

Medium-term economic prospect for Japan

Tomo Kinoshita, Chief Economist Nomura Securities Co.

tomo.kinoshita@nomura.com

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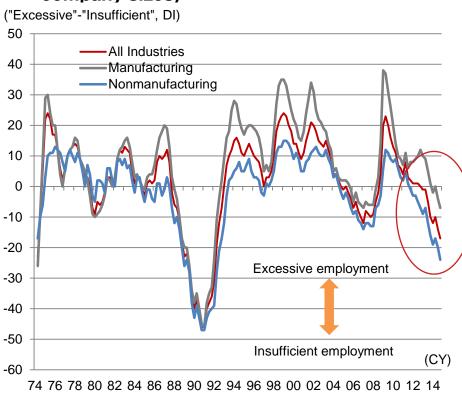
See Appendix A-1 for analyst certification, important disclosures and the status of non-US analysts.

Any authors named on this report are research analysts unless otherwise indicated.

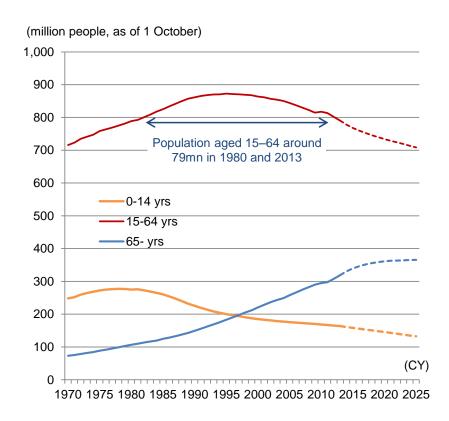
Labor market tightens further (1)



Current employment conditions DI by industry (all company sizes)



Japan's population by age group



Note: Final data point is future employment conditions DI as of September 2014.

Source: Nomura, based on BOJ data

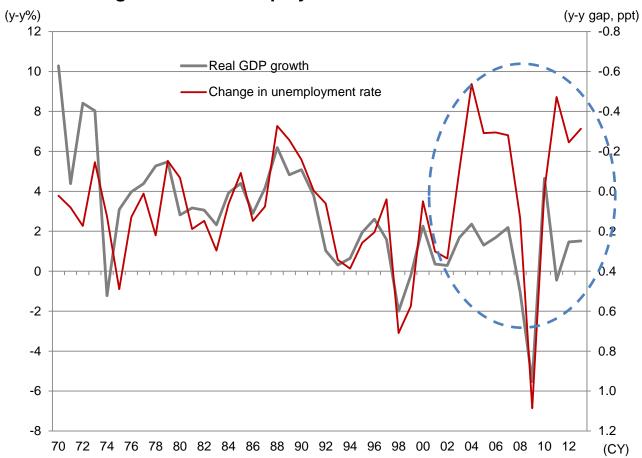
Note: Data from 2014 based on estimates by the National Institute of Population and Social Securities Research

Source: Nomura, based on Ministry of Internal Affairs and Communications (MIC) and National Institute of Population and Social Security Research data

Labor market tightens further (2)



Japan's real GDP growth and unemployment rate

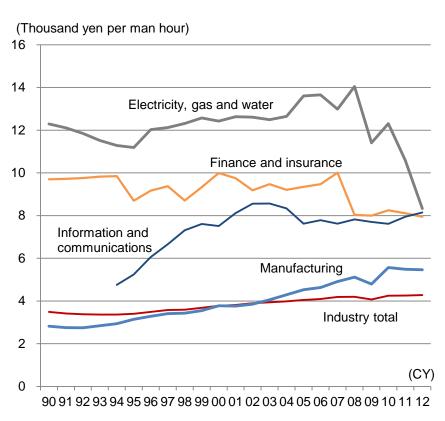


Note: Estimates for 2014 based on actual figures for the first three quarters Source: Nomura, based on Cabinet Office and MIC data

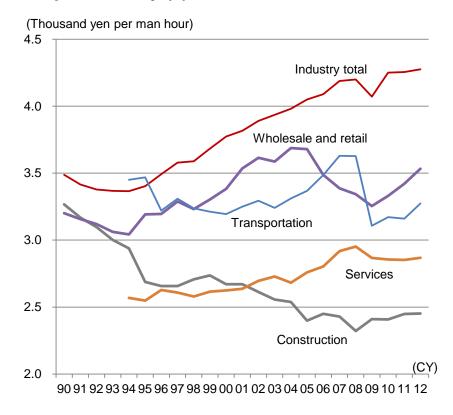
Productivity increase has been subdued in nonmanufacturing sectors



Labor productivity (1)



Labor productivity (2)



Note: Labor productivity = real GDP (at 2005 prices) / (number of persons employed × hours worked per person). Real GDP for the period through 1993 has been backcalculated using the growth rate for real GDP at 2000 prices.

