Japan's Economy: Monthly Outlook (Nov. 2018)

True nature of slowdown in Japanese and global economies, with US remaining strong, and outlook for 2019

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Summary

- The 2018 slowdown in the global economy is due to the falling away of "2017 bonus factors", including (1) an upturn in the inventory cycle centering on the US, (2) acceleration of China's economy in anticipation of the meeting of the National Congress of the Communist Party of China, and (3) recovery of the European economy accompanying the shift to expansion, moving away from austerity measures. We indicated as much in our past reports. Now the 2018 global economy has an additional feature – the US standing out as the one remaining economy showing strength. There are three factors behind this situation: (1) the effects of US tax cuts, (2) global increase in finance costs as a result of US fiscal and monetary policies, and (3) the US getting an enhanced take in comparison with its allies in the zero-sum game of a US-China cold war.

- Considering these factors, when we look ahead we see that there is a strong possibility that the global economy will continue to slow down. First of all, in cyclical terms, the global economy is moving into the inventory adjustment phase. Meanwhile, it is likely that interest on US Treasuries will remain high due to the deteriorating supply and demand situation. Europe may likely find itself in the same situation after 2019. At the same time there is a good chance that the negative effects of the US and China raising tariffs may be largely offset if the price of crude oil continues to drop as it recently began to (this of course depends on the scale of the tariff hikes becoming no greater than has currently been made public). However, the global economy will most likely to continue a moderate slowdown as inventory adjustments continue, and finance costs continue to rise centering on the US and Europe.

- As in the case of the global economy, Japan's economy has also experienced the falling away of "2017 bonus factors", and currently remains in a lull. First of all, the inventory cycle is moving away from the accumulation phase and into a stock pile-up phase. In either case, there is a strong possibility that an inventory adjustment phase will ensue. Meanwhile, exports are showing strong signs of peaking out in a reflection of the global economic slowdown. Therefore, there is a strong possibility that Japan's economy will continue to perform a bit below its potential growth rate.

- The importance of domestic demand will increase relatively as the contribution of overseas demand to Japan's economic growth declines, but there are both positive and negative factors in store for domestic demand in the future. One of the positive factors is the fall in the price of crude oil. On the other hand, the consumption tax hike planned for October 2019 will act as a negative factor on the growth rate. These effects will change depending on the future price of crude oil and the government's fiscal policy response. However, not much change is seen from the above mentioned "low-flying plane" scenario. Our baseline scenario for Japan's economy is a growth rate of +1.0% for FY2018, and +0.8% in FY2019.

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Revised economic outlook: FY2018 +1.0%, FY2019 +0.8%

The real GDP growth rate for Jul-Sep 2018 (1st preliminary est) suffered a reversal, with negative growth for the first time in two quarters at -1.2% q/q annualized (-0.3% q/q). Natural disasters are said to have played a major role in the negative performance, including extreme heat, torrential rains, typhoons, and earthquakes, but the economy was on the weak side even ignoring these temporary factors. Real GDP has been marking time ever since the Oct-Dec period of 2017. Our assessment that the Japanese economy is in a temporary lull remains unchanged.

In light of the 1st preliminary Jul-Sep 2018 GDP release we have revised our economic growth outlook. We now forecast real GDP growth of +1.0% in comparison with the previous year for FY2018, and +0.8% in comparison with the previous year for FY2019. The future of Japan's economy will be influenced by the disappearance of previously positive factors including the inventory cycle and the contribution of overseas demand to the economy. There is a strong possibility that Japan's growth will continue to be moderately low. The inventory cycle is moving away from the accumulation phase and into a stock pile-up phase. In either case, there is a strong possibility that an inventory adjustment phase will ensue. As for exports, until now accelerated growth was encouraged by (1) improvement in the inventory cycle centering on the US, (2) acceleration of China's economy in anticipation of the National Congress of the Communist Party of China, and (3) the recovery in the European economy due to the shift from fiscal austerity to an expansionary policy. However, these positive factors have pretty much disappeared. The US economy is favorable with the effects of tax cuts having become manifest, but the positive effects will soon disappear. In the future the effects of the US-China cold war should become more apparent. Meanwhile, shifting our gaze to Japan's domestic economy, things don't get any more promising with the impending consumption tax hike planned for October 2019. Japan's economic growth rate will most likely remain at a pace just below its potential growth rate for some time to come.

The simple nature of the 2018 global economic slowdown

The global economic growth rate in 2018 remained at a disappointing performance level in comparison to consensus as of the beginning of the year. For instance, the IMF outlook for the global economy as of January this year saw a growth rate of +3.9% in 2018 and +3.9% in 2019 (the actual value for 2017 was +3.7%). In other words, acceleration was expected. But as of October 2018, they had already revised their outlook downwards to +3.7% in 2018 and +3.7% in 2019. Meanwhile, looking at the various economic indices, there is a good possibility that the outlook will be revised downwards again.

So the question is why did the global economy fail to reach the expectations of consensus as of the beginning of the year in 2018? Some say this has to do with fears of a US-China trade war, but this factor does not explain the economic slowdown as it looks now. The US and China began raising tariffs after July 6, and then additional tariffs were implemented on September 24. We have not yet seen any direct effects of tariffs in any of the statistics announced as of this time. The effects of tariffs will most likely become manifest further on in the future.

It would probably be most appropriate simply to say that damage to some degree is expected in the future and this may be hindering economic activity somewhat, centering on corporate capital expenditure. But if that were the case, it would follow that capital expenditure should be affected most in the parties to the trade disagreement, but the slowdown in China's private sector capital expenditure is at most, just a bit sluggish in comparison to other major economic indices. Meanwhile in the US, no negatives can be confirmed in the corporate sector. It appears that most likely the 2018 global economic slowdown has been brought on by countries other than the US (Japan, Europe, the emerging nations, etc.).

The nature of the global economic slowdown is really quite simple – the economy just did too well in 2017, and now the tables have turned. As we have indicated in past outlooks for the Japanese economy[1], the year 2017 enjoyed some positive factors, including (1) an upturn in the inventory cycle centering on the US, (2) acceleration of China's economy in anticipation of the meeting of the National Congress of the Communist Party of China, and (3) recovery of the European economy accompanying the shift to expansion, moving away from austerity measures. These factors helped to speed up the growth rates of economies of various individual regions, as well as the global economy.

