

Summary

- Growth is projected to remain modest by past norms, and unemployment is set to stay much above pre-crisis levels in many economies. Prospects for moderate improvements differ across both advanced and emerging economies.
 - In the advanced economies, growth is set to be stronger in the United States and the United Kingdom than in the euro area and Japan. Unemployment will remain particularly high in the euro area.
 - In the emerging market economies, growth will edge down in China, remain weak in Russia and Brazil, but will recover steadily in India, Indonesia and South Africa.
- World trade growth is expected to pick up a bit, with trade intensity growing again after the stagnation in recent years, but at a slower rate than prior to the crisis.
- Risks to GDP growth in the coming two years are on the downside due to potential financial volatility, lack of confidence about future growth prospects, and impaired and stretched balance sheets of banks and households. The euro area is particularly strongly exposed to these negative risks.
- Inflation is likely to remain below target in many OECD economies due to persistent slack and the recent sharp falls in oil and food prices, even if the latter will cushion growth. The euro area is at risk of deflation if growth stagnates or if inflation expectations fall further.
- If demand does not pick up as projected, some economies, notably the euro area, could get stuck in persistent stagnation, with demand weakness undermining potential growth, which in turn would have adverse effects on the ability of macroeconomic policy to support aggregate demand.
- Against this backdrop, it is essential that all macroeconomic and structural policy levers be used to offer as much support to growth as possible:
 - Ambitious structural reforms are urgently needed, particularly in Japan and the core countries in the euro area, in order to boost employment and strengthen long-term potential growth. Reforms fostering private and public investment would also give rise to positive short-term effects on demand.
 - Monetary policy requirements will diverge across countries: the United States and the United Kingdom are likely to start reducing monetary stimulus next year, while further stimulus is needed in the euro area and, as already decided, in Japan. These differences will inevitably result in volatility in debt and foreign exchange markets, and may uncover excesses in advanced and, especially, emerging market economies.
 - Fiscal policy requirements also differ across economies depending on the state of their public finances and the need to support demand.
 - ❖ Japan should continue to reduce its budget deficit to halt unsustainable debt accumulation.
 - ❖ Euro area countries should, within the EU fiscal framework, slow down structural budget consolidation relative to previous plans to reduce the drag on growth and automatic stabilisers should be allowed to operate freely around the structural consolidation path.
 - ❖ In the United States, extra infrastructure spending should be facilitated by securing adequate funding.

Summary assessment of the economic situation and main policy recommendations

A continuation of the moderate and uneven recovery is likely

A moderate improvement in global growth is expected over the next two years, but with marked divergence across the major economies and large risks and vulnerabilities. Global growth is projected to pick up from 3¼ per cent this year to 3¾ per cent in 2015 and just under 4% in 2016. Even so, growth in the major economies will remain below the average rates attained in the decade prior to the crisis. Global trade growth is also set to remain modest. Continued high unemployment, spare capacity, and commodity price declines will keep inflation low (Table 1.1). In the OECD economies, growth will be supported by still-accommodative monetary policy and favourable financial conditions, slow improvements in labour market outcomes and a fading drag from fiscal consolidation. Growth in the United States will be stronger than in Japan, which will be held back

Table 1.1. **The global recovery will gain momentum only slowly**

OECD area, unless noted otherwise

	Average 2002-2011	2012	2013	2014	2015	2016	2014 Q4 / Q4	2015 Q4 / Q4	2016
	Per cent								
Real GDP growth¹									
World ²	3.8	3.1	3.1	3.3	3.7	3.9	3.2	3.9	4.0
OECD ²	1.7	1.3	1.4	1.8	2.3	2.6	1.7	2.6	2.5
United States	1.7	2.3	2.2	2.2	3.1	3.0	2.0	3.1	2.9
Euro area	1.1	-0.7	-0.4	0.8	1.1	1.7	0.7	1.4	1.8
Japan	0.7	1.5	1.5	0.4	0.8	1.0	-0.1	1.6	0.9
Non-OECD ²	7.1	5.2	5.0	4.8	5.1	5.3	4.8	5.3	5.4
China	10.6	7.7	7.7	7.3	7.1	6.9	7.3	6.8	6.9
Output gap³	0.3	-2.1	-2.3	-2.3	-1.9	-1.4			
Unemployment rate⁴	6.9	7.9	7.9	7.3	7.0	6.8	7.2	6.9	6.8
Inflation⁵	2.1	2.0	1.3	1.6	1.5	1.8	1.7	1.6	1.9
Fiscal balance⁶	-4.3	-5.7	-4.3	-3.9	-3.4	-2.9			
<i>Memorandum Items</i>									
World real trade growth	5.6	3.0	3.3	3.0	4.5	5.5	3.1	5.1	5.7

1. Year-on-year increase; 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. Year-on-year increase; last 3 columns show the increase over a year earlier.

6. Per cent of GDP.

Source: OECD Economic Outlook 96 database.

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by fiscal consolidation, and the euro area, where there are rising risks of getting locked into persistent stagnation. Amongst the emerging market economies (EMEs), growth now appears to have levelled out, but only a small renewed upturn is projected. Growth in China is projected to soften somewhat as ageing and necessary rebalancing effects continue to slow domestic demand and potential growth.

Risks remain largely to the downside

The main risks around this projection are on the downside. A further decline in inflation expectations or a loss of investor confidence could push the euro area towards a recession and deflation, with adverse side effects on growth in other economies. Increased risk-taking in financial and property markets could also quickly unwind, with a sudden shift in investor sentiment and renewed volatility. This is especially the case if weak growth outcomes persist or if investors revise their expectations about monetary policy. Moreover, the financial vulnerabilities that have built up in EMEs, notably China, are also a source of risk to the global economy. Intensified geopolitical tensions and the perceived possibility of an Ebola pandemic could also hit sentiment, raise uncertainty and check the projected recovery in investment. Longer-lasting concerns also remain, including intensified fiscal and growth challenges in Japan and widening income inequalities. On the upside, some of these concerns could ease more quickly than expected if, for example, pent-up domestic demand were to boost US activity and the comprehensive assessment of banks were to help reduce financial fragmentation quickly in the euro area. New reforms to strengthen competition and employment prospects in Japan and the euro area would also result in stronger-than-projected growth.

Accommodative macroeconomic policies and growth-boosting measures are needed

Macroeconomic and structural policies need to be as supportive as possible against the background of continued weak activity, high unemployment, persistent low inflation and predominantly downside risks. Nevertheless, conditional on the recovery evolving along the lines of the OECD projections, policy requirements will diverge across economies:

Monetary policies need to remain accommodative

- Monetary policy support can be reduced gradually in the United States and the United Kingdom, starting in 2015. Nonetheless, policy rates in these countries are likely to remain well below past norms for some time. In contrast, in the euro area, well-tailored additional non-conventional monetary stimulus is needed to help disinflationary pressures subside and inflation expectations move back to target. In Japan, monetary policy should be pursued as recently announced.

All available fiscal space should be exploited

- Available room to ease the pace of deficit reduction should be exploited. Most countries, and especially Japan, have excessive public deficits and debt that will have to be reduced to avoid jeopardising longer-term fiscal sustainability. However, the pace of structural fiscal adjustment in some euro area countries should be reviewed at the EU level, in line with the fiscal rules, to support the recovery. In the United States,

greater infrastructure spending should be facilitated by securing adequate funding. Automatic stabilisers should be allowed to operate freely around the structural consolidation path in all economies.

Structural reforms are needed in all economies

- In all economies, and especially in the core euro area countries area and Japan, there is a need to continue designing and implementing structural reforms to enhance resilience and inclusiveness, strengthen both potential output and job growth, and ease long-term fiscal burdens. Key priorities in the OECD economies include the need to remove regulatory distortions on domestic and foreign firms, improve educational provision and incentives for innovation, strengthen active labour market programmes and implement reforms to benefit systems and labour market regulations. The structural reform commitments announced recently by G-20 members could raise global GDP by around 2% by 2018 if implemented fully.

Main issues for economic prospects

Economic performance has diverged

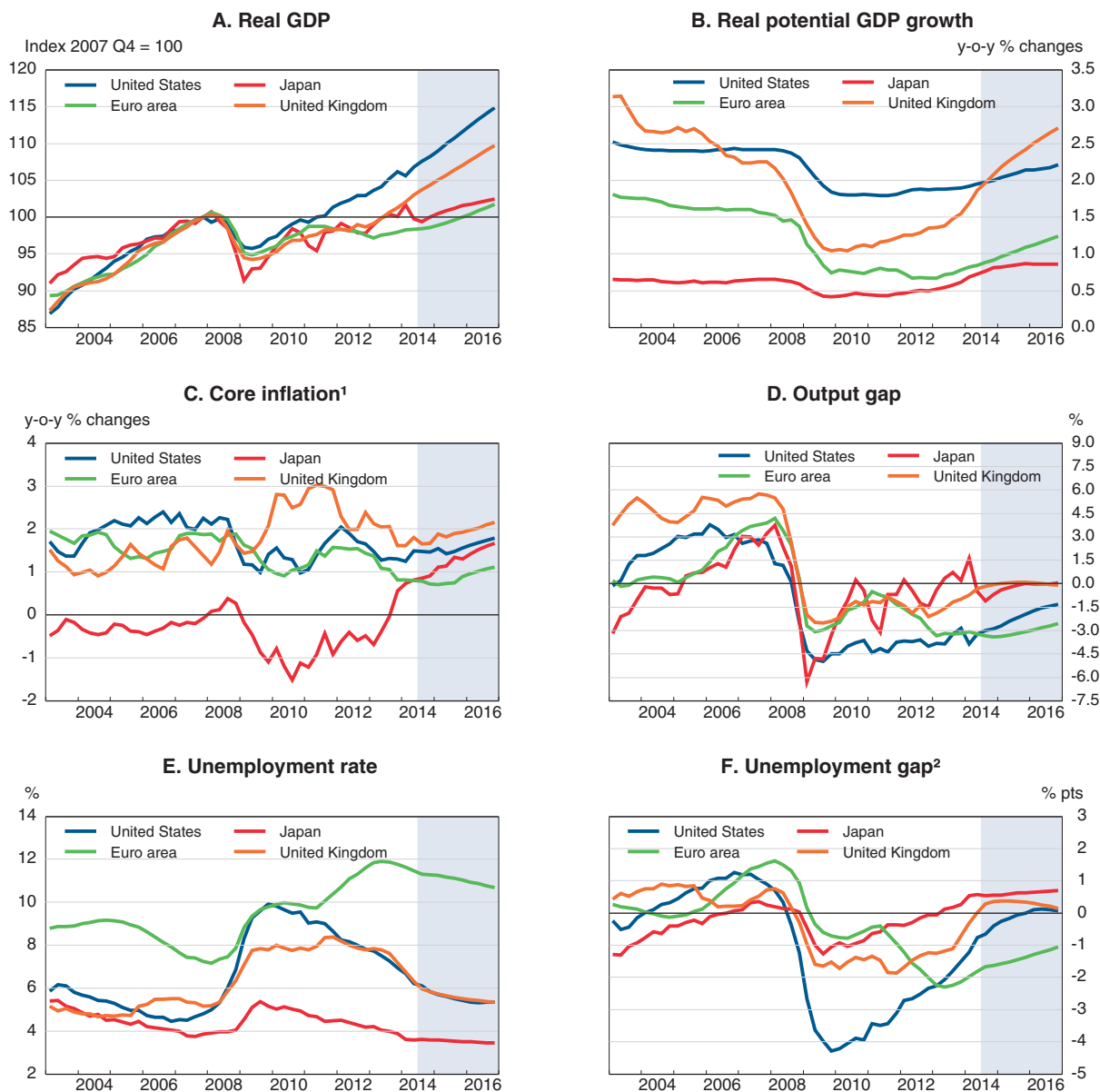
Divergence in economic activity has increased...

Economic developments among the main OECD areas have diverged. Growth has picked up in the United States and the United Kingdom. In contrast, it has stagnated or declined in the largest euro area economies, reflecting persisting imbalances and heightened geopolitical tensions that have hit confidence. Japan has fallen into a technical recession, with activity adversely affected by the necessary consumption tax increase. The uneven recovery is expected to persist through to 2016 (see below; Figure 1.1). Growth has also been diverging among the large emerging market economies (EMEs). In China (following modest macroeconomic policy stimulus), India and Indonesia, activity has been relatively strong. However, in Brazil, Russia and South Africa, GDP contracted or stagnated at low growth rates over the first three quarters of 2014 amid falling commodity prices, political uncertainties and international sanctions in Russia.

... including resource utilisation...

Divergence in the main OECD areas has been evident also in estimates of slack and potential output growth (Figure 1.1). Even if the level of the output gap is estimated to be similar in the United States and the euro area in 2014, there are differences:


- The negative output gap in the United States, although starting from a higher level in absolute terms in 2010, has contracted steadily, in contrast with the euro area.
- Despite weaker growth, the output gap in the euro area did not widen more than in the United States, but this reflects significantly reduced potential output growth in recent years.
- The negative unemployment gap in the United States is lower in absolute terms than in the euro area. Unemployment has declined rapidly, in contrast to the euro area where it has just started to decline from a high level.

Figure 1.1. **Macroeconomic performance among the largest OECD areas is expected to continue to differ**

1. Core inflation in Japan is adjusted to exclude effects of the consumption tax increase.

2. The unemployment gap is the difference between the unemployment rate and the NAIRU.

Source: OECD Economic Outlook 96 database.

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In contrast to the United States and the euro area, it appears that the unemployment and output gaps are almost closed in the United Kingdom. In Japan, the labour market is tight and the output gap is almost closed, reflecting very weak potential growth.

...and inflation

Inflation has diverged as well, partly reflecting differences in economic slack. In the euro area, inflation has drifted down and is now close to zero, due to a number of different factors. Near-term and

medium-term inflation expectations have both moved down, increasing the risks of deflation. In contrast, in the United States and the United Kingdom, inflation has hovered at or above 1½ per cent, and inflation expectations seem to be well anchored. In Japan, excluding the transitory effects of the increase in the consumption tax in April, inflation has remained well below the Bank of Japan's target of 2%, and some measures of inflation expectations have declined, although others remain close to the target.

Divergence has been persistent

Recent divergent economic performance in the main OECD areas is a continuation of the trends since the Great Recession. While the recovery has been universally sluggish, conforming to past experience of deleveraging after financial crises (BIS, 2014), the pace of recovery has differed.¹ The United States and the United Kingdom have surpassed their pre-crisis GDP peaks, Japan has barely attained it, and the euro area as a whole is still below it, though there are considerable differences within the euro area countries (Figure 1.1).²

This could reflect a persistent stagnation trap in some areas...

One explanation is that the euro area may have fallen into a persistent stagnation trap, where deficient demand due to insufficient policy stimulus undermines potential growth, which in turn weakens aggregate demand still further. However, the evidence is uncertain (Box 1.1). Japan is arguably in an advanced stage of such stagnation that started almost two decades ago, but there is little evidence in support of such developments in the United States and the United Kingdom.

Box 1.1. Persistent stagnation traps: evidence and policy implications

In the context of generally sluggish economic growth, large estimated economic slack and low inflation in the main OECD areas, it has been suggested that some economies may have been stuck in persistent stagnation, undermining potential growth, due to insufficient policy stimulus. Such a phenomenon is sometimes referred to as secular stagnation (Summers, 2013, 2014a,b; Krugman, 2013, 2014).

Persistent stagnation can be defined as a situation in which policy interest rates bounded at zero fail to stimulate demand sufficiently, with the ensuing period of prolonged and subdued growth undermining potential growth via labour hysteresis and discouraged investment. In turn, lower potential growth depresses aggregate demand even further. In this setup, the ineffectiveness of monetary policy stems from the limited possibility of lowering real interest rates sufficiently below their neutral levels, i.e. those prevailing when aggregate demand is in line with supply and inflation is stable at the target. Such a situation is especially likely to occur if real neutral rates have turned negative, since real interest rates are prevented from becoming significantly negative by the effective zero bound for nominal interest rates and low and falling inflation due to large economic slack.

1. The sluggish recovery could also reflect a gradual slowing of potential growth rates due to growing income and wealth inequality, especially in the United States (see below), population ageing, lower returns from education and possibly slower technological progress.
2. However, in terms of real GDP per capita, the performance of Japan is similar to that of the United States. The euro area has yet to regain its pre-crisis real GDP per capita level.

Box 1.1. **Persistent stagnation traps: evidence and policy implications** (cont.)

Obtaining clear evidence about a persistent stagnation trap is complicated by considerable uncertainty surrounding estimates of economic slack, its impact on inflation, the crisis-related hit to potential output and neutral interest rates (Rawdanowicz et al., 2014b):

- The OECD estimated that the level of GDP in 2014 was significantly below a hypothetical level implied by the pre-crisis trend of potential GDP (Ollivaud and Turner, 2014). The resulting gap was close to 10% in the United Kingdom and on average for several euro area countries where the potential trend declined, and over 5% in the United States. These numbers should be, however, taken with caution as recent GDP revisions, especially in the United Kingdom, and changes to estimates of potential output affect the magnitude of these effects, though not their sign.
- In the United Kingdom, and to a lesser degree in the euro area, the gap between current GDP and the hypothetical level implied by the pre-crisis trend of potential GDP is largely explained by the estimated crisis-related hit to potential output levels. In the United Kingdom, this has stemmed primarily from lower total factor productivity, and in the euro area from labour market hysteresis.
- The implications of persistent negative output gaps for potential output can be captured by an implicit overall hysteresis parameter. It shows the impact of reducing a negative output gap by one percentage point (i.e. increasing slack) on the level of potential output. It was 0.1 in the United States (in line with De Long and Summers, 2012) and significantly higher in the United Kingdom (0.6) and the aggregate of euro area crisis-hit countries (0.3).¹
- Inflation has been high given the extent of slack since the beginning of the crisis. The insensitivity of inflation to the level of slack throughout the OECD area, resulting in positive even if low inflation, has played a key stabilising role in recent years by limiting the increase in real interest rates. It possibly reflects monetary policy credibility, globalisation, downward nominal rigidities and hysteresis, with many of these factors pre-dating the crisis.
- OECD estimates suggest that, in the euro area, Japan and the United Kingdom, and to a lesser extent in the United States, real neutral interest rates have declined to negative levels, although the confidence intervals surrounding these estimates are very large. The estimated drop in the neutral rate mainly reflects lower potential GDP growth. These estimates suggest that recent low policy rates have provided only weak, if any, stimulus to the economy. This, however, does not account for unconventional monetary policy stimulus, which has been significant in Japan, the United Kingdom and the United States, and overall financial conditions.

In practice, countries may show persistent stagnation symptoms on some but not all indicators. Hence, persistent stagnation tendencies may best be regarded as being measured on a continuous scale rather than assigning countries as being either in or out of stagnation.

The euro area as a whole, and in particular the vulnerable countries, seems to be most likely to be affected by persistent stagnation tendencies (Table below). In the United States and the United Kingdom, the evidence is less firm, while Japan is arguably in the advanced stage of persistent stagnation that started almost two decades ago:

- **Euro area:** in the area as a whole, the crisis-related hit to potential output has been significant and the fall in the neutral interest rate implies that the decline in policy interest rates to close to zero may not be giving sufficient stimulus. Actual and potential growth dynamics have been mediocre and slack remains large, especially in the labour markets. These stagnation features have been particularly strong in the vulnerable countries.
- **Japan:** hysteresis effects since the Great Recession have been absent but, already long before the crisis, GDP growth was sluggish and deflation persisted. Estimated neutral rates have been well below actual rates for almost two decades. This suggests that the zero-interest-rate policy failed to provide any support to demand for a long time, though monetary policy has become increasingly supportive since the introduction of quantitative and qualitative monetary easing in 2013.

Box 1.1. **Persistent stagnation traps: evidence and policy implications** (cont.)**Summary of selected features of persistent stagnation***In per cent unless stated otherwise*

	Euro area			Japan			United Kingdom			United States		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Output gap, % of potential GDP	-2.2	-3.2	-3.3	-0.7	0.2	-0.2	-1.7	-1.4	-0.3	-3.7	-3.4	-3.2
Crisis-related hit to potential GDP ¹	-	-	-6.3	-	-	-	-	-	-8.6	-	-	-2.5
Consumer price inflation ²	2.5	1.3	0.5	0.0	0.4	1.4	2.8	2.6	1.6	2.1	1.5	1.7
Real neutral interest rate ³	-1.6	-1.4	-0.8	-2.8	-2.5	-2.3	-1.3	-0.7	0.5	-0.5	-0.4	0.1
Real short-term rate - real neutral rate	-0.3	0.3	0.2	3.0	2.3	-0.1	-0.7	-1.4	-1.9	-1.1	-0.8	-1.3
Implied monetary stimulus ⁴	0.8	-0.6	-0.5	-	-	-	1.1	2.2	3.1	2.2	1.4	2.5
Implied monetary stimulus including QE effects ⁵	0.8	-0.6	-0.5	0.7	-0.1	0.7	1.0	2.2	3.0	2.7	1.0	3.2

1. Ollivaud and Turner (2014) estimated effects of the crisis measured relative to a counter-factual scenario in which trend productivity continues at its pre-crisis (2000-07) trend growth rate, structural unemployment rates remain at their pre-crisis (2007) levels and trend participation rates are projected to allow for evolving demographics by holding labour force entry and exit rates constant at pre-crisis levels. For the euro area this refers to the GDP weighted average of those members with a crisis-related hit to potential. The equivalent GDP weighted output gap for these members is -3.8% in 2012, -5.3% in 2013 and -5.2% in 2014.


2. For Japan, OECD inflation projections exclude the direct effects of the increase in the consumption tax rate.

3. Annual averages of OECD estimates.

4. Implied monetary stimulus (positive numbers) indicates a boost to GDP growth resulting from the negative difference between real actual and neutral interest rates, based on OECD estimates. For Japan, the elasticity of GDP with respect to the difference in real interest rates is estimated to be zero.

5. Sum of monetary stimulus from the row above and approximate QE effects, which are based on changes in the share of central bank holdings in total outstanding government bonds based on estimated elasticities for the United Kingdom (2.5-basis point decline in long-term interest rate for each percentage point increase in the central bank share in total outstanding government debt) and for the United States (23 basis points). The assumed elasticity for Japan is the average of the two elasticities (12.5 basis points). For more details see Bouis et al. (2014). As the supply of government bonds outpaces central banks purchases, QE in the United Kingdom in 2013-14 and the United States in 2012 actually raises government bond yields and weakens monetary stimulus.

Source: OECD Economic Outlook 96 database and OECD calculations.

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- **United States:** hysteresis effects have been present but muted compared with elsewhere. Although the neutral interest rate is likely to have fallen, monetary policy has still provided stimulus to aggregate demand through conventional and unconventional measures. Consequently, the output gap has been closing, even if economic slack persists.
- **United Kingdom:** hysteresis effects appear to have been strong and neutral rates have fallen but less than real short-term interest rates. Consequently, monetary policy has succeeded in boosting GDP growth and eliminating economic slack.

Persistent stagnation, or the risk of falling into this trap, should be addressed by a comprehensive stimulus package. In principle, more monetary and fiscal stimulus should be accompanied by structural reforms that boost potential growth and neutral rates. The presence of hysteresis effects strengthens the case for accommodative policies, with potentially beneficial longer-term implications for economic activity. However, large uncertainty about the size and persistence of hysteresis, and the risks associated with certain measures poses policy dilemmas:

- **Monetary policy.** With policy interest rates at their effective lower bound, further stimulus would have to come from unconventional measures, including QE, forward guidance or schemes to provide funding to banks. The effectiveness of QE measures depends on the institutional and financial systems in each region. Furthermore, there is some evidence that the effectiveness of such measures may decline as they are used more extensively and asset prices become richly valued. Thus, their effectiveness in addressing the problem of stagnation is not certain as they may also encourage excessive risk-taking and asset price booms that lead to financial instability and costly recessions. Prudential measures could offset some of

Box 1.1. **Persistent stagnation traps: evidence and policy implications** (cont.)

these risks but there are limits to their effectiveness and it is doubtful if they can counter a generalised rise in risk-taking. Moreover, tightening regulation for commercial banks can result in regular bank activities migrating to lightly regulated shadow banks.

- **Fiscal policy.** Fiscal stimulus could be at least partly self-financing (as a permanent increase in potential output implies a permanent increase in taxes) in the presence of hysteresis, high fiscal multipliers and sustained low real interest rates. Nevertheless, such a strategy involves risks. The cost of increased debt may turn out higher due to reduced private investment and increasing economic vulnerability. Moreover, fiscal stimulus may be less able to deal with a prolonged period of subdued growth, as fiscal multipliers could be smaller than during outright recessions. Finally, postponing the implementation of a credible fiscal consolidation plan could lead to adverse market reactions.
- **Structural policy.** Structural reforms can boost potential output growth in the longer term and thus neutral interest rates, increasing the effectiveness of monetary policy. They, however, risk widening output gaps from already high levels if they were to weaken aggregate demand. To the extent that hysteresis effects operate, the widening of economic slack could on its own permanently reduce output, thus offsetting to some extent the beneficial long-run effects of structural reforms. However, OECD research shows that in many cases structural reforms have immediate positive demand effects. Such reforms should be prioritised when economic slack is large.

1. Recent output gap revisions for the United Kingdom would imply a lower overall hysteresis parameter.

... and other factors...

The under-performance of the euro area could also reflect slower progress in cleaning up bank balance sheets and the excessive indebtedness of households.

