Takehiro Sato: Recent economic and financial developments and monetary policy

Speech by Mr Takehiro Sato, Member of the Policy Board of the Bank of Japan, at a meeting with business leaders, Kochi, 4 December 2014.

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Introduction

Thank you for giving me this opportunity to exchange views with people representing the political, economic, and financial arena of Kochi Prefecture. I would like to take this opportunity to express my sincere gratitude for your cooperation with the activities of the Bank of Japan's Kochi Branch.

In today's speech, I will begin by focusing on economic and financial developments in Japan and abroad, as well as the Bank's recent monetary policy. I will then touch briefly on the economy of Kochi Prefecture. Following my speech, I would like to hear your views on actual conditions in the local economy and on the Bank's conduct of monetary policy.

I. Recent economic and financial developments in Japan and abroad

A. Developments in the world economy

As seen in the downward revision of the global growth projection by the International Monetary Fund in its October 2014 *World Economic Outlook* (WEO), the outlook for the economy has been generally cautious recently for Europe and some emerging economies (Chart 1). International commodity prices, including crude oil prices, have been weak, mainly due to concern over a global economic slowdown. A decline in international commodity prices is a tailwind for consumers – i.e., advanced economies – through an increase in purchasing power, but could exert downward pressure on commodity-exporting countries, mostly in emerging economies. I have been monitoring carefully how fluctuations in international commodity prices will affect the formation and distribution of income around the world, but it is uncertain whether growth in the world economy will strengthen, as projected in the October 2014 WEO, considering how much emerging economies have contributed to the recent world economic growth.

Examining the situation by country and region, the U.S. economy has continued to recover steadily, led mainly by private demand, due to an expansion in household spending that reflects a steady recovery in employment. It is expected to gradually accelerate its pace of growth supported by a virtuous cycle. A recent decline in gasoline prices is also a tailwind for consumption. With this economic outlook widely shared by the public, the market has been focusing on the timing of monetary tightening – which is expected to be sometime in 2015 – and its pace (Chart 2).

In Europe, by contrast, the adjustment pressure mainly associated with the debt problem remains and a downtrend in the inflation rate has been observed. Household and business sentiment has become cautious, as manufacturing in Germany – the core country of the region – saw a temporary drop during the summer, partly due to the economic deceleration in Russia. The German economy as a trend is expected to continue its moderate recovery, supported by a steady services industry, while production in the manufacturing sector has been more or less flat recently. However, uncertainties remain in France and Italy, which have lagged behind in structural reforms: the consequences of the debt problem and developments toward ensuring the soundness of the financial system warrant continued attention. It also seems necessary to consider the risks of prolongation of low inflation and materialization of deflation in the European economy (Chart 3). To address these risks, the European Central Bank (ECB) implemented additional monetary easing – including the introduction of a negative interest rate – in June and September 2014, and also showed its commitment to further implement monetary easing measures, if needed, at the Governing Council in November. However, the inflation rate in the euro area has not stopped declining clearly since that time. The ECB is aggressive in taking measures to address future risks, and I would like to keep a close eye on its policy actions and the effects.

Some emerging economies, such as Russia and Brazil, have been experiencing stagflation driven by the decline in international commodity prices and the effects of the depreciation of currencies and monetary tightening. Differences remain in conditions among emerging economies.

Let me touch on China. In proceeding with structural reforms, the authorities seem to value the quality of economic growth and accept marginal declines in the growth rate. While there are downside risks to the economy, due partly to weakness in real estate prices, their policy stance has not changed as they continue to address a further slowdown in growth and uphold economic activity by implementing small-scale economic packages. I understand that the monetary easing measure announced on November 21 underlines the authorities' commitment to their policy stance. From a medium- to long-term perspective, the potential growth rate is expected to fall relatively sharply, reflecting the demographic situation, with not enough room for a rise; but from a short-term perspective, at least, the economy will generally follow a stable growth path, albeit with downside risks (Chart 4).

To sum up, the world economy has been led by the United States, which has been on a relatively steady recovery trend, while the risks of a slowdown are being observed in Europe and emerging economies. However, as the interaction among economies worldwide strengthens, there is a high possibility that the currently steady U.S. economy will be affected by the slowdown in the European and emerging economies (Chart 5). In some other parts of the world, geopolitical risks have been mounting recently, and a spread of the virus infection in West Africa is considered as a new risk factor.

B. Developments in global financial markets

Global financial markets had been tied up in a Goldilocks situation until summer 2014, in which investors had been searching for yields under low volatility conditions. As the outlook for the world economy became cautious, however, a temporary heightening of investors' risk aversion and an overall increase in market volatility were observed in early autumn. International commodity prices declined, as mentioned earlier, and long-term interest rates fell in reflection of flight to quality. Such risk aversion has waned recently, and stock prices are firm globally, but international commodity prices remain weak.

It is difficult to judge whether these market movements are simply in reaction to the overheating seen until this summer or else imply a spread of the cautious views, such as the recent argument regarding secular stagnation. Interaction between markets during such movements is also hard to explain. However, one factor behind them seems to be the temporary unwinding of excessive optimism, in light of monetary tightening scheduled to be conducted by the Federal Reserve, and the continued effects of the unwinding in the international commodity markets. Another factor seems to be that market participants, particularly in the international commodity markets, are aware of the risk that the slowdown in the European and emerging economies could spread to the U.S. economy, which is leading the world economic growth at present.

Let me add a few more things about the unwinding that I have just mentioned. Market volatility is on the rise, and it seems that the progress in international financial regulatory reforms has had an effect on it (Chart 6): with the implementation of the reforms, it is likely that major market makers' risk-taking activities have been restricted, leading to a decline in the market's risk-absorbing capacity and the overall liquidity. Such issues had been generally kept below the surface, while the central banks of major countries had supplied ample liquidity to support the market. However, market participants have become aware of these issues as the Federal Reserve began to convey information on its exit strategies to the public – that is, specifics of the measures with regard to raising the policy interest rate and reducing liquidity supply. As for the outlook, during the phase of monetary tightening, the effects on the market brought about by the regulations might be much stronger. Indeed, the regulations are necessary in order to prevent a large-scale financial crisis such as the Lehman shock from happening again. At the same time, however, it is desirable to maintain a balance when implementing regulations so as not to excessively hinder market participants' risk-taking activities and the functioning of the market's price formation mechanism.

C. Developments in Japan's economy

With regard to Japan's economy, some weakness has remained in consumption of durable goods – including automobiles – and housing investment, due mainly to the effects of the decline in demand following the front-loaded increase prior to the consumption tax hike, and weakness in consumption, such as of automobiles, has impacted the production side until recently. However, somewhat weak developments in exports have come to a halt, and the spread of mini-scale inventory adjustments – mainly in automobiles – to related sectors is likely to continue only for a short term. Furthermore, corporate profits have been favorable with the firm employment and income situation continuing, and the mechanism for economic recovery has been operating steadily; therefore, the economy is likely to follow a moderate recovery path as effects including those of the decline in demand following the front-loaded increase dissipate gradually (Chart 7).

The economic outlook I have just mentioned may sound optimistic in a situation where the first preliminary estimate of the real GDP growth rate for the July-September quarter of 2014 was negative for the second consecutive quarter, and the coincident index within the indexes of business conditions has suggested a possible change in the underlying trend. I admit that the current firm employment situation does not necessarily suggest future firmness of the economy, because such indicators as those of employment are lagging indicators. In fact, the number of new job openings and the ratio of new job offers to applicants – both of which are leading indicators of employment – temporarily showed signs of peaking out toward summer as firms' stance on employment seemed to have become cautious, reflecting somewhat prolonged production adjustments in manufacturing.

