

CHAPTER 4

PROSPECTS FOR GROWTH AND IMBALANCES BEYOND THE SHORT TERM

Introduction and summary

Balanced growth must be restored after the crisis

While the worst potential outcomes from the economic crisis have been avoided, in large part due to prompt and massive world-wide policy stimulus, many countries will have to face up to severe macroeconomic imbalances during the recovery period and beyond. These include large output gaps, high unemployment, wide fiscal deficits and the need to exit from exceptionally loose monetary policy. In addition, while global current-account imbalances receded in the immediate aftermath of the crisis there are concerns that they will reappear with the recovery. These imbalances are not independent and addressing some of them could aggravate others, including those in other countries, and could also endanger the recovery.¹ This paper considers what combination of policies is likely to be most successful in delivering balanced global growth by means of examining a number of alternative stylised scenarios to 2025. Given the nature of the exercise, none of these scenarios should be considered as a forecast.

Policy options are illustrated by means of variant scenarios

To provide the basis for discussion, a highly stylised “baseline” scenario to 2025 is first constructed by extending the short-term projections described in chapters 1 and 2 under the assumption of a minimal adjustment of policies. Simulations of the OECD’s Global Model are then used to construct a number of alternative scenarios as a means of considering what combination of policies might best meet the objectives of strong, sustainable and balanced growth.² The main findings of the paper are as follows:

In the absence of policy action major imbalances are likely to emerge

- The baseline scenario implies the emergence of major imbalances which could sow the seeds of a future crisis. Although, by construction, government debt-to-GDP ratios are assumed to stabilise as a result of gradual consolidation measures, for many countries it is at greatly increased levels which is likely to imply higher long-term interest rates and dampen medium-term growth prospects. It will also leave many countries in a difficult position

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1. Recognising such inter-dependencies, following the Pittsburgh summit the G20 have set up a framework to monitor real and financial imbalances and provide a mutual assessment of monetary, fiscal, exchange rate and financial policies in order to promote strong, sustainable and balanced growth.
 2. The OECD’s Global Model identifies the United States, euro area and Japan with the remainder of the OECD divided into two regions and, for the non-OECD, China is distinguished and the remainder of the non-OECD divided into three geographical regions. The model combines short-term Keynesian dynamics with a consistent long-run neo-classical supply-side. It also features stock-flow consistency, with explicit modelling of domestic and international assets, liabilities and associated income streams and so gives prominence to wealth and the role of asset prices in the transmission of international shocks. For further details see Hervé *et al.* (2010).

to cope with future shocks and the rising fiscal costs of ageing (which are not explicitly considered in the baseline). Current-account imbalances are also likely to re-emerge as cyclical effects wear off, with an increased risk of disorderly adjustments while many economies are still fragile.

Strong fiscal action is necessary, but not sufficient...

- Substantial fiscal consolidation could bring government debt-to-GDP ratios back to pre-crisis levels in most countries by the middle of the next decade and this would lower long-term interest rates and boost growth prospects. However, as it would happen simultaneously in many countries, in the short term it would also risk delaying the recovery and lead to a prolonged period of very low short-term interest rates. Moreover, there would be limited improvement in global current-account imbalances, partly because many OECD countries would be undertaking a similar degree of fiscal consolidation together.

... and needs to be accompanied by reforms to rebalance demand

- There is considerable scope for countries to undertake structural reforms to increase potential output and well-being (OECD, 2010a), and there are many such reforms that may also contribute to reducing international imbalances by reducing savings or increasing investment in surplus countries and *vice versa* in deficit countries. Such reforms could include the wider provision of social welfare and deepening of financial markets in China and non-OECD Asia, liberalisation of the sheltered sector in Japan and tax reforms to encourage saving in the United States. While contributing only modestly to the global current-account rebalancing, labour and product market reforms in the euro area would also help to boost growth and enhance adaptability and so cushion the effects of greater fiscal consolidation.

A combined package would foster strong and balanced global growth

- An illustrative combined package of measures implemented from 2011 onwards -- involving fiscal consolidation in OECD countries, exchange-rate realignments and structural reforms in most regions of the world -- would move much closer to the objectives of sustainable and globally balanced growth. The recovery in those OECD countries where fiscal consolidation needs are greatest would still be delayed (relative to the baseline scenario) because of the lags before structural reforms and exchange rate changes take effect, but GDP growth would remain positive in all major countries and continue to strengthen beyond 2012 so that output would catch up and exceed the baseline scenario after five years. The flipside of the delayed recovery is that growth would be more sustainable over the longer run, whereas sustainability in the baseline scenario is highly questionable given the build up in government debt and international imbalances. Over the longer term, OECD and global output would be 2-3% higher than in the baseline scenario, general government debt in most OECD countries would return to pre-crisis levels and measures of global current-account imbalances would be further reduced relative to current levels.