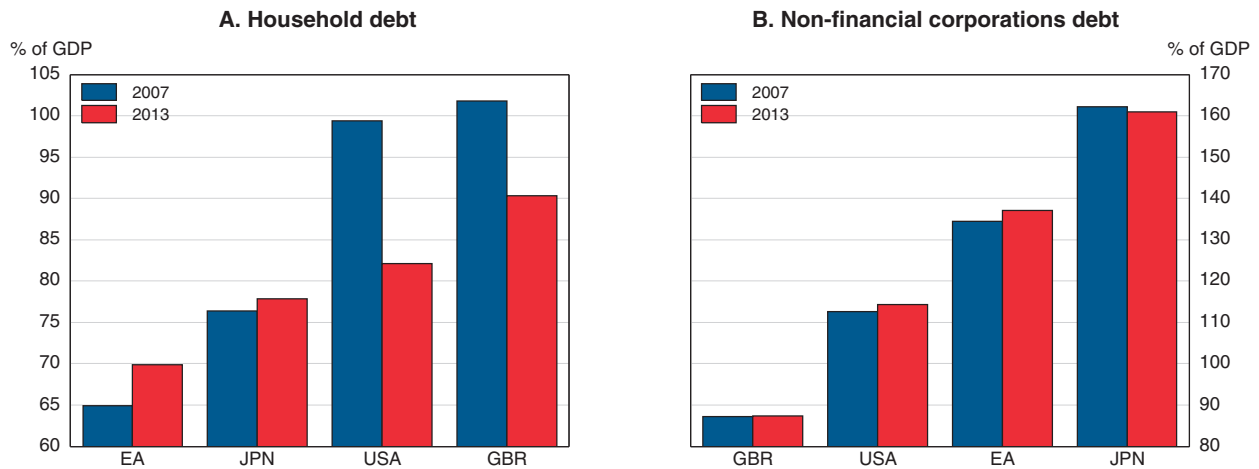
... including weak bank balance sheets...

- Early stress tests and the associated muted capital injections in the euro area failed to restore confidence in banks. As a result, euro area banks have been generally characterised by low capital, and impaired assets on their balance sheets could have reduced provision of credit to healthy businesses. In contrast, swift and credible measures were taken in the United States to assess the state of the banking system and ensure adequate capital cover. The comprehensive assessment of banks in the euro area, released in October 2014, indicated though that euro area banks need only marginal further capital injections to maintain adequate capital cover relative to risk-weighted assets, even in adverse circumstances.

... and high debt burdens


- Household debt in the euro area, in contrast to the United States, has remained historically high, creating headwinds to consumption growth (Figure 1.2). The fall in the household debt ratio in the United States has been helped by an institutional set-up that facilitated debt write-offs, such as non-recourse mortgages, and restructuring to a greater extent than in the euro area countries.³ The differences in private sector deleveraging are likely to affect growth performance going forward.

3. Although the importance of debt write-off in the United States is contested, with some suggesting that it explained nearly two-thirds of deleveraging while others noting only a marginal role (Bouis et al., 2013), debt write-off was an option unlike in the euro area.

Figure 1.2. **Deleveraging in the private sector has differed across the main OECD areas**

Note: Debt is calculated as total liabilities minus shares and other equities, and minus financial derivatives.

Source: European Central Bank; OECD Financial accounts; and OECD Economic Outlook 96 database.

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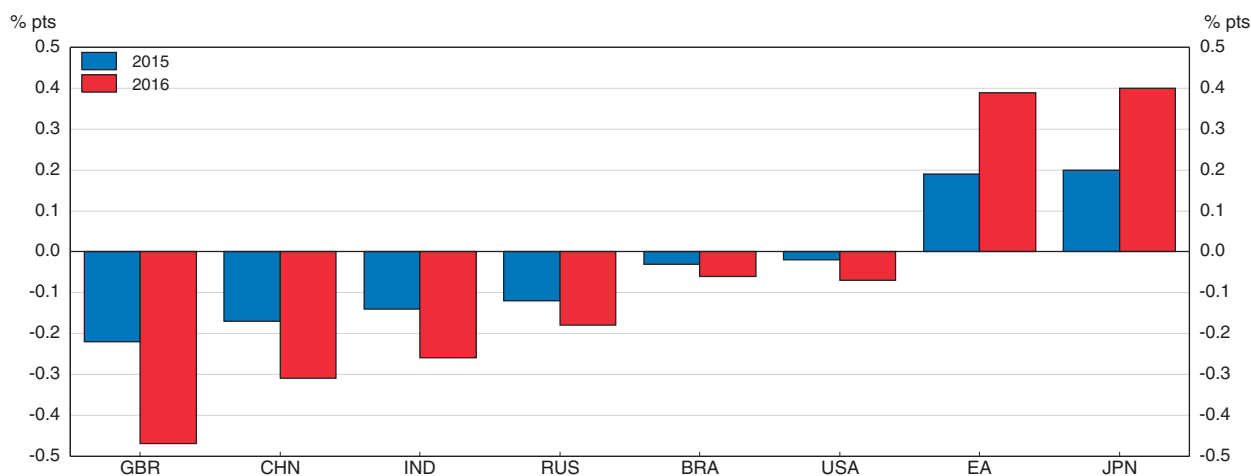
Divergence in policy requirements may trigger exchange rate movements...

Growth and inflation divergence, together with the legacy of past macroeconomic policies, imply differentiated monetary policy stances across the main OECD areas in the coming years. This in turn, if not well anticipated by markets, will generate volatility in financial markets and potentially serious instability. Despite the early October adjustment, the US dollar has already appreciated by around 4% in nominal effective terms since August and by slightly less than 10% against the euro and several EME currencies. Reduced monetary policy stimulus in the United States and further easing in the euro area and Japan, consistent with projected growth and inflation differentials, may imply further exchange rate movements. However, interest rate differentials have not always been a good predictor of financial market reactions in the past.


... with benign implications for growth and inflation in some areas

Macroeconomic model simulations can illustrate the possible economic effects of future exchange rate changes. A gradual 10% depreciation of the euro and the yen against the US dollar over the next two years, with other bilateral exchange rates assumed to remain fixed against the US dollar, would correspond to a depreciation of around 6½ per cent in the euro and yen effective exchange rates. Conditional on an assumption of unchanged policy interest rates, this could raise GDP growth in the euro area and Japan by around 0.2 percentage point in 2015 and 0.4 percentage point in 2016 (Figure 1.3). Headline consumer price inflation would also be pushed up, by over ½ percentage point in Japan by 2016 and over 1 percentage point in the euro area. Growth and inflation would be weaker in all other economies, however, reflecting the appreciation of their currencies. Effective exchange rate rises of around 5% would occur in the United Kingdom and Russia, and by between 2-2½ per cent in the United States, China and India.

Figure 1.3. **Impact on GDP growth of a euro and yen depreciation**
Difference from baseline



Note: Based on a 1% decline in the euro-dollar and yen-dollar exchange rates in each quarter from 2014Q3 through to the end of 2016.
Source: OECD Economic Outlook 96 database; and OECD calculations.

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There is a risk that...

The real effects of the exchange rate adjustment could be less strong and less benign than captured by model simulations:

... the positive effects could be delayed in the euro area and Japan

- The upturn in growth and inflation in the euro area and Japan will depend mainly on the behaviour of exporters and wage settlements. In particular, exporters could use the exchange rate depreciation to increase their profits, rather than to boost export volumes, as shown by the experience in Japan in 2013. In the euro area, staggered wage contracts and still large labour market slack might also slow the speed at which initial currency-related increases in inflation feed through into wage settlements. Both of these factors might limit the short-term boost to growth and inflation.

Vulnerabilities in some EMEs could be exacerbated

- The direct negative growth effects in other economies could be more severe, especially in EMEs. Weaker growth could result in financial instability or prompt a change in investor sentiment, leading ultimately to currency depreciation and higher costs for domestic firms with foreign currency debts. However, if this were not the case, a currency appreciation and lower inflationary pressures could prompt some monetary policy easing in countries with high inflation. This would offset some of the negative effects of appreciation on growth.

More extensive currency realignments could take place

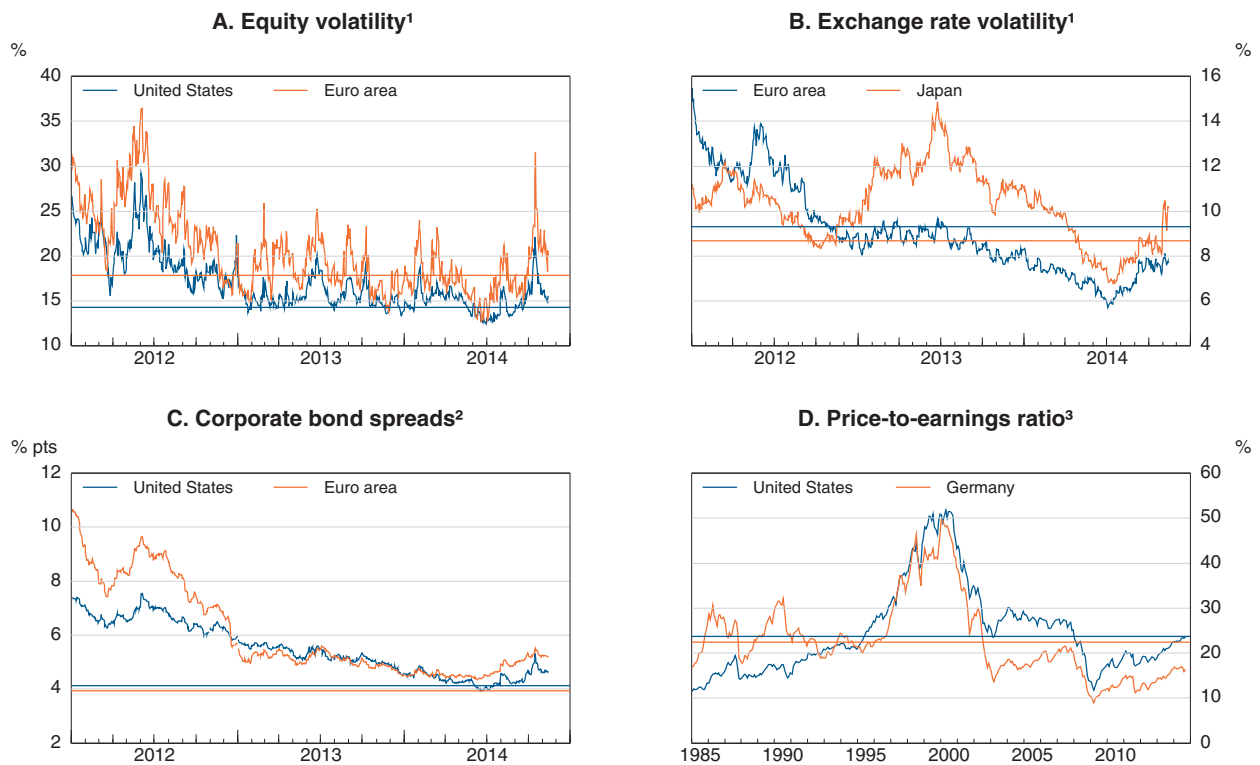
- The impact of the original exchange rate adjustment would be smaller if changes in the value of the US dollar vis-à-vis the euro and the yen were to trigger offsetting policy changes. One example could be officially induced weakening of currencies that appreciated in effective terms, especially in some EMEs.

Financial turbulence risks

Financial market complacency about risk has added to vulnerabilities...

In the context of highly accommodative monetary policy in the main OECD areas, greater risk-taking and elevated asset prices have added to financial market vulnerabilities. Levels of financial stress, in particular in terms of volatility in equity and foreign exchange markets, reached very low levels between May and September, and some asset prices attained record highs (Figure 1.4). This has led to growing concerns about a sudden shift in investors' sentiment and ensuing disruptive asset price corrections. The financial market turbulence in mid-October this year illustrates how fast market sentiment can change, with steep falls in global equity prices and a rise in financial market volatility in spite of no clear change in macroeconomic fundamentals.


Figure 1.4. Risk-taking indicators



Note: Horizontal lines show the average of a given indicator between June 2003 and June 2007, except for the P/E-ratios where they indicate the average between the early 1980s and 2014.

1. The implied volatilities of equity index options and bilateral exchange rates (vis-à-vis the US dollar) options.
2. The spreads between 5-year high-yield corporate and 5-year government bond yields.
3. The cyclically-adjusted price-to-earnings ratio is obtained by dividing the inflation-adjusted stock market index by the 10-year average inflation-adjusted earnings. Last observation: September 2014.

Source: Datastream; and OECD calculations.

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... in the United States...

- In the United States, prior to the mid-October turmoil, the search for yield had resulted in very low risk spreads, weaker underwriting standards and high leverage in some parts of the shadow banking system. The US leveraged loan market has expanded rapidly since 2012,

exceeding its pre-crisis size. This has been associated with an increasing incidence of loans with light covenants, risking higher future default rates and lower recovery rates for investors.⁴ Large equity price gains, despite their temporary dip in mid-October, have also raised concerns about equity price overvaluation, given the subdued economic recovery. Indeed, the cyclically-adjusted price-to-earnings ratio has risen strongly over the past few years and has been close to its average from the early-1980s. These gains reflected portfolio rebalancing towards riskier assets and increasing share buybacks, with cash-rich companies choosing to boost their stock market valuation rather than finance new investment.⁵

- ... and in the euro area**
- In the euro area, increased risk-taking has been evident in very low sovereign bond yields and spreads. Some decline in the very high risk perceptions of financial institutions and public finances since 2012 is welcome. However, it may now be excessive, given the risks of renewed recession or deflation, risking a sudden shift in investor sentiment similar to that in mid-October. The fiscal situation is still challenging. The recent budgetary slippages in several euro area countries and weak GDP growth prospects suggest no material improvement in the near term. Moreover, renewed concerns about the debt sustainability of the vulnerable countries could resurface. Until late September, spreads between government and high-yield corporate bonds were close to their pre-crisis averages and the issuance of high-yield bonds was readily absorbed by investors. In contrast, in a number of euro area countries, the cyclically-adjusted price-to-earnings ratios remained well below their historical averages. This implies less concern about equity valuations, especially as stock markets have not fully recovered from the declines in mid-October.

Risks of turbulence have increased

Sudden shifts of investor sentiment would result in abrupt asset price corrections and a surge in volatility. These could be magnified by liquidity problems and negative feedback loops, creating headwinds to the economy. Such a shift could be triggered by a change in market expectations about monetary policy in the main OECD regions, especially in the United States, or by profit-taking by investors over-weight in risky assets, or by geopolitical tensions (see below). Such an asset price correction could have not only local but also global financial stability repercussions. Risks of negative spillovers are particularly acute in EMEs (Olaberria, 2014; and Rawdanowicz et al., 2014a). Risks are also present in the euro area, where the recent substantial decline in government bond yields was partly driven by foreign investors. As discussed above, such a scenario is likely to be associated with adjustments in exchange rates.

4. This implies fewer, or less strict, protective covenants for lenders, such as requirements for reporting financial performance or preventing borrowers from taking more debt.
5. If buybacks are financed by bond issuance or bank loans, higher indebtedness could reduce future profits and increase vulnerability.

This could undermine financial stability in EMEs given their continuing vulnerabilities...

EMEs remain vulnerable, given their cyclical and structural weaknesses. Growth has weakened in several EMEs, especially Brazil, Russia and South Africa, increasing credit risks, and inflation has been high. Corporates in many EMEs have boosted their leveraged foreign-currency borrowing, exposing them to rollover and, if not hedged, foreign currency risks (Chui et al., 2014). Moreover, external bank debt is dominated by short-term debt, with rollover risks. Since 2007, but also more recently, the share of short-term debt in total bank debt has increased in India and Indonesia, and central bank foreign exchange reserves have declined in Russia and Argentina (Annex 1.A1). On the positive side, their current account deficits are generally lower than a year ago, though it is not clear if this is primarily a structural improvement.

... and also in advanced OECD countries, despite the improved resilience of the financial sector

The resilience of the financial sector in the main OECD countries has improved since the recent financial crisis. This reflects, in particular, reforms in the regular banking sector. Even so, progress remains uneven, and pockets of vulnerabilities still persist.

- The United States has made notable progress in strengthening the resilience of the financial system but vulnerabilities remain in the wholesale funding market. These are related to liquidity or credit shocks that lead to asset fire sales (OECD, 2014c). The role of redemption-prone investors, like money market funds and exchange-traded funds, in certain credit markets has increased, which may result in reduced liquidity during stress periods (IMF, 2014).
- The banking sector in the euro area remains vulnerable. Deleveraging and recapitalisations are not finished and non-performing loans are still high. In addition, some banks suffer from low profitability.

The scope for policy to accommodate financial shocks is limited

Should remaining vulnerabilities result in financial shocks, there could be limited room for significant policy support from either monetary or fiscal policy. Policy interest rates have been nearly zero for some time, although there is some scope for further non-conventional policy stimulus and measures to address financial market panic. Public debt has risen to high levels, and fiscal deficits cannot be increased substantially to provide the significant support seen in the initial stages of the financial crisis.

Commodity prices have weakened substantially

Commodity prices have fallen

Energy prices and prices of globally traded agricultural commodities have declined sharply over the past few months, reflecting a combination of weaker global demand and improved supply. The \$20 per barrel decline in Brent crude prices since the summer will push down headline inflation substantially, benefitting consumers' purchasing power, and also cushion the underlying softness of demand. It could also raise deflation risks if it pushed down euro area inflation expectations further. Empirical estimates suggest that a permanent \$20 per barrel decline in crude oil prices could raise GDP growth in the OECD area by up to 0.4 percentage point over the first two years and decrease headline inflation by at least 0.5 percentage

point (OECD, 2011). Moreover, the decline in global commodity prices will lower fiscal revenues in countries that are major commodity producers, including Chile, Australia, Russia, Indonesia and Canada.

Intensified geopolitical tensions still pose a risk

Geopolitical tensions have intensified...

Geopolitical tensions have intensified in recent months, with the resurgent conflict in the Middle East and trade sanctions on Russia adding to uncertainty and weakening external demand in some economies, especially in Europe.

... with little impact so far on commodity markets...

- Commodity markets seem to have been little affected, but risks persist. The growth benefits of weaker commodity prices, incorporated in the current baseline projections, would disappear if supply pressures were to mount quickly as a result of conflict in the Middle East or a disruption in gas supplies to Europe (Box 1.2).

Box 1.2. Potential energy market spillovers from events in Ukraine

Events in Ukraine could have international spillover effects via potential disruptions of energy supplies from Russia to other parts of Europe. To provide an indication of how sensitive other countries would be to energy supply disruptions, this box looks at the strength of the dependence of other countries on energy imports from Russia.

Disruptions in Russian energy exports that transit through Ukraine, notably natural gas, could prove costly to some neighbouring countries. The Slovak Republic, Austria, Turkey, Hungary and the Czech Republic cover more than 15% of their total primary energy needs through natural gas imports from Russia (see Figure below). For a number of larger European OECD countries, including Germany, Italy and Poland, the ratio of natural gas imports from Russia to total primary energy needs is around 10%.

In the short term, however, disruptions in the supply of Russian natural gas that transits through Ukraine would likely have only marginal effects on prices, as European natural gas stocks currently cover about one year of flows that transit through Ukraine. If events in Ukraine triggered persistent disruptions in natural gas transits lasting more than a year, prices would likely increase in a number of European countries. Yet, it should be noted that around half of the flows that transit through Ukraine – which in 2012 accounted for around 50% of European natural gas imports from Russia (or around 15% of total European natural gas imports) – could be re-directed through alternative pipelines which are currently operating below capacity. Disruptions to the supply of crude oil imports from Russia, which for some European countries cover more than 20% of total primary energy needs, could be dealt with by switching to other suppliers. However, as Russia is the world's second-largest crude oil producer, accounting for around 12% of global crude oil production, supply disruptions could drive up crude oil prices significantly.

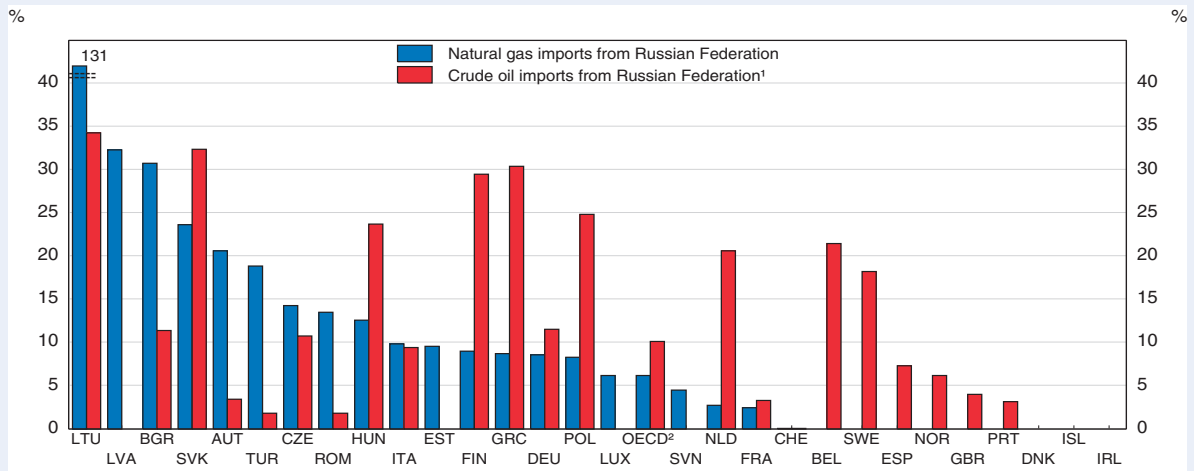
For European countries as a whole, making up for a shortfall of around 130 billion cubic metres (bcm) of gas imports from Russia may be feasible even in the short term but would result in significantly higher energy prices. According to figures in Bruegel (2014), a combination of switching to alternative suppliers, changing the domestic energy mix and reducing consumption could more than cover the shortfall. At least part of the shortfall would have to be made up by more expensive liquefied natural gas (LNG) imports and substituting natural gas for more expensive oil in domestic electricity and heat production. This could lead to spikes in natural gas and other energy prices. Model simulations suggest that for each 10% increase in energy prices, GDP growth in the OECD area would decline by 0.1 percentage point on average in the first year, with somewhat larger effects in those countries with the highest energy import intensities.

Box 1.2. Potential energy market spillovers from events in Ukraine (cont.)

While it may be possible to make up for a shortfall in natural gas imports in Europe as a whole, a lack of import infrastructure may nonetheless cause disruptions in a number of countries and higher natural gas prices may hit some industries particularly hard. A lack of LNG terminals or pipeline connections with other European countries may be a particular concern for those countries that currently cover almost all their natural gas needs by imports from Russia, such as the Baltic countries, Finland, Bulgaria, the Czech Republic and the Slovak Republic.

Natural gas and crude oil imports from Russia account for a sizeable share of primary energy needs

In per cent of total primary energy supply, 2012




Note: Eurostat data for 2011 for Bulgaria, Latvia, Lithuania and Romania; IEA data for 2012 for all remaining countries. Natural gas imports from Russia can be higher than total primary energy supply due to re-exports.

1. Includes crude oil, natural gas liquids and refinery feedstocks.

2. OECD represents OECD European members.

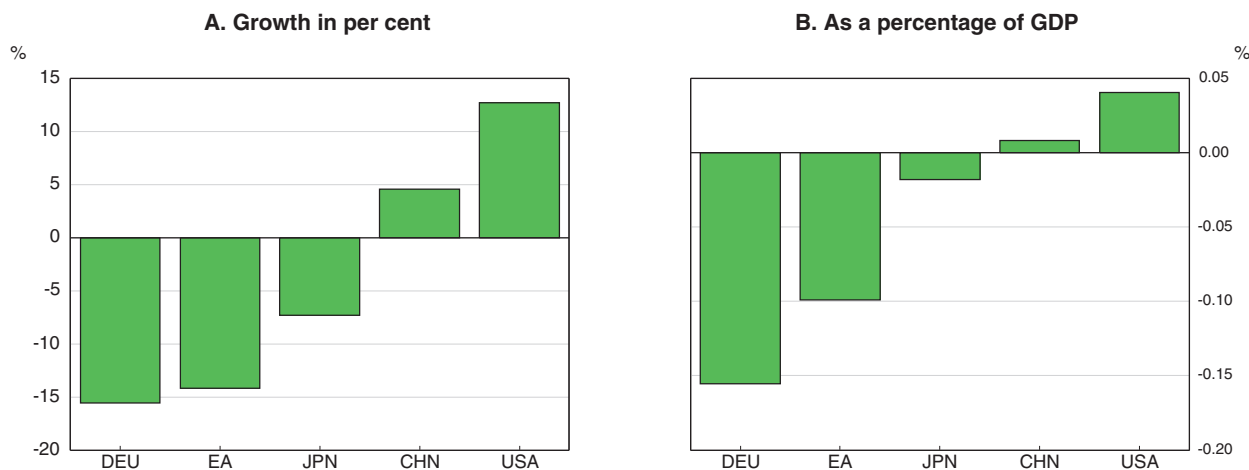
Source: IEA Energy Statistics; Eurostat; and OECD calculations.

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... though they may have hit confidence and GDP growth

- There are some signs that weaker import growth in Russia is having a negative impact on some economies, mainly in Europe. In the euro area, where the linkages to Russia are relatively strong, the volume of area-wide exports to Russia in the first seven months of 2014 was around 14% lower than a year earlier, reducing euro area exports by around 0.7% and GDP growth by around 0.1 percentage point (Figure 1.5). Additional effects are likely to be present from worsening sentiment. Greater uncertainty is also likely to encourage firms to defer new investment decisions. This seems particularly likely in Germany, the Baltic States and several Central European economies, where business ties to Russia are relatively close. Outside Europe, it is difficult to see a strong impact at present, but this could change if tensions were to intensify or persist for longer than expected.

Figure 1.5. **Growth of exports to Russia**
2014 H1 over 2013 H1



Source: IMF, Direction of Trade Statistics; and OECD calculations.

StatLink <http://dx.doi.org/10.1787/888933169164>

Wage growth has yet to accelerate significantly

Labour market conditions are improving...

OECD labour market conditions are continuing to improve, but unevenly with marked differences between economies. Two important issues for policy purposes are the degree of economic slack left in labour markets and the extent to which diminishing slack will give rise to wage pressures and broader inflationary pressures.

... in the United States...

- In the United States, employment growth has strengthened this year, to around 1½ per cent (year-on-year), and job opening rates continue to rise. The short-term unemployment rate has returned to its pre-crisis norm. Sharp declines are occurring in long-term unemployment too, helped by the expiry of the extended unemployment benefits programme at the start of 2014. However, other indicators, such as the high involuntary part-time employment rate, suggest there may still be some labour market slack. The steady decline in the labour force participation rate has recently slowed, but a substantial rebound is not projected to occur.⁶ Average hourly earnings growth has remained relatively flat, at around 2% per annum, but total compensation growth per hour has picked up in the corporate sector.⁷

... in the United Kingdom...

- In the United Kingdom, job growth remains robust, with the unemployment rate declining by around 1½ percentage points over the

6. Around 70% of the decline in the labour force participation rate since early 2011 is estimated to be due to ageing effects (CEA, 2014).

