June 22, 2017

Bank of Japan

Japan's Economy and Monetary Policy

Speech at a Meeting with Business Leaders in Aomori

Kikuo Iwata

Deputy Governor of the Bank of Japan

(English translation based on the Japanese original)

Introduction

It is my pleasure to have the opportunity today to exchange views with administrative, financial, and business leaders in Aomori Prefecture. I would also like to take this opportunity to express my sincere gratitude for your cooperation with the activities of the Bank of Japan's Aomori Branch.

Today, I would like to have your views on the actual situation of the local economy, as well as your candid opinions about the Bank's policies and activities. Before exchanging views with you, I will briefly explain the recent economic developments at home and abroad, and then touch on some points regarding monetary policy.

I. The Current Situation of Economic Activity and Its Outlook

The economic growth in Japan has taken hold more firmly since last autumn, and the Bank judges that the economy has been turning from its moderate recovery trend toward a moderate expansion. Looking ahead, from fiscal 2017 through fiscal 2018, improvement in overseas economies and the government's large-scale stimulus measures that were formulated last year are expected to clearly have positive effects on the economy. Under these circumstances, Japan's economy is likely to continue expanding and keep growing at a pace above its potential, mainly through fiscal 2018.

In what follows, I would like to talk about the current situation of Japan's economic activity and its outlook in more detail.

Let me first touch on overseas economies affecting Japan's economy. In the first half of 2016, pessimistic views about the global economy prevailed; concerns heightened regarding the slowdown in emerging economies including China, and the global financial markets became volatile, triggered by the so-called Brexit. However, the global economy hit bottom in the first half of last year, and its growth momentum seems to have strengthened thereafter, with various economic indicators improving markedly. Specifically, remarkable improvements have been observed in the manufacturing sector and trade activity, both of which had lacked growth momentum after the global financial crisis (Chart 1). Their positive effects have spread globally, and emerging economies -- which tended to lag

behind advanced economies -- also have been improving. In the NIEs and the ASEAN economies, for example, although they were sluggish in 2015 and 2016, their exports clearly have picked up and consumer confidence has improved. In China, the economy has continued to see stable growth on the whole, as evidenced by the fact that the year-on-year GDP growth rate for the January-March quarter of 2017 increased somewhat from the previous quarter.

Looking forward, growth in emerging economies is expected to become solid on the back of the steady growth in advanced economies and the effects of policy measures taken by emerging economies. The latest World Economic Outlook (WEO) released by the International Monetary Fund (IMF) projects that the global economic growth rate will increase, registering 3.1 percent in 2016, 3.5 percent in 2017, and 3.6 percent in 2018 (Chart 2). The Bank is also monitoring developments in risk factors and their impacts on the global economy; risks include those of the new U.S. administration's economic policy and of political situations in Europe, as well as geopolitical risks.

Let me now turn to Japan's economy. Japan's exports and production have been on an increasing trend amid the global improvement mainly in the manufacturing sector and trade activity (Chart 3 [left chart]).

Against this background, in the corporate sector, profits have been at record high levels (Chart 3 [right chart]). Business sentiment has been favorable on the whole, and business fixed investment has continued on a moderate increasing trend. A feature of the current economic recovery phase is that improvement in business sentiment has been widely seen, not only for firms in metropolitan areas and large firms but also for firms in local areas and small firms. The diffusion indexes (DIs) by region for business conditions in the *Tankan* (Short-Term Economic Survey of Enterprises in Japan) have been positive as a trend for all regions since the December 2013 survey (Chart 4). The DIs by firm size have been well above zero for large firms as well as small firms (Chart 5). This was not the case with the previous economic recovery phase from 2002 through 2008 before the global financial crisis.

In the household sector, Japan's labor market conditions have continued to tighten steadily. The unemployment rate has declined to the range of 2.5-3.0 percent -- which is virtually full employment -- for the first time since 1994. The active job openings-to-applicants ratio has risen to 1.48 times, the level last seen in 1974, exceeding the peak level observed in the "asset bubble" period (Chart 6). Looking ahead, labor market conditions are expected to tighten further as the economy continues growing at a pace above its potential.

In this context, some economists argue that labor shortage may constrain Japan's economic growth. However, I am in dissent with this argument and believe that labor shortage will instead raise labor productivity through, for example, a gradual increase in labor-saving investment, thereby encouraging further economic growth.

The tight labor market conditions also have been exerting gradually increasing upward pressure on wages. In fact, the year-on-year rate of change in hourly wages of part-time employees, which are particularly sensitive to labor market conditions, has risen to the range of 2.5-3.0 percent. Furthermore, many firms appear to have raised their base pay for the fourth consecutive year in the annual spring labor-management wage negotiations this year. Base pay rises are especially evident in small and medium-sized firms that face acute labor shortage, amid improvement in business conditions spreading beyond large firms (Chart 7).

Next, I will talk about price developments. Although a decline in energy prices since the second half of 2014 had exerted downward pressure on consumer prices, such pressure dissipated and energy prices turned toward pushing up general prices. The year-on-year rate of change in the consumer price index (CPI) excluding fresh food has been slightly positive since January 2017. Meanwhile, that in the CPI excluding fresh food and energy has continued to be positive as a trend for around three and a half years (Chart 8). Japan's economy is no longer in deflation, which is commonly defined as a sustained decline in prices.

Nevertheless, we must admit that Japan's inflation has been relatively moderate, despite the fact that corporate profits have been at record high levels and the labor market has been at

virtually full employment. This is in striking contrast to the situations in the United States and Europe, where inflation rates have already recovered significantly (Chart 9 [left chart]).

What lies behind such moderate inflation is the fact that, in Japan, people's perception of future price developments -- that is, inflation expectations -- tends to be largely affected by actual inflation rates, which declined in the past. This largely adaptive formation mechanism of inflation expectations is unique to Japan, and is rarely observed in other major economies. In fact, despite the global fall in crude oil prices, inflation expectations in the United States and Europe have barely declined (Chart 9 [right chart]). This is because the degree to which inflation expectations are affected by past inflation is smaller in these economies.

What creates such differences? My answer is that the forecasts of prices based on past inflation have performed well in Japan, as the inflation rate was persistently low for a long time during the deflationary period since the second half of the 1990s. During this period, if the actual inflation rate in the previous year was 0 percent, for example, it was reasonable to project that the inflation rate would be 0 percent again in the following year, rather than rise to 2 percent.

However, Professor Milton Friedman -- a distinguished scholar of economics -- made the following argument, stating that how inflation expectations are formed among the public is subject to change. If wages are unchanged in a situation of continued inflation, employees' real income will be lost to the extent of inflation. They would not tolerate such a situation forever; rather, they eventually will start to forecast future inflation in a forward-looking manner and demand wage increases based on the forecast. This is an example for wages, but the same mechanism will be in place for retail prices of products and services; in an inflationary phase, firms will start to anticipate future inflation and raise their retail prices based on their forecast.

As for the outlook, the year-on-year rate of increase in consumer prices is expected to accelerate, as upward pressure on wages heightens amid a further tightening of labor market conditions, and as a positive contribution of energy prices to inflation increases. Friedman's

argument suggests that, during this inflationary phase, inflation expectations in Japan will become less affected by past inflation, with a gradually increasing number of people formulating their inflation expectations in a forward-looking manner, as is the case in the United States. Furthermore, as I will talk about more later, the Bank will continue to pursue powerful monetary easing with the aim of achieving its price stability target of 2 percent. Against this backdrop, although uncertainty about future developments in inflation expectations warrant attention, Japan's inflation rate is likely to gradually increase toward the price stability target of 2 percent.

II. Thinking behind the Conduct of Monetary Policy

Next, I would like to talk about the thinking behind the Bank's conduct of monetary policy. Since last September, the Bank has been conducting monetary policy under the framework of "Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control." This framework consists of two components (Chart 10).

The first is an inflation-overshooting commitment. This is the Bank's strong commitment that it will continue expanding the monetary base until the year-on-year rate of increase in the observed CPI exceeds 2 percent and stays above that level in a stable manner. You may wonder why monetary easing will be continued until the inflation rate exceeds, not just reaches, 2 percent. In Japan, the view that prices will not increase -- the so-called deflationary mindset -- has been entrenched among people under prolonged deflation. It is crucial, therefore, that the public actually experience inflation above 2 percent and thereby the perception takes hold among them that prices of goods and services tend to go up every year by around 2 percent. With this in mind, the Bank has committed itself to continue with large-scale monetary expansion until such situation is achieved through this inflation-overshooting commitment.

The second component is yield curve control. Under yield curve control, the Bank has been facilitating the formation of the yield curve that is considered most appropriate for achieving the price stability target of 2 percent, taking account of developments in Japan's economic activity and prices as well as financial conditions. At present, the Bank sets the short-term policy interest rate at minus 0.1 percent and the target level of the 10-year

Japanese government bond (JGB) yields at around 0 percent, conducting JGB purchases so as to achieve this target level.

As I explained earlier, although the economic growth in Japan has taken hold more firmly, the inflation momentum is not yet sufficiently firm and there is still a long way to go before achieving the price stability target of 2 percent. Risks have continued to be skewed to the downside, particularly those regarding developments in overseas economies and in firms' and households' medium- to long-term inflation expectations. Under these circumstances, I believe that it is necessary that the Bank persistently pursue monetary easing under "QQE with Yield Curve Control," aiming to lower real interest rates, taking advantage of lowered nominal interest rates.

Now I would like to bring up my views on two proposals recently heard from some economists on the Bank's conduct of monetary policy.

The first proposal is that the Bank should start raising interest rates, as the global environment surrounding interest rates has been changing against the background of the global economic growth gaining momentum and the Federal Reserve pushing forward the rate hike process.