Source: Nomura, based on Cabinet Office data

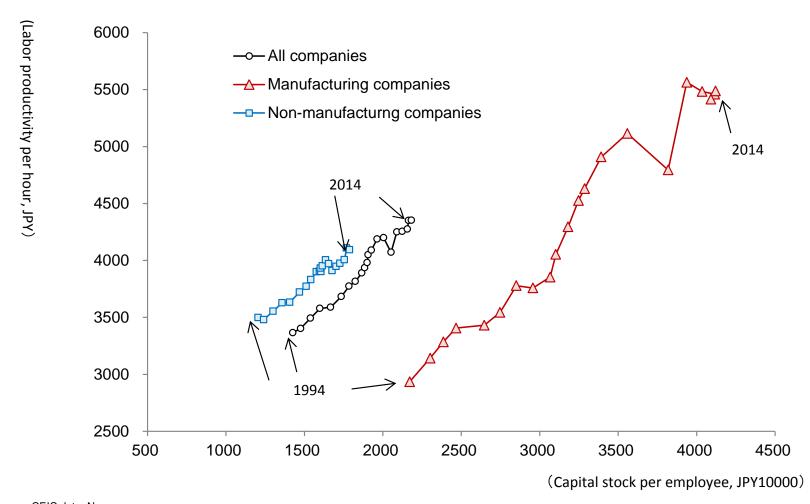
Note: Labor productivity = real GDP (at 2005 prices) / (number of persons employed × hours worked per person). Real GDP for the period through 1993 has been backcalculated using the growth rate for real GDP at 2000 prices.

Source: Nomura, based on Cabinet Office data



Investment is key to productivity growth

Relationship between labor productivity and per capita capital stock



Source: CEIC data, Nomura



Growth strategy: key to improve growth prospect

Evaluation of progress in growth strategies and need for further improvement and expansion

Individual area of the growth strategies	Achievement up to now (relatively major achievements are underlined)	Future challenges					
1. Industry Revitalization Plan							
Accelerating structural reform program (Vitalizing industries)							
Enhancing corporate governance, support for ventures businesses, etc.		TSE expected to put together Corporate Governance Code in time for 2015 general shareholders' meeting season					
Reforming the employment system and reinforcing human resources capabilities							
Labor movement without unemployment / Enhancing matching function / Realizing various ways of working Reforms such as diversifying working patterns, introduction of system of evaluation not based on working hours but on performance	Policy of introducing white collar exemption was decided in June 2014, but still only half done overall	Moving toward promotion of measures such as expanding system of diversified regular workers (for whom working hours, place or type of work are restricted) and revitalizing the external labor market, but in future regulations on firing employees need to be relaxed					
Promoting active social participation by women / Promoting active social participation by the young and the elderly / Utilizing foreign human resources Elimination of waiting lists for childcare, increasing proportion of women in managerial posts, etc	Measures already in place to secure places for 400,000 children by end-2017 through budget measures. Policy of ensuring 300,000 after-school club places for 300,000 children by end-2019 also announced	Moves to ease regulations for taking on foreign workers are still inadequate; this is a challenge for the future					
Further strengthening Japan's international competitiveness as a business hub							
PPP/PFI) / Improving infrastructure such as airports, ports and harbors / Improving competitiveness of cities Setting up of National Strategic Special Zones, lowering of corporation tax, etc	Six areas selected as National Strategic Special Zones, specific projects being discussed at committees for the zones. On subject of cutting corporation tax, policy decided to lower it to below 30% over several years	Further deregulation needed in National Strategic Special Zones and need to aim to lower corporation tax rate to around 25%. Measures in regard to PPPs/PFIs also need to be strengthened					
Stimulating financial and capital markets / Management of public and quasi-public funds, etc. GPIF investment reforms, etc	Major achievement of change to GPIF's investment asset allocation	Steps need to be taken to strengthen Tokyo's international financial center functions					
Overcoming constraints of environmental/energy Electricity system reforms, etc	Major progress in electricity reforms via two rounds of legislation, retail market to be deregulated in 2016, reforms to be completed by 2020	Need to steadily carry out electricity reforms on top of achievements to date					

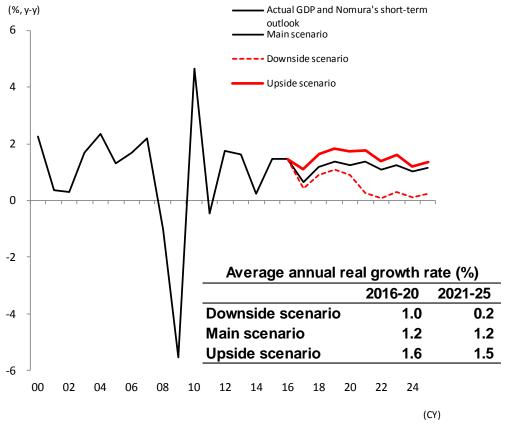
	Individual area of the growth strategies	Achievement up to now (relatively major achievements are underlined)	Future challenges
2. Strat	egic Market Creation Plan		
Exte	ending the nation's healthy life expectancy		
	Internet sales of over-the-counter drugs, etc.	Online sales of OTC drugs broadly implemented	Policy decided to establish not-for-profit holding company system to enable management of several healthcare and nursing care companies and reforms to introduce patient-proposed healthcare service system (combination of insured and uninsured healthcare services). Need to be steadily implemented in future. ICT also needs to be used in healthcare
	ding regional communities that use their unique local resources to appeal ne world		
3	Theme 4-1: A rich rural society which produces the world's highest-quality agricultural, forestry and fishery products and food produce Reform of agricultural cooperatives, "sixth industrialization," promotion of exports, etc	Legislation in place for Public Intermediate Organization for Farmland Consolidation with aim of concentrating agricultural land in the hands of leading farmers. Plan to end policy of rice acreage reduction in 2018 too	Reforming agricultural cooperatives and agricultural committees is an important task
	Theme 4-2: A society which makes use of potential such as tourism Promote tourism with view to Olympics, etc	Major achievement of a large increase in overseas visitors to Japan, partly owing to easing of visa requirements, mainly for visitors from ASEAN countries	Further relaxing of visa requirements and establishment of integrated resorts, including casinos, is an issue for the future
3. Strat	egy of Global Outreach		
Buil	d strategic trade relationships, promote economic partnerships Promotion of economic partnerships as base for global economic activity	Broad EPA agreement between Japan and Australia,	TPP agreement would bring major opportunities, broad

