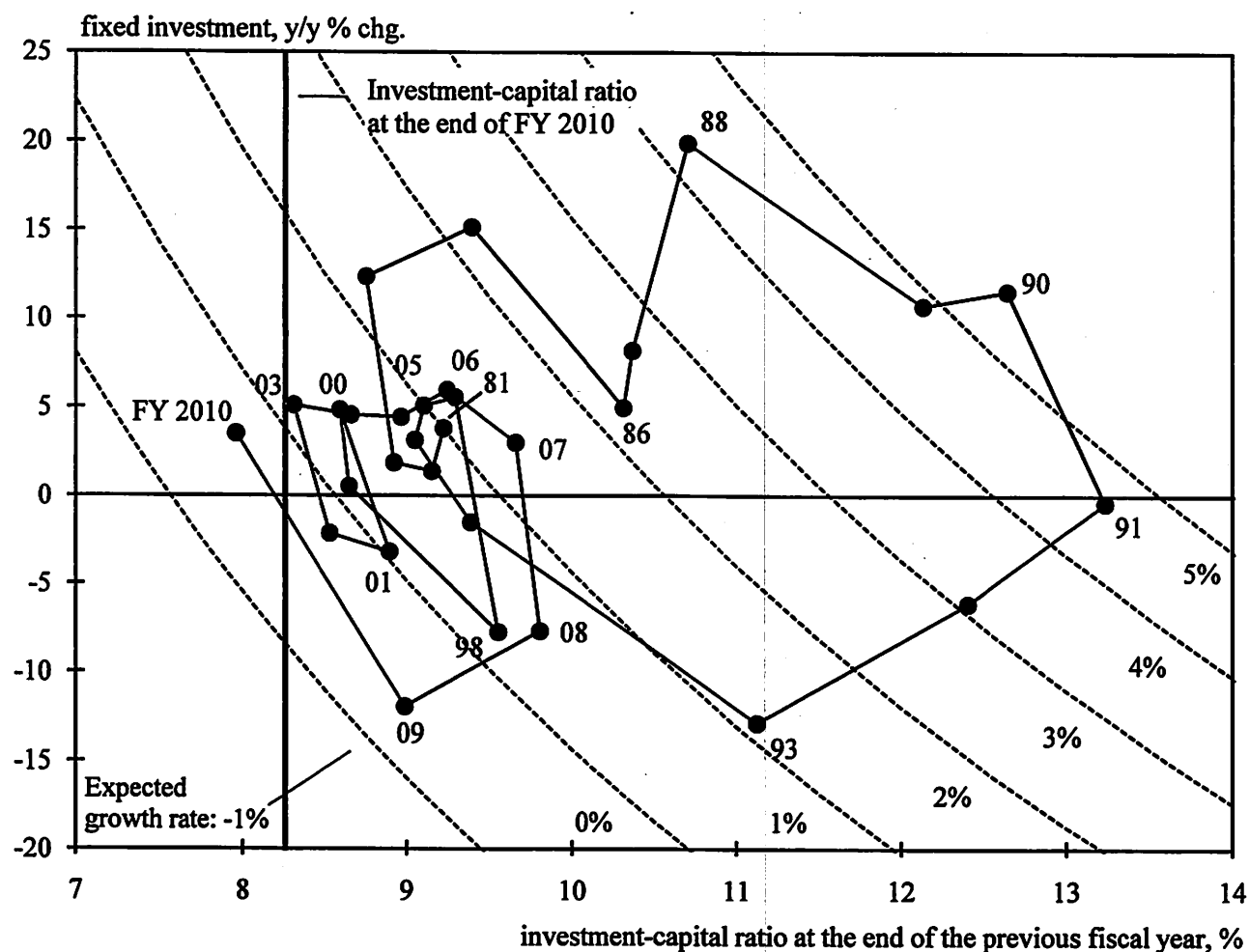
3. Since the introduction of the new accounting standard for lease transactions beginning on April 1, 2008, figures up to fiscal 2008 are based on the previous standard and figures from fiscal 2009 onward are based on the new standard.

4. Figures for fiscal 2011 and fiscal 2012 are the forecasts in the March 2012 survey.

5. Sample enterprises were revised in the March 2010 survey. Therefore, for fiscal 2009, figures up to the December survey are based on the previous data sets, and the figures for "forecast" and "actual result" are on the new basis.

Sources: Cabinet Office, "National Accounts"; Bank of Japan, "*Tankan*, Short-Term Economic Survey of Enterprises in Japan."

Capital Stock Cycle



1. Capital stock cycle in the chart shows 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.

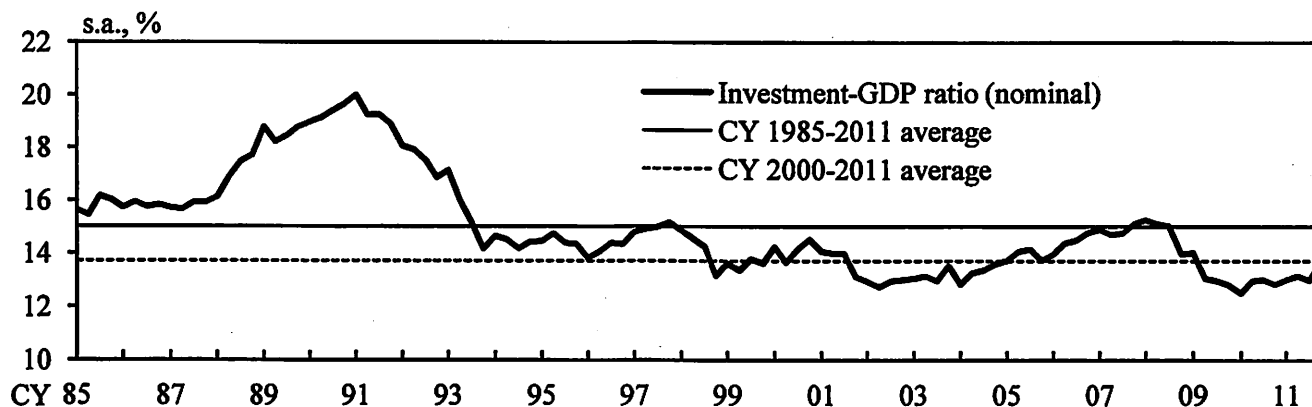
$$\text{Year-on-year rate of change in fixed investment (y-axis)} \times \text{investment-capital ratio at the end of the previous fiscal year (x-axis)} = \text{expected growth rate} + \text{trend growth rate of capital coefficient} + \text{depreciation rate}$$
3. The phase of fixed investment at a certain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

Sources: Cabinet Office, "National Accounts";

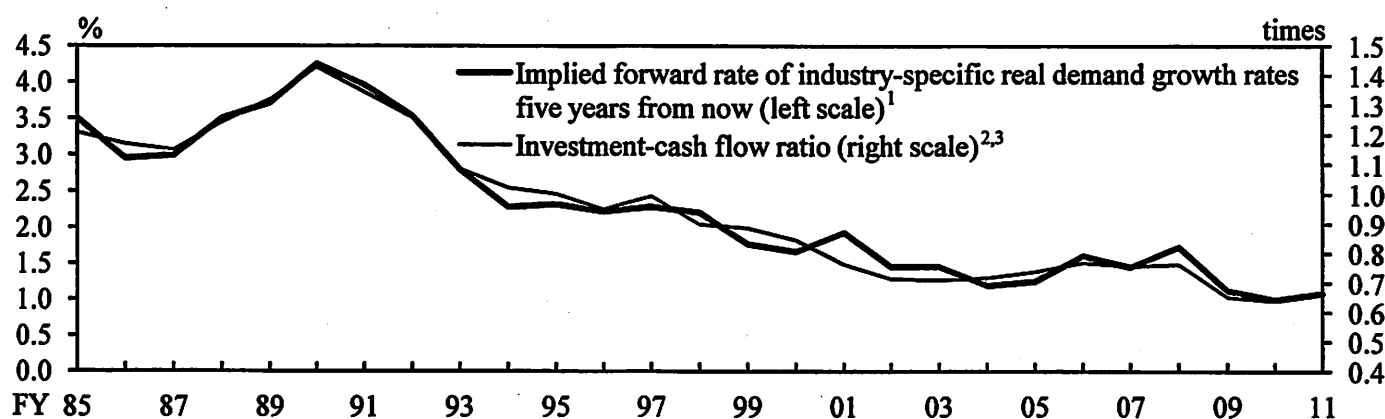
Research Institute of Economy, Trade and Industry, "Japan Industrial Productivity Database."

Business Fixed Investment

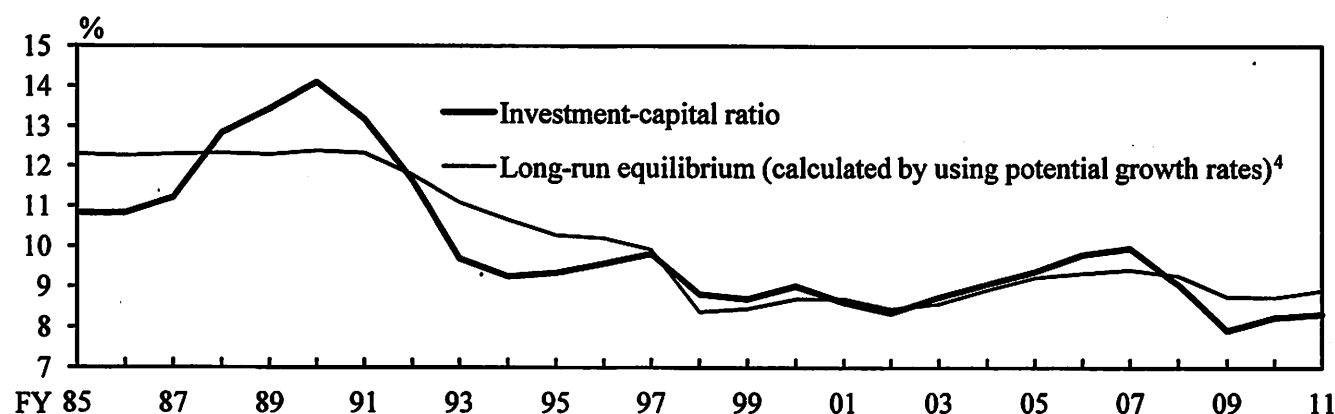
(1) Investment-GDP Ratio (Nominal)



(2) Cash Flow and Business Fixed Investment



(3) Investment-Capital Ratio (I_t / K_{t-1})⁵



Notes: 1. Calculated using the "Annual Survey of Corporate Behavior." Figures surveyed in January or February in the 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 on the 2000 base.

4. $(I_t / I_{t-1}) \cdot (I / K)_{t-1}$ = depreciation rate + trend growth rate of capital coefficient + potential growth rate (see the explanation in Chart 43). Since the left-hand term equals I_t / K_{t-1} , the equation can be expressed as I_t / K_{t-1} = depreciation rate + trend growth rate of capital coefficient + potential growth rate.

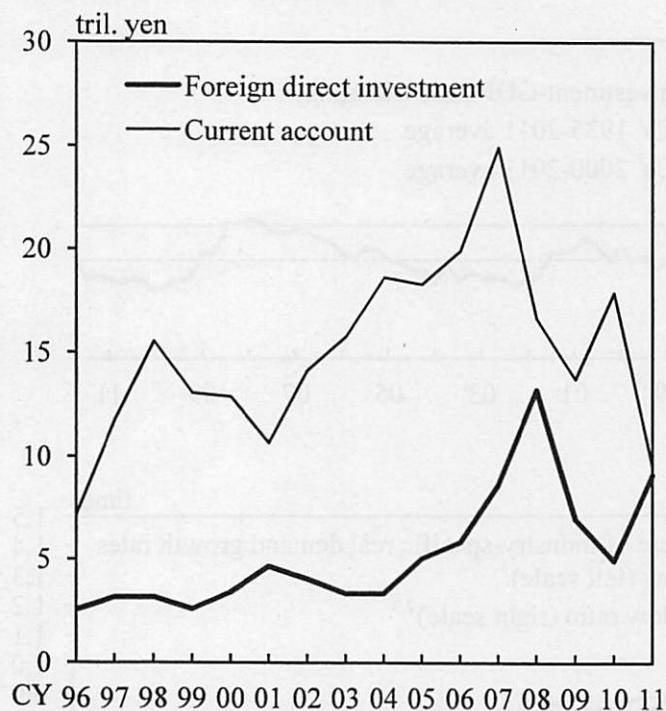
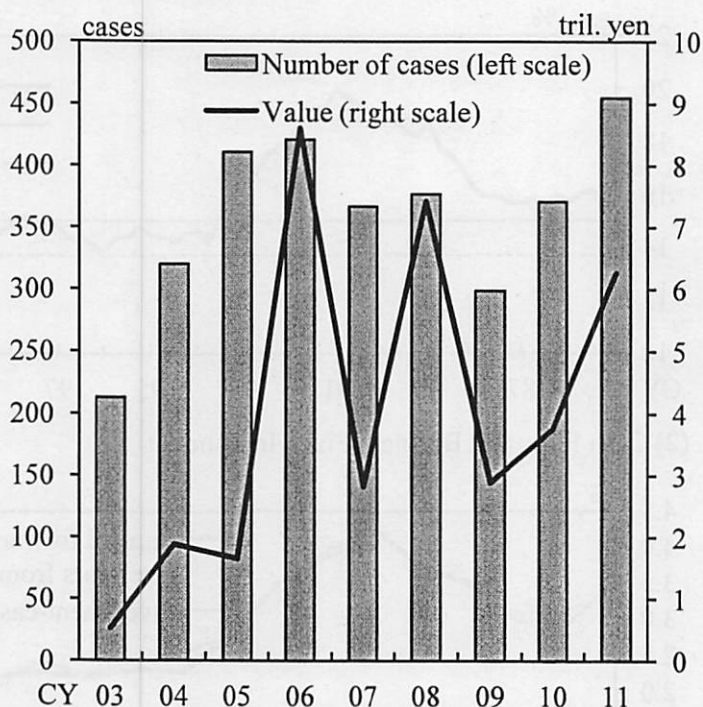
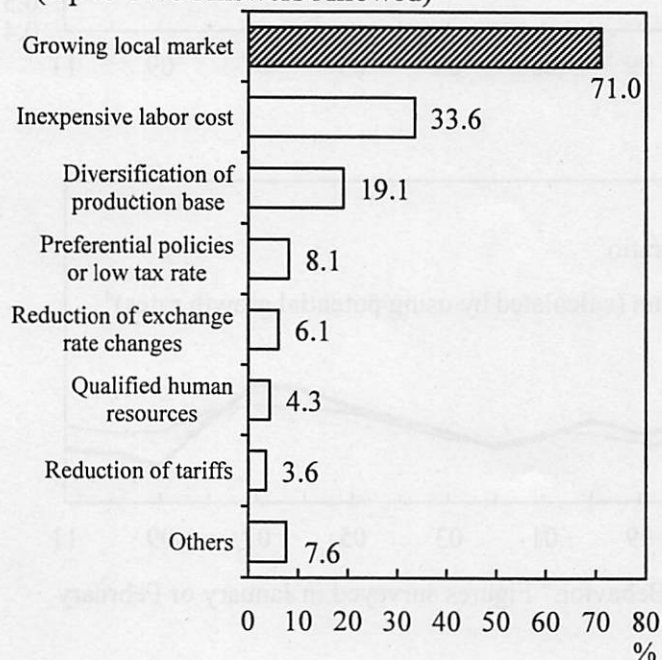
The long-run equilibrium of I_t / K_{t-1} is calculated by using this equation and potential growth rates.