As often pointed out, nominal interest rates in Japan of late are lower than those in the United States for both short and long maturities (Chart 11). However, it is not nominal but real interest rates -- calculated by subtracting inflation expectations from nominal interest rates -- that determine monetary easing effects on the economy. With this in mind, if recent real interest rates in Japan are compared with those in the United States, it is evident that long-term real interest rates are lower in Japan while short-term real interest rates are higher. This is because inflation expectations are lower in Japan than in the United States. In other words, unlike nominal interest rates, it is not necessarily the case that real interest rates in Japan are significantly lower than those in the United States.

Moreover, while the inflation rate in the United States already has been close to 2 percent, in Japan there is still a long way to go to achieve the price stability target of 2 percent. This

means that monetary easing is still necessary in Japan in light of achieving the price stability target, and I do not think at all that it is time that we reduce the level of monetary accommodation, which may not be very high at present compared to that in the United States, by raising interest rates.

The second proposal is with regard to the Bank's price stability target of 2 percent. Some economists argue that there may be no need to aim at higher inflation than the current level as Japan's economic growth rate has been increasing, or that 1 percent -- instead of 2 percent -- is appropriate for Japan's price stability target level since the inflation rate does not accelerate easily in Japan.

To argue against this kind of proposal, let me look back on short-term interest rate developments in the United States and Japan since the outbreak of the global financial crisis. When an economy suffers from a negative shock and demand declines significantly, as was the case following the global financial crisis, it is crucial to reduce real interest rates sufficiently to stop the decline in demand and work toward its prompt recovery. From this perspective, both the Federal Reserve and the Bank of Japan conducted monetary easing after the global financial crisis, thereby reducing short-term nominal interest rates to almost 0 percent (Chart 12).

However, developments in real interest rates, which are a determinant of monetary policy effects, show that while short-term real interest rates in the United States declined significantly after the global financial crisis and remained in negative territory thereafter, those in Japan actually increased and stayed in positive territory. It was not until the introduction of QQE in 2013 that short-term real interest rates in Japan started to follow a declining trend, entering and then remaining in negative territory.

As we have just seen, even though short-term nominal interest rates in Japan and the United States were reduced to 0 percent, the level of short-term real interest rates in Japan was higher than that in the United States. This is due to the difference in the levels of inflation expectations, which are subtracted from nominal interest rates in calculating real interest rates. Although inflation expectations declined both in the United States and Japan right

after the global financial crisis, you will find striking differences between these two economies in developments following the crisis. In the United States, the extent of decline was only marginal; inflation expectations soon bottomed out and have been at around 2 percent in a stable manner. In Japan, inflation expectations -- which had been much lower than those in the United States even before the global financial crisis -- declined to a large extent, and thereafter remained in negative territory for a prolonged period until 2013. This explains why short-term real interest rates in Japan remained higher than those in the United States.

By the same token, the main reason why the differential between long-term real interest rates in Japan and those in the United States was far narrower than the differential between long-term nominal interest rates for the two is because inflation expectations in Japan remained lower than those in the United States (Chart 13).

In Japan, where inflation expectations are low and tend to decline further in a recession period especially, real interest rates cannot be lowered sufficiently to provide appropriate monetary accommodation, even with nominal interest rates of 0 percent. In contrast, in the United States, where inflation expectations have been stable at around 2 percent, a reduction in nominal interest rates will result in a sufficient decline in real interest rates, providing adequate monetary accommodation. In other words, without reducing nominal interest rates to negative territory as in Japan, sufficient monetary easing effects can be obtained in the United States while alleviating impacts on financial institutions of low interest rates.

Although the epicenter of the global financial crisis was outside of Japan, its economy suffered a more significant downturn thereafter than did those of the United States and Europe (Chart 14). Moreover, the price stability target of 2 percent has not been achieved yet despite the large-scale monetary easing since the introduction of QQE in 2013. It is undeniable that one of the most important factors behind this is that there was limited room for a reduction of real interest rates -- or for monetary easing -- in Japan, as inflation expectations stayed at low levels, or declined significantly, after the global financial crisis.

With these factors in mind, the Bank has been conducting monetary policy to achieve the price stability target of 2 percent, with a view to creating an environment where real interest rates can be lowered sufficiently and thereby the economy can be supported effectively even when adverse shocks hit the economy. The price stability target is set at around 2 percent in many major economies, including Japan. This is because of the view shared globally that it is important to anchor inflation expectations at 2 percent and to secure sufficient room for a reduction of real interest rates, by keeping the inflation rate stable at around 2 percent. Therefore, when I hear the kind of arguments in Japan that we do not need to aim at 2 percent inflation, I wonder whether people have already forgotten the very important lesson learned from the hard times after the global financial crisis, as nearly a decade has passed since then.

The Bank will pursue powerful monetary easing with the aim of achieving the price stability target of 2 percent at the earliest possible time.

Conclusion

In conclusion, let me touch on the economy of Aomori Prefecture. The prefecture can be characterized by prosperous agricultural, forestry, and fishery industries with rich nature, as well as a variety of natural, historical, and cultural tourist attractions.

In the agricultural, forestry, and fishery industries, the prefecture is Japan's largest producer of many items such as apples and garlic, with a large-scale and modern business project expanding in the livestock industry in recent years. Despite nationwide sluggishness in these industries, Aomori Prefecture's production is on the rise, at a growth level that is one of the highest among all prefectures. The industries have been taking initiatives recently to raise the value added through enhancement of the products' brand images as well as the "sixth industrialization," and proceeding with overseas expansion of their businesses. Steady progress has been made already; "*Seiten no hekireki*" is gaining attention as a new rice brand and "*Kuro ninniku*," or black garlic, has been increasingly sold in Europe and the United States.

In the tourist industry, the prefecture is endowed with various attractions such as the natural environment and its historical and cultural heritage: the *Shirakami* Mountains, which are registered as a world heritage site; *Hirosaki* Castle, which is also famous for cherry blossoms; *Jomon* period archeological sites; and the *Nebuta* Festival. On top of these, taking advantage of the launch of the Hokkaido Shinkansen last year, the prefecture has been enhancing tourism promotion in cooperation with the Hakodate area. It also has been making great efforts in boosting inbound demand. With these initiatives, the recent growth rate in the number of accommodated inbound guests has marked one of the highest figures nationwide. The number of cruise ships calling at ports in the prefecture is higher than that in any other prefectures in the Tohoku region, and more foreign visitors are expected as regular international flights have been in operation at Aomori Airport since this May for the first time in 22 years.

I believe that people in Aomori Prefecture are taking on new challenges, making full use of these rich resources. I expect the Bank's Aomori Branch to support these initiatives through analysis of the local economy and communication with the public. In closing, let me express my strong hopes for the further development of Aomori Prefecture's economy and convey my best regards.

Thank you very much for your attention.

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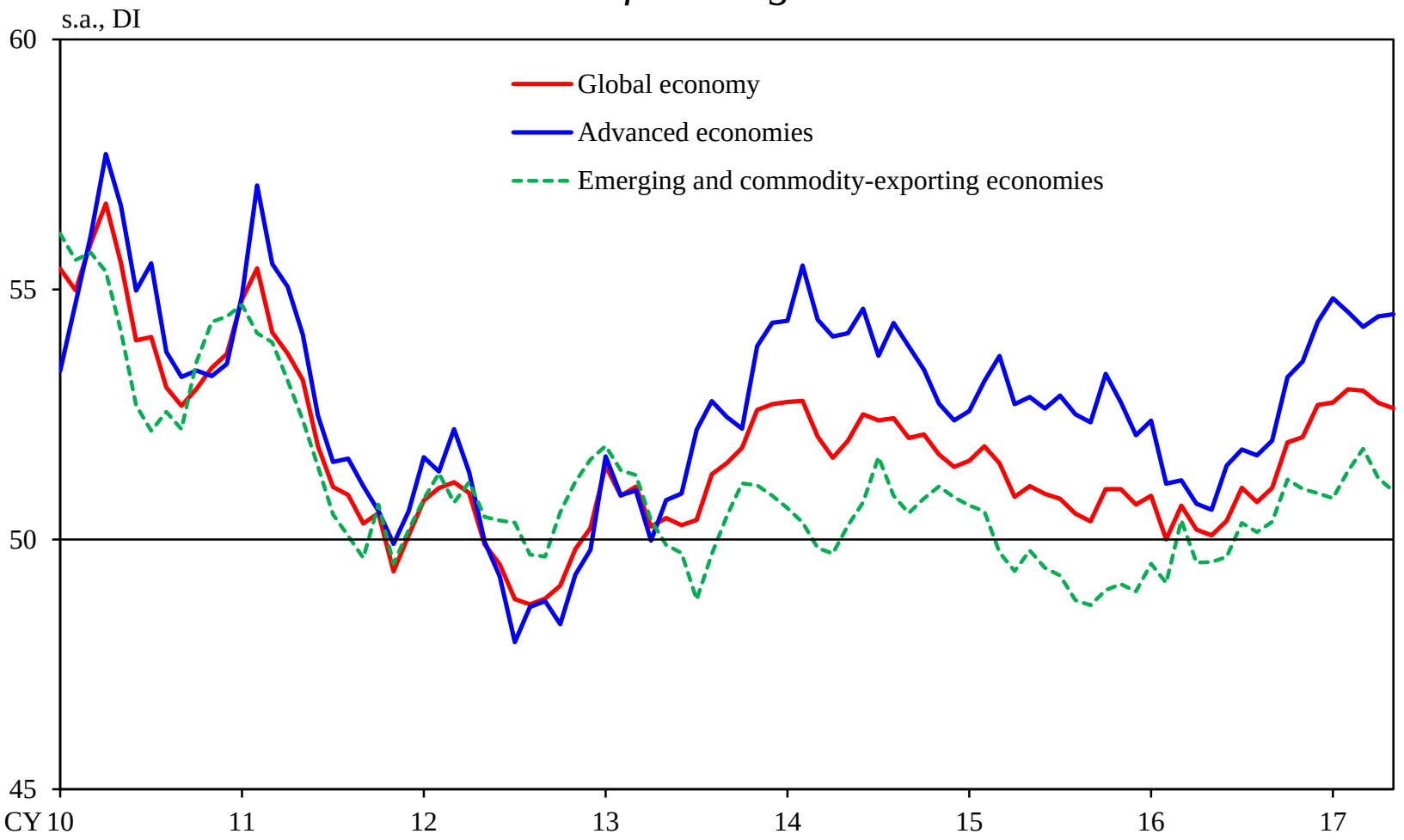
Overseas Economies

Manufacturing PMI



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

Sources: IMF; IHS Markit (© and database right IHS Markit Ltd 2017. All rights reserved.); Haver.

