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# Japan's Economy: Monthly Outlook (Dec 2017)

## Lead role in growth shifts from overseas demand to domestic demand and from volume to quality

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### Summary

- In light of the 2<sup>nd</sup> preliminary Jul-Sep 2017 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.8% in comparison with the previous year for FY17 (+1.6% in the previous forecast), +1.1% in comparison with the previous year for FY18 (+1.2% in the previous forecast), and +0.6% in comparison with the previous year for FY19 (+0.6% in the previous forecast). Japan's economy has continued accelerated growth due to the following factors: (1) favorable overseas demand, (2) inventory investment, and (3) replacement demand for durables. However, the effects of these three factors will gradually fade away in the future, and we expect Japan's economy to gradually slowdown throughout FY2018.
- As in the case of the Japanese economy, the global economy has also manifested accelerated growth in 2017 due to support from positive factors as follows: (1) recovery and accumulation of inventory centering on the US, (2) fiscal expansion (slower pace of tightening) centering on the EU, and (3) acceleration of China's economy in anticipation of the meeting of the National Congress of the Communist Party. However, possibilities are great that these factors will gradually disappear during 2018 and beyond. At the same time, it is also important to remember that the disappearance of these factors which have led to acceleration of growth in 2017 simply means that Japan's economy and the global economy will gradually slow down. There is no need for excessive concern.
- With possibilities great that growth led by overseas demand may temporarily come to a halt in FY2018 and beyond, domestic demand is expected to take over the role of providing the major support for growth. The main factor behind growth in consumption in FY2017 has been the disappearance of factors which had suppressed consumption in the past. The effects of these factors are expected to disappear in FY2018 and beyond, and hence we expect consumption to continue to expand in the future in tandem with the pace of improvement in employee compensation. However, while the beginnings of wage inflation can be recognized in some cases, factors acting to cancel out this effect still remain, and we expect that it will take some more time before full-fledged improvement in employee compensation begins to the extent that it would trigger a virtuous circle led by domestic demand.
- As a result of economic growth experienced over the past five years, the supply-demand gap has moved into positive territory, and the number of industries now reaching their limit in terms of supply constraints is growing. In other words, it has become difficult maintaining growth dependent on sales volume alone. Instead, increasing prices has become an important tool for influencing growth potential on a nominal basis. With this as background, our economic outlook sees the slowdown in the nominal growth rate (+1.9% in FY17 to +1.5% in FY18) as fairly minor in comparison to that of the real growth rate.

## Pace of Growth to Peak Out in FY2017

In light of the 2<sup>nd</sup> preliminary Jul-Sep 2017 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.8% in comparison with the previous year for FY17 (+1.6% in the previous forecast), +1.1% in comparison with the previous year for FY18 (+1.2% in the previous forecast), and +0.6% in comparison with the previous year for FY19 (+0.6% in the previous forecast). Japan's economy has continued accelerated growth due to the following factors: (1) favorable overseas demand, (2) inventory investment, and (3) replacement demand for durables. However, the effects of these three factors will gradually fade away in the future, and we expect Japan's economy to gradually slowdown throughout FY2018.

## Real GDP growth rate gains major upward revision from 1<sup>st</sup> preliminary, while also exceeding market consensus

The real GDP growth rate for Jul-Sep 2017 (2<sup>nd</sup> preliminary est) received a major upward revision to +2.5% q/q annualized (+0.6% q/q) in comparison to the 1<sup>st</sup> preliminary report (+1.4% q/q annualized and +0.3% q/q), while at the same time significantly exceeding market consensus (+1.5% q/q annualized and +0.4% q/q). Demand components receiving upward revisions included private sector capital investment and inventories, which gained especially notable upward revisions in their contributions to GDP growth, government consumption, and public investment, which saw minor upward revisions. On the other hand, private sector housing investment suffered a slight downward revision.

Private sector capital investment won a major upward revision in response to results of corporate statistics, registering +1.1% q/q (+0.2% on the 1<sup>st</sup> preliminary). As for gross fixed capital formation by type, residential investment and other buildings & structures suffered a q/q decline this time around due partly to the reaction to last quarter's strong performance. Transport equipment had been maintaining favorable growth up until the Jan-Mar period, but then suffered declines for two consecutive quarters (the Apr-June period and the Jul-Sep period). On the other hand, other machinery and equipment is maintaining firm growth, while in addition, growth in intellectual property products also contributed to overall growth in capital investment.

### 2017 Jul-Sep GDP (2<sup>nd</sup> Preliminary Estimate)

		2016				2017	
		Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	
						First	Second
Real GDP	Q/q %	0.2	0.3	0.4	0.7	0.3	0.6
	Annualized	0.9	1.4	1.5	2.9	1.4	2.5
Personal consumption	Q/q %	0.4	0.1	0.4	0.9	-0.5	-0.5
Private housing investment	Q/q %	3.0	0.2	0.9	1.3	-0.9	-1.0
Private non-housing investment	Q/q %	-0.2	1.5	0.2	1.2	0.2	1.1
Change in private inventories (contribution to real GDP growth)	Q/q % pts	-0.5	-0.1	-0.1	-0.0	0.2	-0.0
Government consumption	Q/q %	0.5	-0.3	0.2	0.2	-0.1	0.0
Public investment	Q/q %	0.3	-2.4	0.3	4.6	-2.5	-2.4
Exports of goods and services	Q/q %	2.1	3.0	1.9	-0.1	1.5	1.5
Imports of goods and services	Q/q %	0.1	1.3	1.3	1.5	-1.6	-1.6
Domestic demand (contribution to real GDP growth)	Q/q % pts	-0.1	0.0	0.3	1.0	-0.2	0.1
Foreign demand (contribution to real GDP growth)	Q/q % pts	0.3	0.3	0.1	-0.2	0.5	0.5
Nominal GDP	Q/q %	-0.1	-0.0	0.1	0.8	0.6	0.8
	Annualized	-0.4	1.9	0.3	3.2	2.5	3.2
GDP deflator	Y/y %	-0.1	-0.1	-0.9	-0.4	0.1	0.1

Source: Cabinet Office; compiled by DIR.

Notes: 1) Due to rounding, contributions do not necessarily conform to calculations based on figures shown.

2) Q/q figures seasonally adjusted basis.

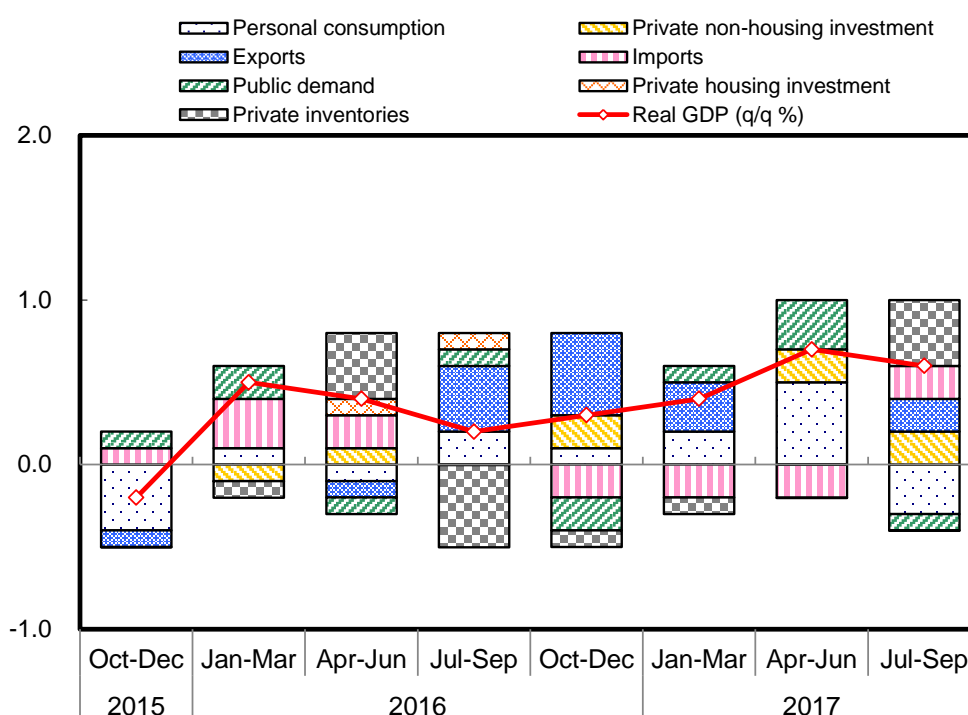
Private sector inventory increased its contribution to GDP growth at +0.4%pt q/q (+0.2%pt on the 1<sup>st</sup> preliminary). This was due to the fact that material & supplies inventory, which is provisional on the 1<sup>st</sup> preliminary GDP estimate, increased its contribution at +0.2%pt (+0.0%pt on the 1<sup>st</sup> preliminary). As for other components, government consumption recorded +0.0% (-0.1% on the 1<sup>st</sup> preliminary) due mainly to the most recent results of fundamental statistics, while public investment managed a slight upward revision at -2.4% (-2.5% on the 1<sup>st</sup> preliminary). On the other hand, private sector housing investment was revised downwards slightly at -1.0% (-0.9% on the 1<sup>st</sup> preliminary).

