FY2018, FY2019 Economic Outlook

Despite ongoing expansion, the global economy is maturing. Keep a close eye upon the escalation of trade friction

August 13, 2018

Mizuho Research Institute

Key points of our forecast

- The global economy is forecast to remain on an expansion track in 2018 and continue to follow a firm footing in 2019. However, as the economy is maturing, the growth momentum will gradually moderate due to the slowdown of the Chinese economy and peak-out of the IT cycle.
- Even though the global economy picked up from the soft patch in the Jan-Mar quarter, the global economy lacks momentum with the exception of the US economy, as evidenced by the slowdown of the Eurozone and Chinese economies in the Apr-Jun quarter.
- The escalation of trade friction, the spread of concerns regarding the emerging market (EM) economies, Middle East tensions, and the rise of crude oil prices pose risks to global growth.
- As for trade friction, the US is exerting stronger external pressures regarding trade principally toward China. Should US-China trade frictions escalate, it would serve as negative pressures not only upon the US and China but upon the global economy as well.
- Concerns regarding the EM economies will spread to China - which is a direct party in trade friction - and the neighboring countries of Asia, reflecting US-China trade friction. In certain countries such as Turkey, capital outflows and currency weakening are spreading to financial problems.
- Turning to the Japanese economy in FY2018 and FY2019, despite the impact of the consumption tax hike, the economy should continue to follow a recovery at a pace on par with its potential growth rate. The Trump administration's protectionist policies pose risks to growth, with additional tariffs related to motor vehicles having a serious impact upon Japan.
- Despite uncertainties accompanying trade issues, the improvement of corporate earnings mainly in the developed market (DM) countries is serving to support the stock market. The tendency of the stock market to recover after US mid-term elections is also a positive factor.

I. General Overview

The global economy on firm footing, with recovery focused on the US

(1) Overview of the global economy: our outlook on global growth remains unchanged from MHRI's *Economic Outlook* in June

- The global economy is forecast to remain on an expansion track in 2018 and continue to follow a firm footing in 2019, despite a moderate downturn in growth momentum.

[Outlook on the global economy]

(Y-o-y % change) (Y-o-y % change) (% point)

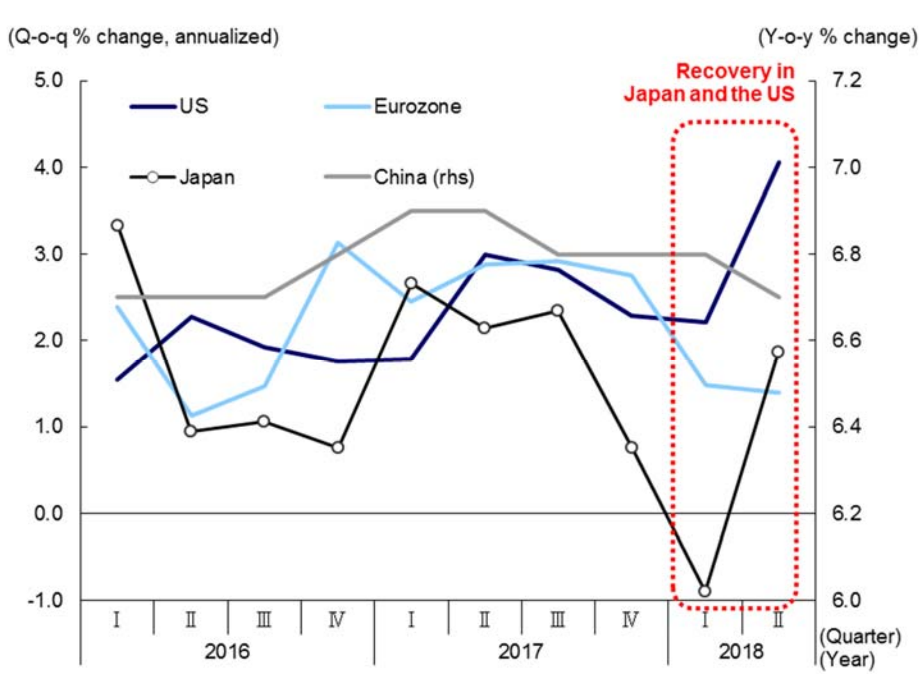
	2015	2016	2017	2018	2019	2018	2019	2018	2019
	Calendar year					(Forecast in June 2018)		(Breadth of change from forecast in June 2018)	
Total of forecast area	3.6	3.4	3.9	4.1	4.0	4.1	4.0	-	-
Japan, US, Eurozone	2.4	1.6	2.2	2.3	2.1	2.4	2.1	-0.1	-
US	2.9	1.6	2.2	2.9	2.7	2.8	2.6	0.1	0.1
Eurozone	2.1	1.8	2.4	2.0	1.7	2.2	1.8	-0.2	-0.1
Japan	1.4	1.0	1.7	1.0	1.3	1.1	1.1	-0.1	0.2
Asia	6.2	6.2	6.1	6.2	6.0	6.2	6.0	-	-
China	6.9	6.7	6.9	6.6	6.4	6.5	6.4	0.1	-
NIEs	2.1	2.3	3.2	2.8	2.5	2.8	2.5	-	-
ASEAN5	4.9	4.9	5.3	5.3	5.0	5.3	5.1	-	-0.1
India	7.6	7.9	6.2	7.4	7.3	7.4	7.4	-	-0.1
Australia	2.5	2.6	2.2	3.0	2.7	3.0	2.7	-	-
Brazil	-3.5	-3.5	1.0	1.5	2.5	2.0	2.5	-0.5	-
Mexico	3.3	2.9	2.0	2.1	2.5	1.9	2.3	0.2	0.2
Russia	-2.5	-0.2	1.5	1.6	1.3	1.6	1.5	-	-0.2
Japan (FY)	1.4	1.2	1.6	1.2	0.9	1.2	0.8	-	0.1
Crude oil price (WTI, USD/bbl)	49	43	51	68	72	67	72	0	-

Note: The total of the forecast area is calculated upon the 2016 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) Overview of the global economy: recovery in the Apr-Jun quarter, particularly in the US

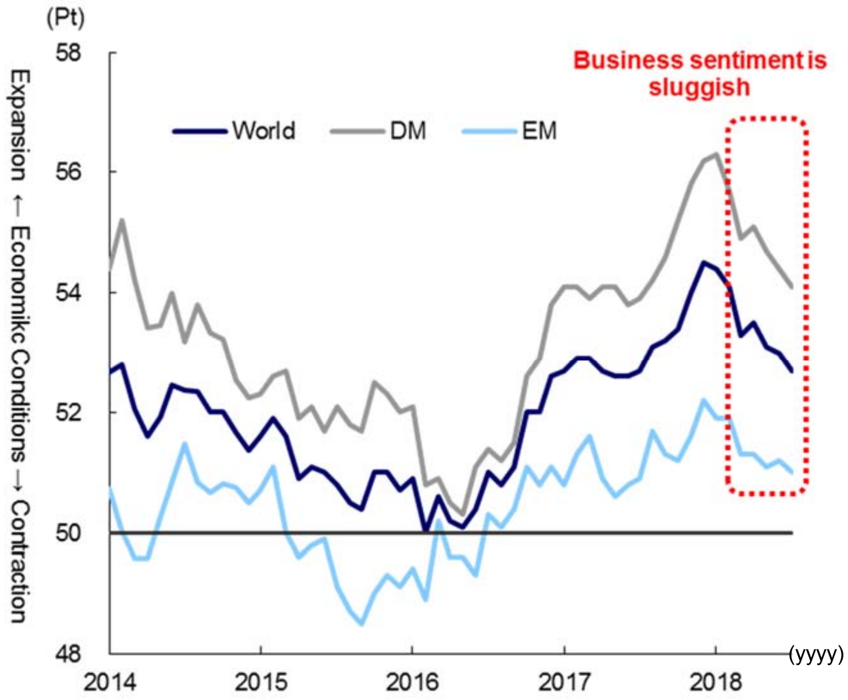
- Even though the global economy picked up from the soft patch in the Jan-Mar quarter, there is a lack of momentum in the global economy apart from the US.
  - Despite a recovery in the growth rates for Japan and the US in the Apr-Jun quarter, growth slowed in the Eurozone and China.
  - Business sentiment in the manufacturing sector is also sluggish, particularly in Europe.

[Quarterly GDP growth rates for Japan, US, Eurozone, China]



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

[Global manufacturing PMI]

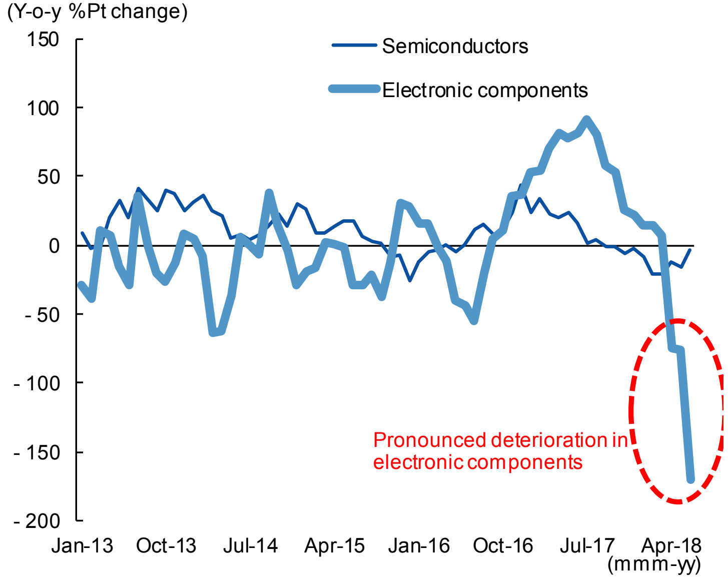


Source: Made by MHRI based upon Markit

IT Cycle: recent inventory adjustment pressures have been stronger on LCD panels than semiconductors

- ❑ The breakdown of electronic components and devices subject to inventory adjustment indicates a greater deterioration in the inventory-shipment balance for electronic components than semiconductors.
  - The change in inventories of electronic components has been in excess of +70% y-o-y for the past two months. Shipments have been negative y-o-y for seven consecutive months.
    - ✓ Semiconductor inventories have accumulated, but shipments have remained positive y-o-y except for February, which was affected by Chinese New Year.
- ❑ Inventory adjustment pressures have increased for LCD panels due to the slump in sales of smartphones and TVs.
  - There is an oversupply of large panels due to increased production, particularly from Chinese manufacturers. Prices for 32 inch screens have plummeted.

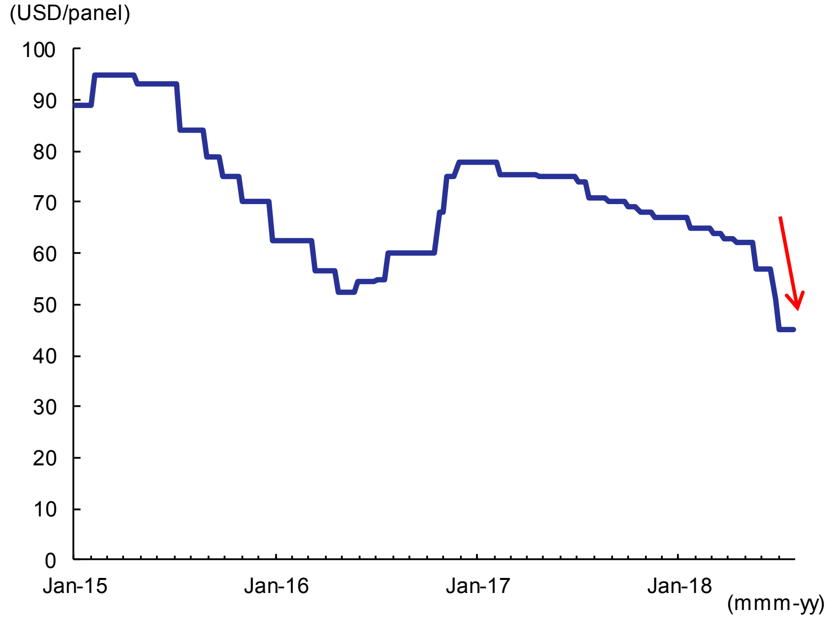
[Inventory-shipment balance of electronic components and semiconductors]



Note: Semiconductors comprises semiconductor devices, integrated-circuits and semiconductor components

Source: Made by MHRI based upon Ministry of Economy, Trade and Industry, *Indices of Industrial Production*

[LCD panels for TVs]

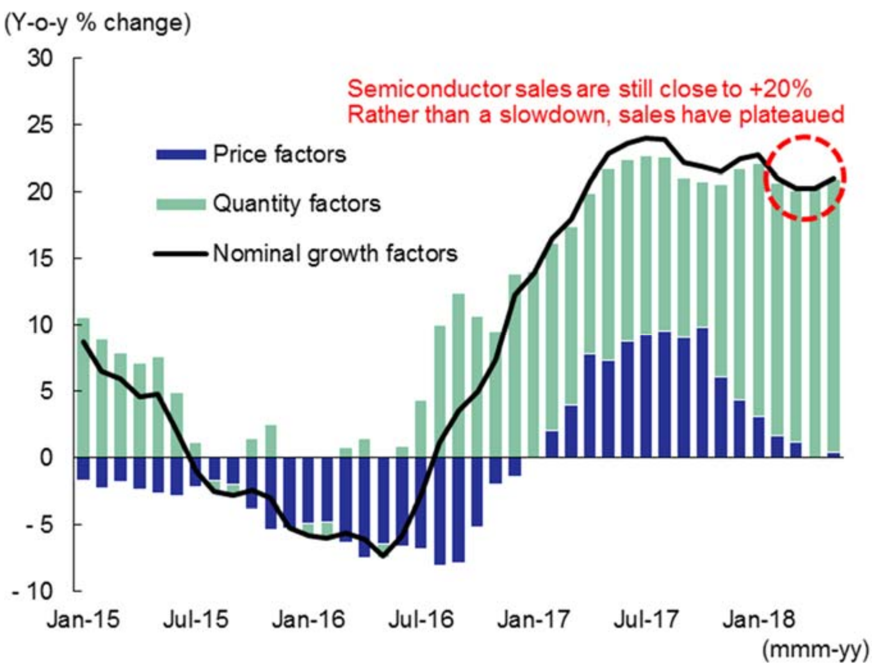


Source: Made by MHRI based upon Nikkei NEEDS FQ

IT Cycle: firm demand for semiconductors, and no need for excessive concern about inventory pressures at present

- Global semiconductor sales continue to show strong growth of close to +20% y-o-y. The growth rate of imports to China has also plateaued at a high level.
  - Even if prices fall, there will be an ongoing rise on a real basis.
- Semiconductor demand is shifting from "B to C" to "B to B", so there is little concern about a major decline in demand. There is no need for excessive concern about inventory adjustment pressure at present.
  - However, the growth rate has not risen from +20% y-o-y, and we forecast a gradual decline in the growth rate until 2019.