Nevertheless, the past few *Tankan* surveys (Short-Term Economic Survey of Enterprises in Japan) indicate that a sense of labor shortage among firms has been around a level that has not been observed since the bubble period in the early stage of the 1990s, and manufacturers' business sentiment remains resilient, although Japan's production has been unfavorable (Chart 8). The resilience in business sentiment can be attributed in part to firms' high consolidated profits, reflecting the favorable business performance of their overseas subsidiaries. Firms' favorable performance on a consolidated basis seems to have been playing a complementary role to the recent weakness in exports. This may mean that a new pattern of generating income is strengthening, through the repatriation by Japanese firms of their overseas subsidiaries' profits in the form of dividends (Chart 9). Although some weakness certainly remains in Japan's economic indicators, I feel that it is necessary to make a more comprehensive assessment, taking into account the current globalization of firms.

Risk factors to the outlook for Japan's economy also warrant attention. The first factor is developments in exports. Japanese manufacturers are likely to continue shifting production sites to overseas – although the pace is slowing – amid uncertainty over whether overseas economies will steadily increase their pace of growth. Therefore, it is uncertain whether the recent further depreciation of the yen will support the recovery in exports. The second factor is the effects of the yen's depreciation. While the decline in energy prices will raise the real purchasing power of households and firms, clearly exerting positive effects on Japan's economy, the depreciation of the yen will become a downside factor in terms of trade for the nonmanufacturing industry, which accounts for a large share of GDP and is a driving force of the current economic recovery. The third factor is developments in household and business sentiment. Sentiment indicators – especially of manufacturing – had been resilient, despite the weakness in Japan's economic indicators; however, sentiment now seems to have weakened, as evidenced by the fact that developments in the diffusion indices (DIs) in the latest *Economy Watchers Survey* have become more sluggish recently. Developments in these DIs warrant attention as these indices are leading indicators of the economy in the short term. Looking at the comments made by the survey's respondents, those regarding the second round of the consumption tax hikes, irregular weather, and depreciation of the yen stand out. The effects of these factors on sentiment warrant attention.

D. Developments in prices

The year-on-year rate of increase in the consumer price index (CPI, for all items excluding fresh food and excluding the direct effects of the consumption tax hike) has been around 1¼ percent for almost a year, since end-2013, and despite the depreciation of the yen, it has been around 1 percent recently due to the effects of the decline in international commodity prices, including crude oil prices. These developments may be partly attributable to the fact that firms' price-setting behavior was affected by the prolonged decline in demand following the front-loaded increase prior to the consumption tax hike (Chart 10). As for the outlook through around the first half of 2015, on the assumption that crude oil prices and foreign exchange rates will be more or less unchanged from the current level, the year-on-year rate of increase in the CPI could remain sluggish given the reversal of the price rise that occurred in the first half of 2014.

I believe that the decline in international commodity prices implies a decrease in income transfers from Japan to commodity-exporting countries, which is clearly a positive factor for Japan's economy and also for prices from a longer-term perspective. As far as supply-side statistics are concerned, the effects of the decline in demand following the front-loaded increase have almost dissipated, and such developments will likely have some positive influence on firms' price-setting behavior, which had become somewhat cautious under the decline in demand.

Regarding the mechanism of a price rise from a longer-term perspective, the Bank is focusing on production resources – namely, the utilization of labor and capital – as described in the recently released *Outlook for Economic Activity and Prices*. In particular, the recent labor shortage – or tight labor resources – seems to be exerting upward pressure on wages on the whole, and this seems to be affecting prices to a considerable degree. On this point, it can be expected in the immediate future that consumption will pick up in reflection of the winter bonuses, which are likely to be firm, and eventually have positive effects on prices.

What is important for sustainable economic recovery and price stability is a wage increase that is in line with growth in labor productivity; furthermore, from a longer-term perspective, such an increase relies on firms' stance toward business fixed investment. It can be considered that Japan's economy continues to be at a critical point in terms of whether (1) it can further improve its labor productivity by leveraging tight labor market conditions as a driving force to stimulate investment aimed at labor saving, or (2) it will fail to significantly improve its labor productivity due to firms' passive stance toward fixed investment, thereby making wage increases unsustainable.

As for firms' stance toward fixed investment, I would like to add that, although investment continues to be made mainly for replacement and maintenance, it is encouraging that their positive actions are being observed in investment to promote rationalization and labor saving, and in that for product upgrades (Chart 11). Reflecting recent developments in the foreign exchange market, some firms have begun to review the balance between domestic and overseas production. Firms' decision on production network strategies is not directly affected by short-term factors such as exchange rate movements, because it is based on a longer-term outlook. It is therefore unlikely that they will start shifting production back to

Japan immediately in response to the recent market developments. However, their decision may change as firms review the medium- to long-term outlook for the exchange rate, and as a result gain confidence that the yen will not appreciate to the extremely high levels seen in the past.

II. Monetary policy for the immediate future

A. Expansion of quantitative and qualitative monetary easing (QQE)

At the Monetary Policy Meeting held on October 31, 2014, the Policy Board decided to expand QQE. As I cast a dissenting vote on this decision, I may be in a delicate position to talk about this policy change. I will therefore provide my views to the best possible extent.

First of all, I judged that additional monetary easing was not necessary. This is because, in my view, the virtuous cycle of economic activity and prices is basically being maintained, as I have mentioned. For the time being, the year-on-year rate of increase in the core CPI will be in the range of around 1 percent to slightly below 1 percent, as the effects of a decline in energy prices outweigh the effects of the yen's depreciation. This may suggest that the achievement of the 2 percent price stability target now seems to be somewhat far away. In my view, the Bank's decision of additional monetary easing aims at offering a kind of insurance against such downside risks to prices. To be sure, I consider that the underlying trend in prices is more important than monthly fluctuations in price indicators. In this regard, the declines in international commodity prices, such as the recent decline in crude oil prices, will surely exert downward pressure on the core CPI. On the other hand, as I mentioned earlier, from a somewhat longer-term perspective it clearly will have positive effects on Japan's economy by reducing income transfers.

In assessing the degree of achievement of the price stability target, what is important is not to focus on monthly fluctuations in specific indicators but to examine a wide range of indicators in a forward-looking manner. For example, it is important to examine whether various economic entities such as firms and households will in fact form business plans or adapt their behavior toward consumption based on the assumption of around 2 percent inflation. More generally, it is important to examine whether people's medium- to long-term inflation expectations – which, under the deflation that lasted for over 15 years, are said to have consistently remained lower than those in the United States – are projected to be re-anchored at around 2 percent, comparable to the level in the United States (Chart 12).

It should be noted, however, that medium- to long-term inflation expectations are not tied to specific economic indicators, and thus are difficult to measure. It might be possible to retroactively acknowledge developments in such expectations as changes in the intercept of the Phillips curve. However, one should be careful in assessing a real-time measurement – even if it can be done – with the estimation bias taken into consideration. After all, it seems that whether or not people's medium- to long-term inflation expectations have changed or will change can only be judged qualitatively by, for example, behavioral patterns of various economic entities.