Source: Nomura, based on revised Japan Revitalization Strategy and Prime Minister of Japan and His Cabinet's website

Japan medium-term macroeconomic outlook —three scenarios



Japanese economy: medium-term real GDP forecast



Expected real growth rate and inflation under each scenario

Downside scenario

Lackluster productivity means potential growth rate of just 0.2% in 2021-25, even slower than average growth of 0.6% in 2011-15. Failure to ramp up supply capacity results in a rise in inflation.BOJ responds to sharper inflation by tightening monetary policy earlier than planned, which drags on growth.

Main scenario

Productivity improves, with potential annual growth of roughly 1.1% in 2021-25, sharper growth than the 0.6% seen in 2011-15. Efforts to increase supply capacity are a success, resulting in only mild inflation, with prices rising 2% in 2023.

Upside scenario

Productivity improvement exceeds our main scenario, with potential annual growth of roughly 1.5% in 2021-25, far sharper growth than the 0.6% seen in 2011-15. Efforts to raise supply capacity result in an even milder rise in inflation than under our main scenario, with prices growing by 2% starting in 2024.

Source : Nomura

Note: Calendar year basis. Figures through 2016 based on Nomura's short-term

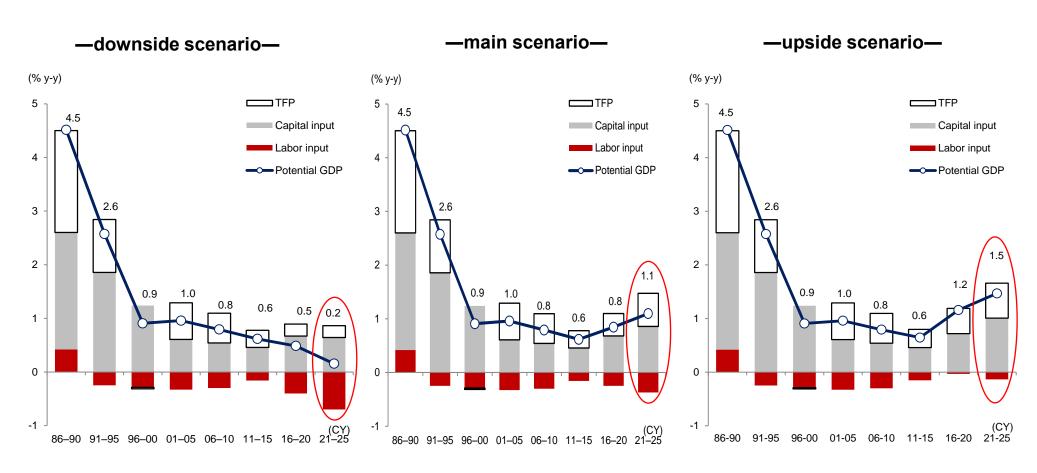
outlook.

Source: Cabinet Office, Nomura

Growth potential depends on investment and labor market reform



Potential rate of growth

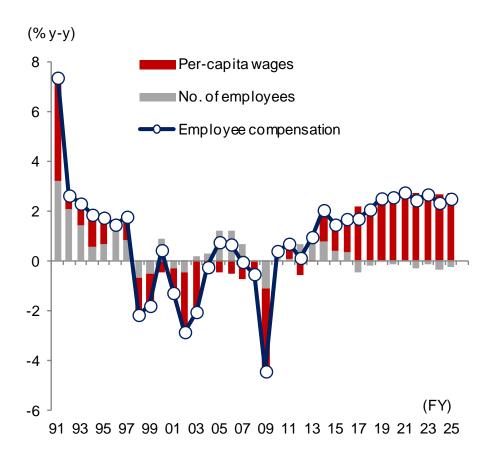


Source: Japanese government, Nomura

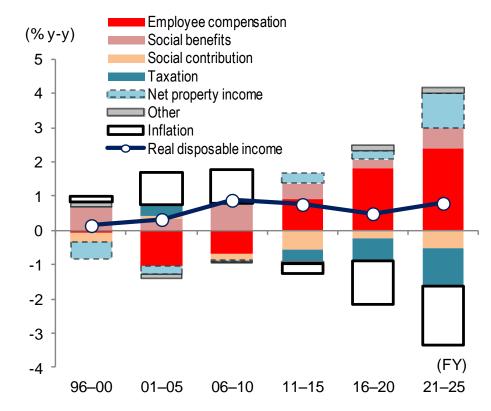


Tighter labor market to generate wage growth

Employee compensation (main scenario)