[Global semiconductor sales]



Source: Made by MHRI based upon CEIC Data

[US and Chinese imports of semiconductors]

Source: Made by MHRI based upon CEIC Data

(3) Trade problems: ongoing trade frictions between the US and China

2018

Mar

(3/23) Additional tariffs on steel and aluminum

Apr

(4/2)【China】Retaliatory action

(4/30) Extended the grace period for the EU, Canada, and Mexico

May

(5/31) Exemption for countries making concessions

Jun

(6/1) Sanctions applied to the EU, Canada, and Mexico

(6/1)【EU】WTO dispute complaint

(6/8)【EU】Agreed to build a framework to alleviate trade friction with the US

(6/22)【EU】Retaliatory tariffs (EUR2.8bn) Additional EUR3.6bn depending on the WTO

(6/26)【EU】Restriction of steel imports in July

Jul

(7/4) Proposes elimination of the auto tariff to the EU

(7/25) Agreement on reservation of additional tariffs

Aug

Worsening retaliatory battle with China; pursuing trade negotiations with the EU as well

《Import tariffs》

(3/22) Announced sanctions on Chinese products worth $50bn as a countermeasure against violation of intellectual property rights

(4/3) Announced a plan affecting Chinese products worth $50bn

(4/4)【China】Retaliatory measures proposal

(4/5) Reviewing additional sanctions on Chinese products worth $100bn

(5/3-4) 1st US-China Trade Discussions
(5/17-18) 2nd US-China Trade Discussions

(6/2-3) 3rd US-China Trade Discussions

(6/15) Announced sanctions on $50bn in Chinese goods $34bn (7/6), $16bn (undecided)

(6/15)【China】Announced retaliation on the same day
(6/16)【China】Announced countermeasures worth the same amount

(6/18) Expanded tariffs to extra $200bn worth of Chinese imports

(6/19)【China】Warns of retaliatory measures
(6/19)【US】Additional sanctions on $200bn in response to the warning

(7/6) Additional tariffs on Chinese goods worth $34bn

(7/6)【China】Immediately announced retaliatory measures

(7/10) Additional tariffs on Chinese goods worth $200bn (from Sep)

(7/11)【China】Warns of retaliatory measures

(8/1) 25% tariff rate on additional tariffs on Chinese goods worth $200bn

《Regulation of US investments》

(3/12) President Trump issued an order prohibiting the acquisition of Qualcomm (*1)

《Export regulations》

(*1) Attempt by Broadcom, a major communications semiconductor company with headquarters in Singapore, to acquire US semiconductor major Qualcomm

Congress (both chambers) reviewing tougher export control regulations to protect cutting-edge and core technologies

(6/18) Bill strengthening regulations on investments in the US and exports passed the Senate (*2)

(6/26) Passed the House of Representatives (*2)

(※2) Waiting for Senate and House of Representatives conciliation

(6/26) President Trump presents a policy of regulating investments in the US by bolstering the powers of the CFIUS (Committee on Foreign Investment in the US) and conducting more rigorous reviews

(6/26) President Trump presents a policy of tougher export control regulations within the existing framework

Fierce battle for dominance in cutting-edge technologies with China; concerns regarding its impact on Japan

Source: Made by MHRI

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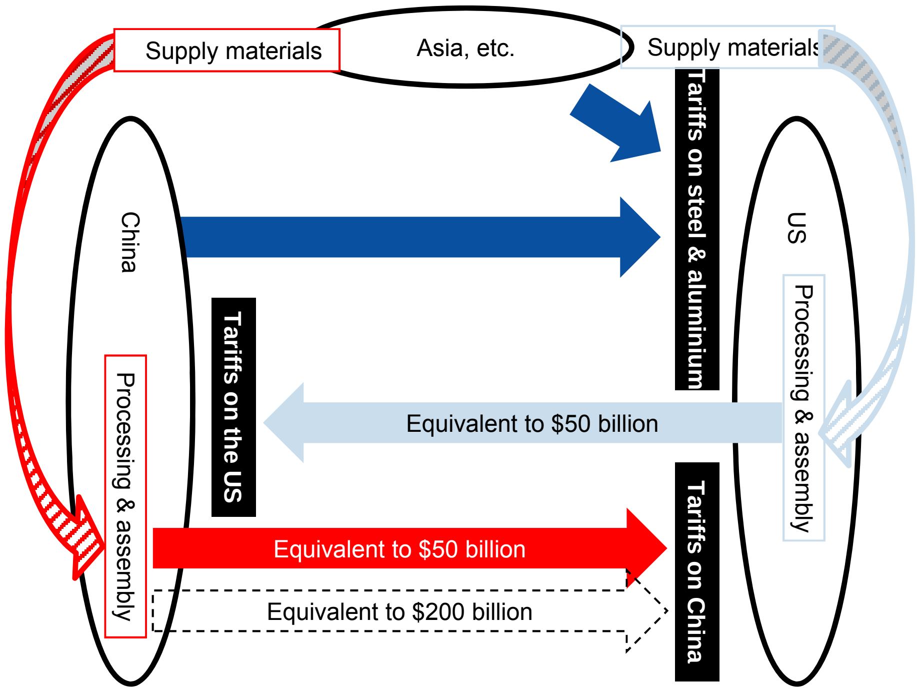
Global: the impact of $50 billion is limited, but there are concerns of escalation such as a spread to auto-related goods

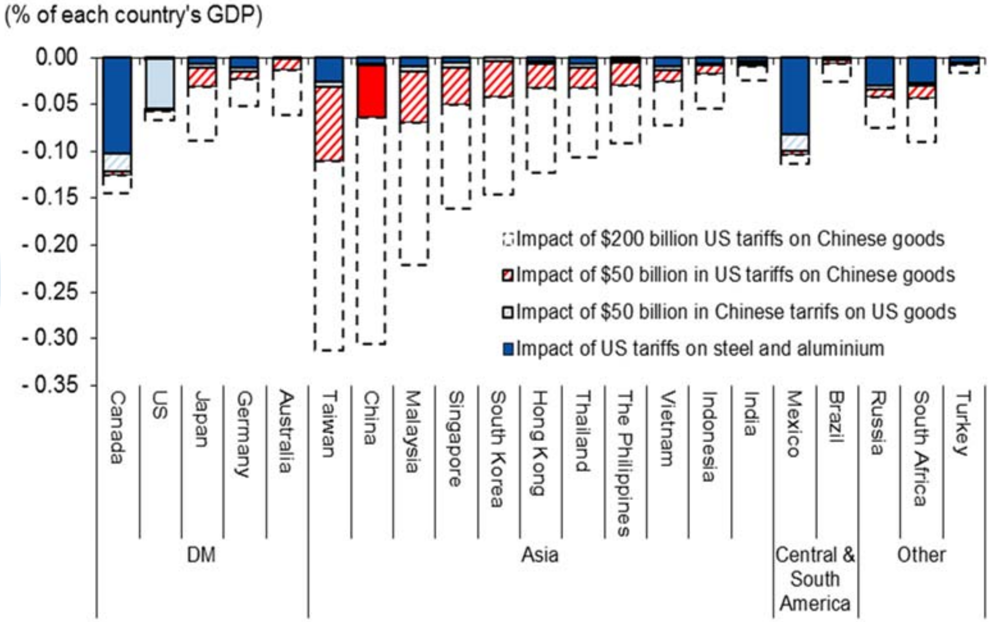
- The impact of US tariffs on steel and aluminium and the tariffs on $50 billion worth of reciprocal goods between the US and China has limited impact on the global export supply chain.
  - In Asia, the impact of US tariffs on the supply of components to China is concentrated on China, but estimates show limited downward pressure on exports.
  - However, extension of sanctions to $200 billion of Chinese imports and auto-related goods would not only directly affect exports through the supply chain, but possibly have an indirect impact on investment and consumption due to increased uncertainty, with risk of a greater decline in the growth rate.

[Relationship between tariff measures and exports]



Source: Made by MHRI

[Downturn in exports due to tariff measures (estimate)]



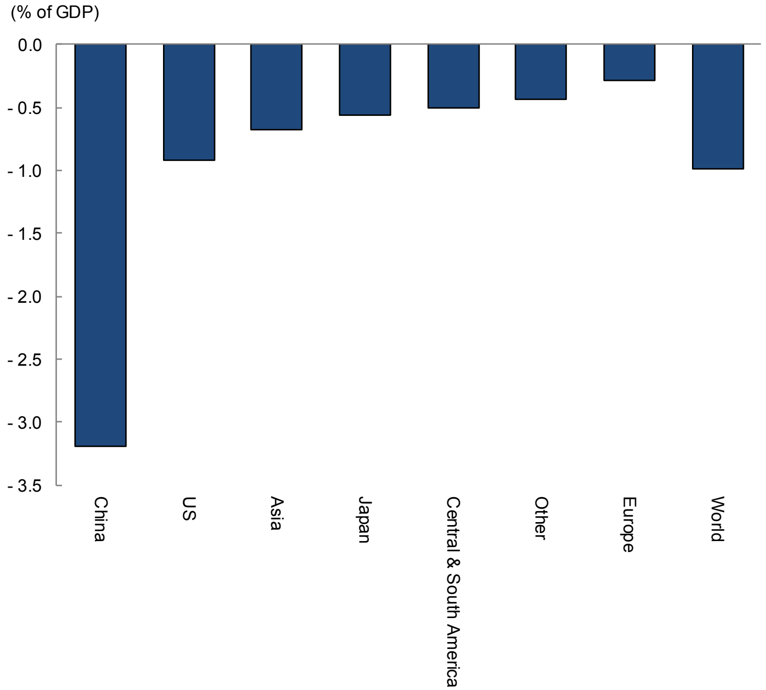
Note: Assumes price elasticity for demand = 1, and no change to the structure of value added exports since the most recent year for TiVA of 2011

Source: Made by MHRI based upon OECD TiVA, IMF World Economic Outlook Database

Global: risk of global economic downturn due to deterioration in business sentiment caused by uncertainty

- The outlook for US-China trade frictions remains uncertain. Concerns for the future will weigh on the stock market as long as the stalemate continues.
- We are concerned about business sentiment. Escalation of trade frictions could curb capital investment and contribute to a global economic downturn.

[Impact on GDP from a 20% reduction in US-China trade]
(MHRI Model)



Note: Calculated including the impact on investment and consumption and the contagion to third countries.
Source: Made by MHRI

[Calculations concerning the impact of trade frictions]

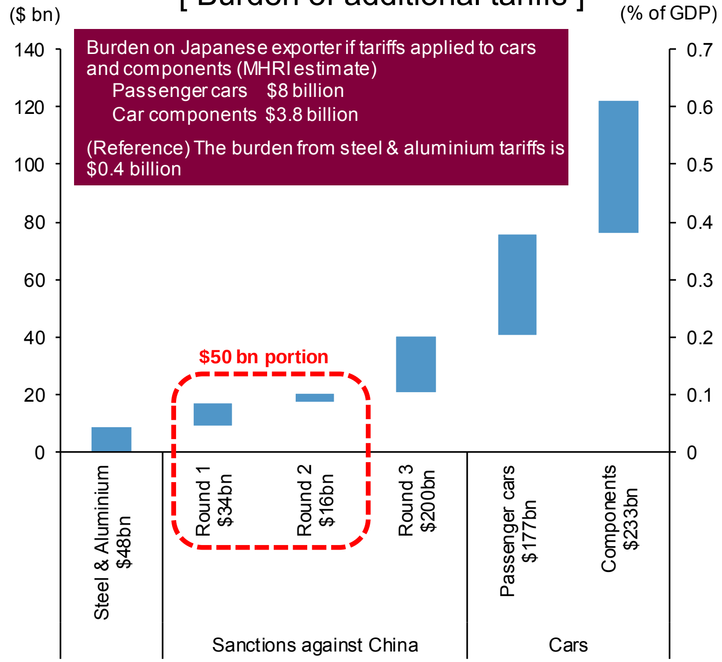
Model (Calculating institution)	Impact (Global GDP)	Assumptions
IMF	-0.5%	• US applies tariffs on steel (25%), aluminium (10%), $50 billion of Chinese goods (25%), $200 billion of Chinese goods (10%), additional tariffs on cars (25%), as well as retribution by each country against the US • Also considers the impact on each country's investment
MHRI	-1.0%	• 20% decline in US-China trade (assuming price elasticity for imports relating to US-China trade = 0.8, equivalent to 25% hike in tariffs) • Also considers the impact on each country's investment and consumption
OECD	-1.4%	• Impact if the US, China and Europe increase the cost of trade such as tariffs on the rest of the world by 10% • Imports in the 3 regions declines about 7 to 11% (price elasticity of about 0.7 to 1.1) • Also considers the impact on each country's investment

Note: IMF calculation indicates the value of the maximum impact.
Source: Made by MHRI based upon IMF, *G-20 Surveillance Note (July 2018),* OECD, *Making Trade Work for All (May 2017),* OECD, *OECD Economic Outlook (November 2016)*

US: additional tariffs are an “increased tax” of 0.6% of GDP. Retaliatory measures are also negative for US exports

- Additional US tariffs have a large impact on the US automotive market in particular. Retaliatory measures from trading partners are also negative for imports such as agricultural products.
  - Implementation of the 20% tariff on passenger cars will push up the price of imported passenger cars by about $6,000 per unit. This is also true for tariffs on automotive components.
  - Furthermore, the tariff on automotive components would push up the production costs for US manufactured cars by an average of 4% (spanning passenger cars to large trucks).
  - Retaliatory measures from trading partners span broad areas with particular focus on agricultural products, mainline items for US exports.

[Burden of additional tariffs]



Note: Note that the figures displayed in the chart differ from the aggregate of 2017 US imports taken from customs statistics (particularly for automotive components)

Source: Made by MHRI based up on the US Department of Commerce

[Retaliatory measures from major trading partners]

Retaliatory measures toward steel & aluminium tariffs (EU, China, Canada, Mexico)

	Steel	4,916
	Aluminium & aluminium products	3,693
	Steel products	2,332
	Various types of industrial chemical products	1,457
✔	Various types of prepared food products	1,343
✔	Meat	1,162
	Beverages, alcohol, etc.	1,156
	Nuclear reactors, boilers, etc.	1,128
	Soap, etc.	1,100
✔	Grains, grain flour, etc.	1,021
	Ships, etc.	958
	Paper products	876
	Furniture	862
	Plastic & plastic products	821
✔	Edible fruit, etc.	758
	Total	28,071

Retaliatory measures toward Round 1of sanctions against China (China)

✔	Seeds for oil and fruit, etc.	12,869
	Cars, etc.	12,854
✔	Grains	1,349
✔	Fish, crustaceans, etc.	1,236
✔	Cotton, cotton fabrics	1,049
✔	Meat	522
✔	Edible fruit, etc.	488
✔	Waste from food industry	414
✔	Dairy products	409
✔	Animal products	269
✔	Prepared products such as fruit and vegetables	232
	Beverages, alcohol, etc.	184
	Tobacco	163
✔	Edible vegetables, root crops, etc.	48
✔	Prepared products such as meat	40

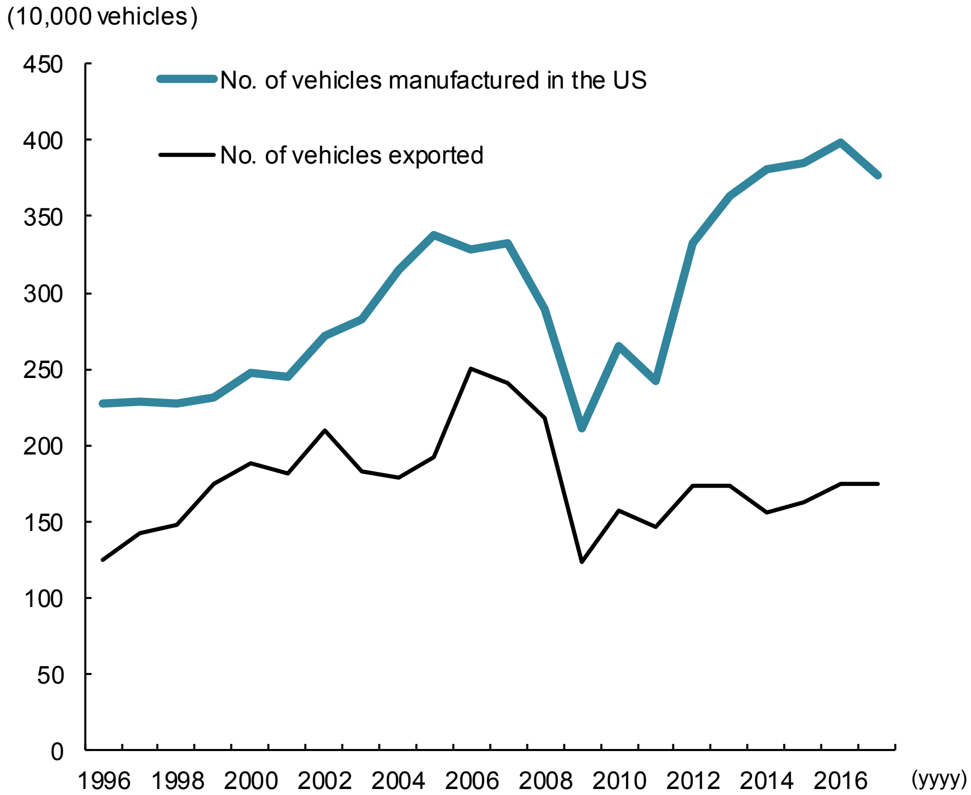
Note: ✔ indicates agricultural products. The amounts refer to the exports from the US to each country or region in 2017.

Source: Made by MHRI based up on the US Department of Commerce and the US Department of Labor

Impact of automobile tariffs: the number of locally produced cars in the US is twice the number exported from Japan

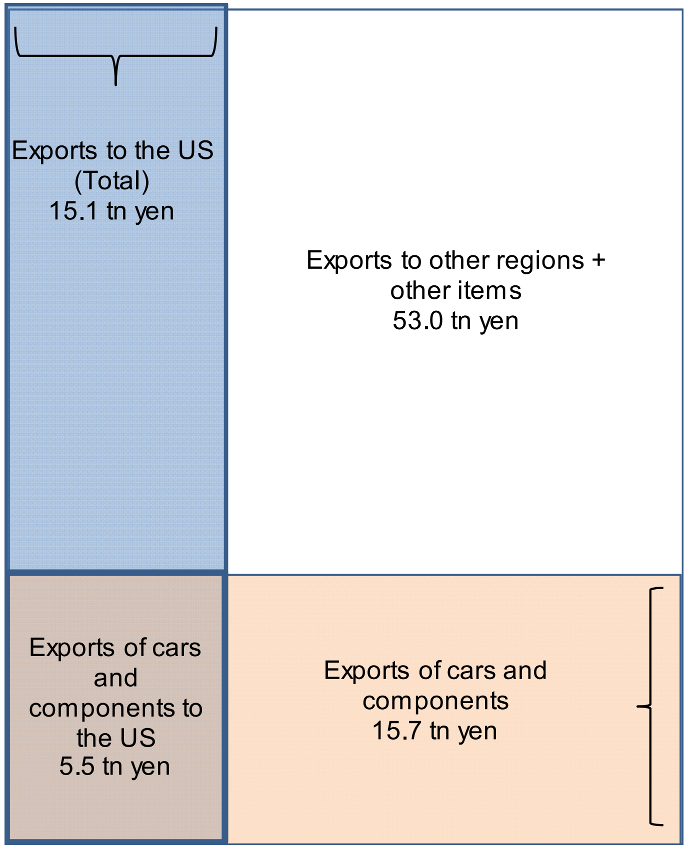
- In terms of the number of vehicles, locally produced cars in the US are twice the number of exports.
  - There has been a recent increase in local production. At a glance, the resilience to additional tariffs appears to have increased.
- However, automobile exports to the US total 5.5 trillion yen (including components, 2017), which accounts for about 7% of Japan's exports (78.3 trillion yen). A 20% tariff on automobiles is estimated to be a burden of more than 1 trillion yen (5.5 trillion yen x 0.2).