In this regard, let me give an example of wage negotiations this fiscal year. Many firms raised their base pay for the first time since the Lehman shock. This was attributed not only to the government's initiatives to realize wage increases, such as the setting up of three-way discussions among the government, employers, and labor unions, but also to efforts both by employers and labor unions. Specifically, as economic conditions changed, as seen in the rise in the inflation rate, both sides gave renewed attention to the ultimate goal of achieving wage increases that are in line with price increases – which had been almost forgotten under deflation – and this was reflected, albeit partly, in the actual wage increases. In light of this, QQE can be assessed as exerting certain effects.

Obviously, if asked whether wage increases observed thus far are enough to re-anchor people's medium- to long-term inflation expectations at 2 percent, I would say we are only halfway there. However, if developments in prices in the past fiscal year and the outlook for prices will be somewhat taken into consideration in the wage negotiations between management and labor unions toward the next fiscal year, thereby realizing a rise in base pay for two consecutive years, this in turn will lead to a greater breakthrough in changing people's fixed idea that wages, base salaries in particular, will not rise under deflation – in other words, their deflationary expectations. I am therefore carefully monitoring developments in wage negotiations toward the next fiscal year.

My understanding is that what is truly essential to achieve the price stability target is a rise in productivity through efforts by various entities to carry out structural reforms and the resultant increase in the potential growth rate of Japan's economy. On this basis, the inflation rate would increase moderately and wages would continuously improve in line with the increase in productivity, and consequently people would enjoy benefits from the overcoming of deflation.

B. Effects of QQE

Second, attention needs to be paid to the diminishing marginal effects brought about by the expansion of QQE. Interest rates are expected to decline further owing to such expansion; however, considering that nominal interest rates are already at historical low levels while real interest rates are substantially negative, it is judged that the marginal upward pressure from such easing on economic activity and prices will not be large. Moreover, the effects of QQE will increase in a cumulative manner with the progress in asset purchases by the Bank. These effects have become clearly evident in both the front and back ends of the yield curve, and are expected to strengthen further with the progress to be made in such purchases. There seems to be insufficient need for the Bank to accelerate this development process by expanding QQE, considering the accompanying costs and benefits.

Now, I would like to touch on the effects of QQE on interest rates. The Bank has committed to purchasing Japanese government bonds (JGBs) at an annual pace of about 80 trillion yen on a net basis – an amount substantially exceeding the planned amount of newly issued JGBs by the government. For this larger amount, the Bank consequently will directly or indirectly reduce the amount outstanding of JGBs in the markets. Partly due to financial regulations, many of the institutional investors holding JGBs have a compelling reason to do so as there is no better alternative, and therefore their preference for JGBs is strong. If the Bank conducts asset purchases in the form of decreasing the net amount outstanding of these investors' holdings of JGBs, the effects – in terms of price formation in the market – will strengthen as the Bank's purchases continue. That is, there will be a tendency for the price of JGBs to rise further and their interest rates to decline.

In Japan's money markets, the effects of asset purchases have become more clearly evident and interest rate formation frequently has been observed in negative territory. Regarding such formation, as arbitrage between the market rates and the interest rate of 10 basis points applied to the complementary deposit facility will work, the market rates will not decline significantly further into negative territory, unlike the situation for the ECB, which imposes a negative interest rate on excess reserves. However, it is necessary to carefully monitor whether such interest rate formation in the markets will create some kind of distortions on economic activity or lead to an accumulation of financial imbalances, or whether such formation will unexpectedly affect deposit rates as well as the broadly-defined settlement system, including money market funds and money reserve funds.

C. The time frame for continuing QQE

Third, the Bank has committed to continuing the newly expanded QQE in an open-ended manner, aiming to achieve the price stability target as long as it is necessary for maintaining that target in a stable manner. I have been of the view that the price stability target is a flexible concept in which there is an allowance for a certain range for upward and downward deviations of the actual inflation rate from the target. Therefore, I have been proposing that "as long as it is necessary for maintaining that target in a stable manner" – which is the wording on the time frame in the public statement – should be assessed as flexible targeting based on forecasts.

Some may point out that such flexible targeting lacks transparency of the conduct of monetary policy. I believe that the expansion of easing this time was decided primarily because the Bank has committed to an outcome – that is, achieving the price stability target of 2 percent – based on such recognition.

Central banks in major economies are similarly experiencing the tradeoff between transparency and flexibility in policy, and even if these central banks try to improve transparency, policy conduct based on a simple rule is not actually easy to accomplish. It seems that an important lesson can be drawn from the case of the Federal Reserve and the Bank of England, in that they have abandoned the rule based on economic indicators in deciding on policy changes and returned to a comprehensive assessment. A rule-based monetary policy seems easy to conduct at first, but various issues arise during the process, and I am therefore of the position that monetary policy conduct should be treated flexibly in considering future economic and price conditions.

Prices reflect the state of the economy and are not a variable that can be directly operated by a central bank. Generally speaking, channels in which the effects of a central bank's policy spread to prices are considered to be through a decline in interest rates, or via foreign exchange rates or asset prices – all of which are indirect channels. On this point, surgical precision with regard to aiming at a specific inflation rate within a specific time frame seems unreasonable, and if such an aim cannot be achieved, a central bank may be exposed to the risk that its credibility will be undermined.

D. Importance of fiscal consolidation

Lastly, I would like to again touch on the importance of fiscal consolidation, in view of the postponement of the second round of the consumption tax hikes. As mentioned earlier, the Bank has been conducting purchases of JGBs with an amount significantly exceeding that of newly issued JGBs by the government and working to raise people's medium- to long-term inflation expectations. However, the final outcome depends on the commitment to fiscal consolidation by the government. Furthermore, whether or not such commitment is being fulfilled is judged neither by the government nor the Bank, but by the markets. If concern over the government's commitment heightens in the markets, effects will materialize in the form of expansion in risk premiums in the JGB market; however, the Bank's prescription for a response is limited (Chart 13).

From a longer-term perspective, in the future process of finding an exit from QQE, the government's efforts toward fiscal consolidation are indeed important to the Bank in terms of smoothly starting toward an exit. On this point, coordination between fiscal austerity policy and monetary policy was consequently established in the United States, and long-term interest rates are at lower levels as a trend relative to the levels seen at the time the Federal Reserve began conveying information on its exit strategies to the public. As I mentioned earlier, the declining trend in the level of long-term interest rates in major economies is due not only to fiscal austerity policy, but may also be affected by the argument regarding secular stagnation, and an assessment of the U.S. experience should be made with caution. On the point of coordination between fiscal and monetary policies, there seem to be some lessons to be learned.

Concluding remarks: economic activity in Kochi prefecture

My concluding remarks will touch on the economy of Kochi Prefecture.

In terms of gross prefectural production, a feature of the industrial structure of Kochi Prefecture is that the share of manufacturing in this prefecture is smaller than that in the country overall, while the share of nonmanufacturing, such as the construction and services industries, is relatively large. The prefecture's economy therefore is supported by domestic demand rather than exports. Thus, it had been stagnant for a prolonged period during the economic recovery phase in Japan during the 2000s, led by export industries. Since 2013, however, as with the country's economy as a whole, the prefecture's economy has continued to improve – led by domestic demand, particularly public investment – albeit with some differences in the degree of momentum and pace of improvement.