If we extend the temporal axis a bit, there is another important factor in the global economic acceleration of 2017 – that is the fact that it was a rebound from the slowdown of 2015-16. It was 2015 when the Greek government-debt crisis brought turmoil to the European capital markets. Also in 2015, capital flight from China caused that country's economy to stagnate[2], and the global economy also to suffer slower growth. The after-effects were manifest in the form of global inventory and production adjustments in 2016 (Chart 1).

| Shipment and Inventory Balance in Japan, US, and EU | Chart 1 |
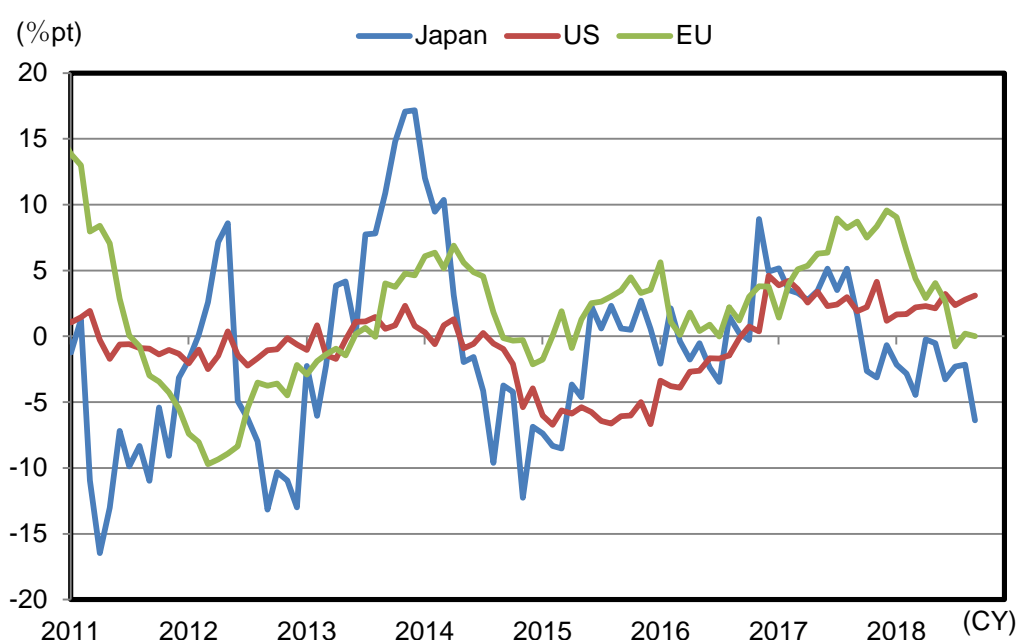
Source: Major statistics from each of the above mentioned countries; compiled by DIR.
Notes: 1) Shipment and inventory balance = shipments (y/y) – inventory (y/y)
     2) For EU only: production index y/y difference – inventory DI y/y difference.

[1] See the following reports for further detail: DIR Report dated 22 September 2017, *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?*, by Shunsuke Kobayashi; DIR Report dated 20 October 2017, *Japan's Economy: Monthly Outlook (Oct 2017): Pointers to guide through this political season; Light and shadow of the "cherry-picking" economy*, by Shunsuke Kobayashi; DIR Report dated 22 November 2017, *Japan's Economy: Monthly Outlook (Nov 2017): Growth rate to peak out in FY2017 with gradual slowdown expected through FY2019*, by Shunsuke Kobayashi; DIR Report dated 20 December 2017, *Japan's Economy: Monthly Outlook (Dec 2017): Lead role in growth shifts from overseas demand to domestic demand and from volume to quality*, by Shunsuke Kobayashi; DIR Report dated 20 April 2018, *Japan's Economy: Monthly Outlook (Apr 2018): How will Japan's economy and corporate performance fare in US-China tariff dispute? Root cause of turmoil in the financial markets*, by Shunsuke Kobayashi & Yota Hirono; DIR Report dated 25 May 2018, *Japan's Economy: Monthly Outlook (May 2018): Japan's economy to enter a temporary lull; our estimates of the effects of the rising price of crude oil on Japan's economy and corporate earnings*, by Shunsuke Kobayashi & Yota Hirono; DIR Report dated 23 August 2018, *Japan's Economy: Monthly Outlook (Aug 2018): 1. Japan's economy is in a temporary lull, no change to DIR outlook (real GDP growth of +1.0% in FY18, and +0.8% in FY19), 2. Reassessment of US-China Trade War and its Effects on the Global Economy, 3. Why no recovery in consumption despite improvements in wages & income?*, by Shunsuke Kobayashi & Yota Hirono.
[2] Said capital flight also has behind it the strong US dollar and rising US interest rates. Hence we could say that leading up to this was the recovery in the US economy up till 2014, and the closing of the supply-demand gap.

After the US presidential election of November 2016 hopes were raised regarding the increase of government spending. This in turn encouraged improvements in market sentiment on the global stock markets. Meanwhile, interest on the government bonds of the southern European countries, which had reached a high level, began to decline as the ECB's quantitative easing took effect, and the problem of government finances began to subside. In addition, in anticipation of the meeting of the National Congress of the Communist Party of China, the Chinese government implemented a fiscal expansion policy and monetary easing. These policy decisions encouraged more corporate activity in 2017 as well as household activity, and also helped to accelerate the global economy. One important point that should not be ignored is the fact that during the previous year, corporate inventories suffered from stock depletion, but recovery of inventory was helped along by the activation of production.

However, the "2017 bonus factors" are all gone now. The only thing left is the inventory that was built up. Therefore, the year 2018, and most likely 2019 as well, will re-enter an inventory adjustment phase. This appears to be the most appropriate baseline scenario.

Three essential factors behind US alone retaining economic strength in 2018

Another one of the special characteristics of the year 2018 is that as the global economy moves into a cyclical downturn, the US is managing to manifest accelerated growth. Of course, one could say that maintaining a strong economy is merely because of tax cuts, and you may be at least partly right. However, there are two more important factors in addition to the effect of tax cuts.

One is that the more the US budget deficit expands, the higher interest rises on US Treasuries, and this has the effect of monetary tightening (a credit squeeze) for the entire world. After October 2017 the Fed began to reduce its asset holdings (in the form of redemption of bond holdings) which had grown huge from its past policy of quantitative easing. This causes an increase in the volume of bonds circulating on the market, while at the same time causing a decrease in the distribution amount of dollar currency. Added to this is the tax cut. The tax cut causes the budget deficit to expand, which means an increase in the volume of bonds issued. Coupled with the reduction of asset holdings by the Fed, this causes interest on US Treasuries to rise, which in turn increases the cost of dollar financing worldwide. To put it more simply, while the US fiscal policy is a positive factor for the US economy, it is a negative factor for the global economy (Chart 2).

Net Issuance of US Debt (as a Proportion of GDP) and Interest on US 10-Year Treasuries   Chart 2
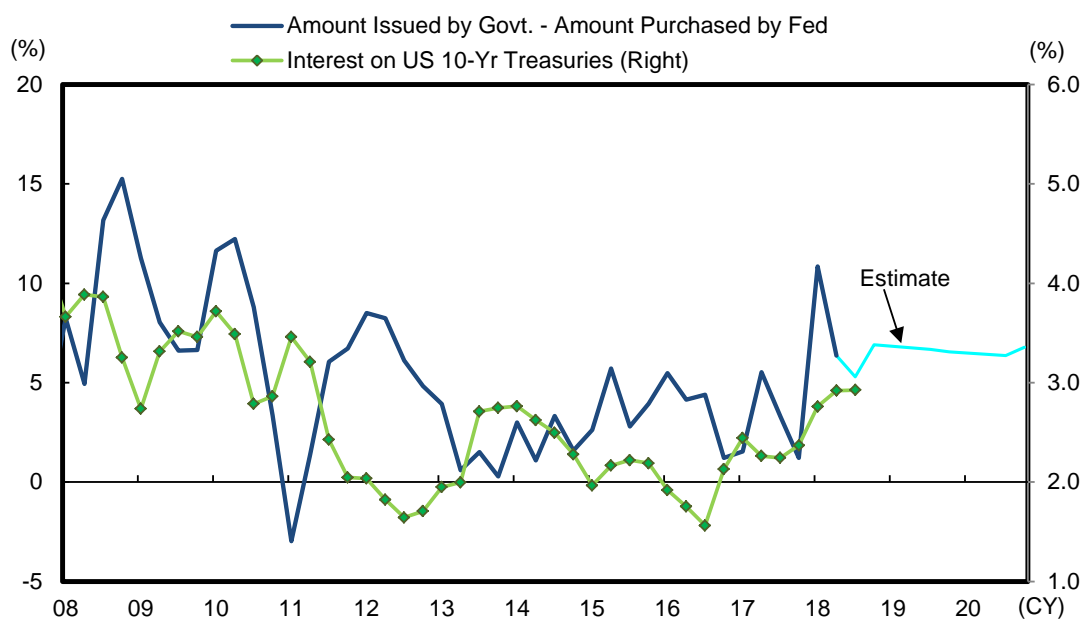
Source: FRB, CBO, Haver Analytics; compiled by DIR.
Note: Data after 2018 calculated by DIR based on FRB and CBO outlooks.