5. Figures for fiscal 2011 are those for 2011/Q2-Q4 in an annual amount.

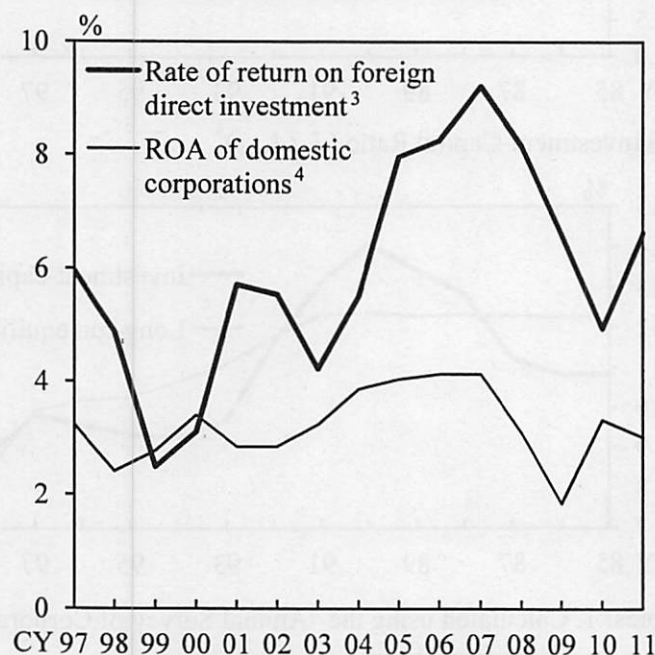
Sources: Cabinet Office, "National Accounts," "Annual Survey of Corporate Behavior";
Research Institute of Economy, Trade and Industry, "Japan Industrial Productivity Database," etc.

Corporate Overseas Investment Activities

(1) Foreign Direct Investment

(2) Overseas M&A¹(3) Reasons for Overseas Business Fixed Investment²
(Up to Two Answers Allowed)

(4) Rates of Return in Japan and Overseas



Notes: 1. M&A of foreign companies by Japanese companies.

2. Taken from the "Opinion Poll on Corporate Behavior" in the July 2011 survey.

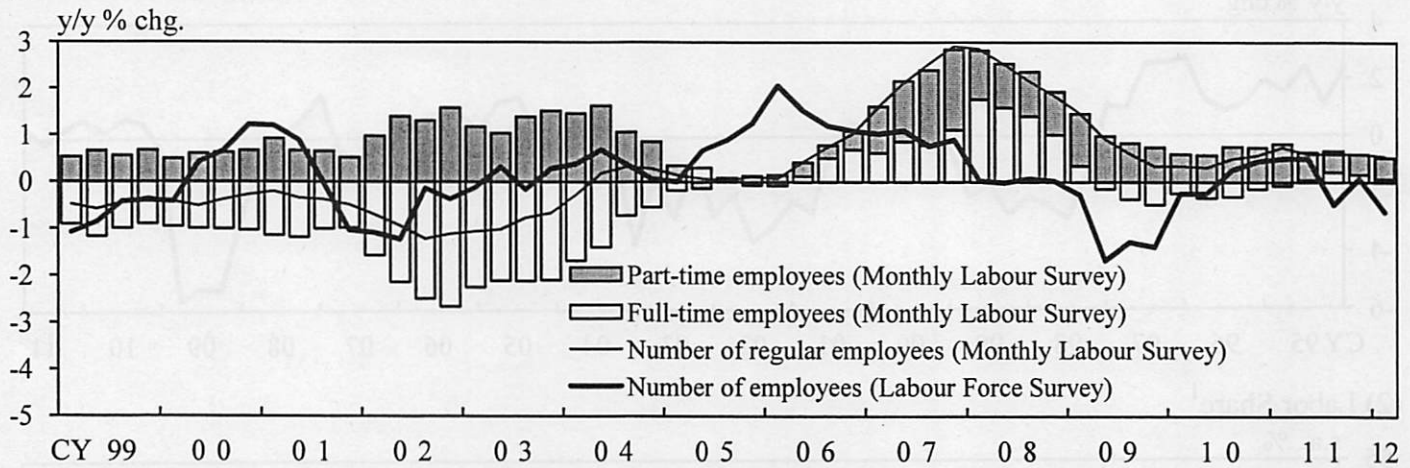
3. Figures are calculated as direct investment income (credit) divided by direct investment assets. Figures for 2011 are based on the quarterly estimate of the international investment position at the end of December (preliminary estimate). Financial derivatives are excluded from the quarterly estimate.

4. Figures are calculated as operating profits divided by total assets and four quarterly averages. Based on all-size enterprises and all industries. Figures exclude finance and insurance.

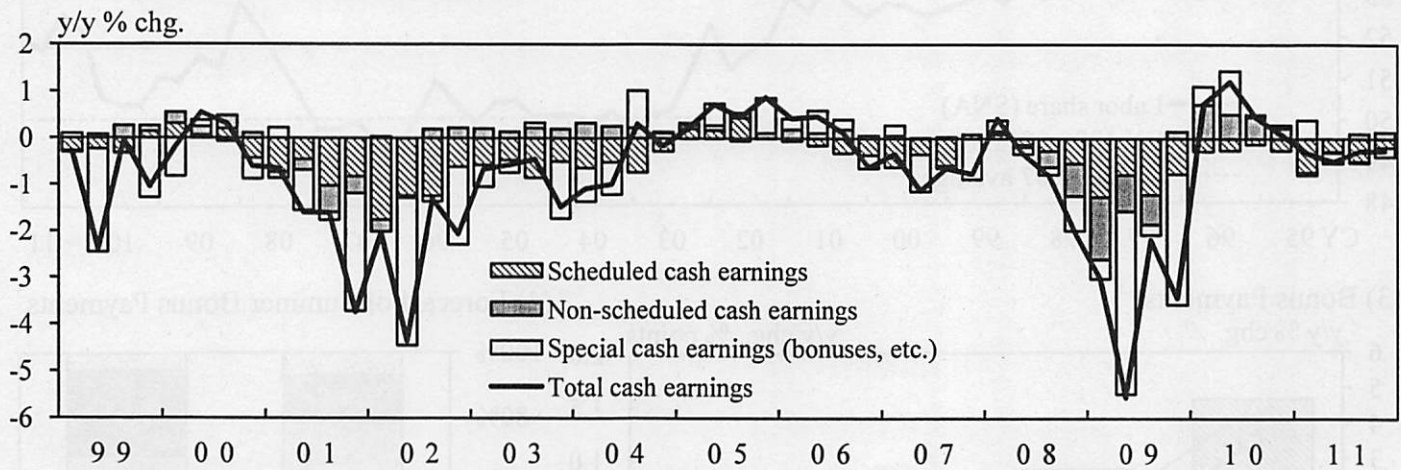
Sources: Ministry of Finance and Bank of Japan, "Balance of Payments"; RECOF DATA, "MARR"; Development Bank of Japan, "Opinion Poll on Corporate Behavior"; Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

Employee Income

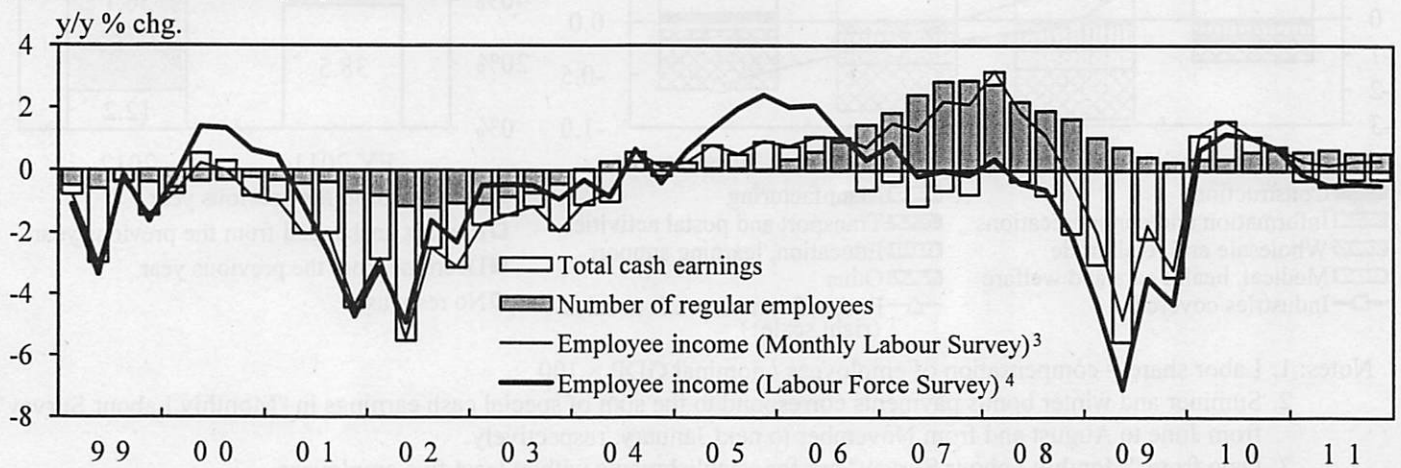
(1) Number of Employees^{1,5}



(2) Breakdown of Total Cash Earnings^{1,2}



(3) Breakdown of Employee Income^{1,2}



Notes: 1. Data of the "Monthly Labour Survey" are for establishments with at least five employees.

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

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

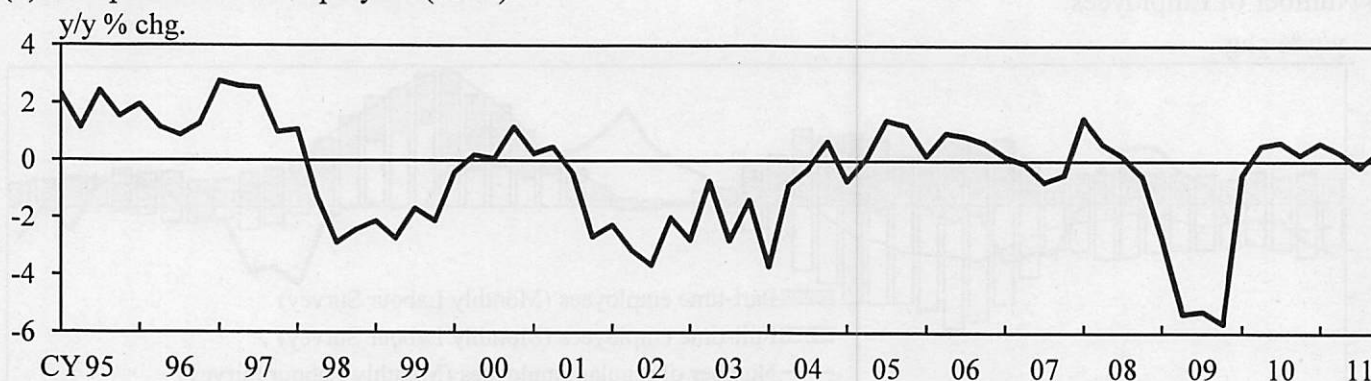
4. Calculated as the "number of employees" (Labour Force Survey) times "total cash earnings" (Monthly Labour Survey).

5. Figures for 2012/Q1 are January-February averages.

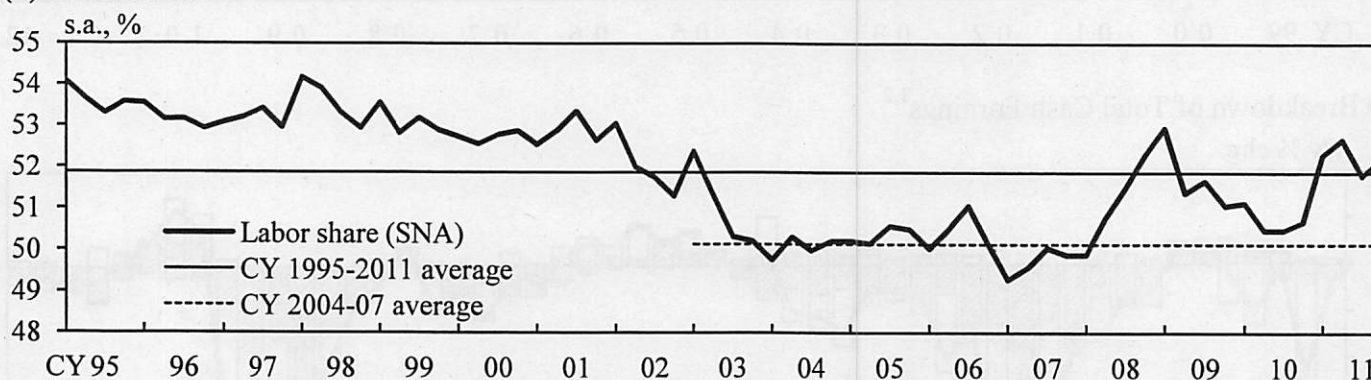
Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey";
Ministry of Internal Affairs and Communications, "Labour Force Survey."

