

# **AMRO Annual Consultation Report**

## **Japan - 2017**

**The ASEAN+3 Macroeconomic Research Office (AMRO)**

April 2018

### Acknowledgements

1. This Annual Consultation Report on Japan has been prepared in accordance with the functions of AMRO to monitor, assess and report its members' macroeconomic status and financial soundness and to identify the relevant risks and vulnerabilities, and assist them in the timely formulation of policy to mitigate such risks (Article 3(a) and (b) of AMRO Agreement).
2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Japan from 31 October to 10 November 2017 (Article 5 (b) of AMRO Agreement). The AMRO Mission team was headed by Dr Jae Young Lee, Group Head and Lead Economist. Team members include Dr Hyunjung Joseph Kim (Senior Economist), Mr Yoichi Kadogawa (Specialist), Dr Jinho Choi (Specialist), Mr Suan Yong Foo (Senior Expert), Mr Xinke Tang (Researcher), and Ms Mya Hnin Wai Pwint (Associate). AMRO Director Dr Junhong Chang and Chief Economist Dr Hoe Ee Khor also participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Japan for 2017 was prepared by Dr Jae Young Lee, Dr Hyunjung Joseph Kim, Mr Yoichi Kadogawa, Dr Jinho Choi, Mr Suan Yong Foo, and Mr Xinke Tang; peer reviewed by Dr Sumio Ishikawa (Group Head and Lead Economist) and Dr Wenlong Li (Senior Economist); and approved by Dr Hoe Ee Khor, AMRO Chief Economist.
3. The analysis in this Report is based on information available up to 31 January 2018.
4. By making any designation of or reference to a particular territory or geographical area, or by using the term "member" or "country" in this Report, AMRO does not intend to make any judgements as to the legal or other status of any territory or area.
5. No part of this material may be disclosed unless so approved under the AMRO Agreement.
6. On behalf of AMRO, the Mission team wishes to thank the Japan authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

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## Table of Contents

<b>Executive Summary .....</b>	<b>4</b>
<b>A. Recent Developments and Outlook.....</b>	<b>7</b>
A.1 Real Sector and Inflation.....	7
A.2 Monetary and Financial Sector .....	9
A.3 Fiscal Policy.....	11
A.4 External Sector .....	12
<b>B. Risks, Vulnerabilities and Challenges .....</b>	<b>13</b>
B.1 Near-term Risks to the Macro Outlook .....	13
B.2 Risks to Medium-term Outlook and Challenges .....	16
B.3 Outward Spillovers to the ASEAN+3 Region.....	19
<b>C. Policy Recommendations .....</b>	<b>21</b>
C.1 More Balanced Economic Policy Framework.....	21
C.2 Restoring Fiscal Sustainability .....	22
C.3 Calibration of the Accommodative Monetary Policy .....	27
C.4 Securing Financial Stability and Addressing Long-term Financial Challenges .....	28
C.5 Efforts to Tackle Demographic Challenges and Structural Reforms.....	29
<b>Boxes</b>	
Box A. China’s economic slowdown or trade protectionism by the U.S. may have small direct impacts on Japan, while their indirect impacts could be larger .....	14
Box B. Challenges in the financial market under the ‘QQE with YCC’ framework.....	16
Box C. Under extended monetary easing, outward investments by Japanese banks and corporates to ASEAN remain substantial .....	19
Box D. Japan’s long-term debt sustainability in the context of ageing population .....	24
<b>Annexes: Selected Issues .....</b>	<b>31</b>
S1. Drivers of Capital Flows to and from Japan in Recent Years.....	31
S2. Labor Market Reforms, Growth and Productivity .....	38
<b>Appendices.....</b>	<b>46</b>
Appendix 1. Selected Figures for Major Economic Indicators .....	46
Appendix 2. Selected Economic Indicators and Projections.....	50
Appendix 3. Data Adequacy for Surveillance Purposes: A Preliminary Assessment..	51
Appendix 4. The U.S. Anti-dumping Investigations on Imports from China .....	52

## Executive Summary

*Since the launch of Abenomics in 2013, Japan's economy has achieved strong growth with low positive inflation. In the near-term, the economy is expected to continue its strong above-potential growth. Underlying CPI inflation has turned positive and fiscal balance has steadily improved during this period. In the medium term, progress has also been made in terms of enhancing potential growth. Labor force participation has increased substantially and firms have started to increase business investment, partly aimed at promoting labor productivity. However, significant challenges remain, in light of the ageing and declining population. Given the robust growth momentum in the near-term, boosted by strong tail wind from faster than expected global growth, further macroeconomic stimulus is not needed. Instead, economic policy should focus on productivity-enhancing investment and promote structural efforts in fiscal, labor, and banking sector. Macroeconomic policy should focus on stability issue while closely monitoring possible spillovers from external shocks and financial market vulnerabilities.*

**Japan's economy has continued to grow strongly above its potential, supported by external demand and macroeconomic policies.** Private consumption has gradually trended up with the steady increase in household income. Public investment was boosted by the implementation of a stimulus package. Business investment remains on a moderate upward trend supported by record-high corporate profits and retained earnings while residential investment has been growing at a moderate pace. Exports have picked up significantly. The labor market has become very tight with the steady increase in employment although the overall wage growth remains low. The unemployment rate fell to 2.8 percent and the jobs-to-applicant ratio rose to a record high level of 1.59 in December 2017.

**Consumer price inflation, however, has remained stubbornly low, falling short of the 2.0 percent price stability target of the Bank of Japan (BOJ).** Rising global commodity prices have gradually pushed CPI (less fresh food) inflation up to 0.9 percent in December 2017. However, when energy-related items are excluded, inflation has stayed below 0.5 percent since August 2016. Medium-term inflation expectations have hovered around 1.0 percent despite the positive output gap.

**The external position has been stable with a sizable current account surplus of more than 3.5 percent of GDP.** Income inflows from large overseas investment assets have continued to be robust amid solid global economic growth. Goods exports (JPY terms) have picked up rapidly, which has led to trade surpluses for nine consecutive quarters. Capital outflows have continued, led by outward direct investments. Japanese investors have continued to purchase foreign bonds and equities, although they repatriated their investment on U.S. bonds in 2017 amid concerns over the rise in U.S. interest rates.

**The financial condition remains highly accommodative and financial institutions also remain sound.** Bank lending has picked up steadily at a slightly accelerated pace of around 3.0 percent and the credit cycle is assessed to be expansionary. Financial markets have been broadly stable with low interest rates and yields as well as steadily rising share prices. Banks remain sound in general with sufficient capital buffers and a low non-performing loan (NPL) ratio.

**Macroeconomic policies continue to be expansionary.** Fiscal policy has been expansionary under Abenomics with its emphasis on boosting growth. Monetary policy has

continued its accommodative stance under the 'QQE with yield curve control (YCC)' framework with inflation-overshooting commitment. The BOJ's open market operations and its communication with the market to implement the new framework have been seen as broadly effective so far.

**Looking forward, GDP growth is projected to be at around 1.8 percent in FY2017, before moderating to 1.3 percent in FY2018.** CPI (less fresh food) inflation is expected to be around 0.7-0.8 percent in FY2017-18 with modest increase in energy prices.

**Risks to the near-term outlook is mostly from external factors and tilted to the downside.** Downside risks include geopolitical shocks, trade protectionism or an economic slowdown among major trading partners. Faster than expected monetary tightening or normalization by the Fed and the ECB could lead to higher volatility in financial markets and uncertainty in the growth outlook.

**Medium-term risks are mostly to the downside.** The emphasis on growth in macroeconomic policies over a prolonged period of time could erode fiscal discipline leading to a build-up of financial vulnerabilities. The BOJ's massive purchases of Japanese Government Bonds (JGBs) have affected the liquidity conditions in the JGB market in some aspects. **Longer-term challenges remain significant.** Downward pressures on regional bank profitability due to tight interest margins and the consequent build-up of risky portfolios, combined with demographic factors, will put stress on their balance sheets. Efforts to lift potential growth and raise inflation are important to strengthen medium- to long-term expectations for economic growth and inflation of households and businesses.

**Fiscal policy should refocus on restoring fiscal sustainability.** Given the above-potential GDP growth rate, the fiscal policy stance should be normalized in order to build up policy space against potential shocks. Fiscal spending needs to be prioritized to growth-promoting structural reforms and policies to address structural challenges such as support of old-age population. When formulating the new fiscal consolidation plan, targets should be more credible over the medium-term based on an analysis of long-term trends in demographics and spending needs. In this plan, the 2019 consumption tax hike should be implemented as scheduled to reduce the fiscal deficit while taking into consideration the need for further tax measures. Expenditure restructuring, particularly towards medical and long-term care spending, should be pushed further.

**Monetary policy should remain accommodative for now to allow more time for the virtuous cycle—from tight labor market and the positive output gap into higher wages and prices—to work.** Given the potential side effects of an extended period of accommodative monetary policy, the 'QQE with YCC' framework may need to be recalibrated during this period.

**Financial policies should address the low profitability of regional banks and ensure financial market stability.** Close macro- and micro-prudential monitoring of potential risks from financial imbalances should be continued. Close engagement with regional financial institutions is needed by encouraging them to diversify their business strategy and to consider consolidation with other financial institutions when appropriate. The liquidity condition in the JGB market should continue to be monitored carefully and implementing offsetting liquidity measures in a timely manner is important.

**Efforts to tackle demographic challenges and structural reforms to lift potential growth should be at the top of the policy agenda.** The government initiative of Work Style Reform is commendable and needs to be supplemented by specific measures to further increase female participation rate as well as productivity of workers. Continued efforts to utilize more foreign labor should be encouraged. Policies to promote productivity-enhancing investment and R&D, deregulation, and targeted investment in the agriculture and tourism sectors, are needed. Continuous efforts to broaden the market are recommended through steady progress in key trade negotiations.

## A. Recent Developments and Outlook

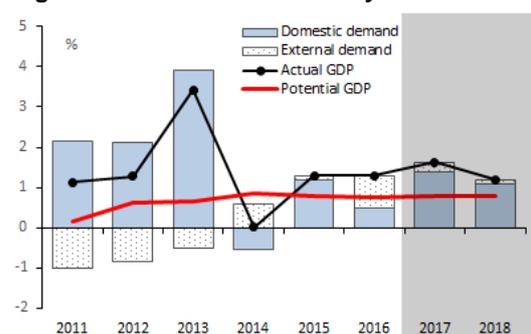
### A.1 Real Sector and Inflation

1. **Japan's economy has continued to grow strongly above its potential, supported by external demand and macroeconomic policies.** GDP grew 1.22 percent annually on average during FY2012-16 and the yoy growth accelerated to 2.2 percent annualized for the first half of FY2017 ending September 2017. These growth numbers are robust and high compared to the potential growth rate, which is estimated to be about 0.8-1.0 percent. Private consumption has been gradually picking up with the steady increase in household income. Public investment was boosted by the implementation of a stimulus package for FY2016-17. Meanwhile, business investment remains on a moderate upward trend supported by record-high corporate profits and retained earnings while residential investment has been growing at a moderate pace. Additionally, exports have picked up significantly on the back of a broad-based recovery in the global economy.

2. **In the near term, the rapid growth trend is likely to continue as the GDP growth rate is projected to be 1.8 percent in FY2017, before moderating to 1.3 percent in FY2018.** Private consumption is expected to grow modestly, largely due to steady improvement in both household disposable income and consumer sentiment, while consumption on durable goods gradually moderates. Business

investment, was helped somewhat by the ultra-low interest rate environment and the 2020 Olympic Games-related demand, is expected to peak in FY2017-18.<sup>1</sup> Private residential investment is projected to be modest as housing demand for rentals that was incentivized by inheritance tax savings<sup>2</sup> peaks out gradually, while last-minute demand before the scheduled consumption tax hike is likely to provide some support in H2 2018. Public investment, which was boosted substantially in FY2017, is likely to moderate in FY2018 without further stimulus. Over the medium term, GDP growth is expected to return to around its potential growth.

Figure 1. Economic Growth Beyond Potential



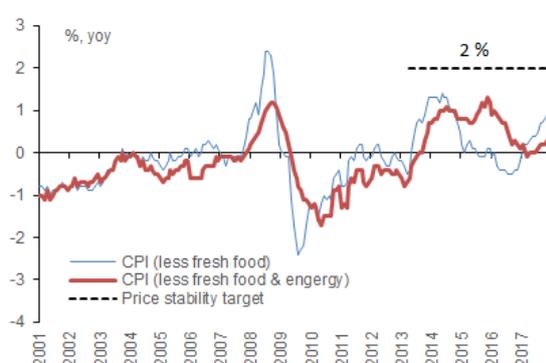
Note: Fiscal year. 2017-18 numbers projected by AMRO staff  
Source: Japan Cabinet Office, BOJ, AMRO staff projections

<sup>1</sup> A recent survey conducted in 2017 by the Development Bank of Japan ("Survey on planned capital spending") suggests a yoy decline in corporate expenditures on fixed capital in FY2018. Past results of this survey indicate that a difference between the yoy change in actual capital spending and planned spending is relatively small.

<sup>2</sup> In order to restore the asset redistribution function of inheritance tax, the government lowered the basic inheritance tax deduction from "JPY50 million plus JPY10 million times number of legal heirs" to "JPY30 million plus JPY6 million times number of legal heirs" and also raised the maximum tax rate from 50 percent to 55 percent, effective from January 2015.

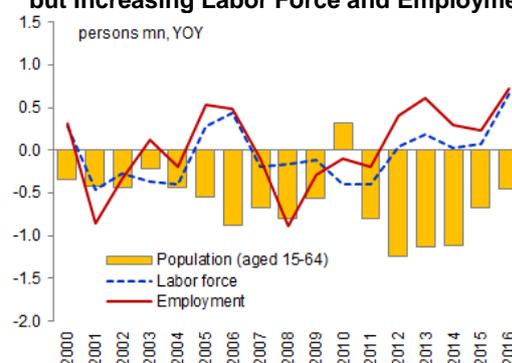
3. **Consumer price inflation has remained stubbornly low, falling short of the 2 percent price stability target of the BOJ.** Rising global commodity prices have gradually pushed CPI (less fresh food) inflation upward in early 2017, and it stood at 0.9 percent in December 2017. However, when energy-related items are excluded, inflation has been hovering below 0.5 percent for more than a year since August 2016. In line with the persistently low CPI inflation, medium-term inflation expectations have also hovered at around 1.0 percent despite the positive output gap.<sup>3</sup>
4. **Looking forward, CPI inflation (less fresh food) is expected to rise moderately by 0.7-0.8 percent in FY2017-18 as energy price increase is expected to be modest.** Pass-through of demand pressure from the tight labor market and positive output gap into consumer prices is expected to be gradual and take time. Similarly, the pass-through from higher import prices, a depreciated yen, and higher wages into higher inflation is also likely to be modest.<sup>4</sup> Over the medium term, consumer price inflation is expected to stay below the 2 percent target, due in large measure to a deeply embedded mindset of deflationary or low inflation expectation, which is widely viewed to be adaptive in behavior and difficult to change without a prolonged period of high inflation.

Figure 2. CPI inflation Well Below BOJ Target



Source: Ministry of Internal Affairs and Communication

Figure 3. Declining Working-age Population, but Increasing Labor Force and Employment



Source: Ministry of Health, Labor, and Welfare, AMRO staff calculations

5. **The labor market has become tighter with the steady increase in employment although overall wage growth remains low.** In the labor market, employment has been growing steadily together with increased labor participation of females and the elderly, despite a declining working-age population (Figure 3).<sup>5</sup> The unemployment rate fell to 2.8 percent and the jobs-to-applicant ratio has risen to a record level of 1.59 in December 2017. Thanks to higher employment, overall household income has been on a gradual increasing

<sup>3</sup> Refer to the various measures of mid-to long-term inflation expectations which are the most recent available data: Consensus Forecast (1.27%, 6 to 10 years ahead), Tankan corporate survey (1.1%, 5 years ahead, as of Dec 2017), Break-even (0.5%, 10 years).

<sup>4</sup> See Box 3: Recent Rise in Upward Pressure of Costs on Prices in "Outlook for Economic Activity and Prices (October 2017)" by the Bank of Japan.

<sup>5</sup> Foreign workers entering to Japan have gradually increased in recent years as well (see Selected Issue 2).

trend in real terms since mid-2015. Wage growth, however, has remained low, while the minimum wage has been increased by 3.0 percent in 2016 and 2017.

6. **Authorities' views.** The authorities broadly agreed with the profile and underlying drivers of AMRO's near-term macro projections. However, they provided slightly higher projections for both GDP growth and inflation. In particular, the BOJ was of the view that inflation will rise steadily as inflation expectations are projected to rise with the gradual shift by firms toward raising wages and prices as output gap continues to widen. For example, the inflation outlook by the policy board members of the BOJ shows a steady increase in CPI inflation toward 2 percent by around FY2019.<sup>6</sup>

## A.2 Monetary and Financial Sector

7. **Monetary policy has continued its accommodative stance under the 'QQE with YCC' framework with inflation-overshooting commitment.** BOJ's open market operations and its communication with the market to implement this new accommodative policy framework have been broadly effective so far since the central bank introduced the framework in September 2016. Meanwhile, the pace of JGB purchases by the BOJ in the secondary market has moderated somewhat in 2017.

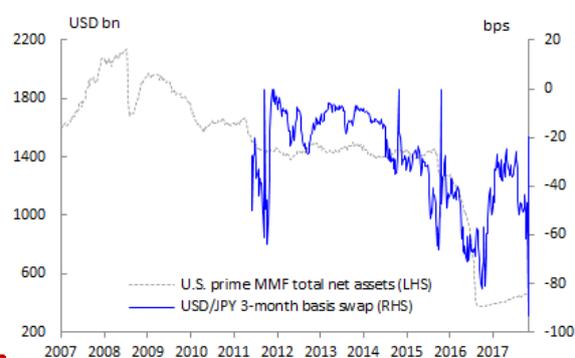
8. **The overall financial condition remains highly accommodative.** The

monetary base has continued to expand significantly and its outstanding stock has reached about 90 percent of GDP<sup>7</sup> as of December 2017. Financial institutions have diversified their balance sheets into risky assets including real estate loans and foreign securities, in search for yield.

Bank lending has been growing in recent

years, notably loans to small firms by regional banks. Given the favorable funding conditions, growth of corporate bond and commercial papers has been relatively high. Meanwhile, loan growth for real estate loans has moderated slightly as financial institutions have become more cautious after the rapid growth in recent years. On the other hand, mortgage loans to households continue to be robust in general. Overall bank lending has been picking up steadily at a slightly accelerated pace of around 3.0 percent

Figure 4. USD Hedging Cost to Japanese Banks



Source: Bloomberg

<sup>6</sup> In its FY2018 Budget proposal, the government projects GDP growth of 1.9 percent and 1.8 percent respectively for FY2017 and FY2018 respectively. In its quarterly "Outlook for Economic Activity and Prices (January 2018)", the BOJ's Monetary Policy Board members project 1.9 percent and 1.4 percent growth in FY2017 and FY2018 respectively. The members also project CPI inflation (for all items less fresh food) of 0.8 percent and 1.4 percent in FY2017 and FY2018 respectively. Note that these numbers indicate the medians of the Policy Board members' forecasts.

<sup>7</sup> This number was calculated by using the estimated GDP of 2017, as the fourth quarter of 2017 was not available at the time of calculation.

and the credit cycle is assessed to be expansionary. Meanwhile, the USD funding cost has been gradually rising amid the Fed's policy normalization process and the USD hedging cost, after peaking in late 2016, has eased significantly with improved USD supply by foreign investors and reduced demand by Japanese investors.

9. **The financial markets have been broadly stable.** The interbank funding market and capital markets have been stable with low interest rates. The yield curve for JGBs has been in line with the current guidelines for market operations under 'QQE with YCC', whereby the short-term policy interest rate is set at minus 0.1 percent and the target level of 10-year JGB yields is around zero percent. Meanwhile, the equity market has continued to be bullish amid a global rally and the JPY exchange rate against the USD has been stable in the range of around 105-115 since the beginning of 2017, despite several episodes of global risk aversion due to heightened geopolitical threats. The real effective exchange rate has fallen, compared to its historical average.

**Table 1. Financial Soundness Indicators (Selected)**

	2015Q1	2015Q3	2016Q1	2016Q3	2017Q1
Regulatory Capital to Risk-Weighted Assets	15.5	15.9	15.9	16.2	16.0
Regulatory Tier 1 Capital to Risk-Weighted Assets	12.5	12.9	13.3	13.4	13.5
Non-performing Loans Net of Provisions to Capital	12.8	12.2	11.5	10.9	9.0
Non-performing Loans to Total Gross Loans	1.6	1.5	1.5	1.4	1.3
Return on Assets	0.3	0.4	0.3	0.3	0.2
Return on Equity	6.3	8.9	6.9	8.3	5.1
Interest Margin to Gross Income	62.9	62.3	60.4	61.0	62.6
Non-interest Expenses to Gross Income	60.6	59.6	62.8	62.1	67.8
Liquid Assets to Total Assets (Liquid Asset Ratio)	26.9	27.6	27.2	27.1	28.7
Liquid Assets to Short Term Liabilities	48.1	49.4	49.1	48.2	49.7
Total Loans (non-interbank) to Customer Deposits	75.7	76.1	74.9	74.0	73.3
Corporate loan to total loan	37.0	37.1	36.8	37.4	36.6

Source: IMF FSI Dataset

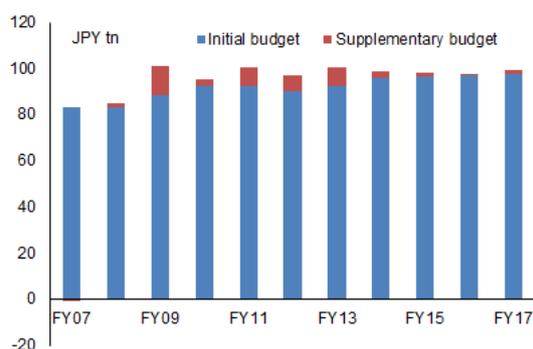
10. **Financial institutions remain sound in general.** Banks have sufficient capital buffers and the low NPL ratio has continued to decline (Table 1). Meanwhile, narrowed interest margins in an ultra-low interest rate environment have been putting downward pressures on the profitability of the banking sector, especially regional banks dependent on the domestic lending business.<sup>8</sup> Outward portfolio investment by institutional investors including life insurance companies and regional banks increased significantly in 2016, although it moderated somewhat in 2017.

