Sayuri Shirai: Japan's economic activity, prices, and monetary policy – some perspectives on the slope of the Phillips curve

Speech by Ms Sayuri Shirai, Member of the Policy Board of the Bank of Japan, at a meeting with business leaders, Tokushima, 27 November 2013.

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I. Introduction

Good morning. It is a great honor to have this opportunity to visit Tokushima Prefecture and meet with local representatives. This is my first visit, so I am really looking forward to learning from you about this region through an exchange of views. In addition, I would like to express my sincere gratitude for your cooperation with the activities of the Bank of Japan's local office in Tokushima and the Takamatsu Branch.

As you may know, at the Monetary Policy Meeting (MPM) held on October 31, 2013, the Bank updated its outlook for Japan's economic growth rate and rate of price changes over the three-year period through fiscal 2015. Also in October, the Bank released the *Outlook for Economic Activity and Prices* (hereafter the Outlook Report). The Outlook Report describes the Bank's baseline scenario as well as upside and downside risks to the scenario from fiscal 2013 to fiscal 2015. I believe that promoting the public's understanding of the Bank's outlook is an essential step in the conduct of monetary policy, so my speech today will focus on the main features of the report.

Let me briefly describe the sequence of my speech, which contains five sections. In Section II, I will explain the Bank's outlook for Japan's economic activity and prices (the baseline scenario), touching on my views. In Section III, I will review the upside and downside risks to the baseline scenario, referring to my views and my related proposal that was presented at the October 31 MPM. In Section IV, I will discuss my current thinking on a number of "conceptual channels" that might lead to achieving the 2 percent price stability target adopted in January 2013 with a sustainable economic growth path based on the concept of the *Phillips curve*, which shows the empirical relationship between the rate of price changes and the output gap (the difference between actual and potential GDP). Finally, in Section V, I will present my proposal to improve the structure of the Outlook Report, to make the Bank's communication strategy more effective. Following my speech, I look forward to hearing your candid opinions on its contents as well as the situation of the local economy.

II. Baseline scenario of the outlook for economic activity and prices

I will begin by describing the current condition of and the Bank's outlook for *economic activity* based on the contents of the October 2013 Outlook Report, covering the projection period through fiscal 2015. This will be followed by my views on this outlook. Then, I will present the current condition of and the Bank's outlook for *prices* in the same manner.

A. Current condition of and outlook for economic activity

Japan's economy has been recovering moderately. On the demand side, exports have been picking up at a somewhat slower pace, but domestic demand – notably private consumption, public investment, and housing investment – has been firm. Reflecting the differences in the extent of recovery strength between domestic and external demand, the pace of increase in industrial production has remained moderate while activity in the nonmanufacturing sector, including services and construction, has been somewhat strong.

Looking ahead, while domestic demand is likely to maintain firmness, external demand is expected to increase moderately. Therefore, Japan's economy is projected to continue growing throughout the projection period at a pace above its potential rate of growth (considered to be around 0.5 percent on average). The projection would remain unchanged even if the economy were affected by the front-loaded increase and subsequent decline in demand prior to and after the two scheduled consumption tax hikes, in April 2014 and October 2015.

The above projection just mentioned assumes four underlying developments.

- Stimulative effects of the accommodative financial conditions on private demand are likely to strengthen as economic activity improves.
- Overseas economies are expected to pick up gradually – particularly the advanced economies – on the assumption that global financial markets remain generally stable.
- Public investment is expected to remain at a high level through the first half of fiscal 2014, mainly reflecting additional economic measures to be implemented by the government as well as the effects of various past economic measures.
- Firms' and households' medium- to long-term growth expectations are expected to rise moderately, due mainly to the adoption of the regulatory and institutional reforms and various tax reduction measures by the government, as well as firms' efforts to expand domestic and external demand with innovative goods and services.

A comparison of the current projection with that in the July 2013 interim assessment leads to the judgment that the real GDP growth rates are expected to be more or less unchanged. Nonetheless, the "median" of the Policy Board members' forecasts showed slight modifications; namely, the real GDP growth rate is currently projected to reach 2.7 percent (2.8 percent in the July assessment) in fiscal 2013, 1.5 percent (1.3 percent) in fiscal 2014, and 1.5 percent (1.5 percent) in fiscal 2015 (Chart 1).

My view is more or less in line with this baseline scenario. To highlight some differences, however, my baseline projections of the real GDP growth rates for fiscal 2014 and fiscal 2015 are somewhat lower than the median of the forecasts. This relatively conservative outlook has remained unchanged since the time of assessment in April (when the April 2013 Outlook Report was released) and July this year. The main reason I have maintained this outlook is that while the additional economic measures to be introduced by the government will likely raise the economic growth rates for fiscal 2014 and fiscal 2015, I believe that at present this positive effect may be offset by other countervailing factors – namely, the moderate recovery pace of real exports and industrial production.

Indeed, the actual export performance has been unimpressive so far (Chart 2); and, I judged that the outlook for real exports and industrial production should be adjusted downward to some extent as well. A look at developments in overseas economies shows that the economic growth landscape has changed drastically this year. In other words, the growth dynamic has been reversed, and emerging and commodity-exporting economies are losing momentum while advanced economies are improving. This dynamic is likely to continue since the pace of increase in the economic growth rate is likely to be faster in advanced economies than in emerging and commodity-exporting economies in the future. However, the recovery path in the advanced economies is neither robust nor strong, since their output gaps are likely to remain negative throughout the projection period.[1] Although the

[1] The IMF's *World Economic Outlook* (October 2013) reports that the real GDP growth rate for advanced economies is projected to reach 1.2 percent in 2013, 2.0 percent in 2014, and 2.5 percent in 2015. That for emerging economies and developing countries is projected to reach 4.5 percent, 5.1 percent, and 5.3 percent, respectively. The output gap, whose projection is available for advanced economies up to 2014, is reported to be minus 2.9 percent in 2013 and 2.5 percent in 2014. The *OECD Economic Outlook* (November 2013) reports that the output gap for the OECD economies is projected to be minus 2.6 percent in 2013, minus 2.3 percent in 2014, and minus 1.8 percent in 2015.

improvement in external demand is likely to increase Japan's exports of items such as automobiles and capital goods, this increase may not be as large as that in the past recovery phase owing to the effects of the ongoing shift of production sites overseas and a change in the dynamic of international competitiveness.

B. Current condition of and outlook for prices

The year-on-year rate of increase in the core consumer price index (headline CPI excluding fresh food) has been positive since June this year and has recently been in the range of 0.5–1.0 percent. In the October 2013 Outlook Report, it was judged that the outlook for the year-on-year rate of change in the core CPI (*excluding* the direct effects of the consumption tax hikes) was expected to follow a rising trend and was likely to reach around 2 percent – the price stability target – toward the latter half of the projection period.

This baseline scenario reflects the following assumptions about the developments of three factors that will primarily determine the inflation rate going forward.

- The aggregate supply and demand balance (output gap) is expected to follow a moderate improving trend and expand toward the latter half of the projection period. Nominal wages are likely to see gradual upward pressure as a tightening of labor supply and demand conditions becomes evident.
- Medium- to long-term inflation expectations are likely to continue on a rising trend with continued monetary easing, partly supported by a rise in the observed inflation rate, gradually converging to around 2 percent.
- Import prices are expected to exert upward pressure for the time being, reflecting developments in international commodity prices and foreign exchange rates.

Comparing the current projection with that in the July 2013 interim assessment, the October 2013 Outlook Report concluded that the projected rates of change in the core CPI (excluding the direct effects of the consumption tax hikes) are more or less unchanged. However, the median of the Policy Board members' forecasts changed slightly; namely, the rate of change in the core CPI is projected to reach 0.7 percent (0.6 percent at the July assessment) for fiscal 2013, while those for fiscal 2014 and fiscal 2015 remain the same at 1.3 percent and 1.9 percent *excluding* the effects of the tax hikes, and at 3.3 percent and 2.6 percent *including* the effects of the tax hikes, respectively (Chart 1).

This baseline scenario is more or less consistent with my assessment. However, some differences are present; that is, under my baseline scenario, projections for fiscal 2014 and fiscal 2015 are somewhat lower than the median of the Policy Board members' forecasts. As is the case with the April and July 2013 assessments, I judge that the core CPI is expected to rise toward 2 percent at a more moderate pace than that of the median. My relatively conservative views for fiscal 2014 and fiscal 2015 arise from the assumption that a rise in medium- to long-term inflation expectations toward 2 percent is likely to occur gradually from now on and that it may take some time for an improvement in the output gap to be reflected in the observed rate of inflation.

III. Upside and downside risks to the baseline scenario

Next, I would like to review the upside and downside risks to the Bank's baseline scenario that were presented in the October 2013 Outlook Report. After that, I will present my own views. Before proceeding, I would like to note that the judgment on risk factors is subject to adjustment in the future assessments, depending on changes in economic conditions.

A. Risk to economic activity

The October 2013 Outlook Report puts particular stress on the following five factors as upside and downside risks to the Bank's baseline scenario for the economy (or real GDP growth rates).

- *Performance of overseas economies*: warranting close attention are the effects of new energy sources and consequences of fiscal problems in the United States, European debt problems, China's excess production capacity and debt issues, and economic developments together with developments in the global financial markets in some emerging and commodity-exporting economies that are facing current account deficits.
- *Developments in households' employment and income situation*: close attention should be paid to whether firms, in the face of intense competition, will increase wages by taking into account an improvement in corporate profits.
- *Effects of the consumption tax hikes*:[2] while the tax hikes will have adverse effects on households' real disposable income, the adverse effects on consumption may be mitigated to some extent by (1) scheduled economic measures to be taken by the government, (2) the high probability that the tax hikes are already factored in among households, and (3) the positive effect of alleviating households' future concerns over the fiscal condition and the social security system.
- *Developments in firms' and households' medium- to long-term growth expectations*: these expectations may be affected by future regulatory and institutional reforms as well as tax reforms, firms' innovation, and households' income situation. From a somewhat long-term perspective, some positive effects from the hosting of the Tokyo 2020 Summer Olympic Games might be expected.
- *Medium- to long-term fiscal sustainability*: a decline in confidence in fiscal sustainability may lead the economy downward through, for example, excessive rises in long-term interest rates. The opposite would occur if confidence in the path toward fiscal consolidation strengthens.

Following a review of these upside and downside risks, the October 2013 Outlook Report assessed that risks to the Bank's baseline scenario are "balanced" as a whole.

B. My views and proposal on risks to economic activity

In principle, I view the aforementioned list of risk factors as important elements. However, I do not feel very comfortable with the Bank's overall risk assessment related to Japan's economy as being "balanced." This is because, based on my observation of various data, the downside risks appear to be somewhat greater than the upside risks at this stage. In addition, I found it important to indicate in a frank manner my awareness of greater downside risks to the public and market participants, as this might contribute to enhancing their confidence in the Bank's conduct of monetary policy and thereby provide them with a greater sense of security regarding the future economic situation. Therefore, at the MPM held on October 31, 2013, I voted against the risk assessment described in the Outlook Report and presented a new proposal (*the first point of my proposal* that I made at the MPM). My proposal was to insert the following description in the last part of subsection "A. Risks to Economic Activity" in Section II titled "Upside and Downside Risks," in the Outlook Report: "*on the whole, attention should be paid to the downside risks since there is a high degree of*

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[2] I submitted a proposal at the MPM held on April 26, 2013, due to a lack of sufficient description of the risk analysis in the Outlook Report. This point was improved in the October 2013 Outlook Report, where a risk factor description has become much clearer.

uncertainty regarding developments in overseas economies and households' employment and income situation."

Let me explain my views on the risks to economic activity in detail. Overseas economies remain unlikely to fall into severe recession or face tail risk. However, since April 2013 I have been claiming consistently that "*on balance, the risks are tilted somewhat to the downside*." This is because of uncertainty associated with the pace of recovery in overseas economies. Moreover, considerable time has passed since the yen depreciated sharply from late 2012, but the rate of growth in real exports appears to have remained sluggish, even after taking into account the J-curve effect and the slow pace of recovery in overseas demand. This means that the mediocre performance of exports may be reflecting structural factors – in addition to cyclical factors – such as a continuing shift of Japanese firms' production sites to overseas and a change in their international competitiveness.

Moreover, compared with the projections in the April and July 2013 assessments, I judge that uncertainty over developments in ***global financial markets and overseas economies*** has increased moderately, which may lead to underperformance in my baseline scenario. My concerns are focused especially on the following aspects.

