Mizuho Economic Outlook & Analysis

April 15, 2019

Will Japan fall into economic recession?

Detailed analysis of the Tankan survey and consideration based on a historical DI estimate

< Summary >

◆ In the Bank of Japan's quarterly Short-Term Economic Survey of Enterprises in Japan (*Tankan* survey) conducted in March, the fixed investment projections of Japanese companies remained firm even in industries with extremely weak earnings conditions, given the expectation that the economy will bottom out in the second half of the year. The level of the Business Conditions DI of nonmanufacturers also remained high, showing the resiliency of domestic demand.

◆ Our estimation of the historical DI indicates that an economic recession will most likely be avoided for now. Since the adjustment pressure of fixed investment is low, we expect that serious adjustment in the economy can be avoided.

◆ The main risk factors include intensification of US-China trade tensions, slowdown of the Chinese economy, continued decline in IT demand, and higher-than-expected yen appreciation. The focal point is whether the external environment will begin improving while domestic demand remains resilient. Japan’s economy may enter a recession should fixed investment start to weaken.

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“Will the Japanese economy finally plunge into recession?” “Can we really be sure that the longest economic recovery since the end of World War II actually happened?” We hear an increasing number of such questions nowadays. Up until the end of 2017, Japan’s economy had continued growing on the back of the simultaneous expansion of the global economy and the super-cycle of the semiconductor market, among other factors. Nonetheless, the situation has changed lately, with the Japanese economy now facing a variety of challenges, such as the slowdown of the Chinese economy and the decline in IT demand including semiconductors. In fact, both the Export Volume Index and the Industrial Production Index started to weaken at the beginning of 2018 (**Chart 1**).

Reflecting this situation, in the indexes of economic conditions announced by the Cabinet Office, the CI coincident index fell significantly by -2.5Pt in January 2019 from the preceding month (**Chart 2**). Although the index rose by +0.7Pt in February on a month-to-month basis, it was not enough to compensate for the drop in the previous month. The Cabinet Office’s current assessment of the CI coincident index (as of February) is “Downward turning point.” If the CI coincident index fulfills the two conditions of (1) the three-month backward moving average declines for three consecutive months, and (2) the difference in this month’s index from the previous month is negative, the assessment will be revised downward to “worsening” (this is defined as “the possibility of economic recession is high” by the Cabinet Office). Since the CI coincident index in February improved over the previous month, the assessment remains unchanged as “Downward turning point.” But considering the rather small increase in February, the assessment may be revised to “worsening” depending on the situation after March. Therefore, an increasing number of economists have laid claim to the Japanese economy dropping into recession at some point in the future.

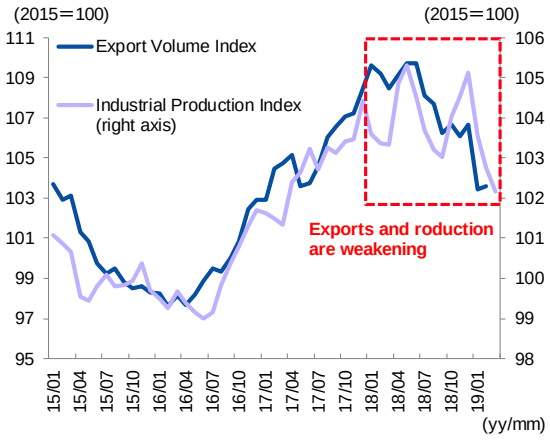
Furthermore, in the recently announced Bank of Japan’s *Tankan* survey (the March survey), the Business Conditions DI of large enterprises/manufacturing sector dropped significantly by -7%Pt. This indicates that even the mindset of companies has begun to deteriorate, in addition to hard data such as exports and production. It remains fresh in our memory the extensive media coverage of this news.

Certainly, these indices suggest that the recent Japanese economy lacks strength. However, we need to carefully consider whether the Japanese economy will really enter a recession. With regard to the basic assessment in the *Tankan* survey, as has also been pointed out by Sakai (2019), the extent of deterioration in the Business Conditions DI of nonmanufacturers was limited and the overall figure remained strong, with firms’ earnings forecasts and fixed investment projections remaining firm. Also, in addition to the basic assessment of the economy based on the CI coincident index, the government

uses the historical DI when finally determining the official turning point of the business cycle (the Committee for Business Cycle Indicators determines the peak and trough of a business cycle). But the basic assessment based on the CI coincident index and the business cycle's turning point determined based on the historical DI are not necessarily consistent.

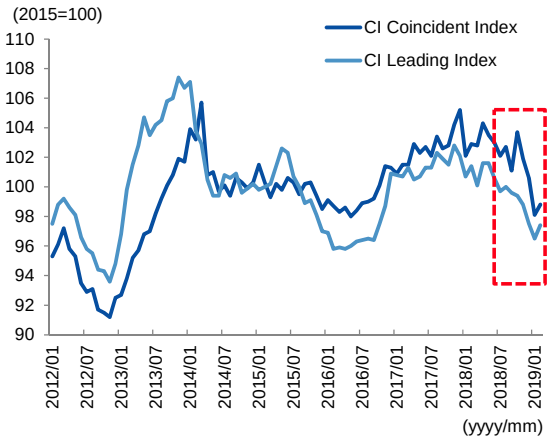
In this report, we will analyze the data compiled in the *Tankan* survey by industry, which are more detailed than the data referred to by Sakai (2019), in order to deepen our interpretation of the March 2019 *Tankan* survey. At the same time, we will consider the possibility of an economic recession by estimating the historical DI.

