OECD Economic Outlook, Volume 2017 Issue 1

Chapter 1

GENERAL ASSESSMENT OF THE MACROECONOMIC SITUATION

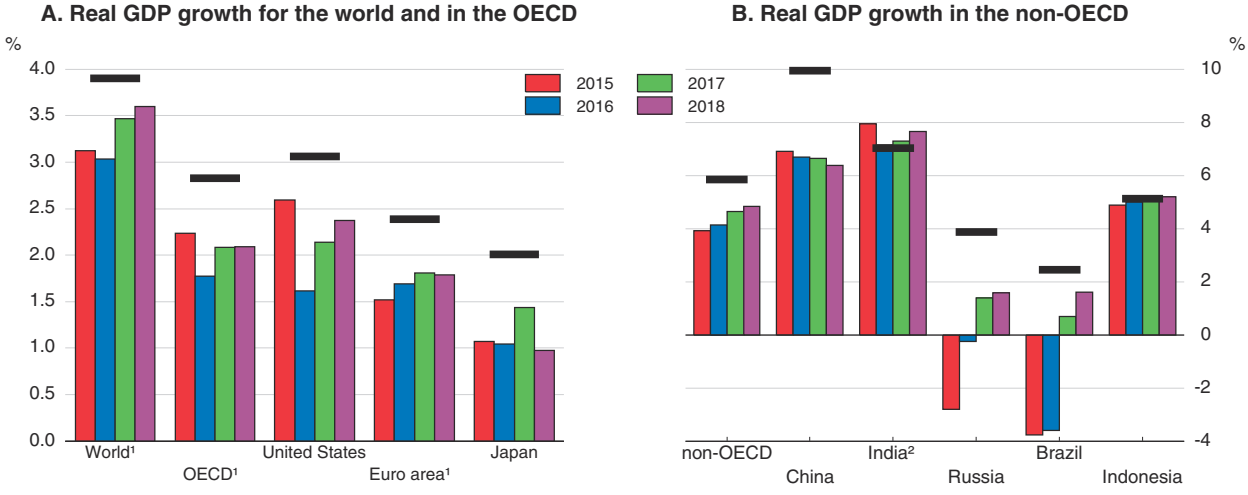
Introduction

After many years of weak recovery, with global growth in 2016 at the lowest rate since 2009, some signs of improvement have begun to appear. Trade and manufacturing output growth have picked up from a very low level, helped by firmer domestic demand growth in Asia and Europe, and private sector confidence has strengthened. But policy uncertainty remains high, trust in government has diminished, wage growth is still weak, inequality persists, and imbalances and vulnerabilities remain in financial markets. Against this background, a modest pick-up in global GDP growth is projected this year to 3½ per cent, with an upturn in trade and investment intensity and improving outcomes in several major commodity producers. Only a small improvement is in prospect for 2018, taking global GDP growth to 3.6%. With modest additional pressures in labour and product markets, inflation is likely to remain subdued in the major economies, provided commodity prices do not strengthen further.

While the pick-up is welcome, it would still leave global growth below past norms and below the pace needed to escape fully from the low-growth trap (Figure 1.1). Additional efforts to enhance policy support remain necessary for the recovery to gain further momentum. The stronger policy-driven demand growth in China and many other Asian economies that is helping to underpin the modest global upturn projected in 2017-18

Figure 1.1. **GDP growth projections for the major economies**

Year-on-year percentage changes



Note: Horizontal lines show the average annual growth rate of GDP in the period 1987-2007. Data for Russia are for the average annual growth rate in the period 1994-2007.

1. With growth in Ireland in 2015 computed using gross value added at constant prices excluding foreign-owned multinational enterprise dominated sectors.
2. Fiscal years.

Source: OECD Economic Outlook 101 database; IMF World Economic Outlook database; and OECD calculations.

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cannot be sustained indefinitely. This reflects already high debt levels in some countries and the need, especially in China, for rebalancing the economy away from stimulus-driven investment growth towards consumption. The extent of US fiscal support in 2018 also remains very uncertain, given the challenges being experienced in reaching political agreement about policy choices. Growth in the euro area is on the upswing, but remains below longer-term averages. On the upside, near-term global cyclical momentum could be even stronger than projected, especially if the optimism in sentiment surveys and financial markets were to be reflected more clearly in private sector spending. The planned upgrading of the capital stock in many countries could also improve capital quality and productivity.

A comprehensive and collective policy response is needed to make growth stronger and more inclusive and to manage risks. Effective fiscal initiatives and implementation of structural reform packages that catalyse private demand and tackle obstacles to long-term inclusive growth remain essential, with each country and region facing particular challenges. In the absence of such support, private investment is unlikely to strengthen sufficiently to ensure the durable boost to productivity and real wages that is ultimately required to sustain higher consumption and output growth and reduce inequalities. Better-integrated policy packages would also help to ensure that the benefits of trade and open markets are more widely and equally distributed across workers, households and regions (Chapter 2). Steps to rebalance the policy mix in many advanced countries would reduce the burden still placed on monetary policy and help to lower risks, particularly in financial markets. Reform efforts should also be enhanced in emerging market economies (EMEs), where policy heterogeneity is greater. The need to adjust to changes in the terms-of-trade as a result of sizeable recent currency and commodity price movements adds to near-term challenges in many of these economies. Any steps to ease the policy stance will have to be judged carefully given the need to minimise financial vulnerabilities against the backdrop of higher US interest rates.

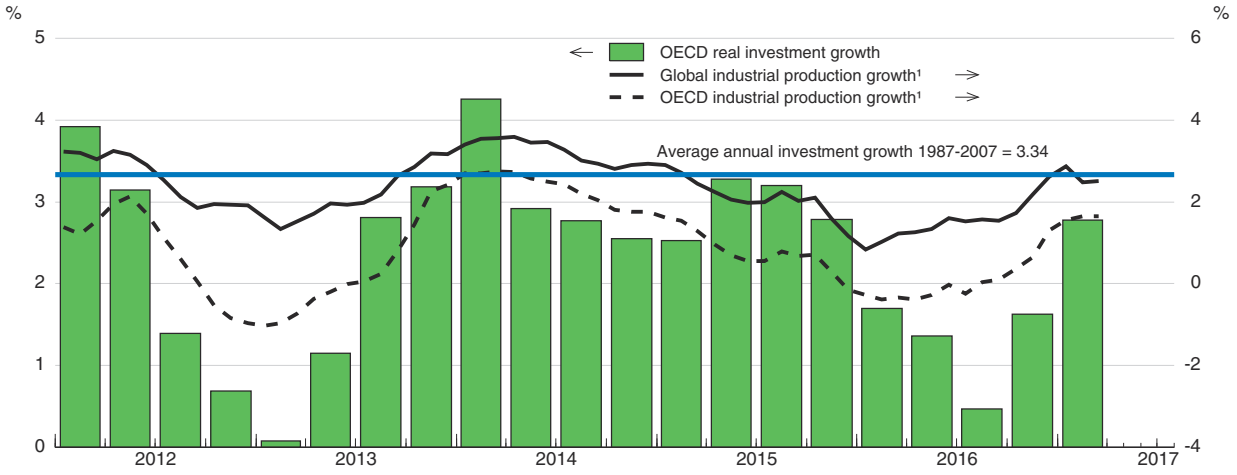
The global economy has improved recently, but policy support is needed for a durable and sustainable recovery

Signs of enhanced momentum in the global economy have recently emerged. Global GDP growth has picked up to an annualised rate of over 3¼ per cent since the middle of 2016, with a rebound in industrial production, global trade and investment (Figure 1.2). Demand growth in the advanced economies has stabilised at around 2%, and both demand and output growth are continuing to turn up slowly in the emerging and developing economies, helped by stronger policy-supported public infrastructure investment in Asia, especially China (Figure 1.3). Collectively, these demand increases have strengthened global trade including via value-chain links, and also contributed to an upturn in commodity prices. Business and consumer confidence have also rebounded further to levels above pre-crisis norms in some economies (Figure 1.4, Panel A). However, in contrast to the low levels of volatility in financial markets (see below), news-based estimates of economic policy uncertainty remain elevated (Figure 1.4, Panel B), suggesting continued medium-term downside risks.

In a number of countries, confidence measures have rebounded to a much greater extent than "hard" indicators of activity, raising issues about the reliability of the signals provided by these measures for future activity. While global business confidence appears to remain a useful signal of likely developments in global industrial production, the

Figure 1.2. **An upturn in investment has helped to boost industrial production growth**

Year-on-year percentage changes



1. Based on the year-on-year growth rate of the 3-month moving average.

Source: OECD Economic Outlook 101 database; OECD Main Economic Indicators database; Thomson Reuters; and OECD calculations.

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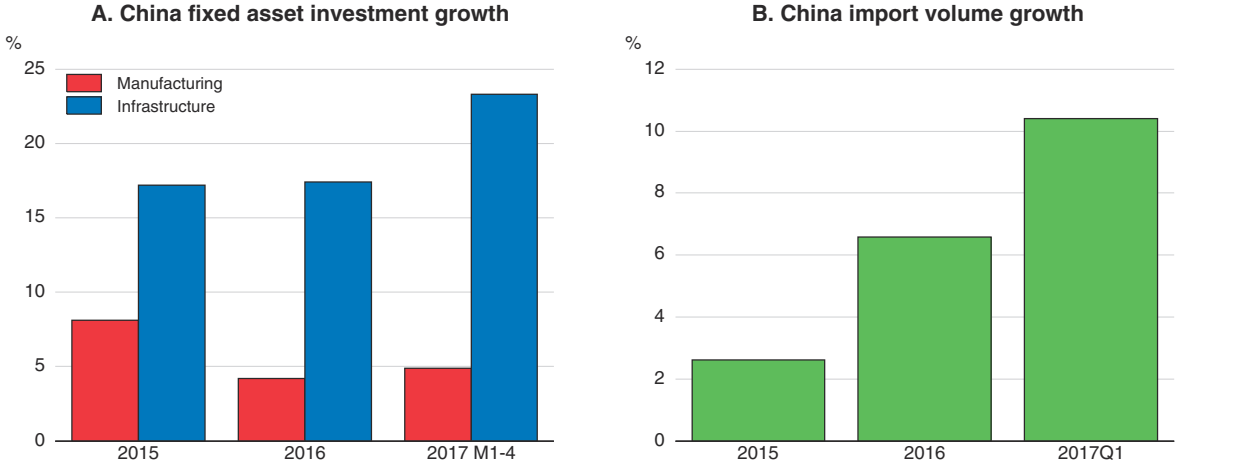
association between consumer confidence and global retail spending has fallen sharply in recent years (Figure 1.4, Panels C and D; Box 1.1), suggesting that limited weight should be given to fluctuations in this measure in the absence of supporting developments in "hard" indicators of spending and income. This disconnect has also been apparent in the early part of 2017, especially in the advanced economies, with consumption growth moderating despite rising confidence, in part due to the drag on purchasing power from higher headline inflation.

Figure 1.3. **Strong stimulus spending in China has helped to boost import growth this year**

Year-on-year percentage changes



Note: Fixed asset investment in nominal terms. Import volumes of goods plus services.

Source: OECD Economic Outlook 101 database; National Bureau of Statistics of China; and OECD calculations.

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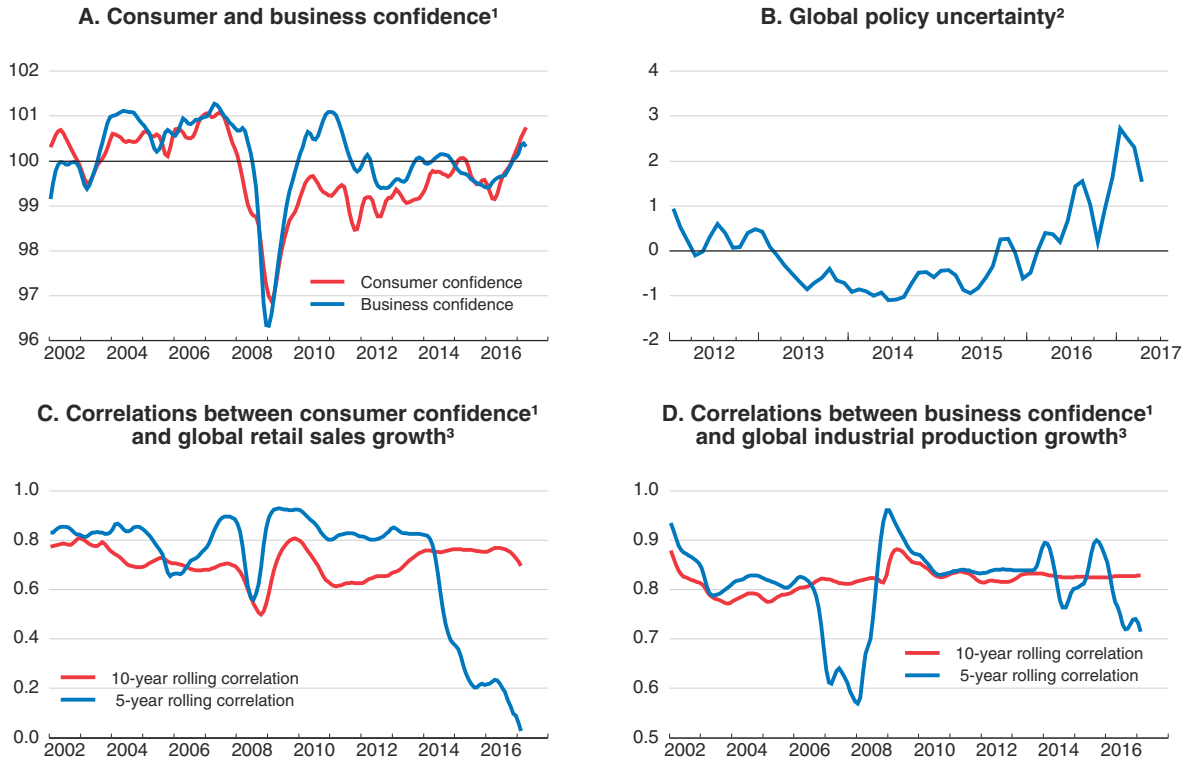
Figure 1.4. **Confidence has strengthened further, but its links with spending are unclear and policy uncertainty remains elevated**



1. Based on OECD member countries, Brazil, China, India, Indonesia, Russia and South Africa.
2. Based on the 3-month moving average of the news-based global economic policy uncertainty index, normalised over 2011-17.
3. Year-on-year percentage changes of the 3-month moving average series.

Source: OECD Main Economic Indicators database; www.policyuncertainty.com; and OECD calculations.

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Box 1.1. **The usefulness of various cyclical indicators**

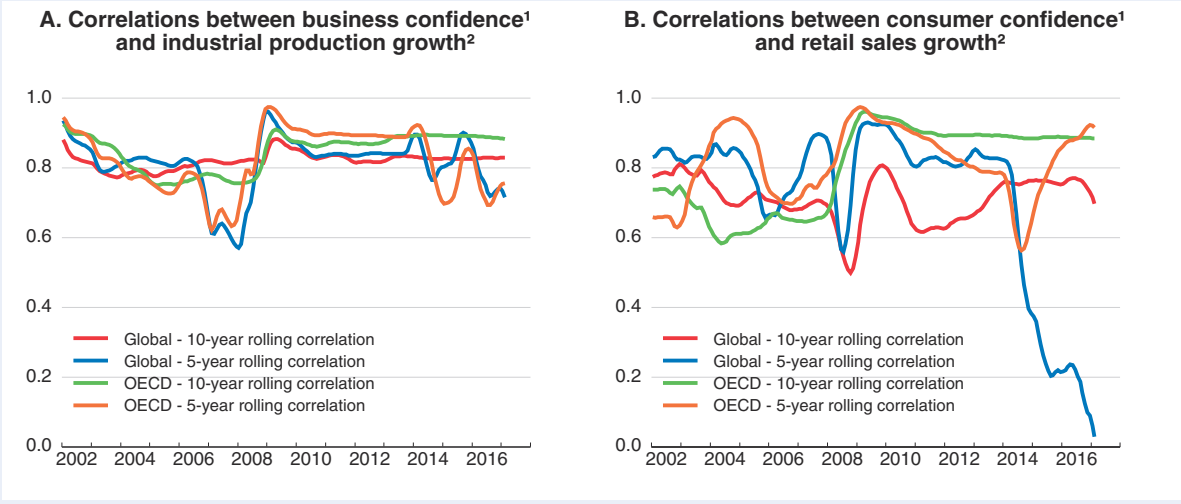
Timely cyclical indicators, such as industrial production (IP) and surveys of sentiment, are widely used in short-term forecasting and "nowcasting" models and in composite leading indicators, including at the OECD (Sédillot and Pain, 2003; OECD, 2012; Chalaux and Schwellnus, 2014). The strong upturn in these indicators since mid-2016 has raised the question as to whether they provide a reliable signal of improved cyclical momentum in the global economy at present. Past literature has shown the usefulness of IP and sentiment indicators in signalling business cycles at the country level (e.g. see above references), but it is less clear whether these indicators at an aggregate level are good signals of global or OECD business cycle dynamics.

The preliminary evidence below suggests that so-called hard indicators, such as industrial production, remain a fairly reliable indicator of OECD GDP growth cycles and to a lesser extent investment. In contrast, there are some signs that the reliability of sentiment indicators (so-called soft indicators) has declined in recent years, especially in emerging market economies. This suggests that these indicators are best assessed in conjunction with other fundamental drivers of growth. For example, this would include income dynamics for consumption, and both demand growth and uncertainty for investment.

Box 1.1. **The usefulness of various cyclical indicators** *(cont.)*

Sentiment indicators, such as business and consumer confidence, are some of the timeliest monthly indicators and typically have a fairly high correlation with other high-frequency (albeit less timely) hard indicators. This underlines their potential usefulness for forecasting GDP growth and its various sub-aggregates. At the global level, as well as for the OECD as a whole, there is a consistent positive correlation between IP growth and business confidence based on 10-year and 5-year rolling samples (first figure below, Panel A). In contrast, whilst the correlation between OECD consumer confidence and OECD consumption growth remains fairly high, consumer confidence has a weak and declining association with monthly consumer spending at the global level (first figure below, Panel B).

Correlations between cyclical hard and soft indicators



1. Global business and consumer confidence indicators based on OECD member countries, Brazil, China, India, Indonesia, Russia and South Africa.
2. Year-on-year percentage changes of the 3-month moving average series.

Source: OECD Main Economic Indicators database; Thomson Reuters; and OECD calculations.

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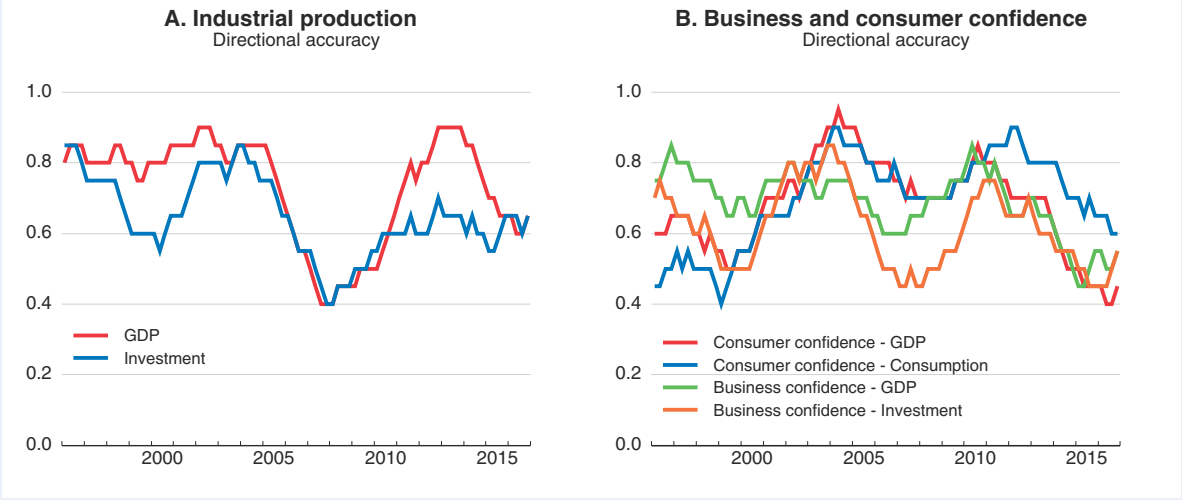
The ability of soft and hard cyclical indicators to signal changes in growth momentum correctly can be assessed qualitatively by measures of directional accuracy. These calculate the proportion of time that an indicator, such as OECD IP growth (or confidence measures), and a reference series, such as OECD GDP growth (or investment/consumption), move in a similar direction.[1] This measure looks only at the direction of the changes in the two series rather than the respective magnitudes of the changes.

- The pre-crisis directional accuracy of IP growth for GDP growth was high, at around 80%; but recently it has been around 60% (second figure, Panel A). The relationship between IP growth and OECD fixed investment growth is broadly similar, albeit slightly weaker.
- Changes in the level of business confidence provide a less accurate indication of the direction of changes in the pace of growth in GDP and investment, and performance has deteriorated recently (second figure below, Panel B). Changes in consumer confidence were a good indicator of growth momentum in the early 2000s, especially for consumption growth, but again directional accuracy has deteriorated recently.

Box 1.1. **The usefulness of various cyclical indicators** *(cont.)*

Assessing year-on-year changes in GDP, investment and consumption using hard and soft indicators



Note: Based on OECD aggregates. Directional accuracy measures the extent to which the two indicators change in a similar direction (e.g. an acceleration or deceleration). The directional accuracy measure is calculated over a 5-year rolling sample.
Source: OECD Main Economic Indicators database; Thomson Reuters; and OECD calculations.

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It is also possible to evaluate the extent to which changes in the high-frequency indicators correctly signal major cyclical turning points in OECD quarterly GDP (or investment or consumption) growth. These turning points are dated by applying the widely-used Bry-Boschan algorithm that sets minimum requirements about the duration and amplification of phases and cycles, following Harding and Pagan (2002).[2]

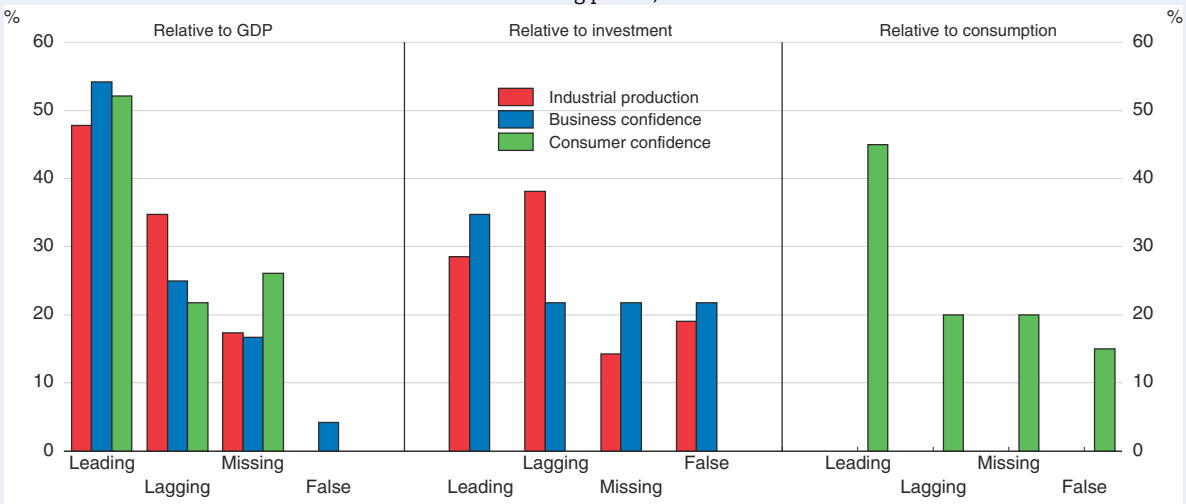
- On this basis, IP growth appears to be a leading indicator of GDP growth, with its turning points lining up more frequently with those of GDP, or preceding turning points in GDP growth (see figure below). Major turning points in confidence measures also tend to lead GDP growth.
- However, there are also a fairly high number of turning points in the reference series that are either lagged, or missed by the indicator series.
- The turning points for IP growth and changes in business confidence line up more poorly with investment growth and these indicators tend to miss or send more false signals regarding changes in investment cycles than is the case for GDP. This may reflect the fact that investment cycles (especially expansionary periods) tend to be longer than cycles for GDP and higher-frequency indicators. Changes in consumer confidence tend to lead or move contemporaneously with consumption growth, suggesting that confidence may also be a useful indicator in assessing turning points in consumption; however, its performance has also deteriorated since 2012, with a rising share of missing and false signals.