## Consumption and public investment shift into decline, while exports and capex take up role of driving growth

Performance by demand component in the Jul-Sep 2017 2<sup>nd</sup> preliminary results shows private sector final consumption expenditure suffering a decline for the first time in five quarters at -0.5% q/q. The employment environment improved and consumer confidence maintained at a positive level. However, bad weather was a drag on personal consumption with a historically long period of rain in Eastern Japan in August, while major typhoons hit many areas of Japan in September. Moreover, a reactionary decline in response to positive performance during the Apr-Jun period (+0.9%) was also part of the mix.

Looking at trends in goods and services, we see that the above mentioned weather situation brought on a decline for services at -0.7% q/q, while semi-durables grew slightly at +0.3%, and non-durables registered +0.0%. Even durables were down for the first time in seven quarters by -1.2%, which is worthy of note after having continued in a growth trend since 2016. The disappearance of the negative effects of pre-consumption over demand and Eco-car related tax breaks, which helped to increase consumption since 2009 along with the Ecopoint program effecting household electronics, as well as last-minute demand prior to the increase in consumption tax, generated replacement demand for durable goods for the past six quarters straight. However, it appears that this effect may be about to peak out.

### Contribution to Real GDP (% , % pt; seasonally adjusted basis)



Source: Cabinet Office; compiled by DIR.

Housing investment suffered a decline for the first time in seven quarters at -1.0% q/q. Housing investment has gained underlying support from lower interest rates on housing loans until now. However, positive factors such as growth in rental property construction as an inheritance tax strategy are gradually losing their effect, and growth in prices is beginning to keep demand in check.

Capital expenditure grew for the fourth consecutive quarter at +1.1% q/q. Past growth in operating rates associated with export expansion, and growing seriousness of the shortage in manpower are thought to be an undercurrent helping to maintain favorable capex spending.

Private sector inventory's contribution grew for the first time in five quarters at +0.4%pt q/q. Contribution of raw materials inventory grew by +0.2%pt, while work in progress inventory at +0.0%pt, and finished goods at +0.1%pt, and distribution inventory at +0.1%pt.

Public investment suffered a decline for the first time in three quarters at -2.4% q/q. Implementation of the government's FY2016 supplementary budget was concentrated mostly in the Apr-Jun period, when public investment grew by +4.6%. A reactionary decline has appeared in the July-Sep period. Meanwhile, government consumption is marking time at +0.0%.

Exports grew for the first time in two quarters at +1.5% q/q. Looking at trade statistics for the Jul-Sep period, we see that exports to the EU declined due to a drop in automobile exports, while positive performance of semiconductor manufacturing equipment pushed up overall exports, and contributed to growth in exports to the US and Asia. On the other hand, domestic demand declined, bringing a decline in imports for the first time in five quarters at -1.6%. As a result, overseas demand made a positive contribution to GDP for the first time in two quarters with a major plus of +0.5%pt.

Terms of trade improved as import prices settled down, and domestic price pass-through has made moderate progress. As a result, the GDP deflator grew for the second consecutive quarter at +0.2% q/q. Nominal GDP also grew for the fourth consecutive quarter at +3.2% q/q annualized (+0.8% q/q).

### **Moderate growth seen continuing, but risk remains for overseas demand**

We expect Japan's economy to continue in a moderate expansion phase. Domestic demand is expected to continue its expansion centering on personal consumption, while overseas demand is expected to maintain steady growth backed by the recovery in the world economy, providing support for Japan's economic growth. However, downside risk remains for overseas demand requiring caution, due to fears that China's economy may slow down after the National Congress of the Communist Party, and increased geopolitical risk. Meanwhile, we also urge caution regarding the slowdown of the US economy accompanying the Fed's tight money policy, and the problem of capital outflows from the emerging nations.

Personal consumption is expected to continue in a moderate expansion phase. The supply of labor is becoming increasingly tight, and this should provide underlying support for personal consumption through growth in employee compensation. However, caution is advised here as corporations may try to compensate for the cost of wage increases by flattening the wage curve and placing restrictions on overtime. This could create a slowdown in the pace of growth in employee compensation, as well as the expansion of consumption. Moreover, new car sales, which had been maintaining favorable performance, have recently begun to weaken. This suggests that replacement demand may be about to peak out as was mentioned earlier in this report. There is a good chance that, coupled with the halting of production and shipments by one automobile manufacturer at its domestic factories, this could very well put a damper on consumption of durables.

Housing investment is expected to experience a lull in its growth trend, and then move into a gradual descent from its current plateau. Interest on housing loans remains low, and therefore should provide continued underlying support. However, caution is required regarding a possible reactionary decline as the positive effect of inheritance tax strategies disappears.

Capex is expected to see moderate growth. Operating rates in the manufacturing sector are on the rise due to the expansion of exports thanks to the recovery in the world economy. However, if uncertainty grows regarding the future of the world economy, corporations are likely to lose their willingness to invest in capex, hence caution is required. On the other hand, research & development, which is in growth phase, is expected to continue pushing up overall capex figures in the future. Meanwhile, investment in labor-saving and rationalization due to the continuing labor shortage is expected to continue its growth trend centering on the non-manufacturing industries. In addition, investment in research & development with an aim to increase profitability is also expected to become a factor in pushing up capex spending in the future, partly supported by improvement of free cash flow of corporations.

As for public investment, we expect the positive effect of the government's FY2016 supplementary budget to gradually disappear, and while levels may remain high, we expect a moderate decline on into the future.

As for exports, with overseas economies continuing moderate growth, we can expect exports to maintain a firm undertone. However, caution is required regarding underlying risk. As for the US, the Fed is continuing to implement its tight money policy. Meanwhile, there are signs of demand for Japan's major export to the US, passenger vehicles, peaking out, and the tight money policy may bring further downward pressure on the economy. The Fed's tight money policy may also cause an acceleration of capital flows from emerging nations. On the other hand, as regards China's economy, now that the curtain has closed on the National Congress of the Communist Party, there is risk that the economy could come under downward pressure due to a reactionary decline in demand, which had been kept artificially high until now by the implementation of economic measures. Other issues include geopolitical risk such as rising tensions in North Korea and the Middle East. All of these risks require caution. Our main scenario sees the world economy continuing its moderate growth. However, if uncertainty grows regarding the future of the world economy, Japan's exports are likely to decline, bringing the risk of downward pressure on Japan's economy.

## **1. Three Factors Supporting Acceleration of Growth in FY2017 to Fade Away**

Japan's economy has continued accelerated growth due to support from (1) favorable overseas demand, (2) inventory investment, and (3) replacement demand for durables. However, as the effects of these three factors disappear, Japan's economy will gradually slow down in the future, and is expected to maintain a growth rate comparable to a slow cruise.

Looking at Chart 1, which illustrates the inventory cycle, we see that Japan's economy in 2016 was characterized by the fact that inventory entered the recovery phase, followed by its progress into the accumulation phase in 2017. Looking at past patterns we see that in 2014, inventory had already accumulated sufficiently when the Chinese yuan was suddenly devalued. In addition to China's economy losing speed, shipments declined leading to the deterioration of business sentiment. Japanese corporations responded by reducing inventories in 2015.