<sup>8</sup> In addition to low interest income, other structural problems were also responsible for the low profitability of regional banks. These include tight competition with a population decline in regional areas, persistently low non-interest rate revenue such as fees, and low labor productivity compared to its advanced economy peers (see BOJ Financial System Report, October 2017 for detailed assessment).

### A.3 Fiscal Policy

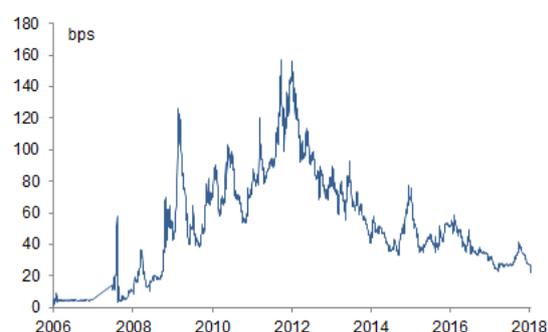
11. **Fiscal policy remains supportive of growth.** The expansionary fiscal policy, which was put in place after the GFC, continued under Abenomics with an emphasis on maintaining growth momentum. Recently, a sizable fiscal stimulus package for FY2016-17 (JPY13.5 trillion), including both central and local government expenditure, has been implemented. Sovereign CDS spread, which had increased sharply after the GFC, has declined as a trend since 2012 when Abenomics started.

Figure 5. Fiscal Stimuli Since the GFC



Source: Japan Ministry of Finance

Figure 6. Japan Sovereign CDS spread (5 year)



Source: Bloomberg

12. **The FY2018 budget proposed by the government aims to narrow both the primary deficit and bond issuance in terms of GDP, compared to the previous year's proposal (Table 2).** According to the proposed JPY97.7 trillion budget, government expenditure will be contained at 17.3 percent of GDP while the tax revenue will remain the same as the previous year at 10.5 percent. The primary deficit is expected to narrow to 1.8 percent of GDP. The FY2018 budget focuses on current priority agenda including the Supply System Innovation and the Human Resources Development Revolution, while further advancing expenditure reforms.
13. **Over the medium term, however, fiscal consolidation is expected to fall short of the government's FY2020 primary surplus target which will be revisited in 2018.** In September 2017, the government had indicated that some portion of the additional revenue from the consumption tax hike to 10 percent, would be used for childcare and education rather than debt reduction, while mentioning the difficulty of attaining the FY2020 primary surplus target. Meanwhile, AMRO's long-term fiscal sustainability analysis projects that the primary deficit as a percentage of GDP will be sustained while the public debt-to-GDP ratio will gradually increase toward FY2035 (see Box D).

**Table 2. Central Government Fiscal Operation: General Account (% of GDP)**

	(actual)	(actual)	(actual)	(actual)	(est.)	(Initial budget)	
	FY13	FY14	FY15	FY16	FY17	FY17	vs. FY18
<b>1. Revenue</b>	12.3	12.8	12.6	12.0	12.5	11.5	11.3
Tax and stamp revenue	9.3	10.4	10.5	10.3	10.5	10.5	10.5
Personal income tax	3.1	3.2	3.3	3.3	3.3	3.3	3.4
Corporate income tax	2.1	2.1	2.0	1.9	2.3	2.3	2.2
Consumption tax	2.1	3.1	3.3	3.2	3.1	3.1	3.1
Other revenues	3.1	2.4	2.1	1.7	1.9	1.0	0.9
<b>2. Expenditure</b>	19.8	19.1	18.4	18.1	18.1	17.7	17.3
National debt service	4.2	4.3	4.2	4.1	4.1	4.3	4.1
Local allocation of tax grants	3.5	3.3	3.1	2.8	2.8	2.8	2.7
Social security related	5.8	5.8	5.9	6.0	5.9	5.9	5.8
Education and science	1.2	1.1	1.0	1.0	1.0	1.0	1.0
Public works	1.6	1.4	1.2	1.2	1.3	1.1	1.0
Other expenditure	3.5	3.1	2.9	2.9	2.9	2.7	2.6
<b>3. Fiscal Balance (= 1-2)</b>	-7.4	-6.3	-5.8	-6.1	-5.6	-6.2	-6.0
Primary balance	-5.3	-3.1	-2.7	-2.7	-1.5	-2.0	-1.8
Bond issuance	8.6	7.4	6.5	7.1	6.5	6.2	6.0
Bond dependency	43.4	39.0	35.5	39.0	35.9	35.3	34.5
<b>4. Government Debt</b>	202	203	197	199	199	n.a	n.a
Long-term bond outstanding	147	149	151	154	160	156	156
Interest rate	1.2	1.1	1.1	1.0	n.a	n.a	n.a
Nominal GDP (JPY bn)	507	519	534	539	550	550	564
Real GDP growth rate (%)	2.6	-0.3	1.4	1.2	1.9	1.5	1.8

Note: "(est.)" for FY17 indicates the supplementary budget. Nominal GDP and Real GDP growth rate for FY17 and FY18 in the Initial Budget are based on "FY2018 Economic Outlook and Basic Stance for Economic and Fiscal Management" (Approved by the Cabinet on December 19, 2017).  
Source: Japan Ministry of Finance, Cabinet Office, Ministry of International Affairs and Communication

## A.4 External Sector

14. **The external position has been stable with a sizable current account surplus of more than 3.5 percent of GDP, supported by large income inflows and an increasing trade surplus, amid sustained capital outflows.** Income inflows from large overseas investment assets have continued to be robust amid solid global economic growth. Goods exports have picked up rapidly, both in JPY and volume terms, as export value grew 11.8 percent in 2017 from the previous year, the most since 2010. This has led to trade surpluses for nine consecutive quarters, mainly driven by transport equipment and semiconductor manufacturing equipment. The service trade deficit has continued to narrow, mainly due to the trend of an increasing number of inbound tourists, particularly from Asia. Meanwhile, capital outflows have continued, led by outward direct investments—Japanese investors continued to purchase foreign bonds and equities, although they temporarily repatriated some investment in U.S. bonds during the last quarter of 2017 amid concerns over the increase in U.S. interest rates. In addition, cross-border lending by Japanese banks continued to grow, particularly to the U.S., albeit at a slower pace.
15. **Looking forward, the current account surplus is projected to widen to slightly more than 4.0 percent of GDP in FY2017-18 and capital outflows to be robust.** Outward

direct investment is expected to be robust for the time being amid a broad-based recovery both in advanced and emerging economies, facilitated by active M&A activities and overseas expansion by Japanese firms. In our baseline scenario, U.S. interest rates are likely to increase gradually despite the extended period of growth and low unemployment, as inflation has been slow in picking up. Portfolio outflows are likely to continue in the near term amid a continued divergence of monetary policies between Japan and other advanced peers. Meanwhile, potential capital repatriation from Japan to the U.S. due to its corporate tax reform package passed in December 2017, is not likely to be significant.

## B. Risks, Vulnerabilities and Challenges

### B.1 Near-term Risks to the Macro Outlook

16. **Risks to the near-term outlook are mostly from external factors and tilted to the downside.** Although negative impacts from the shocks could be significant, their likelihood is relatively low. Most external shocks may dampen external demand.

- **U.S. trade policy in retreat from free trade.** Possible trade conflicts between the U.S. and China would indirectly affect Japan's exports to China, depending on the scale of the conflict. The concern, although somewhat muted as compared to that in early 2017, remains significant, as demonstrated by the recent imposition of protectionist measures by the U.S.<sup>9</sup> Although the trade protectionism by the U.S. may have small direct impacts on Japan, the indirect impact through China, which uses Japanese capital and intermediate goods to produce exports to the U.S. in a global value chain, could be substantial (see Box A).
- **Economic slowdown among major trading partners.** This includes a tail risk of possible disorderly economic adjustment in China, which can have substantial spillovers to the region with financial market volatility.
- **Faster than expected monetary tightening by the Fed and the ECB.** This could lead to higher volatility in JPY interest rates, the exchange rate, CPI inflation and stock prices, as well as heightened uncertainty in the growth outlook. In addition, higher global interest rates would increase foreign currency funding costs of financial institutions while they make negative impacts on foreign security holdings, particularly by insurance companies and regional banks, which have substantially increased foreign assets in their portfolios in recent years (see Box C).

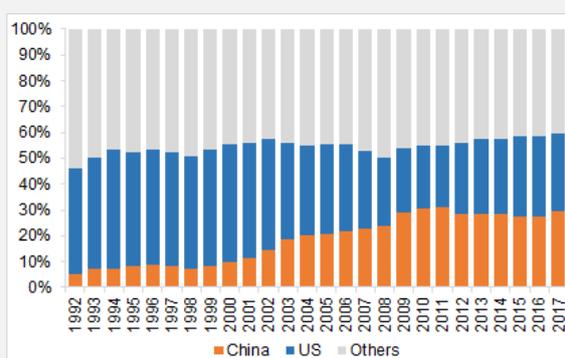
<sup>9</sup> In January 2018, the U.S. government imposed safeguard tariffs on imported large residential washing machines and imported solar cells and modules, in an attempt to protect domestic manufacturers. China is the world's biggest solar panel producer and Korea is the main exporter of residential washing machines to the U.S.

- **Geopolitical shocks.** As observed in 2017, heightened geopolitical tension may increase the volatility of the JPY exchange rate by unwinding of speculative positions, although such safe haven flows have been usually short-lived.
- **Upside risks.** Stronger than expected global growth, not only in Europe and emerging market economies, but also in the U.S., boosted by the large scale tax cuts in December 2017, or additional fiscal stimulus in FY2018 in Japan, might also have implications on the AMRO baseline scenario with regard to economic growth and inflation.

### Box A. China's economic slowdown or trade protectionism by the U.S. may have small direct impacts on Japan, while their indirect impacts could be larger

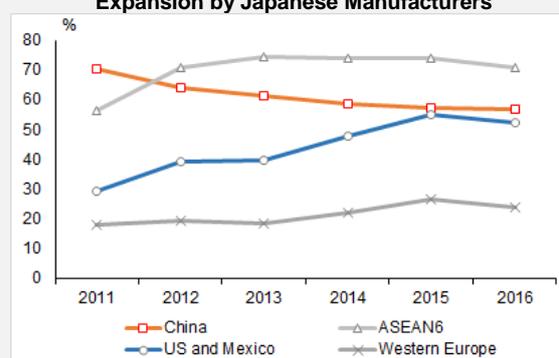
**China is an important trade and direct investment destination for Japan, but Japan's exposure to China has moderated in recent years.** China was the largest export destination for Japan during 2009-2012 but became the second largest after the U.S. after that (Figure A1). Japan's merchandise export to China accounts for 14.9 percent of its total exports in 2017. Meanwhile, imports from China have continued to increase rapidly, and in 2017, China became the country with which Japan has its largest trade deficit. Direct investment to China accounts for 6.2 percent of total outward direct investment from Japan, compared to 30.1 percent in the case of the U.S. Direct investment to China increased during 2008-2010 but declined steadily from 2012. Instead, direct investment to the U.S. has grown very rapidly from 2012. Japanese manufacturers are also starting to expand their overseas operations in the U.S., Mexico, and ASEAN while reducing them in China (Figure A2).

Figure A1. Japan's Exports: By Destination (% Share)



Source: OECD Trade in Value-Added (TVA) database, World Bank, AMRO staff calculations

Figure A2. The Target Country/ Region for Overseas Expansion by Japanese Manufacturers



Note: 'ASEAN6' refers to Singapore, Thailand, Malaysia, Indonesia, the Philippines and Vietnam. Number in the "Y-axis" indicates a percentage of firms among responded firms by answering that they intend to begin and expand overseas operations. Respondents are allowed to choose two answers.  
Source: JETRO, "Survey on the International Operations of Japanese Firms".

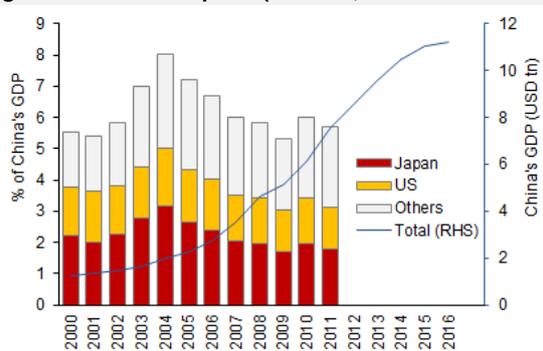
**Given China's importance in the global value chain, its economic slowdown or adjustment is expected to have a non-negligible impact on Japan's exports and economy.** As of 2011, Japan's value-added exports (goods and services) to China stood at USD223 billion, or about 3.6 percent of Japan's GDP. This amount was equivalent to 1.8 percent of China's GDP (see Figure A3). A rough calculation suggests that a 1 percent slowdown in China's GDP growth could lead to a reduction in Japan's value-added exports equivalent to about 0.07 percent of Japan's GDP, assuming the shares based on 2011 data remain valid.<sup>10</sup> This number looks small but it does not include indirect impact through a reduction of Japan's exports to other countries due to spillovers from China's economic slowdown to the rest of the world.

**Meanwhile, the impact from China's economic rebalancing on Japan's exports is rather uncertain.** The rebalancing toward a more service sector-led economy may mean higher demand for Japan's final products and lower demand for Japan's intermediate products. In value-added terms, Japan's export of

<sup>10</sup> Since Japan's domestic value-addition in total value-added exports to China was seen to be relatively high, about 70 percent in the case of 2011, China's economic slowdown would possibly lead to negative impact on GDP growth of Japan.

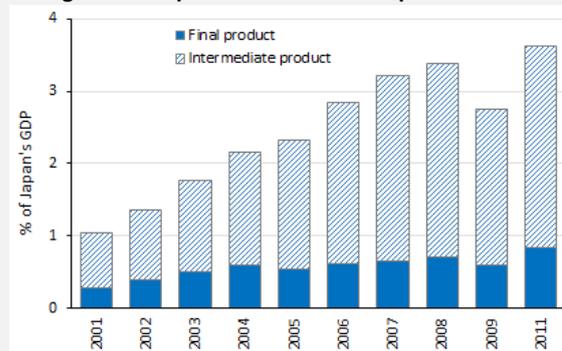
final products (goods and services) to China are small compared to its export of intermediate products (see Figure A.4). However, the actual outcome will depend on the elasticity of China's demand for Japan's final or intermediate products, reflecting the situation of global competition.<sup>11</sup>

**Figure A3. China's Imports (% Share, Value-added Basis)**



Source: OECD Trade in Value-Added (TVA) database, World Bank, AMRO staff calculations

**Figure A4. Japan's Value-added Exports to China**

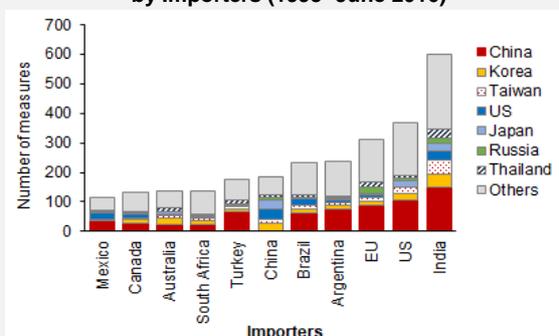


Source: OECD Trade in Value-Added (TVA) database, World Bank, AMRO staff calculations

**Trade frictions between the U.S. and China may affect Japan's exports through indirect spillovers.**

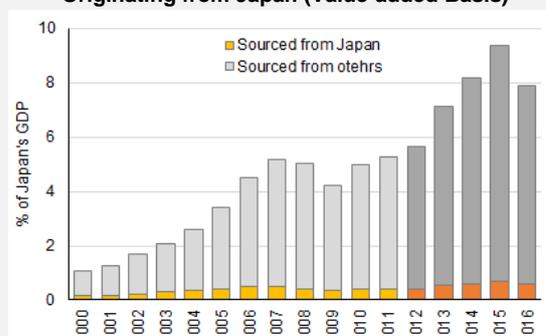
Trade tension between the U.S. and China is not viewed as being significant at the moment, so its direct impact will be limited although there is a risk for this kind of tension to affect Japan indirectly through trade with third countries. For instance, trade tension between the U.S. and China has been significant as shown in the large anti-dumping measures invoked by the U.S. during the 1995-2016 period (Figure A5). Notably, tensions have heightened recently under the Trump administration due to its stance on the unfairness of the existing global trade practices. According to the WTO Secretariat, in 2017, the U.S. launched 13 anti-dumping investigations on imported goods from China and imposed provisional and definitive duties on 18 patches of Chinese goods (see Appendix 4). Such protectionist measures can cause a reduction in China's exports which could, in turn, reduce China's demand for intermediate goods from Japan.

**Figure A5. Anti-dumping Measures Invoked by Importers (1995- June 2016)**



Note: Importers are countries/ regions with more than 100 cases (cumulative). Exporters are countries/ regions with more than 130 cases (cumulative). Source: WTO, JETRO, recreated by AMRO staff

**Figure A6. China's Exports to the U.S. Originating from Japan (Value-added Basis)**



Note: Figures from 2013 are projected by AMRO staff. Source: OECD Trade in Value-Added (TVA) database, World Bank, AMRO staff estimations

**This indirect impact from trade protectionist measures could be larger than expected.**

The portion sourced from Japan (in terms of value-added) stands at about 7.4 percent of China's exports to the U.S. (USD24 billion of exports out of a total of USD325 billion in 2011). Assuming this portion remains stable, Japan's value-added amount in China's exports to the U.S. in 2016 is estimated to be about USD29 billion, about 0.58 percent of Japan's GDP (Figure A6). This indirect impact of trade protectionism would depend on the countries targeted by the U.S., the duration of the protectionist measures, and how they are being implemented. Given Japan's position as a major intermediate goods exporter to the rest of the world, the negative impact of trade protectionism on Japan would be amplified even then it is not the direct target of the trade measures.

<sup>11</sup> The structure of Japan's goods exports to China has been relatively stable. Machinery & Electrical Machinery, Chemicals, Manufactured Goods and Transport Equipment together accounted for over 80.0 percent of total exports (in non-value-added terms), partly owing to the gradual upgrade of China's manufacturing in the global value chain.

## B.2 Risks to Medium-term Outlook and Challenges

### 17. The risks to medium-term outlook are mostly on the downside, and related to the sustainability of public finance and the stress in financial markets.

- **Weakening of fiscal discipline.** An emphasis on economic growth in macroeconomic policy over a prolonged period of time, could negatively affect fiscal discipline leading to a significant build-up of financial vulnerabilities. Considering the stress of a potential sovereign downgrade on the financial system and the expected spike up in social security-related spending from around FY2025 when all of the baby boomers will be aged 75 or older, maintaining the goal of fiscal sustainability in a preemptive manner remains a crucial policy priority (see Box D).
- **Volatility in the JGB market.** The BOJ's massive purchases of JGBs have significantly reduced the transaction volume and turnovers in the JGB cash market, although other liquidity indicators such as bid-ask spread do not suggest any sign of substantial deterioration so far. Some market participants have raised concerns over the possibility that the interest rate adjustments may not be smooth in the event of a future policy normalization by the BOJ (see Box B).
- **Equity market inefficiency.** Large purchases of ETFs and J-REITs by the BOJ going forward at the current pace could reduce the price discovery function of the stock market as the BOJ purchases effectively creates a put option on stock prices (see Box B).
- **Rise in foreign currency funding/ hedging costs.** Upside pressures exist given the strong demand from Japanese financial institutions for overseas investment, the uncertainty around global financial regulatory reforms, particularly in the U.S., and the rising interest rates outside of Japan amid monetary policy normalization in other advanced economies. The magnitude of the cost increase will also depend largely on the availability of foreign currencies in the market. A rapid rise in the funding/ hedging cost in the future could undermine the overseas investment by Japanese investors, which had increased significantly since the introduction of QQE.

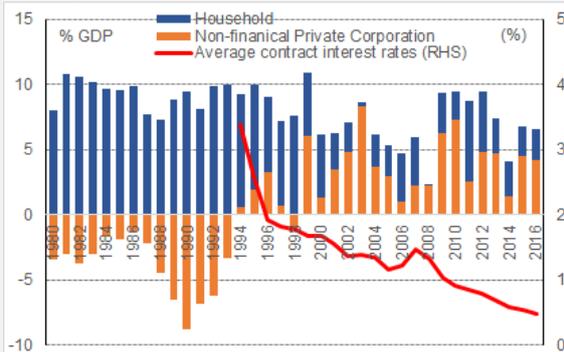
#### Box B. Challenges in the Financial Market under the 'QQE with YCC' Framework

The BOJ's monetary policy, the so-called 'QQE with YCC' framework, has been working relatively well so far in keeping both the short-and long term interest rates very low while maintaining positive slope in the yield curve. But, the private sector credit still grew slower than the deposit. For example, between January 2016 and August 2017, loans increased by 4.0 percent while deposits increased by 11.0 percent. A significant portion of the deposit increase went into the BOJ current account. This was partly due to a fund surplus situation in the private sector, both in households and corporates (Figure B1). Although higher credit growth is not the objective of BOJ's accommodative monetary policy, transmission of the monetary easing to private sector credit growth may be challenging in terms of the effectiveness of the accommodative monetary policy framework leading to higher inflation.

