FY2016, FY2017 Economic Outlook

- The global economy will gradually pick up. Will Trump change the world? -

November 15, 2016

Mizuho Research Institute

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Key points of our forecast

- Given lingering uncertainties including political issues in Europe and structural adjustments of the Chinese economy, it will be necessary to monitor any signs of downside risks.
- Donald Trump turned out to surprise as the victor of the US presidential election. In view of the possibility that the new Trump administration's policy measures may serve as a game changer of the global monetary and fiscal policy framework, keep a close eye upon upcoming developments.
- The US policy mix of fiscal expansion and interest rate hike may accelerate the appreciation of the US dollar. However, since an excessive strengthening of the dollar may serve as downside risks to the US economy and emerging market (EM) economies, it may serve to trigger a protectionist US stance.
- Global trade will likely stagnate for some time due to structural factors, and serve as a drag upon global growth.
- Even though the Japanese economy will pick up in 2017, it will be dependent upon public demand due to the lack of strength in both domestic and external demand.
- As the Abe administration draws closer to extending its term in office as the longest government in power in post-war Japan, Abenomics is also entering a long drawn-out battle. Despite the rise of expectations toward fiscal policy, its economic impact will be temporary. Looking forward, the next step will shift to the achievement of "Inclusive Growth" through the implementation of the full range of policy measures.
- Although interest rates will remain low around the world, note the presence of upward pressures upon interest rates stemming from expectations toward the new US administration.

I. The Global Economy

The global economy will pick up, and attention will gather around the new US administration's policy agenda

(1) Overview of the global economy: although the global economy should pick up in 2017, developments in the US will serve as the key

- While we maintain our expectations for growth rates to recover in the forecast area in 2017, growth will lack strength and be vulnerable to downward risk.
  - We have upwardly revised our forecast for developed market (DM) countries, and Asia in particular, due to the overall better-than-forecast growth rate in the Jul-Sep 2016 quarter.
  - We expect a recovery in 2017 due to a pick up in the US and natural commodity-producing countries. However, we expect the growth rates for DM and Asia to be below 2015 levels.

[Outlook on the global economy]

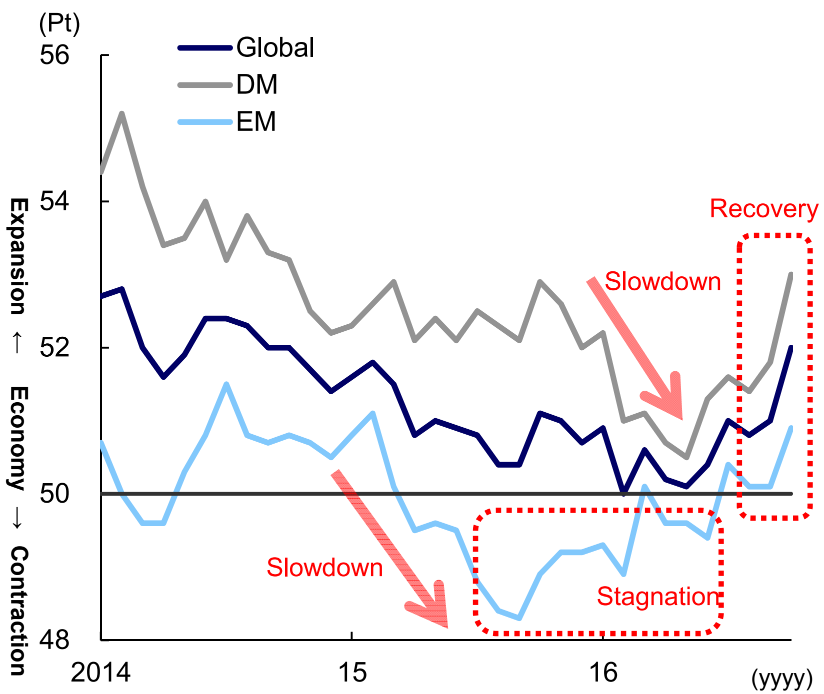
Calendar year	2014 (Actual)	2015 (Actual)	2016 (Forecast)	2017 (Forecast)	2016 (Forecast in Sep)	2017 (Forecast in Sep)	2016 (Breadth of change from Sep)	2017 (Breadth of change from Sep)
	(Y-o-y % change)				(% point)		(% point)	
Total of forecast area	3.6	3.4	3.3	3.6	3.2	3.6	0.1	-
Japan, US, Eurozone	1.6	2.1	1.4	1.6	1.3	1.6	0.1	-
US	2.4	2.6	1.5	2.1	1.4	2.2	0.1	-0.1
Eurozone	1.2	2.0	1.6	1.1	1.5	1.1	0.1	-
Japan	-0.0	0.6	0.7	1.0	0.5	0.7	0.2	0.3
Asia	6.4	6.1	6.1	6.0	6.0	6.0	0.1	-
China	7.3	6.9	6.7	6.5	6.6	6.5	0.1	-
NIEs	3.4	1.9	1.9	2.1	1.9	2.2	-	-0.1
ASEAN5	4.6	4.8	4.8	4.6	4.8	4.6	-	-
India	7.0	7.2	7.6	7.5	7.6	7.5	-	-
Australia	2.7	2.4	2.8	2.5	2.8	2.5	-	-
Brazil	0.1	-3.8	-3.2	1.2	-3.2	1.0	-	0.2
Russia	0.7	-3.7	-0.7	1.0	-1.2	1.0	0.5	-
Japan (FY)	-0.9	0.9	0.9	1.0	0.6	0.9	0.3	0.1
Crude oil price (WTI, USD/bbl)	93	49	43	55	42	45	1	10

Note: The total of the forecast area is calculated upon the 2014 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 for both DM and EM

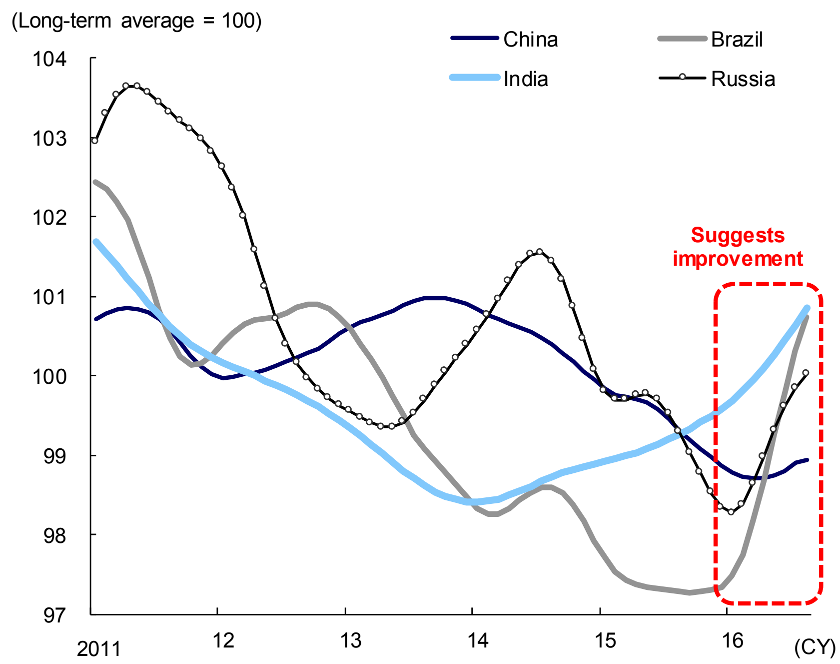
- The global economy is recovering, as shown by the improvement of Jul-Sep quarter real GDP in Japan, the US and Europe.
  - Business sentiment (manufacturers) has been improving in both DM and EM countries, with the sentiment in DM countries recovering to levels during the first half of 2015.
  - Confidence in EM countries is spreading compared to the beginning of 2016 due to the strength of the Chinese economy and the rebound in the price of oil.

[Manufacturing PMI for DM and EM countries]



Source: Made by MHRI based upon Markit

[OECD leading economic indicators (BRICS)]



Source: Made by MHRI based upon OECD

A regime shift towards a global path for fiscal expansion amid rising awareness of the limits of monetary policy

- Amid the rise of awareness of the limits of monetary policy, fiscal policies and structural reforms are being strengthened in some countries.

[Monetary Policy, Fiscal Policy and Structural Reforms in the lead up to 2017 by country]

County/Region	Monetary Policy	Fiscal Policy	Structural Reforms
US	A wait-and-see stance after a rate hike in December. The next rate hike would be in mid-2017 at the earliest.	Donald Trump has proposed major tax cuts, while he has proposed the expansion of defence spending and infrastructure investment on the expenditure side.	A mix of deregulation (health, energy), repeal of Obamacare, protectionism, and xenophobia, etc.
Europe	The ECB will likely extend the period of quantitative easing. The BOE is forecast to continues its comprehensive easing.	Despite fiscal expansion in some countries, the Eurozone as a whole should be slightly oriented toward budget austerity in 2017.	The main reforms are to stimulate jobs (reduction in labor costs and increase in employment opportunities) and to deal with non-performing loans
Japan	Yield curve control measures introduced with an eye on extending easing measures. Current monetary policy is expected to continue for a while.	The government has decided on a 28 trillion yen economic stimulus package. Next year's budget is taking account of the use of the "achievements of Abenomics"	"Working-style Reform Plan" scheduled to be formulated during FY2016. Regulatory reform lacks a centerpiece.
China	Accommodative monetary conditions will be maintained as a basic stance while taking administrative measures to suppress a real-estate bubble.	Proactive and flexible fiscal policies are expected to remain in place. Infrastructure-related spending will be increased.	"Supply-side structural reforms" will be continued, such as culling out excess production capacity, reducing debt, and cultivating new industries.
Other EM	EM countries are taking a cautious stance toward additional easing due to concerns about an outflow of funds amid ongoing expectations for a US interest rate hike.	Given the limited scope for expansion among many countries, there is overall caution due to concerns about an outflow of funds triggered by the stimulation of imports	Reform stance is intensifying in some regions such as Brazil, Argentina, and the Philippines through change in government.

Source: Made by MHRI

Rise of theories emphasizing the significance of fiscal policy, which is also fostered by Donald Trump's tax cuts

- In recent years, there has been a focus upon theories advocating the inability of monetary policy alone to control long-term fluctuations in inflation.
- At the Jackson Hole symposium in 2016, Princeton University Professor Christopher Sims asserted that "monetary policy effectiveness requires an underlying fiscal policy". There is a global trend towards the use of fiscal policy, including US President-elect Trumps large-scale tax cuts.
- Koichi Hamada (Emeritus Professor at Yale University) has recently shifted his stance to advocate expansionary fiscal policy measures, noting the arguments presented by Professor Sims.
  - Professor Hamada had previously been circumspect about fiscal policy due to concerns that higher interest rates would suppress private investment (crowding out).
  - Now that crowding out has been avoided through the BOJ's long-term yield control policy, Professor Hamada is advocating that monetary policy would be more effective if assisted by fiscal policy.

[Various theories that explain "long-term" low inflation]

Theory	Advocate	Details	Notes
Secular stagnation	Summers	A lack of demand (excess savings) due to factors such as increased inequality is a cause of long-term low inflation. Proposes fiscal stimulus as one prescription.	
(Reference) Supply-side secular stagnation	Gordon	The cause of slow productivity growth is that the boost to increased productivity from the industrial revolution (particularly, the second) is almost over.	Some say this alone does not explain low inflation.
Price level fiscal policy theories	Sims et al.	Planning for fiscal consolidation is a cause of low inflation. Proposed delaying the consumption tax hike as a prescription.	
	Kimura et al. (BOJ)	The combination of the decline in the potential growth rate explains low inflation.	The prescription is not definitive.
	Andrade and Berriel	Notes concern that fiscal expansion can conversely lead to stagflation.	
Inflation rate fiscal policy theory	Sargent et al.	The fiscal policy stance is also an important determinant of the inflation rate.	
(Reference) Quantity theory of money		Prices will also rise if the monetary base increases	

Source: Made by MHRI

[Sims' policy recommendations]

- Reductions in interest rates can stimulate demand only if they are accompanied by effective fiscal expansion. For example, if interest rates are pushed into negative territory, and the resources extracted from the banking system and savers by the negative rates are simply allowed to feed through the budget into reduced nominal deficits, with no anticipated tax cuts or expenditure increases, the negative rates create deflationary, not inflationary, pressure.
- What is required is that fiscal policy be seen as aimed at increasing the inflation rate, with monetary and fiscal policy coordinated on this objective. In Japan, this might be achieved by explicitly linking planned future increases in the consumption tax to hitting and maintaining the inflation target..
- Fiscal policies and monetary policies should be implemented after fully considering the impact on spending decisions such as private consumption and investment.