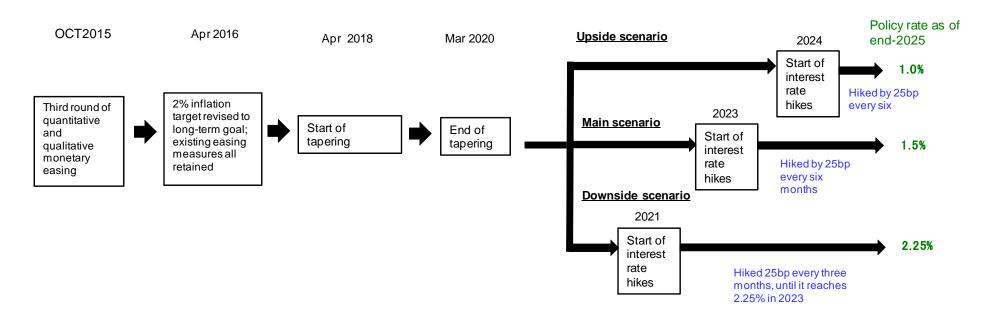
Real disposable income (main scenario)



Source: Nomura, based on Cabinet Office and MIC data

Inflation will likely be key determinant of timing of rate hike

Medium-term outlooks based on differing scenarios for monetary policy

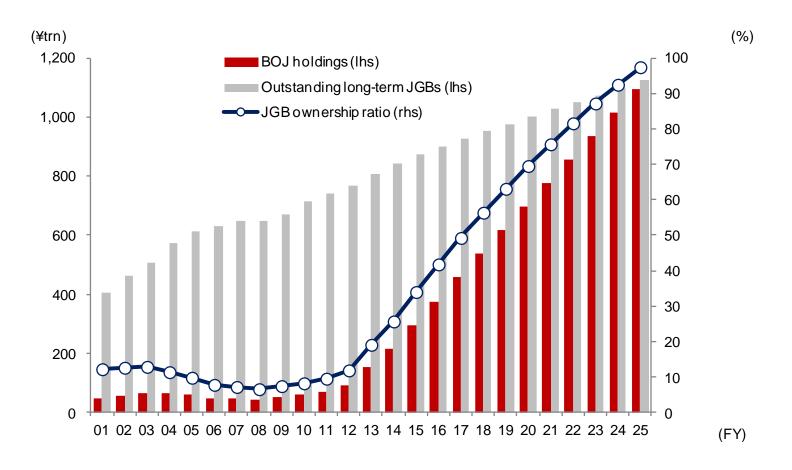


Source: Nomura

If current rate of JGB purchases continues through 2025, BOJ would own entire JGB market



BOJ holdings of outstanding JGBs

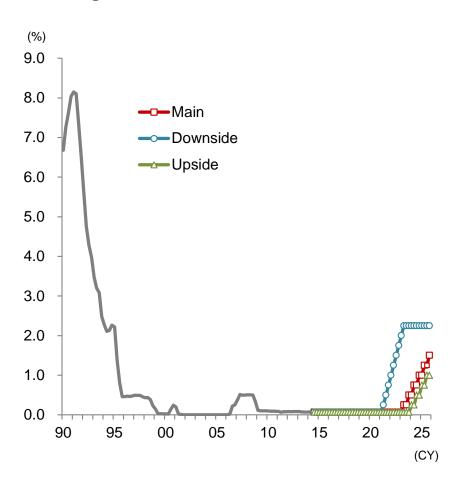


Note: Amount of JGBs outstanding in main scenario. Amount of BOJ holdings assumes that the BOJ continues to purchase ¥80trn of long-term JGBs each year.

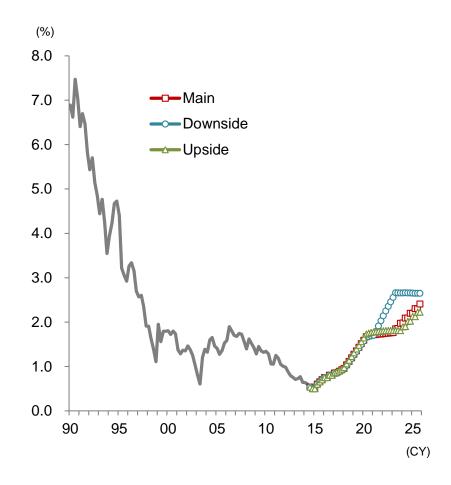
Source: Nomura, based on BOJ and MOF data