Employment and Wages

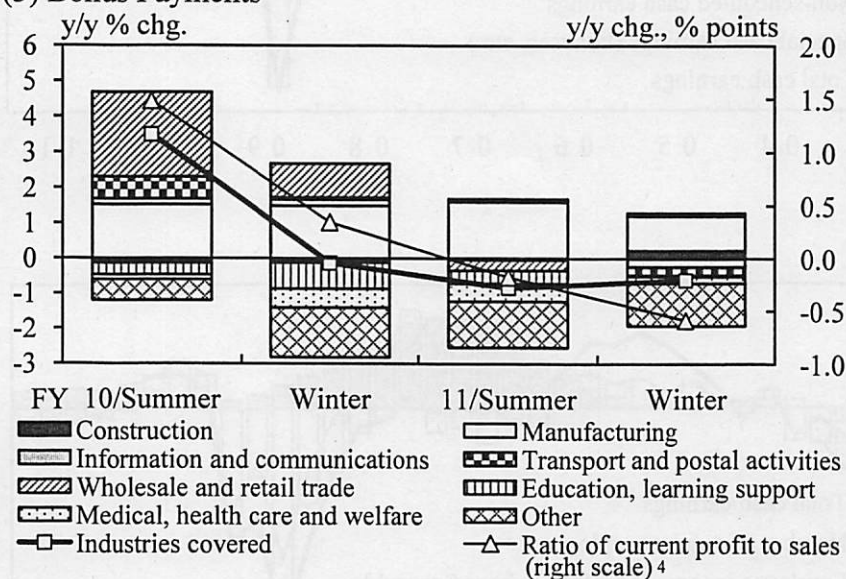
(1) Compensation of Employees (SNA)



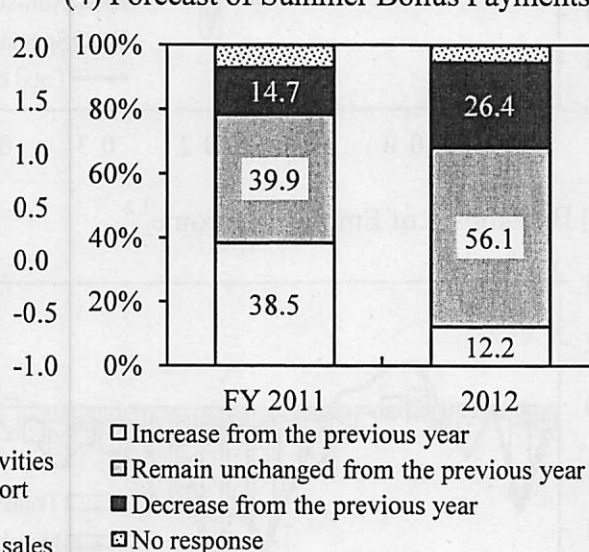
(2) Labor Share¹



(3) Bonus Payments^{2,3}



(4) Forecast of Summer Bonus Payments⁵



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

2. Summer and winter bonus payments correspond to the sum of special cash earnings in "Monthly Labour Survey" from June to August and from November to next January, respectively.

3. Data from "Monthly Labour Survey" are for establishments with at least five employees.

4. Taken from the "Tankan." All-size enterprises and all industries.

The figures for fiscal 2011 are the forecasts in the March 2012 survey.

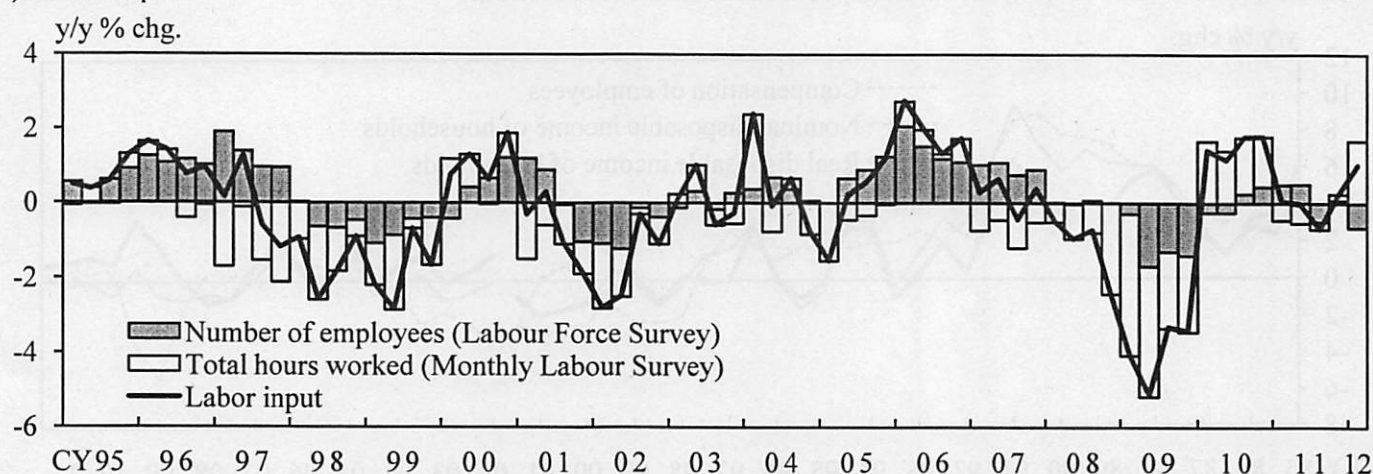
5. The result of survey by the Institute of Labour Administration.

Sample enterprises are selected from listed enterprises on the Tokyo Stock Exchange First Section and Second Section. The number of reporting enterprises for the results for fiscal 2012 is 148.

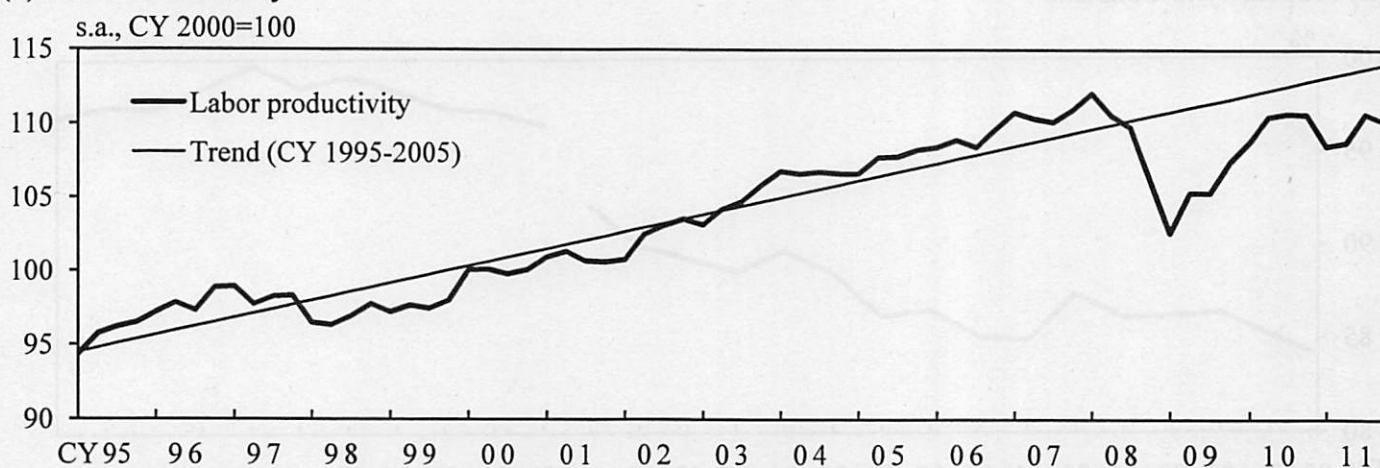
Sources: Cabinet Office, "National Accounts"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey"; Bank of Japan, "Tankan, Short-Term Economic Survey of Enterprises in Japan"; The Institute of Labour Administration.

Supply and Demand Conditions in the Labor Market

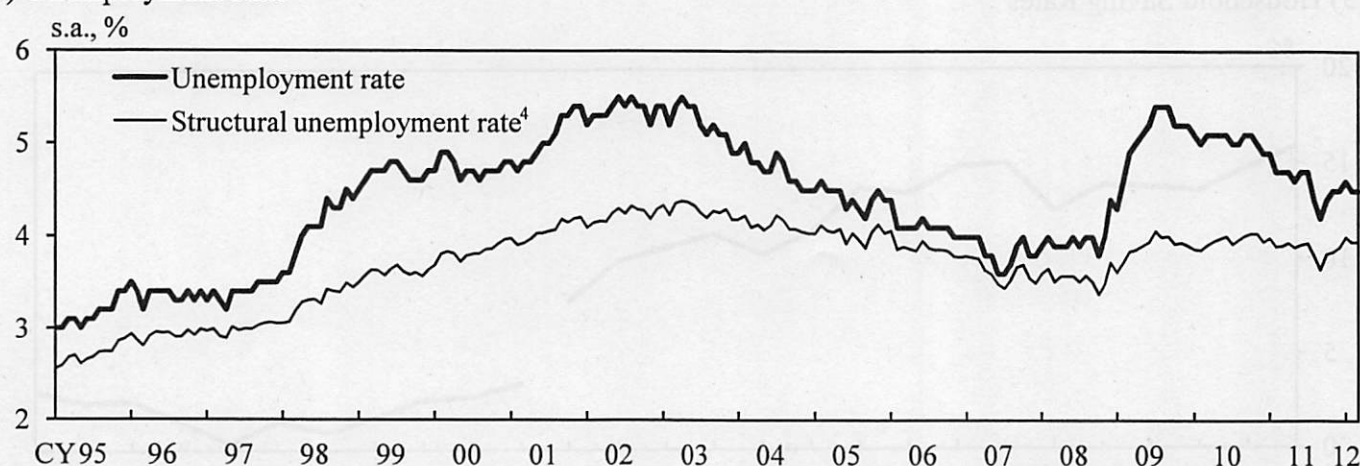
(1) Labor Input^{1,2}



(2) Labor Productivity³



(3) Unemployment Rate



Notes: 1. Data from "Monthly Labour Survey" are for establishments with at least five employees.

2. Figures for 2012/Q1 are January-February averages.

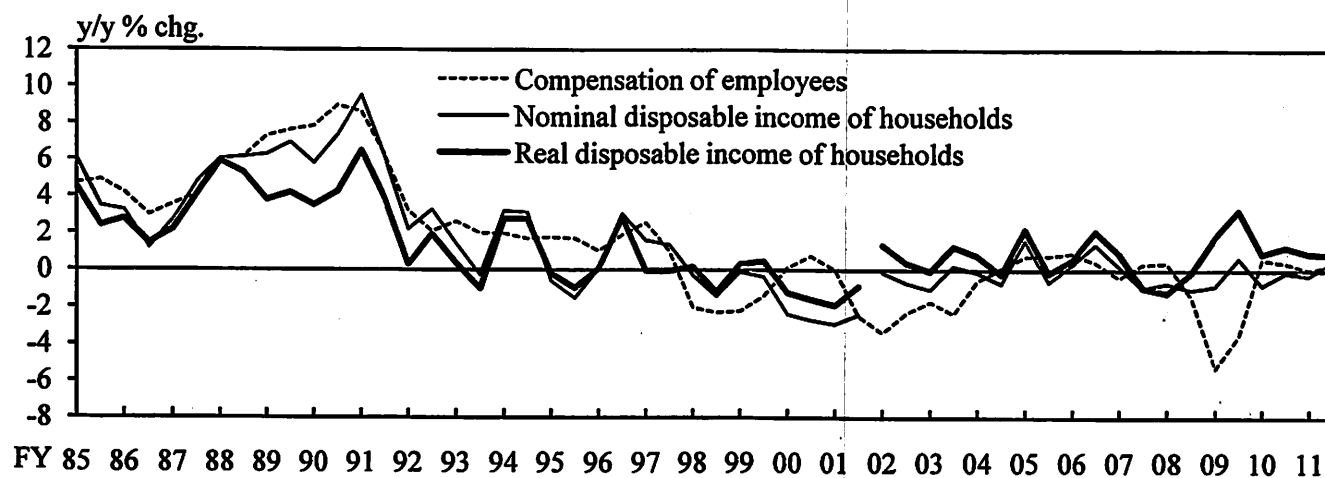
3. Labor productivity = real GDP / number of employed persons

4. 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.