- *Developments in global financial markets*: as recovery in advanced economies proceeds, differences in the monetary policy stance among major central banks may become more apparent. This may cause frequent changes in market participants' views regarding the direction of accommodative monetary policy measures and the interpretations of forward guidance. The resulting impact of such behavior of investors on financial markets and the global economy warrants close attention.
- *The performance of the U.S. economy*: owing in part to postponement of the resolution of fiscal and debt issues until early 2014 as well as to the associated political and economic uncertainties, it is not clear whether the U.S. economy will be able to post economic growth above its potential growth rate – which is an annual rate of about 2.2 percent for 2013 to 2018 as projected by the Congressional Budget Office (CBO). Recent economic growth rates have been higher than the potential rate. This is a welcome development, but the pace of growth in business fixed investment and private consumption (excluding automobiles) has been slow, and therefore these developments require caution. The recovery in the housing market should also be closely monitored, since there is some uncertainty whether the recovery in the number of mortgage applications will be solid amid higher levels of mortgage interest rates and stringent lending attitudes toward first-time buyers.
- *The performance of the European economy*: the euro area economy has bottomed out and shows signs of a moderate pick-up in recent months. Japan's exports to Europe have also begun to increase. However, the banking sector within the euro area remains fragmented, and thus countries in the area still have lending interest rate differentials. Attention needs to be paid to uncertainty regarding Asset Quality Reviews and stress tests to be conducted by the European Central Bank (ECB) over the twelve months from November 2013 and the associated recapitalization process that may occur. The recent disinflation trend in the euro area may aggravate the repayment burden of peripheral countries as they seek to reduce their public- and private-sector debt, hampering their economic recovery. The internal devaluation in the euro area may also become harder to achieve.
- *Developments in emerging and commodity-exporting economies*: given that growth in these economies has been lacking momentum in recent months, it is possible that a weaker-than-projected growth performance will materialize. Countries facing structural problems (such as current account deficits) as well as strong cross-border links with global financial markets may be more prone to the reversal of capital flows and changes in liquidity conditions in the securities and foreign exchange markets. The resultant tightening of financial conditions, together with the necessity to tighten

the fiscal and monetary policies to cope with capital outflows in these economies, may undermine their economic recovery path.

- *Performance of the Chinese economy*: while the rate of economic growth accelerated from 7.5 percent in the second quarter of 2013 to 7.8 percent in the third quarter, the sustainability of the current economic growth rate is uncertain, given the rise in the ratio of private-sector debt to GDP, concerns over the shadow banking system, the rapid pace of real estate price hikes in the metropolitan areas, and unresolved excess production capacity in some industries.

As for domestic demand, greater attention should be paid to the downside risks on the following fronts, relative to the assessments made in April and July 2013.

- *Developments in wage growth*: there is a possibility that the rate of wage growth will not catch up with that of inflation. Alternatively, wealth effects may not sufficiently offset a potential decline in real disposable income. Wealth effects appear to have become less pronounced, since the rising trend in stock prices and exchange rates appears to have leveled off from the second half of 2013.[3] On this front, future asset price movements – together with the recent rise in stock prices and the yen's depreciation – should be monitored closely. While private consumption will remain a major driving force of Japan's economic growth in the immediate future, it may not be as resilient as projected once the effects of the front-loaded increase in demand prior to the consumption tax hike in April 2014 dissipate.
- *Developments in business fixed investment*: business fixed investment is expected to increase in the fields of maintenance and replacement, energy savings and rationalization, and investment in earthquake resistance as well as research and development (R&D). This is because many firms have postponed their investment for several years due to a series of negative shocks. Nonetheless, investment to expand production capacity may be limited if firms do not foresee a sustainable increase in domestic sales. On the whole, growth in business fixed investment may turn out to be more moderate than projected, particularly in the manufacturing sector, where increased investment has just begun to take place.
- *Sustainability of households' and firms' medium- to long-term growth expectations*: a sustainable increase in consumption and business fixed investment as well as associated credit demand may not be feasible without a steady increase in growth expectations. For example, according to the Bank's *Opinion Survey on the General Public's Views and Behavior* conducted in September 2013, the "growth potential diffusion index (DI)" of Japan's economy deteriorated from minus 26.7 percentage points in June to minus 36.8 percentage points in September. This may, however, be attributable to the fact that the September survey was conducted before the announcement of Tokyo's successful bid to host the 2020 Summer Olympic Games.

C. Risks to prices

Turing to risk factors related to prices, the October 2013 Outlook Report points out the following upside and downside risks.

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3 The *Annual Report on the Japanese Economy and Public Finance 2009* compiled by the Cabinet Office presents an empirical analysis of the consumption function. It showed that an increase in stock assets of 100 yen leads to a rise in consumption of 3.5 yen. This effect is larger in the United States, partly because of the differences in exposure to stocks between the two countries. In the United States, the share of stockholdings in financial assets exceeded 40 percent for all age groups (as of 2007). By contrast, the share of stockholdings in Japan increased with age and reached a maximum level of slightly less than 15 percent for the 70–75 age group (as of 2008).

- *Developments in firms' and households' medium- to long-term inflation expectations*: while there is a possibility that inflation expectations may not readily rise in reflection of the moderate decline in prices and wages observed in the past, there is also a possibility that they will rise relatively quickly with a rise in observed inflation and wages. Effects on these expectations of a price increase associated with the consumption tax hikes in items across the board warrant attention.
- *Uncertainty regarding the responsiveness of prices to the output gap*: attention needs to be paid to whether firms will raise prices and wages in accordance with the extent to which the supply and demand balances in goods and services as well as in the labor market tighten over time.
- *Developments in import prices*: there is a high degree of uncertainty regarding developments in import prices reflecting fluctuations in international commodity prices and foreign exchange rates, and the extent to which such developments are passed on to domestic prices.

In the Outlook Report, the Bank assessed upside and downside risks on the price front as being "largely balanced," although considerable uncertainty surrounds developments in medium- to long-term inflation expectations.

D. My views and proposal on risks to prices

The aforementioned list of risk factors related to prices has been covered sufficiently. However, I do not agree with the overall assessment of risks on the price front as being "largely balanced," since, based on my observation of various data, the downside risks appear to be greater than the upside risks at this stage. As in the assessments made in April and July 2013, I have held the view that "*on balance the risks are tilted somewhat to the downside*." Currently, however, I hold the strong view that greater attention should be paid to the downside risks at this stage. This is why I voted against the assessment described in the Outlook Report at the MPM held on October 31, 2013, with a new proposal (*the second point of my proposal*). My proposal was to insert the following description in the last part of subsection "B. Risks to Prices" in Section II titled "Upside and Downside Risks," in the Outlook Report: "*on the whole, attention should be paid to the downside risks, because there is a high degree of uncertainty regarding developments in medium- to long-term inflation expectations and the responsiveness of prices to the aggregate supply and demand balance*." Let me explain my concern in more detail.

Recent Developments in Medium- to long-term inflation expectations

Developments in "medium- to long-term" inflation expectations that are affecting ***the intercept of the Phillips curve*** have been closely monitored by the Bank as one of the essential factors for achieving the 2 percent target. The related indicators exhibited a rapid increase in medium- to long-term inflation expectations from late 2012. In recent months, however, while some indicators showed an uptrend, several others have showed a slow pace of increase or been more or less flat (Chart 3).[4] Also, these inflation expectations are

[4] "Short-term" inflation expectations are more prone to current actual price developments and thus tend to be more volatile than "medium- to long-term" inflation expectations (Chart 4). In addition, the scheduled consumption tax hikes (an increase from 5 to 8 percent in April 2014 and an increase from 8 to 10 percent in October 2015) are likely to further raise "households' short-term" inflation expectations, if the effects of these consumption tax hikes are factored in sufficiently. "Households' medium- to long-term" inflation expectations will increase further if the term for these expectations covers the period in which the two tax hikes occur, but if the term covers a longer period of time the effects of the tax hikes will be diluted. As April 2014 approaches, short-term inflation expectations may rise further, and in fiscal 2014 they may exceed 2 percent in view of the effects of the tax hike, monetary accommodation, and the lagged impact of the yen's depreciation. Attention should therefore be paid to whether short-term inflation expectations will turn out as expected.

still well below the 2 percent target and thus there is uncertainty as to whether these expectations will rise to the level of 2 percent during the projection period. For example, breakeven inflation (BEI) rates increased rapidly in line with the yen's depreciation from late 2012, although such a strong correlation had not been present earlier (Chart 5). However, the BEI rates appear to have become more or less constant since mid-2013, and this trend appears to be in line with the relatively stabilized exchange rate of the yen against the U.S. dollar.

Changes in price responsiveness to the output gap

Another important factor that could contribute to the achievement of the 2 percent target – in addition to the increase in inflation expectations – is an increase in the "responsiveness of prices to the output gap" (or ***the slope of the Phillips curve***). In general, the slope of the Phillips curve steepens when firms find it easier to raise their sales prices or pass their input costs on to their sales prices given the level of the output gap. Also, an increase in the frequency of price adjustments will promote a steepening in the Phillips curve. The current situation signals a possibility that the price-setting environment of firms may be improving.

Meanwhile, severe competition among firms may discourage them from raising their sales prices, if their concerns increase over a possible loss of market share. Especially in fiscal 2014, the Phillips curve may remain largely unchanged owing to the high degree of uncertainty associated with the consumption tax hike. If many firms perceive that the price increase triggered by the tax hike could be sufficiently large to constrain household domestic demand, they may partially postpone raising their final sales prices (those related to the effect of the output gap and a rise in inflation expectations) beyond the increase related to the tax hike in and after fiscal 2015 – that is, not fully raised within fiscal 2014. In such an event, the responsiveness of prices to the output gap would remain limited and the outcome for prices in fiscal 2014 could be lower than projected by the Bank. Please note that this remark has nothing to do with the debate on the timing of the tax hikes. In this regard, let me remind you that I have been supporting the scheduled introduction of the consumption tax hikes, with a view to maintaining fiscal soundness and sustainability of the social security system.

My proposal related to the assessment on the "path" toward achieving the 2 percent target

Based on the observations just described, I judged that the current path toward achieving the 2 percent target entails uncertainty. Reasons for this judgment can be summarized as follows.

- Although prices of a wide range of consumption items have begun to increase, the fact that the core CPI inflation rate has been increasing in positive territory is largely attributable to the lagged impact of the yen's depreciation at this stage and the increase in energy prices. The effects to the price rise of the improvement in the output gap and an increase in inflation expectations need to be confirmed with more evidence.
- The pace of the increase in medium- to long-term inflation expectations appears to have moderated or become more or less flat in recent months.
- There is a considerable difference between medium- to long-term inflation expectations and the 2 percent target.

Thus, my judgment is not consistent with the assessment of the October 2013 Outlook Report placed in the final paragraph in Section III titled "Conduct of Monetary Policy," which said that "*Japan's economy has been following the path toward achieving the 2 percent price stability target as expected*." I voted against this assessment and proposed that the expression "*as expected*" be replaced with "***at a moderate pace***." This constituted *the third point of my proposal*.

IV. Conceptual channels for achieving the 2 percent target

One thing that I wish to emphasize is that I continue to support the 2 percent target with sustainable economic growth path. My determination to make as much effort as possible to achieve this target has remained intact. In this light, in Section IV of my speech I will present my current thinking on the "conceptual channels" that could lead to achieving the 2 percent target. Here, I intentionally used the term "conceptual." This is because increasing "medium- to long-term" inflation expectations and anchoring them at around the 2 percent level – which the Bank is currently pursuing through *quantitative and qualitative monetary easing* (QQE) – is a challenging task that no other major central bank has ever undertaken in the past. Therefore, there is uncertainty regarding the realization of these channels at this point, and I feel that I should wait for more evidence to confirm their achievability. If these channels materialize gradually, I judge that the downside risks to the baseline scenario would decline accordingly.

A. The estimated Phillips curve in the case of Japan

In formal economic terms, with a view to raising inflation toward 2 percent, it is important to consider the relationship between the rate of price change and the output gap – a relationship known as the *Phillips curve*. The October 2013 Outlook Report presented the estimated Phillips curve for the observation period of 1983–2013 (Chart 6). The year 1983 was chosen as a starting year for the observation period, because the impact of the oil shocks that occurred in the 1970s had likely dissipated by that year. The Phillips curve was estimated for the entire observation period and for two subset periods (from 1983 to 1995 and from 1996 to 2013), as shown respectively by lines A, B, and C in Chart 6.

The charts suggest two features: (1) line C, using the data of a more recent observation period, appears to be shifting downward, almost parallel to line B; and (2) the slope of line C appears to be flatter than that of line A, for which the observation period is longer. While various factors influence both features simultaneously, let me list some that may be considered to have affected each of these features.[5] It is possible that some of the factors affected both the shift in the Phillips curve and its slope. However, for the sake of simplicity, I will separate the factors into those that have mainly shifted the Phillips curve and those that have mainly steepened its slope.