7. In the first nine months of 2014, official preliminary estimates suggest that labour compensation per hour worked in the US aggregate corporate sector and also the manufacturing sector were 4% higher than in the first nine months of 2013 (at an annualised rate).

year to the third quarter of 2014. Involuntary part-time employment remains higher than prior to the crisis, though it has started to decline gradually. Earnings growth is edging up, but has yet to accelerate significantly as many new jobs are at the lower end of the pay scale and bonuses have moderated. Labour supply is becoming more elastic as a result of strong inward migration and pension and welfare reforms, making it difficult to identify the degree of slack left in the labour market.

... and in Japan...

- In Japan, the labour market remains tight. The ratio of job offers to applicants is close to its highest level since 1992, and the Tankan survey increasingly points to labour shortages. Employment has risen by around 0.5% this year, accompanied by further increases in the female participation rate and in the share of lower-paid non-regular workers in total employment. Monthly earnings per employee have begun to strengthen, rising by around 1½ per cent in the third quarter relative to a year earlier, although this was largely accounted for by increased overtime and bonus payments. Real wages, deflated by consumer prices, have thus declined as a result of the consumption tax increase.

... but not in the euro area

- In most of the euro area, by contrast, the unemployment rate is still very high – the area-wide rate is around 4¼ percentage points above its pre-crisis level – and has only recently begun to decline. The long-term unemployment rate is more than double the pre-crisis level and over one-half of those unemployed have now been out of work for over a year. Employment has risen this year, though only modestly. As a result, considerable slack remains. Wage growth continues to pick up in the relatively tight German labour market but has eased in most other economies.

Declining unemployment has yet to push up wage growth...

New OECD estimates of equilibrium unemployment rates (Annex 1.A2) suggest that unemployment gaps are now small in a number of economies, including the United States and the United Kingdom, and negative in Germany and Japan (see also Figure 1.1).⁸ Nonetheless, there is as yet little evidence of substantial wage pressures in these economies, even allowing for the extent to which public sector wage constraints are helping to hold down economy-wide labour costs. Theoretically, labour market slack is only one of many influences on real wage growth. Other factors include (trend) labour productivity growth, wage settlement arrangements (such as union coverage) and the relative demand and supply of labour, driven by technological changes and globalisation. Several factors make it difficult to judge the extent to which diminishing labour market slack might feed into real wage developments:

8. The equilibrium unemployment rate is that prevailing when inflation is equal to the official objective of the monetary authorities and economic slack is eliminated.

... in part due to staggered wage contracting...

● Annual or biennial wage bargaining, with wage contracts staggered over time, mean that it takes some time for the impact of past levels of economic slack to fade from currently observed wage growth. In both the United States and the United Kingdom, this effect may still be helping to hold down real wage growth and the labour share of income but will gradually fade (Figure 1.6).

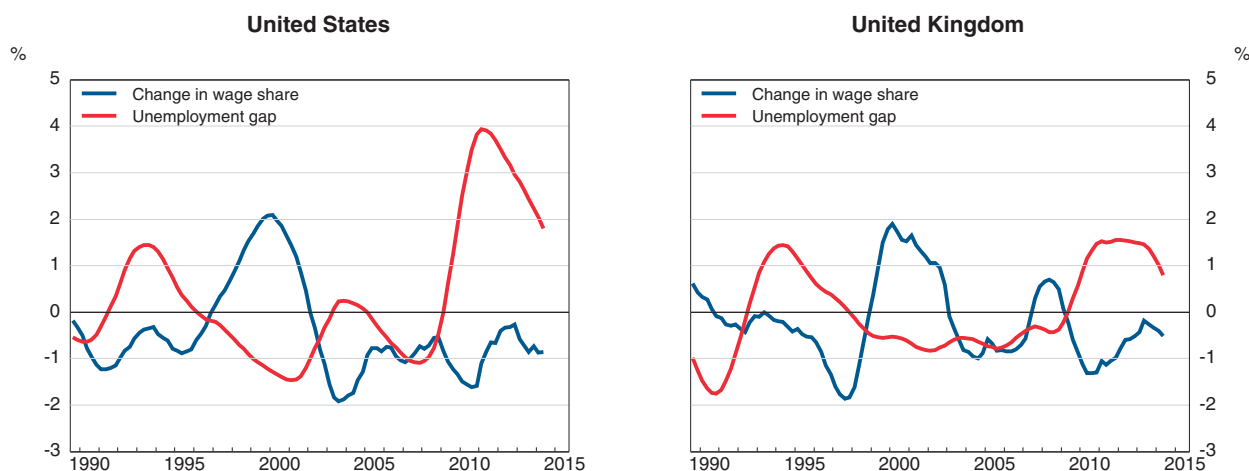
... and still high part-time working rates...

● A second issue is whether total labour market slack influences wage developments (Kiley, 2014), or whether short-term unemployment has a more important role (Krueger et al., 2014), possibly reflecting the lower bargaining power of the long-term unemployed relative to those only recently unemployed. In the latter case, wage growth could soon pick up in countries such as the United States where short-term unemployment is back to pre-crisis norms. Other work has suggested that both short-term unemployment and the share of part-time workers for economic reasons influence (real) wage growth (Aaronson and Jordan, 2014), particularly for workers at the bottom end of the income distribution.⁹ As the latter is still high, there may be a more delayed recovery in wage pressures in many economies.

... flexible labour supply...

● In some countries, including the United Kingdom, labour supply is becoming more elastic, either due to greater participation of domestic residents or increased immigration. For a given level of labour demand

Figure 1.6. Economic slack continues to hold back wage growth



Note: The change in the labour share is defined as the annualised change in eight-quarter moving average of real wages less the annualised change in eight-quarter trend labour productivity, ending in the quarter shown. The unemployment gap is the average unemployment gap over the last eight quarters.

Source: Datastream; OECD Economic Outlook 96 database; and OECD calculations.

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9. Their empirical estimates suggest that average real wage growth in mid-2014 would have been up to 1 percentage point higher in the United States if labour market conditions were the same as those over 2005-07.

this could hold down wage settlements. In practice, the skill mix of the new participants would also matter.¹⁰

... and weak productivity growth

- More generally, for a given level of labour market slack, currently weak underlying productivity growth and low price inflation will also be curbing new nominal wage settlements.

Wage growth is projected to pick up gradually over the next two years

Over the projection period the extent of labour market slack is expected to diminish further in all economies, with underlying productivity growth and price inflation slowly edging up. Against this background, wage growth is projected to strengthen gradually in the OECD economies, with nominal compensation per employee rising by around 2½ per cent in 2015 and just under 3% in 2016. Comparatively tight labour markets and planned or recent minimum wage rises should result in stronger wage growth in several economies, including Germany and the United Kingdom.

Stronger investment is essential to deepen the recovery

A strong acceleration of investment growth is needed

A sustained acceleration in investment will be essential if the recovery is to gain greater momentum. The downturn in fixed investment among advanced economies from the onset of the global crisis was unusually severe, widespread and long-lasting relative to comparable episodes in the past. This largely reflected subdued demand growth, low levels of capacity utilisation, financial constraints and heightened uncertainty. Public investment has been limited by fiscal consolidation and housing investment has been hit by the correction of past housing market imbalances, especially in the United States and some euro area economies. As a result, investment gaps are large, not only in relation to past norms but also relative to projected future steady-state levels in many economies (Lewis et al., 2014). Nevertheless, investment growth has recently begun to pick up and exceed GDP growth in several OECD economies, including the United States and the United Kingdom.¹¹ However, it remains particularly weak in most euro area countries (Figure 1.7). Outside the euro area, corporate balance sheets are now generally healthy with ample liquidity and greater risk appetite has raised the availability of external market finance for large companies. Moreover, bank lending standards are easing and profit levels are high.

A gradual upturn in investment growth is projected in many economies

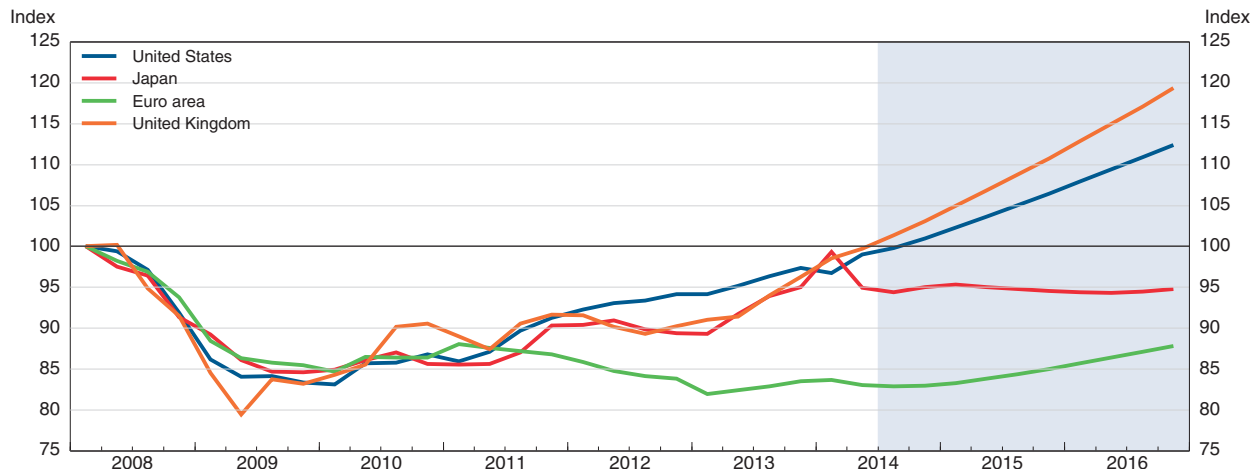
Assuming that the recent upturn in uncertainty fades, a broader and stronger cyclical upturn in investment could occur in 2015-16, with accelerator mechanisms helping investment growth to outpace output growth in a much larger number of economies. This could result in annual rates of investment growth of 5% or more in the United States, the United

10. Recent empirical research has found that immigration may have pushed down the wages of lower-skill workers in the United Kingdom, but raised wage growth for higher-skill workers (Dustman et al., 2013).

11. In the United Kingdom, recent revisions to the national accounts have resulted in average annual real investment growth from 2007 to 2013 being revised up by 2 percentage points.

Figure 1.7. **The post-crisis recovery in investment remains slow**

Index 2008 Q1 = 100



Source: OECD Economic Outlook 96 database.

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Kingdom, Poland, Turkey and Korea. Prospects are weak in Japan, where a turn up in business investment is projected to be offset by declines in public and residential investment. Investment is also likely to remain weak in much of the euro area, reflecting subdued demand, less favourable balance sheet developments, impaired credit channels and barriers to product market competition. If economic uncertainty were to intensify once again, the broader upturn in investment may be delayed considerably, given the option value of waiting.

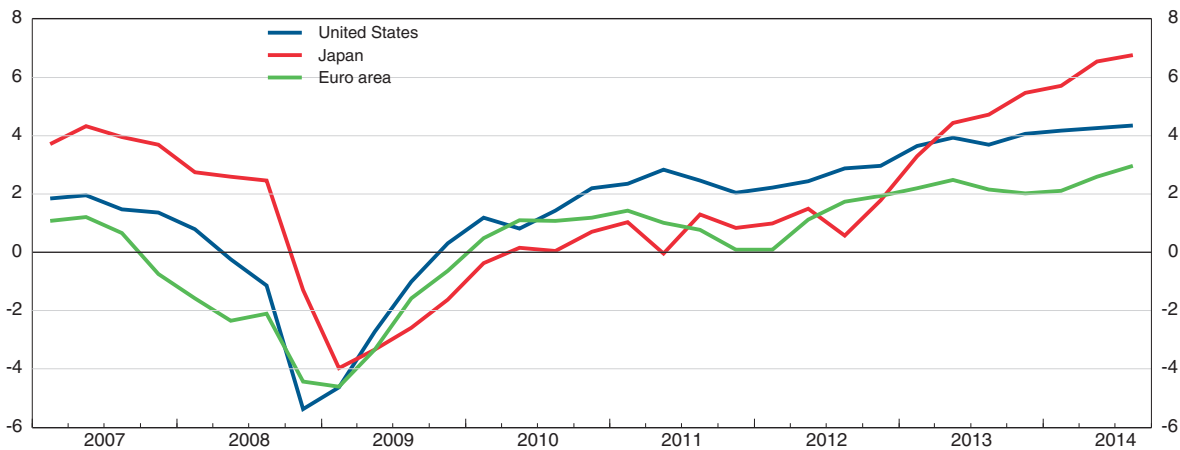
Support from financial conditions is slowing

Aggregate financial conditions, as measured by the OECD Financial Conditions Index, continued to improve in the second and third quarters of 2014, especially in Japan and the euro area (Figure 1.8). Market expectations of sustained accommodative monetary policy and continued policy interventions in bond markets helped lower long-term nominal interest rates in the euro area, Japan and the United States. Japan and the euro area also benefited from real exchange rate depreciations in the third quarter, possibly reflecting expectations of sustained monetary policy stimulus. In contrast, the US dollar appreciated amid expectations of a gradual normalisation of monetary policy. Equity prices have increased since April, boosting household wealth. In addition, credit conditions eased in all three areas.

Financial conditions in the main OECD areas have been supportive of growth...

... but the pass-through to growth may be impaired

The pass-through of short and long-term market interest rates to the cost of credit for households and businesses has been impaired. In the euro area, the cost of bank credit has not fallen proportionally with the sizeable decline in official interest rates and government bond yields. This could reflect pressures to maintain bank operational profits in the context of a high level of non-performing loans and subdued credit provision. Moreover, overall credit conditions still remain tight in the euro area, as

Figure 1.8. **OECD financial conditions have improved further**

Note: A unit increase (decline) in the index implies an easing (tightening) in financial conditions sufficient to produce an average increase (reduction) in the level of GDP of $\frac{1}{2}$ to 1% after four to six quarters. See details in Guichard et al. (2009). Based on available information up to 14 November 2014.

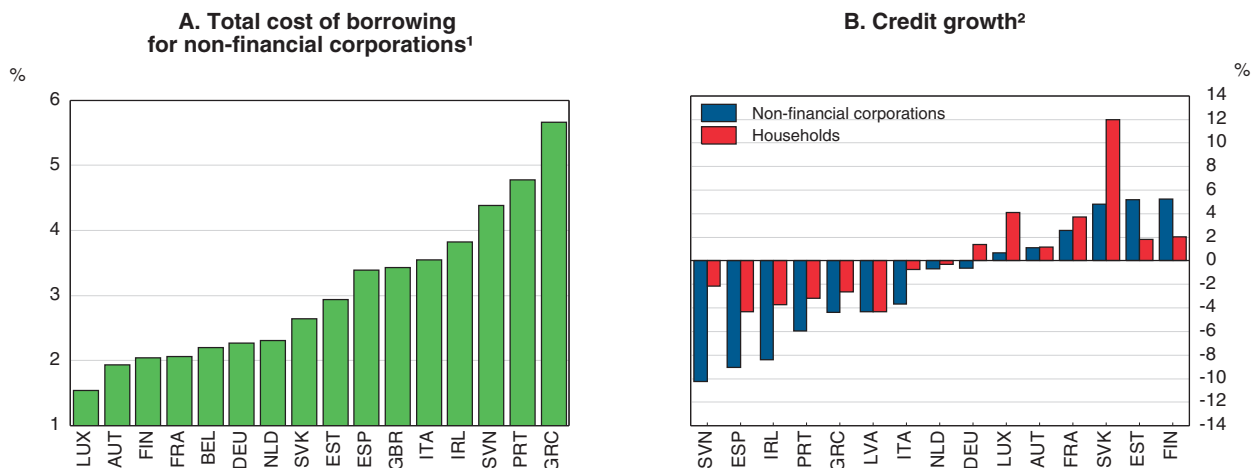
Source: Datastream; OECD Economic Outlook 96 database; and OECD calculations.

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do those for mortgages in the United States. The depreciation of exchange rates might also boost demand by less than expected. Rising asset prices may stimulate household consumption if they are perceived to be durable, but by a smaller extent than usual because financial gains are accruing to only a few households with a relatively low propensity to spend. This is an outcome of high wealth inequality, especially in the United States (see below).

Intra-euro area financial conditions have not yet converged

The cost of bank credit for non-financial corporations in most vulnerable euro area countries is high and its dispersion across euro area countries is still large, despite recent declines (Figure 1.9). Credit

Figure 1.9. **Intra-euro area financial fragmentation**

1. Average of total cost of borrowing from Monetary Financial Institutions between July and September 2014.

2. Average of annual growth rates between July and September 2014. Loans adjusted for sales and securitisation of all types of maturity.

Source: European Central Bank; Bank of Italy; and OECD calculations.

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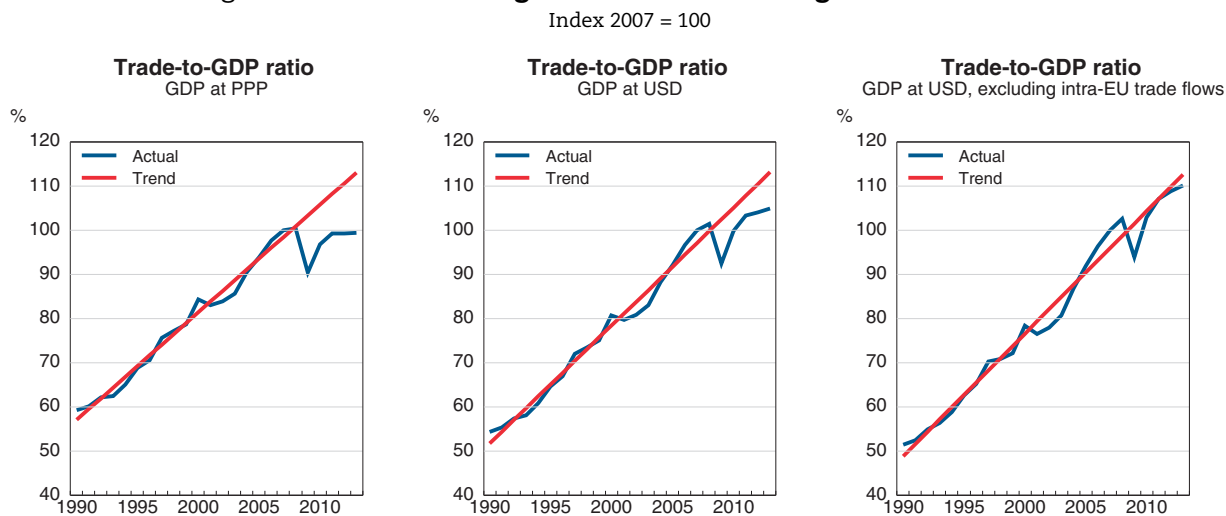
dynamics differ, with generally larger credit declines in the vulnerable countries than in the core countries. This reflects differences in economic performance and credit risks, but also persisting, though somewhat reduced, financial fragmentation in the banking sector. Target 2 balances have halved from their peaks in 2012, though they have widened somewhat in August and September in Italy and Germany.

The global trade elasticity remains low

Weakness in Europe has contributed to a subdued global trade elasticity

Global trade intensity remains constant as the elasticity of global trade to activity is subdued.¹² Trade volumes continue to move in line with activity this year, by around 3%, in a marked break from pre-crisis norms, when global trade grew twice as fast as world GDP. Two main factors account for a substantial proportion of this post-crisis decline in the global trade elasticity. First, intra-EU trade is very weak, reflecting soft domestic demand, and especially investment, in the euro area. Second, the share of the EU in global activity has declined after the crisis. Excluding intra-EU trade, the ratio of global trade to GDP is close to its pre-crisis trend (Figure 1.10) and there has been only a small change in the global trade elasticity.¹³ With only a modest recovery projected in most euro area economies, this factor is likely to hold back global trade

Figure 1.10. **The ratio of global trade volume to global GDP volume**



Note: Global trade volume is the simple average of global export and import volumes and is measured at 2010 USD. The trend represents the pre-crisis trend 1990-2007.

Source: OECD Economic Outlook 96 database; and OECD calculations.

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12. Trade intensity refers to the level of trade relative to the level of GDP (both in volume); the trade elasticity is the rate of change of trade relative to the rate of change of GDP.

13. Trade intensity (in constant prices) is best assessed using GDP at constant market exchange rates rather than by using conventional PPP-based measures of global GDP, since trade itself is measured at market exchange rates.

intensity for some time. The on-going accumulation of trade restrictions in the major economies may also be a factor behind the recent soft trade growth outside Europe.¹⁴

Trade intensity should rise slowly over time

There are some tentative signs that global trade intensity may be improving slowly. Trade growth is projected to have exceeded global output growth in the latter half of 2014, with OECD export growth and non-OECD import growth both picking up. Global export orders have also strengthened over the past six months, and IT-related trade and international air passenger traffic (one indicator of services trade) are rising steadily. The extent to which global trade intensity rises will depend in part on the speed of the growth recovery in the European economies, and, more generally, whether capital investment can strengthen gradually. Based on the growth projections outlined below, global trade growth is projected to pick up from 3% in 2014 to around 5½ per cent in 2016. This would be a modest recovery by pre-crisis norms. In the medium term, measures to facilitate trade and a successful conclusion to the current negotiations on the transatlantic and transpacific trade agreements would help to boost global activity and trade growth.

Private consumption may be held back by inequality effects

Consumption growth has not yet accelerated

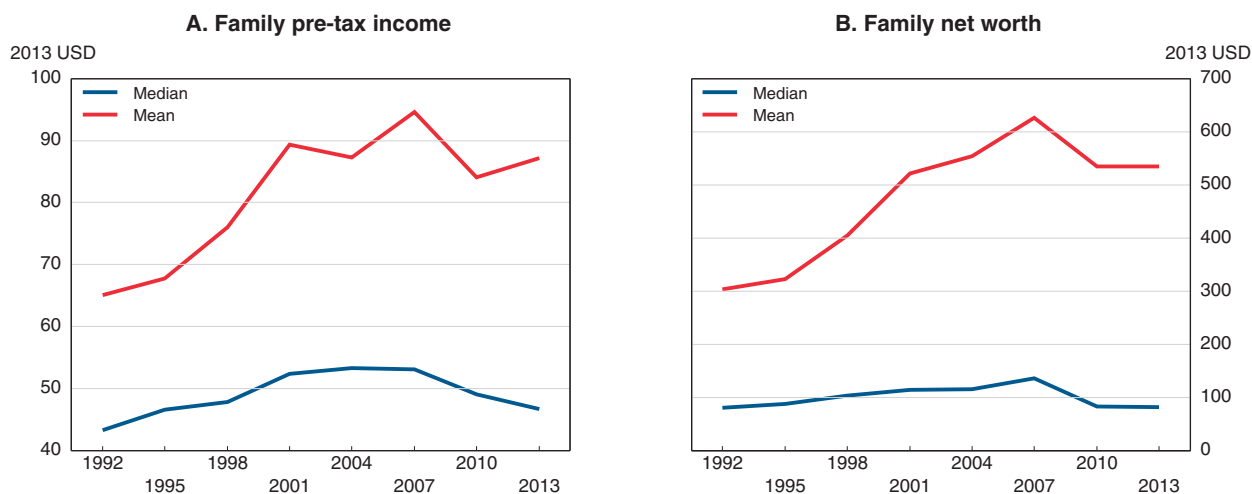
Household consumption growth has remained unchanged in the OECD area this year, despite the boost provided by improving labour market outcomes, low interest rates and, in some economies, especially outside the euro area, stronger household balance sheets.

Rising income and wealth inequality may hold back spending in the United States...

- In the United States, annual private consumption growth has remained around 2¼ per cent this year. The saving rate has risen, despite accelerating household income growth, further wealth increases and improved consumer confidence. One possible explanation is that income and, to a lesser extent, wealth inequality has risen in recent years, reflected, for instance, in the growth of mean incomes and wealth relative to the median (Figure 1.11). Families at the top end of the income and wealth distribution, with a lower propensity to consume (Jappelli and Pistaferri, 2014), have seen substantial gains. Those at the bottom end of the distribution, who have a high propensity to consume, have seen declines in their real incomes and little or no improvement in net wealth. The wealth distribution effects reflect that net financial wealth, typically accruing to the richest households, has risen much more substantially over the recovery than housing net worth, where the benefits are felt by a much wider range of households.

14. The number of trade restrictive measures introduced by G-20 countries since the onset of the crisis covers around 5¼ per cent of G-20 merchandise imports (OECD/WTO/UNCTAD, 2014). The number of new trade facilitation measures has recently started to rise, but still covers only around 0.6% of G-20 merchandise imports.

Figure 1.11. **Income and wealth disparities have widened in the United States**



Note: The data cover families' pre-tax incomes and net worth.
Source: Federal Reserve Board Survey of Consumer Finances.

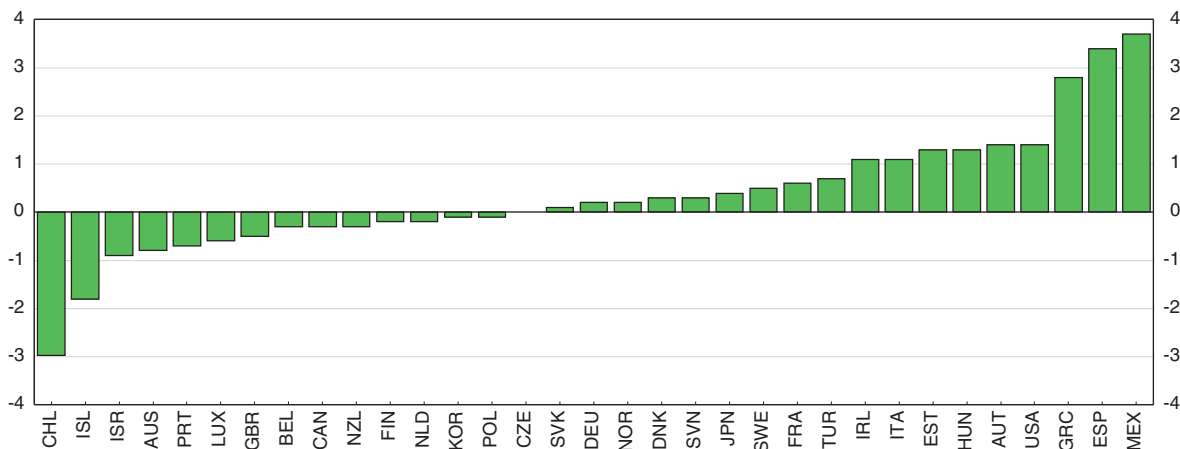
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... and some other economies...