Overnight call rate under three scenarios



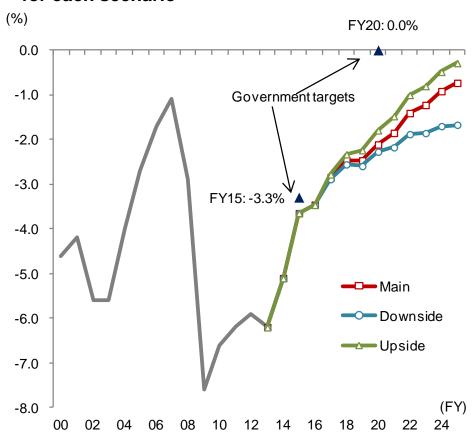
JGB 10-year yield under three scenarios



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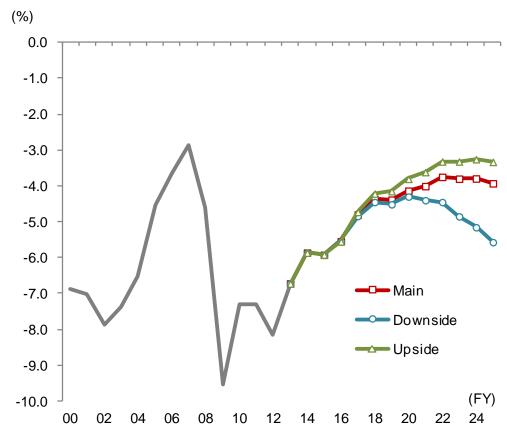
Long-term interest rates to have major impact on fiscal balance

General primary balance as a percentage of GDP for each scenario



Source: Nomura, based on MOF and Cabinet Office data

General fiscal balance as a percentage of GDP for each scenario

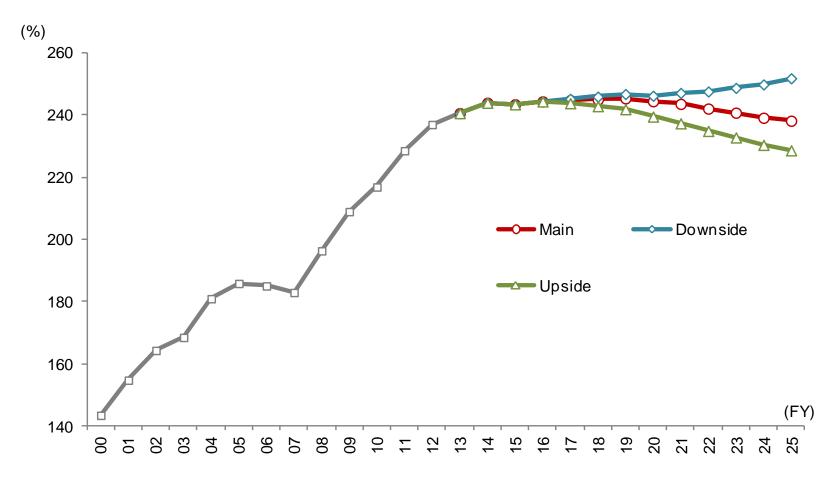


Source: Nomura, based on MOF and Cabinet Office data

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Fiscal deficit as percentage of GDP set to stabilize on effects of inflation

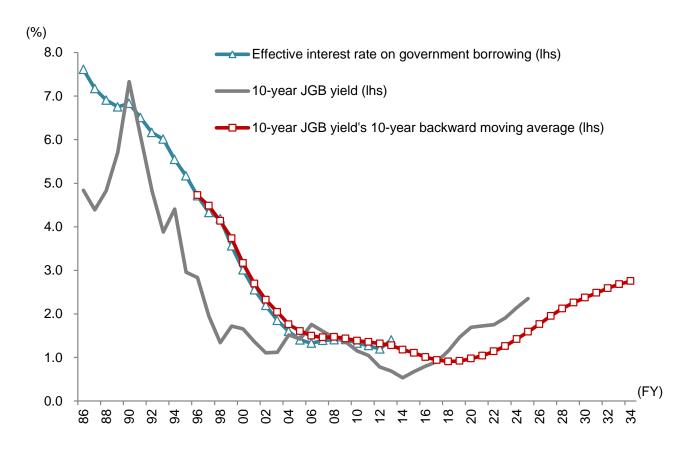
General debt balance as a percentage of GDP for each scenario



Note: General debt balance based on IMF data Source: Nomura, based on MOF, Cabinet Office and IMF data



Effective interest rate on government borrowing and the 10-year JGB yield



Note: (1) Effective interest rate on borrowing = interest payments / long-term debt balance. (2) The forward 10-year JGB yield is based on our main scenario. Source: Nomura, based on MOF and Bloomberg data

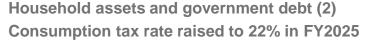


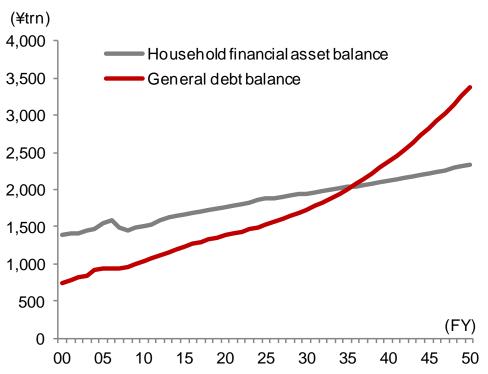
Thoughts on fiscal conditions beyond 2025

