FY2019 - FY2021 Economic Outlook

Dark clouds gather over the global economic recovery scenario due to the spread of novel coronavirus (COVID-19)

February 20, 2020

Mizuho Research Institute Ltd.

Key points of our outlook

- Despite a slowdown of the global economy in the first half of 2020 due to the novel corona virus (COVID-19), we forecast a global economic recovery from the second half of 2020 through 2021. Even so, as our forecast is based upon the assumption that COVID-19 will peak in March and end in June, it will be necessary to monitor the developments.
- Standing on the foregoing premises, calculations based upon the international input-output table show that the impact upon the rate of real GDP growth in 2020 would be as follows: global (-0.2%pt), China (-0.5%pt), Japan (-0.1%pt). However, the expected recovery of production to make up for lost production and additional economic stimulus measures, particularly in China, should limit the decline in actual growth.
- Among the risk factors are: China's economic downturn and impact on supply chains caused by the lasting damage of COVID-19, a global economic downturn due to protectionism, a reversal of the credit cycle stemming from the deterioration of economic conditions, and risks regarding the Middle East and rise of crude oil prices.
- Turning to the Japanese economy, both exports and domestic demand are expected to slow down in FY2020, and the rate of GDP growth should turn out to be weak, around the 0% to 0.5% range. However, a gradual recovery is expected in FY2021, as exports are expected to turn upward along with the global economic recovery, and domestic demand is also expected to pick up. There is little concern that the post-Olympics slump of construction investment will cause a serious recession. Construction investment should pick up again on the back of factors including the progress of redevelopment projects.

(1) Overview of our economic forecast: the global economy will slow down in1H2020 due to the impact of novel coronavirus (COVID-19)

- The growth rate for the total of the forecast area is projected to recover in 2021 following two consecutive years of decline in 2019 and 2020. We have downwardly revised our outlook for the first half of 2020 from our outlook in December with particular consideration given to the impact of the novel coronavirus (COVID-19).

Outlook on the global economy

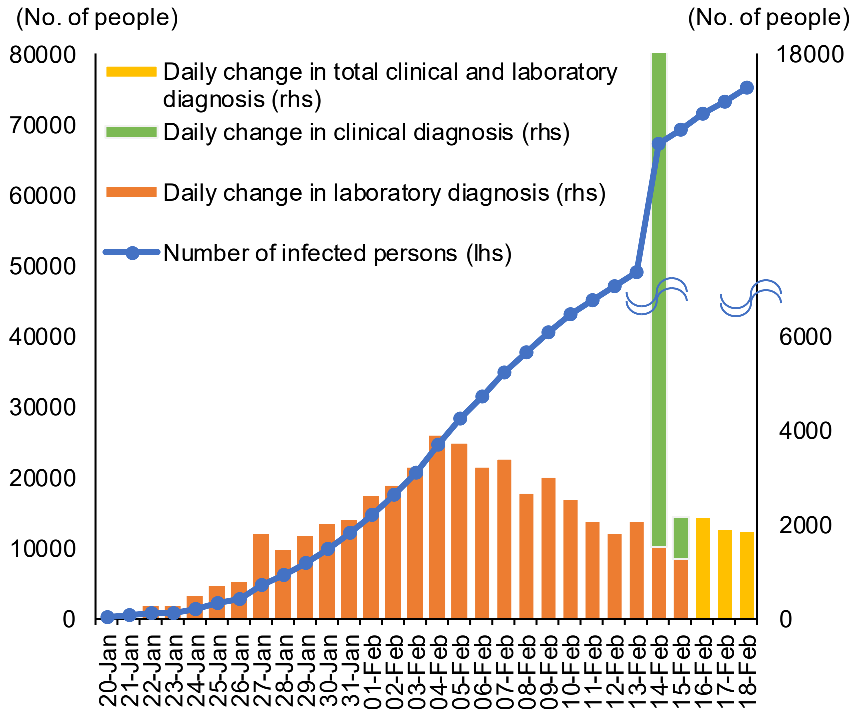
	CY 2016	2017	2018	2019	2020	2021 (Y-o-y % change)	2019 (Forecast in Dec 2019)	2020 (Forecast in Dec 2019) (Y-o-y % change)	2019 (Breadth of change from forecast in Dec 2019)	2020 (Breadth of change from forecast in Dec 2019) (% point)
Total of forecast area	3.5	4.0	4.0	3.2	3.1	3.5	3.2	3.3	-	- 0.2
Japan, US, Eurozone	1.6	2.4	2.1	1.7	1.2	1.5	1.7	1.3	-	- 0.1
US	1.6	2.4	2.9	2.3	1.9	1.8	2.3	1.8	-	0.1
Eurozone	1.9	2.5	1.9	1.2	1.0	1.3	1.2	1.1	-	- 0.1
UK	1.9	1.9	1.3	1.4	1.0	1.3	1.3	1.1	0.1	- 0.1
Japan	0.5	2.2	0.3	0.7	- 0.2	0.9	0.9	0.3	- 0.2	- 0.5
Asia	6.5	6.3	6.2	5.2	5.1	5.5	5.2	5.4	-	- 0.3
China	6.8	6.9	6.7	6.1	5.7	5.9	6.1	5.9	-	- 0.2
NIEs	2.7	3.4	2.8	1.7	1.7	2.2	1.6	1.6	0.1	0.1
ASEAN5	5.0	5.3	5.2	4.8	4.6	5.2	4.8	4.9	-	- 0.3
India	8.7	6.9	7.4	5.0	5.6	6.2	5.1	6.0	- 0.1	- 0.4
Australia	2.8	2.5	2.7	1.8	2.1	2.4	1.8	2.0	-	0.1
Brazil	- 3.3	1.3	1.3	1.1	2.0	2.3	1.0	2.0	0.1	-
Mexico	2.9	2.1	2.1	- 0.1	0.8	1.6	0.1	1.0	- 0.2	- 0.2
Russia	0.3	1.6	2.3	1.3	1.8	1.6	1.0	1.8	0.3	-
Japan (FY)	0.9	1.9	0.3	0.4	0.3	0.7	0.8	0.5	- 0.4	- 0.2

Note: The shaded areas are forecasts. The total of the forecast area is calculated upon the GDP share (PPP) by the IMF
Sources: Made by MHRI based upon releases by the International Monetary Fund (IMF) and statistics of relevant countries and regions

(2) Novel coronavirus (COVID-19): infection is spreading, and the Chinese government implements powerful measures to prevent the spread

- The number of patients with pneumonia caused by the outbreak of the novel coronavirus (COVID-19) in Wuhan City, Hubei Province has surged since late January. On January 31 (Japan time), the World Health Organization (WHO) declared "a public health emergency of international concern (PHEIC)".
  - ■ Although the pace of increase in the number of newly infected people is slowing, there is no allaying the concern that the spread of infections could increase with the resumption of economic activity.
- Successive measures have been implemented to prevent the spread of infection since General Secretary Xi Jinping issued a public order on January 20. This includes the suspension of public transport in Wuhan City and extension of the Chinese New Year holiday as well as restrictions on long-distance transport.

Number of cases of pneumonia due to the novel coronavirus (COVID-19)



Source: Made by MHRI based upon WHO

Measures to prevent the spread of infection implemented by the Chinese government

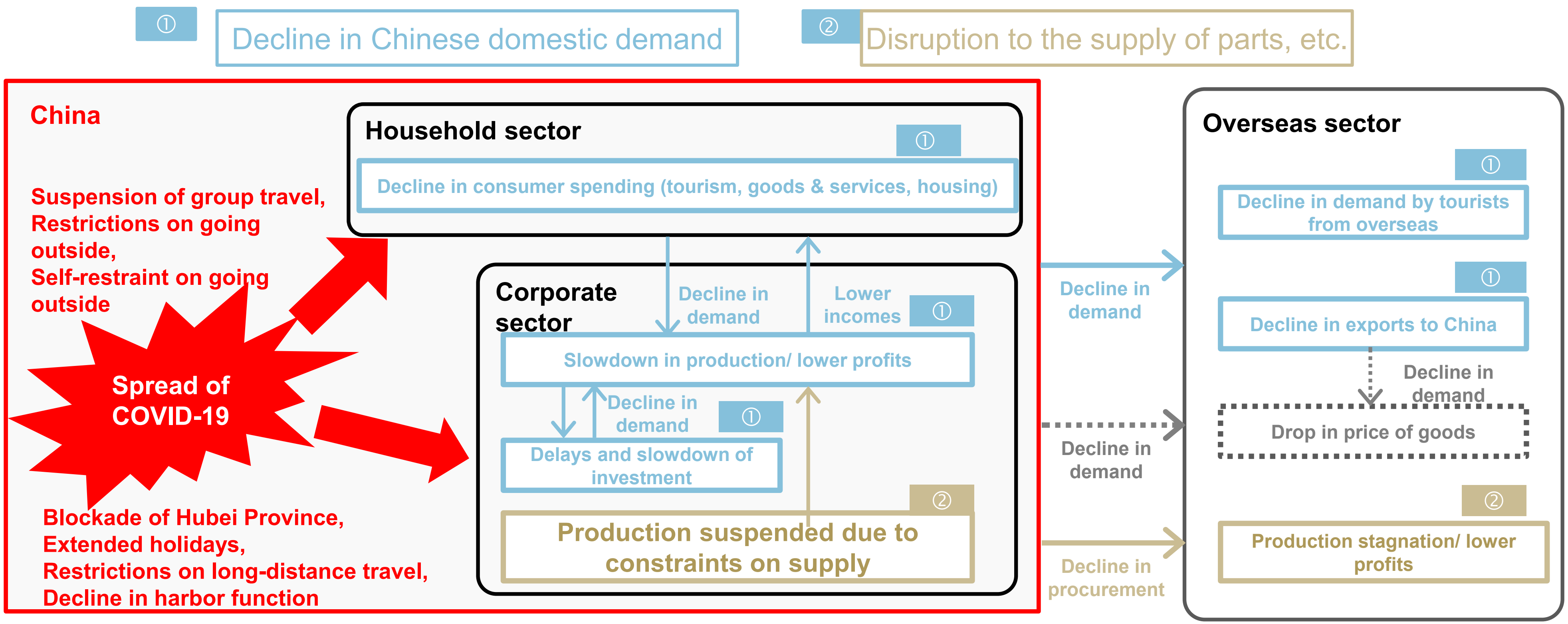
	Key measures
City blockade	Suspension of long-distance transport and transport within cities where the infection originated such as Wuhan City and blockades of the city
Traffic regulations	Reduction in the number of movements on highways
Self isolation	Calls for self isolation away from places where people gather. Some regions restrict dining in groups. Suspension of operations of cultural facilities and New Year events
Travel restrictions	Provisional immediate termination of all group travel including overseas travel and the sale of travel products that package air tickets and accommodation
Extend holidays	Nationwide: Extension of the Chinese New Year holiday period until February 2 (with resumption of business from February 3) Regional: Extension of the period to resume business (mainly resumed from February 10). Even after resumption, recommendation of measures such as working from home

Source: Made by MHRI based upon JETRO Business News and various media reports

Calculation of the economic impact of the novel coronavirus (COVID-19)

- Calculation of the impact from (①) the downturn in domestic demand such as self-restraint on consumer spending (tourism, entertainment and dining, etc.) and postponement of investment as well as (②) the impact from disruption to supply due to restrictions on the flow of goods and people in China, which has become the world's factory.
  - The calculation assumes the downward impact on demand is twice that of SARS and bottoms in March, coming to an end in June. The downward pressure on supply for major industries is anticipated to be 10 to 20% (however, 100% in Hubei Province), based on the impact of the Great East Japan Earthquake, with the period bottoming in February and ending in March.

Channels for the economic impact from the spread of the novel coronavirus (COVID-19)

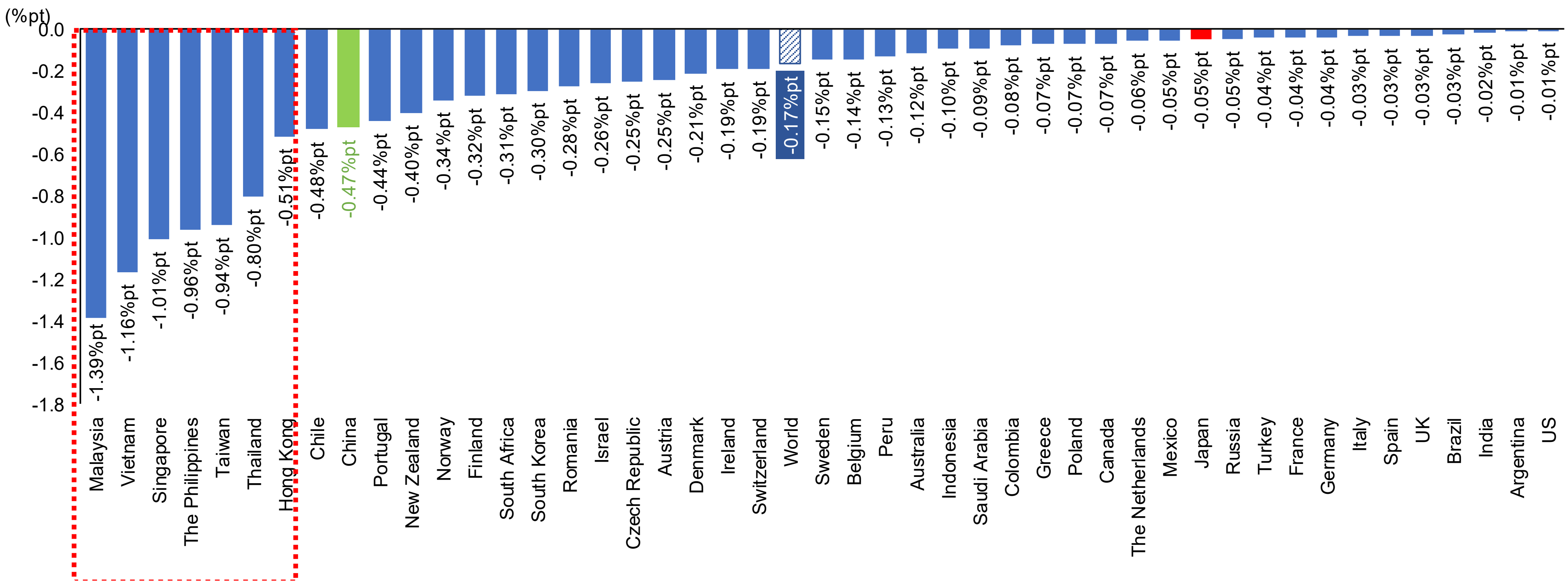


Source: Made by MHRI

Calculations indicate 0.17%pt drop in the global economy and 0.47%pt drop in the Chinese economy

- Calculations that consider the decline in demand and the disruptions to supply according to the international input-output table indicate a 0.17%pt drop in the global economy.
  - The biggest drop in the growth rate is for Malaysia with a drop of 1.39%pt. This is followed by Vietnam, Singapore, the Philippines and Taiwan, with ASEAN and NIES countries largely affected by the disruption to supply.

