FY2016, FY2017 Economic Outlook

- "New normal" under prolonged 3Ls (Low growth, Low inflation, Low interest rates), swirling uncertainties in the world -

August 16, 2016

Mizuho Research Institute

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Key points of our forecast

- The global economy is subject to rising uncertainties stemming from mounting issues such as the future direction subsequent to “Brexit”, political developments in Europe, outcome of the US presidential election and structural adjustments of the Chinese economy. Keep a close eye upon downside risks.

- In addition to the impact of Brexit upon the European economy, it will be necessary to watch developments of political issues and nonperforming loan (NPL) problems.

- The US economy is continuing to fly at low altitudes, amid the coexistence of weak investment and strong employment. Our view remains unchanged that US monetary policy will be kept on hold during the year and that a policy shift may even be delayed further, reflecting uncertainties in the global and domestic economies including the outcome of the US presidential election.

- The Asian economies lacks strength for a self-sustained recovery. Given a number of countries subject to excessive debt problems, the area remains vulnerable to capital outflows. NPLs are rising in China and India, providing reasons to believe that balance sheet adjustment pressures will continue to persist.

- Japan’s economic growth will likely lack strength due to factors including the slowdown of overseas economies, and should remain dependent upon public sector demand for some time. The economic stimulus measures (cumulative total of multiple years) should push up GDP by approximately 1.1%. To boost inflation expectations, the introduction of “wage targets” may be an option.

- Since pressures to correct the strength of the dollar are likely to increase in the run-up to the US presidential election, the strong yen will serve as a drag upon the Japanese economy.

- The core CPI should remain around zero in FY2016. The Bank of Japan (BOJ) may realign its monetary easing scheme on a long-term perspective along with a comprehensive review of its policy stance.

I. The Global Economy

Swirling uncertainties and the new normal of low growth, low inflation, and low interest rates

Concerns about a slowdown and downside risk for the global economy in 2016

- The growth rates in the forecast area have fallen for two consecutive years. While we maintain our expectations for a recovery in 2017, note that uncertainties are growing.
  - Our forecast for the US has been downwardly revised from the July forecast, which was amended following Brexit, but we have upwardly revised our forecasts for the Eurozone and Japan due to expectations toward economic stimulus measures.
  - However, there are ongoing concerns about the downside risk for the global economy in 2017 in particular compared to the pre-Brexit forecasts.

[Outlook on the global economy]

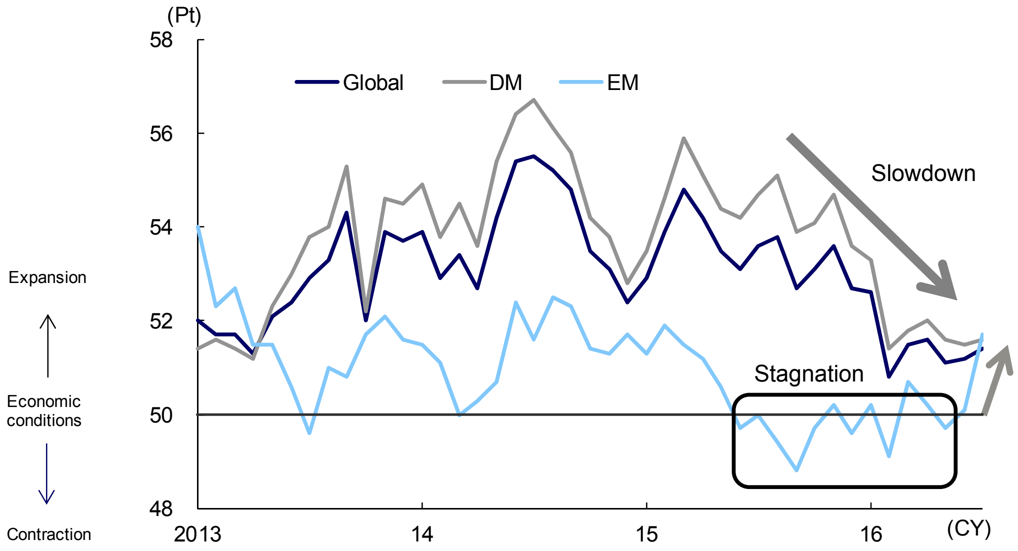
Calendar year	(Y-o-y % change)				(% point)		(% point)	
	2014 (Actual)	2015 (Actual)	2016 (Forecast)	2017 (Forecast)	2016 (Breadth of change from June)	2017 (Breadth of change from June)	2016 (Breadth of change from July)	2017 (Breadth of change from July)
Total of forecast area	3.5	3.3	3.2	3.6	-0.1	-0.1	-0.1	-
Japan, US, Eurozone	1.5	2.0	1.3	1.6	-0.2	-0.2	-0.2	-
US	2.4	2.6	1.4	2.2	-0.4	-0.1	-0.4	-0.1
Eurozone	0.9	1.7	1.5	1.1	-	-0.3	0.1	-
Japan	-0.0	0.5	0.5	0.7	-	-0.2	0.2	0.2
Asia	6.4	6.1	6.0	6.0	-	-	-	-
China	7.3	6.9	6.6	6.5	-	-	-	-
NIEs	3.4	1.9	1.8	2.2	-	-	-	-
ASEAN5	4.6	4.8	4.7	4.6	0.1	0.1	0.1	0.1
India	7.0	7.2	7.7	7.6	-	-0.1	-	-0.1
Australia	2.7	2.5	2.7	2.5	-	-	-	-
Brazil	0.1	-3.8	-3.4	0.8	-	-	-	-
Russia	0.7	-3.7	-1.2	1.0	-	-	-	-
Japan (FY)	-0.9	0.8	0.6	0.9	-	-0.1	0.2	0.2
Crude oil price (WTI, USD/bbl)	93	49	42	45	-2	-1	-2	-1

Note: The total of the forecast area is calculated upon the 2014 GDP share (PPP) by the IMF.
Sources: Made by Mizuho Research Institute Ltd. (MHRI) based upon International Monetary Fund (IMF) materials and statistics of relevant countries and regions.

In contrast to the emerging market (EM) recovery, developed market (DM) countries are suffering an unexpected slowdown

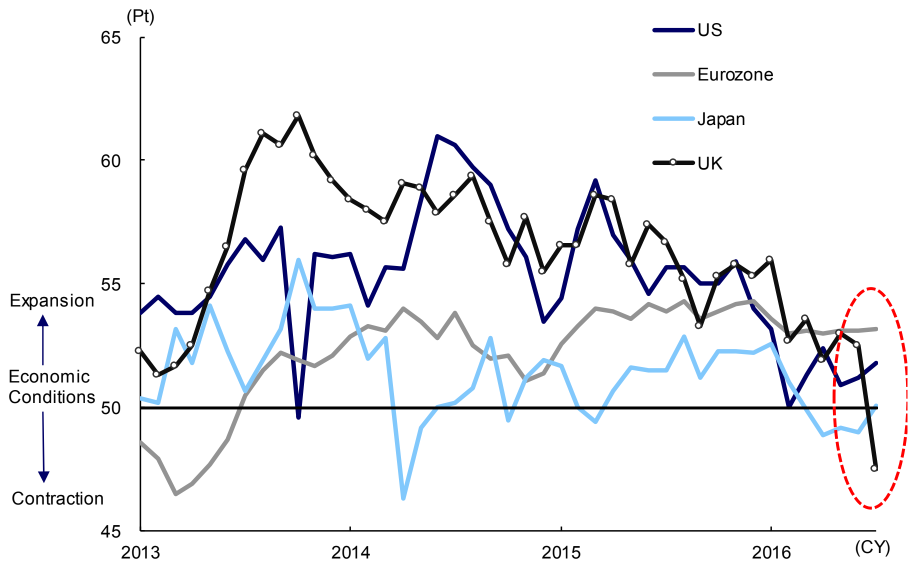
- The recovery momentum for DM countries has waned since the second half of 2015, but there have been recent signs of recovery in some EM countries that had remained sluggish.
  - Business sentiment has been flat for DM countries after a substantial fall from the second half of 2015, yet there has been recent improvement for EM countries.
  - The recovery scenario for a DM recovery - especially that of a US-led DM recovery - that was anticipated at the beginning of 2016 has not materialized.
  - Despite a considerable deterioration of the UK's PMI following the Brexit decision, the impact on other major countries and regions has so far been limited.

[Synthetic PMI for DM and EM countries]



Source: Made by MHRI based upon Markit

[Synthetic PMI for major DM countries and regions]

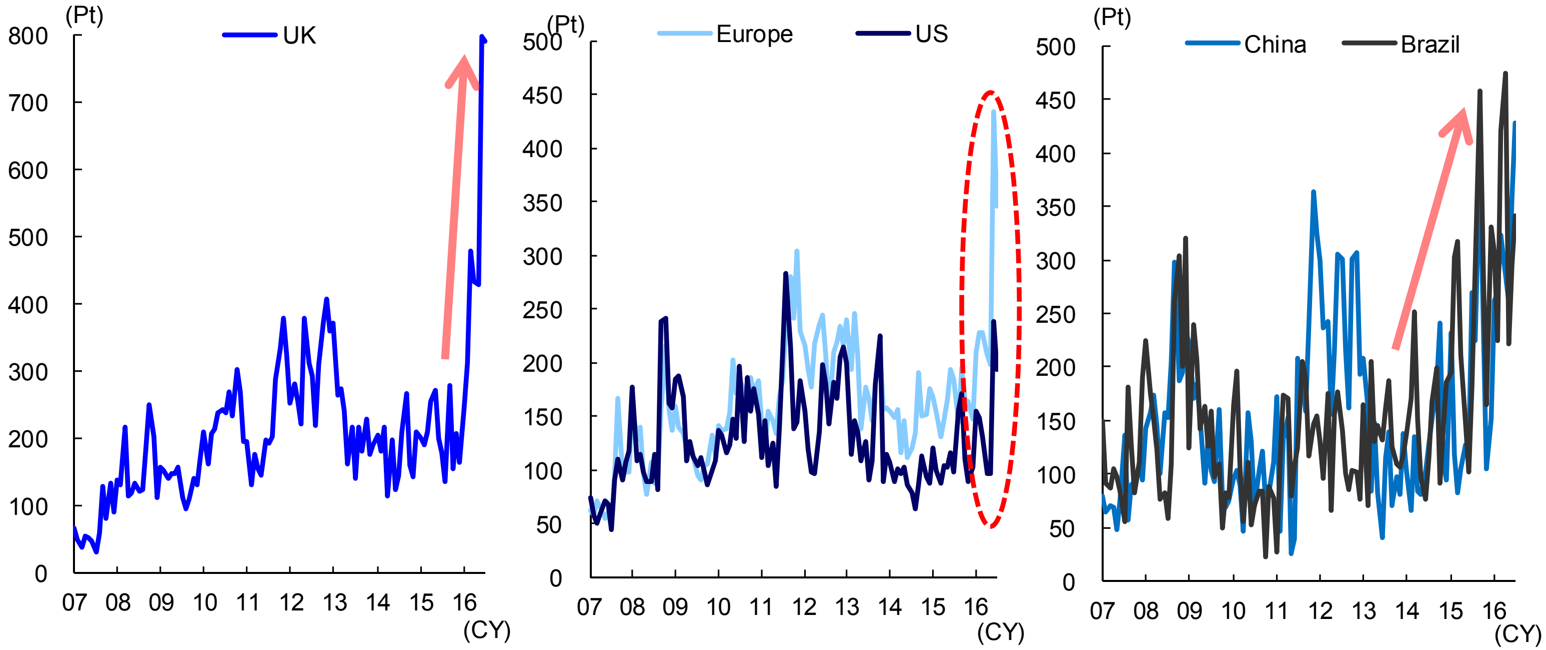


Source: Made by MHRI based upon Markit

Rise of uncertainties regarding the global economy

- Numerous issues are leading to the rise of uncertainties regarding the global economy such as the outlook for Brexit, European political problems, the US presidential election, and structural adjustments in China.
  - The Economic Policy Uncertainty Index surged to historical high levels for the UK and Europe following the Brexit decision, while there has also been a large rise for the US ahead of the presidential election.
    - ✓ The indices for some major EM countries continue to rise including for China, where there are structural problems, and Brazil, which is in recession.

[Economic Policy Uncertainty Index]



Note: Uncertainty is calculated using the newspaper coverage frequency, the number of tax code provisions set to expire in future years, and variation among economic forecasters
Source: Made by MHRI based upon Economic Policy Uncertainty

Factor (1) European politics: Brexit negotiations are delayed, and the focus is shifting to the Italian referendum

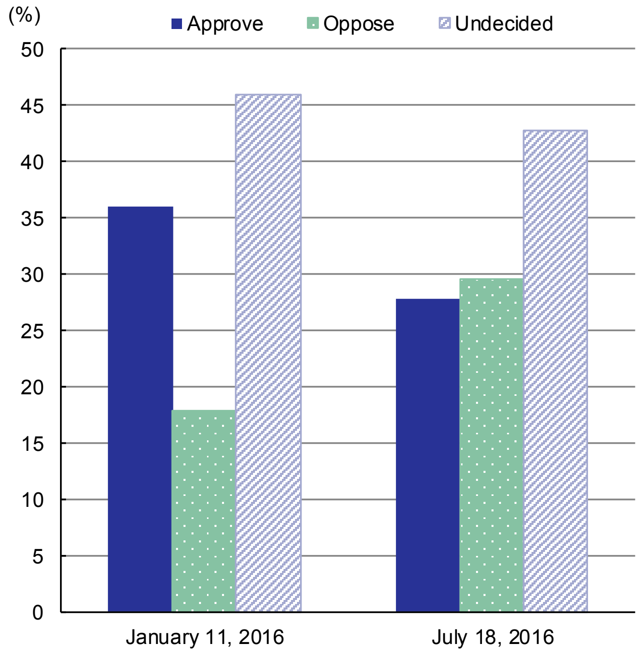
- The UK has commenced preparations to exit the EU under Prime Minister Theresa May.
  - The UK is expected to notify its intention to exit the EU at the beginning of 2017, and circumstances will not change for the rest of 2016. The focus is on the discussion surrounding policy for an economic agreement between the UK and the EU.
- From a EU political risk perspective, the next focus will be Italy. Italy is planning for a constitutional referendum at the end of October.
  - ✓ Prime Minister Matteo Renzi intends to resign if the result is “against amendment [of the constitution]”. There is risk of political instability in Italy. At present, public opinion polls on the referendum indicate growing momentum amongst those against amendment.