1. Specifically, a dummy variable is constructed which takes the value 1 if both the cyclical indicator (either year-on-year IP growth or the level of confidence) and annual growth in GDP (or investment/consumption) increases (or decreases) on a quarterly basis and is set to zero if they move in opposite directions. This dummy variable is then averaged over a 5-year rolling sample.
2. The algorithm identifies local peaks or troughs in a series as a maximum value or a minimum value within a centred 5-quarter window, forcing alternative peaks and troughs. Amongst a set of potential peaks and troughs established from the first step, turning points are determined by conditions related to the duration and amplification of phases and cycles.

Box 1.1. **The usefulness of various cyclical indicators** *(cont.)*

The timing of turning points in OECD cyclical indicators relative to OECD GDP, investment and consumption

Share of turning points, 1990-2016



Note: Based on OECD aggregates. Turning points are calculated on the quarterly growth rates to assess changing growth momentum. Leading signals are those that came before or were contemporaneous with GDP (or consumption/investment). Lagged turning points are those that occurred following those for GDP (or consumption/investment).
Source: OECD Economic Outlook 101 database; OECD Main Economic Indicators database; Thomson Reuters; and OECD calculations.

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The current cyclical upturn is projected to help global GDP growth pick up to a little over 3½ per cent by 2018 (Box 1.2), with the composition of growth becoming more trade-intensive. Global trade growth began to recover from exceptionally low rates through the course of 2016, and global trade intensity is starting to rise, albeit from an historically-low level (Figure 1.5, Panel A). The trade recovery reflects a rebound in investment both in advanced and emerging market economies, given the higher trade-intensity of investment spending, and a resumption of import volume growth in the non-OECD economies. Trade growth is projected to average around 4% per annum through 2017-18, which remains modest by pre-crisis standards. This pick-up is broadly consistent with global investment intensity, which is projected to rise slightly in 2017 and 2018, but remain modest by pre-crisis standards (Figure 1.5, Panel B) despite strong policy-supported infrastructure investment in many emerging market economies in Asia, and a gradual stabilisation of spending in Brazil and Russia. In part, this reflects the likelihood that the current stimulus and credit-driven buoyancy of infrastructure and housing investment in China will diminish over the next two years, as rebalancing proceeds and measures are taken to deal with rising financial vulnerabilities. Across the advanced and emerging market economies, import volume growth in 2017-18 is generally strongest in those economies with comparatively robust investment growth (Figure 1.6).

In the OECD economies, a key issue will be the extent to which the recovery can gain sufficient momentum to escape from the low-growth trap. Estimated cyclical slack is continuing to decline, but in part this stems from soft potential output growth – reflecting weak productivity and investment as a result of weak demand – rather than from more robust demand growth (Figure 1.7). Some improvement in business investment is projected

Box 1.2. **Growth projections in the major economies**

Global GDP growth is projected to rise to a little over 3½ per cent by 2018, helped by improving policy-supported outcomes in some emerging market economies, particularly in Asia, and the assumption of a moderately-supportive fiscal stance in a number of advanced economies, especially the United States in 2018. In the OECD economies, GDP growth is projected to be just over 2% in 2017-18 (table below). On a per capita basis, OECD GDP growth remains over ½ percentage point weaker than in the two decades prior to the crisis. Key features of the growth projections for the major economies are set out below.

In the United States, after a weak first quarter of 2017, GDP growth is projected to pick up to between 2¼-2½ per cent over 2017-18. Consumption growth continues to benefit from a firming labour market and increases in household wealth, and investment growth is recovering, helped by an upturn in energy sector spending and improved business confidence. An assumed fiscal easing of nearly ¾ per cent of GDP in 2018, via household and corporate tax reductions and a small rise in government spending, should provide an additional stimulus to domestic demand, especially business investment, despite somewhat higher long-term interest rates. In the absence of this easing, GDP growth would likely be closer to 2% in 2018.

GDP growth in Japan is set to strengthen to 1.4% this year, supported by stronger export growth, especially in Asian markets, and a modest fiscal easing. As fiscal support wanes in 2018, amidst a renewed decline in public investment, GDP growth could moderate to around 1%. Improved corporate profitability and rising labour shortages should help to underpin business investment through 2017-18, but private consumption is likely to remain subdued given still modest wage and income growth.

In the euro area, GDP growth is projected to average around 1¾ per cent per annum in 2017-18. Accommodative monetary policy and a small fiscal easing of ¼ per cent of GDP per annum in 2017 and 2018 will help to support area-wide activity, but still high unemployment, soft real wage growth and high non-performing loans constrain domestic demand growth in some countries. Stronger growth in non-EU markets, particularly Asia and the United States, should help to support export growth, but negative effects from weaker demand growth in the United Kingdom and uncertainty about the future course of the European Union could start to emerge towards the end of 2018.

GDP growth in the United Kingdom is projected to slow from a little under 1¾ per cent this year to 1% in 2018, despite the additional support from more favourable monetary conditions and the postponement of the sizeable fiscal tightening previously planned in 2017. The depreciation of sterling has improved export prospects somewhat, but has also pushed up inflation, damping household income growth and consumer spending. Business investment is projected to decline sharply, amidst continuing uncertainty about the future relationship between the United Kingdom and the European Union and lower corporate profit margins. The projections continue to assume that trade arrangements with the European Union will be based on WTO rules following the UK departure from the union in 2019.

In China, near-term demand is being supported by strong infrastructure and housing investment driven by expansionary fiscal policy, including via support for public investment from policy banks, and buoyant credit growth. As efforts intensify to manage financial risks and encourage the necessary transition towards consumption and service sectors, GDP growth is projected to ease gradually to between 6¼-6½ per cent in 2018.

In India, the impact of demonetisation has faded quickly, and GDP growth is projected to strengthen to around 7¾ per cent in fiscal year 2018/19. Sizeable increases in public sector wages and pensions are supporting private consumption, and structural reforms, particularly the introduction of the goods and services tax and measures to improve the ease of doing business, are projected to help private investment revive.

Solid domestic demand growth is set to persist in a number of other Asian economies, including Indonesia, the Philippines, Malaysia and Thailand, helped by strong policy-supported investment in infrastructure and improved external demand, especially from China.

Box 1.2. **Growth projections in the major economies** *(cont.)*

A resumption of growth in a number of major commodity-producing economies also accounts for a sizeable proportion of the improvement in global growth in 2017-18, although their collective contribution remains modest relative to 2013-14. In both Brazil and Russia, where output has begun to rise after protracted recessions, GDP growth is set to be supported in 2017-18 by firmer commodity prices, monetary policy easing as inflation wanes, and gradual improvements in sentiment. However, the near-term boost provided by higher oil prices in some oil-producing emerging market economies may be a little smaller than usual, given the extent to which a number of these countries are keeping supply fixed following the agreement of OPEC members and select non-OPEC producers to restrict near-term production levels, but GDP growth should pick up in 2018.

A modest pick up in global growth is projected

OECD area, unless noted otherwise

	Average 2004-2013	2014	2015	2016	2017	2018	2016 Q4	2017 Q4	2018 Q4
				Per cent					
Real GDP growth[1]									
World[2,7]	3.9	3.4	3.1	3.0	3.5	3.6	3.3	3.5	3.7
OECD[2,7]	1.6	2.0	2.2	1.8	2.1	2.1	2.0	1.9	2.2
United States	1.6	2.4	2.6	1.6	2.1	2.4	2.0	2.1	2.5
Euro area[7]	0.8	1.2	1.5	1.7	1.8	1.8	1.8	1.9	1.7
Japan	0.8	0.3	1.1	1.0	1.4	1.0	1.7	1.3	1.0
Non-OECD[2]	6.6	4.6	3.9	4.1	4.6	4.8	4.4	4.8	4.9
China	10.3	7.3	6.9	6.7	6.6	6.4	6.7	6.5	6.3
Output gap[3]	-0.6	-2.1	-1.6	-1.4	-0.8	-0.3			
Unemployment rate[4]	7.1	7.4	6.8	6.3	6.0	5.8	6.2	5.9	5.7
Inflation[1,5]	2.0	1.6	0.8	1.1	2.3	2.2	1.4	2.3	2.3
Fiscal balance[6]	-4.6	-3.5	-2.9	-3.0	-2.8	-2.7			
World real trade growth[1]	5.4	3.7	2.7	2.4	4.6	3.8	3.3	3.6	4.3

1. Percentage changes; last three columns show the increase over a year earlier.
2. Moving nominal GDP weights, using purchasing power parities.
3. Per cent of potential GDP.
4. Per cent of labour force.
5. Private consumption deflator.
6. Per cent of GDP.
7. With growth in Ireland in 2015 computed using gross value added at constant prices excluding foreign-owned multinational enterprise dominated sectors.

Source: OECD Economic Outlook 101 database.

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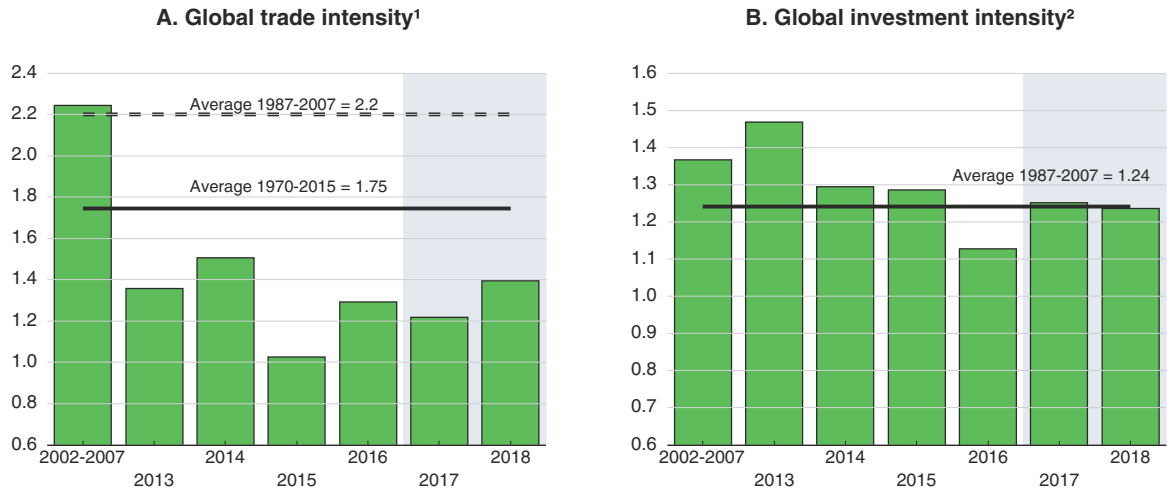
in 2017-18 (Figure 1.8, Panel A), helped by a gradual increase in spending as a result of higher commodity prices in the United States, Canada, Australia and Norway, and improved profitability in Japan and the euro area. This will, however, do little to reverse the substantially weaker growth of the productive capital stock experienced in recent years (Figure 1.8, Panel B).

In the United States, the May 2017 Semi-annual Economic Forecast from the Institute of Supply Management suggests that businesses are now more optimistic about investment spending in 2017 than in the previous report in December 2016, both in

Figure 1.5. **Global trade and investment intensity are set to increase**

Ratio of global trade and investment growth to global GDP growth



1. World trade volumes for goods plus services; global GDP at constant prices and market exchange rates. Based on growth through the year to the fourth quarter in the year shown. Period averages are the ratio of average annual world trade growth to average annual GDP growth in the period shown.
2. Fixed capital investment and GDP growth in the OECD, Brazil, China, Chinese Taipei, Hong Kong - China, India, Indonesia, Malaysia, the Philippines, Russia, Singapore, South Africa, Thailand and Vietnam, at constant prices.

Source: OECD Economic Outlook 101 database; IMF World Economic Outlook database; Consensus Economics; and OECD calculations.

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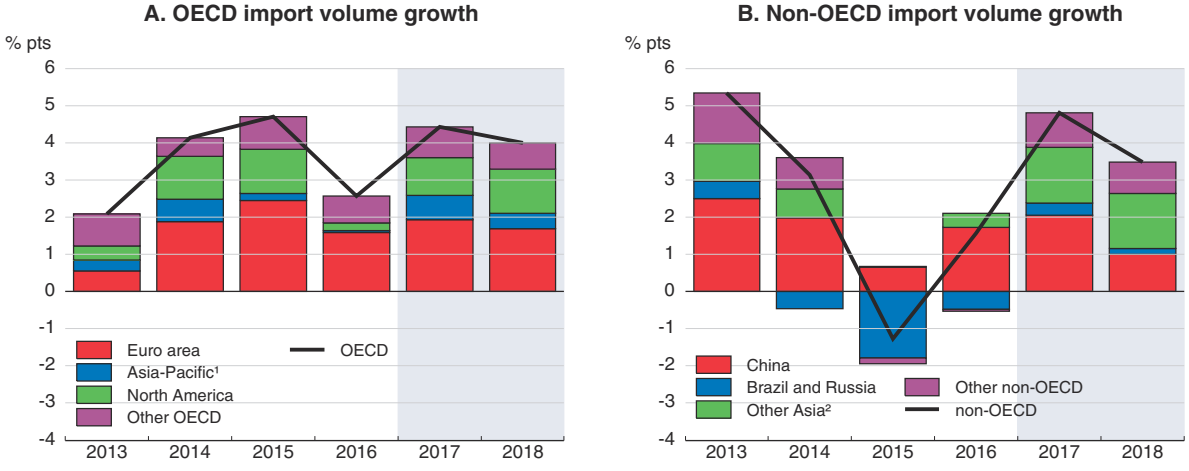
manufacturing and services sectors. Survey evidence from Europe suggests that companies are largely seeking to upgrade their existing capital assets rather than to expand capacity (Figure 1.9, Panel A). This is consistent with the recent Business and Industry Advisory Committee (BIAC) Business Climate Survey, which suggests that there

Figure 1.6. **Contributions to the growth of OECD and non-OECD import volumes**

Contributions to the year-on-year growth of total import volumes



1. Asia-Pacific includes Australia, Chile, Japan, Korea and New Zealand.
2. The group 'Other Asia' comprises Chinese Taipei, Hong Kong - China, India, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

Source: OECD Economic Outlook 101 database.

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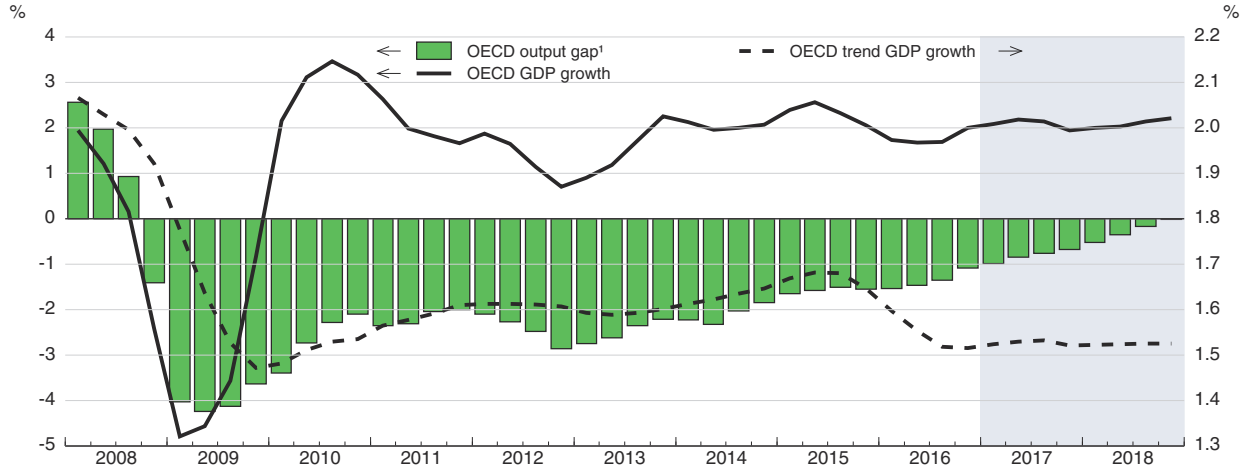
Figure 1.7. **Weaker supply growth is helping to narrow measured cyclical slack in the OECD economies**



1. Per cent of potential GDP.
Source: OECD Economic Outlook 101 database.

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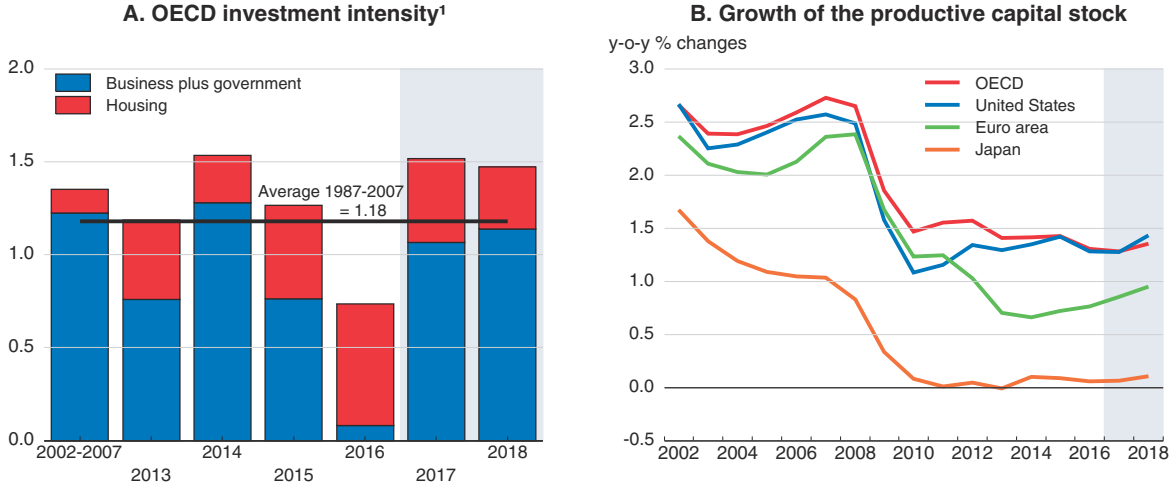
has been only a modest improvement in the enabling conditions for private investment in many countries (Figure 1.9, Panel B).

Upgrading an ageing capital stock would not only contribute to the cyclical upturn, but would also help to boost total factor productivity and potential output, given the likely improvement in capital quality as a result of the diffusion of state-of-the-art technologies and software embodied in new equipment. Recent signs that the global IT cycle has started to regain momentum (Figure 1.10) suggest that a key part of any capital stock upgrade

Figure 1.8. **Investment intensity is projected to improve in the OECD economies but capital stock growth is set to remain weak**



1. Ratio of OECD investment growth to OECD GDP growth in period shown.
Source: OECD Economic Outlook 101 database; and OECD calculations.

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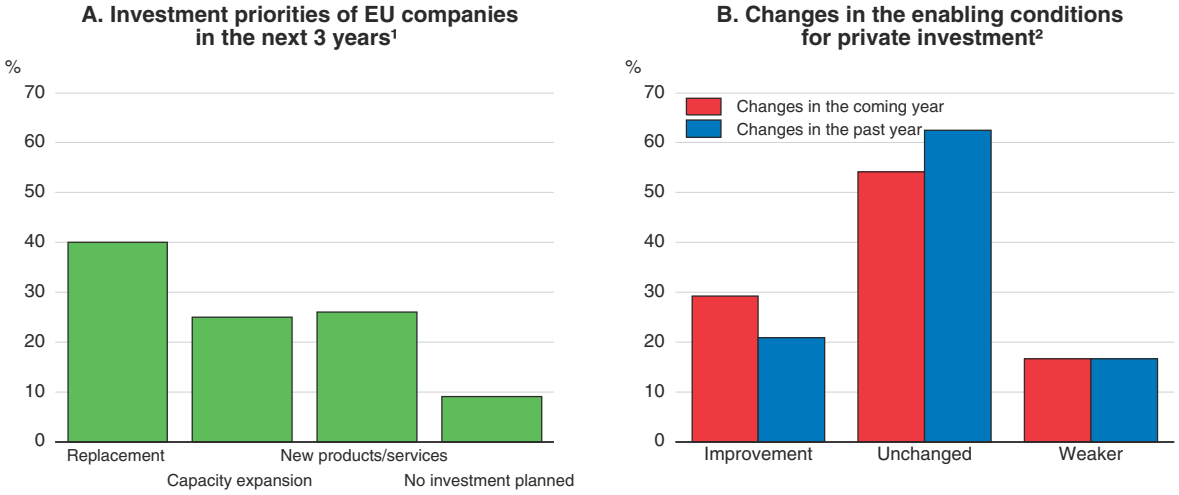
Figure 1.9. **Surveys suggest that firms are likely to replace rather than expand capacity**

Percentage of respondents



1. Responses to the categories 'Replacing existing buildings, machinery, equipment and IT', 'Capacity expansion for existing products/services', and 'Developing or introducing new products, processes or services'.
2. Responses to the questions 'How have the enabling conditions for private investment in your country changed in the past year?' and 'In the coming year, how do you expect the enabling conditions for private investment in your country to change?'.

Source: EIB Group Survey on Investment and Investment Finance, 2017; and BIAC Business Climate Survey 2017.

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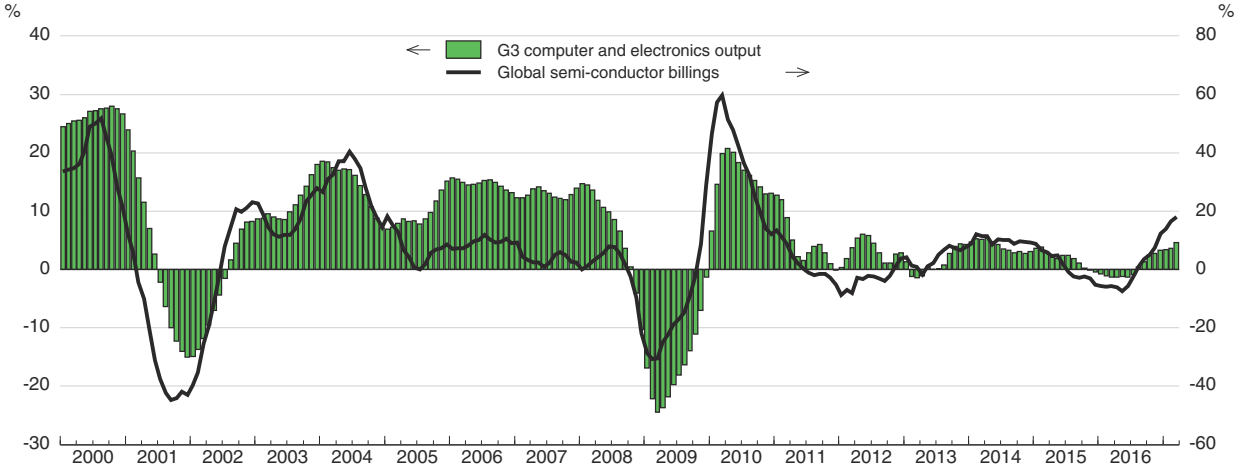
Figure 1.10. **The global IT cycle points to a possible upturn in high-tech investment**

Year-on-year percentage changes of the 3-month moving average



Note: World semi-conductor billings in nominal US dollars. Computer and electronics output is a weighted average of production of computer and electronic products (United States), output of computer, electronic and optical products (Germany), and production of information and communications electronics equipment plus electronic parts and devices (Japan).