A baseline scenario to 2025

Projections are underpinned by potential output estimates

A long-term scenario has been constructed by extending the short-term projections for OECD countries using a highly stylised framework (Box 4.1) underpinned by projections of potential output. For emerging economies, the baseline was constructed using both a growth convergence framework (Duval and de la Maisonnette, 2009),³ and an estimated Balassa-Samuelson effect to project changes in real exchange rates (Box 4.2).

Box 4.1. Assumptions underlying the baseline scenario

The baseline represents a stylised scenario that is conditional on the following assumptions for the period beyond the short-term projection horizon from 2012 onwards:

- The gap between actual and potential output is eliminated by 2015 in all OECD countries. Thereafter GDP grows in line with potential output.
- Unemployment returns to its estimated structural rate in all OECD countries by 2015. Historical estimates of the structural unemployment rate are based on Gianella *et al.* (2008), on which is imposed a post-crisis hysteresis effect. The structural unemployment rate is assumed to eventually return to pre-crisis levels but at a speed which differs across countries based on previous historical experience (Guichard and Rusticelli, 2010); for those countries with more flexible labour markets structural unemployment returns to pre-crisis levels by 2018 and for other countries by 2025.
- Oil and other commodity prices rise by 1% per annum in real terms after 2011.
- Exchange rates remain unchanged in nominal terms in OECD countries; for other countries an estimated Balassa-Samuelson effect (Frankel, 2006) has been used as a basis for assumed currency appreciation between 2011 and 2025.
- Monetary policy rates remain low and are directed at avoiding deflation and, towards 2015, are normalised in order to bring inflation in line with medium-term objectives. For Japan it is assumed that once the output gap has closed and inflation returns to 1% in 2015, the target rate of inflation for monetary policy will be fixed at 2%.
- The adverse effects on the level of potential output resulting from the crisis (through adjustments to capital, structural unemployment and labour force participation) have reached their peak by about 2013.
- After 2011, emerging economies show a slow convergence to US growth rates in per capita income (measured in purchasing power parity) (Duval and de la Maisonnette, 2009). For the period 2015 to 2025, OECD countries experience a slow convergence to annual labour productivity growth of 1¼ per cent per annum.
- Growth of trade in emerging economies has been determined by country-specific equations, but these estimates have been adjusted based on recent work estimating the structural sources of current-account balances (Cheung *et al.*, 2010).

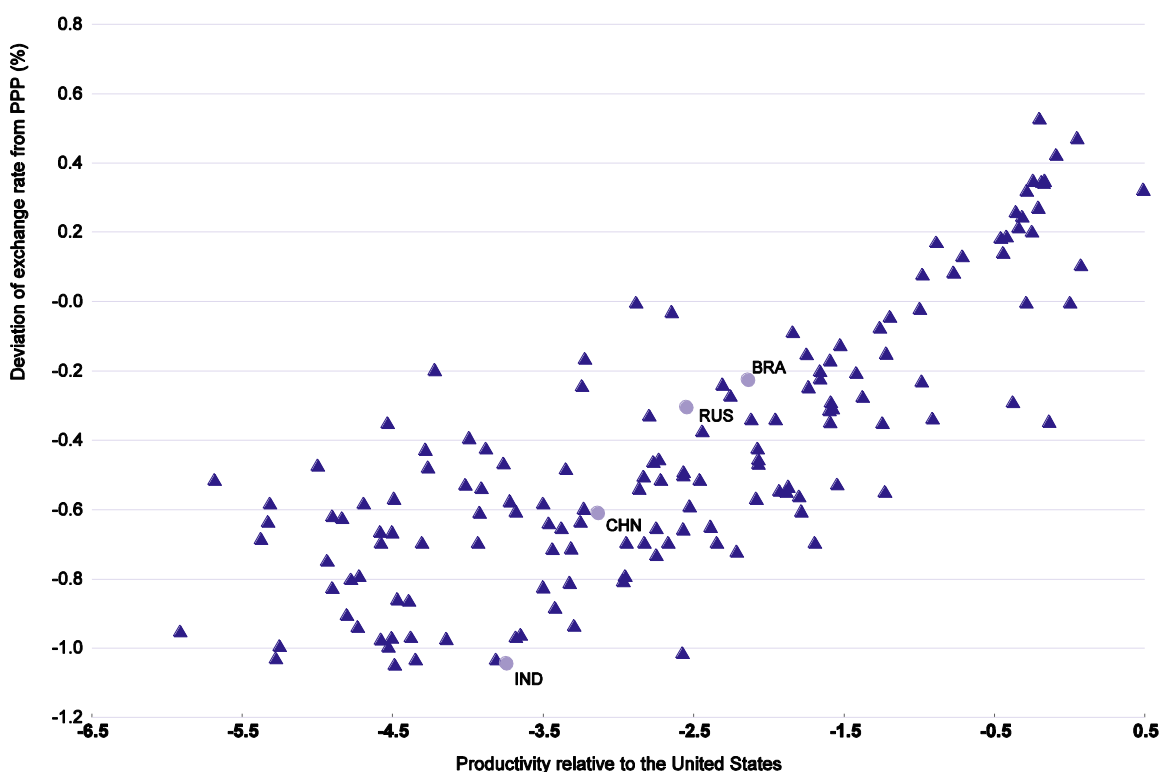
3. Duval and de la Maisonnette (2009) develop and apply a simple “conditional growth” framework to make long-term GDP projections for the world economy, taking as a starting point recent empirical evidence about the importance of total factor productivity and human capital in explaining current cross-country disparities in GDP per capita levels. GDP per capita in each country depends on technology, investment in physical and human capital and the employment rate. As these vary across countries, conditional convergence implies that, in the long run, differences will remain in per capita income levels, but not in growth rates.