**Going forward, significant vulnerabilities may be building up because of the prolonged period of accommodative monetary policy.**

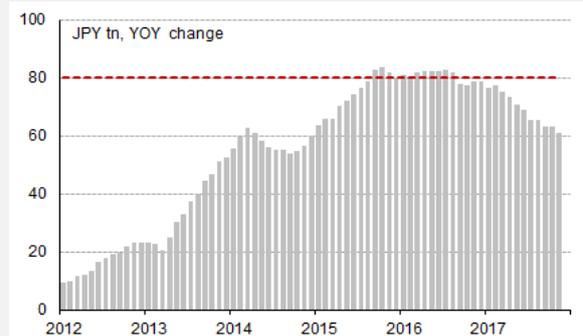
**Low transaction volumes in the JGB market could lead to a tight liquidity situation.** As the BOJ absorbs JGBs in the secondary market through its open market operations, JGBs held by financial institutions have declined as intended. At the same time, large-scale JGB purchases have led to a scarcity in some segments of JGBs from time to time and this has pressured financial institutions that used JGBs as collateral in many transactions such as in the repo market and the currency swap market. Most indicators suggest no significant signs of stress in the JGB market so far. However, potential vulnerabilities have been building up and tight liquidity could lead to volatilities in the market. The pace of JGB purchases by the BOJ has slowed somewhat in recent months (Figure B2).<sup>12</sup>

**Figure B1. Private Sector Fund Surplus/ Deficit**



Source: BOJ

**Figure B2. BOJ's JGB purchases (yoy)**

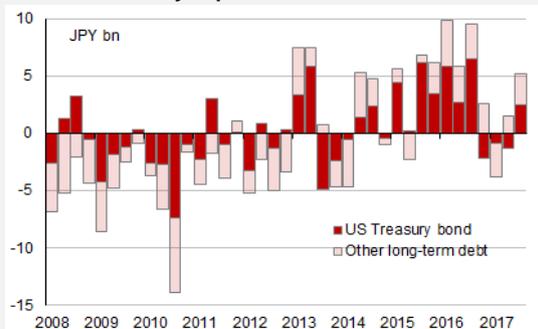


Source: BOJ

**Potential upward pressure in JGB yields could pose challenges in public finance.** Ultra-low interest rates under the accommodative monetary policy have helped the government finance its deficit at low costs and this has helped stabilize government debt dynamics somewhat (see Box D). Long-term JGB yields have been stable since the introduction of 'QQE with YCC' in September 2016. Yields for 10-year JGB has been hovering around zero during this period with relatively low volatility, although they inched up to above 0.09 percent in early 2018. However, when the central bank eventually starts to normalize its accommodative monetary policy, yields could go up rapidly and the government's costs of issuing new debt would also increase in tandem which could destabilize the sustainability of the debt dynamics.

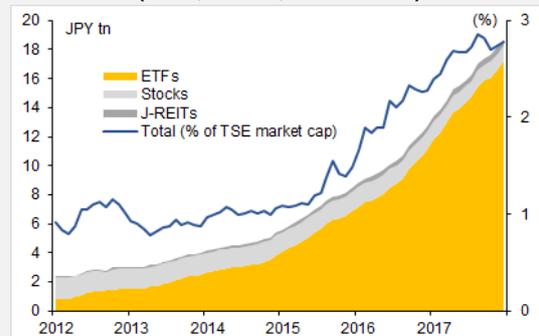
**Increased investment in overseas securities in search of higher yields may pose credit and/or market risks to domestic financial institutions.** As mentioned earlier, ultra-low domestic interest rates have compelled financial institutions to increase investments in foreign debt securities (Figure B3). In particular, purchases of U.S. Treasury bonds have increased significantly since the introduction of QQE in 2013. This seems to be largely driven by banks and life insurance companies. As U.S. interest rates rise, these banks are exposed to valuation losses from their securities holdings, although portfolio rebalancing toward foreign securities is intended policy effects of the monetary easing.

**Figure B3. Long-term Debt Purchases by Japanese Investors**



Source: Japan Ministry of Finance

**Figure B4. BOJ's Existence in the Stock Market (ETFs, Stocks, and J-REITs)**



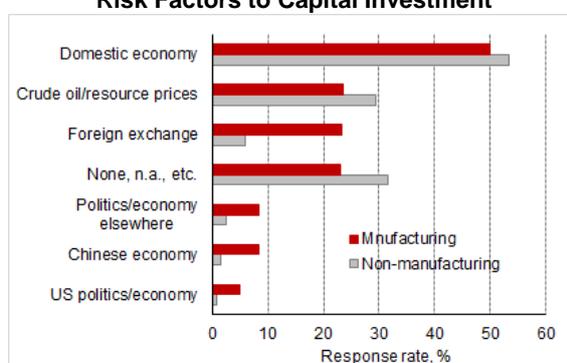
Source: BOJ, Japan Exchange Group

<sup>12</sup> The pace of long-term JGB buying was increased from about JPY50 trillion annually to about JPY80 trillion in October 2014.

**The BOJ's presence in the Japanese stock market has been growing.** Currently, market participants are of the view that ETFs and J-REITs, as well as individual shares are fairly valued in general, judged from price-earnings ratios. However, continued massive purchases by the BOJ could possibly reduce the efficiency of the capital market in the future. The outstanding amount of ETFs held by the BOJ has reached JPY17.2 trillion at the end of 2017, about 3.0 percent of market capitalization of the First Section of the Tokyo Stock Exchange (Figure B4). If this trend continues, by FY2020 the BOJ's holdings could exceed the holdings of the Government Pension Investment Fund (about JPY35 trillion).

18. **Mid- to long-term challenges remain significant with regard to concerns about financial system soundness and growth potential.** Downward pressures on regional bank profitability due to tight interest margins and the consequent build-up of risky portfolios are expected to put stress on the balance sheets of regional banks in the face of a rapidly aging population especially in the rural areas. Efforts to lift potential growth and raise inflation would be important to strengthen medium- to long-term expectations for economic growth and inflation of households and businesses. Japanese corporations, particularly in the services sector, face challenges such as intensified competition, declining demand, labor shortage, and budget-minded consumers, along with a declining and aging population.<sup>13</sup> This would reduce economic vitality and weaken the effectiveness of macroeconomic policies.

**Figure 7. Corporates' Perception of Risk Factors to Capital Investment**



Note: 449 firms in manufacturing and 580 firms in the non-manufacturing sector participated in the survey and they were allowed to choose up to two answers.  
Source: Development Bank of Japan, reproduced by AMRO staff

**Figure 8. Top Three Challenges to Domestic Service Providers**



Note: Respondents were allowed to choose up to two answers.  
Source: Development Bank of Japan, reproduced by AMRO staff

19. **Authorities' views.** The authorities largely agreed with AMRO on the short-term risk factors listed above. They highlighted that most of short-term risk factors are external and the risks to the growth outlook are somewhat balanced, while those to the inflation outlook are mostly downside. In particular, they pointed out the upside risk to growth amid faster than expected growth of the global trade and the global economy. The authorities are fully aware of the market's concerns around the financial stress such as possible liquidity

<sup>13</sup> According to a recent survey by the Development Bank of Japan, "domestic economy (can possibly be translated into 'domestic demand')" is the most concerning downside risk for corporate investment, among other risks.

tightness in the JGB market and challenges such as low profitability of regional banks in the medium-term, both of which the authorities are closely monitoring.

### B.3 Outward Spillovers to the ASEAN+3 Region

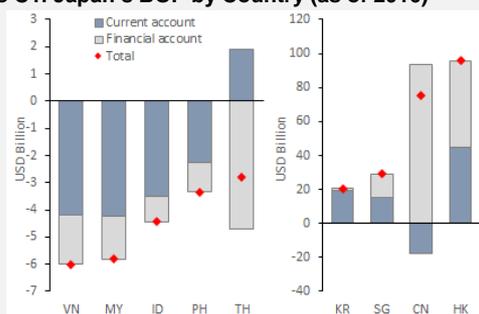
20. **Outward spillovers from Japan to other ASEAN+3 economies could be substantial and have important policy implications for economies of the region.** FDI outflows from Japan to ASEAN countries have been solid and sizable since the introduction of QQE in 2013 and this has provided support to the ASEAN region, which saw a significant decline in direct investment inflows in recent years in the wake of the commodity price shocks in 2012-14. In the financial channel, Japanese banks' expansion in ASEAN economies also helped fill the gap made by the withdrawal of bank lending to this region by European banks after the European sovereign debt crisis of 2012 (see Box C).

#### Box C. Under extended monetary easing, outward investments by Japanese banks and corporates to ASEAN remain substantial

**Japan is a key source of external demand and cross-border financing and investment for the ASEAN+3 region**, particularly as it is one of the largest economies in the world and has deepened its economic and financial linkages with several countries across the region over the years. Therefore, an understanding of channels of spillovers from Japan to the region is important.

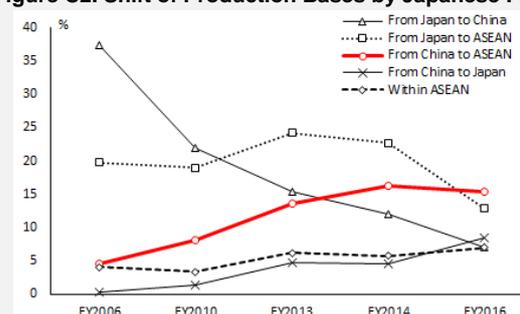
**Japan is a major source of external demand for ASEAN countries, alongside ongoing shifts in production locations within regional production networks.** Japan's growing trade linkages with ASEAN countries may provide some assurance about the region's resilience to potential shocks related to growing trade protectionist sentiments in the US and Europe. In 2016, many emerging ASEAN economies had current account surpluses vis-à-vis Japan and saw capital inflows from Japan (Figure C1). This contrasts with substantial flows from China (including Hong Kong), Korea and Singapore to Japan, on account of bilateral trade and investment activities.

Figure C1. Japan's BOP by Country (as of 2016)



Note: Data as of 2016 (calendar year)  
Source: Japan Ministry of Finance, AMRO staff calculations

Figure C2. Shift of Production Bases by Japanese Firms



Note: The figures include cases of reported restructuring bases conducted in the past two to three years or planned for in the coming two years.  
Source: Japan External Trade Organization (JETRO), "Survey on the International Operations of Japanese Firms"

**Japan's outward FDI has shifted from China to ASEAN countries, partly reflecting the increase of labor cost in China.** One example relates to the shift of production of certain goods from China to Vietnam—this has underpinned Japan's pronounced FDI in Vietnam since the turn of the decade, and boosted Japan's imports of textile products from Vietnam. More broadly, when Japanese corporations restructure their domestic and overseas production bases, most—especially when moving away from China—would select ASEAN as their relocation destination (Figure C2). Looking ahead, ASEAN could

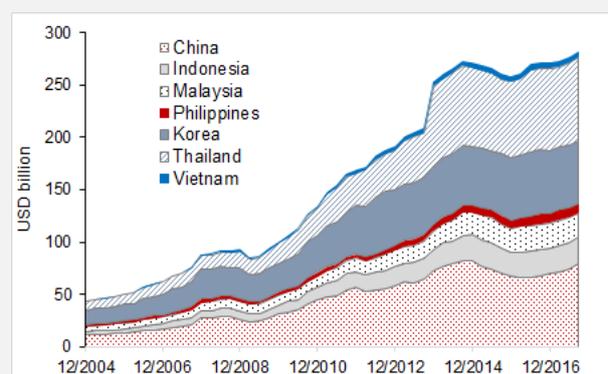
become increasingly important destination for Japanese FDI if economic growth remains buoyant and a rapidly-expanding middle class underpins strong demand for high-quality Japanese goods including automobiles and electronic products.

**Japanese banks have played a key role in keeping financing conditions supportive of the region's growth.** Japanese banks have accounted for much of the increase in net claims within the ASEAN+3 region during recent years (Figure C3). They have filled some of the void created by European and U.S. banks in the years after the onset of the GFC and the ESDC, and helped keep financing conditions supportive amid challenging global economic conditions during those years. This trend is in stark contrast to what occurred in the aftermath of the Asian Financial Crisis when Japanese banks' cross-border lending to Asia fell by about 24-30 percent on average during and immediately following the crisis. (See Chapter 2 of ASEAN+3 Regional Economic Outlook 2017 for more details.)

**Japanese banks' commitment to the region appears to be long-term in nature.** With compression of net interest margins at home and the need to support the creation of global value chains by Japanese corporations, Japanese banks have greatly expanded their overseas lending. As part of this strategy, major Japanese banks have significantly expanded in the ASEAN region, including through M&As.<sup>14</sup>

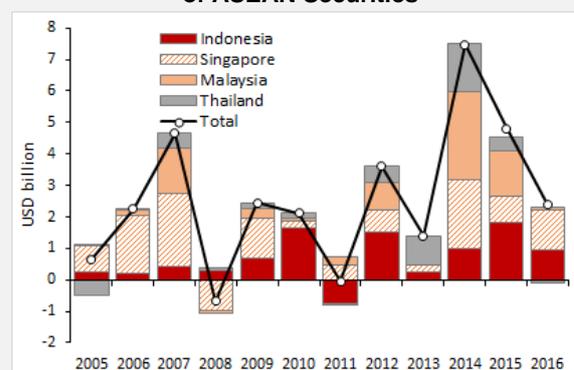
**Portfolio flows from Japan to the region have been robust since the BOJ introduced QQE in 2013, and look likely to continue** given the yield gap between domestic securities and ASEAN-country securities. As part of Japanese investors' continued rebalancing of portfolios towards foreign assets, flows to the region have increased (Figure C4). If there are to be adverse shocks in Japan which induce a pullback of cross-border investments, the impact on the ASEAN region could be significant, as assets in emerging Asia are still not considered to be high-quality or 'safe haven' assets unlike those in advanced economies.

Figure C3. Japanese Banks' Net Claims



Note: 'Ultimate risk basis' for net claims data.  
Source: BIS Consolidated Banking Statistics, BOJ, AMRO staff calculations

Figure C4. Japanese Investors' Net Purchase of ASEAN Securities



Source: Japan Ministry of Finance, AMRO staff calculations

**Japan remains an important trade and investment partner for the ASEAN+3 countries, given its close economic linkages with them,** and this provides considerable assurance about the region's resilience to potential shocks. In the years ahead, there are good prospects for ASEAN to become an increasingly important source of final demand for Japan's exports. Meanwhile, Japan has also deepened its financial linkages with several countries across the region in recent years. For example, Japanese banks have ramped up cross-border lending, while Japan remains a key source of FDI in ASEAN, and portfolio investments in ASEAN remain firm. Table C.1 shows a snapshot of economic linkages between Japan and other ASEAN+3 member economies by summarizing the balance of payments of Japan vis-à-vis each individual member economy in ASEAN+3. As shown in the table, the amount of trade flows as well as capital inflows from Japan to each ASEAN+3 economy is not small compared to their GDP and international reserves.

<sup>14</sup> High-profile acquisitions include the purchase by Mitsubishi UFG Financial Group (MUFG) of a majority stake in the Bank of Ayudhya in Thailand; the purchase by the Bank of Tokyo-Mitsubishi UFJ (BTMU) of strategic stakes in Security Bank in the Philippines and in the Vietnam Joint Stock Commercial Bank for Industry and Trade (VietinBank) in Vietnam. All three major Japanese banks have also obtained banking licenses in Myanmar as part of Myanmar's first phase of banking liberalization. These moves suggest a long-term strategy of continued lending to the region. Recently, in December 2017, BTMU agreed to buy 73.8 percent of Bank Danamon Indonesia in an effort to build its operation base in Indonesia.

	CN	HK	ID	KR	MY	PH	SG	TH	VN
<b>A. Bilateral relation (BOP for Japan)</b>									
1. Current account balance	-17.9	44.5	-3.5	19.1	-4.2	-2.2	15.2	1.9	-4.2
Goods	-41.6	40.8	-7.6	16.4	-8.0	-2.3	16.0	-8.4	-6.8
Services	10.4	1.2	1.3	0.8	1.8	-0.7	-4.3	3.7	1.0
Primary income	14.0	2.4	3.4	2.1	1.9	1.6	3.5	6.8	2.1
Secondary income	-0.6	0.1	-0.6	-0.2	0.1	-0.9	0.0	-0.2	-0.4
2. Financial account ('+' means outflow)	-93.4	-51.4	0.9	-1.6	1.6	1.1	8.7	7.5	4.0
Direct investment	8.5	3.3	2.9	1.6	1.4	2.3	-14.0	4.7	1.8
Portfolio investment	-102.4	-29.4	-1.0	3.8	0.4	1.0	31.1	4.6	0.1
3. Overall (= 1-2)	75.5	95.9	-4.4	20.7	-5.8	-3.3	6.5	-5.6	-8.1
<b>B. Unilateral relation (by Japanese residents)</b>									
Japan's merchandise imports from	155.8	1.9	18.2	24.9	17.2	9.0	7.4	20.0	16.2
Japan's outward FDI to	8.6	1.9	2.9	1.1	1.4	2.3	-17.5	4.1	1.8
Japan's outward portfolio investment to	-0.1	0.5	1.0	-2.3	0.1	0.0	1.3	-0.1	0.2
(o.w) Equities and Investment Fund Shares	-1.4	0.1	0.1	-0.1	0.0	0.0	-0.1	0.0	0.2
(o.w) Long-term debt	1.7	0.6	0.9	-2.0	0.4	0.2	1.5	0.0	0.0
(o.w) Short-term debt	-0.4	-0.1	n.a.	-0.1	-0.3	n.a.	-0.1	-0.1	n.a.
Japanese banks' net claims on	70.8	n.a.	24.0	59.7	23.4	9.8	n.a.	78.1	5.7
<b>C. Reference Items</b>									
GDP	11,199	321	932	1,411	297	305	297	407	205
International Reserves	3,011	386	116	371	95	81	247	172	36

Note: 'Ultimate risk basis' for net claims  
Source: Japan Ministry of Finance, BIS Consolidated Banking Statistics, BOJ, AMRO staff calculations

## C. Policy Recommendations

### C.1 More Balanced Economic Policy Framework

21. **Abenomics has successfully raised both growth and inflation in the near-term, but policy challenges remain.** After Abenomics started, employment increased steadily in tandem with higher labor force participation of the senior and female populations. Government revenues have increased with the consumption tax hike in 2014. Corporate tax rates have been reduced effectively and its tax base has been gradually expanded, maintaining revenue neutrality. Overall, consumer price inflation have turned positive albeit at a gradual pace. In addition to the good macroeconomic performance, corporate performance has also improved significantly in terms of profitability, share price, and governance. However, maintaining and anchoring this higher growth and inflation performance over the medium term remains highly challenging, largely due to entrenched structural problems. Against this backdrop, macroeconomic policies have been expansionary for a prolonged period while fiscal consolidation has been repeatedly delayed.

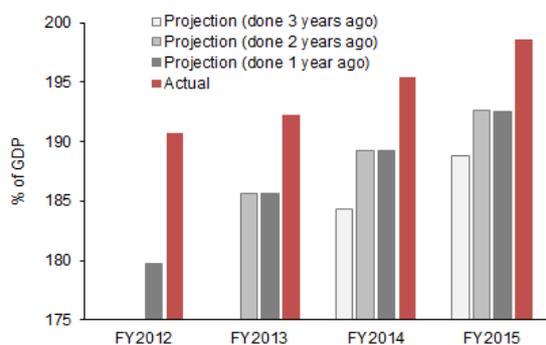
22. **To sustain the higher growth and inflation performance over the long term, authorities need to adopt a more balanced package of policy measures to address entrenched structural challenges.** More focus should be placed on restoring the sustainability of public finance and to tackle demographic challenges and structural reforms to lift potential growth, rather than further fiscal stimulus or monetary easing, especially when the economy is operating above potential and is experiencing strong tail winds from the global economy. Separately, raising inflation to a higher level will be a challenge to the BOJ, which is aiming for a 2 percent inflation target, but achieving the target appears to be not easy in the short run given the structural headwinds of an ageing population and declining labor force as well as the adaptive mechanism in formulating inflation expectations.
23. **Authorities' views.** In the authorities' view, Abenomics has been on the right track with substantial and broad-based progress that has not been seen in previous decades. They also argued that the government is going to continue the "three policy arrows", which consists of aggressive monetary policy, flexible fiscal policy and growth strategy including structural reform. However, they are of the view that the current support from both fiscal and monetary policies would still be necessary for a while in order to ensure growth momentum and to overcome deflation.

## C.2 Restoring Fiscal Sustainability

24. **Fiscal policy should focus on restoring fiscal sustainability.** Given the above-potential GDP growth rate and positive output gap, the fiscal policy stance should be normalized in order to build up policy space against adverse shocks. In particular, fiscal discipline should be restored before the normalization of BOJ's accommodative monetary policy, when interest payment will increase while the current growth rate is likely to moderate to its potential. AMRO's long-term debt sustainability assessment suggests that government debt is projected to rise continuously until FY2040, even under the optimistic scenario with higher economic growth and a modest increase in social security-related spending, possibly due to successful reforms (see Box D). With competing demand from public services, the budget needs to be prioritized to growth-promoting reforms, social investment for sustainable growth, and to address structural challenges such as childcare support.
25. **The new medium-term fiscal consolidation plan, likely to be announced in FY2018, needs to be enhanced with more credible targets and specific measures over the extended timeline.** In the new plan, consolidation targets should be credible over the medium-term based on an analysis of long-term trends in demographics and spending

needs particularly after FY2025, as well as domestic interest rate dynamics to be affected by monetary policy. Developing more credible fiscal projections<sup>15</sup> is encouraged, particularly by making more realistic economic projections. Options may include a strengthening of the Council of Economic and Fiscal Policy or the establishment of an independent fiscal institution as in most other OECD countries (Figure 10). The FY2018 Interim Review for ‘Economic and Fiscal Revitalization Plan’ (developed in FY2015) to assess the progress of fiscal reform and consider additional expenditure and/ or revenue measures as necessary, will be an important step to rebuild momentum for consolidation. A more specific implementation plan should take into account the expectation of a rapid rise in healthcare and long-term care spending toward FY2025 and beyond. Furthermore, given the significant level of public debt, achieving a primary surplus is a crucial stepping stone for putting the debt on a sustainable path. Looking forward, like other advanced countries, a fiscal balance target should be considered.