(Main factors contributing to a downward shift in the Phillips curve)

- *Decline in medium- to long-term inflation expectations*: the sharp drop in inflation expectations in the 1990s may be associated with declines in the potential growth rate and growth expectations for the economy (Charts 7 and 8). Indeed, the average real GDP growth rate dropped from 4.3 percent in the 1980s to 1.5 percent in the 1990s, and further to 0.6 percent in the 2000s.
- *Negative wage gap*: average wages have dropped and the resultant lower level of real wages has not been consistent with that of labor productivity, partly as a result of deregulation in the labor market since the late 1990s. Unit labor costs have also

[5] See, for example, Bank of Japan, "Background Note regarding the Bank's Thinking on Price Stability," 2013; Kenji Nishizaki, Toshitaka Sekine, and Yoichi Ueno, "Chronic Deflation in Japan," Bank of Japan Working Paper Series, No. 12-E-6, 2012; Maiko Koga and Kenji Nishizaki, "Bukka Chingin Firippusu Kyokusen no Suikei (Estimated Phillips Curve of Prices and Wages)," *Kin'yu Kenkyu* (Monetary and Economic Studies), 2006, pp. 73–105 (available in Japanese); and Ryo Kato and Takuji Kawamoto, "Nyu Keinjian Firippusu Kyokusen (New Keynesian Phillips Curve)," Bank of Japan Review Series No. 2005-J-6, 2005 (available in Japanese).

been on a declining trend. In this circumstance, firms may have incentives to lower their sales prices as a result of improved profit margins driven by lower labor costs (Chart 9).

- *Declining trend of durable consumer goods*: mild deflation has been affected by a persistently declining trend in the prices of durable consumer goods (a decline of about 4.5 percent on average from 1997 to 2011), which account for about 10 percent of the total CPI weight. Such a tendency has also been seen overseas, including in the United States, but the decline in durable consumer goods prices – specifically, prices of televisions and personal computers – is more pronounced in Japan despite minor differences in quality. Underlying factors may be national differences in the competitive environments of the retail sectors and quality adjustment.

(Main factors contributing to a flattening in the slope of the Phillips curve)

- *A structural shift to the services sector*: in general, the frequency of price changes in the services sector is lower than that in the manufacturing sector. Given the relatively large shares of raw material and input costs in the total production costs in the manufacturing sector, changes in these prices and costs tend to be reflected in sales prices. By contrast, in the labor-intensive services sector, lower shares of raw material and input costs as well as sluggish growth in nominal wages lead to a low frequency of price changes.
- *An increase in the price elasticity of demand*: intensified competition at home and abroad and a series of negative shocks (and associated plunge in domestic demand) have led to an increase in the price elasticity of demand. This has made it difficult for firms to pass their marginal cost of production on to sales prices, generating constant downward pressure on profit margins and wages. Consequently, firms, supermarkets, and large discount stores have begun to set their sales prices according to their competitors' and clients' demand, rather than in response to the output gap or cost developments. A discount-based marketing strategy has become prevalent.

Based on the observation of the aforementioned factors, turning the viewpoint conversely may lead to the following inference. That is, the Phillips curve may change positively – shifting upward with a steepening slope, in the case of Japan – if the trend in some of these contributing factors can be reversed (Chart 10).

B. Conceptual channels leading to an upward shift in the Phillips curve

This subsection will focus on my current thinking on the conceptual channels that may lead to an upward shift in the Phillips curve. Under the inflation-targeting framework, in general, "medium- to long-term" inflation expectations have little correlation with relatively volatile "short-term" inflation expectations, especially when medium- to long-term inflation expectations are anchored at the inflation target level. In this circumstance, medium- to long-term inflation expectations also become less correlated with the "actual" inflation rate; however, in the long run the actual inflation rate tends to move at around the level of these inflation expectations. This situation is *not yet* applicable ***in Japan***, since the economy is still in the process of establishing an anchor on the higher medium- to long-term inflation expectations at around 2 percent. Until these expectations are firmly anchored, it is possible that the actual inflation rate, short-term inflation expectations, and medium- to long-term inflation expectations will continue to affect each other. My thinking on this, which I will now present, is based on such a perspective.

Will the actual inflation rate Promote an increase in medium- to long-term inflation expectations?

In terms of *the first conceptual channel*, as the public grows convinced that the actual inflation rate has been rising moderately to date and is expected to approach 1 percent by the end of 2013, medium- to long-term inflation expectations may increase further. According to the *Opinion Survey on the General Public's Views and Behavior* conducted by the Bank in September 2013, the respondents who chose "developments in gasoline prices" as the basis for their outlook for price levels over the next five years were nearly 50 percent of the total, and those who chose "developments in prices of frequently purchased items" (such as food and daily necessities) also were nearly 50 percent (with multiple answers allowed). Thus, it is conceivable that the continuation of price increases, especially in these items, will contribute to raising inflation expectations.

Let me now refer to the experience of ***the United Kingdom***, although in that nation it is a case of *lowering* medium- to long-term inflation expectations in the presence of a high level of actual inflation – the opposite of the case of Japan. The United Kingdom exited the European Exchange Rate Mechanism (ERM) in September 1992. To raise the credibility of monetary policy in line with this new move, the Bank of England (BOE) adopted inflation targeting in October 1992, with the initial target set in the *range of 1–4 percent*. The target was subsequently lowered to a *level equivalent to or less than 2.5 percent* in May 1995, and further changed to a *point target level of 2.5 percent* in May 1997. In 1998, the BOE achieved operational responsibility for setting interest rates and established the Monetary Policy Committee. The target level was further changed to *2 percent* at end-2003, together with a change in the reference price indicator from retail prices to consumer prices (Chart 11). Currently, inflation below 2 percent is judged to be just as bad as inflation above 2 percent. If actual inflation surpasses 3 percent or falls below 1 percent, the Governor of the BOE must write an open letter to the Chancellor, explaining the reasons for such a deviation and prescriptions for correcting it.

Looking at the case of the United Kingdom, we can point out four features.

- Medium- to long-term inflation expectations (based on the average forecasts of private-sector economists) tend to change moderately, and such expectations dropped to around 2.5 percent by 1998.
- Setting the inflation target, as well as clarifying it, appears to have been effective in terms of lowering medium- to long-term inflation expectations.
- A steady decline in the actual inflation rate toward the inflation target range or level appears to have improved the public's confidence in monetary policy, contributing to lowering medium- to long-term inflation expectations.
- The pace of decline in the actual inflation rate initially tends to be faster than that of medium- to long-term inflation expectations. Moreover, it is possible that the decline in the actual inflation rate will exceed the decline in the rate of inflation expectations, until these expectations are firmly anchored.

Since the global financial crisis occurred, the actual inflation rate has been on a rising trend in the United Kingdom, due to several factors: (1) a depreciation of the pound sterling; (2) changes in consumption tax rates (a decline in 2008, followed by increases in 2010 and 2011); (3) fluctuations in commodity prices; and (4) the effects of administered and regulated prices. Following these movements, medium- to long-term inflation expectations appear to have risen moderately. On this point, however, the BOE holds the view that the expectations remain well anchored, although there may be some limited concerns about dis-anchoring of inflation expectations because of a persistent deviation of actual inflation above the 2 percent target.[6] Regarding the shift from the inflation target range to the inflation target level or point, it has been pointed out as appropriate because such a shift has the advantage of clarifying monetary policy, and a "range bias" appears to have existed during the period when the target range was adopted, with the inflation expectations fixed at around the upper bound of the range. Once a point inflation target was introduced, inflation expectations fell steadily, as the range bias was ironed out.[7]

Applying the case of the United Kingdom to ***Japan***, several points can be inferred.

- It is conceivable that the actual inflation rate will lead to an increase in medium- to long-term inflation expectations as the actual inflation rate approaches the 2 percent target.
- The increase in the actual inflation rate (which is likely to be affected by changes in commodity prices and other factors) may exceed that of medium- to long-term inflation expectations until these expectations are firmly anchored.
- Applying a target *point*, rather than a target *range*, may be appropriate at this stage since a premature introduction may result in the actual inflation rate being stuck at the *lower* bound of the range (in the case of Japan), making it harder to achieve the 2 percent target.

On the third point, the idea of applying a *range* to the inflation target – while it should not be ruled out – should be examined after the actual inflation rate exceeds at least 1 percent in a stable manner and after it is judged that inflation expectations will likely remain near 2 percent. A more important concern is that the public and market participants may mistakenly assume that the Bank's intention to achieve the 2 percent target has weakened, thus, undermining the credibility of monetary policy.

Will an increase in the growth expectations raise inflation expectations?

Earlier, I mentioned that medium- to long-term inflation expectations may be positively correlated with the potential growth rate and growth expectations of the economy (Charts 7 and 8). Therefore, as *the second conceptual channel*, it is conceivable that an increase in inflation expectations can be promoted by the government's economic growth strategies, firms' efforts to raise competitiveness, and financial institutions' initiatives to take greater risk to provide financial services to innovative and growth-supporting firms, with the continued support of the QQE. Conceptually, all these collective actions, if continued to be taken, will promote a heightening of firms' and households' growth expectations. Moreover, the *Annual Report on the Japanese Economy and Public Finance 2013* compiled by the Cabinet Office reported that firms tend to raise their outlook for sales prices of goods and services over the next year, when they project that market prices over the same period will increase. This response accounted for about 70 percent of respondents in the manufacturing sector and more than 50 percent of respondents in the nonmanufacturing sector. In other words, if an increase in demand for goods and services leads to a rise in market prices, this may induce firms to raise their sales prices. This situation is more likely to occur if a sustainable expansion of the domestic market is projected.

Will the negative wage gap be mitigated?

When examining wage developments, I pay great attention to data on cash earnings per worker after separating workers into those who are *full time* and those who are *part time*.

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6 See Bank of England, "Inflation Report," August 2013.

7 See, for example, Andrew Haldane, "Targeting Inflation: The United Kingdom in Retrospect," in Mario I. Blejerer *et al*., *eds. Inflation Targeting in Practice,* which contains summaries of presentations made at the IMF Seminar held in Rio de Janeiro, Brazil on May 3–5, 1999.

More specifically, I find it important to look at the year-on-year rate of change in *monthly* cash earnings for full-time workers, and that in *hourly* cash earnings for part-time workers.[8] These indicators show that hourly cash earnings for part-time workers have been on a rising trend over the past three years, reflecting the high level of the active job openings-to-applicants ratio (Chart 12). There is a sign that supply and demand conditions in the labor market have been tightening, particularly for part-time workers. In addition, the growth rate of monthly cash earnings for full-time workers has been positive in recent months, thanks to increases in bonuses and overtime payments. The unemployment rate was 4 percent in September 2013 (4.3 percent for males and 3.5 percent for females), approaching the full-employment level especially with regard to female workers. The Bank's September 2013 *Tankan* (Short-Term Economic Survey of Enterprises in Japan) indicates a shortage in employment in the nonmanufacturing sector, regardless of firm size.

Given these conditions and demographic changes, an increase in hourly cash earnings for part-time workers is expected to continue. This may help narrow the wage differences between part-time and full-time workers – although progress is likely to occur only gradually. It is conceptually apparent that these conditions may contribute to mitigating the negative wage gap mentioned earlier. If the negative wage gap shrinks and the increasing trend in wages becomes firm, as *the third conceptual channel*, this may eventually exert greater pressure on firms to raise their sales prices.

C. Conceptual channels leading to a steepening in the slope of the Phillips curve

This subsection will focus on the conceptual channels that may help steepen the slope of the Phillips curve. Current economic conditions appear to exhibit signs of a gradual steepening in the slope of the Phillips curve, although their sustainability is not yet clear.

Will firms' profit margins improve?

Recently, it has been noted that the environment surrounding firms with respect to deflationary pressures is gradually changing. The depreciation of the yen has helped mitigate the deflationary pressure prevailing among firms, since firms no longer need to lower yen-based export prices to maintain (foreign currency-based) international price competitiveness. Indeed, the rate of change in yen-based export prices since late 2012 has turned from negative to positive. The yen's depreciation has also had moderating effects on inflows of some inexpensive import products. Moreover, the moderate movements in foreign currency-denominated commodity prices have helped avoid a sharp increase in import prices; this contrasts with the mid-2000s, which were characterized by sharper yen's depreciation and a commodity price surge.

Taking these factors into account, in terms of *the fourth conceptual channel*, firms may be finding it easier to raise their sales prices and wages owing to the healthier prospects for profitability. Moreover, the September 2013 *Tankan* reports that the "DI for output prices" – or sales prices – of large firms in the nonmanufacturing sector turned positive and that of large

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[8] These decomposed data are more useful than cash earnings per worker, since they remove the effects of the decline in the average wages caused by the uptrend in the ratio of part-time workers. In Japan, this uptrend has been taking place rapidly owing to (1) an increase in the number of workers in the labor market who had been working as regular workers but have temporarily become non-regular workers after retirement (until they meet the threshold for receiving benefits from their corporate pensions); (2) a structural shift to the services sector in the economy; (3) the effects of the spouse tax deduction applicable to the taxable income; and (4) an increase in the labor force participation ratios of female non-regular workers between 15 and 64 years old as well as of non-regular workers over 65 years old. Provided that some of these changes are structural, it is appropriate to separate full-time from part-time workers and look at their wage developments individually. In the case of part-time workers, it is suitable to use an *hourly* based indicator since their working times are more unstable than full-time workers. In the case of full-time workers, *monthly* cash earnings including bonuses and overtime payments – rather than *base salaries* alone – could be useful as an indicator to examine favorable wage developments as a first step.

firms in the manufacturing sector approached closer to zero, suggesting that these large firms have found it relatively easier to raise their sales prices (Chart 13-1). In addition, firms' profit margins – which can be estimated from the difference between the DIs for sales prices and for input prices – have also improved, regardless of sector and firm size, compared with 2008, when a greater depreciation of the yen and a hike in commodity prices caused a sharper increase in input prices and a deterioration in firms' profit margins (Charts 13-1 through 14-2).