Box 4.2. The Balassa-Samuelson effect and real exchange rate assumptions

The Balassa-Samuelson effect arises because the growth of productivity differs among sectors, while wages tend to be less differentiated. Typically, productivity growth is faster in the traded goods sector than in the non-traded goods sector. To the extent that the faster productivity growth in the traded goods sector pushes up wages in all sectors, the prices of non-traded goods relative to those of traded goods will rise so leading to a rise in the overall price index. Given that the growth of productivity is typically faster in developing countries which are catching-up to developed countries, this effect implies that, other things being equal, the real exchange rate of the former will tend to rise over time. Rogoff (1996) estimated that for every 1% increase in a country's real per capita income (relative to the United States), the real exchange rate increases by about 0.3%.

While the Balassa-Samuelson effect describes changes in exchange rate over time it has also been used to try to estimate the extent to which a currency is under- or over-valued. An example using *World Development Indicator* data is provided in the figure below, which shows the relationship between the deviation of exchange rates per US dollar from Purchasing Power Parity rates and real income per capita for 2008. Such estimates suggest that the Chinese currency may be undervalued, although the extent of the undervaluation is highly controversial as estimates in the literature range from 60% undervaluation to slight overvaluation, with a median value of about 20% undervaluation (Cheung *et al.*, 2009).¹

Productivity convergence and exchange rate appreciation



Note: Real exchange rate and real productivity are expressed in log terms. The real exchange rate is obtained by dividing the price level of GDP for each country by that of USA.

Source: World Development Indicator database (2009) and OECD calculations for 152 countries.

Box 4.2. The Balassa-Samuelson effect and real exchange rate assumptions (continued)

For the purposes of the baseline scenario it is assumed that the renminbi *gradually* appreciates by about 30% against the dollar and other OECD currencies in real terms between 2011 and 2025, with approximately half of this appreciation occurring as a consequence of the assumed higher inflation rate in China compared to OECD countries and about half through nominal exchange rate appreciation. The implied real exchange rate appreciation of the renminbi against all currencies is about 20% to 2025, because the currencies of other non-OECD countries are also assumed to appreciate in real terms against OECD currencies at a rate consistent with overall real appreciation in line with the result by Rogoff, which for most non-OECD countries implies real appreciation by 1% or less per annum until 2025. About 10 percentage points of the overall real appreciation of the renminbi can be explained by the projected convergence in GDP per capita growth rates over this period and the effect this would have on the real exchange rate according to Rogoff's estimate referred to above. The remaining 10 percentage points appreciation would then represent a partial correction of any current undervaluation.

To gauge the effect of the uncertain assumptions in this area including the effect on external imbalances, the table presents the effects of a 10% appreciation of the renminbi against all other currencies on GDP, current-account positions and inflation based on the OECD Global Model. The results suggest that such exchange-rate realignment would have a moderate impact on current-account imbalances, compared to the baseline. It would reduce the Chinese surplus by 0.4% of GDP after five years while the US current balance would improve by 0.1% of GDP. The renminbi appreciation would also have the advantage of limiting inflation pressures in China in the short term.

The effect of a 10% appreciation of the Renminbi

	Year 1	Year 2	Year 5
Current balance (% of GDP)			
United States	0.0	0.1	0.1
Japan	0.1	0.1	0.2
Euro area	0.0	0.0	0.1
<i>OECD total</i>	0.0	0.0	0.1
China	-0.4	-0.3	-0.4
<i>Non-OECD total</i>	0.0	0.0	-0.1
Inflation (% pts pa)¹			
United States	0.0	0.1	0.1
Japan	0.1	0.1	0.1
Euro area	0.1	0.1	0.1
<i>OECD total</i>	0.0	0.0	0.0
China	-2.3	-0.5	0.1

1) Inflation is measured by change in consumers expenditure deflator, except for China for which it is the GDP deflator.