The other factor is adjustment of the take amongst allies in the zero-sum game of a US-China cold war. As was pointed out in our monthly outlook of October 2018[3], China bashing by the US does not stop at tariffs. The containment of China by US allies has begun with certainty. Japan, the US, and the EU agreed to carry out WTO reforms, issuing a joint statement[4], which includes the following passage agreeing to "address unfair trading practices including intellectual property theft, forced technology transfer, trade-distorting industrial subsidies, distortions created by state-owned enterprises, and overcapacity" (joint statement of the US and Japan). The USMCA, a continuation of the NAFTA idea, includes provisions obligating member nations to inform other USMCA members and discuss the issue whenever they engage in trade negotiations with a country with a non-market economy[5]. Preparations have been made to continue a containment policy until China begins to promote a completely market oriented economy.

A cold war is a war of attrition. To maintain superiority in a war of attrition, provisions are essential. For this, the US can rely on its allies. Japanese investment in the US domestic automobile industry, the EU's cutting of tariffs, Canada and Mexico increasing the ratio of their US domestic production. In other words, in the context of a US-China cold war there is a new world order, which can be expressed in simple terms as follows: while the US and China play a negative-sum game, the US and its allies play a zero-sum game in which the US is able to increase its take. This situation is expected to continue. Although this is not one of the factors that will make the US the single strong economy in 2018, it is an important factor which suggests that there is a good possibility the US will continue to be the strongest economy through the year 2019 and beyond.

Joint Statement of the United States and Japan	Chart 3

1. On the occasion of our Summit Meeting in New York on September 26, 2018, we, President Donald J. Trump and Prime Minister Shinzo Abe, affirmed the importance of a strong, stable, and mutually beneficial trade and economic relationship between the United States and Japan, recognizing that our economies together represent approximately 30 percent of global Gross Domestic Product. The President reiterated the importance of reciprocal trade, as well as reducing the trade deficit with Japan and other countries. The Prime Minister emphasized the importance of free, fair, and rules-based trade.

2. Against this backdrop, we reaffirmed our determination to further expand trade and investment between the United States and Japan in a mutually beneficial manner, including through further concrete steps, as well as to realize free, fair, and open development of the global economy.

3. The United States and Japan will **enter into negotiations, following the completion of necessary domestic procedures, for a United States–Japan Trade Agreement on goods, as well as on other key areas including services, that can produce early achievements**.

4. The United States and Japan also **intend to have negotiations on other trade and investment items following the completion of the discussions of the agreement mentioned above**.

5. The agreement mentioned above is designed to be mutually beneficial, and, in conducting those negotiations, the United States and Japan will respect positions of the other government:
For the United States, market access outcomes in the motor vehicle sector will be designed to increase production and jobs in the United States in the motor vehicle industries; and
For Japan, with regard to agricultural, forestry, and fishery products, outcomes related to market access as reflected in Japan's previous economic partnership agreements constitute the maximum level.

6. The United States and Japan will also strengthen cooperation to better protect American and Japanese companies and workers from non-market oriented policies and practices by third countries. We will therefore **work closely together, through United States–Japan as well as United States–Japan–European Union cooperation, to promote discussions on World Trade Organization reform and e-commerce and to address unfair trading practices including intellectual property theft, forced technology transfer, trade-distorting industrial subsidies, distortions created by state-owned enterprises, and overcapacity**.

7. The United States and Japan will conduct these discussions based on mutual trust, and **refrain from taking measures against the spirit of this joint statement during the process of these consultations**. In addition, we will make efforts for the early solution of other tariff-related issues.

Source: White House; compiled by DIR.
Note: Coloring and underlining by DIR.

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[3] DIR Report dated 26 October 2018, *Japan's Economy: Monthly Outlook (Oct 2018): The true nature of the US-China Trade War: The end of "the end of history" (or a new beginning?)*, by Shunsuke Kobayashi & Yota Hirono
[4] The US-Japan joint statement of September 26, announced on the previous day, September 25, is even more detailed in content. See "Joint Statement on Trilateral Meeting of the Trade Ministers of the United States, Japan, and the European Union." http://www.meti.go.jp/press/2018/05/20180531009/20180531009-2.pdf
[5] For details see Article 32.10: Non-Market Country FTA in USMCA Chapter 32 - Exceptions and General Provisions.

Outlook for the global economy in 2019

Now, in view of the arguments presented up to this point, what is the outlook for the global economy in 2019? Our baseline scenario is that in cyclical terms, the global economy will move into an inventory adjustment phase.

Meanwhile, it is likely that interest on US Treasuries will remain high due to the deteriorating supply and demand situation explained previously. The pace of the Fed's reduction of its asset holdings was set at 10 billion dollars per month maximum since its beginning in October 2017. The process has been accelerated once every three months by the monthly amount of 10 billion dollars, so that monthly maximum as of October 2018 was 50 billion dollars in asset reduction. Hence the decrease in the distribution amount of dollar currency will continue until the Fed suspends asset reduction. It is safe to say that the pace of asset reduction has just about reached its peak at this time (see Chart 2).

However, it is important to note that the EU may also experience the same phenomenon as the US in the future (Chart 4). The ECB implemented a quantitative easing policy involving asset purchases of 60 billion euros per month up until the end of 2017. Starting in January 2018, it began reducing assets by 30 billion euros per month, lowering this to 15 billion euros per month as of October this year. Plans are to suspend quantitative easing as of January 2019, and considerations are being made for an interest rate hike after summer of the same year. Added to this is the element of political uncertainty.

Italian-born Mario Draghi has served as ECB president since 2011, and provided support on the monetary policy side in handling the debt crisis in southern Europe during that time. His term will be up in 2019, and so far possible candidates named for his successor are from France and farther north. In other words, candidates are all from countries whose financial institutions have suffered the most from Draghi's negative interest policy. The problem of the worldwide increase in the cost of financing arose in 2018. It is important to note that the epicenter of this phenomenon may move from the US (the dollar) to Europe (the euro).