• A similar pattern, with modest private consumption growth, has occurred this year in a number of other economies, including Germany and France, despite income and wealth increases. In these countries, the income share of those with the highest incomes has risen relative to the share of those with the lowest incomes since the start of the crisis. However, this has not occurred in all economies (Figure 1.12; OECD, 2014e). As in the United States, wealth inequality is higher than income inequality in all economies, with the upturn in financial wealth accruing largely to the households with the lowest propensity to consume (Figure 1.13).

Figure 1.12. **Post-crisis changes in the income distribution have varied across countries**

Change in the s90/s10 ratio from 2008 to latest data¹



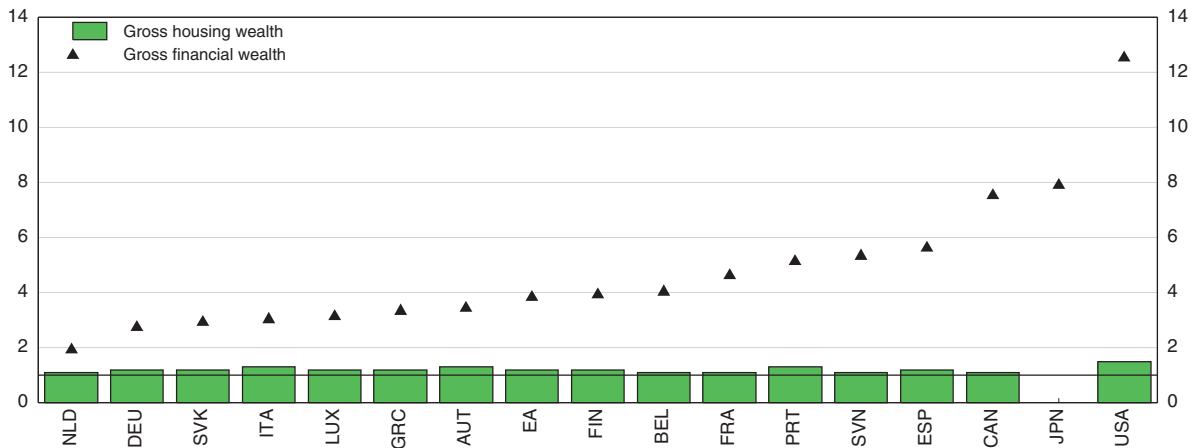
1. Ratio represents the share of disposable income of the top 10% to the share of disposable income of the bottom 10% of income earners. 2007 data are used for Hungary and Turkey.

Source: OECD Income Distribution database; OECD Economic Outlook 96 database; and OECD calculations.

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Figure 1.13. **Financial wealth inequality is greater than housing wealth inequality**

Ratio of mean to median, by type of wealth



Note: Only the primary residence value is included in the value for gross housing wealth. Data for the United States, Canada and Europe are based on samples of all types of households. The Japanese survey only includes single-person households. Means and medians are based on households that own property for the property wealth calculation, and households that own financial assets for the financial wealth calculation.

Source: European Central Bank; Federal Reserve Board; Statistics Canada; and the Central Council for Financial Services Information of Japan.

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... but stronger income growth will support spending over 2015-16

Consumption growth is projected to slowly strengthen in almost all economies, albeit at different speeds, over the next two years as improvements in job and wage growth boost household real disposable incomes. In many countries, saving rates are projected to change very little in 2015 and 2016, with the full effect of past wealth gains in some countries not incorporated into the projections. In Japan, private consumption growth has been very volatile due to expenditure shifting around the increase in the consumption tax rate (Box 1.3), but should slowly strengthen in 2015 and 2016 provided real wage growth becomes positive.

Box 1.3. Consumption tax increases in Japan

This box assesses the impact of the recent consumption tax increase in Japan and draws comparisons with the situation at the time of the previous consumption tax rise in 1997. It suggests that while consumption growth can recover fairly quickly, residential investment could take a longer time to recover.

In order to boost government revenues to help counter rising government debt, the Japanese government has legislated two increases in VAT, known as the “consumption tax”, from 5% to 10%. The first rise, by 3 percentage points, occurred in April 2014. The remaining 2 percentage-point rise is now set to occur in April 2017, rather than October 2015 as originally planned. Considering the relatively low rate of the tax and the stable source of revenue that it provides, raising the consumption tax would be more effective than increasing other tax rates. The last consumption tax increase prior to this year was in April 1997, when the rate was raised from 3% to 5%.

Box 1.3. Consumption tax increases in Japan (cont.)

The economic circumstances in which the recent tax increase occurred differ in several respects from those in 1997. In particular, the 1997 increase coincided with mounting problems in Japan's financial sector, cumulating in the collapse of three major financial institutions in November that year and an extended economic downturn. External demand was stronger in 1997 at the time the tax rise was implemented, but this was soon disrupted by the outbreak of the Asian crisis in June of that year. Monetary policy is, however, more accommodative now than in 1997. One similarity between 1997 and 2014 is that fiscal policy was stimulatory the year before, but restrictive at the time of the tax increase.

In the short term, changes in the consumption tax make it harder to identify the underlying strength of the Japanese economy, due to the volatility associated with the one-off level shifts in the prices of all consumption goods. However, the increase in the consumption tax in April 2014 was followed by a larger short-term reduction of domestic demand and real wages than after the previous tax increase in 1997 (see first figure below). One possibility is that the expectation of a further tax increase contributed to the sharper-than-expected fall in economic activity in 2014. Household survey data also suggest that a higher proportion of households now have no savings or financial assets than in 1997. A third possibility is that the proportionate impact of the tax increase on the price level this year was larger than in 1997.

When taxes on consumption goods are about to be increased, forward-looking households bring forward planned large household purchases, particularly of durable or other non-perishable items, to avoid paying higher prices caused by the tax increase. The effect of this forward shift of demand is a sharp increase in the purchases of goods and services to which the tax applies in the period immediately prior to the tax increase (so called "rush demand") followed by a sharp fall in the following period. Ideally, this short-term shift would have little to no effect on the long-term economic decisions by households. Demand switching was evident in household consumption patterns around the current and the previous tax increases. Consumption increased by 2¼ per cent (quarter-on-quarter) in the first quarter of 2014 followed by a 5% fall in the second quarter and a rise of 0.4% in the third quarter. Consumption growth immediately prior to the 1997 tax rise was of a similar magnitude (around 2% in the first quarter of 1997), although the fall was less severe with consumption declining by only 3½ per cent in the second quarter before recovering by 0.8% in the third quarter.

Looking ahead to the second planned consumption tax increase, it is unclear whether or not the spike and subsequent fall in consumption will be of a similar magnitude considering that some households may have taken both tax increases into consideration when bringing forward consumption in the first quarter of 2014, implying they have fewer large purchases to make.

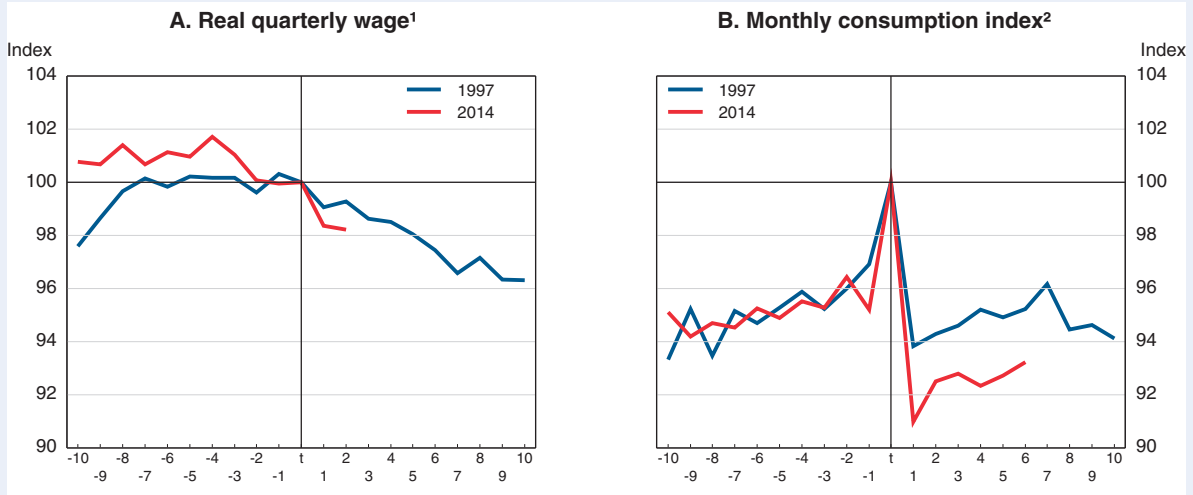
A notable feature of Japan is that activity in the residential property market is also greatly affected by changes in the consumption tax, which is applied on all residential property sales contracts. Since housing represents one of the largest expenditure items subject to the tax, and given the long-term nature of housing services, the pull forward and subsequent fall are more likely to be spread over a longer time period than two quarters. Residential investment saw a noticeable pick-up prior to 2014 before falling off considerably after the increase in the consumption tax in both the second and third quarters of 2014 (see second figure below), similar to what occurred in 1997. At that time, residential investment remained low following its sharp initial fall, reflecting the weak economy and demographic factors. In the current period, more accommodative monetary policy should help stimulate housing demand in the medium to longer term. However, weak underlying demand for new housing due to unfavorable demographics is likely to limit property investment in Japan.

The current baseline projection for Japan is for a moderate underlying strengthening of consumption and housing investment over the projection period. The experience of 1997 is however a reminder that potential external shocks, such as a slowing in China, or persistent weak growth in the euro area could easily soften external demand in Japan and slow the recovery from the impact of the consumption tax increase.

Box 1.3. Consumption tax increases in Japan (cont.)

Effects of the consumption tax increase on households


Value at date of consumption tax increase = 100



1. Compensation rate deflated by the CPI index.

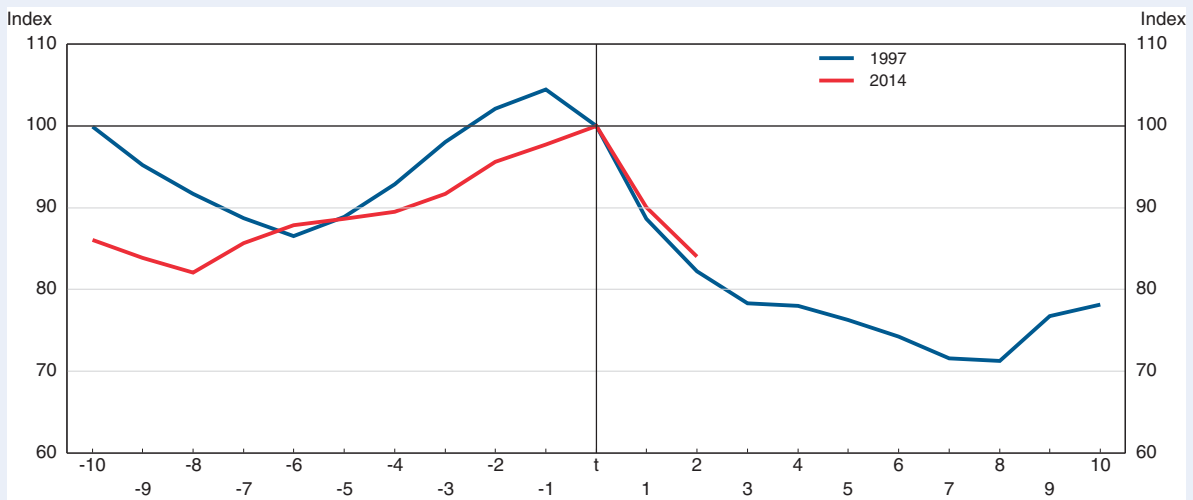
2. The synthetic consumption index, which includes a range of indicators, such as the household budget survey, new motor vehicle registrations, commercial sales statistics, supermarket sales and the index of tertiary industry activity.

Source: OECD Economic Outlook 96 database; and Cabinet Office.


StatLink  <http://dx.doi.org/10.1787/888933169282>

Residential property investment

Value at date of consumption tax increase = 100



Source: OECD Economic Outlook 96 database; and Cabinet Office.

StatLink  <http://dx.doi.org/10.1787/888933169291>

Housing market conditions are diverging

Housing market conditions continue to diverge

House prices are presently rising in over half of the OECD economies (Table 1.2), but housing investment growth has generally slowed this year. In Europe, strong house price growth is continuing in Germany (based on

Table 1.2. **Housing market developments continue to diverge**

	Per cent annual rate of change				Level relative to long-term average ¹		Latest available quarter
	2005-2012	2013	2014 ²	Latest quarter ³	Price-to-rent ratio	Price-to-income ratio	
Australia	2.0	4.1	6.1	6.7	150	132	Q3 2014
Austria	3.0	2.4	1.7	2.4	114	120	Q2 2014
Belgium	2.9	0.5	-0.6	-0.9	155	151	Q2 2014
Canada	4.8	1.3	2.4	3.1	170	132	Q3 2014
Czech Republic		-1.2	0.7	0.8	..	..	Q2 2014
Denmark	-1.8	1.6	2.2	3.0	114	112	Q2 2014
Estonia	-1.4	7.3	10.1	12.4	..	..	Q2 2014
Finland	1.2	-0.9	-2.1	-2.9	131	98	Q3 2014
France	1.7	-2.8	-1.5	-1.9	128	127	Q2 2014
Germany	1.0	5.0	2.8	2.3	93	87	Q3 2014
Greece	-3.6	-9.4	-4.7	-5.8	83	90	Q2 2014
Hungary		-5.0	0.5	0.9	..	..	Q2 2014
Iceland	-2.4	2.3	5.4	6.5	..	..	Q2 2014
Ireland	-6.6	0.0	7.8	12.7	106	99	Q3 2014
Israel	4.2	6.8	5.4	7.3	111	..	Q2 2014
Italy	-1.2	-6.9	-4.0	-5.2	91	105	Q2 2014
Japan	-1.8	-1.5	-1.1	-1.6	62	62	Q1 2014
Korea	1.5	-1.4	0.1	0.5	103	60	Q3 2014
Luxembourg		4.9	2.1	4.0	..	..	Q2 2014
Netherlands	-1.9	-8.3	-0.6	0.8	102	115	Q3 2014
New Zealand	1.0	8.5	4.2	5.8	170	130	Q2 2014
Norway	5.0	1.3	-0.4	1.1	166	124	Q3 2014
Portugal	-0.8	-4.2	-1.4	-2.1	83	93	Q2 2014
Slovak Republic	2.4	-2.2	-0.1	-1.1	..	..	Q2 2014
Slovenia		-5.8	-6.7	-10.6	..	..	Q2 2014
Spain	-4.0	-7.3	-2.5	-3.0	104	107	Q2 2014
Sweden	3.1	2.4	5.5	7.7	139	123	Q3 2014
Switzerland	3.0	5.1	1.3	1.5	101	97	Q3 2014
Turkey		6.2	4.9	7.6	..	..	Q2 2014
United Kingdom	-0.8	1.6	6.1	8.0	140	124	Q2 2014
United States	-3.7	6.4	3.1	3.6	104	89	Q2 2014
Euro area ⁴	-0.2	-2.0	-0.6	-0.7	106	107	Q2 2014
Total OECD ⁴	-1.2	2.1	1.6	2.0	106	95	Q2 2014

Note: House prices deflated by the private consumption deflator.


1. Average from 1980 (or earliest available date) to latest available quarter = 100.

2. Average of available quarters where full year is not yet complete.

3. Increase over a year earlier to the latest available quarter.

4. Using 2010 GDP weights, calculated using latest country data available.

Source: Girouard *et al.* (2006); and OECD.

StatLink  <http://dx.doi.org/10.1787/888933169930>

data from the big cities), Switzerland and the United Kingdom, and has resumed in Ireland and Sweden. Markets remain softer in many other parts of the euro area, reflecting weak income growth and still tight financing conditions. In the United States, housing developments point to a modest recovery following the slowdown caused by adverse weather conditions in early 2014. Prices continue to rise, improving household net worth, but at a much lower rate than throughout 2013. Investment and sales growth have both been volatile but are now picking up once again. Looking ahead, the housing market recovery should continue in the coming two years, given the likelihood of continued solid income growth, potential easing in mortgage lending standards and pent-up demand after a period of subdued household formation rates. In Japan, real house prices are continuing to edge down, and housing investment has declined sharply following the increase in the consumption tax rate on sales contracts this year (Box 1.3).

Economic prospects and risks

Economic growth

The recovery is likely to remain moderate in...

The most likely near-term outlook is for global activity growth to remain moderate in comparison with the rates seen in the decade or so prior to the financial crisis. Provided uncertainty does not intensify, and downside risks do not materialise, output growth should strengthen gradually over the projection period whilst inflation remains low. In the OECD economies, accommodative monetary policies will continue to provide support and the drag from fiscal consolidation is set to fade considerably (outside of Japan) (Box 1.4). However, subdued productivity growth, moderate investment and high unemployment in many countries are likely to check the momentum of the recovery. The growth slowdown in the major EMEs seems likely to have levelled out, but they are not projected to show much of their former dynamism over the projection period.

... the United States...

- In the United States growth is projected to gain additional momentum and remain at an above-trend pace through the projection period. Supportive monetary policy, diminished fiscal drag, improved confidence and strengthened private sector balance sheets should all help to underpin activity. Household income growth should be boosted by solid employment growth and real wage increases as the labour market tightens, helping to support consumption. Normal cyclical effects should also continue to strengthen business investment. Stronger external demand is likely to boost export growth, but the impact on GDP will be largely offset by rising imports. The negative output gap is projected to fade steadily to just above 1¼ per cent by the end of 2016.

... and Japan...

- In Japan, activity has declined after the April consumption tax increase, with soft private domestic demand offsetting stronger public investment and improved export growth. Fiscal consolidation is likely to continue to weigh on growth through the projection period, reflecting the unwinding of past fiscal stimulus in 2015 and 2016.

Box 1.4. Policy and other assumptions underlying the projections

Fiscal policy settings for 2014, 2015 and 2016 are based as closely as possible on legislated tax and spending provisions. 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. Where there is insufficient information to determine the allocation of budget cuts, the presumption is that they apply equally to the spending and revenue sides, and are spread proportionally across components.

In the United States, the general government underlying primary balance is assumed to improve by under $\frac{1}{4}$ per cent of GDP over the 2015-16 period, roughly as implied by current legislation, including the Bipartisan Budget Act and the Budget Control Act.

In Japan, the projections incorporate the further two-percentage point cut in the corporate income rate in 2015 following the cut from 38% to below 35% in 2014. Overall, the underlying primary balance is assumed to improve by between $\frac{1}{2}$ and 1 per cent of GDP in both 2015 and 2016.

In euro area countries, fiscal stances in 2015 and 2016 (measured as the change in the structural primary balance) are based on draft budget laws or, if these are not available, the stated targets in Stability Programmes (SPs).

In the large euro area countries, fiscal policy is assumed to evolve as follows. For Germany, the budgetary plans as contained in the German SP from April 2014 have been built into the projections. For France, the projections incorporate a cumulative reduction in the structural deficit of a little over $\frac{1}{2}$ per cent of GDP in 2015 and 2016, with consolidation shifting toward greater efforts on the spending side, as foreseen in the 2015 draft budget law. For Italy, the projections incorporate broad stability for the structural balance in 2015, followed by about $\frac{1}{2}$ per cent of GDP contraction in 2016, as foreseen in national budget projections.

For the United Kingdom, the projections are based on tax measures and spending paths set out in the March 2014 budget, with structural consolidation of between 1 and $1\frac{1}{2}$ per cent of GDP in both 2015 and 2016.

Policy-controlled interest rates are set in line with the stated objectives of the relevant monetary authorities, conditional upon the OECD projections of activity and inflation, which may differ from those of the monetary authorities. The interest rate profile is not to be interpreted as a projection of central bank intentions or market expectations thereof.

- In the United States, the upper bound of the target federal funds rate is assumed to be raised gradually between June 2015 and December 2016 from the current level of 0.25% to 2.25%.
- In the euro area, the main refinancing rate is assumed to be kept at 0.05% throughout the projection period.
- In Japan, the short-term policy interest rate is assumed to be kept at 0.1% for the entire projection period.
- In the United Kingdom, the Bank rate is assumed to be increased gradually between May 2015 and December 2016 from the current level of 0.5% to 2.50%.

Although their impact is difficult to assess, the following quantitative easing measures are assumed to be taken over the projection period, implicitly affecting the speed of convergence of long-term interest rates to their reference rates. In the United States, following the end of asset purchases in October, the stocks are assumed to be maintained unchanged until the end of the projection period. In Japan, asset purchases are assumed to continue in line with the stated objective of the monetary authorities to attain the inflation target; this is assumed to keep the long-term interest rate constant. In the euro area, current programmes of TLTROs and purchases of covered bonds and ABS securities, as well as additional purchases of government bonds, are built into the projections so as to keep long-term interest rates constant. In the United Kingdom, the stocks of assets purchased are assumed to remain unchanged from current levels until the end of the projection period.

Box 1.4. Policy and other assumptions underlying the projections (cont.)

In the United States and the United Kingdom, 10-year government bond yields are assumed to converge slowly toward a reference rate (reached only well after the end of the projection period), determined by future projected short-term interest rates, a term premium and an additional fiscal premium. The latter premium is assumed to be 2 basis points per each percentage point of the gross government debt-to-GDP ratio in excess of 75%. The 10-year government bond yield is assumed to remain constant throughout the projection period at 0.5% in Japan and at 0.85% in Germany, and yield spreads with Germany in euro area countries are assumed to remain constant at their recent levels.

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 6 November 2014: one US dollar equals 114.45 JPY, EUR 0.80 (or equivalently one euro equals 1.25 dollars) and 6.11 renminbi.

The price of a barrel of Brent crude oil is assumed to remain constant at \$85 throughout the projection period. Non-oil commodity prices are assumed to be constant over the projection period at their average levels of October 2014.

The cut-off date for information used in the projections is 18 November 2014. Details of assumptions for individual countries and economies are provided in Chapter 2.

Increasingly accommodative monetary policy and improved financial conditions should, however, support activity, with improved competitiveness helping exporters to maintain market share as external demand rises. Labour shortages and ample profits are also likely to underpin business investment. Annual GDP growth is projected to remain broadly in line with potential output growth, with the small negative output gap closing by 2016.

... and remain weak in the euro area

- In the euro area, the recovery remains weak, confidence has declined and unemployment and disinflationary pressures remain high. Increasingly accommodative monetary policy, slowing fiscal consolidation, the depreciation of the euro effective exchange rate and weaker oil prices should all help to boost activity, but the recovery is unlikely to regain momentum until well into 2015. Improving export prospects and a gradual upturn in private investment as confidence firms and financial conditions improve could eventually help the recovery to strengthen. Private consumption is likely to remain constrained by weak balance sheets and soft labour markets. Despite the modest rate of potential output growth, the current large negative output gap is likely to persist for some time, before narrowing slowly to around 2½ per cent by the end of 2016.

Growth is projected to ease gently in China...

- In China, the stimulus measures taken this year continue to support output growth, but property market activity remains weak. Over the projection period, spending on infrastructure and social housing projects should remain high and improving external demand is projected to boost export growth. Targeted policy measures to lower financing costs for the corporate sector are likely to continue and

structural reforms, including the further opening up of service sectors to private capital, could provide some additional support to activity. GDP growth will remain moderate by past standards, but ease only gently from between 7¼-7½ per cent this year to just under 7% in 2016.

... but strengthen in India

- In India, growth is set to strengthen through the projection period, from around 5% this year to 6½ per cent in 2016 (calendar year). Improved confidence and on-going business-friendly reforms should boost investment, and past rural wage increases and fading inflation should support real incomes and consumption. Export growth should benefit from stronger external demand and improved competitiveness, but the impact on GDP growth is likely to be offset by rising imports as domestic demand strengthens.

Only modest growth is likely in Brazil...

- In Brazil, the recovery from the technical recession in the first half of 2014 is expected to be modest. GDP growth is projected to edge up to around 1½ per cent in 2015 and 2% in 2016. Tight macroeconomic policies, weak investment growth, persistent infrastructure bottlenecks and high inflation are all projected to restrain domestic demand growth, and export growth is likely to pick up only slowly.

... and Russia

- In Russia, growth has slowed considerably this year. Economic sanctions, the domestic import ban and the sharp depreciation of the rouble have weakened confidence and added to already high inflationary pressures. Tight monetary policy and regulatory measures to reduce credit growth have constrained private sector demand, and the recent sharp declines in the oil price have increased uncertainty and reduced budget revenues. The rouble depreciation should, however, offer some limited support to activity. GDP growth is projected to stagnate in 2015, before picking up to between 1½-1¾ per cent in 2016, provided inflationary pressures ease and uncertainty gradually fades, thereby allowing investment to strengthen.

Risks

Risks remain to the downside

The main risks to economic growth are on the downside. A key risk is that continued growth disappointments, or changes in policy expectations, generate an upsurge in volatility in financial and foreign exchange markets. This would add to uncertainty and intensify financial vulnerabilities. Geopolitical uncertainty also remains, with disruptions to energy supply potentially having a significant adverse impact on growth. Significant downside concerns also remain about persistent weakness in the euro area economy and Japan, and financial risks in China. An additional negative risk is the perceived possibility of an Ebola pandemic.

A further slowdown could push the euro area closer to persistent stagnation...