1. Methods based on PPP and Balassa-Samuelson effects tend to over-estimate the misalignment compared to other methods, such as the Behaviour Exchange Rate Models (BEER) or flow models. There are also substantial differences among studies based on Balassa-Samuelson effects depending on the underlying data set for GDP per capita. See also Korhonen and Ritola (2009) who have collected data from 30 separate papers estimating the equilibrium level and possible misalignment of the renminbi.

Sources: Cheung, Y. W, M. D. Chinn and E. Fujii, (2009), "China's Current Account and Exchange Rate" NBER 14673. Frankel, J. (2006), "The Balassa-Samuelson Relationship and the Renminbi" *Harvard WP*, December. Korhonen, I. and M. Ritola (2009), "Renminbi misaligned -- Results from meta-regressions," *BOFIT Discussion Papers 13/2009*, Bank of Finland, Institute for Economies in Transition. Rogoff, K. (1996), "The Purchasing Power Parity Puzzle", *Journal of Economic Literature*, 34(2), 647-668.

The starting point is severe macroeconomic imbalance

For OECD countries, the starting position (in 2011) is far from macroeconomic equilibrium, with large output gaps and fiscal balances which in many countries are far away from levels that would be consistent with stable government debt. Given the size and combination of these two imbalances, and the wish to consider scenarios in which debt levels are brought back to pre-crisis levels the time horizon of the baseline scenario has been extended (to 2025) compared with previous OECD baseline exercises. Most of the assumptions underlying the scenario tend to err on the optimistic side, including that: the crisis itself has no permanent adverse effect on the rate of growth of total factor productivity or potential output; output gaps are closed by 2015 as a result of sustained above-trend growth with output growing in line with potential thereafter; most countries do not experience deflation despite continued negative output gaps over this period, and eventually experience a smooth return to targeted inflation by 2015;⁴ and countries are assumed to address the budget implications of ageing and trend health cost increases through compensatory or offsetting budget saving (see below).

Demographics imply a slowing potential growth

The scenario builds in a reduction in the level of potential output due to the crisis so that compared to OECD medium-term projections made prior to the crisis (*e.g.* OECD, 2008), the level of area-wide potential output is lowered by about 3%, with most of this reduction already having taken place by 2011 (Box 4.3). From 2012 onwards, the growth rate of OECD-wide potential output recovers to average about 1.9 per cent per annum (Table 4.1), but this is still below the average growth rate of 2.3 per cent per annum achieved over the seven years preceding the crisis. Most of this latter difference is due to slower growth both in participation rates and in the working-age population, mainly reflecting demographic trends rather than additional effects from the crisis.

Output is assumed to return to potential by 2015

Given the assumption that large negative output gaps close, and despite slower potential growth, area-wide GDP growth averages 2½ per cent per annum over the period 2012-15 (Table 4.2), compared with 2¼ per cent per annum over the period 2000-08. Unemployment is falling in all countries, with the area-wide unemployment rate down from 8½ per cent in 2010 to a rate of 6¼ per cent by 2015 and 5¾ per cent in 2025, reflecting both the recovery and the eventual reversal of hysteresis effects.

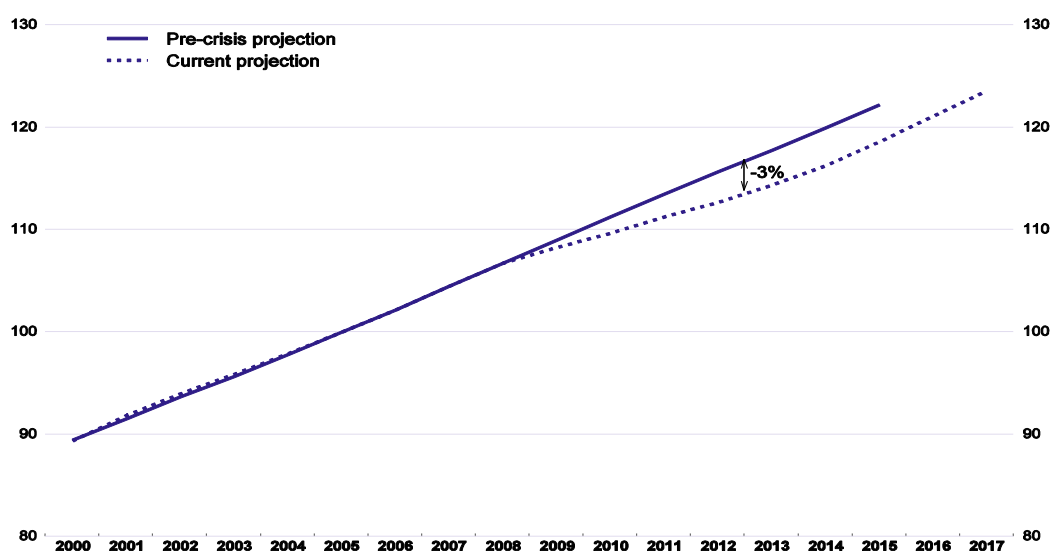
4. This is consistent with inflation expectations remaining fairly well anchored and with the operation of “speed-limit” effects. In principle, and given current extreme settings of macroeconomic policies a risk also exists of inflation expectations slipping upwards which would also result in a worse outcome than portrayed in the baseline scenario.