Source: Made by MHRI based upon Christopher Sims, Fiscal Policy, *Monetary Policy and Central Bank Independence,* (27-Aug-16, keynote speech at Jackson Hole meeting)

Fiscal policies would give the economy a substantial boost, but protectionism and xenophobic stance are risk factors

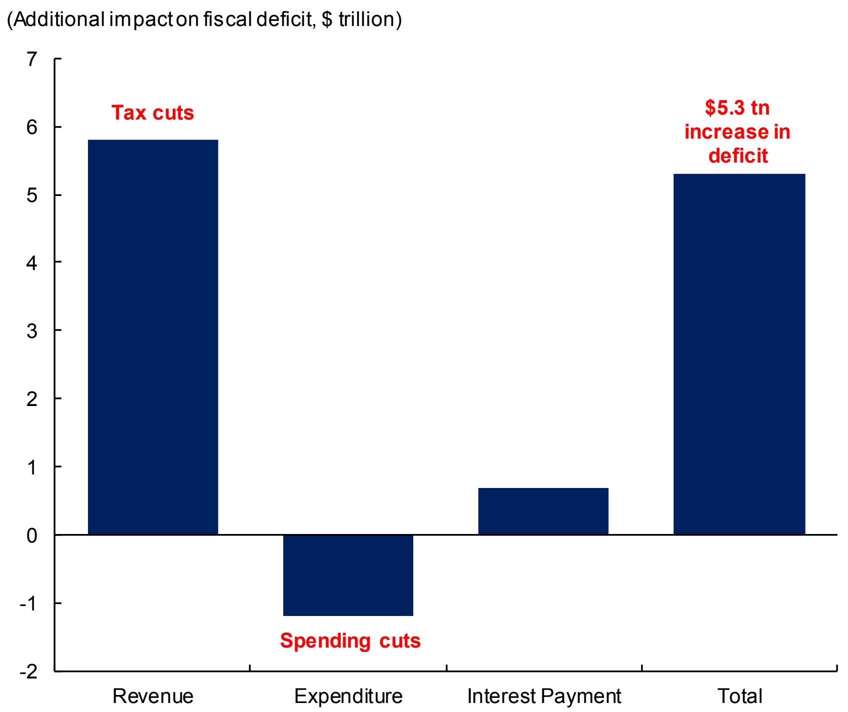
- The additional fiscal deficit attributed to Donald Trump's economic policies is forecast to be approximately $5.3 trillion over 10 years.
  - Major tax cuts are planned such as cuts to income tax and corporations tax.
  - Even though tax cuts serve as economic stimulus, the introduction of trade barriers, strict immigration policies and the rise of uncertainties will serve as drags upon the growth rate.

[Donald Trump's economic policies]

Fiscal policy	Fiscal deficit	$5.3 trillion increase over 10 years
	Tax system	Large-scale tax cuts [Corporations] ・Corporations tax cut to 15% (current 35%) ・Repatriation of corporate profits held offshore at a one-time tax rate [Individuals] ・Simplification of income tax categories with change from previous 7 categories to 3 categories of 12%, 25% and 33%. ・Restrictions on use of income tax exemptions (tax increase)
	Spending	Increased investment in infrastructure, education assistance, repeal of Obamacare [Infrastructure investment] Increase investment to levels above Clinton [Education assistance] Reduce tuition fees and burden of education loans [Health policy] Repeal Obamacare, promote health savings accounts for individuals, deregulation
Immigration		Limit immigration intake, priority employment for US workers
Trade		Protectionist stance Against TPP, Renegotiation of NAFTA Set penal provisions for countries manipulating exchange rates Intent on applying 45% and 35% duties on imported goods from China and Mexico respectively
Minimum wage		Not clear
Impact on GDP growth rate		[Implementation of all Trump's policies] The divergence from the current forecast for the 2017 to 2020 average growth rate: -1.6 to -4.6% points [Increased constraints from Congress] The divergence from the current forecast for the 2017 to 2020 average growth rate: -0.8 to -0.9% points

Note: The impact on GDP is extracted from Oxford Economics (2016), Moody's (2016) report
Source: Made by MHRI based upon various reports

[Fiscal cost of economic policies (10 year cumulative)]



Note: Divergence from the baseline based on current legislation. 10 year cumulative total.
Source: Made by MHRI based upon CRFB materials (22-Sep-16)

Agenda for the first 100 days: Trump administration prioritizing measures not requiring Congressional cooperation

- Donald Trump has already disclosed seven measures for the first day in office and 10 measures targeting legislation for the first 100 days in office.
  - Selected content that can be implemented under presidential authority, mainly covering trade areas, as measures for the first day in office.
    - ✓ Likely to announce renegotiation of NAFTA, exit from TPP, and other measures.
  - Tax reforms, including major tax cuts, are the focus for the first 100 days.
    - ✓ Tax system changes can be legislated just by the Republican Party without interference from the Democratic Party through a measure known as "fiscal reconciliation".
    - ✓ If there are no retroactive measures, tax cuts would be implemented at the beginning of 2018.

[Measures for the first day in office]

①	Announce intention to renegotiate or withdraw from NAFTA	Shocks for the world, including the US, If implemented
②	Announce withdrawal from TPP	
③	Label China as a currency manipulator	
④	Launch investigations in improper practices by trading counterparts and take action using all available means	
⑤	Ease regulations on energy-related development projects in the US	Acceleration of energy investment within the US. However, international criticism of the US is inevitable
⑥	Lift restrictions on infrastructure building and approve construction of the Keystone pipeline	
⑦	Cancel funding to the UN's global warming countermeasures and use the funds for domestic water system and environmental infrastructure investments	

Source: Made by MHRI based upon from Donald Trump's web page

[Measures targeting legislation in the first 100 days in office]

① Implement tax reforms (income tax, corporate tax, corporate international tax)
② Implement tax system reforms to prevent companies from moving overseas
③ Promote energy development and infrastructure investments
④ Reform education (increase freedom to select schools, etc.)
⑤ Repeal Obamacare
⑥ Provide child-rearing and care assistance
⑦ Implement measures to deal with illegal immigration (wall construction, etc.)
⑧ Ensure community security (strengthen violent crime measures, etc.)
⑨ Reform national security (repeal sequestration of defense costs, etc.)
⑩ Take steps to prevent political corruption

Source: Made by MHRI based upon from Donald Trump's web page

Focus Policy (1) Income Tax Reforms: proposed tax cuts need coordination with Congress on size and other details

- Donald Trump is proposing major tax cuts.
  - Cuts apply to all income brackets and offer a particularly large benefit to high-income brackets; proposes a child-rearing tax cut and other measures for low and middle income brackets.
  - Similar to the Congressional Republican's 2016 proposal and direction; while the two sides might reach agreement, differences exist in the size of the tax cuts.
    - ✓ Differences regarding the extent of adjustments to special tax measures; Congressional Republicans focus on simplification and the tax reduction is modest as a whole.
    - ✓ Possible debate of the scale of fiscal deficit expansion including fiscal revenue.

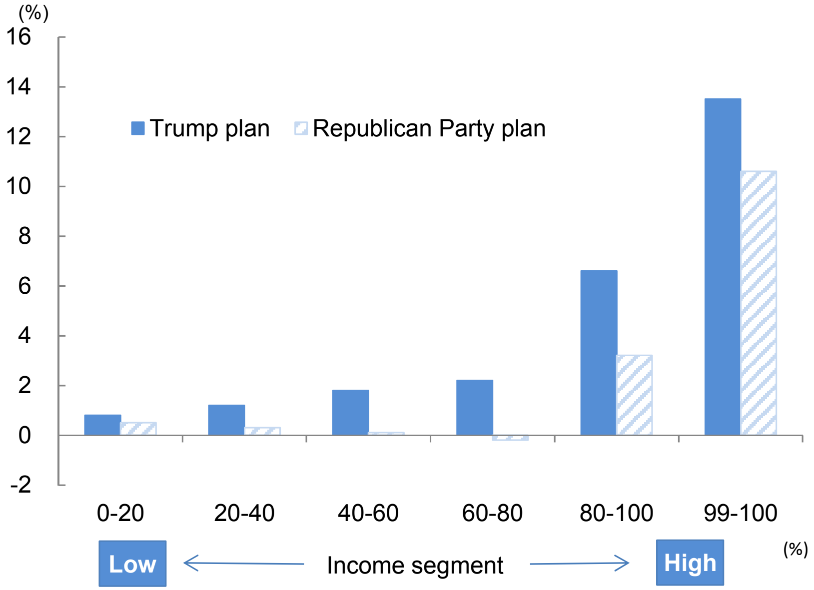
[Proposal for income tax rates]

(%)

	Current system	Trump plan	Republican Party plan
Income tax rate	10	12	12
	15		
	25	25	25
	28		
	33	33	33
	35		
	39.6		

Note: Immigrant = Residents born in other countries
Legal immigrants = Total of naturalized people (with citizen rights), permanent residents, and temporary residents
Source: Made by MHRI based upon Pew Research Center materials

[Tax cut scale by income brackets]



Note: Change in after-tax income
Source: Made by MHRI based upon TPC materials

Focus policy (2) Trade policy: TPP exit and protectionist directives using presidential authority as concerns

- Trade policy is an area where presidential authority can be used with few Congressional constraints; large risk of protectionism
  - Likely to announce a TPP exit on the first day in office
  - Presidential authority in trade policy is extensive, and the president can exit trade agreements and raise tariffs on certain imports without Congressional approval
  - Possibility of tariff hikes against China and Mexico proposed by Donald Trump having significant adverse impacts on the economy
    - ✓ Peterson Institute for International Economics suggests that Donald Trump's tariff hikes could have a large enough negative impact to cause an economic recession
  - The US tilt toward protectionism may accelerate protectionist movements already strengthening around the world

[Impact of tariff hikes on the economy]

Positive impacts

○ Import decline and shift to domestic production

○ Rise in tariff income

Prospect of negative impacts outweighing positive impacts

Negative impacts

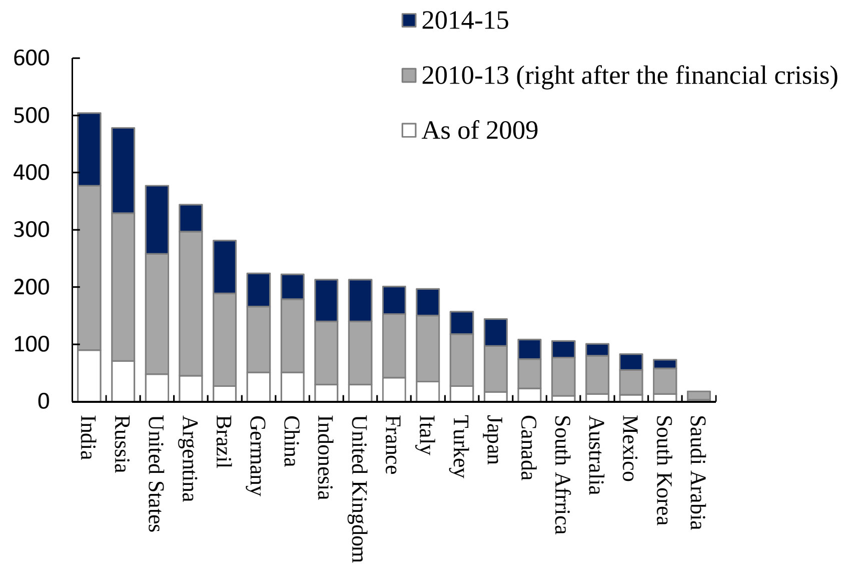
○ Stalled global trade

○ Decline in real purchasing power due to higher import prices

○ Financial market disruptions, increased uncertainty

Source: Made by MHRI based upon various materials

[Protectionist measures by various countries]



Source: Made by MHRI based upon Global Trade Alert

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Impact on monetary policy: expansionary fiscal policy, protectionism, and market trends; also political involvement

- Feasibility of policies advocated by Donald Trump likely to affect US monetary policy through changes in corporate, consumer, and market sentiment.
  - Dovish shift in FOMC voting members; prospect of slowly raising the policy rate as the labor market tightens.
  - Donald Trump's large-scale fiscal policy could support rate hikes by boosting economic activity.
    - ✓ Actual effects from spending in Oct-Dec 2017 and tax cuts in 2018; possibility of being driven by expectations.
  - Yet Donald Trump's protectionist stance and rise in US long-term yield and the dollar in financial markets could serve as impediments toward rate hikes.
    - ✓ US long-term yield upswing and dollar gains represent monetary tightening for the US and could fuel instability in emerging countries.
  - Risk of growing political involvement in monetary policy by the Republican Congress.

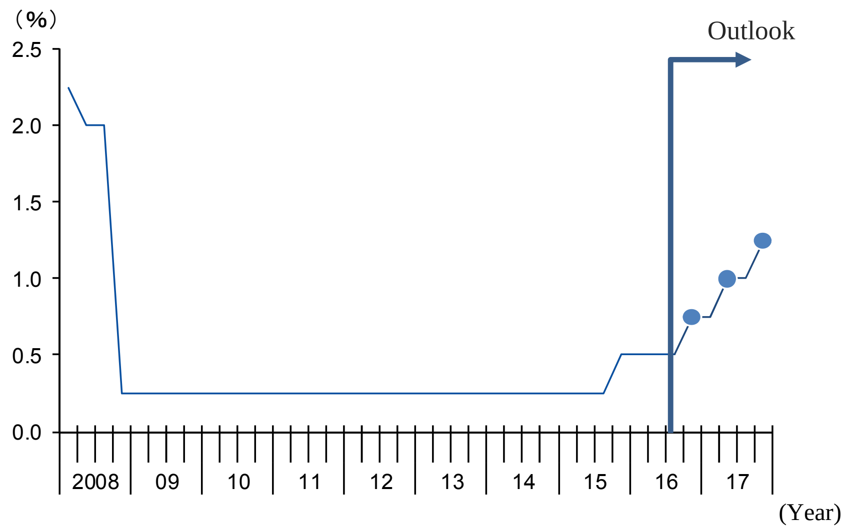
[FOMC voting members]

	2016	2017
Permanent	Yellen FRB Chair Fischer FRB Vice Chair Powell FRB Director Tarullo FRB Director Brainard FRB Director Dudley (New York)	Yellen FRB Chair (term lasts through February 2018) ⇒Risk of a successor being designated (first time in history) Fischer FRB Vice Chair Powell FRB Director Tarullo FRB Director Brainard FRB Director Dudley (New York)
Rotation		Evans (Chicago)
	Bullard (St. Louis)	Kaplan (Dallas) Kashkari (Minneapolis)
	Rosengren (Boston) Mester (Cleveland) George (Kansas City)	Harker (Philadelphia)

Doves ↕ Hawks

Note: Dove and hawk assessments as of November 2016
Source: Made by MHRI based upon FRB materials