Rate of downward pressure on GDP (growth rate) by country and region



Note: Countries and regions with GDP of US$250 billion and above
Source: Made by MHRI based upon OECD

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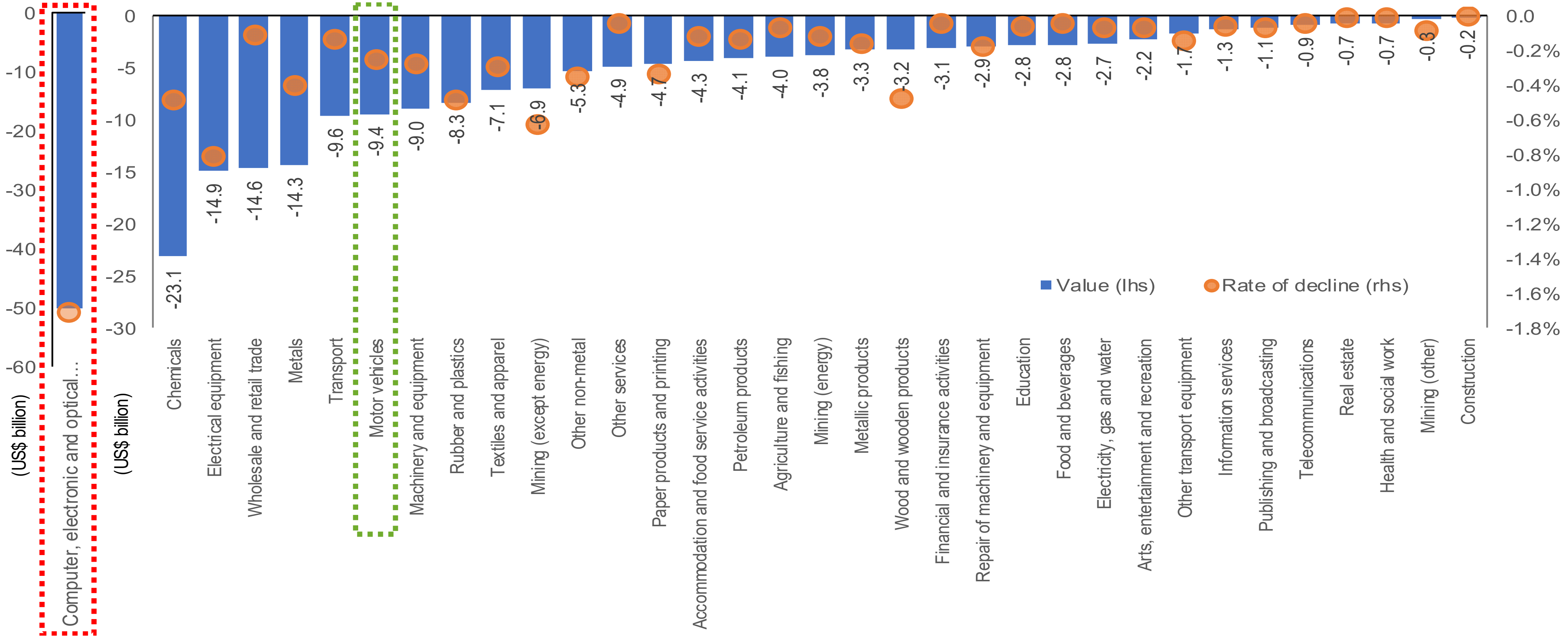
Calculations by industry sector indicate electronic and electrical parts to suffer greatest impact

- The largest decline in output value (= sales) by industry is the US$50.1 billion decline for electronic and electrical parts.
  - This sector also has the largest rate of decline relative to total production amount at -1.53%. This suggests there is a large impact from the supply chain for electronic and electrical parts, which is focused on ASEAN.
  - The US$9.4 billion impact on motor vehicles is smaller than the impact on electronic and electrical parts. One factor is that parts production in China is mainly for the domestic market (However, there is a large impact on some countries such as Thailand).

Value and rate of decline in production by industry

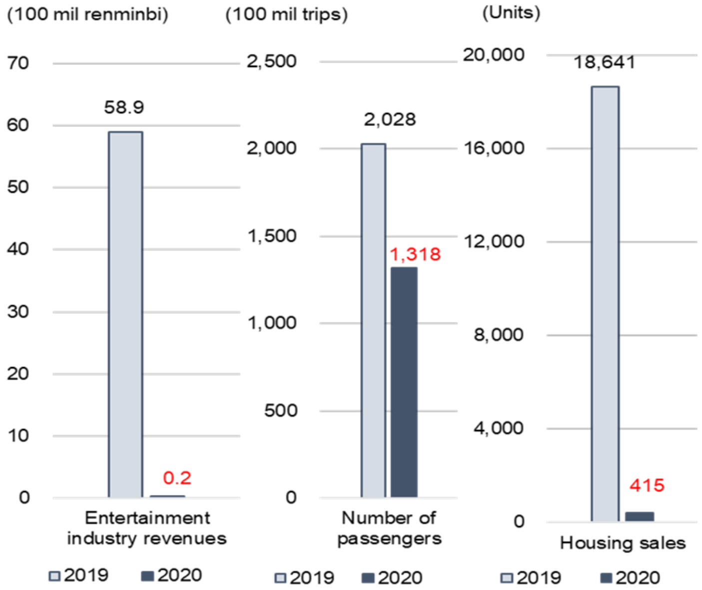


Source: Made by MHRI based upon OECD

China: economic activity declined around the Chinese New Year. Jan-Mar quarter growth rate is anticipated to fall short of +5%

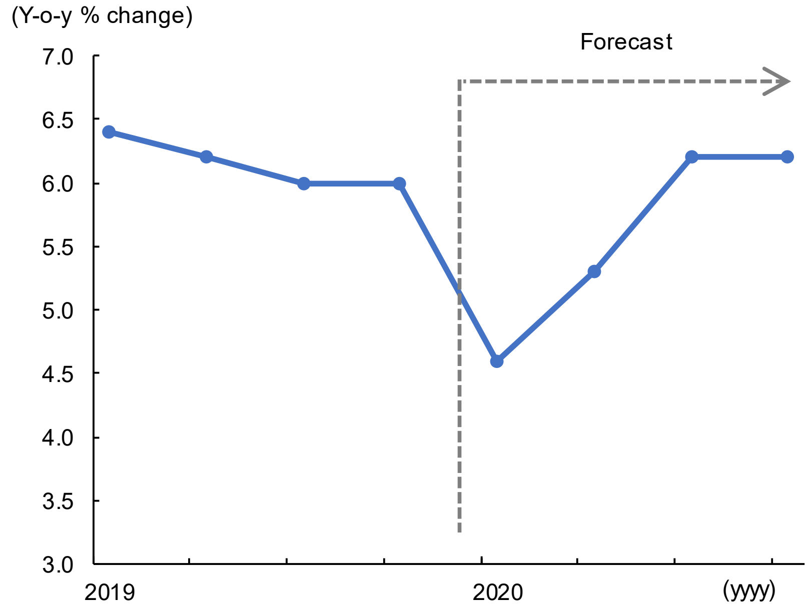
- Economic activity substantially declined around the Chinese New Year due to strong measures to prevent the spread of infection. As a quick recovery in economic activity seems unlikely, the rate of real GDP growth in the Jan-Mar quarter is anticipated to slow to the +4%-level.
- We have downwardly revised our outlook for full-year growth from our outlook in December (+5.9%) by 0.47%pt on the assumption that the novel coronavirus (COVID-19) will come to an end in June and without factoring in any economic stimulus measures. However, based on expectations that there will be additional economic stimulus measures such as increased infrastructure investment and promotion of capital investment, we forecast a slowdown to +5.7%.

State of key economic activities during and following the Chinese New Year



Note: Entertainment industry revenues are the total during the New Year holiday period (February 4 to 10 in 2019 and January 24 to 30 in 2020). The number of passengers during the New Year period is the total up until the 27th (January 21 to February 16 in 2019, January 10 to February 5 in 2020). Housing sales are for the seven days following the New Year holiday period (February 11 to 17 in 2019, January 31 to February 6 in 2020. The 2020 New Year period is the originally anticipated period, whereas in fact the period was actually extended until February 2.
Source: Made by MHRI based upon Ministry of Transport, China, various media reports and wind

Outlook for China's real GDP growth rate (assuming no economic stimulus measures)



Note: The figure for the Jan-Mar quarter assumes the consumer spending such as on transport, dining, education, culture and entertainment, and overseas travel will decline by twice the level at the time of the SARS outbreak and the business activity such as investment and trade will be suspended or delayed. The figure from April assumes a gradual recovery in economic activity with normalization or restoration of lost production from the second half of the year.
Source: Made by MHRI based upon National Bureau of Statistics, China

Chinese government announces measures to support financial and economic stability

- The Chinese government has announced successive measures to stabilize the economy and financial situation and the labor market, with a focus on supporting the financial positions of small companies and manufacturers of medical products. Initiatives are also being strengthened for companies to resume business and production.

Policies announced since February 2020

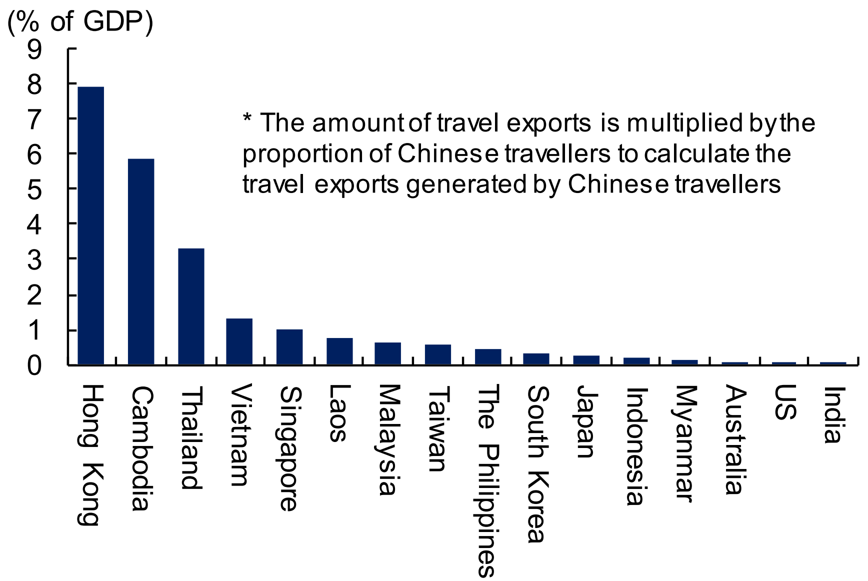
Area	Key policies
Monetary policy	・The 5 Monetary Authority Divisions* announced policies to deal with 30 monetary aspects (Feb 1) (Supply adequate liquidity, refinance, prevent withdrawal of loans and reluctance to lend to impacted companies, etc.) ・The People's Bank of China to **refinance 300 billion renminbi** (Feb 1). Issued instructions to keep market lending rates below 3.15% (LPR rate is 4.15%) ・**Liquidity supply (1.2 trillion renminbi (Feb 3) + 0.5 trillion renminbi (Feb 4))** ・**Cut the (7-day and 14-day) reverse repo rates** (Feb 3) ・**Suspension of night time futures trading and short selling** from February 3 (Feb 2) ・Moves to lower the interest rates on loans to small companies at major banks and regional banks ・Monetary Authorities in regional areas such as Shanghai announce intent to **loosen "tolerance levels" for non-performing loans** ・**Cut MLF interest rate** (3.25%→ 3.15%, Feb 17)
Tax and fiscal measures	・**Subsidized interest payments** (50% of the lending rate for refinancing. Anticipate real interest rate burden of below 1.6%) and enhanced credit guarantee service (simplified and more efficient administration, special proxy repayments, etc.) ・Regions that meet the criteria to secure funds to compensate for lending risk, promoting **compensation for the portion of loans** by financial institutions **to small companies which have become non-performing** ・Regional governments (Suzhou, Shanghai, Beijing) to reduce the cost burden, particularly for small companies (**Postpone payment of social insurance premiums, tax exemptions and postponed payments,** rent reductions or exemptions, etc.) ・**Additional 800 billion renminbi in advanced issuance of local government bonds** (total of about 1.85 trillion renminbi, of which 1.29 trillion renminbi is local government bonds)
Employment	・Ease restrictions with partial refunds of unemployment insurance premiums to companies that maintain employment ・Introduce nearby employers to farmers who have constraints on moving long distances and job creation by the government

Note: The 5 Monetary Authority Divisions refers to the People's Bank of China, State Administration of Foreign Exchange (SAFE), China Insurance Regulatory Commission (CIRC), The China Securities Regulatory Commission (CSRC) and the China Banking Regulatory Commission (CBRC)
Source: Made by MHRI based upon Chinese government and various media reports

Asia: in addition to the impact from fewer Chinese tourists, there are also concerns about the impact on the supply chain

- Looking at travel receipts as a proportion of GDP generated by Chinese nationals in 2018, the level is high for Hong Kong, Cambodia, Thailand and Vietnam. The decline in Chinese tourists will have a negative economic impact.
- Countries in Asia have set measures at their borders, prohibiting entry from China as well as other restrictions. Even though the spread of infected persons in each Asian country is limited compared to within China, further measures are likely given the uncertain outlook.
- As forecast, there is a large impact on Asian supply chains. There is downside risk for the short term and the possibility that the transfer of production will accelerate over the medium term.

Travel exports generated by Chinese travelers (vs. GDP, 2018)



Source: Made by MHRI based upon statistics of relevant countries and regions

Measures taken in response by the countries in Asia

Country	Measures taken in response
South Korea	• Restrictions on entry to country by foreigners etc. who have visited Hubei Province • Immigration checks strengthened such as curbing the supply of tourist visas • Call for self-restraint on travel to Japan, Singapore, Malaysia, Vietnam, Thailand and Taiwan
Taiwan	• Suspends passenger flights to China, apart from four cities such as Beijing from February 10 to April 29 • Suspends operation of cruise ships from February 10 • Total ban of Chinese tourists entering the country from February 6 • Ban on entry by foreigners who have a history of staying or travelling to China, Hong Kong or Macao during the past 2 weeks
Hong Kong	• Closed 10 out of a total 14 border check points linking mainland China and Hong Kong • Compulsory stay at quarantine centre for citizens who have stayed in Hubei Province • 14 days of home isolation with requirement to wear a mask if going outside for citizens who have stayed in places in China other than Hubei Province
Singapore	• Prohibition of entry by persons who have travelled in China, including transit, during the past 14 days • Compulsory follow-up observation for 14 days following return to Singapore for residents who have travelled to China
Malaysia	• Ban on entry by foreigners who have travelled to Hubei Province, five cities in Zhejiang Province and two cities in Jiangsu Province within the past 14 days

Source: Made by MHRI based upon various media reports

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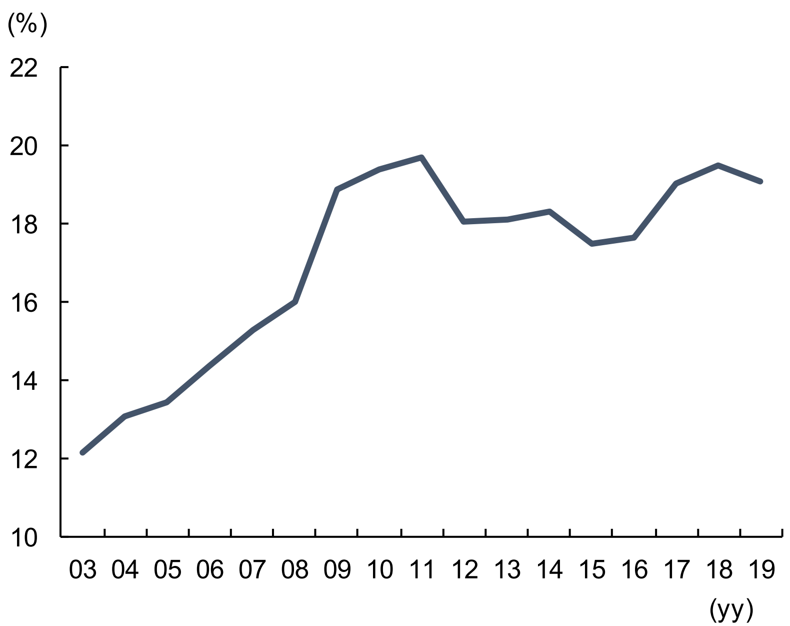
Japan: larger impact than SARS due to increase in exports of goods to China and inbound

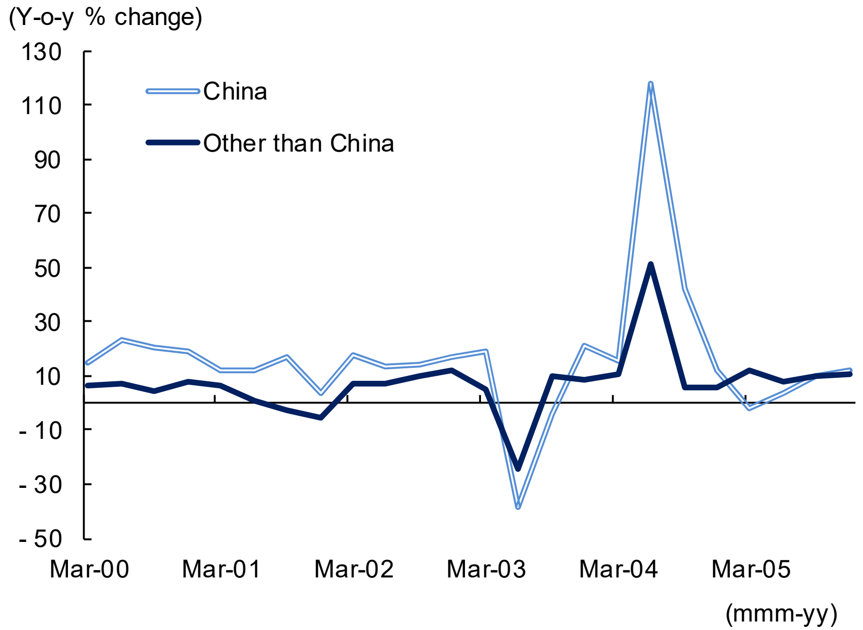
- Exports of goods will be weak in the first half of 2020 due to the stagnation of the Chinese market caused by the novel coronavirus (COVID-19). This should bottom out from the second half of 2020.
  - The ratio of exports of goods to China has increased since the SARS outbreak (2003) (from approximately 12% in 2003 to approximately 20% in 2019). The impact on other countries from a slowdown in the Chinese economy has increased, and the impact from the stagnation of the Chinese market is much greater than before considering the knock-on effect through third countries.
- The impact on inbound travelers from the spread of the novel coronavirus (COVID-19) is assessed as being greater than for SARS.
  - During the SARS outbreak there was not only a decline in visitors from China, but also from other countries. We forecast a similar trend this time.

