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Japan's Economy: Monthly Outlook (Sep 2017)

Japan's economy expected to grow by +1.7% in FY2017 and +1.3% in FY2018. How far has global economic expansion come?

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Summary

- In light of the 2nd preliminary Apr-Jun 2017 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.7% in comparison with the previous year for FY17 (+1.9% in the previous forecast), +1.3% in comparison with the previous year for FY18 (+1.2% in the previous forecast). Overseas demand centering on exports to the US is expected to mark time temporarily, but Japan's economy is expected to continue growth led by domestic demand in the future due to the following factors: (1) growth in consumption due to improved employment environment, and (2) investment in improving productivity.
- The global economy and Japanese exports have maintained favorable results up to now due to support from factors associated with the short-term economic cycle, including (1) inventories, centering on the US, have recently recovered and have moved into the inventory accumulation phase, (2) expansionary fiscal policy has come into effect centering on the EU (the pace of austerity policy has slowed), and (3) acceleration of the Chinese economy ahead of the meeting of the National Congress of the Communist Party this fall. However, the possibility that these factors may begin to lose their influence in 2018 and beyond is unavoidable.
- In this report we examine global economic cycles using a diagram of the capital stock cycle. This is done from the viewpoint of the capital investment cycle, which indicates the mid to long-term economic cycle. The results of this analysis tell us that the overall global economic cycle may quite possibly be approaching maturation. This is based on the fact that the US economy is in a maturation phase, while the Chinese economy is in an adjustment phase, and the EU economy still has room for growth.

1. Main Economic Scenario: Lead Role in Growth Shifts from Overseas Demand to Domestic Demand

In light of the 2nd preliminary Apr-Jun 2017 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.7% in comparison with the previous year for FY17 (+1.9% in the previous forecast), +1.3% in comparison with the previous year for FY18 (+1.2% in the previous forecast). Overseas demand centering on exports to the US is expected to mark time temporarily, but Japan's economy is expected to continue growth led by domestic demand in the future due to the following factors: (1) growth in consumption due to improved employment environment, and (2) investment in improving productivity. In addition, Japan's economy in FY2017 is expected to see three factors which were the cause of stagnation in personal consumption in the past dissipate. 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. However, by FY2018 the effect this will have in helping to increase consumption is expected to fall away, and the environment for capex is expected to mature. Hence the pace of growth will likely slow down gradually at that time.

Real GDP growth rate revised downwards from 1st preliminary, but growth of +2.5% in annualized terms maintained

The real GDP growth rate for Apr-Jun 2017 (2nd preliminary est) was revised downwards to +2.5% q/q annualized (+0.6% q/q) in comparison to the 1st preliminary report (+4.0% q/q annualized and +1.0% q/q), while at the same time falling below market consensus (+2.9% q/q annualized and +0.7% q/q). The downward revision was due mainly to a major downward revision in private sector corporate capex. Despite this fact, results remain unchanged from the 1st preliminary in that all major domestic demand components contributed positively to GDP growth, including private sector corporate capex, personal consumption, housing investment, government consumption, and public investment. Hence an overly pessimistic reaction is unnecessary. Overall, these results confirm our main scenario, which sees Japan's economy moving toward a moderate recovery and expansion. We again point out that Japan's economy has shifted from growth driven by overseas demand to growth driven by domestic demand.

Japanese economy shifts from growth driven by overseas demand to growth driven by domestic 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 in fall, 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. Domestic demand components are expected to lead growth in the future. Until now the driving force behind Japan's economic growth was overseas demand, but there is a very good chance that this role is now shifting to domestic demand.

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.

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, housing starts, which had rapidly expanded with the expectation that there would be a rush to purchase homes before the additional increase in consumption tax originally planned for April 2017, are expected to decrease in the future, especially for condominiums in urban areas, and housing investment is also expected to begin declining after that point. Caution is required regarding a possible reactionary decline following the initially positive effect of inheritance tax strategies on growth in the construction of rental housing.

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.

As for exports, with overseas economies continuing moderate growth, we can expect exports to maintain a firm undertone. Exports to the US appear to be about to peak out, while exports to the EU and Asia are maintaining a firm undertone. As for exports to Asia, there is danger that the current weakening will continue, centering on components used to manufacture products whose final destination is the US. On the other hand, exports of electronic parts and other products oriented toward domestic demand in China are expected to maintain favorability, and this is expected to compensate for the slowdown in other parts of Asia.

Risk lies mainly with overseas economy

However, caution is required regarding overseas demand due to possible downside 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, there is risk that the Chinese economy could come under downward pressure after the National Congress of the Communist Party this fall 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. 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.

2. How far has global economic expansion come?

As was touched upon in the previous section, overseas demand is expected to experience underlying risk. In this chapter we take a look at the outlook for overseas demand from the viewpoint of economic cycles and describe the current phase it is now in. We consider the details of the main economic scenario here, rather than focusing only on risk. In conclusion, we expect 2017 to maintain its current expansion trend supported by factors associated with the short-term economic cycle. However, there is a very good possibility that growth will slow down in 2018 and beyond as the influence of factors associated with the short-term economic cycle disappears and mid to long-term factors take hold.

Situations in US, EU, and China, which are providing the force behind global economic growth in 2017

First we take another look at the factors associated with the short-term economic cycle. Until recently there were three major short-term factors speeding up growth in both the global economy and overseas demand. These were (1) inventory recovery centering on the US and beginning of inventory accumulation phase (the Kitchin cycle), (2) expansionary fiscal policy centering on the EU (pace of austerity policy slows), and (3) acceleration of the Chinese economy ahead of the National Congress of the Communist Party.

As for factor (1), looking back at recent history we see that the devaluation of the renminbi triggered worsening business sentiment from the second half of 2015 through the year 2016, prompting the corporate sector to cut back on inventory. But China's economy soon regained calm, while at the same time hopes grew regarding changes in US fiscal policy after the presidential election in November of last year. These developments brought an improvement in business sentiment, along with further recovery in inventory level.