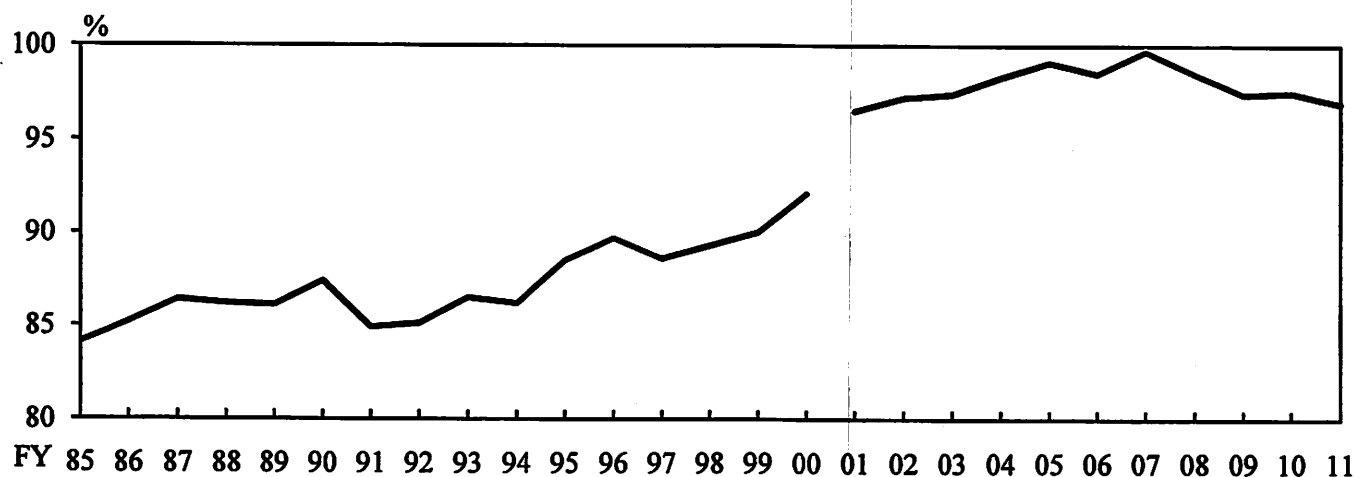
Sources: Ministry of Internal Affairs and Communications, "Labour Force Survey"; Cabinet Office, "National Accounts"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Report on Employment Service."

Disposable Income of Households, Propensity to Consume, and Saving Rates

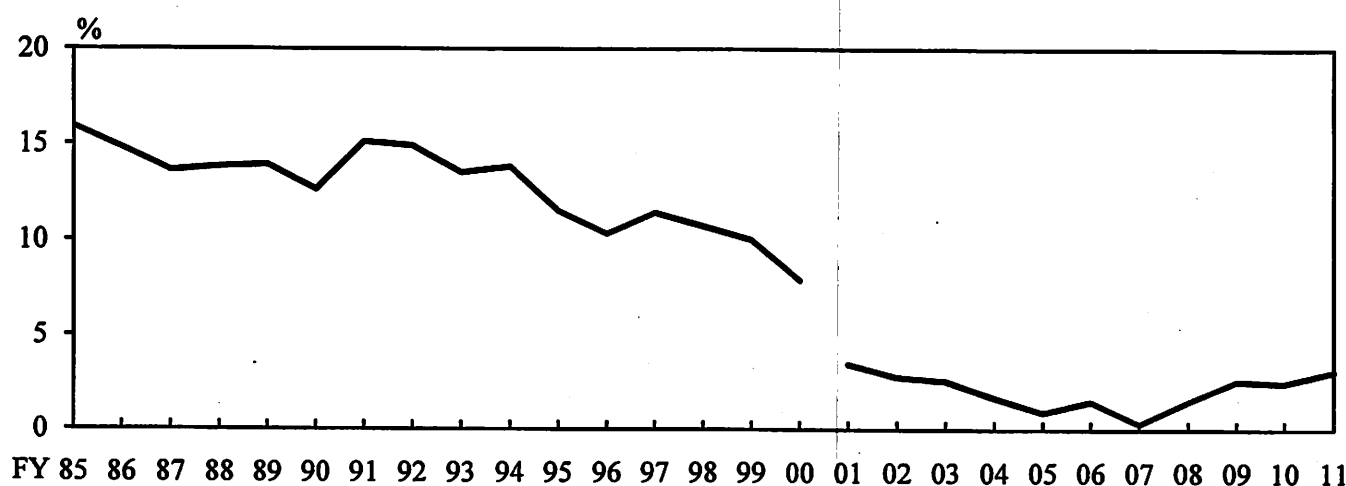
(1) Compensation of Employees and Disposable Income of Households^{1,2}



(2) Propensity to Consume²



(3) Household Saving Rates²

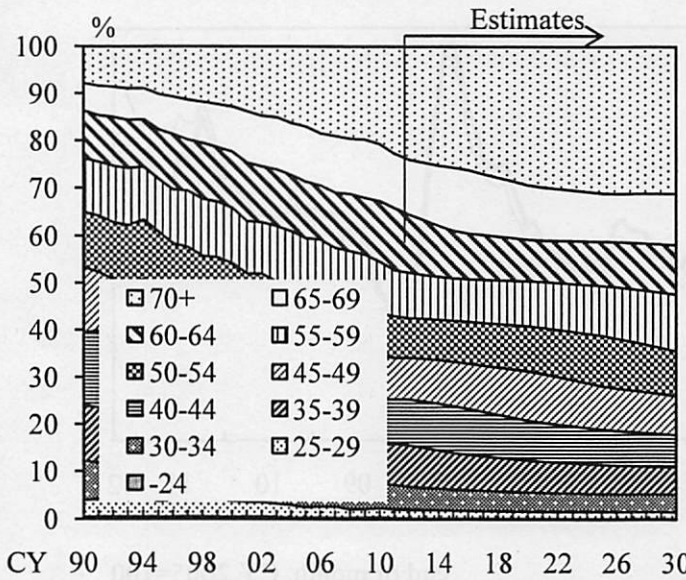
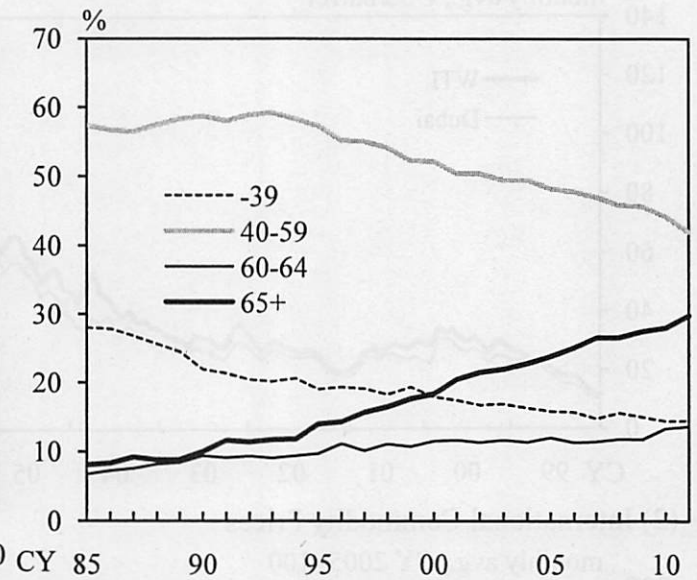
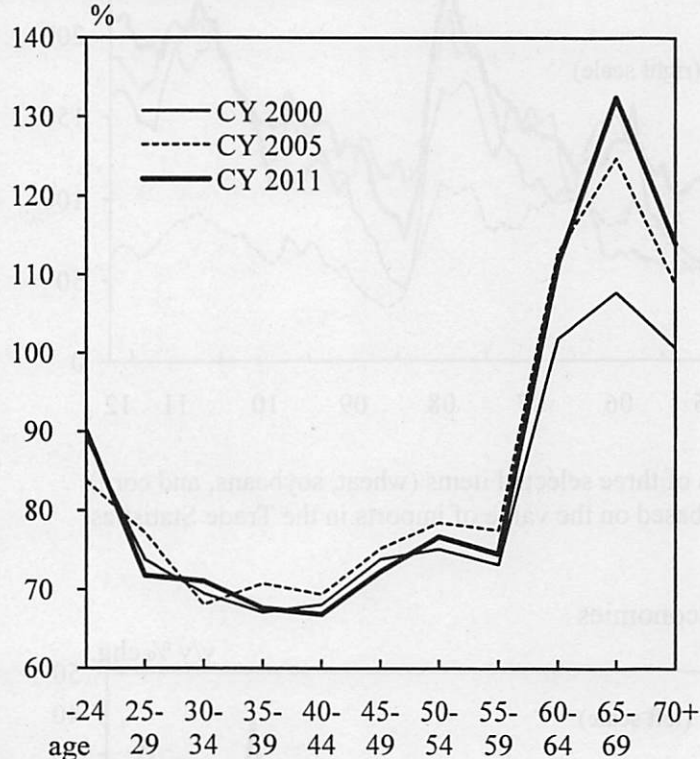
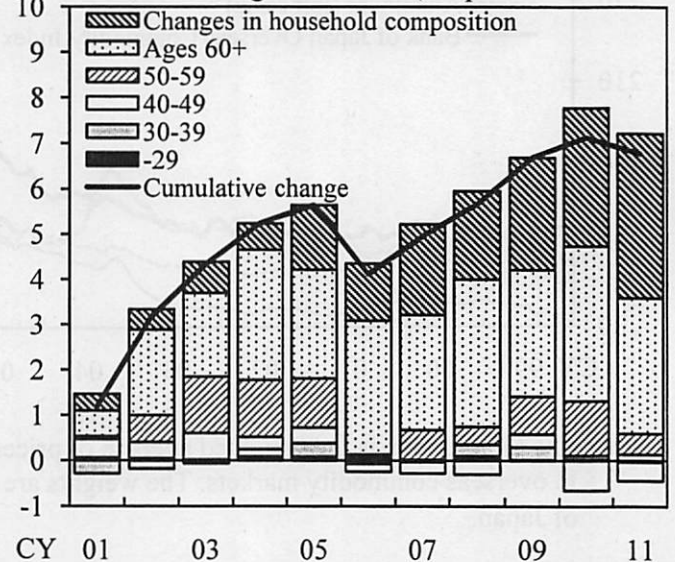


Notes: 1. The figure for compensation of employees for the second half of fiscal 2011 is calculated using of the average year-on-year rate of change in the period from 2011/Q2-Q4.

2. Figures for propensity to consume and household saving rates are on a National Accounts basis. The figure for disposable income of households for the second half of fiscal 2011, and those for propensity to consume and household saving rates for fiscal 2011 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. Figures up to fiscal 2000 are on the 2000 base. From fiscal 2001, they are on the 2005 base.

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications, "Consumer Price Index"; Budgets for fiscal 2009-11, etc.

Population Aging and Private Consumption

(1) Number of Households by Age^{1,2}(2) Shares of Private Consumption by Age¹(3) Propensity to Consume by Age³(4) Change in Propensity to Consume³
cumulative changes from 2000, % points

Note: The breakdown is based on the following equation.

$$\frac{C'}{Y'} - \frac{C}{Y} = \sum_i \left[\underbrace{\left(\frac{C'_i}{Y'_i} - \frac{C_i}{Y_i} \right)}_{\text{Propensity to consume (y/y chg.)}} \underbrace{\frac{1}{2} \left(\frac{Y'_i}{Y'} + \frac{Y_i}{Y} \right)}_{\text{Changes within age brackets}} + \underbrace{\left(\frac{Y'_i}{Y'} - \frac{Y_i}{Y} \right) \frac{1}{2} \left(\frac{C'_i}{Y'_i} + \frac{C_i}{Y_i} \right)}_{\text{Changes in household composition}} \right]$$

C : Consumption, Y : Disposable income, i : Age brackets, C' : C_{t+1}

Notes: 1. Based on the "Family Income and Expenditure Survey" (two-or-more-person households). Figures up to 1999 exclude agricultural, forestry, and fisheries households.

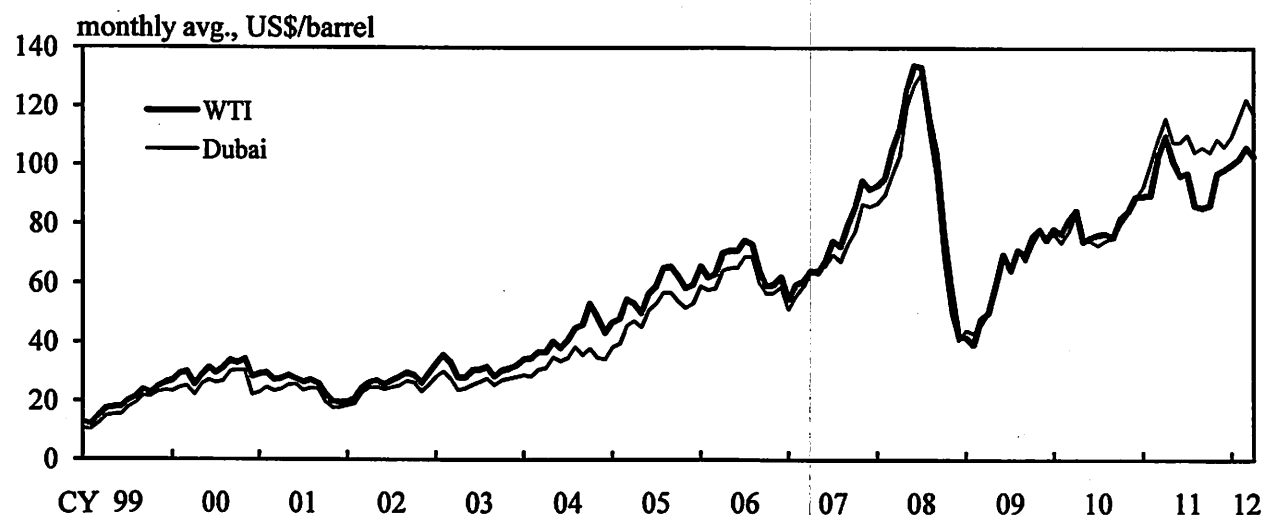
2. Up to 1999, figures for ages 70+ are calculated using the ratio of the figures for ages 70+ to those of 65+ as of 2000. Estimates from 2012 are based on household projections (March 2008) by the National Institute of Population and Social Security Research.

3. Figures for propensity to consume are calculated by using consumption expenditure and disposable income, which are averages weighted by the number of workers' households and no-occupation households.