[Automobile exports to the US and local production (no. of vehicles]



Source: Made by MHRI based up on Ministry of Finance, *Trade Statistics,* and the Japan Automobile Manufacturers Association (JAMA)

[Composition of exports (2017)]

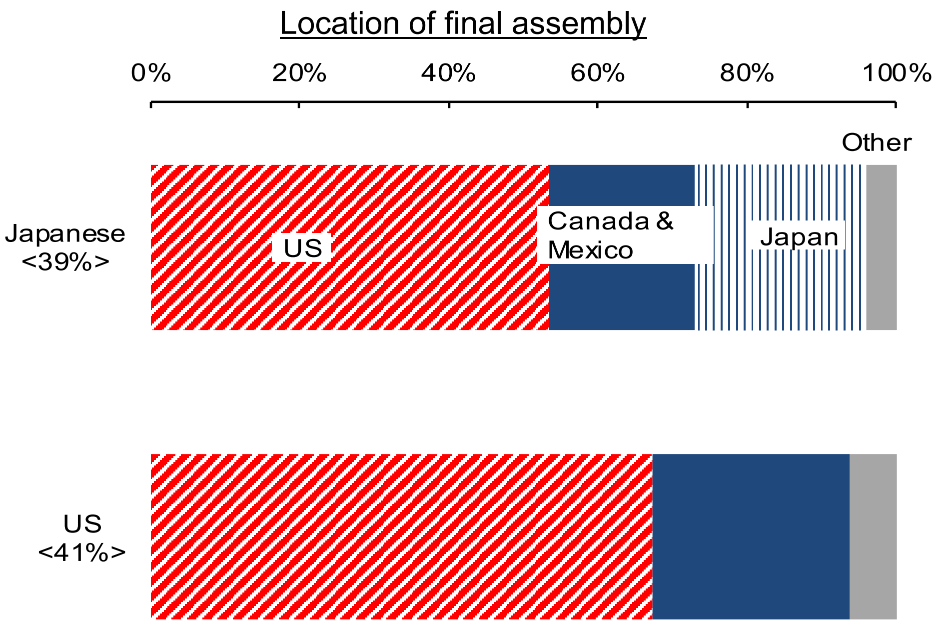


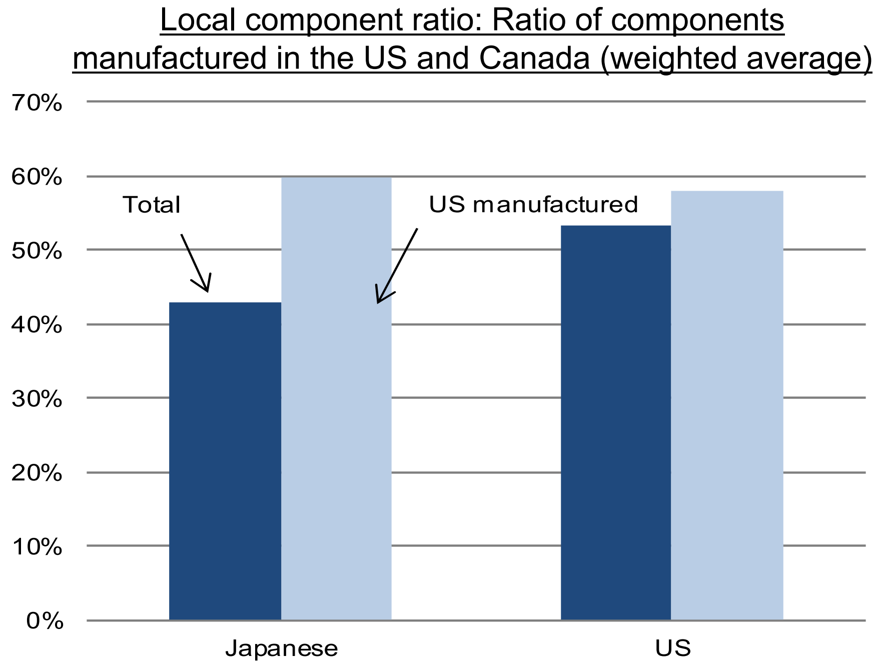
Source: Made by MHRI based up on Ministry of Finance, *Trade Statistics*

Impact of automobile tariffs: even if locally produced, the tariff on components will have a large impact

- ❑ More than 50% of Japanese cars sold in the US are manufactured in the US (about 75%, if manufactured in Mexico and Canada is included).
- ❑ Even if produced locally, the local component ratio (the ratio of components manufactured in the US and Canada) is about 60%, so increased tax on components will have a direct impact.
  - US manufacturers are not immune and they will be unable to avoid the increased burden from tariffs.

[Composition of supply by the country of origin of manufacture in the US car market (2017, estimate]





Note: 1. The figures in <> in the left-hand graph indicates the share of the number of vehicles sold in 2017. Note that this does not reflect the price difference in each model.
2. Created based on the production information by type released by the NHTSA and the number of vehicles sold by type listed on the car information website GoodCarBadCar. Where the number of vehicles sold by type has not been obtained for the same line, the number of models is proportionally divided for expediency.
3. Aggregate of the top 50 types by vehicle sales for Japanese and US manufacturers (covering about 90 to 95% of the number of vehicles sold), The brands considered are as follows:
Japanese: Toyota, Lexus, Nissan, Infiniti, Mitsubishi, Honda, Acura, Mazda, Subaru
US: Buick, Cadillac, Chevrolet, GMC, Ford, Lincoln, Chrysler, Dodge, Fiat, Jeep, (Tesla does not fall into the top 50)

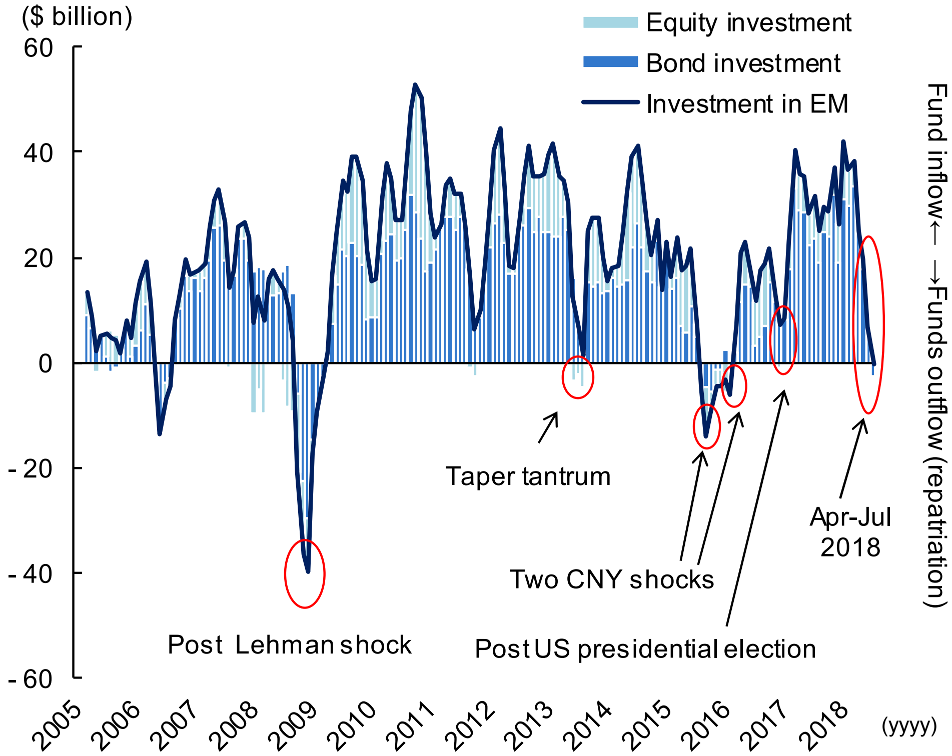
Source: Made by MHRI based up on the US Department of Transportation and the National Highway Traffic Safety Administration (NHTSA), GoodCarBadCar, various media reports.

(4) Rising EM uncertainties: outflow of funds and fall of stock prices in EM

❑ Investment in EM has suddenly declined and funds have been withdrawn since the beginning of spring.

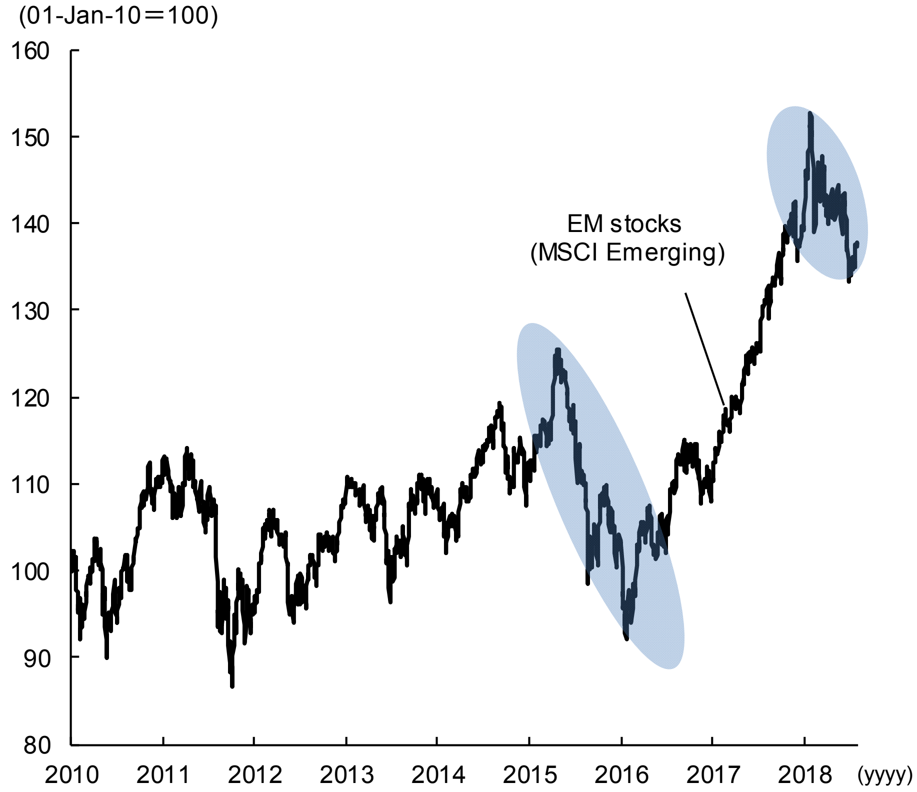
- EM stocks have sustained falls for the first time since 2015.

[Investment in EM securities]



Note: 3-month moving average for IIF statistics. Preliminary data for June to July 2018
Source: Made by MHRI based up on IIF

[EM stock price indices]

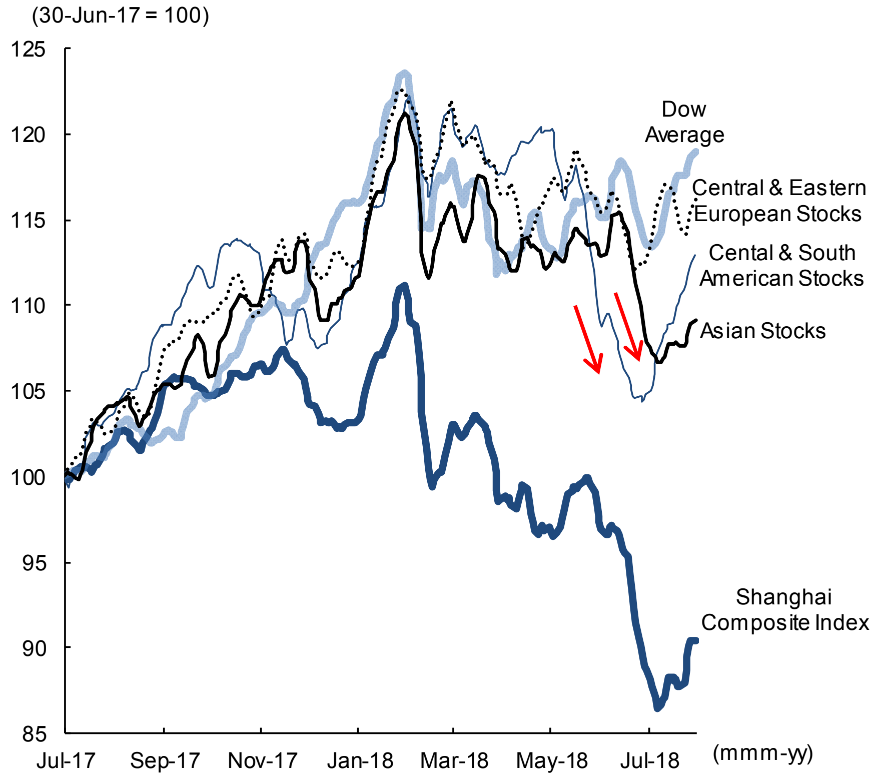


Source: Made by MHRI based up on MSCI

Reflecting US-China trade frictions, EM concerns are spreading to China and neighboring countries of Asia

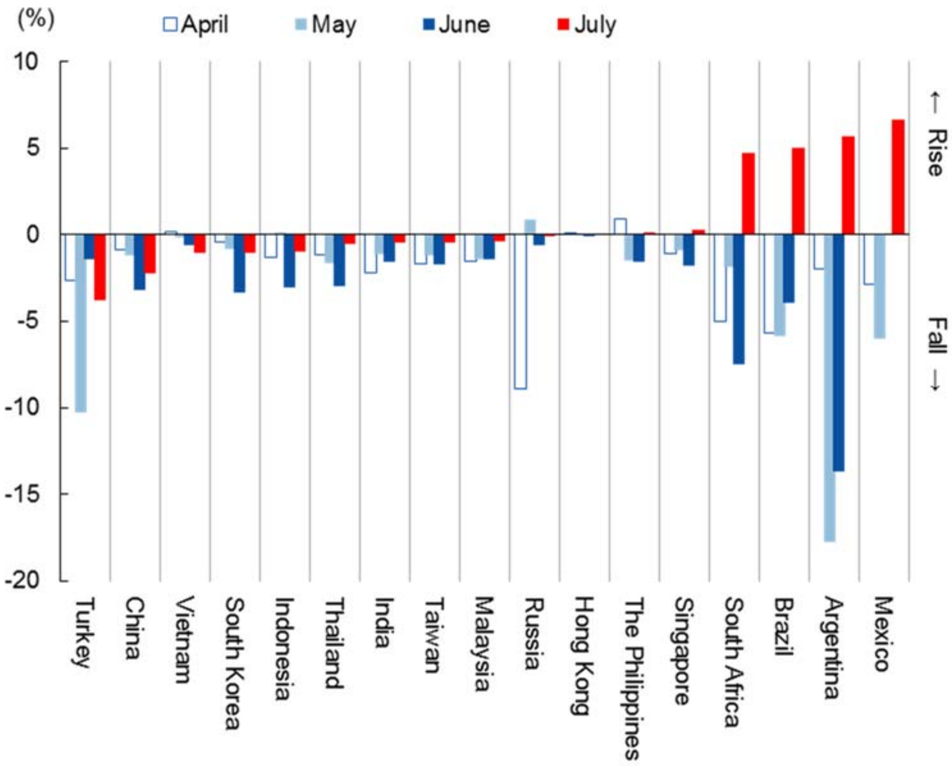
- While the decline in EM stocks was initially focused on Central & South American stocks, stocks subsequently fell in Asia, and Chinese stocks have been particularly weak.
- Turning to EM currencies, even though the decline in the April to June quarter was focused on Central & South American currencies, there has been a pronounced depreciation of Asian currencies from July.
  - The Turkish lira has continued to fall since the beginning of spring.