**Figure 9. Government Projections for Debt-to-GDP**



Note: Projections, done in July or August of each fiscal year, were used here.  
Source: Cabinet Office

**Figure 10. Independent Fiscal Institutions**

Australia	Hungary	Norway
Austria	Iceland	Poland
Belgium	Ireland	Portugal
Canada	Israel	Slovak Republic
Chile	Italy	Slovenia
Check Republic	<b>Japan</b>	Spain
Denmark	Korea	Sweden
Estonia	Latvia	Switzerland
Finland	Luxembourg	Turkey
France	Mexico	UK
Germany	Netherlands	US
Greece	New Zealand	

Note: ‘Green’ (IFI doing long-term sustainability analysis), ‘Yellow’ (IFI but not doing long-term sustainability analysis), ‘Orange’ (No IFI).  
Source: OECD IFI database (2017)

- 26. With respect to government revenue, the 2019 consumption tax hike should be implemented as scheduled while taking into consideration the need for further tax measures.** Given our above potential growth projection for FY2018, supplementary boost measures before the consumption tax hike are not necessary as these may create short-term fluctuations and the reduced tax rate is already scheduled to be applied to food and drinks. Given the government’s plan to use some portion of the revenue from the tax hike for human resources development and the substantial and growing financing gap in social security-related spending needs in the future, additional revenue-raising measures may be needed to support the fiscal consolidation.
- 27. Expenditure restructuring, particularly in medical and long-term care spending envisaged in the ‘Economic and Fiscal Revitalization Plan’, should be implemented as planned.** The FY2018 budget proposal, as a budget for the final year of the ‘intensive

<sup>15</sup> For example, the debt-to-GDP ratio had been projected to go down under the Economic Revitalization Case, but the actual ratio has kept increasing as a result of the nominal GDP growth rate repeatedly falling short of projections.

reform period' (FY2015-18) set in the existing fiscal consolidation plan, suggests gradual progress with a trend of declining JGB issuance and narrowing primary deficit, while it also focuses on supporting the initiative of the Supply System Innovation and the Human Resources Development Revolution. But, significant challenges remain. In particular, medical and long-term care reforms envisaged in the 'Economic and Fiscal Revitalization Plan', should be advanced further and enhanced from the viewpoint of ensuring an equal burden among people based on the ability-to-pay and rationalizing benefit. Moreover, continuous efforts to improve spending efficiency and to prioritize the government spending in other areas are also important. Meanwhile, the government's approach of 'evidence-based policy making' to restructure public spending effectively, is commendable and its implementation is encouraged.

28. **Authorities' views.** The authorities remain committed to achieving a primary surplus, reducing the public debt-to-GDP, and implementing the 2019 consumption tax hike to 10 percent as scheduled, while pursuing economic revitalization at the same time. To this end, the government will present the target period of achieving the surplus as well as a concrete and effective plan that underpins the target in the "Basic Policy on Economic and Fiscal Management and Reforms" in 2018. The authorities agreed on challenges of falling birth rate and ageing population. The government, therefore, will promote both the Supply System Innovation and the Human Resources Development Revolution<sup>16</sup> as the two wheels on an axle towards 2020.

#### Box D. Japan's Long-Term Debt Sustainability in the Context of an Aging Population

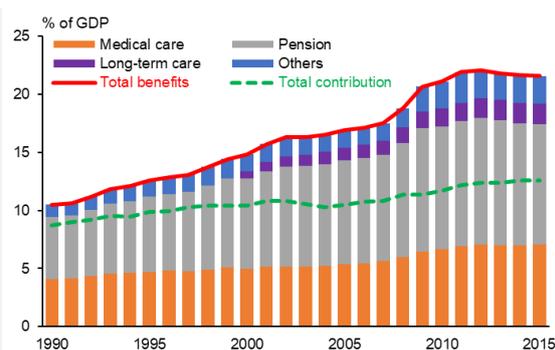
**Japan's aging population has led to widening gaps between social security benefits and contributions.** In 2015, social security benefits, including medical and long-term care, and pension, amounted to 21.6 percent of GDP, while the contribution from insured persons and employers stayed at a lower level of 12.6 percent (Figure D1). This discrepancy has been widening since the 1990s and has been mainly financed through higher fiscal deficits.

**The official projection shows that social security expenditure will amount to 24.4 percent of GDP by 2025.** According to a 2012 projection by the Japanese authorities, the total cost of social security-related expenditure will increase gradually by 36.0 percent by 2025. By category, as of 2015, pension benefits accounted for about 50 percent of the total, but the share is expected to decline to about 40 percent due to the rapid rise of spending on medical care and long-term care (Figure D2).

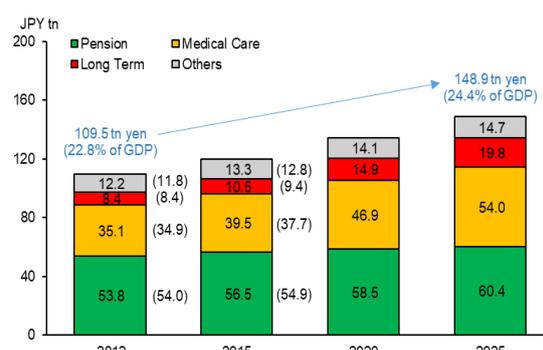
Figure D1. Japan's Social Security Benefits and Contributions

Figure D2. Outlook for Social Security Expenses

<sup>16</sup> To promote "Human Resources Development Revolution", the government formulated a new policy package of JPY2 trillion which includes the reduction of the economic burden of early childhood education and higher education. JPY1.7 trillion will be financed by a part of the revenue increase of 2019 consumption tax hike.



Note: Based on fiscal year  
Source: National Institute of Population and Social Security Research (IPSS)



Note: Based on the latest official projections that were announced in March 2012. Figures in parentheses are actual realizations.  
Source: Japan Ministry of Health, Labor and Welfare (MHLW)

**However, social security-related expenditures are likely to keep rising even beyond 2025 when the first baby boomers will turn 75 years-old and older.** More specifically, total costs of medical and long-term care expenditure have a tendency to rise with the increase in the share of the elderly, especially those who are 75 years-old and older. For instance, per-capita medical care benefits for the 65-74 age group jump by threefold from those applied to aged 64 or below, but were still only half of the benefits for those aged 75 or more. Long-term care benefits for those aged >75 increase by tenfold compared to those for aged 65-74 (Table D1). Accordingly, the continued expansion in health care-related costs is inevitable, even after 2025—when the first baby boomers, born in 1947-49, will turn 75—and together with those aged >75, will be approaching one-fifth of the population (Figure D3).

**Table D1. Per-capita Social Security Benefits by Age (CY2014)**

In JPY	Medical Care				Long-term Care			
	0-64	65-74 (a)	75+ (b)	(b/a)	0-64	65-74 (c)	75+ (d)	(d/c)
Care benefits	180,000	554,000	907,000	1.6	-	55,000	532,000	9.7
Public aid	25,000	78,000	356,000	4.6	-	15,000	145,000	9.7
Total	205,000	632,000	1,263,000	2.0	-	70,000	677,000	9.7

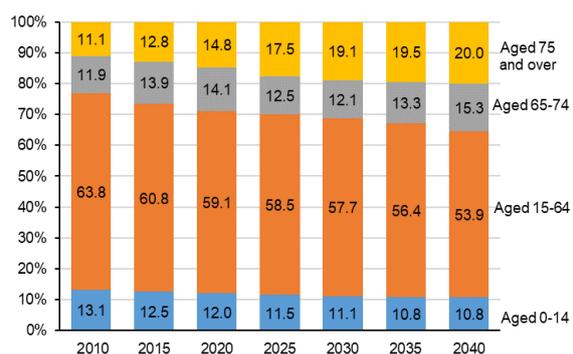
Note: Per capita care benefits and public aid indicate national medical care expenditure and publicly funded expenditures per age group respectively, divided by the population of each generation as of 2014.  
Source: Japan Ministry of Finance

**According to our calculations, social security benefits are expected to continue to rise gradually.** To assess the implication of population aging on the fiscal burden, social security spending is calculated by combining long-term population projections with per capita social security benefits. Moreover, in order to capture the effects of the first baby boomers' turning 75 years-old and over, an extended forecast horizon beyond 2025 is taken into consideration. Under the baseline case, per capita healthcare costs are assumed to rise by 2.3-2.8 percent each year, which follows the study by Makita (2017).<sup>17</sup> Pension and other expenses are assumed to grow at the same pace as in the official Ministry of Health, Labor and Welfare (MHLW) projection in March 2012. AMRO calculations show that social security expenses will likely grow at a similar speed as in the 2012 official projection, but will continue to rise even after 2025. In contrast, under the alternative scenario in which the successful implementation of healthcare reforms would lead to only a gradual increase of about 0.5 percent in per capita healthcare expense each year, the long-term projection of social security expense shows a moderate increase (Figure D4).

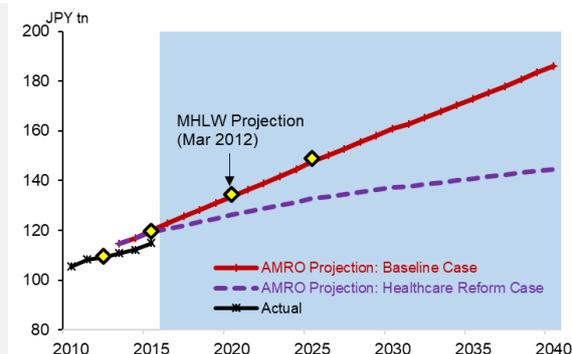
**Figure D3. Long-Term Projection for Age Composition**

**Figure D4. Social Security Expense Projection**

<sup>17</sup> Takeshi Makita (2017), "Japan's Economic Outlook and Challenges for 2020 and Beyond", *JRI Research Journal 2017 I*, The Japan Research Institute.



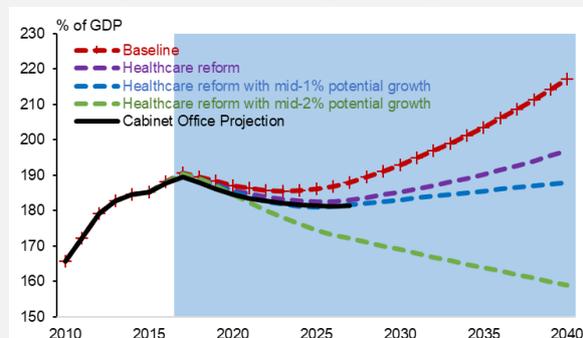
Note: Based on medium-fertility and medium mortality assumptions. The percentage compositions of the aged 75 and over and those aged 65-74 are estimated by using the shares from the UN Population Projection. Source: IPSS, United Nations, AMRO staff calculations



Note: Yellow markers indicate the authorities' latest long-term projections publicly available (March 2012). In AMRO projections, the *Baseline Case* assumes that per capita health expenditures would rise by 2.8% each year until 2020, by 2.6% in 2021-29, and by 2.3% in 2030-40 as in Makita (2017). The *Healthcare Reform Case* assumes the per capita health costs rising by 0.5% each year. The shaded area indicates projection periods. Source: MHLW, AMRO staff calculations

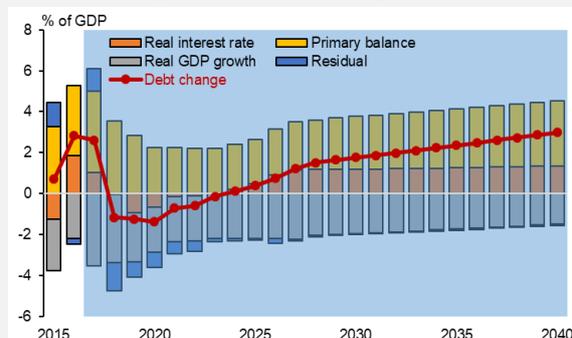
**In addition, such increases in social security spending is highly likely to translate into higher government debt level in the longer term.** Based on the projection on social security spending where the aging population is mainly taken into account, we extend this exercise to make a longer-term projection of the outstanding debt to cover the central and local governments, as defined in the Cabinet Office's semi-annual projections.<sup>18</sup> For simplicity, we adopt long-term macroeconomic and public finance assumptions from the Cabinet Office's baseline case scenario (published in January 2018), while extending beyond FY2027 and adjusting fiscal balances to AMRO projections on the social security-related expenditure mentioned earlier. As of FY2016, outstanding debt was 187.6 percent of GDP. Under the baseline case, the outstanding debt level is expected to rise to 217.0 percent of GDP in FY2040, while the healthcare reform will lead to a gradual debt accumulation to 197 percent. Furthermore, our simulations indicate that the healthcare reforms combined with enhanced growth potential can maintain, or even lower the level of the debt (Figure D5).

Figure D5. Outstanding Debt Projection



Note: Outstanding debt covers central and local governments, excluding the expenditures and the fiscal resources for the recovery and reconstruction measures. The shaded area indicates projection periods of FY2017-2040. Source: Japan Cabinet Office, AMRO staff calculations

Figure D6. Debt Creating Flows



Note: Based on the AMRO baseline projection on the outstanding debt. The shaded area indicates projection periods. On the key assumptions on macroeconomic variables, the CAO baseline case (Jan 2018) is adjusted and extended until FY2040. Source: Japan Cabinet Office, AMRO staff calculations

**Decomposition of debt-creating flows shows that sustaining primary deficits and higher interest rates will be contributing to a gradual rise in public debt.** Applying the debt-dynamics framework into the AMRO's baseline projection (Figure D6), the government debt level is expected to decline slightly until FY2020, mainly benefiting from higher growth and low interest rates. In the medium-term, the debt will show a build-up, led by rising real interest rates due to worsening fiscal conditions. In the longer-term beyond 2025, sustaining primary deficits—2.4-3.2 percent of GDP, other things being equal, will remain the main driver of the gradual increase in government debt. Although our government debt projection may be just indicative due to assumptions and data constraints, this exercise can serve to highlight the importance of implementing fiscal consolidation plans with emphasis on effective healthcare reforms and enhancing growth potentials.

<sup>18</sup> Excluding the expenditure and the fiscal resources for the recovery and reconstruction measures

### C.3 Calibration of the Accommodative Monetary Policy

29. **Monetary policy should remain accommodative for now to allow more time for the virtuous cycle—from a tight labor market and the positive output gap into higher wages and prices—to work.** As shifting the inflation expectations of households and corporates is a daunting task that may take time, an accommodative monetary policy stance should be maintained until it has firmly anchored inflation expectations at a higher level. Moreover, monetary policy should be complemented by government policies to address entrenched structural problems underlying inflation stickiness.
30. **The ‘QQE with YCC’ framework may need to be recalibrated moving forward, given the potential side effects gradually building up in the financial sector.** The framework has allowed the BOJ to be flexible on JGB purchases in order to maintain low interest rates, while ensuring some degree of term spread so that financial institutions can operate profitably. The continued operation of this framework seems to be feasible for now. However, the prolonged accommodative policy stance has led to a squeezing of banks’ and insurance companies’ profit margins as well as tighter liquidity in the JGB markets. Moreover, the potential valuation losses incurred by the BOJ, when normalizing its policy stance, is likely to increase in tandem with the continuation of the current framework. Against this backdrop, the ‘QQE with YCC’ framework may need to be recalibrated during the accommodative period, while closely monitoring developments in economic activity and prices as well as financial conditions.
31. **Continued clear communication with the market is important.** The BOJ’s efforts to strengthen communication with market participants to avoid unwarranted disruption in the market is commendable and to be encouraged. Market participants have started to assess possible scenarios of policy normalization and its economic impacts. Meanwhile, there are somewhat divergent views on the timing of the normalization, and on the normalization process both in YCC and in JGB purchases with regard to the overshooting commitment. Therefore, continuous efforts by the BOJ in communicating its views on these issues with market participants—even if only in a qualitative manner—is important to improve the effectiveness of monetary policy.
32. **Authorities’ views.** The BOJ agreed with AMRO’s view on the need for maintaining the current accommodative monetary policy for the time being. Regarding the potential side effects from its ETF purchases on market efficiency, however, it was of the view that there has been no serious market distortions in pricing of individual shares considering the small share of BOJ’s ETF holdings which accounts for only about 3.0 percent of total stock market capitalization. The BOJ is also fully aware of the risk of possible tight liquidity in



35. **Close monitoring of external shocks is needed to better manage the potential negative spillovers from them.** In particular, careful monitoring is warranted on the volatility in the JPY exchange rate and on the possible driving factors of the volatility which include US fiscal, monetary and trade policies, as well as heightened geopolitical risks such as North Korea's nuclear threat (see Selected Issue 1. "Drivers of Capital Flows to and from Japan in Recent Years").
36. **Authorities' views.** The authorities are fully aware of medium-term challenges such as addressing the low profitability of regional banks, as well as the need for the consolidation of some banks.<sup>20</sup> In this context, Japan's Financial Services Agency has a plan to support financial institutions change their business models as envisaged in its annual Strategic Directions and Priorities for July 2016-June 2017. The authorities do not see any significant sign of financial imbalances as yet, including in the real estate sector; meanwhile, close macro-prudential monitoring is continuing.

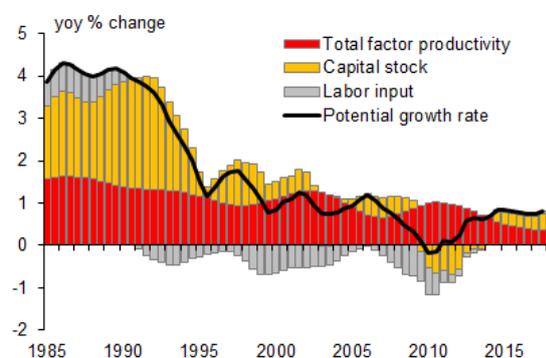
### C.5 Efforts to Tackle Demographic Challenges and Structural Reforms

37. **The smooth implementation of the comprehensive Work Style Reform (WSR) to boost wages and increase productivity is highly recommended.** The government's WSR initiative can provide a solid foundation for comprehensive labor market reforms. The WSR needs to be supplemented by specific measures to further increase the labor participation among females as well as the labor productivity of workers. Higher wage growth based on the improved productivity is important to make the virtuous cycle envisaged by Abenomics more sustainable with higher inflation. Continued efforts to utilize more foreign workers to supplement the domestic work force should be encouraged (see Selected Issue 2. "Labor Market Reform, Growth, and Productivity").
38. **Policies to promote Human Resources Development, productivity-enhancing investment, and R&D for adopting new technology should also be encouraged.** Recent government efforts for Supply System Innovation and Human Resources Development Revolution, including measures for eliminating childcare waiting lists and securing nursing care workers, are commendable. Given the global trend of lowering corporate tax rates, continuous efforts in the area of growth-oriented tax reform are desirable. In addition, continued support for the corporate sector's operational reforms to increase productivity, in response to labor shortages by leveraging technology in the form of Artificial Intelligence (AI), Internet of Things (IoT) and Big Data, is encouraged. Recent

<sup>20</sup> In the special chapter of its "Financial System Report (October 2017)", The BOJ assessed these structural factors impacting financial institutions in Japan, which could be represented as intensified competition under chronic stress, and their economic impact.

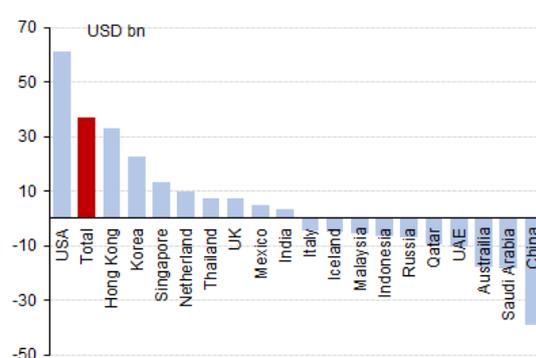
tax reforms to increase the growth potential, including the revision of the spouse deduction for income tax and revision of R&D-related tax system, are also commendable.

Figure 13. Potential GDP Growth



Source: BOJ

Figure 14. Japan's Bilateral Trade Balance (2016)



Note: Original numbers in JPY terms were converted into USD terms by using the average JPY/USD exchange rate in FY2016.  
Source: Japan Ministry of Finance

### 39. Continuous efforts to create new services and broaden the market are important.

Deregulation and targeted investment are needed to enhance productivity in agriculture, and the capacity of the tourism sector in the face of increasing demand. Similar efforts are encouraged in sectors such as medical care, welfare and elderly care, which have been growing in tandem with population aging. As a leader of global free trade and investment, Japan should push for progress in key trade negotiations such as the Japan-EU Economic Partnership (EPA), TPP-11, RCEP and the Japan-China-Korea FTA. In addition, continued efforts to further diversify trade relations, to maintain the global competitiveness of Japan's export sector, and to develop new and growing export services and products such as tourism and agricultural product are encouraged.