In the case of factor (2), the Greek fiscal crisis was reignited in 2015, and it became difficult to absorb sovereign bonds, especially in the southern European countries. As yield rose, the number of countries feeling forced to implement austerity measures grew. The ECB provided support through its monetary easing policy, but properly dealing with the problem was put off in the end. By 2017 the number of countries able to carry out an expansionary fiscal policy or to slow the pace of austerity measures had grown.

As for factor (3), once every five years the Chinese economy tends to accelerate, and this year appears to be no exception. Early in 2017 the Chinese economy sped up supported by domestic demand centering on consumption. On the surface it may not appear as if this was artificially induced by government policy measures, but a look at statistics on the balance of international payments gives us a completely different view. By early in 2017 capital outflows from China were almost completely under control. This development is also connected with the favorable exchange rate for the Chinese Yuan (the renminbi), while at the same time stimulating the domestic distribution of capital in the form of investments and consumption. Some typical manifestations of this effect include the skyrocketing of virtual currency during the first half of 2017, along with a rebound in real estate prices, which were supposed to have been kept under control through government policy measures last year. It should also be noted that these developments likely stimulated domestic demand through the asset effect.

It appears that these three factors have provided support for the recent favorable performance of the global economy and overseas demand. However, there is much room for skepticism when it comes to the question of whether these factors will continue to operate on into the year 2018 and beyond.

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, it is almost certain that the ECB will announce its plan to reduce quantitative easing within the year. It is therefore questionable whether expansionary fiscal policy in the EU can maintain its momentum. And once the National Congress of the Communist Party of China has taken place in October of this year, there will be less incentive to shore up the economy further with the use of policy measures. Moreover, the side effects of policies meant to control capital outflows are likely to begin to appear at some point. These are (1) soaring asset prices, (2) decline in international competitiveness due to yuan appreciation, and (3) policy prevents businesses from taking advantage of opportunities to invest overseas. These policies may have created a huge disincentive which has an effect not only on the economy, but on politics as well. In any case, there is a very good chance that short-term factors which have accelerated the global economy up to now will eventually begin to lose their influence.

Using the mid to long-term cycle to predict the direction of the global economy

Will the global economy head toward an inevitable slowdown once the above-mentioned short-term factors fall by the wayside? Or on the other hand, are there any other factors which could offset the loss of these short-term factors? Is there anything that could help speed up the economy in their place? Next we examine the capital investment cycle, which indicates the mid to long-term economic cycle (the Juglar Cycle). Using this approach makes it easier to visually recognize the patterns of the economic cycles. We perform our analysis with the use of a diagram of the capital stock cycle.

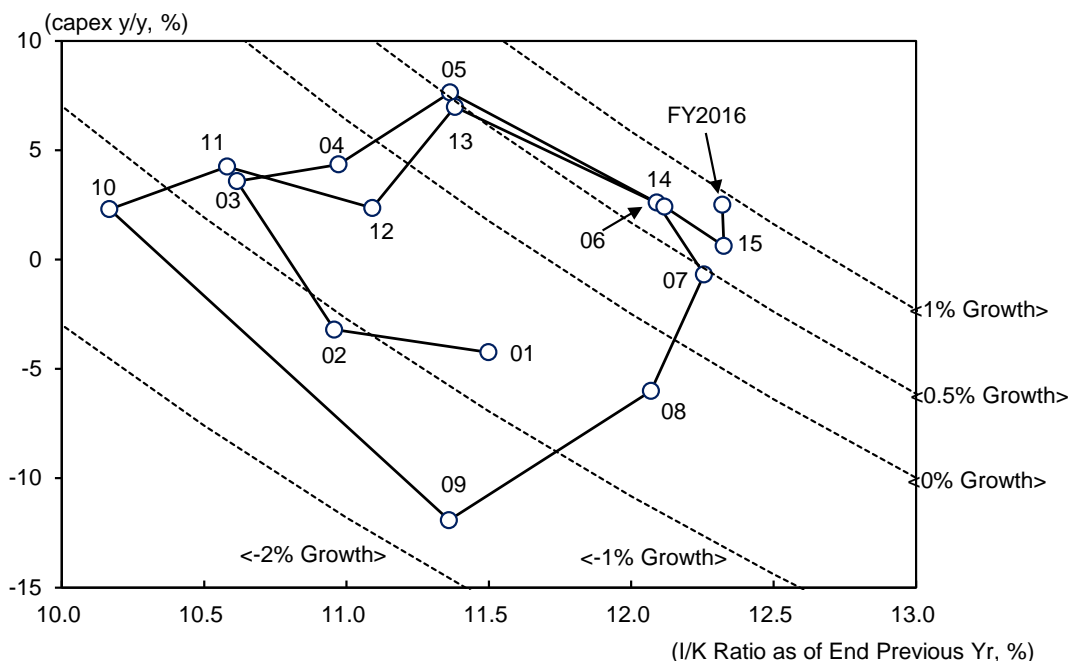
The capital stock cycle diagram allows us to observe the extent (in terms of a percentage) to which the growth rate in capital investment and the I/K ratio (the extent of flow in relation to stock) are commensurate with the anticipated growth rate. The diagram normally provides results for one country, placing the potential growth rate on the center axis. The cycle moves in the clockwise direction. Experience tells us that it is one of the factors making up an economic cycle of 5-10 years.

Japan's capital stock cycle is shown in Chart 1. This diagram shows the deterioration of business incentive after the global financial crisis of 2008 when the environment for capital procurement was at an especially low point. Capital investment in Japan fell into a major decline, and it goes without saying that the size of investments also shrank (shift to bottom left). However, actions taken by the US financial authorities helped calm the storm somewhat, and the economic outlook gradually brightened. Then since the year 2010, we see that capital investment recovered and capital stock began to accumulate steadily (shift to upper right).