Chart 1: Export volume and industrial production



Note: The Industrial Production Index is published seasonally adjusted data (data for March 2019 is data amended by the Ministry of Economy, Trade and Industry), and the Export Volume Index is seasonally adjusted data by MHRI. Both data are three-month backward moving averages.
Source: Made by MHRI based upon the Ministry of Finance and Ministry of Economy, Trade and Industry.

Chart 2: Indexes of economic conditions



Source: Made by MHRI based on Cabinet Office, Indexes of Business Conditions.

1. Detailed review of the Bank of Japan's *Tankan* survey (March) – Business plans are supported by firms' expectation that the business cycle will bottom out

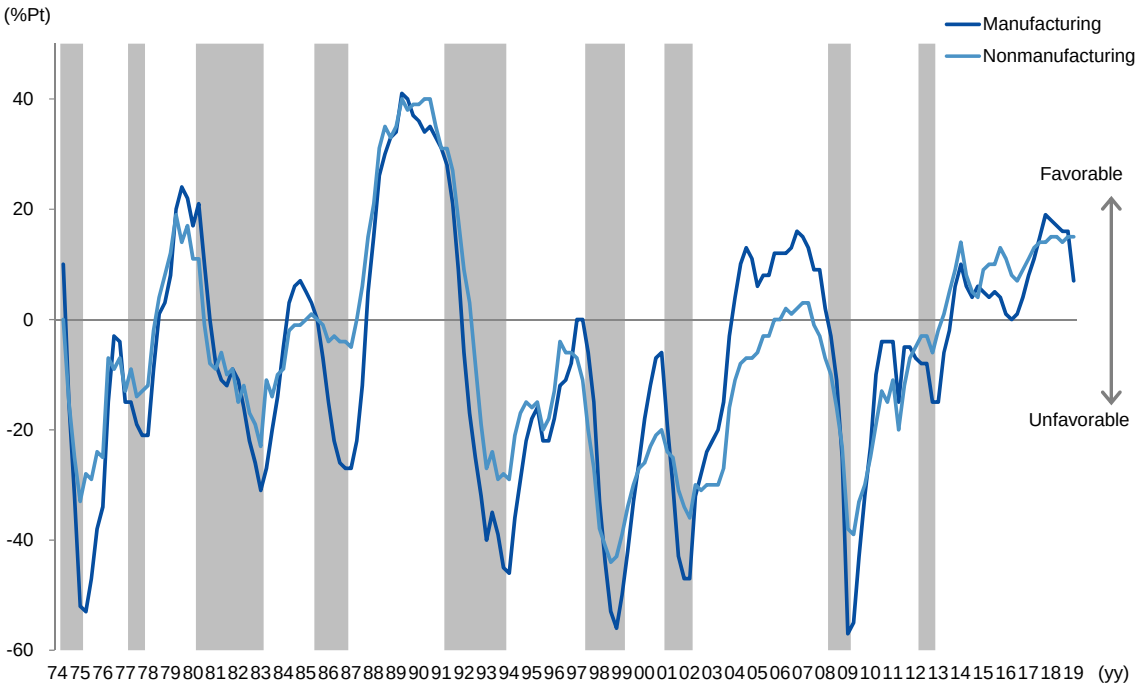
(1) Current position viewed from a long-term time series data perspective – High level maintained by nonmanufacturers reflects firm domestic demand

In this section, we will confirm the current position of the Business Conditions DI in the Bank of Japan's *Tankan* survey from a long-term perspective. Looking at the long-term time series data of all company sizes,[1] economic recessions in the past showed many cases where the Business Conditions DI for both manufacturing and

[1] The Bank of Japan reexamined the industry classification and expanded the scope of sectors covered in the *Tankan* survey in 2004. Here, with a view to confirming the long-term movement, we extracted the data of all company sizes and not only the data of large-sized companies as generally referred to.

non-manufacturing sectors dropped significantly (**Chart 3**). But in the recent March *Tankan* survey, as we pointed out in the earlier section, non-manufacturing sector data remained strong suggesting that domestic demand continues to be firm, albeit external demand is weakening. This should be a positive factor when evaluating this time's survey.

Chart 3: Long-term time series of the Business Conditions DI



Note: Includes enterprises of all sizes. Highlighted parts show a recessionary phase.
Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

(2) Deterioration in recent and future business sentiment is due more to the decline in "improving" than the increase in "worsening"

Next, we study the trend of business conditions of manufacturing firms. The degree of deterioration of large manufacturing firms' Business Conditions DI (-7%Pt) was about as large as in December 2012 (-9%Pt) and in March 2016 (-6%Pt), showing that firms' business sentiment is certainly worsening. However, the DI (%Pt) is derived by asking sample enterprises to judge the business condition that best describes their present and future conditions from "favorable," "not so favorable" and "unfavorable," and then subtracting the ratio (%) of companies that answered "unfavorable" from those that answered "favorable." This means that the DI can decrease via two routes: (1) when the ratio of companies answering "favorable" declines, or (2) when the ratio of firms answering "unfavorable" increases.