[Policy rate outlook]



Source: Made by MHRI based upon FRB materials

Financial markets: outlook for risk-on activity in the short term led by policy expectations for incoming president Trump

[Market scenarios following the presidential election]

	Market outlook
Forex market	US yield upswing and dollar gains in the short term on expectations for fiscal expansion. Even so, the dollar might face upward resistance on pullback of policy hopes and President Trump's protectionism. Possibility of fund inflow to the yen as a safe asset if investors become concerned about capital outflow from emerging market (EM) countries accompanying dollar gains
Emerging markets	Downward pressure on EM currencies in the short term due to US yield upswing and dollar gains. Possibility of heightened appreciation pressure (particularly on the CNY and KRW) over the long term if a stronger protectionist stance increases susceptibility to revision of the strong-dollar. MXN likely to weaken on concerns about illegal immigration measures and other actions
US stocks	Short-term lift on expectations for larger fiscal spending and tax cuts. However, the trend might change to growing downward pressure from pullback of policy expectations and concerns about pursuing protectionist trade policy
US bonds	Upturn in long-term yields on expectations for fiscal action to boost the US economy. Future trend depends on the content of specific policies steadily unveiled from the start of next year. Possibility of a further rise in long-term yields if the government significantly expands fiscal spending
Credit (US HY bond spread)	Narrower spreads on energy and health care driven by policy expectations under a Trump administration. However, subsequent spread reduction might be limited as investors take a closer look at specific policy content and the crude oil price trend

Source: Made by MHRI

Impact on Emerging Markets (EM): note that there could be a possible increase in EM risk through weaker currencies

- The dollar has strengthened against EM currencies, while US long-term yields have risen on the back of expectations toward the expansion of the fiscal deficit by President-elect Donald Trump.
  - Excessive depreciation of EM currencies heightens the risk of concerns about an outflow of money and a foreign currency debt (of US dollar).
- There are also fears that increased protectionism will trigger concerns about EM economies and lead to further currency depreciation.
  - However, there could be upward pressure on the currencies of countries with current account surpluses and countries that have trade surpluses with the US, such as China, South Korea and Taiwan which are on the foreign exchange monitoring list.
- On the diplomatic front, there are concerns that the adoption of an inward-looking America First doctrine could create a “power vacuum" in the Middle East, Eastern Europe, and the East and South China Seas and lead to the rise of geopolitical risks.

[Major elements of the Trump Administration’s policies likely to affect EM]

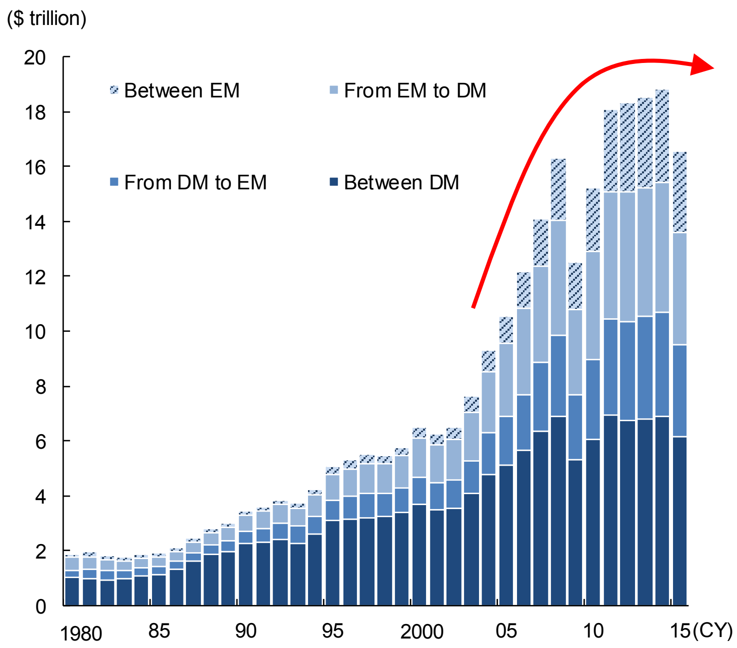
	Fiscal Policies	Trade Policies	Diplomatic Policies
Evaluation point	Expectations toward expansive fiscal policies will increase the expectations for expansion of the US economy and put upward pressure on the dollar	While a protectionist stance will lead to economic uncertainty for EM overall, there would be upward pressure on the currencies of countries on the foreign exchange monitoring list	The America First doctrine would create a “power vacuum” and intensify a risk-off mode
President-elect Trump’s stance (before the election)	EM currencies ⇩ Expansionary (Enormous fiscal deficit)	EM currencies ⇩ Foreign exchange monitoring list countries ⇧ Protectionist	EM currencies ⇩ America First doctrine

Note: ⇧ upward pressure on the currency against the dollar ⇩ downward pressure on the currency against the dollar
Source: Made by MHRI

(4) Sluggish global trade: trade remains sluggish due to structural factors, weighing on the global economy

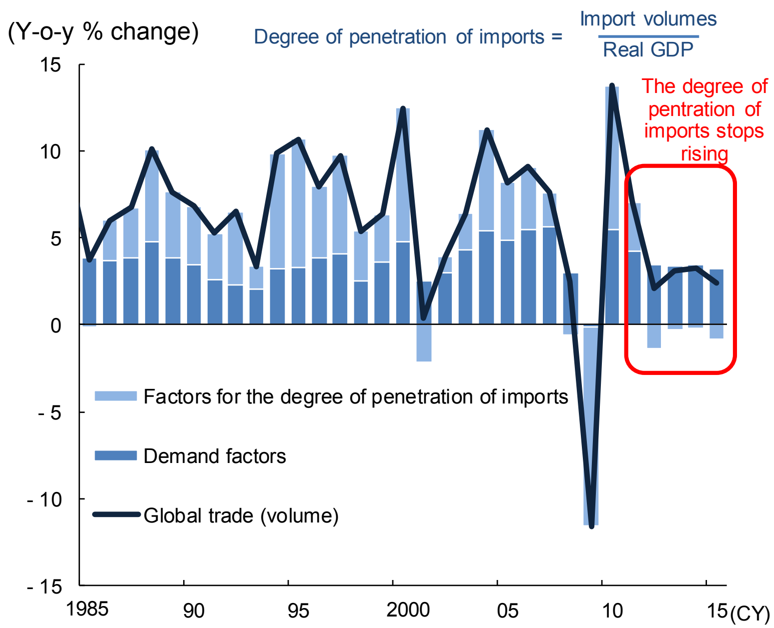
- The global economy has stopped expanding.
  - Even though global trade had been expanding due to the entry of EM economies, the expansion of trade (by value) has been capped from the 2010s.
  - There has been an impact from the fall of commodity prices and the depreciation of EM currencies eroding dollar-denominated export values.
- Even in terms of volumes, when excluding the impact of lower commodity prices, the pace of expansion in global trade has been very sluggish.
  - In addition to sluggish global investment, an end to the growing penetration of imports has had a large impact, suggesting that the expansion of the global supply chain has come to a pause.

[Values of world trade]



Source: Made by MHRI based upon the IMF

[Factors causing fluctuations in world trade (volume base)]

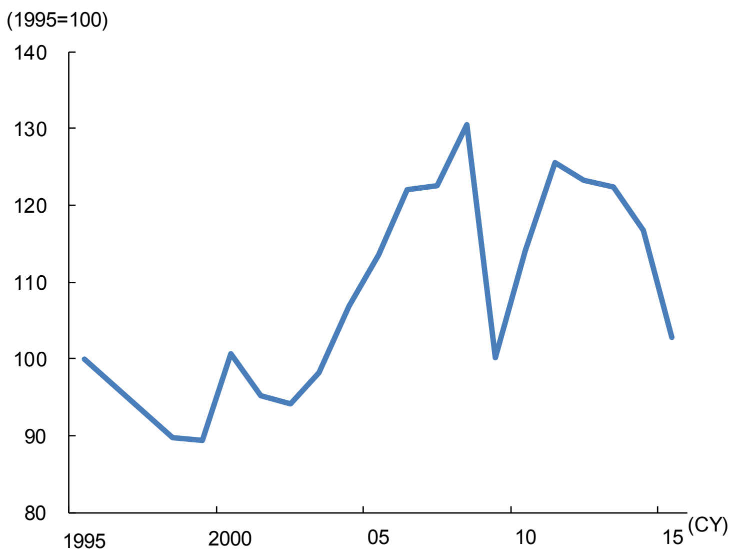


Note: Source: Made by MHRI based upon the IMF

The expansion of the global supply chain, which had contributed to the increase in global trade, has come to a pause

- ❑ Trade in intermediate goods, which had been growing since the 2010s, has stopped reflecting a pause in the expansion of the global supply chain.
  - The value of trade in intermediate goods grew in the 2000s due to growth in the global supply chain, but plummeted in 2015 because of factors such as lower commodity prices.
  - Even on a volume base, the pace of exports from EM to DM has fallen reflecting the pause in the expansion of the global supply chain.
- ❑ Exports from China, which had achieved high growth as the world's factory, have fallen.
  - Despite China's growing presence in the global supply chain, the rise of dependence (penetration) on Chinese imports has come to a pause.

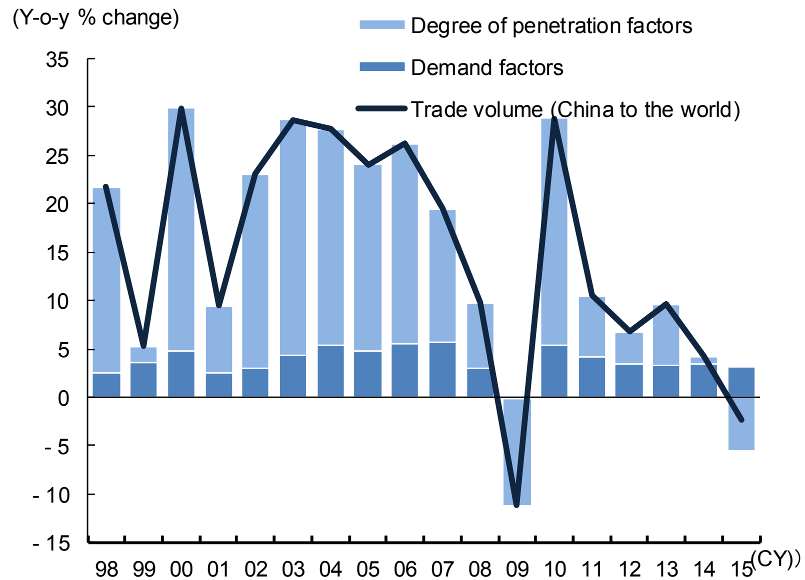
[Trade in intermediate goods]



Note: The value of trade in intermediate goods as a proportion of nominal global GDP. However, the value of trade in intermediate goods is the value of trade excluding trade between EM

Source: Made by MHRI based upon the United Nations and the IMF

[China's exports (volume base)]

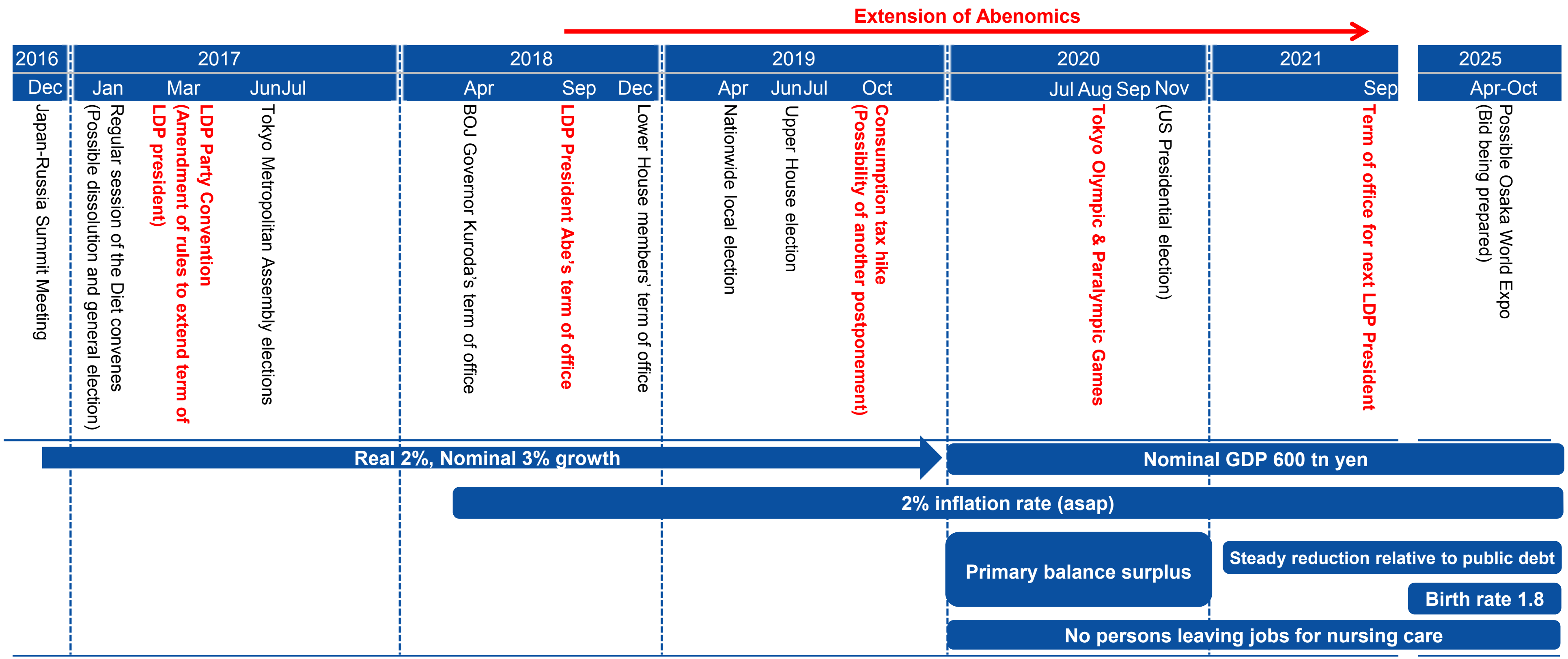


Source: Made by MHRI based upon IMF

(5) The future of Abenomics: given prospects of the longest serving administration, Abenomics shifts into a long-term strategy

- The LDP president's term of office looks likely to be extended for a third term to a total of nine years. The Abe Administration could become the longest serving administration on record.
  - The longest serving administration to date (i.e., the longest consecutive number of days as prime minister) was the 7 years 8 months (November 1964 to July 1972) under former Prime Minister Eisaku Sato. The Abe administration may surpass this record if it continues until the end of August 2020.