Ratio of exports of goods to China (calendar year)



Source: Made by MHRI based upon Ministry of Finance, *Trade Statistics*

Growth rate in visitors to Japan during SARS outbreak

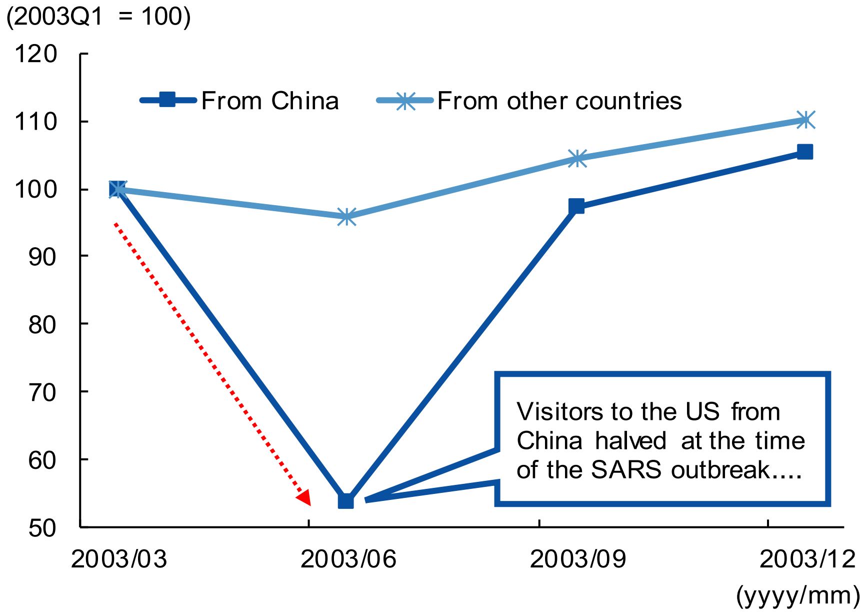


Source: Made by MHRI based upon Japan National Tourism Organization (JNTO)

US: US-China trade in services contracts due to virus measures, weighing on Jan-Mar quarter growth rate

- Movements of people between the US and China are being disrupted due to measures to combat the spread of the novel coronavirus (COVID-19).
  - Foreign nationals are denied entry to the US if they have visited China during the past two weeks, with US citizens undergoing medical examination and quarantine measures.
  - As of January 31, major US airlines (American, United and Delta) had announced suspension of flights to the Chinese mainland.
- The impact on the rate of economic growth (y-o-y, annualized) from the decline in trade in services with China is -0.4%pt for 2020Q1, and +0.4%pt for 2020Q2.
  - During the SARS outbreak in 2003, the number of visitors to the US from China fell 47%.

Number of visitors to the US (during the 2003 SARS outbreak)



Note: Seasonally-adjusted by MHRI
Source: Made by MHRI based upon National Travel and Tourism Office, US Department of Commerce

Trade in services with China (transport + travel)

(US$ billion, nominal)	2019 Actual (Estimated)		
	Exports	Imports	Net exports
Trade in services with China (Transport + Travel)	37.4	9.6	27.8
- Transport	5.3	5.0	0.3
- Travel	32.1	4.5	27.5

↓Trade in services with China (Transport + Travel) falls 75%↓

(US$ billion, nominal)	2020Q1 (Forecast)		
	Exports	Imports	Net exports
Trade in services with China (Transport + Travel)	9.4	2.4	7.0
(Change)	-28.1	-7.2	-20.9
Contribution to US exports and imports (%Pt)	-4.5	-0.9	-
Contribution to rate of growth in real GDP (%Pt)	-0.6	0.2	-0.4

Note: The forecast actual for 2019 for trade in services with China is assumed to be flat from 2018
Source: Made by MHRI based upon US Department of Commerce

US: production fell with the supply shock due to the disruption to imports at the time of the Great East Japan Earthquake

- Imports of goods from China are expected to stagnate somewhat due to measures to deal with the novel coronavirus (COVID-19), which will have an impact on the US domestic supply chain.
- There was a temporary sharp decline in imports from Japan at the time of the Great East Japan Earthquake. There was a lack of parts supply for cars and IT-related goods, which affected US domestic production.
  - The US Beige Book (June 2011) reported the impact on production of cars and in the IT sector due to the sharp decline in the supply of parts from Japan.
  - The US Fed noted that from April to August 2011 the decline in car production was due to the decline in supply of parts from Japan.
  - The ISM Manufacturing Index plummeted in May that year. Business sentiment fell with a lag of about 1 month from the decline in imports caused by the earthquake.

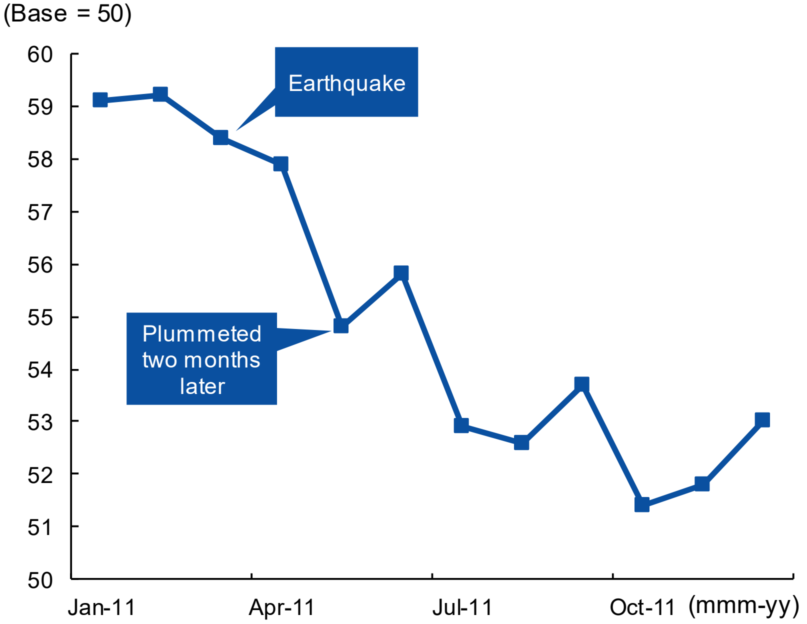
Imports from Japan and US domestic production trends at the time of the Great East Japan Earthquake

	2011		
	Q1	Q2	Q3
Imports of goods from Japan/ Imports of goods (%)	6.3	4.8	5.9
/Nominal GDP (%)	0.21	0.17	0.22
Imports of goods (q-o-q change, US$ billion)	3.5	49.5	14.3
Imports of goods from Japan (q-o-q change, US$ billion)	- 1.5	- 5.7	7.0
- cars	- 0.9	- 4.8	5.2
- semi-conductors	- 0.07	- 0.03	0.06
Industrial production (% change q-o-q, annualized)			
- cars and related parts	20.7	- 13.6	23.3
- semiconductor-related goods	29.0	2.5	6.0
Contribution to rate of growth in real GDP (%Pt)			
- imports of goods	- 0.7	- 0.1	- 0.6
- auto-related parts	0.26	- 0.34	0.30

Sharp decline in supply of parts from Japan
⇒ decline in US domestic production

Source: Made by MHRI based upon US Department of Commerce and the FRB

ISM Manufacturing Index



Source: Made by MHRI based upon US Institute for Supply Management

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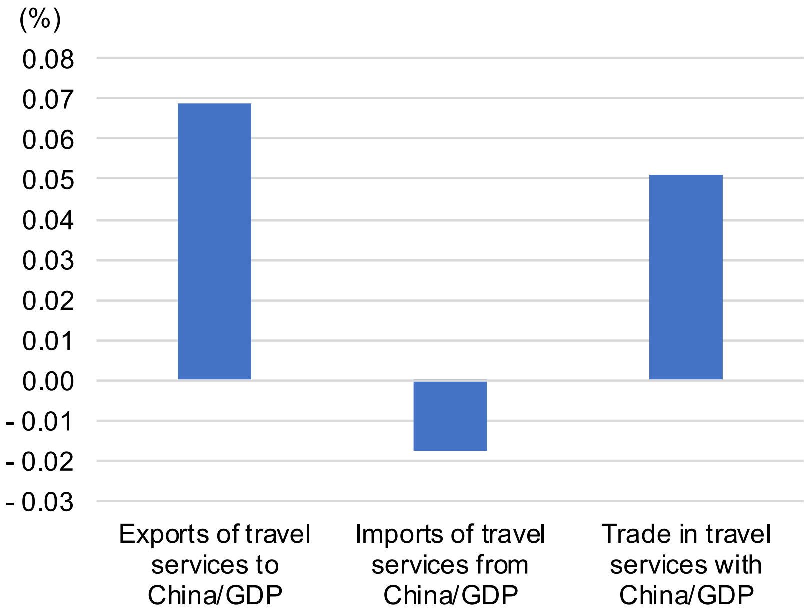
Eurozone: our main scenario outlook is for limited downward pressure on the economy from the novel coronavirus (COVID-19)

- We anticipate the spread of the novel coronavirus (COVID-19) to push down Jan-Mar quarter economic growth (q-o-q, annualized) in the Eurozone by 0.2%pt.
  - Trade in travel services between the EU-28 countries and China accounts for 0.05% of nominal GDP (2018). The direct impact on nominal GDP if there were no trade in travel services for two months would only be -0.03%pt.
- However, the impact on the Eurozone economy, which is heavily dependent on exports, would increase if the impact on global economic activity from COVID-19 were to spread or persist.
  - International events have also been cancelled in Europe. The cancellation of the Mobile World Congress (MWC), scheduled for Barcelona, is thought to have inflicted an economic loss of around 500 million euro.

Trade in travel services between the EU-28 countries and China



Note: 2018 Actual. Nominal base
Source: Made by MHRI based upon Eurostat

Response to COVID-19 in Europe

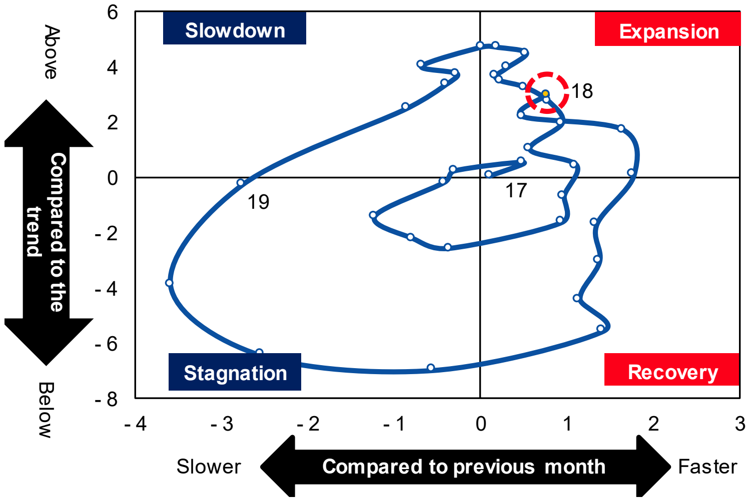
	Event, etc.
Mobile World Congress (MWC) exposition	Cancelled event (February 24 to 27) in Spain (Barcelona)
Swatch	Cancelled *Time to Move* exhibition (February 28 to March 6) in Switzerland (Zurich)
Costa Cruises of Italy	Persons who have stayed or transited through China during the past 14 days will not be allowed on board as a passenger, visitor or crewperson regardless of nationality

Source: Made by MHRI based upon various media reports

IT: a period of adjustment in the first half due to weak automotive demand and the impact of the novel coronavirus (COVID-19)

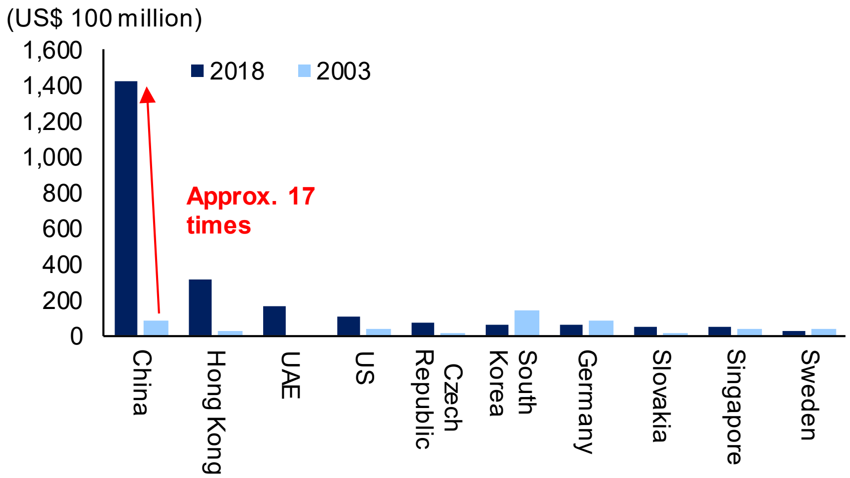
- The silicon cycle was in recovery phase from May to December 2019 leading to a period of expansion. This is seen as being a recovery since the second half of 2019.
- We anticipate a temporary downturn in the first half of 2020 (from slowdown to stagnation), followed by renewed recovery from the second half.
  - Demand for semiconductors for motor vehicles and for smartphones is sluggish due to lower car sales and sluggish production of 5G smartphones caused by constraints on the supply of parts.
  - The downturn in consumer spending and investment in China due to the spread of the novel coronavirus (COVID-19) is weighing on semiconductor demand.
  - We anticipate a recovery in semiconductors for servers, telecommunications and industrial machinery from the second half associated with 5G-related equipment in China as the COVID-19 comes to an end.
- Exports of mobile telephones from China surged from the time of the 2003 SARS outbreak. There are concerns about the impact on the global supply chain.

Current assessment of the silicon cycle (business cycle clock)



Note: Calculated by processing the semiconductor related shipments for Japan, South Korea, Taiwan and the US. The most recent figures for December are estimates
Source: Made by MHRI based upon CEIC Data, etc.