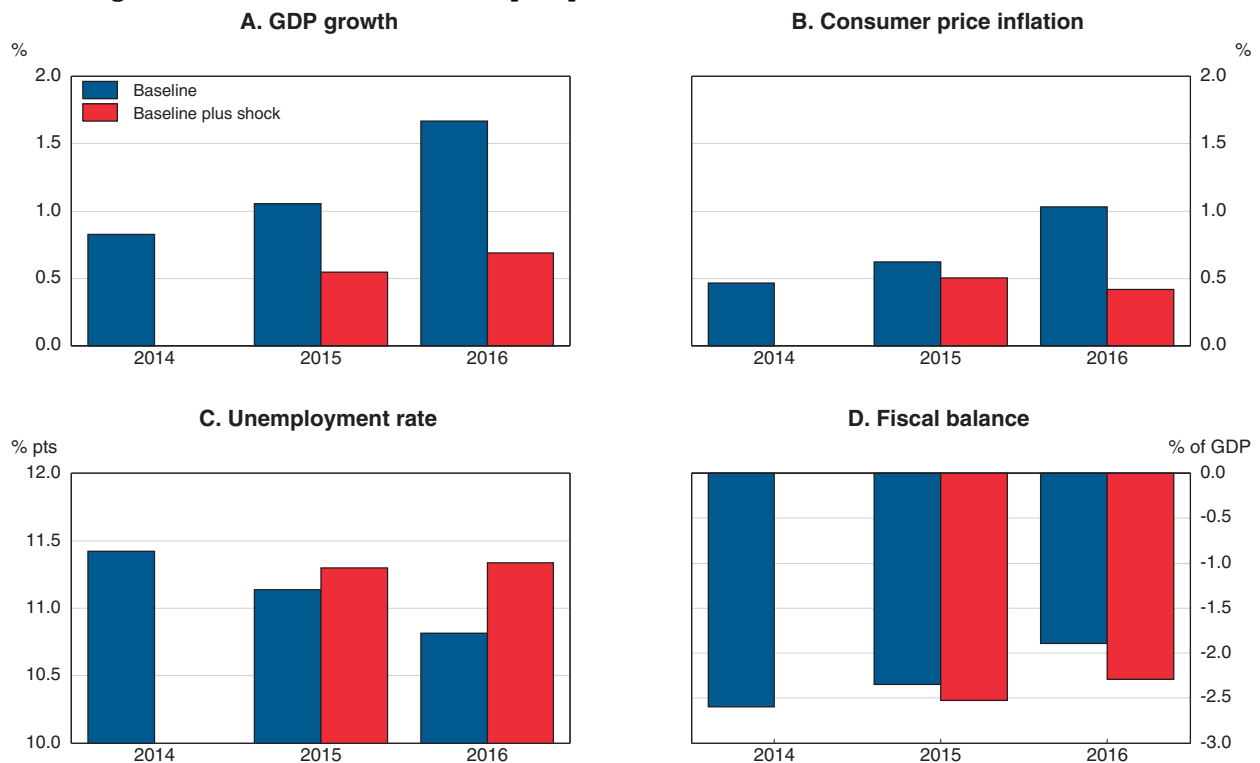
In the euro area, continued weakness in activity and inflation could result in further declines in inflation expectations, and a hit to investor confidence. With inflation currently at a very low level, a sharp downside shock could even result in outright deflation, raising real interest rates

and real indebtedness and prompting consumers to delay purchases in the expectation of lower future prices.¹⁵ In such circumstances, financial conditions would be likely to deteriorate, with reductions in equity prices and higher risk premia. This in turn would hit private-sector demand, both via wealth effects on consumption and by increases in the cost of capital for investment.

... with much weaker growth and inflation

A model simulation suggests that a decline in inflation expectations in the euro area and a loss of investor confidence could push the euro area close to recession and also to deflation.¹⁶ The shocks modelled are a 50 basis point reduction in inflation expectations, a 10% decline in equity prices and a 100 basis point increase in the corporate bond spread, the equity risk premium and the spread between household borrowing and lending rates.¹⁷ This would reduce euro area GDP growth by around ½ percentage point in 2015 and by 1 percentage point in 2016, raising the unemployment rate by around ½ percentage point (Figure 1.14). The decline in inflation expectations and

Figure 1.14. **Euro area economic prospects in the baseline and a downside scenario**



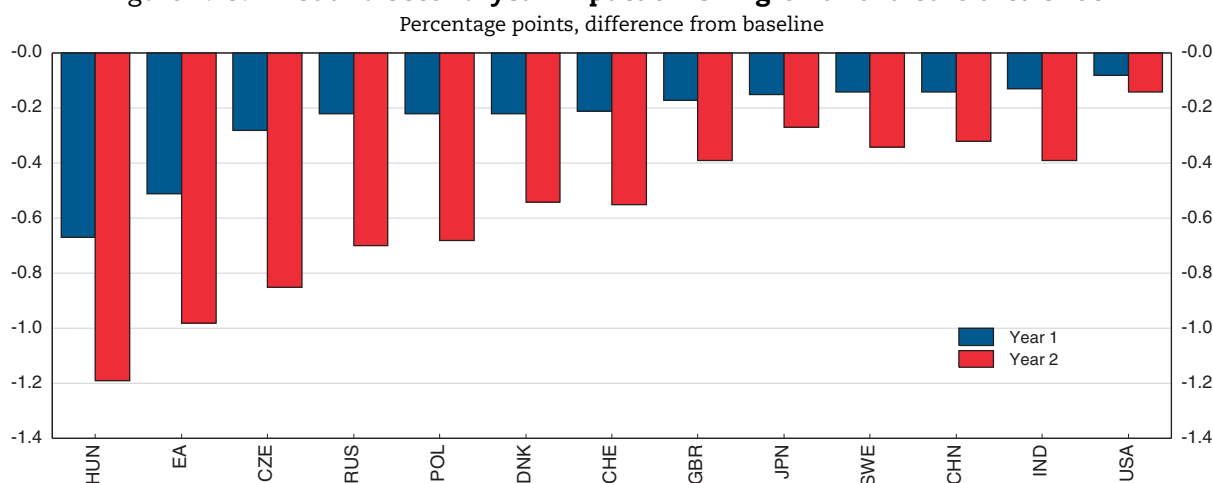
Source: OECD Economic Outlook 96 database; and OECD calculations.

StatLink  <http://dx.doi.org/10.1787/888933171336>

15. A decline in inflation expectation would not only hit price inflation directly (Moccero et al., 2011) but also have indirect effects by diminishing wage settlements and labour costs.

16. The simulations are undertaken on the NiGEM model, maintained by the National Institute of Economic and Social Research. Short-term interest rates and nominal exchange rates are held unchanged.

17. The decline in inflation expectations is similar to the decline over the past year in five-year and 10-year inflation swap rates.

Figure 1.15. **First and second-year impact on GDP growth of a euro area shock**

Note: Based on a decline of 50 basis points in euro area inflation expectations; a reduction of 10% in euro area equity prices and a 100 basis points increase in the euro area investment risk premia and the spread between household borrowing and lending rates.

Source: OECD Economic Outlook 96 database; and OECD calculations.

StatLink <http://dx.doi.org/10.1787/888933169252>

greater economic slack would push inflation down, by around 0.6 percentage point by the second year. Weaker import demand in the euro area would have negative spillover effects on other economies. In the second year, growth would be hit by around 0.2-0.3 percentage point in most of the larger economies, but by 0.5 percentage point or more in other open European economies with relatively strong trade linkages with the euro area (Figure 1.15). If weak growth were to persist in the euro area, then further downward shocks could arise from impaired confidence and a rise in precautionary saving due to higher debt burdens and higher unemployment.

Concerns about financial stability in China are rising...

In China, concerns relate to the past rapid increase in credit, the rising share of financing from outside the traditional banking sector as well as the potential for negative feedback loops between the banking sector, housing market, local governments and activity (Box 1.1 in OECD (2014b)). Non-financial private sector credit has risen by around 70% of GDP since 2007. Total social financing flows have, however, moderated recently. In part this reflects new regulations designed to improve transparency and reduce risks related to inter-bank activity.¹⁸ House prices continue to decline and housing sales have fallen. The authorities have recently loosened lending rules for mortgages and property developments, which may help to stimulate the housing market in the near term.¹⁹ However, it might also

18. A new regulation of inter-bank activity, concerning the size and maturity of inter-bank loans and their disclosure in balance sheets, was announced in May 2014. This could discourage banks from buying high-yield trust loans with money borrowed from other banks.

19. Measures include: a reduction in down payments from 60-70% to 30% of the property value for mortgages for a second home, if the owner has no other mortgages; lowering the floor for mortgage rates (also for first-time buyers); and allowing developers to issue corporate bonds and medium-term notes. Moreover, banks are encouraged to issue mortgage-backed securities to increase credit to the property market.

just postpone the bursting of a property bubble. In this case, it would lead to a further increase in the high indebtedness of households and businesses in the construction sector, and ultimately risk higher future losses for financial institutions.

... and thus risks of negative international spillovers

If financial turbulence in China led to a significant domestic demand slowdown, global repercussions could be sizeable and more severe than implied only by direct trade linkages:

The impact via trade is small...

- Model simulations point to only modest negative spillovers via trade. A 2-percentage point decline in Chinese domestic demand growth for two years would reduce OECD growth by 0.1-0.2 percentage point per annum, with a somewhat stronger impact in Japan and other EMEs.²⁰ In China, imports would fall sharply given the initial decline in domestic demand (by over 4%), reducing the overall impact of the shock on China to a decline of around 1% per annum in GDP growth. Overall, global GDP would decline by 0.3% per year.²¹

... but would be increased by financial shocks

- Nevertheless, the overall effects could be larger, given the additional uncertainty that might arise from the slowdown in China and the likely corrections in financial markets. These would have negative implications for asset prices and investment decisions. To illustrate the possible effects, two adverse financial shocks – a 10% decline in worldwide equity prices and a 20-basis point rise in the equity risk premia in all countries – were incorporated into the initial scenario. The additional impact of these shocks raises the overall reduction in global GDP growth to around ½ percentage point in the second year of the simulation. The full impact of the combined shocks would be relatively large in Japan, as well as India and Russia, reflecting comparatively strong linkages with China (Figure 1.16). GDP growth in the United States and the euro area would decline by around ¼ percentage point in both years. Weaker activity would lower consumer price inflation by around 0.3 percentage point in the OECD economies overall, with the unemployment rate rising by around ¼ percentage point.

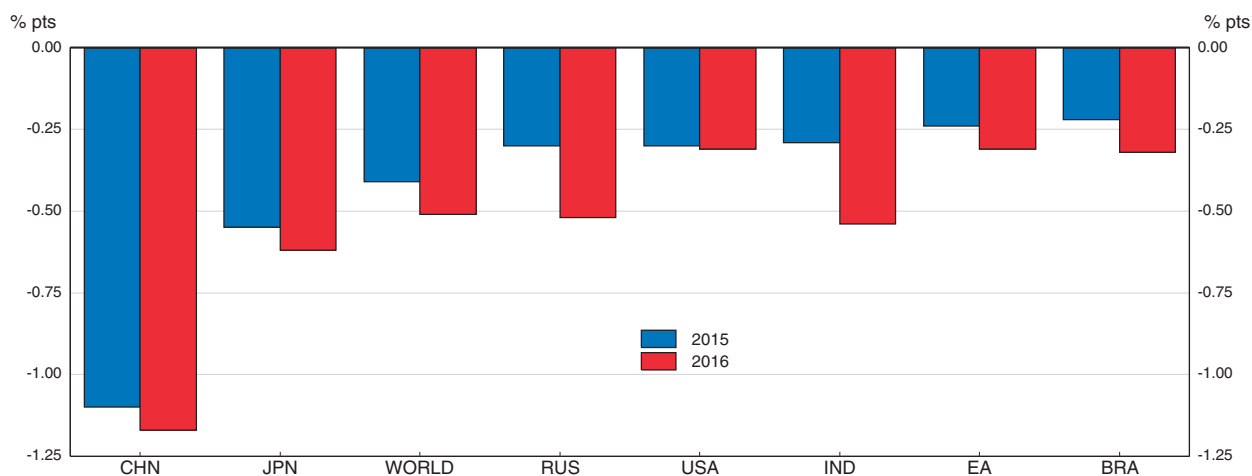
Commodity price effects and policy reactions would also affect the impact

- There are number of additional factors which could change the pattern of growth impacts from that described. Slower Chinese growth would likely damp commodity prices, as China is the largest consumer of many commodities. This is not incorporated into the simulation shown above. In the main commodity-producing economies it would have negative effects on the terms of trade and incomes, but in commodity-importing economies it would help to cushion the impact of the initial shocks on growth, but intensify the disinflationary impact. Monetary

20. This is based on simulations on the NiGEM model maintained by the National Institute of Economic and Social Research, with short-term interest rates and nominal exchange rates held unchanged.


21. This is broadly equivalent to the mechanical effects of lowering GDP growth in China by around 2% and leaving growth in all other economies unchanged.

Figure 1.16. **GDP growth impact of an adverse two-year domestic demand shock in China**
Difference from baseline



Note: Based on a decline of 2 percentage points in the growth rate of domestic demand in China for two years; a reduction of 10% in global equity prices and a 20 basis point increase in the equity risk premium in all countries.

Source: OECD Economic Outlook 96 database; and OECD calculations.

StatLink  <http://dx.doi.org/10.1787/888933169266>

policy easing in some of the affected economies and adjustments in exchange rates could also affect the overall impact of the shocks and the effects on individual economies.

Employment

Labour market slack will disappear slowly...

Aggregate employment growth in the OECD area is projected to remain at around 1% per annum over the next two years, given the growth projections set out above (Table 1.3). With the labour force continuing to rise, the OECD-wide unemployment rate is projected to decline by only a further ½ percentage point by the end of 2016. This would still leave an additional 9½ million people unemployed than immediately prior to the financial crisis. There are marked differences across economies:

... in the United States...

- Employment growth is likely to remain solid in the United States, rising by around 1¼ per cent per annum on average, with labour productivity gradually increasing as the recovery firms. The decline in labour force participation rate is projected to slow, with the present cyclical shortfall in the participation rate (for those aged 15 and over) of just over ¾ percentage point being eliminated over the next two years. The unemployment rate is projected to reach its estimated sustainable rate of 5.4% by the end of 2015.


... Japan...

- In Japan, the cyclical labour force participation rate is estimated to be mildly positive at present, but this gap is projected to fade by the latter half of 2016. Ageing effects are projected to bring renewed declines in the total labour force and employment, despite reforms to raise the female participation rate further. The unemployment rate, however, may remain broadly stable, at around 3½ per cent.

Table 1.3. **OECD labour market conditions are likely to improve slowly**

	2011	2012	2013	2014	2015	2016
Percentage change from previous period						
Employment						
United States	0.6	1.8	1.0	1.6	1.5	1.1
Euro area	0.3	-0.7	-0.7	0.4	0.4	0.6
Japan	-0.1	-0.3	0.7	0.6	-0.1	-0.4
OECD	1.0	1.0	0.7	1.3	1.1	1.0
Labour force						
United States	-0.2	0.9	0.3	0.3	0.8	0.9
Euro area	0.4	0.6	0.0	-0.1	0.1	0.3
Japan	-0.6	-0.6	0.3	0.1	-0.2	-0.4
OECD	0.6	1.0	0.6	0.7	0.7	0.8
Unemployment rate						
	Per cent of labour force					
United States	8.9	8.1	7.4	6.2	5.6	5.3
Euro area	10.0	11.2	11.9	11.4	11.1	10.8
Japan	4.6	4.3	4.0	3.6	3.5	3.5
OECD	7.9	7.9	7.9	7.3	7.0	6.8

Source: OECD Economic Outlook 96 database.

StatLink  <http://dx.doi.org/10.1787/888933169946>

... and the United Kingdom...

- In the United Kingdom, given the growth outlook, solid job growth is likely to continue and the unemployment rate is projected to decline to under 5½ per cent by 2016. Labour productivity (per person employed) which is estimated to have risen by around ¾ per cent during 2014, is projected to strengthen slowly, rising around 1½ per cent in 2016.

... but is set to persist in the euro area

- With only a gentle recovery likely for the euro area, currently extensive labour market slack should fade only slowly. Area-wide job growth is projected to be around ½ per cent per annum. Stronger outturns could occur in some of the vulnerable economies, including Spain, Ireland, Greece and Portugal. Area-wide unemployment is projected to decline by just over ½ percentage point over the next two years, still leaving a sizeable unemployment gap. In Germany, where the labour market is already tight, the unemployment rate is expected to remain largely unchanged over the next two years, with only modest job growth.

Labour market reforms remain essential to boost job growth

Further labour market reforms are essential to foster employment growth, reduce the risk that long-term unemployment becomes increasingly structural and improve the employment opportunities of lower-skilled workers.²² Efforts to improve labour utilisation by reforming labour market regulations and welfare systems have intensified in a number of OECD economies, particularly in many of the vulnerable euro area countries. Additional reforms are nevertheless needed urgently to

22. In the OECD area more than one-third of those unemployed have been out of work for more than one year.

facilitate labour mobility, and strengthen active labour market and social policies. These would improve the matching of workers and jobs and address high long-term unemployment, especially in many European countries and the United States. Reforms of disability benefit schemes are also required in the United States to moderate the fall in labour force participation. In several economies, especially Japan, planned reforms to improve childcare services and reduce tax and benefit disincentives to second earners are needed to encourage higher female labour force participation.

**Product market reforms
would also be helpful**

Product market reforms to relax regulatory restrictions in sectors in which there is a strong potential for new job growth could also help improve labour market outcomes and reap the benefits of past labour market reforms. This is important in many of the vulnerable economies in the euro area where reforms have been undertaken to increase wage flexibility, and also Japan, Germany, France and Canada.

**Low inflation is set to
continue in the OECD...**

Inflation

Weak inflationary pressures in the OECD economies seem likely to persist for some time. The sharp falls in oil and food prices will push headline inflation down further, and persistent economic slack and moderate wage growth will keep cost pressures in check. Nonetheless, core inflation (excluding food and energy prices) should edge up in most economies over the next two years, with the divergence in growth performance likely to be reflected in inflation outcomes.

**... especially in the euro
area...**

- In the euro area, there is a clear risk that prolonged demand weakness or a further decline of inflation expectations could result in a long period of very low area-wide inflation, or even deflation. Disinflationary pressures have already increased. In part this reflects on-going price adjustments to regain competitiveness in some countries. However, medium and short-term inflation expectations have both declined and core inflation rates are now around zero or negative in a rising number of economies. Headline inflation is also set to tumble further given the recent declines in commodity prices. Other import prices will rise due to the recent depreciation of the euro, but domestic cost pressures will be limited given poor growth prospects. Core inflation is projected to remain unchanged in 2015, at around $\frac{3}{4}$ per cent, and edge up to 1% in 2016, well below the ECB's definition of price stability.

... the United States...

- Core inflation in the United States seems likely to drift up slowly to just under the inflation target of 2% by the end of 2016. Economic slack is being eroded steadily and labour cost pressures should begin to strengthen as the labour market tightens. Recent declines in commodity prices and the appreciation of the dollar will, however, damp headline inflation for some time.

... and Japan

- In Japan, inflation expectations remain positive, and the consumption tax increase has helped to push up the annual rate of core inflation.

However, excluding the tax effect, the gradual upward climb in inflation appears to have stalled, with the annual rate of core inflation (excluding food and energy) fluctuating between $\frac{1}{2}$ and $\frac{3}{4}$ per cent. The recent yen depreciation will boost non-commodity import price growth, and a tighter labour market is projected to push up wage growth. The annualised rate of core inflation is projected to be around $1\frac{3}{4}$ per cent by the final quarter of 2016.

Underlying inflation pressures are projected to ease slowly in many EMEs

Despite an extended period of moderate growth, underlying inflationary pressures remain substantial in many large EMEs. Sizeable exchange rate depreciations have pushed up prices in some, including Russia. In others, including Brazil, limited spare capacity has kept inflation high. Underlying inflationary pressures should ease as a result of past monetary policy tightening. Lower commodity prices should also ease headline inflation considerably in all EMEs, with commodities accounting for a comparatively higher share of consumption. In India, consumer price inflation is projected to continue to drift down, from around $7\frac{1}{2}$ per cent this year to a little under 6% in 2016 (calendar year), with spare capacity fading only gradually. A similar outcome is expected in Brazil, with growing economic slack and the effects of past monetary policy tightening helping inflation to ease to around 5% by 2016, from $6\frac{3}{4}$ per cent at present. China is an exception amongst the major EMEs. Headline and non-food inflation have eased to around $1\frac{1}{2}$ per cent, with import prices held back by the ongoing exchange rate appreciation. With the output gap now small, and likely to remain so given projections for output growth, core inflation should edge up slowly over the next two years.

Global balances

Global imbalances are set to remain sizeable...

Global current account imbalances have halved since the onset of the crisis to around $2\frac{1}{4}$ per cent of world GDP in the first half of 2014. Little further improvement is projected over the coming two years (Table 1.4).

... in external surplus economies...

- The external surpluses of China and the aggregate euro area are projected to rise by between $\frac{1}{4}$ - $\frac{1}{2}$ per cent of GDP over the next two years. Export performance is expected to improve further in China, and domestic demand is expected to remain comparatively weak in the euro area. The large surplus in Germany is expected to ease slowly to around $6\frac{3}{4}$ per cent of GDP by 2016, but improvements in the current account balance are set to occur in all other euro area economies. The presently small surplus in Japan could also increase with the yen depreciation having finally begun to improve export performance and with domestic demand growth projected to remain modest. However, the large external surplus of the major oil producers should moderate, with the substantial recent declines in oil prices assumed to persist.

... and external deficit economies

- The external deficits of the United States and the United Kingdom are projected to ease by between $\frac{1}{4}$ - $\frac{1}{2}$ per cent of GDP over the coming two years. In the United States, the relative strength of domestic demand is

Table 1.4. **World trade will strengthen only gradually**


<i>Goods and services trade</i>					
	2012	2013	2014	2015	2016
Percentage change from previous period					
World trade¹	3.0	3.3	3.0	4.5	5.5
OECD exports	2.7	2.6	3.2	4.2	5.1
OECD imports	1.2	1.8	2.9	3.7	4.7
Trade prices²					
OECD exports	-3.6	0.3	-1.1	-4.2	1.0
OECD imports	-2.7	-0.6	-1.3	-4.3	1.1
Non-OECD exports	0.2	-1.8	-1.8	-1.1	2.4
Non-OECD imports	-0.4	-1.3	-0.7	0.1	2.5
Current account balances	Per cent of GDP				
United States	-2.9	-2.4	-2.2	-1.7	-1.7
Japan	1.1	0.7	0.1	0.9	1.4
Euro area	2.2	2.8	3.0	3.1	3.2
OECD	-0.4	-0.1	-0.1	0.1	0.1
China	2.6	2.0	2.4	2.8	2.8
	\$ billion				
OECD	-205	-29	-54	25	68
United States	-461	-400	-379	-312	-317
Japan	63	34	2	41	65
Euro area	281	369	397	399	418
Non-OECD	560	440	502	511	571
China	215	183	237	303	336
Major oil producers	568	457	382	288	335
Rest of the world	-222	-200	-117	-80	-101
World	355	411	449	536	639

Note: Regional aggregates include intra-regional trade.

1. Growth rates of the arithmetic average of import volumes and export volumes.

2. Average unit values in dollars.

Source: OECD Economic Outlook 96 database.

StatLink  <http://dx.doi.org/10.1787/888933169952>

projected to be offset by rising exports of services, declining net imports of petroleum products and an improvement in the terms of trade (reflecting weaker commodity prices). Amongst the major EME economies with external deficits, the impact of past currency depreciations and monetary policy tightening on domestic demand should help their deficits to moderate slowly, despite recent declines in the prices of exported commodities. India is an exception with the external deficit edging up again, reflecting the relative strength of domestic demand.

Additional structural reforms are needed to ensure durable reductions in imbalances...

Further ahead, a concern is that the cyclical factors accounting for at least one-half of the decline in global imbalances since 2008 (Ollivaud and Schwelnus, 2013) will gradually fade. It remains important to implement structural reforms that, in addition to their positive effects on medium-term growth prospects, help to lower saving-investment imbalances in both external deficit and surplus economies.

... in both external surplus...

- In the major external surplus economies, key priorities include the need to strengthen service sector competition and infrastructure investment in Germany and limiting the need for domestic saving in China through the development of the financial sector and social safety nets.

... and external deficit economies

- In the major external deficit economies, key priorities in addition to further fiscal consolidation, include structural reforms to enhance productivity and competitiveness, and, for the EMEs, to improve the incentives for long-term capital inflows.

Economic policy requirements in the major economies**United States****The US macroeconomic policy mix is changing**

The policy mix in recent years of tight fiscal policy and very accommodative monetary policy has changed. Fiscal consolidation is easing (Table 1.5), and, with the fiscal stance set to be close to neutral in the coming two years, an important headwind for the recovery will have been removed. This, together with the recovery in activity and employment and rising inflation, implies that the monetary stance will have to normalise gradually.

Table 1.5. Fiscal positions will continue to improve*Per cent of GDP / Potential GDP*


	2012	2013	2014	2015	2016
United States					
Actual balance	-9.0	-5.7	-5.1	-4.3	-4.0
Underlying balance	-7.3	-4.5	-4.0	-3.5	-3.5
Underlying primary balance	-4.4	-2.3	-1.3	-1.0	-1.0
Gross financial liabilities	110.5	109.2	109.7	110.1	110.0
Euro area					
Actual balance	-3.6	-2.9	-2.6	-2.3	-1.9
Underlying balance	-2.4	-1.4	-1.1	-0.9	-0.7
Underlying primary balance	0.2	0.9	1.1	1.1	1.3
Gross financial liabilities	105.1	107.2	108.2	108.4	108.5
Japan					
Actual balance	-8.7	-9.0	-8.3	-7.3	-6.3
Underlying balance	-7.9	-8.3	-7.7	-6.8	-6.1
Underlying primary balance	-7.0	-7.4	-6.6	-5.7	-5.1
Gross financial liabilities	216.5	224.2	230.0	233.8	236.7
OECD¹					
Actual balance ¹	-5.7	-4.3	-3.9	-3.4	-2.9
Underlying balance ²	-5.0	-3.6	-3.2	-2.9	-2.6
Underlying primary balance ²	-2.8	-1.7	-1.2	-1.0	-0.7
Gross financial liabilities ²	110.1	110.9	112.0	112.7	112.8

Note: Actual balances and liabilities are in per cent of nominal GDP. Underlying balances are in per cent of potential GDP and they refer to fiscal balances adjusted for the cycle and for one-offs. Underlying primary balance is the underlying balance excluding net debt interest payments.

1. Excludes Chile and Mexico.

2. Excludes Chile, Mexico and Turkey.

Source: OECD Economic Outlook 96 database.

StatLink  <http://dx.doi.org/10.1787/888933169969>

A gradual reduction in monetary policy stimulus is warranted...

Following the termination of the asset purchase programme in October 2014, the Federal Reserve would be warranted in starting to raise interest rates in the second half of 2015. With the recovery evolving along lines of the OECD projections, the recommended monetary policy tightening would still leave policy rates well below rates in the past when the output gap was close to balance and inflation was on target. Interest rate increases could also help address risks to financial stability, in view of existing signs of excessive risk-taking (see above). Macro-prudential measures can address some of these vulnerabilities. They are, however, unlikely to fully offset the effects of low interest rates on risk-taking, can create distortions of their own, and may take time to implement. They therefore cannot substitute fully for monetary policy normalisation.

