

## Assessment and recommendations

- *Recent macroeconomic developments and short-term prospects*
- *Removing barriers to labour participation in the context of population ageing*
- *Increasing productivity to promote inclusive growth*
- *Putting the government debt ratio on a downward trend*

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In 2013, Japan launched Abenomics with three arrows – a bold monetary policy, flexible fiscal policy and a growth strategy – to overcome two decades of sluggish growth. Abenomics had an immediate positive effect (Table 1). Real output growth nearly doubled to an annual pace of 1.1% during the past four years, despite growing demographic headwinds, thanks in part to structural reforms (Table 2). On a per capita basis, real output growth nearly matched the OECD average. After declining over 1997-2012, nominal output has risen at a 2.1% annual pace during the past four years, boosted by positive inflation. Core CPI inflation has been above zero since 2014, the longest spell of positive inflation since 1995-98. This contributed to a decline in the government’s primary deficit from 7.5% of GDP in 2012 to 3.1% in 2015.

Table 1. **Abenomics has resulted in faster output growth and higher inflation**

	Annual average percentage change						
	Nominal output growth	Inflation (GDP deflator)	Real output growth	Real output growth per capita	Real output growth per working-age population <sup>1</sup>	US real output growth per capita	OECD real output growth per capita
1997-2012	-0.5	-1.1	0.6	0.5	1.2	1.3	1.3
2012-16	2.1	0.9	1.1	1.2	2.3	1.3	1.3
Objective <sup>2</sup>	3.0	1.0	2.0	..	..	..	..

1. The 15-64 age group.

2. Based on a January 2013 agreement between the government and the Bank of Japan.

Source: OECD (2017c), *OECD Economic Outlook: Statistics and Projections* (database).

Despite the acceleration in growth, Japan’s challenges remain large. Its per capita income, which matched the top half of OECD countries in the early 1990s, is 19% below, reflecting falling labour inputs and low labour productivity (Figure 1). Rising government spending, driven by population ageing and frequent fiscal stimulus packages, boosted gross general government debt from 68% of GDP in 1992 to 219% in 2016 (Panel B), the highest ever recorded in the OECD. Net government debt is also far above the OECD average (Panel C). Even if the government’s target of a primary surplus in FY 2020 were achieved, the gross government debt ratio would surpass 600% of GDP by 2060 in the absence of further fiscal consolidation (Fiscal System Council, 2015). Finally, core CPI inflation has fallen close to zero (Panel D).

The key message of this Survey is that successful implementation of all three arrows of Abenomics is necessary to promote inclusive growth and put the debt ratio on a downward trend:

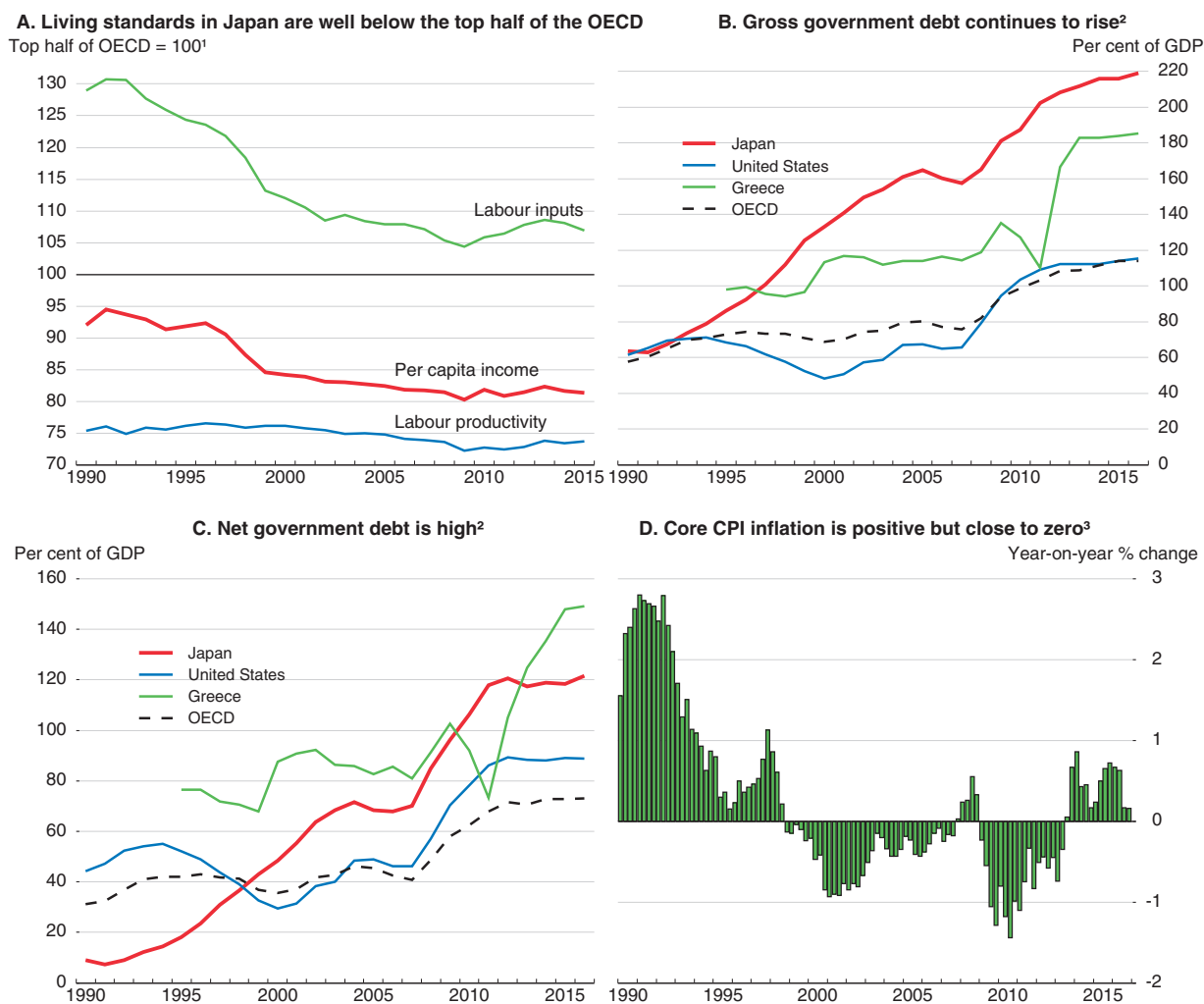
- Bold structural reforms to boost productivity and make growth more inclusive.
- Measures to limit government spending combined with a steady increase in revenue.
- Expansionary monetary policy until the 2% inflation target is sustainably achieved.

Table 2. **Ten key reforms in the Japan Revitalization Strategy**

Reform	Objective	Actions taken
1. Enhance corporate governance: aiming for sustainable growth in corporate value.	Sustained growth in corporate value through enhanced corporate governance as well as improved management and strengthened fundamentals to support listed companies and financial institutions.	The JPX-Nikkei Index 400 and a Stewardship Code were launched in early 2014. The Code has been accepted by more than 200 institutional investors. A Corporate Governance Code, requiring listed firms to have at least two independent directors on a “comply or explain” basis, is applied to more than 2 000 listed firms.
2. Reforms for management of public and quasi-public funds.	Steadily implementation of reforms for management of public and quasi-public funds, based on the recommendations presented by the expert panel.	The Government Pension Investment Fund (GPIF) decided in 2014 to increase the share of equities in its portfolio. Reform of its governance structure was legislated in 2016.
3. Promotion of venture business: creating an entrepreneur-friendly environment.	A “venture ecosystem” (a virtuous cycle of venture funding and firm creation), leading to globally competitive firms.	The tax system for business angels was made more user-friendly and measures to promote crowd-funding were launched in 2014.
4. Corporate tax reform: improving the business environment for all companies.	Strengthen Japan’s competitiveness as a global business location by cutting the corporate tax rate to a globally competitive level.	The FY 2016 tax reform reduced the combined corporate income tax rate from 32.11% in FY 2015 to 29.97% in FY 2016, with a further cut to 29.74% in FY 2018.
5. Stimulate innovation through science and technology and a “Robot Revolution”: Japan as a technology frontier.	Promote scientific and technological innovation and develop infrastructure that links innovative technology with new business.	The budget for science and technology, which had been managed by a number of ministries, was centralised in the Council for Science, Technology and Innovation to promote effective R&D.
6. Enhancing women’s participation and advancement.	Provide a working environment conducive to women with/caring for children and improve the business environment to enhance women’s career advancement at workplaces.	Childcare places for 0.5 million children are being added over FY 2013-17 to eliminate waiting lists, together with after-school care places for 0.3 million school-age children. These measures have contributed to a 4.0 percentage point rise in the female employment rate since late 2012.
7. Enable flexible working practices: improving the talent pool.	Develop more creative working practices where performance is evaluated more highly than hours worked. Promote model cases of “diversified regular employment” focusing on job duties. Develop a transparent and globally-recognised labour dispute resolution system.	Subsidies aimed at maintaining jobs are being shifted to promoting labour mobility. Measures against overwork were reinforced.
8. Attract talent from overseas: a society where foreign workers play an active role.	Create an environment where skilled professionals from overseas can play an active role. Conduct a thorough review of the Technical Intern Training Program (TITP) for foreign workers in Japan.	The government will introduce the “Japanese Green Card for Highly Skilled Foreign Professionals” that substantially reduces the period of stay required before they can apply for permanent residence from the current five years. Foreign trainees will be eligible to extend their training period from three to five years.
9. Aggressive agricultural policy.	Aim to double the income of farmers and farming communities by making agriculture a growth industry. Draw on corporate experience while accelerating private-sector participation in agriculture.	Production quotas for table rice are being phased out over a five-year period by FY 2018 to enable farmers to produce rice in response to demand without relying on government quotas. Requirements for the ownership of farmland by Agricultural Production Corporations were relaxed and agricultural co-operatives reformed.
10. Healthcare industry and high quality services: a stronger healthcare industry and improved services.	Secure a sustainable social security system and revitalise the healthcare industry by establishing a structure to provide efficient and high-quality services as well as streamlining insurance benefits coverage.	A new scheme was introduced to accelerate the inclusion of new treatments in public health insurance. A new institution to manage R&D in healthcare was created.

Source: Government of Japan.

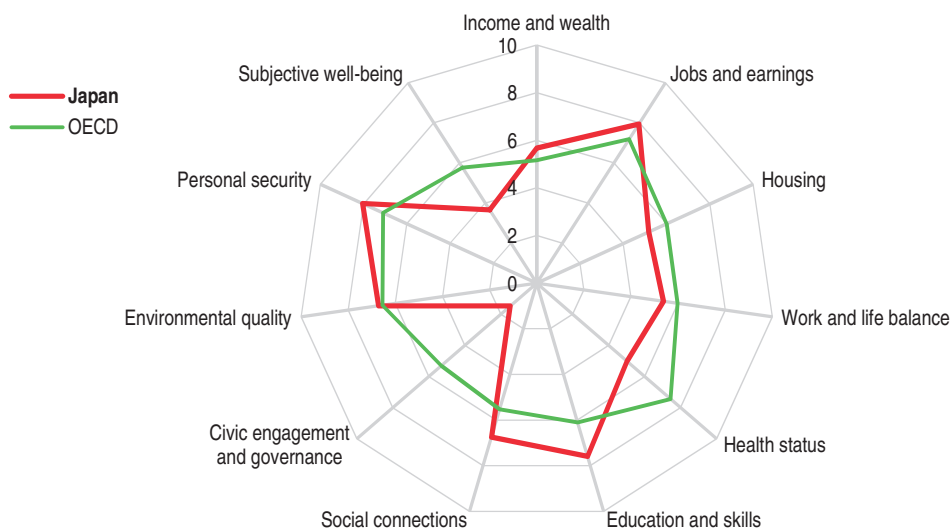
The government launched a plan in 2016 to promote the dynamic engagement of all citizens, based on a “virtuous cycle of growth and distribution”. This requires broadening Japan’s productive base to generate strong and sustainable productivity gains, leading to inclusive growth that distributes the dividends of increased prosperity fairly across society. Indeed, there is synergy between policies to boost productivity and promote inclusive growth.

Figure 1. **Japan has faced low growth, rising government debt and deflation**


1. Per capita GDP is calculated using 2010 prices and PPP exchange rates. Labour productivity equals GDP per hour of labour input. Labour inputs equal total number of hours worked per capita.
  2. OECD estimate for 2016.
  3. OECD measure of core, which excludes food and energy. Excludes the impact of the consumption tax hikes in 1997 and 2014.
- Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database).

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Such policies would improve well-being in Japan, which is strong in many respects (Figure 2). The probability of becoming unemployed is the lowest in the OECD and net household financial wealth is among the highest. The literacy and numeracy skills of Japanese adults are the highest in the OECD, as is personal safety. However, only 35% of Japanese adults perceive their health as good compared to the OECD average of 69%, even though life expectancy in Japan is among the longest in the world. Japan also scores poorly on housing conditions and work-life balance: 22% of those employed work more than 49 hours per week. Japan ranks well below the OECD average in subjective well-being. Well-being would also be enhanced by improving environmental quality, which is currently close to the OECD average (Box 3).

Figure 2. **How's life in Japan? A mixed picture**<sup>1</sup>

1. Each well-being dimension is measured by one to four indicators from the OECD Better Life Index set. Normalised indicators are averaged with equal weights. Indicators are normalised to range between 10 (best) and 0 (worst) according to the following formula: (indicator value - minimum value) / (maximum value - minimum value) × 10. Source: OECD (2016), *OECD Better Life Index*, [www.oecdbetterlifeindex.org](http://www.oecdbetterlifeindex.org).

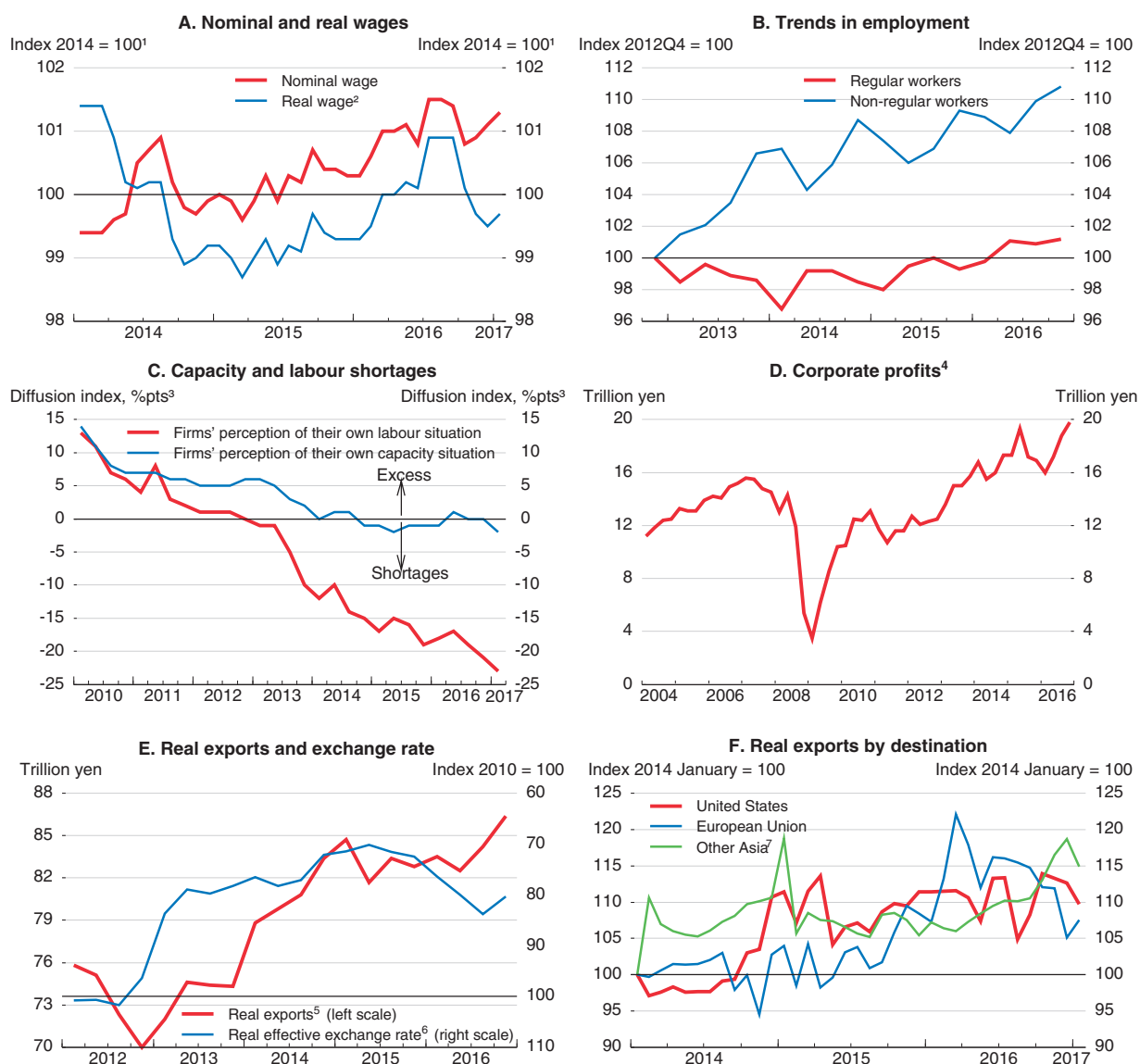
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## Recent macroeconomic developments and short-term prospects

Growth remained above potential in 2016, at 1.0%, with consumer spending supported by real wage growth (Figure 3). However, wage growth remains surprisingly muted despite the tightest labour market conditions in 25 years. With low labour mobility in the context of lifetime employment, wages tend to react slowly to the tightening of the labour market. In addition, wage bargaining has long reflected past inflation rather than inflation expectations. While wage growth was sluggish, consumer purchasing power was boosted by the fall of headline inflation into negative territory, due in part to declining oil prices (Figure 4). Even excluding energy and food, inflation is now close to zero. Household income was also boosted in 2016 by a 1.0% rise in total employment, the largest since 1997, primarily due to a marked rise in the number of non-regular employees since spring 2016 (Figure 3, Panel B), in the context of growing labour shortages (Panel C). Emerging capacity shortages are also supporting business investment, along with record high profit levels (Panel D), large cash hoardings, the cut in the corporate income tax rate and the rebound in exports in the second half of 2016 (Panel E). Stronger export growth was led by shipments to Asian countries, including China, and to the United States (Panel F).

In the first half of 2016, the economy was supported by the FY 2015 supplementary budget and the first supplementary budget for FY 2016, which totalled 0.8% of GDP. In October, the Diet approved a 7.5 trillion yen package (1.5% of GDP) for FY 2016-17. With three supplementary budgets in 2016, a third supplementary budget for FY 2016 in early 2017 and the decision to delay the consumption tax hike that had been planned for 2017, the stance of fiscal policy in 2016-17 is projected to be slightly expansionary even though slack is shrinking and the primary deficit remains large.

Figure 3. Key macroeconomic indicators



1. Seasonally-adjusted data based on establishments with 30 or more workers.
  2. Deflated by the consumer price index, excluding imputed rent.
  3. The diffusion indices show the number of firms responding they had an excess number of workers minus those reporting a shortage and the number responding that they had excess capacity minus those with a capacity shortage. A negative number thus indicates an overall shortage of labour and capacity. Numbers for the first quarter in 2017 are companies' projections made in December 2016.
  4. Profits of non-financial firms, seasonally-adjusted.
  5. National accounts basis.
  6. Trade-weighted vis-à-vis 53 trading partners, calculated using consumer prices. A fall indicates yen appreciation.
  7. Includes China, Thailand, Indonesia, Malaysia, the Philippines and the NIEs.
- Source: Ministry of Health, Labor and Welfare; Bank of Japan; Ministry of Finance; OECD (2017c), *OECD Economic Outlook: Statistics and Projections* (database).

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### Projection and risks

Economic growth is projected to pick up to 1.2% in 2017 before slowing to 0.8% in 2018, with headline inflation rising to 1.1% in 2018 (Table 3). A fall in the saving rate to its pre-2013 level is projected to sustain private consumption, despite an easing in real wage gains

Table 3. **Macroeconomic indicators and projections**<sup>1</sup>

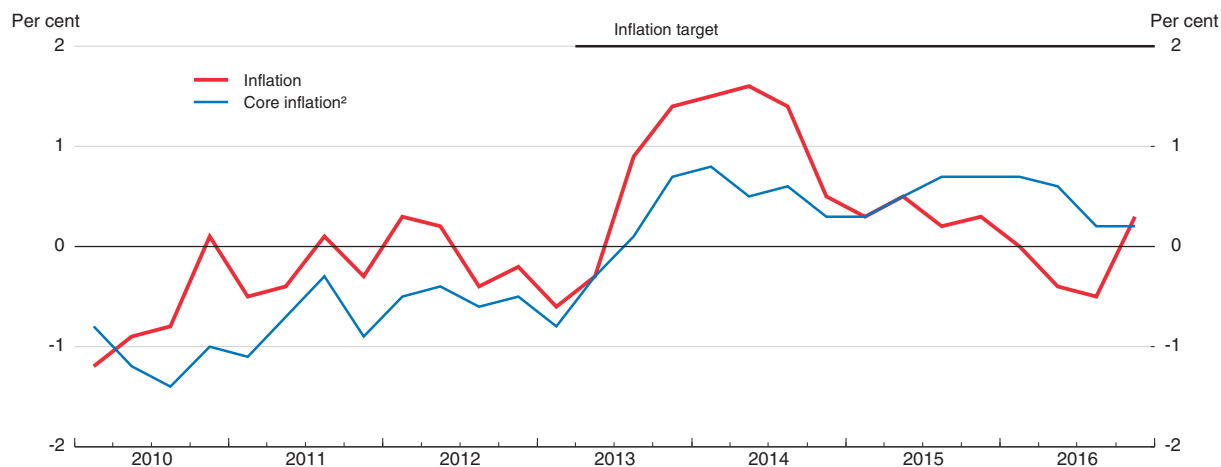
	2013	2014	2015	2016	2017	2018
<b>Demand and output (volumes)</b>						
GDP	2.0	0.3	1.2	1.0	1.2	0.8
<b>Consumption</b>						
Private	2.4	-0.9	-0.4	0.4	0.7	0.7
Government	1.5	0.5	1.6	1.5	0.3	-0.2
Gross fixed investment	4.9	2.9	0.1	1.0	2.6	0.5
<b>Public<sup>2</sup></b>						
Residential	8.0	-4.3	-1.6	5.6	2.4	1.2
Business	3.7	5.2	1.2	1.4	3.4	2.4
Final domestic demand	2.8	0.3	0.1	0.8	1.0	0.5
Stockbuilding <sup>3</sup>	-0.4	0.1	0.6	-0.3	-0.2	0.0
Total domestic demand	2.4	0.4	0.7	0.5	0.8	0.5
Exports of goods and services	0.8	9.3	3.0	1.2	4.2	2.9
Imports of goods and services	3.3	8.3	0.1	-1.7	2.0	1.4
Net exports <sup>3</sup>	-0.4	0.0	0.5	0.5	0.4	0.3
<b>Inflation and capacity utilisation</b>						
World trade growth	3.4	3.9	2.6	1.9	2.9	3.2
Oil prices (spot Brent price in \$)	105.8	97.6	53.8	44.1	55.0	55.0
GDP deflator	-0.3	1.7	2.0	0.3	0.3	0.9
Nominal GDP	1.7	2.1	3.3	1.3	1.5	1.7
CPI	0.4	2.7	0.8	-0.1	0.9	1.1
CPI <sup>4</sup>	0.4	1.2	0.3	-0.1	0.9	1.1
Core CPI <sup>4</sup>	-0.1	0.6	0.6	0.4	0.6	1.1
Unemployment rate	4.0	3.6	3.4	3.1	3.0	2.9
<b>Memorandum items</b>						
General government financial balance <sup>5</sup>	-7.6	-5.4	-3.5	-4.8	-5.3	-4.6
General government primary balance <sup>5</sup>	-7.0	-4.9	-3.1	-4.5	-5.0	-4.3
Gross government debt <sup>5</sup>	211.6	215.9	215.8	219.1	222.6	225.0
Net government debt <sup>5,6</sup>	117.4	119.0	118.4	121.6	125.1	127.5
Household saving ratio (%)	0.3	-0.4	0.7	2.7	2.5	1.7
Current account <sup>5</sup>	0.9	0.8	3.1	3.6	3.6	3.9

1. This projection, which takes into account the second estimate for the fourth quarter of 2016, assumes an oil price of USD 55 per barrel for Brent and an exchange rate of 113.6 yen per US dollar.
  2. Including public corporations.
  3. Contribution to GDP growth (percentage points).
  4. Excluding the impact of the consumption tax hike in April 2014. See footnote 1 to Figure 3. The core CPI is the OECD definition, which excludes both food and energy.
  5. As a percentage of GDP.
  6. Net debt is gross debt less assets held by the government.
- Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database).

in 2017-18 as the rise in inflation outstrips wage growth. The rebound in export growth is expected to continue with some pick-up in international trade and the decline in the yen since last October (Figure 5). In turn, this will support investment in the business sector, supported by the high levels of profitability and cash holdings. As fiscal stimulus fades, the downward trend in public investment will resume, although it will be partly offset by construction related to the 2020 Olympics.