Based on these observations, there is a sign that the price-setting environment for firms may be improving. Nonetheless, the conditions for small and medium-sized enterprises (SMEs) may continue to suggest difficulty, since the DIs for sales prices of such firms in all sectors remain negative and their profit margins over the next three months are expected to continue to deteriorate significantly (Charts 13-2 and 14-2). Given that SMEs account for the majority of Japanese firms, whether SMEs are able to pass their input costs on to their sales prices is increasingly becoming a key to determining future price developments.

Will changes in the marketing strategies of firms and retail stores continue?

Recently, it was noted that the prices of a wide range of goods and services have begun to show a moderate increase. More importantly, a persistently declining trend in the prices of durable consumer goods appears to have been mitigated. In particular, the rate of change in prices for some items – such as televisions and personal computers – has begun to turn positive. This reflects the fact that some large retail stores for home electronics are increasingly shifting from a discount price sales strategy to a higher-value-added or higher unit sales price strategy (*the fifth conceptual channel*), in addition to the rise in import prices reflecting the yen's depreciation. Some restaurants are also attempting to raise their unit sales prices by providing higher-value-added menus and services. It seems that it has become increasingly important to focus on prices in order to secure profits, amid sluggish growth in the overall sales volume in Japan partly reflecting demographic changes. Changes in marketing strategies also reflect an improvement in household sentiment, a continued improvement in employment, wealth effects, and a front-loaded increase in demand prior to the consumption tax hikes. Above all, mitigation of the persistently declining trend in the prices of durable consumer goods – observed since the early 1990s – suggests that firms' price-setting behavior is changing. Such developments have also started to be observed in clothes and footwear. It is conceivable that this trend will last for a considerable time if such a marketing strategy spreads widely throughout society.

To sum up, I have outlined *five conceptual channels* in all as factors that may lead to a shift in the Phillips curve and a steepening in its slope. It is conceivable that the materialization of these factors will contribute to mitigating the downside risks to the Bank's baseline scenario of the outlook for prices and to achieving the 2 percent price stability target.

V. My views and proposal on the structure of the outlook report

Lastly, I would like to explain my views on the structure of the Outlook Report. I believe that the description in the report is insufficiently clear for the public and market participants. In particular, I think that use of the word "perspectives" with no explanation is inappropriate and unfriendly to readers.[9] Readers could easily fail to understand the connection between the contents of the report and the two perspectives contained in it, and as a result the Bank

[9] This was Section III in the Outlook Report – titled "Conduct of Monetary Policy" – which focuses on the two perspectives. The first perspective examines whether the outlooks for economic activity and prices will follow a path of "sustainable growth under price stability" over the next three years or so. The second perspective relates to various risks relevant to the conduct of monetary policy, including (1) the overall assessment of risks to the economic activity and prices and (2) financial imbalances from a longer-term perspective. However, these explanations are not provided in the Report.

could lose the opportunity to communicate its intentions to the public. Ever since I was appointed as a Member of the Policy Board in April 2011, I have maintained views on the need to significantly improve the strategy of the Bank's communication including that expressed through various official documents including the Outlook Report, to promote the public's understanding of monetary policy, and have called for improvements.[10]

I submitted a proposal for the first time at the MPM held on April 26, 2013, after the new leadership of the Bank was appointed.[11] Although the proposal was not accepted at the time, in the most recent Outlook Report released in October 2013 a new footnote was inserted in the section related to the Bank's two perspectives, telling readers to refer to the related *Statement on Monetary Policy* released in January 2013. This improvement was a welcome step, addressing some of my concerns. However, I believe that the insertion of the footnote without any explanation of the two perspectives did not contribute sufficiently to improving the clarity for readers.

Accordingly, I presented a new proposal (*the fourth point of my proposal*) at the MPM held on October 31, 2013, to include an introductory paragraph at the beginning of the Outlook Report. Under my proposal, the paragraph would have explained the sequence of the report and provided a brief description of the concepts behind the two perspectives. The suggested paragraph read as follows: "*The October 2013 Outlook Report will first present the baseline scenario of the outlook for economic activity and prices in Japan for the next one to three years. It will next highlight upside and downside risks to the baseline scenario. The Bank will then assess that scenario from two perspectives: the first perspective concerns an examination of the scenario from the viewpoint of whether the economy will follow the sustainable growth path with price stability; the second perspective involves an examination of various risks considered most relevant to the conduct of monetary policy – including those in the longer term – from the viewpoint of achieving the sustainable growth path with price stability. Lastly, taking into account its assessment based on those perspectives, the Bank will outline its thinking on the future conduct of monetary policy."*

This type of introduction appeared in the October 2011, April 2012, and October 2012 issues of the Outlook Report, but my proposal this time represents an advance in that it focuses on adding an explanation of the two perspectives.

The Bank finds itself in an important phase as it aims to achieve the 2 percent price stability target through the conduct of unprecedented monetary easing, which is a challenging task. In this regard, it appears that some in the public and some market participants feel uncertain about the importance of achieving the 2 percent target, as well as about the Bank's policy intention. Gaining the sympathy of the public and market participants with the Bank's policy intention and promoting their belief in it are fundamental to successfully achieving the 2 percent target. Improving the reader-friendliness of the Bank's official documents – including the Outlook Report – is one of the first steps toward increasing the number of readers and gaining their support of the Bank's conduct of monetary policy. In this regard, I will do my best to pursue more effective communication by the Bank, continually examining how it can gain the understanding of the public and market participants, and thereby achieve the 2 percent target with a sustainable economic growth path.

This brings me to the end of my speech. Thank you very much indeed for your kind attention.

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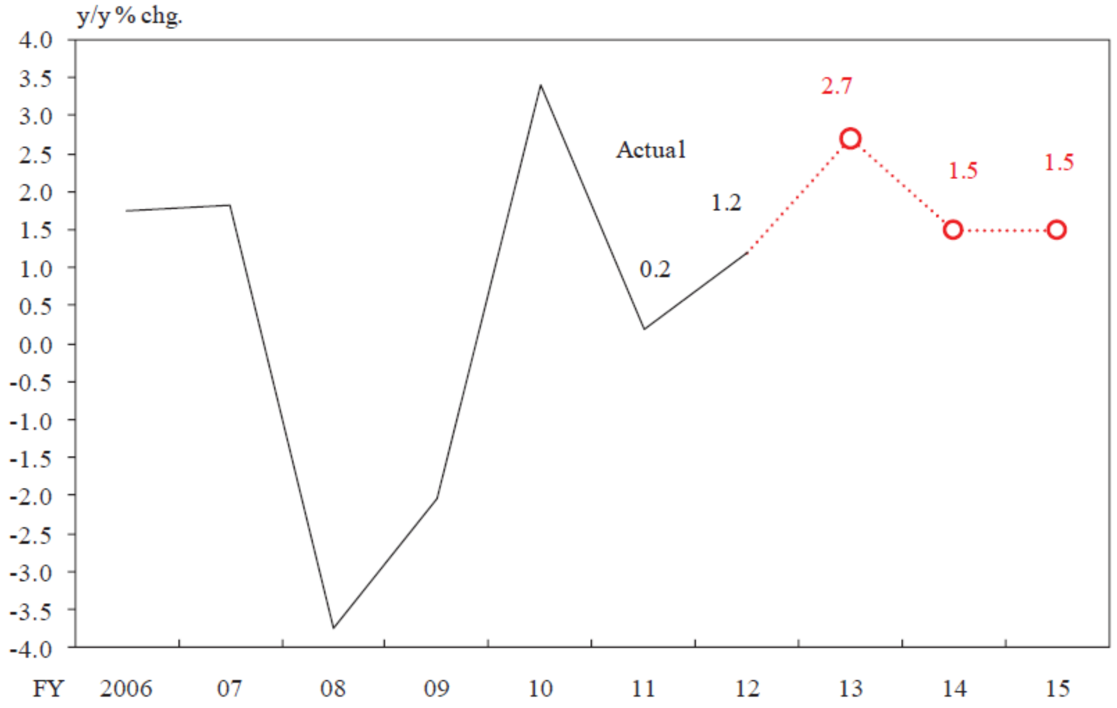
[10] According to the Bank's *Opinion Survey on the General Public's Views and Behavior* conducted in June 2013, about 18 percent of the respondents answered "unclear," nearly 40 percent answered "somewhat unclear," and about 36 percent answered "difficult to say" to a question asking how they would describe the Bank's explanation to the public.

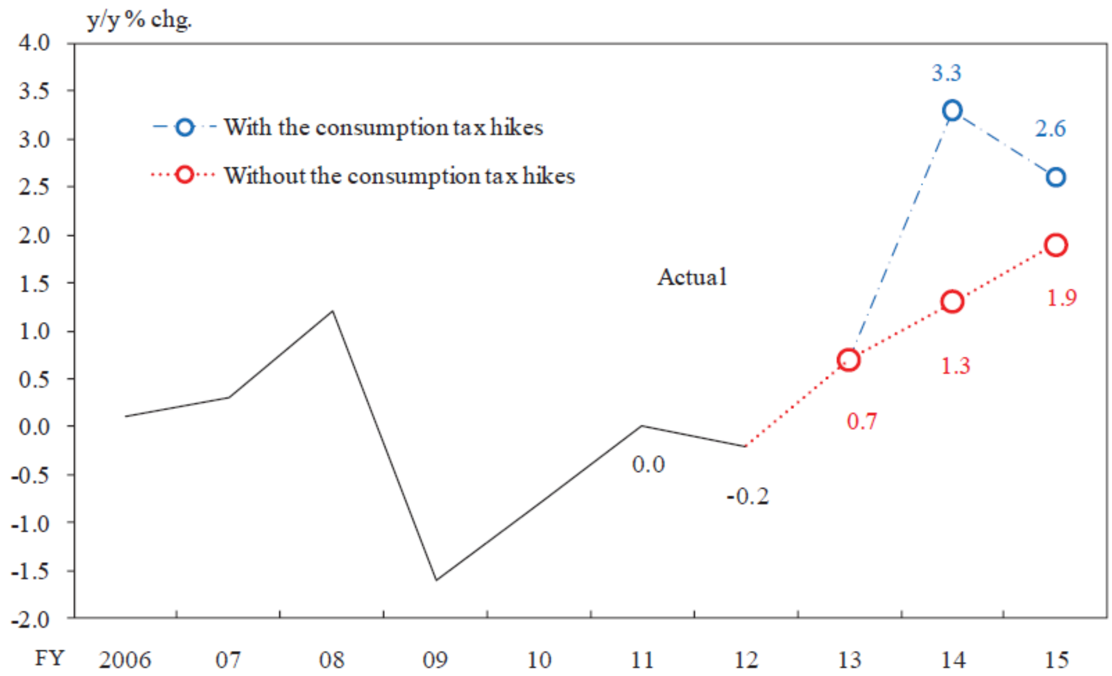
[11] My proposal at the April 26 MPM called for completely removing the concept of the "two perspectives" from the report; instead, I suggested that what was written relating to the two perspectives in Section III be moved to appropriate sections throughout the entire report.

Chart 1

The Bank's Outlook for Economic Activity (Real GDP)



The Bank's Outlook for Prices (Core CPI)



Notes: 1. The circles in the chart indicate the median of the Policy Board members' forecasts (point estimates).

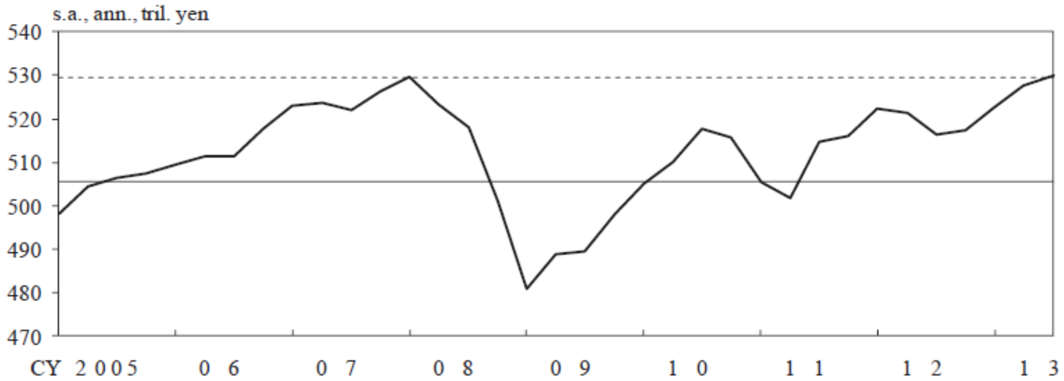
2. Core CPI excludes fresh food from all items.

Source: Bank of Japan.