Comparison of mobile telephone exports (2003 versus 2018)



Note: 2018 uses the HS2017 standard 851712. 2003 uses the HS2003 standard 852520
Source: Made by MHRI based upon US Comtrade

(3) The US economy: the moderate expansion continues despite turbulence

- We forecast growth rates for 2020 and 2021 of +1.9% and +1.8% respectively. These forecasts reflect the impact of partial suspension of aircraft production and the novel coronavirus (COVID-19) as well as partial reduction in the tariffs imposed by the US on China. China's policies to increase imports present upside risk (100% performance would boost the 2020 growth rate by 0.5%pt).
- The US economy is being driven by household expenditure (personal consumption and housing investment) due to firm employment conditions, favorable consumer sentiment and low interest rates. We expect a gradual recovery in capital investment due to the alleviation of uncertainties, albeit partial, with the Phase One US-China trade agreement and smooth Brexit.
- The growth rate will be under downward pressure in the Jan-Mar quarter of 2020 due to capital investment and trade caused by the partial suspension of aircraft production and the impact of COVID-19. The contribution to the rate of growth in real GDP in the Jan-Mar quarter will total -0.6%pt. However, there will be a rebound in the Apr-Jun quarter, and the impact will be flat on a calendar year basis. The partial lowering of tariffs imposed by the US on China with the US-China round one agreement will boost the 2020 growth rate by 0.3%pt.
- We forecast US monetary policy to be left unchanged during the forecast period. The FOMC will transition to a new monetary policy framework (around the middle of 2020). The focus of US monetary policy will be to fill the gap in the inability to achieve the inflation target during recent years (being the first central bank in the world to introduce a makeup strategy).

US: firm pace of increase maintained for domestic demand. Novel coronavirus (COVID-19) to weigh on imports

- We forecast growth rates for real GDP in 2020 and 2021 of +1.9% and +1.8% respectively.
  - A firm pace of increase is maintained for domestic demand particularly in personal consumption and housing investment.
- This forecast reflects the issues at Boeing, the lowering of tariffs due to US-China trade agreements and the impact of the novel coronavirus (COVID-19).
  - There is upside risk from the prospect that China will increase its purchases of US goods under the US-China trade agreement.

Outlook on the US economy

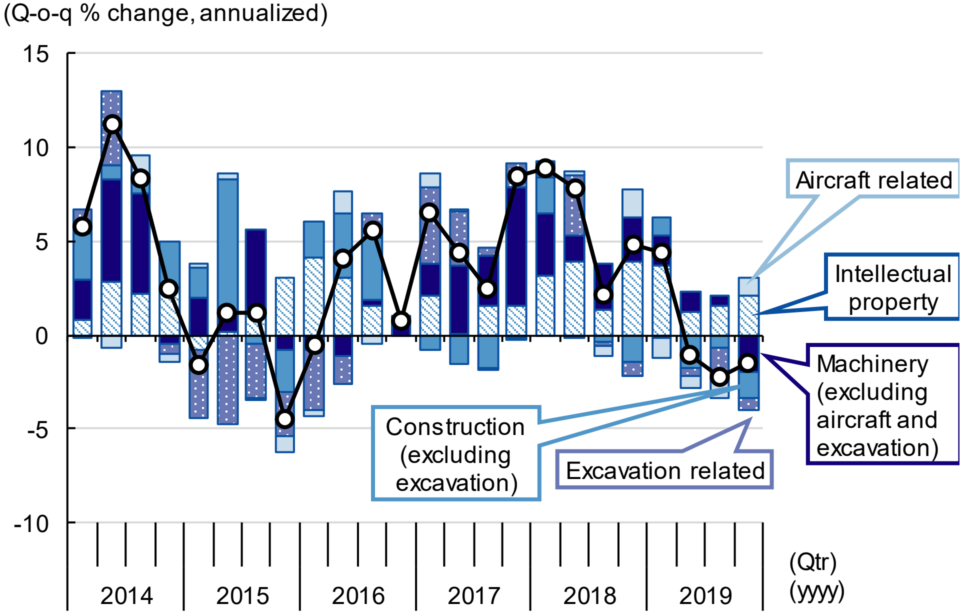
		2018	2019	2020	2021	2019				2020				2021			
						Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
GDP (real)	Q-o-q % ch p.a.	2.9	2.3	1.9	1.8	3.1	2.0	2.1	2.1	1.5	2.0	1.9	2.0	1.8	1.8	1.7	1.7
Personal consumption	Q-o-q % ch p.a.	3.0	2.6	2.4	2.1	1.1	4.6	3.2	1.8	2.0	2.2	2.3	2.3	2.0	2.0	2.0	2.0
Housing investment	Q-o-q % ch p.a.	- 1.5	- 1.5	3.6	2.4	- 1.0	- 3.0	4.6	5.8	4.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Capital investment	Q-o-q % ch p.a.	6.4	2.1	0.4	3.1	4.4	- 1.0	- 2.3	- 1.5	0.0	1.5	4.4	3.7	2.9	2.7	2.6	3.5
Inventory investment	Q-o-q p.a. contribution, % pt	0.1	0.1	0.2	0.0	0.5	- 0.9	- 0.0	- 1.1	- 2.1	2.1	0.8	0.1	0.1	0.1	0.0	0.0
Government consumption	Q-o-q % ch p.a.	1.7	2.3	1.5	- 0.1	2.9	4.8	1.7	2.7	1.1	0.6	0.6	- 0.2	- 0.2	- 0.2	- 0.2	- 0.8
Net exports	Q-o-q p.a. contribution, % pt	- 0.3	- 0.2	- 0.2	- 0.0	0.7	- 0.7	- 0.1	1.5	1.0	- 1.0	- 0.7	- 0.1	- 0.0	0.0	0.0	- 0.0
Exports	Q-o-q % ch p.a.	3.0	0.0	0.9	2.2	4.1	- 5.7	1.0	1.4	- 0.5	3.0	2.0	2.9	2.0	2.0	2.0	2.0
Imports	Q-o-q % ch p.a.	4.4	1.0	- 0.7	2.9	- 1.5	0.0	1.8	- 8.7	- 6.9	9.3	6.0	3.0	1.8	1.5	1.6	1.6
Unemployment rate	%	3.9	3.7	3.5	3.5	3.9	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
PCE deflator	Y-o-y % ch	2.1	1.4	1.7	1.8	1.4	1.4	1.4	1.5	1.7	1.6	1.7	1.9	1.8	1.8	1.7	1.7
Core excluding food and energy	Y-o-y % ch	1.9	1.6	1.8	1.8	1.6	1.6	1.7	1.6	1.8	1.7	1.8	1.9	1.8	1.8	1.8	1.8
(Reference: Domestic final demand)		3.0	2.3	2.0	1.9	1.8	3.6	2.2	1.6	1.7	1.9	2.3	2.1	1.7	1.7	1.7	1.7

Note: The shaded areas are forecasts.
Source: Made by MHRI based upon US Department of Commerce and US Department of Labor

Capital investment remains weak, but appears likely to escape from the worst period

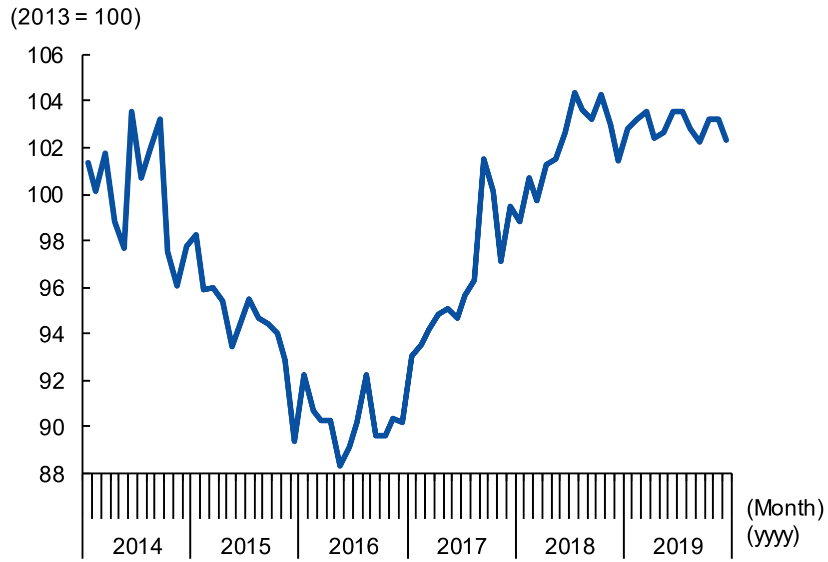
- The breakdown of capital investment indicates deterioration in excavation-related investment (due to the price of crude oil), construction of commercial and business facilities and machinery investment. However, there is moderate growth in intellectual property investment, suggesting that the growth expectations of US companies have not disappeared.
- New orders for core capital goods remain weak, but we forecast an escape from the worst period due to factors such as the US-China trade agreement.
  - The optimistic tone in the Beige Book increased, and comments about capital investment were not all cautionary.
  - The January ISM Manufacturing Index was above 50 for the first time in six months. This was consistent with the alleviation of uncertainties due to the US-China agreement and smooth Brexit.
  - Note that in the short term, there will be downward pressure from the suspension of production of the Boeing 737 Max (contribution to the rate of growth in the Jan-Mar quarter of 2020 of about -0.2%pt).

Capital investment (breakdown)



Source: Made by MHRI based upon US Department of Commerce

New orders for core capital goods

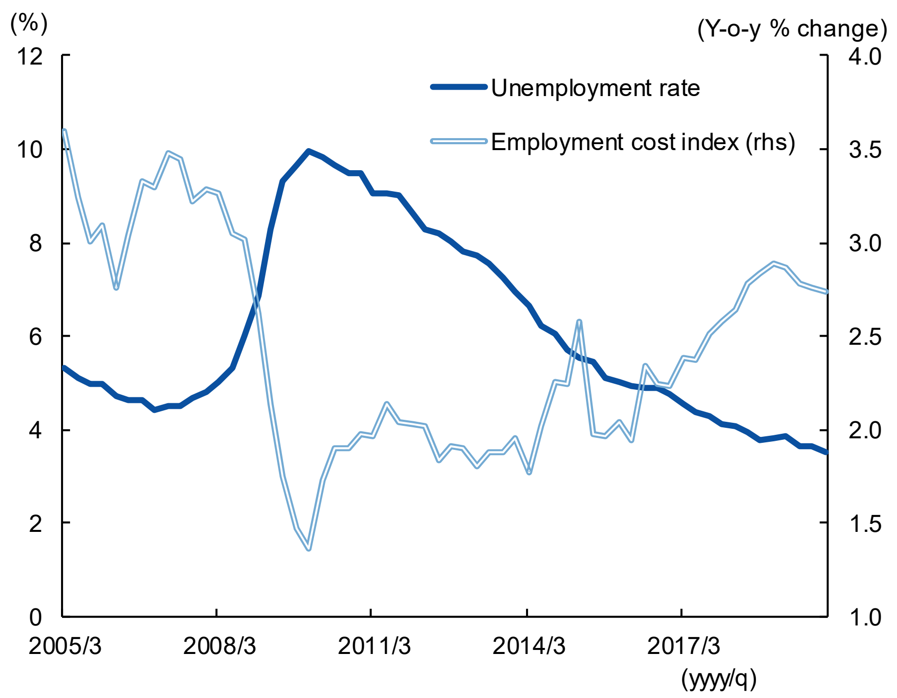


Source: Made by MHRI based upon US Department of Commerce

Personal consumption and housing investment driving the US economy amid firm employment conditions, strong stocks and low interest rates

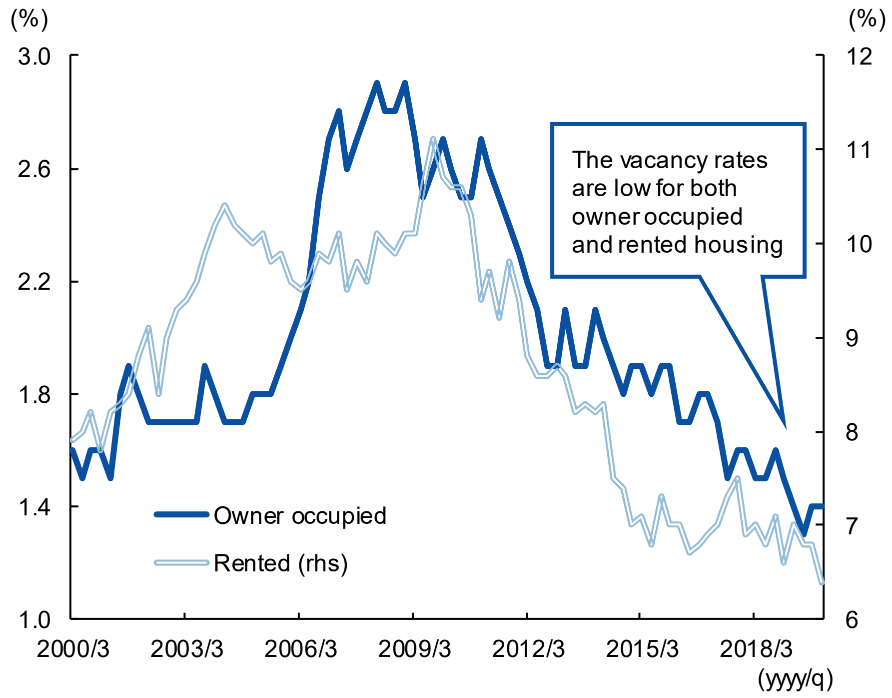
- The unemployment rate is low at 3.5%, and we anticipate moderate wage growth to continue. The fundamentals for personal consumption are good.
- We also anticipate housing investment to recover, amid low interest rates and tight demand and supply.

Unemployment rate and employment cost index



Source: Made by MHRI based upon Bureau of Labor Statistics, US Department of Labor

Vacancy rates in the housing market



Source: Made by MHRI based upon US Department of Commerce

Upside risks: China to increase US imports = contribution to 2020 growth of +0.5%pt

- Under the US-China agreement, China has committed to increasing purchases of US products (goods and services) by setting numerical targets.
  - China will increase imports from the US to an equivalent of US$200 billion in total for 2020 and 2021, based on 2017 standards.
  - Of which, goods (manufactured goods, agricultural products and energy): US$162.1 billion; services (rights to use intellectual property and travel, etc.): US$37.9 billion.
- Were China to achieve 100% of its targeted increase in purchases it would push up the US growth rate by +0.5%pt in 2020 and +0.2%pt in 2021.

Target increase in China's purchase of US goods under the US-China agreement

(US$ billion, nominal)

	2017 (Actual)	Versus 2017 Actual 2020	2021	Total
Goods	78.8	***+63.9***	***+98.2***	+162.1
Manufactured goods	50.2	+32.9	+44.8	+77.7
Agricultural products	20.9	+12.5	+19.5	+32.0
Energy	7.7	+18.5	+33.9	+52.4
Services	55.6	***+12.8***	***+25.1***	+37.9
Total goods and services	134.4	***+76.7***	***+123.3***	200.0

Source: Made by MHRI based upon USTR and US Department of Commerce

If targets are achieved

Outlook on US exports to China

(US$ billion, nominal)

	2017	2018	2019 (Estimate)	2020	2021
Goods	130.3	120.8	106.6	194.2	228.5
(Y-o-y change)				*+87.6*	*+34.3*
Services	56.0	57.1	56.6	68.8	81.1
(Y-o-y change)				*+12.2*	*+12.3*
Total goods and services	186.3	178.0	163.1	263.0	309.6
(Y-o-y change)				*+99.8*	*+46.6*
Contribution to rate of growth in real GDP (% Pt)				**+0.5%**	**+0.2%**

Source: Made by MHRI based upon USTR and US Department of Commerce

(4) The Eurozone economy: low growth below the potential growth rate continues

- The rate of growth in GDP (preliminary) stood at +1.2% y-o-y in 2019, revealing the ongoing weakness of the Eurozone economy. Production continued to fall due to the slowdown in exports, which weighed on the entire economy. However, the tight labor market and expansionary fiscal spending continued to contribute to firm growth in domestic demand.
- We expect the slowdown in exports to pause in 2020 with a flattening of the decline in production and the rate of growth in GDP to remain at +1.0% y-o-y. We forecast growth of +1.3% y-o-y in 2021, slightly below the potential growth rate. In addition to firm exports, we expect the rate of economic growth to be underpinned by increases in fiscal spending such as large tax cuts.
- We forecast only a sluggish rise in the Eurozone inflation rate. The core inflation rate, excluding items with large fluctuations such as energy, remained close to 1% throughout 2019 due to the slowdown of the economy and fall of crude oil prices. We also expect that the pace of inflation will be sluggish from 2020 as the rate of economic growth will remain low.
- The ECB introduced comprehensive monetary easing policies in September 2019 and will monitor the impact in 2020. We expect the monetary policy framework to be left unchanged until 2021. While the focus of discussion will be about a change to the strategy for monetary policy during 2020, there could be a small interest rate cut in the case of an economic downturn.