40. **Authorities' views.** The authorities reiterated the current policy stance of promoting "three policy arrows" integrally rather than focusing only on structural policies. The government emphasized its efforts to upgrade its growth strategy by adding new initiatives such as WSR and the Supply System Innovation and the Human Resources Development Revolution to lift potential growth. The government has a plan for the swift implementation of these new initiatives through budget proposals as well as relevant legislations, especially in the case of WSR in FY2018. In the Cabinet Office's long-term economic and fiscal projections, the GDP growth rate is projected to achieve 2.0 percent in real terms in the Economic Growth Achieved Case.<sup>21</sup>

<sup>21</sup> In this scenario, the total factor productivity (TFP) growth rate rises from the current level (0.7 percent) to around 1.5 percent, based on the extent and pace the Japanese economy had actually experienced before it entered deflation.

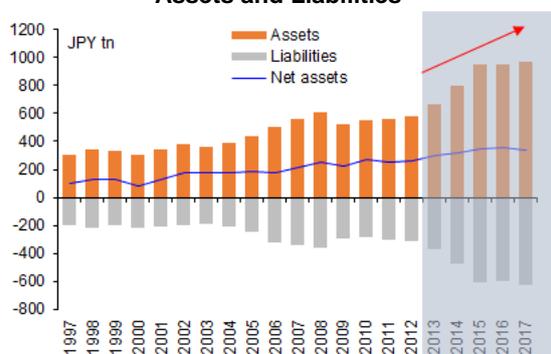
## Annexes: Selected Issues

### S1. Drivers of Capital Flows to and from Japan in Recent Years<sup>22</sup>

#### S1.1 Motivation

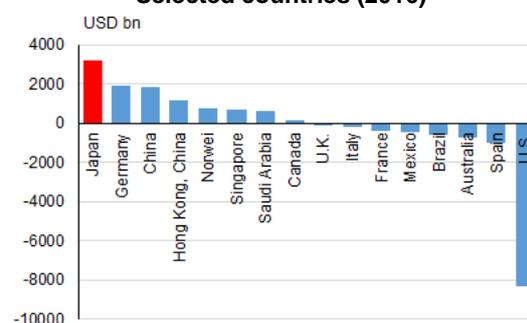
1. While Japan's balance of payments had long been characterized by large current account surpluses associated with large capital outflows, Japan's overseas investments have significantly increased in recent years, especially since BOJ launched the QQE in 2013 (Figure S1.1). As of 2016, Japanese residents held the largest amount of net external investment assets in the world (about USD3 trillion) and this may be one of several reasons<sup>23</sup> why JPY denominated-assets are considered to be safe haven assets (Figure S1.2).

Figure S1.1 Japan's International Investment Assets and Liabilities



Source: Japan Ministry of Finance

Figure S1.2 Net International Investment Position: Selected countries (2016)



Source: National authorities, CEIC

2. Understanding the drivers of the persistently large overseas investment is important as capital outflows are usually associated with the selling of domestic currency (JPY) and buying foreign currencies. In addition, buying foreign currencies is often associated with the hedging demand against weakening of the currency and a higher demand for hedging will lead to higher hedging costs. Given the importance of capital flows and exchange rate movement on external stability, this section examines the driving force of capital outflows and discuss policy implications.

#### S1.2 Profile of Investment Assets and Japanese Investors

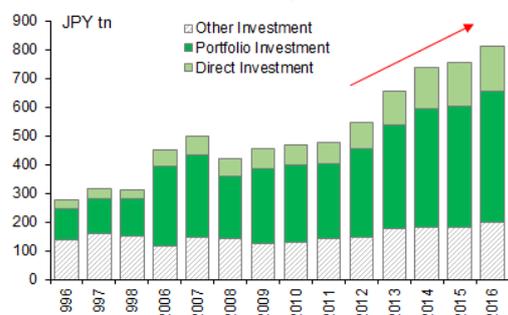
3. This section looks at the profile of the increased overseas investment assets in recent years, by specific asset class and the destination of those investments. First in terms of asset class, the recent increase since 2013 has been driven by portfolio investment in foreign securities and robust foreign direct investment (Figure S1.3).
4. In terms of investment destination, U.S. is the top investment destination for total overseas investment (Figure S1.4). In particular, Japanese residents hold direct investment assets mostly in the North America, followed by Asia and Europe. Meanwhile, they hold the largest amount of equity securities issued by Central and South America. With respect to debt securities, Japanese investors hold foreign bonds mostly issued by U.S. and Europe.

<sup>22</sup> This section is largely based on the information provided by private sector economists and market participants in discussions during AMRO's consultation visit to Japan. AMRO would like to express special thanks to the market participants for sharing their insights on this issue.

<sup>23</sup> In addition, market participants generally view JPY as a safe haven currency as Japan is a BOP surplus country exporting capital and JPY is considered as credible currency as an international currency with stable banking system and liquidity. Furthermore, JPY, together with Euro, is a so-called funding currency of "carry trade", without official interventionist policy in foreign exchange market.

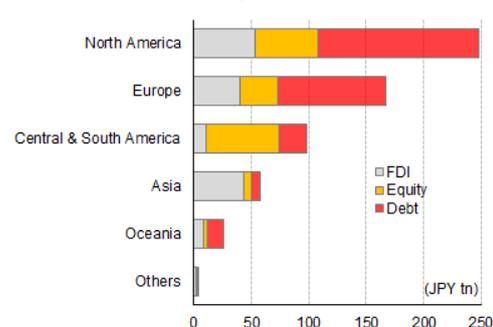
In recent years, particularly from 2013 when QQE started, overseas direct investment and portfolio investment from Japan went mostly to the U.S. As discussed in previous Chapters (Box A and Box C), Japanese investors diversified their direct investment destination from China to ASEAN countries.

**Figure S1.3. Japan's International Investment Assets (Gross): By Asset Class**



Source: Japan Ministry of Finance

**Figure S1.4. Japan's International Investment Assets (Gross): By Destination (2016)**



Source: Japan Ministry of Finance

- A closer look at the profile of Japanese investors suggests that institutional investors such as banks and insurance companies usually hedge their overseas portfolio investments while retail money such as security investment trust funds seems to be invested unhedged (Table S1.1). Japanese banks are the major investor of portfolio investment. It is notable that they hold substantial amount of overseas direct investment assets, around 16 percent of total direct investment assets held by Japanese residents, although non-financial corporations are main investors of outward FDI. Long-term investors such as insurance companies and pension funds including the Government Pension Investment Fund (GPIF) are also key players when it comes to investment in foreign securities.

**Table S1.1. Japanese Investors: Net Asset Position (JPY trillion, as of September 2017)**

		Total Assets	FX Deposit	Total	Foreign Assets			Hedging attitude
					Direct Investment	Portfolio Investment	Other Investment	
Institutional Investors	Banks	1,921.8	-19.6	138.1	25.5	118.5	-5.9	Hedged
	Insurance companies	485.8	-	94.9	2.1	87.2	5.5	Mostly hedged
	Pension funds	380.1	-	105.9	-	104.7	1.2	Mostly hedged
	(o.w) Public pension funds	156.1	0.0	36.4	0.0	35.2	1.2	Mostly hedged
Retail Investors	Securities investment trust	216.7	1.1	90.7	-	90.7	-	Mostly unhedged
	Households	1,844.9	6.3	23.4	-	23.4	-	Mostly unhedged
Others	Non-financial corporations	1,263.5	10.6	170.6	127.7	42.1	0.8	-
	General government	343.5	13.1	128.5	-	118.7	9.9	-

Source: BOJ (Flow of funds), Citi Research

### S1.3 Drivers of Capital Flows

#### *Carry trade strategy*

- Sizable yen selling positions held by Japanese investors in recent years can be partly explained by the carry trade, which peaked in 2005-07. Carry trade can be defined as a financial position from an investment in high-yield currency assets (investment currency, e.g., New Zealand Dollar) funded by low-yield currency (funding currency). This kind of trade leverages the yield difference between the assets of the two currencies especially when the funding currency is expected to weaken against the investment currency and/or low volatility exists in the global financial markets, usually measured by VIX.

7. Since 2013, financial environment seems to be conducive for carry trade. In addition to ultra-low interest rates in Japan, JPY real effective exchange rate has declined to a record low level compared to its last 40-year average, similar to the 2005-07 period (Figure S1.5).
8. The evidence of carry trade is mixed. First, the open positions on the Tokyo Financial Futures Exchange held mostly by margin traders, and speculative foreign currency futures position by non-commercial investors in the Chicago Futures Trade Commission (CFTC), have significantly increased since 2013, similar to the 2005-07 period. Another type of carry trade, loans from foreign bank branches in Japan to their headquarters for investment in high yield assets or lending to other banks or companies, have not increased (Figure S1.6).

Figure S1.5 JPY Real Effective Exchange Rate

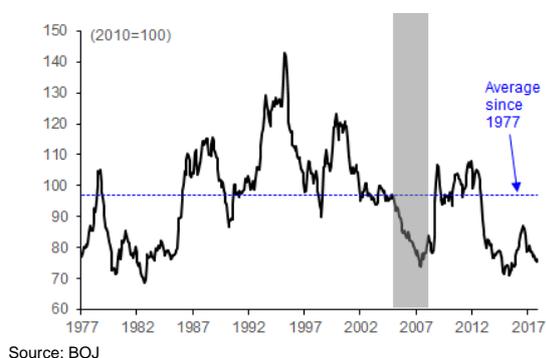
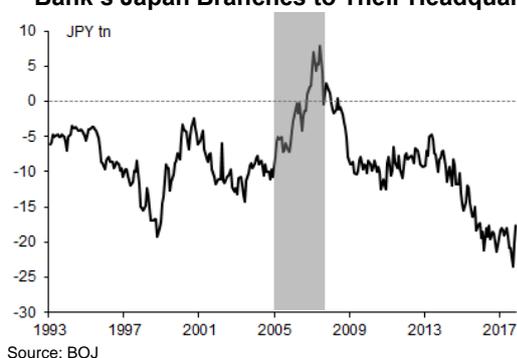


Figure S1.6 Inter-office Net Lending by Foreign Bank's Japan Branches to Their Headquarters

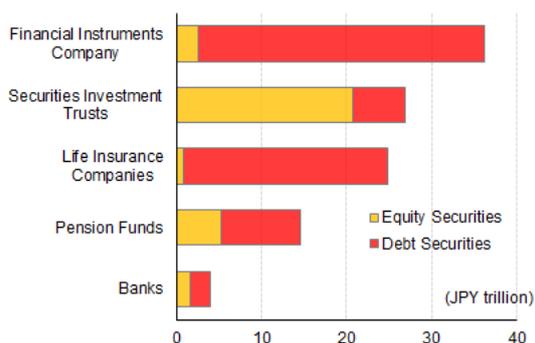


9. In recent years (2013-2017), the relatively small interest rate gap between Japan and other countries compared to the 2005-07 period, as well as a series of events that heightened risk-aversion—such as the North Korea threat—may make the carry trade less attractive. For example, the gap between the policy rate of Japan and the global average was around 400 bps in 2005-07, but came down to around 230 bps in 2017.

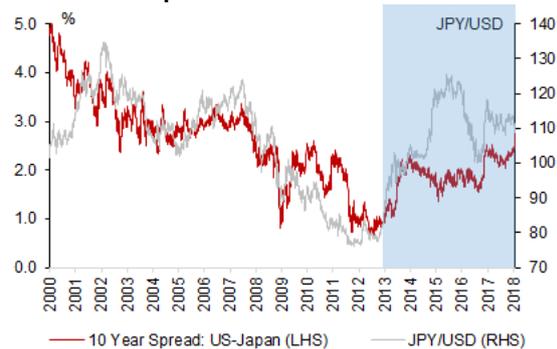
#### *Investment demand (or seeking for yield)*

10. This kind of investment has increased significantly in recent years as the accommodative monetary policy under Abenomics has led to low interest rates and yields of domestic assets. Ultra low interest rate environment in Japan have made Japanese investors purchase foreign assets in search of higher yields in recent years. Security investment trusts and pension funds significantly increased their investments in foreign equity securities, while life insurance companies and retail investors purchased foreign debt securities during 2013-2016 (Figure S1.7). Long-term debt accounted for more than 60 percent of total portfolio assets held by Japanese residents at the end of 2016.
11. The yield gap with foreign assets has largely widened since 2013. In particular, the 10-year sovereign bond yield spread between Japan and the U.S. has widened to around 250 bps in early 2018 from 100 bps in the beginning of 2013. The 10-year yield spread shows a strong correlation with JPY/USD exchange rate fluctuations over a long-term horizon<sup>24</sup>, although the relation had weakened temporarily between January 2015 and August 2016 (Figure S1.8).

<sup>24</sup> This relation between interest rate gap and the change in bilateral exchange rate is known as "uncovered interest rate parity".

**Figure S1.7 Active Investment in Foreign Assets: By Investor and Asset Class (cumulative 2013-16)**

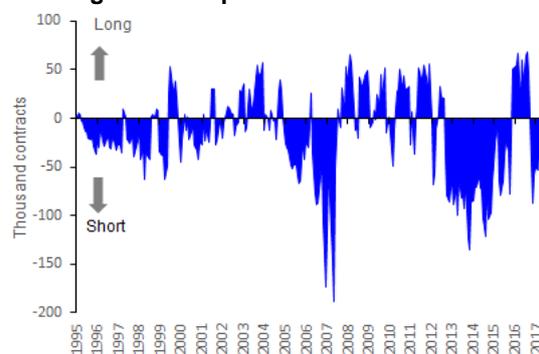
Source: Japan Ministry of Finance

**Figure S1.8 US-Japan 10-year Sovereign Bond Yield Spread and JPY/USD Movement**

Source: Bloomberg

**Safe haven demand**

12. In the period of heightened risk aversion, massive JPY short positions held by Japanese investors would come under pressure so the short-covering activities increase. Japan is one of the largest investor of foreign debt securities globally, and this may lead to capital inflows or repatriation by selling asset or reducing the purchase of foreign debt securities when risk sentiment deteriorates. As a result, the JPY usually strengthens against other currencies. The strengthening of the JPY in times of risk-aversion may be a result of the rewinding of their JPY short positions partly due to the past-experience of JPY strengthening in times of risk aversion in the global market.<sup>25</sup> There was a substantial reduction in JPY short positions as observed in the CFTC around late 2015 and early 2016 when global risk aversion heightened with respect to talk of a potential China market crash (Figure S1.9). Meanwhile, no significant portfolio inflows have been observed since 2013 despite a series of risk-aversion events, including missile threats from North Korea, and JPY appreciation has been only short-lived.

**Figure S1.9 Speculative JPY Positions**

Source: CFTF

**Market risk factors**

13. Banks may need to rebalance their portfolios as asset prices fluctuate. For example, if the yields of foreign bonds held by Japanese banks rise quickly, the banks need to recognize unrealized losses due to reduced asset values. So is the case with stock prices. The recent shift in bond portfolios held by Japanese investors from U.S. Treasury to European and emerging market bonds may be largely associated with the market expectations of faster rising interest rates in the U.S. as well as the economic recovery of European and emerging market economies (Figure S1.10).

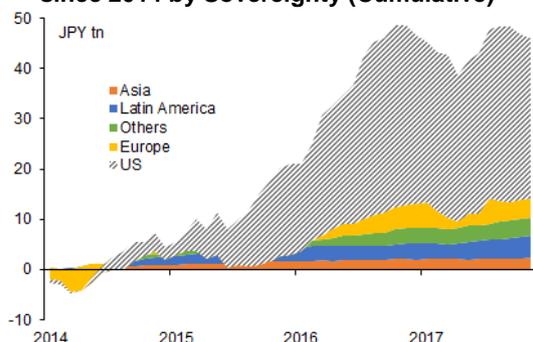
**Foreign investors' appetite for JPY-denominated assets.**

14. Since 2013, foreign investors' purchase of Japanese equity and debt securities has been strong in general. The amount of net purchases has been sizable and these inflows have partly cushioned the reduction in the current account balance in 2012-14 period, together

<sup>25</sup> There seems to be several hypotheses why JPY is globally considered as safe haven and "Japanese investors' repatriation story mentioned in this paragraph is one of them. In addition, speculative flows based on the idea of "JPY as safe haven" can be playing bigger role in making JPY strong in times of risk aversion than the repatriation flows.

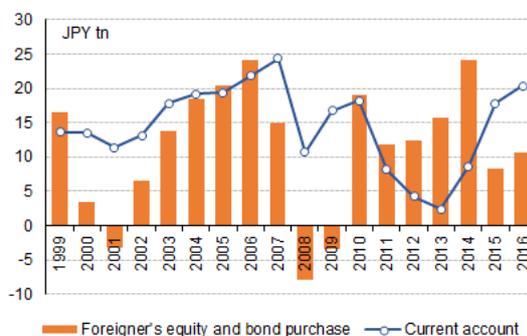
with increased income repatriation (Figure S1.11). The trend of rising corporate profits leading to higher stock prices, and extra premium to foreign investors who usually swap their foreign currency to JPY, due to the widened foreign currency basis swap during this period, had made Japanese equities and bonds attractive to foreign investors, in addition to their qualities as safe assets.

**Figure S1.10 Long-term Foreign Bond Investment since 2014 by Sovereignty (Cumulative)**



Source: Japan Ministry of Finance

**Figure S1.11 Foreigners' Investment in Japanese Equity and Debt Securities**



Source: Japan Ministry of Finance

### *Outward FDI*

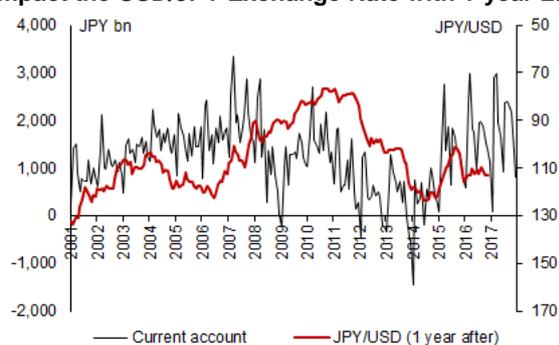
15. Outward direct investment has increased rapidly since 2013 (Figure S1.3). It increased 24.3 percent to USD169.6 billion in 2016, a record high. Both greenfield investment and equity capital investment including M&As increased substantially in 2016. In particular, the U.S. has become an increasingly important investment destination for Japanese companies in this period, and now accounts for about 30 percent of total outward FDI from Japan, amid steady macroeconomic growth and ample business opportunity especially in IT sector in the U.S.
16. The trend of robust growth in corporate earnings and easy financial conditions in Japan, as well as the cautious outlook for Japan's economy in the long-run, might have partly contributed to the increased direct investment overseas. In the past when JPY strengthened against other major currencies, Japanese manufacturers would move their production abroad ('offshoring' or 'outsourcing' business strategy) to maintain their competitiveness or actively purchase shares of foreign companies by M&As.

## **S1.4 Other Factors That Affect Capital Flows**

### *Current account balance*

17. This is one of the main sources of foreign currency supply or liquidity in the domestic foreign exchange market. The trade balance worsened significantly after the Great Eastern Earthquakes due to increased energy imports, and this put depreciation pressures on JPY in 2012-2014. The change in the current account balance is largely viewed by market economists to impact the JPY exchange rate with a time lag of about one year (Figure S1.12). However,

**Figure S1.12 Japan's Current Account Seems to Impact the USD/JPY Exchange Rate with 1-year Lag**



Source: Japan Ministry of Finance, Bloomberg

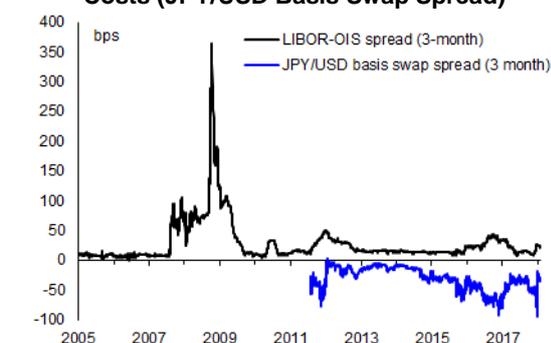
robust income repatriation by overseas Japanese companies from their rapidly increasing direct investment assets had cushioned the reduction in foreign currency supply. The relatively weak JPY situation may also have incentivized Japanese companies to repatriate their retained profits overseas.

18. The gradual and orderly normalization of accommodative monetary policies of the U.S. Fed and the ECB has not constrained Japanese overseas investment so far, with relatively low foreign currency funding costs being maintained. The LIBOR-OIS spread, one of the indicators for USD liquidity in the global funding market, was low from 2013 to mid-2016 (Figure S1.13). However, the USD funding cost is gradually increasing in tandem with rising global interest rates. In addition, tightening liquidity regulations represented by Basel-III as well as financial regulations in the U.S. (such as the regulations on money market funds) have reduced USD liquidity somewhat and increased funding stress in the global market. Uncertainty in U.S. economic, trade, and financial policies may be a risk factor to the exchange rate and consequently, overseas investment from Japan.

### *Hedging costs*

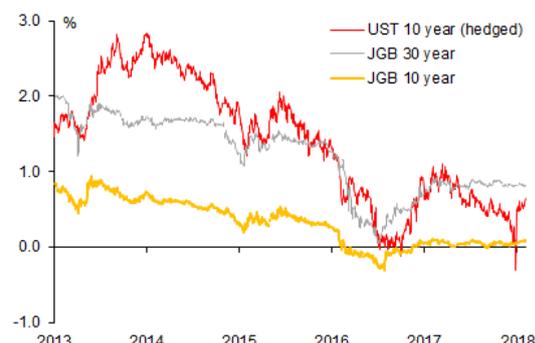
19. Widened basis swaps during 2015-16 led to higher cost of USD cash funding for Japanese banks. The higher hedging cost, particularly in 2016, made Japanese investors' investment on hedged U.S. Treasury bonds less attractive than before, compared to alternative of investment in long-term JGBs (Figure S1.14). The hedged yield even plunged to zero or negative in mid-2016. As indicated in Table S1.1, Japanese institutional investors such as banks and life insurance companies usually hedge against currency risk. The currency swap market is one of the main funding sources for these institutional investors. On the other hand, high hedging premium makes it attractive for foreign investors to buy JPY assets.