Chart 4 depicts the breakdown of these two contributing factors to explain changes in

the Business Conditions DI. The chart tells us that the main factor behind the decline in the "recent" Business Conditions DI of March 2019 was a drop in the ratio of firms that answered "favorable" (5%Pt contribution), rather than an increase in the ratio that answered "unfavorable" (2%Pt contribution). The decline in the June 2019 forecast of the leading Business Conditions DI was also mainly attributable to a decrease in the ratio of companies that answered "favorable" (5%Pt contribution), since the ratio of enterprises answering "unfavorable" declined. This reflects the situation where companies are shifting their judgements from "favorable" to "not so favorable" amid the mounting uncertainty surrounding various trade issues, but their judgements have not gone as far as "unfavorable." Although the mindset of companies is definitely weakening, we need to be alert to the fact that this is different from the typical image of "deterioration" rumored in the market.

(3) Fixed investment appetite is firm even in industries where the business sentiment is clearly deteriorating

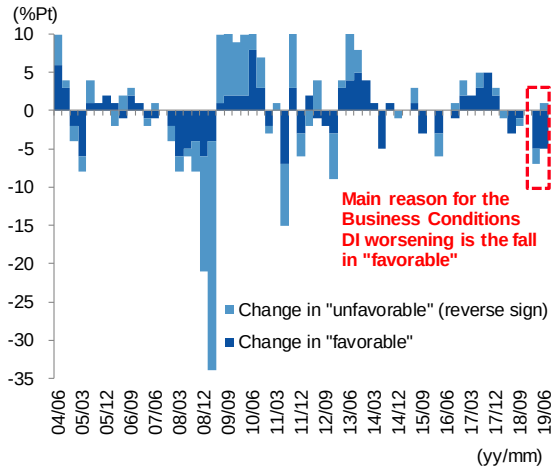
Now we analyze the situation in more detail using the *Tankan* survey's data by industry. If we focus on industries where the Business Conditions DI is particularly deteriorating, it is noteworthy that general-purpose machinery substantially worsened (the degree of decline was -27%Pt, the biggest DI drop since the outset of the survey by industry in March 2010) due to the slowdown in overseas fixed investment demand centered on China. In the processing industry, the degree of decline was also big for electrical machinery (-12%Pt) mainly due to the slump in electronic parts and devices. In the basic material industry, nonferrous metals (-21%Pt) and processed metals (-10%Pt) deteriorated significantly, and this was attributable not only to slack demand affected by the slowdown in China's economy but also deteriorating market conditions.

Chart 5 compares the degree of deterioration in the Business Conditions DI of large manufacturing companies in this time's survey with the downturn reflected in the March 2016 survey, which is the most recent survey showing a similar degree of deterioration as this time's survey. The March 2016 survey was conducted when the global economy was said to be in soft patch because of the economic slowdown in emerging countries, including China. Mizuho Research Institute (2018) and (2019) has pointed out that the current economic situation (sluggish Chinese economy, peaking out of the IT cycle, and European political concerns, among others) is similar to the worldwide economic slowdown experienced in 2015 and 2016.

Looking at **Chart 5**, the degree of deterioration is particularly notable in such sectors as general-purpose machinery, electric machinery, nonferrous metals, processed metals, petroleum and coal products, and pulp and paper. General-purpose machinery is used to

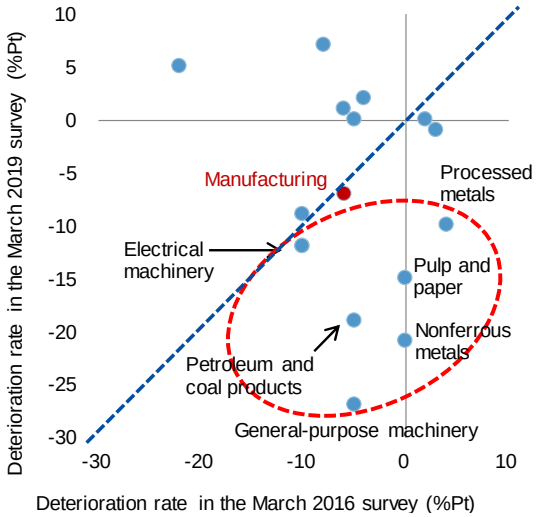
manufacture parts for a variety of products such as semiconductors, and it seems that a decline in orders from China and Europe has caused the DI to worsen. For electrical machinery, an acute adjustment of production and inventory driven by a downward revision in the demand outlook for various products due to trade tensions between the US and China seems to have triggered a deterioration in business conditions. It should be noted that while the impact of production and inventory adjustments in the first half of 2016 was temporary, we hold that this time's adjustment is different in view of the significant downward revision in the demand outlook itself and the presence of uncertainty over the final outcome of the worldwide supply chains. In the pulp and paper sector, we believe that business conditions have worsened temporarily as a reaction to the hurried purchases of printing and information paper whose prices will be subject to significant increases from shipments in 2019 as announced by leading paper companies. Also, while the 2016 Business Conditions DI also worsened in the iron and steel and automobile sectors, we did not see a deteriorating trend in these sectors in the most recent survey.