... and requires prudent communication

In September, the Federal Reserve provided further guidance about its eventual exit strategy, identifying the federal funds rate as its key policy interest rate and indicating that it intended to reduce its holdings of securities in a gradual and predictable manner. This communication is welcome, even if it cannot guarantee smooth movements in financial markets during the exit. As economic conditions continue to improve, and an increase in policy rates draws closer, the Federal Reserve could reconsider its current time-based forward guidance regarding the timing of the policy rate increase.

Gradualism and caution are appropriate when normalising monetary policy

Policy rates should be normalised gradually, as assumed in the projections. This is justified by persistent downside risks to the economy and uncertainties about the current degree of monetary stimulus and the amount of slack. The policy interest rate path may also need to be modified depending on financial conditions, including the strength of the US dollar. Asset price corrections or a stronger dollar that could check the recovery and postpone the attainment of the inflation target would call for delayed and smaller policy rate tightening.

Measures to address long-term fiscal pressures are needed

Given the much improved fiscal picture, it is appropriate to slow the pace of fiscal adjustment. Cyclical improvements, the expiration of temporary stimulus, the enactment of fiscal austerity measures and declining borrowing costs have all narrowed the budget deficit in recent years, and the ratio of public debt to GDP has now largely stabilised. Structural consolidation, estimated at 2% of GDP in 2013 and 1% of GDP in 2014, is projected to taper off to around ¼ per cent of GDP in 2015 and to zero in 2016. Over the medium term, a steady moderate structural budget improvement of between ¼ and ½ per cent of GDP per year would be necessary to put the public debt ratio on a downward path and help prepare for the pressures that an ageing population will put on the public finances. Meanwhile, legislators should agree on a medium-term fiscal programme to address long-term pressures. In addition, greater growth-stimulating public infrastructure spending should be facilitated by securing adequate funding.

United Kingdom

The appropriate monetary and fiscal stances are inter-dependent

A faster-than-expected elimination of economic slack amid robust growth calls for a gradual normalisation of monetary policy and stronger consolidation to ensure sustainable economic growth. In light of the high budget deficit, and assuming the underlying momentum of the recovery remains strong, fiscal consolidation should accelerate, as planned, from less than ½ per cent of GDP in 2014 to about 1¼ to 1½ per cent of GDP per year in the coming two years. Meanwhile, policy rates should start increasing by around the middle of 2015 and principles about the eventual normalisation of the Bank of England balance sheet should be provided. The speed at which monetary policy stimulus is withdrawn should depend on inflationary pressures, resulting from the elimination of economic slack, and thus in part on the pace of fiscal consolidation and currency movements. As a result, stronger consolidation and exchange rate appreciation would likely require smaller policy interest rate increases than assumed in the baseline projection. Recent macro-prudential measures to address risks of rising household indebtedness and associated vulnerabilities may need to be followed up by additional initiatives.²³

Japan

Significant macroeconomic policy adjustment is taking place

Major macroeconomic policy measures have recently been announced to restore the momentum of the comprehensive policy package. The recent expansion of the quantitative and qualitative easing (QQE) programme by the Bank of Japan shows that the monetary policy part of the strategy is being implemented forcefully. Also, in the wake of the second consecutive quarterly GDP decline in the third quarter, the government has decided to postpone the second rise in the consumption tax, despite the very high public deficit and debt. However, in comparison to the efforts to boost short-term demand, progress in structural reforms is lagging.

Swiftly implementing ambitious structural reforms is now vital

Structural reforms are fundamental for boosting economic growth, improving living standards, alleviating fiscal challenges and increasing monetary policy effectiveness. The authorities have specified numerical targets in the revised growth strategy to increase Japan's real growth to around 2% on average through fiscal year 2022. This contrasts with OECD estimates of current potential GDP growth of less than 1%. In addition to earlier measures, the revised growth strategy announced in June 2014 aims to stimulate business investment by lowering the corporate income tax rate from 35% to below 30% over the next few years and strengthening corporate governance. Moreover, policies are expected to maintain the labour supply by encouraging higher female labour participation and easing restrictions on entry of low-skilled foreign workers. The strategy also envisages reforms to the health care and agriculture sectors. While

23. The authorities introduced stricter micro-prudential underwriting standards for mortgages in April 2014 and used macro-prudential tools to limit high loan-to-income ratios in June 2014.

all this is going in the right direction, the chances of meeting growth objectives would be increased by swiftly implementing bolder reforms of product markets, including greater international openness, to promote competition and innovation, and a reduction of labour market dualism.

Fiscal consolidation is set to ease...

Japan's fiscal stance has turned around sharply, from fiscal easing of some ½ per cent of GDP in 2013, to tightening of about ¾ per cent of GDP in 2014, much of it due to the 3-percentage point consumption tax increase implemented in April. But with the additional 2 percentage point increase in the tax scheduled for October 2015 now postponed to April 2017, consolidation in 2016 will be reduced from 1¼ to around ½ per cent of GDP. This implies that the long-standing aim to lower the primary budget deficit of central and local governments from an estimated 6.2% of GDP in the fiscal year ended last March (FY 2013) to 3.3% in FY 2015 will not be achieved. Moreover, it will make it more challenging to attain the medium-term objectives of a primary surplus by FY 2020, and thereafter steadily reduce the ratio of public debt to GDP.

... and monetary stimulus is being increased

The Bank of Japan expanded its open-ended QQE programme in October 2014. It now plans to increase the monetary base at a higher annual pace of around 80 trillion yen (16% of GDP), primarily by purchasing longer-term government bonds, until the inflation rate stabilises durably at the 2% target.²⁴ This stronger monetary accommodation is warranted given limited stimulus from close-to-zero nominal policy rates, reflecting likely negative neutral real rates and still moderate inflation (Box 1.1). It should help raise inflation and inflation expectations closer to the target, whilst keeping long-term bond yields at the current low levels.

This involves negative risks...

While the new fiscal and monetary policy stances will boost growth, the risk that investor confidence may be undermined by delays in structural reforms and fiscal consolidation has increased. The Bank of Japan's purchases of government bonds in the secondary market exceed the issuance of government bonds to fund the large deficit. Even if inflation expectations are currently below the inflation target, the *de facto* monetisation of government deficits could raise such expectations abruptly. It will be a delicate balancing act for the Bank of Japan to keep inflation expectations on target and long-term yields on bonds sufficiently low for debt dynamics to remain under control.

... and calls for accompanying long-term consolidation plan and structural reforms

To contain the risk of potential instability, it is essential to produce a detailed and credible long-term consolidation plan. The plan should include social security reforms to limit spending increases, particularly in the areas of health and long-term care, as well as revenue increases. Equally important

24. The Bank of Japan intends to increase annual purchases of government bonds from around 50-60 trillion yen to 80 trillion yen and to lengthen the average remaining maturity of purchased bonds to about 7-10 years from 7 years. It also envisages sharply increasing purchases of shares in Exchange Traded Funds and Japan Real Estate Investment Trusts.

is to push through an ambitious structural reform agenda along the lines discussed above, as this would improve debt dynamics.

Euro area

A comprehensive policy package is needed

The persistent low-growth and low-inflation environment calls for a comprehensive policy response. Monetary policy stimulus, on top of the measures already announced, should be combined with efforts to strengthen the banking sector, complete the banking union and implement deep structural reforms, notably in core countries, to boost potential growth. The pace of fiscal adjustment should be relaxed where fiscal space exists and the automatic stabilisers should be allowed to operate freely around the structural consolidation path.

Additional monetary policy stimulus is needed...

Further unconventional measures are required to keep long-term interest rates low for long and raise inflation expectations, and thus help achieve the inflation target and support the economy. This is despite the fact that the ECB stimulus measures announced since June 2014 have already had beneficial impacts (Box 1.5). The recovery is set to be much weaker than expected only a few months ago, low inflation is likely to persist for longer than anticipated, and inflation expectations have been declining, with increasing risks of deflation. Further monetary stimulus could involve more purchases of asset-backed securities and covered bonds, and also purchases of government bonds, possibly via a weighted basket of euro area countries, and investment-grade corporate bonds.²⁵ Additional liquidity would likely put downward pressure on the exchange rate, with implications for the euro area itself and its trading partners (see above). To the extent possible, macro-prudential measures should be used to address risks to financial stability stemming from the prolonged monetary policy stimulus.

... combined with the strengthening of the banking sector

Finalising the repair of bank balance sheets is essential to ensure future sustainable growth and to improve monetary policy transmission. The comprehensive assessment of euro area banks, along with a transition to the tighter Basel III banking regulation, will be central for dealing with non-performing assets and bank recapitalisation (OECD, 2014d). Capital has already been raised over the past year, as evident in a higher share of capital and reserves in total (unweighted) assets for the euro area as a whole. Moreover, the recent comprehensive assessment of the 130 largest euro area banks identified few adjustments to total aggregate assets and capital to meet the minimum required core tier-1 capital relative to risk-weighted assets, even in very adverse circumstances (ECB, 2014).

25. Based on the experience of the US Federal Reserve and the Bank of England, the ECB may have to buy government bonds equivalent to around 7% of GDP to reduce long-term yields by 100 basis points (see notes under table in Box 1.1). This may boost GDP by roughly 1% (Rawdanowicz et al., 2014b). These stylised calculations should be treated with caution: effectiveness of QE measures is uncertain; transmission channels in the euro may differ from those in the United States and the United Kingdom; and the calculations do not account for changes in other asset prices.

Box 1.5. Monetary policy easing in the euro area

Since June 2014, the ECB has decided on a package of expansionary policy measures, consisting of:

- **Policy rate cuts.** Policy rates were cut on two occasions by between 20 and 45 basis points, narrowing the upper range of the interest rate corridor and making the deposit facility rate negative (see second figure below).
- **Targeted longer-term refinancing operations (TLTROs).** TLTROs offer up to 4-year funding to banks with the aim of boosting their lending to the private sector, excluding mortgages. Banks are entitled to borrow up to around €400 billion (4% of GDP) to end-2014. In addition, between March 2015 and June 2016, banks can borrow up to three times their net lending in excess of specified undemanding benchmarks.¹ All TLTROs will mature in September 2018, but banks may make earlier repayments after two years. Banks that borrow TLTRO funds and fail to achieve their benchmarks by April 2016 will be required to pay back borrowed funds in full in September 2016. The interest rate on borrowing in the TLTROs will be fixed over the life of each operation at the ECB's main refinancing rate prevailing at the time of take-up augmented by a fixed spread of 10 basis points.
- **Other liquidity measures.** In June, the ECB decided to cease weekly sterilisation operations related to SMPs (around €145 billion), extended the fixed rate tender procedures with full allotment at least until end-2016, and prolonged the period of eligibility of additional assets as collateral at least until September 2018.
- **Outright security purchases.** In September, the ECB announced that it would buy simple and transparent asset-backed securities (ABS) with underlying assets consisting of claims against the euro area non-financial private sector, starting in the last quarter of 2014, and that it would revive its purchases of euro-denominated covered bonds issued by banks domiciled in the euro area, which started in October. The purchases of ABS would be limited to investment-grade securities and more risky ones if they were guaranteed by governments. The ECB has not announced how many securities it plans to purchase.
- **Forward guidance and readiness for further action.** In recent months, the ECB reiterated its forward guidance, indicating that the key policy rates would remain at present levels for an extended period of time, and also its commitment to use unconventional instruments within its mandate, if risks of too prolonged a period of low inflation would need to be addressed.

In November 2014, the ECB President indicated that, due to the above measures, the ECB's total assets were expected to increase from current €2 trillion to levels last seen at the beginning of 2012 (around €3 trillion, 30% of GDP) (see first figure below). Consequently, the ECB assets in relation to GDP would be higher than currently in the United States and the United Kingdom (around 25% of GDP).

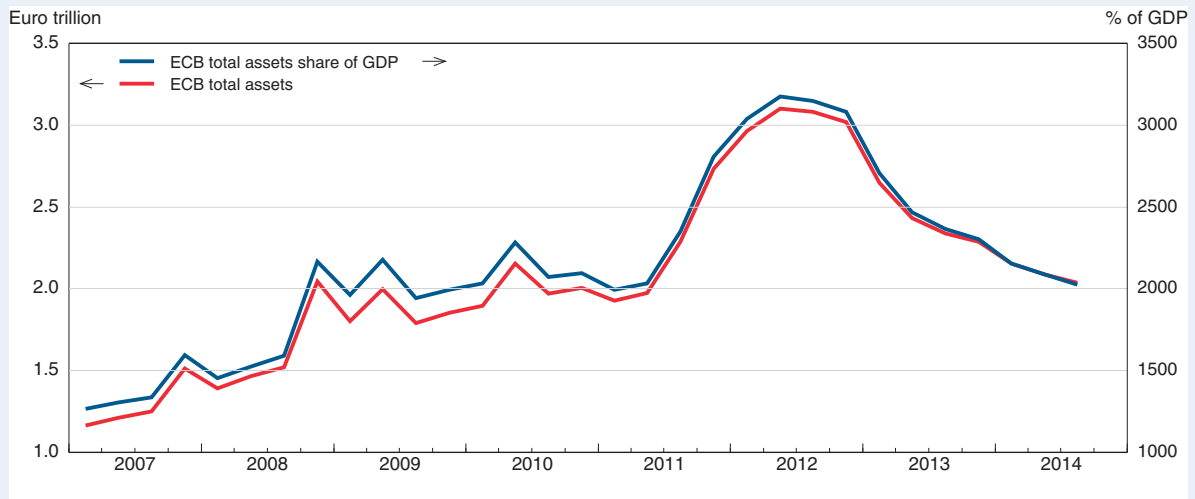
The recent measures have had several positive immediate effects (see second figure below). They have helped lower overnight market rates. The average EONIA rate fell from around 0.2% in the first half of 2014 down to around 0.03% recently, and EONIA rates turned negative on several occasions. The monetary easing has also helped to lower expectations about future policy rates, especially at a longer horizon. This helped to reduce long-term government bond yields even further (by around 50 basis points), following their almost uninterrupted decline since summer 2012, especially in the vulnerable countries (between 100 and 150 basis points). However, intra-euro area government bond yield spreads seem not to have been greatly affected. The increasing divergence in the expected monetary policy stance between the euro area and the United States is also likely to have weakened the euro. Despite the negative rate on deposits, the volume of the deposit facility has remained broadly unchanged so far. It is too early to judge if this cost has been passed through to bank customers or not.

Box 1.5. Monetary policy easing in the euro area (cont.)

The effects of TLTROs remain uncertain and are likely to be delayed, depending largely on the take-up. Lending via TLTROs should be attractive for banks as the cost of long-term financing offered by the ECB is low, even for strong banks. Market initial estimates indicated that the overall take-up could be between €450 billion (4.5% of GDP) and €850 billion (8.5% of GDP). However, the first auction in September was well below market expectations, amounting to €82.6 billion. One reason for this could be that banks awaited the results of the comprehensive assessment before deciding to expand their balance sheets. Even if the upper range of the market estimates is met, this would not be enough to fully reverse the decline in ECB total assets, due to the repayment of the current 3-year LTROs (still around €360 billion out of over €1 trillion – 10% of GDP – to be paid back at the latest in early 2015).

It is, however, not certain whether, even with a high take-up, banks are going to use new funding to extend credit to the non-financial private sector. Incentives to do so, in terms of additional cheap funds on top of initial auctions and no penalties for missing required benchmarks, appear weak. This is especially so for weak banks given their lenient net lending benchmarks. Banks could use the funds to continue to build up their holdings of government bonds from an already high level, especially as this would not increase risk-weighted assets and thus capital requirements, unlike when lending to businesses and households. If this were to be the case, the intended effect of boosting private lending might not be achieved. Still, this would help banks boost their profits, and potentially capital which could leave them in a better position to extend credit in the longer term.

European Central Bank total assets



Source: Datastream; European Central Bank; and OECD Economic Outlook 96 database.

StatLink  <http://dx.doi.org/10.1787/888933169301>

Box 1.5. Monetary policy easing in the euro area (cont.)

Purchases of covered bonds could ease funding conditions for credit institutions by depressing money market term rates, and encouraging credit institutions to lend. Covered bond yields have already declined to historical low levels. The outstanding stock of covered bonds is large, especially in France, Germany and Spain (€1.5 trillion – 15% of GDP; Table below). However, in practice only a third of the existing stock is likely to be available for purchase, given rating requirements and limited incentives for investors to sell their holdings, as there are many investors who invest only in these securities. In addition, new issuances of covered bonds may decline in the future as banks have to access funding via TLTROs. As of early November 2014, the ECB has purchased EUR 7.4 billion of covered bonds.

Purchases of ABS could raise liquidity, lower the cost of funding, and if they include subordinated bonds on top of senior bonds they also could also help transfer risks away from banks. The latter would be, however, conditional on governments providing guarantees. ABS yields have already declined to historical lows, below 1%. The total outstanding stock of ABS-type securities is relatively large (over €860 billion – 8.6% of GDP; see table). However, if purchases are restricted to ABS with underlying loans to SMEs and consumer loans, the stock is significantly smaller. Including residential mortgage-backed securities (RMBS) would enlarge the scope for ECB purchases. Nevertheless, it is not clear how much of all of these securities could be viewed by the ECB as simple and transparent.

It is too early to assess the overall impact of the latest measures on the cost and availability of bank lending. Nevertheless, looking through monthly volatility, bank lending rates (available until September) have declined somewhat, especially in Greece, Italy and Portugal. Moreover, credit standards on loans to enterprises have eased and are expected to continue to do so, though they still remain relatively tight. Credit to the private non-financial sector has, however, continued to decline.

Outstanding ABS securities and covered bonds

	As of June 2014					Total ¹		As of end-2013	
	ABS	CDO	CMBS € billion	RMBS	SME	€ billion	% of GDP	Covered bonds ² € billion	% of GDP
Austria	0.3	0.0	0.2	1.8	0.0	2.2	0.7	42.5	12.9
Belgium	0.0	0.0	0.2	58.2	18.9	77.2	19.2	8.2	2.0
Finland	0.4	0.0	0.0	0.0	0.0	0.9	0.4	29.8	14.6
France	17.6	0.0	0.4	20.0	1.2	39.8	1.9	344.2	16.1
Germany	36.0	1.5	8.8	14.1	2.3	62.8	2.2	452.2	15.6
Greece	13.0	1.8	0.0	4.2	6.7	25.7	14.4	16.5	9.2
Ireland	0.3	0.1	0.0	36.3	0.0	36.7	20.1	43.0	23.6
Italy	43.4	1.7	9.8	79.8	25.7	160.6	9.9	129.0	7.9
Netherlands	2.3	0.6	2.0	243.9	10.4	259.1	39.7	61.0	9.3
Portugal	3.9	0.0	0.0	25.2	5.3	34.5	19.8	35.4	20.4
Spain	23.3	0.5	0.3	111.6	26.7	162.4	15.3	364.9	34.3
Total of above ³	140.5	6.1	21.6	595.0	97.3	862.0	8.6	1552.5	15.5

Note: ABS stands for asset-backed securities, CDO stands for collateralised debt obligations, CMBS stands for commercial mortgage-backed securities, RMBS stands for residential mortgage-backed securities, SME refers to securities backed by loans to small and medium-sized enterprises.

1. Numbers may not add due to rounding and the omission of statistics on whole business securitisation.

2. Total includes covered bonds of Luxembourg (21.7 billion euro) and the Slovak Republic (4 billion euro).

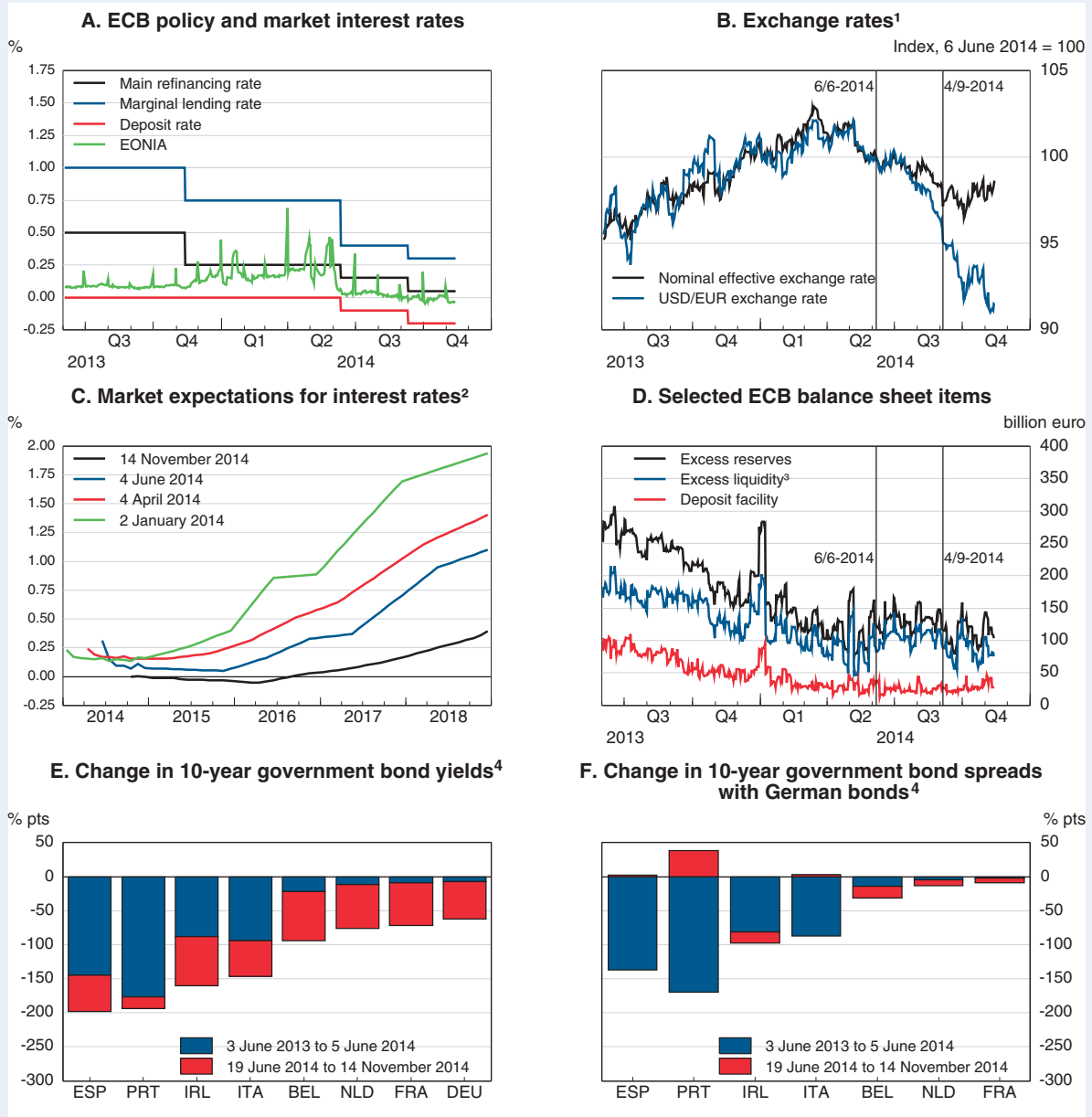
3. For numbers expressed in per cent of GDP, the OECD euro area GDP is used.

Source: Bloomberg; AFME; SIFMA and European Covered Bond Council.

StatLink  <http://dx.doi.org/10.1787/888933170009>

Box 1.5. Monetary policy easing in the euro area (cont.)

Monetary policy easing and its apparent effects



1. An increase in the indices indicates an appreciation of the respective exchange rate.
2. Forward overnight market interest rates derived from overnight index swap (OIS) rates. Two-week averages ending on the indicated dates.
3. Excess liquidity is calculated as current account holdings, plus deposit facility, minus marginal lending facility, and minus reserve requirements.
4. Changes in yields and spreads are calculated based on 2-week averages ending on the dates indicated.

Source: Datastream; Bloomberg; European Central Bank; and OECD calculation.

StatLink  <http://dx.doi.org/10.1787/888933169318>

1. For banks that had positive eligible net lending in the year to April 2014, they are set at zero. For the remaining banks, until April 2015 benchmarks will follow the trend based on the (negative) average monthly net lending of each bank in the year to April 2014, and then until April 2016 they will be set at zero. This implies that banks can access TLTROs funding even if they reduce net lending initially but at a slower rate than in the year to April 2014.

Nevertheless, deleveraging and recapitalisations are by no means finished given continued weak growth, the still high share of non-performing loans in total loans and the gradual transition to a more demanding definition of capital. Moreover, the comprehensive assessment was based on capital adequacy vis-à-vis risk-weighted assets and not total assets. The latter is arguably a better measure of financial soundness and the capacity of banks to expand credit. The recent ECB monetary policy measures, which reduce the cost of financing for banks, are likely to raise bank profits and hence the scope for stronger retained earnings to help recapitalise banks.

Structural reforms are needed

Structural reforms needed to boost confidence and growth should be designed not to weigh on short-term demand. This calls, in particular, for reforms to stimulate investment, as they would raise both demand and potential growth. This is especially the case in the core euro area countries, where the structural reform effort has been much weaker than in the vulnerable countries in recent years. The reforms should involve lowering regulatory barriers to entry in network industries and professional services, along with strengthening and deepening of the Single Market (OECD, 2014a and 2014d). Reforms to boost employment are also essential, especially in vulnerable countries, as they could not only increase potential output growth and reduce hysteresis, but also improve social cohesion and stimulate household consumption (see above).

The pace of fiscal adjustment has slowed

Fiscal balances in the euro area have improved considerably since 2009/10, and public debt ratios have broadly stabilised, albeit at very high levels, on average just above 100% of GDP. After structural fiscal consolidation that averaged about $\frac{3}{4}$ per cent of GDP in 2013, the pace of adjustment has slowed down to under $\frac{1}{4}$ per cent of GDP in 2014, and minimal adjustment is projected over the next two years. But there are large differences in the planned fiscal stances across countries over this two-year period. In the Netherlands and Ireland it is projected to be slightly accommodative, and in Germany moderately so. France, Italy and Portugal are planning around $\frac{1}{2}$ per cent of GDP in fiscal consolidation over the two years; Belgium a little less than 1% of GDP; and Spain a little over 1% of GDP. These plans are not always in line with previous commitments.