Net Issuance of Eurozone Govt. Bonds (as a Proportion of GDP) and Interest on 10-Year Govt. Bond
Chart 4
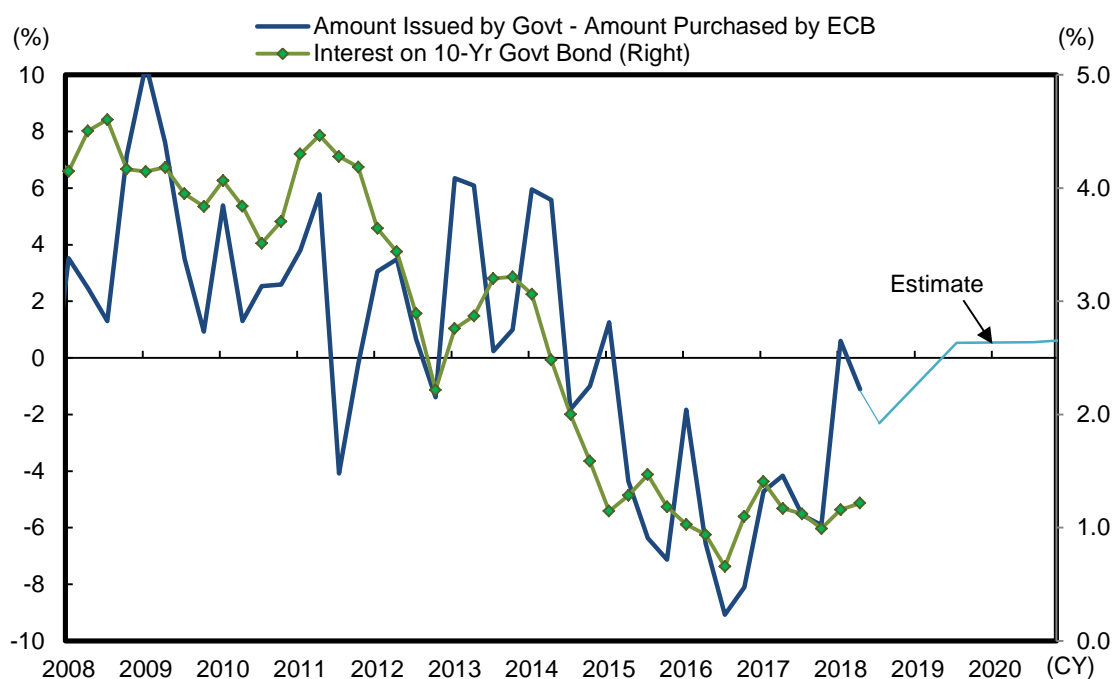
Source: ECB, Eurostat, IMF, Haver Analytics; compiled by DIR.
Note: Interest on 10-year government bond is a weighted average for the Eurozone overall. Outlook beyond 2018 produced by DIR based on IMF and ECB outlooks.

Economic impact of US-China cold war

As was explained earlier in this report, the effects of the US-China cold war should become more apparent in the future. Using the DIR calculation model, we estimated the economic impact of the US-China cold war (Charts 5-8). Charts 5 & 6 assume that US additional tariffs on the equivalent of 200 billion dollars in goods imported from China are left as is, while Charts 7 & 8 assume that the tariff rate is raised to 25%.

The question of which of these assumptions is closest to what happens in the future remains in flux at this time. The US has said that it will raise the tariff rate to 25%. However, it was announced that adjustments will be made at the US-China summit around the time of the G20 meeting at the end of November. The fact that there will be a US-China summit means that both parties feel that there is some benefit in carrying out talks. It is not hard to imagine what China's hopes for the summit are – the suspending of additional tariffs. In this sense the US-China summit is a short-term positive factor (or a reduction in the many possible negative factors). However, as we pointed out in our monthly outlook of October 2018[6], there is a very good possibility that the US-China cold war will continue for the mid to long-term.

Estimation of Effects of Tariffs (Summary)
Chart 5
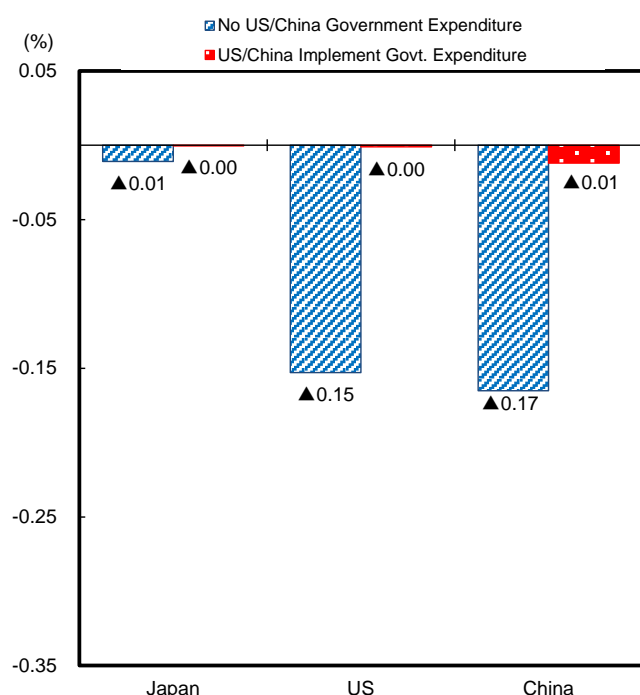
Source: Estimates produced using the DIR macro model.
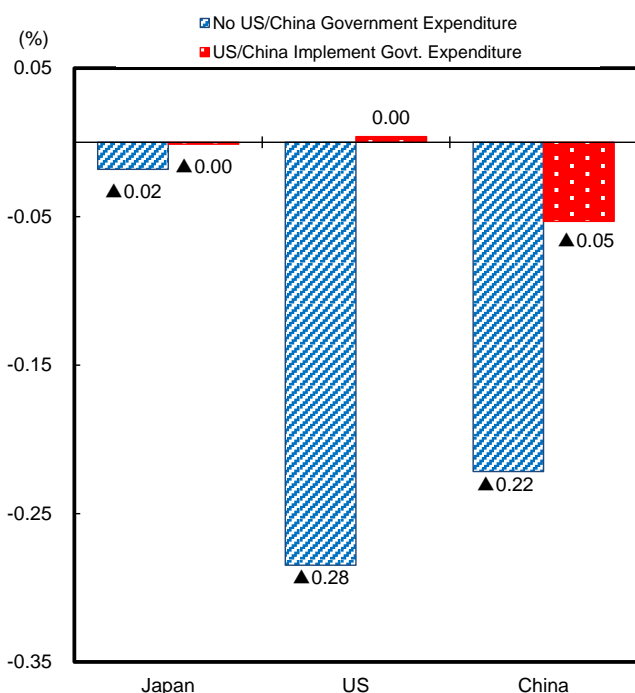Note: All figures are real. Rate of deviation from actual value.