Regarding recent developments, recovery in sales was disturbed by considerable losses – mainly in the retail, tourism, and agriculture industries – incurred from irregular weather during this summer through autumn. However, as the employment and income situation, which underpins private consumption, has stayed on an improving trend, and as business sentiment has been solid, the moderate recovery trend in the prefecture seems to be maintained (Chart 14).

Nevertheless, from a longer-term perspective, there are concerns about market shrinkage and labor shortages in Kochi Prefecture, as it has been confronted with structural issues such as a low birth rate and aging population, as well as a declining population. These issues – which have been exacerbated by the prolonged economic stagnation – have arisen in the prefecture more than ten years earlier than in the rest of the country. In addition, there are momentous issues such as the implementation of measures in preparation for a massive Nankai Trough earthquake and tsunami, from which it is assumed there would be extensive damage.

However, it is encouraging that efforts are being made from various quarters toward tackling these issues. For example, Kochi Prefecture is proceeding with the second Industrial Development Project, in which the private and public sectors are making joint efforts toward industrial development in a wide range of areas. The specifics of the efforts include the following: (1) strengthening local production for local consumption and for external sales; (2) strengthening primary industry and promoting senary, or sixth-order industry; (3) nurturing new industries, such as those relating to disaster prevention and new energy sources; and (4) promoting the tourism industry with the intent to encourage more tourists to visit from other prefectures and overseas. I am greatly impressed with this strategy, which aims to generate sustainable development of industries in the prefecture under the brand *Kochi-ke*, or "the Kochi family," by working to facilitate manufacturing and primary industry and by promoting external sales to other prefectures and overseas markets, amid concerns about the aging and declining population.

Kochi Prefecture has produced many great historical figures, including patriot *samurai* in the closing days of the Tokugawa shogunate, and I have heard that it is a region where an enterprising spirit is rooted. I hope the economic activity in Kochi Prefecture will become more active through aggressive and bold cooperative efforts among industry, government, academia, and financial institutions.

Chart 1

Global Economic Outlook

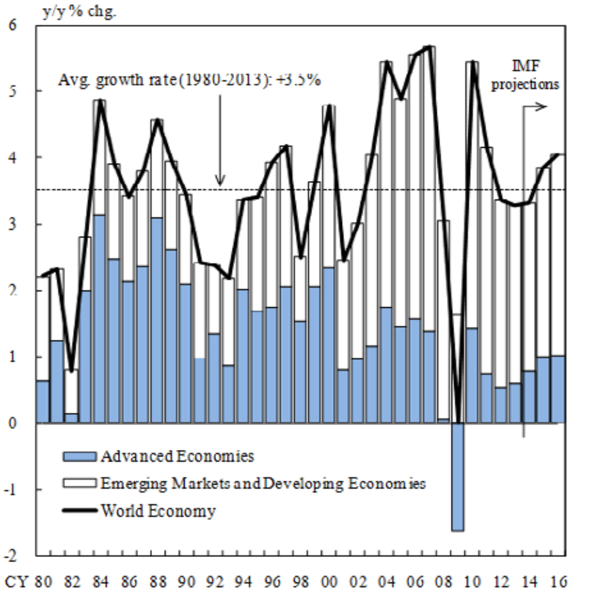
(1) IMF Projections (As of April 2014)

real GDP growth rate, y/y % chg.

CY	2012	2013	2014 projection	2015 projection
World	3.4	3.3	3.3 (-0.1)	3.8 (-0.2)
Advanced Economies	1.2	1.4	1.8 (0.0)	2.3 (-0.1)
United States	2.3	2.2	2.2 (0.5)	3.1 (0.0)
Euro Area	-0.7	-0.4	0.8 (-0.3)	1.3 (-0.2)
Japan	1.5	1.5	0.9 (-0.7)	0.8 (-0.2)
Emerging Market and Developing Economies	5.1	4.7	4.4 (-0.1)	5.0 (-0.2)
Emerging and Developing Asia	6.7	6.6	6.5 (0.1)	6.6 (0.0)
China	7.7	7.7	7.4 (0.0)	7.1 (0.0)
ASEAN	6.2	5.2	4.7 (0.1)	5.4 (-0.2)
Russia	3.4	1.3	0.2 (0.0)	0.5 (-0.5)
Latin America and the Caribbean	2.9	2.7	1.3 (-0.7)	2.2 (-0.4)

Notes: 1. Figures are calculated using GDP based on purchasing power parity (PPP) shares of the world total from the International Monetary Fund.
2. Figures in parentheses are the difference from the July 2014 *World Economic Outlook* projections.
Source: International Monetary Fund.

(2) Real GDP Growth Rate of the World Economy



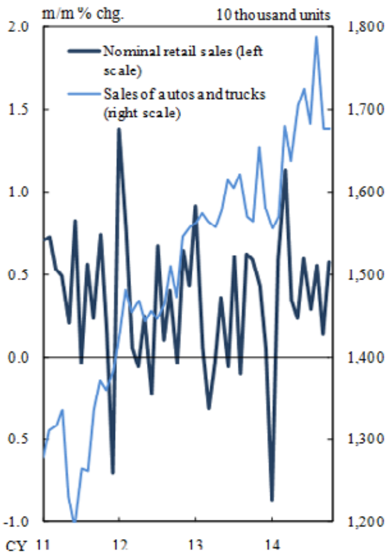
Source: International Monetary Fund.

2

Chart 2

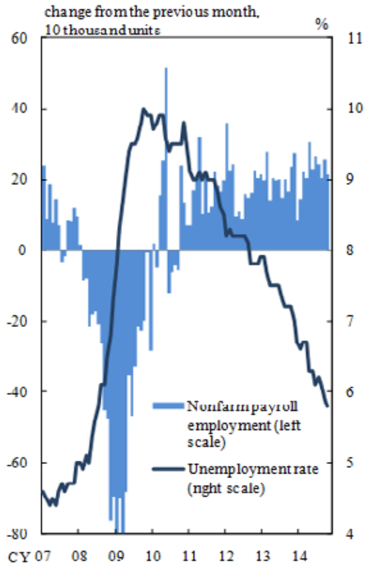
U.S. Economy

(1) Private Consumption



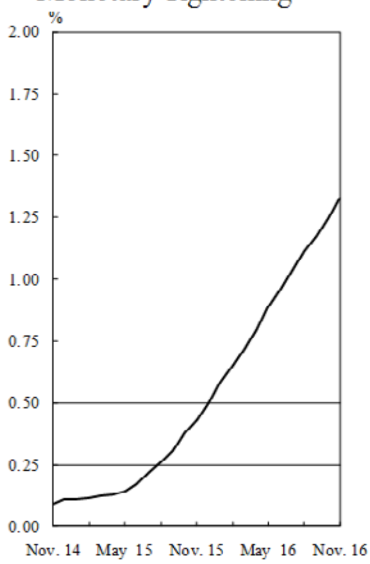
Note: Figures for nominal retail sales exclude motor vehicles, gasoline, and building materials.
Sources: Census Bureau; Bureau of Economic Analysis.

(2) Employment



Source: Bureau of Labor Statistics.

(3) Market's View on the Federal Reserve's Timing of Monetary Tightening



Note: Federal funds rate futures.
Source: Bloomberg.