Chart 4: Contribution breakdown of Business Conditions DI



Note: Data for the quarter ended June 2019 is forecast.
Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

Chart 5: The degree of change in business conditions judgment by sector



Note: Data of large enterprises. Dotted line represents the 45-degree line.
Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

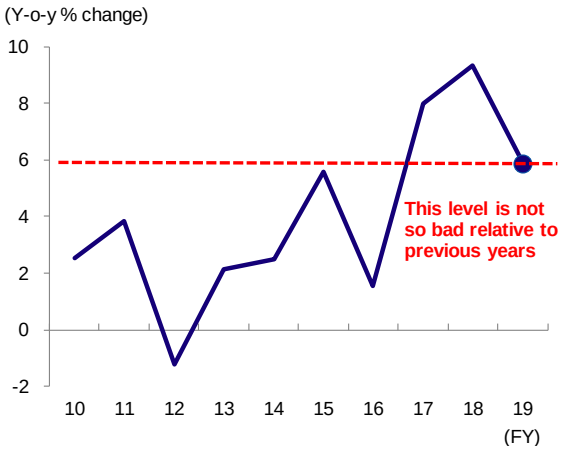
Next, **Chart 6** shows the time series data of the fixed investment projections (large enterprises, as of the March survey) of the above six sectors. The fixed investment projections for FY2019 stood at a year-on-year increase of 5.9%. Although this figure is weaker than the figures in FY2017 and FY2018, when the capex trend was more buoyant,

it should be evaluated as not so bad relative to the trends in recent years. The appetite for fixed investment is firm even in sectors where business sentiment is notably worsening. We can say that the relatively strong fixed investment appetite despite the slack Business Conditions DI figures is a positive factor for the Japanese economy going forward.

(4) Expectation that Japan's economy will bottom out in the latter half of this fiscal year supports firms' investment appetite

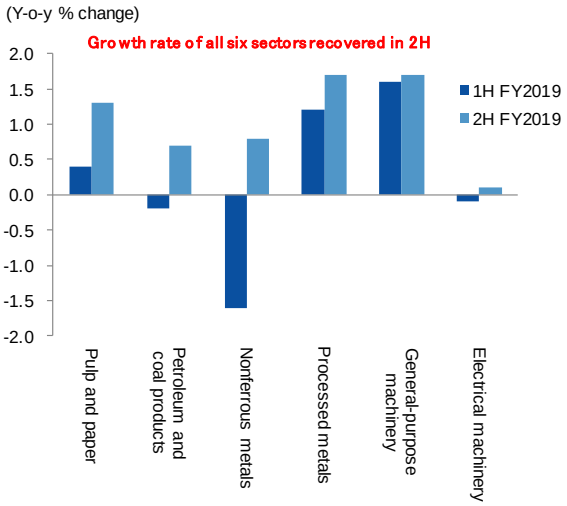
Why are companies retaining a robust fixed investment appetite despite the drop in the Business Conditions DI? **Chart 7** shows the sales forecast of the six sectors for the first and second halves of FY2019. The chart reveals that all six sectors expect their sales growth to pick up in the latter half of the year, and none of them anticipate further weakening of their business performance. Hence, the expectation that the economy will bottom out in the latter half of the year lies behind their capex plans.

Chart 6: Fixed investment plan in six sectors where business sentiment is worsening



Note: Data of large enterprises. Fixed investment projections include the acquisition of land but exclude the purchase of software and R&D costs. We added up the actual value of fixed investment (projections) of the six sectors of general-purpose machinery, electrical machinery, nonferrous metals, processed metals, petroleum and coal products, and pulp and paper in the March survey each year and calculated the year-on-year change rate by dividing by the previous fiscal year's projected figure.
Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

Chart 7: Sales forecast (first and latter half of fiscal 2019)



Note: Data of large enterprises.
Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

We certainly need to be alert to the fact that the economy bottoming out in the latter

half of the year will require certain preconditions. We have listed five main preconditions for the economy to bottom out in **Chart 8** and look briefly at each in the following section.

The first precondition is to avoid an escalation of trade tensions between the US and China. As the US and Chinese economies are inseparably linked, we expect a scenario where the two nations reach a compromise at some point. However, since the US and China trade war involves a variety of issues such as technological supremacy, a settlement will be hard to come by, and friction between the two trading partners may continue longer than expected.

The second precondition is the Chinese economy bottoming out in the middle of this fiscal year driven by economic measures. China's government announced a four trillion yuan economic package centered on tax reductions and infrastructure investment. The government also lowered the reserve ratio and strengthened the fund supply for small businesses in the private sector. These measures have taken effect recently. On the other hand, we need to look cautiously at the real uncertainty surrounding the Chinese economy encumbered by various structural problems.