Source: World Semi-Conductor Statistics; Eurostat; Board of Governors of the Federal Reserve System; Ministry of Economy, Trade and Industry, Japan; and OECD calculations.

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could be the replacement of old equipment with new digital technologies.[1] More broadly, there is a substantial scope for firms in all countries and sectors to catch up with the technological frontier (EIB, 2017).

1. In the United States, BEA estimates suggest that the average age of private sector information processing equipment rose from 4.1 years in 2000 to 5.1 years in 2015 (on a current-cost basis). Within this category, the average age of computers rose from 1.5 years to 2.2 years over the same period.

Even with such capital upgrading, a much stronger recovery in investment and expansion in the capital stock will be needed to help strengthen productivity growth substantially, and ultimately real wages and incomes. As discussed below, enhanced use of fiscal initiatives and structural reforms to improve product market dynamism and competitive pressures would help to further boost investment and the diffusion of new technology.

Imbalances and vulnerabilities remain and wage growth is still modest

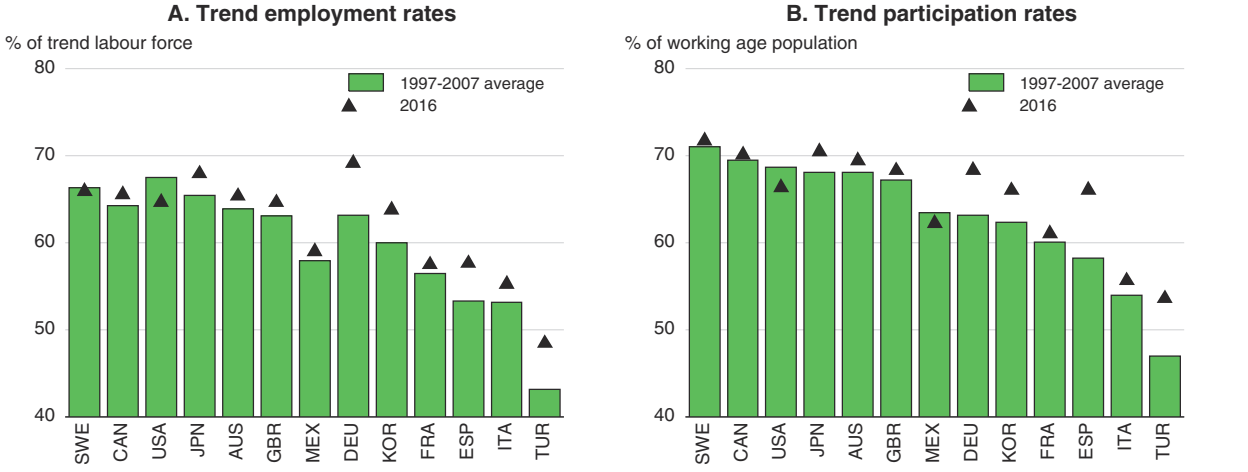
Labour markets are healing, but remaining cyclical slack will restrain wage growth

The key underpinnings of sustainable consumption growth are employment and wage growth. Both are ultimately dependent on private investment behaviour, via its impact on labour and total factor productivity growth. Employment growth, though modest, has recovered relatively well in recent years given the subdued upturn in output. Moreover, in many advanced economies, the underlying employment rate and the underlying labour force participation rate are now higher than in the decade prior to the crisis (Figure 1.11), with the United States a notable exception. In part, this reflects the cumulative impact of past labour market reforms to improve activation, reduce pathways to early retirement, enhance job creation, and lower barriers to female labour force participation. In a number of European countries, inflows of asylum seekers are also providing a modest boost to labour force growth, by close to 1% in Germany over 2015-18 and 0.5% in Sweden and Austria (Box 1.3).

A durable and stronger upturn in household incomes and consumption requires stronger wage growth, since employment growth is likely to moderate as national labour markets slowly tighten and demographic headwinds start to limit feasible labour force growth. Nominal and real wage growth have been remarkably stable in the major economies in recent years, despite higher employment and lower unemployment. This is projected to change only slowly this year and next, in spite of further small declines in unemployment (Figure 1.12). The unemployment rate is now close to, or even below,

Figure 1.11. **Underlying employment and participation rates have risen in many countries**

15-74 age cohort



Source: OECD Economic Outlook 101 database; and OECD calculations.

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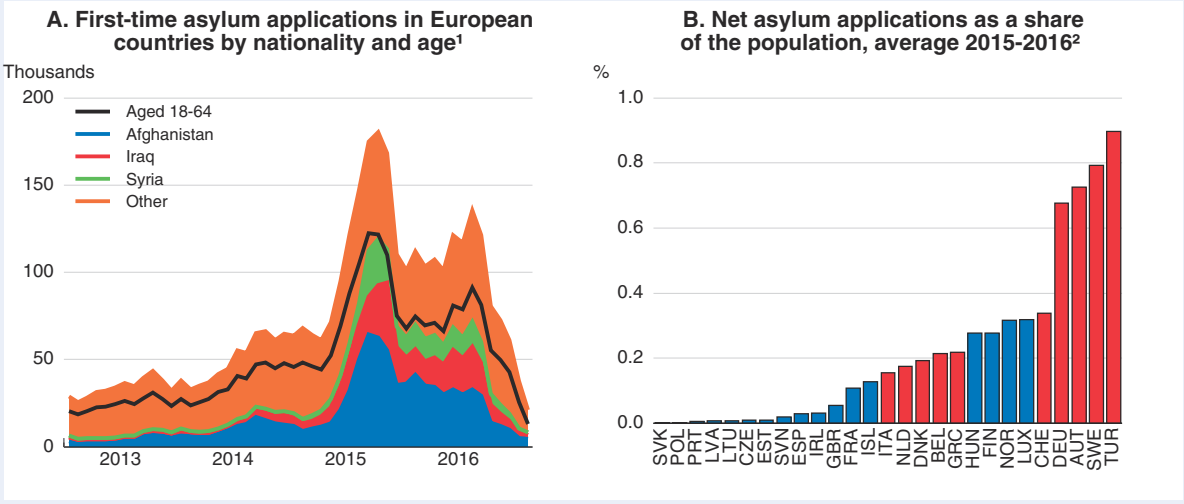
Box 1.3. **Economic impact of asylum seekers in selected countries**

Europe (the European Union, Norway and Switzerland) has experienced the largest inflow of humanitarian migrants since World War II, with 3.6 million first-time asylum applications received since early 2013. In 2015, 1.3 million first-time asylum seekers entered European countries, but recent figures suggest a slowdown through the course of 2016, following the EU agreement with Turkey in March 2016. However, for 2016 as a whole, asylum applications were still elevated at 1.2 million (figure below). A large share of claims since early 2013 are from Syrian, Afghan and Iraqi nationals, reflecting conflicts in the region, although inflows also rose from other countries. By country of first reception in Europe, asylum applications as a share of the population have been highest in Sweden, Austria and Germany (taking into account withdrawn applications), as well as in Turkey. As of the end of 2016, based on Eurostat data, 1.5 million individuals had been granted some form of protection since early 2013, with the stock of pending applications for protection in Europe rising to 1.1 million.

Asylum applications to selected countries by nationality and age



1. Includes data for the EU28, Norway and Switzerland.
2. Net asylum applications are computed as first-time applications minus withdrawn applications, except for Turkey where the figure reports the average yearly change in the number of Syrian nationals under temporary protection over the period plus asylum applications by non-Syrian nationals. Countries with red columns are discussed in the text.

Source: Eurostat; UNHCR; and OECD calculations.

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Assessing the economic impact of rising humanitarian migration on receiving countries is important, from a fiscal perspective and from the longer-term impacts of refugee integration into the labour market and the resulting addition to potential output. While the focus of this box is mainly on the short-term impact over 2016-18, the long-run impact will depend on whether immigrants remain in the country and the extent to which they integrate successfully into labour markets. The focus is on countries which have received a relatively high number of asylum applications as a share of the population, along with Greece and Italy, which have been key transit countries.

Box 1.3. **Economic impact of asylum seekers in selected countries** *(cont.)*

Fiscal impact

Government spending in key receiving countries has increased as a result of the reception and processing costs of asylum seekers. This is projected to continue over in 2017-18. Comparing the level of expenditure between countries is difficult, given differences in the access to services, training and the labour market, as well as differences in the reporting of costs associated with reception, registration, processing and long-term integration services.

- For instance, some evidence suggests that the net fiscal cost for processing and accommodating asylum seekers (prior to acceptance) has been around €10,000 per application, but this figure can be significantly higher if integration support is already provided during the asylum phase (OECD, 2017a).
- There is also a wide range of estimates of the annual cost per refugee in the early stages of reception (over a 12-month period) in reports of official development assistance (ODA) in some countries (OECD, 2016a). For the countries shown here, such estimates range from just over $4,500 in Austria to just under $32,000 in the Netherlands. The average is around $17,800, with a large share of the variance likely resulting from definitional differences.

Moreover, whether an asylum seeker is accepted or rejected, fiscal costs in the initial reception stage can be quite high. In Sweden, for instance, costs over the first 12 months for an asylum seeker granted residence were around $14,000, while fiscal costs associated with an unsuccessful applicant were around $12,000, based on 2014 data. This said, data on these cost breakdowns are limited across countries. Moreover, past experience may be a poor indicator of current costs given that current asylum seekers originate from different countries relative to past waves of migration.

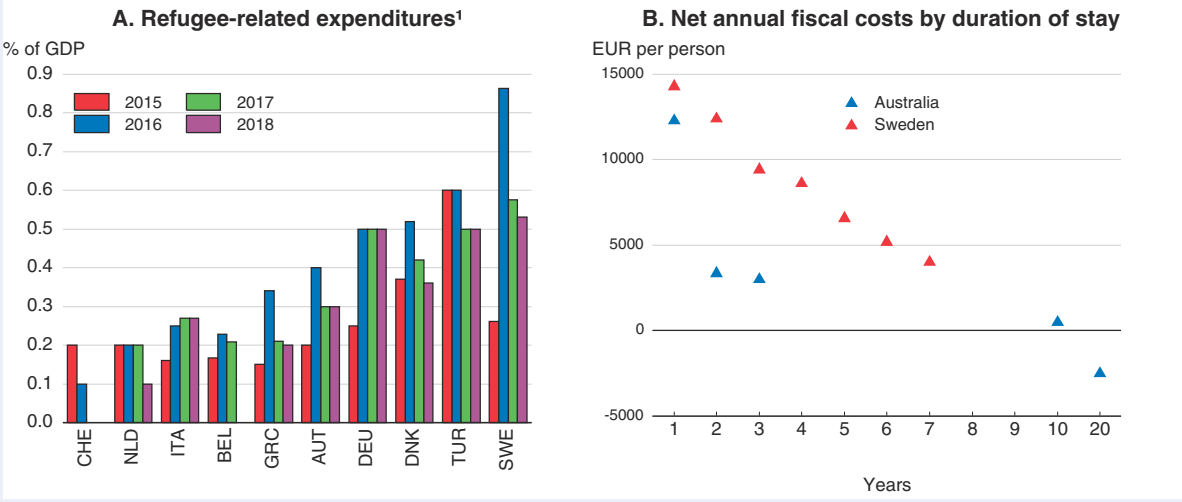
With these caveats in mind, the estimated fiscal costs for the years 2015-18 associated with the recent wave of refugees are shown below, based where possible on available information. These estimates are for the total budgetary costs associated with the reception, processing and integration of new migrants (if available), include all levels of government (i.e. both central and subnational governments) and are net of contributions provided from external sources. For some countries, such as Denmark, they explicitly exclude additional costs on healthcare and public education. Where possible, an attempt is made to focus solely on the impact of the recent surge of refugees, rather than the total number of refugees, as some government spending occurs to provide basic services and training to past humanitarian migrants and a small inflow of asylum seekers would be expected given past norms.

Overall, based on OECD estimates, fiscal costs as a share of GDP are estimated to have peaked in 2016 in most countries, ranging from 0.1% of GDP in Switzerland to around 0.9% in Sweden (second figure, Panel A). Fiscal costs are expected to decline by roughly 0.1% of GDP on average in 2017, relative to 2016, and moderate a little further in 2018. This fiscal boost across the eight countries covered (excluding Turkey and Switzerland) amounts to a cumulative 0.6% of EU GDP from 2016-18 (1.2% of the aggregate GDP in the eight EU countries covered). This may understate EU-wide expenditure, as other countries in the union have also incurred expenditures to address higher numbers of asylum seekers. This boost to spending and demand will have had small, positive spillover effects on other European countries and trading partners.

The net fiscal costs associated with the reception and integration of refugees are typically higher in the early years following their arrival, as shown in Panel B in the second figure. Past experience in Sweden and Australia suggests that the net fiscal costs tend to decline through time as refugees integrate into labour markets. Moreover, in the long run, net fiscal benefits can occur, as in Australia (OECD, 2017a). Successful integration depends on labour market access, settlement support (including language training), and age and skill levels, amongst other factors. Moreover, refugees can increase potential output, by boosting labour force growth, and help to combat fiscal pressures associated with population ageing, given that a large share of the recent wave of refugees are of working age (first figure, Panel A) and the average age of asylum seekers tends to be below that of the current population (European Commission, 2016).

Box 1.3. **Economic impact of asylum seekers in selected countries** *(cont.)*

Estimated fiscal costs associated with the wave of refugees and dynamics through time



1. Estimates for Belgium, Denmark and Italy refer to total spending on asylum seekers (including underlying and on past refugees) in the respective year. Belgium only includes estimates for 2015-17.

Source: OECD (2017a), "Who Bears the Cost of Integrating Refugees?", *Migration Policy Debates*, January, OECD Publishing, Paris; and OECD calculations.

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Labour market impact

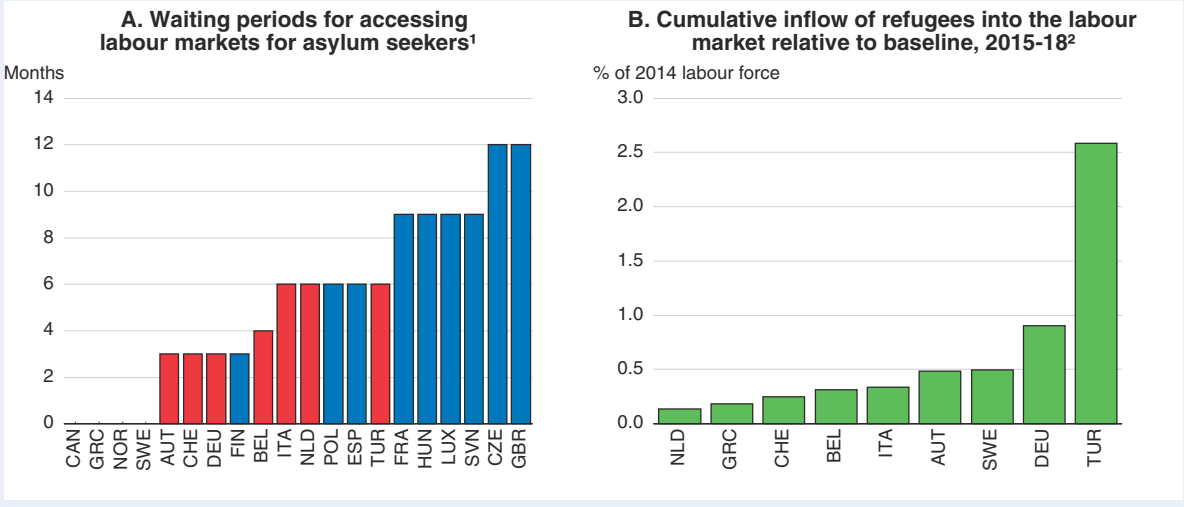
The labour market impact of the recent inflow of asylum seekers will depend on their ability to access labour markets, the length of the application process, their success in gaining refugee status, and their language and skill levels. The typical period for asylum seekers to gain labour market access varies widely, from no waiting period in some countries under certain conditions (includes Greece, Norway and Sweden) and up to 12 months in the United Kingdom and the Czech Republic (third figure, Panel A). While data on the qualification levels of asylum seekers is scarce, some research suggests that there are large differences between the educational backgrounds of asylum seekers from the main countries of origin (OECD, 2017b).

Taking into account the varying timing for asylum seekers to access the labour market, as well as different skill levels, OECD estimates suggest that the cumulative inflow of refugees into the labour market over 2015-18 as a share of the labour force amounts to 2.6% in Turkey, 0.9% in Germany and 0.5% in Sweden and Austria, respectively. This boost is over and above the typical inflow of refugees normally seen on an annual basis. In many other countries, the impact is smaller, even if the absolute numbers entering the labour market can be high (third figure, Panel B). The overall impact on potential output is quite small in the short term, with the exception of perhaps Sweden and Turkey, which have received some of the largest inflows relative to their populations, but could build up over time. Going forward, the successful integration of refugees into labour markets will be a key determinant of their wellbeing as well as their broader impact on potential output and the fiscal balance.

Box 1.3. **Economic impact of asylum seekers in selected countries** *(cont.)*

The recent inflows of asylum seekers are likely to have a limited impact on wage developments in host economies. While they expand potential labour supply, especially in the medium term, their arrival is also associated with stronger demand for goods and services due to the higher level of fiscal support in the near term. Moreover, net effects depend on whether these new workers substitute for, or are complementary to, native workers. Overall, most studies suggest that immigration has little or no aggregate impact on the wages of native-born workers (Kerr and Kerr, 2011; OECD, 2016b). To the extent that there is some downward pressure on wages, it is more likely to occur in economies with relatively rigid product market regulations that inhibit the job creation that is ultimately necessary to absorb higher labour supply (Jean and Jimenez, 2007), and when the characteristics and skills of asylum seekers are similar to some types of native workers. Labour market institutions, such as minimum wage legislation or collective bargaining coverage, could limit any downward adjustment in wage levels, but could also make it more difficult for asylum seekers to gain employment.

Labour market integration of asylum seekers in key receiving countries



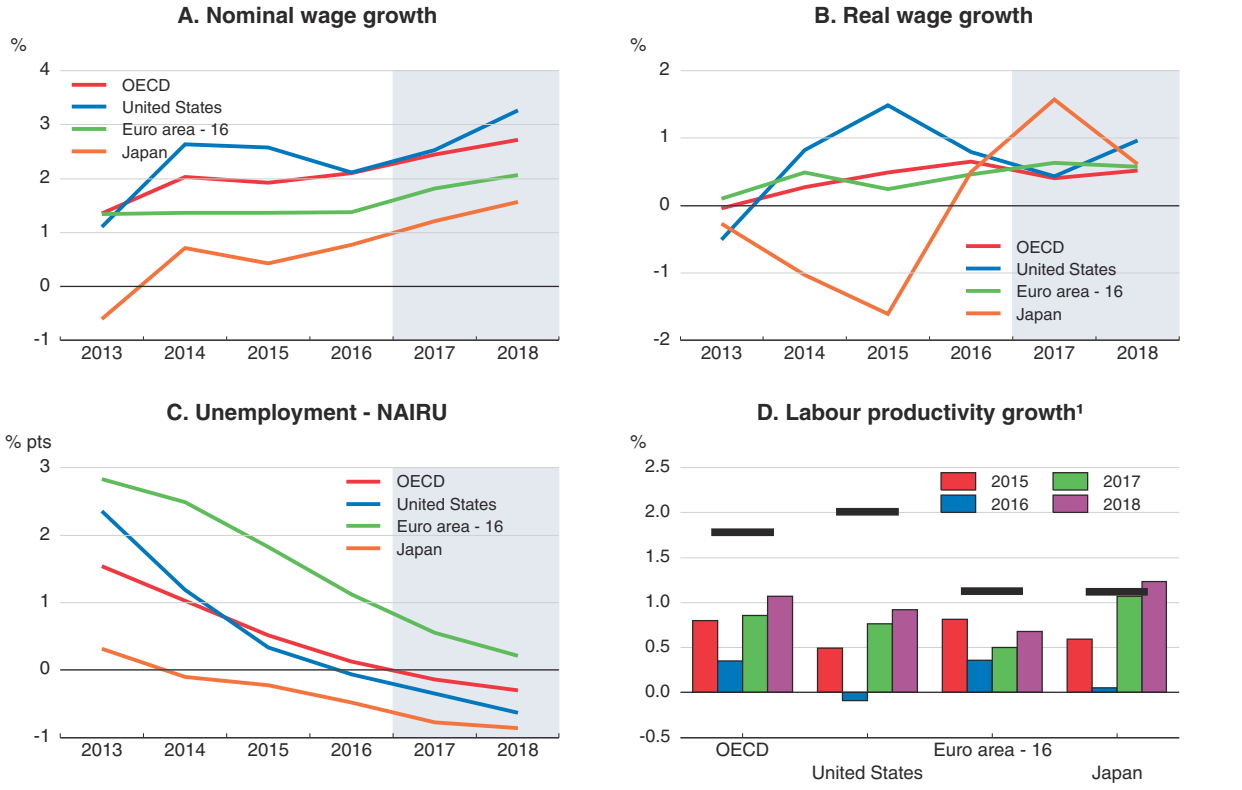
1. Canada, Greece, Norway and Sweden have no waiting period to access the labour market under certain conditions. Countries with red columns are discussed in the text.
2. The baseline excludes the typical annual inflow of refugees, prior to the recent surge.

Source: OECD Economic Outlook 101 database; OECD (2015a), "How will the refugee surge affect the European economy", *Migration Policy Debates*, November, OECD Publishing, Paris; and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933501515

Policy has an important role to play in determining the labour market impact of asylum seekers. Past research has shown that overall labour market conditions upon arrival are an important factor in the integration of refugees and early labour market access is a key determinant of long-term outcomes (OECD, 2017b). Cyclical labour market conditions in the largest receiving countries are fairly good at present, particularly in Germany and Sweden, which should help. While many of these countries provide early access to labour markets for asylum seekers and new policy measures have further liberalised entry, bottlenecks remain. For instance, in Sweden, progress could be made in simplifying procedures for migrants to get residence and work permits (OECD, 2017c). Boosting early labour market access, further increasing places for integration programmes and language training (including vocational language training), accurately assessing the skill levels of immigrants and tying the dispersion of asylum seekers more to areas with better labour market conditions in the host country could all improve the wellbeing of migrants and promote more inclusive growth (OECD, 2017b).

Figure 1.12. **Wage growth remains weak despite declines in unemployment**



Note: Nominal wages are measured as labour compensation per employee. Real wages are measured as nominal wages adjusted for the GDP deflator.

1. Horizontal lines show the average annual growth rate of labour productivity in the period 1997-2007.

Source: OECD Economic Outlook 101 database.

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estimated long-run sustainable rates in a few economies, including the United States, Japan and Germany, although considerable cyclical slack still remains in economies hardest hit by the crisis and fiscal consolidation. In some OECD countries, the extent of remaining cyclical slack in labour markets is also higher than suggested by conventional headline measures of unemployment (Box 1.4). The subdued nature of economy-wide wage growth contrasts with the pick-up in the annual growth of minimum wages in some major economies, including this year (Figure 1.13).[2]

In part, low real wage growth per worker reflects continued sluggish labour productivity growth, with the average annual growth of OECD-wide output per employed person projected to pick up only gently in 2017-18 (Figure 1.12). However, for the typical worker, rising productivity may no longer be sufficient to raise real wages. The experience of the past two decades suggests that technological advances and productivity growth have decoupled from wage growth, especially in the lower part of the earnings

2. Coverage of minimum wages varies across countries, but the proportion of employees affected directly is generally modest in the major economies, ranging from around 15% in Germany to 8½ per cent in the United Kingdom and less than 5% for the federal minimum wage in the United States.