World Economic Outlook Released by the IMF

Projections for Major Economies
(as of April 2017)

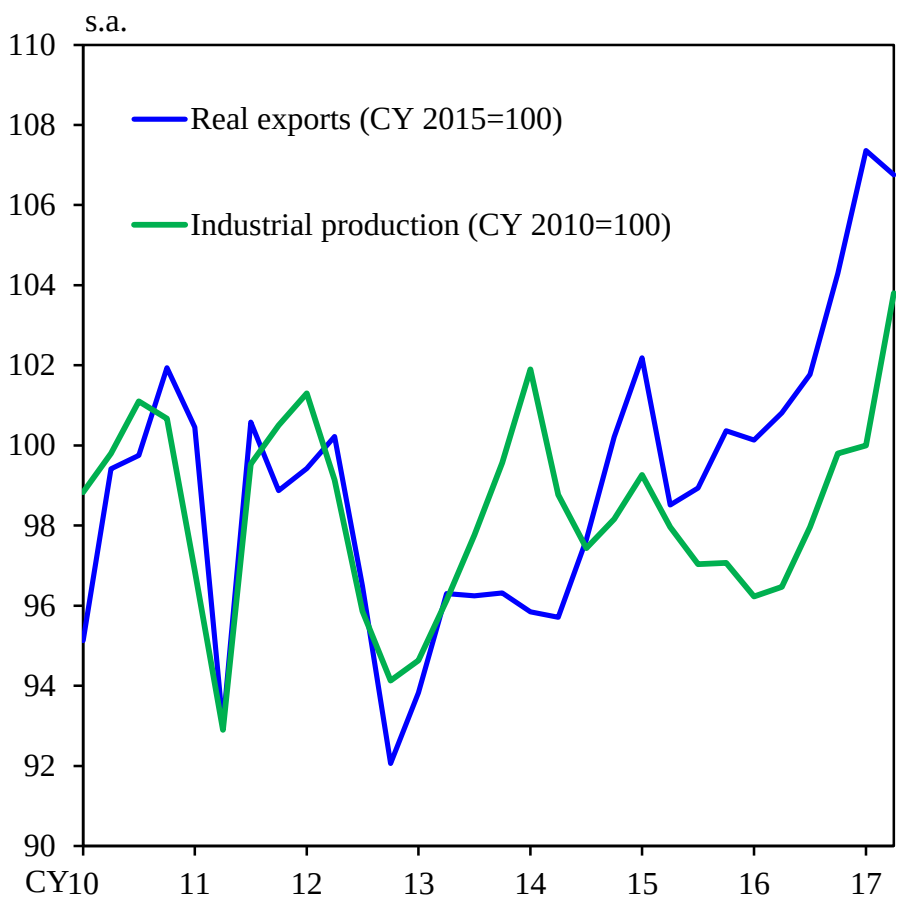
y/y % chg.

	2015	2016	2017 [Projections]	2018 [Projections]
World	3.4	3.1	3.5	3.6
Advanced Economies	2.1	1.7	2.0	2.0
United States	2.6	1.6	2.3	2.5
Euro Area	2.0	1.7	1.7	1.6
United Kingdom	2.2	1.8	2.0	1.5
Emerging Market and Developing Economies	4.2	4.1	4.5	4.8
China	6.9	6.7	6.6	6.2
ASEAN5	4.8	4.9	5.0	5.2

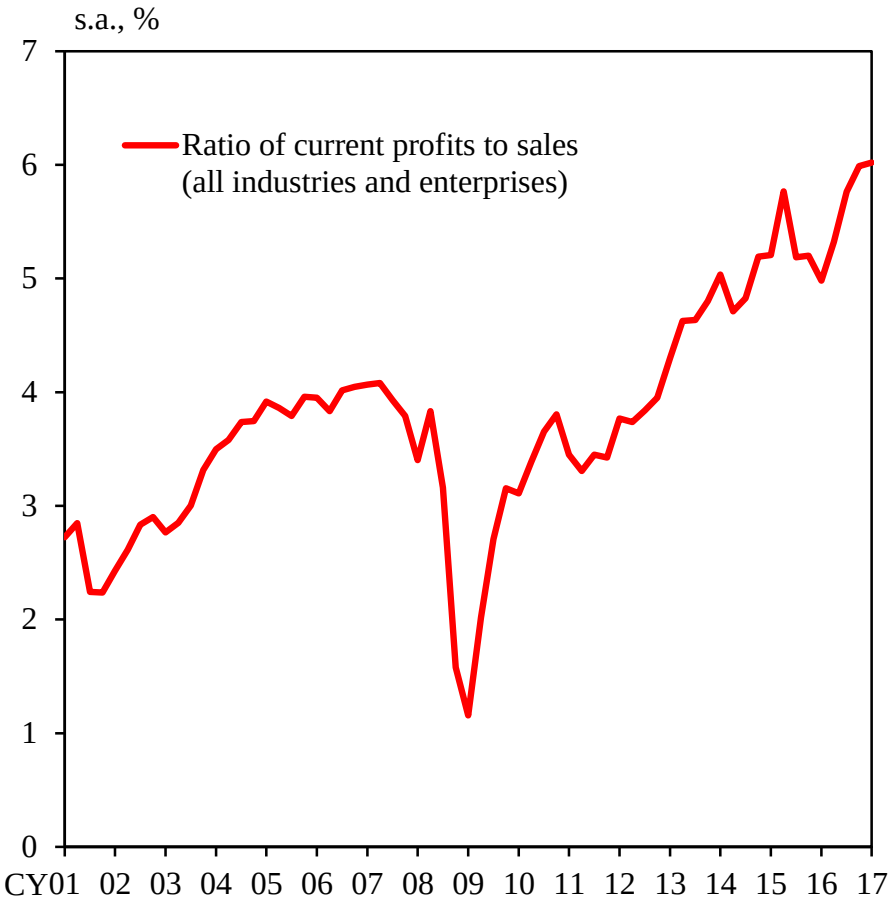
Note: ASEAN5 are Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam.
Source: IMF.