[European political and economic schedule]

		Political events	Monetary Policy Meetings
2016	September		BOE (15), ECB (8)
		Informal summit of the EU-27 Leaders (16)	
	October	UK Conservative Party Conference (2 to 5)	ECB (20)
		Austrian Presidential Election (Re-run, 2)	
		EU Heads of State Meeting (20 to 21)	
		Italian Constitutional Referendum (Oct to Dec)	
	November		BOE (3)
	December	EU Heads of State Meeting (15 to 16)	BOE (15), ECB (8)
2017	March	Dutch House of Representatives Election (15)	
	April	French Presidential Election/ First Round (23)	
	May	French Presidential Election Final Vote (7)	
	June	French National Assembly Election	
	Around September	German Federal Election (August 27 to October 22)	
2018	May	Italian General Election (by 23)	

Note: Only listing monetary policy board meetings held in 2016
Source: Made by MHRI based upon EU, each country’s central bank, various media reports

[Public opinion polls about the Italian referendum that will ask for constitutional amendments]

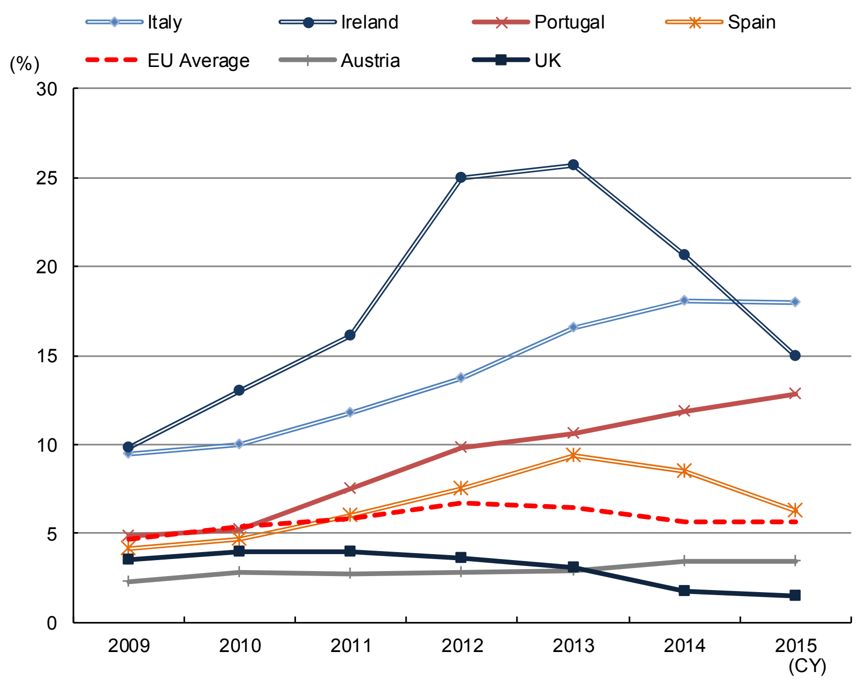


Source: Made by MHRI based upon EMG_Acqua

Factor (2) Italy's non-performing loans:
The non-performing loan ratio is high and radical action is difficult

- Italy's non-performing loan ratio is high at about 18%. This is fundamentally due to the weak economy, but there are also systemic factors that have delayed action.
  - Systemic factors have stalled the sale and write-off of non-performing loans. The government and banks finally commenced initiatives in 2015.
    - ✓ However, the political situation makes it difficult to take the radical action of accelerating sales and write-downs. If the losses from the non-performing loans are borne by creditors including individual investors, the ruling party's approval rating would fall and risk the rise of support toward EU-skeptic parties.

[Non-performing loan ratios in EU countries]



Source: Made by MHRI based upon the World Bank

[Systems related to Italy's non-performing loan problem]

Progress in government and bank initiatives since 2015

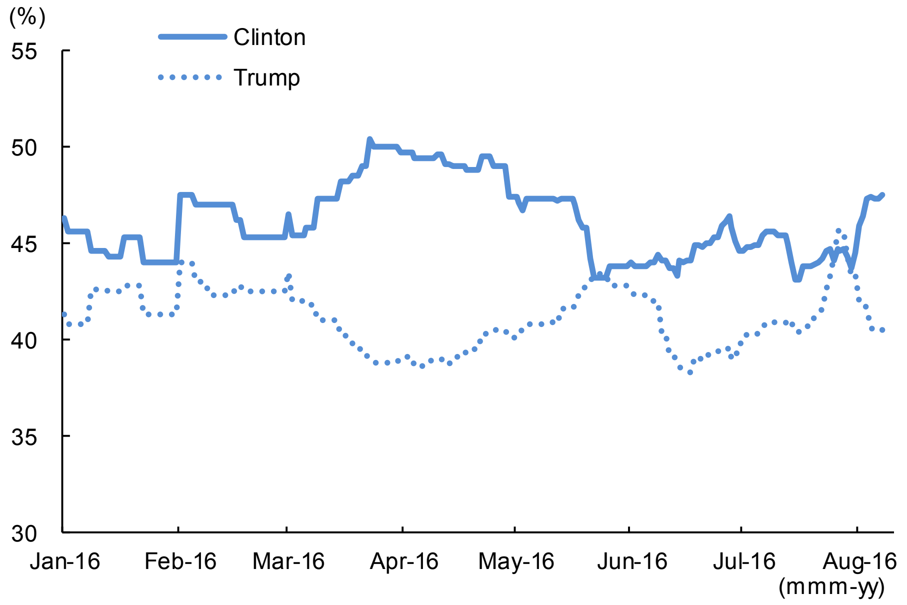
	System to date	Future system
Insufficient reserves	Recognition and measurement of financial assets under IAS39 ・Insufficient loan loss reserves (so-called problem of too little, too late) Cap on deductible losses on reserves ・Deductible losses on reserves capped at 0.3% of loan principal (Initial year of recognition). Balance as deferred tax asset	Recognition and measurement of financial assets under IFRS9 ・Allows for deductible losses on reserves based on 'forecast' ・Able to deduct losses in a lump sum in the financial year when reserves are recognized
Amortization of non-performing loans	Losses associated with amortization of non-performing loans are not deductible ・Can deduct losses of borrower is certified bankrupt. However, it takes a long time to be certified bankrupt Takes time to sell collateral ・About 4 years to execute collateral. Losses from amortization Reduces incentive to cover with sale of collateral.	Shorter bankruptcy procedures ・Deadline set for implementing scheme for liquidation. Aiming to shorten bankruptcy procedures Shorter collateral amortization procedures ・Set deadline for creditor and court procedures ・Reduce the number of auctions
Amortization of non-performing loans	Investors negative towards acquisitions ・Weak Italian economy ・Takes time to sell collateral ・Asymmetry of information about non-performing loans ・If purchasing, investors factor in the above and quote CF cautiously and set high discount rates Compromise on transaction price with banks is difficult	Promote investor demand through securitization ・Small-lot investment, reduction in credit risk ・Reduce further credit risk through a government guarantee scheme (GACS) ・Investment fund to which banks and others have contributed (Atlante) reducing the hurdles for bank use of GACS.

Source: Made by MHRI based upon media reports

Factor (3) US presidential election: concerns regarding the protectionist stance of the new administration

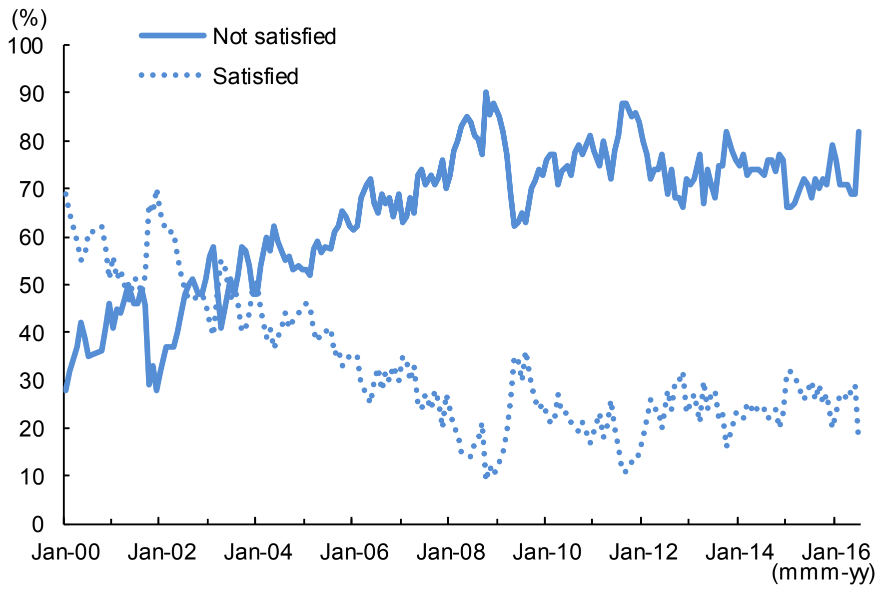
- Opinion polls point to Democratic Party candidate Hillary Clinton winning the election, but the outcome is unpredictable.
  - Outsiders were active in the primaries, and the businessman, Donald Trump overturned criticism and secured the Republican Party nomination.
  - Long-term voter dissatisfaction has been behind the unexpected development.
- Both candidates are pushing a protectionist agenda such as opposition to the TPP, and there will be risks under the new administration regardless of the results.
  - A new trade agreement is expected to face difficulties, and there could also be revisions to existing agreements such as NAFTA.
  - Both candidates are tolerant of a natural increase in the budget deficit and taking an expansionary stance.

[Approval ratings]



Source: Made by MHRI based upon Real Clear Politics

[Satisfaction with the way things are going in the US]

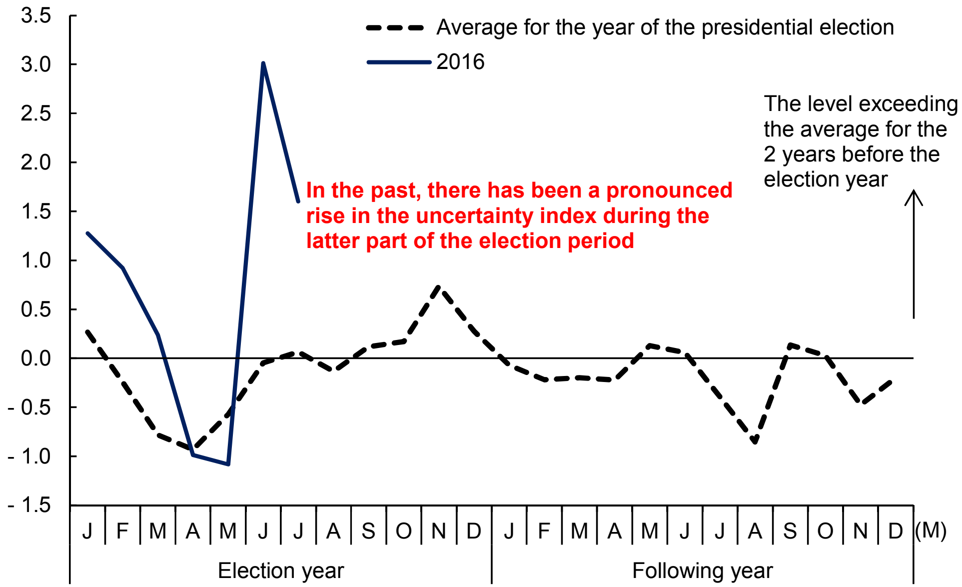


Source: Made by MHRI based upon Gallup survey

Political uncertainties surrounding the US presidential election to dampen business sentiment

- Uncertainty is being exacerbated by the US presidential election and successive elections in Europe, with risk of business sentiment being dampened and deterioration in capital investment.
  - The Economic Policy Uncertainty Index has risen during the latter half of the election campaigns for the past seven presidential elections.
  - A rise in the Uncertainty Index on a par with the past average would push down capital investment (annualized) by 0.5% points.
    - ✓ Federal Reserve Bank of New York President William Dudley noted that capital investment tends to be delayed due to the increased uncertainty for business caused by a presidential election (July 31).

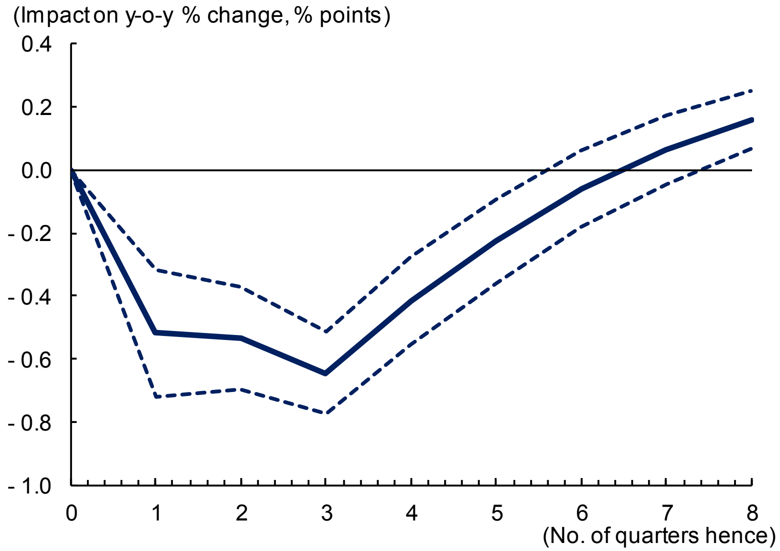
[Economic Policy Uncertainty Index during US presidential election years]



Note: The Economic Policy Uncertainty Index is the standardized figure based on the standard deviation from the past 2-year average. The average for US presidential election years is the average of the past 7 elections from 1988 to 2012.

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

[Impact of uncertainty on capital investment]



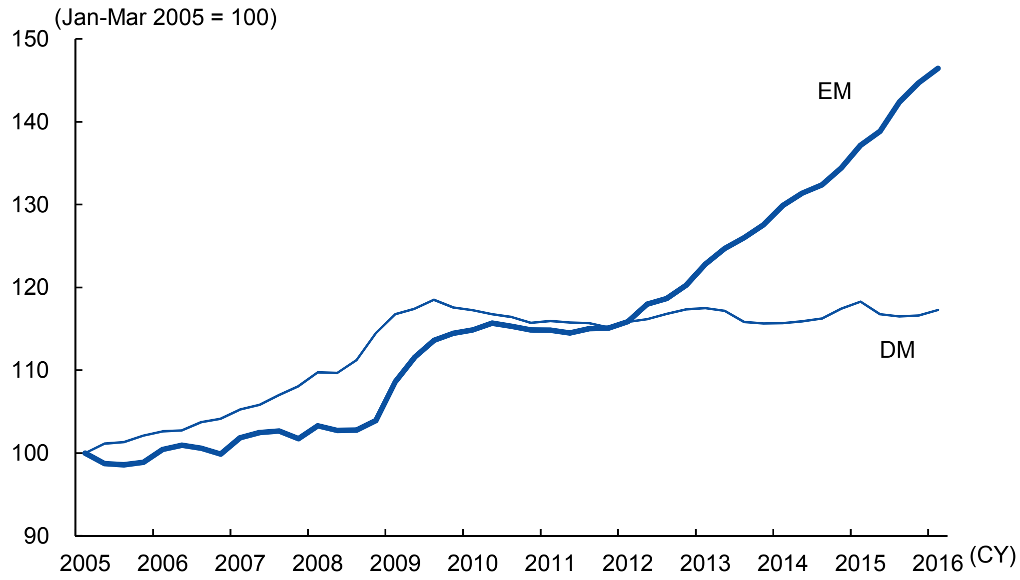
Note: Indicating the impact on capital investment from a 12 point rise (the average rise from summer until November during past US presidential election years) in the Economic Uncertainty Index based on a VaR model using 4 variables: real capital investment, the Economic Uncertainty Index, S&P500 stock index, and the FF rate with reference to Baker, Bloom and Davis (2016) "Measuring Economic Policy Uncertainty",

Source: Made by MHRI based upon US Federal Reserve Board

Factor (4) EM debt problems: lower resilience to capital outflows due to increased external debt

- ❑ EM debt has risen since the collapse of Lehman Brothers (the "Lehman shock").
- ❑ This has been evident by the increase in external debt, raising particular concerns for Malaysia and Indonesia.
  - The proportion of government bonds held by foreigners is high, so such countries are vulnerable to capital outflows.
  - The leverage of foreign currency reserves relative to short-term external debt has declined and is approaching a target multiple of 1 which indicates a lower resilience to crisis.