The risks to the projections appear to be balanced. The major short-term uncertainty is the pace of wage growth. If firms raise wages more rapidly than projected, private consumption would be stronger. Real wages have lagged behind labour productivity growth over the past 25 years (Figure 6), reflecting in part the increasing proportion of low-paid non-regular workers. The gap between productivity and wage growth since 1990 in Japan is

Figure 4. **Consumer price inflation has fallen since 2014**  
Excluding tax hike<sup>1</sup>



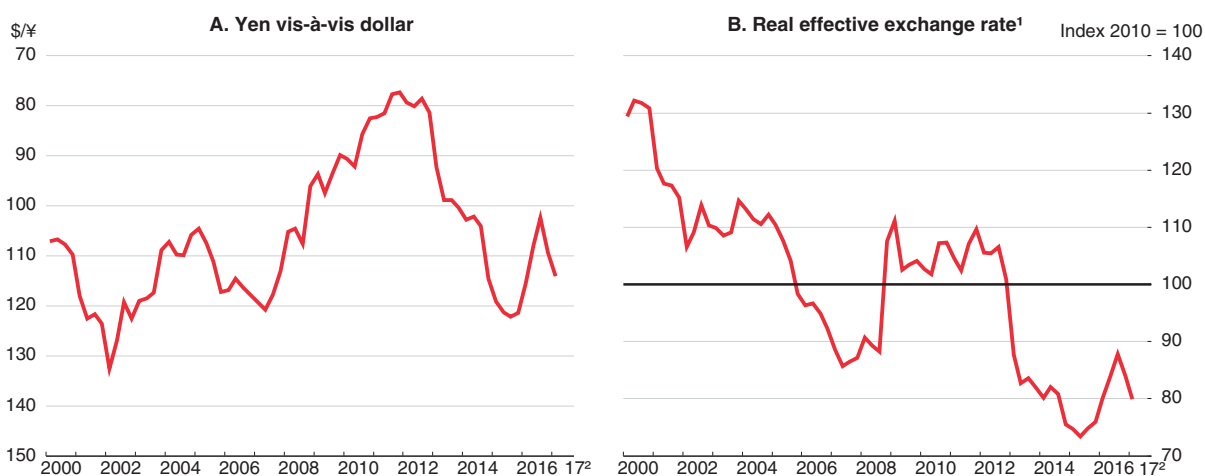
1. In April 2014, the consumption tax was raised from 5% to 8%. The tax hike added 2 percentage points to inflation in FY 2014 according to estimates by the Bank of Japan and the Cabinet Office.
2. OECD measure, which excludes food and energy.

Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database); Bank of Japan.

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more than double the OECD average. The government has introduced tax incentives to encourage firms to boost wages, which were used by 90 600 firms in FY 2015. To raise wages, the government should further increase the minimum wage. While it has gone up by close to 10% in nominal terms over the past four years, it is still one of the lowest in the OECD at 40% of the median wage (Figure 7). The government is aiming to raise it by around 3% per year. In addition, firms should be required to compensate workers for all overtime work. In September 2016, 38% of employees who worked overtime were not paid for their extra hours (Research Institute for the Advancement of Living Standards, 2016).

Figure 5. **The upward trend of the yen during 2016 has been reversed**



1. Trade-weighted vis-à-vis 53 trading partners and deflated based on consumer price indices.
2. The average of January and February 2017.

Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database).


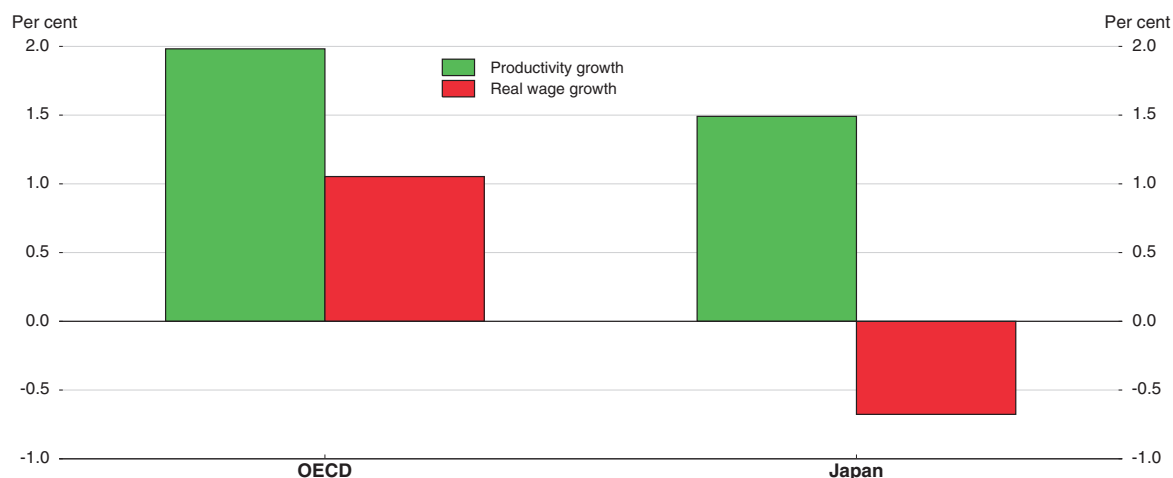
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Figure 6. **The gap between the growth of productivity and real wages is large in Japan**  
Annual average over 1990-2015



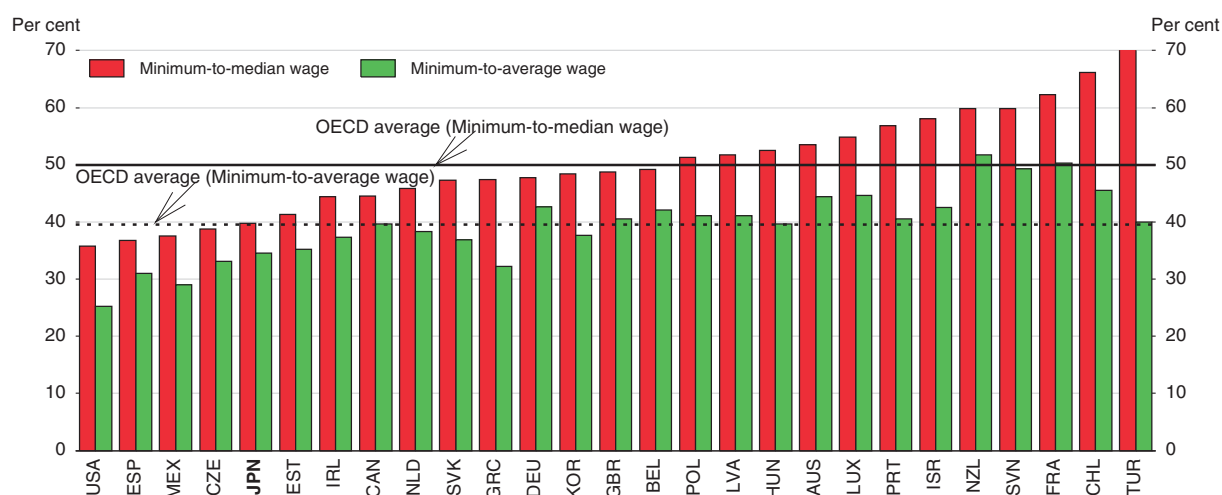
Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database).

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A domestic downside risk is that the improvement in consumer confidence will not be sustained, depressing private consumption growth. On the external side, the expected pick-up in world trade may falter. However, the recent yen depreciation (Figure 5), which has fallen 9% relative to the dollar since October 2016, may moderate that risk, while boosting corporate profits and inflation. Furthermore, the impact of interest rate increases in the United States on worldwide capital flows is uncertain.

Macro-financial indicators suggest that vulnerability in terms of growth sustainability, price stability, external position and financial stability remains contained (Figure 8). Japan does face vulnerabilities that are difficult to assess in the context of the projection (Table 4).

Figure 7. **The minimum wage in Japan is relatively low**  
In 2015 or latest year

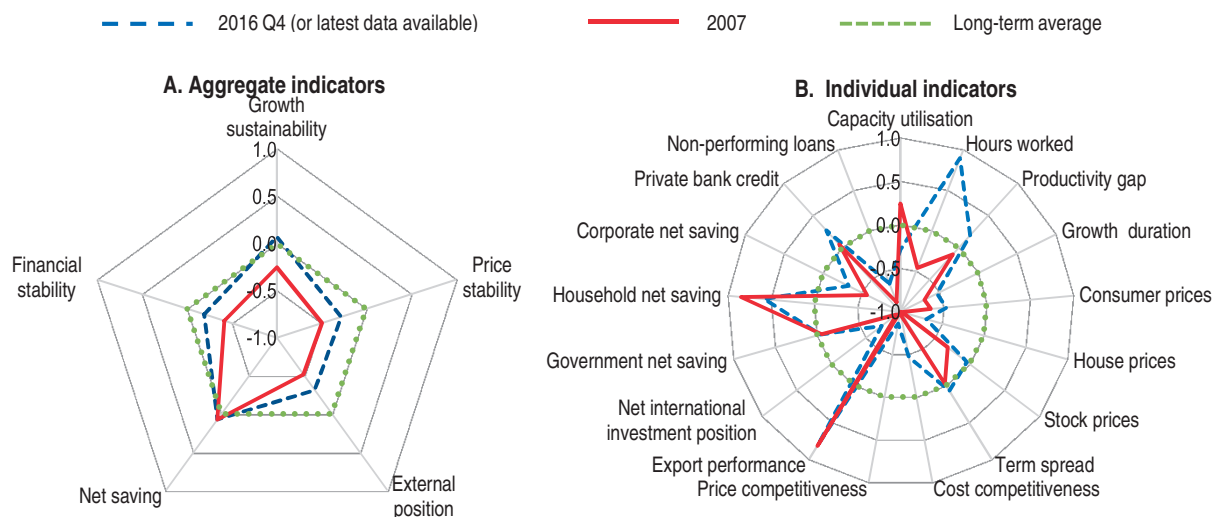


Source: OECD (2017e), OECD Employment and Labour Market Statistics (database).

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Figure 8. **Evolution of macro-financial vulnerabilities since 2007**

Deviations of indicators from their long-term averages (0), with the highest deviations representing the greatest potential vulnerability (+1), and the lowest deviations representing the smallest potential vulnerability (-1)<sup>1</sup>



- Each aggregate macro-financial vulnerability indicator is calculated by aggregating (simple average) normalised individual indicators. *Growth sustainability* includes: capacity utilisation of the manufacturing sector, total hours worked as a proportion of the working-age population (hours worked), difference between GDP growth and productivity growth (productivity gap), and an indicator combining the length and strength of expansion from the previous trough (growth duration). *Price stability* includes headline and core inflation (consumer prices), and it is calculated by the following formula: absolute value of (core inflation minus inflation target) + (headline inflation minus core inflation). *External position* includes: the average of unit labour costs based on the real effective exchange rate (REER), and consumer price based REER (cost competitiveness), relative prices of exported goods and services (price competitiveness), current account balance as a percentage of GDP and net international investment position as a percentage of GDP. *Net saving* includes: government, household and corporate net saving, all expressed as a percentage of GDP. *Financial stability* includes: the average of the share of non-performing loans of financial institutions (non-performing loans), and private bank credit as a percentage of GDP (private bank credit).

Source: Adapted from OECD (2017c), *OECD Economic Outlook: Statistics and Projections* (database) and Thomson Reuters Datastream.


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Table 4. **Key vulnerabilities**

Shocks	Possible outcome
A loss of confidence in Japan's fiscal sustainability	A rise in real interest rates, which could destabilise the financial sector and the real economy, with large spillovers to the world economy.
An increase in trade protectionism in major trading partners.	A contraction in exports and business investment and a disruption of global value chains.
Natural disasters, such as earthquakes, tsunamis and typhoons.	Significant loss of life, disruption of economic activity and high costs for reconstruction.

The most important is related to Japan's unprecedentedly high level of government debt. A loss of confidence in fiscal sustainability could destabilise the financial sector and the real economy, with large spillovers to the world economy. A second vulnerability is increased trade protectionism, particularly given the export-driven growth since mid-2016 (Box 1). Finally, given Japan's location in one of the most seismically-active areas of the earth, it is always at risk of natural disasters.

### Box 1. The structure of Japan's international trade

Japan ranks fourth in world exports and imports, which each accounted for about 16% of its GDP in 2016. The share of trade in Japan's GDP is about half of the OECD average, reflecting the large size of the Japanese economy. Moreover, only about 12% of employment in Japan is directly linked to international trade, compared to nearly 30% in some OECD countries. Nevertheless, international trade has played a key role in Japan's economic development. In recent years, Japan has become increasingly integrated in global value chains (GVCs), especially in Asia.

Asian countries (China, ASEAN and the NIEs) account for about half of both Japanese exports and imports (Table 5). Japan's participation in GVCs is driven by its exports of intermediate parts, particularly to overseas affiliates in China (OECD, 2016e). The final goods are shipped primarily to the United States and Europe (METI, 2016).

**Table 5. Japan's major trade partners in 2015**

Per cent of total in value terms

Imports		Exports	
China	24.8	NIEs <sup>2</sup>	21.7
ASEAN <sup>1</sup>	13.9	United States	20.1
Middle East	12.2	China	17.5
EU	11.0	ASEAN <sup>1</sup>	12.0
United States	10.3	EU	10.6
NIEs <sup>2</sup>	9.2	Middle East	4.2
Other	18.6	Others	13.9
Total	100	Total	100

1. ASEAN includes Indonesia, Cambodia, Thailand, the Philippines, Brunei, Vietnam, Malaysia, Myanmar and Laos. Singapore is included with the NIEs.

2. NIEs include Korea; Chinese Taipei; Hong Kong, China; and Singapore.

Source: Ministry of Finance.

Japan is a major exporter of high value-added goods, reflecting its strong R&D base that makes it one of the leading countries in the development of disruptive technologies (OECD, 2016e). Machinery – general, electronic and transport – accounted for more than 60% of its exports in 2015 (Table 6). Raw materials, mineral fuels and food accounted for more than a third of imports, reflecting Japan's lack of natural resources.

**Table 6. Commodity composition of Japan's international trade in 2015**

Per cent of total in value terms

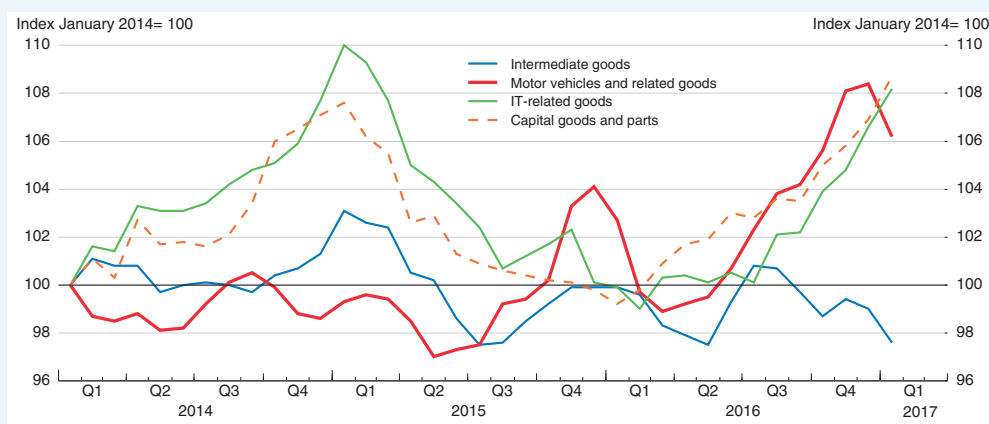
	Imports	Exports
Food	8.9	0.8
Raw material and mineral fuels	29.4	3.2
Chemical, iron, nonferrous metals and textile products	18.9	22.5
General machinery	9.0	19.1
Electronic machinery	15.3	17.6
Transportation machinery	4.0	24.0
Other	14.5	13.0
Total	100.0	100.0

Source: Ministry of Finance.

### Box 1. The structure of Japan's international trade (cont.)

Japan's exports of IT-related goods and motor vehicle and capital goods and parts have rebounded strongly since mid-2016 (Figure 9). In contrast, exports of intermediate goods have been sluggish. Such a trend is consistent with evidence of a slowdown in the growth of GVCs (World Bank, 2017b). GVCs are particularly vulnerable to protectionist measures, which impose unnecessary costs not only on foreign suppliers, but on domestic producers as well. The number of trade restrictions in G20 countries imposed since the 2008 global crisis reached 1 200 by the first half of 2016 (WTO-OECD-UNCTAD, 2016). The impact of protectionism on GVCs highlights the need for open, predictable and transparent trade and investment regimes.

Figure 9. Real exports by type of goods  
Three-month moving average



Source: Bank of Japan.

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### Ending deflation: Quantitative and Qualitative Easing with Yield Curve Control and negative interest rates

The Bank of Japan (BoJ) set a 2% target for consumer price inflation in 2013 (Table 7) and launched “quantitative and qualitative monetary easing” (QQE), which has more than tripled the monetary base (Figure 10). The central bank balance sheet has risen to 88% of GDP, much larger than in the United States and the euro area (Panel B). The new policy was a clear break from the past in terms of scale, decisiveness and ambition. QQE has affected prices and output through interest rates (Figure 11), inflation expectations and portfolio rebalancing.

Following the introduction of QQE, core inflation (excluding energy and food) rose rapidly, from -0.7% (year-on-year) in 2013Q1 to 0.9% in 2014Q1. However, the rise in inflation was partially reversed (Figure 4) by the weak demand following the consumption tax hike in 2014, falling oil and commodity prices and slower growth in emerging economies (Bank of Japan, 2016a). Inflation expectations have fallen below 1% according to some measures.

The BoJ's share of outstanding government bonds has risen from 12% prior to QQE to around 40%. The scope for continued purchases of government bonds may be limited by financial institutions' need for “safe assets” (Arslanalp and Botman, 2015). Against this background, the BoJ introduced “QQE with Yield Curve Control,” which is designed to help the BoJ reach the yield curve that it deems necessary to achieve the 2% inflation target and

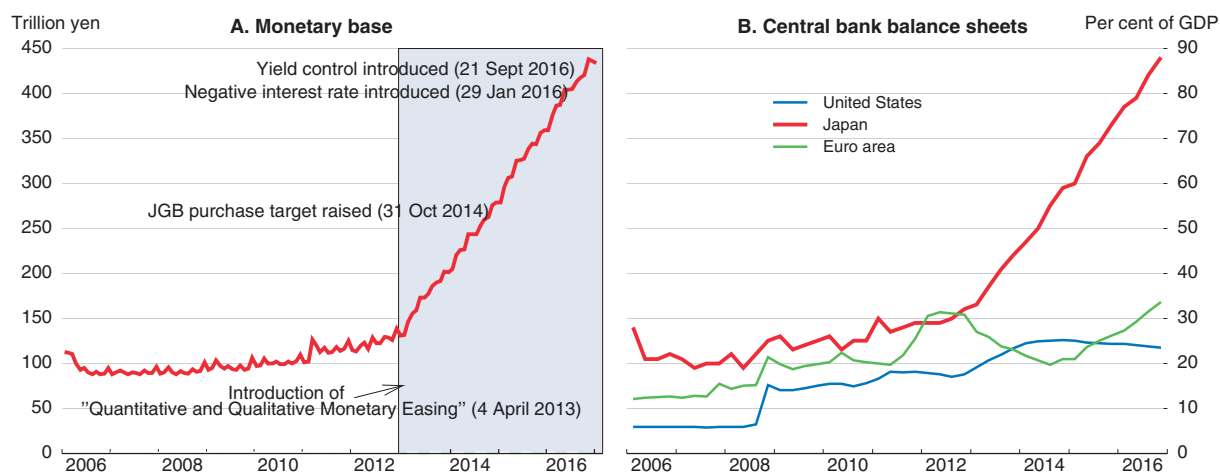
Table 7. **A chronology of major monetary policy measures in Japan since 2013**

2013	January	The BoJ sets a 2% price stability target that it aims to reach "at the earliest possible time".
	March	Haruhiko Kuroda becomes the governor of the BoJ.
	April	The BoJ launches "quantitative and qualitative monetary easing", which aims to double the size of the monetary base by end-2014 by purchasing government bonds at a rate of 50 trillion yen (10% of GDP) per year.
	April	In the <i>Outlook for Economic Activity and Prices</i> , CPI inflation (excluding fresh food) is projected to be 1.9% in FY 2015.
2014	July	In the <i>Outlook for Economic Activity and Prices</i> , the projection for CPI inflation (excluding fresh food) is maintained at 1.9% in FY 2015.
	October	The BoJ accelerates its purchases of JGBs to an annual pace of 80 trillion yen and extends the average remaining maturity of JGB purchases to around 7-10 years (from 7 years).
2015	January	In the <i>Outlook for Economic Activity and Prices</i> , the projection for CPI inflation (excluding fresh food) for FY 2015 is cut to 1.0%, and the 2% target will not be achieved until FY 2016.
	October	In the <i>Outlook for Economic Activity and Prices</i> , the projection for CPI inflation (excluding fresh food) in FY 2016 is cut to 1.4%, and the 2% target is to be reached "around the second half of FY 2016".
	December	The BoJ decides to extend the average remaining maturity of its JGB purchases from about 7-10 years to about 7-12 years from the beginning of 2016.
2016	January	The <i>Outlook for Economic Activity and Prices</i> states that the 2% inflation target will be met "around the first half of FY 2017".
	January	The BoJ introduces a negative interest rate of 0.1%, which initially applies to about 4% of banks' deposits at the central bank.
	April	The <i>Outlook for Economic Activity and Prices</i> states that the 2% inflation target will be met during FY 2017.
	July	The BoJ expands its purchases of ETFs from 3.3 trillion yen (0.7% of GDP) per year to 6 trillion yen (1.2% of GDP) and doubled its lending in dollars to USD 24 billion, while leaving its policy interest rate and the pace of government bond purchases unchanged.
	September	After a comprehensive review of monetary policy, the BoJ introduces "QQE with Yield Curve Control", which targets JGB yields rather than asset purchases. The new policy includes an "inflation-overshooting commitment".
	October	In the <i>Outlook for Economic Activity and Prices</i> , the projection for CPI inflation (excluding fresh food) is cut to 1.5% in FY 2017 and to 1.7% in 2018, and the 2% target will be met "around FY 2018".