[Key political and economic events]

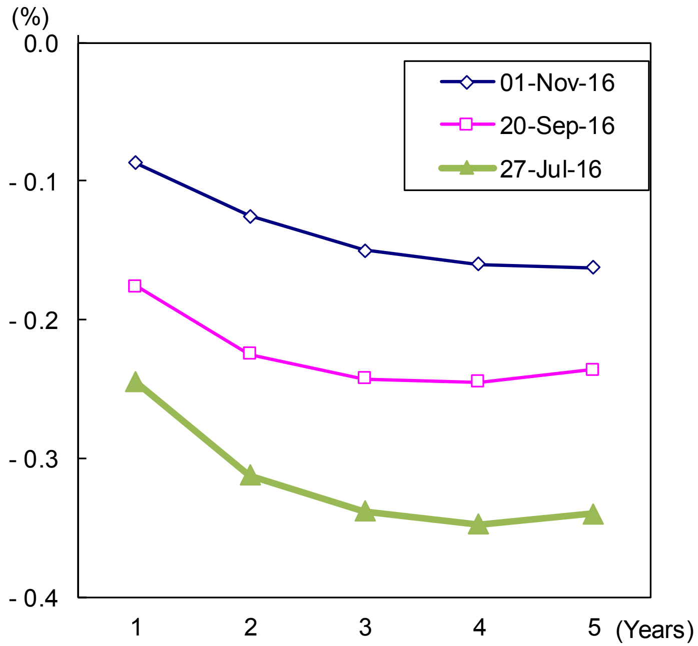


Source: Made by MHRI

① Monetary Policy: shift into a "new framework" anticipating a protracted battle
Monetary policy will likely remain unchanged for a while

- The BOJ decided to introduce "Quantitative and Qualitative Easing with Yield Curve Control" taking account of the comprehensive assessment undertaken at its September Monetary Policy Meeting (September 20-21). The policy focus shifted from monetary base to long-term and short-term interest rate levels. By targeting interest rates, the BOJ is able to secure flexibility in its outright purchases of JGBs.
- The BOJ downwardly revised its forecast for FY2017 prices in its Outlook for Economic Activity and Prices (“Outlook Report”) while postponing the timing to achieve the price stability target to about FY2018. However, it judged that the “momentum" to achieve the price stability target was being maintained. The next focus for assessing policy will be the spring wage negotiations, and we expect policy to be left unchanged for the foreseeable future to assess the impact of policy.

[OIS Curve]



Source: Made by MHRI based upon Bloomberg

[Outlook Report (November 1, 2016)]

(Y-o-y % change)

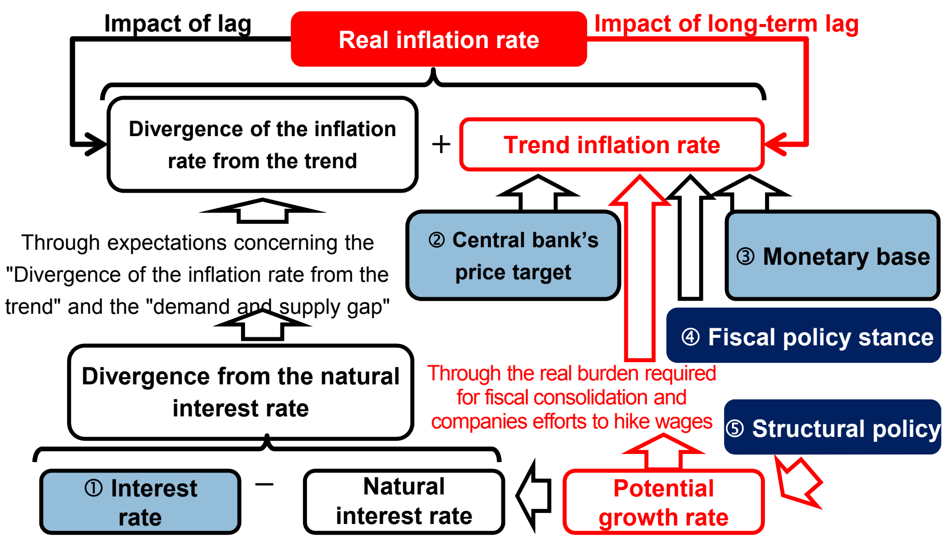
	Real GDP	CPI (All items less food)	Excluding the impact of consumption tax hikes
FY2016	＋0.8 to ＋1.0 (＋1.0)		-0.3 to -0.1 (- 0.1)
Forecast made in July	＋0.8 to ＋1.0 (＋1.0)		0.0 to ＋0.3 (+ 0.1)
FY2017	＋1.0 to ＋1.5 (＋1.3)		＋0.6 to ＋1.6 (+ 1.5)
Forecast made in July	＋1.0 to ＋1.5 (＋1.3)		＋0.8 to ＋1.8 (+ 1.7)
FY2018	＋0.8 to ＋1.0 (＋0.9)		＋0.9 to ＋1.9 (+ 1.7)
Forecast made in July	＋0.8 to ＋1.0 (＋0.9)		＋1.0 to ＋2.0 (+ 1.9)

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

The inflation target will be difficult to achieve through monetary policy alone. Higher growth expectations for wage hikes is needed

- There are limits to pushing up the inflation rate through monetary policy alone. Fiscal policies and structural policies also need to be mobilized.
  - The BOJ appears to have had difficulty in quickly achieving the 2% price stability target through the following tools it has control over: ① interest rates, ② price target (that also required agreement with the government), and ③ monetary base.
    - ✓ Monetary easing causes depreciation of the yen, which temporarily pushes up prices. However, wages do not keep pace leading to increased propensity to save.
  - Monetary policy will continue at the maximum level of easing, while the future focus will be on the trends in ④ fiscal policy and ⑤ structural policies.
    - ✓ It is important to create the environment for wage hikes through fiscal policy and structural policies.

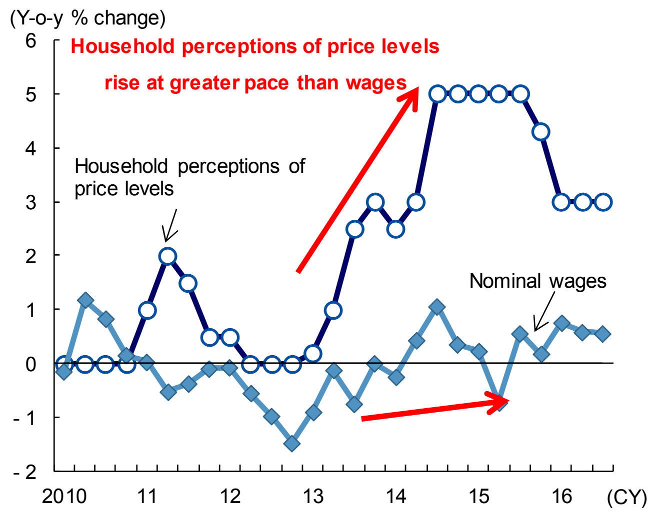
[The path of impact on the inflation rate from monetary, fiscal and structural policies]



Note: The central bank influences the real inflation rate by manipulating (1) interest rates, (2) the price target, and (3) the monetary base

Source: Made by MHRI

[Household perceptions of price levels and nominal wages]



Note: Household perceptions of price levels are the median level for the response to the question "By what percent do you think prices have changed compared with one year ago?"

Source: Made by MHRI based upon BOJ, *Opinion Survey on the General Public's Mindset and Behavior*, and Ministry of Health, Labour and Welfare, *Monthly Labor Statistics*

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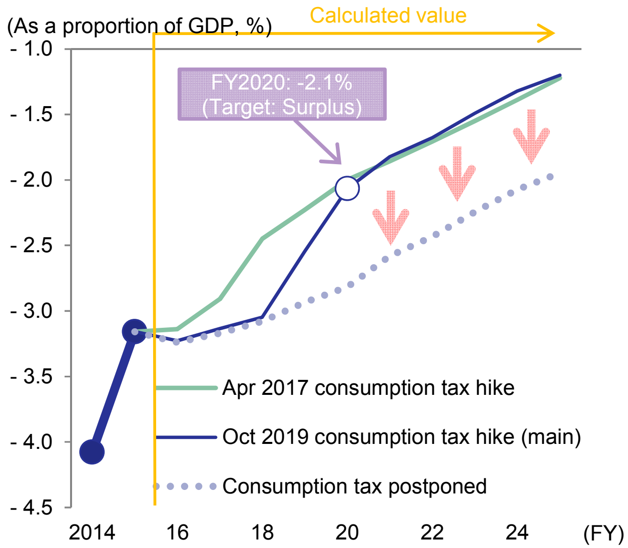
② Fiscal policy: forecasting fiscal spending utilizing low interest rates

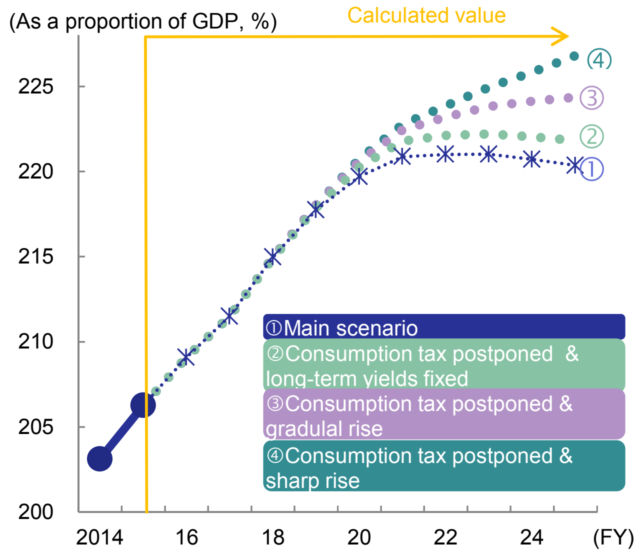
- ❑ As noted earlier, while there are increased expectations for fiscal policy, fiscal spending should proceed cautiously given Japan's fiscal conditions.
  - If low interest rates are maintained, the ratio of public debt to GDP could be stable (i.e. Domar's debt sustainability condition).
  - In terms of policy, the BOJ could extend the low interest rate policy and the 2019 consumption tax hike could be put on hold.
  - However, there could be limited scope for fiscal spending unless growth is boosted through structural policies.

[Outlook on the primary balance and public debt]

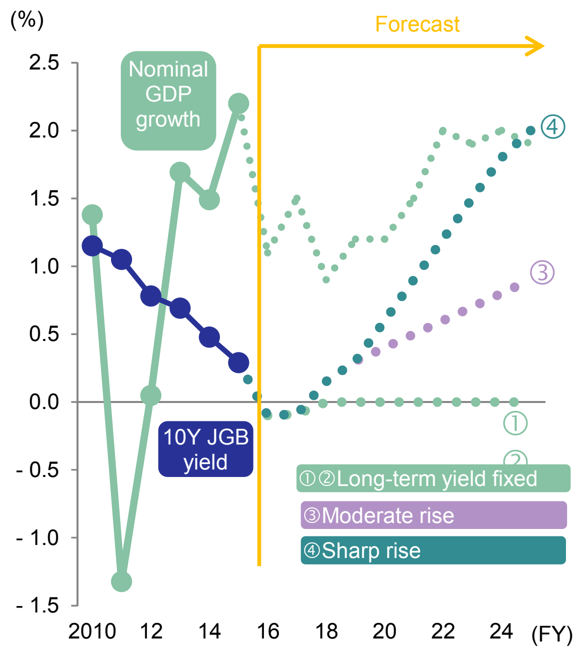
Primary Balance



Public debt



[Reference: Nominal growth rate and nominal interest rate (10Y JGB) used in calculations]