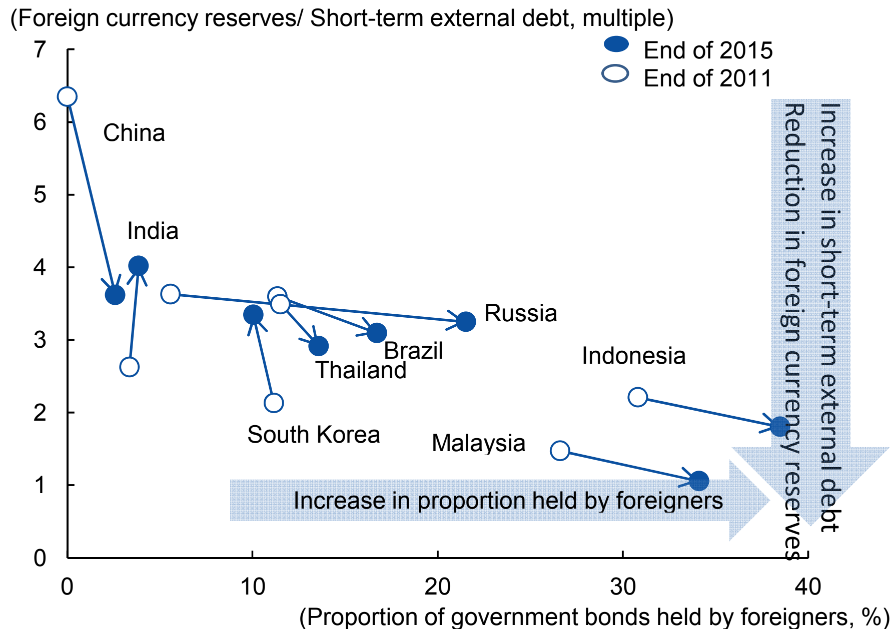
[Debt balance (relative to nominal GDP)]



Note: Debt balance of households, non-financial corporations, financial corporations and government

Source: Made by MHRI based upon IIF

[Ratio of foreign currency reserves to external debt, proportion of debt held by foreigners]



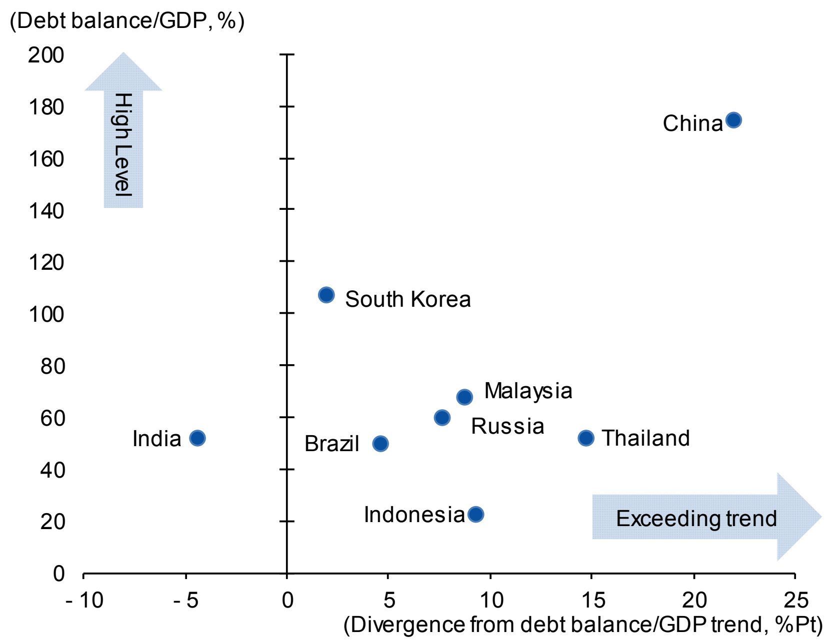
Note: The starting point for Russia is March 2012, and the starting point for India is June 2013

Source: Made by MHRI based upon IIF, IMF, Wind and each country's statistical data

The excess debt of companies and households is a burden on investment and consumption

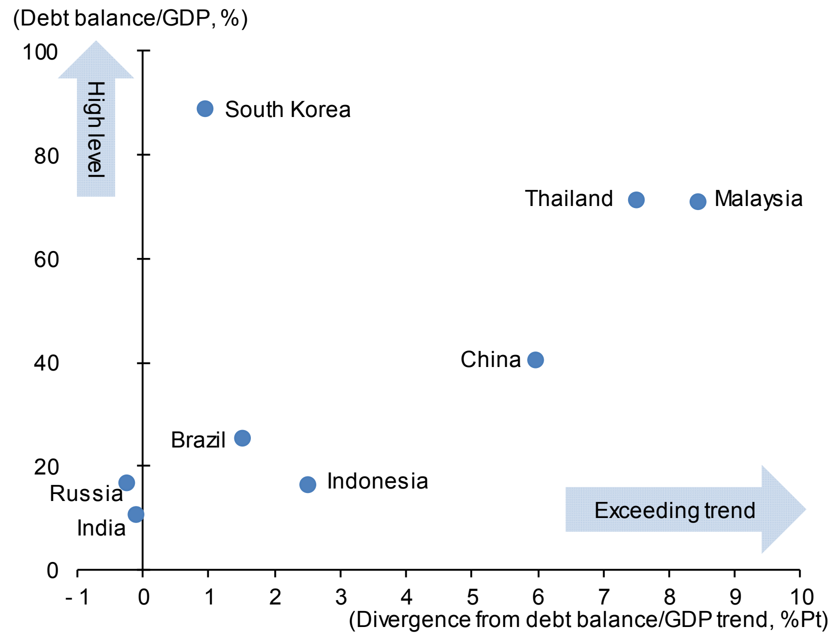
- By borrower type the corporate sector has high levels of debt in China, which are substantially above the trend.
  - The level is also high in South Korea, and while the level is lower in Thailand the trend is excessive and there is a sense of excess in each country.
- In the household sector, debt levels are high in Malaysia and Thailand and substantially above the trend.
  - The level is high in South Korea, while China also exceeds the trend.
- The excess debt of companies and households are a burden on investment and consumption due to the difficulties of obtaining new loans and the increased burden of repayments.

[Debt balance of non-financial corporations (vs. nominal GDP, March 2016)]



Source: Made by MHRI based upon IIF

[Debt balance of households (vs. nominal GDP, March 2016)]

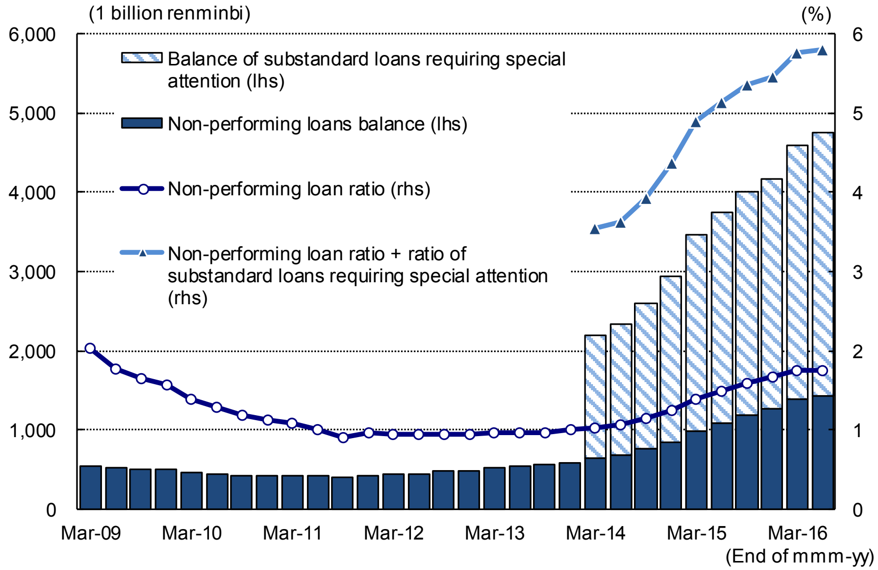


Source: Made by MHRI based upon IIF

Factor (5) non-performing loan problems in China and India: balance sheet adjustment pressures persist

- China's non-performing loan ratio (including substandard loans requiring special attention) has risen to 5.8% as of the end of June 2016 due to the excess debt in the corporate sector and the economic slowdown.
  - Corporate debt with an interest coverage ratio of below 1, which is considered to be 'risky debt' that could become non-performing loans, accounts for 14% of total debt. The IMF assumes that 60% of 'risky debt' will become non-performing loans and points to the risk of a further 2% point increase in the non-performing loan ratio.
- The Chinese government's stance is to avoid financial destabilization through hasty disposal. It is proceeding with measures such as the acquisition and securitization of non-performing loans by an asset management company, but the process is a 'protracted battle' and the corporate sector is expected to continue facing balance sheet adjustment pressures during the interim.
  - Even in India, 70% of banking assets are owned by state-owned banks and the non-performing loan ratio is high (9.6% as at the end of March 2016), so balance sheet adjustment pressures persist.

[Non-performing loans of Chinese commercial banks]



Source: Made by MHRI based upon the China Banking Regulatory Commission and CEIC Data

[Proportion of total debt at risk of becoming non-performing loans (2015)]

Industry	Total Debt ($ million)	Debt at risk ($ million)	Proportion of total debt at risk (%)
Information technology	147,229	12,576	9
Retail and wholesale	157,113	55,145	35
Manufacturing	501,659	88,525	18
Leasing	5,342	142	3
Utilities	369,881	3,086	1
Iron & steel	115,484	45,396	39
Construction materials	59,841	11,625	19
Transportation	152,096	27,548	18
Mining	135,163	47,598	35
Energy	224,845	2,357	1
Real estate	850,737	96,412	11
Other	55,558	1,642	3
Total	2,774,948	392,053	14

Source: Made by MHRI based upon IMF, *Global Financial Stability Report, April 2016*

Less appetite for fiscal stimulus to address downside risk. The overemphasis on monetary policy persists

- Despite strong concerns about the downside risk for the global economy stemming from the rise of uncertainties, countries around the world are still dependent upon monetary policy measures.
  - Although statements such as the G20 communique refer to the mobilization of the full line of policy tools, few fiscal policy measures have been implemented with the exception of Japan's economic stimulus package.
  - Despite the rise of expectations for fiscal policy, given the arguments about the limitations of monetary policy and the criticisms of currency wars, action among the countries has been subdued.

[Monetary and fiscal policies by country]

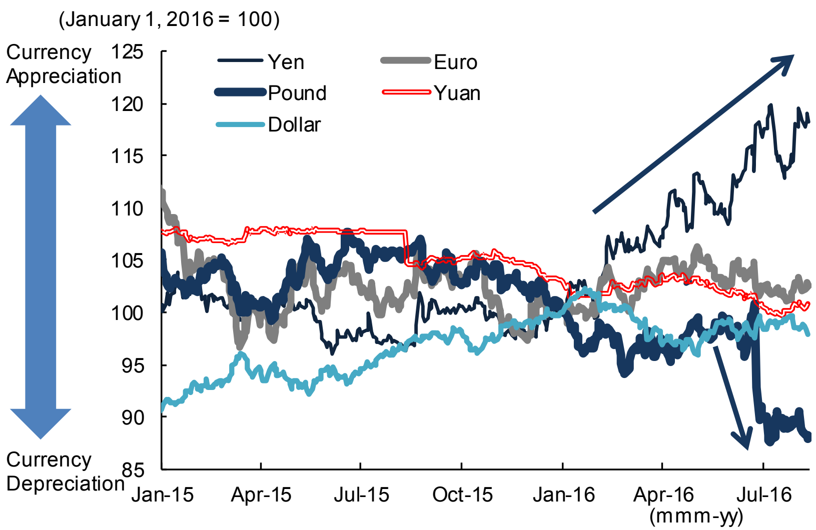
Country/Region	Monetary Policy	Fiscal Policy
US	The cautious monetary stance continues due to concerns about the economy while looking to hike interest rates.	While a shift to an expansionary policy stance is forecast under the new president, no change is expected before the election.
Europe	The BOE decide on comprehensive monetary policy. Possibility of additional easing by the ECB around the year end.	Despite fiscal expansion in 2016, Germany is wary of fiscal spending and impact will be limited.
Japan	Additional easing measures decided in July. Comprehensive assessment of policy to be conducted for September Monetary Policy Meeting.	Economic stimulus totalling 28 trillion yen with 7.5 trillion yen in actual spending has been announced.
China	Cautious about additional rate cuts, but maintaining an accommodative stance.	Despite the growing reliance on fiscal policy to support the economy, there has been no large scale fiscal spending.
Other EM countries	Mixed stance between countries. Interest rate cuts by countries in Asia where prices are stable.	Many countries are limited with not much scope for fiscal spending given their fiscal situation.

Source: Made by MHRI

Japan is the loser in the currency war, surrounded by enemies on all sides with a strong yen

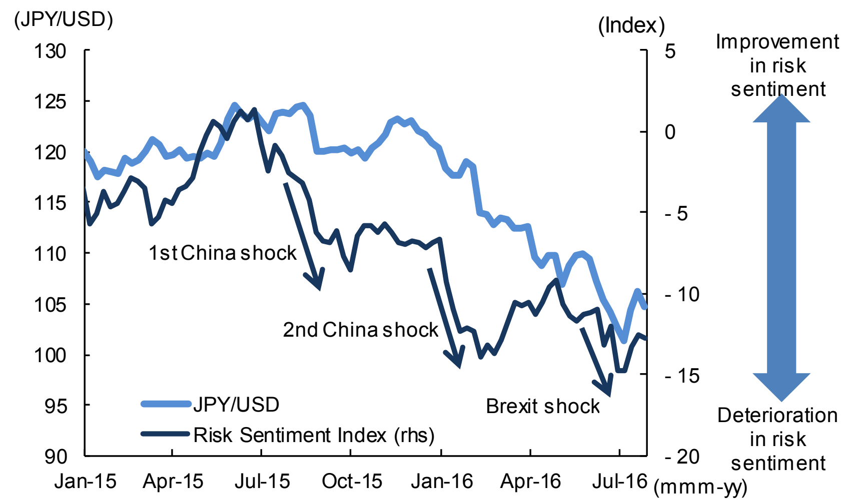
- The standalone appreciation of the yen continues. Despite the pause in the appreciation of the dollar, we anticipate renewed pressure for a correction of the strong dollar ahead of the US presidential election.
  - In terms of major currencies other than the yen, the pound plummeted following the UK's decision to leave the EU, while the euro and the renminbi are generally weak against the dollar.
  - The yen is surrounded by enemies on all sides and has appreciated against all major currencies. Moreover, the market appears to be comfortable with the situation.
    - ✓ The weak dollar eases concerns about the further depreciation of emerging market currencies and contributes to the bottoming out of the oil price.
- Many events such as the US presidential election and Italy's referendum could exacerbate market uncertainty before the year end.
  - Despite the pause in the risk-off trend caused by Brexit, renewed deterioration in risk sentiment could exert upward pressure on the yen.

[Recent trends of five major currencies]



Note: The US dollar in the graph above is set forth as the nominal effective exchange rate. All currencies other than the dollar are exchange rates to the dollar.
Source: Made by MHRI based upon Bloomberg materials

[JPY/USD and risk sentiment index]



Note: The risk sentiment index levels the level of correlation with the global financial markets according to 16 indices such as stocks and interest rates. Estimated by MHRI using a principle component analysis. The cumulative change taking the end of 2005 as the base.
Source: Made by MHRI based upon Bloomberg materials

The Yen/Dollar equilibrium based on the US current account balance is 98 yen. Concerns regarding the America First doctrine

- The equilibrium exchange rate for the yen/dollar is calculated to be 98 yen. (i.e., the foreign exchange rate level at which the current account balance would converge to be GDP±3% as at 2021).