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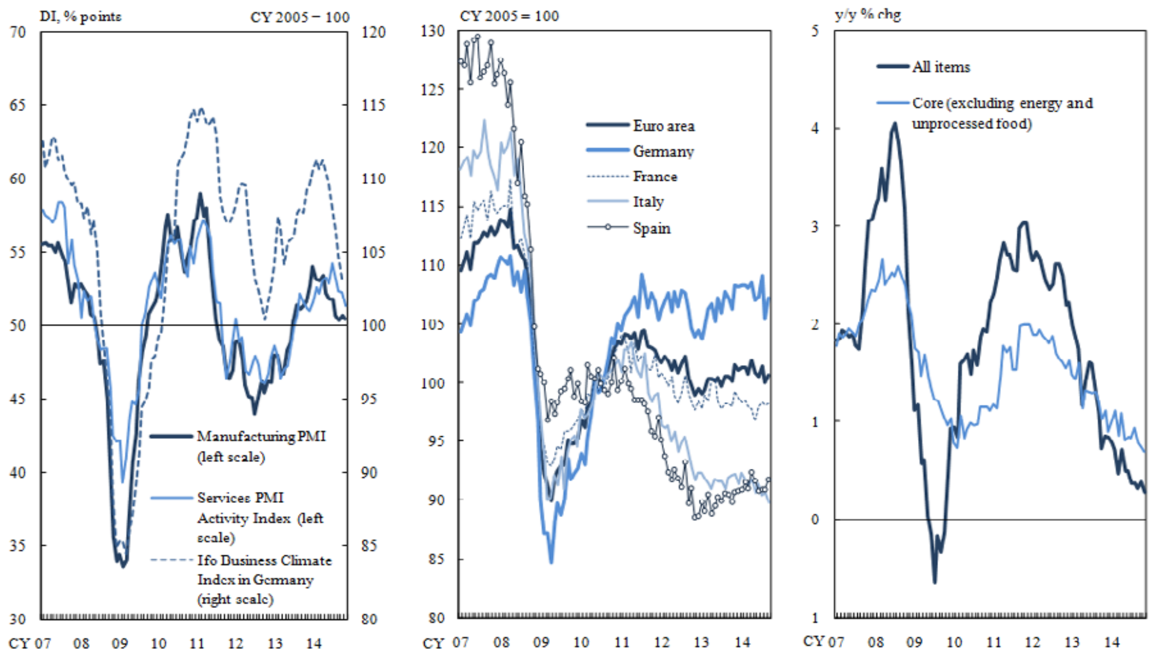
Chart 3

European Economy

(1) Business Sentiment (2) Production (3) HICP

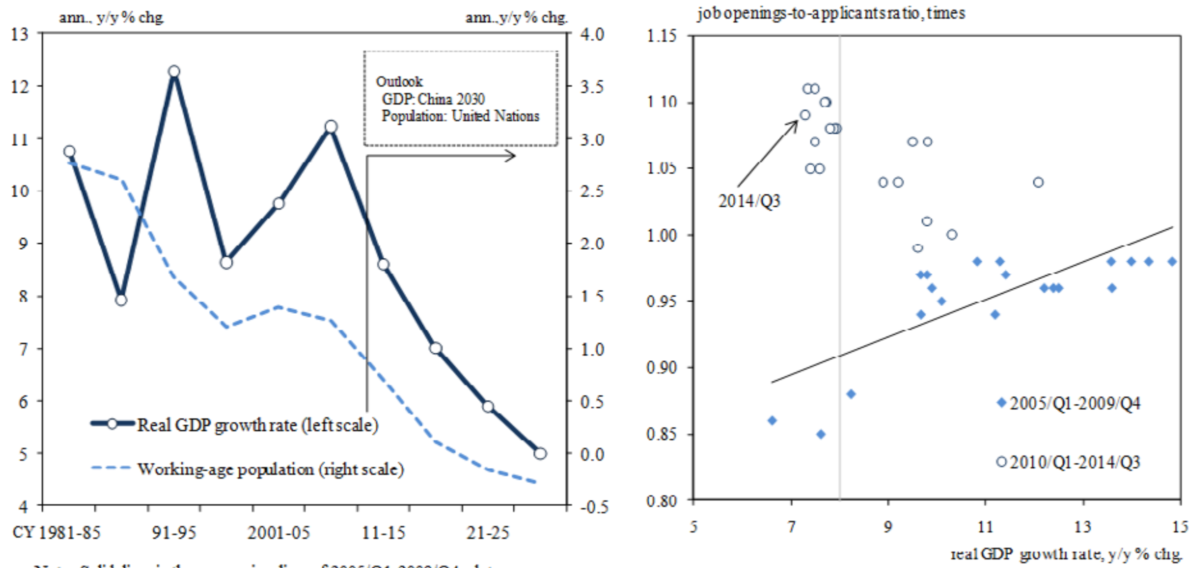


Sources: Markit (© and database right Markit Economics Ltd 2014. All rights reserved.); HAVER.

Chart 4

Chinese Economy

(1) Long-Term Economic Outlook ("China 2030") (2) GDP and Employment



Note: Solid line is the regression line of 2005/Q1-2009/Q4 data.
Sources: The World Bank; Development Research Center of the State Council, People's Republic of China; United Nations; CEIC Data.

Chart 5

Direction of Trade for Major Economies

%

		Exporters		
		United States	Euro area	China
Importers	NAFTA	33.4	12.9	19.3
	United States	-	10.5	16.7
	EU	16.7	32.8	15.3
	Euro area	12.7	-	11.0
	China, Hong Kong	10.4	7.1	17.4
	China	7.7	5.9	-
	Japan	4.1	2.1	6.8
	Others	35.4	45.1	41.2
	Total	100.0	100.0	100.0

Source: International Monetary Fund.

Chart 6

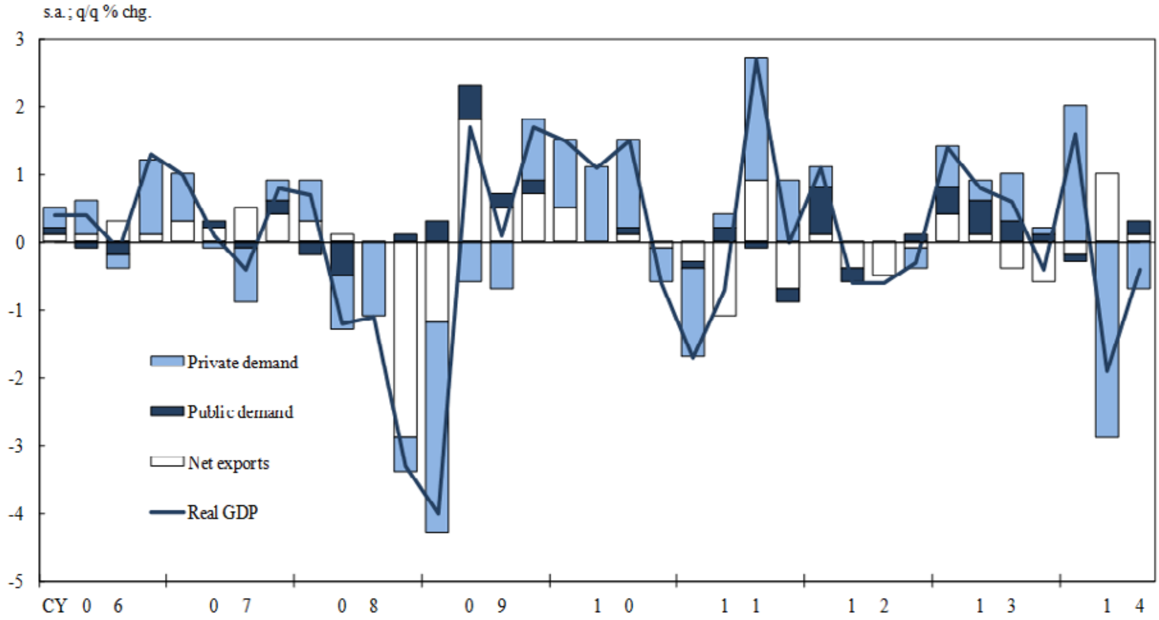
Developments in International Financial Regulations