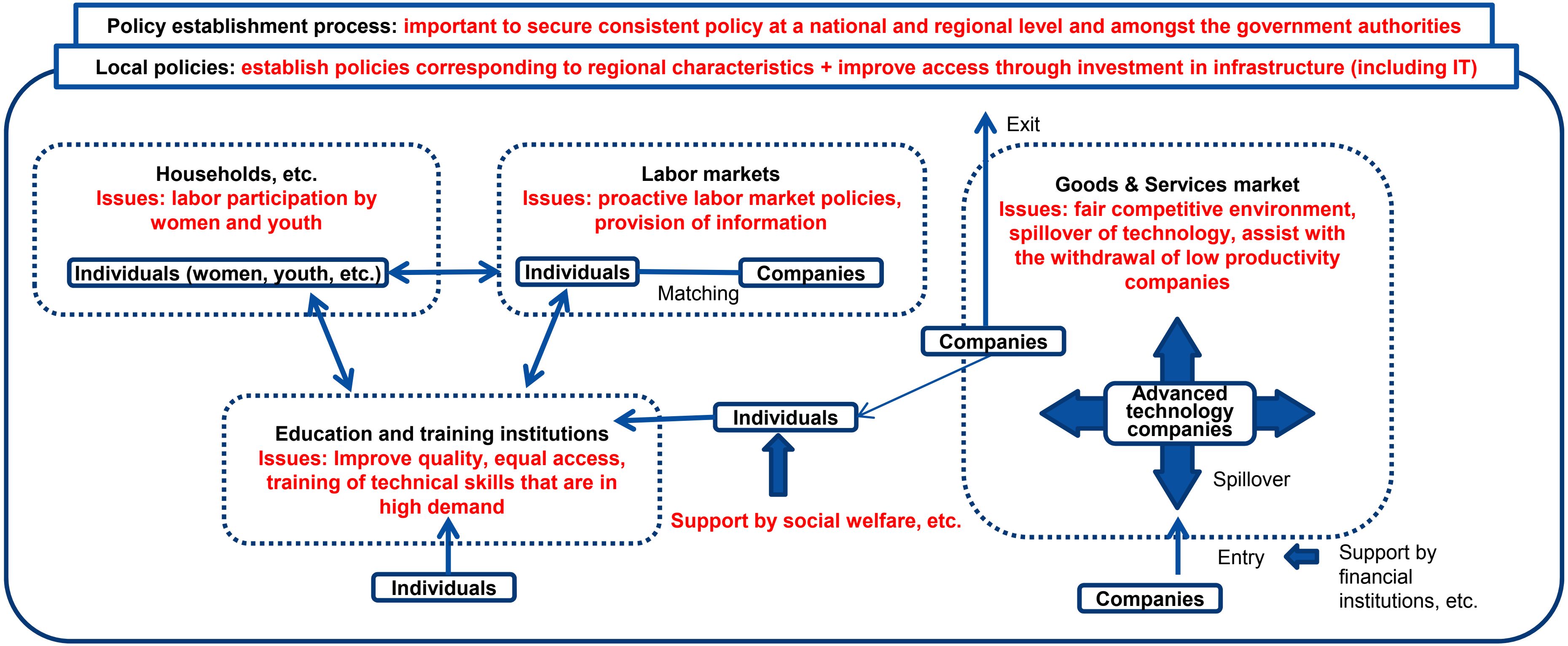
Note: 1. Since the "Consumption tax postponed" shows figures that only consider a change in the consumption tax, the calculated figures need to be interpreted with a degree of latitude.
2. Public debt uses the general government's "securities (liabilities) other then equities"

Source: Made by MHRI based upon Cabinet Office, *National Accounts*, and Ministry of Finance materials, etc.

③ Structural policies: focus of attention upon the concept of "inclusive growth"

- There is a worldwide focus of attention upon the concept of "inclusive growth". In Japan too, it will become important to utilize the synergies of growth and equality through the promotion of women’s careers, careers for non-regular employees, and renewal of the industrial sector.
- A comprehensive policy package (of mutually consistent policies) for individuals and companies that deals with regional circumstances is required.

[Overview of policy package towards "Inclusive Growth"]

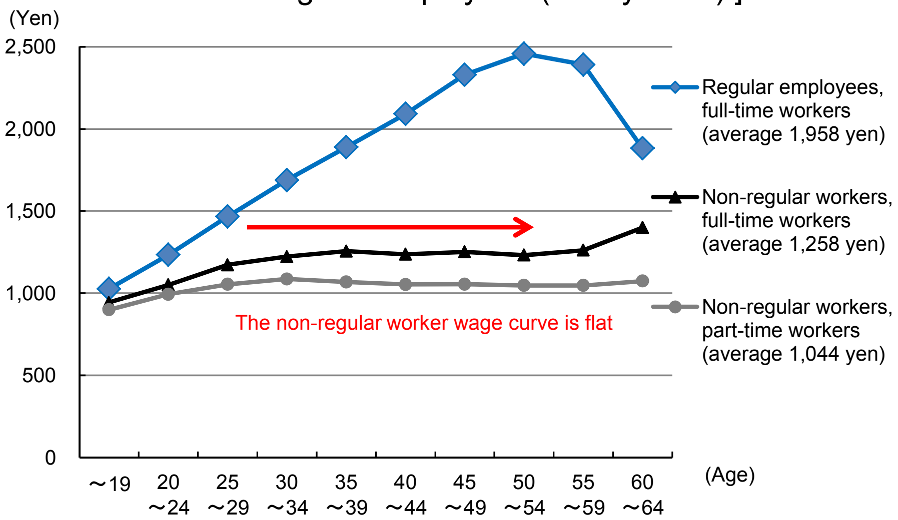


Source: Made by MHRI based upon OECD (2016), *The Productivity-Inclusiveness Nexus*, etc.

While industrial revitalization (dynamism) is part of the growth strategy, more needs to be done

- ❑ The accumulation of skills and careers for non-regular employees is an important challenge leading to synergies in growth and equity.
- ❑ The government has set the revitalization of industry as a KPI (key performance indicator) in its growth strategy. However, prospects of its achievement are murky.
  - ▪ Various initiatives need to be promoted in unison to boost the dynamism of industry. However, many aspects remain untouched, while some policies are even undermining revitalization.
    - ✓ Protection of low growth industries and legislation and practices that impede revitalization need to be revised. Other issues should also be addressed such as the clarification and greater flexibility of employment regulation, expansion of the safety net, and improvement in quality and internationalization of universities.

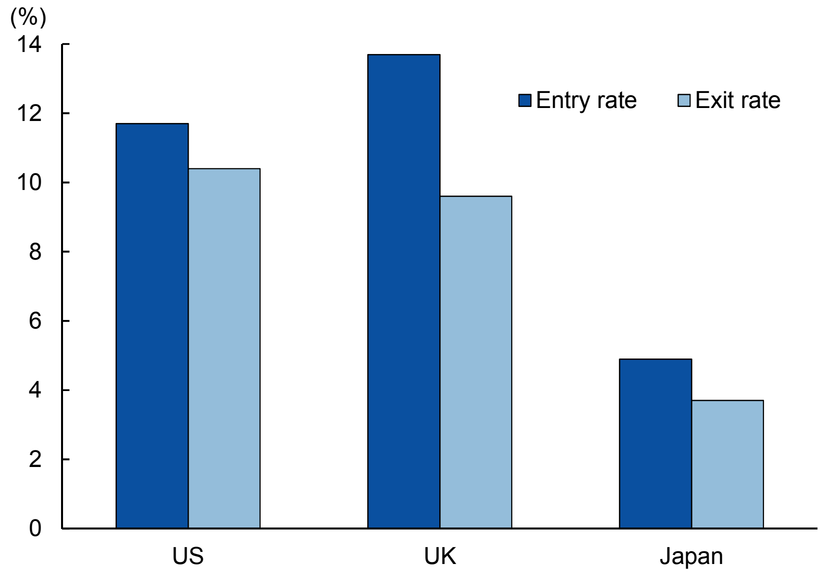
[Comparison of wage curve for regular employees and non-regular employees (hourly base)]



Note: 1. Wages refer to the base pay for the month of June 2015
2. Full time workers refer to regular workers other than part-time workers
3. The average wage for full time workers is calculated by dividing the base pay by the number of hours worked.

Source: Made by MHRI based upon Ministry of Health, Labour and Welfare, *Basic Survey on Wage Structure (2015)*

[Entry and exit rates in Japan, US, and UK]



Note: 2014

Source: Made by MHRI based upon US BLS, *Business Employment Dynamics*, the UK ONS, *Business Demography: 2014*, Japan's Small and Medium Enterprise Agency, *Small and Medium Enterprise White Paper* (Raw data: Ministry of Health, Labour and Welfare, *Employment Insurance Business Annual*)

II. The Japanese Economy

Despite the recent recovery in exports, it is still dependent on public sector demand

The Japanese economy: given the weak recovery of private sector and external demand, Japan's growth will be dependent upon public sector demand for some time

- The *First Preliminary Quarterly Estimates of GDP* ("*1st QE*") for the Jul-Sep quarter of 2016 revealed that the Japanese economy recorded growth in positive territory for the third quarter in a row. Exports are picking up, providing reasons to believe that economic conditions are about to lift off from the landing. However, given the weakness of the twin pillars of domestic demand – consumer spending and capital investment – it is still too early to say that the Japanese economy has returned to a self-sustained recovery track.

- From the Oct-Dec quarter of 2016, the Japanese economy should gradually pick up supported by the implementation of public works accompanying the economic stimulus measures. The pace of economic growth in FY2016 is forecast to stand at +0.9%, levelling off from the previous fiscal year (+0.9%). The pace of economic growth should rise to +1.0% in FY2017, given the full-fledged implementation of economic stimulus measures.

- Drags upon exports such as the weakness of capital investment around the world are lingering. On the other hand, turning to domestic demand, public sector demand should follow firm footing as the impact of the economic stimulus measures gradually emerge. Capital investment should gradually pick up, considering the steady demand to renew existing equipment. Consumer spending will also recover gradually along with the improvement of the employment environment.

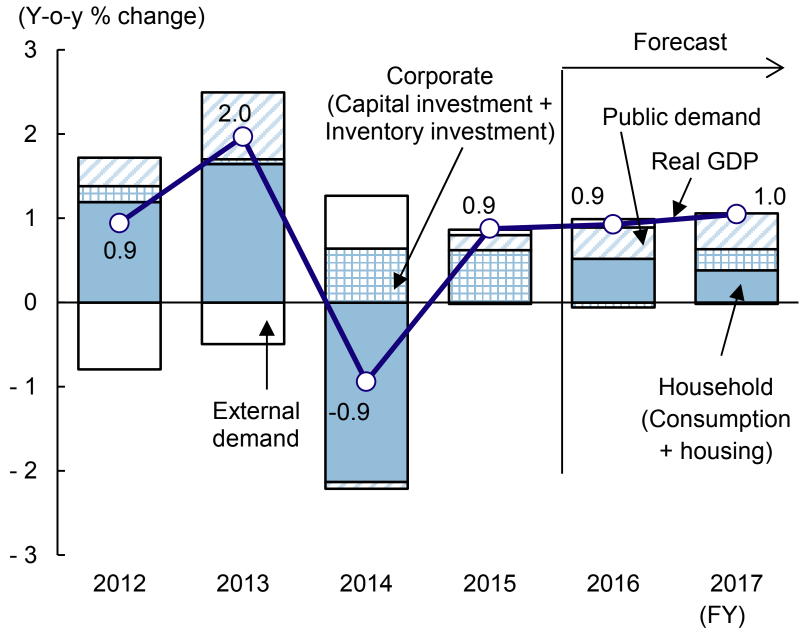
- Note that the inauguration of president-elect Donald Trump has both upside and downside risks upon the Japanese economy. Keep a close eye upon (1) financial market volatility, (2) direction of trade policy, (3) US economic trends, and (4) policy uncertainties.

- Given the strong yen and fall of crude oil prices, the year-on-year (y-o-y) change of the core CPI should remain in negative territory until around the end of 2016. From then onward, the y-o-y change of energy prices should rise to positive territory, lifting the core inflation rate to above 1% toward the latter half of the forecast horizon. The underlying trend in inflation excluding the impact of energy prices should remain slightly positive.

Japan: even though the economy is lifting off from the landing, it still falls short of a self-sustained recovery, making it dependent upon public sector demand

- Real GDP for the Jul-Sep quarter had positive growth of +2.2% q-o-q p.a., the third consecutive quarter of positive growth. There is a move away from the holding pattern, but consumer spending and capital investment remain sluggish and it is still too early to say that the Japanese economy has returned to a self-sustained recovery track.
- The slowdown in overseas economies and impact of the strong yen is weighing on the growth rate in FY2016. However, the economy is underpinned by the increase in public-sector demand and bottoming out of consumer spending and the growth rate of +0.9% is flat on FY2015. We forecast an increase in the growth rate to +1.0% in FY2017 due to factors such as full-fledged progress in economic stimulus measures.
- The focal points for the impact of Donald Trump's election on Japan is ① volatility in financial markets, ② the outlook for trade policies, ③ US economic trends, and ④ policy uncertainty (refer to the chart on the right).

[Forecast factor contribution levels to real GDP]



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

[Impact of Donald Trump's election on the Japanese economy]

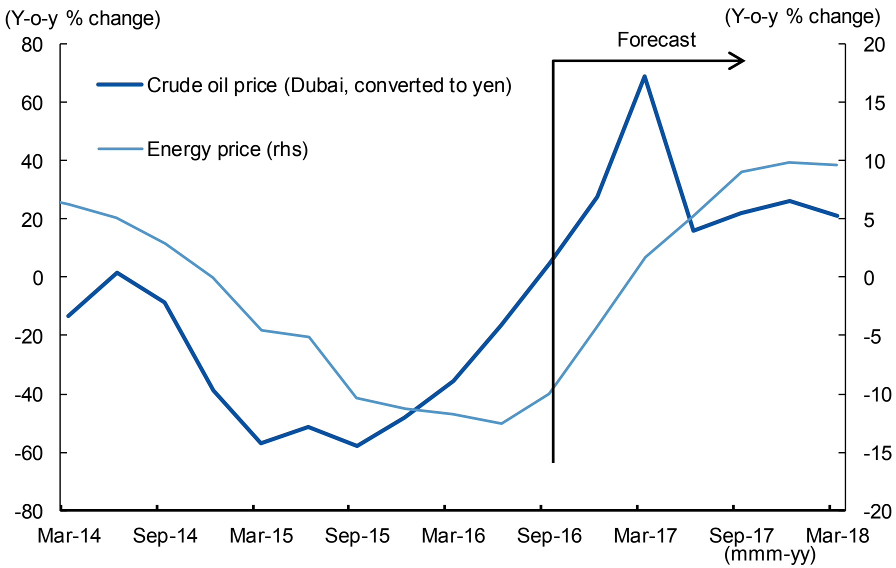
Point	Details
Financial market volatility	MHRI's latest economic outlook does not adjust the foreign exchange rates due to Trump factors. However, the risks of foreign exchange rate fluctuations are large for both the depreciation and appreciation of the yen, which could have an impact on Japan's growth rate.
Trade policy	There would be a negative impact on Japan's exports through a decline in global trade if the US leaves NAFTA and lifts tariffs on major countries (Not factored into this outlook).
US economic conditions	Large-scale fiscal spending would boost the US growth rate, but leaving NAFTA and strict immigration policies would put downward pressure on the US growth rate. This would also spread to Japan's growth rate (Not factored into this outlook).
Policy uncertainty	The moderation in Donald Trump's victory speech has currently fostered expectations of a pragmatic policy change so uncertainty has been suppressed. However, uncertainty could increase depending on future comments and actions, and may lead to delays in capital investment, etc.