[Equilibrium exchange rates versus the dollar for major currencies, according to a leading US research institute]

	Current account/ GDP ratio (%)			Level of correction in the real effective exchange rate necessary for the adjustment on the left (vs. Apr 2016 results, %)	Exchange rate vs. US dollar		
	IMF Forecast		Level of adjustment required for the current account/ GDP ratio to converge to the normal scope (within ±3%) (%PT)		Equilibrium rate against the US$	Recent rate against the US$	Upward pressure on the currency (%) reverse sign for the euro
	2016	2021					
Yen	3.8	3.7	-0.6	+ 3.6	98	102	+4
Euro	3.5	2.6	±0.0	±0.0	1.21	1.11	-8
Renminbi	2.6	0.5	±0.0	±0.0	5.95	6.63	+11
South Korean won	8.2	5.6	-2.1	+ 5.2	1007	1098	+9
Taiwan dollar	15.0	14.0	-11.1	+25.6	24.0	31.3	+28
US dollar	-2.9	-3.9	+1.1	-6.3	—	—	—

Indicator of exchange rate to US$

Depreciation of yen → Yen-strengthening pressure

Depreciation of euro → Euro-strengthening pressure

Depreciation of renminbi → Renminbi-strengthening pressure

Depreciation of won → Won-strengthening pressure

Depreciation of Taiwan dollar → Taiwan dollar-strengthening pressure

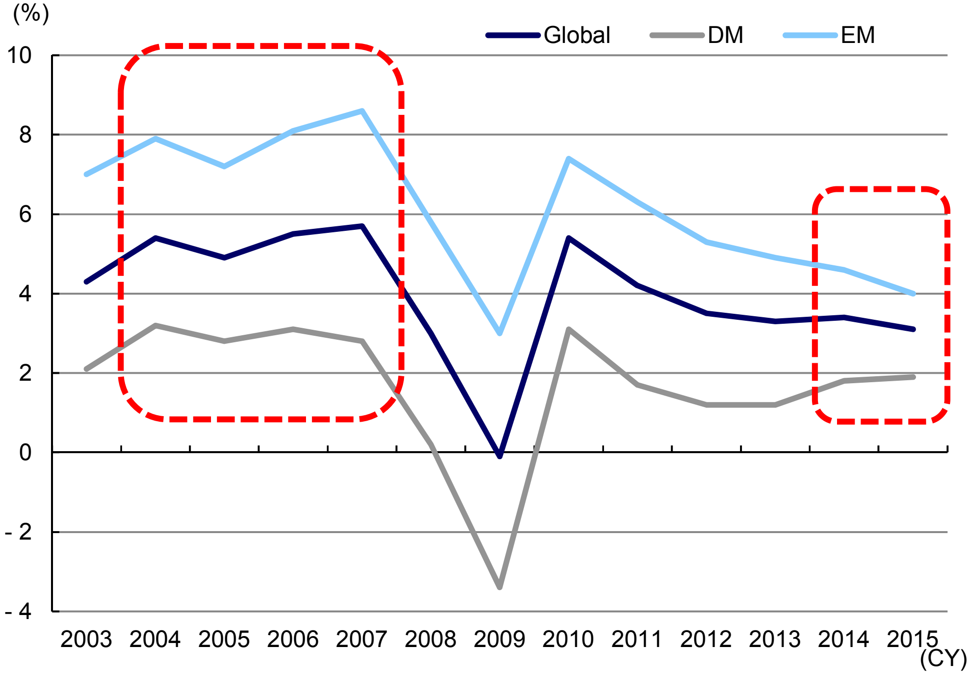
Note: 1. The effective exchange rate needed for the 2021 ratio of the current account balance/ GDP to converge to a range of ±3%, adjusted for the rate against the dollar.
2. The 2016 ratio of the current account balance/GDP is taken from the *IMF World Economic Outlook* (April 2016)
3. The most recent rates against the dollar are as of August 11, 2016. Taken from Bloomberg.

Source: Made by MHRI based upon Cline, William R. (2016) “Estimates of Fundamental Equilibrium Exchange Rates, May 2016.” *Policy Brief*. PB15-20. Peterson Institute for International Economics, May 2016

The global economy shifts to a 'new normal' with low growth, low inflation and low interest rates (3Ls)

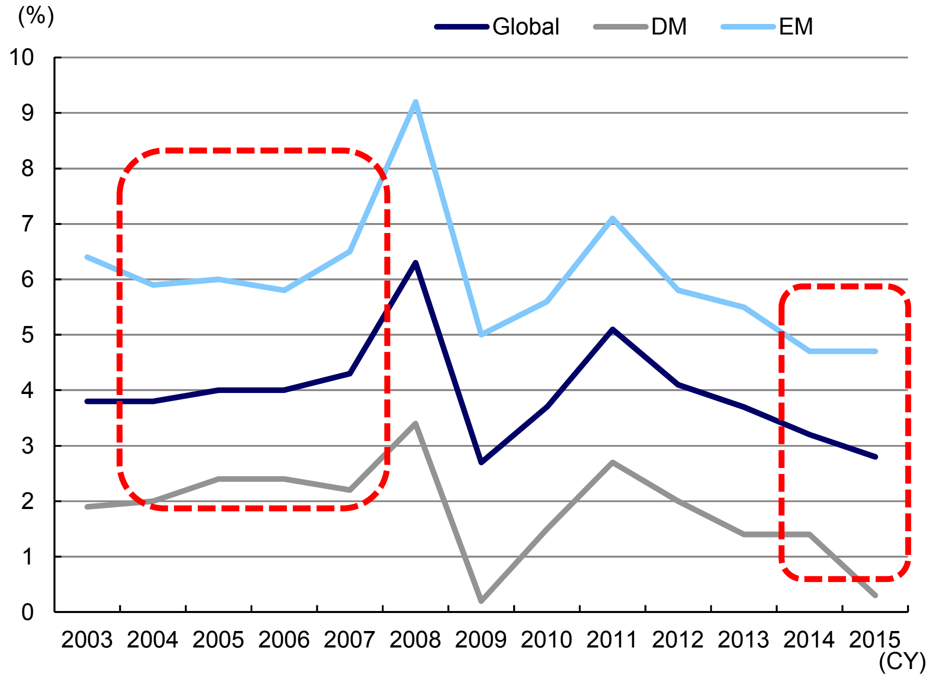
- The '3Ls (low)' of low growth, low inflation and low interest rates are becoming the new normal for DM countries in particular. Increased uncertainty makes it hard to set a target for when this will end.
  - Growth rates and inflation rates are lower than before the Lehman shock for both DM and EM countries.
  - A global 'Japanization phenomenon' due to ongoing balance sheet adjustments.

[Growth rates in DM and EM countries]



Note: Growth rate is the year-on-year rate for real GDP
Source: Made by MHRI based upon IMF

[Inflation rates in DM and EM countries]



Note: The inflation rate is the year-on-year consumer price index
Source: Made by MHRI based upon IMF

Lower long-term yields worldwide

- Global long-term yields are falling due to the low inflation and massive monetary easing measures.
  - Negative interest rates have become normal in Japan and Europe, and there is even downward pressure on long-term yields in the US, where there is prospect of an interest rate hike.

[The ‘flood map’ for global yields]

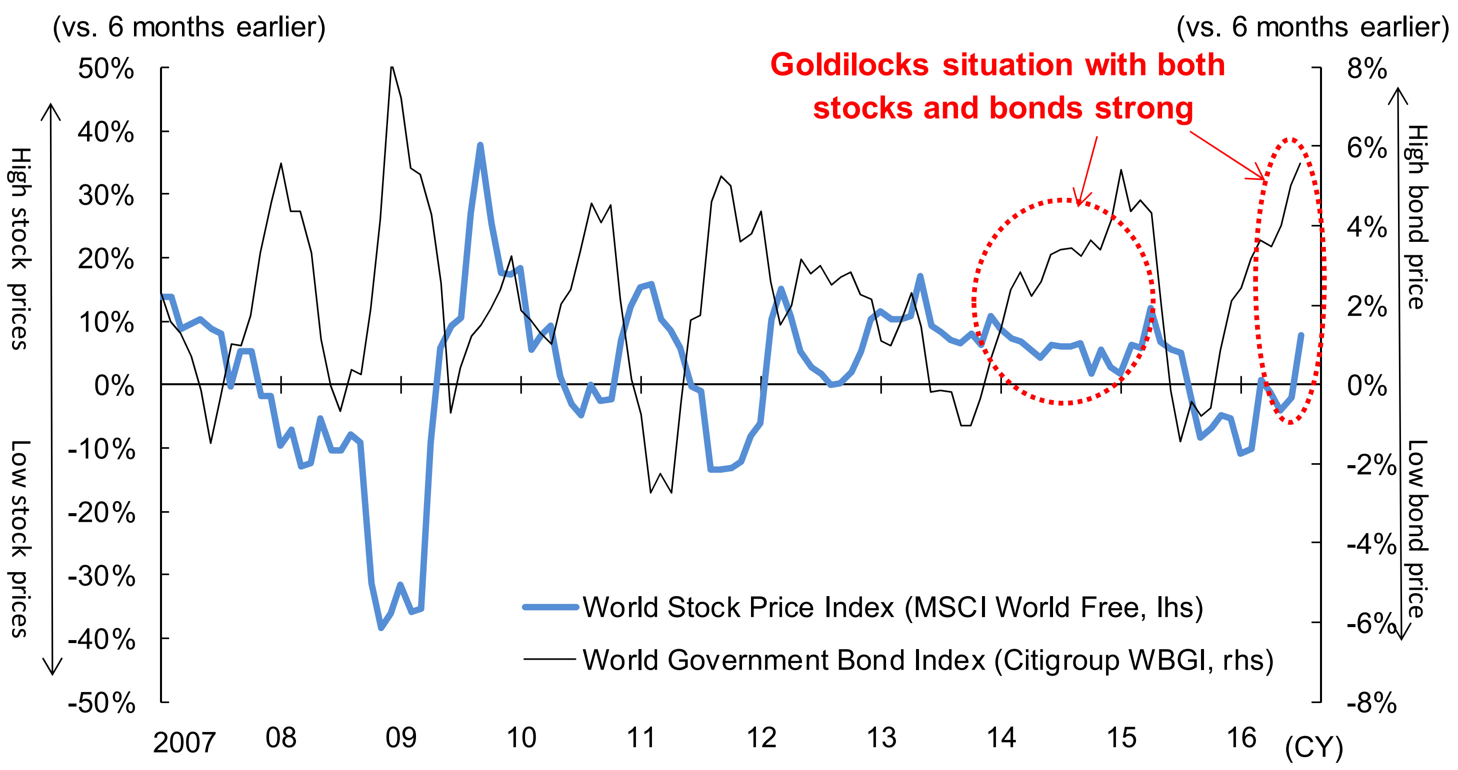
	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	11Y	12Y	13Y	14Y	15Y	20Y	30Y
Switzerland	-0.89	-0.88	-0.98	-0.95	-0.89	-0.82	-0.77	-0.69	-0.61	-0.56	-0.52	-0.48	-0.44	-0.39	-0.35	-0.23	-0.09
Germany	-0.61	-0.64	-0.67	-0.63	-0.55	-0.53	-0.47	-0.36	-0.24	-0.11	-0.09	-0.06	-0.04	-0.02	0.01	0.21	0.39
Japan	-0.21	-0.20	-0.19	-0.18	-0.19	-0.19	-0.21	-0.18	-0.14	-0.10	-0.07	-0.04	-0.01	0.02	0.05	0.27	0.39
The Netherlands	-0.63	-0.60	-0.63	-0.61	-0.48	-0.47	-0.38	-0.25	-0.13	-0.02	0.02	0.06	0.10	0.14	0.17	0.25	0.46
Finland	-0.56	-0.59	-0.60	-0.53	-0.50	-0.41	-0.33	-0.24	-0.13	0.01	0.06	0.12	0.17	0.22	0.27	0.34	0.48
Denmark	-0.57	-0.53	-0.47	-0.40	-0.33	-0.29	-0.24	-0.20	-0.08	0.05	0.07	0.09	0.11	0.13	0.15	0.26	0.46
France	-0.59	-0.58	-0.57	-0.52	-0.44	-0.40	-0.30	-0.20	-0.04	0.10	0.17	0.24	0.31	0.38	0.44	0.71	0.88
Sweden	-0.50	-0.66	-0.60	-0.54	-0.40	-0.35	-0.29	-0.16	-0.05	0.06	0.14	0.22	0.30	0.38	0.46	0.87	
Ireland	-0.38	-0.44	-0.40	-0.34	-0.27	-0.19	-0.07	0.10	0.24	0.33	0.39	0.46	0.52	0.58	0.64	0.79	1.11
Spain	-0.25	-0.18	-0.10	-0.02	0.11	0.19	0.39	0.67	0.79	0.95	1.01	1.07	1.14	1.20	1.26	1.50	1.98
Italy	-0.20	-0.09	-0.04	0.03	0.22	0.37	0.55	0.73	0.91	1.08	1.14	1.21	1.27	1.34	1.40	1.70	2.04
Portugal	-0.02	0.39	0.83	1.31	1.58	1.84	2.10	2.50	2.56	2.75	2.81	2.88	2.94	3.01	3.08	3.35	3.59
UK	0.14	0.10	0.08	0.10	0.13	0.22	0.31	0.42	0.46	0.53	0.61	0.70	0.78	0.86	0.95	1.11	1.26
Norway	0.44	0.49	0.55	0.59	0.64	0.71	0.79	0.84	0.96	1.03							
Canada	0.52	0.51	0.47	0.51	0.57	0.66	0.73	0.80	0.89	0.99	1.05	1.11	1.17	1.23	1.30	1.60	1.61
US	0.52	0.68	0.80	0.94	1.07	1.20	1.33	1.39	1.45	1.51	1.54	1.58	1.62	1.65	1.69	1.87	2.23
Australia	1.49	1.43	1.39	1.44	1.50	1.58	1.67	1.76	1.83	1.87	1.94	2.02	2.09	2.17	2.24	2.45	
China	2.27	2.35	2.45	2.57	2.69	2.73	2.76	2.75	2.75	2.75	2.80	2.85	2.89	2.94	2.99		
India	6.85	6.84	6.90	6.97	7.03	7.10	7.10	7.12	7.15	7.10	7.26	7.27	7.16	7.16	7.79	7.24	7.88

Note: Values as at August 10, 2016
Source: Made by MHRI based upon Bloomberg

The market is in a Goldilocks situation amid an accommodative monetary environment due to the 3Ls

- With the growing expectations for protracted low interest rates, both the stock market and bond market are firm in what is referred to as a "Goldilocks" situation.
  - While the Goldilocks situation is likely to continue for awhile, there is also the risk of major fluctuations that could be triggered by factors such a the realization of risk factors and increased expectations for a US rate hike.

[Global stocks and bond performance]



Note: The data refers to the intra-monthly average compared to 6 months earlier
Source: Made by MHRI based upon Bloomberg

II. The Japanese Economy

Both private sector and external demand are sluggish, with the economy underpinned by economic stimulus measures

The Japanese economy: Japan’s economic recovery will be dependent upon public sector demand for some time, given the lack of strength reflecting factors such as the slow recovery of overseas economies

- The *First Preliminary Quarterly Estimates of GDP* (“*1st QE*”) for the Apr-Jun quarter of 2016 revealed that the Japanese economy recorded growth in positive territory for the second quarter in a row. Even so, growth was tepid, given the prolonged stagnation of private sector demand and exports. The results confirmed that the Japanese economy has not yet emerged out of the “soft patch” from the second half of 2015.

- From the Jul-Sep quarter of 2016, the Japanese economy should gradually pick up supported by public sector demand, despite downward pressures stemming from the slowdown of overseas economies etc. The pace of economic growth in FY2016 is forecast to reach +0.6%, above the potential rate of growth (estimated to be +0.3% to +0.5%). The pace of economic growth should rise to +0.9% in FY2017, given the full-fledged implementation of economic stimulus measures.

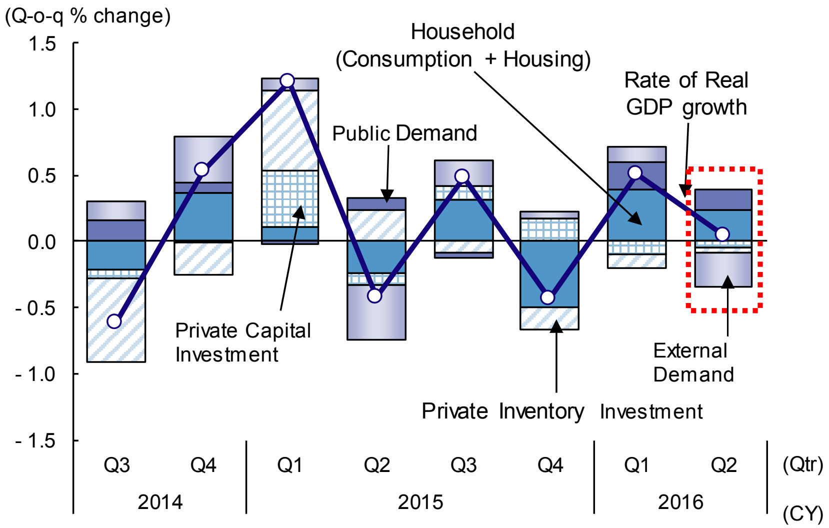
- The recovery of exports will likely lack strength due to structural adjustments in the Chinese economy, the weakness of capital investment by US corporations, as well as headwinds stemming from the sharp appreciation of the yen since the beginning of the year. On the other hand, turning to domestic demand, public sector demand should follow firm footing as the impact of the economic stimulus measures gradually emerge. Capital investment should also pick up gradually considering that the investment cycle of large corporations is in a recovery phase. Personal consumption – albeit lacking in strength – should gradually recover along with the improvement of the employment environment.