**Figure S1.13 LIBOR-OIS Spread and Hedging Costs (JPY/USD Basis Swap Spread)**



Source: Bloomberg

**Figure S1.14 Hedged UST vs Unhedged JGB Yield**



Source: Bloomberg

## S1.5 Implications

20. To sum up, capital flows to and from Japan will be driven by many factors as noted above. Capital outflows will increase when the short-term yen carry trade, and mid-to-long term investment demand increases. Demand for outward direct investment of Japanese corporations is also important factor for capital outflows from Japan, given the important position of Japanese corporations in the global value chain. On the other hand, capital inflows will increase when safe haven demand increases in times of global risk-aversion and/ or when the capital market is exposed to a significant loss of market value of assets.

21. The current situation is assessed as being conducive to capital outflows from Japan. A sizable current account surplus is likely to continue for a while, and there is no sign of significant stress in foreign currency funding. The yield gap between Japan and other countries is expected to widen further as the divergence of monetary policies increases. The JPY's real effective exchange rate remains at a low level compared to the past 40 years and the possibility of significant volatility in the future is not that high at the moment.
22. Close monitoring is warranted, given the uncertainties surrounding geopolitical situation and global policy environment. An unexpected shock in these underlying factors could prevent or discourage Japanese institutions and individuals from investing abroad and this could lead to heightened volatility in the JPY exchange rate and financial markets. Faster-than-expected interest rate hikes by the U.S. Fed and the ECB, although a pull factor for Japanese capital on the one hand, will increase market risks on the other, given the large amount of foreign debt holdings by Japanese residents abroad.
23. Future work could focus on examining the relative importance of those drivers of capital flows and their possible causalities. Some econometric tests could be used to confirm the relation between the volatility of capital flows (or exchange rates) and the proxy indicators<sup>26</sup> of the above-mentioned driving factors.

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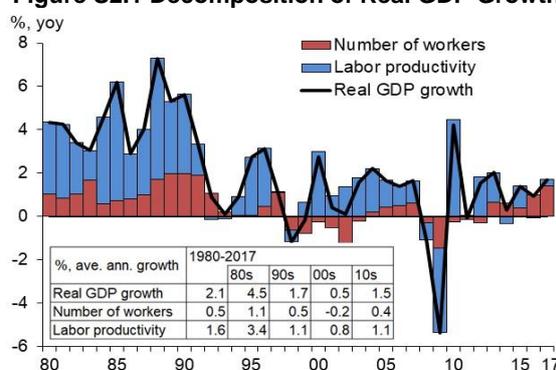
<sup>26</sup> The potential indicators for these underlying factors may include; volatility index for exchange rate (model driven or simple standard deviation); individual items in the BOJ financial account; policy rate differentials; basic balance as a percentage of GDP; monetary base multiple between Japan and other advanced economies; interest rate spreads with different maturities; terms of trade; Economic Surprise Index; VIX index; and foreign currency liquidity indicators such as basis swaps or turnover.

## S2. Labor market reforms, Growth, and Productivity

### S2.1 Why is labor market reform important for Japan?

24. **Japan's economy faces strong demographic headwinds, which should be addressed through labor market reforms that can increase labor input and productivity.** The downward trend in the number of workers has paused in recent years owing to the increasing employment of women and the elderly (Figure S2.1). That said, in the long run, it is estimated the number of workers will decline at a pace of 0.9 percent every year on average from 2018 to 2049, assuming no further improvement in the labor force participation rate (LFPR) is seen (Figure S2.2). Given this long-term projection, labor productivity growth rate of 1.9 percent is necessary going forward to achieve real GDP growth rate of 1.0 percent.<sup>27</sup> However, labor productivity growth rate has remained broadly unchanged at around 1.0 percent since the 1990s. Against this backdrop, this note examines room for and ways to enhance labor input (quantity), and to increase labor productivity (quality) so that Japan's economy can maintain the current level of real GDP growth rate in the long run.<sup>28</sup>

**Figure S2.1 Decomposition of Real GDP Growth**

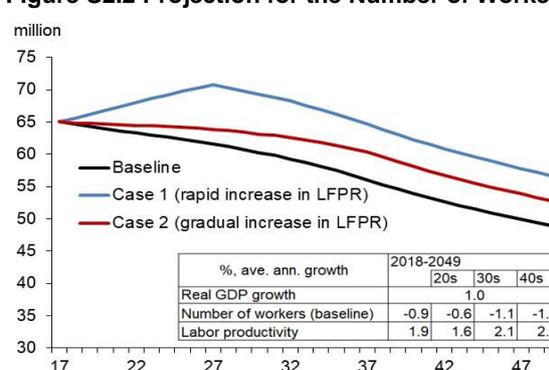


Note 1: Labor productivity is simply calculated by subtracting the growth rate of number of workers from the real GDP growth rate. In other words, this is the real GDP growth rate per employee, and therefore, composed of changes in both working hours and productivity per hour.

2: Data on 2017 are up to Q3 2017.

Source: CEIC, AMRO staff estimates

**Figure S2.2 Projection for the Number of Workers**



Note 1: Figures are estimated based on the population projection (medium-fertility and medium-mortality) by the National Institute of Population and Social Security Research (NIPSSR).

2: The baseline assumes the ratios of number of employed, i.e., LFPR\*(1-unemployment rate) of the age groups 15-64 and 65+ are kept unchanged from those of the Nov 2016-Oct 2017 average (75.1 percent and 23.1 percent respectively). Case 1 assumes the two ratios continue to increase for the next 10 years at the same pace realized during 2013-17, and are kept unchanged from 2028 onward at 84.3 percent and 30.2 percent respectively. Case 2 assumes the two ratios continue to increase at a more gradual pace so that it takes another 10 years to reach the same levels as in Case 1.

Source: NIPSSR, Ministry of Internal Affairs, AMRO staff estimates

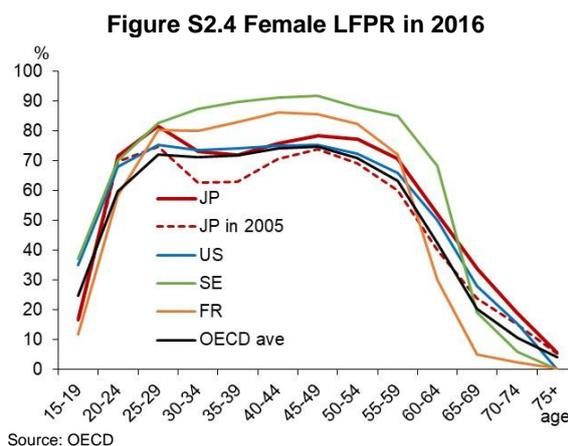
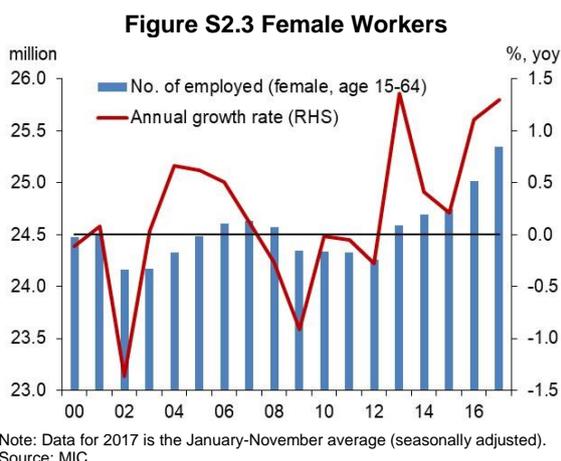
### S2.2 Ways to Improve Labor Input

#### *Increasing female labor force participation rates further*

25. **Japan's female LFPR can increase further, especially in the age groups of 30-64.** The number of employed women has increased notably since 2012 despite the declining working age population overall (Figure S2.3). This is due to a dramatic improvement in female LFPR thanks to a prolonged cyclical upturn causing strong demand for labor and policy initiatives to enable more flexible working environments, particularly for the childrearing generation (Figure S2.4). Japan's female LFPR is now higher than that of the U.S. for the most of the age groups. Nevertheless, it is still far below the level seen in European countries such as Sweden and France, suggesting additional room for improvement. More importantly, a so-called M-shaped curve, reflecting an extended period of withdrawal from the labor market by women aged around 30 for childrearing, remains as it was in 2005.

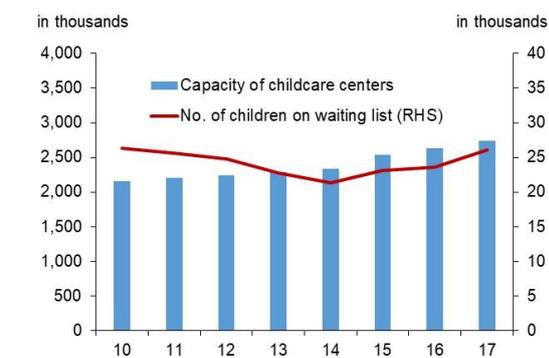
<sup>27</sup> The recent recovery in the number of employed is supported by the increase in part-timers, many of whom are women and the elderly who have newly joined or returned to the labor market. It should be noted that their shorter working hours put downward pressures on labor productivity, shown in Figure S2.1.

<sup>28</sup> Regarding ways to improve labor input, this section focuses on LFPR and working hours, and not on fertility rate. On the labor productivity front, this section mainly focuses on productivity measured in terms of per hour worked, unless otherwise noticed.

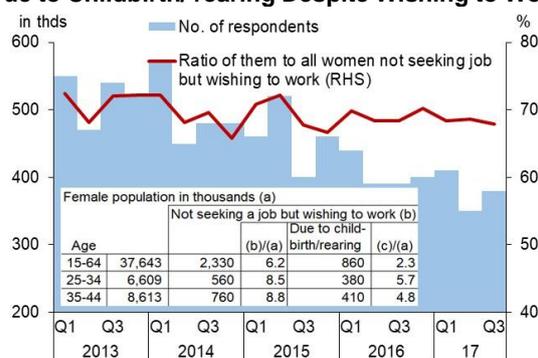


**26. Additional expansion of the childcare centers' capacity will be effective in smoothing the M-shaped curve.** In recent years, the capacity of childcare centers has increased thanks to policy efforts to meet rising demand from women who wish to resume working soon after childbirth (Figure S2.5). That said, the number of children on a waiting list for childcare centers has still increased, because of pent-up demand unleashed by improved access to childcare centers as well as a shortage of nursery teachers. Meanwhile, the number of women aged 25-34 who are not seeking jobs due to childbirth/childrearing despite wishing to work<sup>29</sup> has declined by 170,000, or 30.9 percent, from Q1 2013 to Q3 2017 (Figure S2.6). Such a dramatic improvement, supported by both central and local governments' efforts, has contributed to increasing female LFPR. However, still around 70 percent of women not seeking jobs deem childbirth/childrearing as the major obstacle to return to work. If this obstacle can be addressed fully, the female LFPR for ages 25-34 and 35-44 are estimated to increase by 5.7 percentage points and 4.8 percentage points respectively, and will help smoothen the M-shaped curve.

**Figure S2.5 Capacity of Nursery Care Centers**



**Figure S2.6 Women Aged 25-34 Not Seeking a Job Due to Childbirth/ rearing Despite Wishing to Work**

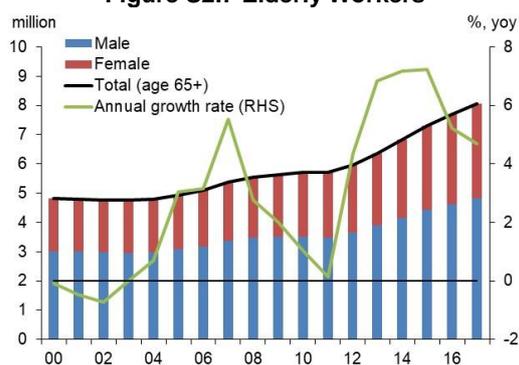


**27. Tax disincentives that prevent part-timers from working longer should be recalibrated.** The threshold for income tax deduction, or the so-called spousal deduction, was raised from JPY 1.03 million to JPY 1.5 million, effective from January 2018. This is a welcome development as more part-timers can work longer without adjusting working hours downward so as to avoid their incomes crossing the threshold for tax deduction. Given the steady rise in hourly wage of part-timers in recent years, such tax disincentives should be further addressed to boost their working hours.

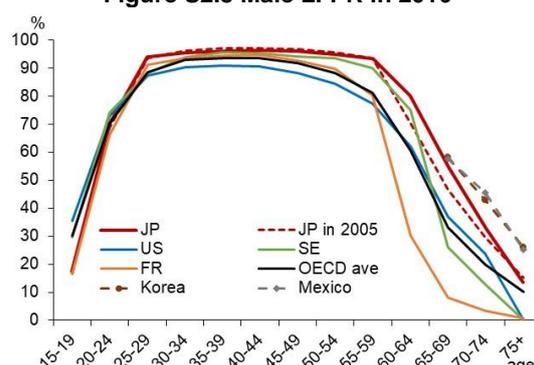
<sup>29</sup> These women are not counted as part of the labor force as they are not seeing jobs.

*Increasing labor participation among the old*

28. **The number of employed in the 65+ age group has increased rapidly in recent years, but room for further growth may be limited in the medium- to long-term unless comprehensive pension system reform is carried out.** The implementation of the revised Law Concerning Stabilization on Employment of Older Persons (effective from April 2013), which requires an employer to renew the employment contracts of those who wish to continue to work until age 65, together with the labor shortage, has increased the employment of the elderly (Figure S2.7). The LFPR of the elderly has shifted up for both females and males in tandem (Figure S2.4, S2.8), which has alleviated the negative impacts of a declining working age population. Looking ahead, however, the pace of old-age LFPR improvement is expected to moderate. This is because the share of people aged 75+, for whom it is difficult to continue working, is project to increase steadily. In addition, the old-age LFPR is already higher than OECD average. Nevertheless, some OECD countries such as Korea and Mexico have higher old-age LFPR than that of Japan, mainly because of less generous public pension systems. This suggests that a comprehensive reform of pension systems, including extending the minimum retirement age and raising the eligibility age for receiving public pension benefits, may lead to an additional increase in the number of elderly workers. That said, such reform should be carefully calibrated by taking into account the possible negative impacts on private consumption throughout a worker's lifecycle.

**Figure S2.7 Elderly Workers**

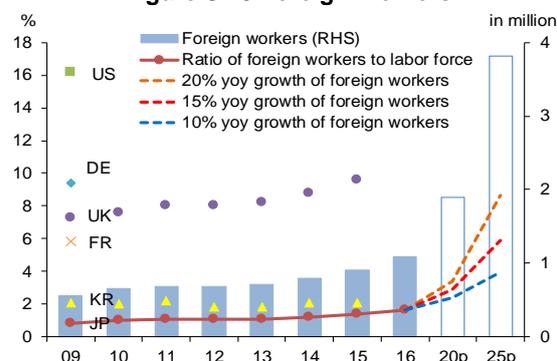
Note: Data for 2017 is the January-November average (seasonally adjusted).  
Source: MIC

**Figure S2.8 Male LFPR in 2016**

Source: OECD

*Utilizing more foreign workers*

29. **The number of foreign workers has steadily increased in recent years, but they still account for only 1.6 percent of the total labor force, suggesting room for further increase.** The number of foreign workers reached a record high of 1.08 million in 2016, with a 19.4 percent annual growth rate (Figure S2.9). However, they still comprised only 1.6 percent of the total workforce. If the number of foreign workers increase by 15 percent annually between now and 2025, the total number of foreign workers will reach 3.81 million in 2025, or 5.9 percent of the total labor force, which will still be

**Figure S2.9 Foreign Workers**

Note 1: Data on the ratio of foreign workers are available up to 2015 for Korea and U.K., and up to 2009 for France, Germany, and the U.S.

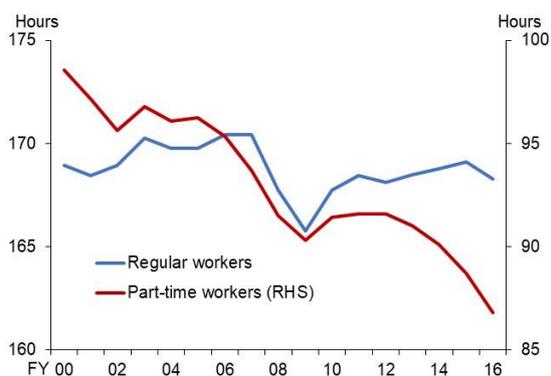
2: Projection for 2020 and 2025 is based on assumption that the labor force participation rate is kept unchanged at 2016 level onwards, and the long-term population projection by the NIPSSR (medium-fertility and medium-mortality), with three scenarios of annual growth rate of foreign workers. The bar charts for 2020 and 2025 is based on a 15 percent growth scenario.  
Source: MHLW, Japan Institute for Labor Policy and Training, NIPSSR, AMRO staff estimates

lower than the share of foreign workers in most Western countries, suggesting this growth assumption is not unrealistic. The government has recently eased regulations on foreign workers, including the introduction of a new status of 'long-term care' to the resident visa and the shortening of required stay period in Japan to apply for green cards from five years to between one and three years for those designated as highly skilled. Such policy efforts are welcome, and further initiatives are encouraged to cope with the labor shortage, although opening up the labor market for foreign workers is not merely an economic but also a social issue. Obstacles such as cultural differences and a language barrier should also be addressed to encourage foreign workers, especially highly productive ones, to stay in Japan.

### *Extending the working hours for part-timers*

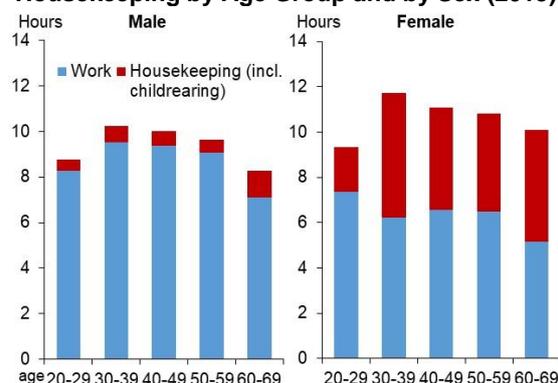
30. **The working hours of part-time workers can be longer if work relating to childcare can be alleviated.** As discussed, there is ample room to increase the number of workers. Another way to increase labor input is to make the working hours longer. Of course, given that Japan's regular workers work much longer hours than those in advanced economies, the focus should be on part-time workers. Since 2000, the working hours of regular workers have remained almost unchanged, except in the period after the GFC, while those of part-time workers have steadily declined (Figure S2.10). This is partly because Japanese firms are now offering shorter required working hours for part-timers in response to the different needs of women and the elderly who have increased bargaining power due to a labor shortage. Some elderly workers may intentionally choose to work shorter hours due to their age and/ or health. However, it is also true that part-timers, especially women with children, cannot work longer due to limited support from their spouses who are working overtime. A disproportionate share of the burden of housekeeping and childcare is borne by women (Figure S2.11). Reducing regular workers' overtime work, which is not deemed as being very productive, would be helpful as it would provide the support needed to allow female part-timers to work longer. Allowing part-timers to work longer will also help convert them into regular workers, who will be eligible for higher salaries and various benefits. This will result in higher labor costs for employers, but they can be compensated by more stable employment.

**Figure S2.10 Total Monthly Working Hours**



Note: Data are for companies with more than five employees.  
Source: MHLW

**Figure S2.11 Hours to be Spent for Work and Housekeeping by Age Group and by Sex (2015)**

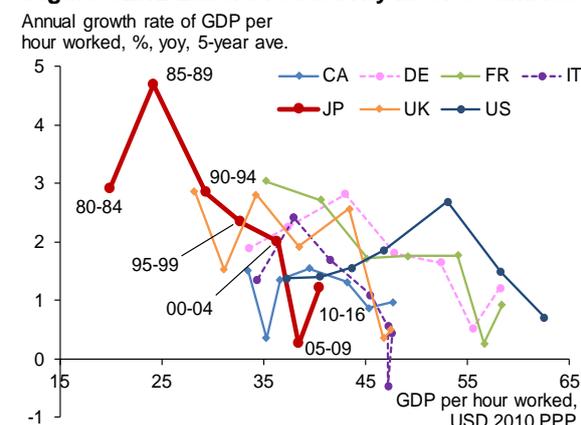


Note: Data is representative of the average working day.  
Source: NHK (Japan Broadcasting Corporation)

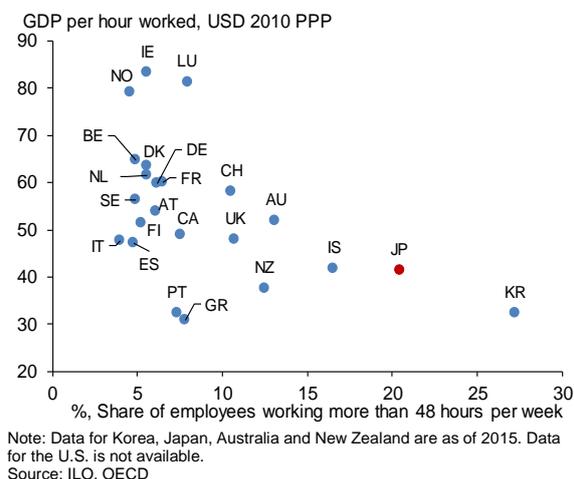
## S2.3 Ways to Improve Labor Productivity

31. **There seems to be ample room to improve Japan's labor productivity.** Japan's growth rate of labor productivity—measured in terms of annual growth rate of GDP per hour worked—has declined since the 1990s, as in other G7 countries (Figure S2.12). However, the productivity level is the lowest among the G7 countries. It stood at USD41 (in 2010 PPP) on average between 2010-16, or 65 percent of the USD63 in the U.S. This suggests there are ways to improve Japan's hourly labor productivity.