Source: Made by MHRI

Japan: higher crude oil price boosts core CPI. A moderate improvement in the underlying inflation rate

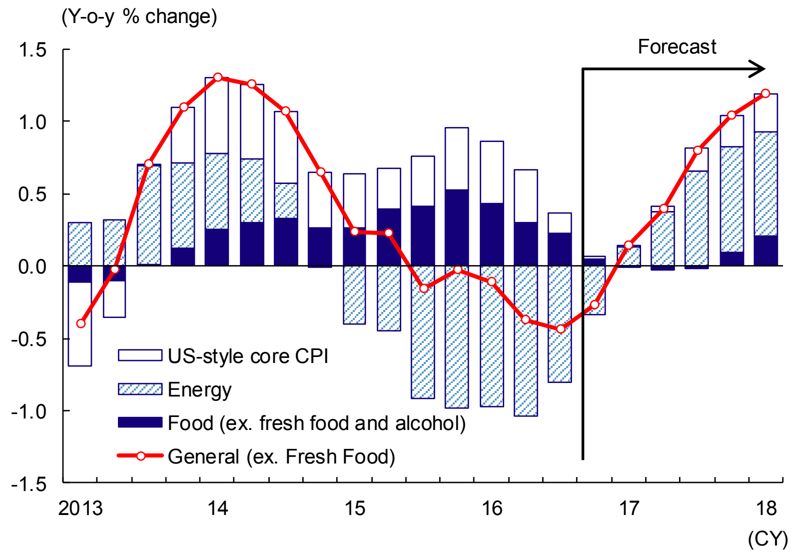
- Given the strong yen and fall of crude oil prices, the year-on-year (y-o-y) change of the core CPI should remain in negative territory until around the end of 2016. From then onward, the y-o-y change of energy prices should rise to positive territory, lifting the core inflation rate to above 1%.
  - The core inflation rate for FY2016 was downwardly revised from MHRI's *Economic Outlook* in September (from -0.1% to -0.2%). The forecast for FY2107 was upwardly revised (from +0.8% to +0.9%).
    - ✓ The greater than anticipated downward pressure on prices due to the strong yen and increased propensity for household savings led to the downward revision. However, the increase in the forecast for the crude oil price (from $43/barrel to $56/barrel, FY2017 Dubai crude) led to the upward revision.
- We forecast US-style core CPI to rise at a moderate pace.

[Outlook for crude oil and energy prices]



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

[Forecast consumer price index (excluding consumption tax)]

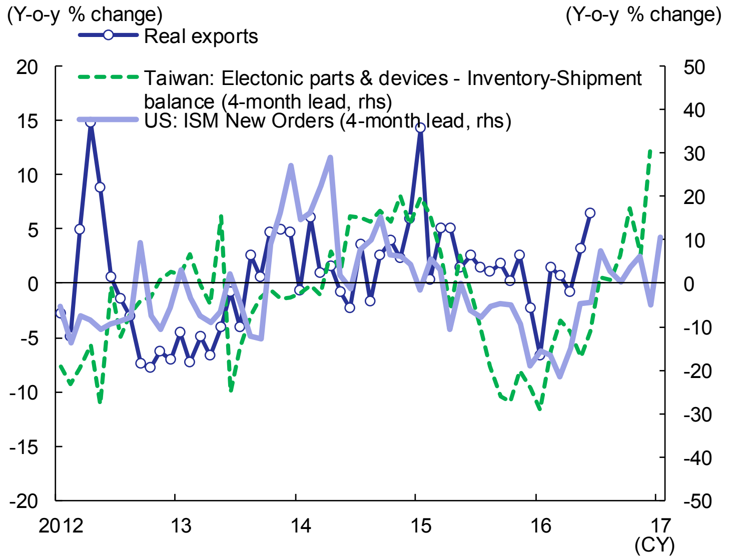


Note: US-style core CPI is the General Index excluding food (excluding alcohol) and energy
Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Consumer Price Index*

Exports: improvement in the IT cycle will underpin exports, yet downward structural factors persist

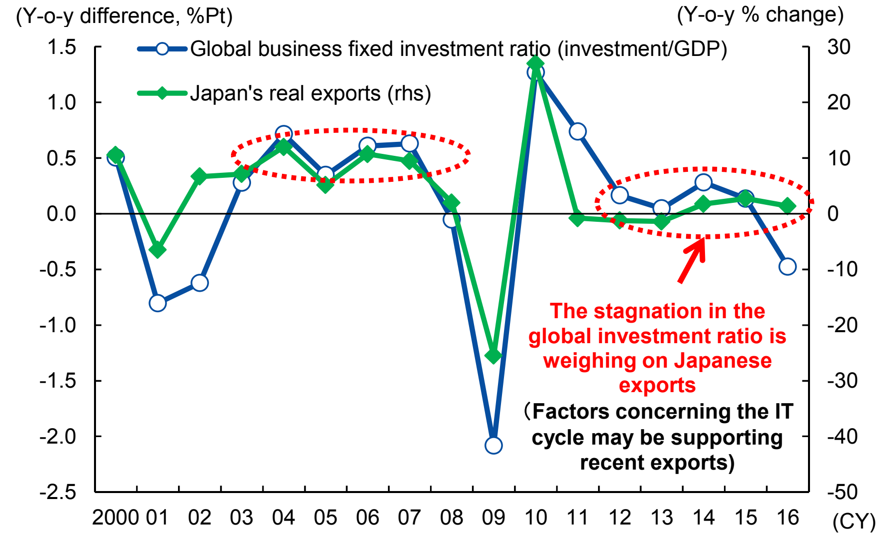
- Exports have recently recovered due to improvements in the IT cycle. Leading indicators also suggest a near term recovery in exports.
  - Sales of iPhone7 are tailwinds for Japanese companies, but this alone would only have limited impact. The delivery of components to emerging Chinese manufacturers is serving as underpinnings.
    - ✓ We forecast the impact on Japan from the increase in sales by emerging Chinese manufacturers such as OPPO and vivo to be small compared to the iPhone7 etc. However, Japanese component makers have already made certain inroads into such emerging Chinese manufacturers, so there is no need for pessimism.
- However, stagnant global investment and the consequent sluggishness in trade of capital goods will be a structural factor weighing on Japanese exports.
  - The growth in global investment ratio (y-o-y change) fell to near zero following the financial crisis. There has been a virtual parallel decline in the rate of increase in Japan's exports.

[Export leading indicators]



Source: Made by MHRI based upon Bank of Japan, *Real Exports and Real Imports*, US ISM, and the Ministry of Economic Affairs, Taiwan

[Global ratios of business fixed investment and Japan's real exports]



Note: The global investment ratios for 2016 are forecast by the IMF. Japan's real exports for 2016 (BOJ base) is the ratio of the average up until September 2016 and the average for 2015.

Source: Made by MHRI based upon IMF, and Bank of Japan, *Real Exports and Real Imports*

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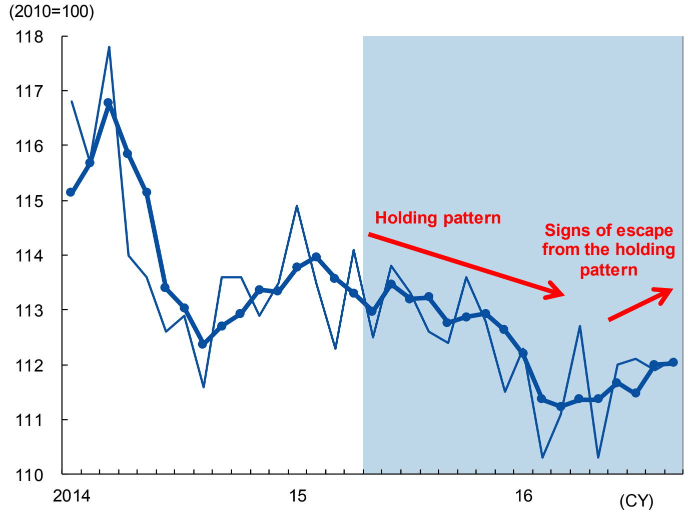
Japanese economy: signs of a lift-off from a holding pattern caused by the weakness in the manufacturing sector

- The Japanese economy entered a holding pattern in 2015 due to factors such as the slowdown in EM. The recent recovery in production and exports has led to signs of there being a movement away from such holding pattern.
  - Features of the recent holding pattern included weakness in the manufacturing sector, but the non-manufacturing sector was firm. Consequently, employment conditions also improved.
    - ✓ Employment indicators showed ongoing improvement in the unemployment rate even during the holding pattern. The slowdown in production and exports was not serious enough for manufacturers to cut jobs, while non-manufacturers continued to expand employment.
- While we forecast the economic recovery to be underpinned by progress in economic stimulus measures, there remains a substantial risk of downturn in private-sector demand and foreign demand.

[Index of Business Conditions (coincident index)]

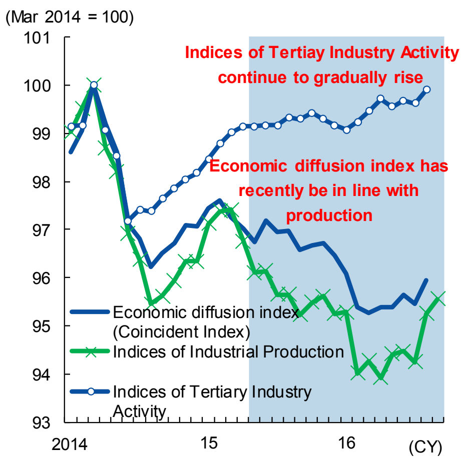


Note: 1. The thick line is the backward 3-month moving average.
2. The shaded area indicates the holding pattern period (Here defined as the period since May 2015, based on the Cabinet Office's assessment of the Index of Business Conditions.

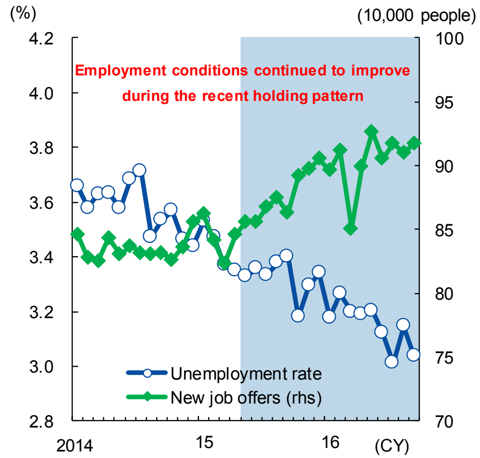
Source: Made by MHRI based upon Cabinet Office, *Index of Business Conditions*

[Trend in indices under the current holding pattern]

Corporate activity



Employment



Note: The shaded area indicates the holding pattern period (Here defined as the period since May 2015, based on the Cabinet Office's Core Assessment of the Index of Business Conditions.

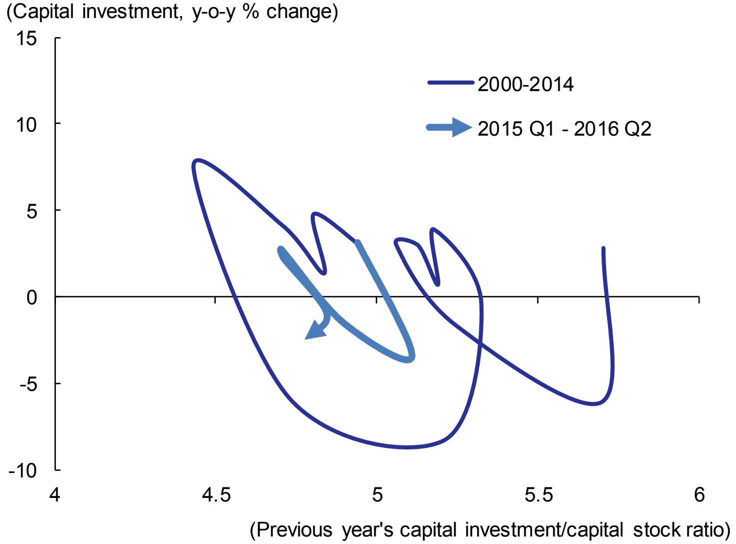
Source: Made by MHRI based upon Cabinet Office, *Index of Business Conditions*, Ministry of Economy, Trade and Industry, *Indices of Industrial Production, Indices of Tertiary Industry Activity,* Ministry of Internal Affairs and Communications, *Employment Statistics,* Ministry of Health, Labour and Welfare, *Employment Referrals for General Workers*

Capital Investment: improvement in the non-manufacturing stock cycle. ROE targets curbing domestic investment

- The non-manufacturing capital stock cycle is in an adjustment period. We forecast future improvements with the avoidance of serious adjustments.
  - Underpinned by high cash flow levels and investment plans related to inbound demand and new warehouses, etc.
- Over the long term, the rise in cost of shareholder equity due in part to "aggressive corporate governance" will serve as restraints upon capital investment.
  - The increase in dividends due to stronger corporate governance could be contributing to the higher cost of shareholder equity.
    - ✓ There are concerns that the increased focus on foreign investment to increase consolidated profits due to ROE targets could have a negative impact on domestic investment.