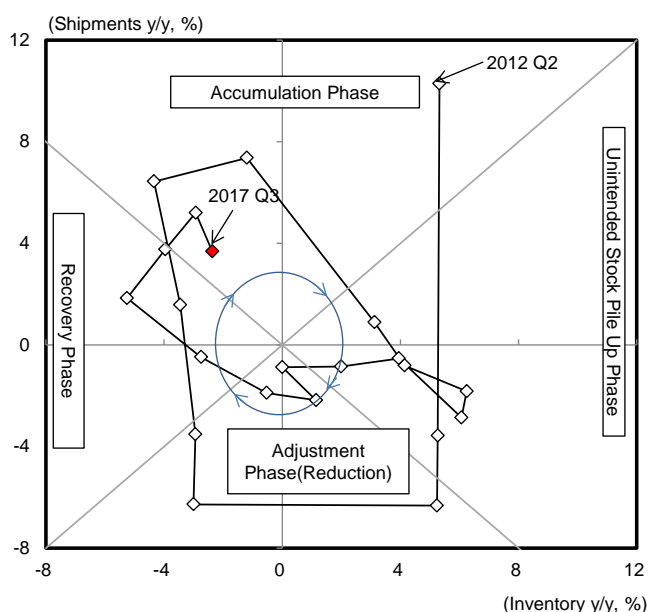
However, China's economy regained composure through 2016, and US demand showed promise of recovery after the presidential election, encouraging an improvement in business sentiment. The inventory cycle then reentered the accumulation phase in 2017. However, it goes without saying that inventory is merely a short-term factor. The recovery and accumulation phase moves quickly towards

its completion and moves onto the next phase. This means that the positive effect which the inventory cycle has had on Japan's economy very well may gradually fade away.

Next we look at Chart 2, which indicates that expansion of exports, which continued in tandem with the acceleration of the global economy, has had the role of leading Japan's economic growth. Here we can name three factors which led to the acceleration of the global economy in 2017. These are (1) recovery and accumulation of inventory centering on the US, (2) fiscal expansion (slower pace of tightening) centering on the EU, and (3) acceleration of China's economy in anticipation of the meeting of the National Congress of the Communist Party in October 2017.

The Inventory Cycle

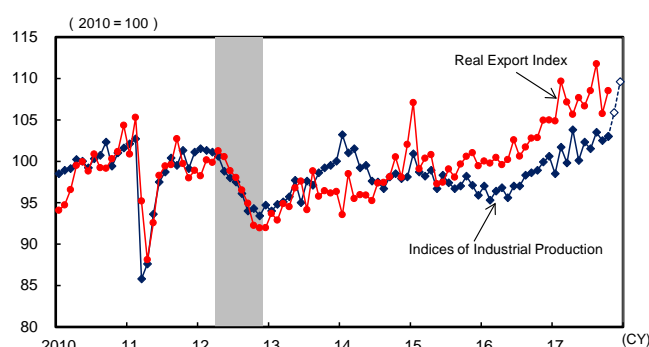
Chart 1



Source: Ministry of Economy, Trade and Industry; compiled by DIR.

Japan's Real Exports, and Industrial Production

Chart 2



Source: Bank of Japan, Ministry of Economy, Trade and Industry, Cabinet Office; compiled by DIR.

Notes: 1) Shaded areas represent periods of recession.

2) Most recent two months of industrial production uses values from METI's production forecast survey.

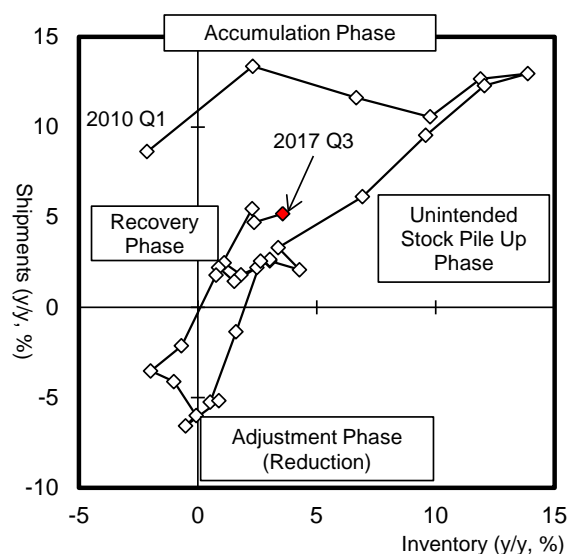
First we take a closer look at factor (1). Chart 3 shows the US inventory cycle. As was mentioned previously, the US inventory cycle been influenced by the same factors as Japan's cycle, and is now in the recovery and accumulation phase.

Next we look at (2). This is all old news by now, but many will recall that in 2015, the Greek fiscal crisis was reignited. The Greek financial crisis soon led to turmoil in the financial markets centering on Southern European countries holding a large amount of government debt, and interest on government bonds grew rapidly. This was due to fears that there was a risk of the Greek problem spreading to nearby countries. In response to financial turmoil, most European countries felt forced to implement austerity measures.

However, the ECB provided support through its monetary easing policy, delaying the question of properly dealing with the problem until a later date. As a result, the number of countries able to carry out an expansionary fiscal policy or to slow the pace of austerity measures eventually grew. Chart 4 indicates that nineteen out of a total of 34 advanced nations were implementing austerity measures in 2015. This number fell to ten in 2016 and then decreased to only six countries by 2017. In comparison, the number of countries implementing relaxation of fiscal policy in 2015 totaled only eight, but then increased to eleven countries in 2016, and finally to a total of sixteen in 2017. The increase in the number of countries implementing relaxation of fiscal policy played an important role in the acceleration of the EU economy.

The US Inventory Cycle

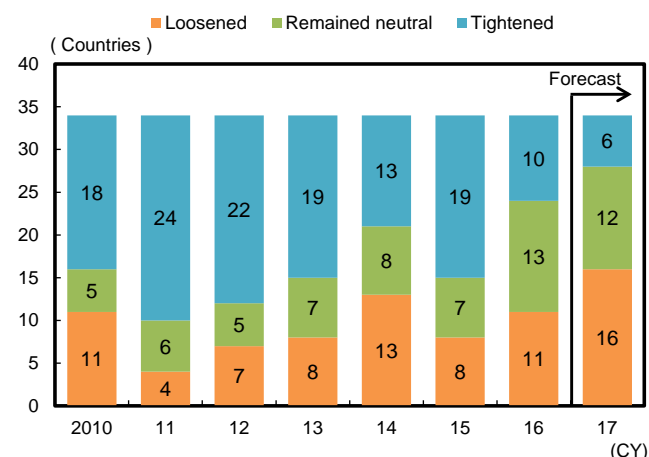
Chart 3



Source: U.S. Department of Commerce; compiled by DIR.

Fiscal Policies of Advanced Nations

Chart 4



Source: IMF; compiled by DIR.

Lastly, we take a look at (3). First of all, experience tells us that in years in which the National Congress of the Communist Party of China meets, the economy tends to get shored up for political reasons using government policy measures. Next we take a look at the actual numbers to see if our assumption is correct. Chart 5 shows China's Business Cycle Signal Index, which is composed of a mixture of ten major economic indices. It is similar to Japan's Indexes of Business Conditions. Years in which the National Congress of the Communist Party of China has met are circled in red. During these years the economy has tended to accelerate almost without exception. The major exception to the rule is the year 1997, which is when the Asian currency crisis took place. That said, it would be appropriate to say that China's economy held up pretty well considering the extreme negativity of the external environment.

Of course, there are differing opinions. Since the beginning of 2017 China's economy has accelerated supported mainly by domestic demand centering on consumption. If we look only at this piece of data it appears that the case has simply been that the economy did well this year. It is possible for one to develop the opinion that growth has not been dependent on government support.

However, when we also consider the fact that China had managed to bring capital outflows almost completely under control by the beginning of 2017, the argument above loses its attraction. Chart 6 indicates that after depreciation of the Chinese yuan in August 2015 there were expectations of further declines in the future. Then there was influence from growth in US interest rates. This led to capital outflows from China in 2016 totaling 640 bil dls (approximately 70 tril yen). In contrast, net capital outflows from China in the first half of 2017 came to a total of 42.3 bil dls (approximately 5 tril yen). Control on capital outflows since the beginning of 2017 was encouraged by government policy measures. The possibility that there may have been political considerations leading to the suppression of risk of the Chinese yuan collapsing by the Chinese government in anticipation of the National Congress of the Communist Party would not at all be odd. And it is highly possible that as a result of this policy, capital which no longer had anywhere to go naturally flowed back into China, stimulating investment and consumption. During this same period of time the virtual currency market skyrocketed, while a rebound in real estate prices, which were supposed to have been kept under control through government policy measures last year, also occurred. These events must be connected in some way to government policy. It is also possible to deduce that the above mentioned movements in the asset markets led to further stimulation of China's domestic demand through the asset effect.