[Trends in stock prices]



Source: Made by MHRI based up on Thomson Reuters and MSCI

[Intra-month rate of change against the dollar]

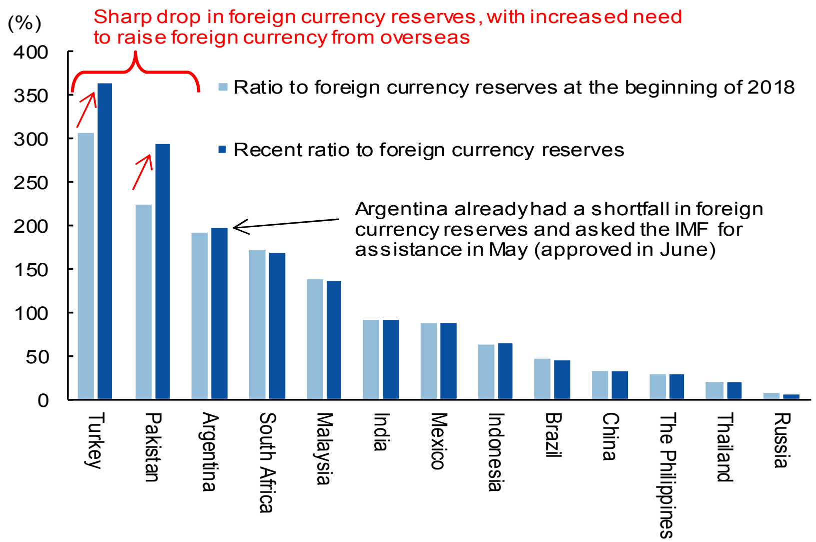


Source: Made by MHRI based up on Bloomberg

Financial risk has increased for some EM countries such as Turkey due to the outflow of funds and currency depreciation

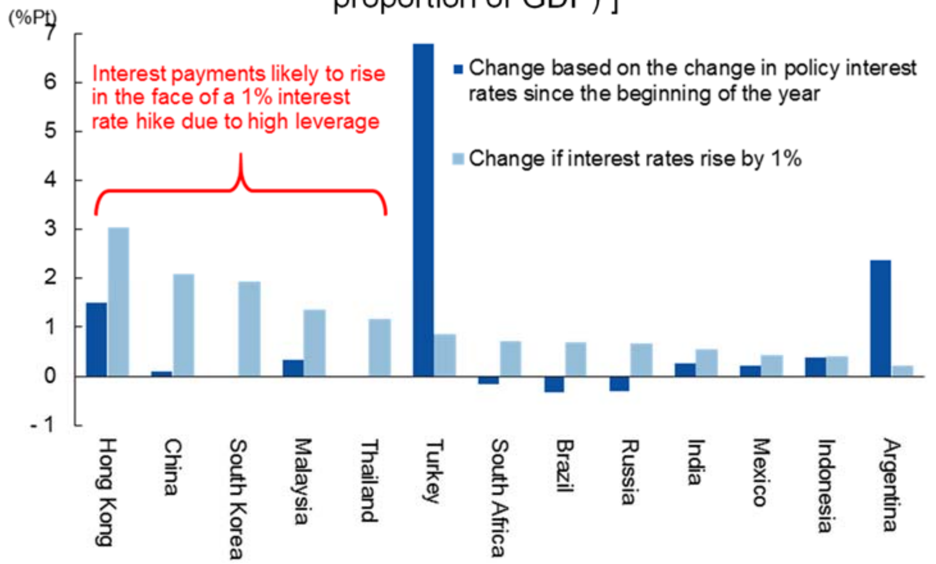
- Given the outflow of funds and currency depreciation, EM countries with enormous external debt and current account deficits are facing dire financial currency positions.
  - Argentina has requested assistance from the IMF, and Pakistan could be next. Turkey also appears to be facing a lack of foreign currency.
- The burden of interest rate payments has surged in Turkey and Argentina, where interest rates have been hiked sharply to defend their currencies.
  - To date, interest rate hikes in Asia have been limited. However, debt/GDP ratios are high so the structure is conducive to increased interest payments relative to a certain degree of interest rate hikes.
  - The potential risk toward rate hikes is high for Asia.

[Calculation of amount needed for external debts (current account deficit and repayment of short-term debt)]



Note: 1. Repayment of short-term debt and current account deficit is the IMF forecast average for 2018 to 2020
2. Indicates the proportion of foreign currency reserves to the amount needed for external debt based on 1.
Source: Made by MHRI based up on IMF

[Change in the interest payment burden (as proportion of GDP)]



Note: 1. Assumes that the change in policy interest rate is completed transferred to borrowing interest rates, calculated as “total private sector debt x change in interest rate ÷GDP”. In fact, since there is a fixed interest rate for borrowings, the interest payment burden may not be as high as the calculation suggests.
2. China’s interest rate is the 7-day reverse repo. Turkey’s interest rate is the late-liquidity window lending rate.
Source: Made by MHRI based up on BIS

II. The Japanese Economy

Maintaining a moderate recovery

The Japanese economy: the economy will remain on recovery track, driven by the expansion of the overseas economies and strength of domestic demand

- According to the *First Preliminary Quarterly Estimates of GDP* (“*1st QE*”) for the Apr-Jun quarter of 2018, the Japanese economy expanded for the first time in two quarters (+1.9% q-o-q p.a.). In addition to the large increase of personal consumption, capital investment also accelerated, growing for the seventh quarter in a row for the first time since the bubble period. On the other hand, exports lacked momentum, and the contribution by external demand dipping slightly into negative territory.

- Looking forward, while momentum of the IT sector will gradually weaken as a driver of the economy, exports should gradually pick up, supported by IoT-related goods and capital goods. In addition to the recovery of overseas economies, capital investment should follow firm footing, supported by investment related to the 2020 Tokyo Olympic Games and productivity improvement. Even though the favorable employment environment will serve as tailwinds upon personal consumption, the rise of prices such as energy prices will weigh down upon real wages, thus keeping personal consumption subdued. The pace of economic growth in FY2018 is forecast to stand at +1.2%.

- In FY2019, economic growth is forecast to moderate to +0.9%, given downward pressures due to the consumption tax hike in October, and slowdown of exports and capital investment (previous forecast: +0.8%; upwardly revised due to the carry-over of growth). However, even in consideration of the consumption tax hike, the downward pressure upon real income will turn out to be smaller than initially expected due to the implementation of various income support measures.

- Turning to the risks to MHRI’s economic outlook, it will be necessary for the time being to keep a close eye upon the impact of the US’ protectionist trade policy. In addition to the possibility that the rise of uncertainty would lead to a shift in corporate sentiment to a more cautious stance, the imposition of additional tariffs related to motor vehicles & parts would having a serious impact upon the Japanese economy.

Japan: forecast growth rate for FY2018 of +1.2% and for FY2019 of +0.9%

- The pace of recovery is forecast to remain on par with the potential growth rate in FY2018 and FY2019.
  - The forecast growth for FY2018 is +1.2%, unchanged from our previous forecast. Despite the recent decline in the growth rate, we anticipate capital investment to support the growth rate.
  - In FY2019, the growth rate will be pushed down slightly by the October consumption tax hike. Together with factors such as slowdown in exports, we forecast a growth rate of +0.9%.
    - ✓ We have slightly upwardly revised our previous forecast (+0.8%) due to the increase in the carryover of the growth rate from FY2018.

[Outlook on the Japanese economy]

		2016	2017	2018	2019	2017				2018				2019				2020
		FY				Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
GDP (real)	Q-o-q % ch	1.2	1.6	1.2	0.9	0.7	0.5	0.6	0.2	-0.2	0.5	0.5	0.3	0.4	0.3	0.3	-0.5	0.1
	Q-o-q % ch p.a.	—	—	—	—	2.7	2.1	2.3	0.8	-0.9	1.9	1.9	1.3	1.6	1.4	1.1	-1.8	0.6
Domestic demand	Q-o-q % ch	0.4	1.2	1.1	0.9	0.6	0.8	0.0	0.3	-0.3	0.6	0.4	0.3	0.4	0.4	0.5	-0.9	0.1
Private sector demand	Q-o-q % ch	0.4	1.4	1.3	1.0	0.7	0.6	0.2	0.5	-0.4	0.7	0.4	0.4	0.4	0.5	0.6	-1.2	0.2
Personal consumption	Q-o-q % ch	0.3	0.8	0.9	0.7	0.5	0.8	-0.7	0.3	-0.2	0.7	0.3	0.1	0.2	0.4	1.5	-2.5	0.5
Housing investment	Q-o-q % ch	6.2	-0.3	-4.3	-0.2	0.8	1.3	-1.3	-3.0	-2.3	-2.7	1.3	1.1	1.3	1.9	-1.2	-3.8	-4.2
Capital investment	Q-o-q % ch	1.2	3.1	3.3	2.4	0.6	0.5	1.2	0.8	0.5	1.3	0.7	0.6	0.5	0.6	0.9	0.3	0.3
Inventory investment	Q-o-q contribution, % pt	(-0.3)	(0.1)	(0.1)	(-0.0)	(0.1)	(-0.1)	(0.4)	(0.1)	(-0.2)	(0.0)	(-0.1)	(0.1)	(0.1)	(0.0)	(-0.5)	(0.5)	(-0.1)
Public sector demand	Q-o-q % ch	0.6	0.9	0.4	0.8	0.3	1.4	-0.5	-0.1	-0.1	0.2	0.4	0.1	0.3	0.1	0.4	0.0	0.0
Government consumption	Q-o-q % ch	0.5	0.7	0.7	0.8	0.3	0.4	0.1	0.1	0.0	0.2	0.2	0.3	0.3	0.2	0.2	-0.1	0.3
Public investment	Q-o-q % ch	0.9	1.4	-0.6	1.1	-0.2	5.4	-2.9	-0.6	-0.4	-0.1	1.1	-0.6	0.3	-0.3	1.4	0.7	-0.8
External demand	Q-o-q contribution, % pt	(0.8)	(0.4)	(0.1)	(0.0)	(0.1)	(-0.3)	(0.6)	(-0.1)	(0.1)	(-0.1)	(0.1)	(0.0)	(0.0)	(-0.1)	(-0.3)	(0.5)	(0.0)
Exports	Q-o-q % ch	3.6	6.3	3.6	2.7	1.9	0.2	2.1	2.1	0.6	0.2	1.1	0.8	0.7	0.6	0.6	0.6	0.4
Imports	Q-o-q % ch	-0.8	4.1	3.3	2.7	1.4	1.9	-1.5	3.3	0.2	1.0	0.5	0.8	0.5	1.1	2.0	-1.8	0.3
GDP (nominal)	Q-o-q % ch	1.0	1.7	1.3	1.4	0.2	0.8	0.8	0.3	-0.4	0.4	0.8	0.3	0.1	0.6	0.4	0.2	-0.1
GDP deflator	Y-o-y % ch	-0.2	0.1	0.2	0.5	-0.8	-0.3	0.1	0.1	0.5	0.1	0.3	0.2	0.1	0.3	0.1	0.8	0.8
Domestic demand deflator	Y-o-y % ch	-0.5	0.6	0.9	0.7	0.0	0.4	0.5	0.6	0.9	0.5	1.1	0.9	0.7	0.7	0.4	0.9	1.0

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

Japan: underlying trend of consumer prices (excluding food and energy) to growth by around 0.5%

[Outlook on the Japanese economy (major economic indicators)]

		2016 FY	2017	2018	2019	2017 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2018 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2019 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2020 Jan-Mar
Industrial production	Q-o-q % ch	1.0	4.1	2.0	1.8	0.2	1.8	0.5	1.6	-1.3	1.2	0.8	0.5	0.5	0.8	1.2	-1.2	-0.4
Ordinary profits (Lower line: excludes impact of special factors)	Y-o-y % ch	10.0 7.3	6.9 12.5	0.0	0.7	26.6	22.6	5.5 17.9	0.9	0.2	0.8	-1.4	0.5	-0.1	1.8	6.7	-3.1	-1.6
Nominal compensation of employees	Y-o-y % ch	2.4	2.3	2.5	1.7	1.4	2.2	2.2	1.9	3.1	4.3	2.1	1.8	1.7	1.5	1.9	1.7	1.7
Unemployment rate	%	3.0	2.7	2.5	2.6	2.9	2.9	2.8	2.7	2.5	2.4	2.5	2.5	2.6	2.5	2.6	2.7	2.6
New housing starts	P.a., 10,000 units	97.4	94.6	96.2	92.5	97.2	98.7	95.5	94.8	89.2	96.8	93.9	96.2	98.5	99.3	93.7	89.8	86.9
Current account balance	P.a., JPY tril	21.0	21.8	20.1	17.3	21.4	20.0	23.2	23.6	18.7	22.0	20.6	19.1	17.4	15.9	14.7	18.7	18.5
Domestic corporate goods prices	Y-o-y % ch	-2.4	2.7	2.3	1.8	0.9	2.1	2.8	3.3	2.5	2.6	2.9	2.1	1.4	0.9	0.8	2.8	2.7
Domestic corporate goods prices (ex consumption tax)	Y-o-y % ch	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	0.9	0.9
Consumer prices, ex fresh food	Y-o-y % ch	-0.2	0.7	1.0	0.8	0.2	0.4	0.6	0.9	0.9	0.7	1.1	1.0	1.0	0.8	0.6	1.0	1.1
Consumer prices, ex fresh food (ex consumption tax)	Y-o-y % ch	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1
Consumer prices, ex fresh food and energy	Y-o-y % ch	0.3	0.2	0.4	0.6	0.1	0.0	0.1	0.3	0.5	0.3	0.4	0.4	0.5	0.4	0.4	0.8	0.8
Consumer prices, ex fresh food and energy (ex consumption tax)	Y-o-y % ch	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1
Uncollateralized overnight call rate	%	-0.06	-0.06	-0.05	-0.05	-0.06	-0.07	-0.06	-0.06	-0.06	-0.07	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Yield on newly-issued 10-yr JGBs	%	-0.05	0.05	0.08	0.10	0.07	0.04	0.05	0.05	0.06	0.04	0.08	0.10	0.10	0.10	0.10	0.10	0.10
Nikkei average	JPY	17,520	20,984	23,400	24,700	19,241	19,503	19,880	22,188	22,366	22,341	22,800	24,000	24,500	25,000	24,700	24,200	24,700
Exchange rate	JPY/USD	108	111	109	106	114	111	111	113	108	109	110	108	107	107	106	106	105
Crude oil price (WTI nearest term contract)	USD/bbl	48	54	69	74	52	48	48	55	63	68	69	70	71	72	73	75	76

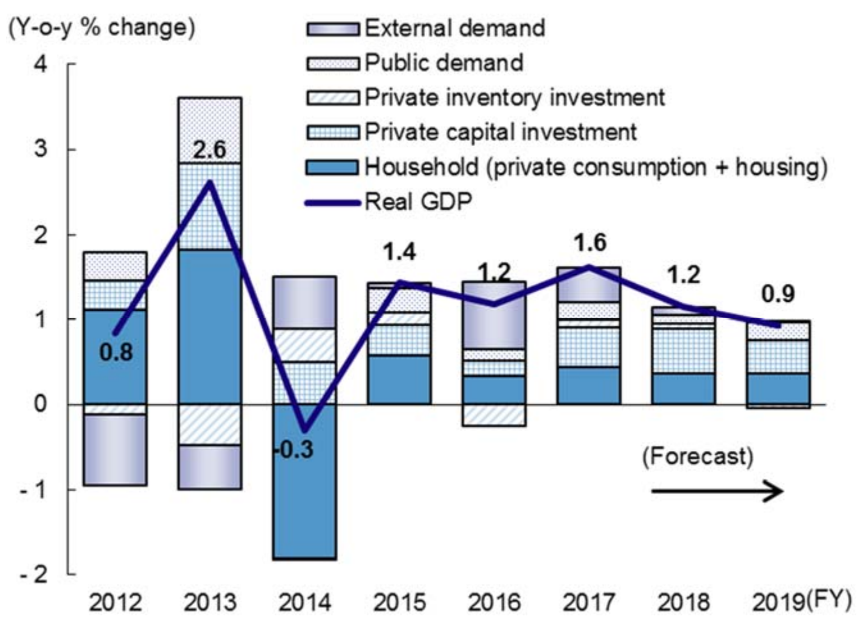
Notes: 1. Figures in the shaded areas are forecasts.The readings above may differ from public releases because the rates of change are calculated on the basis of real-terms data
2. Consumer prices (both including and excluding the impact of the consumption tax hike) reflect the impact of free pre-school education for the Oct-Dec quarter of 2019 and the Jan-Mar quarter of 2020
3. Ordinary profits are based upon the *Financial Statements Statistics of Corporations by Industry* (all industries basis) (ex finance & insurance)
4. Of the finance-related indices, the uncollateralized overnight call rate refers to the rate at the end of term, 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

Sources: Made by MHRI based upon relevant statistics

Outlook: ongoing recovery in growth of about 1% in both FY2018 and FY2019

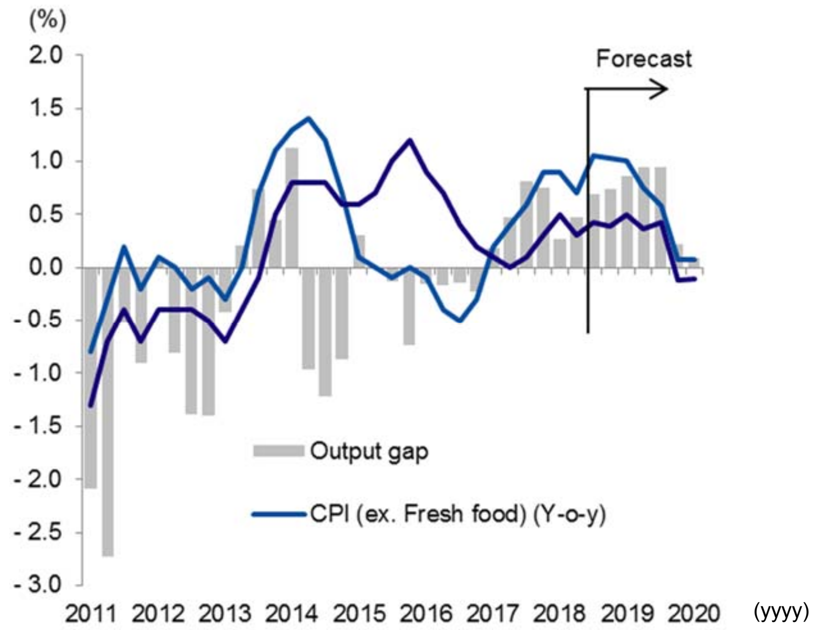
- We expect growth of +1.2% in FY2018.
  - We forecast ongoing economic expansion driven by exports and capital investment.
- We forecast growth to remain sluggish at +0.9% in FY2019 due to factors such as the consumption tax hike and slowdown of exports.
- Energy prices will boost the core CPI. We forecast growth on an ex. energy base to be around 0.5% given that improvements in the output gap and rise in labor costs will be transferred onto prices to a certain degree, albeit moderate.
  - Furthermore, free early childhood education will weigh on growth in the second half of FY2019 by about 0.5% points.