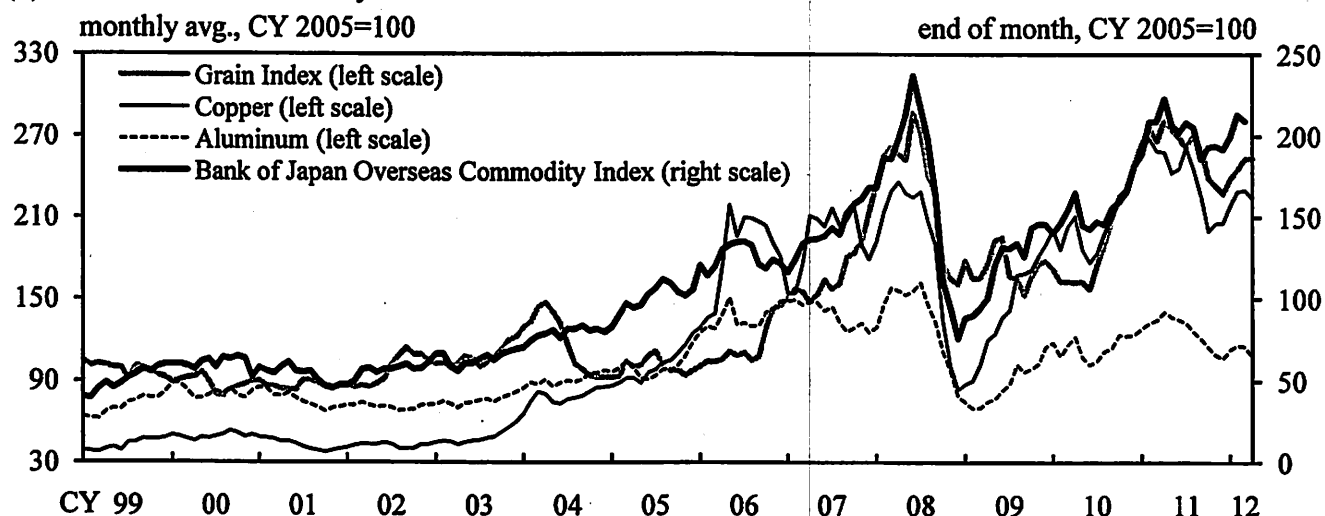
Sources: Ministry of Internal Affairs and Communications, "Family Income and Expenditure Survey"; National Institute of Population and Social Security Research, "Household Projections for Japan."

International Commodity Prices and Overseas Economies

(1) Oil Prices

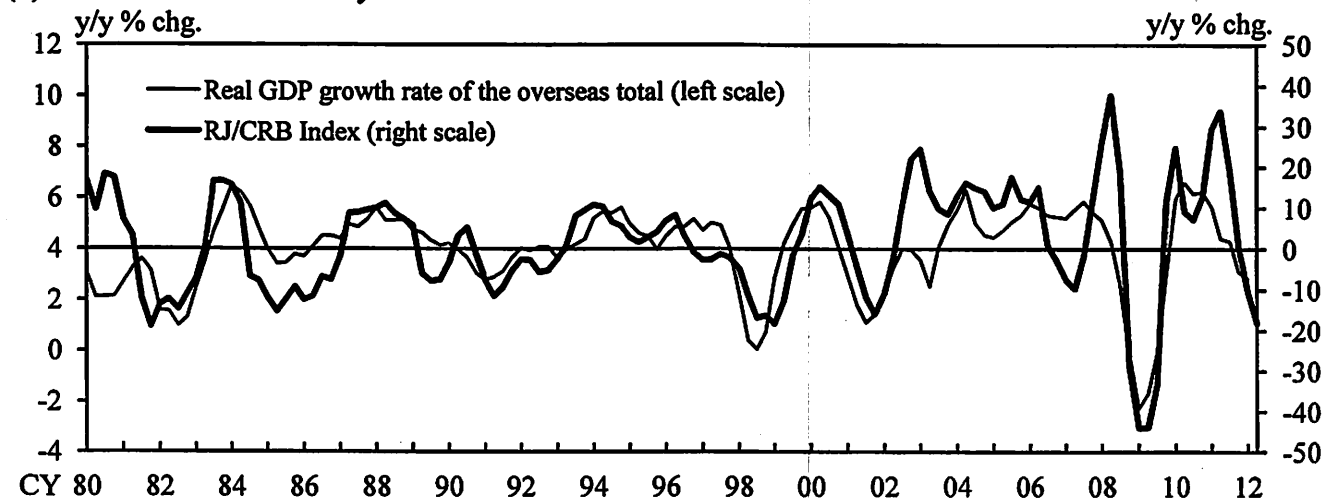


(2) International Commodity Prices



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.

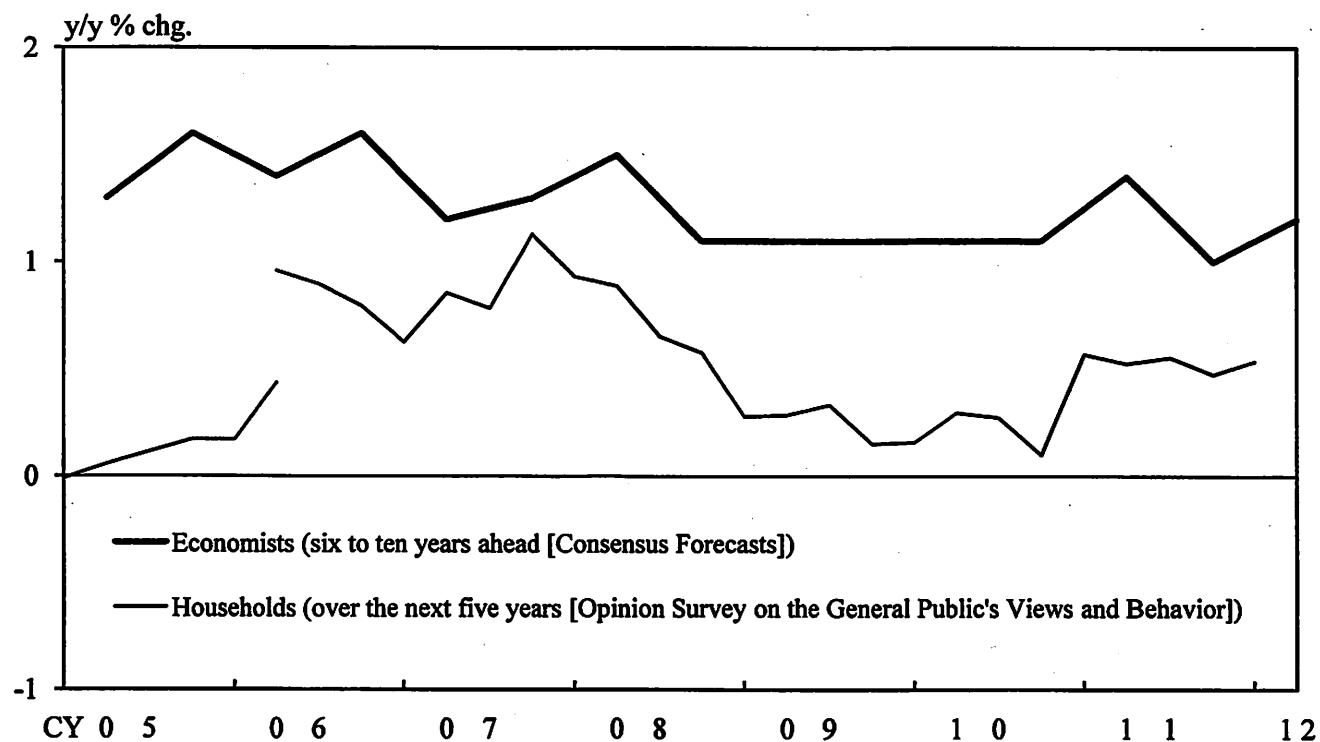
(3) International Commodity Prices and Overseas Economies



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

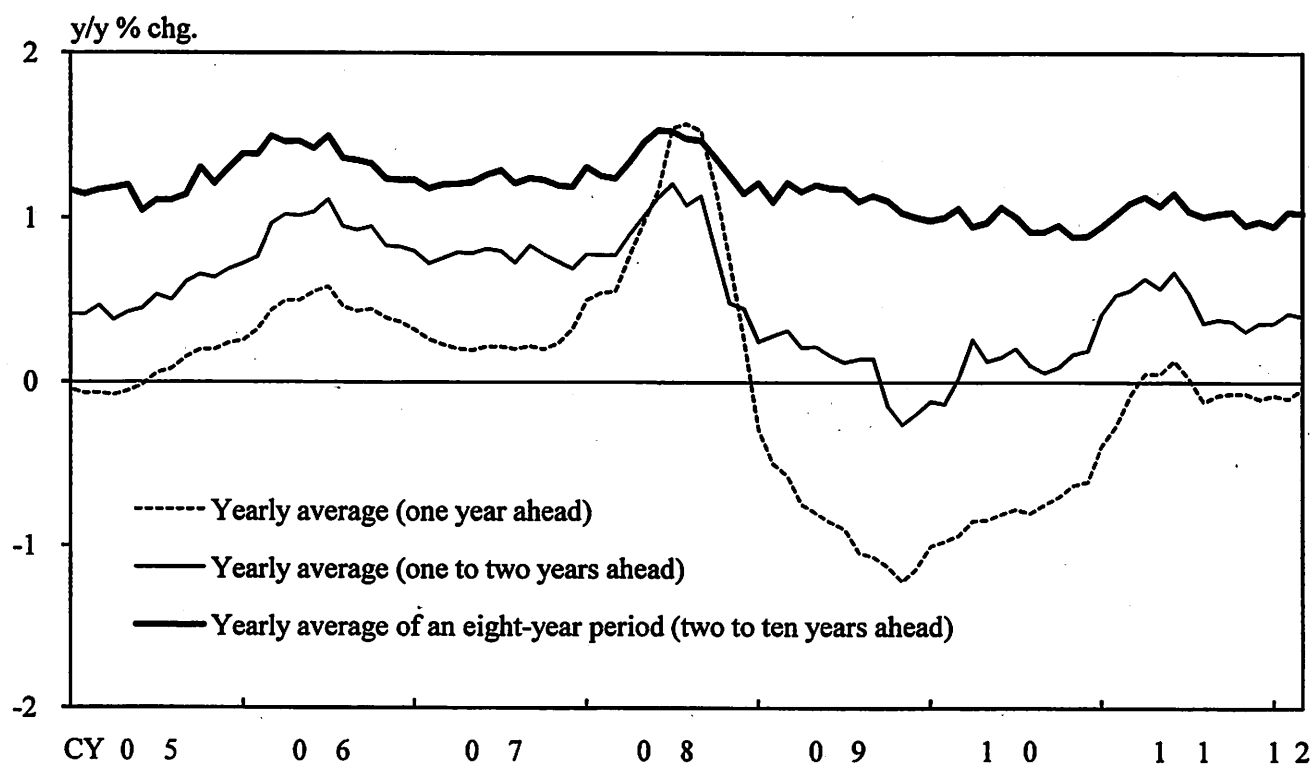
Inflation Expectations

(1) Expected Rates of Inflation over the Medium to Long Term (Economists, Households)



Note: Figures for households 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).

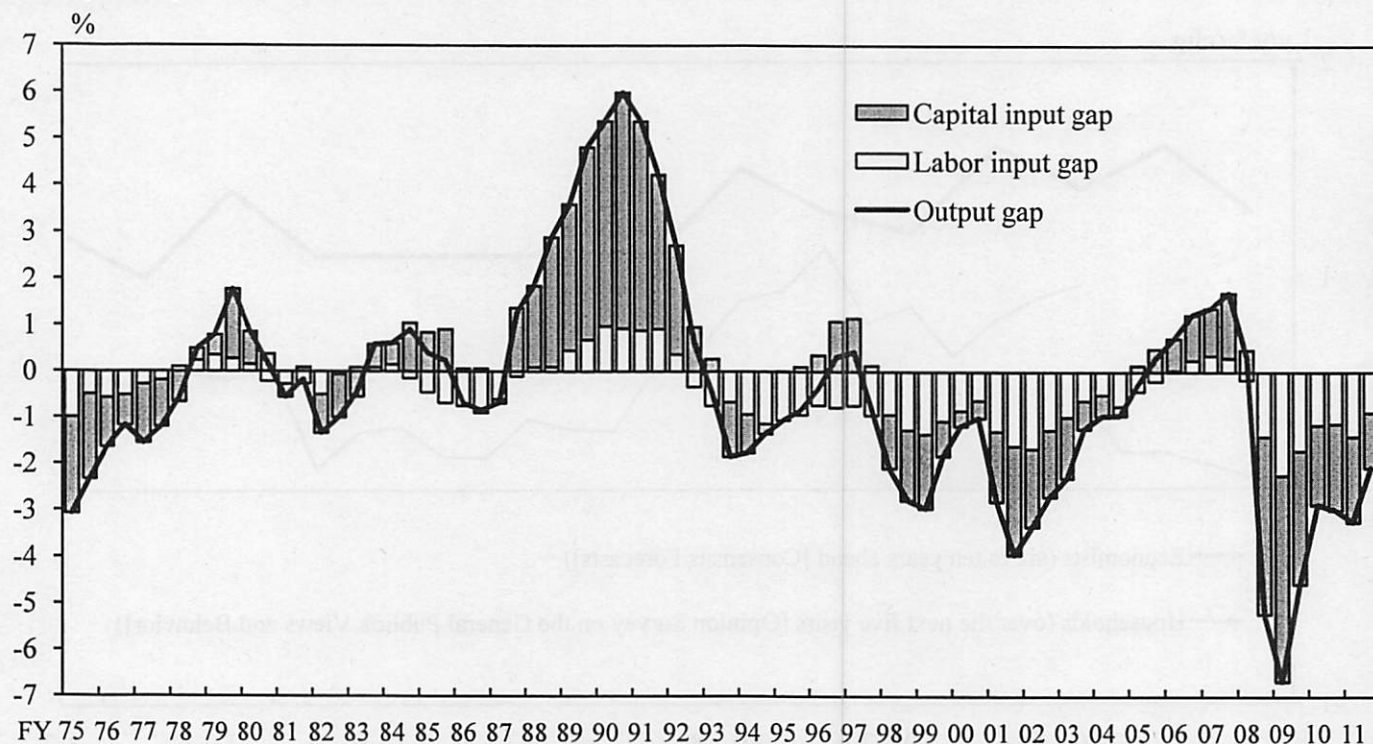
(2) Expected Rates of Inflation (Market Participants)