## China's Business Cycle Signal Index

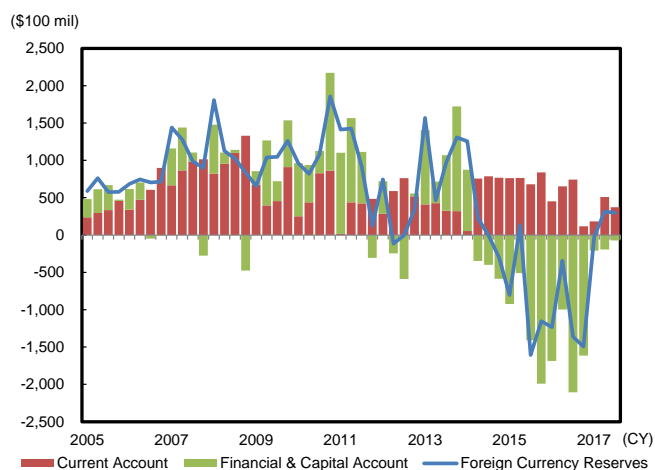
Chart 5



Source: National Bureau of Statistics of China, The People's Bank of China, CEIC; compiled by DIR.

## China's International Balance of Payments

Chart 6



Source: Haver Analytics; compiled by DIR.

The three factors supporting recent growth in the global economy are strong points that were focused on. However, there are doubts that this can continue into 2018 and beyond, and there is plenty of margin left for doubt. For one thing, the inventory cycle is merely a short-term factor, and even considering the possibility that a recovery and accumulation phase may sometimes be on the long side, it still has to end sometime. Meanwhile, the ECB has announced its plan to reduce quantitative easing. It is therefore questionable whether expansionary fiscal policy in the EU can maintain its momentum. There is a good chance that the factors bringing upward pressure on the US and EU economies will gradually disappear. As for China, now that the October 2017 meeting of the National Congress of the Communist Party is over, there will likely be less incentive to carry out further government policy measures to shore up the economy. Moreover, the side effects of policies meant to control capital outflows are likely to begin to appear at some point. These soaring asset prices as was mentioned previously, as well as a decline in international competitiveness due to yuan appreciation, and the loss of opportunities to invest overseas due to the policy, which has its own cost.

Of course, the disappearance of these acceleration factors does not necessarily mean that the global economy will fall into a recession. The expected slowdown will be a gradual one, or it could be merely an adjustment phase. In any case, it is highly likely that Japan's economy will gradually slow down as the benefits of acceleration factors, including expansion of exports and inventory accumulation, fade away.

## 2. Lead Role in FY2018 Growth to Lean Relatively More Toward Domestic Demand

### 2.1 Personal Consumption to Continue Moderate Growth

As was mentioned earlier in this report, as growth led by inventory recovery and overseas demand temporarily comes to a halt, domestic demand is expected to take over the role of providing the major support for growth. In this section we examine the largest factor in domestic demand, that of personal consumption. In conclusion, we see personal consumption continuing moderate expansion throughout FY2017 and FY2018. However, support for expansion of domestic demand will come from a different source in FY2018 than it is expected to in FY2017. The main factor behind growth in consumption in FY2017 is expected to be the disappearance of factors which had suppressed consumption in the past. On the other hand, growth in consumption in FY2018 is expected to be led by improvements in the employment environment associated with the growing seriousness of the labor shortage, and which will include improvements affecting regular employees.



## 2.2 Three Positive Factors Encouraging Personal Consumption in FY2017

First of all, the major factor encouraging growth in consumption in FY2017 is expected to be the disappearance of three factors which were the cause of stagnation in personal consumption in the past. These include (1) elimination of the special case pension category, (2) increased tax and insurance burden for the working-age generation, and (3) reactionary decline following past economic stimulus measures. These factors will lose their negative effects in the near future, bringing in their stead positive factors for the outlook for personal consumption.

First we consider (1) elimination of the special case pension category. Pension payment amounts are determined annually, taking into account the trends in prices and wages. However, despite the collapse in prices in the past, the government implemented a special measure so that pensions were not cut and instead left as is until FY2012. This also meant that pension amounts were higher than normal. Then as of FY2013, the special measure was eliminated, bringing a cut in pension payment per person. The special case pension category was eliminated in FY2015, and as of FY2016 the effect is no longer operating as a factor in holding down per capita pension payments. Taking into consideration the time lag which likely exists before the propensity to consume amongst the elderly population finally recovers, it seems that by now the effect of suppressing consumption should be gradually disappearing.

Next we examine the issues surrounding positive factor (2) increased tax and insurance burden for the working-age generation. As is the case with pensioners, factors have appeared in recent years bringing pressure on disposable income for the working-age generation. Employee compensation grew around Y9.5 tril between FY2012 and FY2015, but disposable income also grew by around Y2.6 tril due to the growth in income, then the raising of the maximum tax rate brought total growth in income tax to Y4 tril. In addition, social burden (employee's share of social insurance contribution) also grew by around Y3 tril. Even if salaries grew in terms of face value the net amount did not grow, effectively putting a damper on consumption on the part of the working-age generation. The negative effects of the income tax rate being raised are expected to have played themselves out after FY2016. Meanwhile, the annual rate of increase in insurance premiums is expected to peak out in FY2017. Overall, our view is that negative factors holding down the growth rate of disposable income in comparison to the growth rate of employee compensation will gradually fall away.

Of course, the original source of this problem, Japan's low birthrate and aging population, will continue to be an issue. Hence, as long as there is no change in the general trend toward growth in social insurance burden, this problem will continue to reignite in the future. However, we can at least declare these factors as positive ones as of this point, which are expected to bring improvements in the outlook for disposable income for the duration of the period covered by our outlook, or for around the next 2-3 years.

Finally, we take into consideration positive factor (3) reactionary decline following past economic stimulus measures. The past economic stimulus measures discussed here are mainly Eco-car related tax breaks and the Ecopoint program effecting household electronics, which were implemented since the year 2009 after the global financial crisis hit in 2008.

Chart 7 shows variations in real consumer expenditure on durable goods since 1994. Looking at this chart it becomes evident that consumer expenditure on durable goods during the period covered by the Eco-car related tax breaks and the Ecopoint program, and the period lasting until the Jan-Mar period of 2014 (unrelated to economic measures) in which last minute demand occurred due to the increase in the consumption tax, recorded performance vastly exceeding past trends. On the other hand, when we consider the fact that real employee compensation was stagnant until the inauguration of the second Abe administration, we can conclude that expenditure on durable goods in contrast to income between

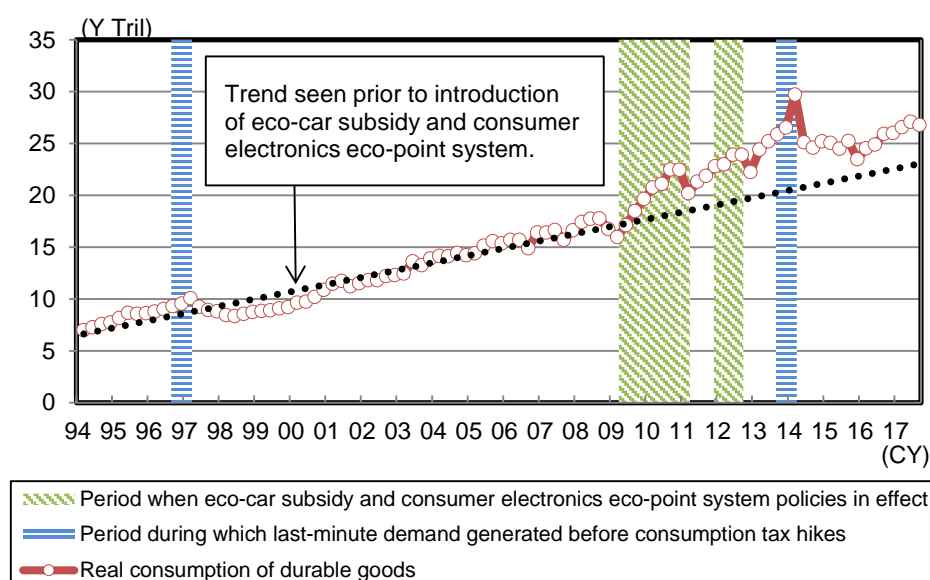
the year 2009 up to just before the increase in consumption tax, was too high. In other words, there was preconsumption over demand in the area of durables as a result of economic measures.