[Factor contribution to the rate of growth in real GDP]



Source: Made by MHRI based upon Cabinet Office, *National Accounts*

[Forecast output gap and CPI]



Note: Output gap estimated by MHRI.
The CPI excludes consumption tax (accounting for the impact of free early childhood education)

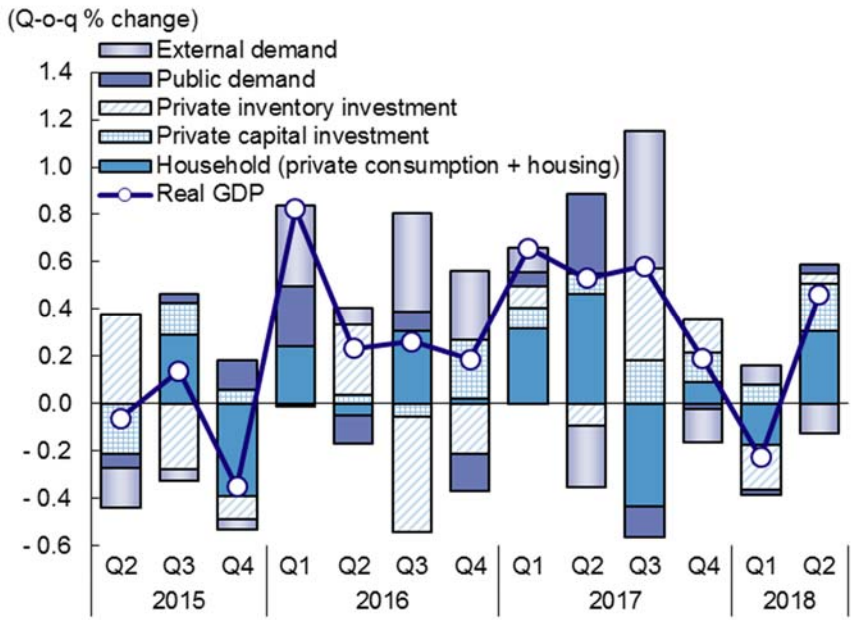
Source: Made by MHRI based upon Ministry of Internal Affairs and Communications and Cabinet Office

MIZUHO

Current status and forecast: recovery in Apr-Jun quarter focused on domestic demand

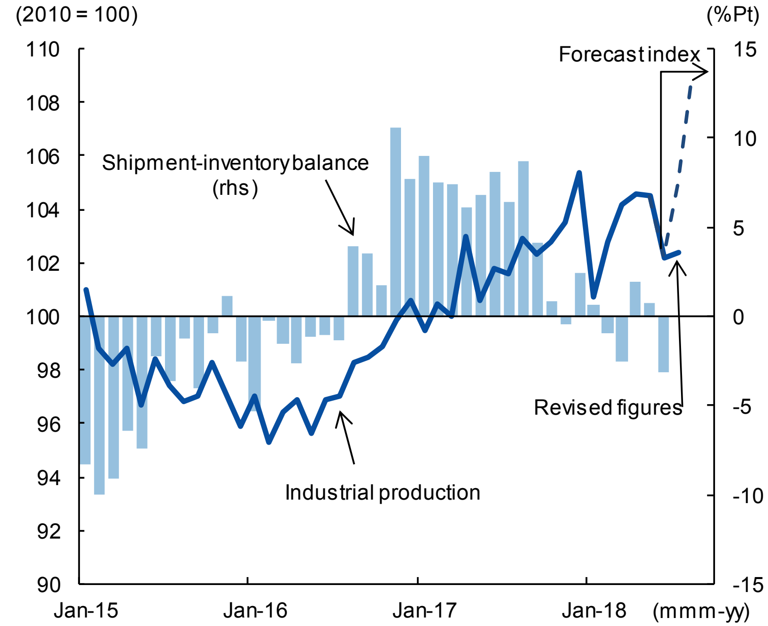
- Real GDP for the Apr-Jun quarter was +1.9% q-o-q (annualized), the first positive level in two quarters. The contribution from external demand was slightly negative due to factors such as the drop in service exports, but there was substantial increase in personal consumption and capital investment.
- The economy has continued to recover since summer.
  - Although the industrial production turned positive again from the Apr-Jun quarter, it was not enough to offset the lower production in the Jan-Mar quarter and still lacks strength.
    - ✓ The shipment-inventory balance is deteriorating, particularly for electronic components and devices.
  - Production plans (as of July 10) are positive for both July and August. Even though inventory adjustments for electronic components will serve as a drag, production should continue to grow at a gradual pace.

[Quarterly real GDP]



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

[Industrial production index]

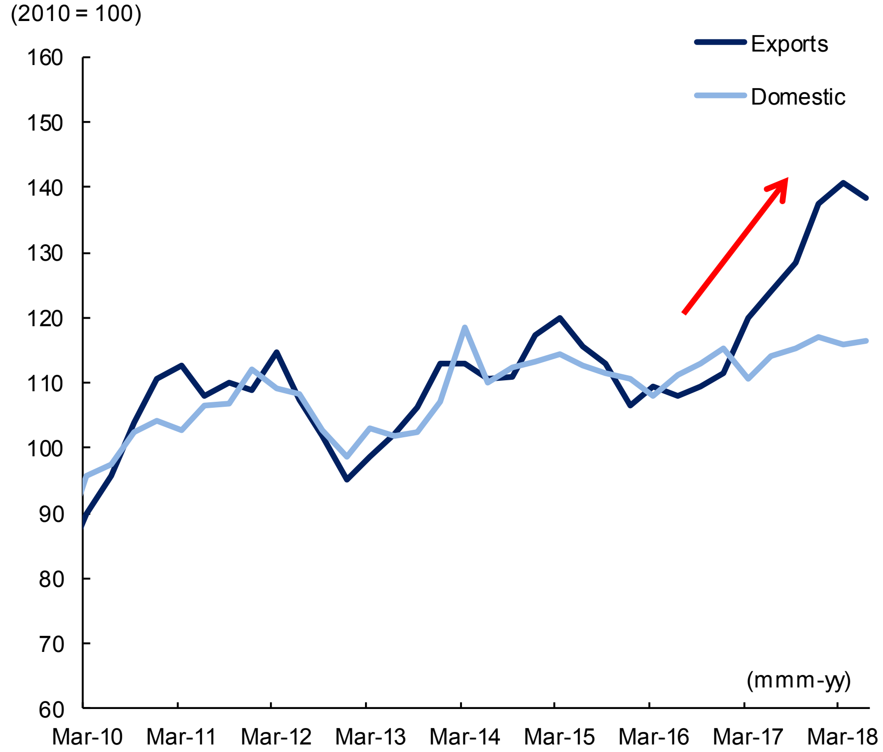


Source: Made by MHRI based upon Ministry of Economy, Trade and Industry, *Indices of Industrial Production*

Exports and production activity: recent capital goods shipments have been led by exports of industrial robots

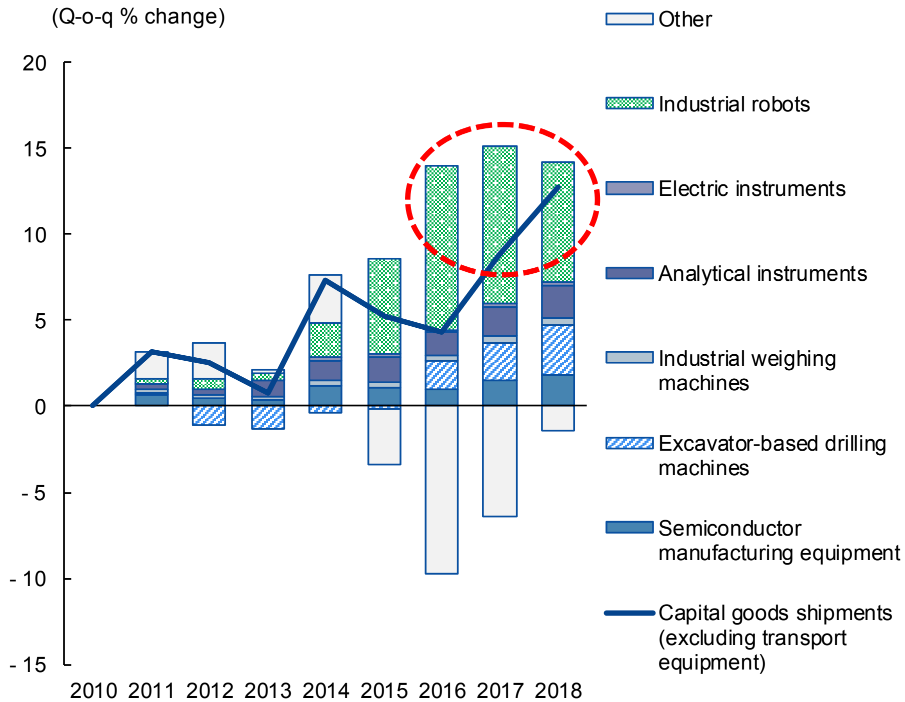
- The breakdown of capital goods shipments by destination indicates high growth in exports.
  - Amid the recovery of the global economy, capital investment in major countries is recovering and demand for labor saving measures and efficiency improvements is growing in countries such as the US and China.
- In terms of contribution, the increase in shipments of capital goods is being driven by industrial robots.

[Breakdown of capital goods shipments]



Source: Made by MHRI based upon Ministry of Economy, Trade and Industry, *Breakdown of Industrial Shipments Table*

[Decomposition by product for capital goods shipments (cumulative)]



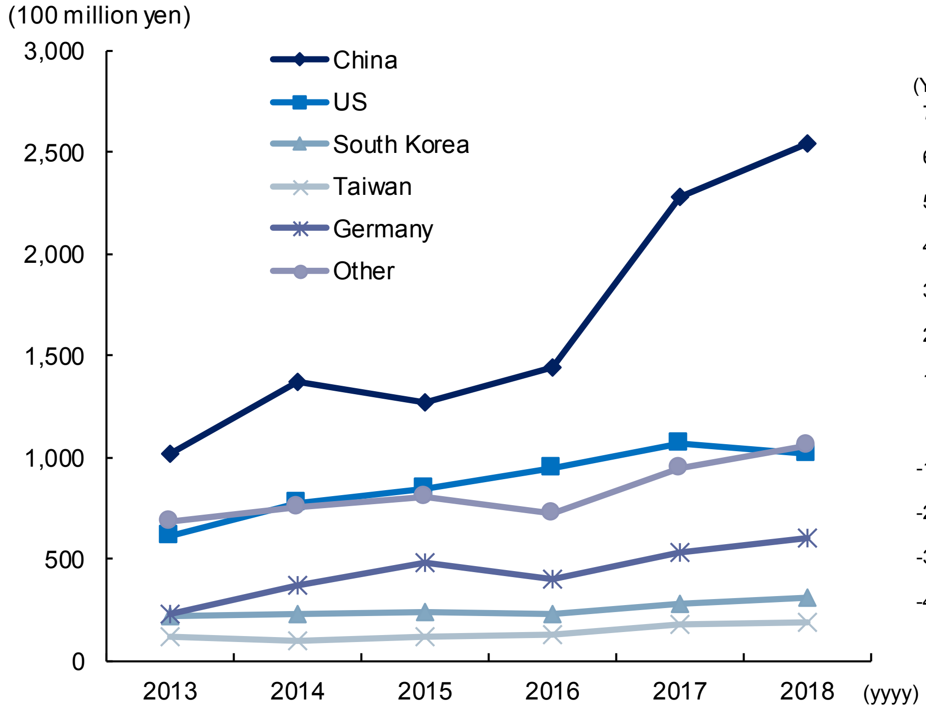
Note: 2018 shows an extension of the y-o-y change for January to June

Source: Made by MHRI based upon Ministry of Economy, Trade and Industry, *Indices of Industrial Production*

Exports and production activity: sharp rise in robots exported to China. Total orders are at high levels.

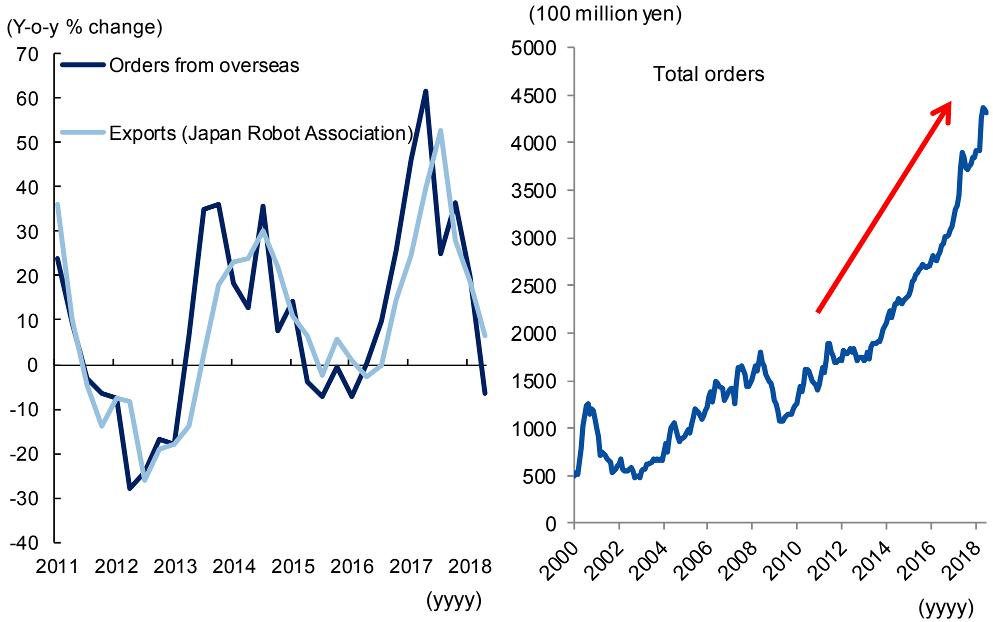
- The increase in shipments of industrial robots is driving exports. There is an overall upswing, and by region this is led by the sharp rise in exports to China.
- Despite a recent downturn in orders, total orders remain at record highs. Exports of robots should remain firm for the near term.