	Compliance date	Overview of regulations
Leverage ratio requirements	January 2018	Tier 1/on- and off-balance sheet exposures ≧ 3 percent The final calibration, and any further adjustments to the definition, will be completed by 2017 (in the United States, the enhanced requirements will be applied to the eight SIFIs).
U.S. Volcker Rule	July 2015	Restrictions on proprietary trading and fund investments.
U.S. Foreign Banking Organization Rule	July 2016	Requirement for foreign banking organizations in the United States with over a certain size of assets to establish intermediate holding companies (IHCs) over their U.S. subsidiaries. For IHCs or branches of foreign banking organizations, liquidity requirements are applied, and for the former, capital and leverage ratio requirements that are applicable to U.S. bank holding companies are also applied.
OTC derivatives reforms	December 2015	Margin requirements for uncleared OTC derivatives.

Chart 7-1

Japan's Economy

(1) Developments in Real GDP



Source: Cabinet Office.

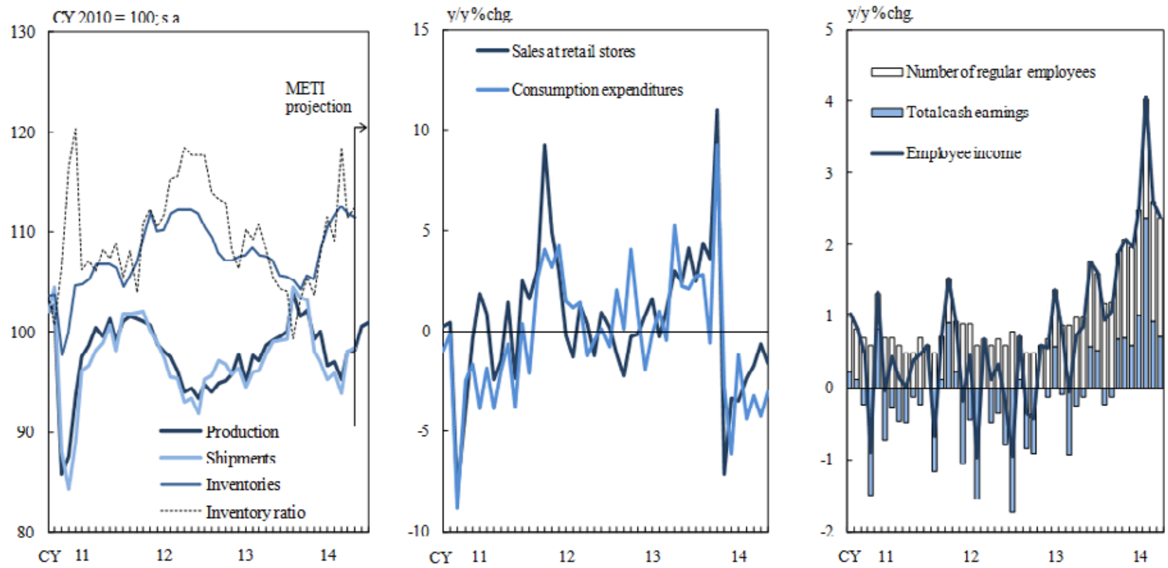
Chart 7-2

Japan's Economy (Continued)

(2) Production

(3) Consumption

(4) Employee Income



Notes: 1. Figures for consumption expenditures are based on two-or-more-person households. Figures for sales at retail stores and consumption expenditures are calculated on a nominal basis, while those for April 2014 and onward are estimated after adjusting for the direct effects of the consumption tax hike.

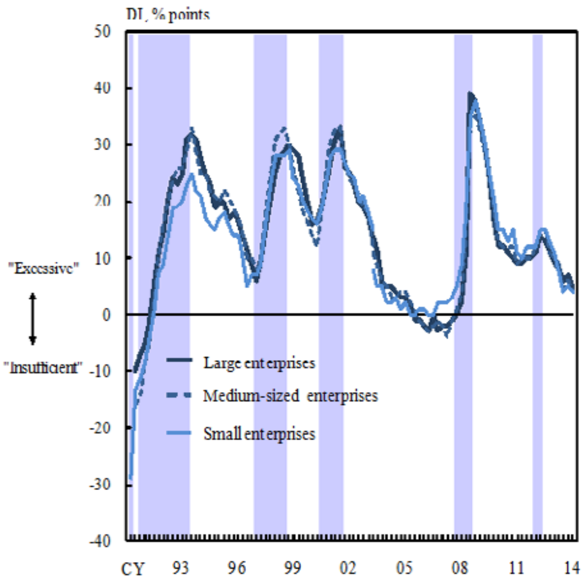
2. Employee income is calculated as the number of regular employees times total cash earnings.

Sources: Ministry of Economy, Trade and Industry; Ministry of Internal Affairs and Communications; Ministry of Health, Labor and Welfare.

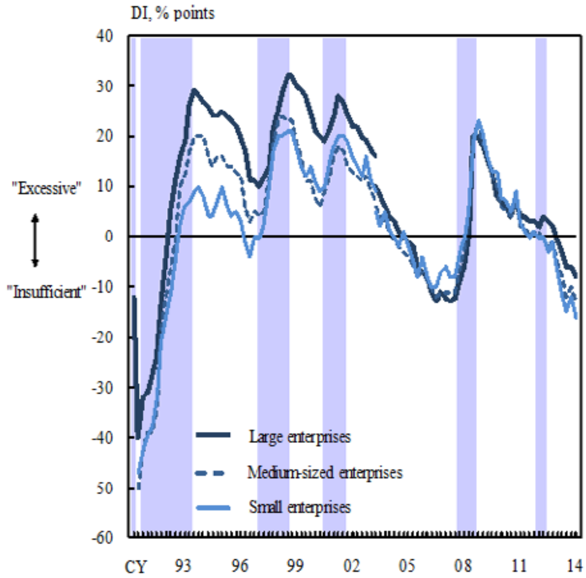
Chart 8

Business Sentiment (*Tankan*)

(1) Production Capacity (Manufacturing)