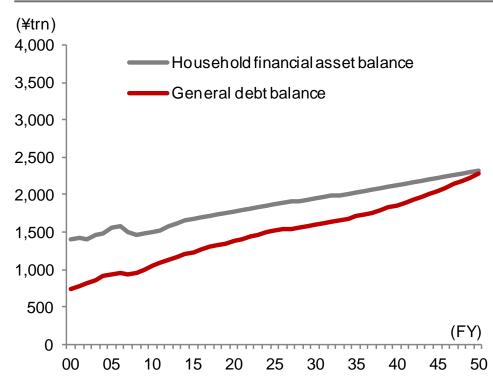
With the consumption tax rate fixed at 13% from FY26, government debt exceeds household financial assets in FY36. To avoid that from happening, a consumption tax rate of 22% would be necessary.

Household assets and government debt (1)









Note: Data points up to FY25 based on our main scenario. From FY26, real GDP grows 1% and core CPI rises 2%. At that time, we assume nominal GDP growth of 2.2%.

Source: Nomura

Source: IMF. Nomura



Economic outlook (downside scenario)

CY:	13	14E	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	25E	16E-20E2	1E-25E
Real GDP (% y-y)	1.6	0.2	1.5	1.5	0.4	0.9	1.1	0.9	0.3	0.1	0.3	0.1	0.2	1.0	0.2
<key demand="" items=""></key>															
Private-sector consumption	2.1	-1.1	0.3	1.5	0.4	8.0	0.9	0.7	8.0	0.6	0.8	0.6	8.0	0.9	0.7
Private-sector housing investment	8.7	-4.7	-7.1	-1.2	-8.4	-9.3	-6.2	-8.9	-7.3	-7.1	-5.9	-6.2	-5.9	-6.8	-6.5
Private-sector capital expenditure	0.4	4.7	3.1	4.5	3.4	4.0	3.7	3.8	-1.7	-2.2	0.3	0.5	1.0	3.9	-0.4
Growth in private-sector inventories	-0.4	0.1	-0.1	0.0	-0.2	0.0	0.1	-0.1	0.1	-0.1	0.1	-0.1	0.0	0.0	0.0
Government final consumption exper	1.9	0.3	1.4	1.3	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.9	1.5	1.1
Public fixed capital formation	8.0	3.1	-0.2	-7.4	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.9	-3.0
Change in public-sector inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net exports (ppt contribution y-y)	-0.3	0.3	0.6	0.1	-0.1	-0.2	-0.2	0.0	-0.1	0.1	-0.4	-0.3	-0.4	-0.1	-0.2
Exports	1.5	7.9	5.7	4.4	2.2	3.7	4.2	4.5	4.0	3.7	2.9	2.9	2.9	3.8	3.3
Imports	3.1	6.9	2.2	4.7	3.5	5.3	6.0	5.2	4.8	3.3	5.1	4.5	5.1	4.9	4.6
Nominal GDP (% y-y)	1.1	1.7	3.0	2.3	2.0	1.8	1.8	2.4	1.7	1.9	1.8	2.0	1.7	2.1	1.8
Current account balance (as % of nomin	0.2	0.9	1.6	1.4	-0.5	-0.4	-1.1	-1.7	-0.7	-0.3	-0.4	-1.0	-1.1	-	
Primary fiscal balance (as % of nominal		-5.1	-3.6	-3.5	-2.9	-2.6	-2.6	-2.3	-2.2	-1.9	-1.9	-1.7	-1.7		
Fiscal balance (as % of nominal GDP)	-6.7	-5.9	-5.9	-5.5	-4.8	-4.5	-4.5	-4.3	-4.4	-4.5	-4.9	-5.2	-5.6		
Fiscal deficit (¥tm)	240.7	244.0	243.5	244.4	245.3	246.0	246.8	246.2	247.2	247.6	248.8	249.9	251.9		
CPI (ex fresh food) (% y-y)	0.4	2.7	1.4	1.2	2.4	1.6	1.4	2.2	2.2	2.7	2.3	2.7	2.3		
CPI (ex impact of consumption tax hike,	0.4	1.2	0.9	1.2	1.3	1.3	1.4	1.7	2.0	2.1	2.1	2.1	2.1		
GDP deflator (% y-y)	-0.5	1.5	1.5	8.0	1.5	0.9	0.7	1.5	1.4	1.9	1.5	1.9	1.5		
Uncollateralized overnight call rate	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.75	1.75	2.25	2.25	2.25		
JGB yield (10-year)	0.74	0.50	0.70	0.80	0.91	1.17	1.49	1.69	2.02	2.45	2.65	2.65	2.65		
Dollar/yen rate	105	120	125	130	122	114	117	119	121	123	126	128	130		
North Sea Brent (\$/bbl)	110.8	83.3	82.3	84.8	92.9	92.8	92.0	91.4		90.5	90.5	90.4	90.5		
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Note: (1) Units are % unless otherwise indicated. Y-y growth for real GDP, nominal GDP, CPI, and GDP deflator. Main demand components for real GDP are private-sector inventory growth, public-sector inventory growth, and y-y change in contribution from net imports. Current account balance, primary fiscal balance, fiscal balance, and fiscal deficit are percentages of nominal GDP. Uncollateralized overnight call rate, 10-year JGB yield, USD/JPY, and North Sea Brent crude price are end-period. (2) Current account balance, primary fiscal balance, fiscal balance, and fiscal deficit on fiscal year basis. Other data on calendar year basis. (3) Fiscal deficit on IMF basis. (4) We assume consumption tax rate will be hiked 2ppt in April 2017 and 1ppt each in April 2020, April 2022, and April 2024. (5) Data show average growth rates for 2016–20 and 2021–25. Source: Nomura, based on Cabinet Office, BOJ, MOF, and MIC data