Source: Bank of Japan.

allow it to adjust more flexibly to economic and financial conditions (Bank of Japan, 2016b). The new framework has two components:

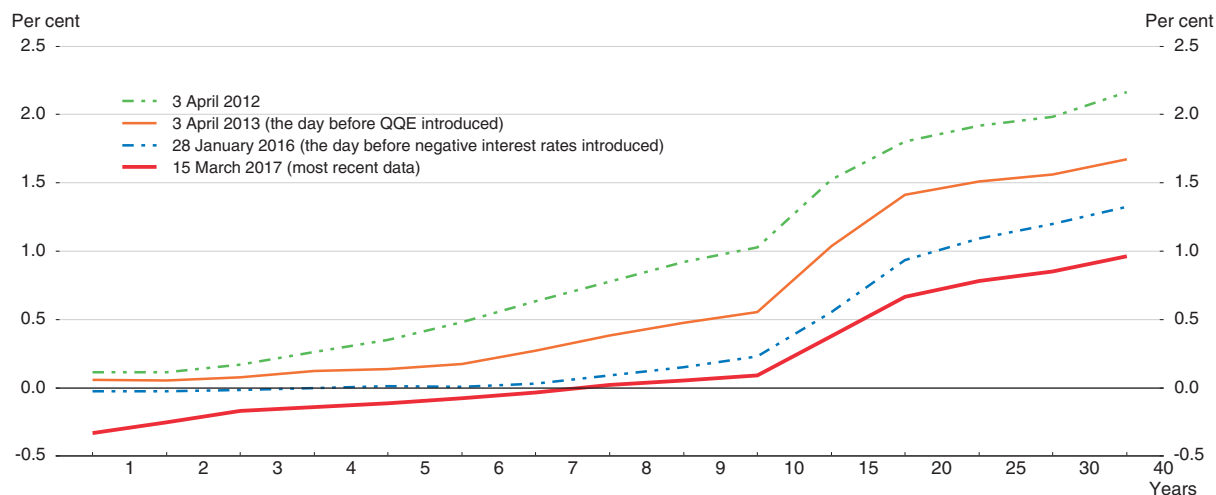
- The BoJ will keep the 10-year government bond yield at close to 0%, though how long it will maintain the target level depends on economic activity, prices and financial conditions going forward.

Figure 10. **Quantitative and Qualitative Easing has sharply increased Japan's monetary base**

Source: Bank of Japan; Thomson Reuters Datastream.

StatLink  <http://dx.doi.org/10.1787/888933469165>

Figure 11. **Quantitative and Qualitative Easing has reduced interest rates across the yield curve<sup>1</sup>**



1. Market-based rate using compounded growth rates.

Source: Ministry of Finance.

StatLink  <http://dx.doi.org/10.1787/888933469179>

- The BoJ made an “inflation-overshooting commitment” to continue expanding the monetary base until inflation exceeds the 2% target in a stable manner. This is intended to strengthen inflation expectations.

The BoJ added another tool to its policy framework in January 2016 by introducing a negative interest rate of -0.1% on banks’ excess reserves, a policy already used by a number of European central banks. Bank lending attitudes have continued to become more accommodative since the introduction of negative interest rates and the yield curve shifted down further (Figure 11). Lower government bond yields were passed through to corporate bonds and lending rates, thus helping boost residential investment. The potential costs and side effects associated with unconventional monetary easing, including asset price booms, large-scale purchases of assets that can lead to dominance by the central bank in the market segments where purchases take place, a negative effect on banks’ profit margins, the ever-greening of non-performing loans and the challenge of exiting quantitative easing, are discussed in Box 2. Furthermore, effective structural reform to boost growth and policies to maintain confidence in Japan’s public finances will also be important.

### Box 2. Potential costs and side effects associated with unconventional monetary easing

With policy interest rates in the United States, Japan, the euro area and the United Kingdom close to zero following the Great Recession, additional stimulus has been provided primarily by reducing long-term interest rates via quantitative easing. In addition, negative interest rates have been introduced in a number of countries. How far to go in the direction of highly expansionary monetary policy and how long to maintain such policies hinges on the balance of marginal benefits and costs. A number of potential costs and side effects can be identified (Rawdanowicz et al., 2013):

- Excessive risk-taking can fuel asset price booms that risk financial instability in the future.
- Large-scale purchases of assets can lead to dominance by the central bank in the market segments where purchases take place and could result in less liquid markets and other efficiency losses.

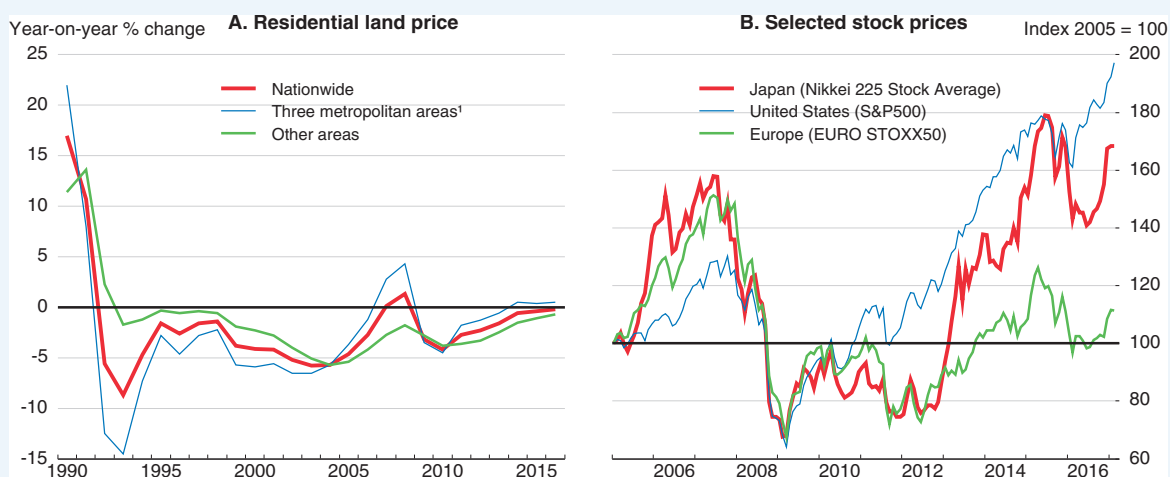
## Box 2. Potential costs and side effects associated with unconventional monetary easing (cont.)

- Negative interest rates can reduce bank lending margins, squeezing their profits and limiting credit growth.
- The ever-greening of *de facto* non-performing loans, encouraged by low interest rates, may undermine creative destruction and productivity gains in the economy.
- Asset purchases can lead to exit challenges, notably the risk of bond market instability and central bank financial losses.

### An evaluation of the potential costs and side effects in Japan

**Asset price booms:** Government bond prices have risen significantly as interest rates have fallen across the yield curve (Figure 11). In August 2016, 80% of government bonds had negative yields, including bonds with a maturity of ten years. With the adoption of QQE with Yield Curve Control in September 2016 and higher global growth prospects, long-term yields with maturity of nine years and beyond are now in positive territory. Residential land prices fell each year over 1992-2016, but appear to be stabilising (Figure 12). Equity prices have rebounded (Panel B), reflecting record high profits. While the price-earnings ratio is rising, it is now around 16, the lowest among G7 countries. The BoJ's purchases of ETFs, which invest in equities, have had a positive effect on equity prices. The BoJ is now the largest shareholder of 54 companies in the Nikkei 225 (Iwata et al., 2016). In September 2016, the BoJ decided to put more weight on TOPIX-based ETFs, which invest in all listed firms in the Tokyo Stock Exchange's first section. As with other investors, the BoJ's voting rights are delegated to the ETFs' asset managers. The BoJ invests only in ETFs that observe the Stewardship Code. Finally, declines in corporate bond yields have been modest.

Figure 12. Asset price trends in Japan are improving



1. Tokyo area (Tokyo, Kanagawa, Saitama, Chiba, and Ibaraki prefectures), Osaka area (Osaka, Hyogo, Kyoto, and Nara prefectures), and the Nagoya area (Aichi and Mie prefectures).

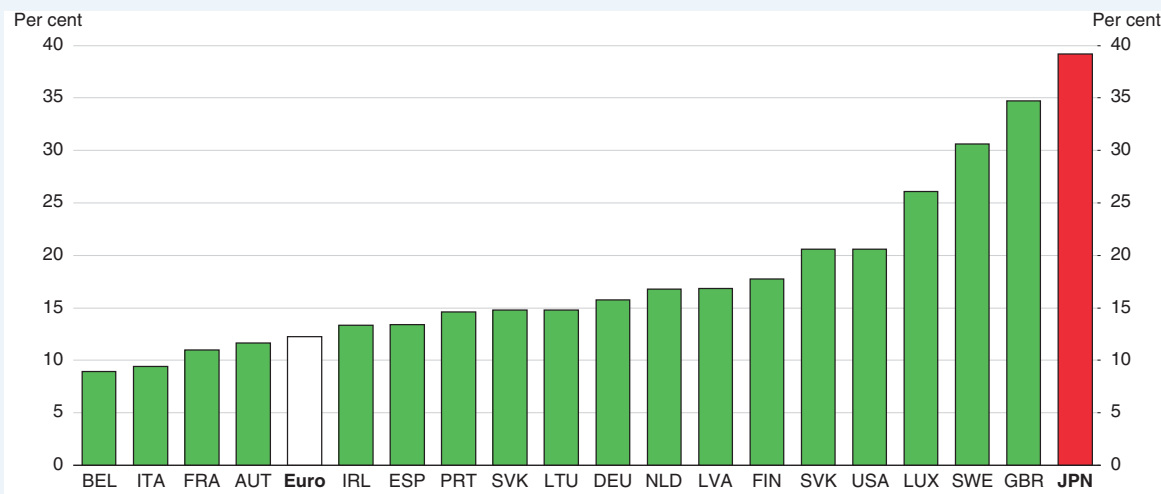
Source: Ministry of Land, Infrastructure, Transport and Tourism; Thomson Reuters Datastream.

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**Central bank dominance of asset markets:** The BoJ's balance sheet has expanded sharply (Figure 10), with its holdings of domestic government bonds rising from 12% prior to the launch of QQE to around 40%, the highest in the OECD area (Figure 13). With fewer trades taking place among private agents, liquidity in the government bond market has been reduced (Bank of Japan, 2016a). The BoJ conducts periodic surveys of the government bond market. The negative impact on the government bond market may be limited by the shift

## Box 2. Potential costs and side effects associated with unconventional monetary easing (cont.)

Figure 13. **The Bank of Japan's holdings of domestic government bonds are high**  
Government bonds held by central banks as a percentage of government debt securities as of September 2016



Source: OECD (2016g).

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to QQE with Yield Curve Control in September 2016, which targets bond yields rather than the amount of bond purchases. Under the new policy framework, the BoJ may need to buy less government bonds than before.

*Negative interest rates:* In recent years, banks' returns on assets have been below pre-crisis levels and the return on equity in many banks is below the estimated cost of equity in Japan (IMF, 2016). However, the direct impact of negative interest rates on banks is limited, as the share of bank reserves subject to negative rates is only around 4%. Consequently, the average interest rate on bank reserves is still positive and banks continue to earn positive interest income (OECD, 2016f). The share price of the Japanese banking sector in January 2017 was 8% higher than when negative interest rates were announced. The lending balance of financial institutions increased by 2.2% in 2016 and picked up in early 2017. Prolonged low and negative interest rates, however, may pose greater challenges for pension funds and financial institutions offering life insurance policies that promise pre-crisis or fixed nominal returns. With the adoption of QQE with Yield Curve Control, the investment environment for insurance and pension products has become more favourable as very long-term interest rates have increased.

*The ever-greening of de facto non-performing loans:* While Japan's exit rate is low compared to other leading economies (Figure 21), it has declined only slightly since 2001. This does not suggest any marked increase in the ever-greening of problem loans.

*Large asset purchases can lead to challenges of exiting QQE:* The BoJ's large holdings of government bonds may make the exit from QQE difficult. However, with inflation close to zero, it appears premature to focus on the exit strategy, which will depend on economic and market conditions at that time. Looking ahead, in designing the exit strategy, Japan may benefit from the experience of other major economies exiting quantitative easing. However, given that the size of the BoJ's balance sheet relative to GDP is much larger than that of the Federal Reserve's or the ECB's, the exit will be a major challenge for the BoJ. The impact of exit is uncertain for financial institutions.

### Conclusion

As in other economies, the use of unconventional monetary policy measures, including quantitative easing and negative interest rates, creates potential costs and side effects, as summarised in Table 8, which should be weighed against the benefits of such policies.



**Box 2. Potential costs and side effects associated with unconventional monetary easing (cont.)**

**Table 8. Summary of the potential costs and side effects associated with Japan's monetary policy**

Key potential costs and side effects	Assessment
Excessive risk-taking can lead to asset prices booms	Government bond prices have risen significantly as monetary easing lowered bond yields. Residential land prices appear to be stabilising while equity prices have risen in tandem with corporate profits.
Distortions in the government bond market due to the dominant role of the BoJ.	The shift to QQE with Yield Curve Control, which focuses on the 10-year bond yield, rather than the amount of purchases, may reduce concerns in this regard.
The impact of negative interest rates on the banking sector.	The profitability of banks is low, but they continue to earn interest income and the growth of lending by financial institutions remains robust. The impact on pension funds and life insurance companies may be a concern.
The ever-greening of <i>de facto</i> non-performing loans.	The firm exit rate, while low, has not shown any marked decline since 2001.
Asset purchases can lead to challenges of exiting QQE.	The exit strategy will be determined by economic and financial conditions at the time of exit. The BoJ has experience with its successful exit of quantitative easing in 2006.

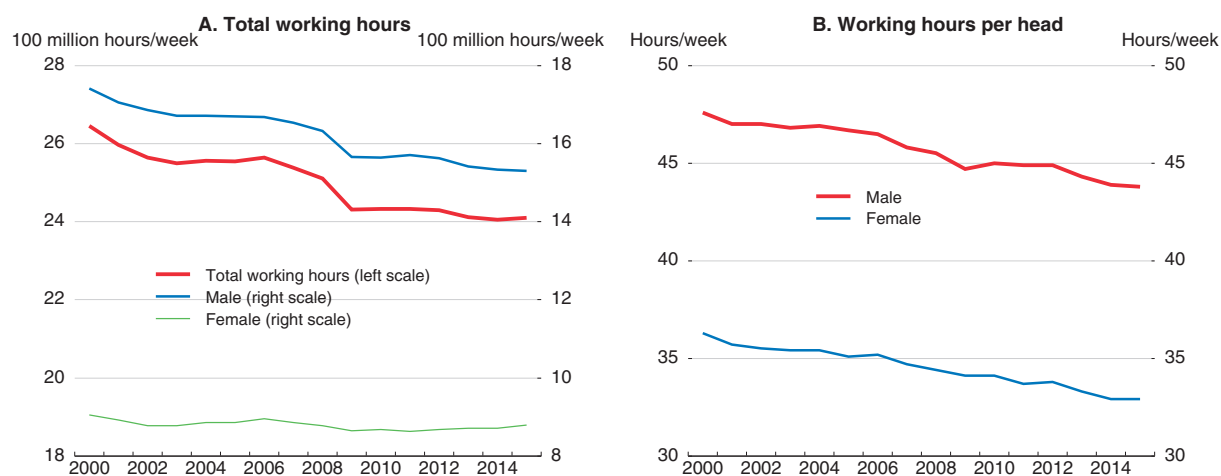
Achieving the 2% inflation target should remain a top priority, while monitoring the potential costs and side effects noted in Box 2. Deflation lowers nominal GDP, thereby boosting the government debt ratio and threatening fiscal sustainability. Reducing the debt ratio in a deflationary context is thus very difficult, in part as deflation also has a negative impact on growth.

### Removing barriers to labour participation in the context of population ageing

The female employment rate rose from 60.7% in 2012 to 64.7% in 2015, well above the 58.6% OECD average. Nevertheless, the gender gap in employment rates in Japan was large at 17 percentage points below that of men. Although female employment has been rising, total working hours of women have been steady, as the increase in part-time employment has reduced average working hours (Figure 14). Female employment is discouraged by a 27% gender pay gap, the third largest in the OECD, while only 9% of private-sector employees with management responsibility were female in FY 2014. The target of having women occupy 30% of “leadership” positions by 2020 is out of reach. Removing the obstacles that limit employment opportunities would increase fairness and inclusive growth by allowing women to fulfil their potential. Three major issues should be addressed as part of the government’s “womenomics” initiative.

First, the shortage of childcare capacity in major urban areas should be reduced. The government is taking steps in this regard (Table 9). Still, its spending on early childhood education and care, at 0.5% of GDP, is less than half of some European countries. Public childcare centres should be supplemented by private-sector childcare by addressing a number of issues: i) relaxing rules on financing and tax disadvantages that discourage the entry of private firms and non-profit organisations; ii) reviewing the rationale for regulations set by some municipalities that exceed national standards, and thus limit entry by new suppliers (Suzuki, 2014); and iii) childcare personnel shortages, which could be filled in part by further promoting the return of qualified nursery teachers who are not currently employed in childcare centres.

Second, the tax and benefit systems should be reformed to make them neutral with regard to work decisions by secondary earners in households. If a second earners’ income

Figure 14. **Total working hours have declined as part-time employment has increased**

Source: Cabinet Office.

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is below 1.03 million yen, the income is tax exempt and the main earner can claim a spouse deduction. This deduction primarily benefits higher-income households and gives many women an incentive to work part-time. The government is raising the exemption to 1.5 million yen (USD 13 300) in 2018 and limiting it to main earners with an annual income of less than 12.2 million yen. Over the longer run, and taking into account the impact of the increase in the threshold, the exemption should be phased out altogether.

Third, work-life balance needs to be improved by changing the culture of long working hours, which limits employment opportunities for women with family responsibilities. The Council for the Realization of Work Style Reforms will issue its findings by the end of March 2017. The number of overtime hours worked by regular workers has been on a rising trend during the past few decades. In practice, a company's management and labour union can agree to an unlimited amount of overtime. The government inspects workplaces where workers' monthly overtime exceeds 100 hours, already a level that may put workers at risk of *karoshi* (death by overwork). The government should introduce a binding ceiling on overtime hours. In addition to facilitating female employment, this may also increase fertility, as the two are positively correlated in the OECD. An overtime limit should be

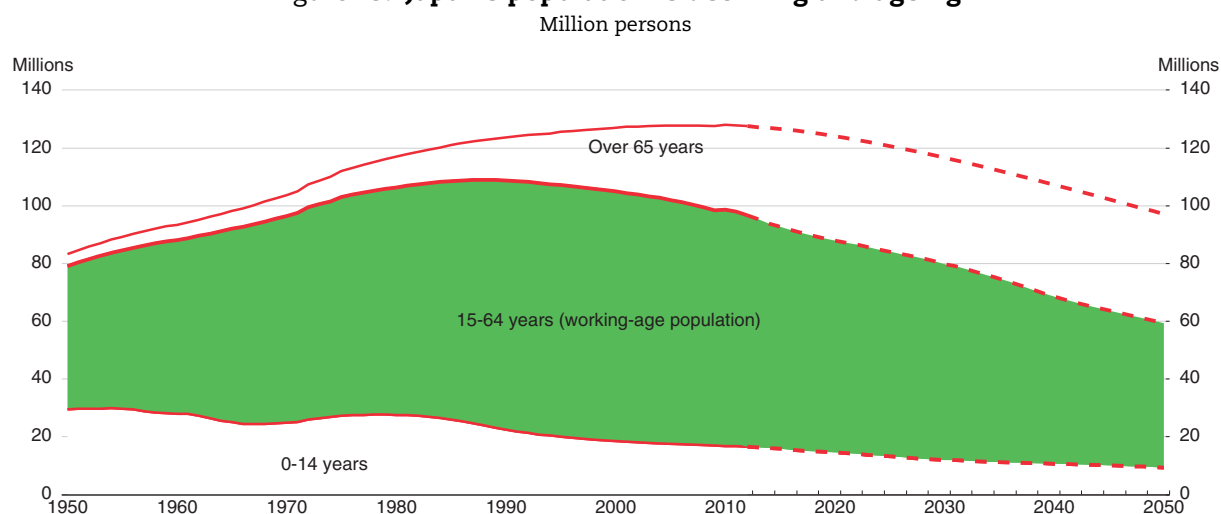
Table 9. **Implementation of OECD recommendations to remove obstacles to labour force participation**

Earlier OECD recommendations	Action taken or planned
Increase the availability of affordable, high-quality childcare.	Childcare places for 0.5 million children are being added to eliminate waiting lists over FY 2013-17, together with after-school care places for 0.3 million school-age children by end-FY 2019.
Reform aspects of the tax and social security system that reduce work incentives for secondary earners.	To encourage second earners' labour supply, the government plans to raise the upper limits on second earners' earned income for the spouse deduction in 2018, with introduction of upper limits on first earners' earned income.
Encourage better work-life balance.	The government created the Council for the Realization of Work Style Reforms, which will issue its findings by end-March 2017.
Encourage greater use of flexible employment and wage systems to improve working conditions for older workers, in part by abolishing the right of firms to set mandatory retirement at age 60.	A FY 2012 revision to the labour law that requires firms to keep all workers who wish to work until 65 had been implemented in 99.5% of companies by June 2016.

accompanied by greater emphasis on labour productivity and an increase in wages so that workers can make a living without long hours of overtime. The legal ceiling would also need to address unpaid and unreported overtime. Finally, the government should lead by example in terms of changing habits and work culture.

In addition to promoting inclusive growth, removing obstacles to the employment of women would mitigate the economic impact of demographic trends. Indeed, Japan's future economic prosperity and the well-being of its people largely depend on how it manages the unprecedented demographic transition now underway. The population is projected to decline by almost 25% between 2010 and 2050 to below 100 million (Figure 15). At the same time, the share of the elderly (65+) will rise from around 26% in 2015 to almost 40%, remaining the highest in the OECD. This implies that the ratio of working-age persons (15-64) to elderly will fall from 2.3 to 1.3. Japan is already experiencing labour shortages as the job offer to applicant ratio has remained above one since 2011 and the share of firms reporting shortages has increased markedly (Figure 3). If the female participation rate were to converge to that of men by 2060, the labour force would be 10% larger than if participation rates were unchanged (Figure 16), thus helping to sustain per capita income levels.

Figure 15. **Japan's population is declining and ageing**

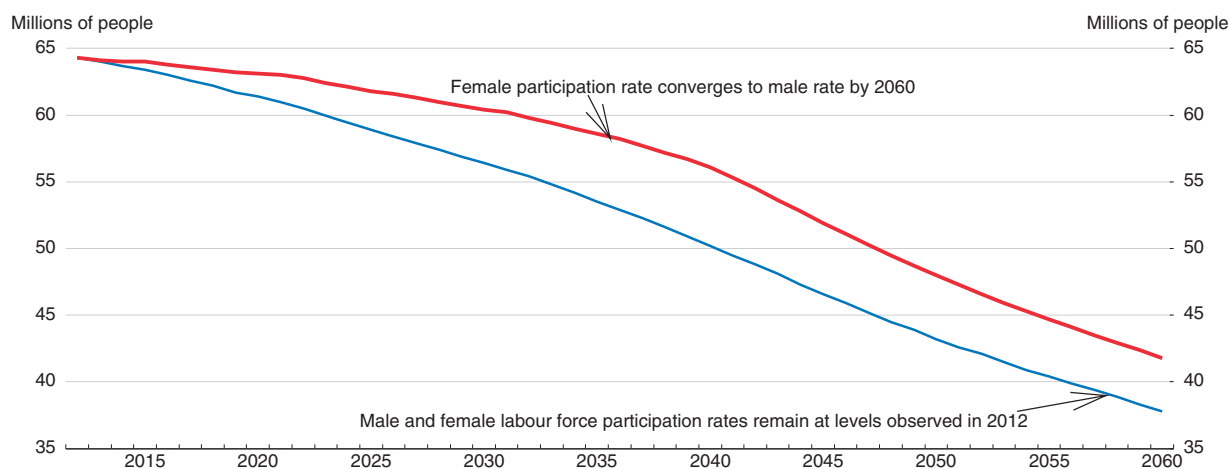


Source: OECD (2017b), *OECD Demography and Population Statistics* (database).