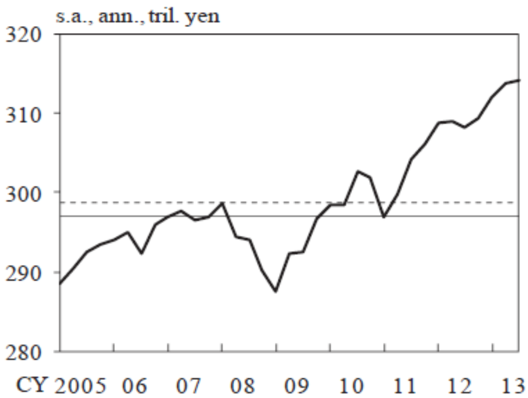
Chart 2

Real GDP and Its Components

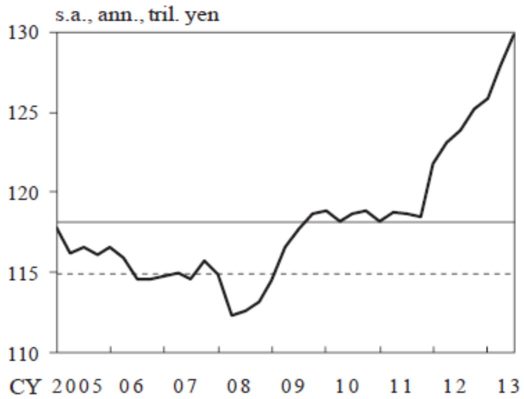
(1) Real GDP



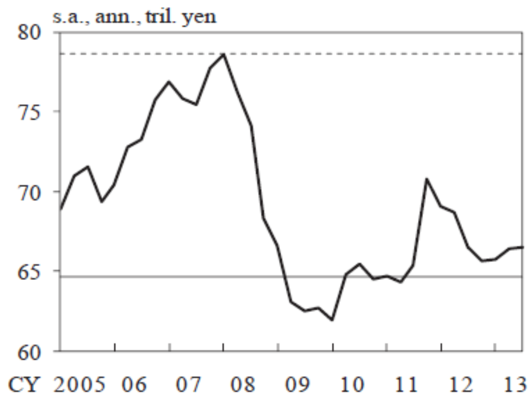
(2) Private Consumption



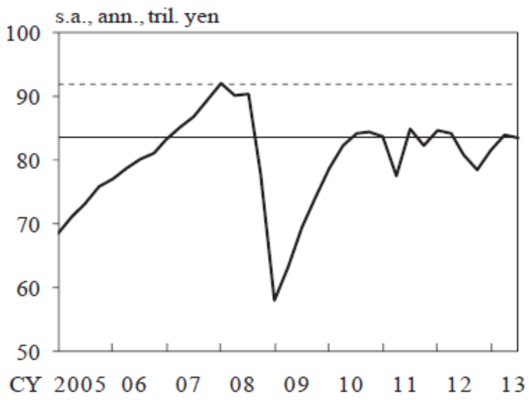
(3) Public Demand



(4) Private Non-Residential Investment



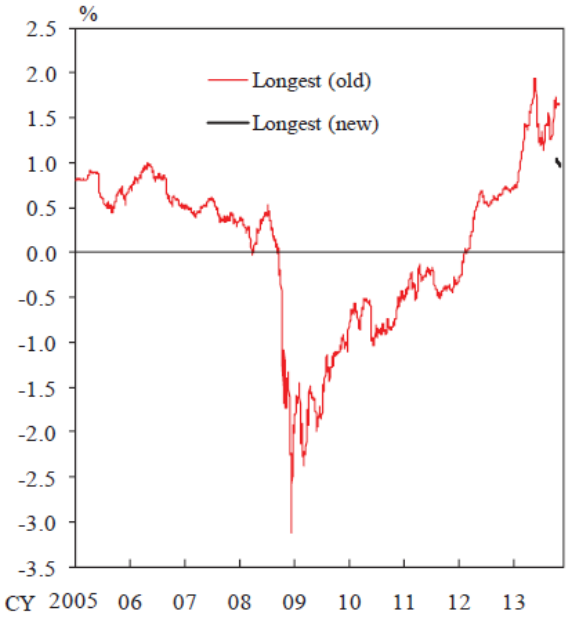
(5) Exports



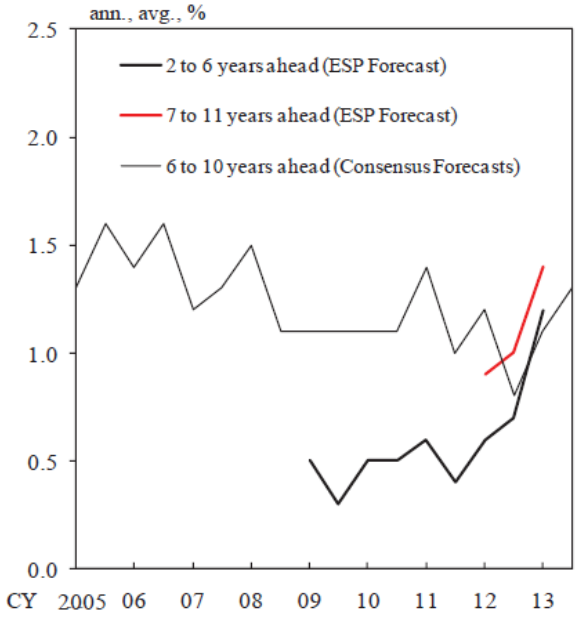
Note: In each chart, the broken line indicates the level for 2008/Q1, when real GDP recorded its peak just before the Lehman shock. The thin solid line indicates that of 2011/Q1, when the Great East Japan Earthquake occurred.
Source: Cabinet Office.

Medium- to Long-Term Inflation Expectations

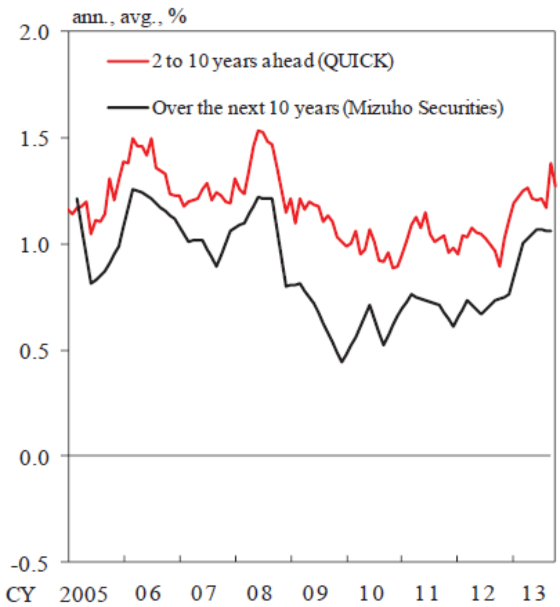
(1) BEI for Inflation-Indexed JGBs



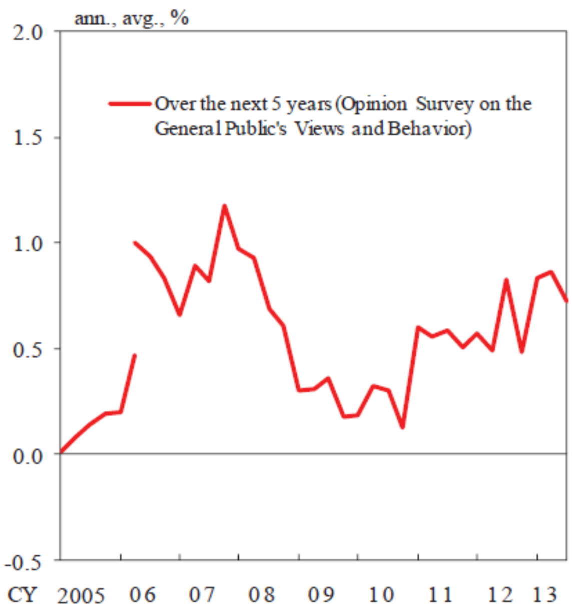
(2) Economists



(3) Market Participants (Survey)



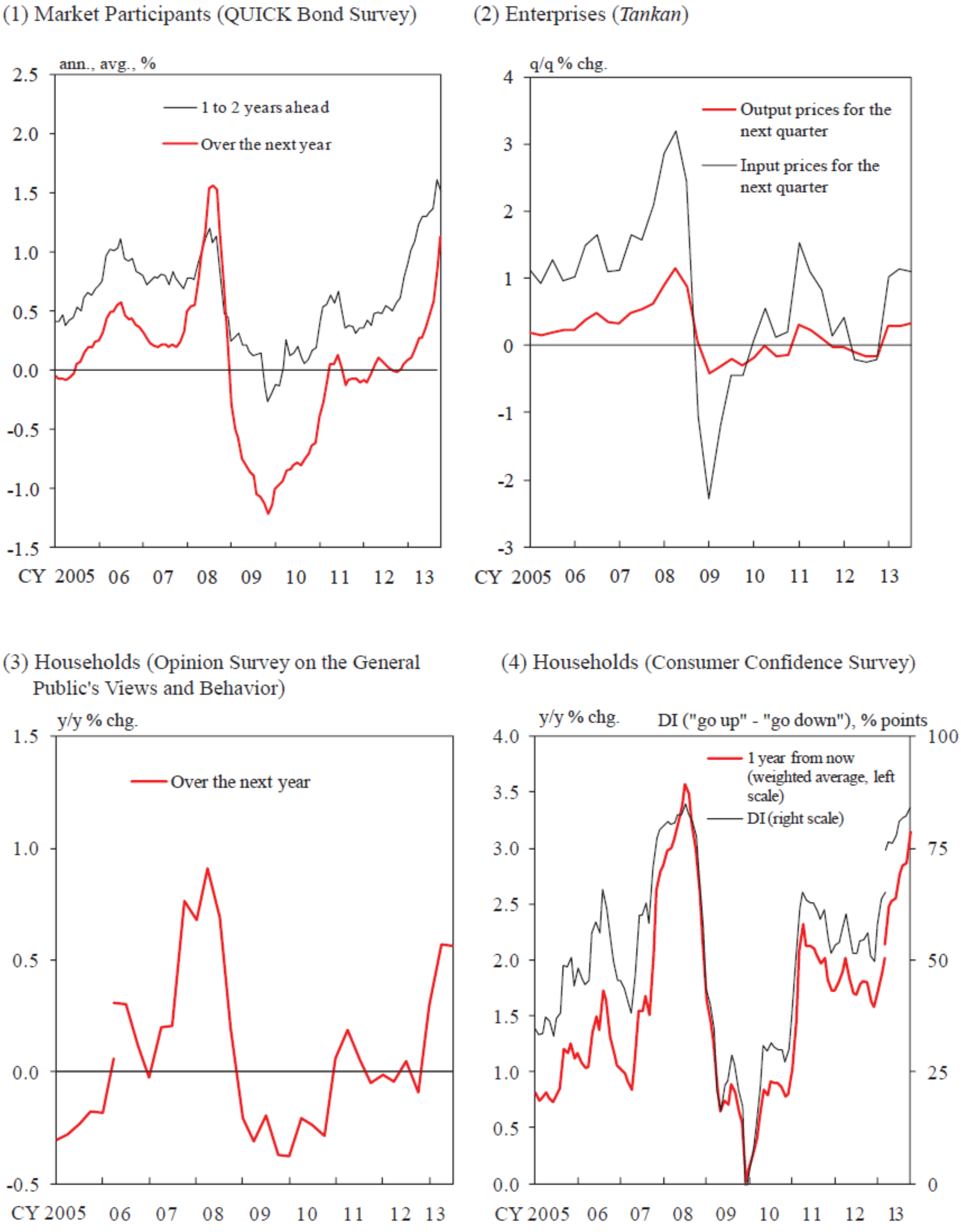
(4) Households



Sources: Bank of Japan; Consensus Economics Inc., "Consensus Forecasts"; Japan Economic Research Center; QUICK; Mizuho Securities; Bloomberg.