Exports, Industrial Production, and Corporate Profits

Exports and Industrial Production

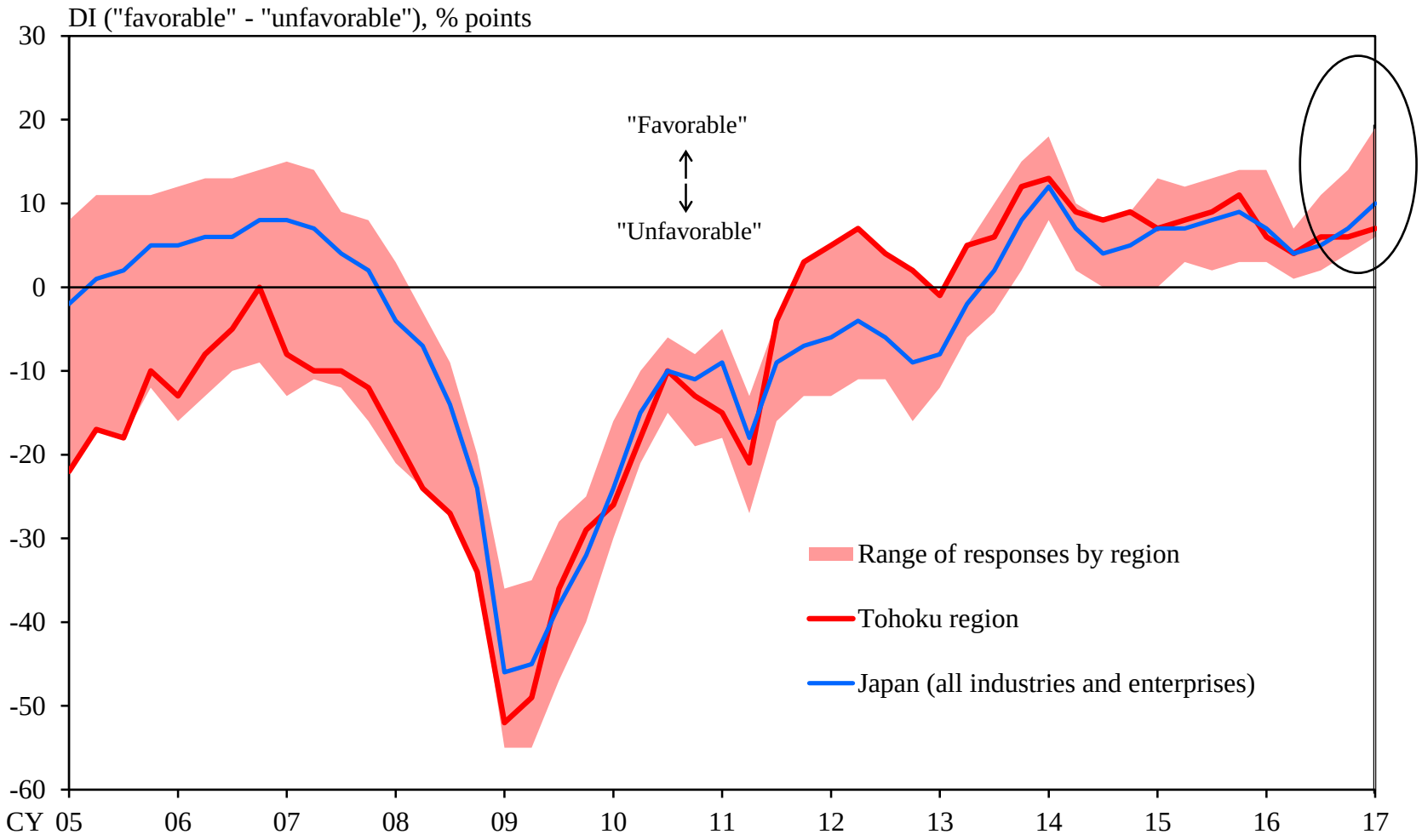


Corporate Profits



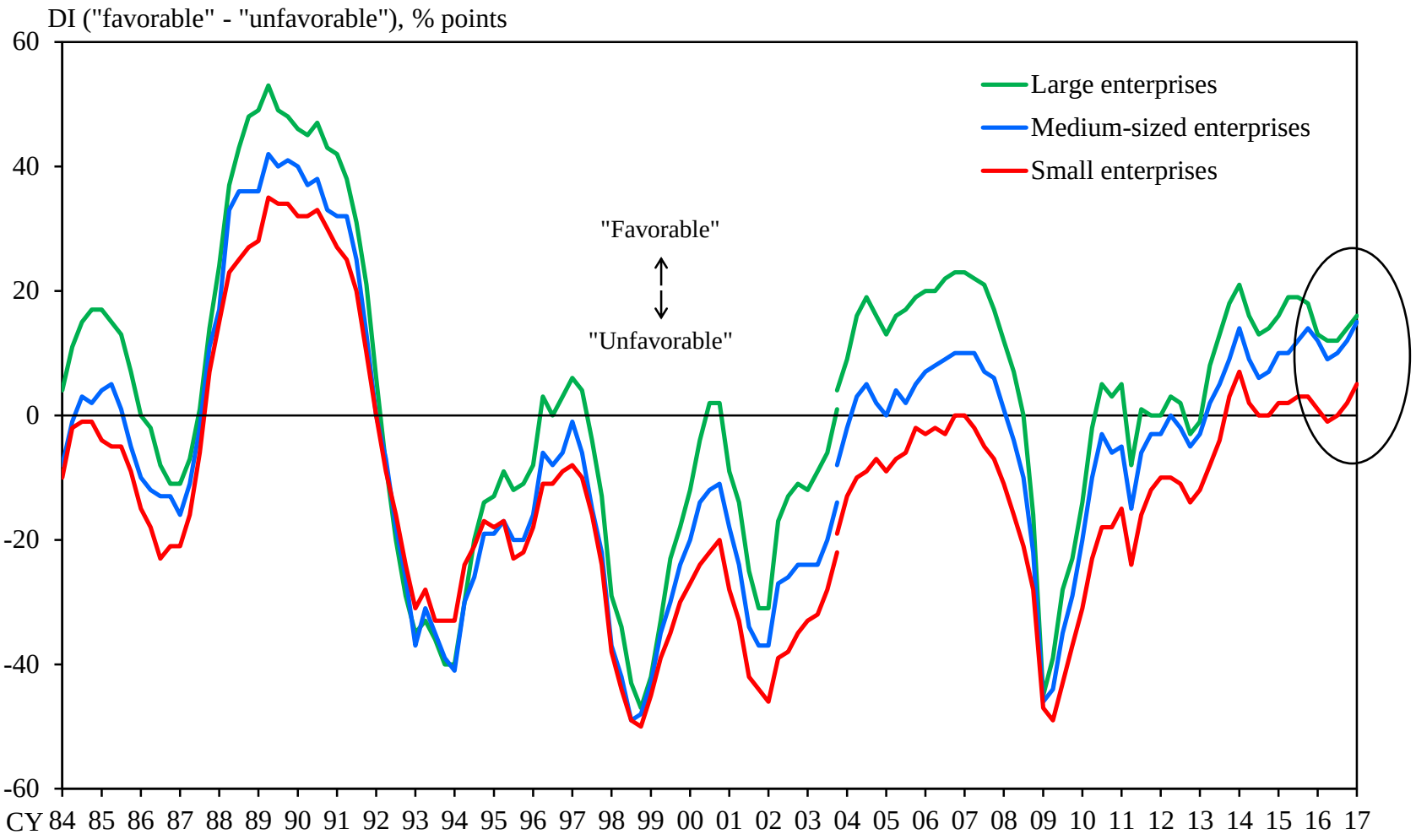
Note: Figures for corporate profits are based on the "Financial Statements Statistics of Corporations by Industry, Quarterly."
Excluding "Finance and Insurance."
Sources: Bank of Japan; Ministry of Finance; Ministry of Economy, Trade and Industry.

Business Conditions by Region (*Tankan*)



Source: Bank of Japan.

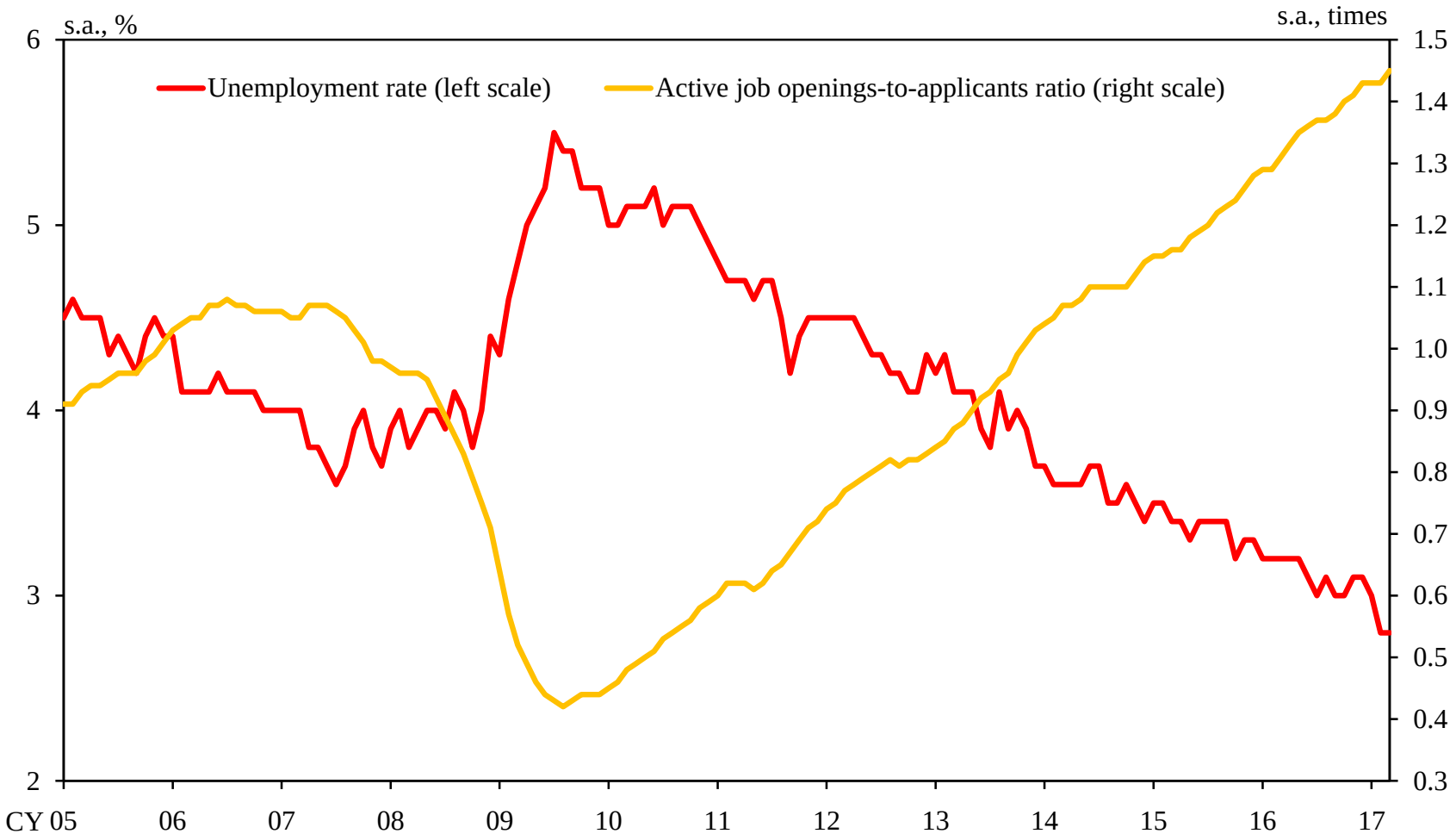
Business Conditions by Size of Enterprise (*Tankan*)



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

Labor Market Conditions

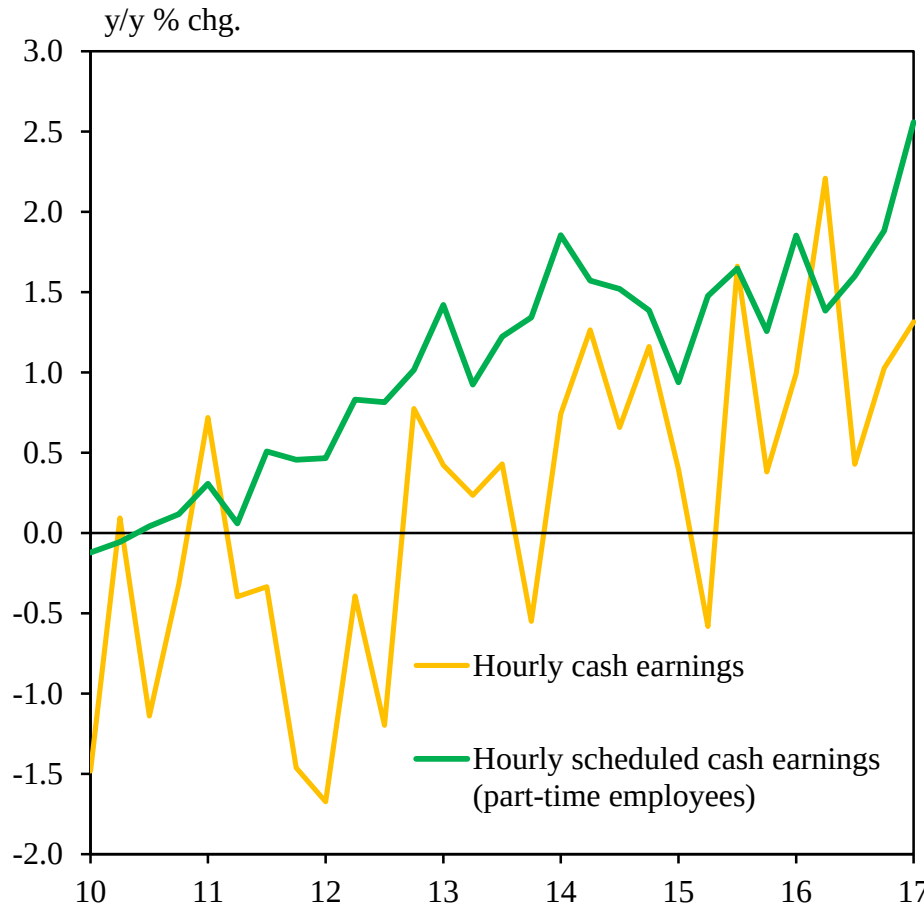
Unemployment Rate and Active Job Openings-to-Applicants Ratio