Box 4.3. The effect of the crisis on potential output

The economic crisis is likely to result in a permanent loss in the level of potential output in all OECD countries so that, even with the recovery continuing, GDP may never catch up to its pre-crisis expected trajectory. The extent of these losses is very uncertain, but current OECD estimates suggest a peak area-wide reduction in potential output of about 3% (see figure). However, estimates of the nature and scale of the adverse effects on potential output vary across OECD countries, in part due to different impacts of the crisis but also reflecting different institutional and policy settings, particularly in the labour market. These latter differences illustrate that policy responses to the crisis can either amplify or dampen the negative impact of the crisis on potential output.

Revisions to projections of OECD potential output following the crisis

Index 2005 = 100



Source: OECD calculations.

The main channels through which the crisis affects potential output are identified by using a production function approach, distinguishing effects on capital, labour (mainly through changes in labour force participation and unemployment, although for some countries changes in net-migration flows may also be important) and total factor productivity:

- On average across countries about 2 percentage points of the projected reduction in potential output is expected to come from a higher cost of capital which reduces the capital-labour ratio and hence productivity. Such a transmission mechanism seems to be borne out by previous major OECD banking crises, subsequent to which there has been a particularly marked fall in capital accumulation in comparison with other severe downturns (Haugh *et al.*, 2009a). The increased cost of capital, assumed equivalent to an increase in interest rates of 150 basis points, is based on a reversion of the real interest rates faced by the corporate sector to more normal levels from the unusually low levels experienced during the period of easy credit over much of 2000s.
- Evidence of previous severe recessions in OECD countries suggests that sharp increases in unemployment following severe recessions are long-lasting and often not completely reversed in subsequent recoveries (OECD, 2009c). “Hysteresis” effects are likely to push up structural unemployment as workers that remain unemployed for a long period become less attractive to employers as a result of declining human capital, or as they reduce the intensity of their job search (Machin and Manning, 1999) and put less downward pressure on wages and inflation. The projections of structural unemployment are derived from country-specific equations linking the long-term unemployment rate to projections in the aggregate unemployment rate, with additional assumptions used to transform these projections of long-term unemployment into structural unemployment and take into account the effect of recent labour market reforms (for details see Guichard and Rusticelli, 2010). The peak increase in OECD-wide structural unemployment rate due to

Box 4.3. **The effect of the crisis on potential output** (continued)

hysteresis effects resulting from the current crisis is estimated at ½ percentage point, although the effects vary widely across countries. Eventually the hysteresis-induced increase in structural unemployment is fully reversed, although the speed with which this occurs differs across countries, consistent with previous episodes (Guichard and Rusticelli, 2010). For those countries with less rigid markets structural unemployment is assumed to revert to pre-crisis levels by 2018, whereas for other countries pre-crisis levels are not reached until 2025.