**Figure S2.12 Labor Productivity in G7 Countries**



**Figure S2.13 Overtime and Productivity (2016)**



### *Cutting overtime work for regular workers*

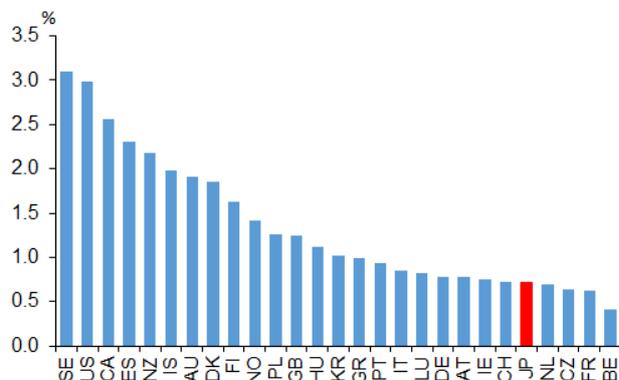
32. **The working hours for regular workers in Japan can be shortened without productivity loss.** Conceptually, working longer can enhance an employee's marginal productivity as it promotes his/ her accumulation of knowledge and skills. Marginal productivity diminishes gradually as working hours become longer, and it turns to negative at a certain threshold because of tiredness and sleepiness as well as physical and mental sickness. In Japan, the working hours of regular workers have been flat on average since 2000 (Figure S2.10), while the share of employees working overtime is high (Figure S2.13). The weak negative correlation between overtime work (especially in the area of 10.0 percent and higher) and hourly productivity implies that Japan's working hours are well over the threshold that maximizes marginal productivity. Initiatives to reduce overtime work, including requiring employer to pay more for overtime work, an introduction of caps on monthly and/ or annual overtime work and strengthening enforcement on illegal overtime work, will be welcome in this context.

### *Improving labor mobility*

33. **Japan's labor mobility is low as compared to other advanced economies, and this may have affected the efficient distribution of human capital (Figure S2. 14).** It is important to keep the labor market fluid to ensure that workers can move to where they can deliver the highest performance. However, too much mobility can undermine productivity with limited opportunity for workers to accumulate firm-specific skills. However, in Japan, the labor market duality between regular workers and non-regular workers remains substantial. The government's initiative regarding 'equal pay for equal work' is appropriate as it is expected to remove wage gaps between regular workers and non-regular workers, and thereby enhance labor mobility. Moreover, the mobility in the market of regular workers, which account for as much as 70 percent of total employees,

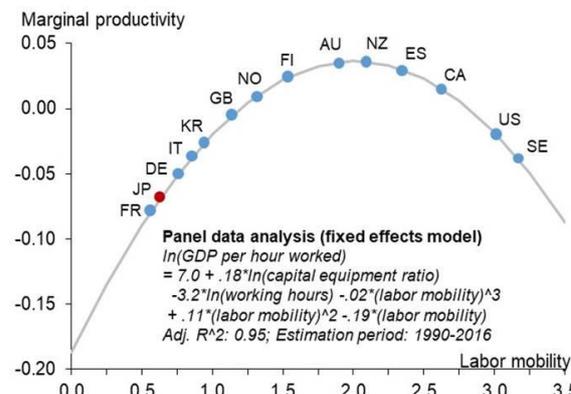
is considered particularly low.<sup>30</sup> The low mobility may have also hindered the dissemination of advanced technology or skills from productive firms to less productive ones.<sup>31</sup> Indeed, our estimation results suggest that higher labor mobility can help boost marginal productivity in Japan (Figure S2.15).

Figure S2. 14 Labor mobility (2014-16 average)



Note: The index shows the ratio of the sum of inflows and outflows of short-term unemployment (unemployed less than one month) to working age population.  
Source: OECD, World Bank, BOJ, AMRO staff estimates

Figure S2.15 Labor Mobility and Marginal Productivity

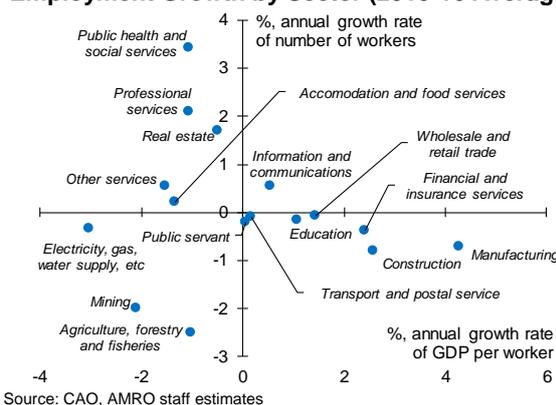


Note: The estimation is conducted based on data from 27 advanced countries listed in Figure S14. The quadratic function in Figure S13 shows the first-order differentiation of the estimated equation in terms of labor mobility. Dots are 2014-16 average.  
Source: OECD, World Bank, AMRO staff estimates

**34. Measures that promote labor inflows into productive firms/ sectors are necessary as well.**

So far, a growing number of employees has tended to be absorbed in less productive sectors (Figure S16). This is especially the case with the increase of workers in public health social services, which include healthcare workers, reflecting the rising demands amid aging population. Wages in such public sectors are not simply determined by market forces, and hence, the government’s plan to increase the wages of employees in long-term care centers and nursery schools are welcomed. However, the wage hike in such quasi-public sectors should be conducted by enhancing the efficiency of fiscal expenditure, and/ or by mobilizing additional revenue given the growing fiscal imbalance in Japan in the long term. Improving labor mobility, as discussed above, would also help smooth transition of workers from less productive to more productive sectors.

Figure S2.16 Productivity Growth and Employment Growth by Sector (2010-16 Average)



Source: CAO, AMRO staff estimates

*Facilitating physical and human capital investment*

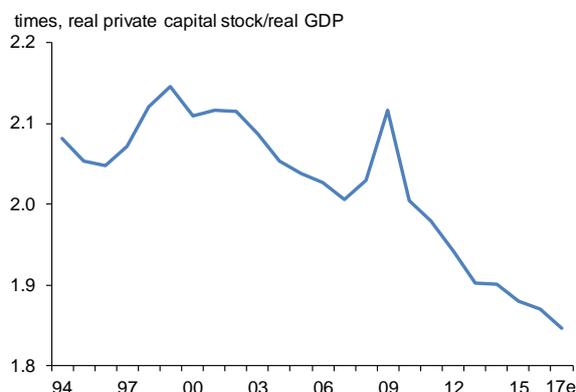
**35. Labor-saving investments amid a shrinking labor force will continue to increase, which will contribute to improve labor productivity.**

Faced with a labor shortage, firms have recently increased labor-saving fixed investments, especially by utilizing technology. The capital coefficient of the private sector, measured by the ratio of private capital stock to GDP, has declined since the GFC (Figure S2.17). This suggests that the efficiency of investment has improved, justifying the current uptick in private fixed investments.

<sup>30</sup> Regular workers do not strongly demand a wage increase in exchange for their job security under the implicit long-term labor contract.  
<sup>31</sup> Hiroshi Nakaso (2017), “Japan’s Way towards Strong, Sustainable, and Balanced Growth: Assessment of the potential of the Japanese economy suggests the sun also rises,” *Speech at meeting hosted by the Japan Society and the City of London Corporation in London.*

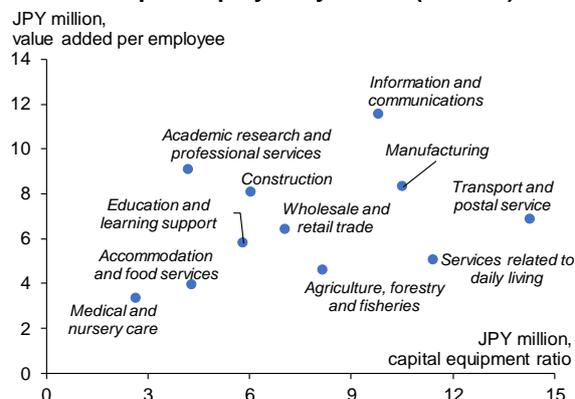
Considering the positive correlation between the capital equipment ratio and value added per worker by sector, investments in sectors that are not highly productive are encouraged (Figure S2.18). The government also supports investments that enhance labor productivity through subsidiaries and tax incentives.

**Figure S2.17 Capital coefficient**



Note: The capital coefficient is calculated as (real private fixed capital + real private housing capital) / real GDP as of Q4 of each year. Data for 2017 is calculated based on data in Q2.  
Source: CAO

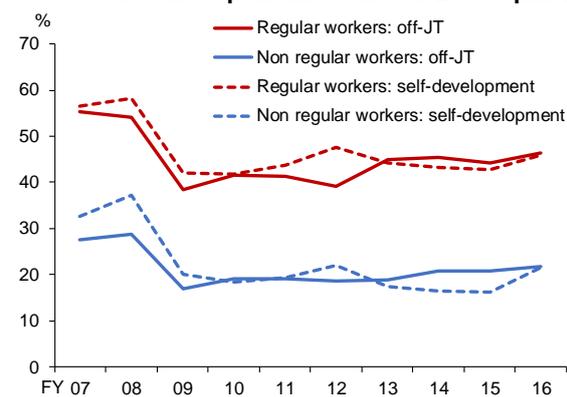
**Figure S2.18 Capital equipment ratio and value added per employee by sector (FY2016)**



Note 1: The capital equipment ratio is calculated by (tangible fixed assets - construction in process) / number of employees.  
2: Three sectors including electricity, gas and water supply, real estate and leasing, and mining and quarry are not shown due to their sizable capital equipment ratios.  
Source: CAO

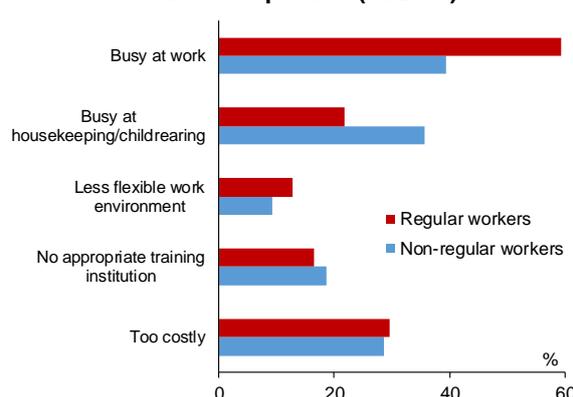
**36. In addition to investments in physical capital, investment in human capital are also needed to enhance labor productivity.** The share of workers who have taken off-the-job-training courses and have spent time for self-development have recovered from the decline after the GFC, while the dichotomy between regular and non-regular workers remains visible (Figure S2.19). In addition, among those who responded that they did not spend time for self-development, a majority said that they were busy at work and with housekeeping and childrearing (Figure S2.20). Topics discussed earlier such as reducing overtime work and the childbearing burden would be beneficial from this viewpoint as well.

**Figure S2.19 Share of Workers that Took off-JT Courses and that Spent Time on Self-Development**



Source: MHLW

**Figure S2.20 Reasons for not Spending Time on Self-developments (FY2016)**



Note: Multiple responses permitted  
Source: MHLW

## S2.4 Policy implications

**37. The government's Action Plan for the Realization of Work Style Reform (WSR), including measures to improve both labor input and labor productivity, is welcome; meanwhile, additional efforts can help address challenges posed by an aging population and enhance growth potential of Japan.** As shown in Table S2.1, the Action Plan announced in March 2017, which is to become effective in FY2019, puts in

place various measures relating to the labor market, which is highly commendable. Reform momentum should be maintained for further actions. Possible additional measures would include: increasing the use of foreign workers, increasing the participation of female and elderly workers, increasing overtime pay, introducing a financial compensation program for invalid dismissal to enhance labor mobility. On the sidelines of WSR, the Abe administration is working on Supply System Innovation and Human Resources Development Revolution. Such policies are also welcome, as they are expected to complement the WSR.

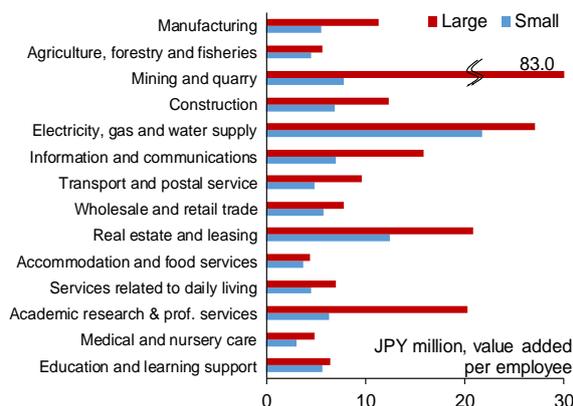
**Table S2.1 Action Plan for the Realization of Work Style Reform (Excerpt)**

<b>1. Improvement in wage for non-regular workers including equal pay for equal work</b> - Establishment of legal framework and guideline to ensure effectiveness
<b>2. Wage increase and improving labor productivity</b> - Encouraging companies to raise wages and improve business transaction practice - Supporting productivity increase to facilitate wage increase
<b>3. Correction of overtime work by introducing upper limits on overtime work with penalty</b> - Limiting overtime to 45 hours per month, 360 hours per year - Exception up to 720 hours per year, 100 hours in any one month
<b>4. Fostering flexible work styles</b> - Updating guidelines of telecommuting - Promoting sideline business
<b>5. Improving work employment of women and young generations</b> - Supporting retraining of individuals including recurrent education for women - Promoting divergent employments for women - Support measures on the generation faced a hard time to find job during 1993-2005 and on youth
<b>6. Ensuring compatibility of medical treatment and work</b> - Changing corporate management's way of thinking and establishment of rediness to receive affected workers - Improvement in industry medical care and industry health insurance
<b>7. Ensuring compatibility of childrearing/long-term care and work, and employment of disabled</b> - Enriching support for childrearing and long-term care (promoting male's participation for them)
<b>8. Promoting job-change and re-employment in industries with high capacity to absorb labor and value added</b> - Supporting companies recruiting job changers - Provision of information on qualification and remuneration of job openings
<b>9. Providing equal educational opportunities</b>
<b>10. Promoting employment of the elderly</b>
<b>11. Promoting intake of foreign workers</b>
<b>12. Drawing up a roadmap for the next 10 years</b>

Source: Office of the Prime Minister of Japan and His Cabinet

38. **Given the narrow fiscal space, related budget support for these policies should be targeted.** These include sectors and firms with low productivity, and lower income groups as well as specific generations facing limited opportunities for education and job training. For example, the productivity of SMEs is clearly low, justifying the government's targeted supports for them (Figure S2.21).

**Figure S2.21 Value-added per Employee (by Sector and Size, FY2016)**

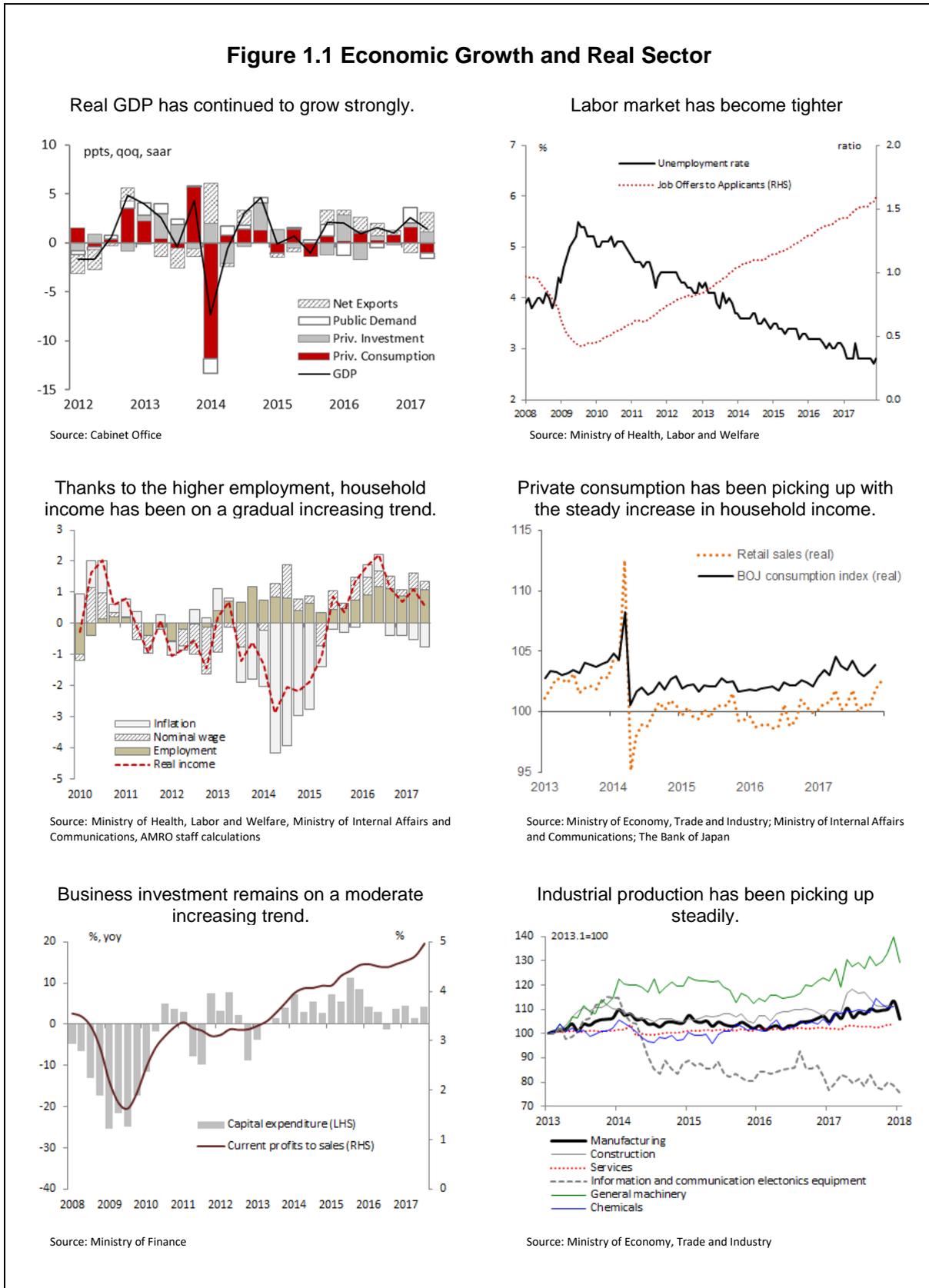


Note: Companies with less than JPY100 million of capital are classified as small enterprises, while those with a greater amount of capital are classified as large enterprises.

Source: JMOF, AMRO staff estimates

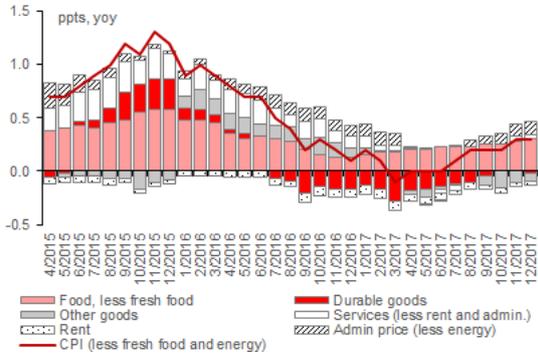
Appendices

1. Selected Figures for Major Economic Indicators



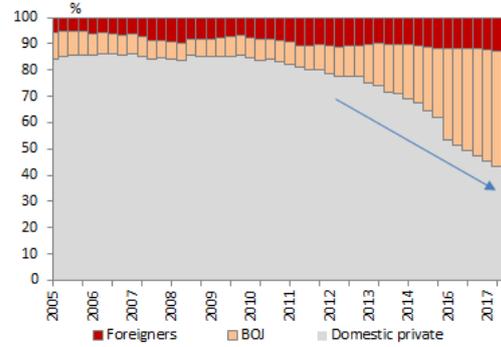
**Figure 1.2 Monetary and Financial Sectors**

Underlying CPI inflation (less fresh food and energy) has remained stubbornly low.



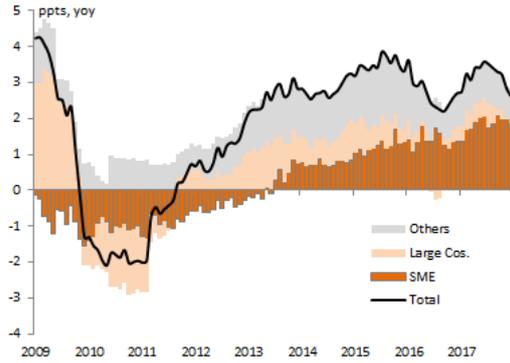
Source: Ministry of Internal Affairs and Communications, Japan Center for Economic Research

BOJ's share of JGBs rose to over 40 percent.



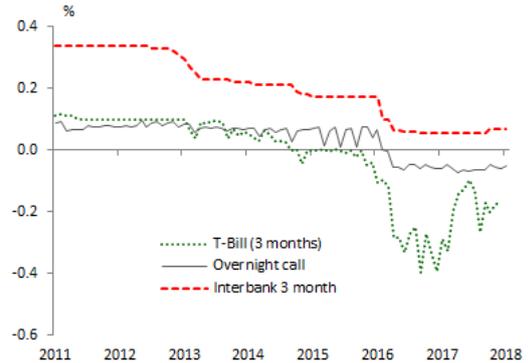
Source: The Bank of Japan, Ministry of Finance, Bloomberg

Loan growth has picked up again to around 3.0 percent.



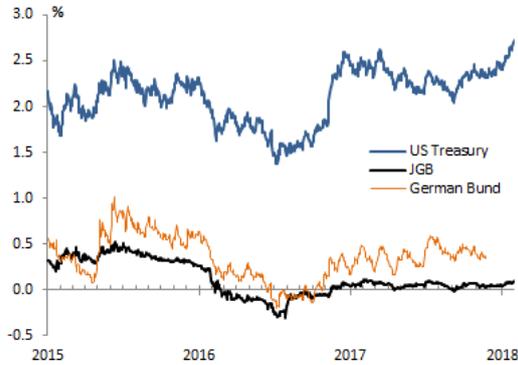
Source: The Bank of Japan  
Note: "Credit" includes loans and discount.