[Exports of industrial robots by destination]



Note: Amounts of members. 2018 shows an extension of the y-o-y change for January to June.
Source: Made by MHRI based upon Japan Robot Association

[Orders and exports of industrial robots]

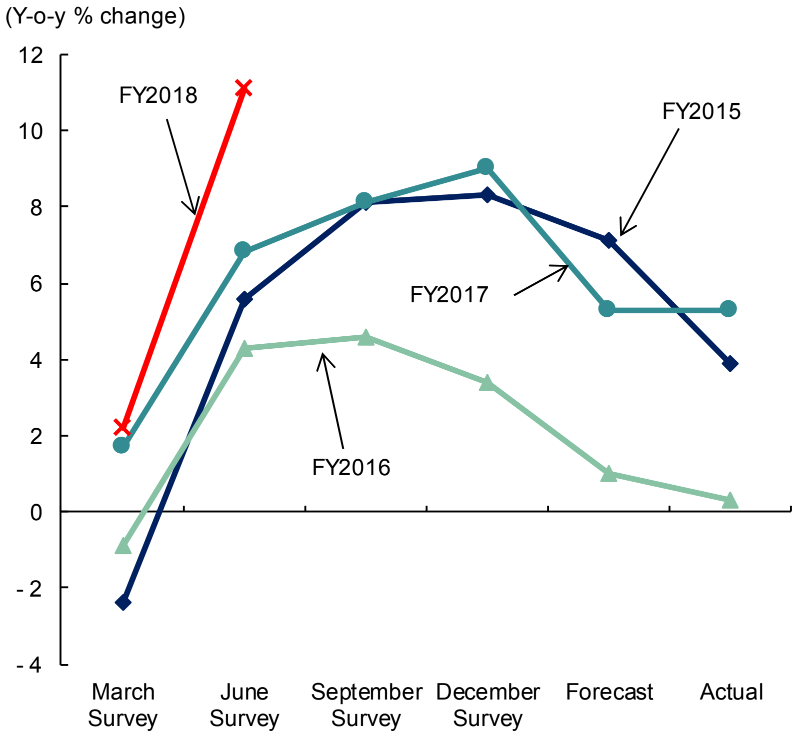


Note: The total orders also includes domestic orders (raw numerical values)
Source: Made by MHRI based upon Japan Robot Association, Ministry of Economy, Trade and Industry, *Machinery Orders*

Fixed (Capital) Investment: even the realization rate indicates high levels of growth in fixed investment

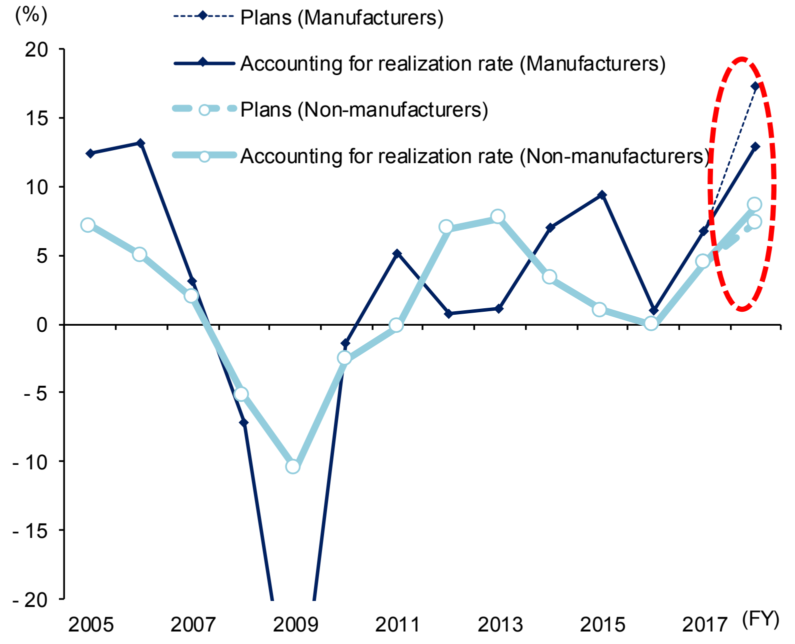
- The fixed investment plans in the BOJ *Short-term Economic Survey of Enterprises in Japan (TANKAN)* had record high growth for a June survey.
  - There is boost from demand for labor savings investment, the Olympics and inbound-related investment.
- Calculations on the basis of the past average realization rate indicate a high rate of actual growth even if slightly below the plans.
  - The high realization rate for small and medium-sized enterprises, particularly non-manufacturer, is offsetting the downturn for large enterprises.

[Fixed Investment Plans]



Note: Includes software and excludes land purchasing expenses.
Source: Made by MHRI based upon Bank of Japan, *Short-term Economic Survey of Enterprises in Japan* (*TANKAN*).

[Fixed Investment accounting for the realization rate]

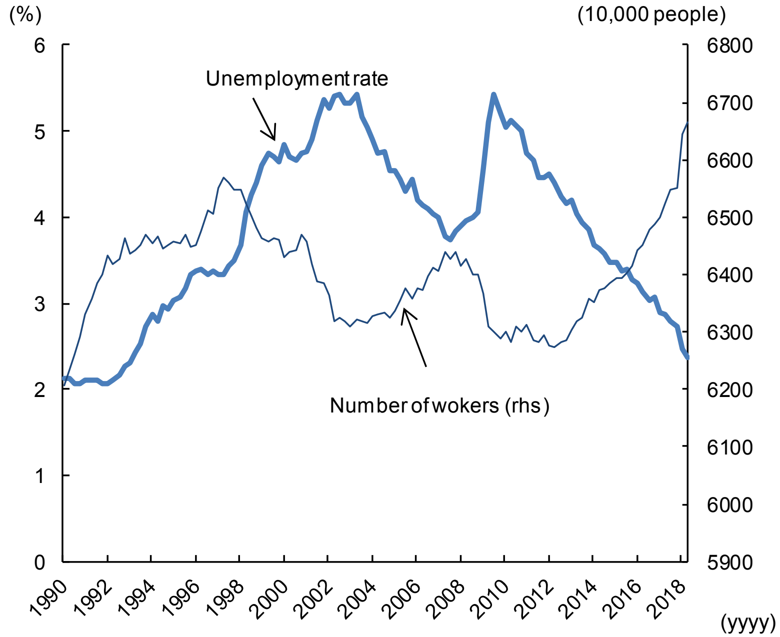


Note: Includes software and excludes land purchasing expenses.
Calculated using the average realization rate for the first half and second half by industry and size
Source: Made by MHRI based upon Bank of Japan, *Short-term Economic Survey of Enterprises in Japan* (*TANKAN*).

Employment and consumption: the unemployment rate has fallen to low 2% levels. However, there is still labor underutilization

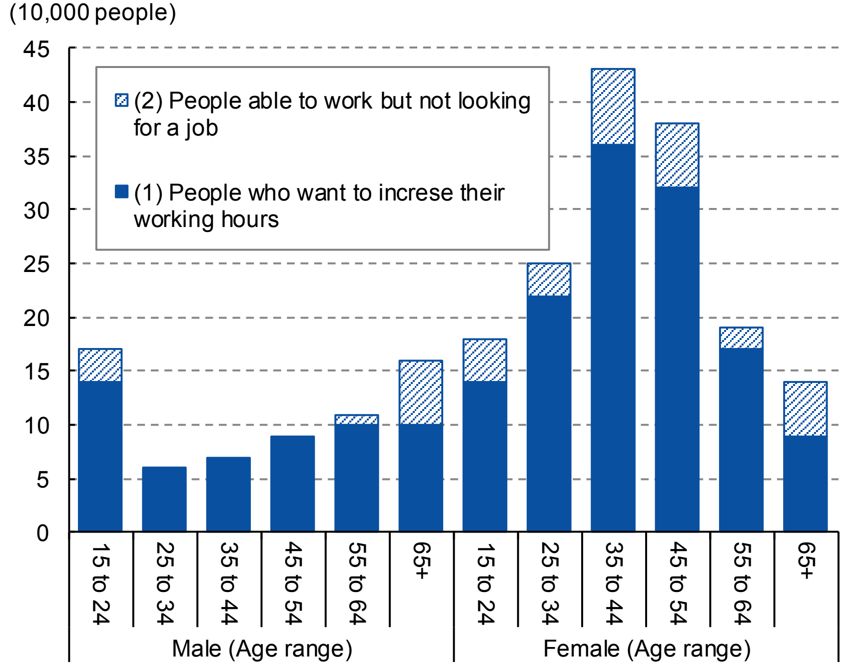
- The unemployment rate fell to 2.2% in May. The level was the lowest since the early 1990s even on an average for April to June.
  - The number of workers reached its highest level since 1953 in the April to June quarter.
- There is still considerable labor underutilization. This is particularly evident amongst females aged 35 to 54.
  - This is attributed to the difficulties of working full-time due to factors such as tax and social insurance barriers and rigid ways of working for ordinary employees.
  - The potential workforce (able to work, but not looking for work) comprises many elderly, and there appears to be a desire to work if suitable employment could be found.

[Unemployment rate and the number of workers (quarterly average)]



Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Labour Force Survey*

[Labor underutilization by gender and age]

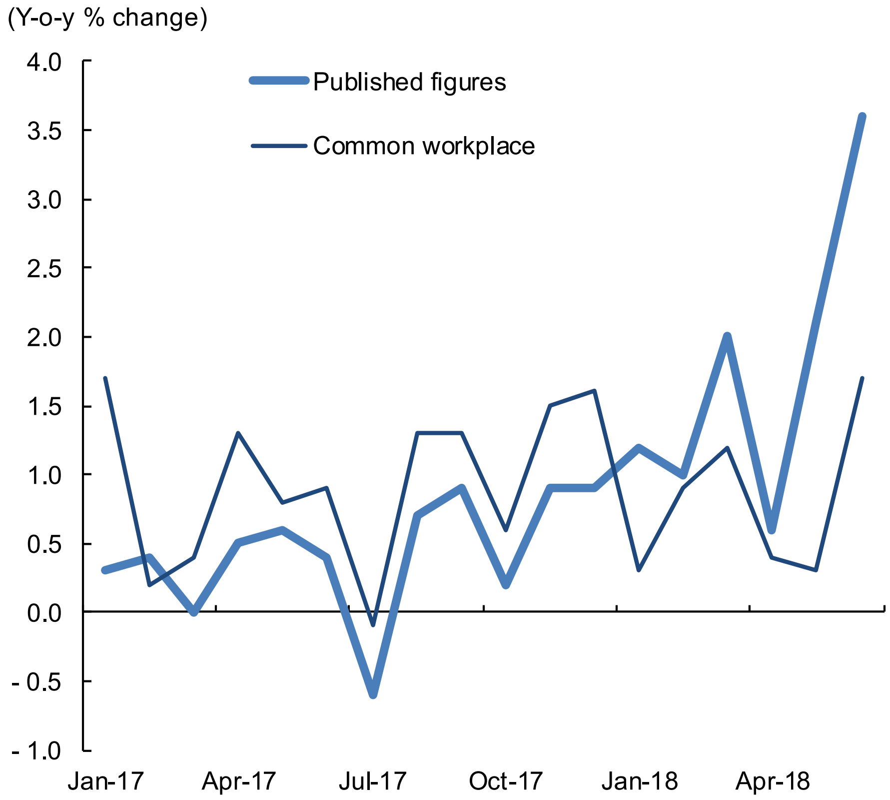


Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Labour Force Survey*

Employment and consumption: household incomes may not have improved to the extent indicated by statistics

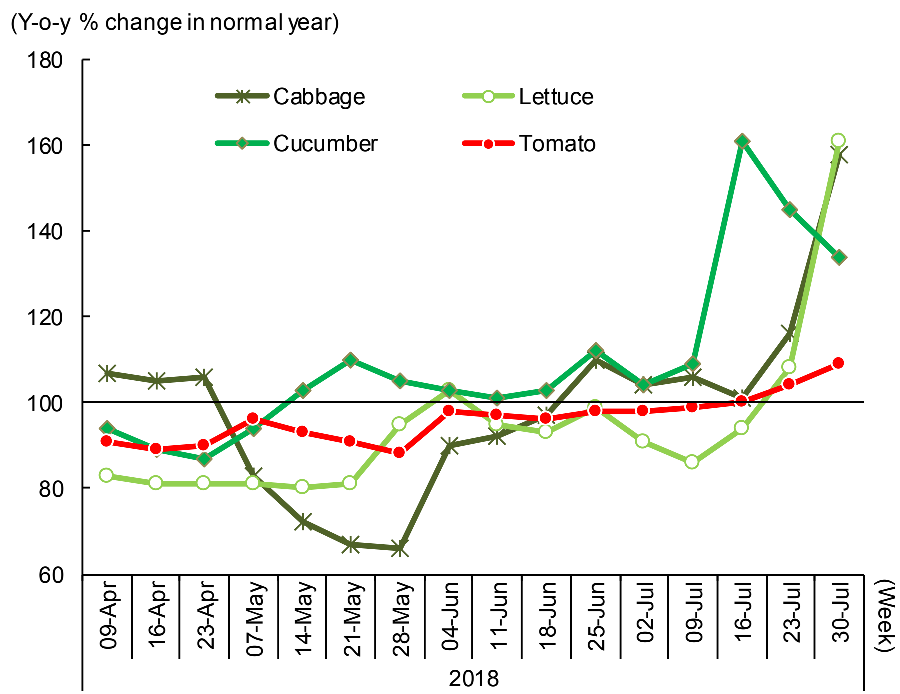
- ❑ Despite the recent acceleration of wage rises, this may well be due to sampling factors caused by changes in statistical methods.
  - There is no definite indication of an acceleration of wages, when the change in sample factors are excluded.
- ❑ In addition to the rise of energy prices, the spike in vegetable prices caused by the heat wave has put downward pressure on real wages.

[Wages]



Source: Made by MHRI based upon Ministry of Health, Labour and Welfare, *Monthly Labour Survey*

[Price of vegetables]



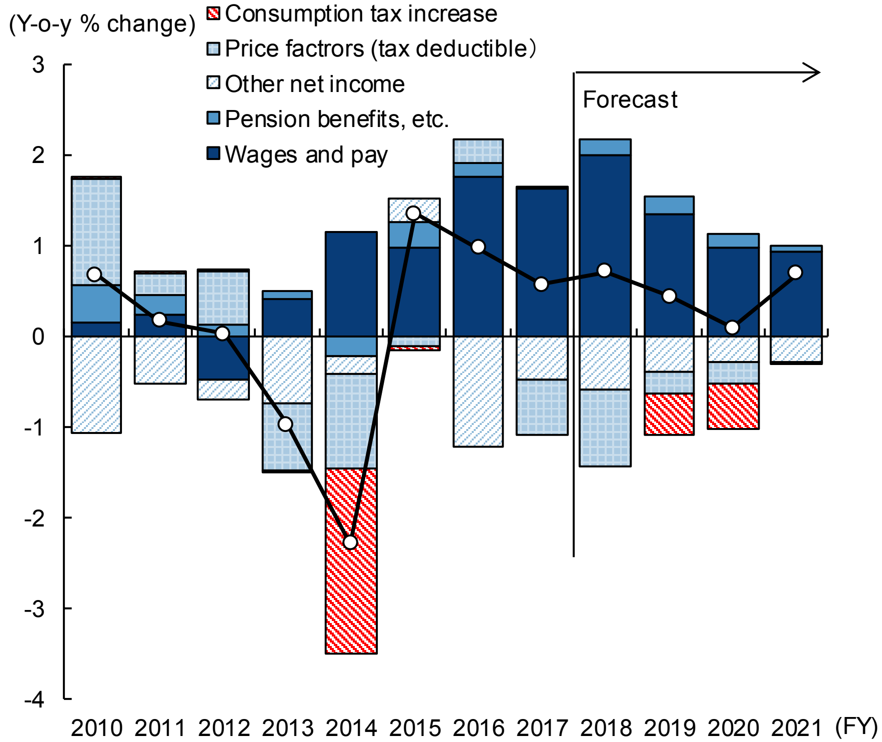
Note: Normal year ratio is the comparison to the 5-year average price for the survey price from food price trend survey operations for FY2013 to FY2017

Source: Made by MHRI based upon Ministry of Agriculture, Forestry and Fisheries, Consumer price trends survey (vegetables)

Employment and consumption: the impact of the tax hike on real wages will be about ¼ the previous impact

- The downward pressure on real disposable incomes from the consumption tax hike will be much smaller than it was for the FY2014 tax hike.
  - The downward pressure on disposable incomes will be less then 0.5% points for both FY2019 and FY2020. It was about 2% points in FY2014.
    - ✓ This is due to factors such as the smaller breadth of the tax hike, the dispersion of the impact due to the different month of implementation, and mitigation measures such as free early childhood education.