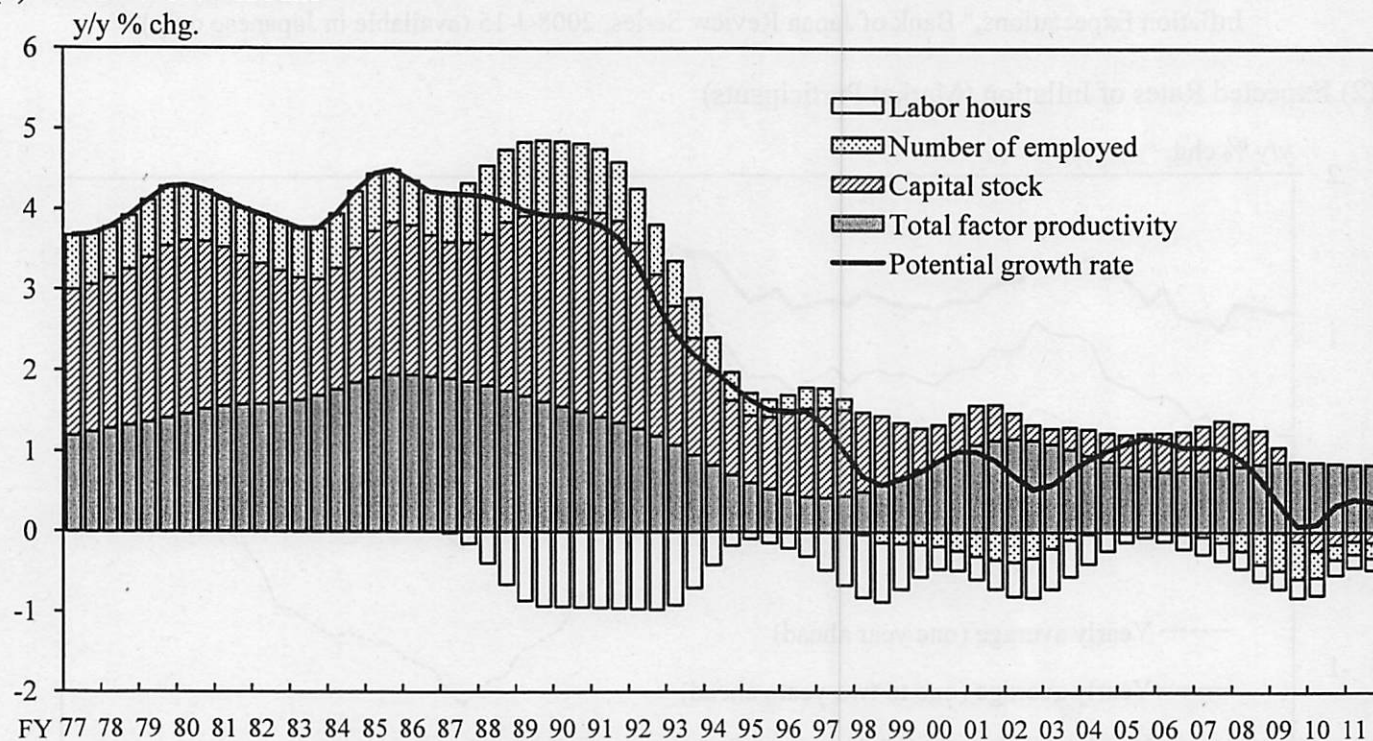
Sources: Bank of Japan, "Opinion Survey on the General Public's Views and Behavior"; Consensus Economics Inc., "Consensus Forecasts"; QUICK, "Quick Bond Monthly Survey."

Output Gap and Potential Growth Rate

(1) Output Gap



(2) Potential Growth Rate

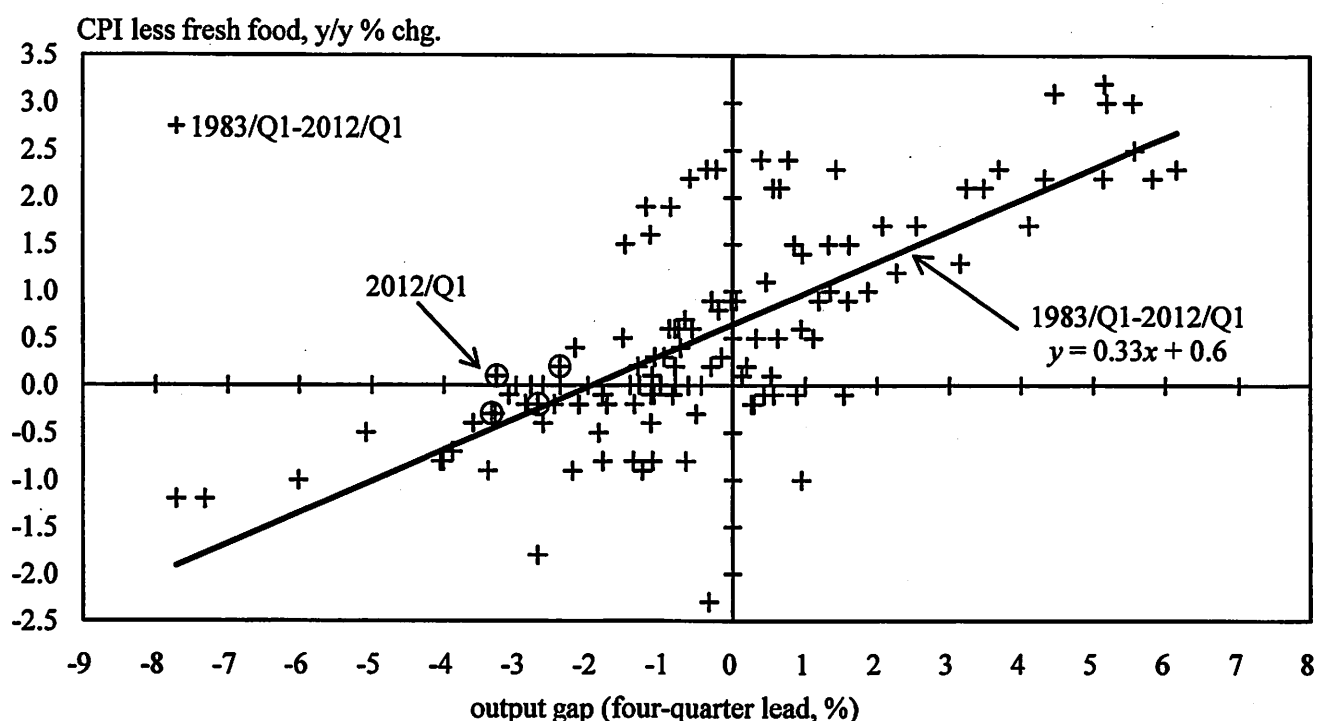
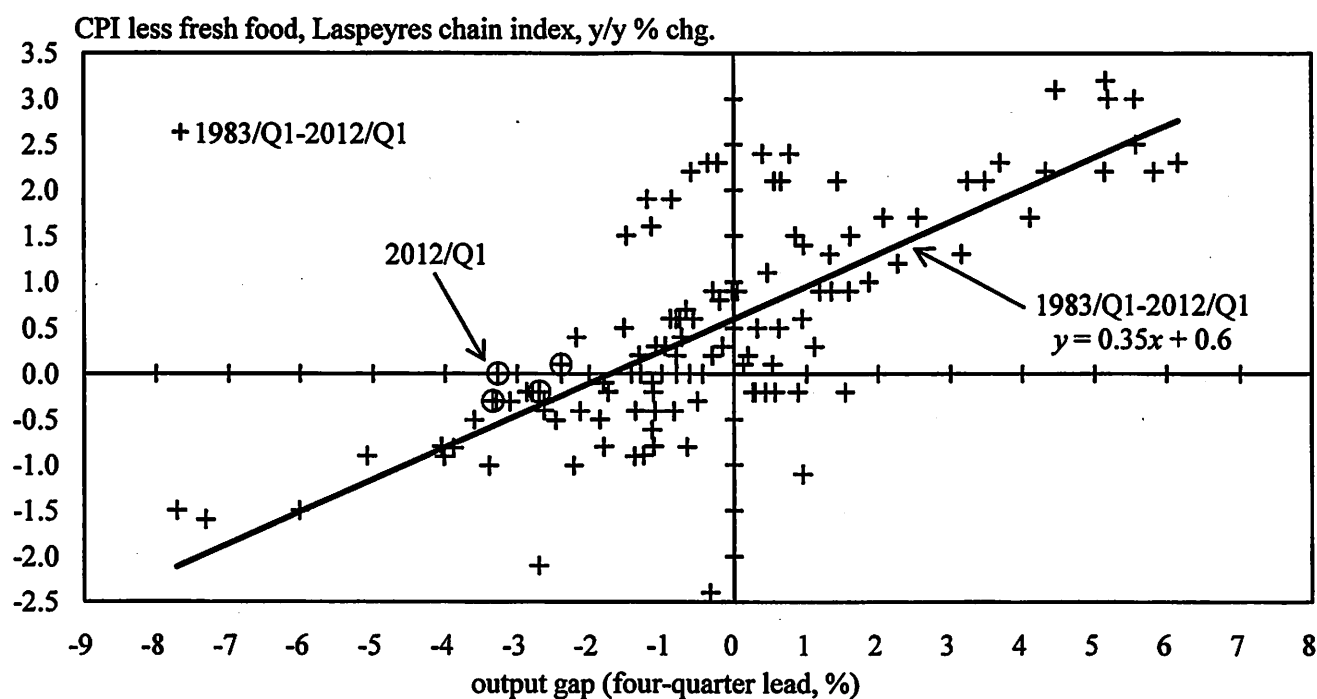


Notes: 1. The output gap and the potential growth rate are estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3.

2. Figures for the second half of fiscal 2011 are those of 2011/Q4.

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.

Output Gap and Inflation Rate (1)

(1) Phillips Curve (CPI Less Fresh Food)^{1,2,3}(2) Phillips Curve (CPI Less Fresh Food, Laspeyres Chain Index)^{1,2,3,4}

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.

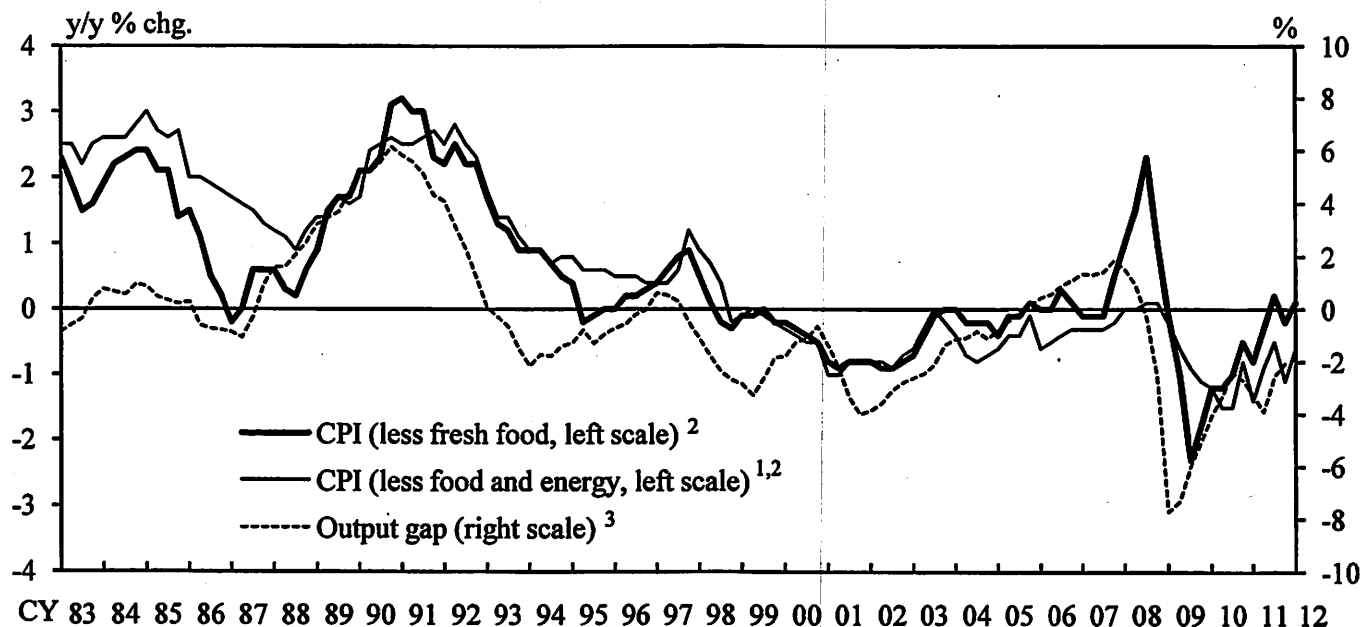
3. The output gap is estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3.

4. Figures for the CPI (Laspeyres chain index) up to 2000/Q4 are based on the fixed-base index, and figures from 2001/Q1 are based on the Laspeyres chain index. However, figures for the Laspeyres chain index of the 2000 base are estimated by the Research and Statistics Department, Bank of Japan.