Effects of Tariffs on Japan, US, and China (Detailed Version)
Chart 6

Effects on Chinese Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.17	▲0.34	▲0.06	0.00	▲0.30	▲0.32
	Contribution Rate		▲0.13	▲0.03	0.00	▲0.06	0.06
US/China Implement Govt. Expenditure	Deviation Rate	▲0.01	▲0.34	▲0.00	0.93	▲0.22	▲0.20
	Contribution Rate		▲0.13	▲0.00	0.13	▲0.04	0.03

Effects on US Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.15	▲0.26	▲0.20	0.00	▲0.09	▲0.47
	Contribution Rate		▲0.18	▲0.03	0.00	▲0.01	0.08
US/China Implement Govt. Expenditure	Deviation Rate	▲0.00	▲0.26	▲0.00	1.08	▲0.07	▲0.05
	Contribution Rate		▲0.18	▲0.00	0.18	▲0.01	0.01

Effects on Japan's Economy		Real GDP	Personal Consumption	Housing Investment	Capex	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.01	▲0.00	▲0.00	▲0.08	▲0.12	▲0.11
	Contribution Rate		▲0.00	▲0.00	▲0.01	▲0.02	0.02
US/China Implement Govt. Expenditure	Deviation Rate	▲0.00	▲0.00	▲0.00	▲0.00	▲0.00	▲0.00
	Contribution Rate		▲0.00	▲0.00	▲0.00	▲0.00	0.00

Source: Estimates produced using the DIR macro model.
Notes: 1) Estimated effects assuming US imposes tariff of 25% on 50 billion dollars' worth of Chinese imports, plus another 10% on 200 billion dollars' worth of Chinese products, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and 7.4% on $60 billion worth.
2) All figures are real. Rate of deviation from actual value (%) and rate of contribution to GDP (%pt).

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[6] See list of reports in Note 3.

Estimation of Effects of Tariffs (Summary)
Chart 7

(legend) ■ No US/China Government Expenditure ■ US/China Implement Govt. Expenditure

Japan: ▲0.00, ▲0.02
US: 0.00, ▲0.28
China: ▲0.22, ▲0.05

Source: Estimates produced using the DIR macro model.
Note: All figures are real. Rate of deviation from actual value.

Effects of Tariffs on Japan, US, and China (Detailed Version)
Chart 8

Effects on Chinese Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.22	▲0.34	▲0.08	0.00	▲0.57	▲0.36
	Contribution Rate		▲0.13	▲0.03	0.00	▲0.12	0.06
US/China Implement Govt. Expenditure	Deviation Rate	▲0.05	▲0.34	▲0.02	0.93	▲0.41	▲0.24
	Contribution Rate		▲0.13	▲0.01	0.13	▲0.09	0.04

Effects on US Economy		Real GDP	Personal Consumption	Capex	Government Expenditure	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.28	▲0.50	▲0.38	0.00	▲0.10	▲0.87
	Contribution Rate		▲0.35	▲0.06	0.00	▲0.01	0.14
US/China Implement Govt. Expenditure	Deviation Rate	0.00	▲0.50	0.01	2.07	▲0.08	▲0.08
	Contribution Rate		▲0.35	0.00	0.35	▲0.01	0.01

Effects on Japan's Economy		Real GDP	Personal Consumption	Housing Investment	Capex	Exports	Imports
No US/China Govt. Expenditure	Deviation Rate	▲0.02	▲0.01	▲0.00	▲0.13	▲0.19	▲0.18
	Contribution Rate		▲0.00	▲0.00	▲0.02	▲0.03	0.03
US/China Implement Govt. Expenditure	Deviation Rate	▲0.00	▲0.00	▲0.00	▲0.01	▲0.01	▲0.01
	Contribution Rate		▲0.00	▲0.00	▲0.00	▲0.00	0.00

Source: Estimates produced using the DIR macro model.
Notes: 1) Estimated effects assuming US imposes tariff of 25% on 250 billion dollars' worth of Chinese imports, and China imposes tariff of 25% on 50 billion dollars' worth of imports from the US, and 7.4% on $60 billion worth.
2) All figures are real. Rate of deviation from actual value (%) and rate of contribution to GDP (%pt).

If price of crude oil continues to decline by $20/bbl from its peak, it could offset negative impact of US-China tariffs

Conversely, there are also some positive factors for the global economy beyond 2019, mainly the recent collapse of the price of crude oil, which is especially good news for advanced industrialized countries. The WTI crude oil futures price continued to rise after 2016, reaching the mid-seventies per barrel in April 2018. Currently it is at the mid-fifties per barrel, dropping nearly $20/bbl.

Using IMF past calculations[7], when the price of crude oil drops by $10/bbl, the global economy is expected to be pushed up cumulatively by a maximum of around 0.2%pt (around 0.1%pt in a single year). Therefore, if the price of crude oil continues to decline by $20/bbl in comparison to the April 2018 price, it could offset the negative impact of the US-China tariffs discussed in the previous section.

Will the US fiscal policy second round help accelerate the global economy?

Another question that brings at least some hope is the second round of the US fiscal policy. There are many reasons why this should be discussed more seriously. Since the Democratic Party took the lower house in the US midterm elections, possibilities have increased that infrastructure investment, which the Republicans have continued to be against, may move forward. However, it is doubtful that this would be enough to conspicuously increase the growth rate of the global economy.

First of all there is the problem of revenue source which is often pointed out. In order to carry out investment in infrastructure cuts will have to be made elsewhere. Either that or find a way to increase revenue. Fiscal policy does not have any direct stimulating effect.

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[7] IMF, "World Economic Outlook (WEO) April 2016 -Too Slow for Too Long-"

Secondly, the effects of the US tax cut will disappear in not too long. The US will be unable to avoid an economic slowdown unless it implements government spending large enough to offset it. According to Congressional Budget Office (CBO) calculations[8], the effect of the tax cut in pushing up the growth rate is expected to be felt in 2019 as well as 2018. Most likely this reflects lead time. In either case, capital expenditure does not get counted in GDP until after the decision to cut taxes, after which corporations make decisions on what to do, then issue orders, select vendors, and actual projects get going. Therefore there is nothing odd about expecting the positive effect of the tax cut on GDP to remain in 2019. However, when we look at actual data, the ISM Manufacturing Report on Business peaked out at the end of 2017 and has since then been in continual decline. Hence possibilities are great that despite the above mentioned lead time, the effects of the tax cut will most likely decline in 2019 in comparison to 2018.

Third, if enough government spending is implemented to offset the falling away of the tax cut effect, this will serve to expand the budget deficit, which would mean issuing more government bonds. As was explained previously in this report, this would cause the cost of dollar financing to increase even more. So even if the US can avoid a slowdown in its economic growth rate, this would have a negative effect on other economies. It is therefore quite possible that there will not necessarily be an overall positive effect on the global economy from US developments.

In light of the above reasoning, there is a good possibility that the growth rate of the global economy will continue to slow down through the year 2019. As long as the negative impact of the raising of US-China tariffs does not become any larger than it is now, there is a good possibility that the collapse in the price of crude oil could offset some of the damage. However, in cyclical terms, inventory adjustment will continue centering on the US and Europe, and due especially to the credit squeeze, the global economy will continue its moderate structural slowdown.

Outlook for the Japanese economy in 2019

As in the case of the global economy, Japan's economy is experiencing the falling away of positive factors which came together in FY2017, and has currently settled into a temporary lull. The inventory cycle is moving from the accumulation phase into a stock pile-up phase (Chart 9). In either case, there is a strong possibility that an inventory adjustment phase will ensue. In addition, as has been mentioned previously in this report, exports are showing strong signs of peaking out, reflecting the slowdown in the global economy (Chart 10). There is a strong possibility that Japan's economy will continue to perform a bit below its potential growth rate.