Eurozone: Exports remain weak and 2020 GDP is forecast to slow to +1.0% y-o-y

- The rate of growth in Eurozone GDP is forecast at +1.0% in 2020 and +1.3% in 2021.
  - We have downwardly revised our forecast rate of growth for 2020 by 0.1%pt from our December outlook.
    - This is mainly due to the low rate of growth for the Oct-Dec quarter of 2019 of +0.1% q-o-q.
- We forecast the core inflation rate to rise at a sluggish pace throughout the forecast period.

Outlook on the Eurozone economy

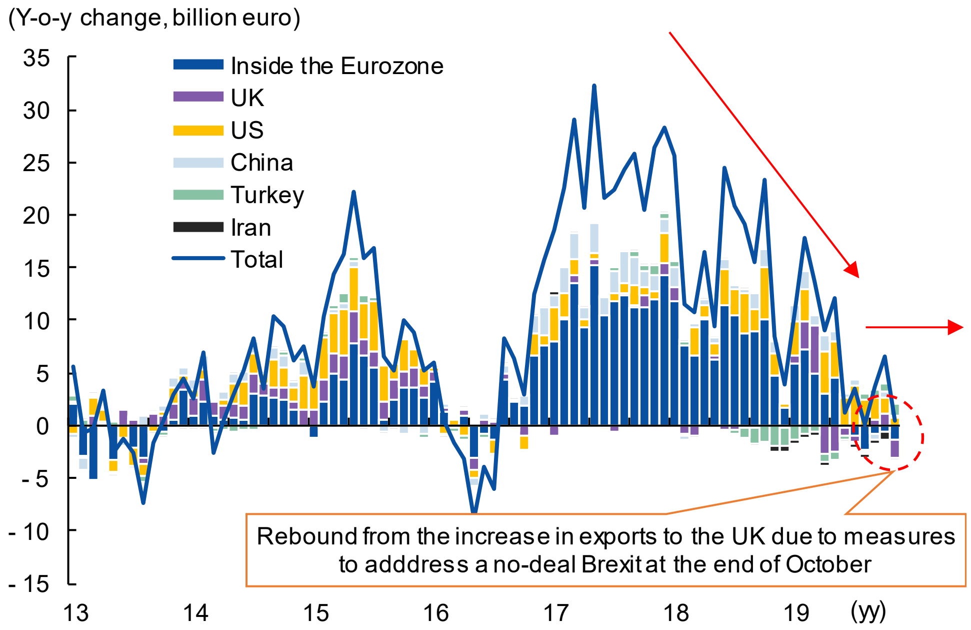
		2018	2019	2020	2021	2019				2020				2021			
						Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
GDP (real)	Q-o-q % ch	1.9	1.2	1.0	1.3	0.4	0.2	0.3	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Domestic demand	Q-o-q % ch	1.6	1.6	0.8	1.6	0.1	1.4	- 0.6	- 0.0	0.2	0.3	0.5	0.5	0.5	0.3	0.3	0.4
Personal consumption	Q-o-q % ch	1.4	1.3	1.2	1.3	0.4	0.2	0.5	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Gross fixed capital formation	Q-o-q % ch	2.3	4.5	0.4	1.8	0.3	5.2	- 3.8	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Government consumption	Q-o-q % ch	1.1	1.5	1.2	1.4	0.4	0.5	0.4	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
Inventory investment	Q-o-q contribution, %pt	0.0	- 0.4	- 0.3	0.1	- 0.3	0.0	- 0.1	- 0.2	- 0.1	- 0.0	0.1	0.1	0.1	- 0.1	- 0.1	0.0
Net exports	Q-o-q contribution, %pt	0.4	- 0.3	0.2	- 0.2	0.3	- 1.2	0.9	0.1	0.1	0.0	- 0.1	- 0.1	- 0.1	0.1	0.1	- 0.0
Exports	Q-o-q % ch	3.3	2.6	1.7	2.3	0.9	0.1	0.7	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Imports	Q-o-q % ch	2.7	3.5	1.4	2.9	0.2	2.7	- 1.2	0.1	0.1	0.6	0.8	0.8	0.9	0.5	0.5	0.7
CPI	Y-o-y % ch	1.8	1.2	1.2	1.4	1.4	1.4	1.0	1.0	1.2	1.1	1.3	1.3	1.4	1.4	1.4	1.4
Core, excluding food and energy	Y-o-y % ch	1.0	1.0	1.3	1.3	1.0	1.1	0.9	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3

Note: The shaded areas are forecasts
Source: Made by MHRI based upon Eurostat

Eurozone: slowdown in exports behind the slump in production, particularly intermediate goods

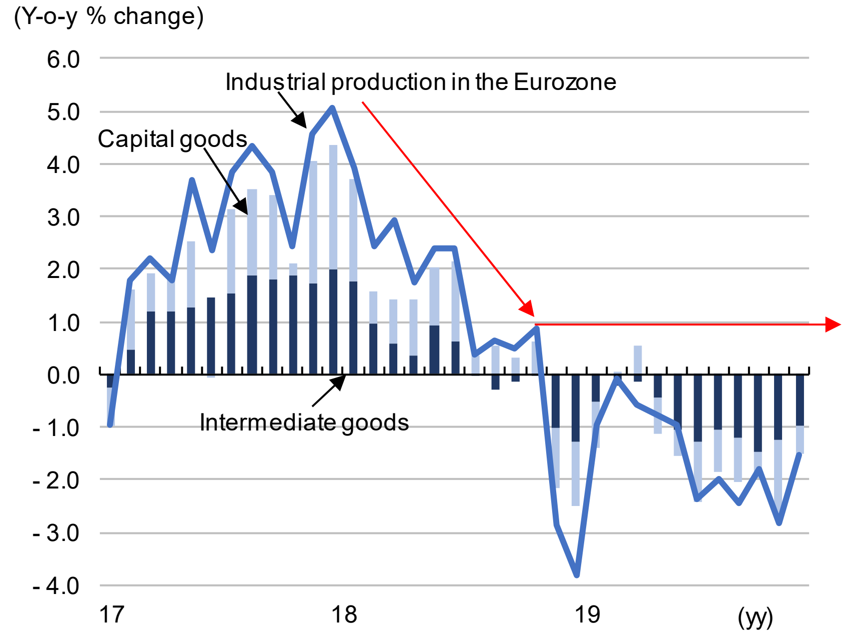
- Eurozone exports and industrial production growth have generally remained flat since the beginning of 2019.
  - November exports to outside the Eurozone were +0.9% y-o-y (c.f., +3.7% y-o-y in October), the weakest growth rate since June.
    - Exports to the UK contributed -1.0%pt y-o-y. The temporary increase in exports associated with the prospect of a no-deal Brexit policy at the end of October waned.
    - November exports inside the Eurozone were -0.8% y-o-y, the sixth straight month of growth falling short of the previous year.
  - November industrial production in the Eurozone was -1.5% y-o-y (c.f., -2.8% y-o-y in October), the thirteenth month of growth below the previous year.

Exports of goods inside and outside the Eurozone



Source: Made by MHRI based upon Eurostat

Industrial production in the Eurozone

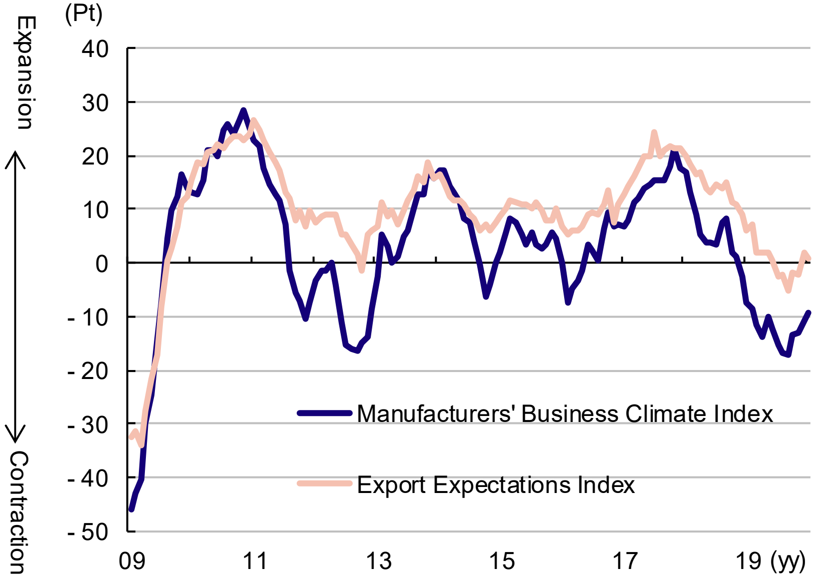


Note: Contribution to y-o-y growth rate in industrial production for capital goods and intermediate goods
Source: Made by MHRI based upon Eurostat

Eurozone: production forecast to remain at rock-bottom levels, given the modest recovery of the global economy

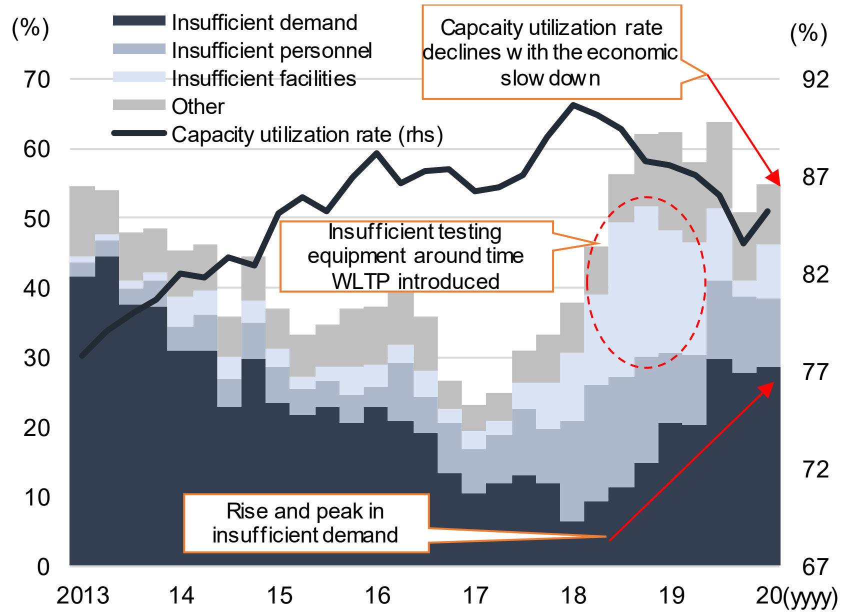
- Germany's export expectations index for the next three months is close to the expansion-contraction threshold of zero.
  - Despite the ongoing improvement since September 2019, we forecast manufacturing business sentiment to remain below zero for the next six months.
- The constraints on capital investment in the auto industry that surged in 2018 around the introduction of the WLTP (Worldwide harmonised Light vehicles Test Procedure, which measures fuel consumption and CO2 emissions) were resolved by the Oct-Dec quarter of 2019.
  - The lack of demand since the beginning of 2019 remains the biggest issue.
  - The response to dealing with strong environmental standards also remains an issue.

Germany's ifo expectations index



Note: The export expectations index inquires about the direction of exports for the next three months. The manufacturers Business Climate Index inquires about the business sentiment for the next six months. In both cases, zero represents the expansion-contraction threshold.
Source: Made by MHRI based upon ifo

Constraints on auto production in the Eurozone



Note: The proportion of total responses that cited demand, personnel, facilities and other manufacturing constraints as factors (multiple responses allowed)
Source: Made by MHRI based upon European Commission

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(5) The Asian economies: we expect growth to be flat in 2020, but accelerate in 2021

- In China, the rate of growth in real GDP in the Oct-Dec quarter of 2019 was flat from the Jul-Sep quarter. While retail growth was sluggish and the contribution from exports turned negative, there was increased growth in fixed asset investment.
- We forecast a dip in China's economic growth due to the novel coronavirus (COVID-19). We then forecast a subsequent moderate recovery due to measures such as the expansion of public investment.
- In the Asian economies (excluding China), economies were mixed in the Oct-Dec quarter of 2019. The economies accelerated in South Korea and the Philippines due to increased government spending, but Hong Kong suffered its third consecutive quarter of negative growth amid ongoing anti-government demonstrations.
- In terms of the outlook for Asian economies (excluding China), we forecast a dip in economic growth due to factors such as sluggish growth in travelers from China. We forecast an overall recovery from the second half of 2020 led by exports due to factors such as the upturn of the IT cycle. The Indian economy should recover, given the progress in inventory adjustments.
- As for the Asian economies as a whole, the rate of growth in 2020 is expected to fall slightly from 2019. We forecast a rise in 2021 led by China and India.

Asia: the Chinese economy will accelerate following a dip, while other countries will maintain a moderate recovery trend

- China: although we forecast economic conditions to dip, this should be followed by a recovery due to increased public investment, etc.
- NIEs and ASEAN5: we forecast a moderate recovery in economies due to a rise in the IT cycle to rise from the second half of 2020 as well as the transfer of production away from China reflecting US-China trade tensions.
- India: we forecast a cyclical rise in the economy due to the end of bad weather as well as progress in inventory adjustment.