Supported in part by the mid to long-term cycle discussed here, the Japanese economy is now in the midst of its longest running period of expansion during the postwar period. Looking at the results for FY2016, we see that capital investment has already reached 1% growth, which is the around the same level as economic growth. According to the Cabinet Office, the Japanese economy's potential growth rate is just under 1%. The OECD places it at just over 0.7%. This suggests that Japan's economic cycle is approaching the maturation phase.

Diagram of Japan's Capital Stock Cycle

Chart 1



Source: Cabinet Office, Bank of Japan.

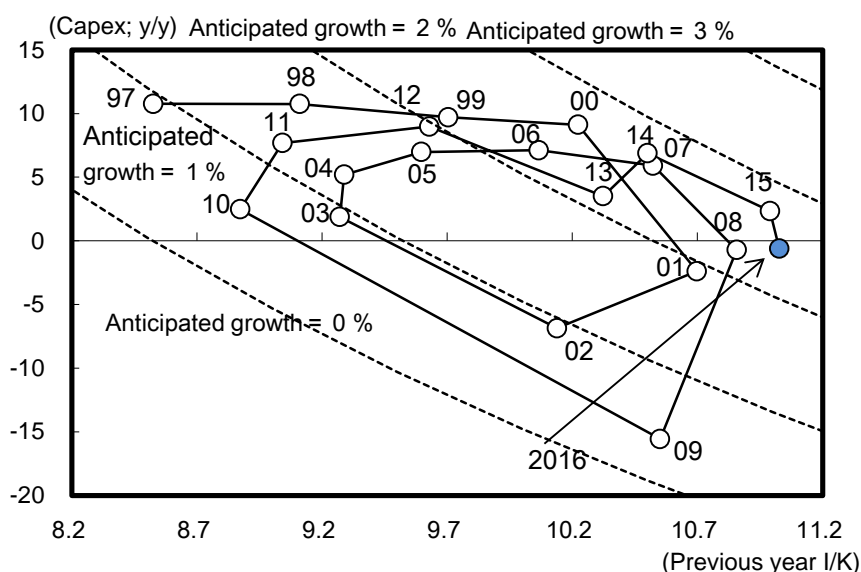
Note: The dotted lines represent the hyperbolic curve in relation to current anticipated growth rate.

US economy entering a maturation phase

Next, using the same method, we take a look at the phases in the economic cycle that other major economies now find themselves in. Chart 2 shows the US capital stock cycle. Much like Japan's situation, we see a major decline occurred after the global financial crisis of 2008, then around 2010 the economy began to recover and capital stock entered an accumulation phase. The road to recovery in the US was even smoother than Japan despite the fact that it was at the epicenter of the crisis. This was due to actions taken by the financial authorities and the lack of a major economic downturn like the one Japan experienced after the major earthquake of 2011.

Diagram of US Capital Stock Cycle

Chart 2



Source: BEA, Haver Analytics; compiled by DIR.

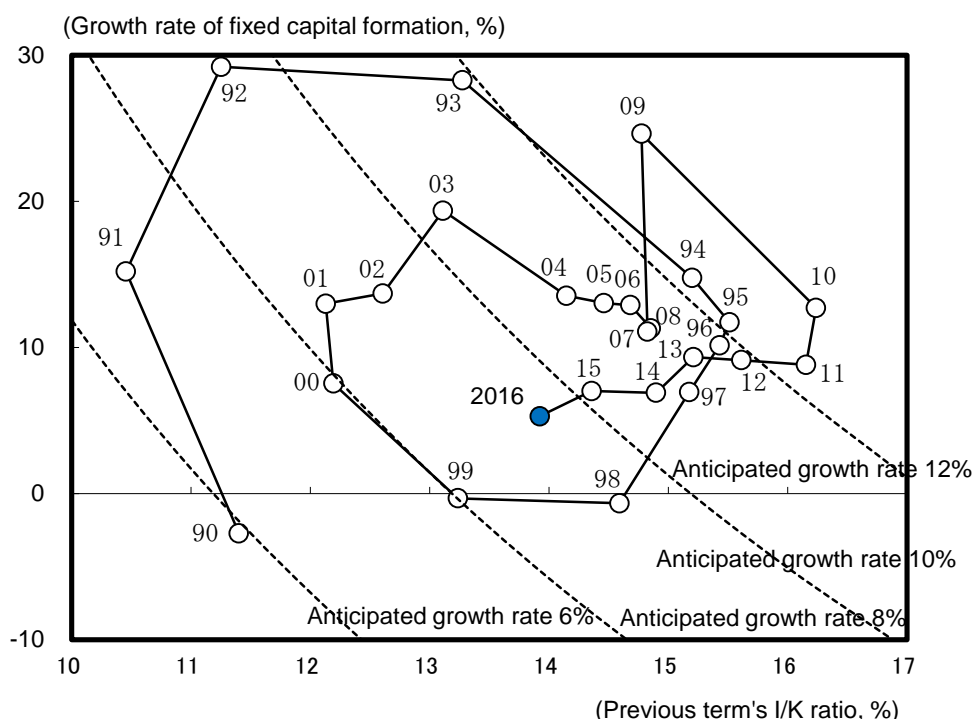
This also means that the extent of maturation in the US economy is even more advanced than the one shown in Japan's economic cycle. According to the CBO, the US potential growth rate is at just under 2%, while the OECD sees it at around 1.5%. In either case, the size of capital investment in the US can be said to have already been sufficient around the year 2012. As long as the US potential growth rate does not attain major growth due to reform of the tax system, there is not much more room left for growth in demand for capital investment in the US. This means that possibilities are great that the growth rate in Japan's exports to the US will soon be headed toward peaking out.

China's economy will be in an adjustment phase for some time to come

Chart 3 indicates that the Chinese economy is already in an adjustment phase. The first thing that catches the eye in this diagram is that China's economy did not enter an adjustment phase during the global financial crisis of 2008. In fact, growth in investments in China literally exploded in 2009 and continued to balloon on into 2010. This can of course be attributed to the government's 4 trillion yuan stimulus package.