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

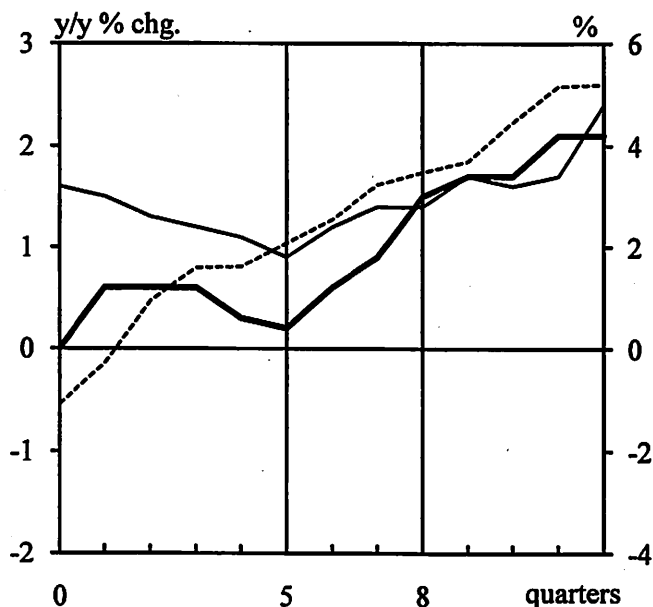
Output Gap and Inflation Rate (2)

(1) Output Gap and CPI

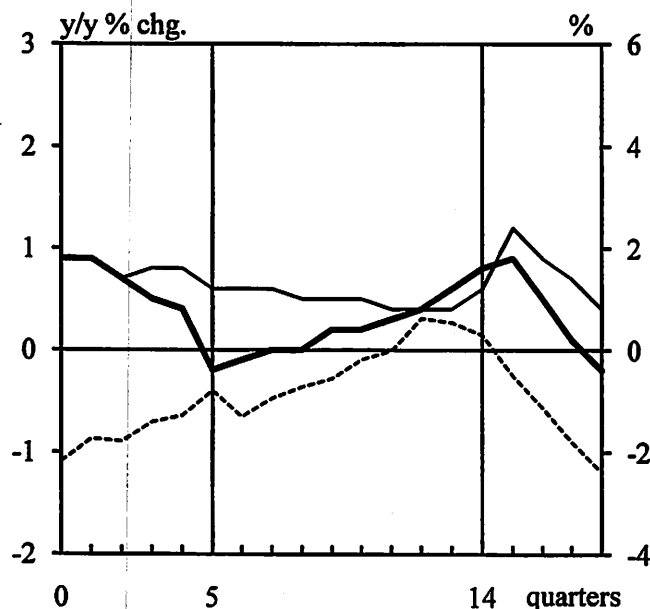


(2) Comparison in Business Cycles

(a) 1987/Q2 Onward



(b) 1994/Q1 Onward



	Period of improvement in the output gap	Turning point of the rate of increase in the CPI ⁴	1% increase since the turning point
Period	1987/Q2	1988/Q3	1989/Q2
CPI ⁴ (y/y % chg.)	--	0.2%	1.5%

	Period of improvement in the output gap	Turning point of the rate of increase in the CPI ⁴	1% increase since the turning point
Period	1994/Q1	1995/Q2	1997/Q3
CPI ⁴ (y/y % chg.)	--	-0.2%	0.8%

Notes: 1. Alcoholic beverages are excluded from food.

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

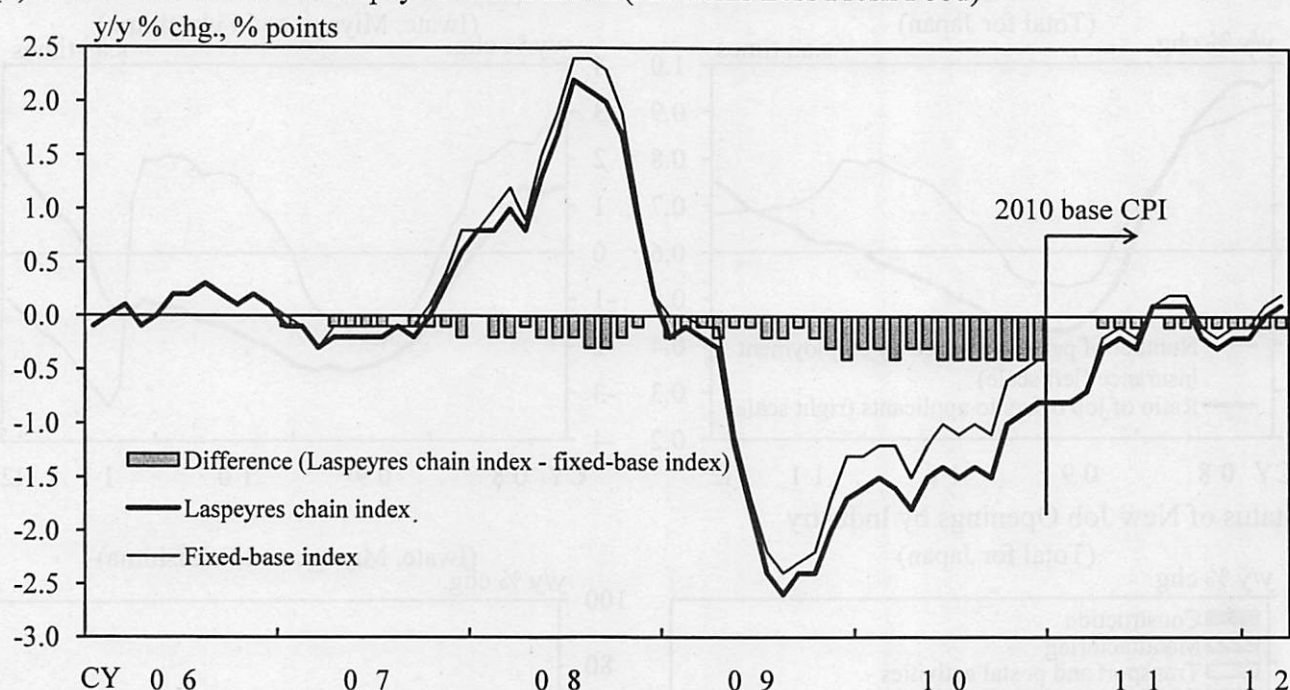
3. The output gap is estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3.

4. Less fresh food.

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

CPI Laspeyres Chain Index

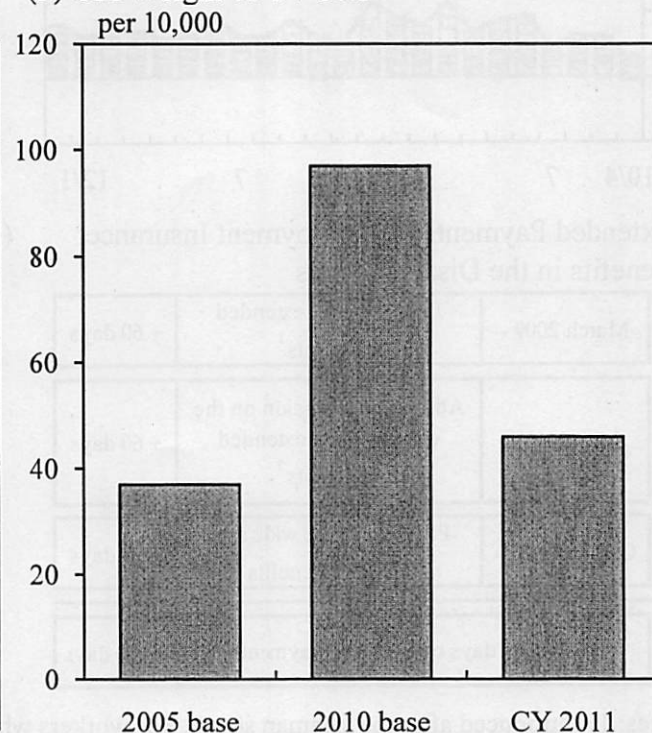
(1) Fixed-Base Index and Laspeyres Chain Index (All Items Less Fresh Food)



Note: 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) CPI Weight (CY 2011)¹

	2010 base (A)	2011 (B)	Difference (B) - (A)
All items	10,000	10,000	—
All items, less fresh food	9,604	9,611	7
Agricultural, aquatic & livestock products ²	293	294	1
Goods ^{1,3}	3,729	3,690	-40
Durable goods	660	583	-77
Petroleum products	359	377	18
Food products	1,337	1,350	13
Public services ⁴	1,712	1,753	41
General services	3,869	3,873	4

(3) CPI Weight of TV Sets⁵

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. Less fresh food.

3. Less agricultural, aquatic & livestock products.

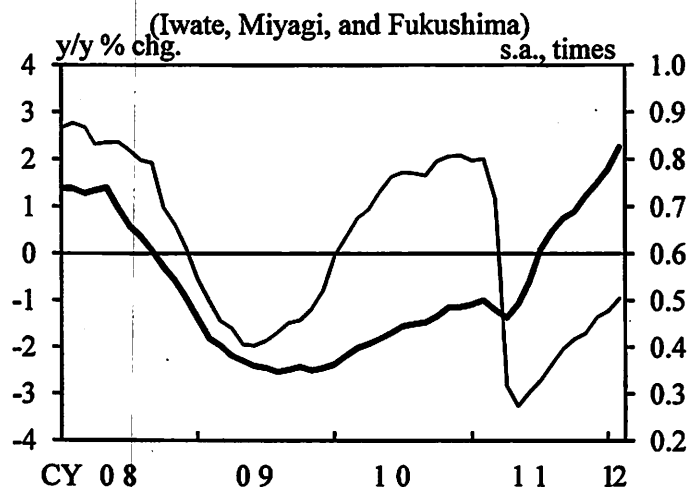
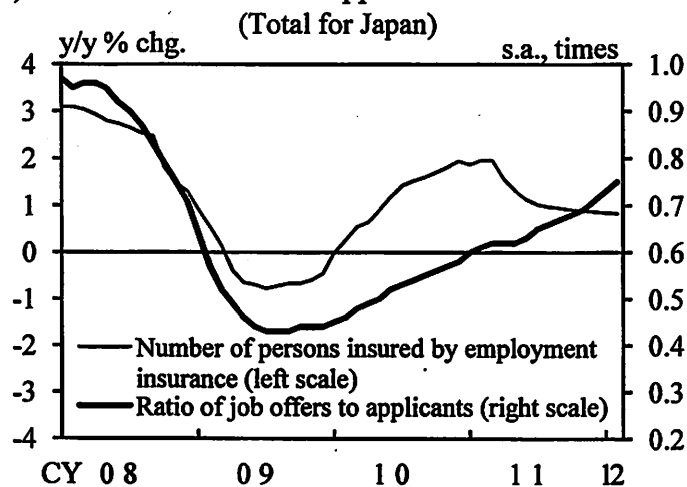
4. Including electricity, manufactured & piped gas & water charges.

5. The figure for the 2005 base is based on the midpoint-year revision.

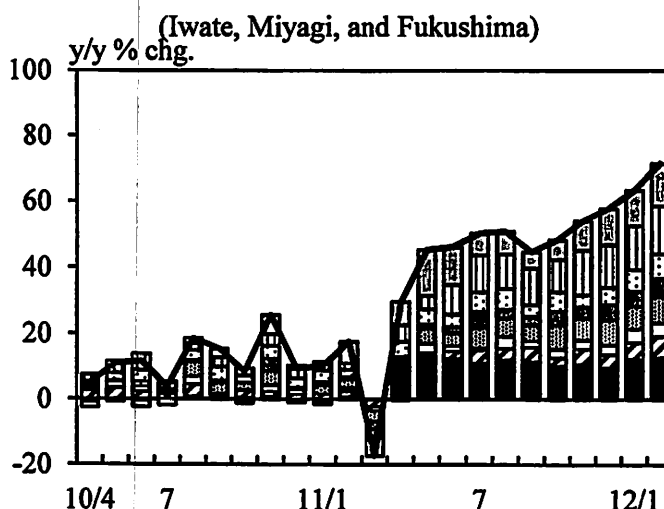
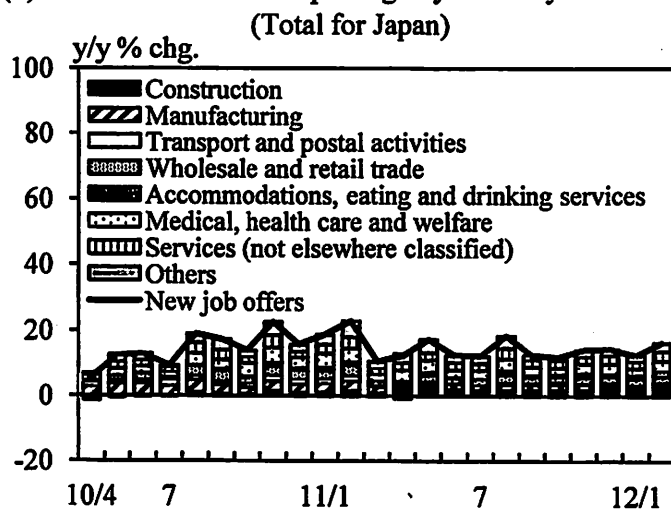
Source: Ministry of Internal Affairs and Communications, "Consumer Price Index."