Outlook on the Asian economies

(Units: %)

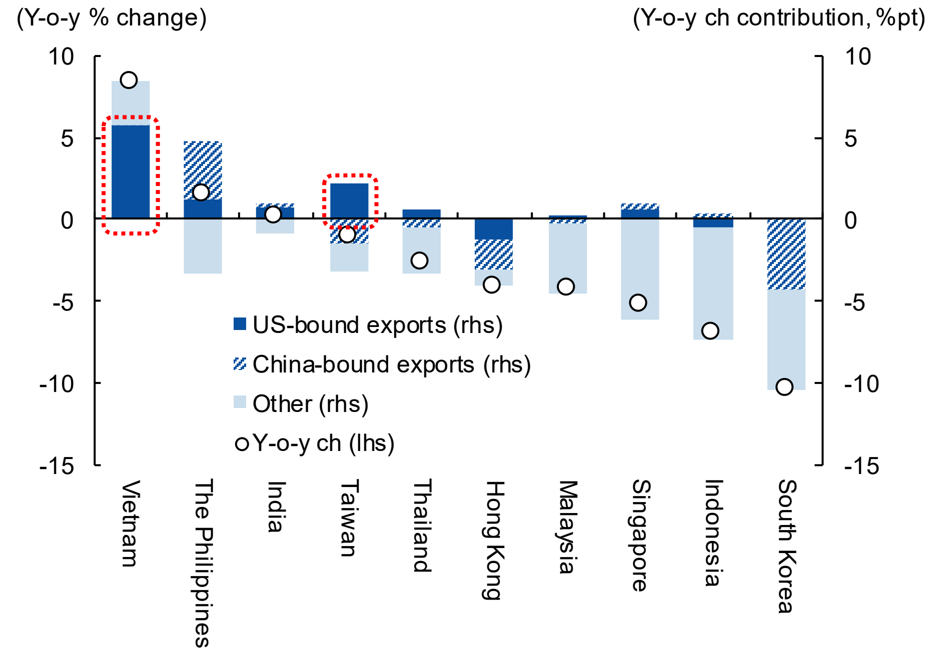
	2016	2017	2018	2019	2020	2021
Asia	6.5	6.3	6.2	5.2	5.1	5.5
China	6.8	6.9	6.7	6.1	5.7	5.9
NIEs	2.7	3.4	2.8	1.7	1.7	2.2
South Korea	2.9	3.2	2.7	2.0	2.1	2.3
Taiwan	2.2	3.3	2.7	2.7	2.3	2.4
Hong Kong	2.2	3.8	3.0	- 1.2	- 0.8	1.8
Singapore	3.2	4.3	3.4	0.7	0.8	1.6
ASEAN5	5.0	5.3	5.2	4.8	4.6	5.2
Indonesia	5.0	5.1	5.2	5.0	4.9	5.3
Thailand	3.4	4.1	4.2	2.4	2.4	3.5
Malaysia	4.4	5.7	4.7	4.3	3.7	4.8
The Philippines	6.9	6.7	6.2	5.9	6.0	6.4
Vietnam	6.2	6.8	7.1	7.0	6.2	7.0
India	8.7	6.9	7.4	5.0	5.6	6.2

Note: Real GDP growth rate (y-o-y). The shaded areas are forecasts. Average figures are calculated using the 2017 GDP share from the IMF (purchasing power parity base)
Source: Made by MHRI based upon statistics of relevant countries and regions, CEIC Data and IMF

Impact of US-China trade tensions: trends in US-bound exports from countries and regions in Asia

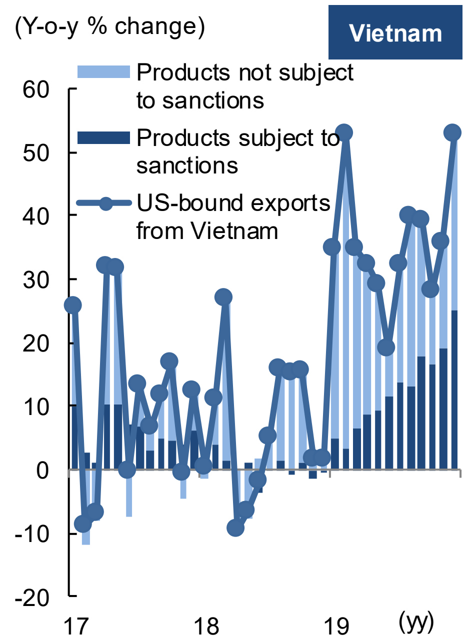
- Exports from Asia in 2019 were, on the whole, sluggish for many countries and regions.
  - Despite some recent signs of recovery in exports, the slowdown in the Chinese economy and US-China trade tensions were headwinds for exports in 2019.
  - As an exception, US-bound exports from Vietnam and Taiwan were firm.
- US-bound exports from Vietnam and Taiwan retained high growth for products on which the equivalent Chinese manufactured goods were subject to US-imposed sanctions.
  - By product, exports with high growth included electronic goods and wooden furniture from Vietnam and electronic goods from Taiwan.

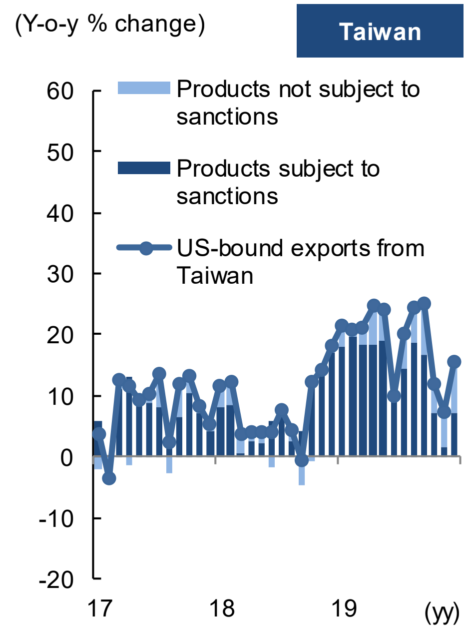
Exports from countries and regions in Asia (2019)



Source: Made by MHRI based upon statistics of relevant countries and regions, CEIC Data

US-bound exports from Vietnam and Taiwan



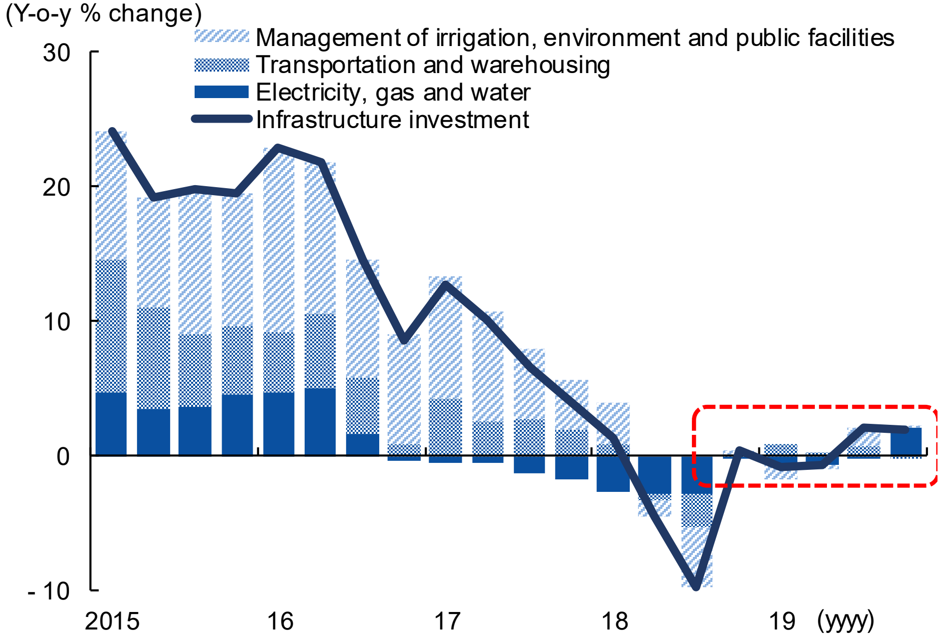


Note: US-bound exports from Taiwan and Vietnam on the basis of US imports from both countries according to US statistics. Sanctions on China up until the first to third rounds
Source: Made by MHRI based upon US Department of Commerce

China: the support for the economy from infrastructure investment will become evident from the second half of 2020

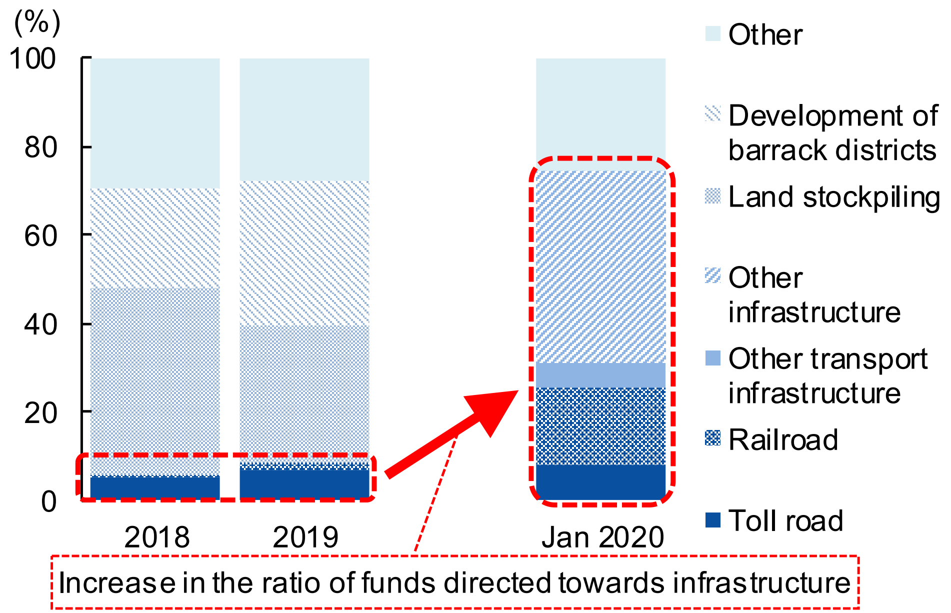
- Infrastructure investment has been sluggish even though the Chinese government pressured for increased issuance of local government bonds to finance infrastructure investment.
  - The sluggish investment is attributed to the tendency for funds from local government bonds to be used for purchase of land and real estate.
  - Consequently, the government has strengthened the policy to ensure funds are directed towards infrastructure investment. Measures include the prohibition of using funds raised from such bonds for land and real estate.
  - The effect of these measures resulted in a substantial increase of about 75% of the funds raised from such bonds issued in January 2020 being used for infrastructure. We expect the impact of these measures to gradually become evident and fully realized after the impact of the novel coronavirus (COVID-19) has completely subsided.

Infrastructure investment



Note: Converted to real figures using investment in fixed assets price index
Source: Made by MHRI based upon National Bureau of Statistics of China

Use of funds raised from local government bonds



Source: Made by MHRI based upon wind, Founder Securities "Capital for 7148 billion in special debt?" (January 16, 2020)

The Japanese economy: forecast of weak growth in FY2020 followed by a gradual recovery in FY2021

- The rate of GDP growth for the Oct-Dec quarter of 2019 stood at -1.6% q-o-q, revealing a drop comparable to the fall at the time of the previous consumption tax hike (Apr-Jun quarter of 2014: -1.9% q-o-q). Even in consideration of drags stemming from special factors such as the impact of the large typhoons, our view is that the Japanese economy is weakening. Production has been stagnant since November when the counter reaction to the tax hike should have faded, leading to a high possibility that the Japanese economy is in a recession.
- In FY2020, given the weakness of both exports and domestic demand, GDP is expected to remain at +0.3% y-o-y. As exports are expected to take a downturn in the Jan-Mar quarter due to factors such as the impact of COVID-19, the economy will only bottom out in the second half of the year. While demand for labor-saving investment remains strong, growth in capital investment is expected to be sluggish due to the weakness of construction investment. The recovery of consumption will most likely be limited due to the weakness of employment and income.
- In FY2021, exports are expected to pick up along with the recovery of the global economy. Domestic demand should also start to pick up, leading to a moderate GDP growth rate of +0.7% y-o-y. In capital investment, machinery investment is expected to increase moderately along with a recovery in the manufacturing industry. There is little concern that the post-Olympics slump of construction investment will cause a serious recession, and should pick up again on the back of factors including the progress of redevelopment projects. The employment and income environment will gradually pick up from the recovery of production and profits, and personal consumption will also begin to recover. Even so, the pace of recovery is expected to be moderate.
- The BOJ core CPI is expected to slow as the output gap will remain in negative territory after the consumption tax hike and unit labor costs are also expected to weaken.

The Japanese economy: forecast for FY2020 (+0.3%), FY2021 (+0.7%)

- Japan's real GDP growth should remain a low +0.3%, given the weak growth of both exports and domestic demand.
  - The bottoming of exports will only take place in the second half due to the impact of COVID-19. Capital investment will slow. Personal consumption will also be sluggish due to weak employment and income conditions.
- We forecast a moderate recovery in FY2021 to +0.7% due to the recovery in exports and domestic demand.
  - Production and profits will pick up due to the recovery in exports. We forecast a gradual rise in investment and consumption.

Outlook on the Japanese economy

		2018 FY	2019	2020	2021 FY	2019 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2020 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2021 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2022 Jan-Mar
GDP (real)	Q-o-q % ch	0.3	0.4	0.3	0.7	0.6	0.5	0.1	-1.6	0.2	0.3	0.3	0.5	0.1	0.1	0.2	0.2	0.1
	Q-o-q % ch p.a.	—	—	—	—	2.6	1.9	0.5	-6.3	1.0	1.3	1.4	2.1	0.4	0.4	0.7	0.8	0.3
Domestic demand	Q-o-q % ch	0.4	0.6	0.1	0.7	0.2	0.8	0.4	-2.1	0.5	0.3	0.1	0.3	0.1	0.1	0.2	0.2	0.1
Private sector demand	Q-o-q % ch	0.2	-0.1	-0.3	0.7	0.2	0.5	0.2	-2.9	0.7	0.2	0.1	0.3	0.2	0.1	0.2	0.2	0.2
Personal consumption	Q-o-q % ch	0.1	-0.3	-0.2	0.6	0.0	0.6	0.5	-2.9	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Housing investment	Q-o-q % ch	-4.9	0.6	-4.6	-2.3	1.5	-0.2	1.2	-2.7	-2.9	-0.9	-0.3	-0.0	-1.0	-0.8	-0.6	-0.4	-0.4
Capital investment	Q-o-q % ch	1.7	0.2	0.3	1.9	-0.5	0.8	0.5	-3.7	1.2	0.3	0.5	0.5	0.5	0.5	0.4	0.4	0.4
Inventory investment	Q-o-q contribution, % pt	(0.0)	(0.0)	(-0.0)	(-0.0)	(0.2)	(-0.1)	(-0.2)	(0.1)	(0.1)	(-0.1)	(-0.1)	(0.0)	(0.0)	(-0.0)	(0.0)	(0.0)	(0.0)
Public sector demand	Q-o-q % ch	0.8	2.7	1.3	0.6	0.1	1.7	0.8	0.4	-0.0	0.6	0.2	0.4	-0.2	0.1	0.3	0.4	-0.2
Government consumption	Q-o-q % ch	0.9	2.5	1.1	1.1	-0.4	1.6	0.7	0.2	0.4	0.3	0.0	0.2	0.2	0.4	0.2	0.3	0.3
Public investment	Q-o-q % ch	0.6	3.6	2.2	-1.0	2.1	1.8	1.2	1.1	-1.5	1.6	0.9	1.1	-1.5	-1.0	0.7	0.7	-1.8
External demand	Q-o-q contribution, % pt	(-0.1)	(-0.2)	(0.2)	(0.0)	(0.5)	(-0.3)	(-0.3)	(0.5)	(-0.3)	(0.1)	(0.2)	(0.2)	(-0.0)	(-0.0)	(-0.0)	(-0.0)	(-0.0)
Exports	Q-o-q % ch	1.6	-2.0	1.3	3.4	-1.9	0.4	-0.7	-0.1	-2.7	0.7	2.2	2.2	0.7	0.5	0.4	0.5	0.5
Imports	Q-o-q % ch	2.2	-0.7	0.1	3.3	-4.3	2.0	0.7	-2.6	-1.0	0.4	1.1	1.3	0.8	0.7	0.7	0.6	0.6
GDP (nominal)	Q-o-q % ch	0.1	1.2	1.1	1.1	1.2	0.5	0.5	-1.2	0.7	0.4	0.4	0.5	0.3	0.2	0.0	0.3	0.4
GDP deflator	Y-o-y % ch	-0.1	0.9	0.7	0.4	0.2	0.4	0.6	1.2	1.2	1.3	1.0	0.5	0.3	0.3	0.1	0.4	0.4
Domestic demand deflator	Y-o-y % ch	0.5	0.5	0.5	0.4	0.3	0.4	0.2	0.7	0.7	0.7	0.7	0.3	0.3	0.5	0.3	0.5	0.5

Note: Figures in the shaded areas are forecasts.
Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*

The Japanese economy: year-on-year rise of consumer prices (ex fresh food) to remain tepid

Outlook on the Japanese economy (major economic indicators)