Chart 4

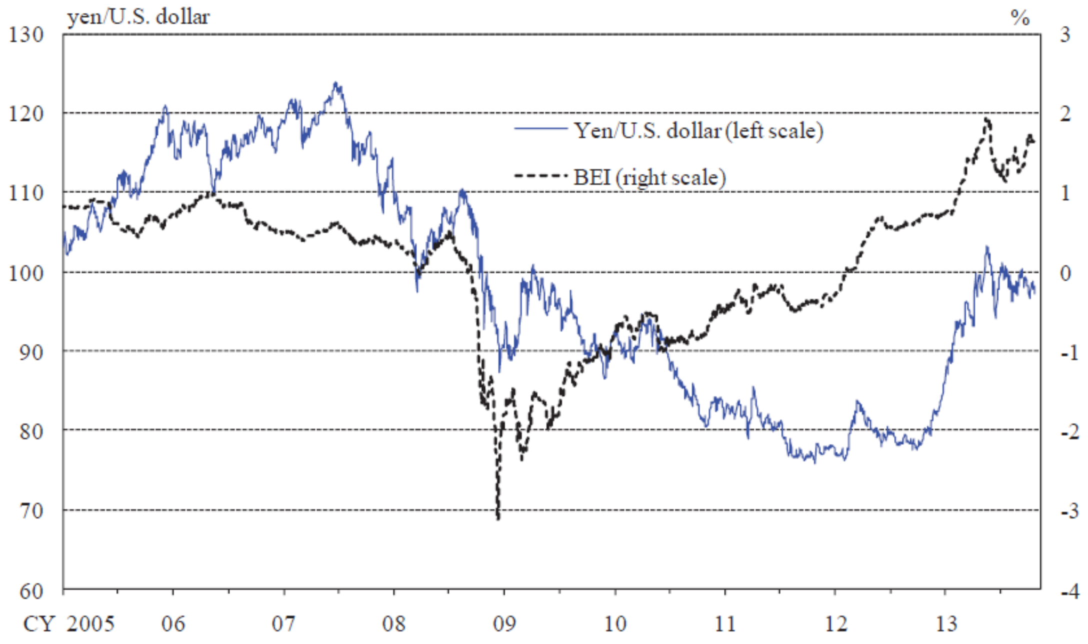
Short-Term Inflation Expectations



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

Chart 5

BEI for Inflation-Indexed JGBs and Yen/U.S. Dollar Exchange Rate

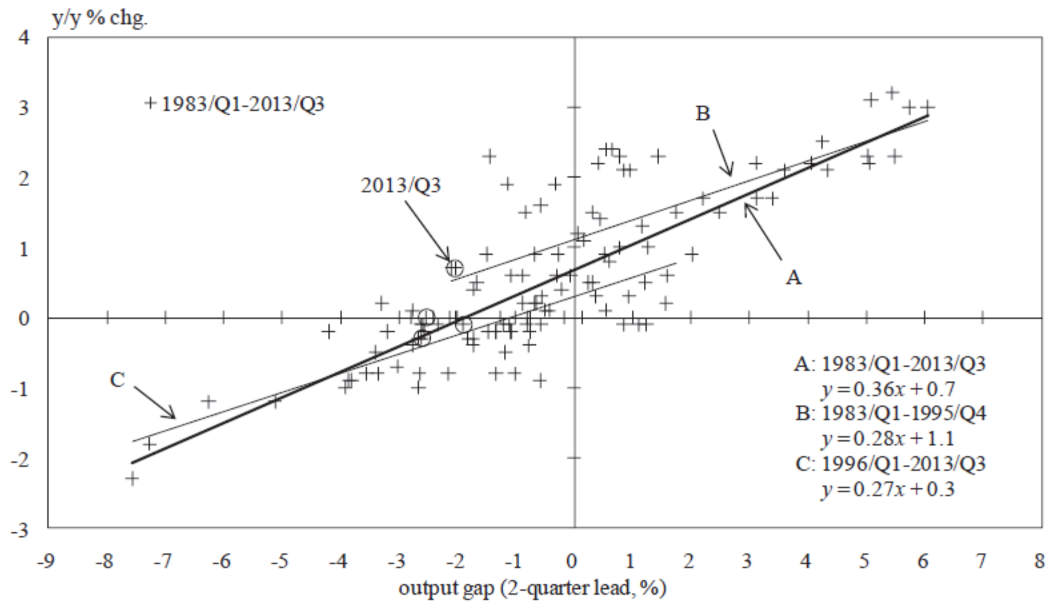


Note: BEI is for the longest-maturity instruments.
Sources: QUICK; Bloomberg.

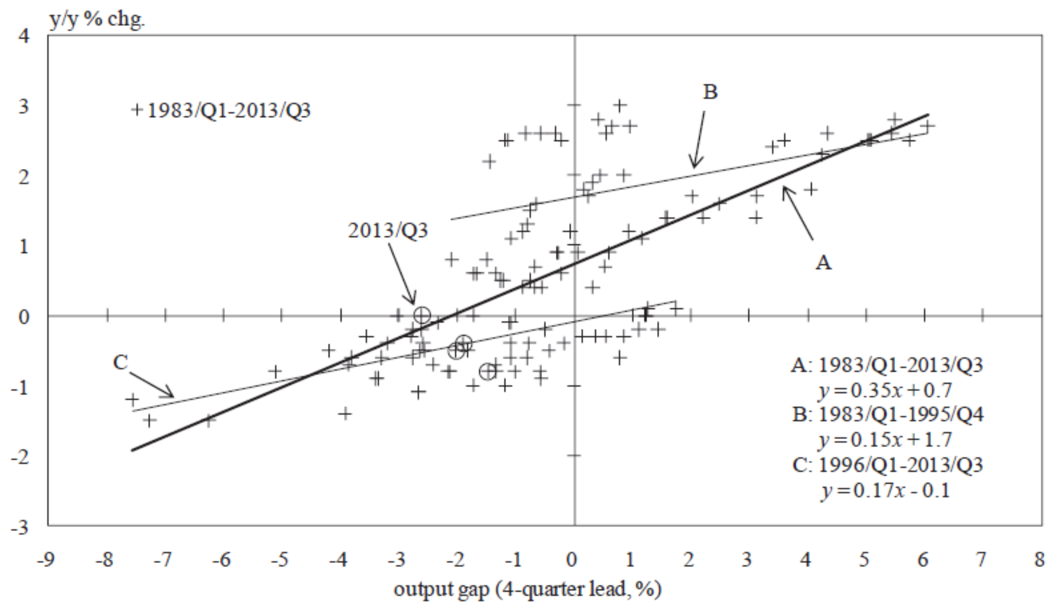
Chart 6

Estimated Phillips Curves

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



(2) Phillips Curve (CPI All Items Less Food and Energy)

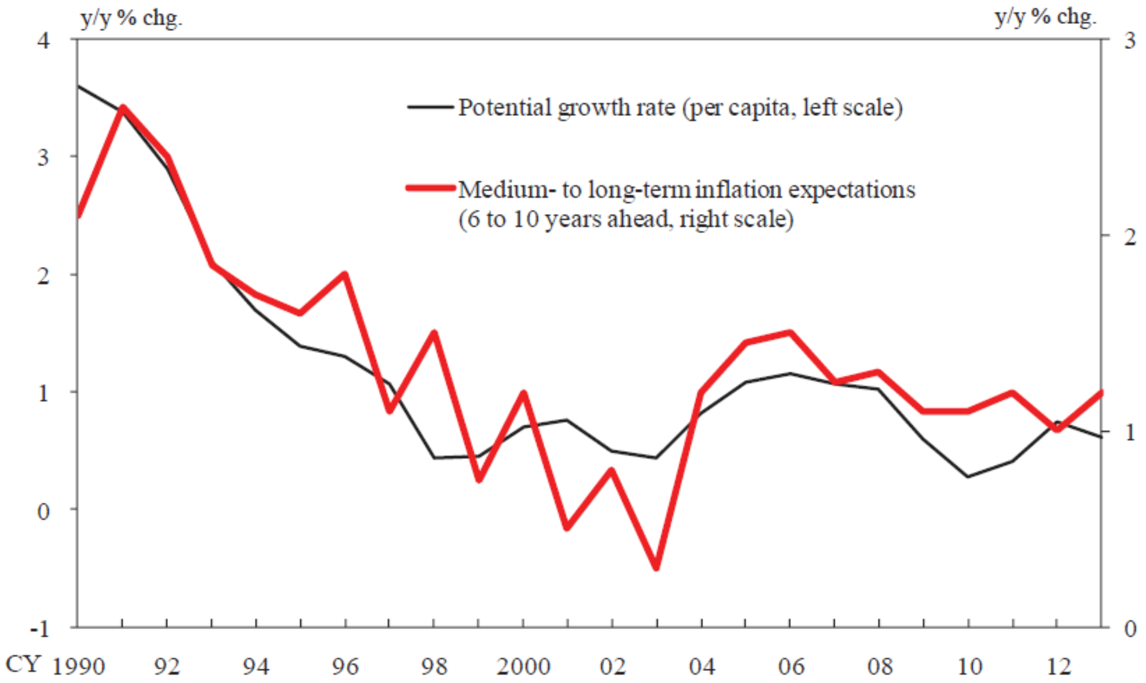


Note: The output gap is estimated by the Bank of Japan.

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

Chart 7

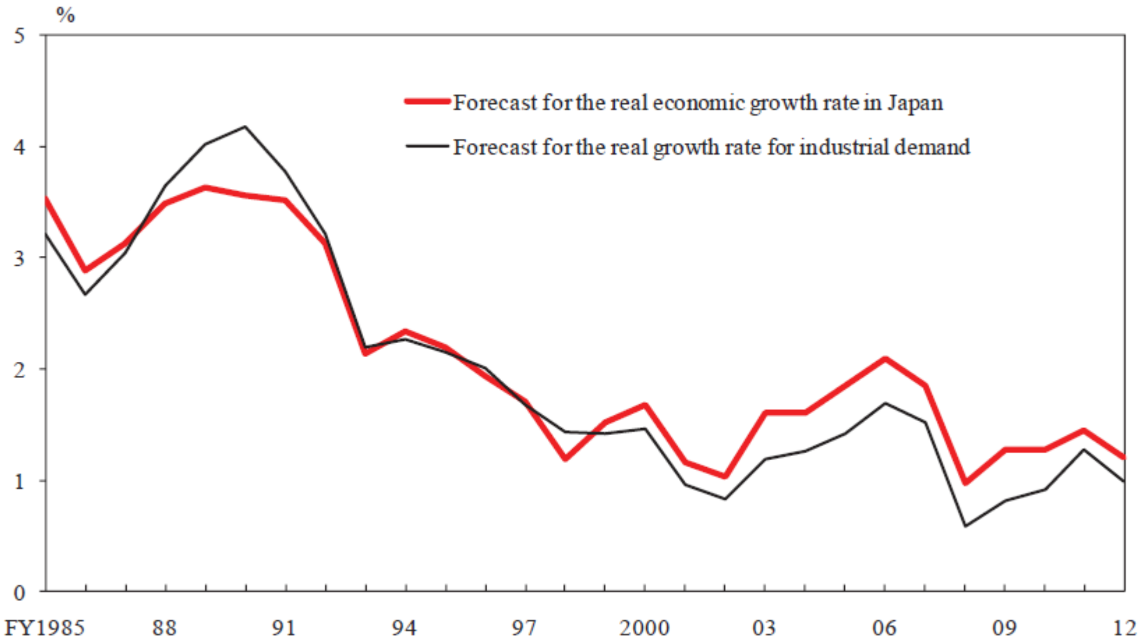
Medium- to Long-Term Inflation Expectations and Potential Growth Rate



Sources: Cabinet Office; Consensus Economics Inc., "Consensus Forecasts."

Chart 8

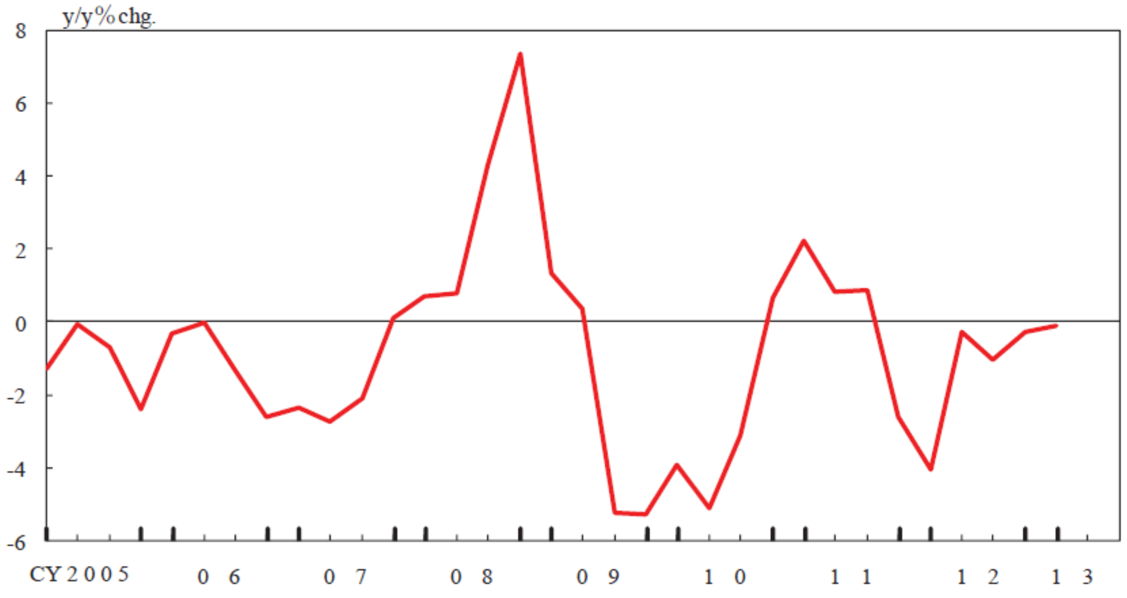
Firms' Expected Growth Rates (For the Next 5 Years)



Source: Cabinet Office.

Chart 9

Unit Labor Costs



Source: Cabinet Office.