At the same time, however, Chart 7 indicates that during the most recent six quarters, real consumer expenditure on durable goods has entered a recovery trend. About eight years have passed since the Eco-car related tax breaks and the Ecopoint program were first introduced, and it has been over three years since the last increase in consumption tax. Now durable goods purchased when those economic measures were implemented are up for replacement, so it is possible that the market for durables may be on the way up again in the near future.

To summarize the above arguments, it is our opinion that personal consumption will continue to record moderate growth in the future as negative factors which have held down personal consumption until recently, including (1) elimination of the special case pension category, (2) increased tax and insurance burden for the working-age generation, and (3) reactionary decline following past economic stimulus measures, run their course.

Variations in Real Consumer Expenditure on Durable Goods

Chart 7



Source: Cabinet Office; compiled by DIR.

## Light and shadow of replacement cycle for durables in Japan

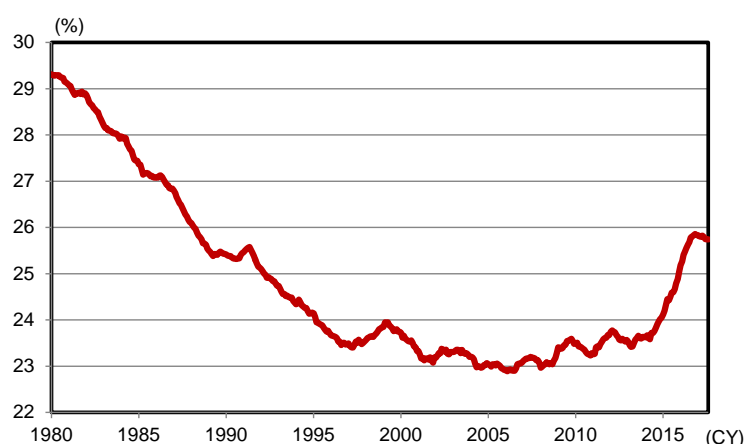
Of course, replacement demand can't last forever. In actual fact, as is shown in Chart 7, the most recent GDP results for the Jul-Sep period show that consumption of durables has already peaked out. Hence it is quite possible that Japan's economy, which has been supported until now by replacement demand for durables, may lose the effect this has had on the acceleration of growth. At the same time, another interesting point is the question of the side effects of replacement demand for durables. From the viewpoint of corporations, replacement demand is a factor leading to growth in earnings. However, from the viewpoint of households it is a factor which leads to an increase in expenditure. Therefore, it follows that households have an incentive to economize when it comes to expenditure on items other than durables. The Engel's coefficient expresses this relationship quite well (Chart 8).

After the 2000s Japan's Engel's coefficient bottomed out and then reversed course, heading into a growth phase. This is due mainly to the following structural factors: (1) as the population ages the portion of disposable income used to purchase food increases, (2) as the ratio of households with double incomes increases, the tendency is more toward foods that are simple to prepare and eating alone, hence food products are more high value added than in the past, and this increases expenditure

on foods, and (3) Japan has become relatively poor in comparison to other countries in general (especially the emerging nations), and relative purchasing power of Japanese individuals has declined.

Japan's Engel's coefficient peaked out at the end of 2016, and has since been somewhat in a decline. This kind of temporary halt in the Engel's coefficient has been seen before in situations such as those explained above, in other words the periods when the Eco-car tax breaks and the Ecopoint program were in effect, and the period in which last minute demand occurred due to the increase in the consumption tax. In other words, a rise in demand for durables has a recognizable tendency to suppress demand for foods and goods and services other than durables. Replacement demand for durables is currently driving the acceleration of Japan's economic growth, yet at the same time it may also be a factor in suppressing consumption of goods other than durables. To put it in another way, once replacement demand has run its course, the economic growth rate will likely slow overall, while at the same time, consumption of goods other than durables may then head toward recovery.

**Long-Term Fluctuations in Engel's coefficient** **Chart 8**



Source: Ministry of Internal Affairs and Communications; compiled by DIR.

Note: 1) Engel's coefficient = Food consumption ÷ Disposable income.

2) Two-more-person households (including agricultural, forestry and fisheries households).

3) 12 months moving average.

## 2.3 Countdown to Wage Inflation

Throughout FY2018 the consumption expansion effect due to the falling away of negative factors inhibiting consumption mentioned in the previous section is expected to disappear. In this section we consider the pace of improvement in employee compensation expected in the future. In conclusion, though there are localized incidents of wage inflation beginning to appear, there are still factors which offset this effect. We therefore are of the opinion that more time will be required before genuine improvement in the employment environment to the extent that a virtuous circle driven by domestic demand is triggered can begin.

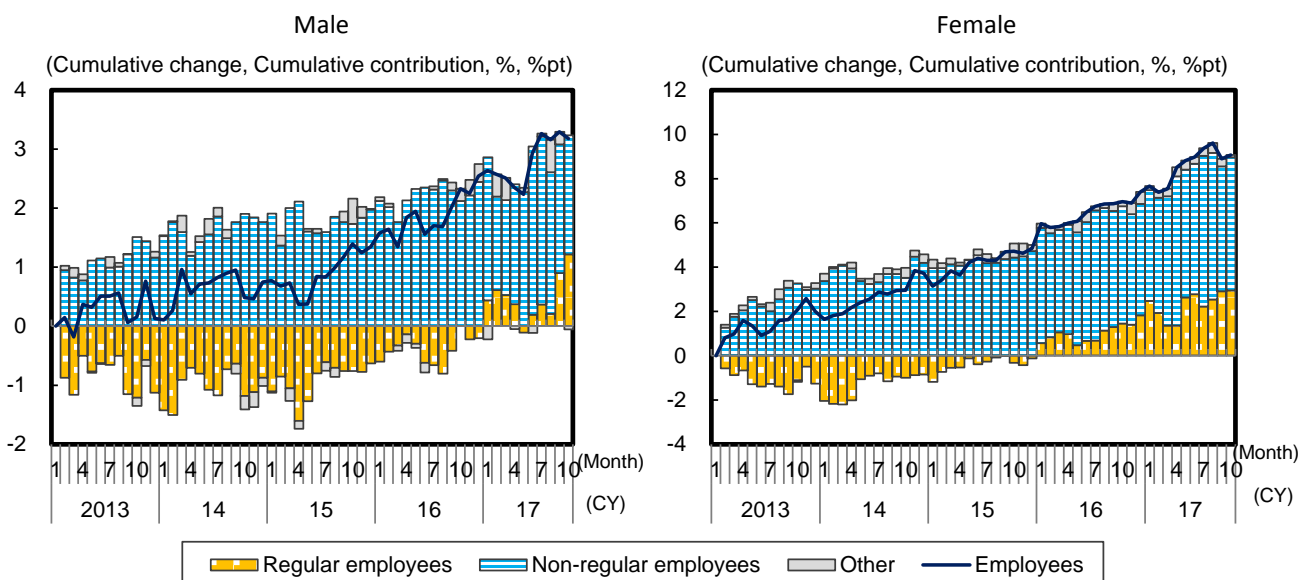
Japan's economic growth has continued to exceed its potential growth rate, while at the same time corporate earnings have expanded to reach the highest levels recorded in the past, but hourly wages of regular employees have remained stagnant. On the other hand, part-time workers have seen improvements in hourly wage and employment. Behind this lies the fact that corporations have been cautious regarding the expansion of regular employment due to the strict regulations governing dismissal under Japan's unique lifetime employment system. Moreover, the hourly wages of part-timers have also been lower than regular employees in the past. But the tide has begun to change. Chart 9 suggests that since around the year 2016, non-regular employment has stopped growing, and instead, growth in regular employment has accelerated. One of the reasons behind this change is that

the hourly wages of non-regular employees are no longer that much cheaper than regular employees. However, more importantly, this is one of the symptoms of Japan's having entered the era of chronic shortages in manpower. Over the past four years, Japan's working age population has declined by nearly four million, due to its low birthrate and aging population. Even so, the working age population has actually grown of late. The reason is that the employment rate has recorded major growth centering on women and the elderly. However, it would be difficult to expect major growth in the labor participation rate in the future. This is because the distinctive M curve associated with women's labor participation rate has disappeared after years of growth in women's employment, and has now reached about the same level as that seen in the US. We will have to accept that there is not as much room left for further growth in women's labor participation rate as there has been in the past.