The third is the steady performance of domestic demand reflecting a favorable job environment actually surfacing in the Business Conditions DI of non-manufacturing companies, and we expect the non-manufacturing sector to compensate for the slump in the manufacturing sector for a while. Although the consumption tax hike is scheduled in October 2019, we anticipate that various income support measures, including a reduced tax rate, free education, a point return system, and so forth, will offset the downward pressure on consumption.

The fourth is the easing of adjustment pressure in the semiconductor market by the latter half of the year. While the market entered an adjustment phase in the latter half of last year, we assume that future semiconductor demand will be strong by virtue of 5G, data centers, and automatic driving devices, among other factors. Nonetheless, as seen in the Huawei issue, the trend to prevent the flow of American technology to China may hinder the full-fledged dissemination of 5G, and this will

Chart 8: Preconditions for the economy to bottom out

(1)	**Avoidance of further escalation of trade tensions between the US and China**
(2)	**Bottoming out of China's economy supported by economic measures**
(3)	**Steady domestic demand reflecting a favorable job environment**
(4)	**Easing of adjustment pressure in the semiconductor market**
(5)	**Foreign exchange trend (assumed USD/JPY rate: 108.87 yen)**

Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

serve as a risk factor for this scenario.

The fifth important precondition involves developments in the foreign exchange market. The assumed foreign exchange rate of large enterprises/manufacturing sector for FY2019 was 108.87 yen in the March survey, which is a little higher than the recent trend. We believe this rate was set because of the difficulty of imagining a depreciating yen as a result of the widening gap in US-Japan interest rates, since the FRB has stopped raising interest rates and shifted its position to a wait-and-see approach. Also, as the global economy is expected to slow down toward the latter half of the year, we believe the Bank of Japan has forecasted the yen to move higher. However, as Noguchi, et al. (2019) points out, there is a risk that the foreign exchange market may suddenly shift to a stronger yen should the introduction of foreign exchange provisions be requested during the Trade Agreement on goods (TAG) negotiations between the US and Japan scheduled in the future.

If the five preconditions outlined above are not met for various reasons, such as intensification of trade tensions between the US and China, further slowdown of China's economy, longer-than expected slump in IT demand centered on semiconductors, and unexpected strengthening of the yen, this may trigger not only a further worsening of business sentiment but also a downward revision of firms' earnings and fixed investment projections. We need to keep these risk factors in mind.

(5) "Delay in the timing of bottoming out" rather than "economic recession"

Thus far we have looked at the *Tankan* survey in detail. Amid the rising uncertainty over trade issues, we are certainly observing a weakening of the business sentiment. But we have also seen that it is too early to worry that the economy will enter a recession. As seen in the long-term time series data, the level of the Business Conditions DI remains strong centered on the non-manufacturing sector, and companies' financial position continues to be resilient. We expect that firms' fixed investment projections are robust enough to support the economy going forward. Even if exports and production continue to soften and the basic judgment is mechanically revised to "worsening" based on the criteria of the CI coincident index, we believe the Bank of Japan will say that "the timing of bottoming out will be delayed" rather than "the economy has entered a recession." Our conclusion for the time being is that we can at least avoid a serious adjustment in the economy.

Nonetheless, if the above preconditions collapse to a great extent and fixed investment stalls (also in relation to the historical DI as will be explained in the later section), the possibility of entering a recession will rise significantly.

2. Analysis of the risk of economic recession based on the historical DI estimate

(1) Outline of the historical DI

In this section, we study the risk of economic recession based on the historical DI used by the government to officially determine the turning point (peak and trough) of the business cycle.

The outline of the historical DI is well explained by Tokuda (2015). It employs the same indices as the CI,[2] sets the peak and trough for each indicator, and is computed as a ratio of indices in an expansionary phase (period between trough and peak). Basically, the month right before the ratio falls below 50% becomes the economy's peak, and the month right before the ratio exceeds 50% is the economy's trough.

However, for determining an economic recession (determination of the business cycle's peak), a historical DI under 50% will not suffice for the judgment, and it needs to fulfill the additional criteria of the "three Ds," namely, (1) degree of "diffusion" (the contraction of economic activities diffuses to most economic divisions. The yardstick is the historical DI falling to nearly 0%); (2) quantitative change ("depth") (the CI coincident indices drop significantly. The yardstick is the CI coincident indices dropping by the same rate or higher compared with past relatively mild falls in the CI during a recessionary phase); and (3) "duration" of economic recession (the period of economic recession is not too short. The threshold is 5 months or longer after the most recent economic peak (trough) and 15 months or longer after the previous economic peak (trough). Each of these three judgment criteria must be fulfilled.[3]

(2) Estimate result of the historical DI and risk of Japan's economic recession

The Cabinet Office had announced the historical DI from December 2012 to October 2018 at the time of writing this report (75% as of October 2018[4]). Since calculation of the historical DI uses various moving average figures (for example, the 15-month weighted moving average), data after 2018 are scheduled to be revised retroactively. In this report, we estimated the historical DI up until present by referring to Tokuda (2015),[5] reflecting

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[2] The currently employed indicators are the Index of Industrial Production (Mining and Manufacturing), Index of Producer's Shipments (Producer Goods for Mining and Manufacturing), Index of Producer's Shipments of Durable Consumer Goods, Index of Non-Scheduled Worked Hours, Index of Producer's Shipments (Investment Goods), Retail Sales Value, Wholesale Sales Value, Operating Profits, and Effective Job Offer Rate.