Chart 10

Phillips Curve: Upward Shift with a Steepening Slope

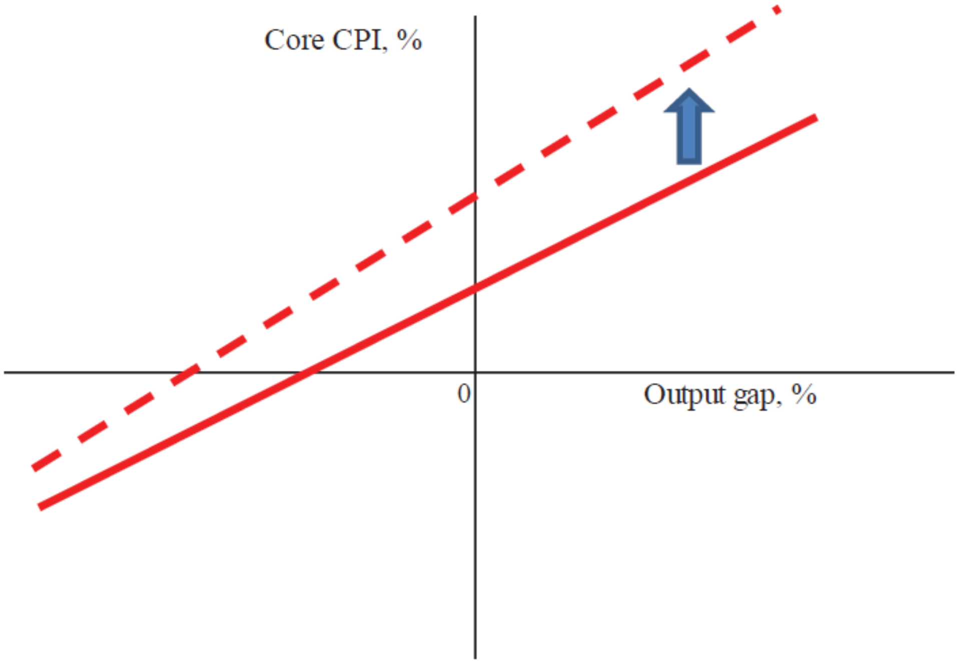
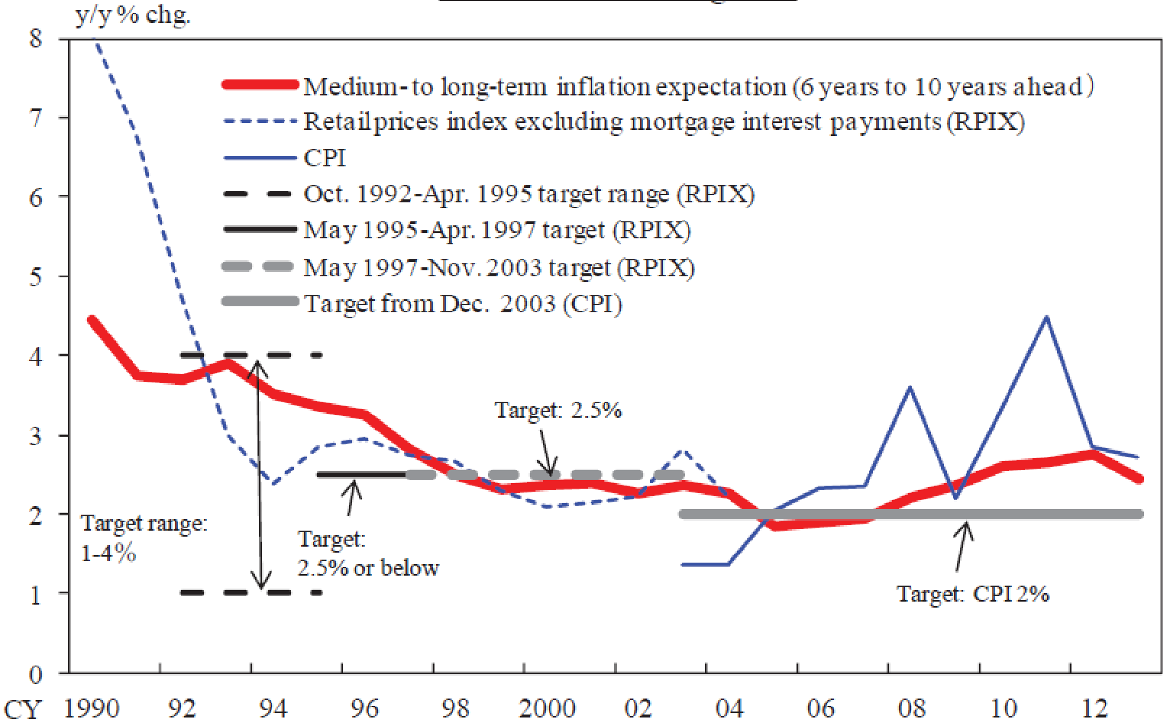


Chart 11

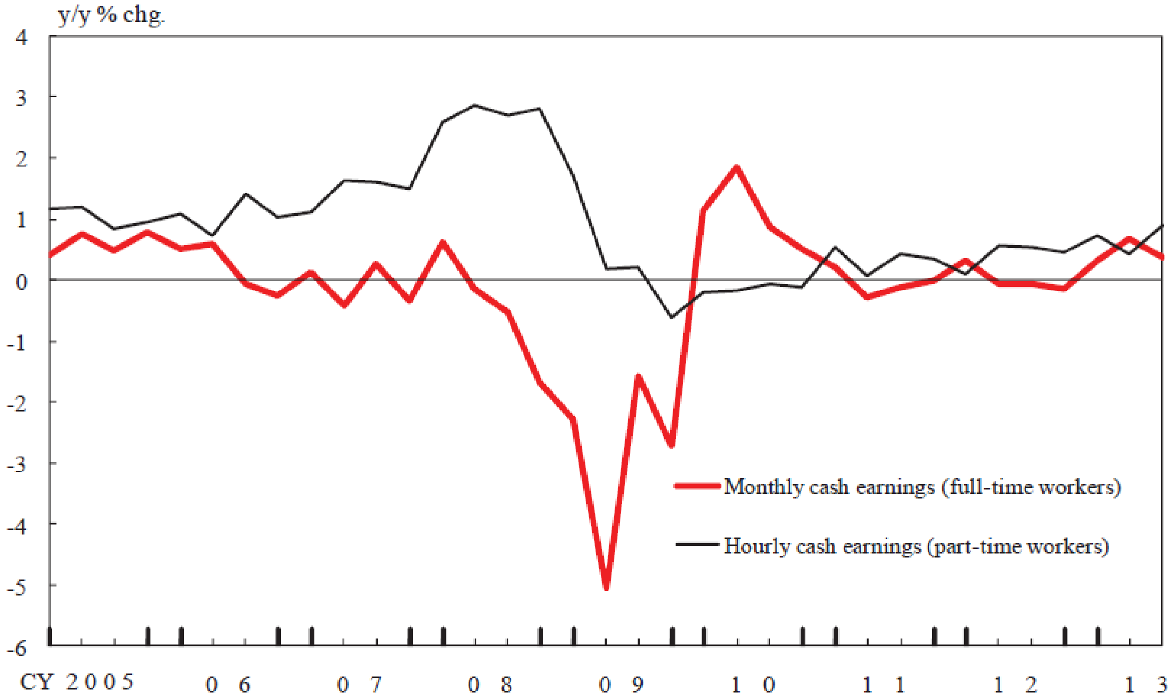
Inflation Rate and Medium- to Long-Term Inflation Expectations in the United Kingdom



Sources: Consensus Economics Inc., "Consensus Forecasts"; Office for National Statistics; Bank of England.

Chart 12

Cash Earnings by Type of Worker

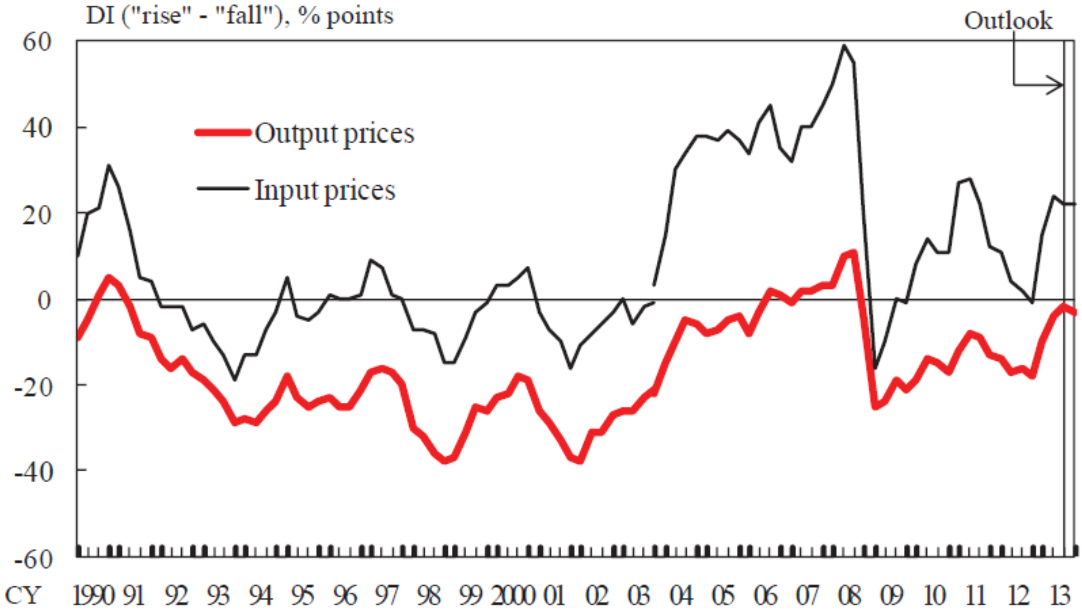


Source: Ministry of Health, Labour and Welfare.

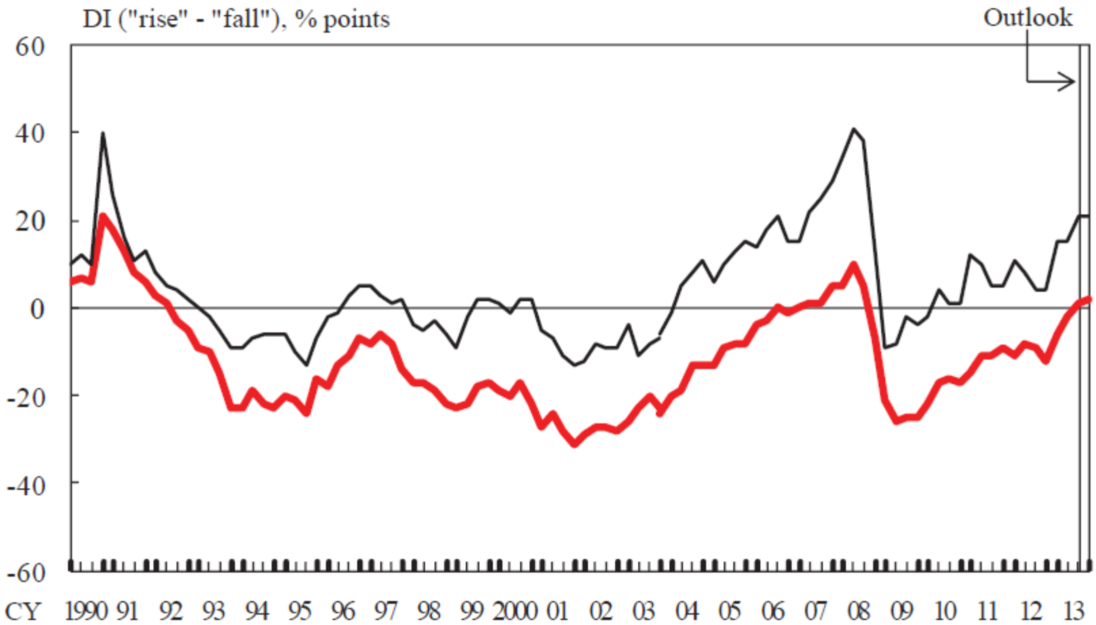
Chart 13-1

Tankan: Output Price DI and Input Price DI (1)

(1) Large Enterprises: Manufacturing



(2) Large Enterprises: Nonmanufacturing

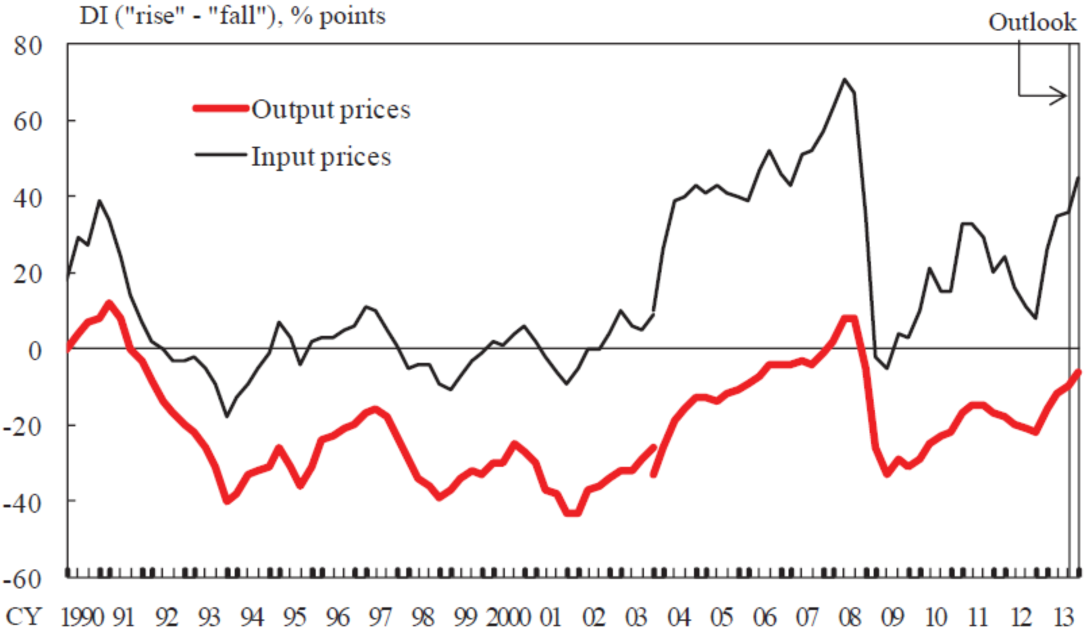


Source: Bank of Japan.