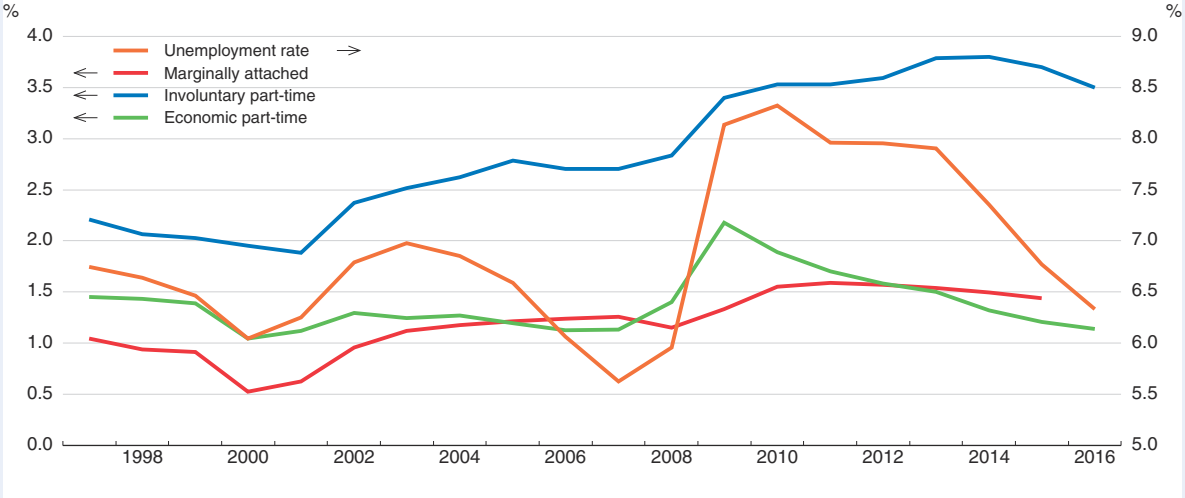
Box 1.4. **Changes in the composition of employment and unemployment are affecting average wage growth**

The weak response of wages to the declines in unemployment rates in the OECD economies is partly due to the degree of cyclical slack remaining in labour markets being greater than suggested by conventional measures of unemployment. Related changes in the composition of employment and the unemployed are also affecting economy-wide wage growth.

- Many countries still have a high level of involuntary part-time workers compared with the pre-crisis decade, implying that there is some scope to increase hours worked if demand strengthens (first figure below). In the OECD as a whole, the involuntary part-time rate in 2015-16 was over 1 percentage point higher than in the pre-crisis decade, with significantly larger increases in a number of European countries.
- There are also a comparatively high number of people only marginally attached to the labour market, but who might also return to the labour force if growth and job creation were to strengthen further. In contrast, the share of economic part-time workers has returned towards pre-crisis norms as the recovery has progressed.
- Employment rates have risen, but many new jobs are only part-time rather than full-time (second figure below), helping to hold down growth of wages per person.
- A further compositional effect is that the moderation of public pay that was introduced in a number of advanced economies in the aftermath of the crisis may have contributed to the weakness of economy-wide wage growth, both by reducing pay in an important segment of the economy and possibly by reducing wage pressure in other sectors.
- Relatedly, evidence suggests that the main impact of labour market conditions on wage growth in recent years may have occurred via the wages of newly-hired workers rather than from those of incumbent workers (OECD, 2014, Chapter 2). In part this reflects the extent to which downward nominal wage rigidity and very-low price inflation have limited the ability of firms to lower wages for incumbent workers.

High levels of involuntary part-time work add to cyclical slack in the OECD area

As a percentage of labour force



Source: OECD Economic Outlook 101 database; OECD Employment database; US Bureau of Labor Statistics; Eurostat; Statistics Bureau Japan; and OECD calculations.

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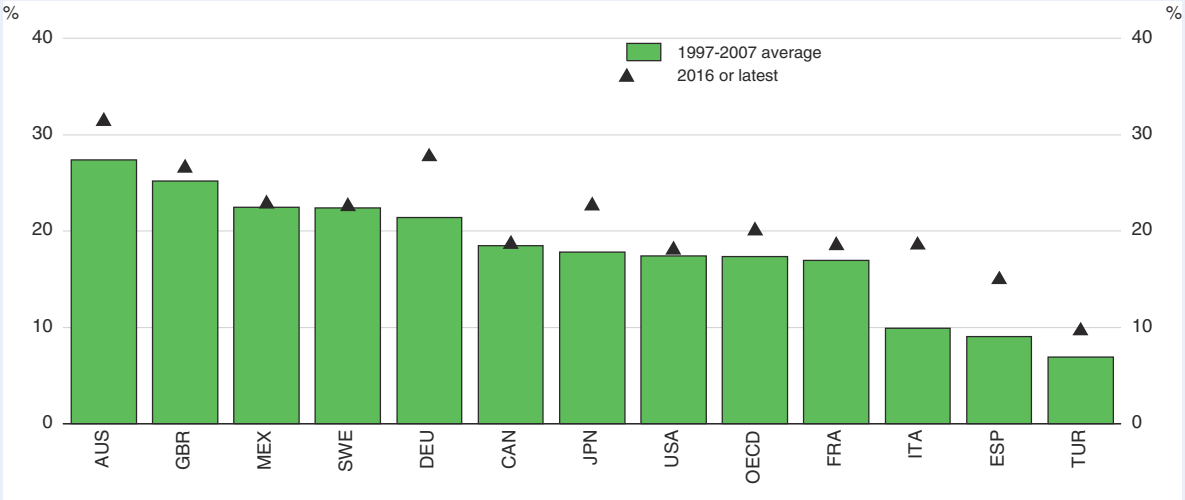
Box 1.4. **Changes in the composition of employment and unemployment are affecting average wage growth** *(cont.)*

- On the other hand, high-levels of long-term unemployment in some countries (third figure below), and the associated losses in skills and employability ("hysteresis"), should act in an offsetting manner, since the impact of the long-term unemployed on wage bargains is small (Rusticelli, 2014). This makes current modest wage growth even more striking. However, a high level of long-term unemployment also implies that labour market reforms in conjunction with policy support for demand could have strong long-term effects on output (OECD, 2016c).

The share of part-time employment is higher than before the crisis

Share of part-time employment in total employment



Note: Based on national definitions of the share of part-time employment in total employment.
Source: OECD Labour Force statistics database.

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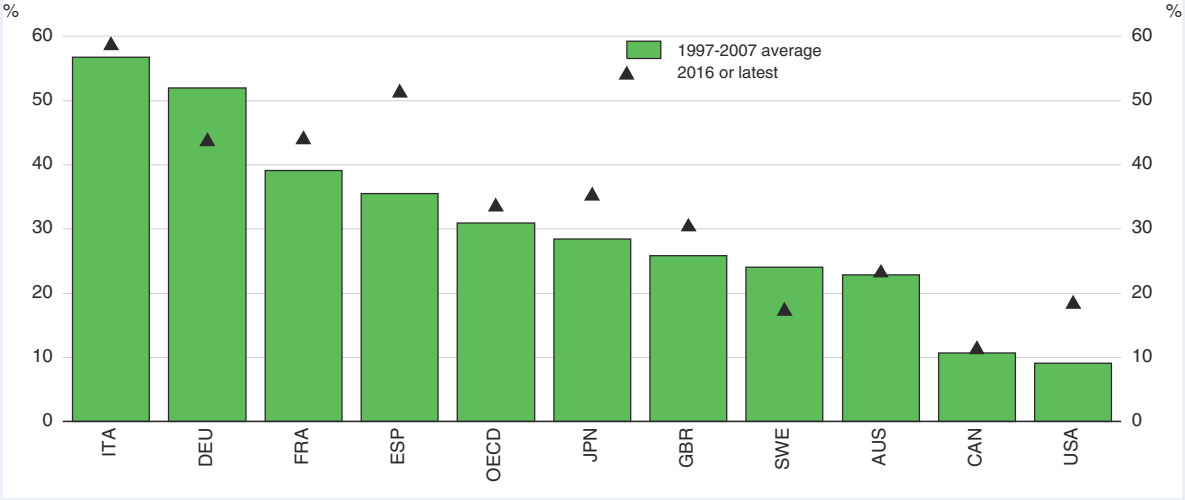
The proportion of unemployed for over one year is still above pre-crisis norms

Share of those unemployed for over 1 year in total unemployment



Source: OECD Labour Force statistics database.

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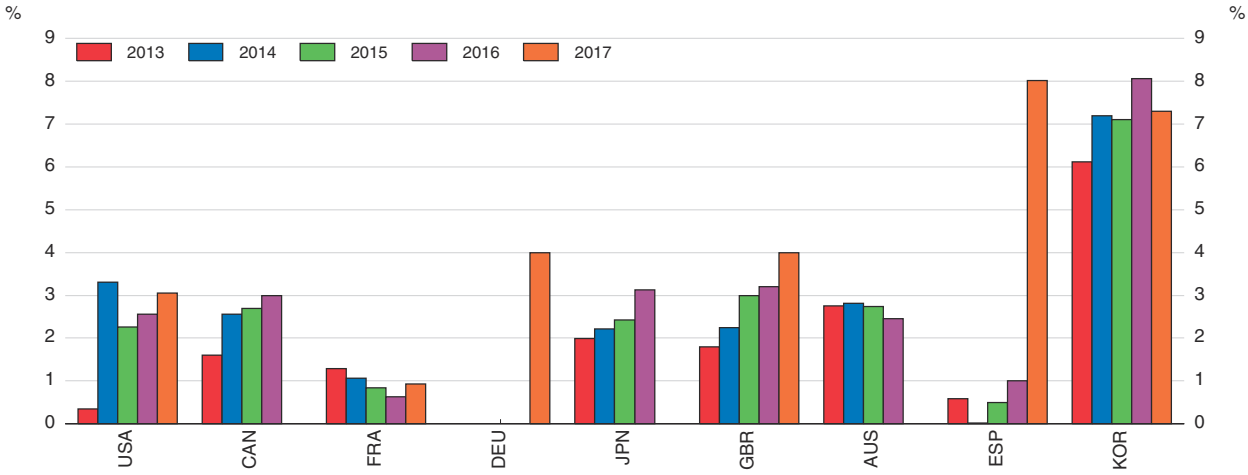
Figure 1.13. **Minimum wage growth is picking up in some countries**

Year-on-year percentage changes



Note: Estimates for the United States based on an employment-weighted average of state minimum wages, with the federal minimum wage used in those states either without a separate minimum wage or in which the state-minimum is below the federal rate.
Source: OECD Minimum Wage database; and United States Department of Labor.

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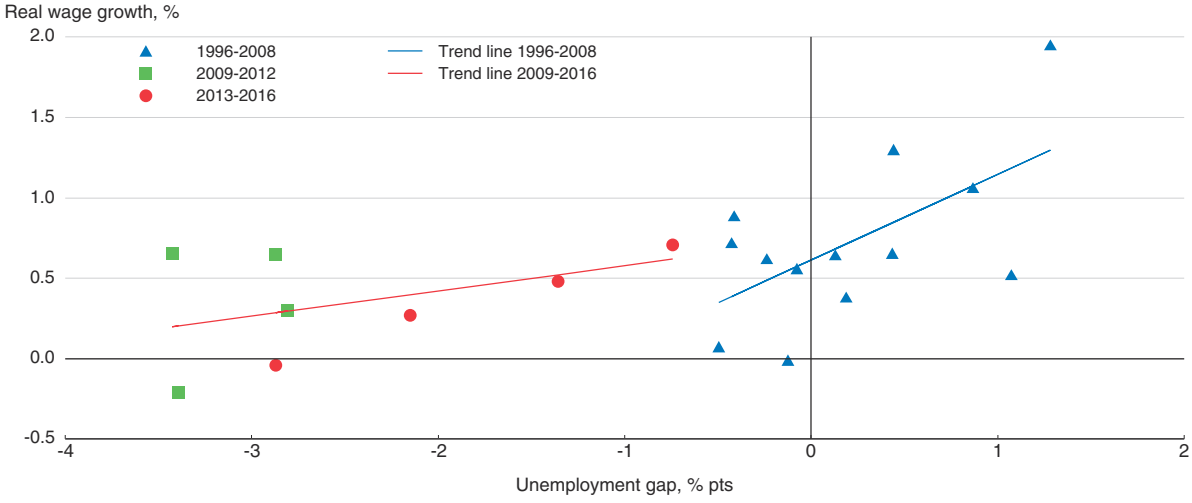
distribution, raising earnings inequality (Andrews et al., 2016; Schwellnus et al., 2017; Berlingieri et al., 2017).

There is also some evidence that a given level of cyclical slack is now associated with a smaller impact on wage growth than before the crisis, even if allowance is made for changes in involuntary and economic part-time working (Figure 1.14). An implication is

Figure 1.14. **The impact of labour market slack on wage growth has declined in the OECD**



Note: Real wages are measured as the annual growth of compensation per employee in the OECD economies deflated using the GDP deflator. The unemployment gap is the difference between the average broad unemployment rate over 1993-2007 and the current broad unemployment rate. The broad unemployment rate is the sum of the claimant unemployment rate plus the economic part-time work rate plus the involuntary part-time work rate.
Source: OECD Economic Outlook 101 database; OECD Labour Force Statistics; US Bureau of Labor Statistics; Eurostat; Statistics Bureau Japan; and OECD calculations.

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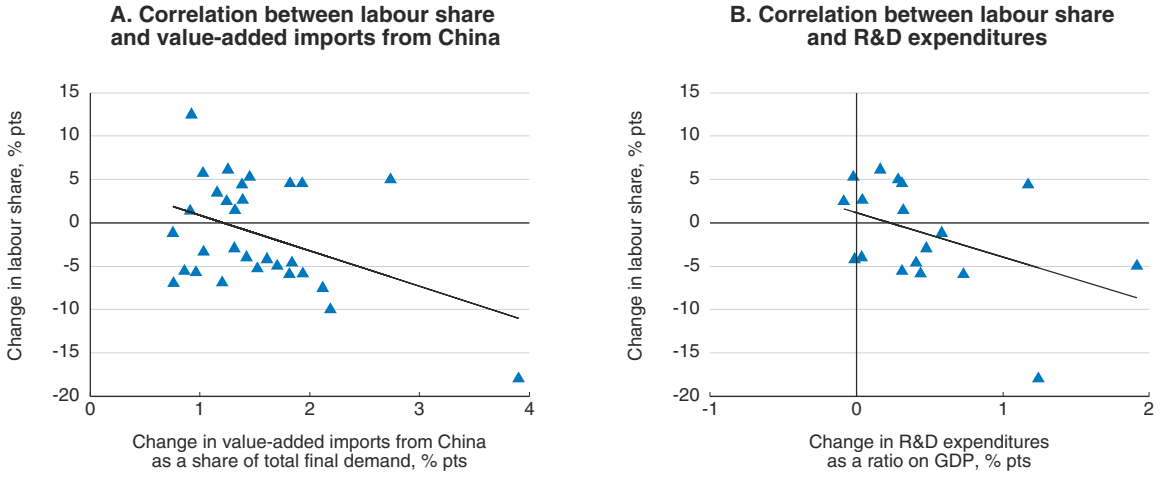
that real wage growth might remain subdued even with continued improvements in national labour markets unless there are significant non-linear effects of slack on wage growth after labour markets tighten beyond a certain point (Nalewaik, 2016).

Factors that may have reduced the responsiveness of wages to labour market slack include weaker bargaining power of workers due to rapid technological change, the automation of certain tasks, increasing global production integration and, in particular, the offshoring of low-skill labour intensive tasks (Figure 1.15). These factors are interrelated and difficult to untangle fully, since stronger trade integration directly affects productivity growth and incentives to innovate (Chapter 2; Bloom et al., 2016; Égert and Gal, 2017). Firm-level evidence suggests that both globalisation and digitalisation are associated with higher wage divergence (Berlingieri et al., 2017).

Overall, wage pressures should eventually show up as labour markets continue to tighten. However, nominal and real wage growth in the advanced economies are projected to increase only gently in 2017-18 (Figure 1.12), and remain well below pre-crisis norms. Productivity growth is subdued, labour market slack is more extensive than suggested by conventional unemployment rates and the influence of a given level of slack on real wage growth is weaker than prior to the crisis. Hence, additional policy support for demand and long-term supply is needed to eliminate fully existing labour market slack and strengthen productivity growth, thereby bringing about the durable strengthening of real wages needed to sustain consumption growth.

Figure 1.15. **Changes in trade and technology are both associated with changes in labour shares in advanced economies**

Change between 1995 and 2011, in percentage points



Source: Schwellnus et al. (2017), "The Role of Trade, Technology and Public Policies in Determining the Labour Share: Empirical Evidence", *OECD Economics Department Working Papers*, forthcoming, OECD Publishing, Paris.

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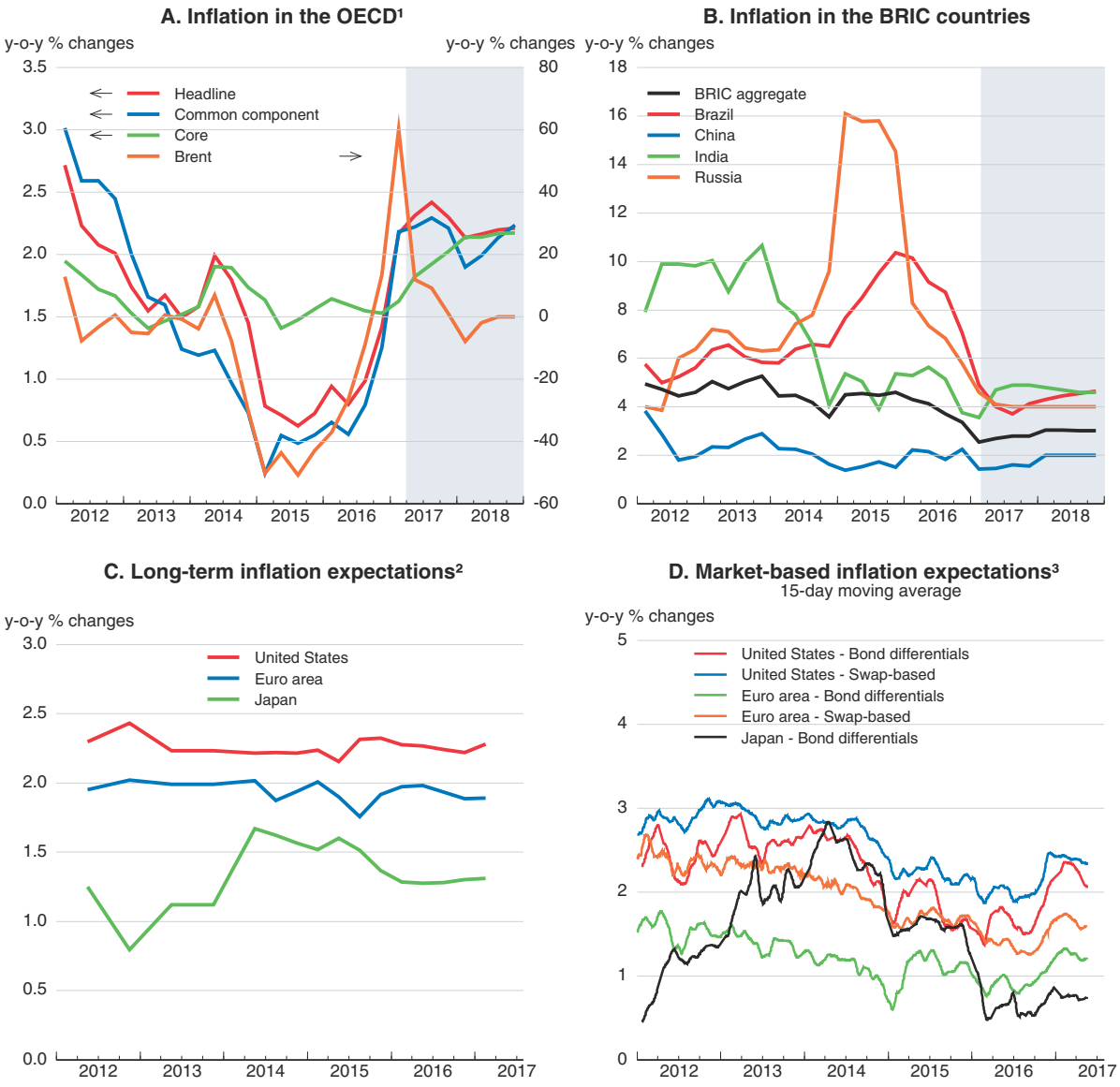
Headline inflation has risen but underlying inflationary pressures are projected to remain subdued

Higher commodity prices have boosted headline inflation in the major economies, but core inflation remains modest (Figure 1.16). Commodity prices including energy, metals and non-agricultural food commodities have risen since 2016Q3, reflecting both stronger demand and idiosyncratic supply constraints. Oil prices have increased since November,

Figure 1.16. **Inflationary pressures in the OECD and emerging market economies are projected to remain modest**



1. Based on the consumer expenditure deflator for the United States, the harmonised consumer price indices for euro area economies and the consumer price index in remaining OECD countries. The OECD average is constructed using PPP GDP weights. The OECD common component is based on the first principal component of the headline inflation series in OECD economies.
2. Inflation expectations are based on an average of 6 to 10-year ahead inflation forecasts by professional forecasters from Consensus Economics.
3. Inflation expectations implied by the yield differential are based on the difference between 10-year government benchmark bonds and inflation-indexed bonds. Swap-based inflation expectations are based on 5-year and 10-year inflation swaps.

Source: OECD Economic Outlook 101 database; Consensus Economics; Thomson Reuters; and OECD calculations.

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following the agreement of OPEC members and select non-OPEC producers to restrict near-term production levels. In contrast, survey measures of longer-term inflation expectations have remained fairly flat since 2016 in major economies, but market-based inflation expectations have moved up slightly, albeit remaining subdued by historical standards. Core inflation (excluding food and energy prices) has changed little in most

advanced economies, although the United Kingdom is a notable exception following the depreciation of sterling. In China, consumer price inflation has moderated since January, although producer prices have been increasing since early 2016, reflecting commodity price developments and reduced over-capacity, after having been on a declining trend for five years. In some other large emerging market economies, recent currency movements are having a sizeable impact on inflation, with inflation declining sharply in Brazil and Russia, but rising markedly in Turkey.

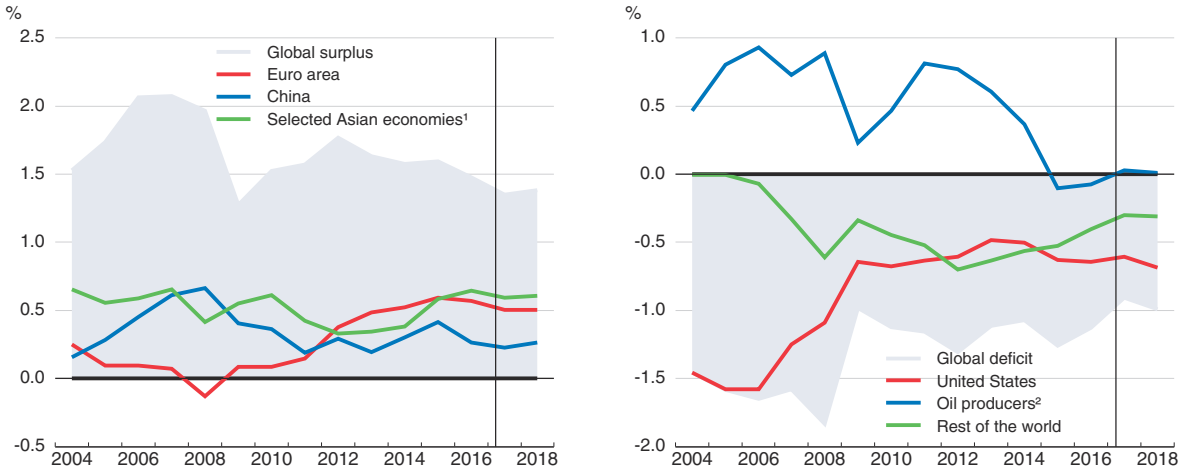
In the absence of significant further moves in commodity prices, exchange rates and inflation expectations, core inflation is projected to edge up slowly as economic slack declines in the advanced economies over the next 18 months. Inflation is projected to be around 2¼ per cent in late 2018 in the United States, where the recovery is relatively advanced, but to remain at 1% and just over 1½ per cent, respectively in Japan and the euro area. Amongst major emerging market economies, consumer price inflation is projected to remain low in China, ease in Russia and remain subdued in Brazil. In India, inflationary pressures are expected to increase from current low levels, albeit remaining within the inflation target band.