[3] Refer to the 17th Committee for Business Cycle Indicators (held on June 15, 2017), committee material 1.

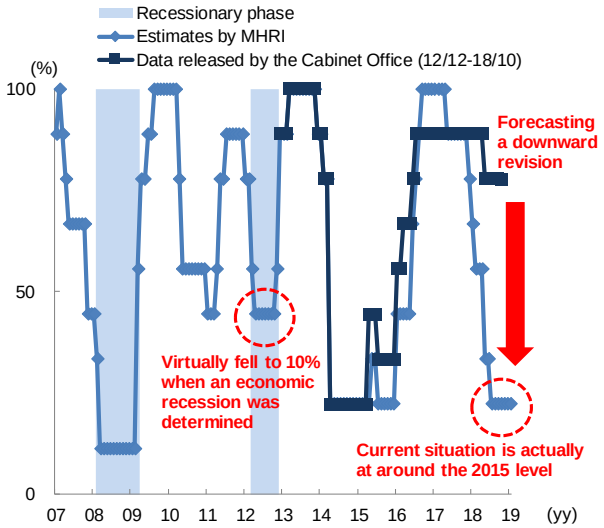
[4] Refer to the 18th Committee for Business Cycle Indicators (held on December 13, 2018), committee material 2. A minus assessment was made for the two indicators of the Index of Producer's Shipments of Durable Consumer Goods and Wholesale Sales Value (change from the previous year). (The indices in October were calculated using eight indicators that exclude Operating Profits.)

[5] Tokuda (2015) estimated the historical DI using a program based on the statistical software "Gauss" created by Professor Mark Watson. It should be noted that in Chart 9, the figures announced by the Cabinet Office and those calculated by MHRI differed in part even before 2017, but this was mainly because the Index of Non-Scheduled Worked Hours, which is one of the coincident indices, was revised in February 2019. The MHRI estimate was calculated after the revision, but the figure computed by the Cabinet Office was calculated based on data as of December 2018 before the revision. Attention must be paid to several other differences in the detailed assumptions of the calculation process, which resulted in slight deviations in the estimates made by MHRI and the

the most recently announced data at the time of writing this report and applying the MHRI estimates for data beyond than that.

Chart 9 depicts the estimate results and reveals that the historical DI will be subject to a significant downward revision from the figure disclosed by the Cabinet Office. According to our estimate, the historical DI came under 50% as of May 2018 and lowered to 22% in January 2019, the most recent timing. This level is similar to that in around 2015 when the economy was stagnant. (We need to pay attention to the fact that we estimated the data using the currently employed set of indicators which differ from those used to judge the peak and trough of business cycles in the past. When the government declared a recession in 2012, the lowest value of the historical DI at that time was around the 20% level. But of the indicators without a peak, the Industrial Production Index fell to almost the same level as the other set of indicators with peaks, and the government decided that the historical DI virtually fell to the 10% level.[6])

Chart 9: Estimate of the historical DI



Note: The figures estimated by MHRI are calculated based on the economic outlook compiled by MHRI. Our estimates are calculated using the currently employed indicators; attention must be paid to the fact that they differ from the data employed when a business cycle's peak and trough were determined in the past.
Source: Made by MHRI based on Cabinet Office, Working Group of Indexes of Business Conditions

What matters here is whether the government actually determines that the economy has entered a recession with this result. Here we would like to review the situation in line with the above three judgment criteria. With regard to criterion (3) "duration of economic recession," it fulfills the condition since the time of entering a recession is 5 months after the latest peak and more than 15 months after the trough (April 2018). For criterion (2) "quantitative change," the CI coincident index fell by -6% compared with the time assumed to be the peak (April 2018) as of January 2019. In past recessionary phases, the decline rates ranged from -3.4% to -33.8%. Considering that the Committee for Business Cycle Indicators in June 2017 did not determine an economic recession with a decline

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Cabinet Office.

[6] Refer to footnote 7 in Tokuda (2015). It should be mentioned that the number of indicators employed in the historical DI to judge an economic recession in 2012 (the 15th cycle) was bigger than at present (9 indicators are employed) (11 indicators were employed in the provisional determination, and 10 indicators in the final determination). So, we need to be careful when making a comparison with past determinations.

rate of -6% after the consumption tax hike in 2014 (April 2014 to February 2016), the current rate may not suffice for declaring an economic recession. Lastly, concerning criterion (1) "diffusion," in light of the recent historical DI maintaining a 20% level, it is highly likely that the judgement requirements will not be met.

When the government actually determines the peak and trough of a business cycle, it also refers to the real GDP trend and business perception described in the Bank of Japan's *Tankan* survey, in addition to the historical DI, and then makes a comprehensive judgement. In view of our analysis made in this and previous sections, we hold that no judgement of an economic recession will be made at this point in time.