- In addition to the strong yen and fall of crude oil prices, thrift-consciousness among households will also serve as downward pressures, keeping the year-on-year (y-o-y) change of the core CPI 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 around 1% toward the latter half of the forecast horizon. We expect a gradual improvement of the underlying trend in inflation excluding the impact of energy prices.

Still in a soft patch. Despite prospects of recovery due to stimulus, the pace will likely be moderate

- In the Apr-Jun quarter of 2016, real GDP had positive growth of +0.2% q-o-q p.a. However, the positive level was small due to the protracted stagnation in private-sector demand and exports and the waning impact of the leap year factor.
- The sluggish recovery of exports looks likely to continue for awhile. However, the economy should return to a recovery track, given firm public sector demand, and gradual recovery of both capital investment and consumer spending.

[Factor contribution levels to real GDP]



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

[Issues for the Japanese economic outlook]

Background to stagnant exports

- The decline in Japan's export share is basically a long-term trend caused by the overseas shift by Japanese companies and catch-up by emerging country companies
- In future, a pick-up in the IT cycle and recovery in orders from US manufacturers will have a positive impact, yet a strong recovery seems unlikely due to difficulties in the US for sales of export vehicles.

Momentum for recovery in domestic demand

- [Capital investment] Large companies are in a recovery period in their capital stock cycle. There is an upward trend for software investment in particular, so a drop in capital investment will be avoided even if profits decline.
- [Consumer spending] Sluggish growth in disposable incomes is holding back the recovery in consumer spending. Even though further decline in the propensity to consume seems unlikely, gradual progress is being made in the reduction of stocks of durable goods, and the rise in the price of food has paused, which will be positive factors

Price trends

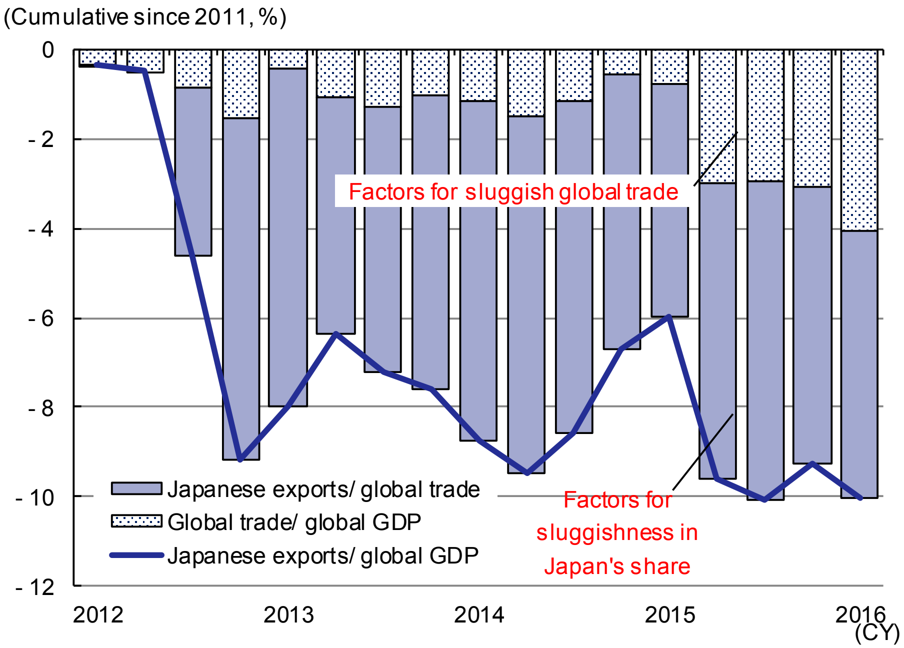
- The post-Abenomics recovery continues. However, the increased tendency for households to economize, evident from the end of 2015, will suppress the rate of rise in CPI with a lag during FY2016
- Unit labor cost is rising, but there is insufficient price transfer. A steady rise in the rate of growth in prices is likely to take time.

Source: Made by MHRI

Stagnant exports: Japan's export share is falling due to overseas shift and catch up by EM companies

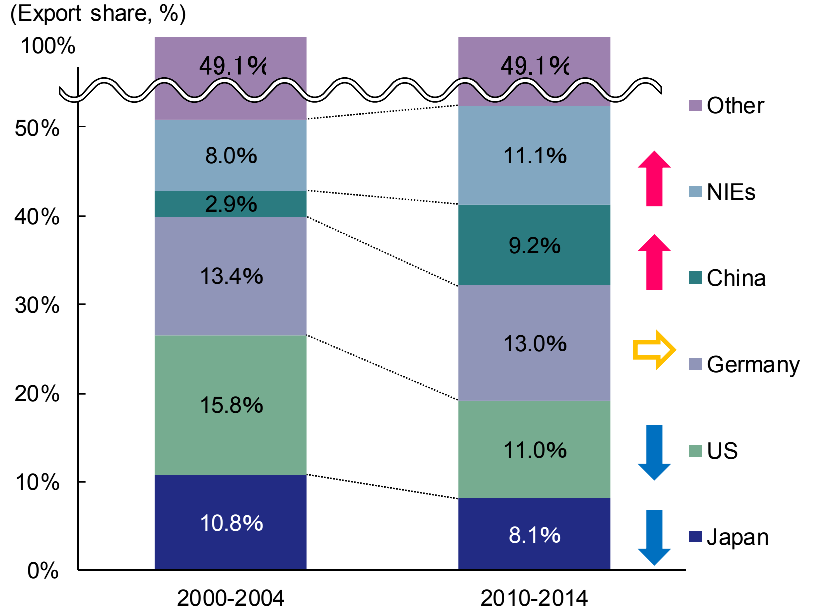
- The contribution of Japan's exports to global GDP is falling.
  - Japan's exports have fallen as a result of the decline in share of global trade and the stagnation of global trade.
- The increase in EM value-added exports is contributing to the decline in Japan's exports. This is a long-term trend.
  - The export share of global trade by added-value indicates a rise in EM countries such as China for high value-added goods.

[Contribution of Japan's exports to global GDP]



Source: Made by MHRI based upon the Netherlands Bureau for Economic Policy Analysis, *CPB World Trade Monitor*, IMF, *International Financial Statistics*, etc.

[Export share of global trade by country (high value-added goods)]



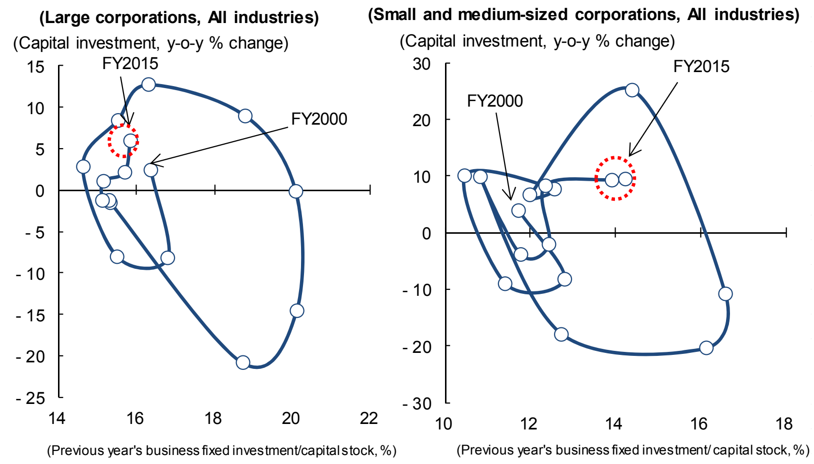
Note: Classifying goods into 10 stages of added value, and defining categories 8 to 10 as high value-added goods based on 'Asian development and the Japanese economy: export trends, foreign exchange rates and Japan's international competitiveness' Hori (2009)

Source: Made by MHRI based upon United Nations, *UN Comtrade*

Recovery momentum for domestic demand: capital investment is firm, particularly for large companies

- Considering that large companies are in a capital stock recovery period, it is unlikely that capital investment will fall due to deterioration in profits. However, since small and medium-sized companies had an earlier recovery in capital investment than large companies, it would be necessary to watch out for a slowdown.
- More listed companies (consolidated base) have increased their investment in software than those that have increased their tangible fixed assets (FY2015).
  - 47.5% of companies have increased their tangible fixed assets (excluding non-depreciable assets), while 54.8% of companies have increased software.
  - More than 25% of the companies surveyed have increased software even when they have reduced their depreciable tangible fixed assets, with some companies shifting their investments.

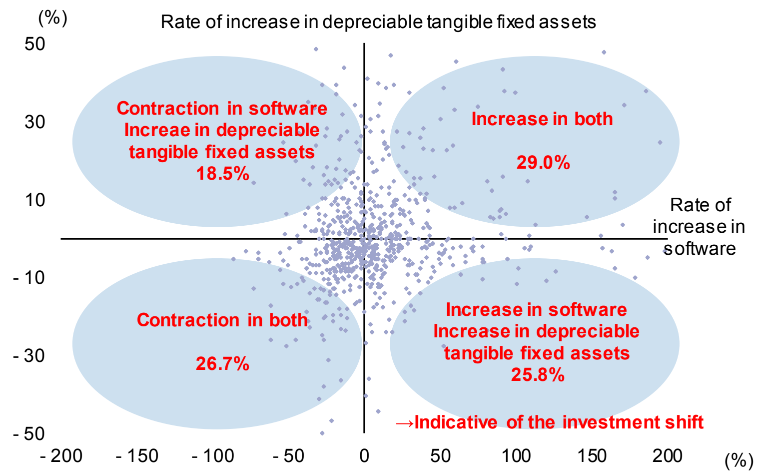
[Capital stock cycle]



Note: 1. Referring to all industries (excluding finance and insurance). In addition, treating corporations with capital of at least 1 billion yen as large corporations and otherwise as small and medium-sized corporations.
2. Data is from the quarterly report. capital investment is the aggregate of new tangible fixed assets for four quarters, Capital stock is the figure at the end of each March.

Source: Made by MHRI based upon Ministry of Finance, *Financial Statements Statistics of Corporations by Industry, Quarterly*

[Relationship between tangible fixed assets and software (FY2015)]



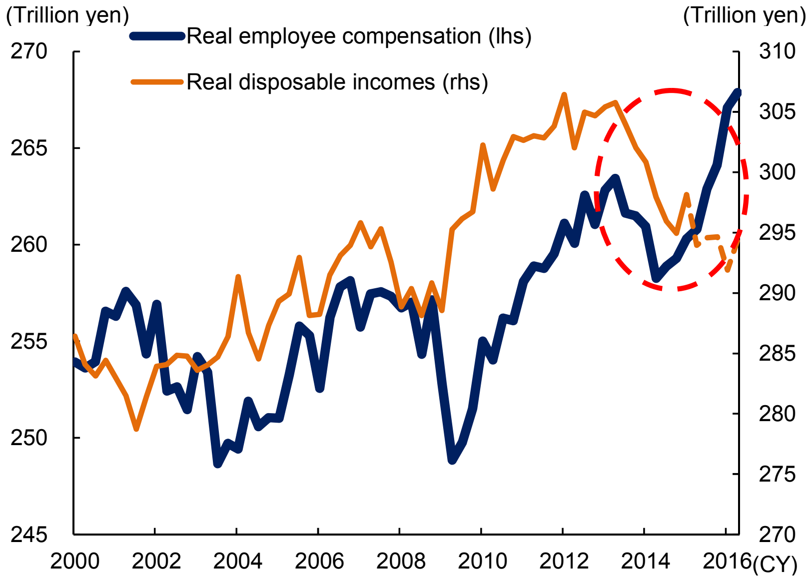
Note: Aggregate for 779 corporations (excluding finance and insurance) that have reported their financial results between December 2015 and March 2016 and disclosed software assets (more than 10 million yen) for two consecutive periods.

Source: Made by MHRI based upon Nikkei NEEDS

The sluggish growth of disposable income is weighing on consumer spending

- Growth in disposable incomes remains sluggish.
  - According to estimates using the *Family Income and Expenditure Survey*, the gap with real employee compensation has not contracted, while disposable incomes are generally flat.
  - The increase in the average social welfare burdent for young and middle-aged households is likely to be weighing on consumer spending.
- However, since the propensity to consume (persons under 60 years of age) has already fallen to extremely low levels, further falls seem unlikely. We expect consumer spending to recover from the slump recorded in the second half of 2015, returning to a recovery pace in line with incomes.

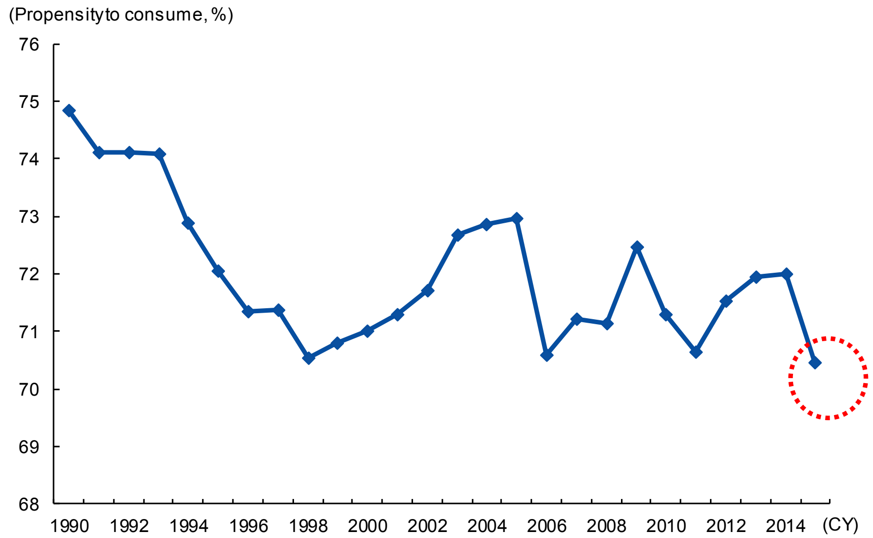
[Real employee compensation and real disposable incomes]



Note: 1. The dotted line is the estimated value using the disposable incomes for two-or-more person households (workers' and non-workers' households) in the *Family Income and Expenditure Survey*, so needs to be considered with a degree of latitude.
2. The seasonally-adjusted figure for disposable income is calculated by MHRI.