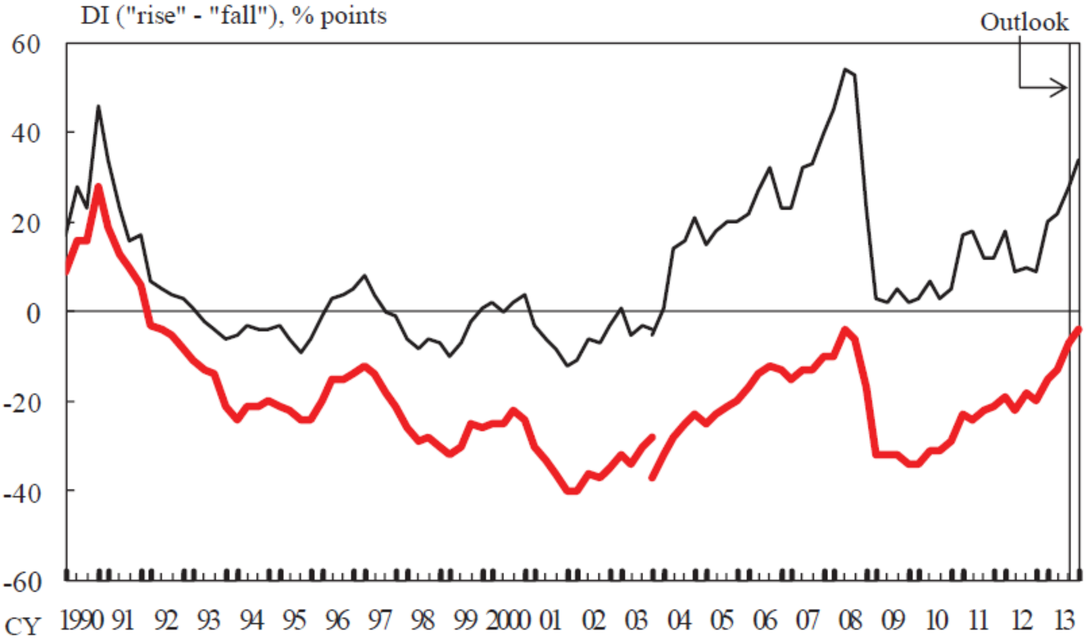
Chart 13-2

Tankan: Output Price DI and Input Price DI (2)

(3) SMEs: Manufacturing



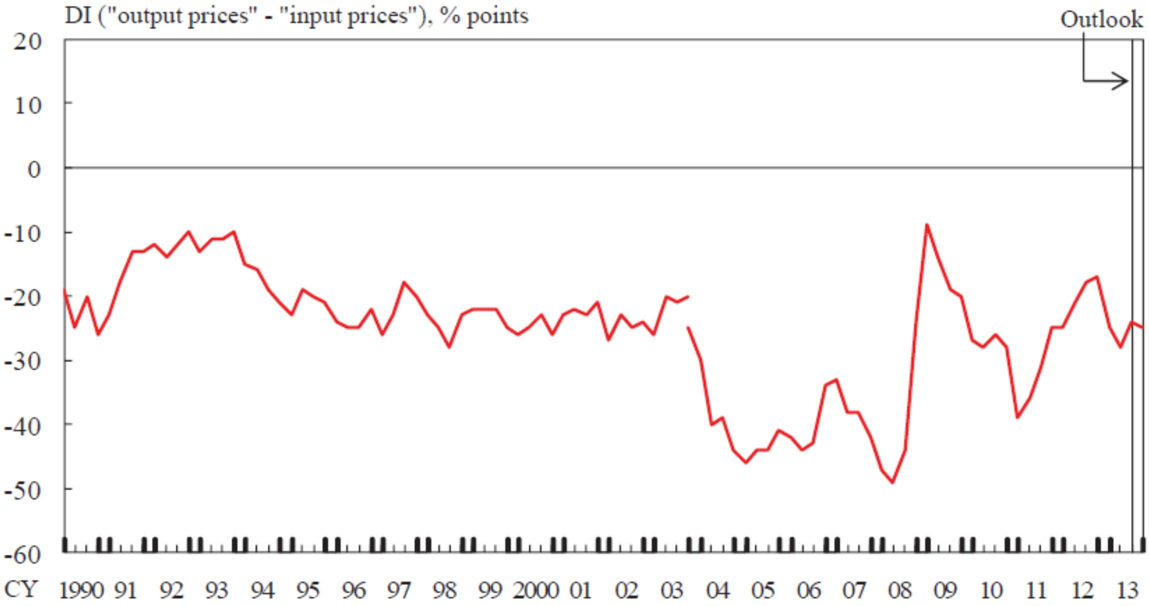
(4) SMEs: Nonmanufacturing



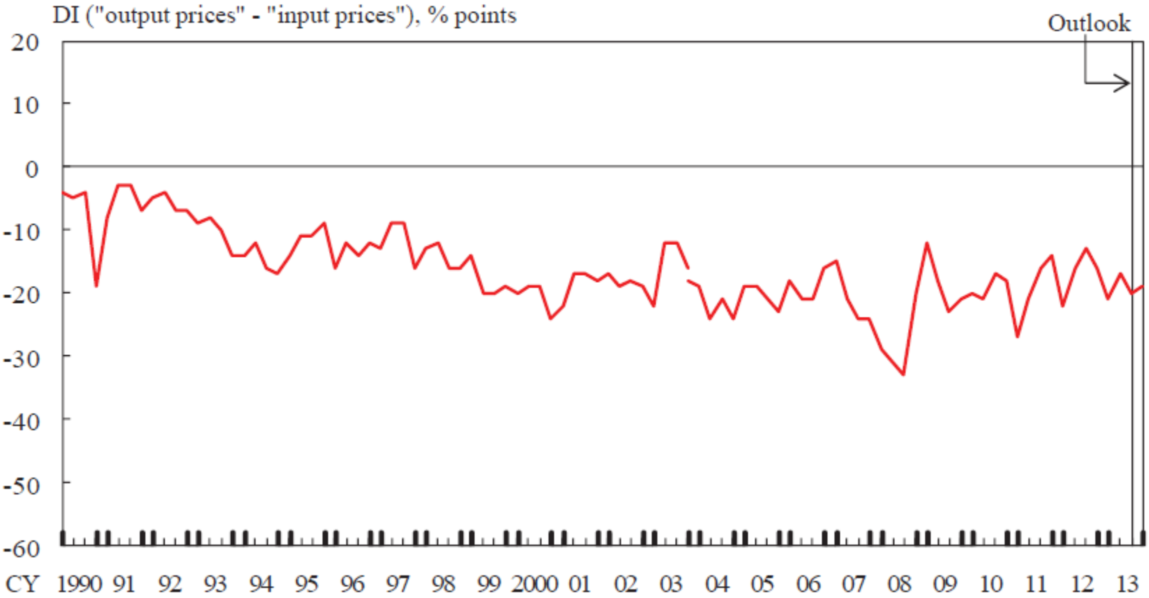
Source: Bank of Japan..

Tankan: Difference between DIs for Output and Input Prices (1)

(1) Large Enterprises: Manufacturing



(2) Large Enterprises: Nonmanufacturing

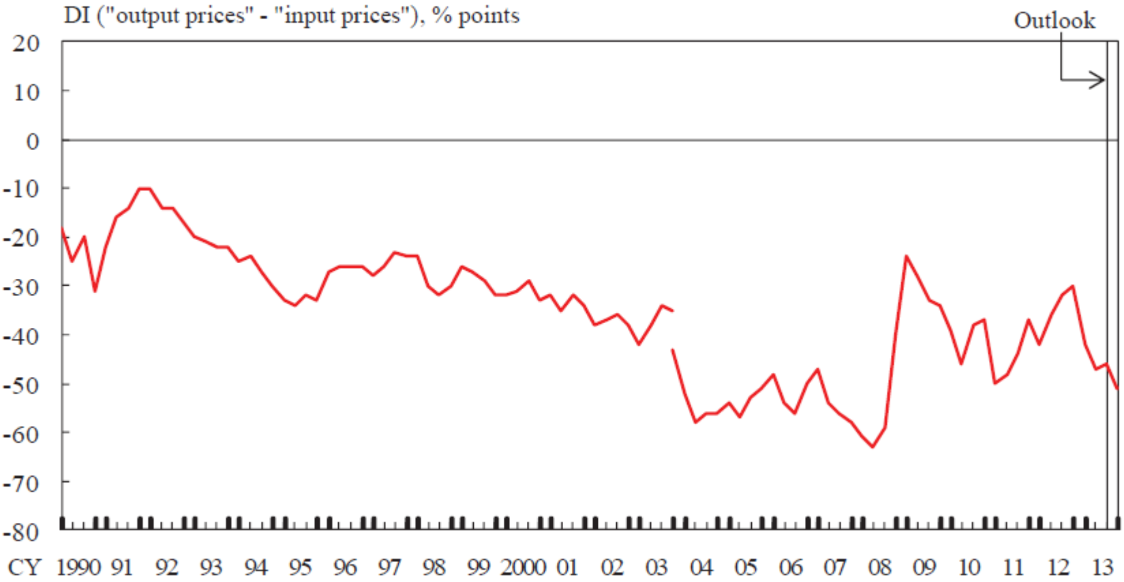


Source: Bank of Japan.

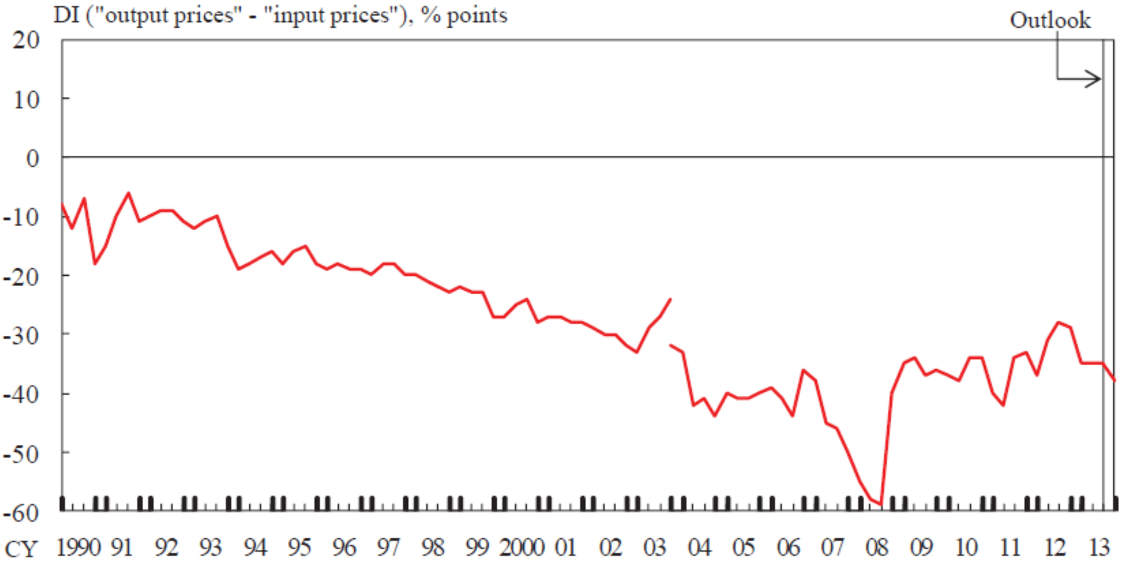
Chart 14-2

Tankan: Difference between DIs for Output and Input Prices (2)

(3) SMEs: Manufacturing



(4) SMEs: Nonmanufacturing



Source: Bank of Japan.