Economic outlook (main scenario)

C	Y: 13	14E	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	25E	16E-20E 21E	:–25E
Real GDP (% y-y)	1.6	0.2	1.5	1.5	0.7	1.2	1.4	1.2	1.4	1.1	1.2	1.0	1.2	1.2	1.2
<key demand="" items=""></key>															
Private-sector consumption	2.1	-1.1	0.3	1.5	0.5	0.9	1.0	0.9	1.1	0.9	1.2	1.0	1.3	1.0	1.1
Private-sector housing investment	8.7	-4.7	-7.1	-1.2	-7.4	-8.3	-5.2	-6.9	-4.8	-4.6	-3.4	-3.7	-3.4	-5.8	-4.0
Private-sector capital expenditure	0.4	4.7	3.1	4.5	3.8	4.5	4.2	4.5	3.8	3.3	2.8	2.5	2.5	4.3	3.0
Growth in private-sector inventories	-0.4	0.1	-0.1	0.0	-0.2	0.0	0.1	-0.1	0.1	-0.1	0.1	-0.1	0.0	0.0	0.0
Government final consumption expenditure	1.9	0.3	1.4	1.3	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.9	1.5	1.1
Public fixed capital formation	8.0	3.1	-0.2	-7.4	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.9	-3.0
Change in public-sector inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net exports (ppt contribution y-y)	-0.3	0.3	0.6	0.1	0.0	0.0	0.0	0.1	-0.1	0.1	-0.1	0.0	-0.1	0.0	0.0
Exports	1.5	7.9	5.7	4.4	2.4	3.9	4.4	4.7	4.2	4.2	3.9	3.9	3.9	4.0	4.0
Imports	3.1	6.9	2.2	4.7	3.0	4.7	5.3	5.0	5.1	4.3	4.9	4.2	4.7	4.5	4.6
Nominal GDP (% y-y)	1.1	1.7	3.0	2.3	2.2	2.1	2.0	2.5	2.4	2.6	2.6	2.7	2.5	2.2	2.6
Current account balance (as % of nominal GDP)	0.2	0.9	1.6	1.4	2.0	2.0	1.3	0.8	0.6	0.2	0.3	0.4	0.4		
Primary fiscal balance (as % of nominal GDP)	-6.2	-5.1	-3.6	-3.5	-2.8	-2.5	-2.5	-2.1	-1.8	-1.4	-1.2	-0.9	-0.7		
Fiscal balance (as % of nominal GDP)	-6.7	-5.9	-5.9	-5.5	-4.8	-4.4	-4.4	-4.1	-4.0	-3.7	-3.8	-3.8	-3.9		
Fiscal deficit (¥trn)	240.7	244.0	243.5	244.4	244.8	245.0	245.4	244.5	243.6	242.1	240.8	239.2	238.2		
CPI (ex fresh food) (% y-y)	0.4	2.7	1.4	1.2	2.3	1.6	1.3	2.0	1.8	2.3	2.1	2.5	2.1		
CPI (ex impact of consumption tax hike, % y-y)	0.4	1.2	0.9	1.2	1.3	1.2	1.3	1.5	1.6	1.8	1.9	2.0	1.9		
GDP deflator (% y-y)	-0.5	1.5	1.5	0.8	1.5	0.9	0.6	1.3	1.0	1.5	1.3	1.7	1.3		
Uncollateralized overnight call rate	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.50	1.00	1.50		
JGB yield (10-year)	0.74	0.50	0.70	0.80	0.92	1.19	1.51	1.70	1.73	1.75	1.97	2.20	2.40		
Dollar/yen rate	105	120	125	130	120	110	110	110	110	110	110	110	110		
North Sea Brent (\$/bbl)	110.8	83.3	82.3	84.8	92.9	92.8	92.0	91.4	90.4	90.5	90.5	90.4	90.5		
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Note: (1) Units are % unless otherwise indicated. Y-y growth for real GDP, nominal GDP, CPI, and GDP deflator. Main demand components for real GDP are private-sector inventory growth, public-sector inventory growth, and y-y change in contribution from net imports. Current account balance, primary fiscal balance, fiscal balance, and fiscal deficit are percentages of nominal GDP. Uncollateralized overnight call rate, 10-year JGB yield, USD/JPY, and North Sea Brent crude price are end-period. (2) Current account balance, primary fiscal balance, fiscal balance, and fiscal deficit on fiscal year basis. Other data on calendar year basis. (3) Fiscal deficit on IMF basis. (4) We assume consumption tax rate will be hiked 2ppt in April 2017 and 1ppt each in April 2020, April 2022, and April 2024. (5) Data show average growth rates for 2016–20 and 2021–25. Source: Nomura, based on Cabinet Office, BOJ, MOF, and MIC data