Global current account imbalances have narrowed modestly but the regional composition has changed sharply

Although current account balances are not a target for policy, examining how they have evolved can yield a perspective on the underlying demand and production imbalances which are relevant for policy. Global current account imbalances have narrowed, with the surplus counterpart well below pre-crisis levels at around 1½ per cent of world GDP in 2016 (Figure 1.17). This narrowing has been accompanied by sizeable

Figure 1.17. **The composition of global current account balances has changed**

As a percentage of world GDP



Note: Regional aggregates are calculated inclusive of intra-regional trade. The surplus and deficit part of the global current account balance may differ due to statistical discrepancies.

1. Selected Asian economies include Chinese Taipei, Hong Kong - China, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand and Vietnam.
2. Oil producers include Algeria, Angola, Azerbaijan, Bahrain, Brunei, Chad, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Qatar, Republic of Congo, Russia, Saudi Arabia, Sudan, Timor-Leste, Trinidad and Tobago, Turkmenistan, the United Arab Emirates, Venezuela and Yemen.

Source: OECD Economic Outlook 101 database.

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regional shifts. The large current account surpluses of oil-producing countries have turned into deficits, reflecting the past fall in oil prices. The Chinese surplus has narrowed, but the euro area surplus has increased. The US current account deficit narrowed until around 2013, but has since widened again, albeit remaining below pre-crisis levels.

Looking from the country perspective, changes in current account balances between 2009 and 2016 are largely driven by changes in trade in goods and services, with income and capital accounts playing a significant role only in a few countries (Figure 1.18).[3] The euro area countries, Japan and Korea have benefited from high export market growth (that increases exports) relative to total final expenditure growth (that increases imports). The opposite has been true for China. The large increase in the surplus of the euro area countries has reflected tight fiscal policy, which has weighed on domestic demand and compounded the effect of the persistent regulatory barriers on competition in the domestic market that restrain investment. In most of the countries shown, the increasing import intensity of total final expenditure, reflecting rising trade openness and the global fragmentation of production, has led to a deterioration in trade balances. Similarly, most of the countries have lost market shares, reducing the benefits from rising foreign demand, with the notable exceptions of China and Germany. Oil-importing countries, as well as Korea and some European economies, have also benefited from positive terms of trade developments, but this has acted against oil-exporting countries until recently.

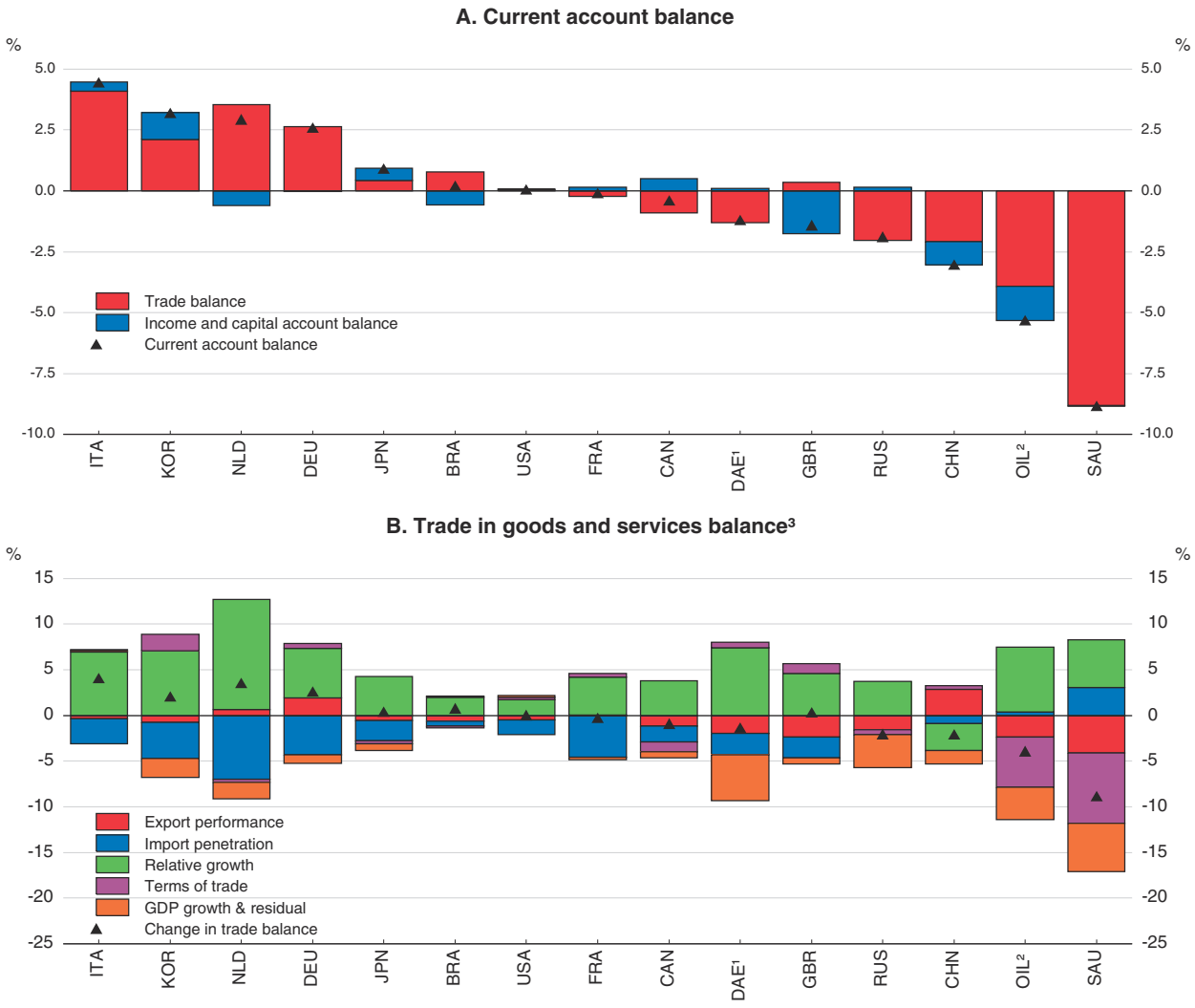
Exchange rate changes since 2009 seem to have had only a modest overall impact on trade balances. Cross-country experience suggests that an appreciation of the domestic currency in real effective terms is only weakly associated with declines in market shares over time, and vice versa (Figure 1.19).[4] Thus, the large effective appreciation of the US dollar in 2014-16 has not so far resulted in significant export market losses, and the depreciation of sterling in 2008-09 was not followed by gains in export performance. On the import side, currency appreciation seems to co-move with higher import penetration, but again the cross-country correlation is quite low. An important reason for the weak volume response to currency movements appears to be a tendency to price to markets, with profits adjusting to currency changes. The small responsiveness of trade volumes to exchange rates could also result from a still high share of imported inputs in production of goods for exports (Ollivaud et al., 2015), despite some unwinding of global value chains since the Great Recession (Haugh et al., 2016).

In view of the low responsiveness of trade flows to exchange rate moves, expenditure-switching in response to changes in the relative prices of domestic versus foreign products is unlikely to reduce trade imbalances significantly. Thus a reduction of current account surpluses will require stronger domestic demand, all else equal. Depending on country circumstances, this could involve either more private consumption or more domestic investment. For instance, in Asian emerging market economies, and in particular in China, higher domestic demand could be achieved by reducing precautionary household saving via a more generous and inclusive social security system (including public health care, pensions and unemployment benefits). In Japan and Korea, raising both

3. The large change in the United Kingdom is attributable to the fall in net income from FDI investment.
4. Country-specific error-correction models, with export performance as the dependent variable and real effective exchange rate as the explanatory variable, estimated with quarterly data from the mid-1990s, indicate a long-term and correctly signed relationship between the two variables only for a handful of countries.

Figure 1.18. **Decomposition of changes in external balances**

Changes between 2016 and 2009, as a percentage of GDP



1. Dynamic Asia Economies include Chinese Taipei, Hong Kong - China, Malaysia, the Philippines, Singapore, Thailand and Vietnam.
2. Oil producers include Algeria, Angola, Azerbaijan, Bahrain, Brunei, Chad, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Qatar, Republic of Congo, Sudan, Timor-Leste, Trinidad and Tobago, Turkmenistan, the United Arab Emirates, Venezuela and Yemen.
3. Export performance is the ratio of the growth of goods and services exports to a weighted average of the growth of import volumes in partner countries. Import penetration is the share of import volumes in total final expenditure. Relative growth is the difference between foreign demand growth and the growth of total final expenditure. The terms of trade is the ratio of export to import prices. The GDP growth and residual component measures the contribution of nominal GDP growth and the decomposition discrepancy to changes in the trade balance as a share of GDP.

Source: OECD Economic Outlook 101 database; and OECD calculations.

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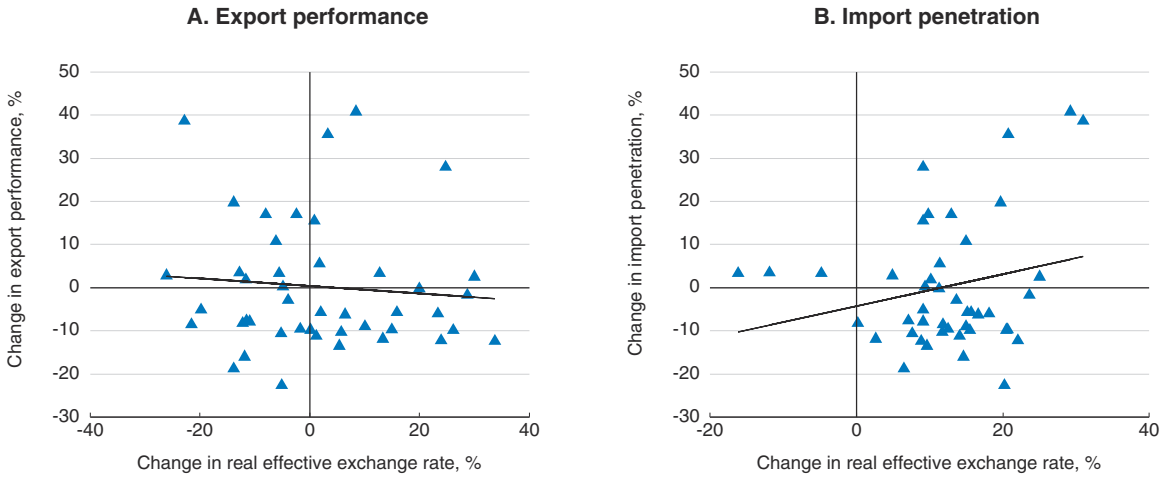
private consumption and investment is desirable. In Germany and the Netherlands, and to a lesser extent in other euro area countries, boosting private investment and easing the fiscal stance would help to reduce large current account surpluses.

By contrast, protectionism will not reduce trade imbalances but will weaken economic and productivity growth. Raising trade barriers is also likely to result in retaliation. Simulations in the OECD METRO model (OECD, 2015b) of an illustrative increase in trade

Figure 1.19. **Changes in export performance and import penetration seem not to respond strongly to changes in real effective exchange rates**



Note: Percent changes between 2016 and 2009 are calculated on annual data for 44 countries (most OECD countries and several non-OECD emerging market economies). Export performance is the ratio of the growth of goods and services exports to a weighted average of the growth of import volumes in partner countries. Import penetration is the share of import volumes in total final expenditure. A positive change in the real effective exchange rate indicates a currency appreciation.
Source: OECD Economic Outlook 101 database.

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costs on all goods (but not services) by 10 percentage points by major global trading economies (China, Europe and the United States)[5] suggest that export volumes could decline by more than import volumes in Europe and the United States (OECD, 2016c). Assuming no changes in export and import prices, this would likely result in an even larger deficit in goods trade in the United States. Moreover, such protectionist measures would also likely reduce GDP in the main trading areas by around 2½ per cent in the medium term. These negative effects could be even larger if retaliatory actions were to generate additional adverse effects on trade from disruption to global value chains, and the resulting uncertainty were to result in a slowdown of investment, leading to further drops in incomes and productivity.

Financial market disconnects and vulnerabilities could derail the recovery

Anomalies in government bond markets persist

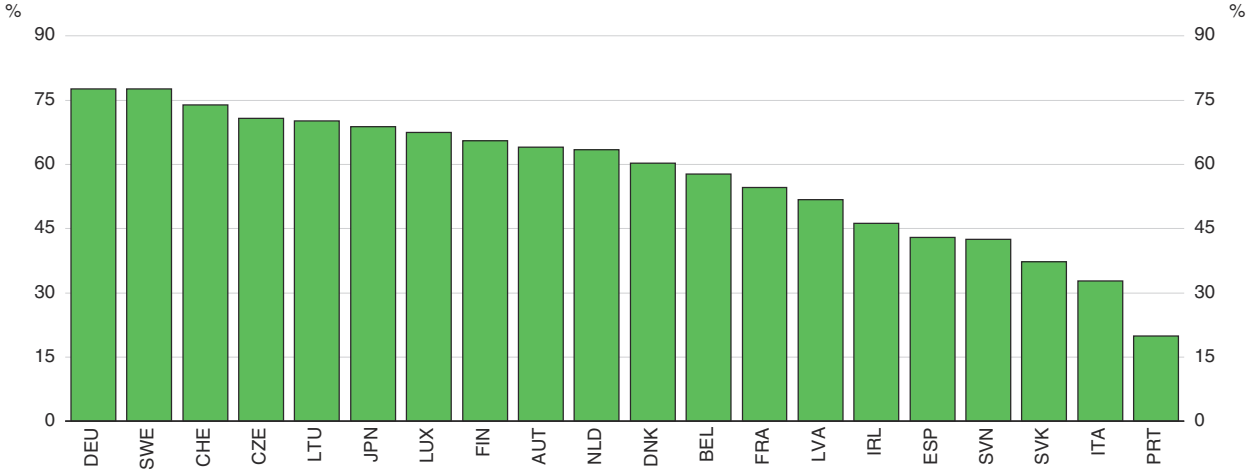
Despite only a gradual increase in long-term rates in the United States in the last year, there is still a risk of a swift snap-back. While the normalisation of interest rates in the economy is desirable with stronger GDP growth and higher inflation, the financial market volatility that may arise during the process, could have negative spillovers to other assets in the United States and elsewhere, including government and corporate bonds, equities and property prices.[6] A sudden increase in US long-term government bond yields could, for instance, happen when the Federal Reserve decides to reduce the size of its balance sheet, reversing downward pressures on term premia from earlier asset purchases (D'Amico et

5. This magnitude is roughly equivalent to an average increase of tariffs to the bound tariff rates in 2001, the year when the trade negotiations under the Doha Development Round started.
6. For instance, Rawdanowicz et al. (2017) show that, based on estimated country-specific error-correction models for G7 countries, real 10-year government bond yields are significantly influenced by foreign bond yields.

al., 2012; Li and Wei, 2014).[7] This, together with increases in policy rates, could make market participants revise their expectations of future policy interest rates excessively. So far, market indicators point to a much more gradual increase in policy rates than projected by policymakers. There is also a risk that the initial rise in bond yields could be magnified by bond sales by investors who bet on bond price gains, or by pension funds and insurance companies, as discussed below.

In Europe and Japan, a large share of government bonds still trade at negative yields (Figure 1.20). Moreover, currently around 10% of total outstanding conventional government bonds in Denmark, Japan and the Netherlands, and around 18% in Germany, have been sold with negative interest rates at auctions. This abnormal asset pricing, stemming partly from extraordinary monetary policy stimulus, has adverse implications for bond holders, in particular banks, pension funds and insurance companies (OECD, 2016c). The reaction of pension funds and life insurance companies to the low-interest rate environment could have actually amplified downward pressures on government bond yields, as they have increased demand for longer-term government securities to match the increase in their discounted future liabilities (Domanski et al., 2017). In the euro area, the ECB's Asset Purchase Programme has contributed to the widening of so called TARGET2 imbalances to record highs (De Nederlandsche Bank, 2016; Deutsche Bundesbank, 2016; ECB, 2016; Auer and Bogdanova, 2017; Box 1.5).

Figure 1.20. **The share of negative-yield bonds in total outstanding government bonds remains high**



Note: Estimated based on benchmark sovereign bond yields as of 18 May 2017.
Source: Thomson Reuters; Bloomberg; and OECD calculations.

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Equity prices have risen apparently in excess of fundamentals

Global equity prices have increased on average by more than 10% since November last year, reaching historic highs in the United States and Germany (Figure 1.21). The recent rise has been driven mainly by improved risk tolerance, following heightened risk aversion in early 2016. Prices have increased by more than expected earnings and despite an increase

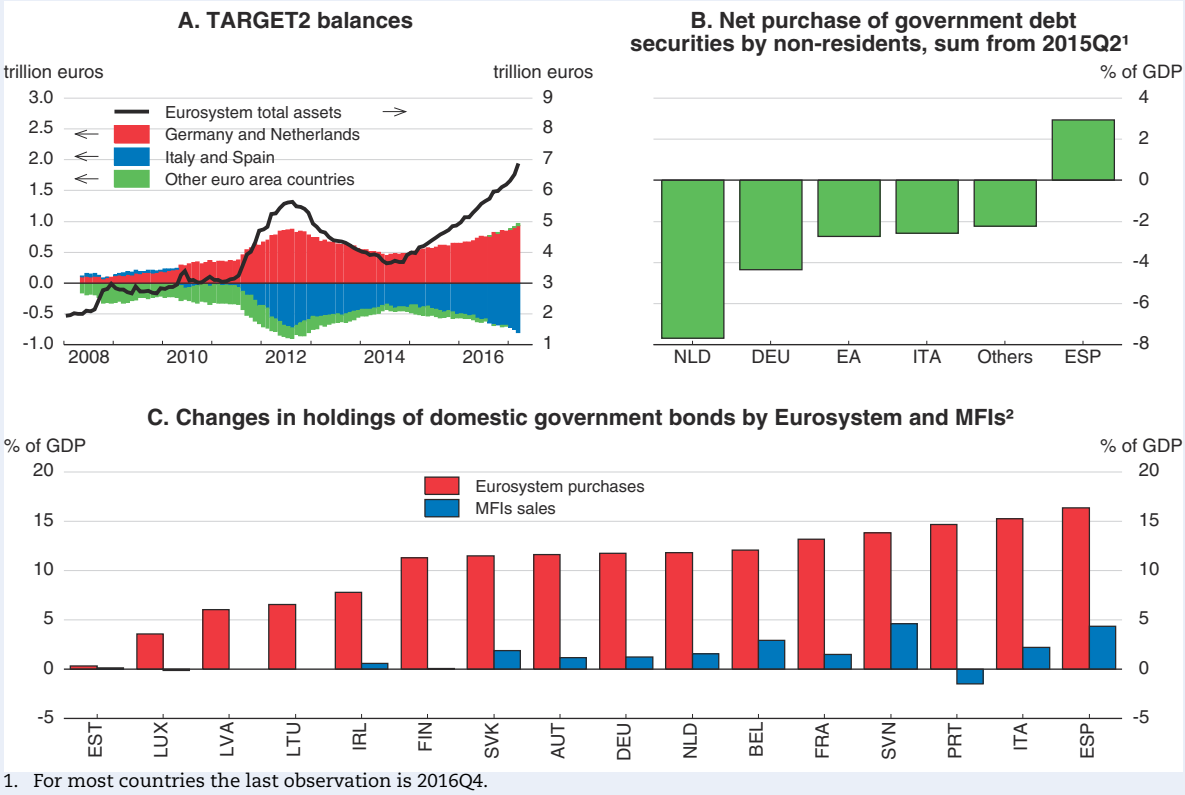
7. If term premia were to move from their recent level of close-to-zero to the average levels over the five years prior to the crisis, 10-year government bond yields could increase by around 110 basis points. Estimates of term premia are, however, highly uncertain (Li et al., 2017).

Box 1.5. **The widening of TARGET2 imbalances**

The ECB's Asset Purchase Programme (APP) is believed to have contributed to the widening of Trans-European Automated Real-Time Gross Settlement Express Transfer System (TARGET2) imbalances (De Nederlandsche Bank, 2016; Deutsche Bundesbank, 2016, ECB, 2016; Auer and Bogdanova, 2017). These imbalances have reached record high levels (figure below). Around 80% of the asset purchases by the Eurosystem have involved non-domestic counterparties, and around half of the assets have been bought from non-euro area residents with bank branches in countries with TARGET2 surpluses, like Germany and the Netherlands. This has led to cross-border flows of central bank money from countries with TARGET2 deficits at the start of the APP to countries with TARGET2 surpluses, resulting in higher TARGET2 imbalances. These cross-border flows are also reflected in balance of payments statistics, with net outflows of portfolio investment in government securities in Italy, Germany and the Netherlands (in the latter two countries likely reflecting transactions in bonds of other euro area countries by non-euro area residents).

It is not clear if the unequal distribution of non-cash central bank liquidity within the Eurosystem reflects negative risk perceptions about the euro area countries hardest hit by the crisis and the resulting government bond market fragmentation, or the willingness of non-resident investors to realise large price gains, with domestic financial institutions unwilling to sell government bonds for regulatory reasons. However, rising TARGET2 balances do not seem to reflect a widespread renewal of bank funding stress (De Nederlandsche Bank, 2016). While banks in some countries have increased lending via longer-term refinancing operations, to some extent, there has not been a rush for liquidity provisions from central banks and bank CDS spreads in the euro area countries hardest hit by the crisis have not changed much compared to their early 2015 levels.

TARGET2 balances have widened again



1. For most countries the last observation is 2016Q4.
2. Changes in government bond holdings of Monetary Financial Institutions (MFIs) between February 2015 and March 2017. They include potential changes in the valuation of government bonds.

Source: European Central Bank; IMF Balance of Payments database; and OECD calculations.