However, this resulted in capital investment continuing at a higher level than the potential growth rate, and we can see by the diagram that this same relationship also led to the long adjustment period which would begin at a later date. According to the OECD, China's potential growth rate is just over 6.4%. In moving toward an amount in capital investment more commensurate with potential growth rate, possibilities are great that growth in capital investment in China will slow, while the growth rate of China's economy will also likely slow, and remain so for the long-term.

Diagram of China's Capital Stock Cycle **Chart 3**



Source: China Statistical Yearbook, CEIC, Haver Analytics, World Bank; compiled by DIR.

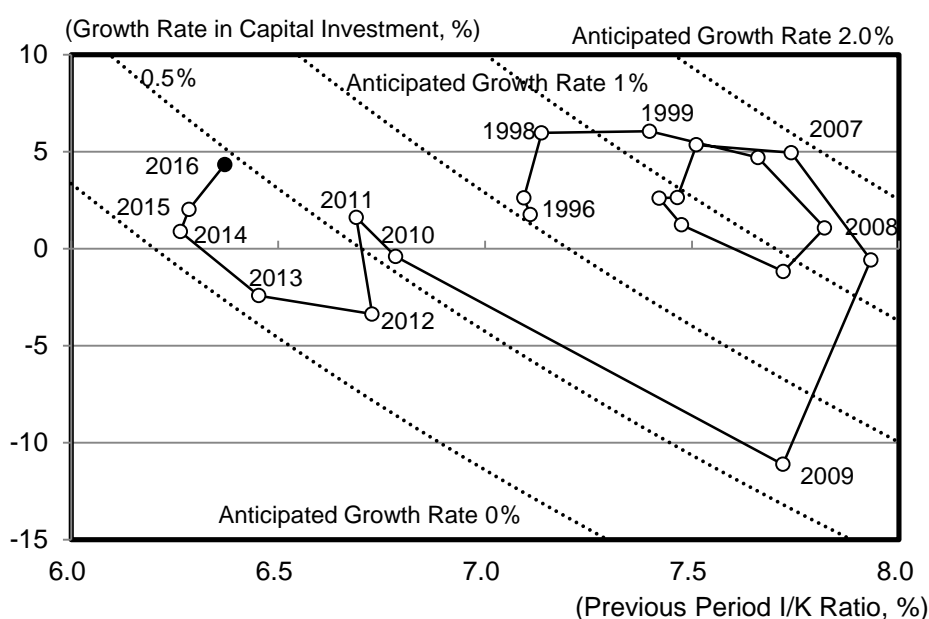
EU economy still has room for growth

Chart 4 suggests that the extent of maturity in the EU economy is still superficial as of this time. This is because the EU economy lagged seriously behind other major countries and regions in entering the recovery phase. In addition to the after-effects of the global financial crisis of 2008, this was due to the appearance of the debt problem in the southern European countries in 2011 and which lasted well beyond that point. However, this may have contributed to the current state of affairs, in which potential pent-up demand remains.

We can therefore deduce that the EU economy may still have some room for growth in comparison to other major countries and regions such as the US and China. This is of course contingent on the avoidance of risk factors unique to the EU, such as a recurrence of the debt problem.

Diagram of the Eurozone's Capital Stock Cycle

Chart 4



Source: Haver Analytics; compiled by DIR.

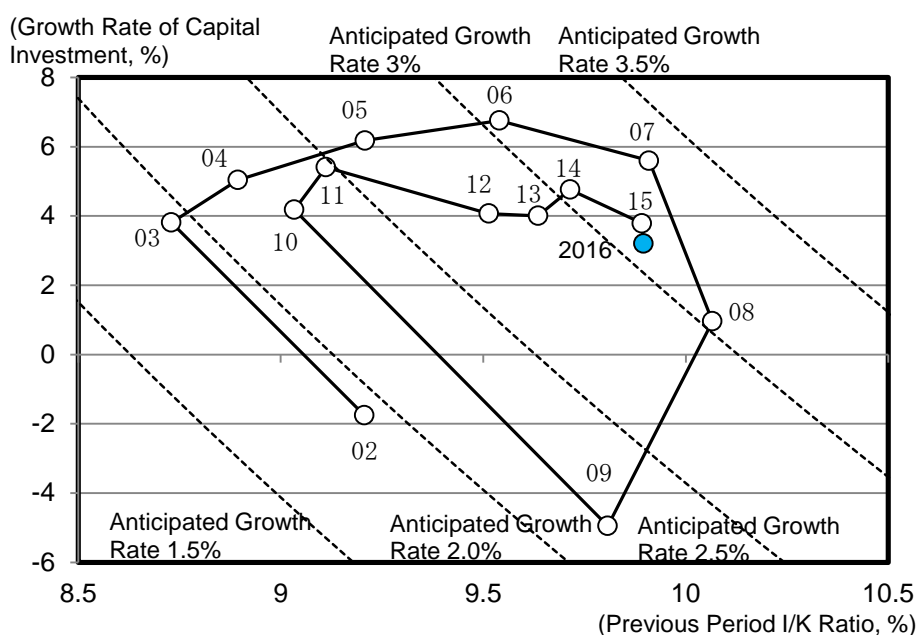
Global economy may be maturing overall

So far, by looking at the phases in the economic cycle by country and region, we have determined that the US economy is in a maturation phase, while the Chinese economy is in an adjustment phase, and the EU economy still has room for growth. Then what about the global economy overall? What phase has the global economy reached in the economic cycle? Chart 5 shows the capital stock cycle for the global economy overall (we use the combined figures for Japan, the US, the Eurozone, and China, since this is the equivalent of about 62% of the entire global economy). Considering the fact that the weighted average of potential growth rate is somewhere around 2.5%, it is possible that the global economy entered the maturation phase as of 2016.