[Capital stock cycle]

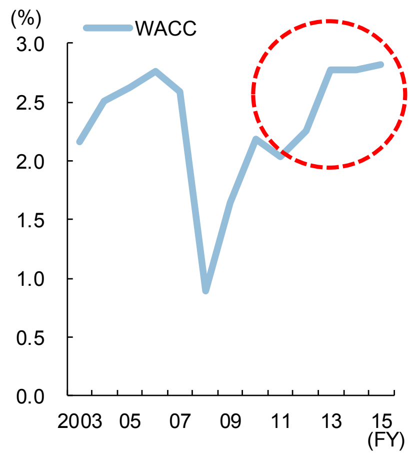
<Non-manufacturing>



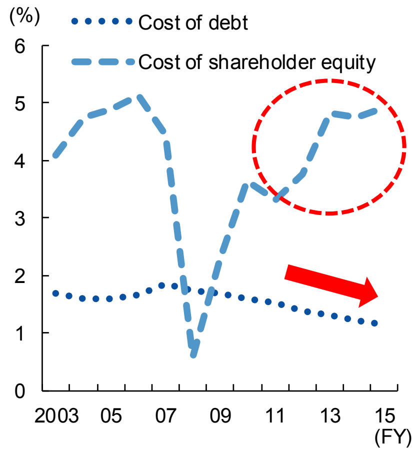
Source: Made by MHRI based upon Cabinet Office, *Gross Capital Stock of Private Enterprises, National Accounts*

[Cost of capital]

WACC (Weighted average capital cost)



Cost of debt and cost of shareholder's equity



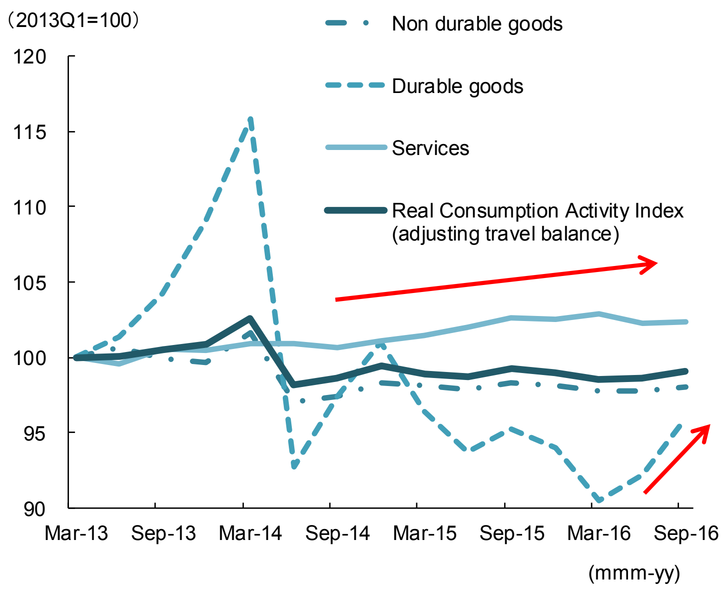
Note: 1. Using a sample with a certain degree of continuity for the period between 2003 and 2015
2. The values are median values
3. Calculated from the consolidated results of listed companies

Source: Made by MHRI based upon Osiris, Ministry of Finance and Ministry of Internal Affairs and Communications

Consumer spending: while at low levels, durable goods are bottoming out. A sustained rise in real wages is key to recovery

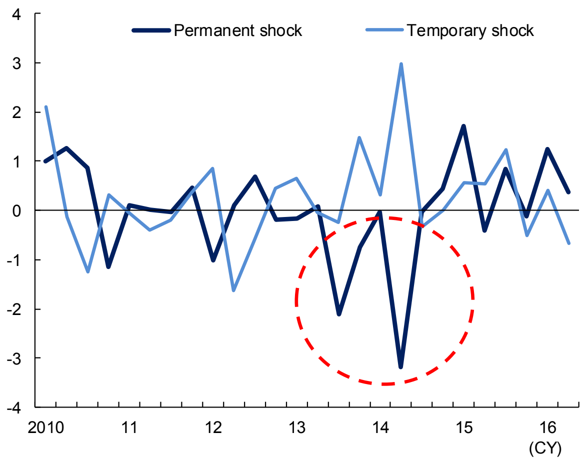
- GDP-based consumer spending was poor, but consumer spending declined with the weakness in the Family Income and Expenditure Survey. The more realistic consumption activity index bottomed out.
- Consumer sentiment is improving and there are expectations that this will underpin consumer spending in the new year. On the other hand, the higher price of fresh foods due to the poor weather means there is risk that consumer spending will decline.
- A sustained rise in real wages is key to a recovery in consumer spending.
  - As wage rises have not kept pace with the increase in prices due to the weak yen and higher taxes, there was a permanent shock of negative real wages in 2013 and 2014.
  - The permanent shock from the impact of the decline in the price of crude oil from 2015 turned positive. We forecast a gradual improvement in the income environment for households.

[Consumption Activity Index]



Source: Made by MHRI based upon Bank of Japan, *Consumption Activity Index*

[Permanent and temporary income shocks affecting real wages]



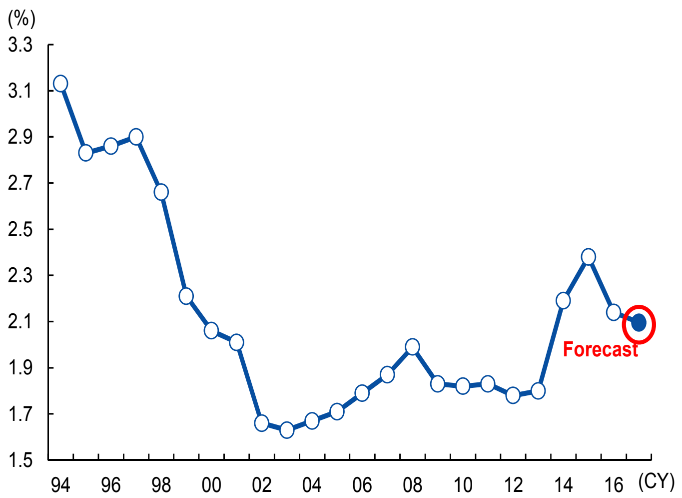
Note: Calculated using the 2 variable VAR (lag 4) model for x = [Δlog (real wages), Δlog (nominal wages)] 1 taking the structural shock from the permanent impact on real wages using the Blanchard-Quah method to be the real shock and the shock that only has a temporary impact as the nominal shock (observed period from 1995 Q1 to 2016 Q2).

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

Wages: 2017 wage negotiations will likely be on a par with 2016. The increase in SME pay is positive

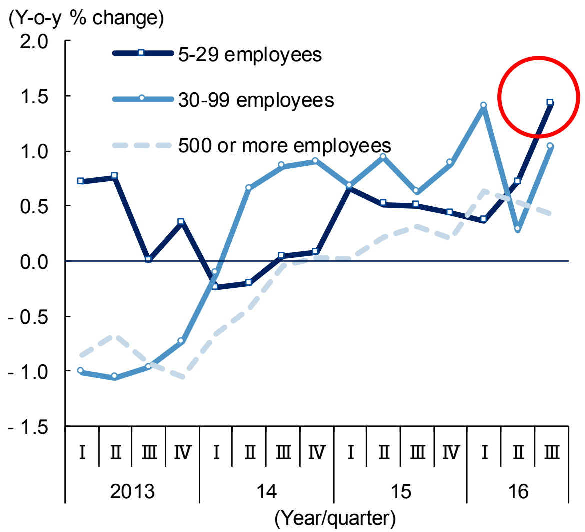
- We forecast a slight decline in the rate of 2017 spring wage increase for major companies of 2.10% from 2016 (2.14%).
  - While the tight labor market is one factor pushing up wages, wages will be weighed down by the erosion of corporate profits due to the strong yen and sluggish prices.
- Scheduled cash earnings (full-time employees) by company size indicate a recent increase in scheduled cash earnings for small and medium-sized business establishments with 5 to 29 employees.
  - There is a significant labor shortage among small and medium-sized non-manufacturers in particular, which appears to be serving as upward pressure on wages.
  - Small and medium-sized enterprises (SMEs) appear to have been a position to increase wages from a business capacity perspective as well.
    - ✓ The divergence from the long-term natural rate of real wages (linked to productivity) shows the recent level to be reasonable.

[Rate of spring wage hike for major companies (forecast)]



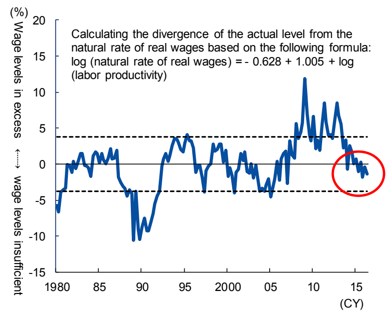
Note: 2017 figure is forecast by MHRI
Source: Made by MHRI based upon Ministry of Health, Labour and Welfare, *Survey on agreements for wage increases at major private sector companies*

[Scheduled cash earnings by company size (full-time employees)]



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

[Divergence from the natural rate of real wages line (SMEs)]



Note: The dotted line highlights the ± 1 standard deviation. The divergence from the natural rate of real wages is the difference between the estimated value and actual value after conversion to a logarithm. The divergence is positive where the rate of growth in real wages exceeds the rate of growth in labor productivity.
Source: Made by MHRI based upon Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*

III. Asian Economies

Exports are recovering, but growth is flat

Asian Economies: growth will likely remain flat

- In the Jul-Sep quarter of 2016, China's real GDP growth rate stood at +6.7% y-o-y, the third consecutive quarter of flat growth. While stock adjustment pressures continue in the manufacturing sector, the economy is being underpinned by policy measures such as infrastructure investment.

- While we expect the support from policies to strengthen until the end of 2016, we anticipate flat growth in 2016. Although stock adjustments in the manufacturing sector will continue to exert downward pressure, we forecast a moderate recovery in exports and continued support from infrastructure investment in 2017, so the Chinese economy should suffer only a slight slowdown. Tax cuts on automobiles are highly likely to be extended, and even if the tax cuts expire at the end of 2016 as scheduled, the impact on the growth rate would be limited.

- There were signs of recovery in some Asian economies (ex. China) in the Jul-Sep quarter of 2016 with the bottoming out of exports due to factors such as the recovery in IT demand.

- With the ongoing recovery in IT demand and upward trend for the US growth rate, exports should gradually recover throughout 2017. The ongoing depreciation of Asian currencies due to the resumption of US interest rate hikes will also be supportive. On the other hand, the impact from fiscal and monetary policies is contracting and we expect the growth rate for Asian economies to be flat overall.

Growth rate to remain around +6% in 2017

- We forecast a growth rate for the Asian economies to be flat at about +6% up until the end of 2017.
  - China is facing a moderate slowdown as the pressure to adjust excess production capacity mitigates the policy impact while the recovery in exports is mild.
  - The export recovery is sluggish for both NIEs and ASEAN5, and we forecast growth to be flat. Comparing the two, ASEAN5 is expected to have higher growth than NIEs due to the prospect of investment such as in infrastructure.
  - In India, the impact of the substantial hike in public servant wages in 2016 and the boost to the agricultural economy from the weather will fade in 2017.

[Outlook on the Asian economies]

(%)

	2011 (Actual)	2012 (Actual)	2013 (Actual)	2014 (Actual)	2015 (Actual)	2016 (Forecast)	2017 (Forecast)	2016 (Previous: Sep Forecast)	2017 (Previous: Sep Forecast)
Asia	7.4	6.5	6.5	6.4	6.1	6.1	6.0	6.0	6.0
China	9.5	7.9	7.8	7.3	6.9	6.7	6.5	6.6	6.5
NIEs	4.1	2.3	2.9	3.4	1.9	1.9	2.1	1.9	2.2
South Korea	3.7	2.3	2.9	3.3	2.6	2.6	2.4	2.6	2.6
Taiwan	3.8	2.1	2.2	3.9	0.6	1.2	2.1	0.9	1.8
Hong Kong	4.8	1.7	3.1	2.7	2.4	1.5	1.5	1.5	1.5
Singapore	6.2	3.7	4.7	3.3	2.0	1.1	1.2	1.7	2.3
ASEAN5	4.7	6.2	5.0	4.6	4.8	4.8	4.6	4.8	4.6
Indonesia	6.2	6.0	5.6	5.0	4.8	5.0	4.9	5.0	4.9
Thailand	0.8	7.2	2.7	0.8	2.8	3.1	2.9	3.2	2.8
Malaysia	5.3	5.5	4.7	6.0	5.0	4.1	4.1	3.8	4.3
The Philippines	3.7	6.7	7.1	6.2	5.9	6.4	5.7	6.3	5.6
Vietnam	6.2	5.3	5.4	6.0	6.7	6.1	6.2	5.8	6.0
India	6.6	5.6	6.3	7.0	7.2	7.6	7.5	7.6	7.5
Australia	2.6	3.6	2.0	2.7	2.4	2.8	2.5	2.8	2.5
(Reference) Asia ex. China and India	4.5	4.6	4.2	4.1	3.6	3.7	3.7	3.6	3.7
(Reference) Asia ex. China	5.4	5.0	5.1	5.4	5.2	5.4	5.4	5.5	5.5

Note: 1. Real GDP growth rate (y-o-y) . Shaded areas are forecasts. Without shading indicates actual results.
2. Average figures are calculated from the 2014 GDP share from the IMF (purchasing power parity base).
3. India's growth rates use the figures from the IMF up until 2012, and figures released by the Indian Ministry of Statistics and Programme implementation from 2013.