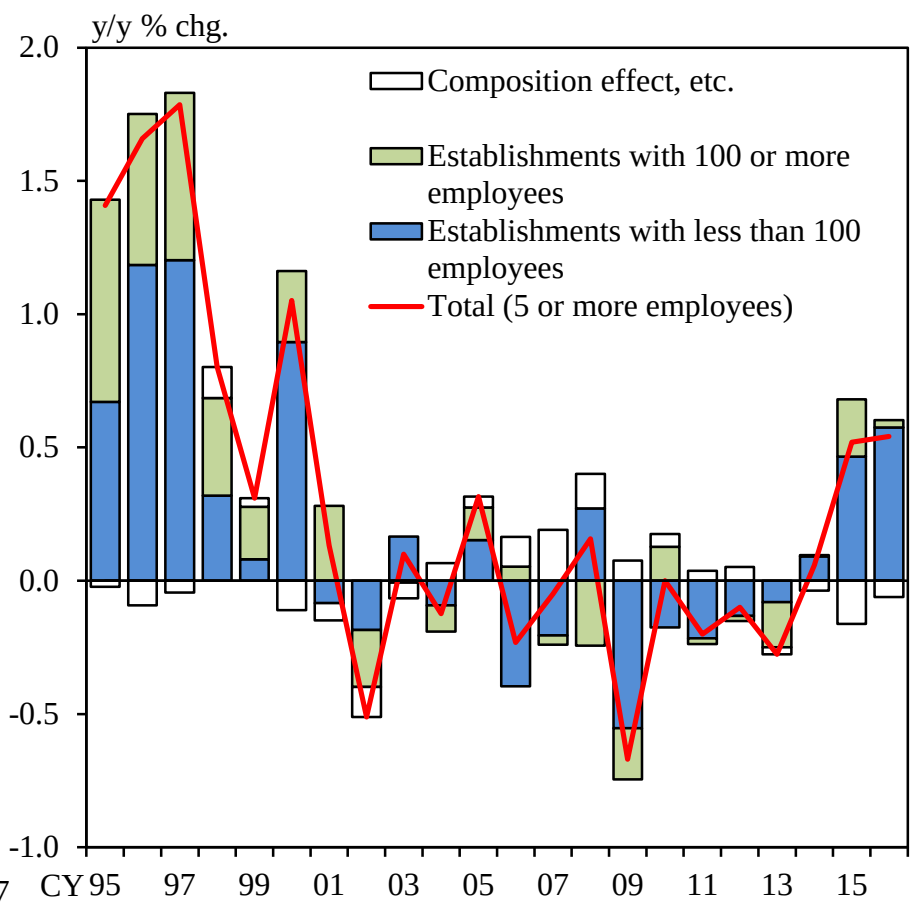
Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.

Nominal Wages

Hourly Cash Earnings

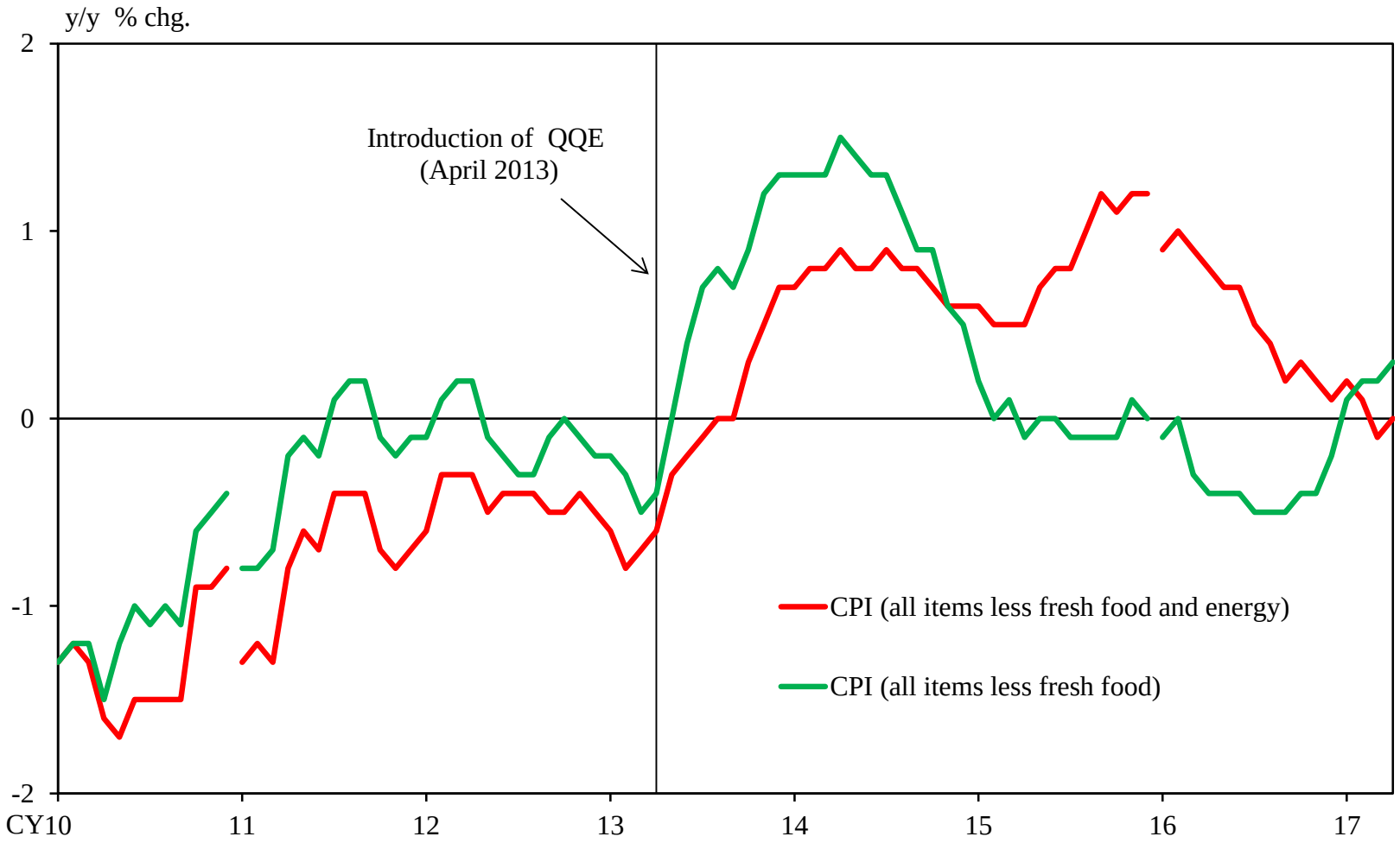


Scheduled Cash Earnings (Full-Time Employees)



Note: For hourly cash earnings, Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February.
Figures for 2017/Q1 are those of March-April averages.
Source: Ministry of Health, Labour and Welfare.