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Removing obstacles to the employment of older people would also mitigate demographic pressures. The employment rate for the 60-64 age group rose from 52% in 2004 to 62% in 2015. Still, it is well below the 79% rate for the 50-55 age group. Most firms still impose mandatory retirement at age 60, reflecting steep seniority-based wage profiles and the high cost of dismissing regular workers. While retirees have the right to remain as non-regular workers, others leave the labour market. Given long life expectancy, mandatory retirement at age 60 is not appropriate. Accelerating the planned hike in the pension eligibility age to 65 and raising it further would encourage employees to work longer while also improving the sustainability of public pensions. The government should abolish the right of firms to set a mandatory retirement age and encourage a shift to flexible employment and a wage system based on ability rather than age.

Figure 16. **Increasing female employment can help limit the looming labour supply shortage**  
Projected size of the labour force, working-age population (15-74)



1. In the baseline, both male and female labour force participation rates are projected based on average entry and exit rates for each five-year age group over the period 2003-12. In the other scenario, the male rate is calculated the same way.

Source: OECD projections based on OECD (2017b), *OECD Demography and Population Statistics* (database) and OECD (2017e), *OECD Employment and Labour Market Statistics* (database).

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Greater use of foreign workers would also slow the decline in the labour force. Japan's growth strategy set a goal of "a society where foreign workers play an active role". The number of foreign workers (including foreign trainees) topped one million for the first time in 2016, up from 0.7 million in 2013. Still, they account for only 1.6% of Japan's labour force, one of the lowest in the OECD. To boost the number of foreign workers, the government will introduce the Japanese Green Card for Highly Skilled Foreign Professionals, which substantially reduces the period of stay required before they can apply for permanent residence from the current five years. Also, foreign trainees will soon be eligible to extend their training period from three to five years. Finally, automation and greater use of robots can help offset a declining work force. In 2015, the government launched the Robot Strategy, and created the Robot Revolution Initiative to implement it.

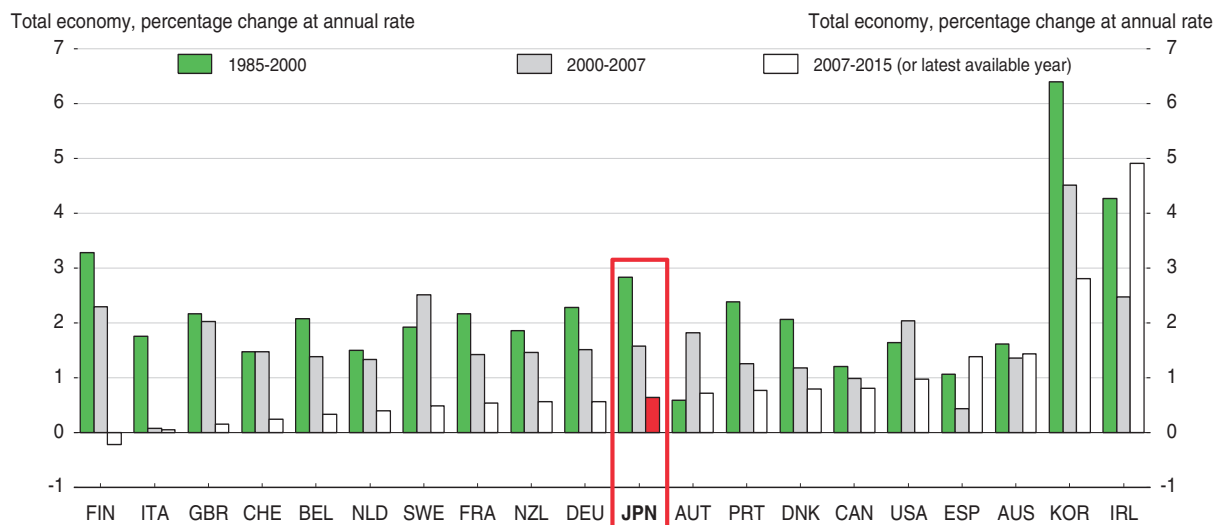
OECD research shows a wealth of evidence demonstrating that the medium and longer-term effects of migration on public finance, economic growth and the labour market are generally positive (OECD, 2016d). Immigration can increase tax revenue and social security contributions, raise the share of the population that is working and fill some skill gaps and specific bottlenecks. However, the benefits depend on the qualifications of migrants. Realising the economic benefits of migration requires significant investment in the education of new migrants, in part to master the Japanese language. Apart from the benefits on a national basis, the impact of migration on local areas can vary widely. In any event, international migration on a scale sufficient to substantially change the demographic picture is not feasible (OECD, 2016i).

## Increasing productivity to promote inclusive growth

While sustaining the labour force is important, boosting labour productivity is the key to raising living standards and addressing the fiscal problem. With a negative contribution from labour inputs, productivity growth would have to exceed 2% to achieve the government's real growth target. However, in Japan, as in many OECD countries, productivity growth has

slowed in recent years (Figure 17). At the same time, income inequality and relative poverty in Japan are above the OECD average (Figure 18).

Figure 17. **Productivity growth has slowed in Japan, as in most OECD countries, since the 1980s**



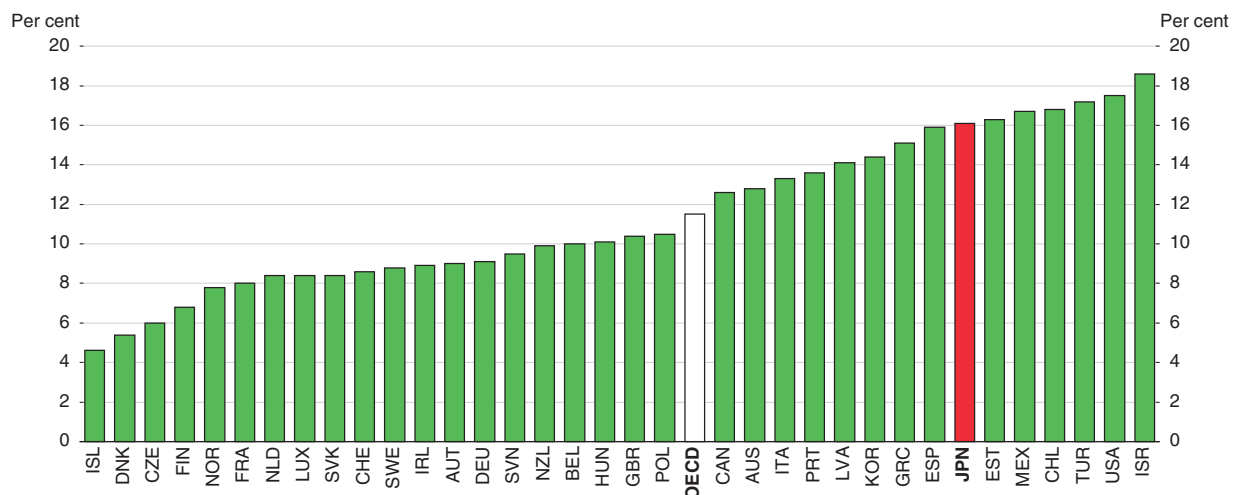
Source: OECD (2017i), OECD Productivity Statistics (database).

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The global productivity slowdown is accompanied by an increasing divergence between leading and lagging firms. In the world economy, labour productivity at firms at the global frontier in manufacturing increased at an average annual rate of 2.8% over 2001-13, compared to only 0.6% for non-frontier firms (Figure 19, Panel A, left-hand side). The

Figure 18. **Relative poverty in Japan has risen to a high level**

In 2014 or latest year available

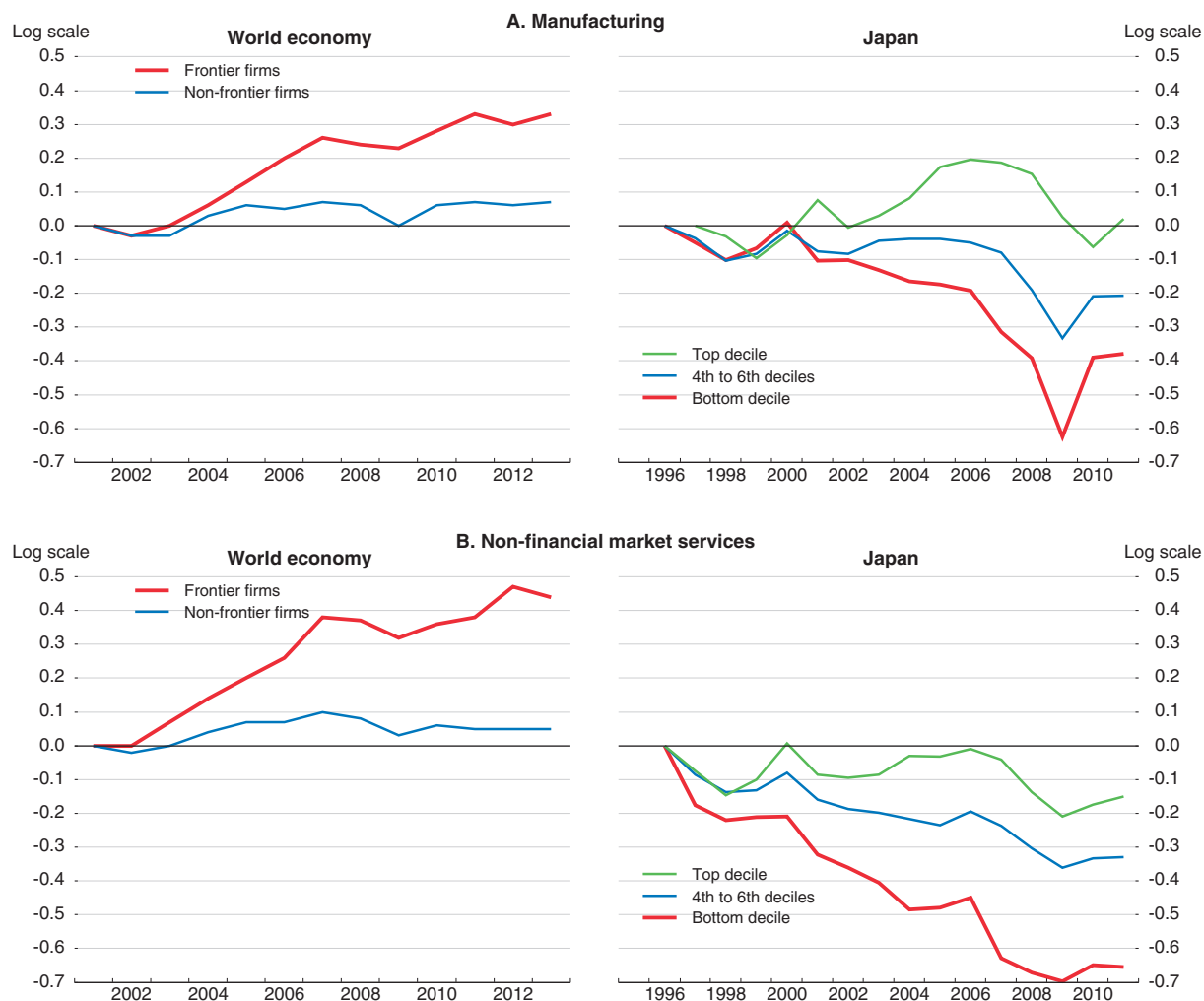


Note: Relative poverty is measured as the share of the population with an income less than half of the “median equivalent disposable income” (adjusted for household size). Values for Japan are based on the Comprehensive Survey of Living Conditions 2012. Another survey for Japan, the National Survey of Family Income and Expenditure, shows relative income poverty edging down from 10.1% in 2009 to 9.9% in 2014.

Source: OECD (2017g), OECD Income Distribution (database).

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Figure 19. **Productivity at Japanese firms has diverged significantly during the past few decades**



Note: In the left-hand panels, which show the world economy, the global frontier is measured by the average of log labour productivity for the top 5% of companies in the world with the highest productivity levels within each 2-digit industry. Non-frontier firms are the average log productivity of all the other firms. Unweighted averages across 2-digit industries are shown for manufacturing and services, normalised to 0 in the starting year. The right-hand panels show the unweighted average of log labour productivity for Japanese firms in the bottom decile, between the 4th and 6th deciles, and in the top decile of the labour productivity distribution in any given year. The values are normalised at 0 in 1996. Data only includes firms with more than 50 employees. The lines indicate cumulated growth rates. A value of 0.3 indicates a 30% increase, while -0.2 indicates a 20% decline.

Source: Andrews et al. (2016); Berlingieri et al. (2017).

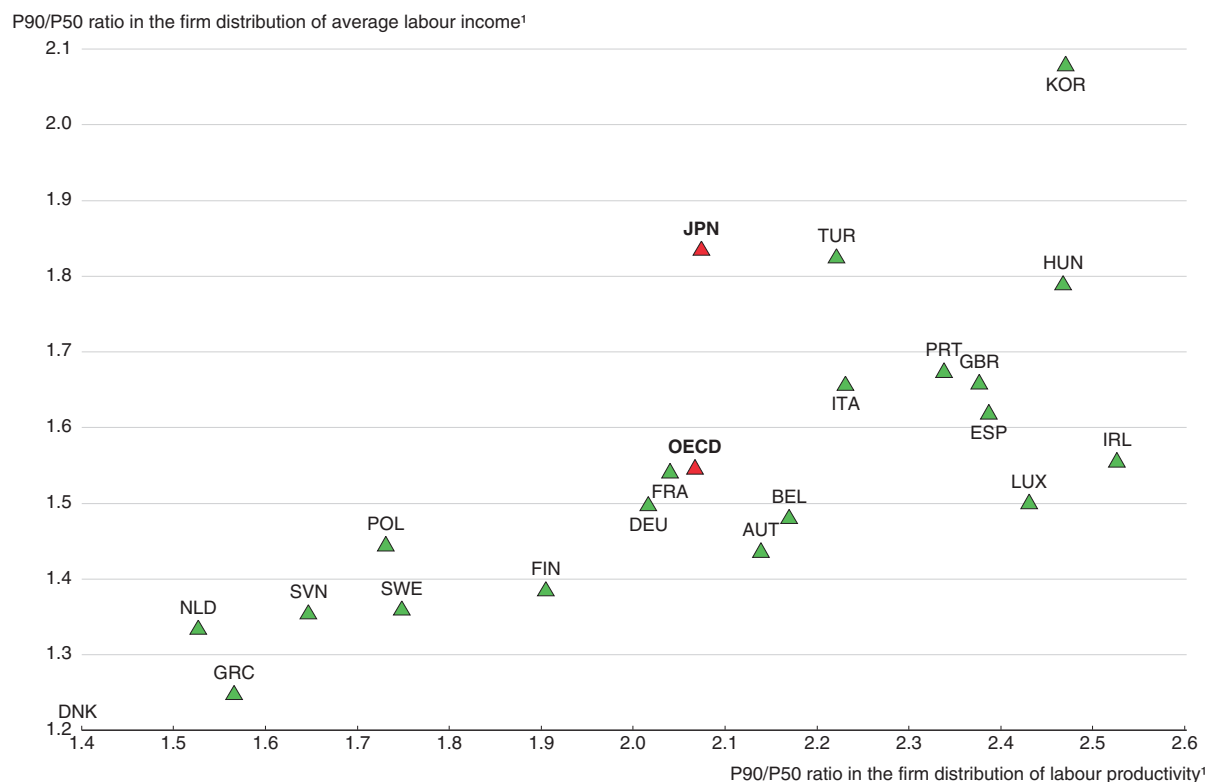
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divergence is even more pronounced in services (Panel B, left-hand side). In Japan as well, the labour productivity gap between firms at the top, fourth to sixth and bottom deciles in both manufacturing and services has widened significantly (Figure 19, right-hand panels). This trend reflects several complementary factors: i) a decline in the diffusion of technology and knowledge from frontier firms to others; ii) poorly-performing firms that remain longer in the market, rather than exiting, thereby trapping resources in unproductive activities; iii) a greater concentration of high-skilled workers in certain firms; and iv) greater concentration of market power and rent-seeking by frontier firms that may have left non-frontier firms behind. Finally, productivity performance has been much weaker in Japan. While labour

productivity increased for both frontier and non-frontier firms in the world economy, it fell in Japan for all deciles (except the top decile in manufacturing, where it was constant).

The widening productivity gap between firms leads to more wage inequality; the dispersion between productivity in firms at the 90th and 50th percentiles in the OECD was positively correlated with the dispersion in average wage income in 2013 (Figure 20). The dispersion of productivity in Japan is slightly above the OECD average and that of average labour income is far above it. While Japan has taken a number of measures to boost productivity (Table 10), it still faces the challenge of broadening the productive base of its economy to generate strong productivity gains that lead to inclusive growth. This requires a comprehensive policy framework that narrows the gap between leading and lagging firms by improving exit policies, encouraging entrepreneurship and upgrading SME policies. Breaking down labour market dualism is another key priority.

Figure 20. **Labour income inequality is positively correlated with productivity disparities between firms**



1. This figure compares labour productivity and labour income at a firm at the 90th percentile to one at the 50th percentile in 2013. Source: OECD (2016f).

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## **Reducing the gap between leading and lagging firms, while raising productivity**

### **Improving exit policies**

The widening gap between firms can be explained in part by poorly performing firms that linger in the market, trapping resources in unproductive activities. In 2013, Japan had a high number of non-viable firms, defined as failing to earn enough profits to cover interest payments for at least three years. The survival of such firms drags down productivity and congests markets. Their existence is estimated to have reduced investment and employment

Table 10. **Implementation of OECD recommendations to raise productivity**

Earlier OECD recommendations	Action taken or planned
Upgrade corporate governance to increase pressure on management to increase profitability and act in shareholders' interests.	More than 200 institutional investors have adopted Japan's Stewardship Code. The share of companies in the first section of the Tokyo Stock Exchange with two or more independent directors rose from 22% in 2014 to 80% in 2016.
Reduce government support for SMEs to promote the restructuring of viable firms and the exit of non-viable ones.	Outstanding credit guarantees from the government for SME loans fell from 7.3% of GDP in 2009 to 5.2% in 2015. The share of guarantees covering 100% of loans declined from 69% to 40% over that period and the government plans further reform to strengthen market forces.
Revitalise venture capital investment to promote firm creation and innovation.	Since 2014, private companies can get tax deductions by investing in funds that are certified by the government as having the ability to support venture businesses.
Improve and expand market mechanisms in the electricity sector, including ownership unbundling to create a level playing field between regional monopolies and new entrants.	With the full liberalisation of the retail electricity market in 2016, about 400 new suppliers have entered the market. An independent regulator for the electricity sector was established in 2015 and a law mandating legal unbundling by FY 2020 was passed.
Strengthen the linkages between academia, the business sector and government research institutes.	In 2016, the government launched the Program on Open Innovation Platform with Enterprises, Research Institute and Academia (OPERA) to foster university-industry partnerships, funded by companies and the government.
Participate in high-level trade agreements, notably the Trans-Pacific Partnership and the Japan-EU Economic Partnership Agreement.	The Diet approved the TPP agreement in December 2016. Japan was the first of the 12 original TPP signatories to notify the Depositary in January 2017 that it had completed domestic procedures. Negotiations to create the Japan-EU EPA are continuing.
Promote the consolidation of farmland so as to cut production costs by lifting obstacles to land transactions.	The "farmland consolidation banks" had leased 101 000 hectares (2% of Japan's farmland) to business farmers by March 2016.

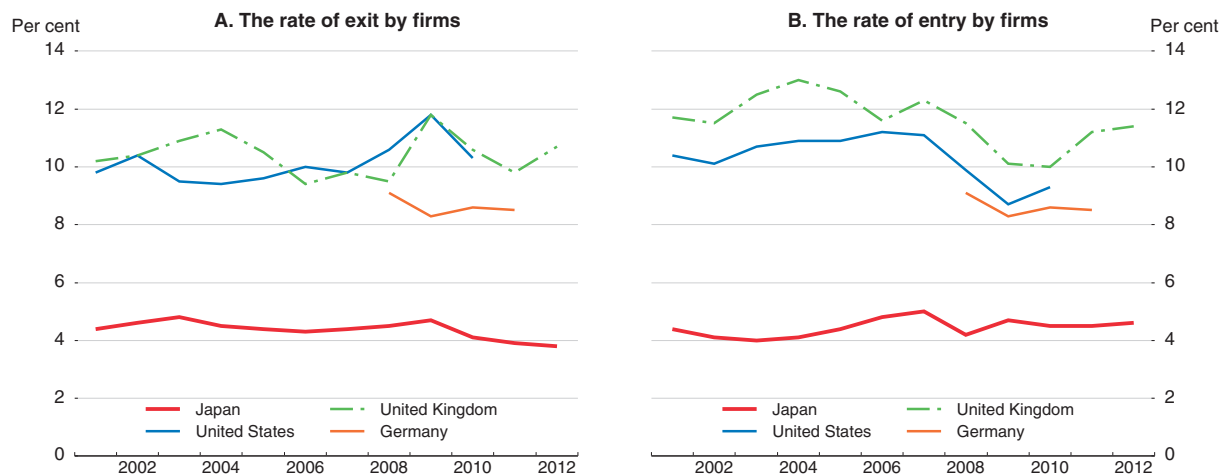
by a cumulative 2½ per cent and ¾ per cent, respectively, in Japan over 2008-13, thereby preventing the expansion of healthy firms (Adalet McGowan et al., 2017). In more recent years, the aggregate interest coverage ratio has improved, which may have reduced the number of non-viable firms.

The existence of non-viable firms reflects the low exit rate in Japan, which is only about half of that in other advanced countries (Figure 21). The growth strategy set a goal of raising both the exit and entry rates to around 10%. While Japan's corporate insolvency regime is highly efficient (World Bank, 2017a), the wide use of personal guarantees and the stringency of the personal insolvency regime are important impediments to firm exit. Almost 60% of SMEs rely on personal guarantees by the owner and 10.5% of them have guarantees by individuals outside the firm (Uesugi, 2010). Personal guarantees exceed the owner's assets in 78% of the cases (Mitsubishi UFJ Consulting, 2010). The orderly exit of non-viable firms would be facilitated by greater co-operation among the parties concerned using the Guidelines for Personal Guarantees Provided by Business Owners, which brings debtors and creditors together in an out-of-court setting. However, both government and private financial institutions should make greater use of the Guidelines and the government should diffuse information about them to banks.


The Guidelines state that banks should not require personal guarantees by SME owners in contracting new loans when SMEs fulfil certain conditions. This will improve lending practices and remove obstacles that limit early exit, restructuring, and second chances by SME owners. Since the implementation of the Guidelines in 2014, government financial institutions have raised the share of loans without personal guarantees from 15% to 33% by September 2016, while private banks increased the proportion of such loans from 12% in 2015 to 14% in 2016. The share of loans without personal guarantees should be increased further.



Figure 21. **Annual firm exit and entry rates in Japan are low compared to other advanced countries**



Source: Ministry of Economy, Trade and Industry (2014).