		2018 FY	2019	2020	2021 FY	2019 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2020 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2021 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2022 Jan-Mar
Industrial production	Q-o-q % ch	0.3	- 3.4	0.2	1.8	- 2.5	0.6	- 0.5	- 4.0	0.4	0.4	1.2	1.0	0.5	0.2	0.3	0.2	0.3
Ordinary profits	Y-o-y % ch	6.2	- 10.8	- 0.1	3.8	10.3	- 12.0	- 5.3	- 8.1	- 16.2	- 3.7	- 0.4	1.9	2.7	5.8	3.8	3.1	2.1
Nominal compensation of employees	Y-o-y % ch	3.0	1.7	0.8	1.1	1.7	2.3	1.6	1.7	1.1	0.6	0.7	1.0	0.8	1.1	1.1	1.2	1.1
Unemployment rate	%	2.4	2.3	2.4	2.5	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.6
New housing starts	P.a., 10,000 units	95.3	88.2	82.9	81.0	95.6	92.5	90.6	86.5	85.5	84.9	83.6	83.2	82.1	82.1	81.6	81.5	81.2
Current account balance	P.a., JPY tril	19.2	21.1	24.5	24.3	18.8	19.7	19.3	21.0	22.1	22.6	23.6	24.8	24.7	24.1	23.5	23.5	23.7
Domestic corporate goods prices	Y-o-y % ch	2.2	0.3	0.8	1.2	0.9	0.6	- 0.9	0.2	1.2	1.0	1.3	- 0.1	0.8	1.5	1.2	1.3	1.0
Domestic corporate goods prices (ex consumption tax)	Y-o-y % ch	-	- 0.5	0.0	-	-	-	-	- 1.4	- 0.4	- 0.6	- 0.2	-	-	-	-	-	-
Consumer prices, ex fresh food	Y-o-y % ch	0.8	0.6	0.5	0.5	0.8	0.8	0.5	0.5	0.4	0.4	0.6	0.4	0.4	0.5	0.5	0.5	0.5
Consumer prices, ex fresh food (ex consumption tax, free education)	Y-o-y % ch	-	0.4	0.3	-	-	-	-	0.3	0.0	0.1	0.3	-	-	-	-	-	-
Consumer prices, ex fresh food and energy	Y-o-y % ch	0.3	0.6	0.5	0.3	0.3	0.4	0.4	0.4	0.8	0.7	0.6	0.4	0.2	0.3	0.3	0.3	0.3
Consumer prices, ex fresh food and energy (ex consumption tax, free education)	Y-o-y % ch	-	0.5	0.4	-	-	-	-	0.5	0.5	0.4	0.4	-	-	-	-	-	-
Interest rate on Policy-Rate Balances	%	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10
Yield on newly-issued 10-yr JGBs	%	0.05	- 0.10	- 0.05	0.00	- 0.02	- 0.08	- 0.20	- 0.09	- 0.04	- 0.05	- 0.05	0.00	0.00	0.00	0.00	0.00	0.00
Nikkei average	JPY	22,000	22,200	23,400	24,300	21,000	21,414	21,270	23,045	23,100	22,600	23,000	23,800	24,000	24,000	24,200	24,400	24,400
Exchange rate	USD/JPY	111	109	108	107	110	110	107	109	108	107	107	108	108	107	107	107	107
Crude oil price (WTI nearest term contract)	USD/bbl	63	57	56	61	55	60	56	57	54	54	56	57	58	59	60	62	62

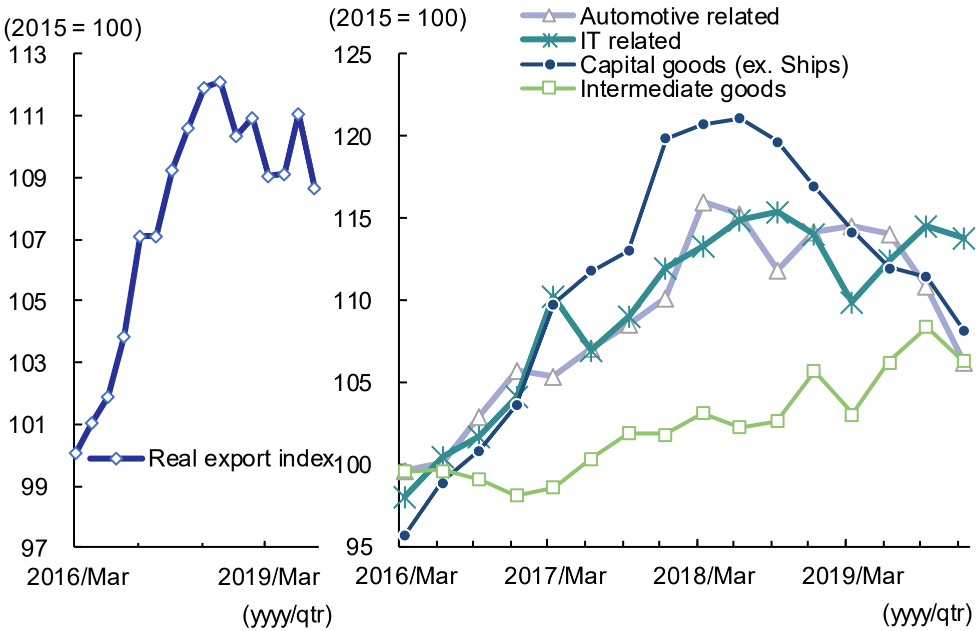
Note: 1. Figures in the shaded areas are forecasts.The readings above may differ from public releases because the rates of change are calculated on the basis of real-terms data
2. Ordinary profits are based upon the *Financial Statements Statistics of Corporations by Industry* (all industries basis) (ex finance & insurance)
3. Of the finance-related indices, the interest rate on Policy-Rate Balances refers to the end-of-term rate, the yield on newly-issued 10-yr JGBs refers to the average of the end-of-month rates during the relevant term, and all others are averages during the relevant terms

Source: Made by MHRI based upon relevant statistics

Exports: weak, mainly due to poor automotive sector. Bottoming out from the second half of 2020

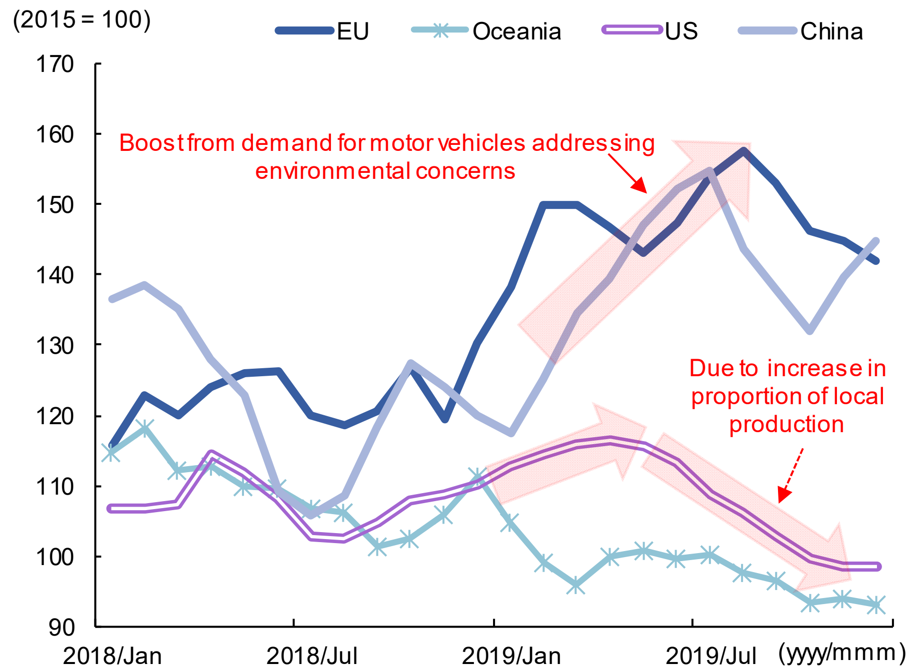
- US-bound motor vehicle exports are the main reason for the recent weakness of exports. While we expect overall exports to bottom from the second half of 2020 or later, the pace of recovery will be moderate.
  - Since the impact of the novel coronavirus (COVID-19) will weigh on exports in the first half of 2020, we are inclined toward the view that exports will only bottom out sometime from the second half of 2020.
  - The recent sluggishness in US-bound exports reflects the shift to local production which should come to a pause after the turn of the year in 2020. Even so, we expect that motor vehicle exports will be flat in 2020, amid the sluggish growth in global auto markets. The odds are high that the pace of recovery in IT-related goods and capital goods will also be moderate due to the stagnant demand for motor vehicles. We forecast only a moderate recovery in exports from the second half of 2020.

Real exports by major goods (quarterly, seasonally-adjusted)



Note: Capital goods (ex. ships) series based upon calculations by MHRI
Source: Made by MHRI based upon BOJ, *Developments in Real Exports and Real Imports*

Volume of motor vehicle exports by major destination

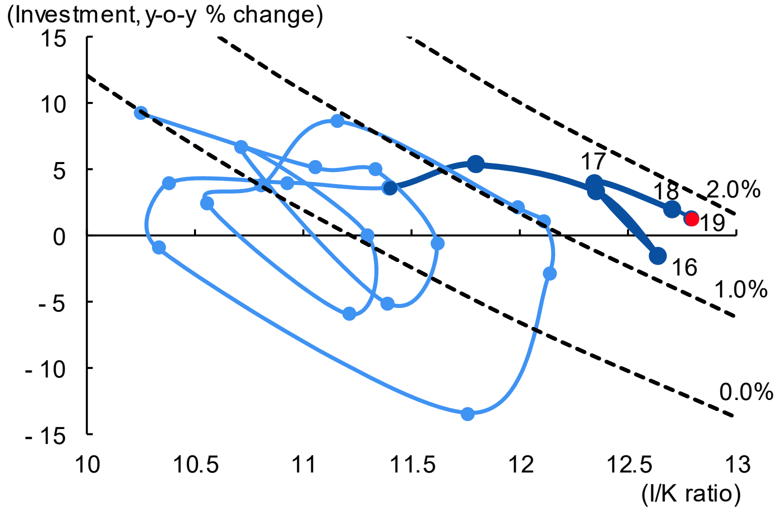


Note: Seasonally-adjusted by MHRI. 3-month moving average.
Source: Made by MHRI based upon Ministry of Finance, *Trade Statistics*

Capital investment: serious drop unlikely due to structural boost, despite heightened adjustment pressures

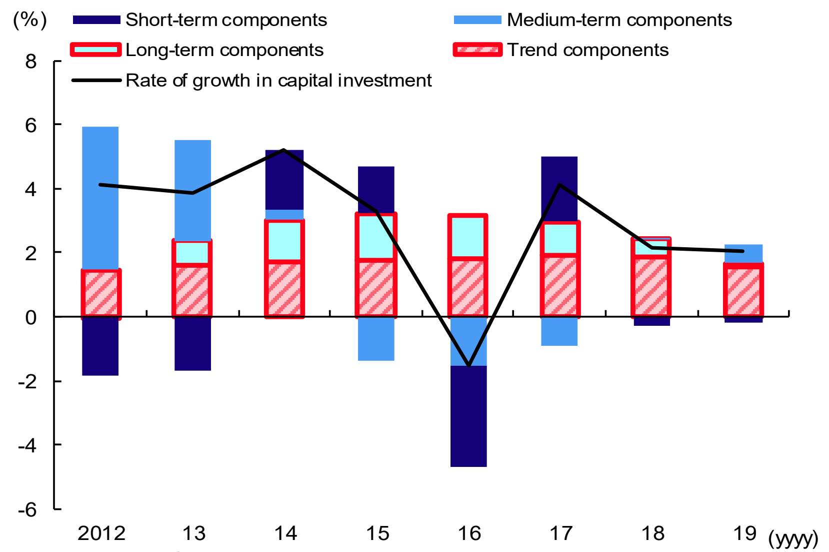
- The capital stock cycle suggests the rise of adjustment pressures. However, investment is underpinned by structural boosts.
  - Even the decomposition of contribution by period component indicates overall capital investment is being supported by sustained investment demand (trend components and long-term components).
    - Investment is underpinned by demand for labor-saving investments, amid the tightening of the labor market and demand to renew buildings with long service lives.
- Although growth will be weak through FY2020, a serious adjustment is unlikely since there will be support from structural investment demand.

Capital stock cycle



Note: The thick blue line shows the period of Abenomics (2013-2019). Calculated by MHRI using *Preliminary Quarterly Estimates of Net Capital Stocks of Fixed Assets* up until the Jul-Sep quarter of 2019
Source: Made by MHRI based upon Cabinet Office, *National Accounts, Preliminary Quarterly Estimates of GDP, Preliminary Quarterly Estimates of Net Capital Stocks of Fixed Assets*

Real growth in capital investment (decomposition of contribution by period component)



Note: The value of capital investment has been seasonally-adjusted. The average up until the *Second Preliminary Quarterly Estimates of GDP* for the Jul-Sep quarter of 2019. Decomposed into short term components (up to 4 years, temporary policy impact and statistical noise), medium-term components (4 to 11 years, economic cycle and facility replacement cycle, investment for inbound measures) and long-term components (11 to 25 years, facilities with long service lives and building renewal cycle)
Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*

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Capital investment: flat in FY2020 due to weak construction investment, with overall increase in FY2021

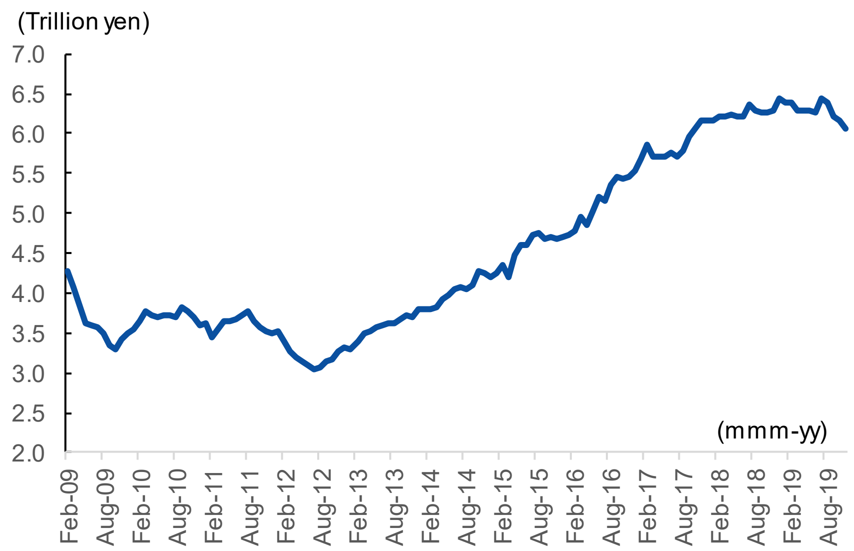
- We forecast overall investment to be flat in FY2020 with flat machinery investment, weak construction investment and an increase in intellectual property investment. We forecast an overall increase in FY2021 due to recoveries in machinery investment and construction investment stemming from the recovery of both the domestic and overseas economies, and progress in redevelopment projects.
- Construction companies have large levels of construction projects on hand. A large volume of offices are scheduled to be released in 2023, and there are currently many redevelopment projects awaiting construction, which should be commenced from around the second half of FY2020.
- There is little concern that the post-Olympics slump of construction investment will cause a serious recession. We expect construction investment to pick up again in FY2021.