It should be mentioned that for "diffusion," the two indicators of Index of Producer's Shipments (Investment Goods) and Effective Job Offer Rate are used as positive assessment. The latter indicator is expected to remain favorable in view of the ongoing strength of the job market. But the Index of Producer's Shipments (Investment Goods) may move downward depending on developments in fixed investment.[7] If the trend of fixed investment weakens affected by escalating US-China tensions, the possibility of judging an economic recession based on the historical DI will skyrocket.[8] This is similar to the discussion made in the previous section on company assumptions in the *Tankan* survey.

Furthermore, attention must be paid that the above estimate results may vary depending on the outcome of indicators or statistical revisions announced in the future.

3. Key factor is the trend of fixed investment – Current trend is upbeat with low pressure of adjustment

As explained in the earlier sections, since the job environment is expected to remain buoyant in the future, the trend of fixed investment will likely be a determining factor in judging the outset of an economic recession.

For fixed investment, as pointed out in Sakamoto and Sakai (2019), its ratios against GDP and capital stock have renewed past records, suggesting a mounting pressure of adjustment from an empirical viewpoint. For this reason, we studied the degree of adjustment pressure using the same methodology employed by Sakamoto and Sakai (2019). More specifically, we used the Financial Statements Statistics of Corporations by

[7] Private-sector machinery orders, excluding volatile ones for ships and those from electric power companies, rose in February by +1.8% from the previous month, marking the first positive growth over the past four months. But this was not enough to compensate for the drop in January (-5.4% on a month-to-month basis), and we are concerned about the current sluggish trend.

[8] It should be noted that the Cabinet Office announced that when changing the indicators employed in the Indexes of Business Conditions in the future, such changes shall be made when determining the business cycle's peak or trough (including provisional determination), and when the peak of the 16th cycle is provisionally decided, the Export Volume Index (on a seasonally adjusted basis) will be newly added to the coincident index. Hence, we need to take note that the number of indicators employed in the historical DI will increase when determining the peak of the 16th cycle. Even in the case where the Export Volume Index is subject to a minus assessment, we estimate that the historical DI will continue to be 20% if our estimate this time is correct.

Industry compiled the Ministry of Finance, applied the CF filter to the quarterly data (October to December 2018) of fixed investment (all industries excluding finance and insurance, seasonally adjusted data excluding software), and extracted the trend components.[9] (We employed an indicator that excludes software to make it consistent with the coverage of the Index of Producer's Shipments (Investment Goods) used in the historical DI.)

Charts 10 and 11 show a comparison of the extracted trend components and the movement of actual data. The trend component is on a rising trend in the 2010s on the back of resilient energy-saving investment and renewal investment, which is in line with Sakamoto and Sakai (2019). If we regard the upward shift of fixed investment from the trend line due to current cyclical factors as a proxy variable of adjustment pressure, the adjustment pressure can be assessed as low compared with the time of the bubble economy and before the Lehman Shock (the deviation rate from the trend due to cyclical factors was about 5% in 2018, and the reason for deviation was mainly the long-term component). In fact, if we look at the Production Capacity DI (for enterprises of all sizes) in the *Tankan* survey, even the most recent data (March 2019 survey) continue to be in the "insufficient" territory (**Chart 12**) for both manufacturing and non-manufacturing sectors. This is quite different from the situation of past economic recessions. Even if downward pressure on the economy emerges in the future, we expect that a significant slowdown can be avoided (leading indicators in June are also expected to remain "insufficient"[10]). Our conclusion here is consistent with the robust trend in fixed investment projections in the *Tankan* surveys of FY2018 and FY2019.

In light of the upward movement in the trend factor of fixed investment, as discussed in the first section, fixed investment is expected to perform steadily unless company assumptions prove greatly out of step. And as a result, it is highly likely that Japan's economy will be able to avoid a serious adjustment supported by stable domestic demand, even if a temporary downswing emerges in external demand. The focal point in the near future is whether the Chinese economy and IT demand hit the bottom as companies expect, while domestic demand centered on fixed investment remains resilient.

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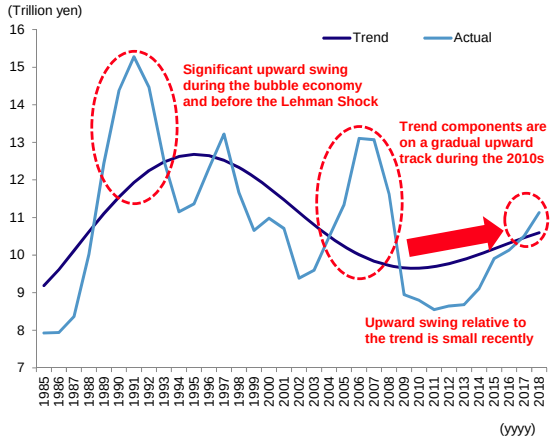
[9] We applied the same definition of period of cyclical factors as Sakamoto and Sakai (2019) and made a short-term component (within 4 years), mid-term component (4 to 11 years), and long-term component (11 to 20 years). The short-term component includes statistical noise in addition to fluctuations due to temporary policy effects. The mid-term component is considered to reflect the business cycle and the replacement cycle of equipment, as well as investment responding to inbound demand. The long-term component includes the replacement cycle of equipment with a long useful life and buildings. The trend component is believed to represent long-term cyclical factors that cannot be grasped by cyclical factors (such as the replacement demand of buildings with a useful life over 20 years) and structural changes (emergence of energy-saving investment due to structural labor shortages).