Source: Made by MHRI based upon Cabinet Office, *National Accounts*, Ministry of Internal Affairs and Communications, *Family Income and Expenditure Survey*

[Propensity to consume (under 60 years of age]



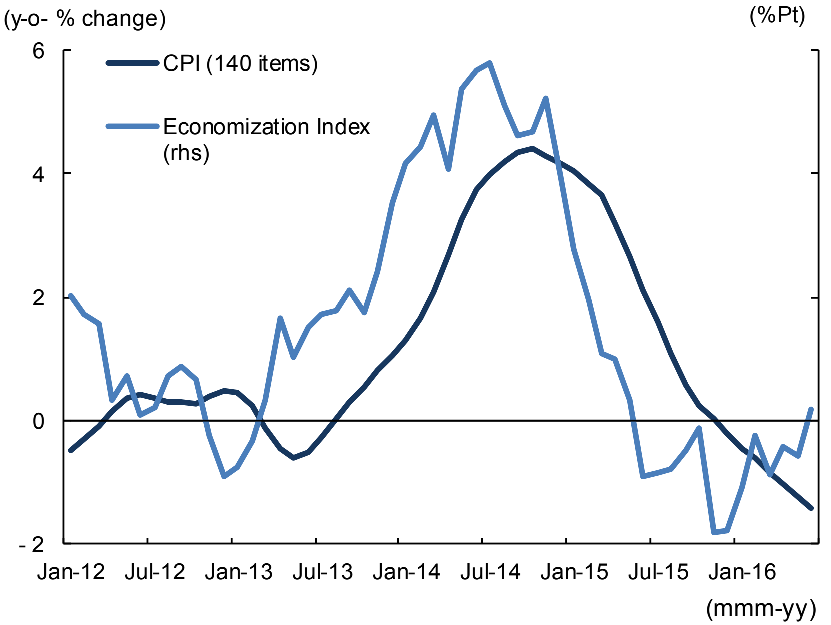
Note: 1. Calendar year values. Excludes households engaged in agriculture, forestry and fisheries up until 1999. Includes such households from 2000.
2. Propensity to consume = consumption/disposable income x 100. Two-or more person households.

Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Family Income and Expenditure Survey*

Price trends: rising thrift-consciousness since last year pushed prices down this year

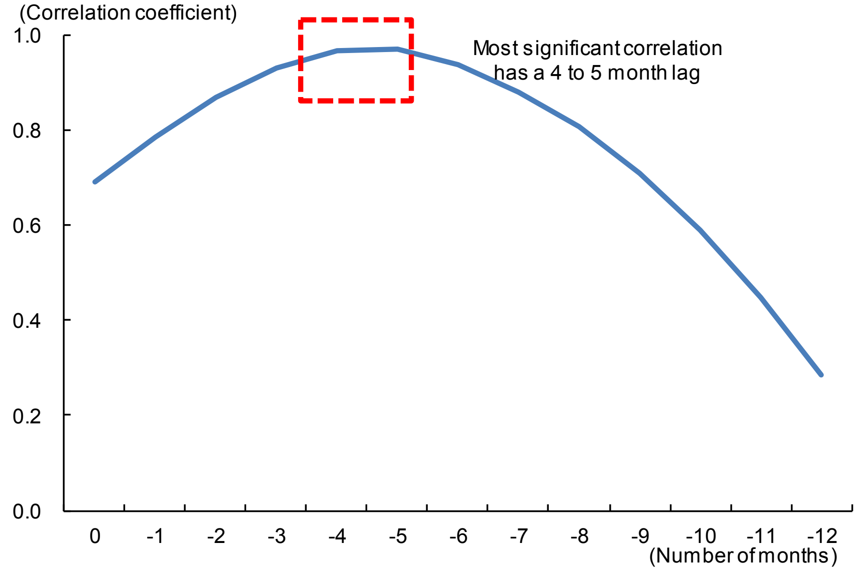
- The economization index has been falling since the middle of 2015, and could weigh on prices for the rest of 2016.
  - The decline in the economization index is a factor pushing down CPI with a lag of about 4 to 5 months.
    - ✓ Pricing strategies are revised due to the change in consumer attitudes, and it takes about 6 months for this to be applied to store prices.
  - The economization index fell until June, suggesting that price growth is likely to be sluggish at least for the rest of 2016.

[Economization index and CPI (140 items)]



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

[Lag correlation coefficient for the economization index and CPI (140 items)]



Note: Correlation coefficient taking the CPI (year-on-year change) as the base and extending the economization index with a lag of month by month

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

Economic stimulus (actual spending possessing stimulus) to push up GDP by around 1.1% on a cumulative basis

- Economic stimulus (actual spending stimulating the economy) is calculated to push up GDP by approximately 1.1% on a cumulative basis. Progress in public works projects has lagged due to the lack of construction workers, and the benefit to growth is about 0.1 to 0.3% per year. (MHRI's previous *Economic Outlook* already incorporated 1.5 trillion in public works expenditure (2 trillion when earthquake restoration is included)
  - Of the actual spending (about 6 trillion yen on a national expenditure base), about 3 trillion yen is public works (the amount of increase in construction bonds). Apart from this, there are benefits of 15,000 yen to low-income earners and environmental improvements for child-rearing and nursing care.
  - *Zaito* (FILP) bonds will be implemented from the 2020s. The impact on *MHRI's Economic Outlook* is limited.

[Main details of economic stimulus measures]

	Size (trillion yen)	Actual spending (trillion yen)
I. Acceleration of a society with dynamic engagement of all citizens	**3.5**	**2.5**
Facilities for child rearing and nursing care		
Improve conditions for childcare workers and nursing care personnel	From 2017	
Lower employment insurance premiums (0.2%)	From 2017	
Revised scholarship system	From 2017	
Shorten qualifying period to receive pensions (25 years → 10 years)	From 2017	
Subsidies of 15,000 yen for low-income earners (targeting 22 million people)	Scheduled to be provided from summer of FY2017	
II. Improve 21st Century infrastructure	**10.7**	**1.7**
Improve infrastructure to deal with era of 40 million foreign tourists		
Promote exports of agriculture, forestry and fishery products and strengthen the competitiveness of the agriculture, forestry and fisheries industry		
Accelerate facilities such as the Linear-Chuo-Shinkansen and maintenance of the Shinkansen lines		
III. Deal with risks such as the uncertainty associated with Brexit and support for small and medium-sized enterprises and regional areas	**10.9**	**0.6**
Financial support for small and medium-sized business operators		
Promote regional developments		
IV. Strengthen the restoration and disaster prevention measures associated with the Kumamoto Earthquake and the Great East Japan Earthquake	**3.0**	**2.7**
Restoration and reconstruction following the Kumamoto Earthquake and the Great East Japan Earthquake		
Strengthen disaster prevention measures and measures to deal with aging infrastructure		
Total	**28.1 trillion yen**	**7.5 trillion yen**

Note: Actual spending includes the 1.3 trillion yen allocated for regional expenditure
Source: Made by MHRI based upon Cabinet Office and various media reports

[Boost to GDP from economic stimulus measures (Estimate)]

		National expenditure (Approximate)	Boost to GDP	Notes
FY2016 Supplementary Budget	Public works	3 tn yen	0.75%	
	Payments	0.35 tn yen	0.02%	Scheduled payments from summer of FY2017
	Other	1.25 tn yen	0.22%	
FY2016 Initial Budget	Reduction in employment insurance premiums	1.0 tn yen	0.10%	Scheduled implementation from FY2017
	Other	0.6 tn yen	0.04%	
Total		**6.2 tn yen**	**1.12%**	

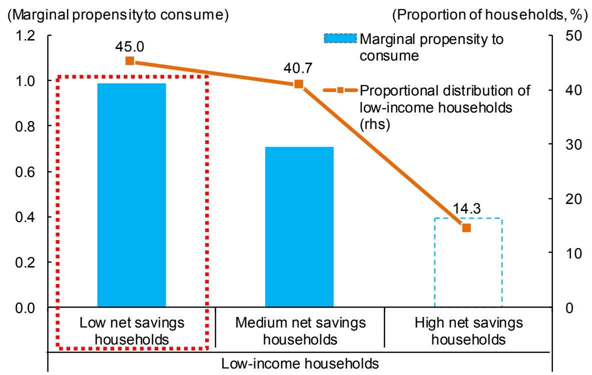
Note:
1. The benefits for low-income earners assumes administrative expense to be the same amount as incurred for last year's benefits.
2. The boost to GDP includes the local government expenditure.
3. Based on materials accessible as of August 16, 2016

Source: Made by MHRI based upon various media reports

Limits to the efficiencies in benefits for low-income earners. Consideration of future concerns is needed

- Payment of benefits to low-income earners as a whole has limited efficiency when viewed as an economic stimulus measure. More efficiency would be gained by restricting the benefits to households with low savings.
  - Even amongst low-income earners, persons holding liquid assets have low marginal propensity to consume. Since benefits are also paid to such persons (40% of low-income earners are households with medium-level savings, while 15% have high-level savings), the efficiency as an economic stimulus measure is limited.
- The delayed hike in the consumption tax and increased government spending could curb consumption due to increased concerns about the future tax hike.
  - According to a public opinion survey, there has been a noticeable increase in the number of younger people being concerned about savings for living expenses in old age.

[Marginal consumption propensity by level of net savings for low-income households]

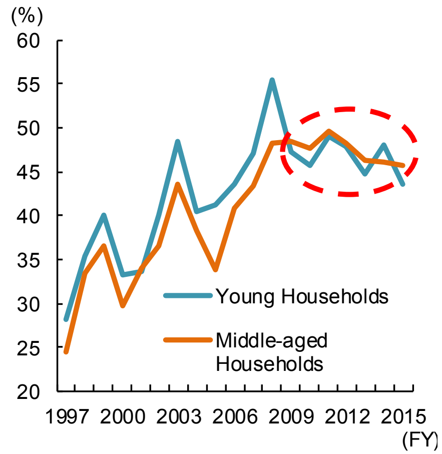


Note: 1. The dependent variable is the amount of real consumption, with a regression analysis using explanatory variables: disposable income (real), number of household members, number of persons in households aged 65 years and over, proportion of households repaying housing loans, and a seasonal dummy variable. Logarithmic value for all apart from the dummy variable. Sample period from the Jul-Sep 2007 to the Oct-Dec 2015.
2. Area outlined by the rectangle indicates not falling within the 10% degree of significance. Using the figures for two-or-more person households.
3. Categorizing low net savings as levels 1 to 2, medium net savings as levels 3 to 4, and high net savings as level 5.

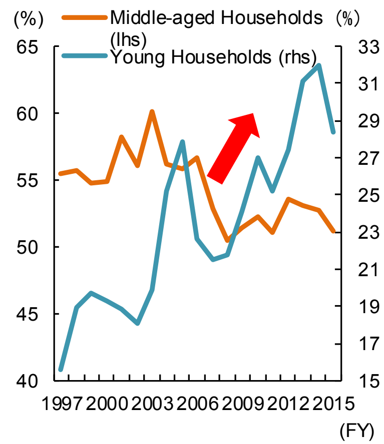
Source: Made by MHRI based upon Ministry of Internal Affairs and Communications, *Family Income and Expenditure Survey*

[Future concerns highlighted by public opinion survey]

[Proportion who responded 'very worried about life in old age']



[Proportion who responded the purpose of savings is 'for living expenses in old age']



Note: 1. 30 years and younger are taken to be young households, 60 years and older are taken to be old aged households, others are referred to as middle-aged households.
2. The right hand side chart allows for multiple responses

Source: Made by MHRI based upon the Central Council for Financial Services Information, *Public Opinion Survey on Household Financial Assets and Liabilities*

Despite its limited impact on wages, minimum wages are appropriate for boosting inflation expectations

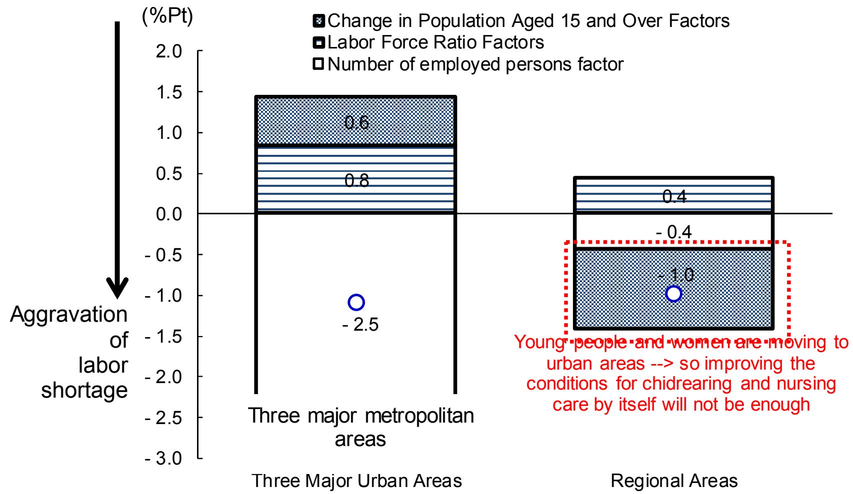
- Although an increase in the minimum wage has little impact on boosting wages from a macro level, the measure is appropriate from the perspective of boosting inflation expectations.
  - Progress made in improving the environment for child-rearing and nursing as well as the social participation of woman can be lauded as measures to deal with the labor shortage, but this by itself is also insufficient.
  - The increased employment in urban areas is a major cause of the labor shortage, so improving the environment for child-rearing and nursing care as well as the social participation of women are important measures. On the other hand, there needs to be more radical initiatives including the use of foreigners in regional areas suffering an outflow of young people and women.

[Impact of the minimum wage]

Average wage	Low-skilled workers under 20 years of age tend to be affected. However, previous research notes that workers under 20 years of age make up a small proportion of the work force, so there is no rise in the total macro average wage. On the other hand, IMF research also indicates a 3% in the minimum wage will push up the macro average wage by 1.5%.
Wage differential	Approximately half the workers working at the minimum wage are wives of medium-income households or students. This is insufficient as a way of supporting poor households.
Employment	There are reports about the comparative negative impact on the employment of low-income workers, but no clear impact has necessarily been evident.
Productivity	The following factors will reportedly increase productivity. ① Replace unskilled workers with skilled workers, ②Investment in human capital by companies to fill in the gap between productivity and wage levels, and ③ have incentives for unskilled workers to invest in their own human capital to avoid unemployment. On the other hand, deterioration in profit ratios also has negative aspects with the reduction of investment in facilities and in human capital.

Source: Made by MHRI

[Factors contributing to changes in the unemployment rate in urban and regional areas (2012-2015)]



Note: Three major urban areas include Saitama, Chiba, Tokyo, Kanagawa, Gifu, Aichi, Mie, Kyoto, Osaka, Hyogo and Nara. Regional areas are prefectures other than those in the three major metropolitan areas

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

Implementation of a reverse income policy (wage targets) could be an option to boost wages

- Change in the required thinking. How has (the previously demonized) home-made inflation (wage inflation) come about?
  - There was wage inflation/home-made inflation at the time of the first oil shock. However, there was no wage inflation/home-made inflation at the time of the second oil shock. The difference was the 'relationship between wage setting and prices'.
  - The home-made inflation in the US and European countries at the time of the second oil shock was largely attributed to price-indexed wages.
- In recent years, wage increases have been guided through measures such as the government-labor-management meeting, but there is also a proposal to implement 'wage targets (inflation target + rate of productivity increase for each company)'.

[Elements deemed most important when determining wages]

(Units: %)

	Year	Corporate earnings	Prevailing practice	Securing./ Establishing Labor Force	Price trends	Other
First Oil Shock	1973	30.4	34.8	18.2	**12.9**	3.7
	1974	26.6	37.5	8.6	**24.0**	3.3
	1975	52.9	23.2	4.3	**14.6**	5.0
	1976	54.3	25.8	4.3	**8.0**	7.6
Second Oil Shock	1978	**67.2**	18.9	2.3	**6.5**	5.1
	1979	**64.9**	18.2	4.2	**7.1**	5.6
	1981	**57.3**	22.2	5.2	**8.8**	6.5
	1981	**57.0**	24.3	3.2	**9.3**	6.2
	1982	**62.9**	23.3	1.7	**5.8**	6.3
Recent	2012	52.0	7.3	2.7	**0.5**	37.5
	2013	58.6	8.4	4.2	**0.2**	28.6
Consumption Tax Hike	2014	50.7	8.6	7.2	**1.2**	32.6
	2015	52.6	5.4	9.2	**0.3**	32.5

Source: Made by MHRI based upon Ministry of Health, Labour and Welfare, *Status Survey on Wage Hikes*

[Price rises in the year following the oil shocks]

(%)

	Raw materials	Intermediate goods	**Final goods**
First Oil Shock (1973/Q4→1974/Q4)	52.7	19.6	**20.0**
Second Oil Shock (1979/Q1→1980/Q1)	67.6	26.0	**6.0**
Recent (Before the Global Financial Crisis) (2007/Q2→2008/Q2)	36.5	6.1	**0.5**

Source: Made by MHRI based upon Bank of Japan, *Corporate Goods Price Index*

MIZUHO

BOJ indicates uncertainty in achieving its price stability target and “adaptive formation mechanism”

- The BOJ decided on additional easing measures at its July Monetary Policy Meeting (July 28 and 29) with an increase in the pace of ETF purchases and enhanced measures to support growth in US dollar funding by companies and financial institutions. The level of negative interest rates and program of outright purchases of JGBs were left unchanged.
- The BOJ downwardly revised its FY2016 outlook for economic activity and prices in its Outlook Report, but kept its forecast timing to achieve the price stability target at during FY2017. However, the view was accompanied by considerable uncertainty due to concerns about overseas economies and other factors.
  - The “adaptive formation mechanism” to form inflation expectations is much stronger in Japan than the US and Europe, which was cited as making it difficult for prices to rise.