- The effect of a prolonged period of slack in the labour market is estimated to reduce trend labour force participation, with the youngest and oldest workers normally being mostly affected. For a typical OECD country this could reduce potential output by up to 1 percentage point over the medium term. There is, however, considerable cross-country variation with larger adverse effects for countries with stricter job protection, lower incentives to continued work at older ages, and benefit generosity which declines more sharply with duration of unemployment. In addition, easier access to further education may mean a larger reduction in the participation rate of younger age groups. Moreover, the specific features of the recent crisis may lead participation rates of older workers to hold up better than normal.
- The magnitude and sign of the likely effect on total factor productivity (TFP) is more difficult to pin down, and so no systematic effects have been incorporated into current estimates of the effect of the crisis. There may be an adverse effect on TFP from lower R&D expenditures, but the magnitude of the effect could be offset by policy responses, by “cleansing effects” as low-efficiency activities are discontinued and resources shifted to more productive uses, and by possible increase in human capital accumulation.
- While labour migration has shown signs of clear falls in virtually all OECD countries during the course of the economic downturn, there are only a handful of OECD countries that have experienced migration flows large enough for changes as a result of the crisis to have a significant and lasting effect on potential output growth. Countries where net immigration had, prior to the onset of the recent crisis, made a significant contribution to labour force growth include the United States, Canada, Australia, New Zealand and some European countries, such as Ireland, Iceland and Spain. In a few countries, namely Spain, Ireland and Iceland, the magnitude of the response in net migration flows is likely to result in a permanent reduction in the labour force over the medium term relative to pre-crisis estimates. For other countries receiving substantial flows of migrants prior to the crisis, the effects are judged to be more limited in the medium term. Return migration has also gained importance in the European Union, as the economic conditions in some cases worsened more in the host countries than the home countries. For these countries evidence is, however, largely inconclusive, mainly reflecting data limitations. Still, in countries experiencing large net outflows of migrants prior to the crisis, outflows are expected to pick up again as labour market conditions improve.
- The crisis itself is not expected to affect potential growth in the longer term (beyond 2015), which is nevertheless expected to slow for unrelated reasons (mainly ageing populations).

Summing the estimated effects on capital, structural unemployment and labour force participation described above, suggests a peak reduction in the *level* of potential output for a typical OECD country of about 3% by about 2013. As the recovery proceeds some partial reversal of hysteresis effects in the labour market is expected so that by 2017 the reduction in the level of potential output for an average OECD country is less. Two countries for which the downward revisions to potential output in *Economic Outlook* projections exceed these estimates are Ireland and Spain. In both cases, additional downward revisions reflect the effect of reduced net migration flows as well as a (downward) reassessment of potential output prior to the crisis.

Table 4.1. Potential output in the baseline scenario

Annual averages, percentage points

Output Gap	Components of potential employment ¹												
	Potential GDP growth		Potential labour productivity growth (output per employee)		Potential employment growth		Trend participation rate		Working age population		Structural Unemployment		
	2010-2011	2012-2025	2010-2011	2012-2025	2010-2011	2012-2025	2010-2011	2012-2025	2010-2011	2012-2025	2010-2011	2012-2025	
Australia	-1.7	3.2	2.9	1.5	1.7	1.6	1.2	0.1	-0.1	1.6	1.3	0.0	0.0
Austria	-2.7	1.5	2.0	0.7	1.6	0.8	0.4	0.5	0.4	0.4	0.0	0.0	0.0
Belgium	-6.7	1.8	1.6	1.3	1.5	0.5	0.1	-0.3	0.0	0.8	0.1	-0.1	0.0
Canada	-2.0	1.6	1.6	0.6	1.3	1.0	0.3	-0.1	0.0	1.2	0.2	0.0	0.0
Czech Republic	-3.7	2.8	2.0	3.0	2.6	-0.2	-0.6	-0.3	0.2	0.3	-0.9	-0.3	0.0
Denmark	-4.7	0.6	1.0	1.0	1.2	-0.4	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0
Finland	-6.6	0.8	2.0	1.7	2.4	-0.9	-0.4	-0.4	0.0	-0.3	-0.4	-0.2	0.0
France	-3.2	1.2	1.5	1.0	1.5	0.2	0.0	-0.2	0.0	0.6	0.0	-0.1	0.0
Germany	-3.6	1.2	1.3	0.9	1.6	0.2	-0.4	0.3	0.1	0.0	-0.5	0.0	0.0
Greece	-10.2	0.3	1.4	0.9	1.4	-0.6	0.0	0.0	0.1	0.2	-0.3	-0.8	0.1
Hungary	-4.0	1.0	1.7	1.5	2.1	-0.4	-0.4	-0.1	0.1	-0.1	-0.6	-0.2	0.0
Iceland	-4.1	-0.5	1.7	0.6	1.2	-1.1	0.6	-0.3	0.0	-0.6	0.5	-0.2	0.0
Ireland	-5.5	-0.9	2.7	0.2	1.5	-1.1	1.2	-1.2	-0.1	1.1	1.1	-0.9	0.2
Italy	-3.7	0.3	1.5	0.7	1.4	-0.3	0.1	-0.2	0.1	0.1	-0.1	-0.3	0.1
Japan	-2.1	0.8	0.9	1.3	1.8	-0.5	-0.9	0.1	0.0	-0.5	-0.9	0.0	0.0
Korea	-0.3	4.0	2.4	3.2	2.8	0.8	-0.4	0.1	0.0	0.7	-0.4	0.0	0.0
Luxembourg	-4.8	2.6	2.7	1.2	1.7	1.4	1.0	0.0	0.0	1.5	0.9	-0.1	0.0
Mexico	-1.9	1.9	2.2	0.3	1.2	1.6	1.0	0.0	0.0	1.7	1.0	0.0	0.0
Netherlands	-2.8	0.9	1.5	0.9	1.6	0.0	-0.1	0.0	0.2	0.2	-0.2	-0.2	0.0
New Zealand	-1.8	1.6	2.4	0.5	1.4	1.1	1.0	0.0	0.0	1.2	0.9	-0.1	0.0
Norway ²	-3.0	2.0	2.8	1.5	2.4	0.5	0.4	-0.1	0.1	0.7	0.3	0.0	0.0
Poland	0.8	3.2	1.7	2.9	2.5	0.4	-0.8	-0.1	0.0	0.2	-0.8	0.3	0.0
Portugal	-2.5	0.2	1.4	0.6	1.3	-0.4	0.1	-0.2	0.0	0.1	0.1	-0.3	0.1
Slovak Republic	-3.3	3.6	2.6	3.9	3.2	-0.4	-0.6	-0.2	0.0	0.1	-0.6	-0.2	0.0
Spain	-4.3	-0.2	2.0	1.7	1.3	-2.0	0.6	-0.6	-0.1	-0.4	0.4	-1.1	0.3
Sweden	-6.0	1.8	1.6	1.7	1.8	0.1	-0.2	-0.6	-0.1	0.6	0.0	0.0	0.0
Switzerland	-2.0	2.0	1.8	0.9	1.5	1.1	0.3	0.1	-0.1	1.1	0.4	-0.1	0.0
Turkey	-7.2	3.6	3.4	2.2	2.2	1.3	1.2	0.0	0.0	1.7	1.1	-0.3	0.1
United Kingdom	-5.1	1.2	1.8	1.2	1.6	0.0	0.2	-0.2	0.0	0.4	0.2	-0.1	0.0
United States	-1.7	1.4	2.3	1.3	1.7	0.1	0.7	-0.6	-0.2	0.8	0.8	-0.1	0.0
Euro area	-3.9	0.8	1.5	1.1	1.5	-0.2	0.0	-0.1	0.0	0.2	-0.1	-0.3	0.1
OECD	-2.6	1.2	1.9	1.2	1.5	0.1	0.4	-0.2	0.0	0.6	0.3	-0.2	0.0