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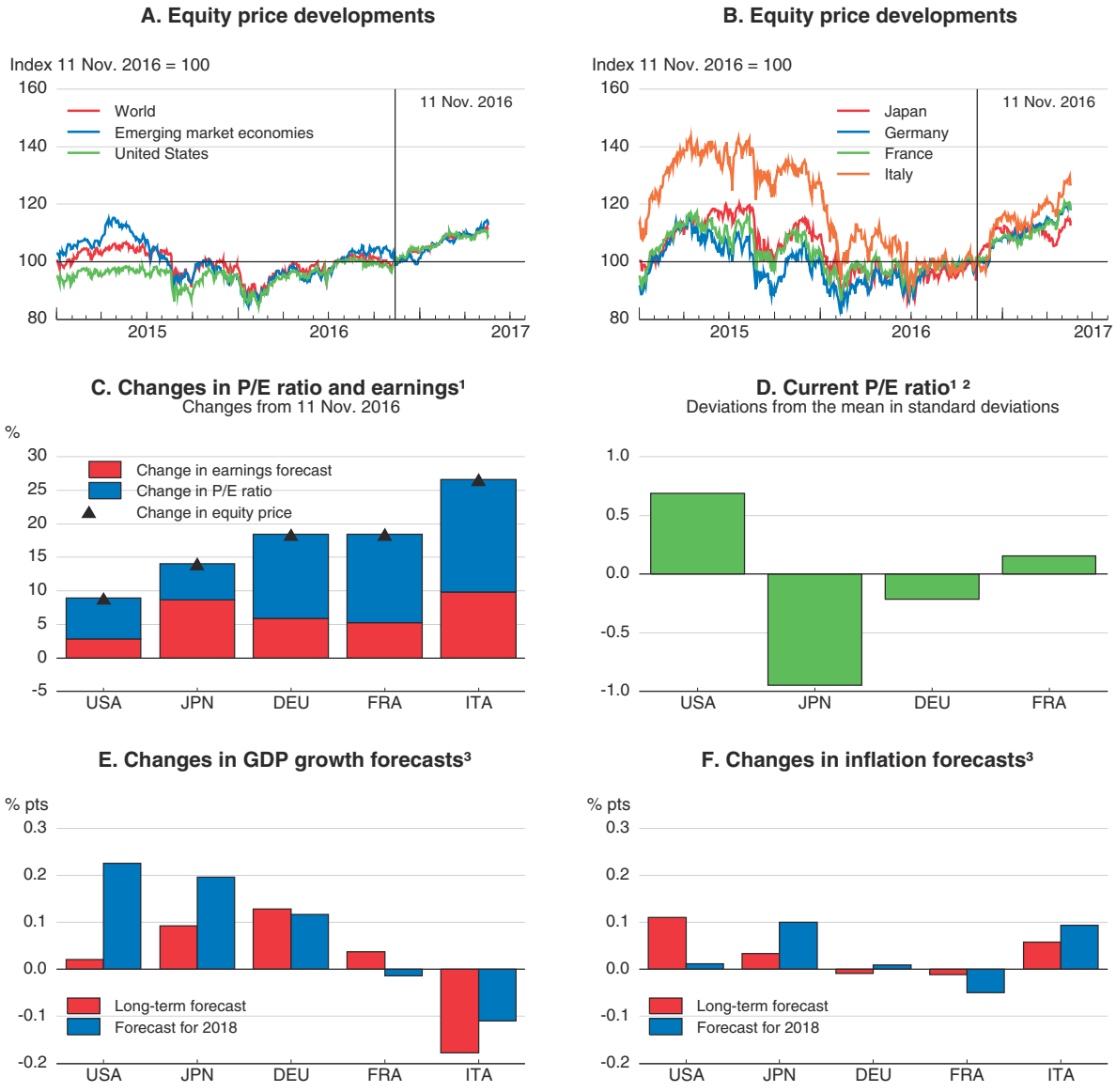
Figure 1.21. **Recent equity price gains have been driven by improved market sentiment**



1. Price-to-earnings (P/E) ratios and earnings are 12-month forward forecasts from IBES.
2. Figures represent "(current ratio - historical mean) / standard deviation". Current P/E ratios are calculated as the mean of the last 10 days. Historical means and standard deviations are calculated based on daily data for the past 30 years.
3. Changes in GDP growth and inflation forecasts from Consensus Economics between October 2016 and April 2017. Long-term forecasts refer to projections for the 6 to 10-year ahead average.

Source: Consensus Economics; Thomson Reuters; and OECD calculations.

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in bond yields. However, the positive assessment of corporate earnings might be too optimistic given small changes in short and long-term consensus projections for GDP growth and inflation over the past six months, pointing to risks of equity price corrections if earnings growth disappoints.

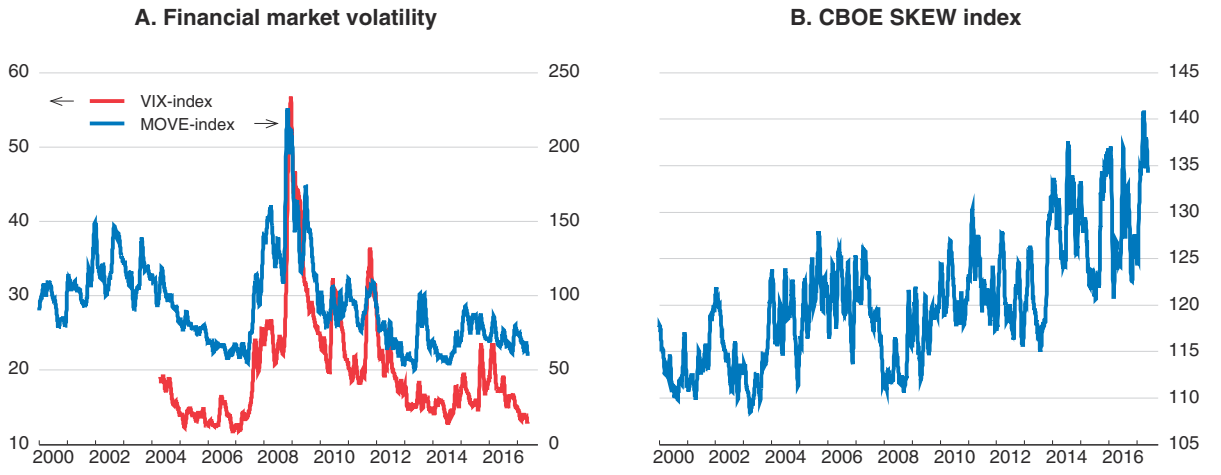
In the United States, S&P500 price-to-earnings (P/E) ratios, based on expected earnings, now significantly exceed the 30-year average. The recent increase should be viewed in the context of very strong projected earnings growth, of around 20% in the

coming 12 months. Such high growth in expected earnings may, however, exaggerate the expected benefits of possible policy initiatives, including corporate tax cuts. The rise in a widely-used metric of market valuation – the Shiller cyclically-adjusted P/E ratio which discounts recent earnings developments – to its highest level since the dot-com boom is also a worrying development.[8] Despite this, the increase in stock prices has been accompanied by low expected stock market volatility, as measured by the VIX index (Figure 1.22).

Equity prices are vulnerable to downward revisions in earnings expectations, a faster-than-expected rise in government bond yields and investor sentiment shifts. A big correction in equity prices could weigh on economic activity via wealth effects and the financial conditions for firms (though such effects appear to have weakened in recent years). Heightened financial market volatility could also spill over to other assets and countries, with negative feedback loops. In the United States, perceived risks of a significant decline in S&P500 equity prices one-month ahead, as measured by the SKEW index, have recently risen to a record high (Figure 1.22).

Figure 1.22. **Volatility has been low but perceptions of risks of large equity price declines have increased in the United States**

20-day moving average



Note: The VIX measures an expected symmetric range of movements in the S&P500 index over next 30 days. It is derived from options. The Merrill Lynch Option Volatility Estimate (MOVE) index is an equivalent of the VIX index for US treasuries. The Chicago Board Options Exchange (CBOE) SKEW is an option-based measure of the perceived risk of 30-day ahead large (two or more standard deviations) changes in returns of the S&P500. Numbers above 100 indicate a negative skew in the distribution (i.e. negative tail risk). Since the standard deviation varies over time, so does the size of expected equity price declines.
Source: Thomson Reuters.

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Buoyant house prices in some economies raise concerns about financial stability

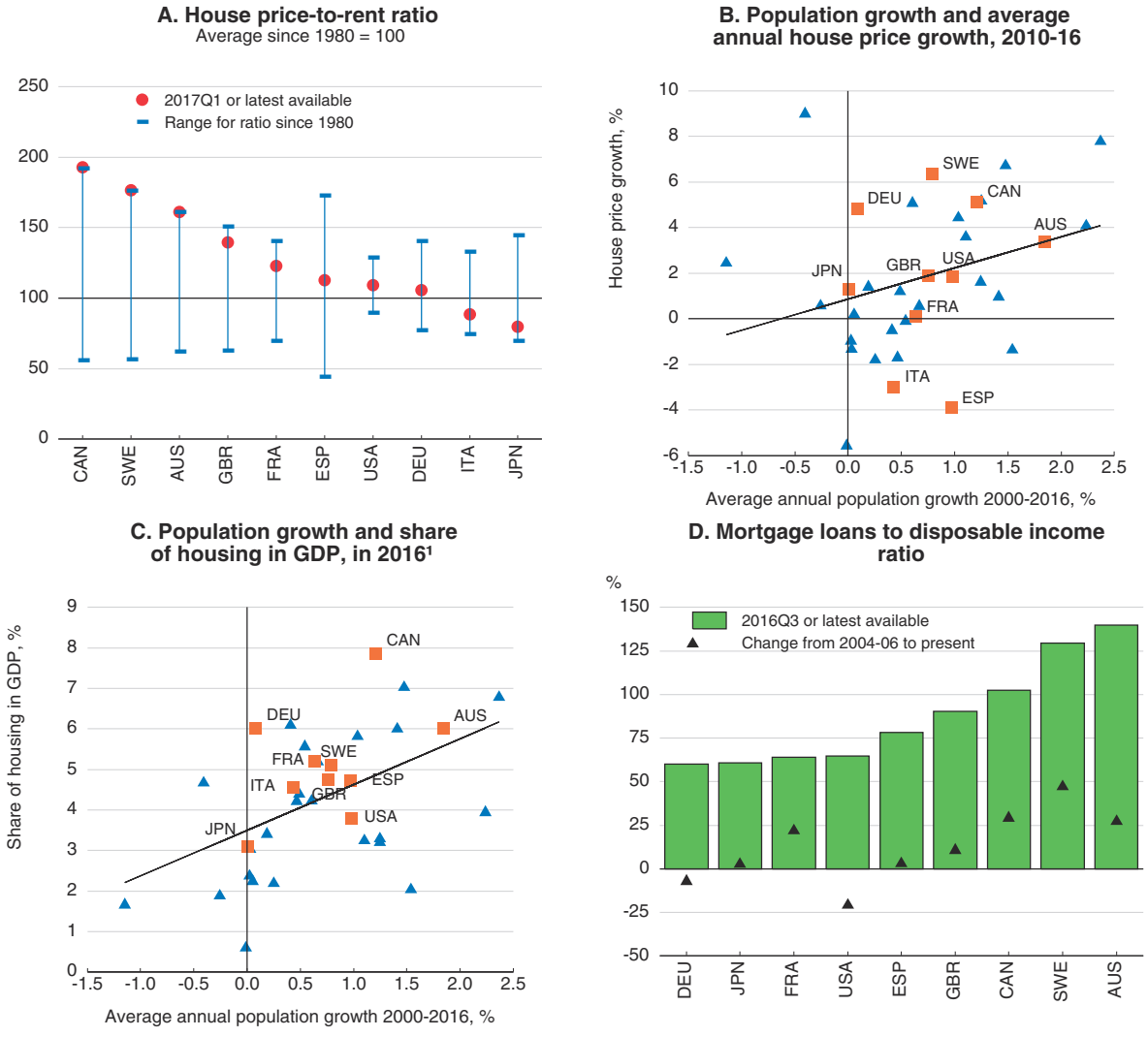
An overreliance on very expansionary monetary policy in recent years, and the associated extended period of low interest rates, has led to vulnerabilities associated with rising debt levels, elevated asset prices and a search for yield. Some advanced economies

8. The ratio has real equity prices in the numerator and trailing 10-year average real earnings in the denominator, and hence is still influenced by the earnings slump in the 2008/09 recession, boosting the overall ratio.

have experienced rapid house price growth, including Canada, Sweden, Australia and the United Kingdom. In these countries, house prices are elevated relative to rents (i.e. rental yields are low), suggesting overvaluation (Figure 1.23, Panel A). As past experience has shown, rapid house price gains can be a precursor of an economic downturn, especially when they occur simultaneously in a large number of economies (Hermansen and Röhn, 2017).

While strong population growth in recent years in these countries has contributed to buoyant house price growth, house price inflation in some has been comparatively high even allowing for population increases (Figure 1.23, Panel B). Residential investment as a share of GDP also tends to be higher in countries with fast population growth, to fill potential housing shortages; however, investment is at unusually high levels in some

Figure 1.23. **House prices, residential investment and mortgage debt**



1. The share of housing investment in GDP at current prices.

Source: OECD Economic Outlook 101 database; OECD Analytical House Price database; OECD Main Economic Indicators database; European Central Bank; and OECD calculations.

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countries, such as Canada, potentially increasing such countries' exposure to any housing market correction (Figure 1.23, Panel C).

Moreover, mortgage debt (and overall debt) relative to disposable incomes remain high in many of the countries with rapid house price growth in recent years, and have risen further from pre-crisis levels. This increases financial stability risks if rising interest rates or a decline in income were to trigger a housing market correction. While additional macro-prudential measures have been implemented in some countries to reduce risks and strengthen the resilience of the banking sector, further targeted actions may be necessary. In some countries a comprehensive approach, including measures to facilitate supply and tax policy changes (e.g. eliminating mortgage interest deductibility), could help to ease upward pressures on house prices and credit growth (OECD, 2017c, d). A rebalancing of policy support from monetary to fiscal policy would also help to reduce housing market pressures.

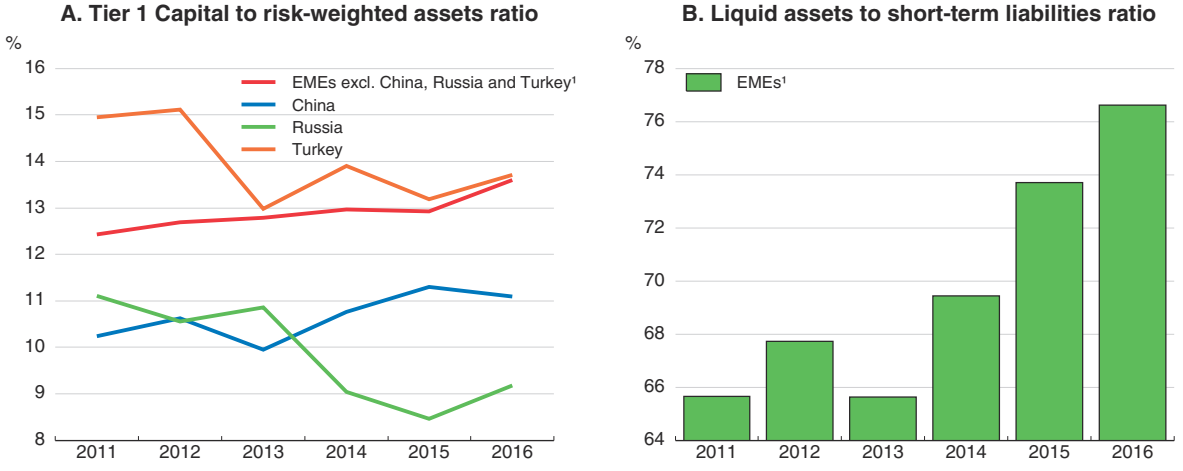
Vulnerabilities in some emerging market economies pose important risks

Emerging market economies have made some progress in addressing financial vulnerabilities. Bank Tier 1 capital ratios have gradually improved in recent years, reaching more comfortable levels. In 2016, bank capitalisation strengthened even in countries exposed to financial distress (like Brazil, Russia and Turkey), although it declined slightly in China (Figure 1.24). Moreover, capital ratios have improved primarily as a result of recapitalisation due to increased regulatory scrutiny, rather than by adjusting the composition of assets towards those with lower risk-weights. Deposit-taking institutions have also raised their liquidity ratios, increasing resilience to possible adverse liquidity shocks.

In China, the monetary authorities have raised a number of money market rates this year to address strong increases in property prices and to curtail funding for leveraged

Figure 1.24. **Capital and liquidity ratios have improved in emerging market economies**

As a percentage of GDP



1. EMEs include Argentina, Brazil, China, Costa Rica, Colombia, India, Indonesia, Mexico, Russia, South Africa and Turkey. Simple average of individual EMEs' ratios.

Source: IMF Financial Soundness Indicators; and OECD calculations.

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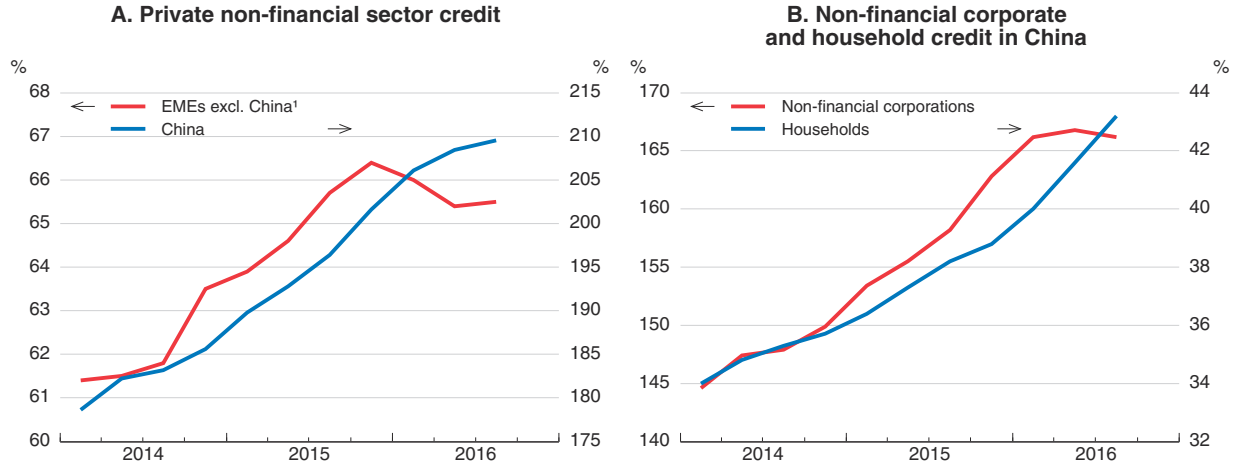
investment in asset markets. The new macro-prudential framework imposes the same capital requirement for wealth management products as for standard lending activities, thereby reducing the issuance of such products. Regulatory tightening, involving so-called "entrusted" investments,[9] has led to a significant bond market sell-off and a subdued performance in stock markets since November 2016. These developments demonstrate the challenges for regulators in reducing financial risks in shadow market activities without destabilising financial markets or growth prospects.

Financial vulnerabilities persist in some EMEs from past credit growth. Favourable financial conditions have fuelled rapid credit growth in several EMEs over recent years and the debt of households and non-financial companies remains high by historical standards, exposing these economies to economic and interest rate shocks. Credit dynamics in EMEs appear to have slowed in 2016, possibly reflecting a global tightening of financial conditions in addition to country-specific factors (Figure 1.25). Deleveraging has been particularly pronounced in Russia and Brazil. At the same time, declining profit margins in many EMEs increase their potential exposure to negative demand shocks at a time when effective policy responses could be constrained. Despite fairly-well capitalised intermediaries, the rise in non-performing loans in India and Russia might start to test the stability of the banking system, with potential negative feedback loops with the real economy (Figure 1.26).

Private non-financial sector credit has stabilised at high levels relative to GDP in China, due to a reduction in the growth of credit to non-financial corporations and rising nominal GDP growth. However, debt remains high. In event of distress, the ample use of

Figure 1.25. **Outstanding private credit has declined in emerging market economies outside China**

As a percentage of GDP



1. EMEs include Argentina, Brazil, China, Colombia, India, Indonesia, Malaysia, Mexico, Russia, South Africa and Turkey. Simple average of individual EMEs' ratios.

Source: Bank for International Settlements; and OECD calculations.

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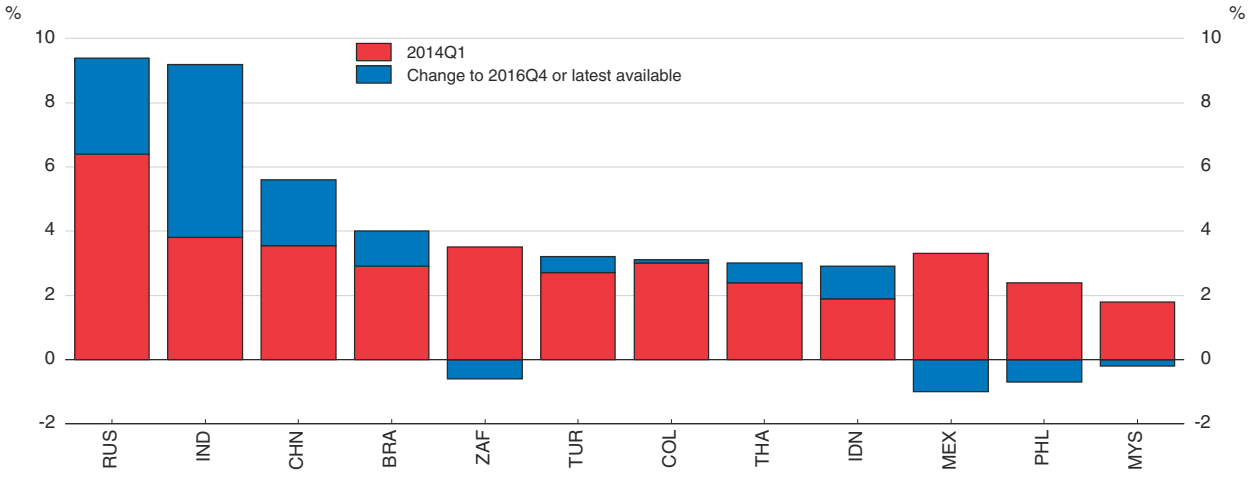
9. Funds that Chinese banks divert to the poorly regulated and opaque external asset management sector.

Figure 1.26. **Non-performing loans are rising in some emerging market economies**

As a percentage of gross loans



Note: China includes 'special mention' loans.
Source: China Banking Regulatory Commission; International Monetary Fund; and OECD calculations.

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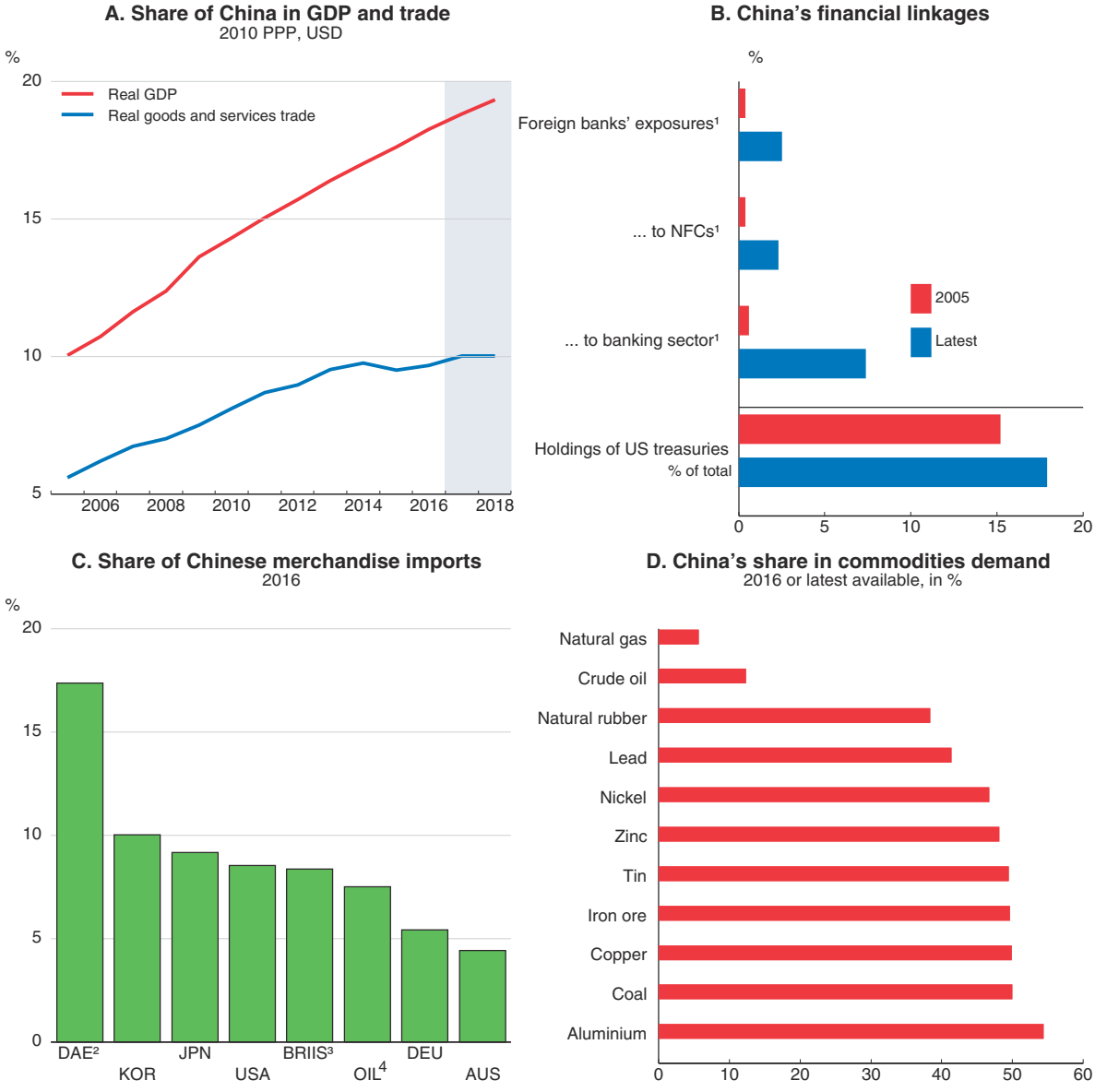
cross-guaranteed loans – the practice of companies in the same region of offering guarantees for each other's debt – could trigger a chain reaction, transmitting default risk and uncertainty even to economically viable firms.