Of course, this method is merely one possible approach to this question, and we also must consider the margin of error in the estimate. Hence, these findings should be approached with a certain grain of salt. But even more importantly, the potential growth rate of the overall global economy tends to fluctuate. For instance there is always the possibility that reform of the tax system could be carried out in one of the advanced countries, thereby causing the potential growth rate to increase. Conversely, if protectionist trade policies were to take hold, this could cause the potential growth rate of the global economy to decline. In addition, one of the emerging economies not currently included in this analysis could suddenly take off like China did a number of years ago, thereby dramatically improving the potential growth rate of the global economy. The occurrence of destructive events such as war must also be taken into consideration. A development of this sort could potentially cause a dramatic decrease in the potential growth rate and therefore cannot be completely ignored.

But despite these limitations, based on the assumptions used in this report, we believe that the major conclusions of our main economic scenario stated earlier are appropriate. In other words, we expect 2017 to maintain its current expansion trend supported by factors associated with the short-term economic cycle. However, there is a very good possibility that growth will slow down in 2018 and beyond as the influence of factors associated with the short-term economic cycle disappears and mid to long-term factors take hold.

Diagram of the Global Economy's Capital Stock Cycle (Japan, US, Eurozone, and China Combined)
Chart 5



Source: Statistics from each country; compiled by DIR.

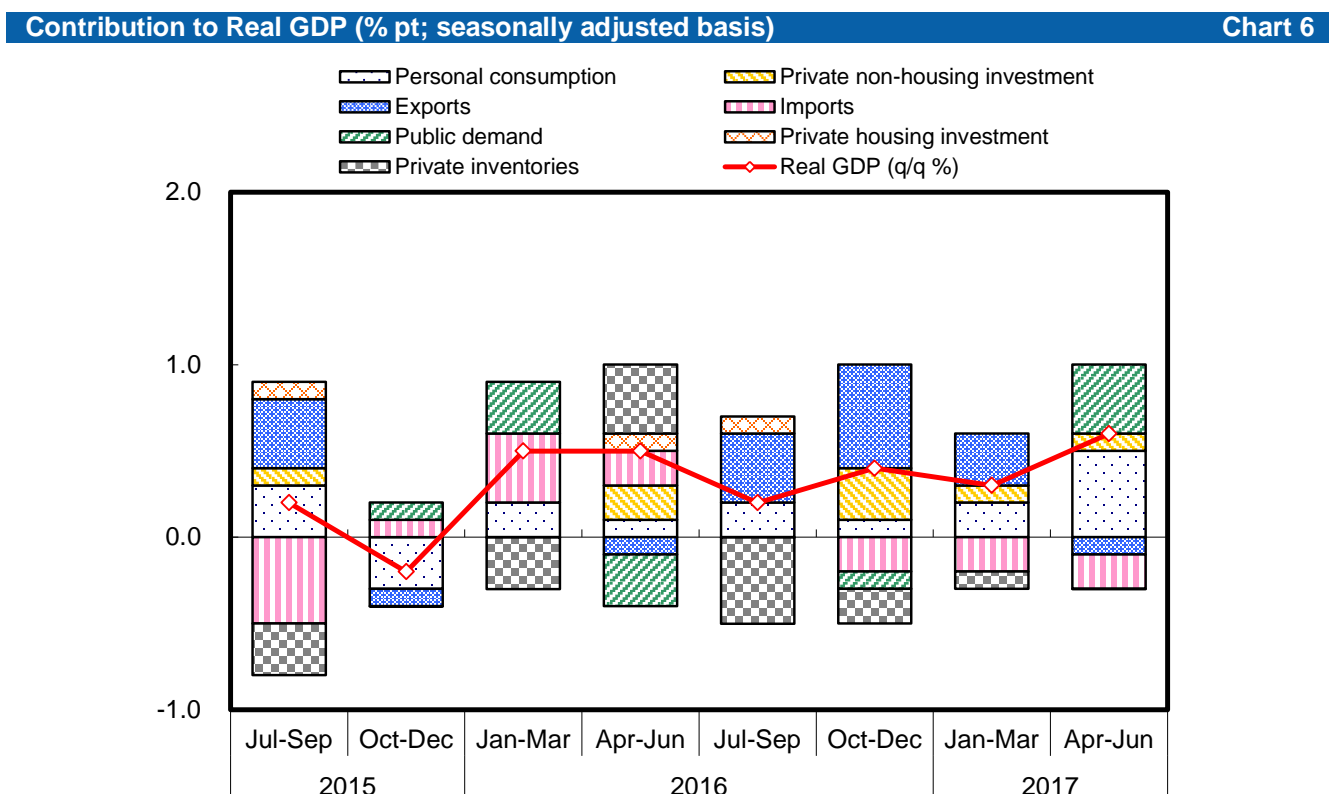
3. Outlook for the Japanese Economy: Growth of +1.7% in FY2017 and +1.3% in FY2018

Exports to US slack off while exports to China continue to expand, causing some anxiety

Japan's economy is shifting increasingly from growth led by overseas demand toward growth led by domestic demand.

As is indicated in Chart 6, in FY2016 the larger portion of Japan's growth came from growth in exports. Looking at trends in exports by destination, we see that although exports to the US appeared to be close to peaking out, they still maintained favorable performance. Meanwhile, exports to the EU and Asia also notably show recovery and expansion. Exports bottomed out for the following reasons: (1) US demand for consumer goods was favorable due to improvements in the employment environment, (2) pent up demand rose to the surface in the EU last year after a period in which domestic demand was inhibited due to lagging recovery, and (3) emerging market economies bottomed out, centering on China where the tendency toward slowdown worsened due to capital outflows.