1. Percentage point contributions to potential employment growth.

2. Excluding oil sector

Source: OECD Economic Outlook 87 database.

Table 4.2. A macroeconomic summary of the baseline scenario

	Real GDP growth		Inflation rate ¹		Unemployment rate		
	2012-15	2016-25	2011	2015	2011	2015	2025
Australia	3.4	2.9	2.7	2.5	4.9	5.1	5.1
Austria	2.5	2.1	1.0	2.0	5.0	4.4	4.3
Belgium	3.2	1.7	1.4	2.0	8.3	8.2	8.0
Canada	2.0	1.7	1.6	2.1	7.2	6.7	6.5
Chile	4.6	4.0	4.8	3.0			
Czech Republic	3.3	1.8	2.1	2.1	7.5	6.5	5.8
Denmark	1.9	1.2	1.7	2.0	6.9	4.7	4.4
Finland	3.4	2.2	1.5	2.0	9.0	7.8	7.4
France	2.1	1.5	1.1	2.0	9.5	8.5	8.2
Germany	2.3	1.2	1.0	2.0	8.0	8.2	8.2
Greece	3.3	1.7	0.3	2.0	14.3	11.1	8.9
Hungary	2.5	1.7	2.3	2.1	10.5	7.4	6.6
Iceland	2.5	1.8	4.2	2.0	8.4	3.8	2.8
Ireland	2.9	3.2	0.8	2.1	13.0	8.0	4.8
Italy	1.9	1.7	1.0	2.0	8.8	7.4	6.3
Japan	1.4	0.9	-0.5	2.1	4.7	4.2	4.1
Korea	3.7	1.9	3.2	2.0	3.3	3.5	3.5
Luxembourg	4.1	2.7	1.9	2.0	5.8	4.3	4.0
Mexico	2.7	2.1	3.8	3.2	4.5	3.3	3.2
Netherlands	1.9	1.7	1.4	2.0	4.8	4.0	3.5
New Zealand	2.6	2.5	2.1	2.1	5.6	4.3	4.0
Norway	3.4	2.8	2.2	2.1	3.6	3.5	3.3
Poland	2.2	1.4	2.7	2.1	8.6	10.0	10.1
Portugal	1.6	1.6	1.4	2.0	10.4	7.9	6.9
Slovak Republic	4.3	2.2	2.2	2.9	13.4	11.8	11.5
Spain	2.4	2.2	0.6	2.0	18.2	13.2	9.1
Sweden	2.4	1.9	2.1	2.0	8.7	7.3	7.2
Switzerland	2.3	1.8	0.8	2.0	4.5	3.9	3.7
Turkey	5.6	3.2	5.7	4.6	15.9	9.7	8.0
United Kingdom	2.8	2.0	1.5	2.1	7.9	5.8	5.3
United States	2.5	2.4	1.0	2.0	8.9	5.6	4.9
Euro Area	2.3	1.7	1.0	2.0	10.1	8.6	7.6
OECD	2.5	2.0	1.3	2.1	8.2	6.3	5.7
Brazil	4.8	4.0	5.1	4.5			
China	9.5	7.2	2.4	3.0			
India	7.7	6.7	6.2	5.0			
Indonesia	5.7	4.7	8.0	4.9			
South Africa	5.3	4.6	5.4	4.4			
Estonia	3.7	4.0	1.2	2.0			
Israel	3.7	3.3	2.6	4.0			
Russian Federation	4.5	3.7	9.0	4.0			
Slovenia	3.4	3.4	1.5	3.0			