The importance of domestic demand will increase relatively as the contribution of overseas demand to Japan's economic growth declines but there are both positive and negative factors in store for domestic demand in the future. One of the positive factors is the fall in the price of crude oil. The import value of crude oil and unrefined oil entering Japan totaled 7.2 trillion yen on a performance basis in 2017. The WTI crude oil futures price averaged $50/bbl in 2017. In a simple calculation, when the import price of crude oil rises 40%, import value of crude oil rises by around 2.9 trillion yen. Nominal GDP is then expected to be pushed down by the same amount. There was concern that when the WTI crude oil futures price temporarily hit the mid-seventies ($/bbl) in mid-2018 that the effect would be a negative factor bringing down Japan's economic growth rate. However, the WTI crude oil futures price is currently at a lower level in the mid-fifties ($/bbl), and if it settles at a lower price, the negative effect will evaporate.
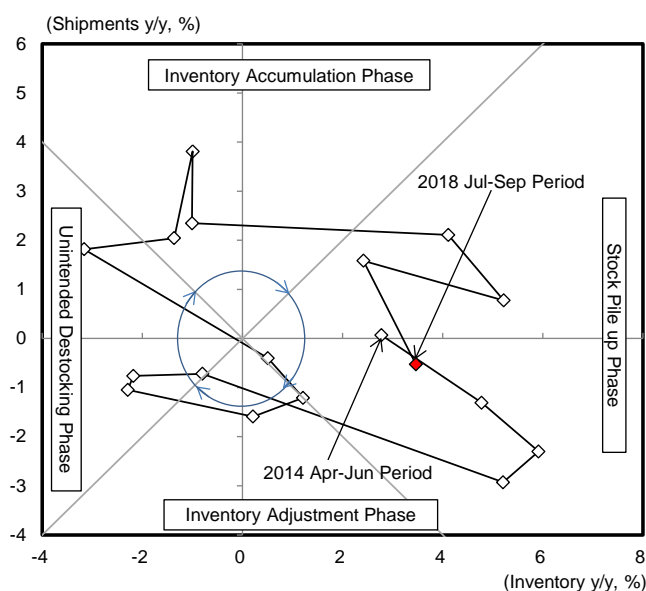
On the other hand, the consumption tax hike planned for October 2019 will act as a negative factor on the growth rate. The tax rate will be raised by 2%pt at that time, and is expected to bring in an increase of around 5.6 trillion yen in tax revenue for the government (meaning an increase in household

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[8] CBO, "The Budget and Economic Outlook: 2018 to 2028"

burden). But at the same time, a reduced tax rate will also be introduced, thereby reducing tax revenue by around 1.0 trillion yen and lightening household burden. Free preschool and advanced education for those who qualify is expected to reduce tax revenue further at around 1.4 trillion yen and lightening the burden of households. Ultimately, tax revenues are expected to increase by around 3.2 trillion yen (meaning an increase in household burden).

The Inventory Cycle   Chart 9

(Shipments y/y, %)

Inventory Accumulation Phase

Unintended Destocking Phase

Stock Pile up Phase

2018 Jul-Sep Period

2014 Apr-Jun Period

Inventory Adjustment Phase

(Inventory y/y, %)

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

Japan's Real Exports and Industrial Production   Chart 10

(2015 = 100)

Real Export Index

Indices of Industrial Production

(CY)
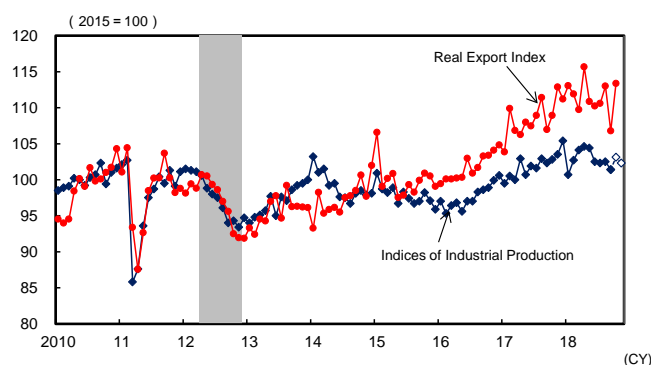
Source: Bank of Japan, Ministry of Economy, Trade, and Industry, Cabinet Office; compiled by DIR.
Notes: 1) Shaded areas represent periods of economic recession.
2) Most recent two months of data on industrial production from the METI production forecast survey.

Therefore, roughly speaking, the effects of the collapse of the price of crude oil and increased household economic burden as a result of the increase in consumption tax are about the same[9]. If these two factors offset each other, the only major factors influencing the future of Japan's economy would be inventory adjustment and overseas demand. We therefore feel that a more probable outlook for Japan's economy is that it will settle into a growth rate just below that of the potential growth rate.

Of course, the discussion here touches upon only the direct effects of fluctuations in the price of crude oil and the increase in consumption tax. In the following section we discuss the influence of these factors on Japan's economy in further detail.

Fluctuation of $20 in the WTI price would have an effect of 1.6 trillion yen on corporate earnings (manufacturing 0.4 tril yen, non-manufacturing 1.1 tril yen)

As for the price of crude oil, we consider the effects of high prices on the corporate sector using an input-output table. A crude oil price high would be a negative factor for effecting profits in the corporate sector. Japan depends on imports for the majority of its energy needs. Only a limited number of corporations benefit from high crude oil prices. For most Japanese corporations it is a negative factor. A high in crude oil prices causes the variable cost ratio to rise, which in turn raises the break-even point for most corporations, causing profitability to deteriorate.

At the same time, the extent of the effect also depends on the cost structure of particular industries and corporations. The extent of influence is not uniform across all industries and businesses. Chart 11 shows the percentage of intermediate inputs accounted for by energy inputs for all industries. As

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[9] We must of course keep in mind that in many cases long-term contracts exist associated with the import of energy resources, so fluctuations in the spot price do not have much of a direct effect on Japan's economy in the short-term.

indicated by the chart, there are only two industries in Japan which carry out direct inputs in crude oil. These are petroleum & coal products, and electrical power. The vast majority of Japanese corporations do not have direct inputs in crude oil, but rather in refined petroleum and coal products and electrical power. Hence most corporations do not experience the immediate effect of high crude oil prices. The disadvantage of a crude oil price high is first experienced at the point of price pass-through in the form of the increasing cost of petroleum and coal products and electrical power.

Percentage of Intermediate Inputs Accounted for by Energy Inputs in All Industries
Chart 11
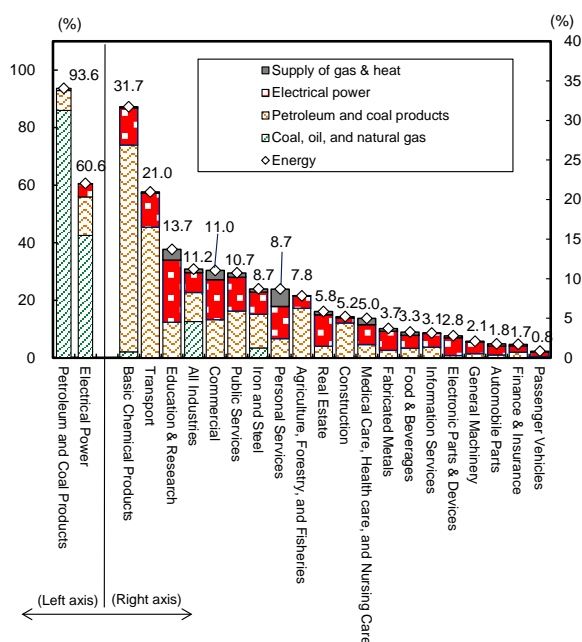
Source: Ministry of Economy, Trade, and Industry; compiled by DIR.
Note: Figures for 2011 are estimates based on the input-output structure.