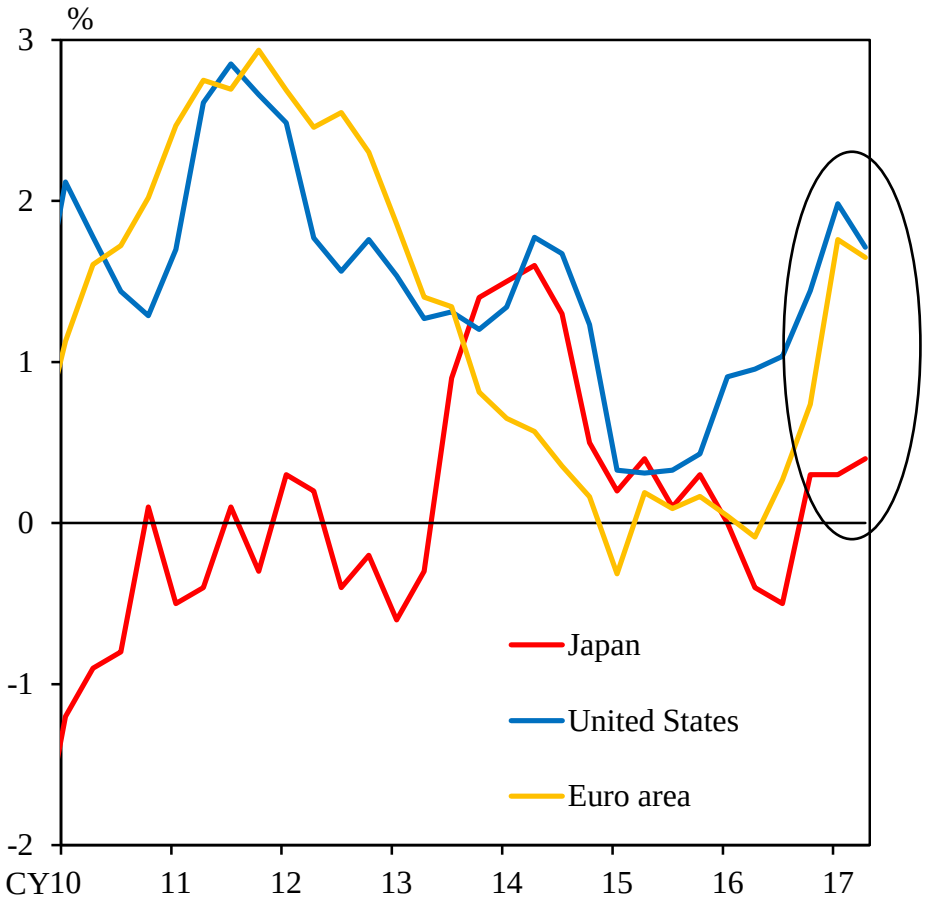
Consumer Prices



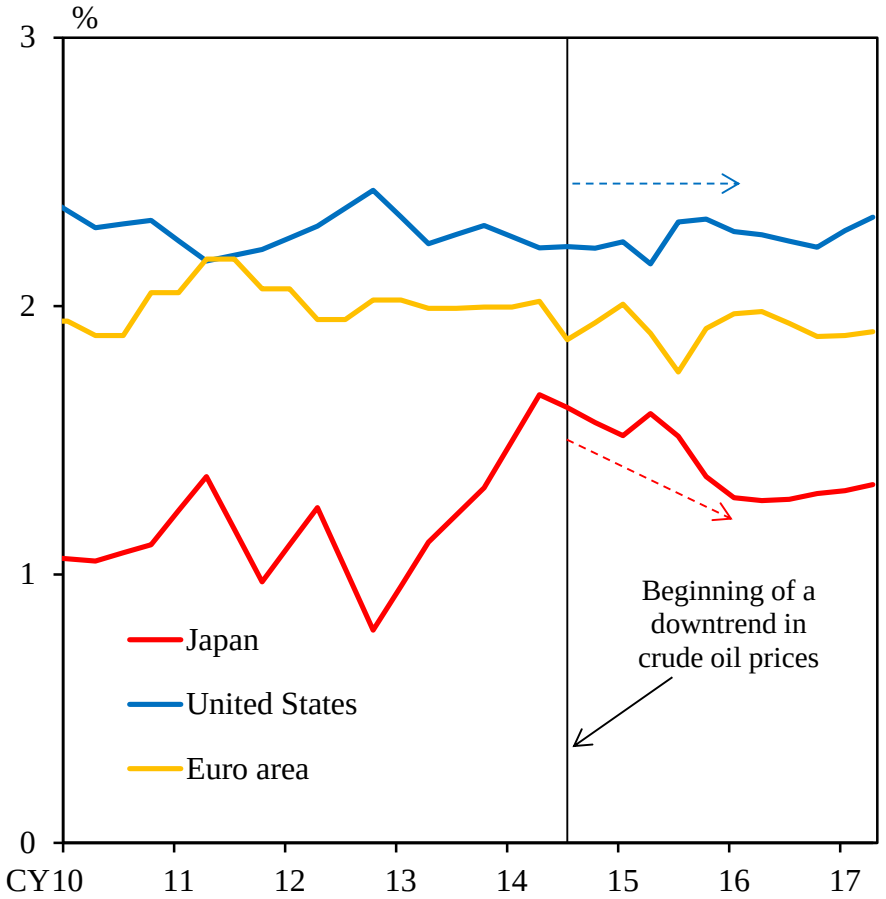
Note: Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.
Source: Ministry of Internal Affairs and Communications.

Consumer Prices and Inflation Expectations in Advanced Economies

Consumer Prices (All Items)



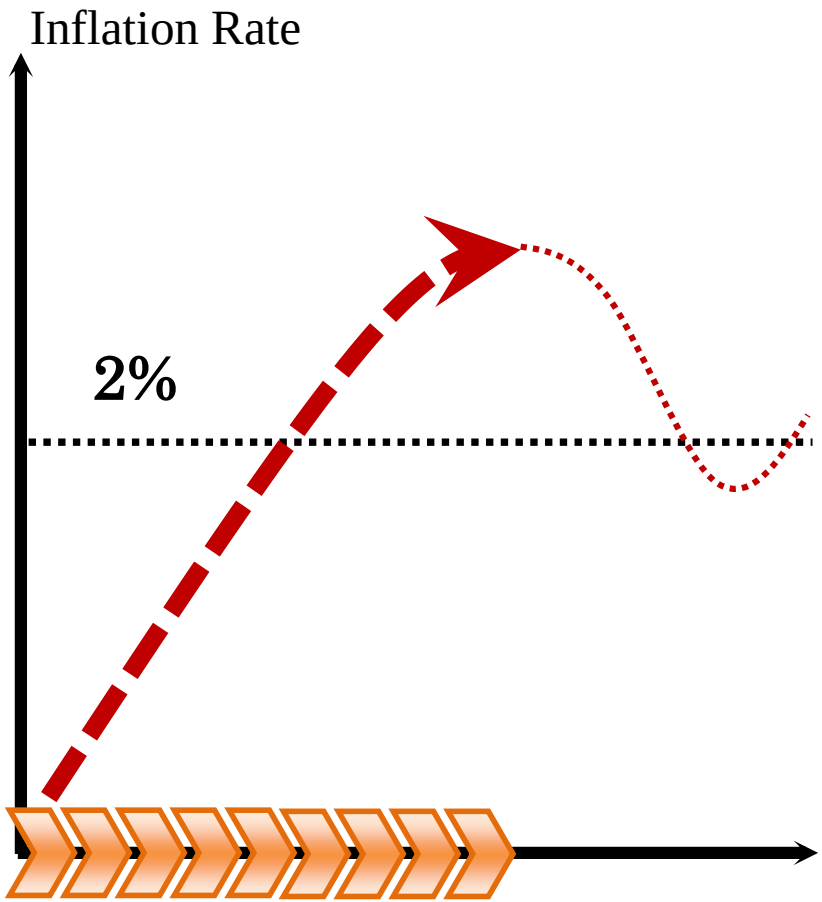
Inflation Expectations (Long-term)



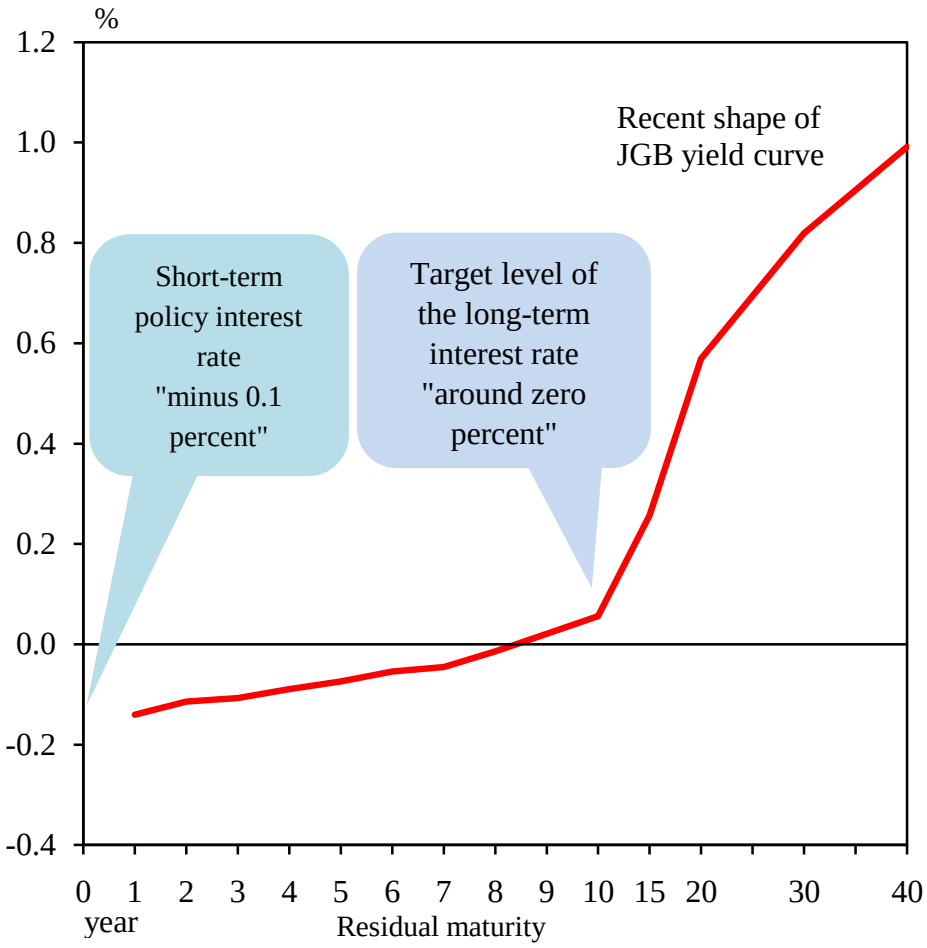
Notes: 1. Figures for Japan's CPI (all items) are adjusted to exclude the estimated effects of changes in the consumption tax rate.
2. Figures for inflation expectations (long-term) are 6-10 years ahead expectations in the "Consensus Forecasts."
Sources: Ministry of Internal Affairs and Communications; BEA; Eurostat; Consensus Economics Inc., "Consensus Forecasts."