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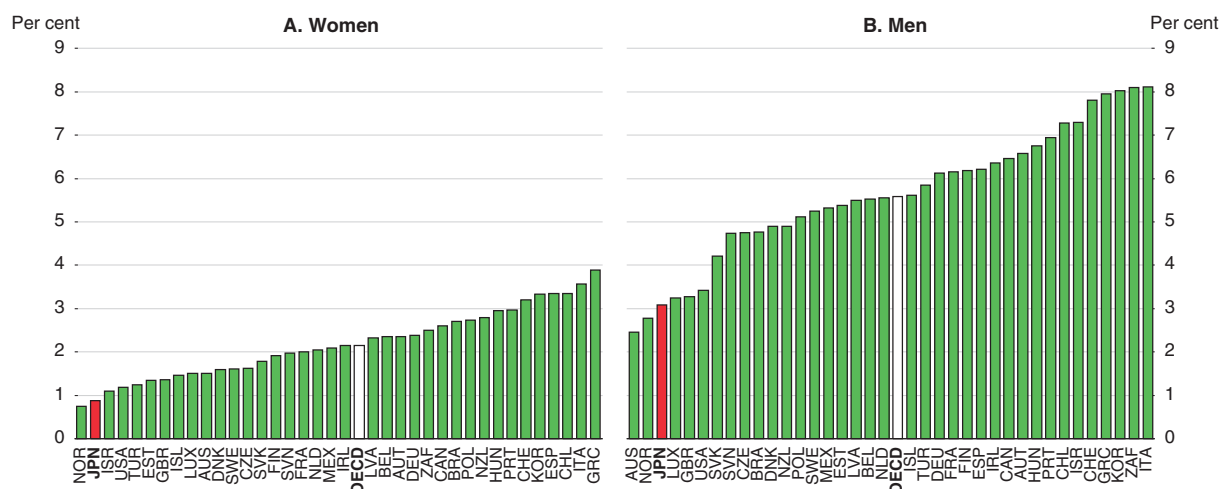
As for existing personal guarantees, the Guidelines bring debtors and creditors together in an out-of-court setting. However, the Guidelines were used to dissolve personal guarantees in only 207 cases by private financial institutions and 61 cases by government financial institutions in FY 2015, and thus should be used more widely. For the Guidelines to be more effective, creditors should play a larger role in initiating the procedure at an early stage, as the owner/debtor is reluctant to resolve the firm and face personal bankruptcy.

Facilitating the exit of non-viable firms would initially entail a rise in the number of displaced workers. Such a rise in displaced workers, however, should be considered in a wider context: in Japan, 8.0 million people found a job in 2014 (17.3% of the total number of workers) and 7.1 million left a job (MHLW, 2015). The chronic labour shortage in Japan does increase re-employment opportunities for those leaving jobs. Nevertheless, policies are needed to facilitate the re-employment of workers, including those who were employed at firms that exited. OECD evidence shows that active labour market policies are more effective in helping displaced workers following firm exit, compared with other categories of job seekers (Andrews and Saia, 2016). In addition, policies to encourage firm creation will help create new opportunities for displaced workers.

### **Promoting entrepreneurship and firm creation**

The weakness of entrepreneurship is one reason for the low entry rate. Indeed, the number of entrepreneurs (as a share of those employed) is among the lowest in the OECD (Figure 22). New firms tend to play a key role in innovation and raising productivity (OECD, 2015b). Although regulatory barriers to entrepreneurship in Japan have fallen below the OECD average, they remain an obstacle due to the complexity of the licence and permit system (OECD, 2013a). Increasing entrepreneurship also requires improving its image; less than a third of the working-age population views entrepreneurship as a good career choice, the lowest in the OECD. The negative perception reflects a lack of perceived opportunities (7%, the lowest in the OECD), perceived capabilities (12%, the lowest) and a fear of failure (55%, the second highest) (Global Entrepreneurship Monitor, 2015).

Figure 22. **The share of entrepreneurs in Japan is low, especially among women**  
Self-employed with employees (as a share of employed persons) in 2015



Source: OECD (2016a).

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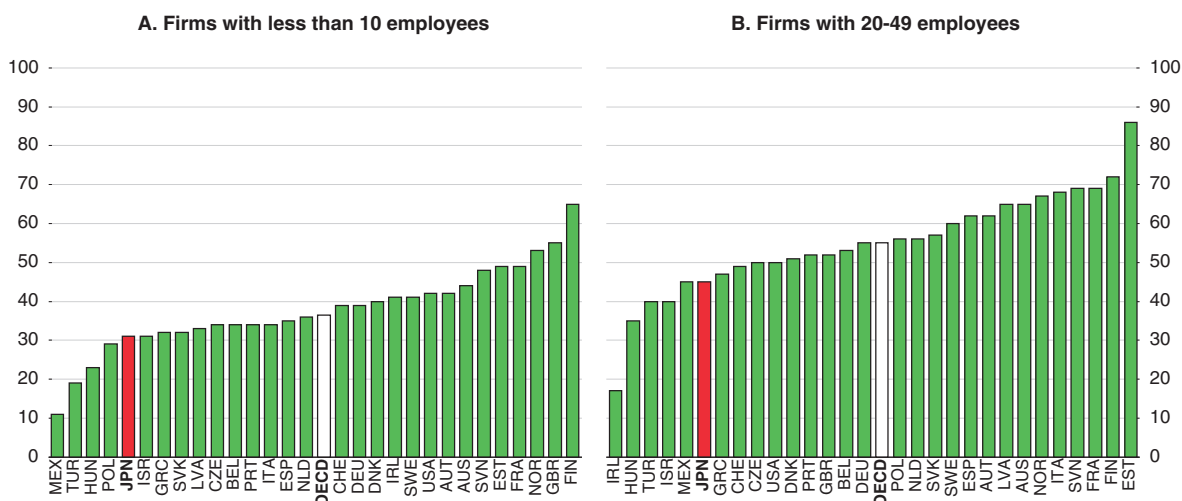
The low capabilities in entrepreneurship suggest a need for additional education and training. Only 20% of the Japanese, the lowest in the OECD, agree that “school education had provided enabling skills and know-how necessary to run a business”, compared to an OECD average of 52% (OECD, 2013a). Training is also a priority, as only 31% of men and 18% of women said that they had access to entrepreneurial training. In addition, reforming the personal bankruptcy system (see above) is essential to allow second chances for failed entrepreneurs. Another obstacle is difficulty in obtaining financing. The share of Japanese men who report that they have access to financing matches the OECD average, while it is below average for women. The range of financing instruments available to entrepreneurs, particularly risk capital, should be broadened. In 2015, venture capital amounted to only 0.02% of GDP, compared with more than 0.3% in some OECD countries. Developing the M&A market and shortening the time for initial public offerings (IPOs) would boost venture capital financing. Policies to increase firm creation should emphasise women, given their untapped potential for entrepreneurship.

### Improving SME policies

The inter-firm dispersion of productivity also reflects the wide gap between SMEs and large firms. SMEs have long suffered from low productivity and weak profitability. Labour productivity in firms with less than 50 employees relative to those with more than 250 employees is below the OECD average (Figure 23). Low productivity in the SME sector is linked to the weakness of services (2015 OECD *Economic Survey of Japan*), given that three-quarters of SMEs are in that sector. More than two-thirds of firms with less than 100 million yen (USD 0.87 million) in capital reported a deficit in FY 2014.

SMEs receive substantial government support, although improved economic conditions have reduced public credit guarantees for SME loans from a peak of 35.9 trillion yen (7.3% of GDP) in FY 2009 to 25.8 trillion yen in FY 2015. In addition, the share of guarantees covering 100% of loans declined from 69% to 40% over that period. Guarantees of 100% weaken market forces as they leave banks little incentive to monitor such loans. Further reforms

Figure 23. **Productivity in small firms in Japan is low relative to large firms**  
Value added per person employed in 2013 relative to that in firms with more than 250 workers = 100



Source: OECD (2016a).

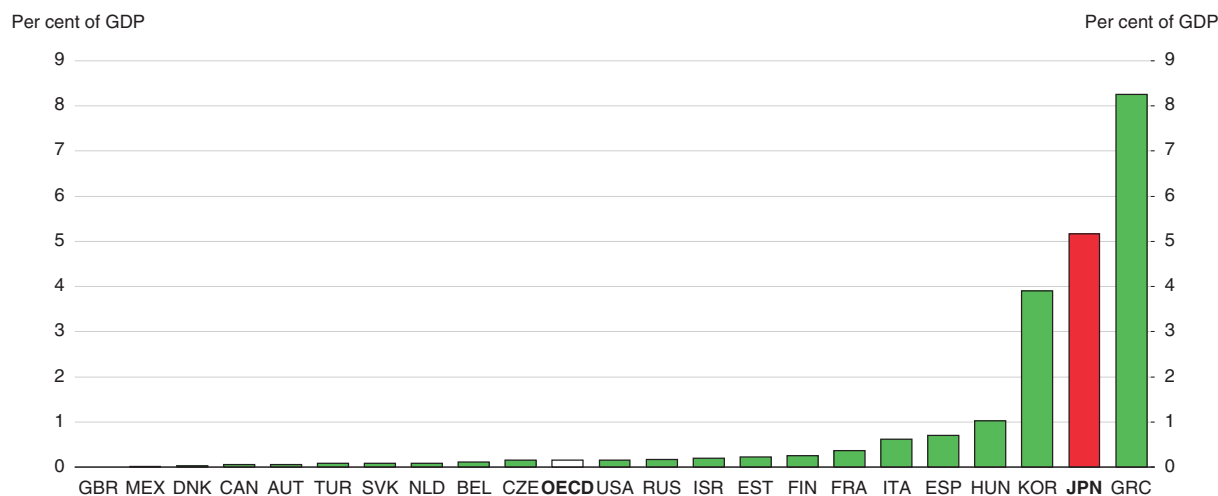
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are planned to strengthen market forces: i) banks applying for credit guarantees will have to supply loans to SMEs without personal guarantees by the borrowers; and ii) the largest 100% guarantee scheme (Safety Net Program No. 5) will lower its rate to 80%.

Despite the decline, government guarantees for loans to SMEs in Japan were exceptionally high at 5.2% of GDP in 2015 (Figure 24). However, given the heavy reliance on bank lending to SMEs, the share of SME loans that are publicly guaranteed is around 11%, compared to 12% in the United States and 15% in Korea. High levels of public support can delay restructuring by keeping non-viable enterprises afloat, which distorts resource allocation by limiting the scope for entry of new firms and expansion of innovative firms. Public support for SMEs can have other negative side effects. First, it hinders the development

Figure 24. **Credit guarantees for SMEs in Japan are exceptionally large**

Stock of guarantees in 2015 or latest year available

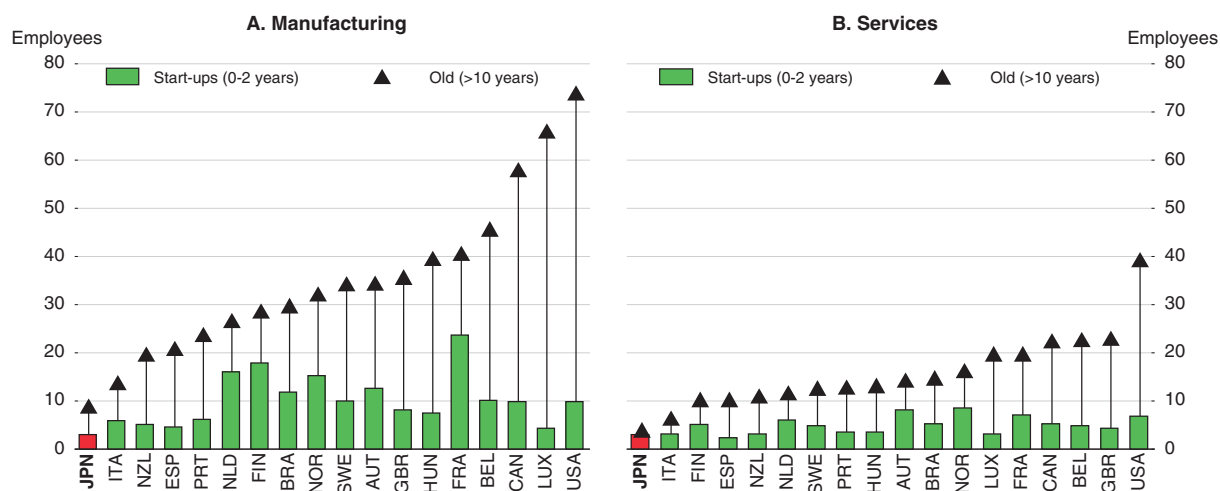


Source: OECD (2017a).

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of market-based financing. *Second*, there is little evidence that government financial support improves SME performance (Ono and Uesugi, 2014; Lam and Shin, 2012). *Third*, compared to other OECD countries, SMEs in Japan show little growth, as measured by the difference in the number of employees in mature firms (more than ten years old) and new start-ups (Figure 25), which may reflect SME policies (Tsuruta, 2016). The creation and growth of innovative SMEs and the downsizing of non-viable ones would tend to increase productivity. At the same time, SMEs have an important role to play in local economies.

Figure 25. **Small firms in Japan tend to stay small**



Source: Criscuolo et al. (2014).

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The number of SME loans that are guaranteed should be reduced gradually towards the levels in other OECD countries and the coverage of credit guarantees should be reduced to encourage banks to actively monitor credit risks. Support should be focused on correcting market failures that limit access to finance rather than on supporting mature firms. Those market failures are concentrated among young firms and micro-firms, as the longer a SMEs' history and the larger its size, the lower its borrowing cost. However, mature and larger firms may also need support to cope with economic crises and natural disasters. Financial supervisors should require financial institutions to conduct regular credit reviews, publicly announce the results, and prompt the exit or restructuring of non-viable firms. The government should reduce pressure on banks to ease lending terms for SMEs. Such pressure would hinder the exit of non-viable firms and the growth of more efficient ones. As noted above, effective policies are needed to help workers displaced by firm exit.

### **Other policies to promote synergies between productivity and inclusive growth**

#### **Upgrading corporate governance**

Japanese firms have long been characterised by low return on equity compared to their European and US counterparts. A better corporate governance system would improve the allocation of capital and monitoring of firm performance, allowing Japan to make better use of its high level of business R&D and human capital (Isaksson and Çelik, 2013). Better corporate governance would also facilitate the downsizing or closing of low-productivity activities and the shift of resources to high-productivity activities. The government introduced a Stewardship Code for institutional investors in 2014 and a Corporate

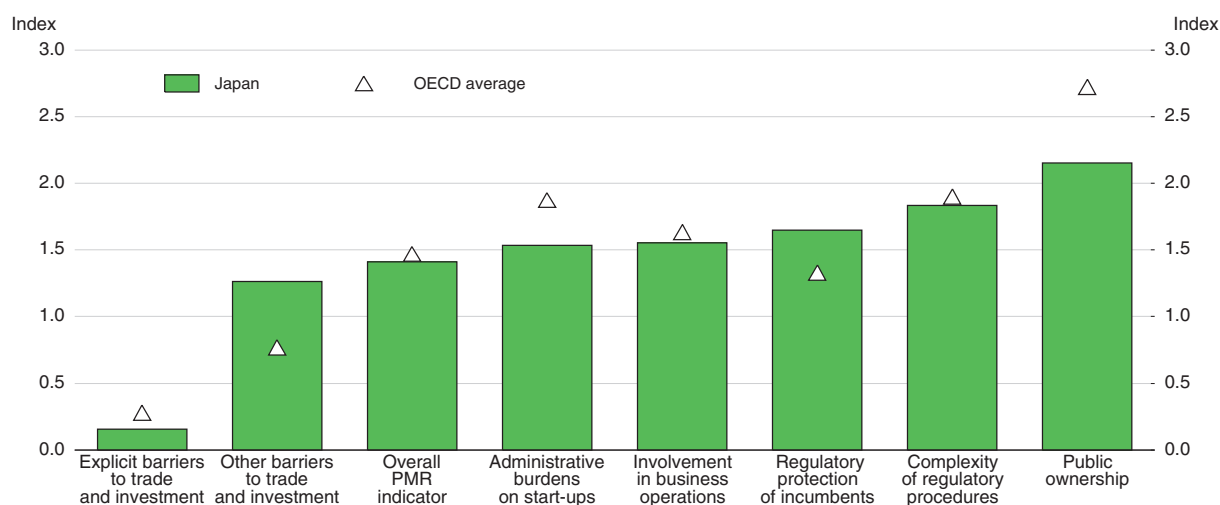
Governance Code for publicly-listed companies in 2015. More than 200 institutional investors have joined the Stewardship Code and the share of firms on the Tokyo Stock Exchange that have followed the Corporate Governance Code by having at least two independent directors rose from 22% in 2014 to 80% in 2016.

To realise the benefits of the new framework, the business sector, the Tokyo Stock Exchange and the government need to support its effective implementation. For the Stewardship Code to be more successful, the end asset owners could be further encouraged to join when appropriate. The Government Pension Investment Fund, which is by far the largest asset owner, has joined and outsourced its asset management activities to fund managers who have also adopted the Code. While other public pension funds and the Pension Fund Association have joined the Code, only one non-financial corporate pension fund has joined it thus far. A priority for corporate governance is to improve the performance of the board, in part by applying the principle that the boards “should analyse and evaluate its effectiveness as a whole... including the self-evaluations of each director” (TSE, 2016).

### Accelerating the reform of product market regulation

Less stringent product market regulation (PMR) tends to raise aggregate productivity (Bouis et al., 2011). Reforms that lighten burdens on firms and increase the transparency of regulation support entrepreneurship and market entry. Less restrictive regulations can also narrow the gap between leading and lagging firms by allowing innovative new firms to attract the resources necessary to grow. Japan’s PMR index in 2013 was slightly below the OECD average in 2013, but well above that of the leading countries (Figure 26). Priorities for regulatory reform in Japan include: i) reducing the high level of regulatory protection of incumbents; ii) reducing administrative burdens on start-ups toward the best-performing countries; and iii) reducing the complexity of regulatory procedures. Japan’s 2016 Growth Strategy lists three priorities – National Strategic Special Zones (2015 OECD Economic Survey of Japan), corporate governance (see below) and labour market reform (see below).

Figure 26. **There is scope to align Japan’s product market regulation with OECD best practice**  
In 2013<sup>1</sup>



1. The OECD Indicators of Product Market Regulation are a comprehensive and internationally-comparable set of indicators that measure the degree to which policies promote or inhibit competition. Research shows that the indicators have a robust link to performance. The indicator, based on more than 700 questions, ranges from zero (most relaxed) to six (most stringent).

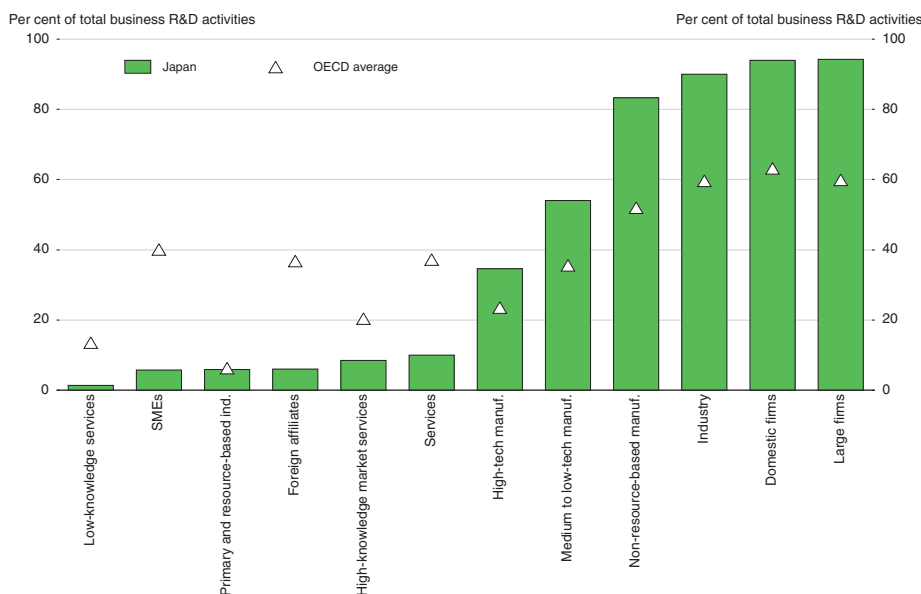
Source: OECD (2017h), OECD Product Market Regulations Statistics (database); Koske et al. (2015).

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### Improving the innovation framework

R&D spending in Japan was 3.6% of GDP in 2014, the third highest in the OECD, with the business sector accounting for three-quarters. R&D is concentrated in major corporations, while the share of SMEs is only 6%, compared to around 40% in the OECD (Figure 27). In 2010-12, the share of SMEs in Japan that introduced some form of innovation (47%) was significantly lower than in Switzerland (76%) and Germany (67%) (OECD, 2016e). In addition, R&D is focused in manufacturing, while that in services, both high and low-knowledge, is well below the OECD average (Figure 27). Innovation in Japan thus tends to widen productivity and wage gaps between manufacturing and services and between large and small firms.

Figure 27. **R&D spending is concentrated in large manufacturing firms**  
In 2013



Source: OECD (2016h).

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Moreover, 99% of business-financed R&D is carried out in firms, leaving little room for co-operation with universities and government research institutes. R&D collaboration between universities and the business sector reduces the productivity gap between firms (Andrews et al., 2015). Such collaboration is especially important in SMEs and in services, as it provides smaller firms with direct access to sources of knowledge. Initiatives to encourage R&D collaboration between universities and firms are thus essential to raise both productivity and equality.

### Upgrading human capital

Japan is a top performer in developing skills, but it falls short in using skills at work, which is equally important to translate skills into economic growth and productivity. This is particularly true for women, and even more so for younger cohorts with high education. Young women in Japan are more likely to have a tertiary degree than young men: in 2013, 61% of women aged 25-34 years had a tertiary degree compared with 56% of men. Japan ranked first in the OECD Survey of Adult Skills (PIAAC) in both literacy and numeracy skills of adult workers. However, the use of reading skills in the work place is close to the average, while use of numeracy skills is below average. Around 10% of Japanese workers are in jobs for which their literacy competency is higher than required (OECD, 2016e).

One reason is that women who attain a high level of qualification often work in jobs for which they are overqualified, particularly as non-regular workers. The PIAAC survey indicates that women in Japan face the highest probability of being overqualified at 32%, compared to the average of 20% in the countries that participated in the survey (OECD, 2013c). Overall, about one-fifth of Japanese workers report a mismatch between their existing skills and those required for their job, which is close to the norm in OECD countries for which data are available.

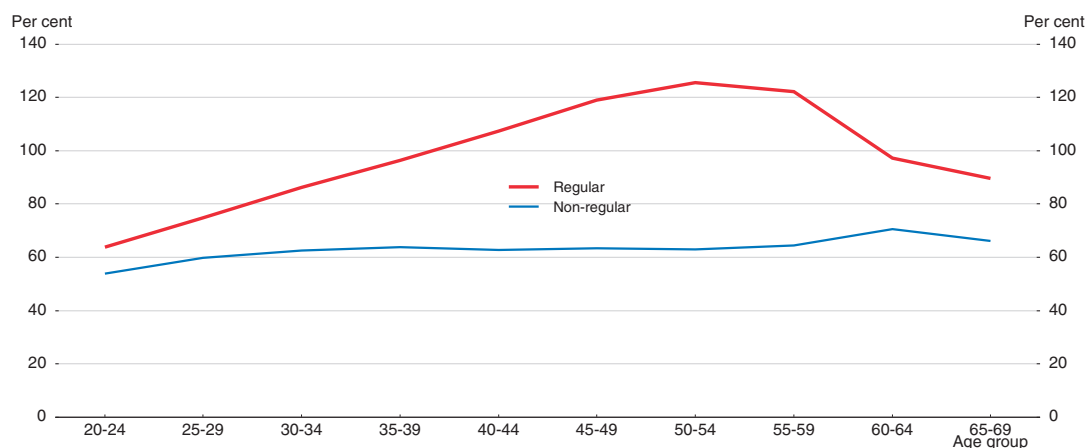
Skill mismatch and aggregate productivity are related through two channels: the impact on within-firm productivity and on the allocation of labour resources across firms. Trapping skilled labour in relatively low productivity firms makes it more difficult for more productive firms to attract skilled labour and gain market share. Mismatch thus slows the growth of new innovative firms, lowering aggregate labour productivity. Reducing the level of mismatch to the best practice in the OECD in each industry would boost overall labour productivity by around 4% in Japan (Adalet-McGowan and Andrews, 2015).