Effect of 20% Rise in Price of Crude Oil on Corporate Earnings (Operating Surplus)
Chart 12

	Amount: Y bil	Rate of Change %
All Industries	-1,557	-1.9
Manufacturing	-422	-3.9
Food & Beverages	-22	-0.6
Pulp, Paper, and Paper Products	-13	-3.4
Chemicals	-205	-14.5
Petroleum and Coal Products	39	26.2
Ceramics, Stone, and Clay Products	-21	-5.2
Iron and Steel	-122	-25.8
Non-ferrous Metals	-7	-6.2
Fabricated Metals	-7	-2.2
General Machinery	-11	-1.0
Electrical Machinery	-5	-1.6
Information and communication electronics equipment	-2	-1.5
Electronic Parts and Devices	-6	-7.1
Transport Equipment	-18	-2.3
Precision Machinery	-1	-1.0
Non-manufacturing	-1,135	-1.5
Agriculture, Forestry, and Fisheries	-31	-0.9
Mining	-6	-22.8
Coal, Crude Oil, Natural Gas	13	125.0
Recyclable Resource Collection & Processing	-1	-5.7
Construction	-93	-20.7
Electrical Power	-203	-24.8
Wholesale & Retail	-140	-0.9
Finance & Insurance	-8	-0.1
Real Estate	-8	-0.1
Transport	-212	-10.1
Information and communication	-21	-0.5

Source: Ministry of Economy, Trade, and Industry, Bank of Japan; compiled by DIR.
Note: Figures for 2011 are estimates based on the input-output structure.

Based on this input-output structure, we estimated the effects of crude oil price highs on corporate earnings (operating surplus) shown in Chart 12. Our result on an all industry basis finds that the effect in monetary terms would be 1.6 trillion yen. Looking at results by industry, we see that manufacturing is estimated to suffer 0.4 trillion yen in earnings fluctuation, while non-manufacturing would be at 1.1 trillion yen.

Our assumptions in these estimates were that the price of crude oil rises or falls by 20%, with the average WTI price at around $95/bbl – the average price in 2011. In terms of actual amounts, we assume that the pattern to be in keeping with the price rise between the beginning of the year and the month of October, followed by a collapse of the price of crude oil of the extent that was recently seen. However, since these estimates use the input-output structure as it stood in 2011, as well as the average value of price pass-through of that year, results should be taken with a certain grain of salt.

Fluctuation of $20 in the WTI price would cause real GDP to fluctuate by 0.22%, with nominal GDP at 0.97%

In addition to the effects on the corporate sector outlined in the previous section, fluctuations in the price of crude oil also affect real income and thus the household sector as well. Here we make use of the DIR macro-economic model to perform an overall analysis of the influence on the entire Japanese economy. Results are shown in Chart 13. According to the results of our simulation, if the price of crude oil were to fluctuate by $20/bbl, real GDP between 2018 and 2020 would fluctuate as follows: 0.22% in 2018, 0.26% in 2019, and 0.24% in 2020.

Looking at results by demand component, we see that an increase in the price of crude oil would bring a decline in personal consumption due to the decline in real wages, while housing investment would also be expected to decline. In addition, the decline in corporate earnings would bring downward pressure on capital expenditure. Meanwhile, household burden would increase as a portion of the decline in corporate earnings would become manifest in the form of a decline in real wages. The decline in corporate income would also contribute to a decline in household demand. Moreover, an increase in the price of crude oil would also push up prices of goods in general, while real interest rates would likely decline, encouraging more household investment and capital expenditure. However, the positive factors would not be enough to offset the negative factors due to the decline in income.

As for prices in general, the price of imports would rise, bringing upward pressure on the capital goods price index (CGPI) and core CPI, causing the domestic demand deflator to rise. This would cause the import deflator (a deductible item) to rise considerably, in turn causing the GDP deflator to fall. As a result, nominal GDP would be forced downwards more than real GDP. Hence nominal GDP between 2018 and 2020 would be forced downwards as follows: 0.97% in 2018, 0.90% in 2019, and 0.98% in 2020.

Effect of $20/bbl Rise in Price of Crude Oil on Japan's Economy		Real GDP	Real Personal Consumption	Real Housing Investment	Real Capital Expenditure	Real Exports	Real Imports	Nominal GDP	GDP Deflator
		%	%	%	%	%	%	%	%
$20/bbl Increase in Price of Crude Oil	2018	-0.22	-0.35	-0.67	-0.86	-0.17	-1.10	-0.97	-0.74
	2019	-0.26	-0.45	-1.02	-0.96	-0.18	-1.32	-0.90	-0.64
	2020	-0.24	-0.39	-0.82	-1.04	-0.18	-1.25	-0.98	-0.74

Chart 13

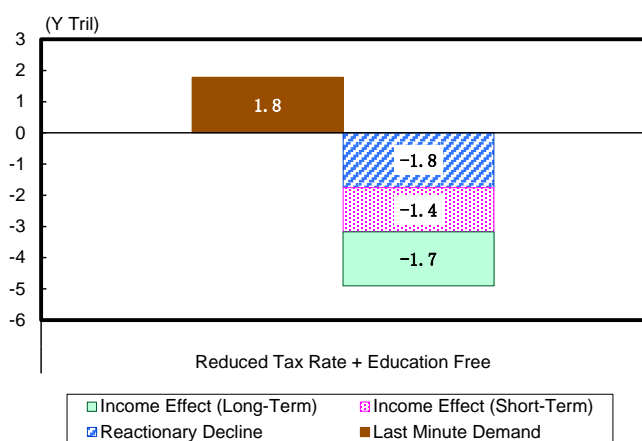|		Current Account Balance / Nominal GDP	Import Prices	Export Prices	CGPI	Core CPI	Industrial Production	Indices of Tertiary Industry Activity	Indices of All Industry Activity
		%pt	%	%	%	%	%	%	%
$20/bbl Increase in Price of Crude Oil	2018	-0.89	7.52	0.89	1.19	0.42	-0.42	-0.22	-0.24
	2019	-0.87	7.59	0.89	1.22	0.62	-0.50	-0.26	-0.29
	2020	-0.97	7.60	0.89	1.25	0.58	-0.48	-0.25	-0.28

Source: Compiled by DIR.

Therefore, if the WTI crude oil futures price were to hit a high in the mid-seventy dollar range ($/bbl), Japan's 2019 real GDP could be pushed down by somewhere between 0.22% and 0.26%, while nominal GDP could be pushed downwards by between 0.87% and 0.89%. However, the price of crude oil has recently been going through a correction phase, so if the WTI crude oil futures price settles on the low side of the mid-fifty dollar range ($/bbl), the Japanese economy could instead receive positive influence to the same degree as described above.