Short-term interest rates remained low.



Source: The Bank of Japan, Bloomberg

10-year JGB yield has been suppressed at around zero percent.



Source: Bloomberg

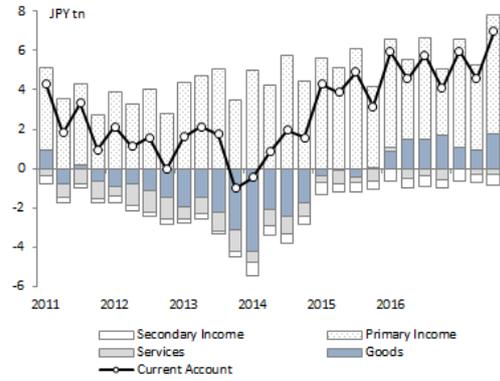
Stock prices have climbed up as a trend, albeit with some adjustment in early 2018.



Source: Tokyo Stock Exchange, Bloomberg

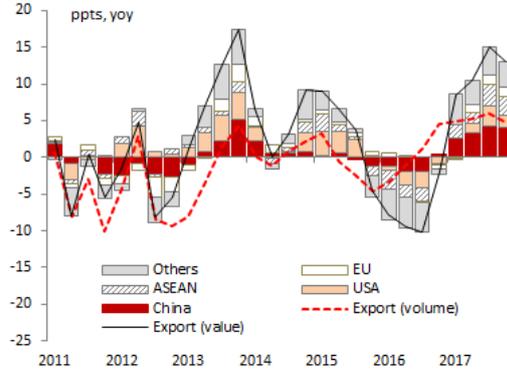
**Figure 1.3 External Sector**

The current account surplus remained sizable.



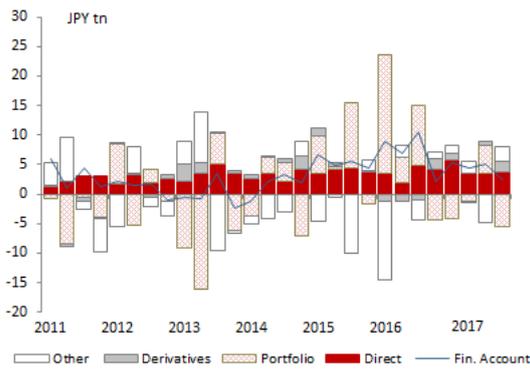
Source: Ministry of Finance

Merchandise exports have been picking up.



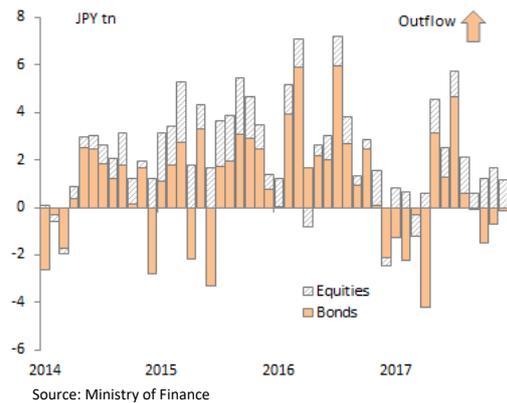
Source: Ministry of Finance and AMRO staff calculations

Capital outflows have continued, led by outward direct investments.



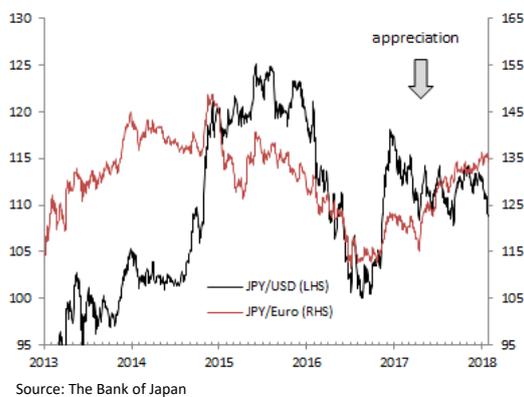
Source: Ministry of Finance

Japanese investors resumed their investment in foreign bonds in the second quarter of 2017.



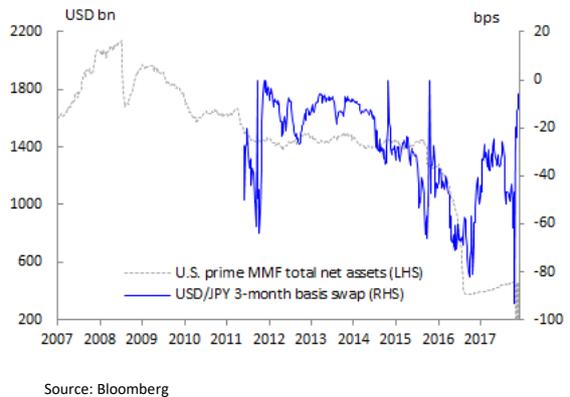
Source: Ministry of Finance

JPY exchange rate has been stable at around the range of 105-115 since the beginning of this year.



Source: The Bank of Japan

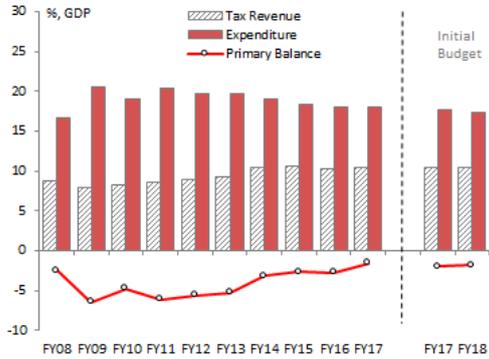
The USD hedging costs have eased significantly.



Source: Bloomberg

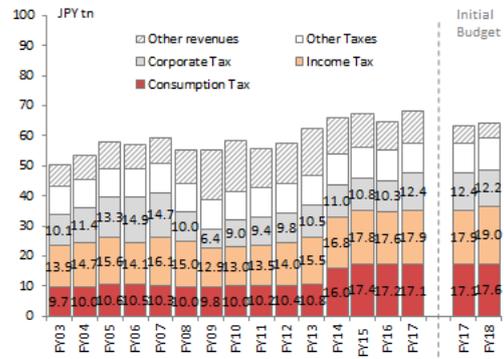
**Figure 1.4 Fiscal Sector**

Central government primary deficit has narrowed gradually.



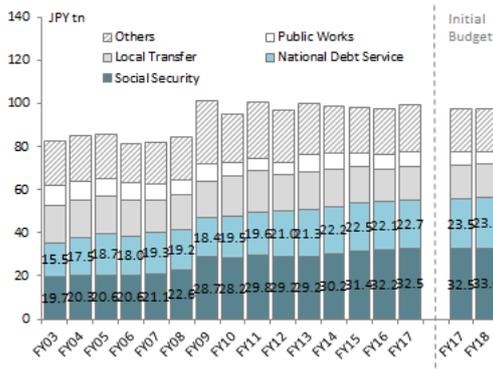
Note: Realization for FY17 is estimated from the supplementary budget.  
Source: Ministry of Finance, Cabinet Office

Tax revenues are expected to remain steady during FY2016 and FY2017.



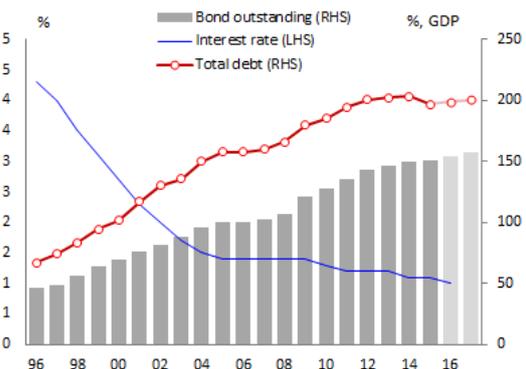
Note: Realization for FY17 is estimated from the supplementary budget.  
Source: Ministry of Finance and AMRO staff estimation

Government spending has been contained, but social security spending has continued to rise.



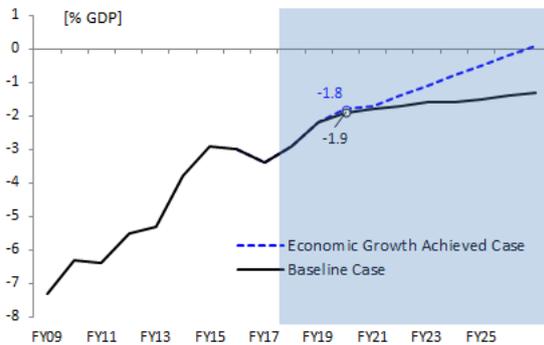
Note: Realization for FY17 is estimated from the supplementary budget.  
Source: Ministry of Finance

Central government debt remained high at around 200 percent of GDP.



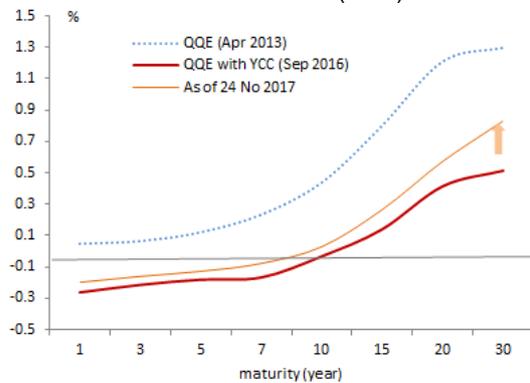
Source: Ministry of Finance and AMRO staff estimation (for FY16-17)

The primary balance in terms of GDP is projected to remain in deficit in FY2020.



Source: Cabinet Office (January 2018)  
Note: The primary balance is for central and local government

JGB yield curve has been in line with the current guideline for market operations under "QQE with Yield Curve Control (YCC)".



Source: Bloomberg

## 2. Selected Economic Indicators and Projections

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
						Proj.		
<b>Real Sector and Prices</b>	(Annualized percent change, unless otherwise specified)							
GDP growth	0.8	2.6	-0.3	1.4	1.2	1.8	1.3	0.7
Private consumption	1.6	2.7	-2.5	0.8	0.3	1.3	0.9	0.2
Private Non-Residential Investment	2.4	7.0	3.3	2.3	1.2	3.1	3.2	2.0
Private Residential investment	5.1	8.3	-9.9	3.7	6.2	3.0	1.1	-3.8
Government consumption	1.3	1.7	0.4	1.9	0.5	0.6	0.3	0.3
Public investment	1.3	8.6	-2.0	-1.6	0.9	2.5	-2.7	0.9
Net exports (ppts)	-0.8	-0.5	0.6	0.1	0.8	0.3	0.2	0.0
Exports of goods and services	-1.6	4.4	8.7	0.7	3.4	5.8	5.2	4.8
Imports of goods and services	3.8	7.1	4.2	0.3	-1.0	3.8	3.5	3.1
<b>Labor market</b>	(Average of monthly data)							
Unemployment rate (% , sa)	4.3	3.9	3.5	3.3	3.0	2.7	2.6	2.6
Ratio of job offers per one applicant (sa)	0.8	1.0	1.1	1.2	1.4	1.5	1.6	1.6
<b>Prices</b>	(Average of monthly data)							
CPI (all items)	-0.3	0.9	2.9	0.2	-0.1	0.7	0.8	0.9
CPI (less fresh food)	-0.2	0.8	2.8	0.0	-0.2	0.7	0.8	0.9
<b>External Sector</b>	(JPY trillion unless otherwise specified)							
Current account balance	4.2	2.4	8.7	17.9	20.4	21.0	21.4	23.1
Current account balance (% of GDP)	0.9	0.5	1.7	3.3	3.8	3.8	3.8	4.1
Trade balance	-8.2	-13.8	-9.1	-1.1	4.0	3.6	5.1	6.6
Exports of goods, fob	63.9	70.9	74.7	74.1	71.5	78.2	82.3	86.2
Imports of goods, cif	72.1	84.6	83.8	75.2	67.5	74.6	77.2	79.6
Current account: primary income	14.5	18.3	20.0	20.9	18.1	19.2	18.0	18.1
Financial account	1.5	-1.0	14.2	23.8	24.9	16.8	20.2	22.0
International reserves (USD bn, period end)	1,254	1,279	1,245	1,262	1,230	...	...	...
<b>Fiscal Sector (Central Government)</b>	(In percent of GDP)							
Tax revenues	8.9	9.3	10.4	10.5	10.3	10.5	10.6	10.8
Expenditures	19.6	19.8	19.1	18.4	18.1	18.0	17.5	17.2
Primary balance	-5.3	-4.0	-2.7	-2.3	-2.9	-2.3	-1.9	-1.7
Outstanding gov. debt	200.5	202.1	203.2	196.5	198.7	200.7	199.9	199.5
<b>Monetary Sector</b>	(In annual percent change, unless otherwise specified)							
Monetary base	8.8	43.7	39.7	32.3	23.4	...	...	...
Overnight uncollateralized call rate (%)	0.058	0.044	0.015	-0.002	-0.060	...	...	...
<b>Memorandum items</b>								
Exchange rate (JPY/USD, period average)	83.0	100.2	109.9	120.1	108.4	...	...	...
Exchange rate (JPY/USD, end of period)	94.0	103.0	120.2	112.4	111.8	...	...	...
Nikkei 225 (JPY, end of period)	12,398	14,828	19,207	16,759	18,909	...	...	...
JGB 10 year yield ( % , end of period)	0.564	0.641	0.398	-0.049	0.067	...	...	...
Non-performing loan ratio (% , end of period)	0.33	1.33	1.10	0.97	0.87	...	...	...
Nominal GDP (USD bil)	5,958	5,061	4,717	4,445	4,976	...	...	...
Nominal GDP (JPY tn)	494.5	507.2	518.5	533.9	539.3	549.1	559.9	569.0

Note: Fiscal year unless otherwise mentioned.

NPLs are from Japan Financial Services Agency, "Overview of Major Banks Financial Results"

The BOP data in external sector follow the IMF BPM6 standard.

Source: National Authorities, AMRO staff estimations and projections.

### 3. Data Adequacy for Surveillance Purposes: a Preliminary Assessment

Criteria/ Key Indicators for Surveillance	Availability (i)	Reporting Frequency/ Timeliness <sup>(ii)</sup>	Data Quality <sup>(iii)</sup>	Consiste ncy <sup>(iv)</sup>	Others, if Any <sup>(v)</sup>
National Accounts	Available	Quarterly data (1 <sup>st</sup> estimate) are released with a time lag of around two months	-	-	-
Balance of Payments (BOP) and External Position	Available	Monthly balance of payments data have been released with a time lag of one to two months	-	-	-
State Budget and Government/External Debt	Available	Budget data for general government are released on an annual basis with a time lag of around eight months. External debt data are released on a quarterly basis with a time lag of two to three months	-	-	-
Money Supply and Credit Growth	Available	Monthly data have been released with a time lag of one to two months	-	-	-
Financial Sector Soundness Indicators	Available	Semi-annual data have been released on the FSA website with a time lag of three months	-	-	-
State-Owned-Enterprises Statistics	Available	Most data are released timely with adequate frequency on their own websites of SOEs	-	-	-
Others, if relevant	-	-	-	-	-

**Notes:**

(i) Data availability refers to whether the official data are available for public access by any means.

(ii) Reporting frequency refers to the periodicity with which the available data are published. Timeliness refers to how up-to-date the published data are relative to the publication date.

(iii) Data quality refers to the accuracy and reliability of the available data given the data methodologies.

(iv) Consistency refers to both internal consistency within the data series itself and its horizontal consistency with other data series of either the same, or different, categories.

(v) Other criteria might also apply, if relevant. Examples include, but are not limited to, potential areas of improvement for data adequacy.

## 4. The U.S. Anti-dumping investigations on import goods from China

2016			
1.	United States	Initiation on 12 January 2016 of anti-dumping investigation on imports of large residential washers from China	Provisional and definitive duties imposed on 26 July 2016 and 6 February 2017, respectively
2.	United States	Initiation on 10 February 2016 of anti-dumping investigation on imports of certain new pneumatic off-the-road tires from China and India	Terminated on 19 February 2016 on imports from China. Provisional and definitive duties imposed on 19 August 2016 and 6 March 2017, respectively. Terminated on 17 January 2017 on imports from India
3.	United States	Initiation on 10 February 2016 of countervailing investigation on imports of certain new pneumatic off-the-road tires from China, India and Sri Lanka	Terminated on 19 February 2016 on imports from China. Provisional and definitive duties imposed on 20 June 2016 and 6 March 2017, respectively
4.	United States	Initiation on 16 February 2016 of anti-dumping investigation on imports of certain biaxial integral geogrid products from China	Provisional and definitive duties imposed on 22 August 2016 and 3 March 2017, respectively
5.	United States	Initiation on 16 February 2016 of countervailing investigation on imports of certain biaxial integral geogrid products from China	Provisional and definitive duties imposed on 24 June 2016 and 3 March 2017, respectively
6.	United States	Initiation on 23 February 2016 of anti-dumping investigation on imports of certain amorphous silica fabric from China	Provisional and definitive duties imposed on 1 September 2016 and 17 March 2017, respectively
7.	United States	Initiation on 23 February 2016 of countervailing investigation on imports of certain amorphous silica fabric from China	Provisional and definitive duties imposed on 5 July 2016 and 17 March 2017, respectively
8.	United States	Initiation on 10 March 2016 of anti-dumping investigation on imports of stainless steel sheet and strip from China	Provisional and definitive duties imposed on 19 September 2016 and 3 April 2017, respectively
9.	United States	Initiation on 14 March 2016 of countervailing investigation on imports of stainless steel sheet and strip from China	Provisional and definitive duties imposed on 18 July 2016 and 3 April 2017, respectively
10.	United States	Initiation on 1 April 2016 of anti-dumping investigation on imports of 1,1,1,2 - tetrafluoroethane (R-134a) from China	Provisional and definitive duties imposed on 7 October 2016 and 19 April 2017, respectively
11.	United States	Initiation on 28 April 2016 of anti-dumping investigation on imports of 1-hydroxyethylidene-1, 1-diphosphonic acid from China	Provisional and definitive duties imposed on 4 November 2016 and 18 May 2017, respectively
12.	United States	Initiation on 28 April 2016 of countervailing investigation on imports of 1-hydroxyethylidene-1, 1-diphosphonic acid from China	Provisional and definitive duties imposed on 8 September 2016 and 18 May 2017, respectively
13.	United States	Initiation on 5 May 2016 of anti-dumping investigation on imports of certain carbon and alloy steel cut-to-length plate from Austria; Belgium; Brazil; China; France; Germany; Italy; Japan; Korea, Rep. of; South Africa; Chinese Taipei and Turkey	Provisional duty imposed on 14 November 2016 on imports from Austria; Belgium; China; France; Germany; Italy; Japan; Korea, Rep. of and Chinese Taipei. Definitive duty imposed on 20 March 2017 on imports from China
14.	United States	Initiation on 5 May 2016 of countervailing investigation on imports of certain carbon and alloy steel cut-to-length plate from Brazil; China and Korea, Rep. of	Provisional duty imposed on 13 September 2016 on imports from China and Korea, Rep. of. Definitive duty imposed on 20 March 2017 on imports from China.
15.	United States	Initiation on 22 June 2016 of anti-dumping investigation on imports of ammonium sulphate from China	Provisional and definitive duties imposed on 9 November 2016 and 9 March 2017, respectively
16.	United States	Initiation on 22 June 2016 of countervailing investigation on imports of ammonium sulphate from China	Provisional and definitive duties imposed on 2 November 2016 and 9 March 2017, respectively
17.	United States	Initiation on 16 December 2016 of anti-dumping investigation on imports of certain hardwood plywood products from China	Provisional duty imposed on 23 June 2017
18.	United States	Initiation on 16 December 2016 of countervailing investigation on imports of certain hardwood plywood products from China	Provisional duty imposed on 25 April 2017
2017			

1.	United States	Initiation on 30 March 2017 of anti-dumping investigation on imports of certain aluminium foil from China	
2.	United States	Initiation on 30 March 2017 of countervailing investigation on imports of certain aluminium foil from China	
3.	United States	Initiation on 27 April 2017 of anti-dumping investigation on imports of carton-closing staples from China	
4.	United States	Initiation on 9 May 2017 of anti-dumping investigation on imports of certain tool chests and cabinets from China and Viet Nam	
5.	United States	Initiation on 9 May 2017 of countervailing investigation on imports of tool chests and cabinets from China	
6.	United States	Initiation on 16 May 2017 of anti-dumping investigation on imports of certain cold-drawn mechanical tubing of carbon and alloy steel from China; Germany; India; Italy; Korea, Rep. of and Switzerland	
7.	United States	Initiation on 16 May 2017 of countervailing investigation on imports of certain cold-drawn mechanical tubing of carbon and alloy steel from China and India	
8.	United States	Initiation on 27 June 2017 of anti-dumping investigation on imports of fine denier polyester staple fibre from China; India; Korea, Rep. of; Chinese Taipei and Viet Nam	Terminated on 20 July 2017 on imports from Viet Nam
9.	United States	Initiation on 27 June 2017 of countervailing investigation on imports of fine denier polyester fibre from China and India	
10.	United States	Initiation on 2 August 2017 of anti-dumping investigation on imports of cast iron soil pipe fittings from China	
11.	United States	Initiation on 2 August 2017 of countervailing investigation on imports of cast iron soil pipe fittings from China	
12.	United States	Initiation on 11 September 2017 of anti-dumping investigation on imports of stainless steel flanges from China and India	
13.	United States	Initiation on 11 September 2017 of countervailing investigation on imports of stainless steel flanges from China and India	