However, the assumptions behind this kind of expansion in exports are beginning to crumble. First of all, as was mentioned earlier in this report, based on the Juglar Cycle, the mid to long-term cycle of the US economy, the six years lasting from 2010 to 2015 represent a capital stock accumulation phase, during which the economy is driven by growth in capital expenditure. However, as a result, no more margin is left for further expansion of capital expenditure. The US economy has entered the maturation phase. On the other hand, judging from the Kitchin Cycle (the short-term economic cycle), the US economy has just recently been in the inventory accumulation phase, which promises to act as a factor encouraging economic growth for the time being. However, this acts only as a short-term factor in speeding up growth. There is not much of a chance that it can continue. As a result, Japanese exports to the US, especially their main export product, automobiles, now show signs of peaking out. Moreover, exports of parts and accessories to Asia (with the exception of China) for the manufacturing of products whose final destination is the US are also beginning to suffer from a slowdown.



Source: Cabinet Office; compiled by DIR.

We also must take a careful look at China. One of the factors behind the resurgence of China's economy is the strengthening of rules restricting the movement of capital. This has inhibited capital outflows. Finally, capital which has been left to stagnate in domestic China, is put to use in real estate development and other investments. This activity brings risk of a reactionary decline or adjustment in the future. If these policies restricting movement of capital were merely put in place to please the National Congress of the Communist Party of China which meets this fall, then there is a good possibility that they will not continue, hence leaving open the possibility of a reactionary decline occurring in 2018 or later. Meanwhile, if the Fed further accelerates its monetary tightening policy, it could become a factor in slowing down the emerging nation economies even further due to the encouragement of capital outflows centering on China.

Personal consumption to maintain moderate expansion

Overseas demand will mark time temporarily while domestic demand takes the role of providing underlying support for growth. In this section, we examine personal consumption, the most important component of domestic demand. In conclusion, personal consumption is expected to continue moderate expansion throughout the period covered by our outlook (FY2017-FY2018). However, the source of growth in domestic demand differs for each of these years. In FY2017, the main factor driving growth in personal consumption is expected to be the falling away of negative factors which inhibited consumption in the past. On the other hand, in FY2018 consumption is expected to continue to expand with improvements in employee compensation.

Three positive factors encouraging personal consumption in FY2017

Japan's economy in FY2017 is expected to see three factors which were the cause of stagnation in personal consumption in the past dissipate. 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.

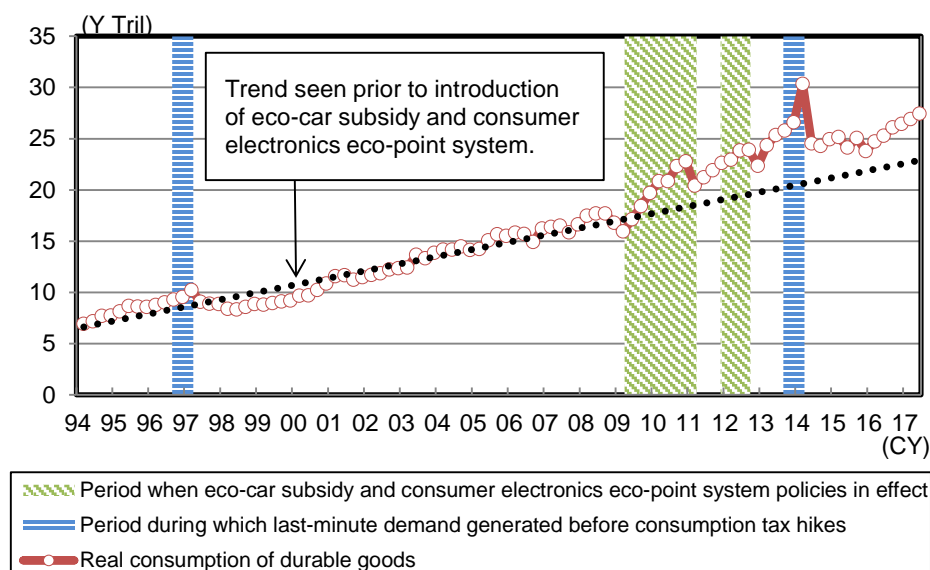
Next we examine the issues surrounding positive factor (2) increased tax and insurance burden for the working-age generation. As is the case with pensioners, factors have appeared in recent years bringing pressure on disposable income for the working-age generation. Employee compensation grew around Y9.5 tril between FY2012 and FY2015, but income tax 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 by the end of 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.

Variations in Real Consumer Expenditure on Durable Goods

Chart 7



Source: Cabinet Office; compiled by DIR.

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.

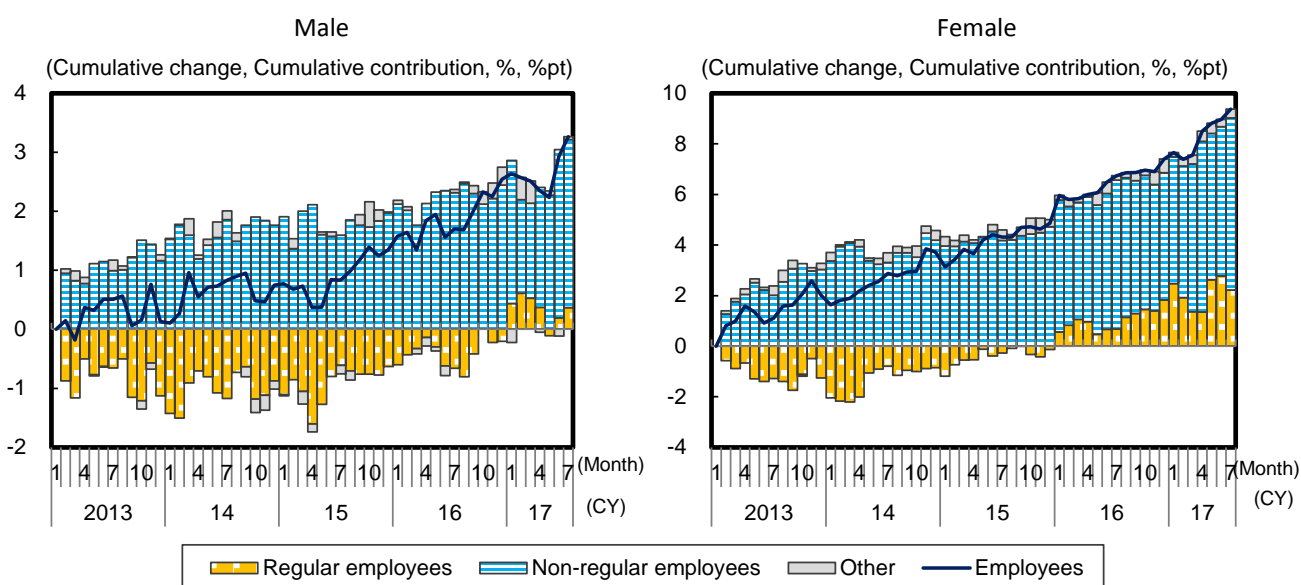
Countdown to Wage Inflation

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 8 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.