As a result, the effective opening-to-application ratio for part-timers has reached an unprecedented level. Under these circumstances it has become difficult to find part-time workers, and hence corporations have begun, somewhat tentatively at first, to increase the number of regular employees. As a result, the effective opening-to-application ratio for regular employees hit a historic high of 1.03x in October 2017, exceeding 1x. These developments may indicate that the countdown to wage inflation is already underway.

### Factor Analysis of Employment

Chart 9



Source: Ministry of Internal Affairs and Communications; compiled by DIR.  
Note: Seasonal adjustment performed by DIR.

## 2.4 Improvements in productivity are essential before a virtuous circle driven by domestic demand can be triggered

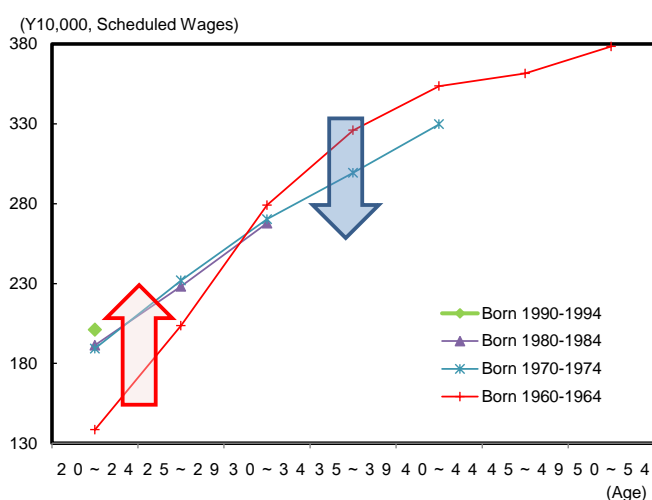
However, there is still quite a bit of distance to cover before said wage inflation reaches the point of triggering a virtuous circle brought about by domestic demand. As was mentioned earlier, as growth in overseas demand comes to a temporary halt, possibilities are great that momentum of improvement in corporate earnings, which is the source of employee compensation and capital investment, will also enter a temporary lull.

Meanwhile, simple wage inflation from the viewpoint of corporations is not only a factor bringing negative pressure on earnings, but could even lead to scaling down their business or to the hollowing out effect. Sustainable wage inflation depends on IT investment, research & development or in some cases carrying out mergers & acquisitions, as well as whether or not corresponding labor productivity can also be attained in tandem. Meanwhile, since labor productivity such as this can take time to

achieve, companies suffering from rising unit labor costs (nominal wages ÷ productivity) may very likely have to keep total labor costs under control by flattening the wage curve and placing restrictions on overtime, rationalizing the latter by dressing it up as “workstyle reform.” The practice of increasing the hourly wage at which new regular employee hires are taken on (both new graduates and non-regular employees who have gained the status of regular employees), and then holding down the total salaries of existing regular employees may likely continue for some time.

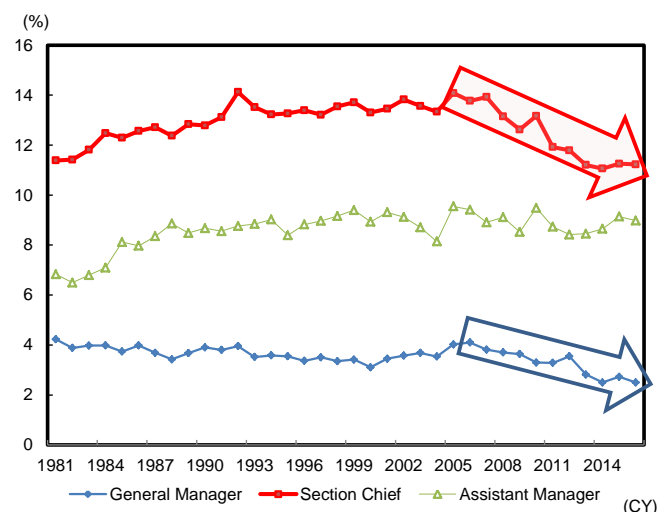
There is nothing new about this type of corporate behavior. Chart 10 illustrates the wage curve and how it is generally applied by birth year. Here we can see how starting salaries are raised, while mid-level and senior salaries are depressed. The chart reveals how flattening the wage curve continues to be practiced by corporations. Meanwhile, Chart 11 shows the technique of flattening the wage curve from a different angle. In another development which will become more prominent by the latter part of the 2000s, the proportion of workers in their 40s who have moved into managerial positions is decreasing. The same tendency can be seen regarding workers in their 50s. In other words, corporations appear to be delaying the promotion of workers in their 40s and 50s, while also decreasing the number of workers who are promoted to management positions. Members of Japan’s second-generation baby boom, including those who are now in their 40s, as well as those in their 50s who began their career during Japan’s economic bubble era, account for a large proportion of overall personnel expenses. By delaying the promotion of employees who form the “volume zone” in terms of age-group, corporations hope to cut back on personnel expenses. The possibility of a similar phenomenon occurring in the future is also a factor which cannot be ignored.

**Wage Curve by Birth Year and Age Group**  
Chart 10



Source: Ministry of Health, Labour and Welfare; compiled by DIR.

**Proportion of Workers in Their 40s in Managerial Positions**  
Chart 11



Source: Ministry of Health, Labour and Welfare; compiled by DIR.

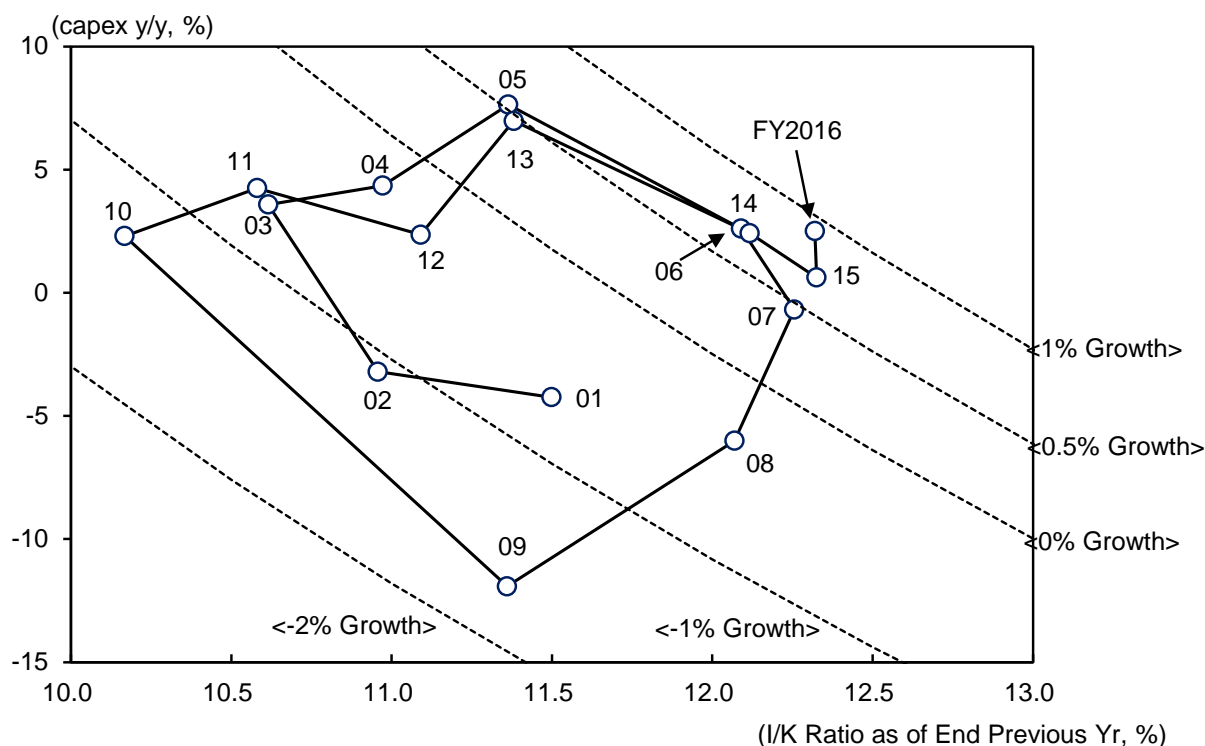
## 2.5 Capex expected to maintain underlying strength focusing on rationalization & labor saving

Despite the advice of caution in the previous section, the incentive to carry out investments oriented toward rationalization & labor saving in the face of the worsening labor shortage is actually stronger than it has been in the past, and few have any doubts about whether or not this is a wise move. But if serious wage increases including those affecting regular employees occur in the future, unit labor cost will increase as well, bringing pressure on corporate earnings, unless labor productivity or profitability can be raised to the degree that they can offset wage increases. For this reason, investments in research & development, and upgrading & renovation with an aim to improve earnings in addition to investment in rationalization and labor-saving directly linked to improving productivity will likely continue to achieve moderate growth in the future.