[Factor contribution to real disposable incomes]



Note: Price factors are household final consumption expenditures deflator (excluding imputed rent and FISIM).
Reflecting the impact of free early childhood education in the consumption tax hike
Source: Made by MHRI based upon the Cabinet Office

[Policies to support incomes following tax hikes]

At the time of the 2014 tax increase	Size
Housing measures	0.6 tn yen
Tax credits regarding mortgages	0.2 tn yen
Total	0.8 tn yen

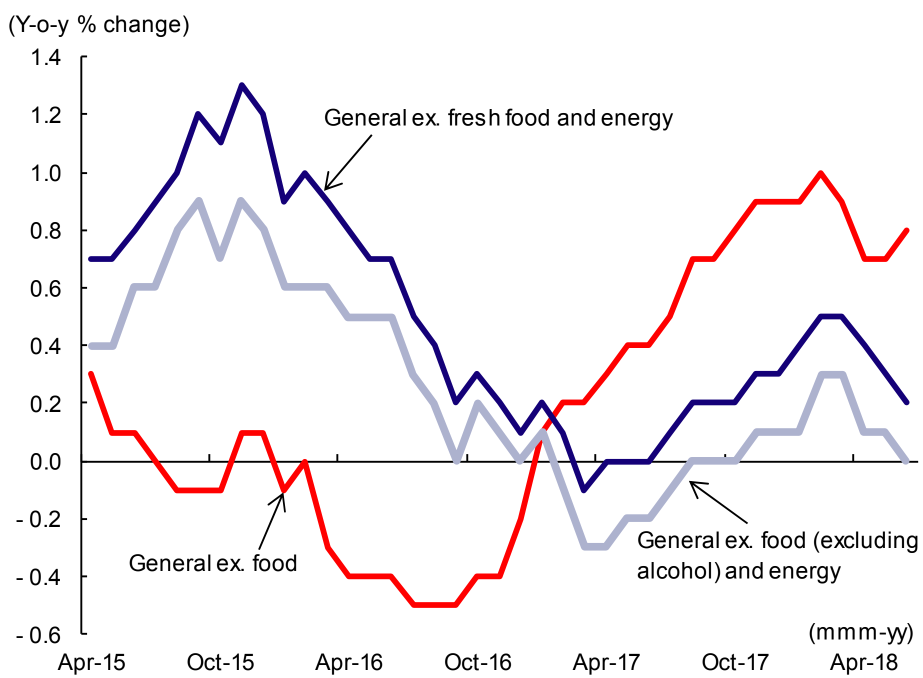
At the time of the 2019 tax increase	Size
Preferential tax rate	1.0 tn yen
Support benefits	0.5 tn yen
Free child and higher education Support for raising children, improved benefits for childcare workers and nursing care workers	1.7 tn yen
Total	3.2 tn yen

Source: Made by MHRI based upon Ministry of Finance, Bank of Japan, and various media reports

Prices: recent growth in CPI (ex. energy) has been sluggish

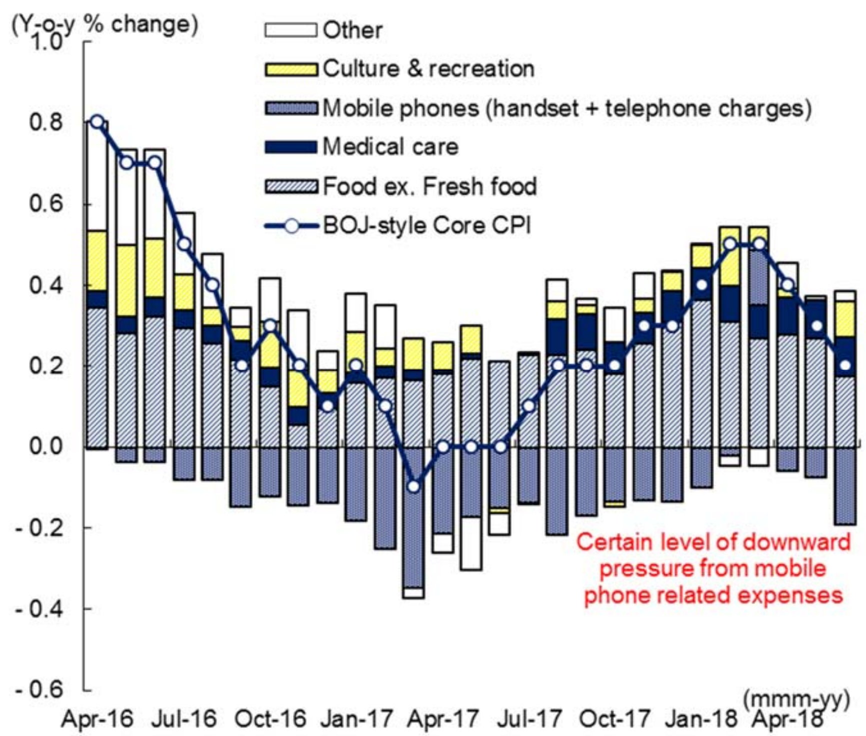
- Growth in Core CPI has increased due to higher energy prices (+0.8% y-o-y in June).
- However, BOJ-style CPI (ex. fresh food and energy) has stalled (+0.2%) due to sluggish growth in food (backlash to the previous year price increase due to amendments to the tax on alcohol) and the substantial negative growth in mobile phone telephone charges.

[Consumer Price Index]



Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Consumer Price Index*

[Factor contribution to CPI ex. Fresh food and energy]



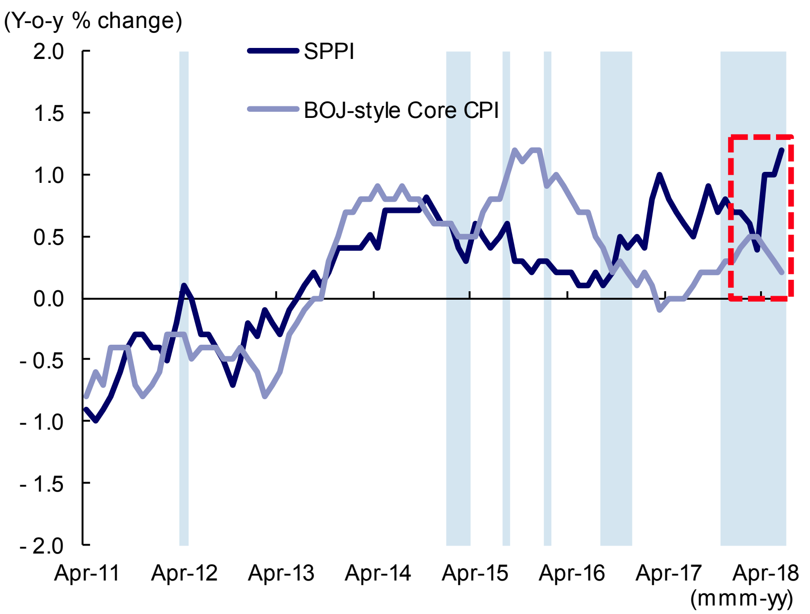
Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Consumer Price Index*

Prices: in contrast to B2B price setting, prices have not risen for B2C

- The pace of increase in the services producer price index (SPPI), which indicates the B2B (business to business) price trends, has recently accelerated and there have been some moves to pass on prices. However, the strong propensity of households to save means B2C (business to customer) price transfers have stalled.
- Considering recent trends, we have downwardly revised our outlook for the consumer price index from the previous report (June).
  - We forecast core CPI of +1.0% for FY2018 (c.f., +1.2% in June) and +0.8% for FY2019 (c.f., +1.2% in June).

  * Implementation of free early childhood education is reflected in this outlook for FY2019 (-0.2 to -0.3% points on a fiscal year base).

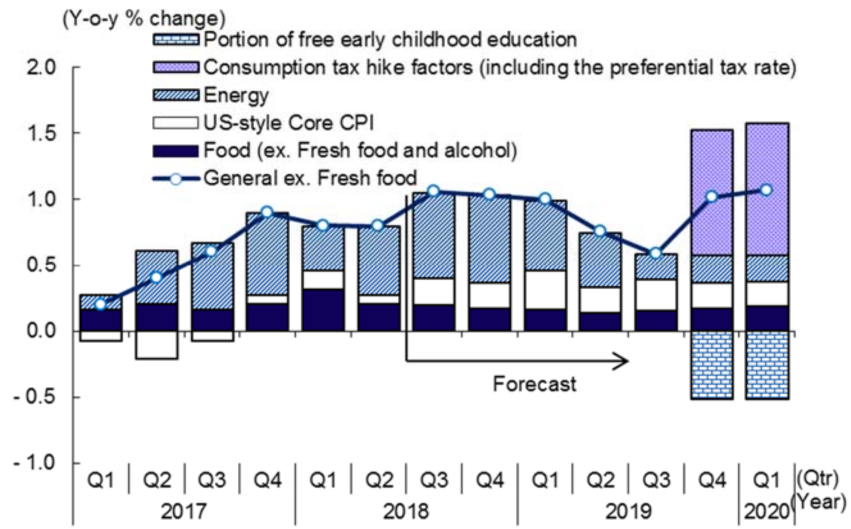
[Services Producer Price Index (SPPI) and Consumer Price Index (CPI)]



Note: The shadow highlights periods when MHRI's thrift-consciousness index (CPI growth minus average household unit cost, 3-month moving average) is positive. Both SPPI and CPI exclude consumption tax.

Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Consumer Price Index* and Bank of Japan, *Corporate Services Price Index*

[Outlook for Consumer Price Index]



Note: Assumes in the impact of free education that tax-exempt households pay nothing for child-care fees at nursery centers for children aged 0 to 2 years and 3 to 5 years, calculating the proportion of free child-care fees proportionally for the total amount of child-care fees by each age group. Since the figures fluctuate depending on how child-care fees for private kindergartens, the enrolment fees, and the proportion of tax-exempt households are set, allowances need to be taken into consideration when looking at the final results.

Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Consumer Price Index*

BOJ: focus on side effects, with policy interest rates to be left unchanged until the consumption tax hike

- The BOJ has abandoned hope of achieving the price stability target within the forecast period. The focus has shifted towards increasing the sustainability of policy and maintaining price momentum.
  - The July Monetary Policy Meeting (MPM) decided on more highly sustainable policies such as flexibility in yield curve control and ETF purchases.
- We forecast policy interest rates to be left unchanged until the consumption tax hike due to the forward guidance for policy interest rates. Subsequently, the BOJ could allow interest rates to rise moderately within the scope of maintaining price momentum. The market is starting to factor in an end to negative interest rates.

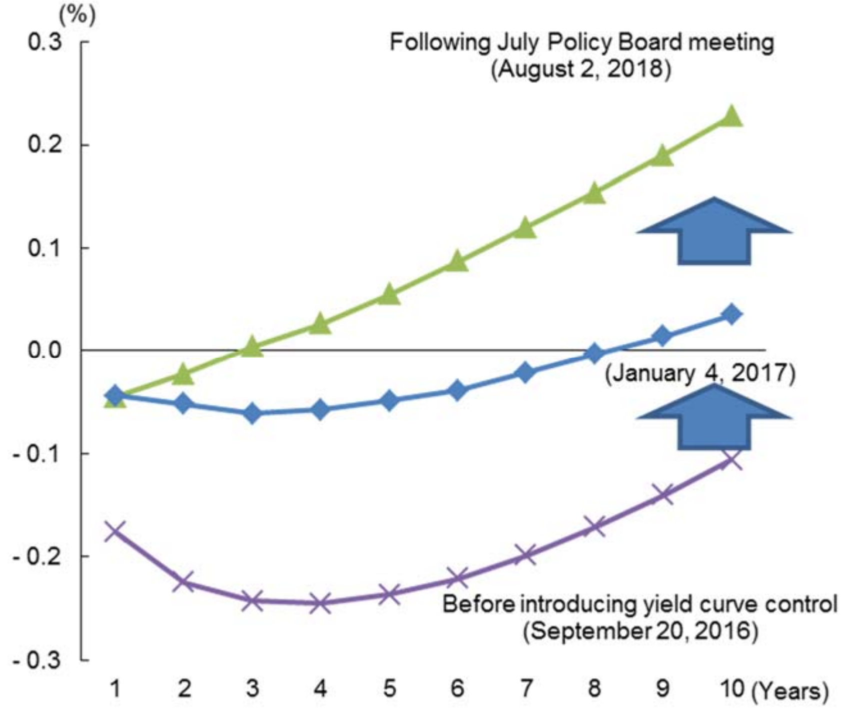
[*Outlook for Economic Activity and Prices* (July 2017)]

(Y-o-y % change)

	Real GDP	CPI (All items except fresh food)	Excluding impact of consumption tax hike
FY2018	+1.3 to +1.5 (+1.5)	+1.0 to +1.2 (+1.1)	
Forecast made in April 2018	+1.4 to +1.7 (+1.6)	+1.2 to +1.3 (+1.3)	
FY2019	+0.7 to +0.9 (+0.8)	+1.8 to +2.1 (+2.0)	+1.3 to +1.6 (+1.5)
Forecast made in April 2018	+0.7 to +0.9 (+0.8)	+2.0 to +2.3 (+2.3)	+1.5 to +1.8 (+1.8)
FY2020	+0.7 to +0.9 (+0.8)	+1.9 to +2.1 (+2.1)	+1.4 to +1.6 (+1.6)
Forecast made in April 2018	+0.6 to +1.0 (+0.8)	+2.0 to +2.3 (+2.3)	+1.5 to +1.8 (+1.8)

Note: Forecasts of the Majority of Policy Board Members. Figures in brackets indicate the median of the Policy Board members' forecasts (point estimates)
Source: Made by MHRI based upon Bank of Japan materials

[OIS curve]



Source: Made by MHRI based upon Bloomberg

III. The Asian Economies

Moderate slowdown in the pace of economic expansion in 2019

The Asian economies: moderate slowdown in the pace of economic expansion in 2019

- In China, the growth rate fell for the first time in three quarters in the Apr-Jun quarter of 2018. The economy is in a slowdown phase, particularly for domestic demand due to factors such as structural adjustments to prevent financial risk. In addition, there are rising uncertainties toward the future due to US-China trade friction.

- Looking forward on China, we forecast a soft landing, given initiatives to deal with future uncertainties such a monetary easing and aggressive fiscal policies.

- In Asian economies (ex. China), the growth rates fell for many countries in the Apr-Jun quarter. Looking at the trends by country, while exports were generally firm, domestic demand turned out mixed, being lackluster among the NIEs but strong in the ASEAN and India. Indonesia, the Philippines and India hiked interest rates.

- In terms of the outlook for the Asian economies (excluding China), we forecast the pace of overall economic expansion to wane, particularly in relation to exports due to China's moderate slowdown and a peaking out of the IT cycle. As for Indonesia, the Philippines and India which are highly dependent on domestic demand, the recent interest rate hikes will curb growth.

- Overall, the Asian economies will follow a moderate slowdown of the pace of economic expansion in 2019.

Asia: China, NIEs, ASEAN and India are all facing a moderate slowdown

- China: despite the rise of uncertainties due to structural adjustments to prevent financial risk and trade frictions, economic stimulus measures should lead to a moderate slowdown.
- NIEs: the NIEs are forecast to follow a gradual slowdown, particularly in relation to exports, due to China's slowdown and a peaking out of the IT cycle.
- ASEAN: the ASEAN countries are also forecast to follow a moderate slowdown overall. As in the NIEs, exports are forecast to slow down, and the interest rate hikes by Indonesia and the Philippines, which are heavily dependent on domestic demand, is a negative factor. However, in Indonesia, the economy will be supported by spending related to next year's general election.
- India: India's growth rate picked up in 2018 given the fading impact of factors such as the abolition of high-denomination bank notes. However, there will be a slight slowdown in 2019 due to the impact of interest rate hikes.

[Outlook on the Asian economies]

(Units: %)

	2014	2015	2016	2017	2018	2019
Asia	6.4	6.2	6.2	6.1	6.2	6.0
China	7.3	6.9	6.7	6.9	6.6	6.4
NIEs	3.5	2.1	2.3	3.2	2.8	2.5
South Korea	3.3	2.8	2.9	3.1	2.8	2.6
Taiwan	4.0	0.8	1.4	2.9	2.4	2.3
Hong Kong	2.8	2.4	2.2	3.8	3.5	2.4
Singapore	3.9	2.2	2.4	3.6	3.2	2.7
ASEAN5	4.6	4.9	4.9	5.3	5.3	5.0
Indonesia	5.0	4.9	5.0	5.1	5.2	5.2
Thailand	1.0	3.0	3.3	3.9	3.8	3.0
Malaysia	6.0	5.1	4.2	5.9	5.5	4.9
The Philippines	6.1	6.1	6.9	6.7	6.3	6.2
Vietnam	6.0	6.7	6.2	6.8	6.9	6.6
India	7.0	7.6	7.9	6.2	7.4	7.3
(Reference) Asia ex. China and India	4.2	3.8	3.9	4.5	4.4	4.1
(Reference) Asia ex. China	5.4	5.4	5.7	5.3	5.8	5.6

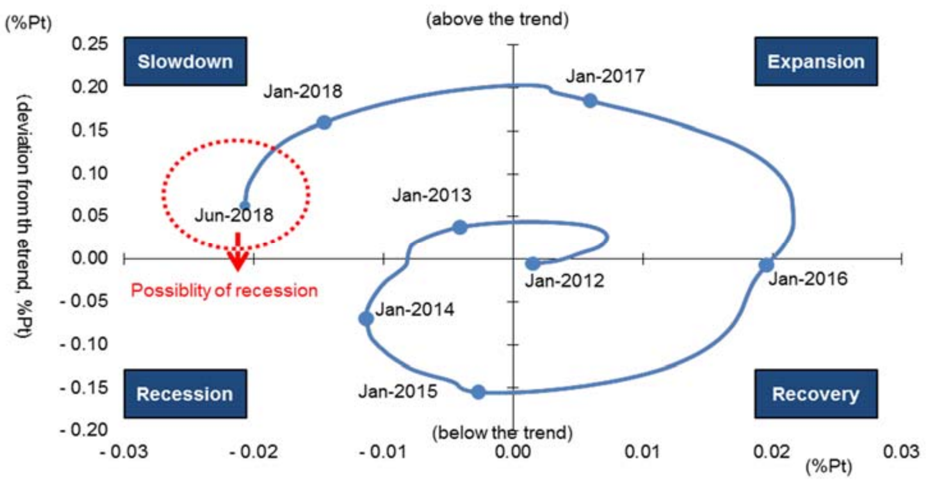
Note: Real GDP growth rate (y-o-y). Shading denotes forecasts. Average figures are calculated from the 2016 GDP share from the IMF (purchasing power parity base)
Source: Made by MHRI based upon statistics of the relevant countries and regions

China: slowdown in investment and consumption, with growing concern about a downturn despite favorable exports

- China's weak stocks and currency depreciation are affected by concerns regarding US-China trade friction. The real economy is not as weak as it was at the time of the 2015 renminbi shock.
  - The stagnation of consumer spending evident in June was also due to restraints on purchases ahead of the reduction of imported car prices from July.
  - Economic indices are above trend, and the economic downturn does not appear to indicate as much weakness as there was in 2015 when there was a Chinese sell-off.
- However, growth in investment has slowed sharply, particularly in relation to infrastructure. The Chinese economy may show signs of stagnation going forward.
- Reflecting trade frictions, there are also concerns about a downturn of the current strength of exports. The Chinese government plans to strengthen its support for the economy through monetary and fiscal policies.