Factor Analysis of Employment

Chart 8



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

In conclusion, 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

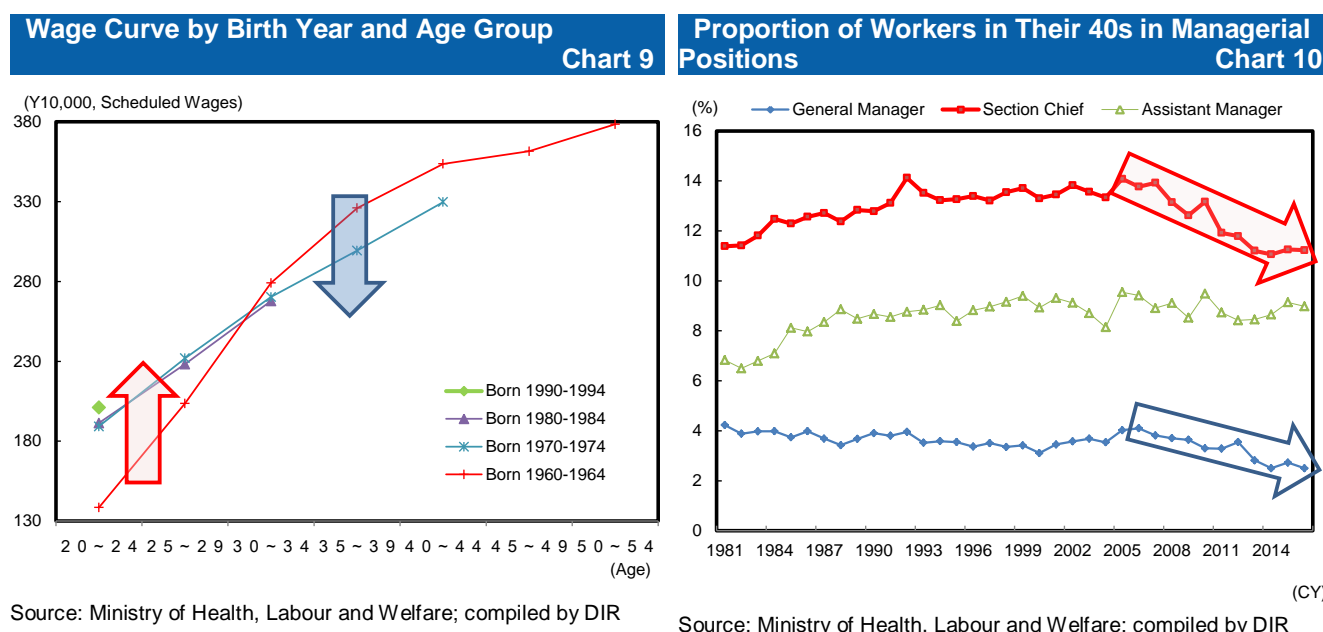
corporations have begun, somewhat tentatively at first, to increase the number of regular employees. As a result, the effective opening-to-application ratio for regular employees hit a historic high of 1.01x (seasonally adjusted) in June and July 2017, exceeding 1x for the first time. These developments may indicate that the countdown to wage inflation is already underway.

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.

First of all, 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 9 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 10 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. In other words,

corporations appear to be delaying the promotion of workers in their 40s, while also decreasing the number of workers who are promoted to management positions. Members of Japan’s second-generation baby boom are now just entering their 40s, hence this age group accounts 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.

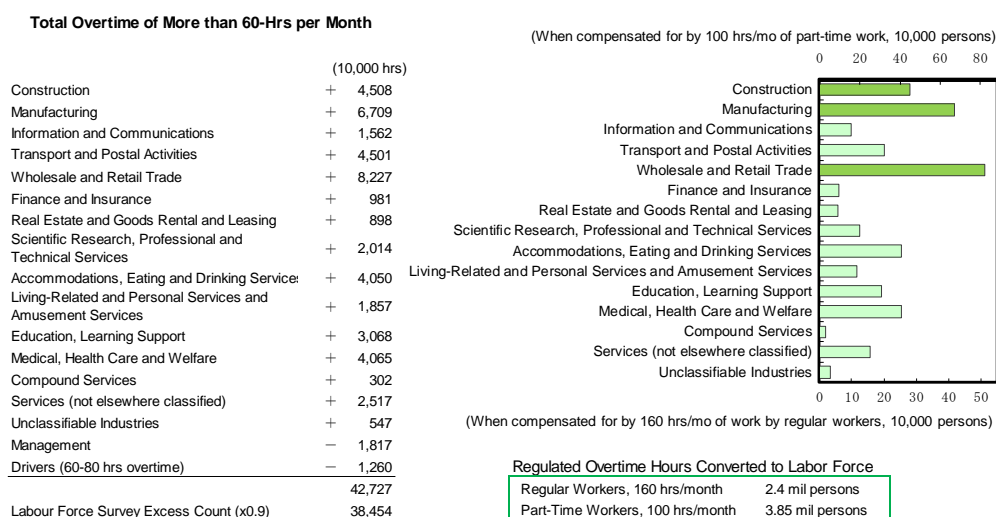
Overtime pay could decline by up to Y8.5 tril as a result of new regulations

Caution is required regarding factors which bring risk of offsetting the effects of wage inflation. Amongst the various workstyle reforms is the adoption of a rule limiting the amount of overtime an employee is allowed to work. This type of rule includes a penalty if the rule is not followed. This type of rule has been adopted by some companies as a corrective to the tendency to work overly long hours. However, the existence of this rule carries with it the risk of bringing downward pressure on overall employee compensation by virtue of reducing overtime pay.