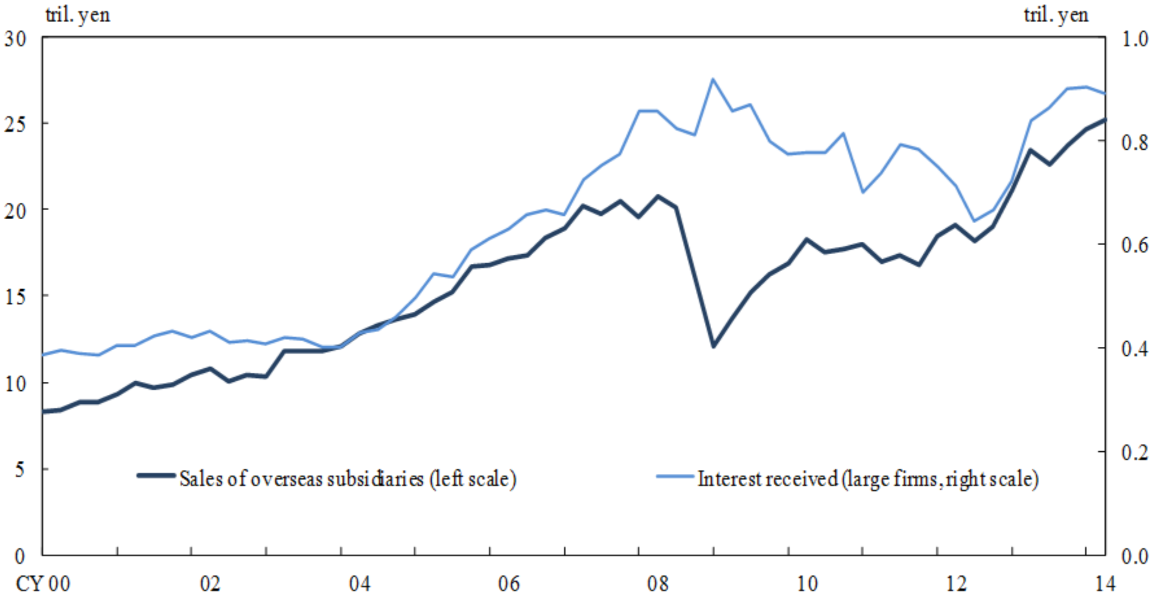
(2) Employment Conditions (All Industries)



Note: Shaded areas indicate periods of recession (according to the Cabinet Office).
Source: Bank of Japan.

Chart 9

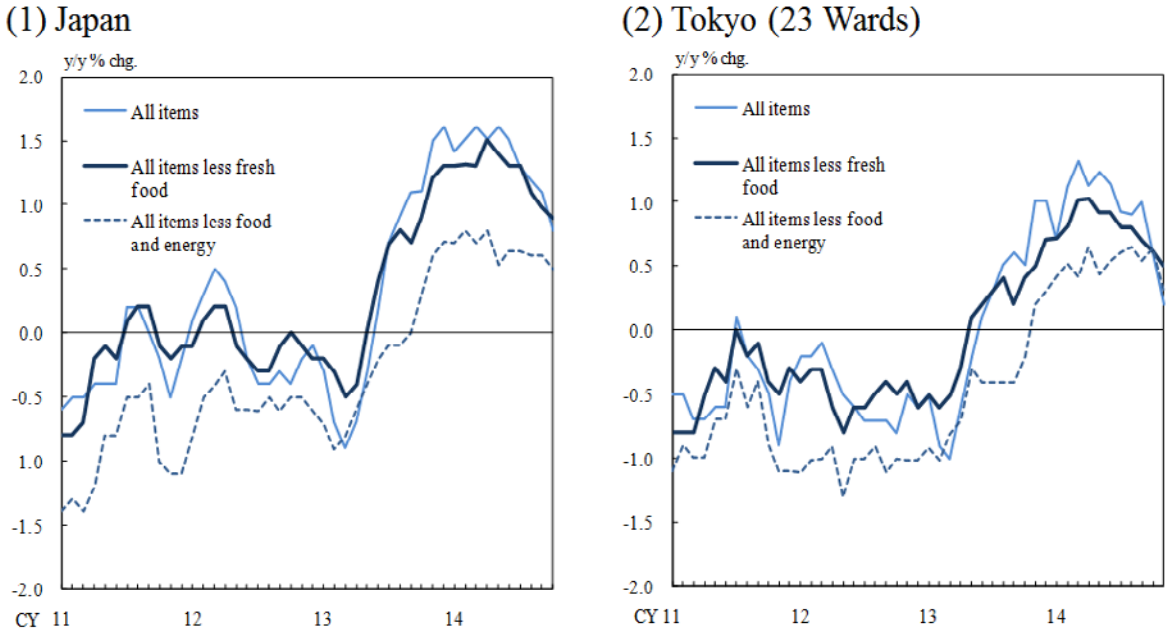
Sales of Overseas Subsidiaries and Interest and Dividends Received



Notes: 1. Figures for sales of overseas subsidiaries exclude sales to Japan.
2. Figures for interest received are four-quarter backward moving averages and include dividend income.
Sources: Ministry of Finance; Ministry of Economy, Trade and Industry.

Chart 10

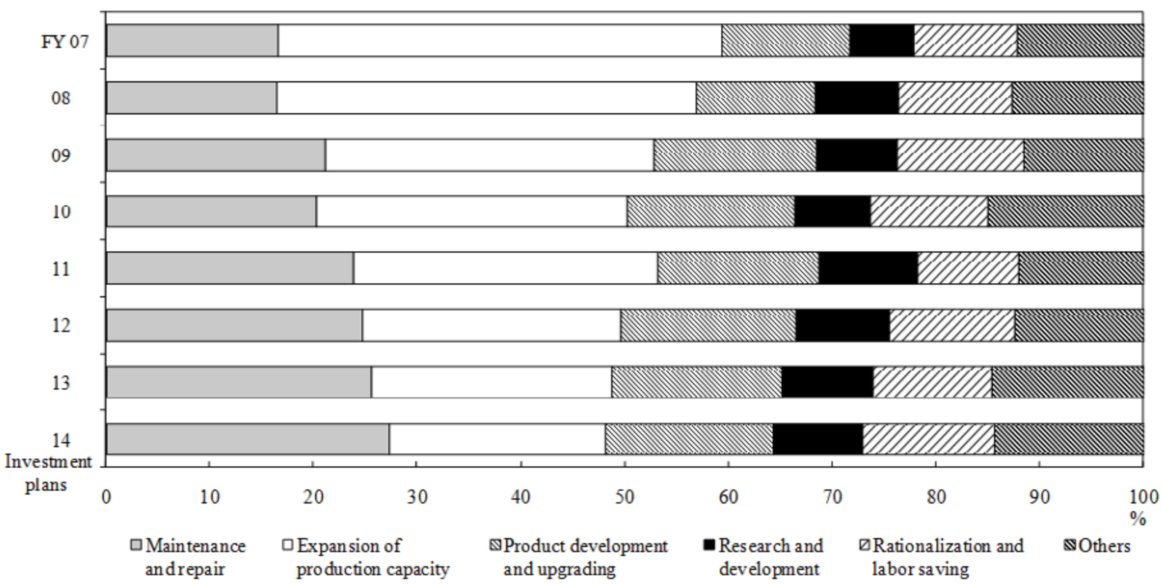
Consumer Prices



Note: Figures for April 2014 and onward are estimated after adjusting for the direct effects of the consumption tax hike.
Source: Ministry of Internal Affairs and Communications.