[Additional easing measures (July 29)]

Easing Measures	Now	In future
Negative interest rates	-0.10%	Unchanged
Annual increase in amount of ETF and REIT outstanding	ETF: About 3 trillion yen REIT: About 90 billion yen	ETF: About 6 trillion yen REIT: Unchanged
Annual increase in amount of JGBs outstanding	80 trillion yen	Unchanged
Purchase of CP and corporate bonds	Outstanding amounts maintained Corporate bonds: About 3.2 trillion yen CP: About 2.2 trillion yen	Unchanged
Lending program to support growth in US dollars	$12 billion	$24 billion

Source: Made by MHRI

[Outlook Report (July 29)]

(Y-o-y % change)

	Real GDP	CPI (all items less fresh food)	Excluding the effects of the consumption tax hikes
FY2016	＋0.8 to ＋1.0 (＋1.0)	0.0 to ＋0.3 (＋0.1)	
Forecasts made in April	＋0.8 to ＋1.4 (＋1.2)	0.0 to ＋0.8 (＋0.5)	
FY2017	＋1.0 to ＋1.5 (＋1.3)	0.8 to ＋1.8 (＋1.7)	
Forecasts made in April	0.0 to ＋0.3 (＋0.1)	＋1.8 to ＋3.0 (＋2.7)	＋0.8 to ＋2.0 (＋1.7)
FY2018	+0.8 to ＋1.0 (＋0.9)	1.0 to ＋2.0 (＋1.9)	
Forecasts made in April	＋0.6 to ＋1.2 (＋1.0)	1.0 to ＋2.1 (＋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

Policy framework to be revised with the comprehensive assessment at September Monetary Policy Meeting

- The BOJ plans to undertake a comprehensive assessment of the impact of monetary easing measures from the perspective of quick achievement of the price stability target at its September Monetary Policy Meeting (September 20 and 21). There could also be revisions to the policy framework such as outright purchases of JGBs.
  - Given the high hurdles toward increasing the level of negative interest rates faces high hurdles and we anticipate easing measures will focus on 'qualitative' measures such as the expansion of corporate bond and REIT purchases.
    - ✓ The corporate bond market is limited (about 60 trillion yen). There could also be an increase in support for foreign-currency funding.
  - Consideration could also be given to ways to take concerted action with the government such as examination of policies that suggest helicopter money with the extension of the period for holding JGBs. It will be important to watch out for market movements caused by speculation about monetary policy such as revisions to outright purchases of JGBs.

[Gist of BOJ Governor Kuroda's comments (July 29)]

Economy and Price Trends	・Against the backdrop of the United Kingdom's vote to leave the European Union and the slowdown in emerging economies, uncertainties surrounding overseas economies have increased. ・The baseline scenario is that the timing to achieve the price stability target will be during fiscal 2017 , although this is accompanied by considerable uncertainty. There are major adaptive elements in relation to the formation of the projected rate of increase in CPI.
Additional easing	・To prevent uncertainties from leading to a deterioration in business confidence and consumer sentiment support is provided through the increase in the purchase of ETF and increasing the size of the Bank's lending program to support growth in US dollars. These are the most effective and appropriate policies at the present point in time. ・The limits for negative interest rates and expansion of quantitative measures have not been met.
Comprehensive assessment	・Monetary easing has had considerable impact on the economy as a whole, but inflation is midway ・With the growing uncertainty about the inflation outlook a candid assessment of what is required to quickly achieve the price stability target will be undertaken at the next Policy Board Meeting. ・The 2% price stability target is a commitment made in a joint statement with the government, so there are no plans to change

Source: Made by MHRI based upon the Bank of Japan

[Major asset balances]

Units: trillion yen

Assets	Balance	Of which, held by the BOJ
JGBs	901	332
Corporate Bonds	57	3
Municipal Bonds	59	–
Government-guaranteed Bonds	35	–
Zaito (FILP) Institution Bonds	33	–

(Private-sector financial institution loan assets)

Loans to companies and government	588	–
Housing loans	178	–

Note: Balances as at the end of FY2015 (Amounts held by the BOJ as of the end of July)
Source: Made by MHRI based upon the Bank of Japan and the Japan Securities Dealers Association

Japan: the overseas economic slowdown and strong yen will serve as a drag upon the Japanese economy. Even though the Japanese economy will pick up toward FY2017, the recovery will be dependent upon public sector demand

- Japan's economic growth will be slower in FY2016 than FY2015 due to the overseas economic slowdown and strong yen. Even so, since public demand will underpin the economy, the rate of growth is expected to reach +0.6% and stay above the potential growth rate (estimated my MHRI to be +0.3 to 0.5%).
  - The forecast has been upwardly revised from MHRI's forecast in July (+0.4%). This is attributed to the recent increase in housing investment and increase in public demand due to economic stimulus measures.
- The rate of growth in FY2017 is forecast to reach +0.9% (upwardly revised from the +0.7% forecast in July) due to full-fledged implementation of economic stimulus measures, etc.

[Outlook on the Japanese economy]

		2014	2015	2016	2017	2015		2016				2017				2018
		FY				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	-0.9	0.8	0.6	0.9	0.5	-0.4	0.5	0.0	0.3	0.0	0.2	0.2	0.3	0.3	0.3
	Q-o-q % ch p.a.	--	--	--	--	2.0	-1.7	2.0	0.2	1.3	0.1	0.7	0.8	1.0	1.2	1.1
Domestic demand	Q-o-q % ch	-1.5	0.7	0.6	1.0	0.3	-0.5	0.4	0.3	0.1	0.1	0.2	0.3	0.3	0.3	0.3
Private sector demand	Q-o-q % ch	-1.9	0.8	0.2	0.6	0.4	-0.6	0.2	0.2	0.0	-0.1	0.2	0.2	0.2	0.2	0.3
Personal consumption	Q-o-q % ch	-2.9	-0.2	0.7	1.0	0.5	-0.8	0.7	0.2	0.4	-0.1	0.3	0.3	0.3	0.3	0.3
Housing investment	Q-o-q % ch	-11.7	2.4	5.1	-3.7	1.1	-0.5	-0.1	5.0	2.9	-2.3	-3.4	-0.8	0.3	-0.3	0.4
Capital investment	Q-o-q % ch	0.1	2.1	0.5	1.7	0.7	1.2	-0.7	-0.4	0.5	0.3	0.4	0.4	0.5	0.5	0.4
Inventory investment	Q-o-q contribution, % pt	0.6	0.3	-0.5	-0.2	-0.1	-0.2	-0.1	-0.0	-0.4	0.0	0.0	-0.1	-0.1	-0.0	0.0
Public sector demand	Q-o-q % ch	-0.3	0.7	1.9	1.9	-0.1	0.0	0.8	0.6	0.4	0.4	0.3	0.5	0.6	0.6	0.4
Government consumption	Q-o-q % ch	0.1	1.6	1.6	1.7	0.2	0.8	0.9	0.2	0.2	0.2	0.2	0.5	0.6	0.5	0.5
Public investment	Q-o-q % ch	-2.6	-2.7	3.0	3.1	-1.9	-3.3	0.1	2.3	1.6	1.6	0.8	0.5	0.6	1.0	-0.1
External demand	Q-o-q contribution, % pt	0.6	0.1	0.0	-0.1	0.2	0.1	0.1	-0.3	0.2	-0.0	-0.0	-0.1	-0.0	-0.0	-0.1
Exports	Q-o-q % ch	7.9	0.4	0.3	2.1	2.6	-0.9	0.1	-1.5	1.6	0.6	0.5	0.4	0.4	0.5	0.4
Imports	Q-o-q % ch	3.4	-0.0	0.2	2.8	1.2	-1.1	-0.5	-0.1	0.4	0.8	0.8	0.7	0.7	0.7	0.7
GDP (nominal)	Q-o-q % ch	1.5	2.2	1.1	1.5	0.6	-0.3	0.8	0.2	0.6	-0.4	-0.3	0.9	1.1	0.1	-0.2
GDP deflator	Y-o-y % ch	2.4	1.4	0.4	0.6	1.8	1.5	0.9	0.8	0.9	0.4	-0.3	0.2	0.7	0.8	0.9
Domestic demand deflator	Y-o-y % ch	2.1	-0.2	-0.3	0.8	-0.1	-0.2	-0.5	-0.6	-0.5	-0.2	0.1	0.4	0.7	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: The y-o-y change of core CPI will stay around zero in the second half of 2016, and around 1% in FY2017

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

		2014	2015	2016	2017	2015		2016				2017				2018
		FY				Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
Industrial production	Q-o-q % ch	-0.5	-1.0	0.6	2.6	-1.0	0.1	-1.0	0.2	1.2	0.9	0.5	0.6	0.5	0.5	0.7
Ordinary profits	Y-o-y % ch	5.1	3.5	-4.2	5.6	8.5	-3.1	-9.6	-6.9	-2.3	-3.8	-3.1	0.9	2.7	6.6	12.7
Nominal compensation of employees	Y-o-y % ch	1.9	1.7	1.8	1.7	1.7	1.9	2.5	1.9	1.6	1.7	1.5	1.4	1.7	1.8	1.7
Unemployment rate	%	3.5	3.3	3.2	3.1	3.4	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	3.0
New housing starts	P.a., 10,000 units	88.0	92.1	96.1	90.7	91.7	86.8	94.7	100.5	97.9	95.0	91.0	89.7	90.5	91.4	91.2
Current account balance	P.a., JPY tril	8.7	18.0	18.3	19.0	15.9	19.2	19.9	18.8	17.1	15.5	16.2	16.0	15.7	15.7	16.9
Domestic corporate goods prices	Y-o-y % ch	2.7	-3.2	-2.7	1.1	-3.7	-3.7	-3.4	-4.3	-3.6	-2.3	-0.4	0.6	1.1	1.5	1.4
Consumer prices (ex fresh food)	Y-o-y % ch	2.8	-0.0	-0.0	0.9	-0.2	-0.1	-0.1	-0.4	-0.2	-0.0	0.5	0.8	0.9	1.1	1.1
Consumer prices (ex fresh food, ex consumption tax)	Y-o-y % ch	0.7	-0.0	-0.0	0.9	-0.2	-0.1	-0.1	-0.4	-0.2	-0.0	0.5	0.8	0.9	1.1	1.1
Consumer prices (ex food (ex alcohol) and energy, ex consumption tax)	Y-o-y % ch	0.5	0.5	0.3	0.6	0.5	0.6	0.6	0.5	0.4	0.3	0.3	0.5	0.7	0.6	0.7
Uncollateralized overnight call rate	%	0.02	0.00	-0.05	-0.05	0.01	0.04	-0.00	-0.06	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Yield on newly-issued 10-yr JGBs	%	0.48	0.30	-0.12	-0.09	0.39	0.31	0.06	-0.12	-0.19	-0.15	-0.10	-0.10	-0.10	-0.10	-0.05
Nikkei average	JPY	16,273	18,841	16,100	16,800	19,412	19,053	16,849	16,408	16,300	15,800	15,800	16,100	16,600	16,900	17,500
Exchange rate	JPY/USD	110	120	103	105	122	121	115	108	103	100	101	103	105	106	107
Crude oil price (WTI nearest term contract)	USD/bbl	81	45	44	45	47	42	34	46	42	45	44	44	45	46	46

Note: 1. Figures in the shaded areas are forecasts. The readings above may differ from public releases because the rates of change are calculated based upon actual results.
2. Ordinary profits are based upon the *Financial Statements Statistics of Corporations by Industry (all industries) (ex. Finance & insurance, and production, transmission and distribution of electricity)*
3. Quarterly data on the unemployment rate, new housing starts and current account balance are seasonally-adjusted
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 10yr JGBs refers to the average of the end-of-month rates during the relevant term, and all others are averages during the relevant terms.

Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*, Ministry of Economy, Trade and Industry, *Indices of Industrial Production*, Ministry of Finance, Financial Statements Statistics of Corporations by Industry, Quarterly, Ministry of Internal Affairs and Communications, *Labour Force Survey, Consumer Price Index*, Ministry of Land, Infrastructure, Transport, and Tourism, *Current Survey on Construction Statistics*, Bank of Japan, *Balance of Payments, Corporate Goods Price Index, Financial and Economic Statistics Monthly, Foreign Exchange Rates*, Japan Bond Trading Co., Ltd. *Latest Daily JGB Rates*, Nikkei Inc. and Bloomberg.

III. The Asian Economies

Sluggish recovery due to balance sheet adjustments

The Asian Economies: ongoing lack of self-sustained recovery

- In the Apr-Jun quarter of 2016, China's real GDP growth rate stood at +6.7% y-o-y, flattening out from the previous quarter and avoiding a further downturn. Although investment has slowed, particularly in the manufacturing sector, policy measures are underpinning the economy.

- In addition to the downward pressure on medium-term investment due to the progress in deleveraging, investment has been temporarily curbed by the recent rise of policy uncertainty. While the prospect of a downturn like the Apr-Jun quarter is fading, investment will be weak throughout 2017. Consumer spending is also slowing slightly due to the weak employment and income conditions. Exports are expected to recover throughout 2017. Although policy measures should keep the economy from stalling, we expect an ongoing slowdown.

- Asian economies (ex. China) were generally weak in the Apr-Jun quarter despite a temporary spike in the growth rate for some countries.

- We expect the economic slowdown to continue in 2016. Although there are signs of a slight recovery in exports for NIEs countries and regions, exports remain weak for Asia as a whole given the ongoing economic downturn in Japan, the US and Europe.

- A significant acceleration of the economy is unlikely during 2017. Although the European economy is slowing because of the Brexit issue, exports are expected to pick up due to the upturn of the US economy. That said, the pace of recovery will most likely be tepid. The scope for support from fiscal and monetary policy is contracting due the prospective resumption of interest rate hikes.

The acceleration of growth for some countries is due largely to temporary factors. Weakness continues

- Even though the pace of growth of the Asian economies picked up slightly in the Apr-Jun quarter of 2016, this was due largely to temporary factors.
  - The South Korean economy picked up slightly due to the fading impact of the fall of consumer spending in the Jan-Mar quarter. Indonesia brought forward its budget, resulting in a slight acceleration in growth. While Vietnam's economic growth accelerated slightly, growth has fallen substantially short of the government target (+6.7%) due to the drought and spread of salt-air damage.
  - However, sluggish private sector investment in China has been underpinned by fiscal policy, and further falls have been avoided. Consumer spending has slumped in Taiwan and Malaysia due to deterioration in employment and income conditions and slowed from the previous quarter.
- Despite a slight recovery in exports for China, South Korea and Taiwan attributed to the recovery in IT demand, exports remain at low levels for Asia as a whole.