If this were to trigger an abrupt weakening of domestic demand growth, it would have adverse effects for the global economy (OECD, 2015c).[10] China has a significant role in global markets, accounting for around 10% of global trade in goods and services, and over one-sixth of global output (in PPP terms) (Figure 1.27, Panel A). Cross-border financial linkages with China have also risen over time (Figure 1.27, Panel B). Softer import demand in China would have adverse effects particularly on other Asian economies, including Japan and Korea, reflecting the integrated nature of manufacturing supply chains in East and South-East Asia (Figure 1.27, Panel C). Direct trade exposures to China are generally somewhat weaker in the United States and the euro area, although both economies are more heavily exposed to weaker demand in China's main trading partners. There would also be marked effects in most commodity markets, given the large proportion of demand accounted for by China (Figure 1.27, Panel D), likely resulting in markedly lower commodity prices and lower export revenues for most commodity producers.

The external position of many EMEs also makes them vulnerable to any changes in global interest rates and financial cycles that result in capital flow reversals and sharp exchange rate adjustments. Depreciation of domestic currencies increases indebtedness via valuation effects and generally imposes higher servicing costs on foreign currency debt. This effect could be particularly severe in countries characterised by a gap between

10. Estimates in OECD (2015c) suggest that a reduction of 2 percentage points in Chinese domestic demand growth in two successive years, augmented by global financial stresses and increases in risk premia, could reduce OECD GDP growth by around ½ percentage point in both years, and global growth by around 0.7 percentage point per year.

Figure 1.27. **China's linkages with the global economy have increased**



1. Share of loans to China in total foreign loans of all BIS reporting banks, on an ultimate risk basis.
2. Dynamic Asia Economies include Chinese Taipei, Hong Kong - China, Malaysia, the Philippines, Singapore, Thailand and Vietnam.
3. Brazil, India, Indonesia, Russia and South Africa.
4. Oil producers include Algeria, Angola, Azerbaijan, Bahrain, Brunei, Chad, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Qatar, Republic of Congo, Saudi Arabia, Sudan, Timor-Leste, Trinidad and Tobago, Turkmenistan, the United Arab Emirates, Venezuela and Yemen.

Source: OECD Economic Outlook 101 database; Bank for International Settlements; US Department of Treasury International Capital System; IMF Direction of Trade Statistics; International Energy Agency (2017); World Bank Group (2017); and OECD calculations.

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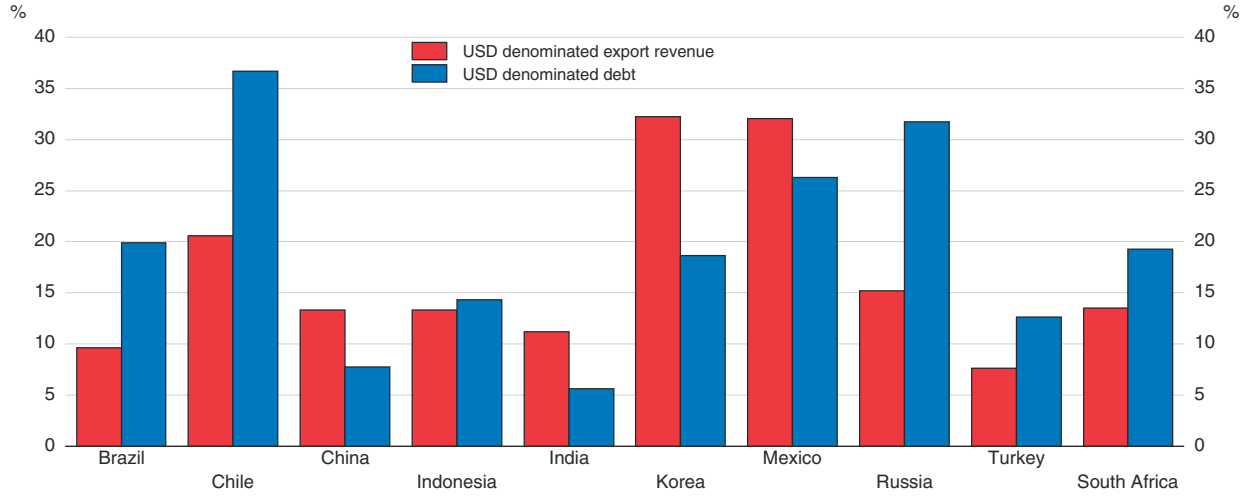
US-dollar denominated debt and export revenues (Figure 1.28). Looking ahead, the expected reduction in the US Federal Reserve's total assets and further increases in policy interest rates may result in substantial volatility in currency and bond markets.

Figure 1.28. **US-dollar denominated debt and export revenue**

As a percentage of GDP



Note: 2016Q4 estimate of the US dollar (USD) denominated debt of non-bank borrowers. This includes international bonds issued by non-banks (by nationality i.e. including bonds issued by offshore affiliates of domestic non-banks); foreign bank cross-border USD claims (loans and debt securities) on domestic non-banks; local USD claims of domestic banks on domestic non-banks; and cross-border USD claims of domestic banks banks on foreign non-banks. The latter is a proxy for USD loans to non-bank offshore affiliates, and may thus overstate the ultimate USD debt of domestic non-banks. The value of local and cross-border non-bank USD debt is approximated using bank claims on non-banks as a share of total bank claims and total bank USD claims on banks and non-banks. In China, the USD component of local bank cross-border claims on non-banks is assumed to be 50% of the total cross-border USD claims of local banks. Estimates for Indonesia, India, and Turkey do not include domestic bank USD claims on local and cross-border non-banks. US-dollar denominated export revenue is given by merchandise exports invoiced in US dollars in 2016. Estimates of the USD share of exports are based on Gopinath (2016) for all countries, except Chile (based on Cravino, 2014) and China and Russia (national sources).

Source: OECD Economic Outlook 101 database; Bank for International Settlements locational banking statistics; Bank for International Settlements debt securities statistics; IMF International Financial Statistics; The Central Bank of the Russian Federation; and OECD calculations.

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Policies for sustained and inclusive growth

A comprehensive and collective policy response is needed to durably exit the global low-growth trap, manage risks and help ensure that the benefits of technological progress and globalisation are more broadly shared. Rebalancing of the policy mix towards fiscal policy initiatives and structural reform packages would reduce the burden on monetary policy, especially in advanced economies, and help to catalyse the improvements in business investment and productivity that are needed to support stronger real wage and potential output growth. In turn, stronger demand growth would also help ease the pressures arising from financial vulnerabilities. Collective fiscal and structural efforts would have a greater impact than individual efforts, and would be aided by clear and longer-term commitments to policies and frameworks, including through international coordination.

Monetary policy stimulus should be reduced gradually

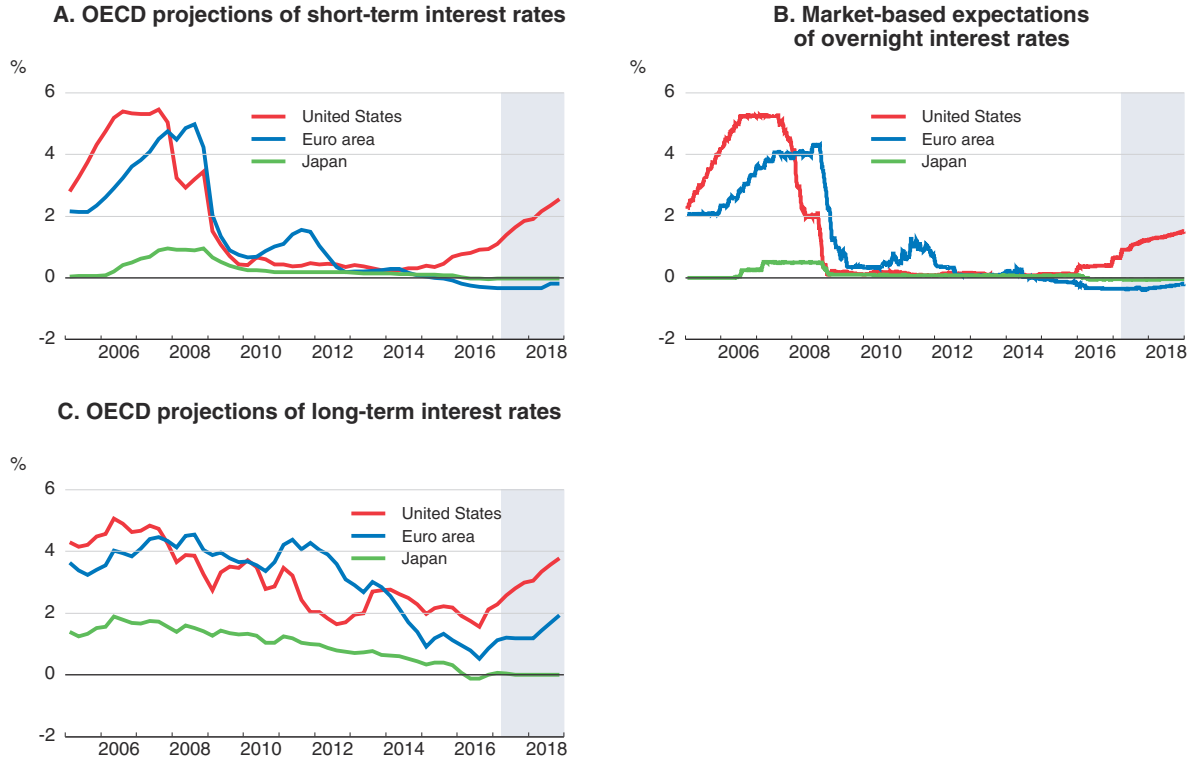
The monetary policy stance has continued to diverge among the main OECD areas.[11] Further divergence is likely over the coming 18 months, involving both policy rates and the

11. Since November 2016, the US Federal Reserve has increased policy interest rates on two occasions by a cumulative 50 basis points, while the policy stance has been broadly unchanged in the euro area and Japan. The European Central Bank has reduced monthly asset purchases from 80 to 60 billion euros from April but is expected to buy assets for longer, at least until end-2017. It has also adjusted the modalities of asset purchases to ensure their smooth implementation. The Bank of Japan has continued the yield curve control framework, which targets the 10-year government bond yield rather than the amount of bond purchases.

size of the balance sheet of central banks (Figure 1.29), with policy settings depending on fiscal, financial and economic developments.

- A further gradual reduction of monetary stimulus is desirable in the United States. With inflation projected to be a little above the inflation target through 2018 and shrinking spare capacity in the labour market, the policy rate should be raised broadly in line with median expectations of FOMC members, reaching around 2.25% by the end of the projection horizon. With respect to its security holdings, the Federal Reserve will need to provide investors with more information on how it intends to attain the goals set out in its September 2014 policy normalisation principle, including plans to reduce security holdings to a level of "no more than necessary to implement monetary policy efficiently and effectively".[12]
- In the euro area, with core inflation projected to slowly approach the inflation target by end-2018, the European Central Bank should gradually taper asset purchases in 2018. Inflation developments also warrant a gradual phasing out of the negative interest rate policy; in particular, the negative deposit rate could be raised towards the end of 2018 to make the policy rate corridor symmetric again.

Figure 1.29. **Interest rates are expected to diverge among the main OECD areas**



Source: OECD Economic Outlook 101 database; Bloomberg; and OECD calculations.

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12. The Federal Reserve could opt to maintain a sizeable balance sheet and control market interest rates via interest rates paid on excess reserves (i.e. so-called floor system), see Inaba et al. (2015).

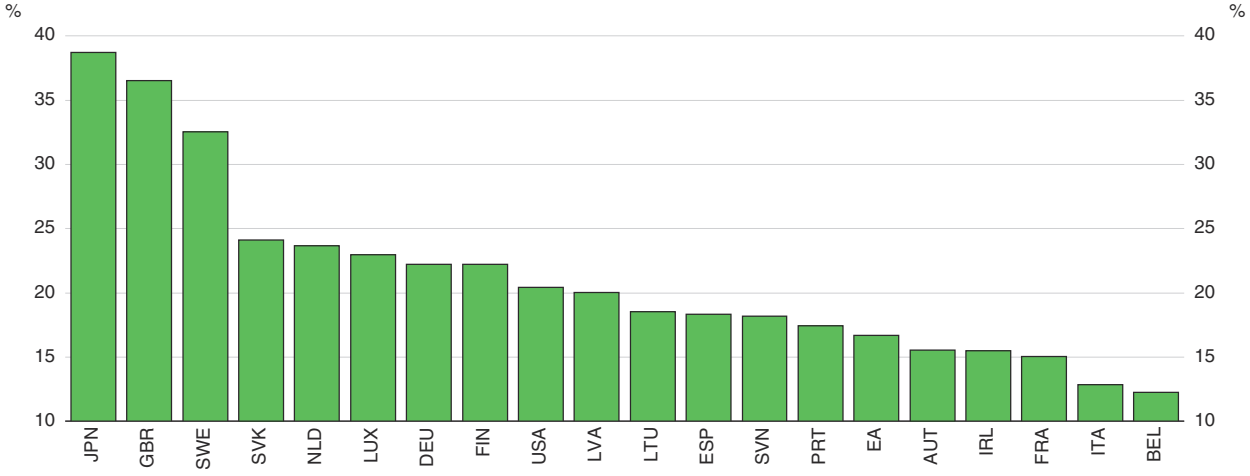
- In contrast, maintaining the stimulative stance is warranted in Japan, given that inflation is projected to remain below the inflation target. The Bank of Japan needs to carefully monitor the potential side effects of its policies, especially as it already holds a sizeable share of government bonds (Figure 1.30).

Monetary policy is assumed to ease in a few emerging market economies but remains dependent on specific circumstances including from domestic market and external forces.

- In China, the monetary policy stance is assumed to remain neutral but some additional measures to address financial stability risks are likely. Despite more stringent regulation of interbank activities by the China Banking Regulatory Commission, further measures to curb shadow banking are needed as risks persist, including increased inter-bank borrowing with sub-standard collateral or without collateral at all.
- Countries whose currencies have recently appreciated and where current and expected inflation has been falling, like Brazil and Russia, have scope to ease monetary policy. India and Indonesia have less room to cut policy interest rates in the near term as inflation is expected to remain broadly unchanged and growth is expected to continue to be strong, and, in India, inflation expectations have been high.
- On the other hand, Turkey and South Africa have no scope to ease the monetary policy stance as inflation is expected to remain high, partly due to the recent depreciation of their currencies and domestic uncertainties.

Figure 1.30. **Several central banks have become dominant holders of domestic government bonds**

Government bonds held by central banks as a per cent of government debt securities, as of 2017Q1[1]



Note: For the United States, marketable treasury securities, excluding treasury bills, held by the Federal Reserve as a share of outstanding marketable treasury securities, excluding treasury bills, at market value. For the United Kingdom, Asset Purchase Facility holdings as a share of outstanding (conventional) gilts, at market value. For Japan, government bonds held by the Bank of Japan as a share of outstanding treasury securities, excluding treasury discount bills and including FILP bonds, at market value. For the euro area countries, cumulative net purchases of government bonds in the Eurosystem Public Sector Purchase Programme at book value as a share of outstanding general government bonds at face value. For the euro area aggregate, the numerator and the denominator of the share are sums of the respective values for all euro area countries. For Sweden, the planned purchases of government bonds (275 billion SEK by mid-2017) as a share of outstanding government bonds issued in Swedish krona in March 2017, at face value.

1. 2016Q4 for Japan, the United Kingdom and the United States.

Source: Board of Governors of the Federal Reserve System; Bank of Japan; Sveriges Riksbank; UK Debt Management Office; European Central Bank; and OECD calculations.

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Countries with rapid increases in house prices and household debt should consider implementing or tightening prudential policies to enhance resilience. While these should help contain the rise in property prices, even very strict measures may not be sufficient in practice to check continued increases in house prices fully in the near term.[13] Rebalancing the policy mix and reducing monetary policy support would also help address vulnerabilities (as discussed above). In addition, authorities should implement structural measures to improve the availability of housing.

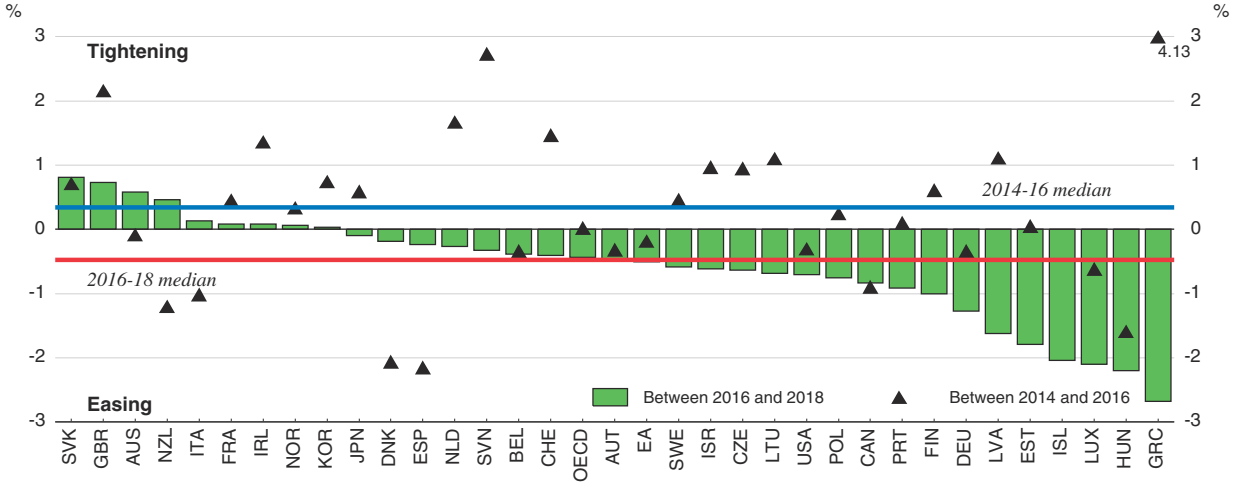
Fiscal initiatives and structural reforms should be accelerated

The fiscal policy stance is now easing modestly in a number of countries, with the stimulus over 2017-18 now projected to be larger than expected last year. Following an estimated fiscal easing in 2016, a further stimulus of at least around ½ per cent of potential GDP is expected until 2018 in nearly half of the OECD countries, including Canada, the United States, Germany and several other European economies (Figure 1.31). Despite discretionary measures to ease the fiscal stance, overall budget balances are expected to deteriorate only slightly or even improve. This stems from higher fiscal revenues and lower expenditures as a result of stronger economic growth, as well as smaller net interest payments.

A more active use of fiscal and structural policies is needed to boost potential output and support aggregate demand, given waning benefits from monetary policy support. Although interest rates have increased in some areas, they remain low and thus provide an opportunity to implement effective fiscal initiatives and reforms with beneficial effects on current and potential growth without compromising long-term debt sustainability (OECD, 2016c). In a few countries, including Japan, such productivity-enhancing fiscal initiatives should be budget-neutral.

Figure 1.31. **The fiscal stance is expected to ease in many OECD countries**

Change in the underlying primary balance, as a percentage of potential GDP



Source: OECD Economic Outlook 101 database; and OECD calculations.

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13. Akinci and Olmstead-Rumsey (2015) find that macro-prudential measures, especially ones directly targeted at limiting housing credit growth, are associated with lower house price inflation. However, Cerutti et al. (2015) suggest that macro-prudential measures are less effective in more developed and open economies, as their usage can be offset by greater cross-border borrowing.

These initiatives and reforms should be used to help tackle the barriers to achieving long-term inclusive growth. Structural reforms with fiscal implications should be considered as part of the overall fiscal stance. Depending on the country concerned, the fiscal measures could include increasing spending on hard, soft and remedial infrastructure investment and other measures that add to demand and enhance supply (Table 1.1).[14] Such initiatives are particularly desirable given that many countries cut productive spending since the Great Recession, although complementary improvements in effectiveness are also important to avoid pro-cyclical fiscal policy (Figure 1.32; Box 1.6). So far, most OECD countries are not expected to increase government fixed investment relative to GDP in 2017-18, with the government investment share projected to remain below pre-crisis levels in several euro area countries, Japan and the United States. The benefits of fiscal initiatives would be enhanced by cross-country spillovers if countries were to collectively undertake fiscal initiatives with a

Table 1.1. **Effects of public spending reforms on growth and equity**

Policy	Growth	Income of the poor	Countries with scope for gains and recommended actions
Increasing government effectiveness	+	+	FRA, GRC, HUN, ITA, SVN
Increasing education outcomes	+	+	CHL, GRC, MEX, PRT, TUR
Increasing public investment (including R&D)	+	+	BEL, GBR, IRL, ISR, ITA, MEX, USA
Increasing family benefits	0	+	CHE, GRC, USA
Decreasing public subsidies	+	0	CHE

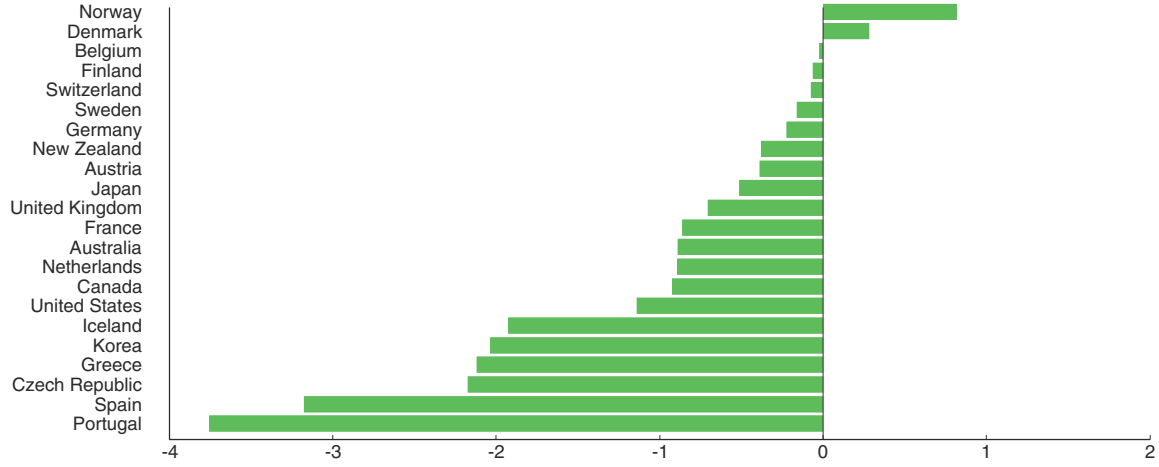
Note: + stands for a positively significant impact, and – for a negatively significant impact. The countries identified are those with the highest estimated scope for gains from reforms in each category and in which the reform is identified as a priority for the country in 2017.