Economic outlook (upside scenario)

	CY: 13E	14E	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	25E	16E-20E 2	1E–25E
Real GDP (% y-y)	1.6	0.2	1.5	1.5	1.1	1.6	1.8	1.7	1.8	1.4	1.6	1.2	1.3	1.6	1.5
<key demand="" items=""></key>															
Private-sector consumption	2.1	-1.1	0.3	1.5	0.9	1.3	1.4	1.3	1.5	1.1	1.4	1.2	1.5	1.2	1.3
Private-sector housing investment	8.7	' -4.7	-7.1	-1.2	-5.4	-6.3	-3.2	-4.9	-2.8	-2.6	-1.4	-1.7	-1.4	-4.2	-2.0
Private-sector capital expenditure	0.4	4.7	3.1	4.5	5.3	6.0	5.7	6.0	4.8	4.3	3.8	3.0	3.0	5.5	3.8
Growth in private-sector inventories	-0.4	0.1	-0.1	0.0	-0.2	0.0	0.1	-0.1	0.1	-0.1	0.1	-0.1	0.0	0.0	0.0
Government final consumption expenditure	1.9	0.3	1.4	1.3	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.9	1.5	1.1
Public fixed capital formation	8.0	3.1	-0.2	-7.4	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.9	-3.0
Change in public-sector inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net exports (ppt contribution y-y)	-0.3	0.3	0.6	0.1	0.0	-0.1	-0.1	0.1	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.1
Exports	1.5	7.9	5.7	4.4	3.9	5.4	5.9	6.2	5.7	5.7	5.4	5.4	5.4	5.2	5.5
Imports	3.1	6.9	2.2	4.7	4.7	6.6	7.0	6.6	6.7	6.2	6.4	6.1	6.5	5.9	6.4
Nominal GDP (% y-y)	1.1	1.7	3.0	2.3	2.6	2.6	2.6	3.1	3.0	3.0	2.8	3.0	2.7	2.6	2.9
Current account balance (as % of nominal GDP) 0.2	0.9	1.6	1.4	2.0	2.0	1.3	0.8	0.6	0.2	0.3	0.4	0.4		
Primary fiscal balance (as % of nominal GDP)	-6.2	-5.1	-3.6	-3.5	-2.8	-2.3	-2.2	-1.8	-1.5	-1.0	-0.8	-0.5	-0.3		
Fiscal balance (as % of nominal GDP)	-6.7	' -5.9	-5.9	-5.6	-4.7	-4.2	-4.1	-3.8	-3.6	-3.3	-3.3	-3.3	-3.3		
Fiscal deficit (¥trn)	240.7	244.0	243.5	244.4	243.9	242.9	241.9	239.6	237.4	234.9	232.9	230.5	228.7		
CPI (ex fresh food) (% y-y)	0.4	2.7	1.4	1.2	2.3	1.6	1.4	2.1	1.9	2.4	2.0	2.6	2.1		
CPI (ex impact of consumption tax hike, % y-y)	0.4	1.2	0.9	1.2	1.3	1.3	1.4	1.6	1.8	1.8	1.8	2.0	2.0		
GDP deflator (% y-y)	-0.5	1.5	1.5	0.8	1.5	0.9	0.7	1.4	1.2	1.6	1.2	1.8	1.4		
Uncollateralized overnight call rate	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.50	1.00		
JGB yield (10-year)	0.74	0.50	0.70	0.80	0.94	1.22	1.56	1.77	1.79	1.81	1.81	2.02	2.22		
Dollar/yen rate	105	120	125	130	120	110	110	110	110	110	110	110	110		
North Sea Brent (\$/bbl)	110.8	83.3	82.3	84.8	92.9	92.8	92.0	91.4	90.4	90.5	90.5	90.4	90.5		

Note: (1) Units are % unless otherwise indicated. Y-y growth for real GDP, nominal GDP, CPI, and GDP deflator. Main demand components for real GDP are private-sector inventory growth, public-sector inventory growth, and y-y change in contribution from net imports. Current account balance, primary fiscal balance, fiscal balance, and fiscal deficit are percentages of nominal GDP. Uncollateralized overnight call rate, 10-year JGB yield, USD/JPY, and North Sea Brent crude price are end-period. (2) Current account balance, primary fiscal balance, fiscal balance, and fiscal deficit on fiscal year basis. Other data on calendar year basis. (3) Fiscal deficit on IMF basis. (4) We assume consumption tax rate will be hiked 2ppt in April 2017 and 1ppt each in April 2020, April 2022, and April 2024. (5) Data shows average growth rates for 2016–20 and 2021–25. Source: Nomura, based on Cabinet Office, BOJ, MOF, and MIC data



Appendix A-1

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