Employment Conditions in the Disaster Areas

(1) Ratio of Job Offers to Applicants



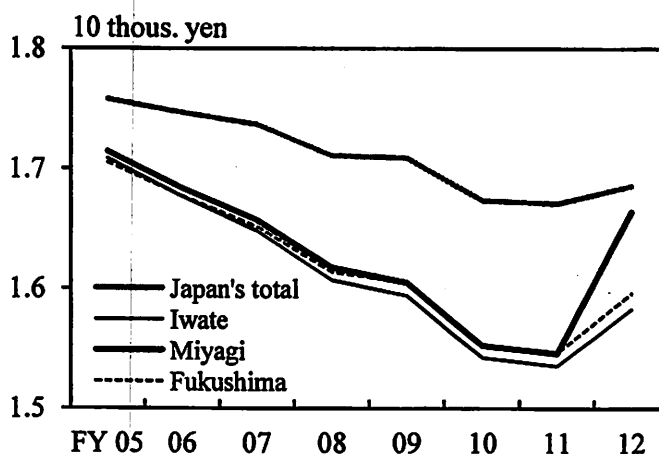
(2) Status of New Job Openings by Industry



(3) Extended Payments of Employment Insurance Benefits in the Disaster Areas

March 2009 -	Case-by-case extended payments ¹	+ 60 days
May 2011 -	Additional extension on the case-by-case extended payments ²	+ 60 days
+) October 2011 -	Payment of the wide area extended benefits ³	+ 90 days
Maximum days of extended payments		+ 210 days

(4) Unit Price for Labor Service in Public Works



Notes: 1. Introduced after the Lehman shock. For workers who (1) are under the age of 45, (2) reside in the designated areas, or (3) are approved by the Chief of the Public Employment Security Office.

2. For workers who were separated from employment or suspended from work due to the Great East Japan Earthquake.

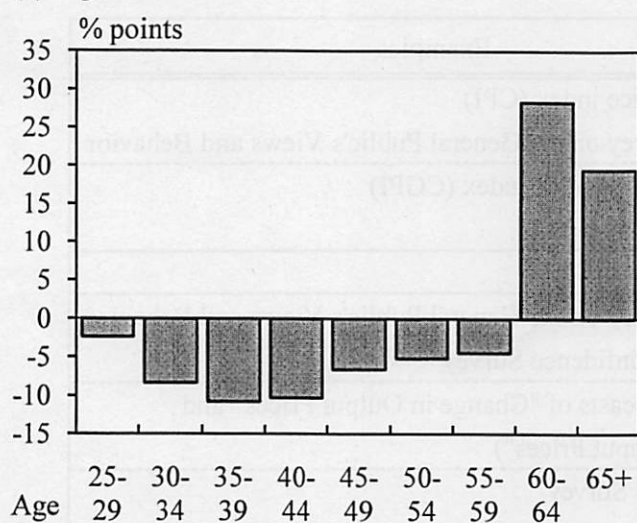
3. For workers who reside in the coastal areas in Iwate, Miyagi, and Fukushima prefectures.

Sources: Ministry of Health, Labour and Welfare, "Report on Employment Service," "Monthly Report on Employment Insurance Services"; Prefectural Labour Offices, "Employment Referrals for General Workers"; Ministry of Land, Infrastructure, Transport and Tourism, etc.

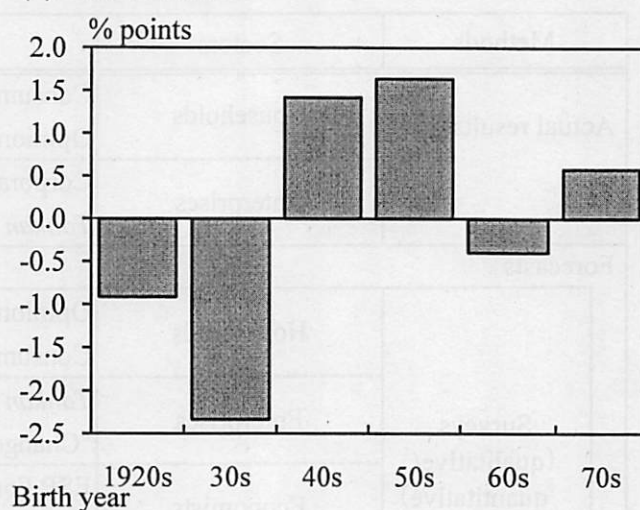
Features of Elderly Household Consumption

(1) Propensity to Consume by Cohort-Based Analysis

(a) Age Effect



(b) Cohort Effect



(Outline of Cohort-Based Analysis)

To break down the change in propensity to consume into (a) the age effect, (b) the cohort effect, and (c) the time effect, the below model is estimated: the dependent variable is the propensity to consume by age brackets, and the explanatory variables are the age dummy, the cohort dummy, the time dummy, and unemployment rates by age brackets.

Figures for (a) and (b) are coefficients of the age and cohort dummies standardized as deviations from these averages.

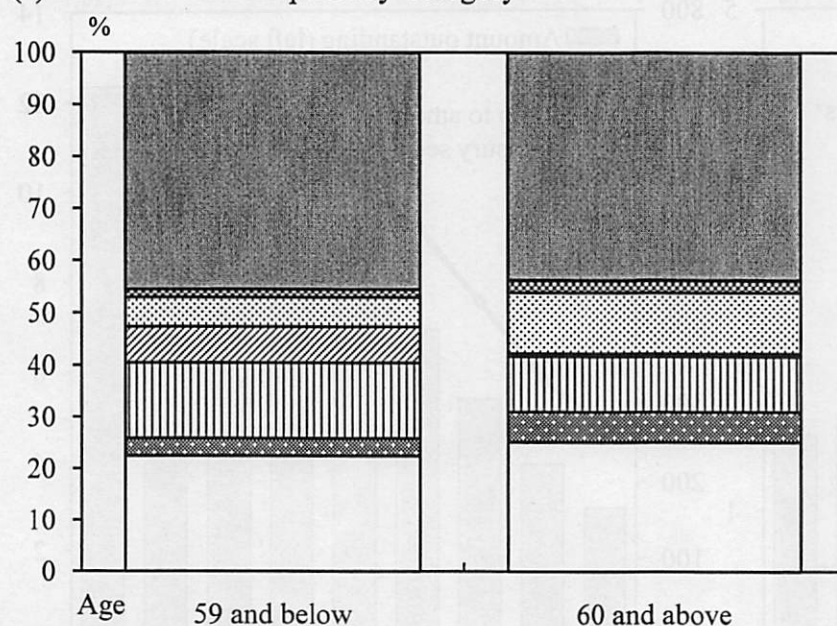
(Estimation model)

Propensity to consume_{i,t} = const + α_i age dummy_i + $\beta_{j=t-i}$ cohort dummy_{j=t-i} + γ_t time dummy_t + δ unemployment rate_{i,t} + $\varepsilon_{i,t}$

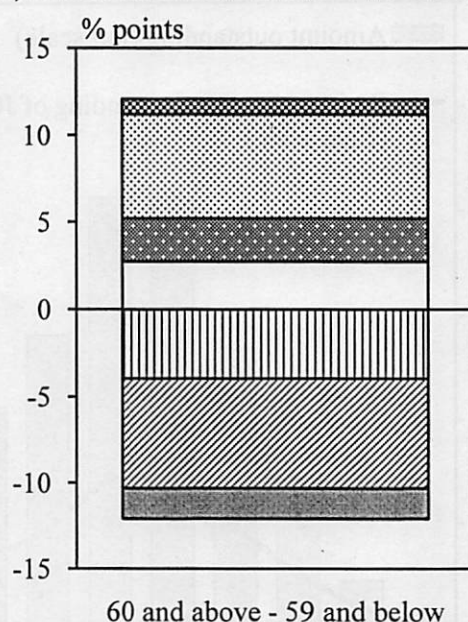
Sample period: CY 1986-2011 Number of observations: 260 Adjusted R²: 0.93

(2) Consumption by Age (Average in CY 2011, Two-or-More-Person Households)

(a) Shares of Consumption by Category



(b) Difference between the Two Groups



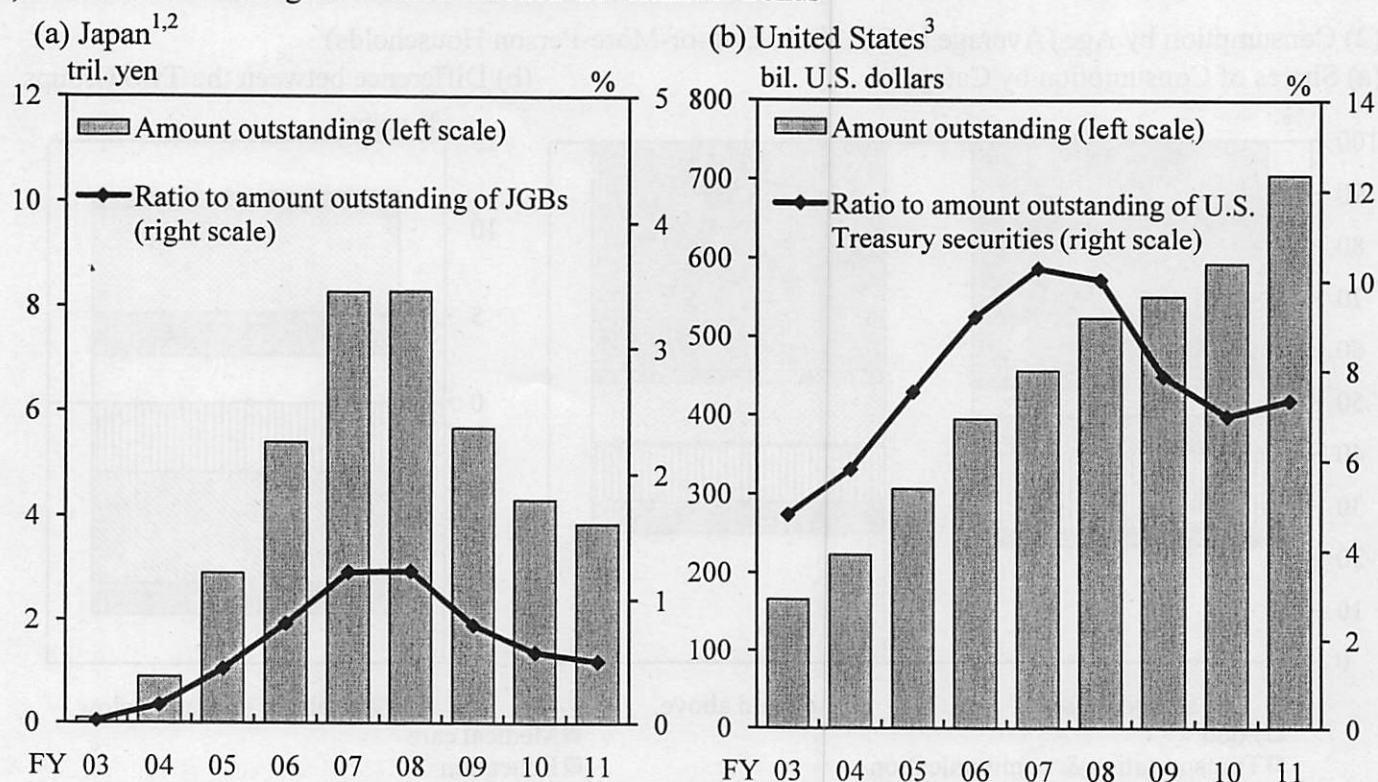
Sources: Ministry of Internal Affairs and Communications, "Family Income and Expenditure Survey,"
"Labour Force Survey."

Information Available in Deriving Inflation Expectations

(1) Surveys and Indicators Related to Inflation Expectations

Methods	Sectors	Examples
Actual results	Households	Consumer price index (CPI) Opinion Survey on the General Public's Views and Behavior
	Enterprises	Corporate goods price index (CGPI) <i>Tankan</i>
Forecasts		
Surveys (qualitative/ quantitative)	Households	Opinion Survey on the General Public's Views and Behavior Consumer Confidence Survey
	Enterprises	<i>Tankan</i> (forecasts of "Change in Output Prices" and "Change in Input Prices")
	Economists	ESP Forecast Survey Consensus Forecasts
	Market participants	Quick Bond Monthly Survey
Market price information	Market participants	Break-even inflation rate (fixed-rate JGB yield - inflation-indexed JGB yield) Inflation swap rate Implied forward rate

(2) Amount Outstanding of Inflation-Indexed Government Bonds



Notes: 1. Figures for Japan for fiscal 2011 are those of December 2011.

2. JGBs = general bonds + fiscal investment and loan program bonds

3. U.S. Treasury securities exclude nonmarketable bonds.

Sources: Ministry of Finance; CEA, "Economic Report of the President."

Economic Assessment by Region (Regional Economic Report)

Region	Assessment in January 2012	Changes from the previous assessment	Assessment in April 2012
Hokkaido	The economy is more or less unchanged, as the pick-up in economic activity is pausing.	➡	The economy has been more or less unchanged.
Tohoku	The economy has been recovering as a whole, as evident from the following factors: (1) economic activity in non-stricken areas has exceeded pre-earthquake levels due to the demand stemming from the disaster; and (2) there are signs of resumption in economic activity even in some of the stricken areas.	➡	The economy has been recovering as a whole, as evident from the following factors: (1) economic activity in non-stricken areas has been above pre-earthquake levels due to the demand stemming from the disaster; and (2) there are signs of resumption in economic activity even in the stricken areas.
Hokuriku	The economy continues to pick up as a whole, although the pace of the pick-up is moderating in some aspects.	➡	The economy continues to pick up as a whole, although the pace of the pick-up is moderating in some aspects.
Kanto-Koshinetsu	The pick-up in economic activity appears to be pausing, mainly due to the effects of the slowdown in overseas economies and the appreciation of the yen.	➡	The economy is more or less unchanged, mainly due to the effects of the slowdown in overseas economies and the appreciation of the yen.
Tokai	The economy continues to pick up, but the pace of the pick-up is moderating.	➡	The economy has continued to pick up.
Kinki	The economy has paused.	➡	The economy has paused.
Chugoku	The pick-up in economic activity is pausing.	➡	The economy is more or less unchanged.
Shikoku	The economy has been on a pick-up trend as a whole, although there appear to be signs of weakness on the production side.	➡	The economy has been picking up as a whole, as some weakness observed on the production side has begun to ease.
Kyushu-Okinawa	The pace of the pick-up in economic activity has slowed, as the effects of the slowdown in overseas economies are beginning to weigh on production.	➡	The economy continues to pick up as a whole, although the pace of the pick-up remains moderate.

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/rer120412.htm/>).

Source: Bank of Japan, "Regional Economic Report (Summary) April 2012."