### Reforming the labour market

Labour market dualism is the major cause of increasing income inequality in Japan (MHLW, 2012). Non-regular employment, a category that includes fixed-term, part-time and dispatched workers, rose sharply from 20.3% of total employment in 1994 to 37.5% in 2016. Firms hire non-regular workers to increase employment flexibility, given the difficulty of dismissing regular workers, and to lower labour costs. Non-regular employment is concentrated among women, who accounted for 68% of non-regular workers in 2015, as 56% of women working as employees are non-regular. The segmentation of the labour market into non-regular and regular workers is an obstacle to female employment. In addition, non-regular workers receive less training and opportunities for skill development than regular workers, reflecting the fact that many are temporary. This slows productivity growth and widens the productivity and wage gap between workers (Aoyagi and Ganelli, 2013).

After adjusting for type of job and educational attainment, the wage gap between full and part-time workers is 45% for men and 31% for women. The gap widens over time as regular workers build up seniority (Figure 28). For the 50-54 age group, regular workers make

Figure 28. **The wage gap between regular and non-regular workers is large**  
Wage as a percentage of the average wage of regular employees<sup>1</sup>



1. In June 2015, excluding overtime payments and bonuses. Only 31% of non-regular workers received bonus payments in 2014, so the gap in take-home pay is even larger.

Source: Ministry of Health, Labor, and Welfare “Basic Survey on Wage Structure 2015”.

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twice as much as non-regular workers. Among households with one earner, the poverty rate is 5% if the husband is a regular worker and 35% if he is a non-regular worker (Higuchi, 2013). The lower income of non-regular workers also discourages family formation and reduces the birth rate. Breaking down dualism requires a comprehensive strategy to lower employment protection for regular workers, in part by setting clear rules for the dismissal of workers, and to expand social insurance coverage and training programmes for non-regular workers, and raising the minimum wage (OECD, 2015a). Given the difficulty of reforming employment protection, Japan should follow the approach of Italy, which has “grandfathered” the existing rights of current employees, while introducing a single contract for new workers (OECD, 2017d).

### Box 3. Green growth challenges

Japan’s economy is less energy-intensive than the OECD average but the difference has narrowed (Figure 29). The energy mix has changed significantly since the 2011 Great East Japan Earthquake, resulting in the closure of nuclear reactors, which had supplied about a third of electricity. They were replaced by imported coal and gas, contributing to a 12% increase in GHG emissions over 2010-14, pushing emissions per GDP above the OECD average. Japan’s Intended Nationally Determined Contribution aims to cut emissions by 26% from 2013 levels by 2030. Japan’s planned energy mix is consistent with its GHG emissions target.

Reducing emissions depends to an important degree on nuclear energy, a low-carbon source, and the re-starting of nuclear power plants that are approved by the Nuclear Regulatory Authority. Today, only three reactors are in commercial operation. Nuclear safety requirements in Japan are now the most stringent in the world (OECD, 2016e). The regulator is reviewing 23 reactors for possible re-starting. Under the government plan, nuclear power will eventually produce 20-22% of electricity, about half of the pre-2011 target.

Renewables’ share of Japan’s total primary energy supply rose by less than 2 percentage points between 1990 and 2015 to reach 5.3%, about half of the OECD average (Panel B). The increase was driven by energy recovery from incineration of waste, while little use is made of solar or wind energy. The introduction of the Feed-in-Tariff system in 2012 has had little impact on the growth of renewables and the fixed long-term contracts at high prices under this system risk creating a serious financial burden on consumers and the government. The outlook for renewables also depends on the on-going reform of the electricity sector (2015 OECD Economic Survey of Japan).

Japan is aiming at a significant improvement in energy efficiency comparable to that achieved after the oil shock. One of the tools to increase efficiency is further expansion of the energy efficiency standards set by the Top Runner Program, which is mandatory for manufacturers and importers. The Program, which was established in 1998, set efficiency targets over a time frame of three to ten years for cars and household electrical appliances, encouraging competition and innovation among manufacturers and importers. Construction materials were added to the Program in 2013 and nine products were included after 2013. The Top Runner Program is supplemented by the Efficiency Benchmark Program, which was extended to the distribution sector, including convenience stores, from FY 2016. It will be expanded to hotels and department stores from FY 2017. In FY 2018, it will cover 70% of energy consumption of all industries.

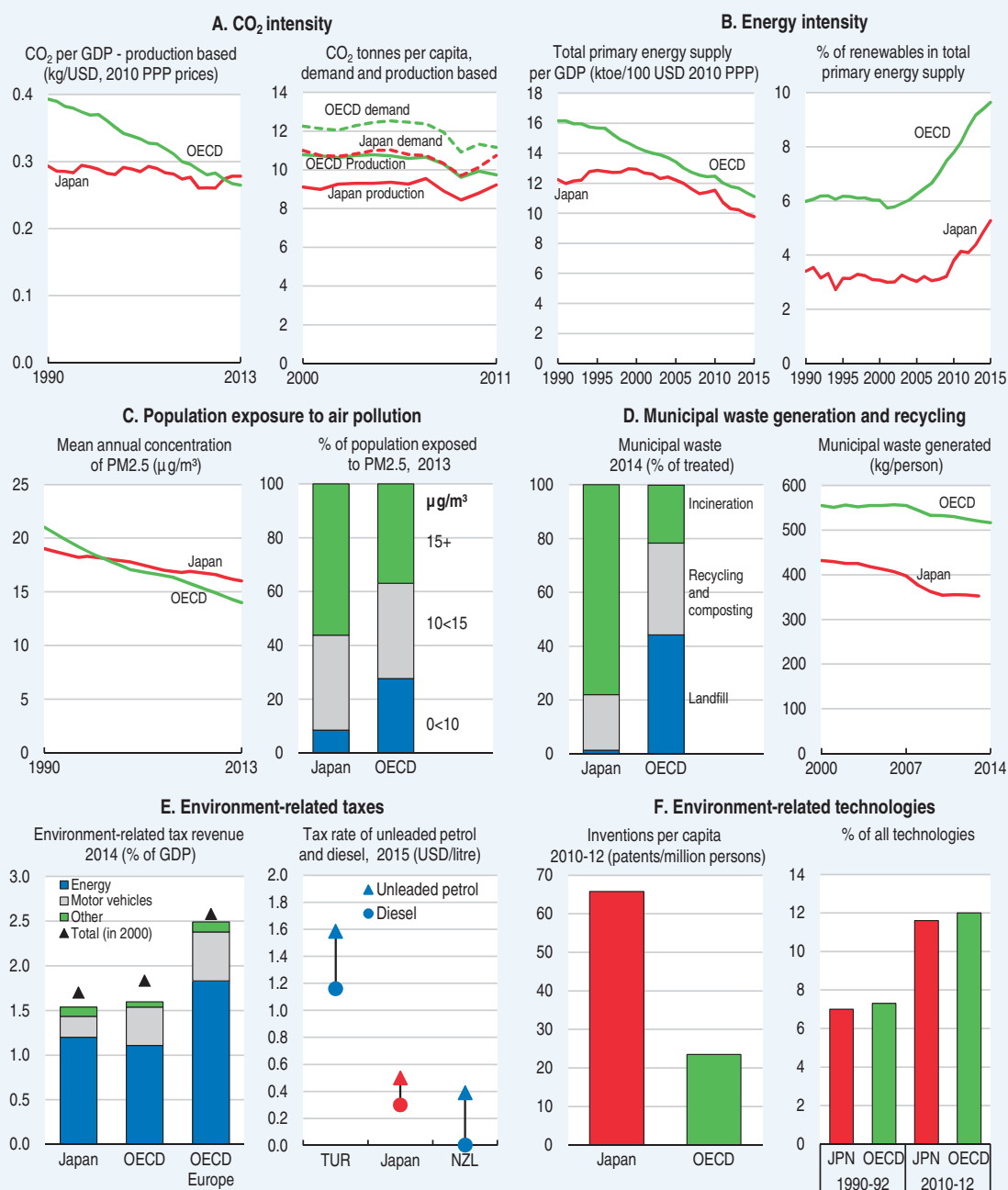
Extreme levels of annual exposure to air pollution are less frequent in Japan than in the average OECD country (Panel C). Nevertheless, average exposure to PM2.5 is higher than the OECD average. The overall trend is improving but falling behind the improvements made in most OECD countries.

Municipal waste generation is well below the OECD average, and the gap has increased since 2000 (Panel D). About one-third of such waste was sent to landfill in 1990 but now almost 100% is either recycled or incinerated. Landfill of other waste is also much reduced and nearly half is recycled, owing to regulations and promotion campaigns (OECD, 2010).



## Box 3. Green growth challenges (cont.)

Figure 29. Green growth indicators: Japan



Source: OECD (2016c), *Green Growth Indicators* (database). For detailed metadata, <http://stats.oecd.org/wbos/fileview2.aspx?IDFile=02a134e1-c3ec-4c5c-9a05-4ebb41a60539>.

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Environmentally-related taxes are also important to reduce GHG emissions and achieve other important environmental objectives, such as pollution reduction. Revenues from such taxes, primarily on energy and vehicles, have been stable in Japan at around 1.7% of GDP between 1994 and 2012, close to the OECD average (Panel E).

## Putting the government debt ratio on a downward trend

Japan's gross government debt was 216% of GDP in 2015 (Figure 30), although net debt is substantially lower, given the government's large asset holdings. Nevertheless, net debt has also risen rapidly and was the third highest in the OECD at 118% of GDP in 2015 (Panel B). The primary deficit is projected to be close to 5% of GDP in 2017, further pushing up debt. The impact of high debt is mitigated at present by low interest rates, reflecting large-scale government bond purchases by the central bank, as well as persistent deflation, risk aversion and the home bias of investors. Indeed, net interest payments were only 0.4% of GDP in 2015, compared to the 2% OECD average (Panel C). However, the outlook for the government bond market once inflation reaches its target and central bank bond purchases are phased out is uncertain.

Figure 30. **Japan's government debt is the highest in the OECD but interest payments on the debt are low**

General government basis as a percentage of GDP in 2015



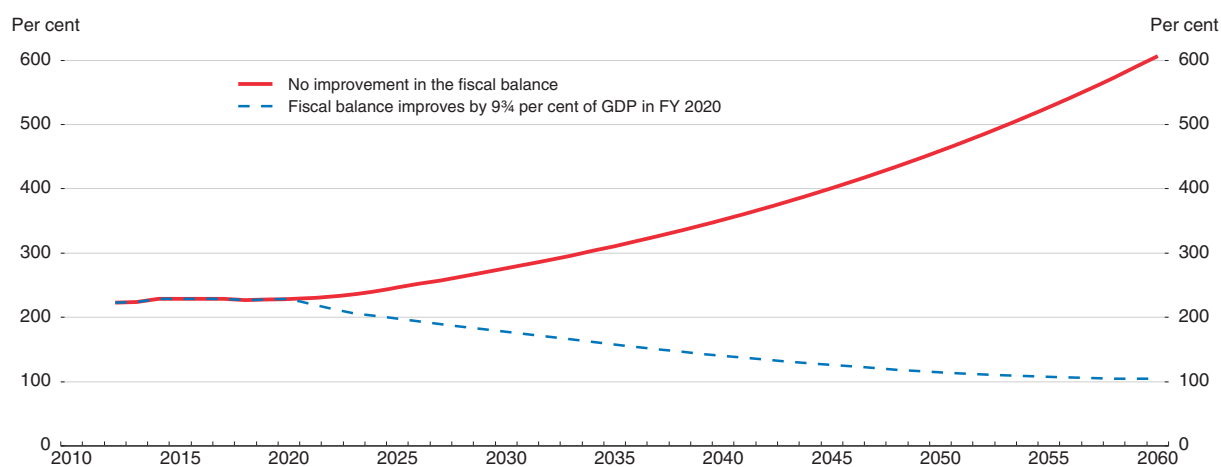
Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database).

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A simulation by the Fiscal System Council presents two alternative scenarios. Both assume that a small primary surplus (central and local governments) is achieved by FY 2020 and that government revenue and government spending that is not related to ageing remain constant as a share of GDP over FY 2020-60. Age-related spending is projected to increase from 24% to 31% of GDP over FY 2020-60, based on per capita benefit levels by age, taking changes in the population structure into account. In the first scenario, a primary surplus is followed by a fiscal consolidation of 9¾ per cent of GDP in FY 2020, reducing the government debt ratio to 105% of GDP in FY 2060 (Figure 31). In the second scenario, there is no fiscal consolidation over FY 2020-60, leading to a sharp increase in the debt ratio. This reaffirms the necessity of significant fiscal consolidation to ensure fiscal sustainability. The government has taken steps to raise revenue and reduce spending (Table 11), but much remains to be done.

**Figure 31. Long-run simulations of the government debt ratio**

General government basis; percentage of GDP on a fiscal year basis



Note: The economic assumptions for nominal and real growth and the long-term interest rate through FY 2024 are based on the “economic revitalization scenario” in the “Economic and Fiscal Projections for Medium to Long-term Analysis” by the Cabinet Office (July 2015 version). After FY 2024, assumptions are based on one of the cases in the “Actuarial Valuation of Employees’ Pension Insurance and the National Pension in FY 2014” by the Ministry of Health, Labor and Welfare. The simulation is based on SNA 1993.

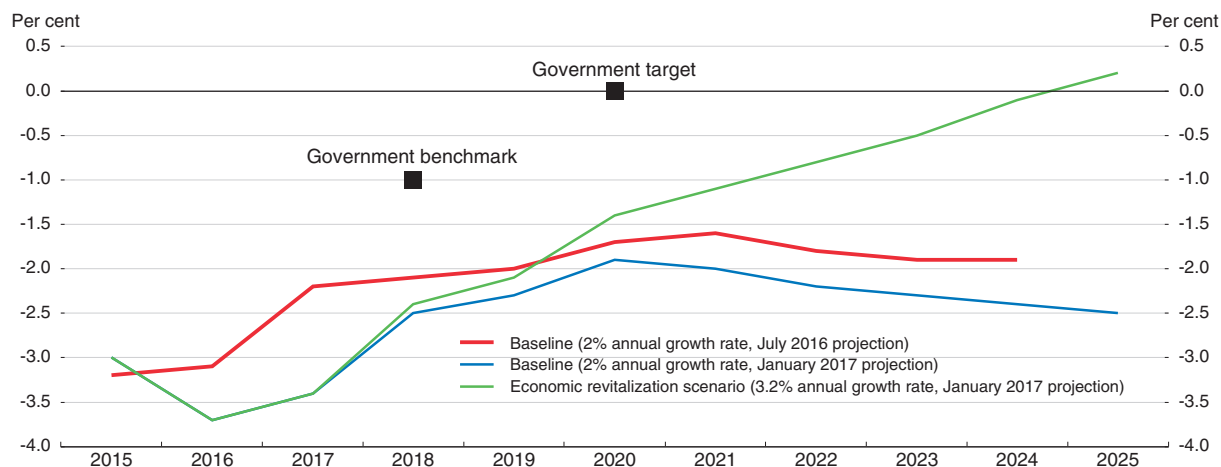
Source: Fiscal System Council (2015).

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The government has a target of a primary surplus (central and local governments) by FY 2020. However, the government’s most recent projection shows that the primary deficit of central and local governments may persist through FY 2024 (Figure 32). Under its baseline scenario, the primary deficit is projected to be 2.5% in FY 2025. It is important first to attain the fiscal plan’s target of a primary surplus for central and local governments by FY 2020. The size of the primary surplus necessary to stabilise the debt ratio equals the level of debt multiplied by the gap between the nominal interest rate and nominal growth rate. If the gap were to match its average since 1980, Japan would need a primary surplus of around 2.5% of GDP (Table 12). With a primary deficit of 5% on a general government basis in 2017, the fiscal consolidation necessary to achieve a 2.5% primary surplus is around 7½ per cent of GDP.

Such a large-scale fiscal consolidation would be best achieved by a steady path of gradual consolidation that allows economic growth to continue. Achieving the 7½ per cent of GDP consolidation over a decade would imply a pace of ¾ per cent per year, which could be achieved by: i) a gradual hike in the consumption tax rate of 1 percentage point per year, boosting revenue by ½ per cent of GDP; ii) broadening the bases of the personal and

Figure 32. **Government projections show it failing to meet its fiscal targets**  
Primary balance (central and local governments) as a percentage of GDP on a fiscal year basis



Note: The 2018 benchmark will be reviewed and addressed in light of the postponement of the consumption tax hike.

Source: Cabinet Office (2016b and 2017).

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corporate income tax and the inheritance tax for an additional  $\frac{1}{4}$  per cent of GDP of revenue; and iii) freezing spending as a share of GDP, which may require spending cuts to offset increases in ageing-related spending.

The second objective of the government's fiscal plan is to put the government debt ratio on a downward trend from FY 2021. The simulation below (Figure 33) shows the path of the primary balance necessary to stabilise gross debt at 170% of GDP. Given the large gap between gross and net debt in Japan, this implies net debt of 72% of GDP, the OECD average in 2015. The simulation assumes consolidation at the  $\frac{3}{4}$  per cent of GDP annual pace for various levels of the interest rate minus nominal growth ( $r-g$ ).

- ( $r-g$ ) at its long-term average of around 1% (for gross debt): this could result from an interest rate of 3% while nominal growth remains at the 2% rate of 2012-16. In this case, the primary surplus would peak at 10% in 2037 to reduce gross debt to 170% of GDP by 2048.
- ( $r-g$ ) at -0.5%: this could be achieved by effective use of the third arrow to boost nominal growth above the interest rate. In this case, the primary surplus would peak at around 5% in 2031, stabilising gross debt at 170% in 2042.

Table 11. **Implementation of OECD recommendations to achieve fiscal sustainability**

Earlier OECD recommendations	Action taken or planned
Set out a detailed and credible plan to constrain government spending and raise revenues so as to achieve the target of a primary surplus by FY 2020.	The Economic and Fiscal Revitalization Action Program, announced in December 2015 and revised in 2016, contains 80 specific measures to reform major spending programmes.
Ensure the sustainability and inter-generational equity of the public pension scheme by increasing the pension eligibility age above 65 and fully applying macroeconomic indexation.	A carryover system for the macroeconomic indexation of pension benefits will be launched in FY 2018. Revisions that are cancelled in years of low inflation will be added later.
Reform social security to limit spending increases, particularly in health and long-term care, by increasing efficiency and raising co-payments, while taking account of equity implications.	In 2016, the government introduced the Health Technology Assessment for adjusting the price at which pharmaceuticals and medical devices are reimbursed by insurance. The number of hospitals adopting the Diagnosis Procedure Combination system increased from 1 505 in 2012 to 1 667 in 2016.

**Table 12. Fiscal assumptions to calculate the required amount of consolidation**  
Improvement in the general government primary balance to stabilise the debt ratio (as a percentage of GDP)

Years	Average (r-g) <sup>1</sup>	Gross government debt ratio <sup>2</sup>	Primary balance target <sup>3</sup>	2017 primary deficit	Total required consolidation <sup>4</sup>
<b>1980-2015</b>	<b>1.2</b>		<b>2.5</b>		<b>7.5</b>
1992-2015	1.7	<b>215.8</b>	3.8	<b>-5.0</b>	8.8
1992-2002	2.8		6.1		11.1
2003-2015	0.8		1.7		6.7

Years	Average (r-g) <sup>5</sup>	Net government debt ratio <sup>2</sup>	Primary balance target <sup>3</sup>	2017 primary deficit	Total required consolidation <sup>4</sup>
<b>1980-2015</b>	<b>2.1</b>		<b>2.5</b>		<b>7.5</b>
1992-2015	2.0	<b>118.4</b>	2.4	<b>-5.0</b>	7.4
1992-2002	4.1		4.9		9.9
2003-2015	0.2		0.2		5.2

1. The average interest rate paid on gross government debt minus the nominal growth rate.

2. In 2015, the last year for which data are available.

3. The average (r-g) times the government debt ratio.

4. The primary balance target minus the 2017 primary deficit.

5. The average interest rate paid on net government debt minus the nominal growth rate.

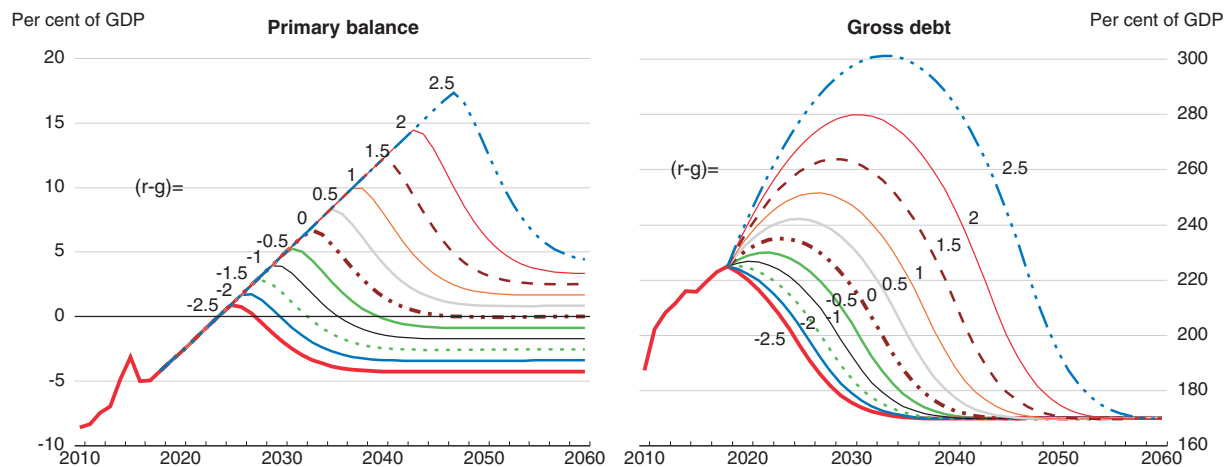
Source: Calculations based on OECD (2017c), *OECD Economic Outlook: Statistics and Projections* (database).

- An (r-g) of 2%: this could result from a rise in the risk premium, leading to an interest rate of 4%, while nominal growth remains at 2%. In this case, the primary surplus would peak at 14.5% of GDP in 2043, stabilising debt in 2054.

While these simulations are for illustrative purposes, the message is clear: stabilising net government debt at a level close to the current OECD average requires at least a decade of consolidation to achieve a large primary surplus. Faster output growth would reduce the size of the required fiscal consolidation effort, while higher interest rates would increase it. A slower pace of consolidation at ½ per cent per year would require a longer period of consolidation and take longer to stabilise the debt ratio.

**Figure 33. Sustained fiscal consolidation is needed to reduce and stabilise the government debt ratio**

The consolidation path is shown for different values of (r - g)<sup>1</sup>



1. A fiscal multiplier of -0.5 is associated with fiscal consolidation. This is consistent with Hamada et al. (2015), who estimate a multiplier for hikes in the consumption tax and the personal income tax of around -0.3 to -0.5.

Source: OECD calculations.