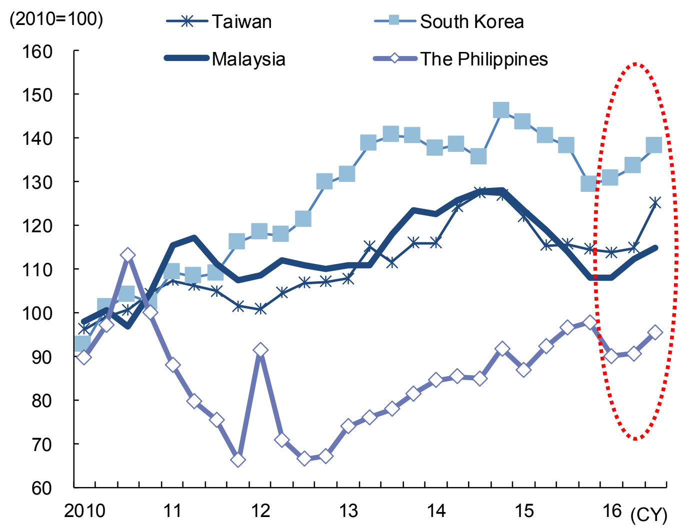
Source: Made by MHRI based upon statistics of the relevant countries and regions, CEIC Data and IMF

MIZUHO

Asia: exports will be underpinned by the recovery in IT-related demand in 2017

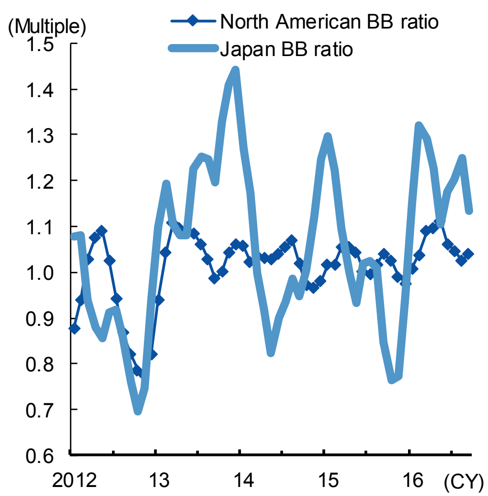
- The recovery in Asia's electrical machinery exports has become clearer since the beginning of 2016,
  - Exports of electrical machinery, which are major export items for Taiwan, South Korea, Malaysia and the Philippines, have picked up with the recovery in IT-related demand. There has been a significant recovery in electronic components such as semiconductors, which account for 70% of electrical machinery in Taiwan, due to the expansion of exports to China (including Hong Kong).
    - ✓ The fact that China's stocks of communications and electronic devices has declined year-on-year since May for the first time on record is also a positive factor.
  - The BB ratio, which indicates the demand trend for semiconductors, is at high levels, and global shipments of semiconductors have recovered since June. We forecast positive growth in demand for semiconductors next year, which is expected to underpin Asian exports throughout 2017.

[Electrical machinery in Asia]



Note: South Korea, Taiwan and Malaysia are SITC77, while the Philippines uses the Philippine Standard Component Categories (PSCC) for electronic components. Seasonally-adjusted by MHRI.
Source: Made by MHRI based upon statistics of each of the relevant countries and regions, and CEIC Data

[Semiconductor orders (BB ratio) and forecast demand]



Forecast →

	2015	2016	2017
World	- 0.2	- 2.4	2.0
US	- 0.8	- 7.3	1.9
Europe	- 8.5	- 0.1	1.6
Japan	- 10.7	- 1.7	1.1
Asia	3.5	- 1.2	2.2

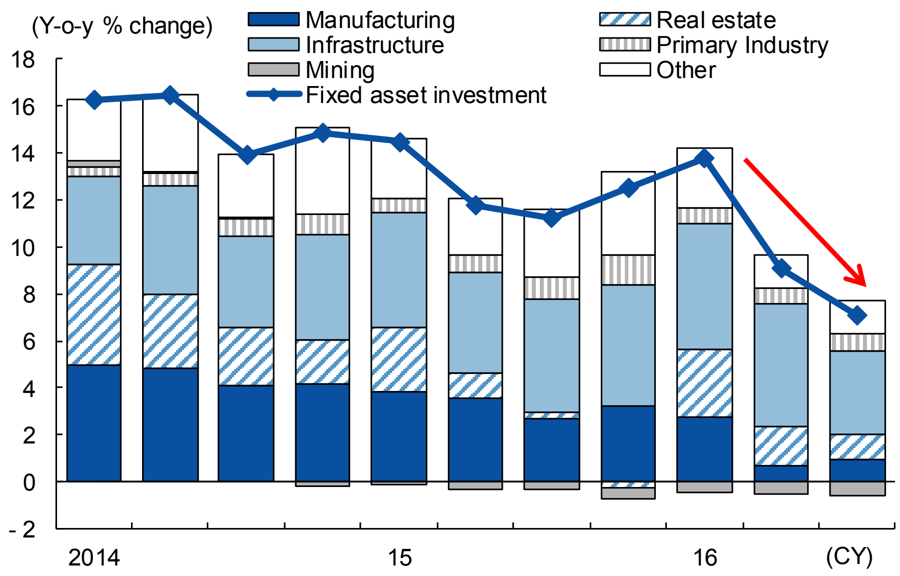
Note: BB ratio = value of orders for semiconductor manufacturers/sales amount
Source: Made by MHRI based upon WSTS and the Semiconductor Equipment Association of Japan

MIZUHO

China: consumer spending is firm, underpinned by policy measures

- Although fixed asset investment is slowing due to the adjustment in excess stock, the recent retail value of social consumer items is firm.
- The favorable sales of automobiles and housing related items, reflecting leveraged policy measures, appear to have underpinned consumer spending.
  - Tax cuts on light vehicles (less than 1.6 liter engine) introduced in October 2015 and the interest rate cuts and reduction in the amount of down payments for housing loans implemented in 2015 have contributed to good sales. The level of contribution to total sales from automotive and housing related sales has also increased.

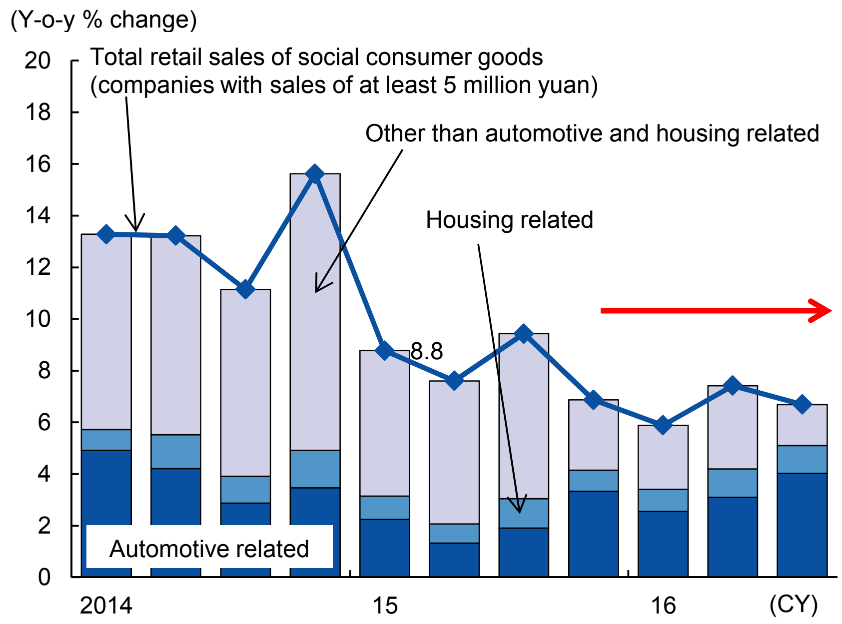
[Real fixed asset investment]



Note: Infrastructure related items is the aggregate of electricity, gas and water, transport, warehousing, and post, irrigation and environment, and utility management. Converted to real values using the fixed asset investment price index.

Source: Made by MHRI based upon the National Bureau of Statistics China and CEIC Data

[Total retail sales of social consumer goods (retail companies with sales of at least 5 million yuan)]



Note: Converted to real values using the commodity retail value index. Regarding retail companies with sales of at least 5 million yuan.

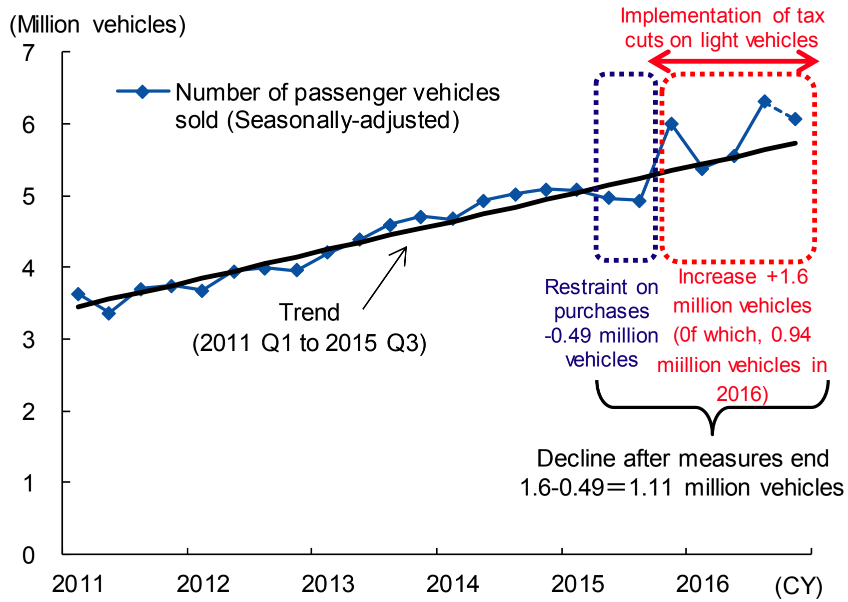
Source: Made by MHRI based upon the National Bureau of Statistics China

MIZUHO

China: slowdown of consumer spending should be avoided regardless of the possible extension of tax cuts on light vehicles

- The tax cut on light vehicles, scheduled to conclude at the end of 2016, is highly likely to be extended in view of its economic impact.
- Even if the tax cut ends as scheduled, there would be limited impact on the growth rate.
  - The difference from the sales trend for passenger vehicles during the period of tax cuts (2015 Q4 to 2016 Q4) is forecast to be about 1.6 million vehicles.
  - Assuming that the tax cuts conclude at the end of 2016 and the backlash is completely factored into 2017, the impact on consumer spending would be 0.19%Pts, pushing down real GDP by about 0.07%Pts.
    - ✓ When the rise of the trend is also factored in, the impact on 2017 real GDP would only be about -0.03Pts.

[Trend for passenger vehicle sales]



Note: 1. The trend shows the period following the end of the previous period of tax cuts on light vehicles (January 2009 to the end of 2010) until 2015 Q3, which was the period before the introduction of the most recent tax cuts on light vehicles.
2. The passenger sales for 2016 Q4 shows the estimated value.
Source: Made by MHRI based upon the China Association of Automobile Manufacturers

[Calculation of the impact if tax cuts terminated at the end of 2016]

	2016	2017
①: Number of passenger vehicles sold	23.29 million vehicles (+11.1% y-o-y)	22.83 million vehicles (-2.0% y-o-y)
②: Trend in the number of passenger vehicles sold	22.35 million vehicles	23.94 million vehicles
③: Impact of tax cuts (ch from trend, number of vehicles)	+0.94 million vehicles	-1.11 million vehicles
③' : Impact of tax cuts (ch from trend, %) [③÷②]	+4.2%Pt	-4.6%Pt
④: Impact on consumer spending (trend ratio) [③'x vehicle weight]	4.2%Pt x 4.1% = +0.17%Pt	-4.6%Pt x 4.1% = 0.19%Pt
⑤: Impact on real GDP (ch from trend) [④x consumer spending weight]	0.17%Pt x 38.6% = 0.07%Pt	-0.19%Pt x 38.6% = -0.07%Pt
⑥: Impact on real GDP (y-o-y) [①y-o-y x vehicle weight x consumer spending weight]	-	-2.0% x 4.1% x 38.6% = -0.03%Pt

Note: The passenger sales for 2016 Q4 shows the estimated value. ④ is calculated from the proportion (2015) of the value of automobile sales in total retail sales of social consumer goods (companies with sales above a certain value). ⑤ is calculated from the proportion of household transport devices in per person consumer spending. ⑥ is calculated from the proportion of consumer spending in nominal GDP.
Source: Made by MHRI based upon the China Association of Automobile Manufacturers and the National Bureau of Statistics China

(Reference) Key political events

	2017		2018	
US	Jan	Inauguration of new administration, congress	Feb	Fed Chair Yellen's term of office ends
			Nov	Mid-term elections
Europe	Mar	General election (The Netherlands)	Around May	General election (Italy)
	Apr-May	Presidential election (France)		
	Jun	Legislative election (France)		
	Aug-Oct	Legislative election (Germany)		
Japan			Apr	BOJ Governor Kuroda's term of office ends
			Sep	LDP general election
			Around Dec	Lower house members' term of office end
Asia	Mar	Election of Legislative Council President (Hong Kong)	May	Legislative election (Malaysia)
	Autumn	19th National Congress of the Communist Party of China (China)	Autumn	3rd Plenary Session of the CPC Central Committee (China)
	Around Dec	Presidential election (South Korea)	This year	Upper house election (India)
	Around Dec	General election (Thailand)		
Other			Mar	Presidential election (Russia)
			Jul	Presidential election (Mexico)
			Oct	Presidential election (Brazil)

Source: Made by MHRI