QQE with Yield Curve Control

Inflation-Overshooting Commitment



Yield Curve Control

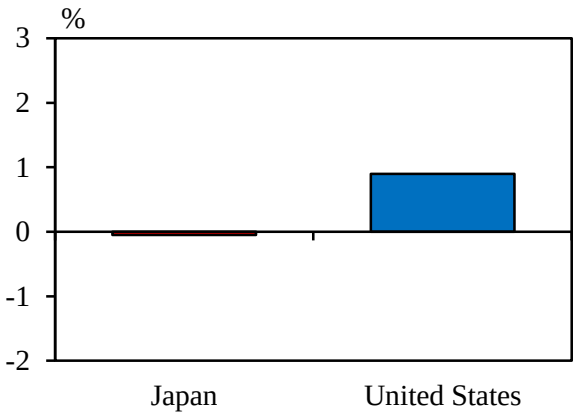


Source: Bloomberg.

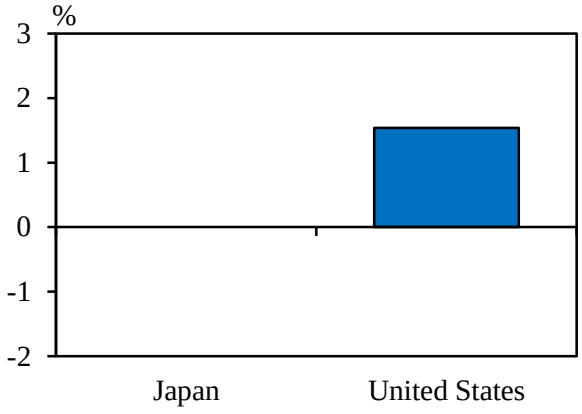
Nominal and Real Interest Rates (the Most Recent)

(1) Short-term (overnight)

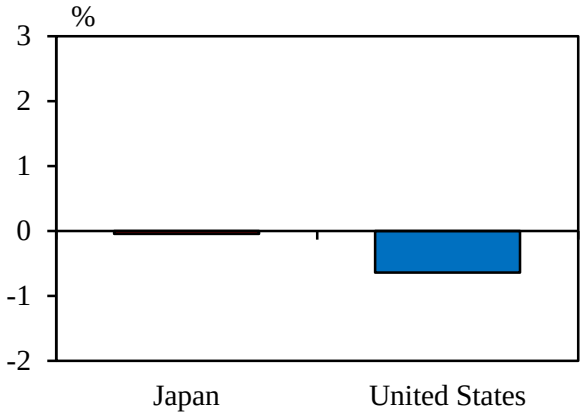
Nominal Interest Rates



Inflation Expectations
(≒Observed Inflation Rates)

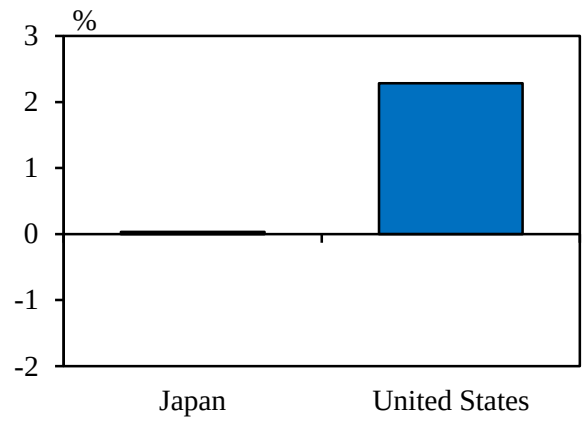


Real Interest Rates

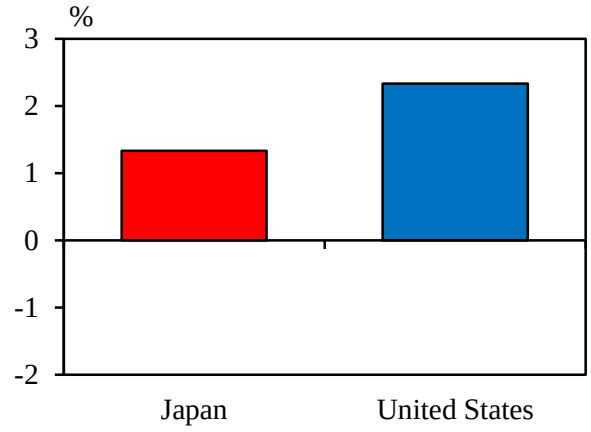


(2) Long-term (10-year)

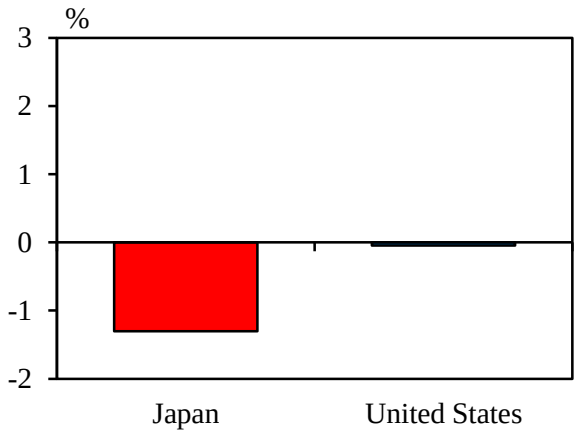
Nominal Interest Rates



Inflation Expectations



Real Interest Rates

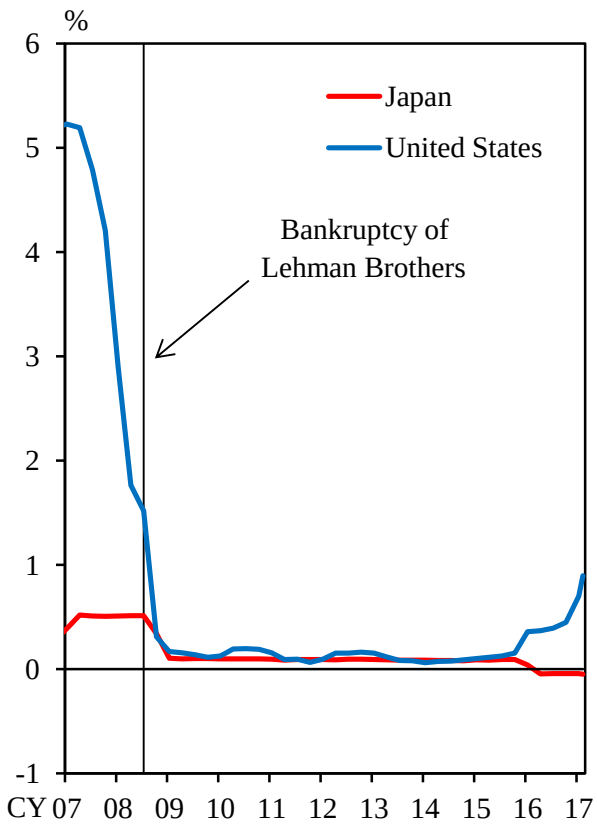


Notes: 1. Figures are those of April 2017. Figures for observed inflation rates are the CPI (all items less fresh food and energy) for Japan and the PCE deflator (all items less food and energy) for the United States.
2. Figures for long-term inflation expectations are 6-10 years ahead expectations in the "Consensus Forecasts."

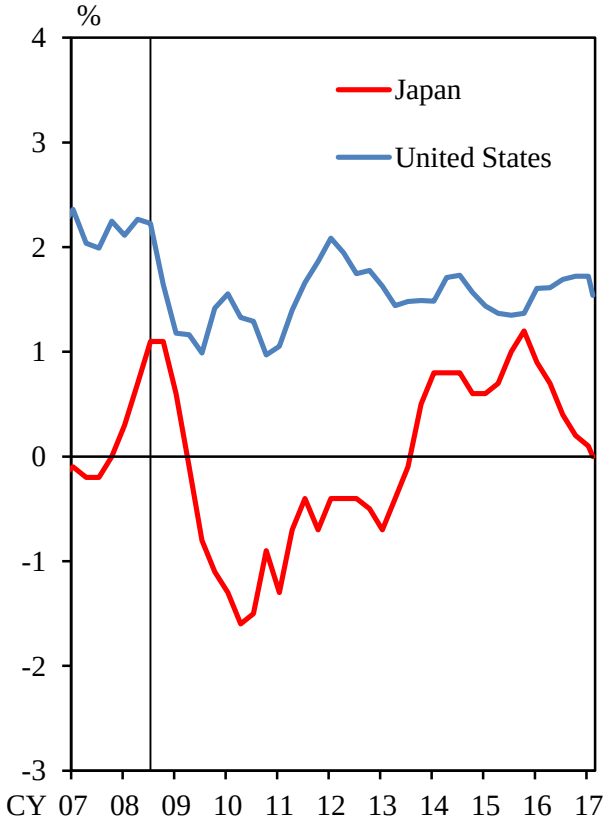
Sources: Ministry of Internal Affairs and Communications; Consensus Economics Inc., "Consensus Forecasts"; Bloomberg; BEA.