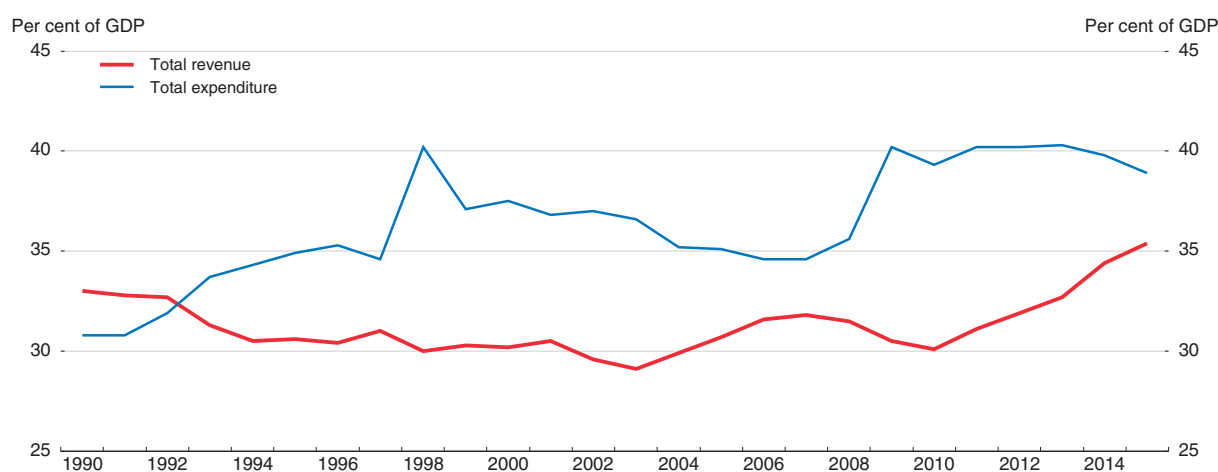
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Achieving steady fiscal consolidation for a decade or longer requires political will and commitment, backed by public support. The sustainability of debt depends in part on whether the market believes that it is sustainable. To maintain confidence in Japan's public finances, the implementation of a more detailed and credible consolidation path that contains specific spending cuts and tax increases is essential. Such a commitment would be strengthened by improving the fiscal policy framework through a stronger legal basis for fiscal targets and expenditures (IMF, 2009). Many OECD countries have an independent fiscal council to improve policymaking, make clear the fiscal problems and help build public consensus for consolidation (OECD, 2012). Such an approach may benefit Japan as well, alongside a strengthening of the Council on Economic and Fiscal Policy.

### **Controlling the growth of spending while fostering inclusive growth**

The origin of Japan's fiscal problem is the rise in spending from 31% of GDP in 1991 to as high as 40% (Figure 34). Since 1991, social spending increased rapidly from 11% of GDP to 23%, slightly above the OECD average. Around 80% of social spending is for pensions, health and long-term care – the second highest share in the OECD. Population ageing is projected to raise elderly-related social spending by another 7% of GDP over 2020-60 (Figure 35). A number of reforms are needed to slow the rise in spending.

Figure 34. **Government revenue has not kept up with rising expenditures**

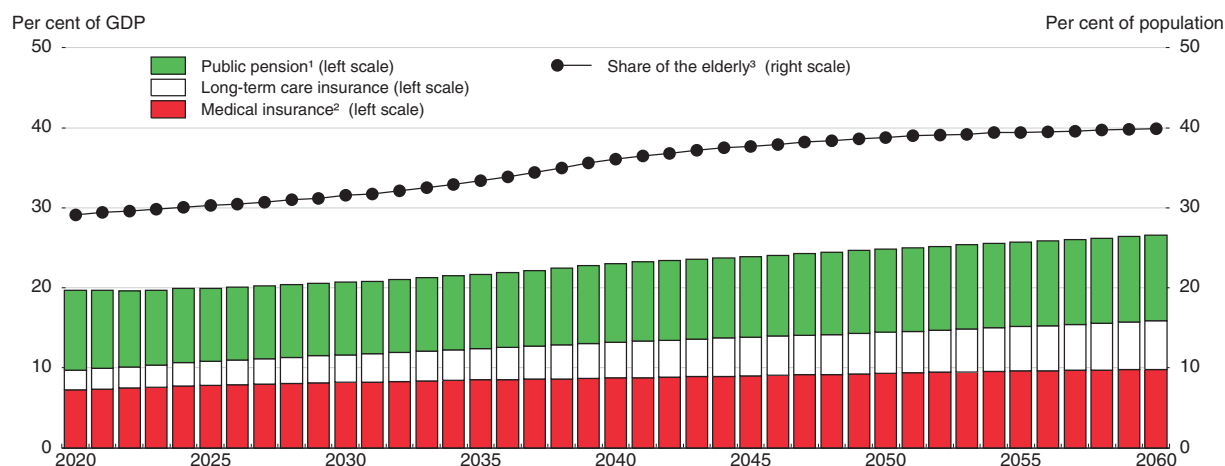


Source: OECD (2017c), OECD Economic Outlook: Statistics and Projections (database).

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### **Policies to contain spending in the face of rapid population ageing**

Transfers from the working-age population to the elderly are substantial: net average transfers to households with a person aged 60 and over were 1.9 million yen (USD 16 700) in 2009 (Figure 36), amounting to more than 40% of their disposable income. For households headed by a person under age 60, net transfers were negative, amounting to 1.1 million yen, 18% of their disposable income, with the heaviest burden on young adults. Over 1994-2009, the tax and social security burden as a share of disposable income rose, particularly among the working-age population (Panel B, left-hand side). Meanwhile, social security benefits increased significantly for the population aged 65 and over (Panel B, right-hand side). The transfers result in a high level of inter-generational inequality: a person born in 1940 receives 16.4% of lifetime earnings in net transfers, while one born in 2010 pays 12% (Panel C).

Figure 35. **Elderly-related social spending is projected to rise further**

Note: Fiscal System Council estimates based on the current framework, following the method of the European Commission (2012). Ageing-related spending is defined as programmes where per capita expenditure differs by age, such as pensions.

1. Public pension spending is based on the actuarial valuation by the Ministry of Health, Labor and Welfare (2014), Case C.

2. Medical assistance in the Basic Livelihood Protection Program is included in "medical insurance".

3. The population over age 65 as a share of the total population.

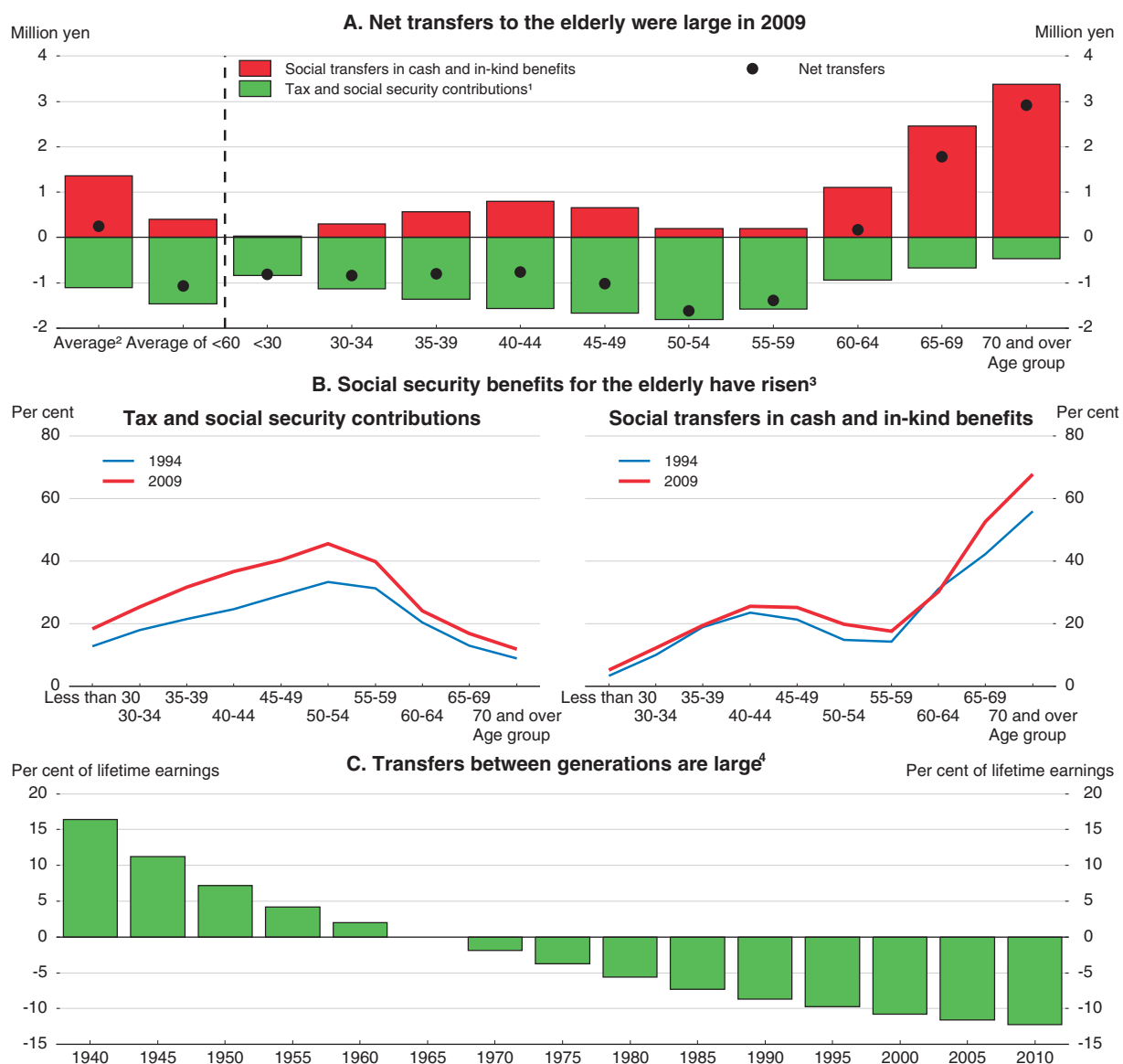
Source: Fiscal System Council (2015).

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The large transfers significantly boost the income of older persons. For a household headed by someone aged 60 or over, disposable income was 95% of that for the under 60 age group (after adjusting for household size) in 2009 (Figure 37). In addition, older persons have relatively large assets: in households with a person age 60+, assets are nearly ten times the average household disposable income for the entire population, compared to only 4.3 times for households headed by a person under age 60 (Panel B). Social transfers and accumulated assets boost private consumption by the elderly above the working-age population (Panel A). Including in-kind benefits provided by the government, such as health and long-term care, "actual final consumption" of a household headed by someone over age 60 is one-third higher than for households headed by someone below age 60.

Keeping Japan's promises to provide pensions and health and long-term care to its current and future elderly citizens requires achieving fiscal sustainability. At the same time, it is crucial to protect the large number of elderly living alone and in relative poverty. Achieving social inclusion also depends on the well-being of the working-age population. The significant fall in the number of Japanese youth contributing to the basic pension and national health insurance, even though both are legally mandatory, suggests both increasing financial hardship and pessimism about the future. In a 2016 survey, only 21% of Japanese voiced optimism about the future of their country, with the major reason for pessimism being a perceived lack of measures to cope with the rapidly ageing and shrinking population (Geji, 2016). The following sections set out policy directions to achieve social inclusion and fiscal sustainability.

**Health and long-term care.** Healthcare spending (public and private), including long-term care, rose from 5.7% of GDP in 1990 to 10.8% in 2013, above the 9.0% OECD average, driven in almost equal measure by population ageing and rising costs per person. Over 2020-60, healthcare spending in Japan is projected to rise more than in major European countries that also face rapid population ageing. Japan's outlays in each category of

Figure 36. **The tax and transfer system redistributes income from the working-age to the elderly**

1. Includes the consumption tax.
  2. For the total population.
  3. As a percentage of average household disposable income.
  4. For men covered by employee pension and health insurance and with a non-working wife. Employees' Pension Insurance premiums are assumed to rise steadily from 18.3% in FY 2017 to 23.8% in FY 2032, and to stabilise at that level. Other assumptions include: i) an investment yield of 2.5%; ii) 2% wage growth; iii) 1% inflation; and iv) lifetime wages of workers equal to 300 million yen.
- Source: Hamada (2003 and 2012); Maeda and Umeda (2013), Suzuki (2014).

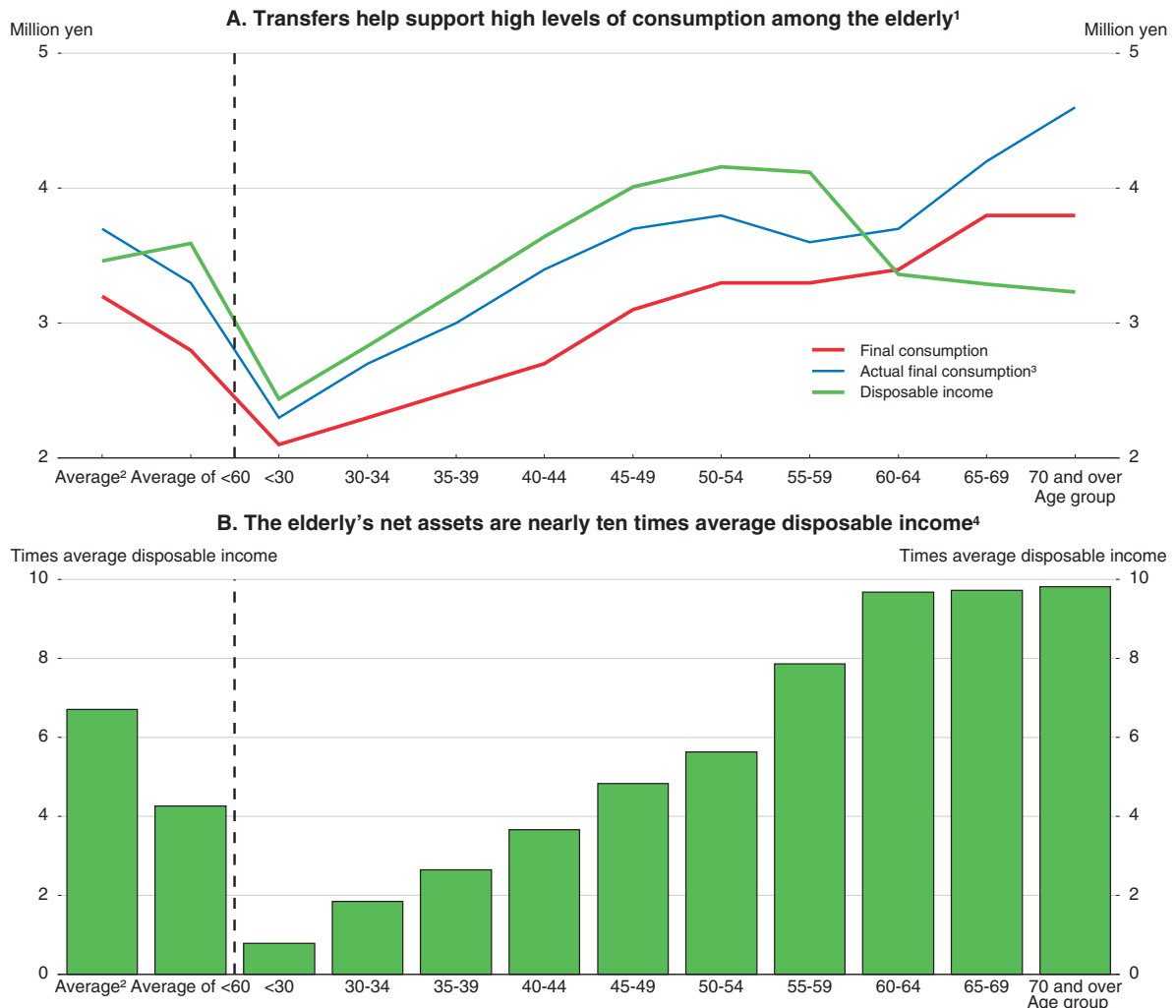
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healthcare – medical goods, outpatient and inpatient care and long-term care – is already higher as a share of GDP than the OECD average, suggesting scope for savings.


Japan's per capita expenditure on pharmaceuticals is 47% above the OECD average. To reduce it, the use of generics should be expanded. Generics accounted for 34% of the pharmaceutical market in 2015 in volume terms in Japan, below the OECD average of 50%. Sales of generics should be increased by making them the standard for reimbursement by health insurance.



Figure 37. **Transfers and asset holdings support high levels of consumption among the elderly**  
In 2009



1. Data are from SNA distribution statistics. Disposable income includes depreciation of fixed capital. Consumption (both final and actual final) includes imputed rent. Each series is on an equivalised basis (the square root of household size).
  2. Average of total population.
  3. Includes in-kind benefits provided by the government, such as health and long-term care and education.
  4. As a ratio to average household disposable income.
- Source: Hamada (2012).

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Japan stands out for its exceptionally frequent medical consultations, averaging 12.8 times per year per capita, almost double the OECD average (Table 13). Containing outpatient spending requires shifting from a fee-for-service to a pay-for-performance approach. In addition, out-of-pocket payments are low: private expenditures cover only 17% of the cost of consultations compared to the OECD average of 33%. Co-payments should be increased for both inpatient and outpatient care, especially for people aged 70 or more (as most pay only 10% versus 30% for the working-age population), while taking account of their income level.

The average hospital stay for acute care in 2014 was 16.9 days, the highest in the OECD (Table 13). The number of hospital beds in a prefecture is strongly correlated with the

Table 13. **International comparison of healthcare shows room for cost savings in Japan**  
In 2014 or latest year available

	Number of doctor consultations per capita per year	Share of private expenditure on outpatient care (%)	Average total hospital stay <sup>1</sup>	Average hospital stay for acute care <sup>1</sup>	Total number of hospital beds <sup>2</sup>	Number of acute-care beds <sup>2,3</sup>	Number of long-term care beds <sup>2,3</sup>	Number of beds in long-term care facilities <sup>2</sup>
<b>Japan</b>	<b>12.8</b>	<b>17.1</b>	<b>29.9</b>	<b>16.9</b>	<b>13.2</b>	<b>7.9</b>	<b>2.7</b>	<b>6.2</b>
OECD average	6.8	33.3	8.3	6.4	4.7	3.6	0.6	7.3
Highest country	14.9	54.9	29.9	16.9	13.2	7.9	4.2	12.8
Lowest country	2.6	13.3	4.0	3.5	1.6	1.6	0.0	0.5

1. In days.

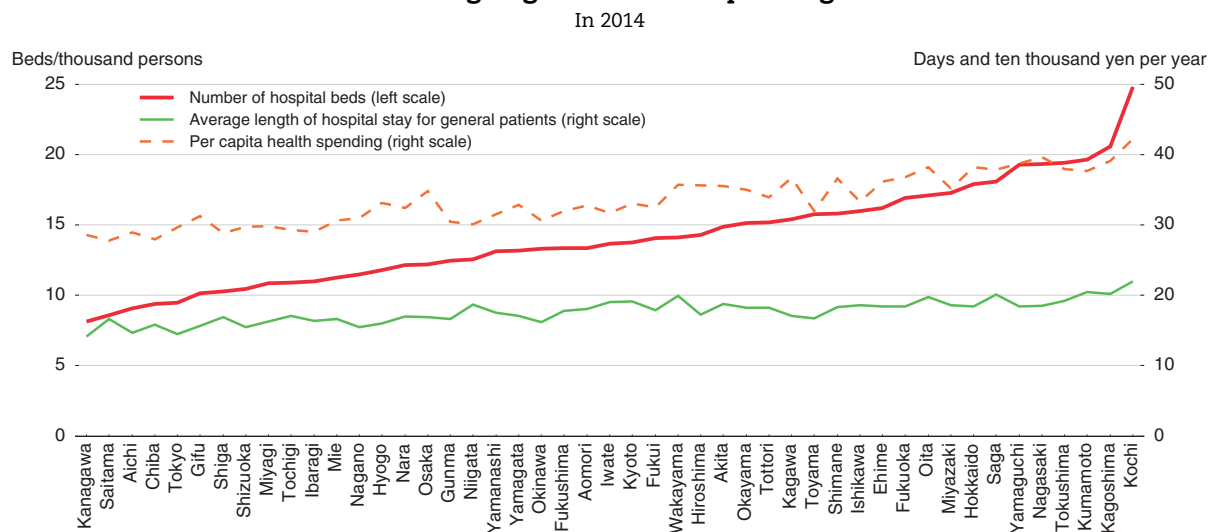
2. Per 1 000 population.

3. In hospitals.

Source: OECD (2017f), OECD Health Statistics (database).

hospitalisation rate, the average length of hospital stay and per capita healthcare spending (Figure 38). Reducing the number of hospital beds is thus a priority. Hospital costs could also be lowered by improving Japan's Diagnosis Procedure Combination (DPC), which sets standard treatment and fees for specific medical procedures. Its coverage of hospitals and medical procedures should be raised and fees based on the most efficient hospitals.

Figure 38. **The higher the number of beds, the longer are hospital stays, leading to greater health spending**



Source: Cabinet Office, Visualization Database.

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A top priority is to take long-term care out of hospitals, which boosts the average hospital stay to 29.9 days, almost four times the OECD average (Table 13). In addition, only about half of hospital patients in acute-care beds receive healthcare, with the remainder just getting help with daily living (Tsutsui et al., 2015). Providing long-term care in hospitals is inefficient given its much higher cost. Long-term care insurance was introduced in 2000. Spending for long-term care was 2.0% of GDP in 2013 and it is projected to rise to 6.1% of GDP in 2060. About 18% of the elderly population is receiving care financed by the insurance, compared to the OECD average of 12%. Private expenditures covered 8.6%

of long-term care in 2013, about half of the 15.7% for healthcare spending in Japan. The coverage of long-term care insurance for the elderly with less severe needs should be reduced and responsibility for the system should be shifted from municipalities to prefectures. In addition, co-payment rates should be increased.

**Public pension reform.** Pension spending is projected to increase less than health and long-term care (Figure 35), owing to the 2004 reform that introduced “macroeconomic indexation”, which adjusts pension benefits based on changes in the number of contributors and life expectancy. However, indexation has been applied only once. Macroeconomic and price indexation should be allowed to operate fully. The share of the population contributing to the mandatory basic pension has been low, at around 68% since 2002. The share of the population contributing is lower among youth and non-regular workers (Oshio, 2013). In addition, around a third of business entities legally required to participate in the Employees’ Pension Insurance do not do so.

The Employees’ Pension Insurance eligibility age will be raised to 65 by 2025 for men and 2030 for women, but will remain low compared to Japan’s life expectancy of 83.7 years. Accelerating the increase in the eligibility age to 65 and raising it further would raise replacement rates (Table 14), improve intergenerational equality and boost output growth by increasing employment rates.

Table 14. **Raising the pensionable age leads to a large increase in the replacement rate**

Per cent

Cases <sup>1</sup>	Real GDP growth rate		Replacement rate <sup>2</sup> (%) in 2050 for pension eligibility age of:		
	FY 2014-23	FY 2024 onward	65 years	68 years	70 years
Case C	1.1	0.9	51.0	63.9	72.5
Case E	1.1	0.4	50.5	63.3	71.8
Case G <sup>3</sup>	0.2	-0.2	42.0	52.8	60.0
Case H <sup>4</sup>	0.2	-0.4	41.9	52.7	59.8

1. The table shows four of the eight simulations done by the Ministry of Health, Labor and Welfare (2014). Total pension benefit payments are fixed, resulting in variations in the replacement rate.
2. Pension benefit, including the impact of macroeconomic indexation, as a percentage of final earnings. The replacement rate was 62.7% in FY 2014.
3. For the retirement age of 65, the replacement rate is for 2058.
4. For the retirement age of 65, the replacement rate is for 2054.

Source: Adapted from the Ministry of Health, Labor and Welfare (2014).

**Minimum income benefit reform.** Japan’s tax and benefit system has a limited effect on income inequality and relative poverty among the working-age population (2015 OECD *Economic Survey of Japan*). The key welfare programme, the Basic Livelihood Protection Program (BLPP), covers 1.6% of the population, only a small fraction of the population in relative poverty, although social insurance programmes also provide assistance. Limited coverage reflects strict eligibility criteria, which takes into account assets and the ability of family members to provide help. BLPP benefits are set on the basis of the consumption levels of the lowest-income families (the “minimum living standard”). Benefits are among the highest in the OECD, suggesting scope for broadening coverage and lowering benefits. Moreover, the high effective tax rate on persons leaving the BLPP to accept employment weakens work incentives. As argued in earlier OECD *Economic Surveys of Japan*, the top priority to reduce poverty and promote employment is an earned income tax credit (EITC), which

would reduce the number of working poor. Japan's share of households in relative poverty despite having two or more workers is the second highest in the OECD.