Forecast capital investment by form in FY2020 and FY2021

	FY2020		FY2021	
Machinery	→	Flat due to sluggish growth in domestic and external demand	↗	Recovery reflecting the rebound in domestic and external demand
Construction	↘	Weak due to pre-Olympic pause in construction and slumping factories, etc.	↗	Recovery mainly in urban renewal projects
Intellectual Property	↗	Moderate increase in software R&D	↗	Ongoing increase in software R&D
Total	→	Flat	↗	Increase

Source: Made by MHRI

Construction projects on hand (private non-residential, seasonally-adjusted)



Note: Seasonally-adjusted by MHRI
Source: Made by MHRI based upon Ministry of Land, Infrastructure, Transport and Tourism, *Current Survey on Construction Statistics*

Personal consumption: sluggish in FY2020 due to weak employment and income conditions, with a moderate recovery in FY2021

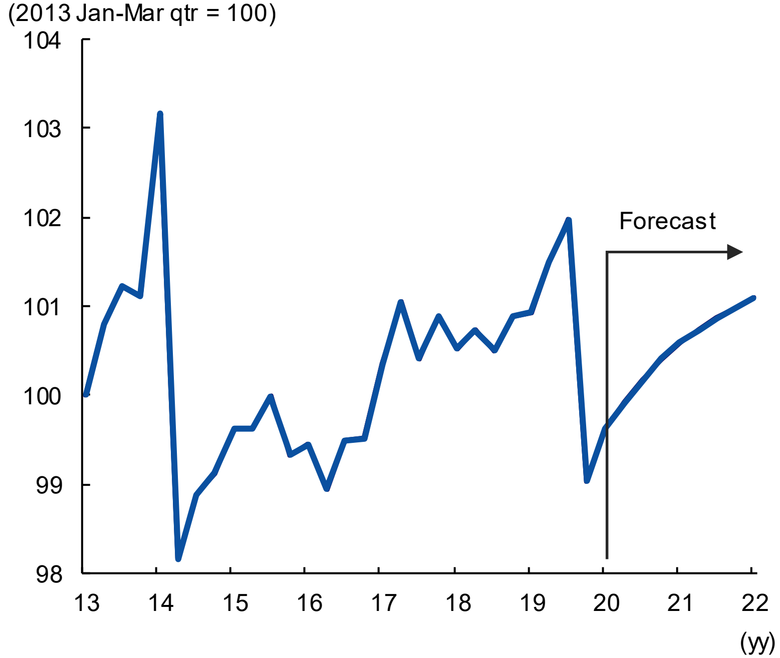
- Employment and income conditions will be weak in FY2020. Despite a gradual recovery in FY2021, growth should remain moderate.
  - In FY2020, we forecast heightened caution concerning employment, particularly in the manufacturing sector. Wage growth will be sluggish due to weak corporate earnings. We forecast real wage incomes to be weak. In FY2021, even though employment and income conditions should pick up due to the recovery of production activity, the growth will be moderate.
- The underlying trend of personal consumption will be sluggish due to weak employment and income conditions even though there will be the impact from new car models in early 2020 and a fading of the negative impact of the consumption tax hike. While we anticipate personal consumption to pick up in FY2021 amid the recovery in employment and income conditions, we expect only moderate growth.

Outlook on employment, wages and prices (FY2019, FY2020)

	FY2019	Y-o-y change	FY2020	Y-o-y change
No. of employees	Growth in the number of employees slows down. Despite increase in the non-manufacturing sector, growth in the manufacturing sector flattens out	+1.1%	The global economy fall short of a recovery and manufacturers are cautious about employment. Growth in number of employees will slow even further	+0.6%
Nominal wages	Growth in scheduled cash earnings flattens out, and lower production leads to lower scheduled cash earnings. Special earnings also declines due to weak corporate earnings	+0.5%	Stagnant earnings make employers cautious about wage hikes, leading to the stagnant growth of scheduled cash earnings. The decline of working hours leads to the ongoing fall of non-scheduled cash earnings. Given the fall of bonuses as well, wage growth slows down even further	+0.3%
Prices	Growth in prices following the consumption tax hike flattens out	+0.7%	Growth in prices expected to be flat in FY2020 as well	+0.8%

Source: Made by MHRI

Outlook on real personal consumption



Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*

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Government: GDP to be boosted by about 1%pt from the cumulative impact of economic measures

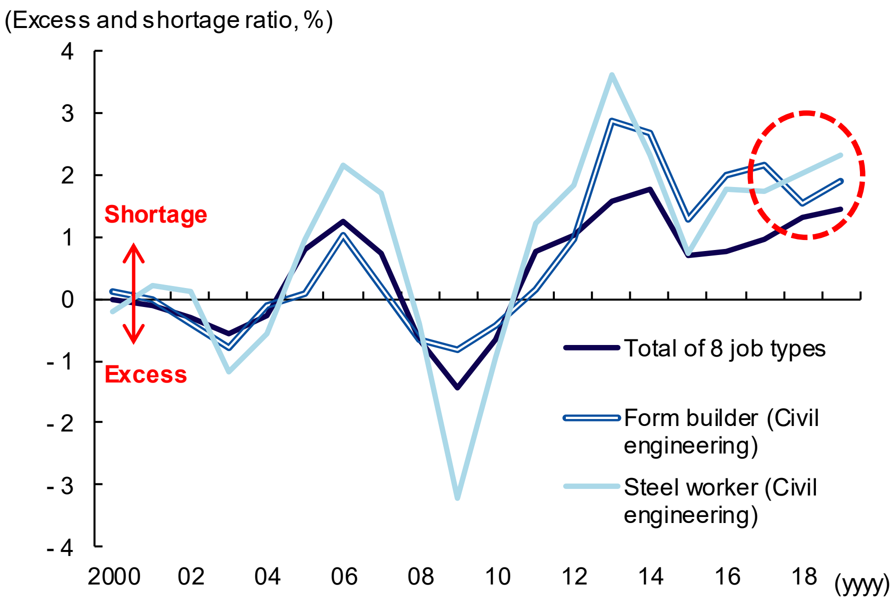
- The cumulative economic impact from the economic measures in the FY2019 supplementary budget and the FY2020 initial budget, should boost GDP by about 1%pt mainly in public investment. The benefit to be realized in FY2020 is forecast at about 0.7%pt.
- However, the shortage ratio of skilled construction workers is gradually rising. There are concerns that adequate economic impact may not be achieved relative to the size of the budget.

Calculated impact of economic measures (FY2019 supplementary budget + FY2020 initial budget)

	Economic impact			
	Cumulative		Boost in FY2020	Boost in FY2021
	Value (Tn yen)	Contribution to GDP (%Pt)	Contribution to GDP (%Pt)	Contribution to GDP (%Pt)
Total	5.5	1.0	0.7	0.3
Personal consumption	0.2	0.0	0.0	0.0
Capital investment	0.1	0.0	0.0	0.0
Public demand	5.2	0.9	0.7	0.2
Government consumption	0.7	0.1	0.1	0.0
Public investment	4.6	0.8	0.6	0.2

Source: Made by MHRI based upon Ministry of Finance materials, etc.

The shortage ratio for skilled construction workers

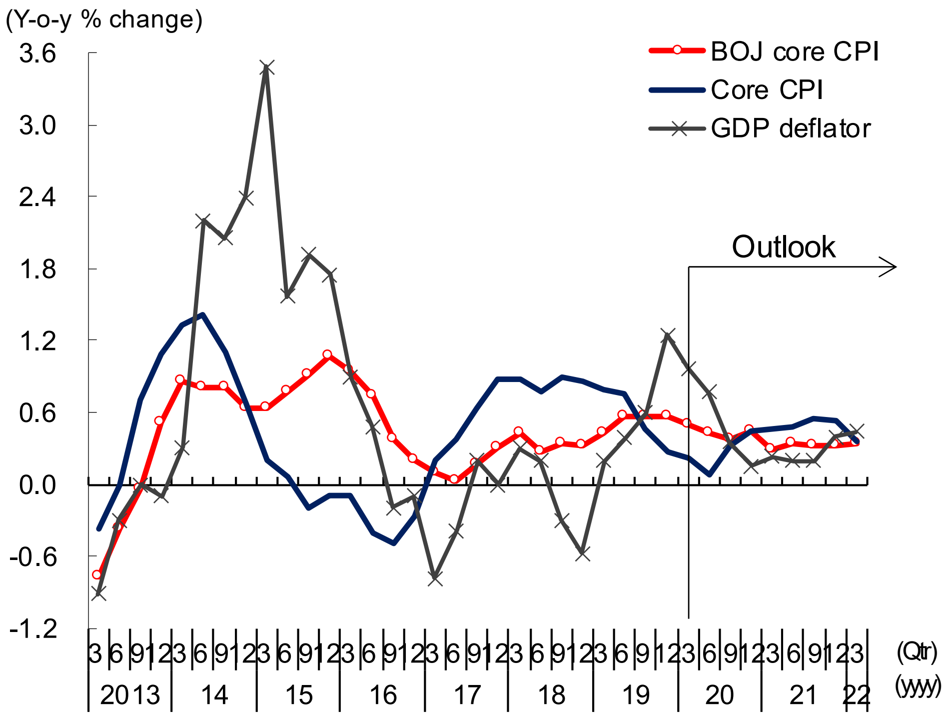


Note: The "shortage ratio" is "(the number of workers the companies wanted, but were unable to secure - the number of workers that were secured but were surplus to requirements) / (the number of workers secured + the number of workers the companies wanted, but were unable to secure) x 100"
Source: Made by MHRI based upon and Ministry of Land, Infrastructure, Transport and Tourism, *Survey on Supply and Demand of Construction Labor*

Prices: remain low and will serve as a drag on both the output gap and labor costs

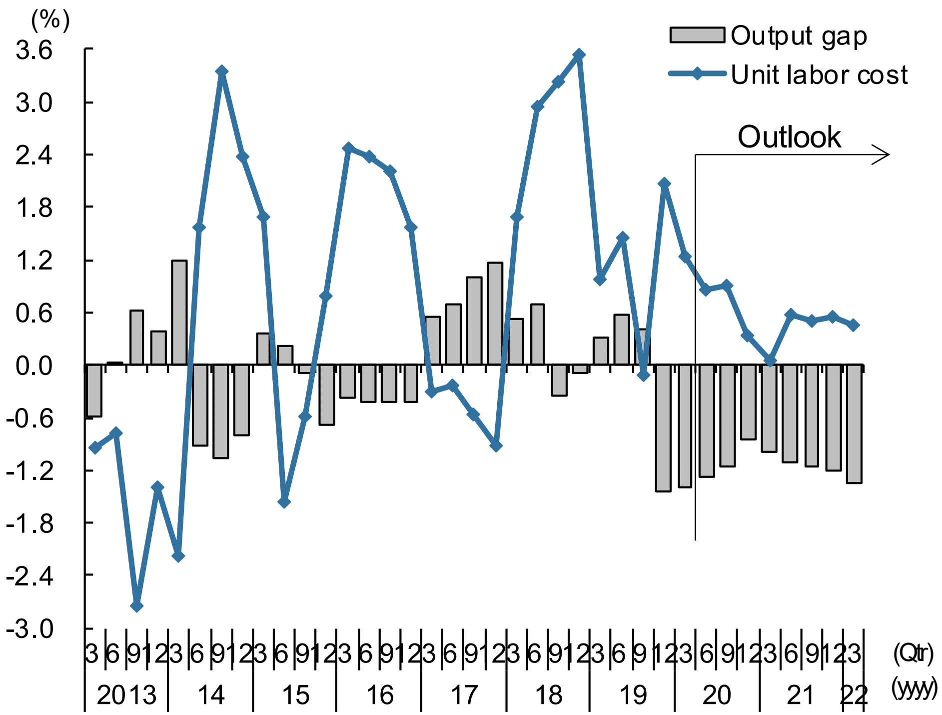
- The BOJ core CPI has stayed at around the middle of the 0%-level since the start of 2019. Looking forward, it should move in the lower range of the 0%-level through FY2020 and FY2021.
- Apart from a negative output gap, we forecast weak growth in the unit labor cost throughout FY2020 and FY2021 as well. The odds are high that the underlying trend of prices will slow down.

CPI and GDP deflator



Note: Calculation excluding the impact of consumption tax hike and free education
Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP* and Ministry of Internal Affairs and Communications, *Consumer Price Index*

Unit labor cost (y-o-y) and output gap



Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*

(7) Financial markets: protracted global low interest rate environment

- Given the likelihood that monetary policy will remain unchanged in Japan, the US and Europe amid lingering uncertainties such as US trade policy, we expect a protracted low interest rate environment around the world.
- We forecast a gradual rise in US stocks amid the low interest rate environment and firm US economy. Japanese stocks are being weighed down by concerns regarding China's economic slowdown and could perform below overseas stock markets.
- Central banks of Japan, the US and the Eurozone are likely to leave monetary policy unchanged amid the ongoing low inflation environment. The focus will be on the US Fed's revision of its monetary policy framework and debate at the ECB concerning revisions to its monetary policy strategy.
- US 10-year government bond yields are trading at the upper half of the 1%-level amid lingering speculation of a US interest rate cut. German 10-year government bond yields are in negative territory and Japanese 10-year government bond yields remain close to 0%.
- While we anticipate periods of temporary upward pressure on the yen against the US dollar due to factors such as US trade policy, we expect any movement will be range-bound.

Financial markets: central banks of Japan, the US and the Eurozone to leave monetary policy unchanged

- The US Fed, ECB and BOJ are all likely to keep monetary policy unchanged amid lingering uncertainties in the global economy and the absence of a sense of acceleration in prices. The focus will be on the US Fed's revision of its monetary policy framework and debate at the ECB concerning revisions to its monetary policy strategy.
- Long-term interest rates remain low. We forecast a moderate rise in US and Japanese stocks amid the ongoing accommodative monetary policy conditions. While we anticipate periods of temporary upward pressure on the yen against the US$ due to factors such as US trade policy, we expect any movement will be range-bound.

Outlook on the financial markets (February 2020)

		FY2019	FY2020	FY2021	2020				2021				2022
					Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
Japan													
Interest rate on Policy-Rate Balances	(%)	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10
Euroyen TIBOR	(3-mo, %)	0.05	0.05	0.05	0.04	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Interest rate swap	(5-yr, %)	- 0.05	0.05	0.10	0.00	0.00	0.05	0.10	0.10	0.10	0.10	0.10	0.10
Newly-issued JGBs	(10-yr, %)	- 0.10	- 0.05	0.00	- 0.04	- 0.05	- 0.05	0.00	0.00	0.00	0.00	0.00	0.00
Nikkei 225 Average	(JPY)	22,200	23,400	24,300	23,100	22,600	23,000	23,800	24,000	24,000	24,200	24,400	24,400
US													
Federal funds rate	(End-of-period, %)	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75	1.50～1.75
Newly-issued US government bonds	(10-yr, %)	1.90	1.70	1.80	1.65	1.60	1.70	1.75	1.80	1.80	1.80	1.80	1.80
Dow Jones Average	(USD)	27,200	29,000	30,300	28,600	28,000	29,000	29,400	29,600	30,000	30,200	30,400	30,400
Eurozone													
ECB deposit rate facility	(End-of-period, %)	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50
German government bonds	(10-yr, %)	- 0.35	- 0.30	- 0.25	- 0.36	- 0.40	- 0.30	- 0.25	- 0.25	- 0.25	- 0.25	- 0.25	- 0.25
Exchange rate													
USD/JPY	(USD/JPY)	109	108	107	108	107	107	108	108	107	107	107	107
EUR/USD	(EUR/USD)	1.11	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
WTI Crude oil futures	(USD/Barrel)	57	56	61	54	54	56	57	58	59	60	62	62

Source: Made by MHRI based upon Bloomberg

Reference: Key political events

		2020		2021		2022
US	Nov	Presidential and congressional elections	Sep	20 years since the September 11 attacks	Nov	Mid-term elections
Europe			Sep	Russia: Legislative election	Apr-Jun	France: Presidential and legislative elections
			Oct	Germany: Legislative election		
			Autumn	Germany: Chancellor Merkel scheduled to step down		
Japan	Jul-Sep	Tokyo Olympic and Paralympic Games	Mar	10 years since the Great East Japan Earthquake	Jul	Term of office of Upper House members ends
			Sep	Inauguration of the next president of the LDP		
			Oct	Term of office of Lower House members ends		
Asia	Apr	South Korea: Legislative election	By year-end	Vietnam: National Congress of the Communist Party		South Korea: Presidential election
	@Sep	Singapore: Legislative election				Thailand: Legislative election
	Sep	Hong Kong: Legislative Council election				China: 20th National Congress of the Communist Party
	By year-end	China: Fifth Plenary Session of the CPC Central Committee				Hong Kong: Chief Executive election
						Australia: Senate and House of Representatives elections
						The Philippines: Presidential and legislative elections
Other					Oct	Brazil: Presidential election

Note: "@ Sep" indicates that the event will be held sometime around September
Source: Made by MHRI based upon Bloomberg

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