Chart 11

Reasons for Business Fixed Investment in the Manufacturing Sector

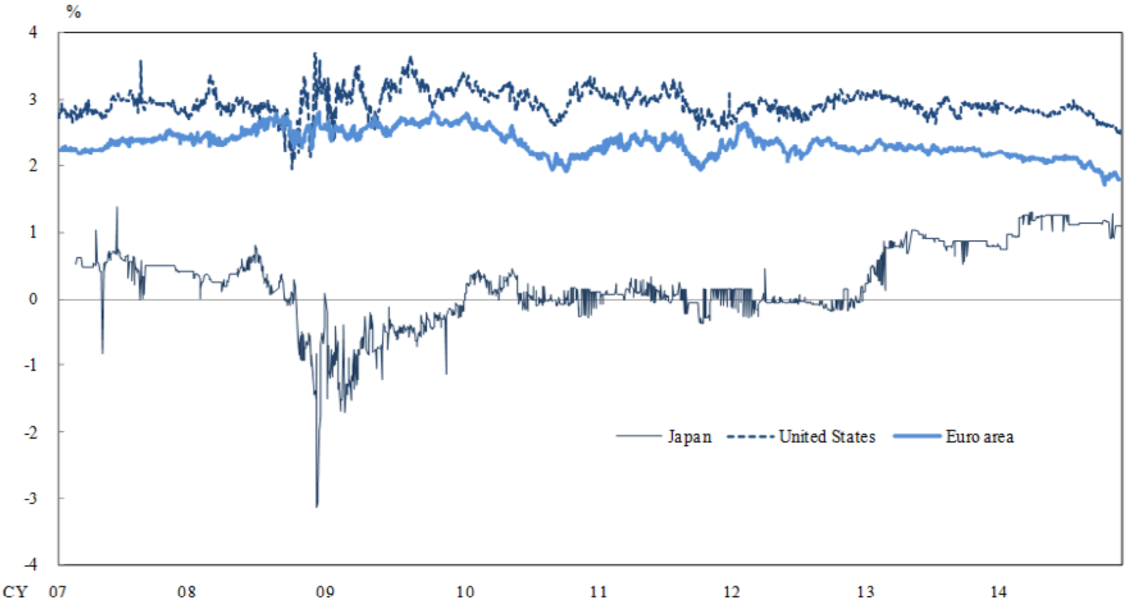


Source: Development Bank of Japan.

Chart 12

Medium- to Long-Term Inflation Expectations in Major Economies

5-year / 5-year inflation swap rate



Source: Bloomberg.

Chart 13

Factors Affecting Long-Term Interest Rates

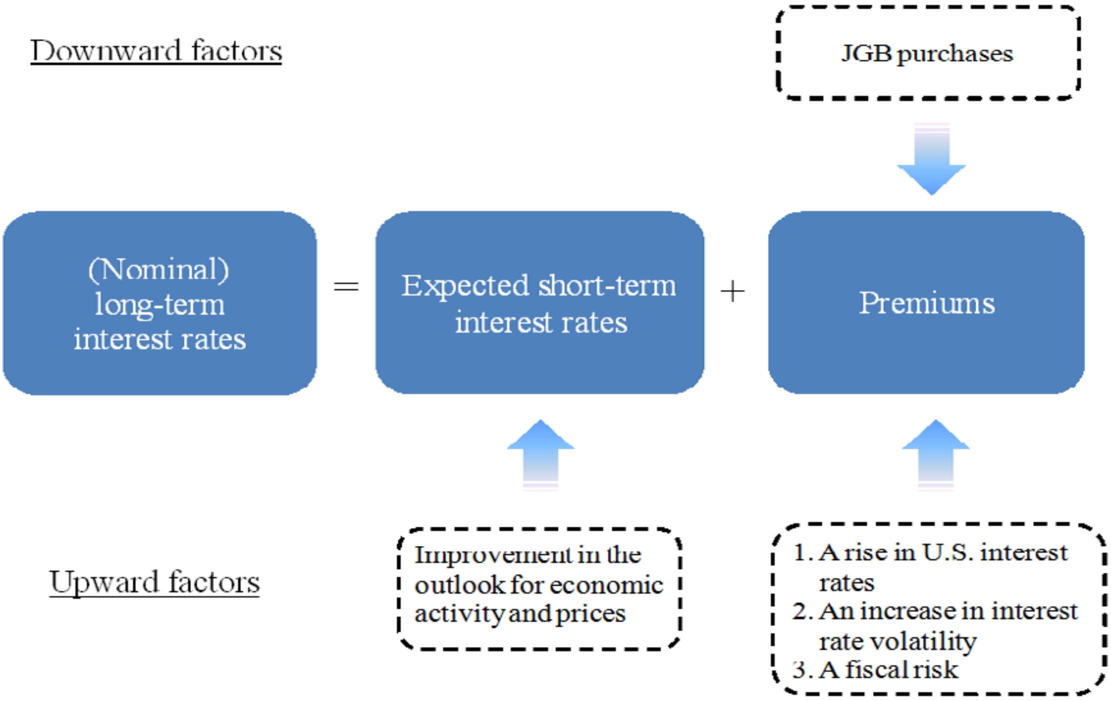
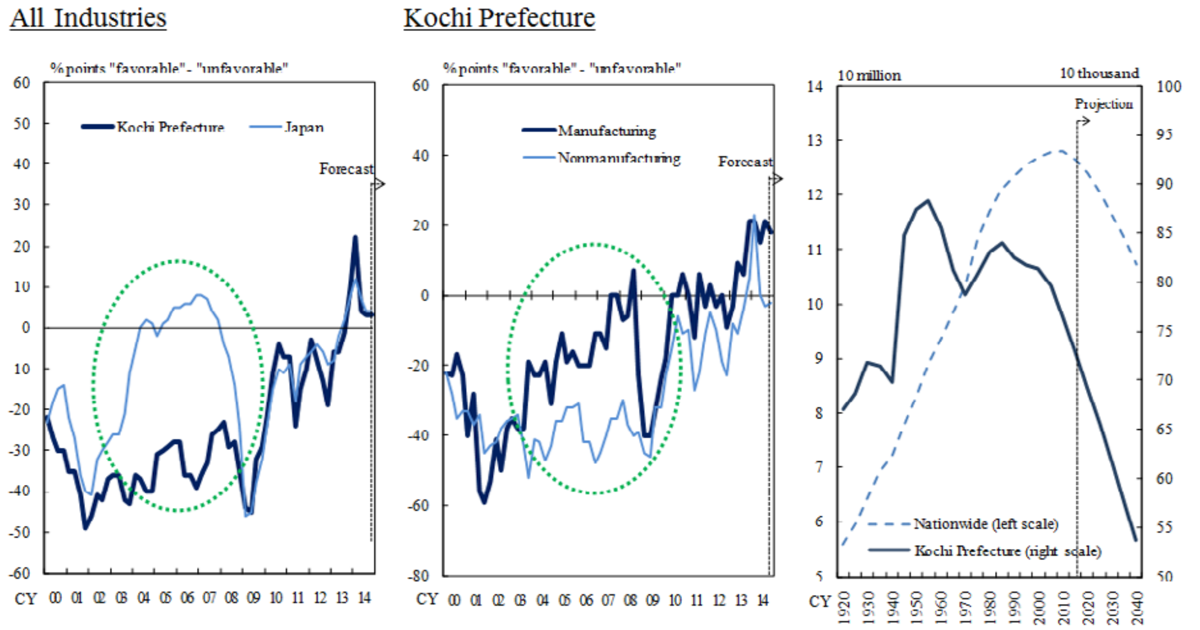


Chart 14

Economic Activity in Kochi Prefecture

(1) Business Conditions DI (*Tankan*)

(2) Long-term Changes in Population



Sources: Bank of Japan; Ministry of Internal Affairs and Communications; National Institute of Population and Social Security Research.