Flexibility in the EU fiscal framework should be used

However, keeping to previous commitments would have meant rapid fiscal contraction in some large countries, which would likely depress activity further and even risk tipping the euro area into another recession. Thus, the slower pace of structural fiscal adjustment relative to previous commitments that France and Italy have proposed in their 2015 budget plans seems appropriate. Limiting fiscal adjustment in both countries would help give already-agreed structural reforms and additional monetary policy easing a chance to lift activity. However, under current numerical fiscal rules and official recommendations, little fiscal space is available for a relaxation of planned fiscal adjustments, except in a few smaller countries and in Germany (Box 1.6). Deviations from official targets are in the process of being agreed with EU fiscal authorities, using

Box 1.6. Fiscal space in the euro area under the European fiscal rules

Some euro area member states have been arguing for a slower pace of fiscal consolidation relative to their previous commitments. This box assesses how much fiscal space the European fiscal framework currently provides to member states to slow the pace of budgetary adjustment while still respecting the rules. Only some of this fiscal space can be quantified – to do so, the binding fiscal rule for each country is identified and the distance between it and OECD projections incorporating the country's current fiscal plans is measured (see Table). National fiscal rules are not taken into account. The simple mechanical exercise suggests that no fiscal space is available for countries in an Excessive Deficit Procedure, including France, and little fiscal space seems available for the others, except for Germany and Luxembourg. Beyond what is quantifiable, the framework also allows the Council of the European Union to agree to temporary deviations from numerical targets if these deviations can be shown to support structural reforms or public investment, or in the case of economic downturns. These flexibility provisions, in particular the economic downturn provision, leave room for interpretation and hence provide the Council with full discretion as to whether a rule has been breached, whether to apply sanctions and whether to grant a deadline extension in an Excessive Deficit Procedure.

The European fiscal framework

The European fiscal framework consists of several numerical fiscal rules:¹

- *The deficit rule* stipulates that the headline fiscal deficit should not exceed 3% of GDP.
- *The transition to the debt rule* aims at reducing the deficit to conform to the debt rule within three years after exiting an Excessive Deficit Procedure (EDP) started in or before 2011.
- *The debt rule* requires the gap between the current debt ratio and the 60% of GDP reference level to be reduced by 1/20th annually.
- *The medium-term objective (MTO)* sets a maximum structural deficit of 1% or 0.5% of GDP (depending on the debt level), to be reached by structural adjustment of at least 0.5% of GDP annually.

Within the framework, there are two sources of fiscal space, or “flexibility”; that which is available under the numerical fiscal rules, and that granted by special provisions in the EU fiscal framework.

Flexibility under the numerical rules

Countries that are not bound by any of the four numerical rules have some flexibility to ease back on fiscal adjustment until one of the rules becomes binding. This fiscal space is currently limited to only a few countries (see Table). When comparing current projections with the spring 2014 vintage, which encompassed member states' early 2014 fiscal targets (see Figure), headline budget balances, as well as planned structural fiscal efforts over 2014-15, have generally been revised down. However, any assessment of fiscal slippage relative to the Stability Programmes (SP) or past projections is complicated by changing estimates of potential output and by the ongoing changeover to the 2010 European System of Accounts. These complications will have to be taken into consideration by the Council when assessing compliance with the rules. Nevertheless, the size of revisions to not only nominal but also to structural targets in some countries suggests that slippage is not only due to methodology or to weak GDP growth. Such slippage relative to previous structural fiscal commitments explains the lack of quantifiable fiscal space over the next two years for many countries. Overall, in the euro area as a whole, this space amounts to 0.3 percentage points of GDP over 2015-16.

France, Greece, Ireland, Portugal, Slovenia and Spain are currently in the EDP. They have no fiscal space if they are to meet the nominal deficit rules by the agreed deadline. Ireland might appear to have some fiscal space as it has been over-achieving its nominal targets, but given its high debt level, it has no room to ease its structural adjustment efforts if it is to comply with the transition rule after it leaves the EDP. This rule will most likely become binding for all countries currently under EDP after their exit, due to their high debt levels. Austria, Belgium, Italy, the Netherlands and the Slovak Republic have to meet softer structural fiscal adjustment targets so as to comply with the debt rule by the end of the transition period. However, these

1. For more details on the rules see Box 1.4 in OECD (2012), or http://ec.europa.eu/economy_finance/economic_governance/sgp/index_en.htm.

Box 1.6. Fiscal space in the euro area under the European fiscal rules (cont.)

targets are strict enough to be binding in most cases. One exception is the Slovak Republic, whose debt-to-GDP ratio is lower than 60%, hence the transition rule is not binding. Belgium lost its space due to slippage relative to its SP plans.

Even if none of the above rules is binding, the framework does not generally provide any room to relax fiscal consolidation efforts beyond letting automatic stabilisers operate, unless a country has previously over-achieved its MTO, as is the case of Germany, Estonia and Luxembourg, or if it plans greater adjustment towards its MTO than required.

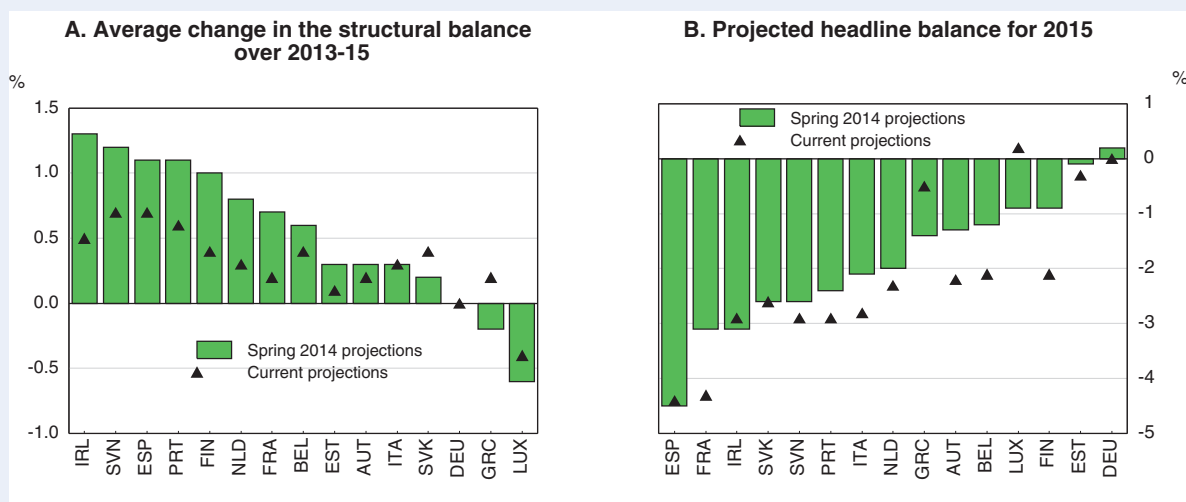
Flexibility under special provisions

Fiscal space can arise from several *special provisions* that define situations in which countries can deviate from the numerical targets. A deviation from required structural fiscal adjustment can be granted by the EU Council if a country implements *major structural reforms* that have a verifiable impact on the long-term sustainability of public finances and that meet a number of other conditions. In a similar vein, the Council can use an *investment provision* to allow a temporary deviation from the required structural fiscal effort, but only if the deviation is linked to national expenditure on projects co-funded by the EU under the Structural and Cohesion policy, Trans-European Networks or Connecting Europe Facility. Finally, *unexpected adverse economic events*, *economic bad times* in an individual country or a *severe economic downturn* in the euro area as a whole can be invoked by the Council to provide flexibility around the required structural adjustment path. How much fiscal space these provisions offer is hard to quantify, as it partly depends on the country's decision on how much of the provision to use (e.g. size of the investment programme), and ultimately on the European Council's decision to grant use of such a provision. An extension of EDP has been granted eleven times to seven countries since 2009 on the grounds of unexpected adverse economic events.

The current debate surrounding the European fiscal rules and uncertainty about how they may be applied suggests that it would be advisable to revise the framework to simplify it and make it more transparent, in particular by setting out more clearly in what situations and under what terms the available discretion will be used. The current complexity jeopardises the credibility of the framework and its effectiveness in ensuring the sustainability of public finances.

Fiscal policy stance

In per cent of GDP



Source: OECD Economic Outlook 96 database; OECD Economic Outlook 95 database; and OECD calculations.

StatLink <http://dx.doi.org/10.1787/888933169323>

Box 1.6. Fiscal space in the euro area under the European fiscal rules (cont.)
Binding EU rules and implied fiscal space

In percent of GDP

	Deadline for EDP correction	End of debt rule transition period ¹	Public debt ²	Public deficit	MTO status	Binding rule ³			Difference in structural effort between:			
						2014	2014	2015	2016	2017	OECD projections vs. required by the rules	Stability programmes 2014 vs. required by the rules
											2015-16	2015-16
France	2015	2018	95.8	-4.4	below MTO	3%	3%	3%	..	..
Greece ⁴	2016	2019	176.1	-1.0	over MTO	3%	3%	trans.	..	..
Ireland	2015	2018	111.0	-3.7	below MTO	3%	trans.	trans.	..	..
Portugal	2015	2018	127.2	-4.9	below MTO	3%	trans.	trans.	..	..
Slovenia	2015	2018	74.4	-4.4	below MTO	3%	trans.	trans.	..	..
Spain	2016	2019	96.7	-5.5	below MTO	3%	3%	3%	..	..
Austria	..	2016	86.1	-3.0	below MTO	trans.	trans.	debt	..	..
Belgium	..	2016	106.1	-2.9	below MTO	trans.	trans.	debt	..	0.3		
Germany	..	2014	74.3	0.2	over MTO	=	=	=	0.8	1.0		
Italy	..	2015	130.6	-3.0	at MTO	trans.	debt	debt	..	..
Netherlands	..	2016	69.8	-2.6	below MTO	->MTO	trans.	debt	..	..
Slovak Republic	..	2016	54.4	-2.9	below MTO	->MTO	->MTO	->MTO	..	..
Estonia	..	..	9.5	-0.3	at MTO	=	=	=	0.4	..
Finland	..	..	59.0	-2.6	below MTO	->MTO	debt	debt	..	0.3
Luxemburg	..	..	24.4	0.9	over MTO	=	=	=	2.1	0.6
Euro area	..	..	94.3	-2.6	..	..	..	..	0.3	0.3

Notes: "3%" - 3% deficit ceiling or EDP; "trans." - transition rule; "debt" - debt rule; "->MTO" - transition to MTO; "=" - MTO is reached; ".." - no positive fiscal space available or not applicable.

1. Assuming the EDP ends in line with current deadline.

2. Maastricht definition.

3. Or rule that is the closest to being binding, if a country plans more adjustment than what would be implied by the rules.

4. Greece does not have a Stability programme or structural balance targets, nominal targets were taken from its Economic Adjustment Programme.

Calculations start in 2015. Structural effort means change in the underlying balance projected in 2015 and 2016. Assessment of compliance with the debt rule is based on backward-looking benchmark only. Compliance with the rules is assessed under normal circumstances assumption, i.e. no economic "good times", "bad times", structural reforms or similar provisions are taken into account. OECD methodology is used for cyclical adjustment and potential output calculations. See Barnes et al. (2012) for more details on the methodology.

Source: OECD Economic Outlook 96 database; European Commission; and OECD calculations.

StatLink  <http://dx.doi.org/10.1787/888933170010>

the flexibility available under special provisions, and should be backed by more structural reforms. Where debt ratios are still on steep upward paths (e.g. Spain), or where market sensitivity poses too great a risk (Greece, Ireland and Portugal), a moderate pace of fiscal consolidation should be maintained. In Greece, such moderate consolidation may have to be accompanied by additional debt relief to ensure fiscal sustainability. In all countries, automatic stabilisers should be allowed to operate freely around structural consolidation paths, even when the planned pace of structural consolidation has been relaxed.

China

In China, growth and rebalancing needs call for...

China's main near term challenge is to address financial and macroeconomic vulnerabilities whilst upholding growth. Private sector and local government debt has increased rapidly over recent years and there are signs of a property bubble and overcapacities in some sectors.

Thus, macroeconomic stimulus to achieve short-term growth objectives may aggravate current imbalances. But too sharp a slowdown in economic growth could also lead to financial instability. In the longer term, an orderly adjustment to a lower and sustainable growth path is needed. To achieve this, the authorities should proceed with reforms to liberalise the financial sector and strengthen the fiscal framework.

... the maintenance of the current easy monetary policy stance...

- The People's Bank of China (PBOC) has implemented a number of targeted measures to ease credit conditions²⁶ and has recently lowered the one-year deposit and lending rates by 25 and 40 basis points respectively. The resulting stance is accommodative and should support growth and sustain moderate inflation. If disinflation were to intensify and growth were to slow more than projected, the PBOC would have room ease monetary policy. Such an adjustment could, however, aggravate existing imbalances.

... and a greater use of financial and macro-prudential regulation...

- Persisting concerns about financial stability should be addressed by financial regulation and macro-prudential measures, affecting also the shadow banking sector. The planned deregulation of interest rates in the coming two years will also help foster financial stability by weakening the attractiveness of lightly regulated shadow banking products. The revised rules on bond issuance by local governments will also lessen the borrowing of such entities from shadow banks and will reduce maturity mismatches on local governments' balance sheets. As proposed by the authorities, deposit insurance and a resolution system for financial institutions will precede full liberalisation.

... and a broadly neutral fiscal policy stance

- The fiscal stance appears to be broadly neutral, and the government has ruled out large-scale stimulus, an appropriate stance given the growth outlook. If growth weakens by more than projected, there is room to provide support, especially through investment in social infrastructure. Rapid increases in local government debt have been a concern for some time, and the risk of some default on loans to local governments and their financing vehicles is now considered high. In this context, the recently passed amendments to the Budget Law that will become effective in 2015 are welcome as they, among other things, restrict the amount and purpose of debt that sub-national governments can issue. The revised law should also reduce the pro-cyclicality of the budget by not requiring sub-national governments to balance their budgets on an annual basis.

Other large EMEs

Policy requirements differ across other large EMEs...

Risks of renewed financial tensions remain, and EMEs should prepare for such an eventuality. This calls for macroeconomic policy to address cyclical weaknesses where this is possible. Brazil, Russia and South Africa

26. They include lowering reserve ratios for banks that primarily lend to the agriculture sector and small and micro-sized enterprises, a collateralised loan of CNY 1 trillion (1.6 % of GDP) to the China Development Bank to boost social housing construction, and targeted interest rate cuts for lending to small and micro-sized enterprises.

are faced with stagflation challenges. They have little scope for easing their monetary and fiscal policy stances, and further exchange rate depreciation would call for monetary tightening. Although growth has picked up in India, there is a need to bring inflation and budget deficits down. EMEs also need to address their structural vulnerabilities. This requires a durable improvement of fiscal positions to reinforce the credibility of fiscal announcements; better regulation and supervision to ensure sufficient capital and liquidity buffers and to reduce currency mismatches; and re-starting growth-enhancing structural reforms.

... Brazil...

In Brazil, monetary policy may need to stay tight to attain the inflation objective, despite the weakness of growth. The fiscal stance has been expansionary in recent months, and with a technical recession at the same time, fiscal performance has deteriorated noticeably. Although the public debt burden is not yet very high compared with many OECD countries (gross general government debt is just below 60% of GDP), it is relatively high for an emerging economy. As well, the conjunction of a deteriorating primary surplus, slow growth and rising interest rates is resulting in an inflexion of public debt dynamics. The government needs to rein in discretionary spending as well as a plethora of costly tax exemptions, credits, and subsidies to avoid triggering negative market reactions. Sluggish growth calls for urgent measures to alleviate infrastructure bottlenecks and other supply-side constraints like high and distortionary taxes, high labour costs, red tape and skill shortages.

... Russia...

In Russia, the termination of the peg of the rouble to the dollar and the euro gives the monetary authorities greater freedom to adjust the monetary policy stance for domestic requirements. The fiscal rule allows some fiscal support to the extent that flagging activity is due to the fall in the oil price and, indeed, a modest relaxation of fiscal policy is planned for 2015. To strengthen longer-term growth prospects it is necessary to widen the application of the rule of law, reduce barriers to entry and remove excessive red tape.

... and India

In India, moderating but still high inflation calls for maintaining the tight monetary policy stance. Adopting an inflation targeting monetary policy framework, as has been proposed by the Expert Committee set up by the Reserve Bank of India, would help anchor inflation expectations. The new government is committed to reducing the central government deficit from 4.5% of GDP in 2013/14 to 4.1% in the current fiscal year, and eventually to 3% of GDP in 2016/17 in line with the fiscal roadmap of its predecessor. This year's objective will be met with a slight tightening of the fiscal stance and some asset sales. India's public finances would benefit from rebalancing expenditures away from subsidies and toward more public investment. Improving social and physical infrastructure, business environment and modernising labour and tax laws are crucial for sustaining growth momentum.

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ANNEX 1.A1

Indicators of potential financial vulnerabilities

The following tables show the position of OECD and selected non-OECD countries on a number of indicators that could reveal potential exposure to financial turbulence. The main focus of Table A1 is on domestic vulnerabilities of the OECD and BRIICS countries, that of Table A2 on financial account vulnerabilities of the OECD and non-OECD G20 countries.

Table A1 presents indicators typically associated with financial vulnerabilities arising primarily from the domestic economy in four broad categories: the real economy, the non-financial sector, the financial sector and public finances (International Monetary Fund, 2012; European Commission, 2012). Possible weaknesses in the real economy are captured by the difference between the potential and the actual GDP growth rate, the difference between the actual unemployment rate and the natural rate of unemployment (or NAIRU), the current account deficit and the evolution of relative unit labour costs. Indicators of financial market excesses related to the non-financial sector are debt of households and non-financial corporations and real house price growth. An aggregated ratio of core Tier-1 capital to total assets (i.e. the leverage ratio) for selected banks in each country,²⁷ non-performing loans, and financial corporations' debt are included to account for the direct risk exposure of the financial sector. Vulnerabilities stemming from the public sector are quantified along three dimensions: government net borrowing, gross government debt and the difference between 10-year real sovereign bond yields and the potential real GDP growth rate. Higher values, with the exception of the leverage ratio, indicate a larger vulnerability.

Four OECD countries with the weakest scores are labelled in dark grey, four OECD countries with the next weakest scores in light grey. Table A1 also includes the current sovereign credit ratings issued by Standard and Poor's.

Table A2 displays financial-accounts-related risk factors for the OECD and non-OECD G20 countries to financial stability based on previous OECD empirical analysis (Ahrend and Goujard, 2012a, 2012b). The analysis shows that:

- Greater (short-term) borrowing from external banks, or a skew in external liabilities towards debt, increases the risk of a financial crisis substantially (external bank debt being defined as debt to a foreign bank).
- A larger share of FDI in gross external liabilities decreases the chances of a financial crisis.
- Shorter maturity of banks' debt raises the risk of a crisis, mainly by increasing exposure to financial contagion.
- The size of foreign reserve holdings reduces the probability of a crisis.

27. The calculations of the country leverage ratios are based on over 1200 commercial banks, including 915 in the United States, 197 in the OECD euro area countries, 23 in the United Kingdom, 11 in Canada and 7 in Japan.

- Total external assets (excluding reserves) or liabilities are found not to affect the risk for countries with small and moderate levels of assets and liabilities. However, external assets reduce, and external liabilities increase the crisis risk when they are large.

Table A2 shows for each of the 8 selected indicators: i) the position of each country in 2014Q1 (or the latest available) along various dimensions of its financial account structure, and ii) the country-specific change, from 2007 to 2014Q1. As in Table A1, four OECD countries with the scores that present the largest risk to financial stability are labelled in dark grey, four OECD countries with the next weakest scores for financial stability are labelled in light grey. For some of the variables, the numbers need to be interpreted with care as the relevance of the variable may differ across countries. For example, the foreign currency reserves of the United States are the lowest relative to GDP in the OECD area, but this does not signify a weakness as the US dollar is a reserve currency, and the same applies to low currency reserves in individual euro area countries.

The main highlights emerging from the analysis include:

- Based on Table A1, the least vulnerable OECD countries include Austria, Germany and Poland.
- According to Table A1, vulnerable euro area countries (Greece, Ireland, Italy, Portugal, Spain, and Slovenia) score weakly on several indicators, including low growth, and high unemployment, non-performing loans, public debt and deficit, and government bond yields. In many of these countries external liabilities exhibit a systematic debt bias (Table A2).
- There are indications that some OECD countries (Australia, Canada, New Zealand, Norway and Sweden), which have suffered relatively little from the global financial and euro area crises, are exposed to vulnerabilities stemming from the non-financial sector (most or all from household debt, house prices and relative unit labour cost). On the other hand, their financial sector does not appear to exhibit significant external vulnerability (Table A1).
- Countries with a large financial sector – as, for example, proxied by the size of financial corporations' gross debt relative to GDP in Table A1– tend to exhibit the largest financial-accounts-related risks to financial stability (as suggested by Table A2). These include Denmark, Iceland, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom.
- Overall, Table A2 suggests only modest increases in external financial stability risks for non-OECD G20 countries since 2007. The general exception to this pattern is the relatively short maturity of external bank debt, which has become more pronounced since 2007, possibly related to increased inflows of foreign capital. There is also some increase in external debt bias and some decline in foreign exchange reserves, raising the risk of more turbulent consequences from capital outflows.

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Table A1. Indicators of potential financial vulnerabilities

	Real economy				Non-financial sector		
	Potential GDP growth rate-actual GDP growth rate differential	Actual unemployment rate-NAIRU differential	Current account deficit ¹	Relative unit labour cost	Household gross debt ^{2,3}	Non-financial corporation gross debt ^{1,3}	Real house prices
	2014	2014Q3	2014	% change 2000Q1-14Q3	2013 or latest available	2013 or latest available	% change 2000Q1-14Q2
United States	-0.2	0.7	2.2	-22.7	110.1	114.4	15.6
Japan	0.4	-0.5	-0.1	-46.1	132.2	160.5	-31.2
Germany	-0.3	-0.9	-7.4	-11.0	94.8	70.5	-0.6
France	0.8	0.7	1.7	4.0	108.1	103.2	75.5
Italy	0.3	3.4	-1.5	15.4	78.6	90.9	13.3
United Kingdom	-1.1	-0.3	4.8	-15.3	148.6	87.3	71.7
Canada	-0.5	-0.1	2.6	38.0	169.5	138.0	90.5
Australia	-0.2	0.4	3.6	52.9	193.1	79.9	90.0
Austria	1.1	0.5	-1.6	-0.6	90.8	97.8	22.4
Belgium	0.2	0.5	-0.2	8.5	101.9	94.7	61.9
Chile	2.1	-1.0	1.9	20.0	73.9	138.0	..
Czech Republic	-0.7	-0.1	0.1	32.7	64.6	61.6	..
Denmark	-0.1	0.4	-6.2	12.1	326.0	102.2	25.7
Estonia	0.4	-1.2	-0.1	36.8	94.5	102.6	..
Finland	0.7	1.1	1.6	-0.6	123.1	98.3	26.9
Greece	-1.6	8.9	-1.2	-3.0	103.5	76.3	-7.5
Hungary	-2.1	-2.1	-3.9	23.3	55.5	103.1	..
Iceland	-1.0	0.8	-3.2	-27.4	..	324.1	..
Ireland	-2.7	0.5	-5.2	19.9	230.4	236.0	-3.4
Israel	0.7	0.1	-1.8	-11.8	..	75.1	34.0
Korea	0.1	0.0	-6.0	6.2	160.0	151.3	24.2
Luxembourg	-1.1	0.8	-5.1	31.9	153.4	312.4	..
Mexico	0.4	0.3	1.9	1.9	..	..	..
Netherlands	0.0	1.6	-10.7	0.9	288.7	100.5	-0.9
New Zealand	-0.8	-0.6	3.5	70.2	..	..	101.5
Norway ⁷	0.7	0.1	-9.9	50.6	215.2	107.1	83.1
Poland	-0.4	-0.3	0.9	-9.4	58.8	52.8	..
Portugal	-0.6	1.2	0.4	0.9	143.0	151.4	-15.8
Slovak Republic	0.1	-0.5	-0.9	27.0	54.9	76.6	..
Slovenia	-1.1	2.2	-5.4	2.1	56.9	94.5	..
Spain	-0.7	5.3	-0.7	6.2	140.8	122.5	20.8
Sweden	-0.1	0.4	-5.3	-3.5	169.9	142.0	89.7
Switzerland	0.5	0.6	-7.9	24.5	197.3	..	46.0
Turkey	1.3	0.8	5.4	-19.3	..	..	..
Brazil	2.0	..	3.9	33.7	..	..	..
China	0.5	..	-2.4	80.4	..	..	..
Colombia	-0.2	-0.4	4.2	46.8	..	..	..
India	0.7	..	1.5	-44.0	..	..	..
Indonesia	0.8	..	3.3	-9.5	..	..	..
Latvia	-0.1	-1.9	2.3	3.3	..	..	..
Russian Federation	1.9	..	-3.0	279.5	..	..	..
South Africa	-0.1	-1.9	2.3	3.3	..	..	..

1. In per cent of GDP.

2. In per cent of gross household disposable income.

3. Gross debt is defined as liabilities less financial derivatives and shares and other equity. Based on consolidated data for most countries.

4. In per cent of total (unweighted) assets.

5. Rating for sovereign debt in foreign currency.

6. OECD Economic Outlook 96 database estimates.

7. Mainland (potential) GDP is used instead of total (potential) GDP where applicable.

■ Labels the 4 OECD countries with the weakest scores (i.e. highest values for all indicators but the core Tier-1 leverage ratio).

■ Labels the 4 OECD countries with the next weakest scores (i.e. next highest values for all indicators but the core Tier-1 leverage ratio).

Source: OECD Economic Outlook 96 database; OECD National Accounts database; IMF Financial Soundness Indicators database; European Central Bank; European Commission; OECD Housing Prices database; Standards & Poors; and OECD calculations.