### **Controlling spending by local governments**

Local governments are now required to pursue fiscal consolidation in tandem with the central government. Local spending has remained broadly unchanged in nominal terms during the past 20 years, as a decline in public investment was offset by social spending. Per capita expenditures in the highest-spending prefecture was 2.4 times greater than in the lowest-spending prefecture in 2014 (Figure 39), suggesting scope for savings. Differences in population density and the share of elderly explain some of the spending gap (Panel B). These factors will put further upward pressure on spending as accelerating population decline reduces density and the share of elderly continues to rise.

Local government tax revenue finances around a third of their spending, with other local revenue, such as user fees covering another third. Prefectures with high per capita spending have lower tax receipts. Central government transfers – notably the local allocation tax (LAT) – cover another third of local spending (Figure 39, Panel A). The LAT is higher in prefectures with higher per capita spending. The accumulated central government debt resulting from LAT was around 80 trillion yen (15% of 2016 GDP) since 1990 (MoF, 2015). The LAT is projected to rise by 1.5 times by 2030 (Cabinet Office, 2016c).

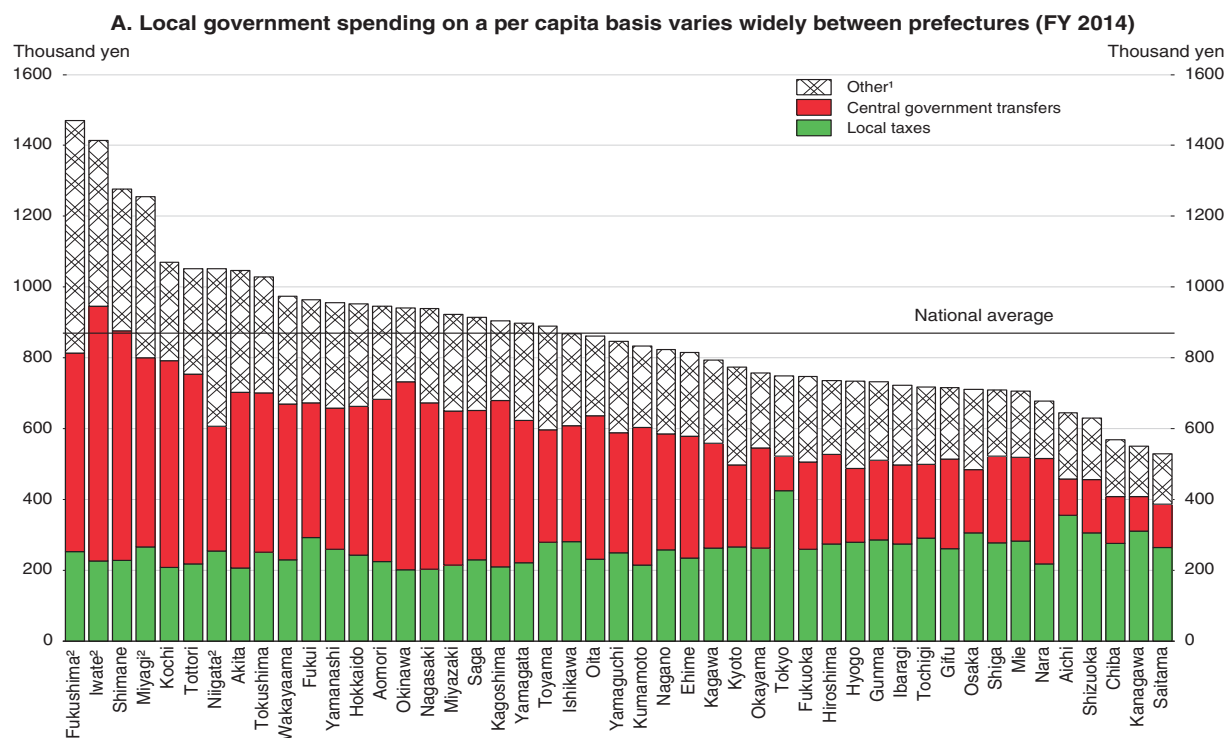
Achieving greater fiscal consolidation at the local government level requires greater fiscal discipline by strengthening fiscal rules, including spending limits, while reducing support to local jurisdictions facing financial troubles, so as to limit moral hazard. Financial markets should be allowed to play a more prominent role in disciplining local government behaviour through credit ratings in bond markets. This would require that the central government state clearly that it will not intervene as a lender of last resort to local governments and ensure that adequate information on local governments' outstanding debt and implicit liabilities is readily available. An effective solvency regime is also necessary.

One of the areas where local governments have scope for reducing spending is education, given the on-going fall in the number of school-age children. The decline in the number of children has outstripped that of teachers, reducing the ratio of students per teacher in primary and middle school close to the OECD average. The decline was intended in part to improve the quality of education, but also reflects disincentives for school consolidation in the LAT. Indeed, the cost savings of consolidation go primarily to national and prefectural governments, rather than to municipalities (Honda, 2012). By 2030, the school-age population (5-14) will shrink by another quarter, with the largest declines in prefectures with low class sizes, creating scope for school consolidation. A government study shows positive consequences of maintaining adequate class size on learning (MEXT, 2015).

Japan is an outlier in terms of its stock of public capital, which reached 107% of GDP in 2013, compared to between 34% and 65% of GDP in other OECD countries (Figure 40). The marginal return on additional public investment in Japan is estimated to be negative (Fournier, 2016). With public investment falling, the rising age of public infrastructure (Table 15) puts financial pressure on local governments (Panel B). Local authorities need to carefully select which infrastructure to keep open to limit maintenance costs in the context of a falling population.

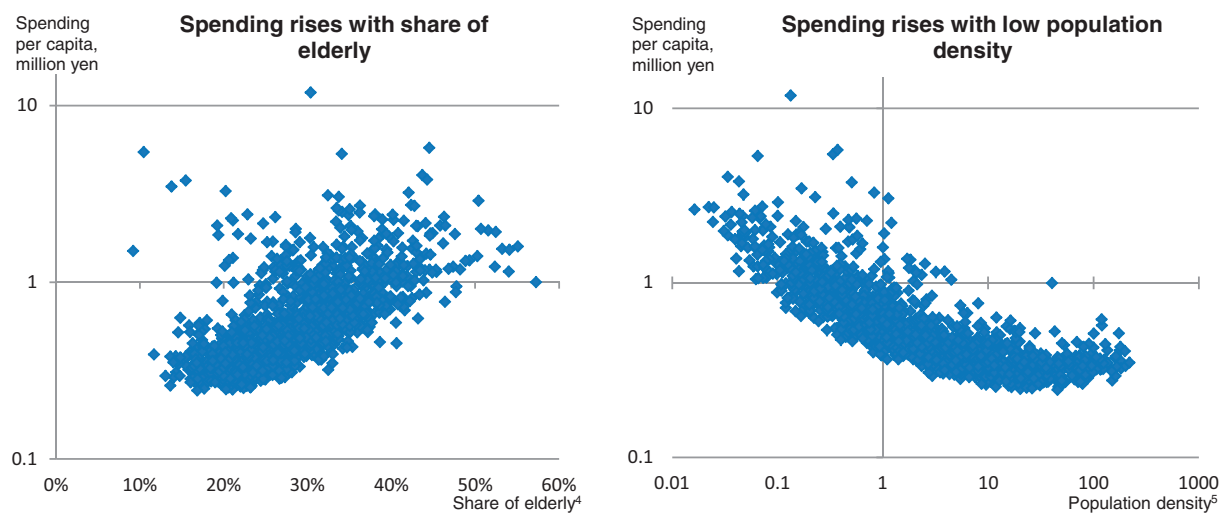
Infrastructure maintenance costs should be reduced by promoting compact cities. Japan's National Spatial Strategy aims to develop compact cities through more effective

Figure 39. **Local government spending varies widely, influenced by ageing and population density**



**B. Municipal government spending is driven up by ageing and shrinking populations**

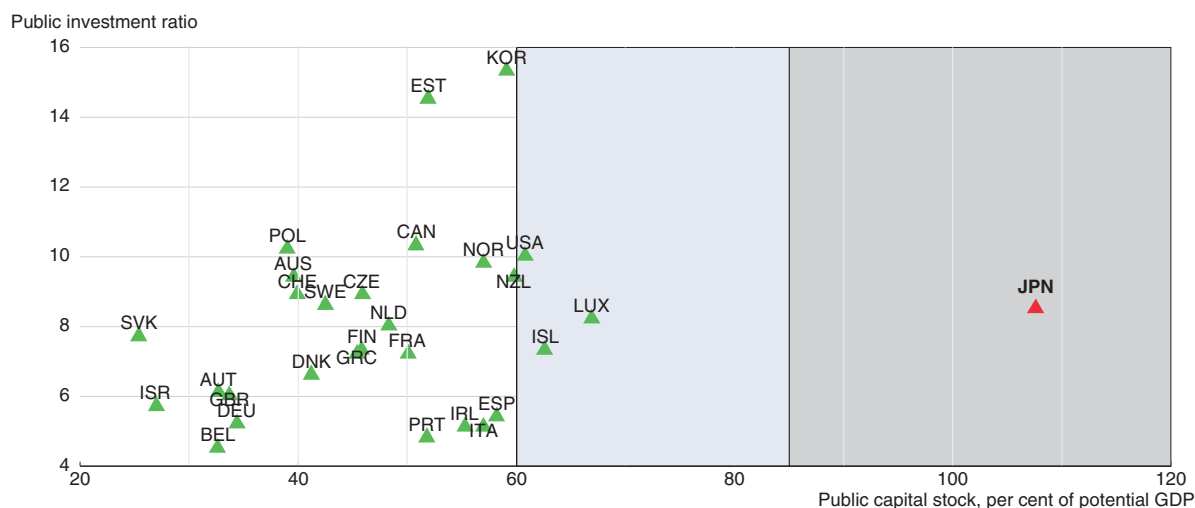
In 2010 for 1 741 municipalities<sup>3</sup>



1. Other includes local bonds, loan redemption income, transferred money, balances brought forward, user fees, commissions, etc.
2. Prefectures affected by the Great East Japan Earthquake (Fukushima, Iwate and Miyagi) received money from a fund financed by national treasury disbursements. The “other” category of Niigata prefecture is high because of the loan principal and interest income from the Niigata Prefecture Chuetsu Earthquake Reconstruction Fund.
3. Logarithmic scales, except for the horizontal axis in the left-hand panel.
4. Share of population aged over 65 in the total population.
5. In persons per square hectare.

Source: Cabinet Office (2016a); Cabinet Office, Visualization Database.

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Figure 40. **Japan's stock of public capital is exceptionally large**

Note: Public investment is shown as a percentage of underlying primary public spending. The data on the capital stock, which are from the IMF Investment and Capital Stock Dataset, depend on the rate of capital depreciation. The IMF data can thus differ from national sources.  
Source: Fournier (2016).

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application of land-use regulations (OECD, 2016i). Japan has launched Location Optimization Plans to encourage concentration of community amenities and housing, thereby limiting infrastructure spending (MLIT, 2016). The wide regional variation in the marginal productivity of public capital suggests that public investment should be more focused on projects with the highest returns (Cabinet Office, 2014).

Table 15. **The ageing of public infrastructure poses challenges for local governments**

## A. Indicators of infrastructure ageing

Type of infrastructure	Local government share (%)	Share of assets over 50 years old (%)		
		2013	2023	2033
Roads and bridges (length>2 metres)	90.0	18	43	67
Tunnels	72.0	20	34	50
River management facilities	92.6	25	43	64
Sewerages	100.0	2	9	24
Port quays (water depth >4.5 metres)	100.0	8	32	58

B. Burden of roads, public buildings and sewage facilities by the size of municipality<sup>1</sup>

Size of municipality	Roadway per capita (m <sup>2</sup> )	Future replacement cost <sup>2</sup>	Public building space per capita (m <sup>2</sup> )	Future replacement cost <sup>2</sup>	Sewage capacity per capita (metres)	Future replacement cost <sup>2</sup>
National average	32.0	194.5	3.2	243.6	3.6	283.1
Major cities	21.6	73.8	3.4	201.1	2.7	215.1
Cities <sup>3</sup>	62.4	417.2	3.6	222.3	4.1	452.8
Towns <sup>4</sup>	242.1	860.0	10.6	295.6	6.3	986.0

1. Estimates are based on a Ministry of Internal Affairs and Communications survey of 111 local governments.

2. As a percentage of current expenditure.

3. Population of 50 000 to 100 000.

4. Population of less than 10 000.

Source: OECD (2016).

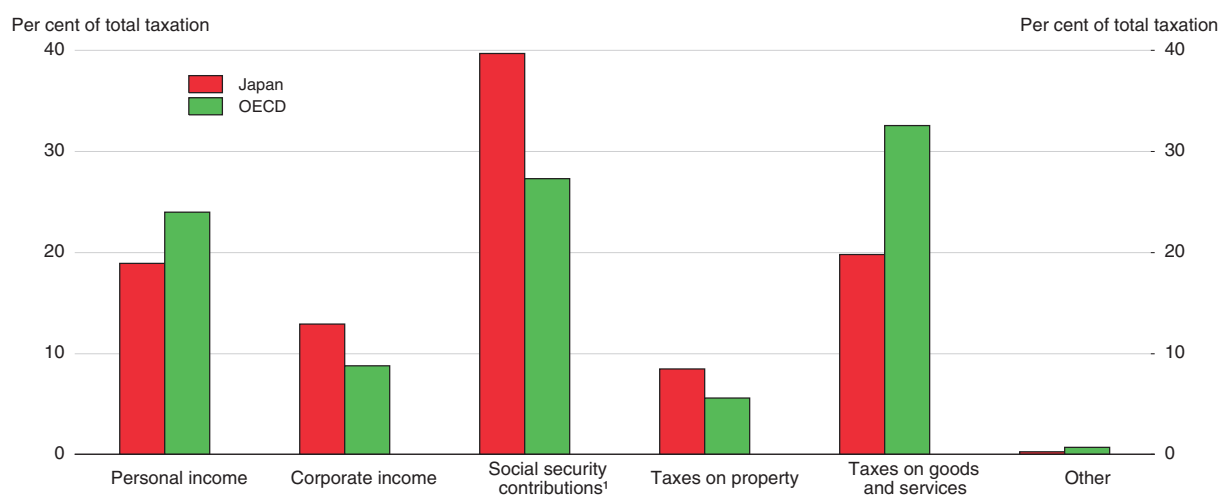
It is also important to increase the efficiency of local public corporations (LPCs), which provide services such as water and public transport. LPC spending equals about one-fifth of local government spending (OECD, 2016i) and it is largely financed by service fees and transfers from local governments. As the population falls, LPC fee income will decline, while the ageing infrastructure that they manage will require greater maintenance, further undermining their finances (MIAC, 2016). To achieve scale economies and profitability in LPCs, it is necessary to scale down by closing some of the existing facilities and merging LPCs across municipal lines.

### **Increasing revenue while fostering inclusive and sustainable growth**

Ensuring fiscal sustainability also requires boosting revenue. Taxes and social insurance contributions in Japan amounted to 32% of GDP in 2014, below the 34% OECD average. Social security contributions and corporate income and property tax revenue are above the OECD average (as a share of total government revenue), while Japan stands out with low shares for taxes on consumption and personal income (Figure 41).


Figure 41. **Japan's taxes on goods and services, and personal income are relatively low**

In 2014 or latest year available in per cent of total taxation



1. Contributions include other payroll taxes.

Source: OECD (2017), OECD Tax Statistics (database).

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### **Raising the consumption tax**

The consumption tax is a relatively stable revenue source and is less harmful for economic growth (Arnold et al., 2011). Moreover, greater reliance on the consumption tax (a value-added tax) would improve intergenerational equity, as the elderly would bear a larger share of the burden. In short, a VAT is the most appropriate tax for raising additional revenue. Japan's VAT rate is the second lowest in the OECD at 8% and the planned hike to 10% has been delayed twice. If the 7½ per cent of GDP improvement in the primary balance were to be achieved solely through the consumption tax, it would have to rise to the European average of around 22%.

With the planned consumption tax hike to 10% in 2019, the government will introduce multiple rates in order to soften the regressive impact. However, multiple tax rates are not

effective, as the benefits are larger for high-income households (OECD, 2014). If the revenue foregone by introducing a lower rate were used instead to finance an earned income tax credit (EITC), the gains would be better targeted on low-income earners. Effective implementation of the identification numbers introduced in 2016 for taxpayers and those contributing to social security would enhance transparency about income, thus facilitating the introduction of an EITC.

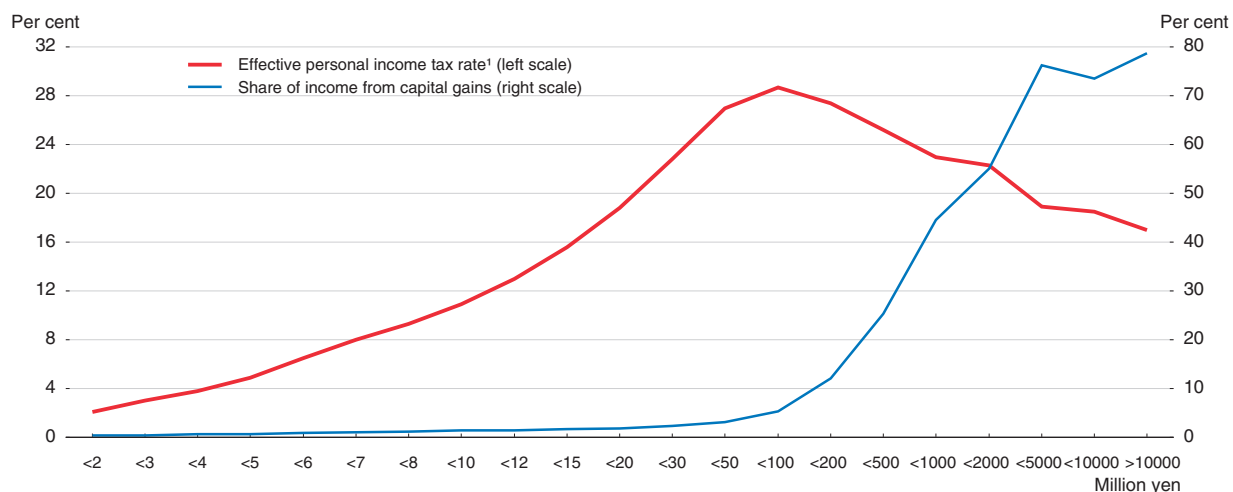
### Reforming the personal income tax

Personal income tax revenue is low – at 19% of tax revenue compared to an OECD average of 24% (Figure 41) – because a large share of personal income is exempted. Indeed, less than half of the 260 trillion yen in personal income in FY 2014 was taxable due to deductions, notably for wages and public pension benefits. Many of the deductions favour high-income households. Increasing the share of personal income that is taxed, while taking account of fairness between employees and the self-employed, would make Japan's progressive tax rates more effective in reducing inequality.

In addition, raising taxes on capital gains and dividends would enhance the progressivity of the tax system. Indeed, the effective tax rate on personal income peaks at 28.7% for those with an income between 50 million and 100 million yen per year (USD 440 000 to USD 880 000) and then falls to 17.0% (Figure 42). The decline reflects the lower tax rate on capital gains, which are concentrated among high-income earners. Capital gains account for 78.7% of income for those with total income above 10 billion yen. Raising the tax rate to 25% for capital gains and dividends, as well as interest payments, would increase tax revenue (Morinobu, 2016) and offset the fall in the corporate tax rate. Strengthening inheritance taxes would also raise revenue and social cohesion. Even after the expansion of the inheritance tax base in 2015, only 8% of the deceased are taxed.

Figure 42. **The effective personal income tax rate on high earners is reduced by low rates on capital gains**

As a percentage of total income in 2014



1. Calculated by dividing personal income tax payments by total personal income, including earned income and capital gains. The data cover persons making personal income tax declarations (income taxed at source is not included).

Source: National Tax Agency.

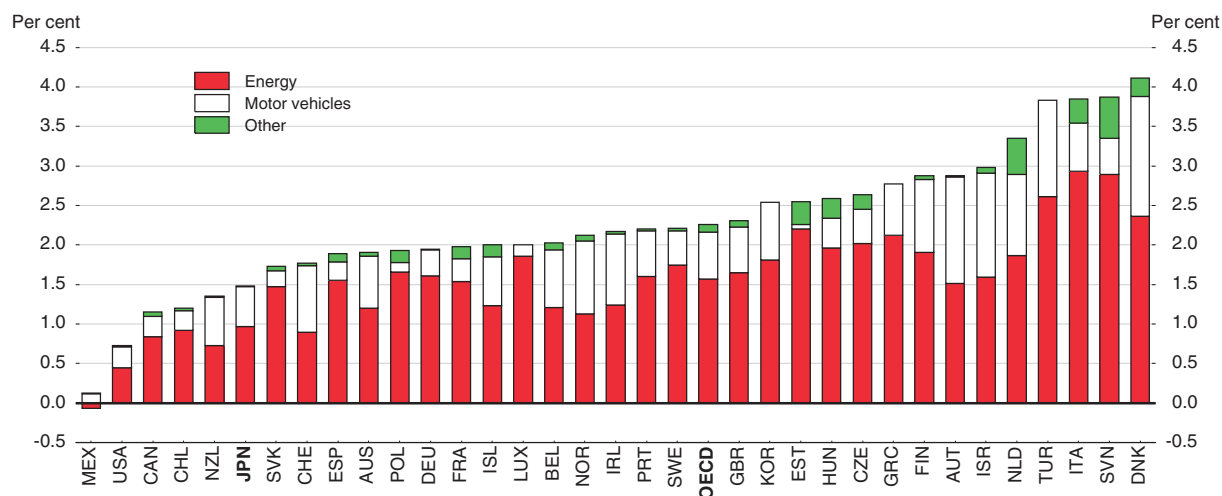
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### Raising environmentally-related taxes

Japan's economy has long been characterised by relatively high energy efficiency and low greenhouse gas (GHG) emissions (Box 3). However, the closure of the nuclear power plants resulted in a rise in the carbon intensity of Japan's energy mix since 2011. Japan's Intended Nationally Determined Contribution aims to cut the country's emissions by 26% from 2013 levels by 2030 by a comprehensive approach that promotes energy efficiency and the use of low-carbon energy sources, such as nuclear and renewable energy. Raising environmentally-related taxes would also boost revenue while helping to reduce GHG emissions and achieve other environmental objectives, such as improving air quality (2013 *OECD Economic Survey of Japan*). Japan has taken steps in this regard, notably by introducing the Tax for Climate Change Mitigation, which increased an existing tax on petroleum and coal in three steps in 2012, 2014 and 2016, with the revenues earmarked for renewable energy and energy conservation. However, in 2014, environmentally-related taxes were only 1.5% of GDP, the sixth lowest in the OECD and well below the mean (Figure 43), suggesting scope for raising revenue.

Figure 43. **Environmentally-related taxes in Japan are well below the OECD mean**  
Per cent of GDP in 2014



Source: OECD (2016j).

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**From:**  
**OECD Economic Surveys: Japan 2017**

**Access the complete publication at:**  
[https://doi.org/10.1787/eco\\_surveys-jpn-2017-en](https://doi.org/10.1787/eco_surveys-jpn-2017-en)

**Please cite this chapter as:**

OECD (2017), "Assessment and recommendations", in *OECD Economic Surveys: Japan 2017*, OECD Publishing, Paris.

DOI: [https://doi.org/10.1787/eco\\_surveys-jpn-2017-3-en](https://doi.org/10.1787/eco_surveys-jpn-2017-3-en)

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