On the other hand, the fact is that capex spending does not grow as much as one might expect when compared to favorable corporate earnings. As is shown in Chart 12, Japan's capital stock cycle is now in the maturation phase. In order to extend the stock accumulation phase, it is essential that the anticipated growth rate be increased. In addition, factory operating rates are at a lower level than they have usually been during past periods of growth in capital expenditure and this is a worrisome point. In order to predict whether or not capital expenditure will move into full swing, we have to confirm that the following conditions have been met: along with growth in production volume, factory operating rates must exceed a certain threshold and continue performing at that level.

Capital Stock Cycle

Chart 12

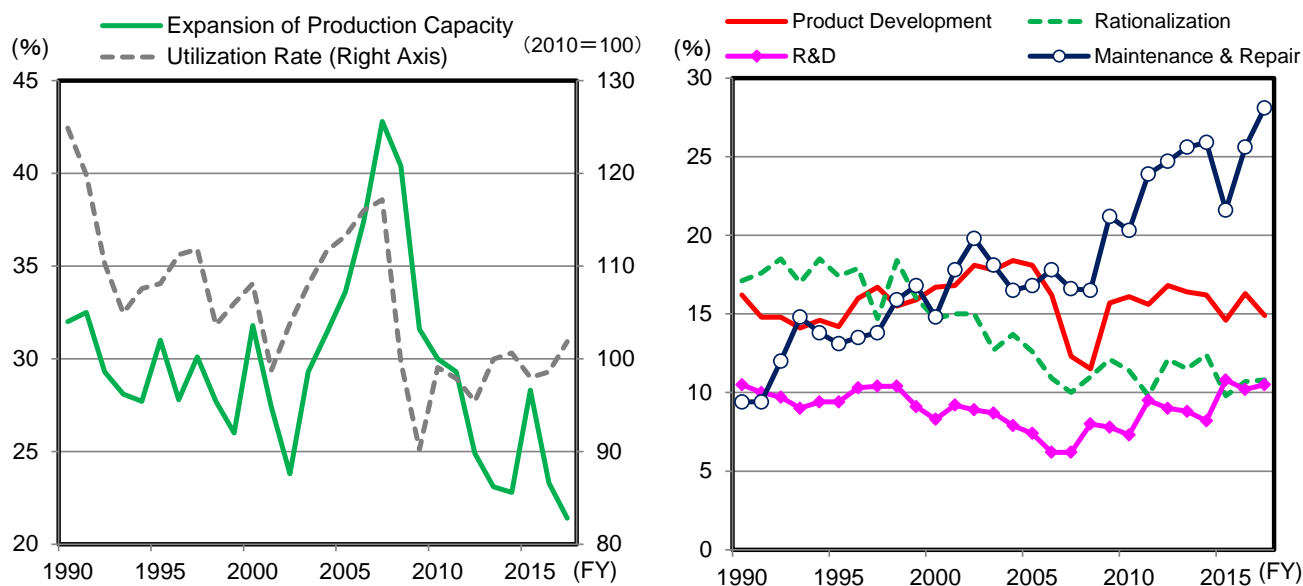


Source: Cabinet Office, Bank of Japan.

Note: Dotted lines represent the hyperbolic curve in relation to current anticipated growth rate.

As is shown in Chart 13, when we consider investment motives behind the capital investment plans of Japanese corporations, we see that capacity increase is not touched upon. However, plans involving maintenance and repair of existing and aging facilities are extremely common. It appears that there is a growing number of corporations which protect their bottom line by extending the life of existing facilities. Meanwhile, the proportion of capex spending accounted for by investment in rationalization and energy saving is not necessarily growing either. Behind this lies a shortage of engineers, creating a bottleneck on the supply side. Even though demand is strong, the tendency is growing for orders to simply keep piling up (Chart 14).

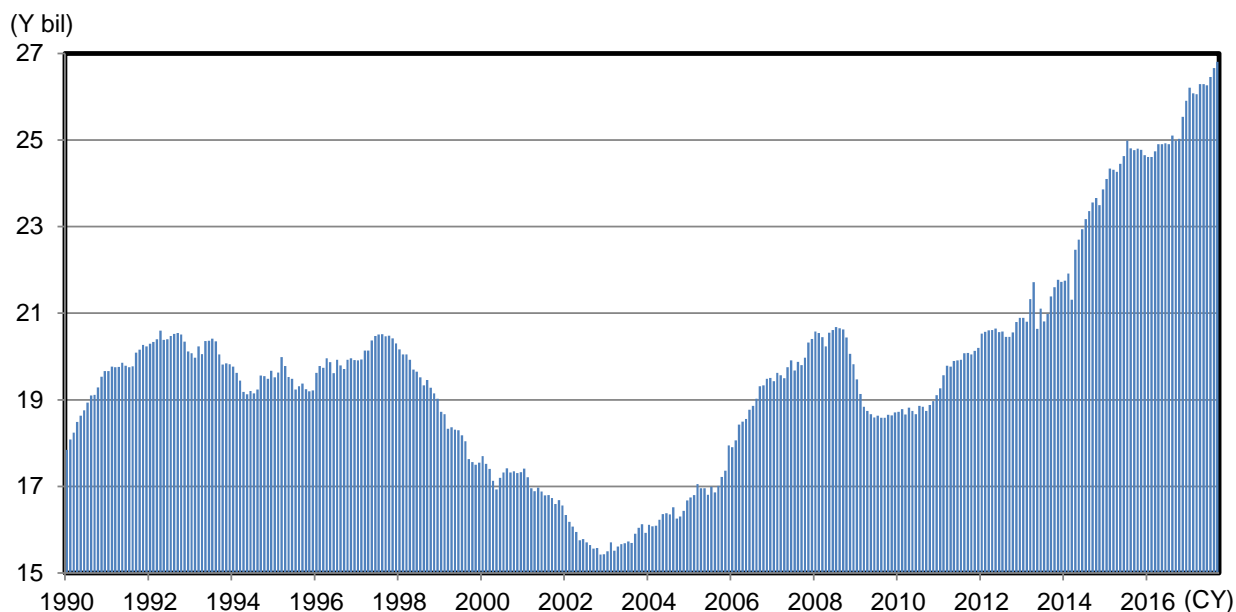
Capex Plans by Investment Motive Chart 13



Source: Development Bank of Japan, METI; compiled by DIR.  
 Note: Utilization rate is the average during the period.  
 Data for FY2017 is the average during the Apr-Jun period only.

Source: Development Bank of Japan; compiled by DIR.

Long-Term Changes in Balance of Machinery Orders Chart 14



Source: Cabinet Office; compiled by DIR.  
 Note: Seasonally adjusted values excluding ships.

A final lingering problem is that of the possibility that we may unwittingly commit a fallacy of composition in moving from the micro to the macro. The idea that aggressive capital expenditure is required as a means of offsetting downward pressure on corporate earnings caused by wage increases originating in the shortage of manpower is one associated primarily with the labor intensive industries, mainly small and medium-sized enterprises in the non-manufacturing sector. However, the corporations which actually have more margin to become aggressive in capital expenditure are the large manufacturers.