Effects of consumption tax hike: after the initial last-minute demand, a negative income effect will occur, lasting from the second half of FY2019 through the first half of FY2020
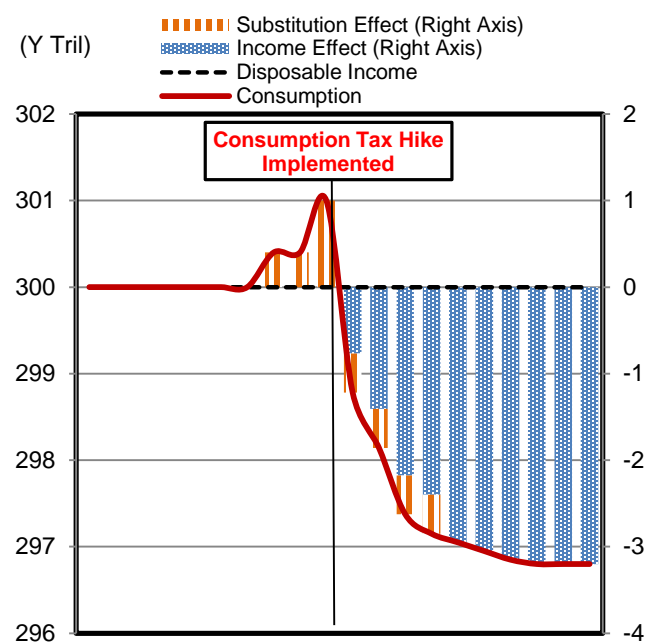
Next we examine the effects of the consumption tax hike planned for October 2019. The results of our estimates using the DIR macro model are shown in Charts 14 & 15. The macro model utilizes a consumption function estimated using past trends in consumption. The time frame includes the increase in consumption tax implemented in April 2014.

The results of estimates tell us that there are a wide variety of possible effects depending on the assumptions used. At this time the case with the highest probability of being implemented is the consumption tax hike with reduced tax rate + free preschool and advanced education for those who qualify. The substitution effect is expected to be ±1.8 trillion yen. And most importantly, the income effect is set at -3.2 trillion yen. Naturally, the ratchet effect is also at work, so the negative effect on households in the form of real income is not immediately reflected in consumption. The negative effect which is generated immediately after the tax hike is expected to be at around -1.4 trillion yen. This means that the full extent of the FY2019 consumption suppression effect will not become manifest right away. The consumption suppression effect could cause a drag on the economy all the way through FY2020 and beyond.

Effects of Increase in Consumption Tax
Chart 14

Source: Cabinet Office; compiled by DIR.

Notes: 1) The income effect as estimated here reflects the short-term effects based on marginal propensity to consume. It is possible that a negative income effect will occur which in the long-term is equivalent to tax burden x average propensity to consume - income effect (short-term). For this reason the same effect was used. Meanwhile, the long-term income effect is expressed in real terms making use of the predicted value of prices as of the point when the tax hike occurs (2019Q4).

2) Last-minute demand is generated in 2019 Q1-Q3, and reactionary decline is assumed to be during 2019 Q4-2020 Q3.

3) Preschool education is completely free for ages 3-5, but for ages 0-2 it may be limited to households that are untaxed. Advanced education may also be free for households exempt from local taxes. For amounts, we referred to the Bank of Japan report "Outlook for Economic Activity and Prices, April 2018."

4) These estimates are based on certain assumptions, and figures should be taken with a certain grain of salt.

Effects of Increase in Consumption Tax: (Time Series)
Chart 15

Source: Compiled by DIR.

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	FY17	FY18 (Estimate)	FY19 (Estimate)	CY17	CY18 (Estimate)	CY19 (Estimate)
Main economic indicators						
Nominal GDP (y/y %)	1.7	1.0	1.9	1.5	0.9	1.9
Real GDP (chained [2011]; y/y %)	1.6	1.0	0.8	1.7	0.9	1.1
Domestic demand (contribution, % pt)	1.2	1.0	0.7	1.2	0.8	1.1
Foreign demand (contribution, % pt)	0.4	-0.0	0.2	0.6	0.1	-0.0
GDP deflator (y/y %)	0.1	0.0	1.0	-0.2	0.0	0.9
Index of All-industry Activity (y/y %)*	1.8	0.8	1.1	1.6	0.8	1.2
Index of Industrial Production (y/y %)	2.9	0.6	1.7	3.1	0.7	1.8
Index of Tertiary Industry Activity (y/y %)	1.0	0.9	0.9	0.7	0.9	1.1
Corporate Goods Price Index (y/y %)	2.7	2.3	2.6	2.3	2.5	1.9
Consumer Price Index (excl. fresh food; y/y %)	0.7	0.9	1.0	0.5	0.9	0.9
Unemployment rate (%)	2.7	2.4	2.5	2.8	2.4	2.4
Government bond yield (10 year; %)	0.05	0.08	0.10	0.05	0.07	0.10
Balance of payments						
Trade balance (Y tril)	4.6	2.5	4.5	5.0	2.3	3.8
Current balance ($100 mil)	1,968	1,772	1,928	1,957	1,742	1,847
Current balance (Y tril)	21.8	20.2	22.3	22.0	19.2	21.0
(% of nominal GDP)	3.9	3.6	4.0	4.0	3.5	3.7
Real GDP components						
(Chained [2011]; y/y %; figures in parentheses: contribution, % pt)						
Private final consumption	0.8 (0.5)	0.6 (0.3)	0.3 (0.2)	1.0 (0.6)	0.3 (0.2)	0.9 (0.5)
Private housing investment	-0.3 (-0.0)	-4.2 (-0.1)	1.6 (0.0)	2.7 (0.1)	-5.8 (-0.2)	2.8 (0.1)
Private fixed investment	3.1 (0.5)	4.6 (0.7)	1.1 (0.2)	2.8 (0.4)	4.4 (0.7)	2.0 (0.3)
Government final consumption	0.7 (0.1)	0.6 (0.1)	0.7 (0.1)	0.4 (0.1)	0.5 (0.1)	0.7 (0.1)
Public fixed investment	1.5 (0.1)	-2.4 (-0.1)	1.6 (0.1)	1.2 (0.1)	-1.7 (-0.1)	0.6 (0.0)
Exports of goods and services	6.3 (1.0)	2.4 (0.4)	2.6 (0.4)	6.7 (1.1)	3.3 (0.6)	2.5 (0.5)
Imports of goods and services	4.1 (-0.6)	2.4 (-0.4)	1.5 (-0.3)	3.5 (-0.5)	2.8 (-0.5)	2.5 (-0.5)
Major assumptions:						
1. World economy						
Economic growth of major trading partners	4.2	4.0	3.6	4.1	4.1	3.7
Crude oil price (WTI futures; $/bbl)	53.6	65.2	60.0	50.9	66.0	60.0
2. US economy						
US real GDP (chained [2009]; y/y %)	2.4	3.0	2.2	2.2	2.9	2.5
US Consumer Price Index (y/y %)	2.1	2.4	2.3	2.1	2.5	2.2
3. Japanese economy						
Nominal public fixed investment (y/y %)	3.2	-0.7	2.9	2.8	-0.1	1.9
Exchange rate (Y/$)	110.8	111.8	113.5	112.2	110.5	113.5
(Y/€)	130.3	129.4	129.0	127.2	130.3	129.0

Source: Compiled by DIR.
Note: Due to rounding, actual figures may differ from those released by the government.
* Excl. agriculture, forestry, and fisheries.
Estimate: DIR estimate.