[China's business cycle]

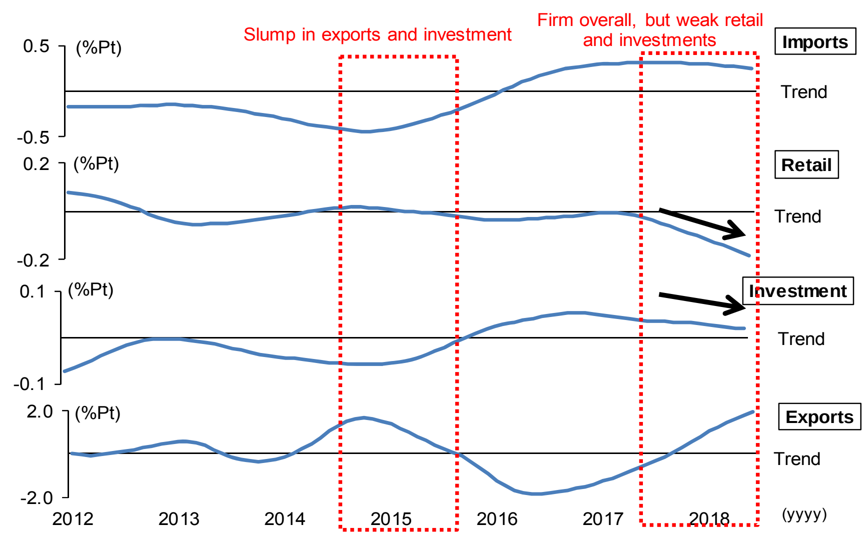
< Composite Economic Index (estimate) >



Note: The Composite Economic Index comprises 6 indices of production, retail sales of consumer goods, investment in fixed assets, imports, ratio of job offers to applicants and corporate earnings, respectively standardised, and adjusted to remove the trend and outliers, weighted equally. The Y-axis plots the upward and downward divergence from the trend, while the X-axis plots the variation (m-o-m change) in the time series for the cycle components.

Source: Made by MHRI based upon National Bureau of Statistics of China and the General Administration of Customs, China

< Major indices >



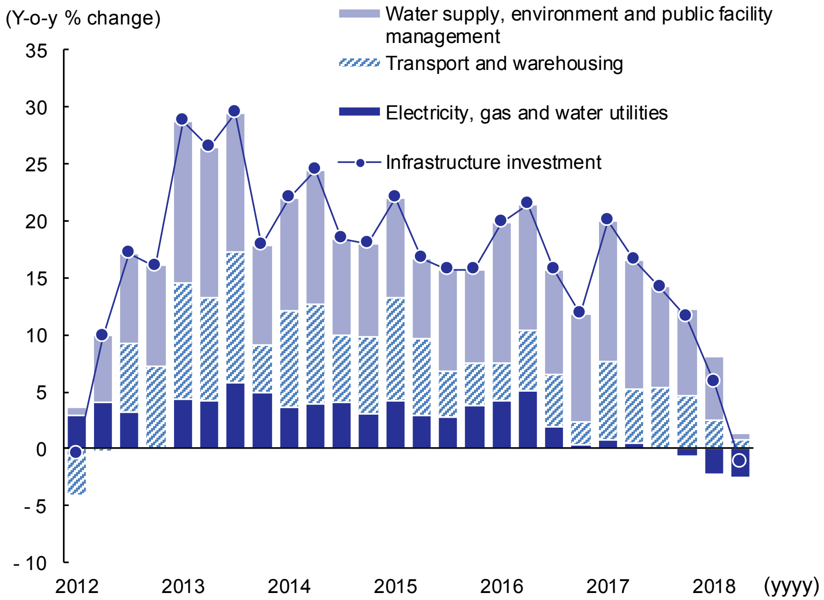
Note: The Y-axis plots the upward and downward divergence from the trend. Exports are not included in the Composite Economic Index (estimate)

Source: Made by MHRI based upon National Bureau of Statistics of China and the General Administration of Customs, China

China: shoring up infrastructure investment through acceleration of local government bond issuance from mid-2018

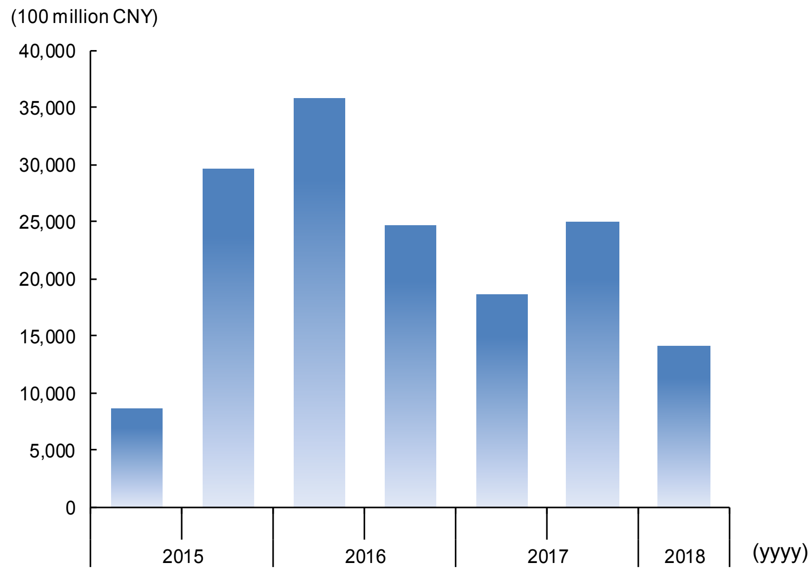
- Real infrastructure declined y-o-y in the Apr-Jun quarter of 2018 due to factors such as the decline in local government bond issuance and tightened environmental regulations.
  - Despite the fall in the number of planned Public-Private Partnerships (PPP) since the beginning of 2018, the number of implemented projects has increased.
- At the State Council's Executive Meeting in July, a decision was made to pursue fiscal policy more proactively to deal with the uncertainties in the external environment. In addition to tax cuts, and lower fees, the acceleration in issuance of local government bonds has been aimed at bringing forward infrastructure projects.
  - Even though the total issuance of local government bonds is estimated to reach about 4.4 to 4.5 trillion renminbi in 2018, the value of issues in the first half of the year stood at only 1.4 trillion renminbi.

[Infrastructure investment]



Note: Made real using the fixed asset investment price index (construction)
Source: Made by MHRI based upon National Bureau of Statistics China

[Local government bonds]



Note: The small amount of issuance in the first half of 2015 was partially due to the fact that issuance of bonds by local governments was approved in 2015 (budget formulated in March 2015 National People's Congress)
Source: Made by MHRI based upon National Bureau of Statistics China, and China Government Securities Depository Trust & Clearing Co. Ltd.

China: monetary policy is turning more accommodative than in the past

- Implementation of a more "prudent" monetary policy was announced at the July 31 Meeting of China's Politburo. This was a change from the "prudent and neutral" monetary policy indicated at the beginning of the year and confirms the recent trend in accommodative monetary policy operations.
  - The deposit reserve requirement ratio has already been cut three times, and there have been large-scale MLF leading to "rational and sufficient" liquidity.
  - While there has been progress in preparing a system to standardize shadow banking, measures are being implemented to mitigate the negative impact of such corporate funding.

[Policies concerning monetary policy, etc. indicated at the Meeting of China's Politburo]

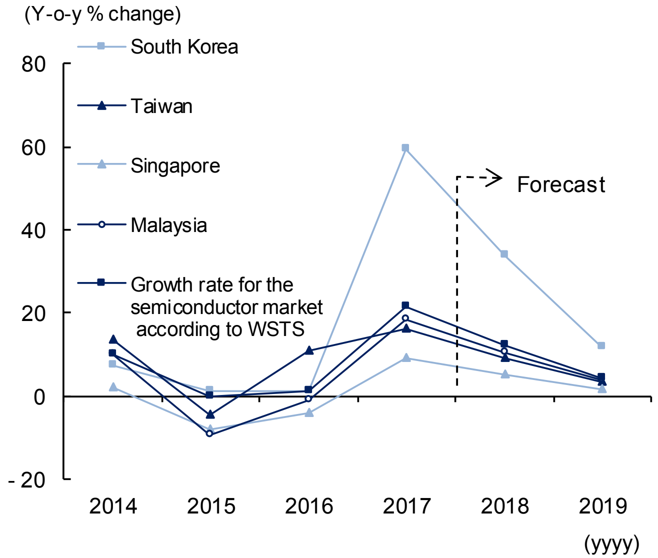
	Details indicated at Politburo	Measures since the beginning of the year
Monetary policy	- Maintain prudent (*previously, "prudent and neutral") monetary policy - Need to firmly monitor the valve of monetary supply (*previously, "make sure the valve is well controlled") - Maintain reasonable and sufficient (*previously, reasonable and stable) liquidity	- Deposit reserve requirement ratio cut three times (January, April, and July) - Conducted MLF worth 500 billion renminbi (July)
Prevent financial risk	- Better link the initiatives to prevent risk to contribute to the real economy - Be firm on initiatives without wavering on deleverage - Control the pace and intensity (of deleveraging) and make appropriate adjustments to the timing of each policy announcement	- Cut the required level for loan loss provisions of commercial banks (March) - Announced "Guidance opinions concerning standardization of asset management operations by financial institutions" (April) - Expanded the bonds acceptable for the necessary collateral when conducting MLF to include corporate bonds rated AA and AA+ (previously, only AAA ratings) (June)

Source: Made by MHRI based upon the Meeting of the Political Bureau of the Communist Party of China (CPC) Central Committee (People's Daily Online, August 1, 2018), etc.

Asia: growth in IT exports gradually peaking out

- Growth in semiconductor exports peaked in 2017 and we forecast sluggish growth from 2018.
  - Exports of South Korean semiconductors have slowed, yet demand for mainline memory is firm, maintaining high growth compared to other countries.
    - ✓ Semiconductors have fallen in price due to factors such as improvement in the supply shortfall and sluggish sales of smartphones. The export slowdown is price driven and not volume.
  - Semiconductor exports by Taiwan, Singapore and Malaysia have slowed in line with the decline in the growth rate for the global semiconductor market.
  - In Vietnam and the Philippines, the rapid expansion of electronic equipment exports reflecting the increase in direct inward investment is pausing.

[Growth in the semiconductor market and outlook for semiconductor exports]



Note: Nominal base, "semiconductors" refers to HS8541 and 8542
Source: Made by MHRI based upon each country's statistics, actual figures based on Comtrade and forecasts in World Semiconductor Trade Statistics (WSTS)

[Interviews with major Asian research institutions on electronic equipment exports]

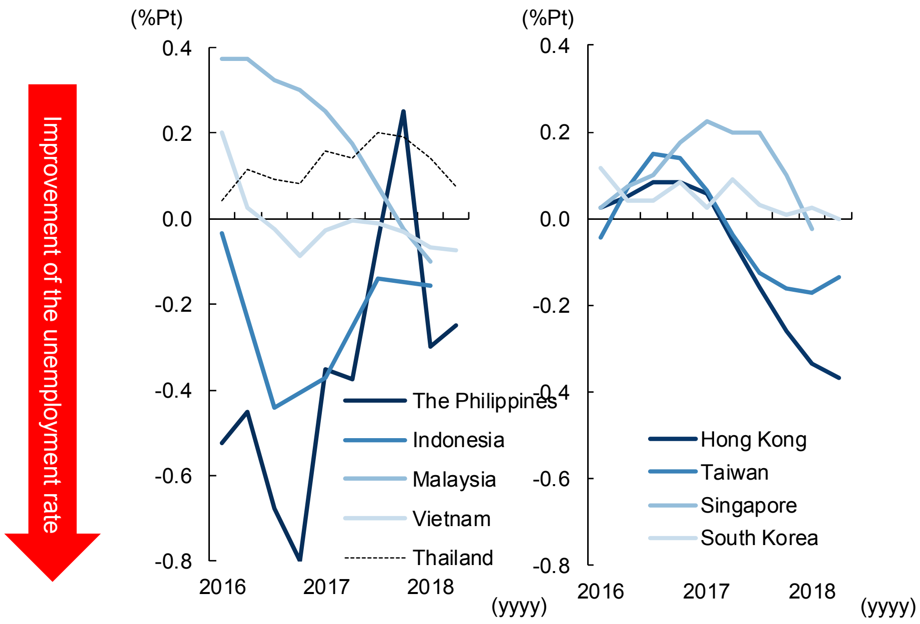
Item	Overview
Evaluation of semiconductor demand up until H1 2018	- The global economic recovery and sectors related to the fourth industrial revolution are driving demand - Upgrades to smartphones are also favorable for semiconductors - Increased demand for data center related memory is the main reason for increased demand in H1
Forecast from H2 2018 and beyond	- Growth may moderate, but there is little likelihood of a sharp contraction - Despite the slowdown, orders have already been received and a large-scale slowdown seems unlikely - Forecast to slow down until 2019. Close the image of the WSTS forecast figures
Memory trends	- Forecast moderate price adjustments and no major deterioration in corporate earnings is expected - Demand for memory is firm due to the development of AI and deep learning, etc.
Semiconductor manufacturing equipment trends	- Investment in semiconductor facilities by China and South Korea will drive demand for manufacturing equipment in the next year or so - Domestic production of semiconductor manufacturing equipment has not progressed in South Korea, and is dependent upon Japan and the Netherlands
Panel display trends	- The main reason for the decline in price of LCD panels is the over supply by Chinese companies. Production will not be curbed in the near term and improvement in the output gap will be difficult - Unlike the LCD panel market, there is a good outlook for the OLED market

Note: Interviews with major research institutions in each Asian country such as LG Economic Research Institute with which MHRI has business relations
Source: Made by MHRI

Asia: employment has improved mainly in ASEAN. Prices are generally stable, but some countries have hiked interest rates to deal with inflation

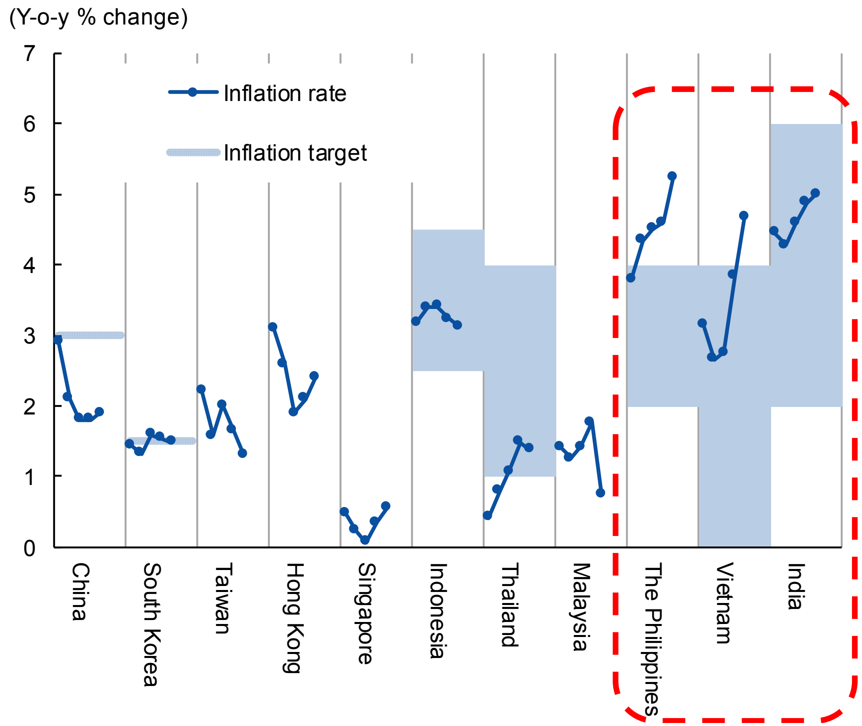
- ❑ The ASEAN (excluding Thailand) countries were among the first to see the fall of the unemployment rate, serving as tailwinds for consumption. In contrast, the improvement is taking longer among the NIEs.
- ❑ Inflation rates are generally stable in each country and region, and there are no signs of a deterioration in the consumption environment from a real purchasing power perspective.
  - Even so, it is necessary to keep a close eye as the inflation rates exceed the targets in the Philippines and Vietnam and are approaching the upper limit of the target in India.
  - The Philippines, India and Indonesia have all hiked interest rates, serving to cool domestic demand.

[Unemployment rate (y-o-y change)]



Source: Made by MHRI based upon each country's statistics

[Inflation rate (monthly, January to June 2018)]



Source: Made by MHRI based upon each country's statistics