Source: Fournier and Johansson (2016), "The Effect of the Size and the Mix of Public Spending on Growth and Inequality", *OECD Economics Department Working Papers*, No. 1344, OECD Publishing, Paris; OECD (2017e), *Economic Policy Reforms 2017: Going for Growth*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933505068

Figure 1.32. **Many governments have reduced public investment since the crisis**

Change in the government investment-to-GDP ratio between 2016 and the 2008-10 peak, in %



Source: OECD Economic Outlook 101 database; and OECD calculations.

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14. Stylised simulations in Mourougane et al. (2016) show that several OECD countries could debt finance spending of this type, amounting to 0.5% of GDP, for 3-4 years on average and boost output without deteriorating debt-to-GDP ratios in the long term.

Box 1.6. **The quality of public spending deteriorates during deep and long recessions**

During the global financial crisis, a negative demand shock created pressure on public finances. While priority could have been given to preserving spending in areas with the highest benefits for inclusive growth, governments typically reacted with cuts to the most productive forms of spending. Such a fall in government productive spending can not only amplify the crisis but, if sustained, can also reduce potential output.

New indicators of the quality of public spending have been developed to capture the extent to which public spending supports inclusive growth (Bloch and Fournier, 2017). The headline indicator combines two sub-indicators. The first one reflects the public spending mix. The second one combines information on the size and effectiveness of government.

Primary public spending is broken down into ten separate categories (investment, current spending in education, etc.). Each public spending share is multiplied by an estimated coefficient from the growth and inequality equations presented in Fournier and Johansson (2016) to build both a growth and an income distribution component. These are then summed to create an aggregate indicator, with equal weights attached to growth and equality considerations. The estimated coefficients reflect, for instance, that higher shares of public investment and family benefits are conducive to stronger long-term inclusive growth. On the other hand, shifting spending towards public subsidies and pensions undermines growth. The size of these coefficients is in line with the literature that provides evidence of the positive effect of productive spending on growth (Johansson, 2016).

Higher public spending can reduce long-term growth, but the adverse growth effect can be offset if countries have effective governments (Fournier and Johansson, 2016). The size and effectiveness component of the indicator is intended to reflect this pattern, making use of estimated coefficients from a growth regression in which these elements are interacted. Government effectiveness is difficult to observe. The government effectiveness indicator from the World Bank used here "captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies".[1]

According to the aggregate indicator, many countries that have recently faced sovereign debt stress already had a relatively low quality of public spending in 2005. This aggregate indicator also reveals that public spending quality worsened between 2005 and 2012 in about three-quarters of the OECD countries for which the relevant data are available (first figure below).

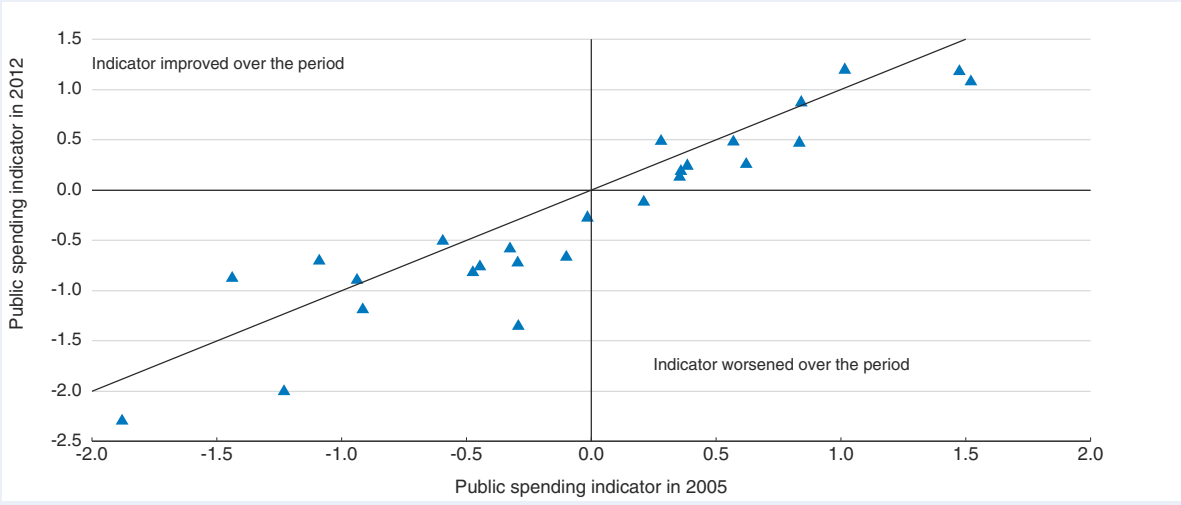
When faced with a demand shock, governments may find it easier to cut investment rather than current spending to meet short-term government budget constraints. However, such decisions can reduce future growth. Indeed, in most countries, there is a positive correlation between the change in the output gap and the growth component of the quality of public spending mix indicator, which adds to estimates of growth effects due to changes in government spending shares, especially productive spending (second figure below). This positive correlation means that during an economic downturn, the public spending mix becomes less conducive to growth while during an upturn, public spending favours growth. This pattern can thus amplify the long-term effects of a shock. The link between the cycle and the pro-growth nature of the public spending mix is more pronounced in those countries that have experienced large and persistent shocks (second figure below). When a country faces a large negative demand shock, it is likely to cut productive spending, thereby reducing long-term growth and contributing to a low growth trap.

Linking the indicator to other outcomes suggests that:

- The countries with a high quality of public spending tend also to be those that have pursued a counter-cyclical policy.
- There is no systematic link between the cycle and the overall size of public expenditure. However, in countries facing large shocks, governments typically reduce the structural public spending-to-GDP ratio, and as governments in these countries are not perceived to be among the most effective, the smaller size of government is likely to support growth in the long run.

Box 1.6. **The quality of public spending deteriorates during deep and long recessions** *(cont.)*

The quality of public spending deteriorated in many countries during the crisis



Note: The headline indicator combines information on the effect of the size and effectiveness of government and the public spending mix on growth and inequality. The sub-components have been centred around the average over all countries and the whole sample (from the mid-1990s to 2014 in most countries). An indicator value of 1 indicates that a country is one standard deviation above the sample average.
Source: Bloch and Fournier (2017), "The Deterioration of Public Spending Quality during the Global Financial Crisis: Insights from New Indicators", *OECD Economics Department Working Papers*, forthcoming, OECD Publishing, Paris.
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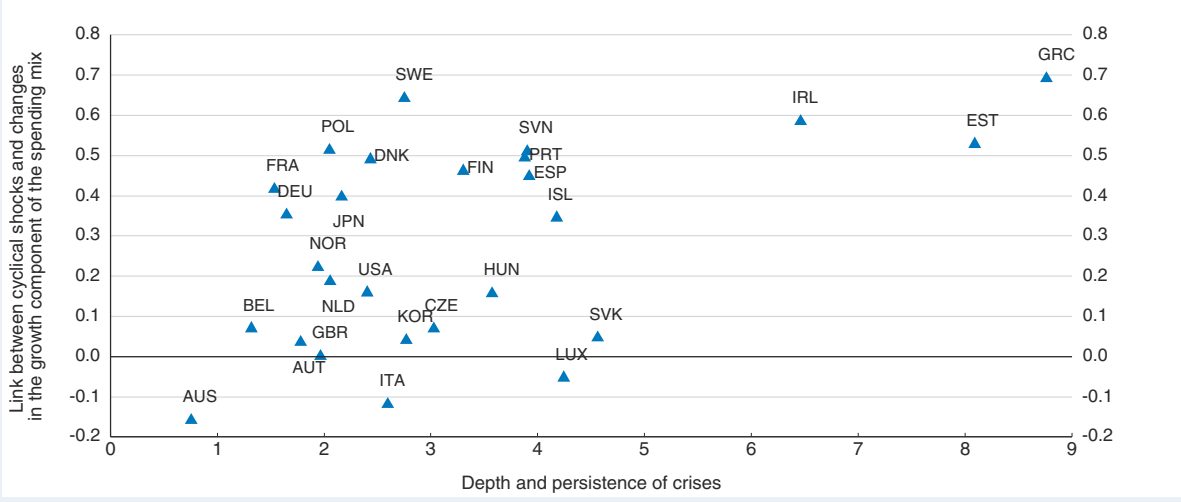
Spending mix changes typically amplify demand shocks



Note: The link between cyclical shocks and the growth component of the spending mix is measured by the correlation between the change in the country-specific output gap estimated by the OECD and the change in the indicator component. The size and persistence of crises is measured by the standard deviation of the country-specific output gap.
Source: Bloch and Fournier (2017), "The Deterioration of Public Spending Quality during the Global Financial Crisis: Insights from New Indicators", *OECD Economics Department Working Papers*, forthcoming, OECD Publishing, Paris.
StatLink http://dx.doi.org/10.1787/888933501629

1. See *http://info.worldbank.org/governance/wgi/pdf/ge.pdf*.

high-growth impact. More generally, all countries have room to restructure their spending and tax policies towards a more growth and inclusive mix, including through the tax and transfer system (Cournède et al., 2013; Fournier and Johansson, 2016).

Packages of structural reforms are needed to achieve stronger and more inclusive growth

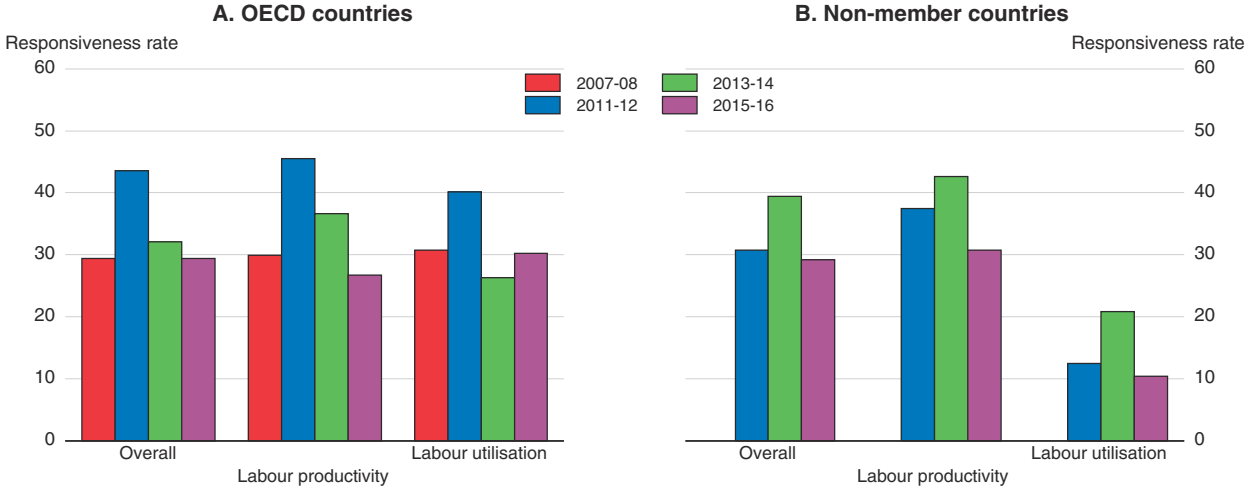
More ambitious structural reforms are needed to complement the impact of additional fiscal initiatives in order to ensure that growth strengthens in a sustainable way and that increases in incomes and living standards are shared broadly. However, with the exception of a few countries, the pace of reforms has slowed in both advanced and emerging market economies (Figure 1.33). The slowdown in reform implementation has been particularly deleterious in policy areas that have a strong influence on labour productivity, such as competition and innovation, as these directly affect incentives to invest and introduce new technologies.

Coherent packages of structural reforms can enhance their overall effectiveness by raising their combined economic impact and helping to ensure that their benefits are widely shared. Yet in recent years there has only been a limited packaging of reforms. Policy efforts have been concentrated either in the labour market or product markets, but very rarely in both areas (OECD, 2017e), despite the opportunities that exist to combine measures to boost competition, either in domestic product markets or through lower barriers to international trade and investment, along with specific labour reforms (Figure 1.34).

Reforms to reduce barriers to product market competition, either at home or from abroad, are essential to encourage innovation and business dynamism and achieve healthy and sustained growth. Although such reforms also improve the likelihood that all unemployed workers will find a job, they are not necessarily always inclusive; in particular, product market reforms can be associated with more frequent transitions out of employment for less qualified and low-income workers (Cournède et al., 2016). While this

Figure 1.33. **The pace of structural reforms has declined further**

Responsiveness to Going for Growth recommendations across the OECD and non-member countries[1]



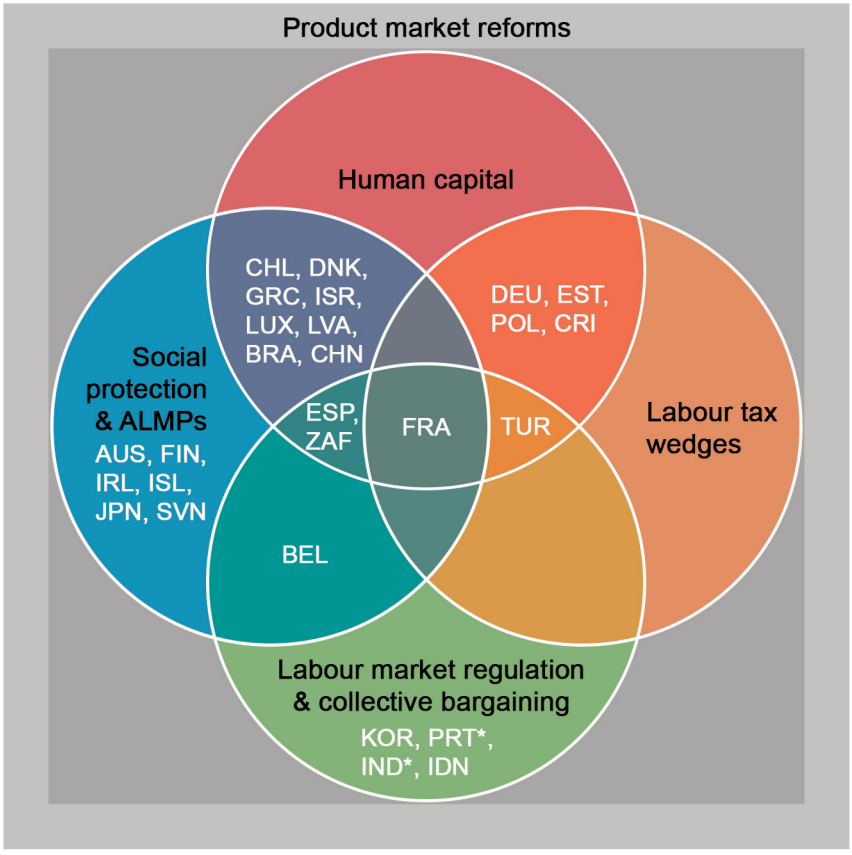
1. Non-OECD countries refer to Brazil, China, Colombia, India, Indonesia, Russia and South Africa. Russia is excluded in 2015-16.

Source: OECD (2017e), *Economic Policy Reforms 2017, Going for Growth*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933502256

Figure 1.34. **There is sizeable scope for new packages of labour and product market reforms**

Countries where competition-enhancing reforms can be combined with identified labour market reforms in 2017

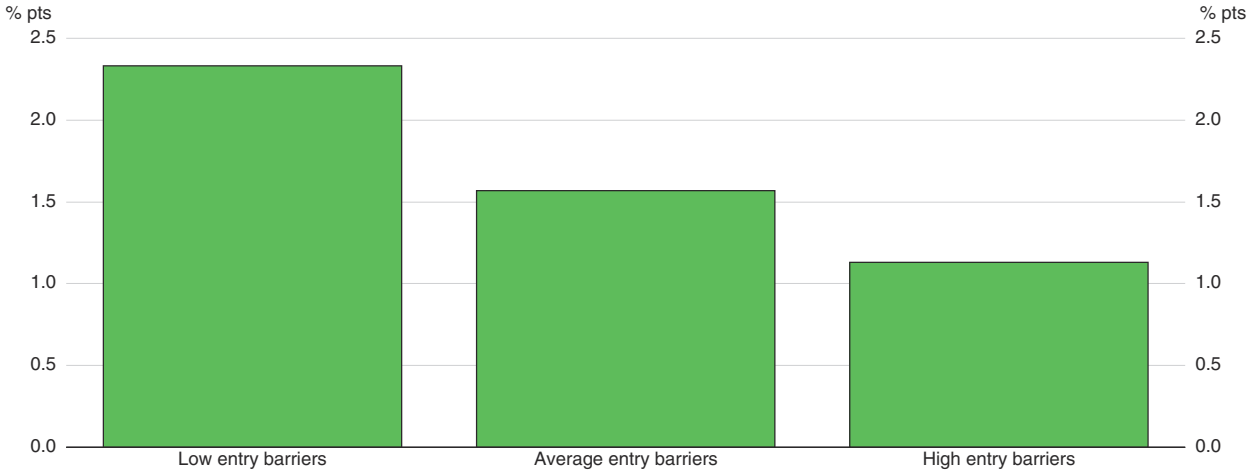


Note: Countries included are those in which there is clear scope for packages of labour and product market reforms to be combined. Portugal and India would also benefit from reforms to improve human capital. The graphic highlights the types of labour market reforms identified as priorities. Human capital includes only those countries with a reform priority that includes at least one of enhanced vocational training, improving the responsiveness of universities to labour market needs, improved targeting of financial assistance to attend university and enhanced lifelong learning. ALMPs stands for active labour market programmes. The subcategory "Social protection and ALMPs" also includes unemployment benefits.
Source: OECD (2017e), *Economic Policy Reforms 2017: Going for Growth*, OECD Publishing, Paris.

higher job-exit rate will be offset eventually by the related improvement in job-entry rates, some additional support may be required in the transition period. This is also the case when job losses are concentrated in industries with specialised labour or concentrated in specific geographical locations (Chapter 2). This suggests that such competition-enhancing reforms should be accompanied by packages of labour market measures that can help vulnerable workers transition to new jobs. More favourable labour market regulations, adequate social protection, active job market assistance, and policies to develop skills and to ease the transfer of pensions between employers would all support the mobility of workers. Well-designed active labour market programmes could be especially effective in helping displaced workers find a new job, especially in countries in which barriers to firm entry are low (Figure 1.35). Indeed, within a given budgetary spending envelope, shifting funds towards such targeted programmes is a more cost-effective approach to improving re-employment probabilities (Andrews and Saia, 2017).

Figure 1.35. **Low entry barriers in product markets improve the effectiveness of ALMP spending**

Impact of a 0.1% of GDP increase in ALMP spending on the re-employment probability of workers displaced due to firm exit



Note: The bars show the percentage point impact on the re-employment probability of a 0.1% increase in spending on ALMPs (as a share of GDP) for three levels of entry barriers: i) the level corresponding to the average of the two best performing countries over the sample period; ii) the average level observed over the sample period; and iii) the level corresponding to the average of the two worst performing countries over the sample period.

Source: Andrews and Saia (2017), "Coping with Creative Destruction: Reducing the Costs of Firm Exit", *OECD Economics Department Working Papers*, No. 1353, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933502275

Other examples where reforms could be combined include: measures to enhance product market competition and ease the financial difficulties of highly indebted companies, particularly in services sectors with pent-up demand (Gal and Hijzen, 2016) and where more could be done to facilitate the entry and growth of innovative firms; reforms to housing policies and job-search assistance that facilitate geographic and job mobility; and reallocation-friendly banking sector and insolvency regime reforms that could ease the exit of "zombie" firms (Adalet McGowan et al., 2017). The latter is particularly important in the euro area, where banks in several countries are still laden with non-performing loans (NPLs). The solutions include raising capital surcharges for long-standing NPLs, development of a market for NPLs, establishing asset management companies (preferably at a European level), and shortening insolvency procedures by, for instance, resorting to out-of-court procedures (OECD, 2016d).

In addition to tackling existing vulnerabilities, EMEs need to enhance their resilience to a possible tightening of global financial conditions that could result in sharp currency fluctuations and capital flow reversals. The adoption of risk management practices such as higher capital buffers and stricter macro-prudential regulations, even on non-bank intermediaries, is particularly necessary in countries with high debt. Recent exchange rate moves and substantial uncertainty in their future development also requires prudent management of foreign reserves and more prevalent foreign currency exchange hedging. At the same time, EMEs should step up structural reform efforts to improve growth prospects. This includes efforts to raise labour utilisation (OECD, 2017e) and the implementation of more competition-friendly regulations. This can be achieved by lowering barriers to foreign trade, investment and firm entry, and by reducing state control of businesses, to increase the efficiency of capital allocation and to boost the employment rate.

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ANNEX A1

Policy and other assumptions underlying the projections

Fiscal policy settings for 2017 and 2018 are based as closely as possible on legislated tax and spending provisions and are consistent with growth, inflation and wage projections. Where government plans have been announced but not legislated, they are incorporated if it is deemed clear that they will be implemented in a shape close to that announced. For the United States, with the fiscal programme yet to be finalised, the projections assume an increase in the underlying primary deficit of nearly ¾ per cent of GDP in 2018, primarily due to reduced taxes. Elsewhere, where there is insufficient information to determine budget outcomes, underlying primary balances are kept unchanged, implying no discretionary change in the fiscal stance; in euro area countries, the stated targets in Stability Programmes are also used.

Regarding ***monetary policy***, the assumed path of policy interest rates represents the most likely outcome, conditional upon the OECD projections of activity and inflation, which may differ from those of the monetary authorities.

- In the United States, the upper bound of the target federal funds rate is assumed to be raised gradually to reach 2.25% in December 2018, up from the current level of 1%.
- In Japan, the overnight interest rate is assumed to be kept at -0.1% for the entire projection period.
- In the euro area, the main refinancing rate is assumed to be kept at 0% until the end of 2018 but the negative deposit rate is assumed to be raised by 15 basis points towards the end of 2018.
- In China, monetary policy is assumed to be neutral with a tightening bias to address financial stability risks.
- In India, the repo rate is assumed to be cut from the current level of 6.25% to 6% in 2018.
- In Brazil, the policy rate is assumed to be cut gradually from the current level of 10.25% to 8.25% by the end of 2018.

Although their impact is difficult to assess, the following quantitative easing measures are assumed to be taken over the projection period, implicitly affecting long-term interest rates. In the United States, it is assumed that the Federal Reserve will start reducing the stock of assets purchased in 2018. In Japan, the Bank of Japan's asset purchases and yield curve control are assumed to last until the end of 2018, maintaining the 10-year government bond yield at 0%. In the euro area, it is assumed that the ECB will gradually taper asset purchases in 2018, keeping long-term interest rates constant until mid-2018.

Structural reforms that have been implemented or announced for the projection period are taken into account, but no further reforms are assumed to take place.

The projections assume unchanged ***exchange rates*** from those prevailing on 4 May 2017: one US dollar equals JPY 112.17, EUR 0.91 (or equivalently one euro equals USD 1.09) and 6.90 renminbi.

The ***price of a barrel of Brent crude oil*** is assumed to remain constant at 50 US dollars throughout the projection period. Non-oil commodity prices are assumed to be constant over the projection period at their levels as of April 2017.

The cut-off date for information used in the projections is 1 June 2017.