The following provides a more detailed summary of the above issue. Small and medium-sized enterprises in the non-manufacturing sector which exhibit an especially strong sense of employment shortage are also high in labor's relative share. This means growing personnel expenses, which are thought to be a major factor holding down earnings. Hence it may also be possible to deduce that

capital expenditure is being held down by growth in personnel expenses since this leads to a decline in corporate earnings. On the other hand, large manufacturers do not feel the shortage in employment to the same degree as small business and non-manufacturing industries. With labor's relative share at a low level, there should be limited downward pressure on capital expenditure originating in worsening of earnings.

Caution is advised regarding the risk involved in not carrying out improvements in labor productivity to match the increase in wages or in not carrying out capital expenditure as a result of having focused more on the macroeconomic view of spending versus income. This mistake results from the fallacy of composition, in which one naively assumes that what is true for a part is also true for the whole (micro vs. macro). Ultimately, capital expenditure is necessary in order for corporations to attain profitability. The result of not carrying out enough capital expenditure would be that if unit labor cost increases, corporations will be forced to make a choice between scaling down their business or suffering the hollowing out effect, or possibly even having to accept both. In this sense, a decline in labor input could result if work style reforms are implemented without sufficient improvements in productivity accompanying them. We advise caution here as this could cause a decline in the potential growth rate of Japan's economy.

### Corporate Stance Toward Distribution of Profits

Chart 15

(Component percentages of total number of respondents, %)

	Large Corporations			Middle-size Corporations			Small Corporations		
	All	Manufacturing	Non-Manufacturing	All	Manufacturing	Non-Manufacturing	All	Manufacturing	Non-Manufacturing
Capex	62.3	72.1	57.3	51.0	66.5	46.2	41.4	50.9	39.5
Research & development	26.6	47.0	16.2	20.5	31.3	17.1	15.7	30.4	12.8
Capitalization of associate companies, M&A	10.8	8.4	12.0	5.7	4.2	6.2	3.2	2.9	3.3
Reduce interest-bearing liabilities	19.2	21.4	18.0	22.7	26.2	21.6	26.6	27.8	26.4
Increase number of new employees	7.0	4.1	8.5	18.2	13.3	19.6	21.3	19.7	21.6
Profit-sharing with employees	27.7	24.9	29.1	41.9	40.1	42.4	54.6	56.9	54.1
Compensation, bonuses to directors	3.7	2.6	4.3	8.7	6.4	9.5	22.4	15.8	23.7
Dividend payout to shareholders	56.5	58.2	55.6	34.2	34.2	34.2	8.6	7.1	9.0
Retained earnings	55.2	42.0	62.0	58.8	48.2	62.1	58.3	48.3	60.3
Others	1.8	0.3	2.5	1.5	1.2	1.6	2.5	1.3	2.7

Source: Cabinet Office; compiled by DIR.

Notes: 1) Component percentages of total number of respondents. Respondents were asked to provide answers to at least three out of a total of ten questions.

2) Questionnaire took place in Jan-Mar 2017 period, based on FY2016 business performance.

### 3. Shift in Leading Role in Growth in 2018 from Volume to Quality from the Viewpoint of Corporate Earnings

What stands out when we consider the above-mentioned macro-environment from the viewpoint of corporate earnings, is that the leading factor in growth is gradually shifting from volume to quality. As a result of economic growth experienced over the past five years, the supply-demand gap has moved into positive territory (Chart 16), and the number of industries now reaching their limit in terms of supply constraints is growing. The most notable example is the machinery industry, which can be confirmed by looking back at Chart 14. And there are many others, including the transportation industry and the construction industry whose main challenge is the labor shortage, as well as a broad range of service industries facing a bottleneck in the supply of labor.

It has become difficult for industries like these to maintain growth dependent on sales volume alone. Instead, increasing prices has become an important tool for influencing growth potential on a nominal basis, as it reduces the ratio of costs to sales. Whether or not pricing power can be successfully carried out is an especially important question for the above mentioned representative industries. Looking at



the potential growth of Japan's economy on a nominal basis, it is industries in the above categories that we depend on the most.

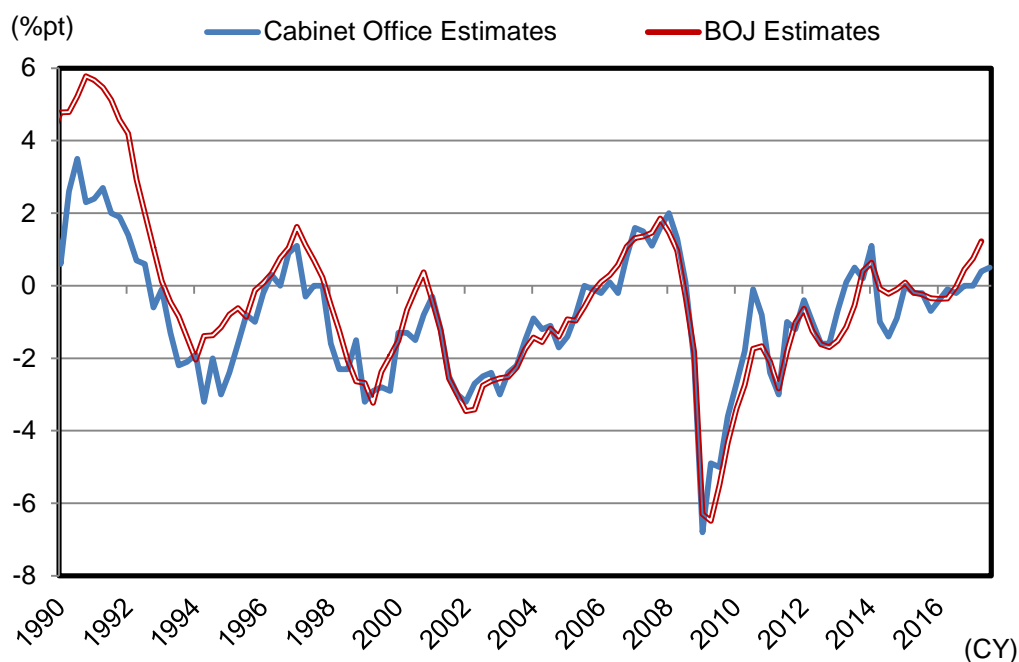
Meanwhile, in the broad sense of the term it is the shift from volume to quality that is called into question when we consider the growth potential of that aspect of the consumer market oriented towards women who are the most affected by changes in the employment environment (the improvements in the income environment are focused on women while the income of workers middle aged or older is stagnating). While the growth phase in the number of women workers will soon reach its limit (volume), there is still a chance for the potential of quality in terms of per capita consumption.

With these changes in the situation, our economic outlook sees the slowdown in the nominal growth rate (+1.9% in FY17 to +1.5% in FY18) as fairly minor in comparison to that of the real growth rate (+1.8% in FY17 to +1.1% in FY18). This is the result of the deflator having improved (+0.1% in FY17 to +0.5% in FY18). In real terms it means that the gross profits of corporations will improve.

Of course the question of whether or not this improvement in the deflator can be realized depends on the efforts of each individual company, as well as the price of crude oil and exchange rates. However, considering expectations for the economy during the next fiscal year, it will be necessary to pay attention to nominal GDP which is at least as important as real GDP if not more.

#### Long-term Changes in Supply-Demand Gap

Chart 16



Source: Cabinet Office; compiled by DIR.

## Economic Indicators and Interest Rates

Chart 17

Indicator	2017		2018				FY16	FY17	FY18	FY19
	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec				
	Actual	DIR estimates					Actual	DIR estimates		
<b>Real GDP</b>										
Q/q %, annualized	2.5	0.9	0.9	0.9	0.9	1.1				
Y/y %	2.1	1.9	1.7	1.3	0.9	1.0	1.2	1.8	1.1	0.6
<b>Current account balance</b>										
SAAR (Y tril)	24.5	25.4	25.9	26.1	26.1	26.3	20.4	24.0	26.5	27.9
<b>Unemployment rate (%)</b>										
	2.8	2.8	2.8	2.7	2.7	2.7	3.0	2.8	2.7	2.6
<b>CPI (excl. fresh foods; 2015 prices; y/y %)</b>										
	0.6	0.9	0.9	0.9	0.9	0.7	-0.2	0.7	0.8	1.1
<b>10-year JGB yield</b>										
(period average; %)	0.05	0.05	0.05	0.05	0.05	0.05	-0.05	0.05	0.05	0.05

Source: Compiled by DIR.

Note: Estimates taken from DIR's *Japan's Economic Outlook No. 195 Update (Summary)*