[Growth rate for real GDP]

(Q-o-q % change annualized)

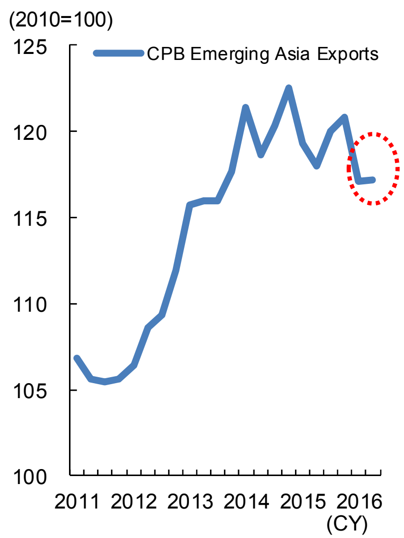
	2015				2016	
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun
South Korea	3.2	1.7	5.0	2.7	2.1	2.9
Taiwan	2.7	- 6.2	- 0.6	0.8	3.1	0.2
Hong Kong	2.9	2.5	1.9	0.8	- 2.1	6.5
Singapore	0.2	- 1.6	2.3	6.2	0.1	0.3
Thailand	1.8	2.1	3.6	3.4	4.0	3.2
Malaysia	5.7	3.8	3.5	5.0	4.2	2.7
The Philippines	2.9	8.9	5.7	8.8	4.5	N.A.

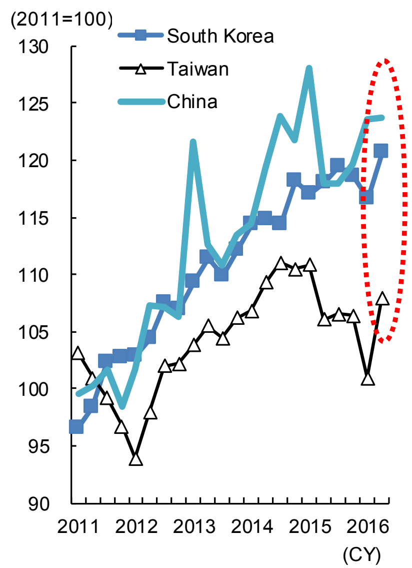
(y-o-y % change)

China	7.0	7.0	6.9	6.8	6.7	6.7
Indonesia	4.7	4.7	4.7	5.0	4.9	5.2
Vietnam	6.1	6.5	6.9	7.0	5.5	5.6
India	6.7	7.5	7.6	7.2	7.9	N.A.

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

[Asian export volumes]





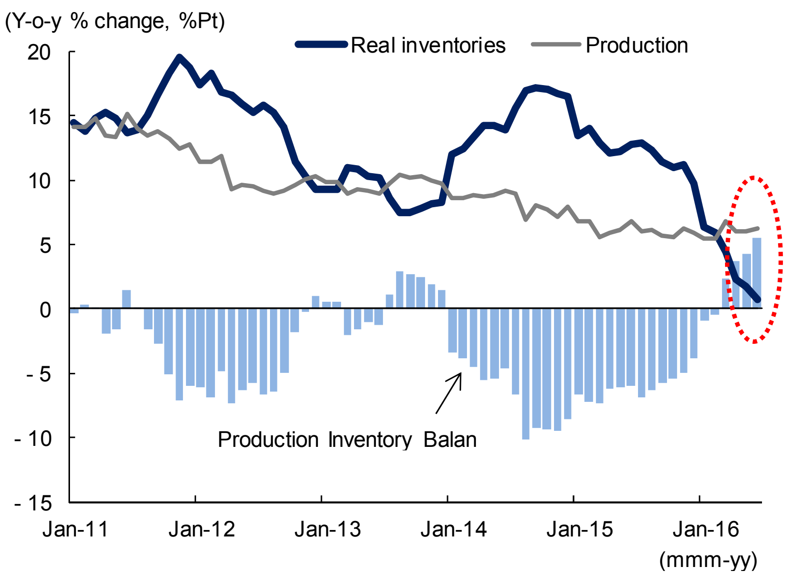
Note: The most recent data for CPB is the April to May average. Export volumes for South Korea, Taiwan and China are seasonally-adjusted by MHRI

Source: Made by MHRI based upon CPB World Trade Monitor, CEIC Data

The pace of export recovery will be moderate. Acceleration in the growth rate is unlikely until 2017

- We expect the slowdown in Asian economies to continue in 2016.
  - We expect exports to remain sluggish given the slowdown in the US and European economies. Even so, downward pressure on inventory adjustments has eased with improvement in the production stock balance (y-o-y production – y-o-y inventory) to positive territory in China, and other Asian countries have avoided a further fall of exports to China.
- A significant acceleration of the Asian economies is unlikely in 2017.
  - Although a slight rise of global economic growth centering around the US suggests an upturn of exports, the pace of recovery is still tepid.
  - In the ASEAN5 countries such as Indonesia where domestic demand is firm, the propensity to invest is stable and remains comparatively steady.

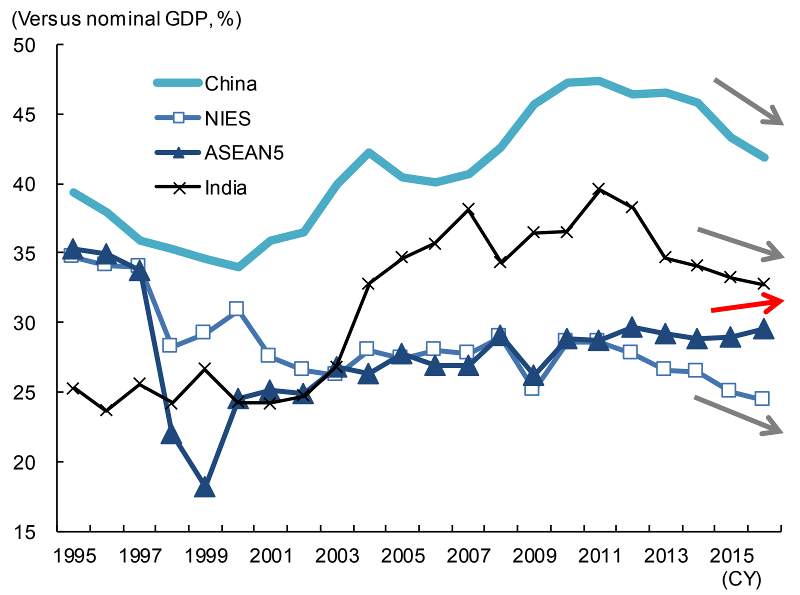
[China's production inventory balance]



Note: The production inventory balance = y-o-y production – y-o-y inventory. Inventory is the real value of PPP.

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

[Propensity to invest in Asian countries and regions]



Note: NIES and ASEAN5 are synthesized by the PPP base GDP. 2016 is the IMF forecast

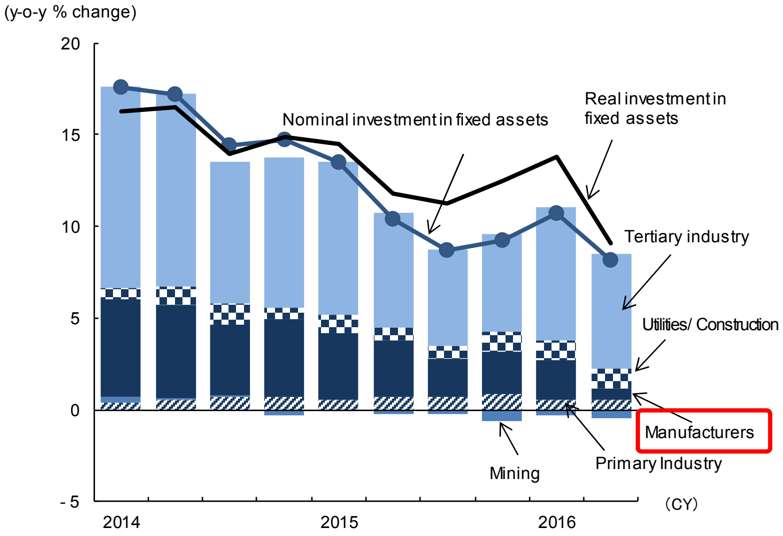
Source: Made by MHRI based upon IMF

MIZUHO

Sluggish investment, particularly in China's manufacturing sector, stems from deleveraging by private companies

- Recent investment has slowed, particularly in the manufacturing sector.
  - Investment in fixed assets slowed to +8.2% y-o-y in the Apr-Jun quarter of 2016. The real growth has also fallen to single digits for the first time since statistics have been recorded.
  - Given the ongoing downturn in the mining industry (coal, etc.), the substantial slowdown of investment in the manufacturing sector has weighed on total investment.
    - ✓ A breakdown of the manufacturing sector indicates a decline in the debt ratio of companies where investment in fixed assets has recently fallen apart from the automotive and non-ferrous metal sector, which have a high proportion of state-owned companies. This suggests that the progress of deleveraging by private companies may be dampening investment.

[Breakdown of investment in fixed assets]



Note: The level of contribution is the breakdown of the nominal figure. Each scale for total investment and investment by industry are adjusted for the published year-on-year figures so the total level of contribution is not the same as the year-on-year figure for total investment in fixed assets.

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

[Manufacturing sectors that had lower (nominal) investment in fixed assets, and the debt ratio and the ratio of state-owned companies]

	Breakdown of manufacturer's contribution to investment in fixed assets 16/Q1→16/Q2 (%Pt)	Change in debt ratio 15/Q1→16/Q1 (%Pt)	Proportion of state-owned companies 2014 (%)
Manufacturers	- 4.6		
Automobiles	- 1.5	0.5	43.6
General Machinery	- 0.7	- 1.6	10.6
Specialist Machinery	- 0.7	- 0.9	14.2
Computers, telecommunications, and electronic products	- 0.6	- 1.4	8.5
Non-metallic products	- 0.4	- 0.4	8.7
Rubber & plastics	- 0.4	- 1.7	4.2
Electrical appliances	- 0.3	- 0.2	8.3
Chemicals	- 0.3	- 1.0	16.0
Wood	- 0.3	- 0.6	1.6
Clothing & accessories	- 0.2	- 0.5	0.9
Alocohol & beverages	- 0.2	- 0.8	16.0
Non-ferrrous metals	- 0.2	1.4	32.5
Printing/ Media	- 0.2	- 1.3	7.5

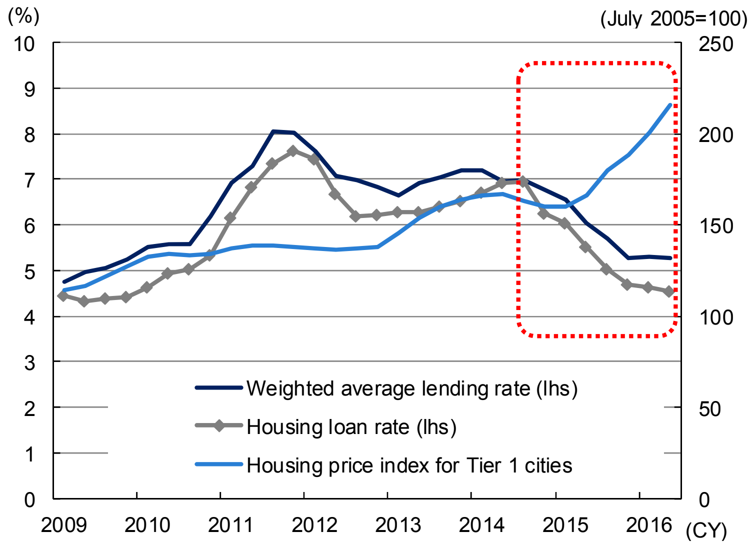
Note: The manufacturing sectors with a more than 0.2%pt decline in the contribution from Q1 to Q2 are outlined. The ratio of state-owned companies is the ratio to revenue (Sales) in its principal area of business.

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

Growing reliance on fiscal policy while concerns about monetary easing (asset bubble) linger

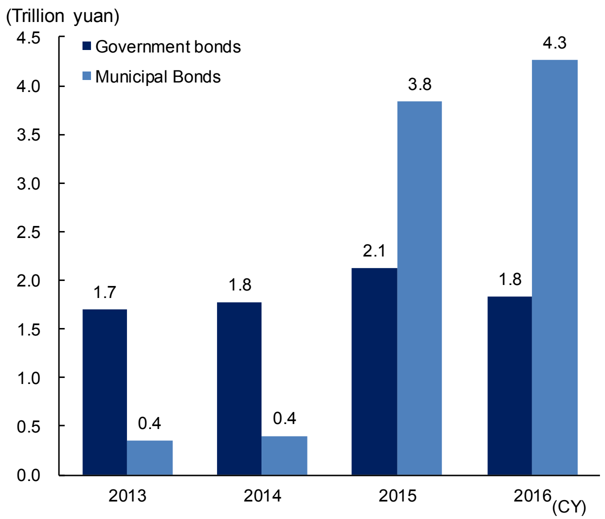
- ❑ There is a cautious stance about cutting interest rates and reducing the reserve deposit ratio. We expect the accommodative environment to be maintained by targeted supply of funds.
  - Chinese authorities have become increasingly concerned about an asset bubble and an outflow of funds, and are taking a cautious stance towards cutting interest rates and reducing the reserve deposit ratio.
  - The supply of funds targeted at private sector companies and small and medium-sized companies could be increased.
- ❑ We expect increased reliance on fiscal policy.
  - The Ministry of Finance of the People's Republic of China has requested acceleration in the pace of executing the budget. Furthermore, the government has also announced an increase in leverage to support deleveraging by companies.
  - Regional government bond issuance had already surpassed the level for 2015 by August 2016. The pace of government bond issuance has also picked up.

[Loan interest rates and housing prices]



Source: Made by MHRI based upon the People's Bank of China, National Bureau of Statistics of China

[Issuance of government bonds and regional government bonds]



Note: Total amounts issued from January to August 4, 2016
Source: Made by MHRI based upon Wind

Asia: forecasts on growth rate of +6% for both 2016 and 2017 are unchanged

- While the Asian economies should maintain growth at +6%, they still fall short of a self-sustained recovery.
  - China is following a mild slowdown as it proceeds with the adjustment of excess production capacity while avoiding a downturn by support from policy measures.
  - The NIEs are still growing at a tepid rate of +2% due to the weak economic recoveries of major export destinations.
  - Within the ASEAN5, there are countries demonstrating firm domestic demand, but growth will remain below +5% due to sluggish export growth.
  - In India, the impact of the substantial hike in public servant wages 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: June Forecast)	2017 (Previous: June Forecast)
Asia	7.4	6.4	6.4	6.4	6.1	6.0	6.0	6.0	6.0
China	9.5	7.9	7.8	7.3	6.9	6.6	6.5	6.6	6.5
NIEs	4.1	2.3	2.9	3.4	1.9	1.8	2.2	1.8	2.2
South Korea	3.7	2.3	2.9	3.3	2.6	2.5	2.6	2.4	2.5
Taiwan	3.8	2.1	2.2	3.9	0.6	0.9	1.8	1.1	1.9
Hong Kong	4.8	1.7	3.1	2.7	2.4	1.5	1.5	1.5	1.8
Singapore	6.2	3.7	4.7	3.3	2.0	1.7	2.3	1.8	2.3
ASEAN5	4.7	6.2	5.0	4.6	4.8	4.7	4.6	4.6	4.5
Indonesia	6.2	6.0	5.6	5.0	4.8	5.0	4.9	4.9	4.9
Thailand	0.8	7.2	2.7	0.8	2.8	3.2	2.8	2.8	2.7
Malaysia	5.3	5.5	4.7	6.0	5.0	3.8	4.3	3.7	4.3
The Philippines	3.7	6.7	7.1	6.2	5.9	6.1	5.5	6.1	5.5
Vietnam	6.2	5.3	5.4	6.0	6.7	5.8	6.0	6.0	5.7
India	6.6	5.6	6.3	7.0	7.2	7.7	7.6	7.7	7.7
Australia	2.6	3.6	2.0	2.7	2.5	2.7	2.5	2.7	2.5
(Reference) Asia ex. China and India	4.5	4.6	4.2	4.1	3.6	3.6	3.7	3.5	3.7
(Reference) Asia ex. China	5.4	5.0	5.1	5.4	5.2	5.4	5.5	5.4	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 each country's statistics, CEIC Data and IMF