Short-term Interest Rates (O/N) after the Global Financial Crisis

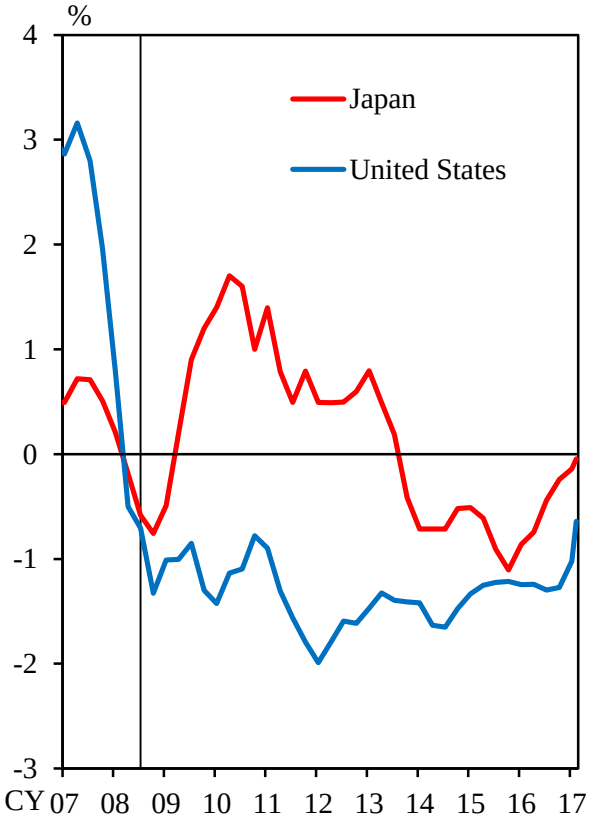
Nominal Interest Rates



Inflation Expectations
(≒Observed Inflation Rates)



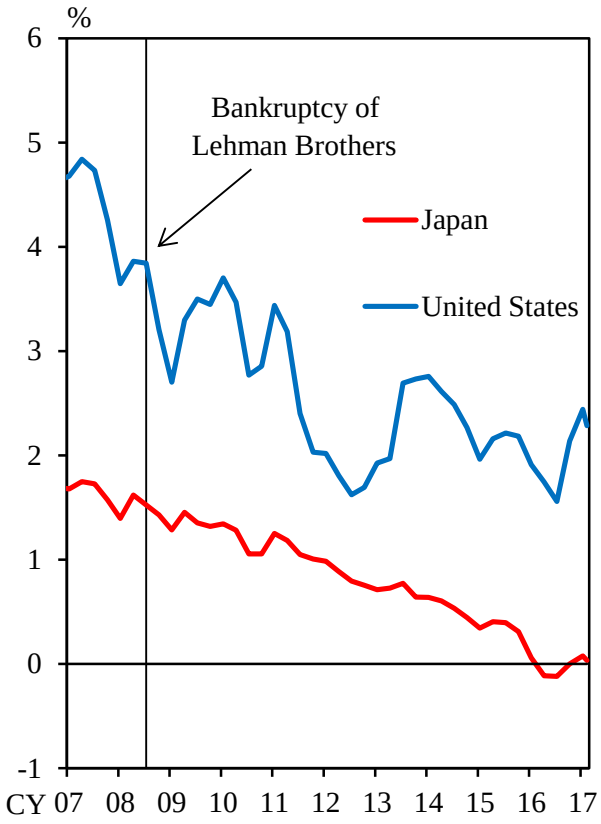
Real Interest Rates



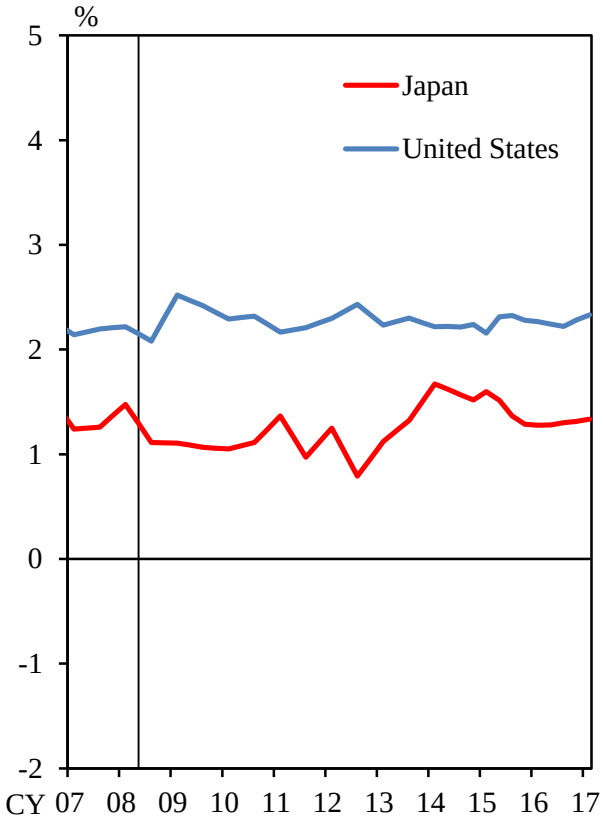
Note: Figures for observed inflation rates are the CPI (all items less fresh food and energy, adjusted to exclude the estimated effects of changes in the consumption tax rate) for Japan and the PCE deflator (all items less food and energy) for the United States.
Sources: Bloomberg; Ministry of Internal Affairs and Communications; BEA.

Long-term Interest Rates (10-Year) after the Global Financial Crisis

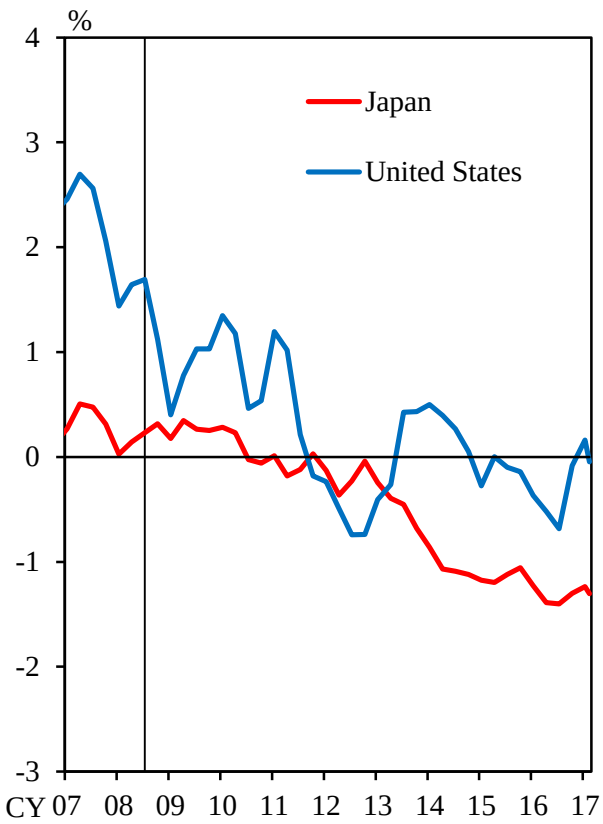
Nominal Interest Rates



Inflation Expectations

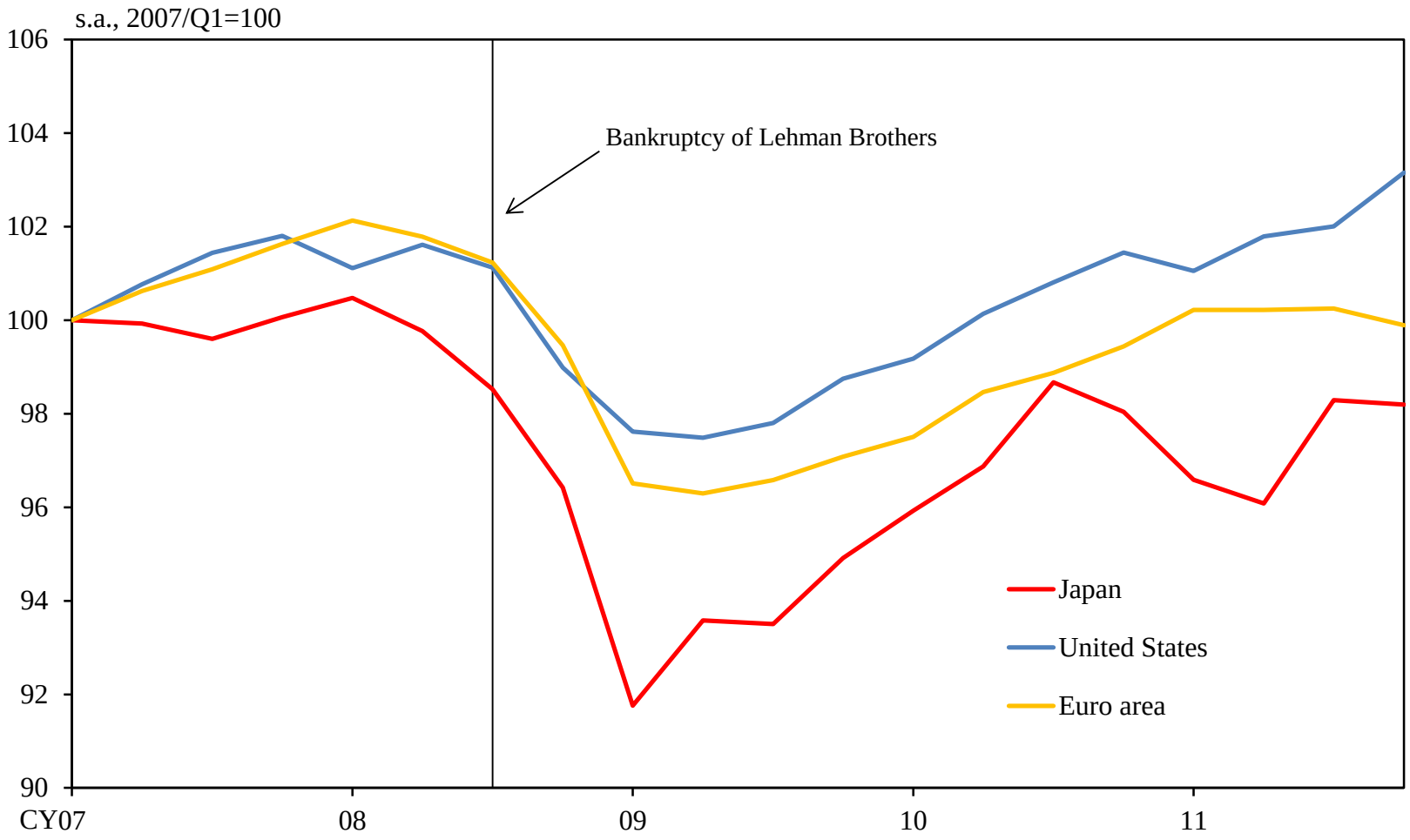


Real Interest Rates



Note: Figures for inflation expectations are 6-10 years ahead expectations in the "Consensus Forecasts."
Sources: Bloomberg; Consensus Economics Inc., "Consensus Forecasts."

Developments in Real GDP after the Global Financial Crisis



Sources: Cabinet Office; BEA; Eurostat.