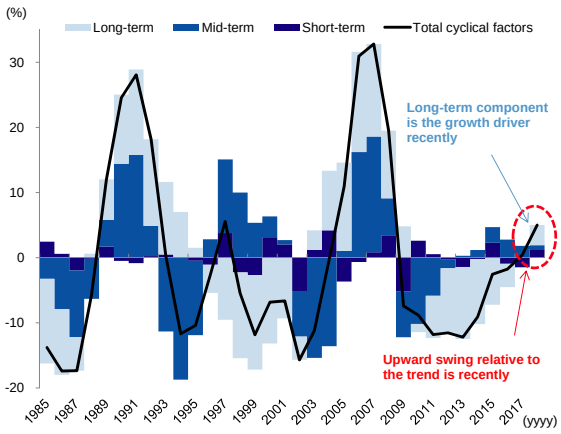
[10] In the March 2019 survey, the leading Production Capacity DI is forecast to be in the insufficient territory at -4%Pt for the manufacturing sector and -6%Pt for the non-manufacturing sector (for enterprises of all sizes).

Chart 10: Actual result of fixed investment and trends



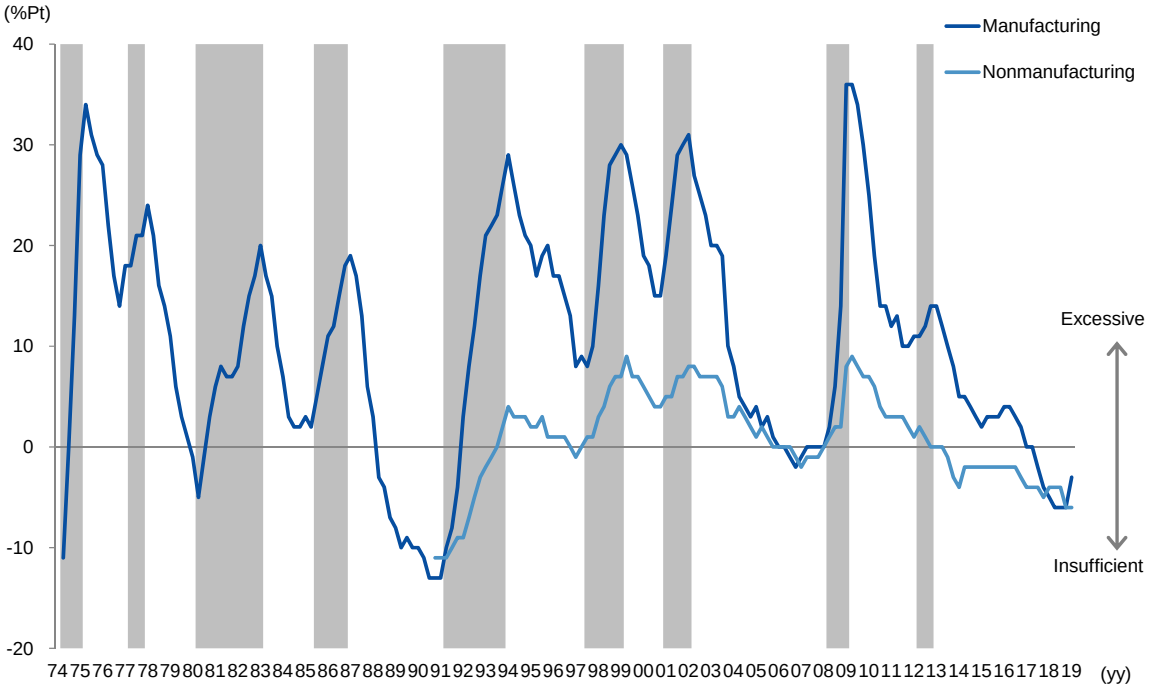
Note: Data on an all-industry (excluding finance and insurance) basis. Fixed investment values are on a seasonally adjusted basis. Data excludes software.
Source: Made by MHRI based upon the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*.

Chart 11: Adjustment pressure of fixed investment



Note: Data on an all-industry (excluding finance and insurance) basis. Fixed investment values are on a seasonally adjusted basis. The graph plots the deviation rate from the trend attributable to cyclical factors.
Source: Made by MHRI based upon the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*.

Chart 12: Long-term time series of the Production Capacity DI



Note: Data above include companies of all sizes. Highlighted parts show a recessionary phase.
Source: Made by MHRI based upon the Bank of Japan, *Short-Term Economic Survey of Enterprises in Japan*.

Refer to the original Japanese report by clicking the URL below for the reference material

https://www.mizuho-ri.co.jp/publication/research/pdf/insight/jp190415.pdf