Table A1. Indicators of potential financial vulnerabilities (cont'd)

Financial sector			Public finance			Sovereign credit rating S&P ⁵	Country
Core Tier-1 leverage ratio ⁴	Non-performing loans to total loans	Financial corporation gross debt ^{1,3}	Headline government budget deficit ^{1,6}	Gross government debt ^{1,6}	Real 10-year sovereign bond yield-potential GDP growth rate differential		
Latest available	Latest available	2013 or latest available	2014	2014	2014Q3 or latest available	Latest	
6.4	2.3	346.4	5.1	109.7	-1.0	AA+	United States
4.9	1.9	568.8	8.3	230.0	-0.4	AA-	Japan
4.1	2.7	321.0	-0.2	79.0	-2.1	AAA	Germany
3.7	4.5	278.1	4.4	114.1	-0.7	AA	France
5.7	16.5	206.2	3.0	146.9	1.4	BBB	Italy
4.8	3.7	659.4	5.5	95.9	-1.4	AAA	United Kingdom
4.4	0.5	332.7	2.0	93.9	-1.2	AAA	Canada
4.7	1.2	336.0	3.3	36.2	0.5	AAA	Australia
6.3	4.1	240.6	3.0	103.4	-1.7	AA+	Austria
5.1	4.2	295.4	2.9	119.2	-1.1	AA	Belgium
..	2.2	201.2	..	..	-2.4	AA-	Chile
..	5.7	120.7	1.4	51.9	-2.5	AA-	Czech Republic
4.8	4.5	449.1	1.7	58.9	-1.3	AAA	Denmark
..	1.3	117.5	0.3	12.9	..	..	Estonia
3.8	..	241.9	2.6	68.4	-1.5	AA+	Finland
8.8	33.5	194.2	1.0	182.3	7.8	..	Greece
..	16.3	96.0	2.9	96.7	0.5	..	Hungary
..	..	993.9	0.5	86.7	3.4	BBB-	Iceland
5.7	25.3	959.1	3.7	116.6	-0.8	A-	Ireland
..	2.6	206.7	3.8	68.6	-3.0	A+	Israel
..	..	353.9	0.6	36.7	-1.4	A+	Korea
..	0.2	5047.2	-0.9	30.6	-2.8	AAA	Luxembourg
..	2.9	..	0.8	..	-0.3	BBB+	Mexico
4.5	3.0	658.6	2.6	77.8	-0.9	AA+	Netherlands
..	..	..	0.0	41.1	0.6	AA	New Zealand
6.6	1.3	211.9	-9.9	35.1	-2.6	AAA	Norway ⁷
..	5.0	99.2	3.3	55.7	-1.0	..	Poland
6.2	10.8	252.0	4.9	142.4	2.1	BB	Portugal
..	5.2	118.5	2.9	60.1	-1.2	A	Slovak Republic
..	15.3	121.6	4.4	82.9	1.1	A-	Slovenia
5.4	9.4	239.6	5.5	130.8	1.3	BBB	Spain
4.0	0.6	285.8	1.7	46.5	-1.7	AAA	Sweden
4.5	0.8	..	-0.5	42.6	-1.5	..	Switzerland
..	2.7	119.1	..	..	-0.8	..	Turkey
..	2.9	..	3.9	..	8.7	..	Brazil
..	..	..	1.1	..	-3.5	..	China
..	3.1	..	..	..	..	..	Colombia
..	3.1	..	..	..	..	..	India
..	4.0	..	6.6	..	1.1	..	Indonesia
..	2.1	..	2.2	..	0.9	..	Latvia
..	2.1	..	2.2	..	0.9	..	Russian Federation
..	5.3	..	1.3	34.8	-0.4	..	South Africa

1. In per cent of GDP.

2. In per cent of gross household disposable income.

3. Gross debt is defined as liabilities less financial derivatives and shares and other equity. Based on consolidated data for most countries.

4. In per cent of total (unweighted) assets.

5. Rating for sovereign debt in foreign currency.

6. OECD Economic Outlook 96 database estimates.

7. Mainland (potential) GDP is used instead of total (potential) GDP where applicable.

Labels the 4 OECD countries with the weakest scores (i.e. highest values for all indicators but the core Tier-1 leverage ratio).

Labels the 4 OECD countries with the next weakest scores (i.e. next highest values for all indicators but the core Tier-1 leverage ratio).

Source: OECD Economic Outlook 96 database; OECD National Accounts database; IMF Financial Soundness Indicators database; European Central Bank; European Commission; OECD Housing Prices database; Standards & Poors; and OECD calculations.

Table A2. **Financial-accounts-related risk factors to financial stability**

Latest available (in per cent)

	External debt ¹	External bank debt ²	Short-term external bank debt ²	Short-term external bank debt ³	External liabilities ²	External assets ²	Foreign exchange reserves ²	FDI liabilities ¹
	Higher values indicate higher financial stability risk					Higher values indicate lower financial stability risk		
United States	51.1	14.9	5.5	36.6	175.3	143.9	0.9	19.6
Japan	60.3	17.8	14.7	82.7	99.3	167.1	26.3	4.1
Germany	59.0	31.8	16.0	50.3	202.9	248.6	1.8	19.4
France	60.9	53.4	30.3	56.7	294.5	276.9	2.0	13.9
Italy	69.3	26.5	9.4	35.7	157.1	125.2	2.5	16.0
United Kingdom	56.0	71.3	46.2	64.7	539.4	534.2	3.4	10.5
Canada	44.3	23.9	12.7	53.0	163.7	160.7	4.2	38.0
Australia	52.2	21.5	7.7	35.6	164.5	110.0	3.7	26.0
Austria	67.8	45.5	12.1	26.7	253.8	256.5	2.9	25.4
Belgium	40.3	42.8	19.4	45.3	405.3	446.9	3.4	53.2
Chile	28.6	19.4	8.1	41.8	135.6	121.0	15.6	62.4
Czech Republic	36.3	21.3	6.1	28.7	130.9	91.6	27.5	59.3
Denmark	62.6	63.3	40.3	63.7	248.6	285.2	24.1	17.7
Finland	59.3	45.3	15.4	34.1	320.1	328.7	3.4	15.6
Greece	91.2	31.0	15.9	51.4	248.8	122.4	0.9	4.2
Hungary	28.7	40.8	13.2	32.4	309.9	231.2	35.1	68.0
Iceland	84.1	39.9	12.7	31.8	682.4	286.5	24.9	15.3
Ireland	38.1	152.3	61.8	40.6	1962.8	1863.8	0.6	16.7
Israel	33.1	5.4	2.5	45.8	85.9	104.6	27.9	35.0
Korea	41.0	14.1	9.1	64.1	73.6	72.9	25.3	17.2
Luxembourg	24.2	944.4	345.2	36.6	14688.0	14905.6	1.4	36.1
Mexico	45.5	9.7	3.1	31.7	81.5	43.6	14.3	37.8
Netherlands	57.0	104.8	37.0	35.3	435.5	482.2	2.6	19.2
New Zealand	56.2	18.4	7.8	42.2	147.9	81.9	9.3	32.2
Norway	62.8	28.1	11.0	39.2	187.5	291.4	10.4	27.7
Poland	47.2	24.9	5.7	23.1	109.0	41.5	17.6	44.7
Portugal	70.6	30.2	8.3	27.6	284.7	169.8	1.5	21.7
Slovak Republic	52.0	33.8	13.6	40.4	138.5	72.8	1.5	47.2
Slovenia	72.4	30.3	8.8	29.0	133.9	96.3	1.6	25.4
Spain	61.4	32.4	13.0	40.2	230.4	132.9	2.5	24.4
Sweden	52.5	48.9	22.4	45.7	296.0	290.0	10.4	28.6
Switzerland	38.9	61.7	41.1	66.7	485.1	623.1	70.2	30.9
Turkey	66.0	21.3	11.7	55.2	81.3	28.6	14.0	24.5
Argentina	44.4	2.6	1.6	60.5	35.3	42.8	4.6	51.1
Brazil	32.1	72.7	4.8	6.6	73.3	34.9	16.4	47.6
China	34.4	10.2	8.3	80.9	42.5	62.9	40.7	58.4
India	53.0	10.6	5.8	54.7	41.7	24.5	14.8	29.6
Indonesia	41.3	11.3	6.1	53.9	64.3	21.7	11.1	44.8
Russian Federation	43.0	9.3	3.7	39.3	64.1	70.1	22.5	42.2
Saudi Arabia	16.7	8.5	5.4	63.5	34.2	130.0	89.5	79.3
South Africa	27.7	9.2	3.7	40.1	113.5	109.0	12.8	38.1

1. As per cent of external liabilities.

2. As per cent of GDP.

3. As per cent of external bank debt.

Labels the 4 OECD countries with the weakest scores.

Labels the 4 OECD countries with the next weakest scores.

Source: BIS; IMF; World Bank and OECD calculations.

Table A2b. **Financial-accounts-related risk factors to financial stability** (cont'd)

Change from 2007 (in percentage points)

External debt ¹	External bank debt ²	Short-term external bank debt ²	Short-term external bank debt ³	External liabilities ²	External assets ²	Foreign exchange reserves ²	FDI liabilities ¹		
Positive values indicate an increase in the financial stability risk					Positive values indicate a decrease in the financial stability risk				
-4.1	-5.5	-3.3	-6.3	20.9	-1.6	0.3	0.8	United States	
5.4	4.7	5.6	13.0	25.7	42.6	4.2	-0.2	Japan	
-8.7	-18.4	-11.9	-5.3	-2.6	13.9	0.3	0.7	Germany	
-0.7	-14.0	-13.3	-8.0	6.2	-9.7	0.0	-3.5	France	
-2.3	-24.8	-8.9	-0.1	-1.9	-6.8	0.9	1.1	Italy	
-8.8	-44.9	-40.6	-10.0	-30.2	-12.5	1.6	2.9	United Kingdom	
9.6	0.6	-2.0	-9.9	-5.9	4.2	1.1	-8.5	Canada	
3.5	-10.4	-4.5	-2.5	-9.4	0.8	0.9	0.4	Australia	
2.2	-26.6	-14.6	-10.4	-66.2	-43.2	-0.2	1.0	Austria	
-21.6	-72.0	-69.3	-32.0	-111.4	-101.6	1.0	19.2	Belgium	
-3.8	1.2	-1.5	-10.8	34.0	18.9	5.2	1.8	Chile	
2.7	-1.3	-2.7	-10.4	19.9	25.1	7.9	1.8	Czech Republic	
-5.2	-7.9	3.5	11.9	-3.5	39.5	13.3	-3.5	Denmark	
20.0	5.3	2.8	2.5	37.4	77.1	0.4	-3.3	Finland	
15.8	-27.5	-0.8	22.8	51.0	29.5	0.7	-4.7	Greece	
-2.7	-23.5	-4.7	4.5	-4.0	18.8	16.7	3.9	Hungary	
4.8	-249.8	-112.7	-11.5	-49.4	-322.0	11.4	0.3	Iceland	
-15.4	-117.4	-88.9	-15.3	535.0	456.9	0.3	2.2	Ireland	
-11.7	-3.1	-1.5	-0.2	-33.6	-14.3	10.7	9.8	Israel	
-1.8	-2.7	-1.3	2.4	1.0	17.6	1.0	1.6	Korea	
-4.8	-213.6	-163.0	-7.3	1335.8	1438.9	1.1	11.6	Luxembourg	
11.8	1.8	0.7	1.4	13.1	12.5	5.6	-5.9	Mexico	
-1.8	-31.9	-31.0	-14.5	-59.9	-6.6	1.1	-1.7	Netherlands	
-2.2	-7.4	-5.4	-8.6	-35.0	-14.1	-5.0	-0.3	New Zealand	
-1.1	-34.4	-30.1	-26.6	-41.4	-0.9	-6.7	7.9	Norway	
1.9	0.4	-0.3	-1.8	3.0	-1.8	1.2	-1.5	Poland	
0.8	-44.8	-19.5	-9.5	-13.4	-30.5	0.6	3.0	Portugal	
10.9	1.9	1.3	1.8	18.9	13.5	-24.6	-10.2	Slovak Republic	
0.8	-18.1	-4.3	2.0	-9.0	-21.4	-0.6	0.4	Slovenia	
-2.6	-27.0	-5.9	8.3	-5.3	-15.3	1.7	4.0	Spain	
2.8	-5.1	-10.0	-14.2	14.1	9.7	4.5	-3.3	Sweden	
-10.6	-110.9	-84.2	-5.9	-101.5	-115.9	59.9	10.2	Switzerland	
11.3	2.3	3.4	11.0	-2.0	-0.6	1.4	-7.6	Turkey	
-9.7	-4.2	-1.9	10.2	-22.3	-26.1	-10.3	11.8	Argentina	
5.8	64.9	1.1	-40.6	-1.6	3.4	1.7	13.8	Brazil	
2.2	4.2	5.0	25.7	3.6	-13.6	-7.8	1.1	China	
3.4	-0.6	0.0	2.7	1.9	-8.0	-11.1	3.9	India	
-11.9	-0.3	-0.1	0.8	-2.7	-3.9	-2.4	13.1	Indonesia	
7.4	-4.7	-3.0	-8.5	-45.5	-26.2	-18.7	2.6	Russian Federation	
-19.7	-0.6	-0.3	1.2	3.7	0.4	8.7	15.7	Saudi Arabia	
7.1	-2.8	-1.7	-5.0	0.1	30.8	1.7	-5.1	South Africa	

1. As per cent of external liabilities.

2. As per cent of GDP.

3. As per cent of external bank debt.

■ Labels the 4 OECD countries with the weakest scores.

■ Labels the 4 OECD countries with the next weakest scores.

Source: BIS; IMF; World Bank and OECD calculations.

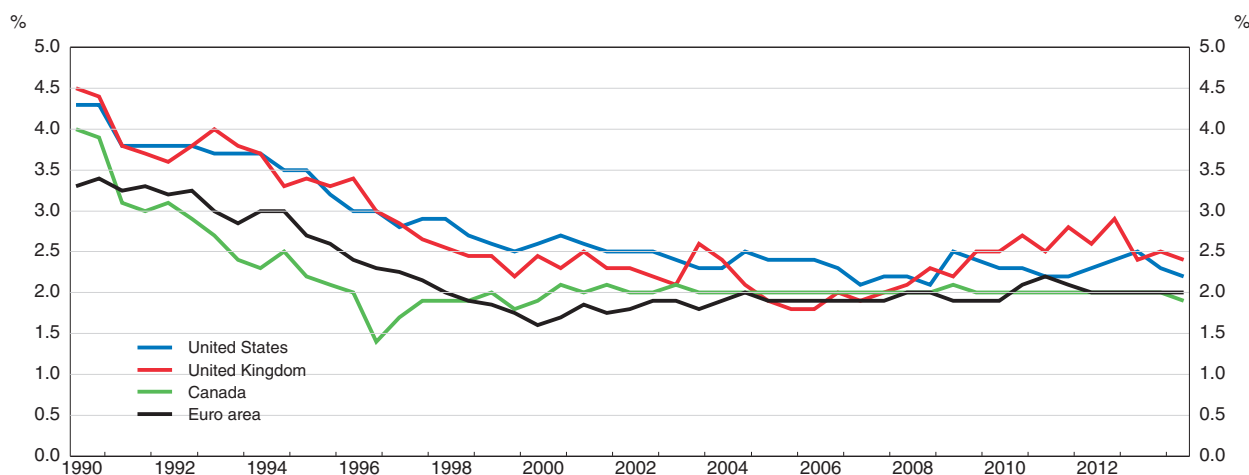
ANNEX 1.A2

A revised framework for modelling the relationship between inflation and unemployment

This Annex describes a revision to incorporate anchored inflation expectations into the Phillips curve model which is used to derive estimates of equilibrium unemployment. The resulting new estimates of equilibrium unemployment have been used to derive the estimates of potential output, and by implication output gaps and underlying fiscal balances, which are described throughout this publication.


While inflation in nearly all OECD countries is currently low, the fall in inflation over the course of the Great Recession has been surprisingly modest given the massive increase in unemployment. In the case of the United States and euro area, the unemployment rate has averaged nearly 3½ percentage points above pre-crisis levels over the last 5 years (with peak increases of just under 5 percentage points), but this has been associated with a fall in core inflation of only ¼ and 1 percentage point, respectively. The reduced sensitivity of inflation to demand conditions has been attributed to a variety of factors (IMF, 2013), but perhaps most prominent among these is the increased credibility that monetary authorities have in targeting inflation which has led to inflation expectations being better anchored (Figure A2.1). The assumption that medium-term inflation expectations are anchored to inflation targets has been incorporated into the modelling framework used to assess estimates of equilibrium unemployment across

Figure A2.1. Inflation expectations have stabilised since the late 1990s



Note: Expected average rate of CPI inflation 6 to 10 years ahead.

Source: Consensus Forecasts; and OECD calculations.

StatLink  <http://dx.doi.org/10.1787/888933169330>

OECD countries. This revision to the standard OECD Phillips curve approach generally leads to estimated equations with better econometric properties and for some countries leads to a significant change in the assessment of labour market slack, as described in the remainder of this Annex.

Abstracting from dynamics, a general reduced-form Phillips curve representation of the inflation process which incorporates inflation expectations is:

$$(1) \Delta\pi_t = \beta(\pi_t^e - \pi_{t-1}) + \alpha(U_t^* - U_t) + \text{supply shocks},$$

where π is consumer price inflation, π^e is expected inflation, U is unemployment, U^* is a measure of equilibrium unemployment (explained further below) and supply shocks include relative oil price inflation, relative import price inflation and indirect tax changes. Two representations of this general framework, which are more specific about how inflation expectations are formed, are considered below.

A backward adaptive expectations model assumes adaptive expectations about inflation are formed by past outcomes of inflation, leading to a simplified “accelerationist” model of the form:

$$(2) \Delta\pi_t = \alpha(U_t^* - U_t) + \text{supply shocks}.$$

This implies that, in the absence of supply shocks, inflation will only be stable when the unemployment gap is closed. This approach has been used in the past by the OECD to derive estimates of the equilibrium unemployment rate, previously referred to as a “NAIRU”, see Guichard and Rusticelli (2011). Given that the NAIRU is unobserved, equation (2) is estimated by means of a Kalman filter applied assuming the NAIRU evolves over time as a random-walk process, but under constraints that ensure relatively smooth and gradual change. However, for some countries where unemployment has risen most sharply, these smoothness constraints make it difficult to reconcile inflation developments (typically low, but relatively stable) with a gradual rise in the NAIRU. Thus, for countries for which unemployment has been changing most rapidly (Greece, Ireland, Italy, Portugal, Slovak Republic, Slovenia and Spain), long-term unemployment is included in the stochastic modelling process for the NAIRU to allow it to change more rapidly when long-term unemployment is also changing more rapidly, on the grounds that long-term unemployment captures hysteresis effects on the NAIRU (Rusticelli, 2014).

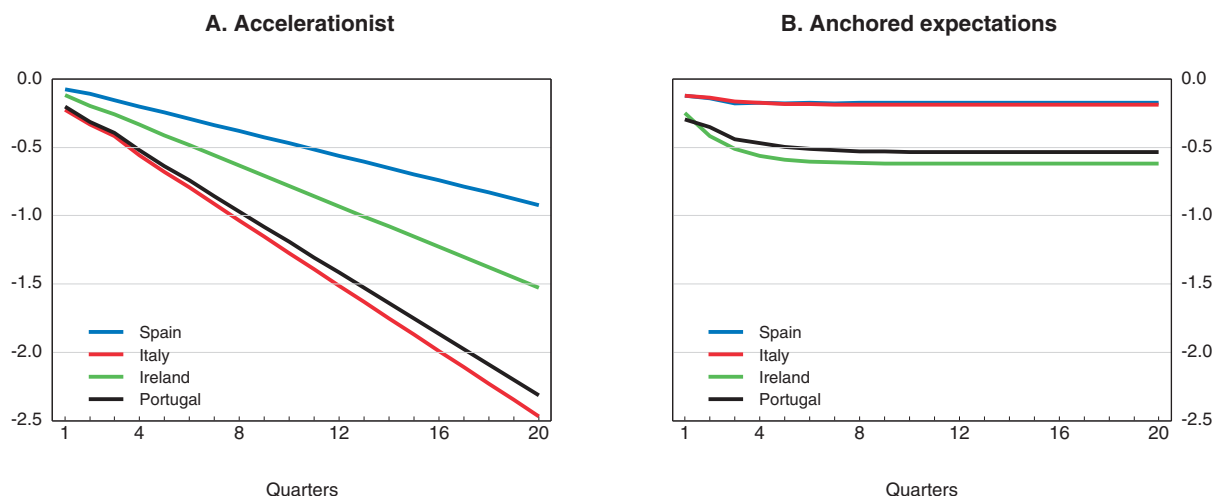
Alternatively, the anchored expectations model is represented by:

$$(3) \Delta\pi_t = \mu - \beta\pi_{t-1} + \alpha(U_t^* - U_t) + \text{supply shocks},$$

where μ is a constant, so that the implied level of stable inflation expectations is given by (μ/β) , and where there is an explicit central bank target for inflation, the restriction that (μ/β) is equal to this target is imposed when consistent with the data. This model implies that, in the absence of supply shocks, inflation will be stable and consistent with medium-term inflation expectations (which typically are assumed to correspond to the central banks inflation target) only when the unemployment gap is closed. The estimation approach is similar to that of (2) and involves the use of a Kalman filter. However, given the rationale underlying the model, it is only estimated over a relatively recent sample period when inflation has been almost stable and therefore inflation expectations can plausibly be considered to be anchored; so for most countries the sample estimation period begins in 1998. For euro area countries, a restriction of 2% inflation expectations is tested for each individual country, even though the ECB’s target is for area-wide inflation to be “below, but close to, 2% over the medium term”.


The implications for inflation of a negative unemployment gap (i.e. actual unemployment exceeding the equilibrium rate) are very different across the two models (Figure A2.2): the accelerationist model implies a continuing process of disinflation which will persist as long as the unemployment gap remains; conversely, the anchored expectations model implies that inflation will fall below expectations to a new lower level, but will not continue falling.

The different properties of the alternative models also imply different estimates of equilibrium unemployment for some countries, particularly those for which unemployment has risen most steeply,

Figure A2.2. **The estimated effect of the unemployment gap on inflation, for selected OECD countries**

Note: The impulse response of annual inflation to a one percentage point increase in the unemployment gap, for a group of countries for which unemployment has risen most over the crisis, evaluated according to the estimated parameters of the respective models. For full details see Rusticelli et al. (2014b).

Source: OECD calculations.

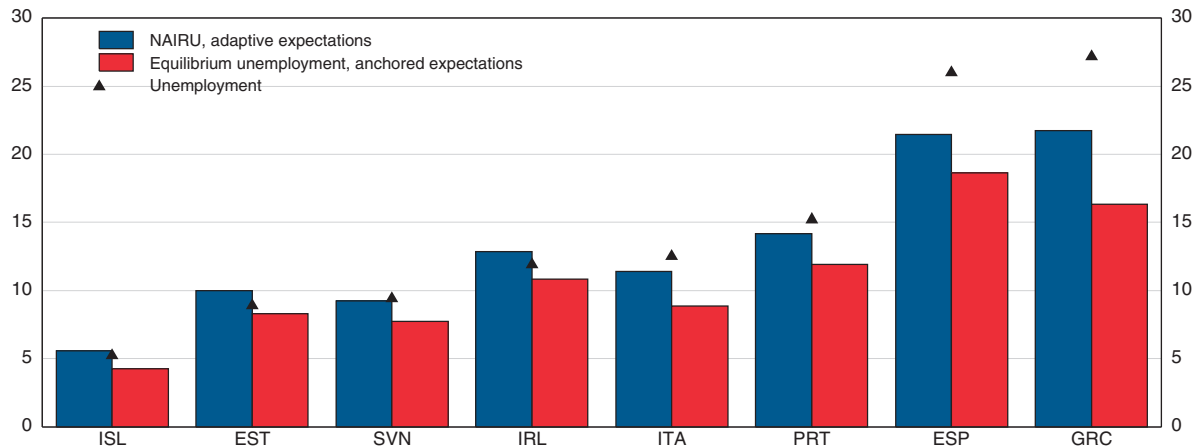
StatLink  <http://dx.doi.org/10.1787/888933169348>

and where typically inflation has fallen and tended to stabilise at a lower level. In these cases, the accelerationist model will attempt to reconcile relatively stable inflation with a smaller unemployment gap, whereas the anchored expectations model will match a low level of inflation with a larger persistent unemployment gap. Thus, for the eight OECD countries where unemployment has risen the most since the crisis, the anchored expectations model implies current estimates of equilibrium unemployment which on average are nearly 2½ percentage points lower than the NAIURU derived from the accelerationist model (Figure A2.3). For all other countries, for which unemployment has increased less steeply, the difference in current estimates of equilibrium unemployment is much smaller; the equilibrium unemployment estimate from the anchored expectations model is, on average, only 0.2 percentage points lower.

On balance, the anchored expectations model is preferred to the accelerationist model for a number of reasons:


- Inflation expectations do appear to have been fairly stable over the crisis and in the anchored expectations model the coefficient restriction that inflation expectations are anchored at the central bank target is mostly accepted.
- The anchored expectations model tends to fit better over a more recent estimation period. In particular, the additional inflation (levels) variable and intercept term, which appear in the anchored expectations model but not the accelerationist model, are usually highly statistically significant. Additionally, the unemployment gap terms have much greater statistical significance in the anchored expectations model for which the unemployment gap is significant to at least the 5% level in three-quarters of countries, whereas for the accelerationist model over a common recent sample period the unemployment gap is statistically significant at the 10% level in only about one-fifth of all countries.
- Simplicity also favours the anchored expectations model, because to make the accelerationist model work for countries where unemployment has risen the most since the crisis requires supplementing the model with long-term unemployment to give the NAIURU sufficient flexibility.

Figure A2.3. **Different estimates of equilibrium unemployment, 2013Q4, selected OECD countries**



Note: Estimates of equilibrium unemployment for 2013Q4 for the group of OECD countries for which the peak rise in unemployment relative to pre-crisis levels was at least 5 percentage points. For further details see Rusticelli *et al.* (2014b).

Source: OECD calculations

StatLink  <http://dx.doi.org/10.1787/888933169353>

The estimation work described in this Annex assumes that for most OECD countries, inflation expectations have been anchored since the late 1990s at levels which are broadly consistent with central bank inflation targets. While this seems to be a reasonable assumption for most countries over much of the sample period, there have been recent signs that inflation expectations have been declining in some countries, as discussed in the main chapter. Moreover, there is a risk of inflation expectations declining further and in the limit becoming completely unanchored, which in conjunction with the persistence of large unemployment and output gaps, would considerably raise the risks of disinflation.

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