In some cases the rule limiting overtime with penalty includes some exceptions, but in general, overtime is restricted to 45 hours per month or a total of 360 hours per year. If labor and management agree, this amount can be extended to up to 720 hours per year. This is expected to become law in Japan by April 2019 at the earliest.

According to our risk scenario, if overtime hours which have been reduced are not redistributed to other workers and new workers, total overtime pay of workers in Japan could undergo downward pressure of Y8.5 tril annually. This is the equivalent of 3% of employee compensation. Meanwhile, in order to compensate for reduced overtime hours, 2.4 million new fulltime workers would be required in order to make up for those lost hours. However, due to the limited margin available for increasing the labor force participation rate in Japan, there is not much hope of a major increase in the number of employees. The one thing that can be said is that the question of increasing labor productivity as was discussed earlier is an urgent one.

Estimated Effects of Restriction on Overtime (Risk Scenario) Chart 11



Overtime Pay -8.5 tril yen/yr = Downward Pressure of 3% on Employee Compensation

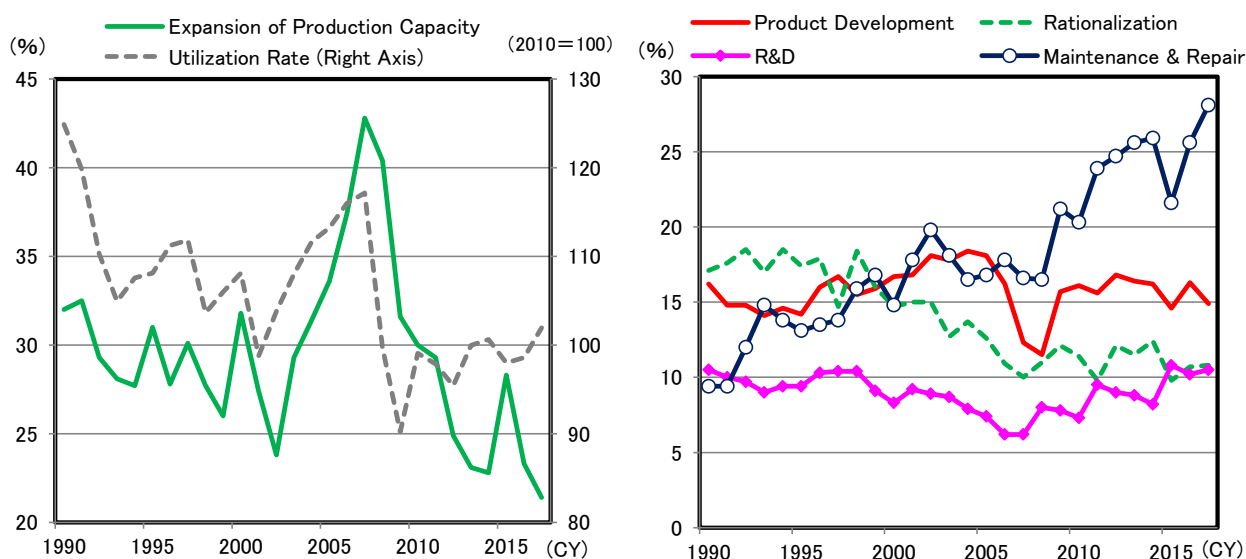
Source: Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare; compiled by DIR.
 Note: The term “Management” refers to all jobs with a managerial function. The term “Drivers” includes operation of all kinds of transport equipment and machinery. This includes the operation of trains and airplanes. According to the Labour Force Survey, there is a chance that in the case of many of these jobs, unpaid overtime and break time may in some cases be counted as work time. Therefore 10% is subtracted from the estimate with reference to the difference between the Labour Force Survey and the Monthly Labour Survey.

Capex expected to maintain underlying strength focusing on maintenance & repair

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.

Capex Plans by Investment Motive

Chart 12



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.

On the other hand, one problem that is often pointed out regarding recent trends in capital investment is that capex spending does not grow as much as one would have expected when compared to favorable corporate earnings. As was mentioned previously, behind this lies Japan's capital stock cycle, which is now in the maturation phase as is the US. 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.

Risk Associated with Fallacy of Composition

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.

Corporate Stance Toward Distribution of Profits

Chart 13

(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, Ministry of Finance; 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.

Economic Indicators and Interest Rates

Chart 14

Indicator	2016	2017				2018	FY15	FY16	FY17	FY18
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar				
	Actual			DIR estimates			Actual		DIR estimates	
Real GDP										
Q/q %, annualized	1.7	1.5	4.0	0.6	1.1	1.6				
Y/y %	1.7	1.5	2.0	1.9	1.8	1.8	1.3	1.3	1.9	1.2
Current account balance										
SAAR (Y tril)	20.6	21.7	18.9	19.3	19.5	20.0	17.9	20.4	19.6	20.6
Unemployment rate (%)										
	3.1	2.9	2.9	2.9	2.8	2.8	3.3	3.0	2.8	2.7
CPI (excl. fresh foods; 2015 prices; y/y %)										
	-0.3	0.2	0.4	0.7	0.7	0.5	-0.0	-0.2	0.6	0.6
10-year JGB yield										
(period average; %)	0.00	0.07	0.04	0.04	0.04	0.04	0.26	-0.05	0.04	0.04

Source: Compiled by DIR.

Note: Estimates taken from DIR's *Japan's Economic Outlook No. 194 Update (Summary)*.