1. For OECD countries, percentage change from the previous period in the private consumption deflator and for non-OECD countries, percentage change in the GDP deflator is reported.

Source: OECD Economic Outlook 87 database.

Fiscal consolidation is essential to prevent unstable debt dynamics

In 2011 fiscal deficits in many countries are large, with a substantial component which is not explained by the cycle (Table 4.3). In these circumstances, fiscal consolidation is inevitable for many countries, as is already recognised by many OECD governments which have announced plans for moving back towards more sustainable fiscal positions (see Figure 1.16 in the chapter on *General Assessment*). As a stylised assumption, a degree of future fiscal consolidation has been incorporated in the baseline scenario which is sufficient to stabilise the ratio of government debt to GDP over the medium term. However, the relatively modest pace of this consolidation ($\frac{1}{2}$ per cent of GDP per annum reduction in the underlying primary balance for as long as it takes to stabilise debt) is such that in most cases there is a further build-up in the government debt to GDP ratio before it does stabilise (Box 4.4).⁵ The slow pace of consolidation and the high levels of debt reached may in practice not be sustainable but these assumptions are chosen to have a basis against which to explore more ambitious consolidation strategies. It should also be kept in mind that the assumption understates the extent of required reforms as additional pressures on public spending from ageing populations are already supposed to be met by compensatory or offsetting budgetary savings (Table 4.4).

Slow fiscal consolidation implies a massive increase in debt...

OECD general government net and gross debt is projected to increase by about 30 percentage points of GDP by 2011 relative to pre-crisis levels and, under the assumptions set out above, by about a further 20 percentage points of GDP before it stabilises thereafter. The number of OECD countries with gross debt levels that exceed 100% of GDP would rise from three prior to the crisis to eleven by the next decade. The change in net debt levels, as a percentage of GDP, is similar to that for gross debt, although the level of net debt is in general lower, particularly for Japan, Canada and the Nordic countries.⁶ The magnitude of the area-wide increase in debt is partly a reflection of the magnitude of the increase in some of the largest countries; in particular the increase in debt by 2025 compared to pre-crisis levels for both the United States and Japan is greater than 50 percentage points of GDP, whereas the median increase across all OECD countries is about half that.

-
5. The fiscal rule targets the primary balance which will stabilise debt over the medium term given long-term trend growth and current long-term interest rates. In practice, achieving the target primary balance does not immediately stabilise debt because dynamics in the model have to fully unwind. For example, the implicit interest rate paid on existing government debt will be different from the current long-term bond rate used in the rule, but the former is assumed to converge on the latter. It is also noteworthy that a number of highly indebted countries require little further consolidation to stabilise debt, in part reflecting the arithmetic that for such countries the overall fiscal balance consistent with stable debt will be a substantial deficit. Of course, a higher level of debt also implies a greater risk from a range of shocks.
 6. Net debt is in many respects the superior concept and underpins the fiscal rule described in Box 4. However, gross debt is more comparable across countries and represents what has to be financed through government debt issuance.

Table 4.3. Fiscal trends in the baseline assuming a stylised fiscal rule¹

As percentage of nominal GDP (unless otherwise specified)

	Underlying fiscal balance	Number of years of consolidation ²	Financial balances ³			Net financial liabilities ⁴			Gross financial liabilities ⁵			Long term interest rate ⁶ (%)		
			2011	2007	2009	2025	2007	2009	2025	2007	2009	2025	2007	2009
Australia	-2.1	1	1.7	-3.9	-1.3	-7	-4	14	14	19	37	6.0	5.0	6.6
Austria	-3.3	2	-0.5	-3.4	-2.0	31	37	50	62	70	83	4.3	3.7	5.1
Belgium	-0.7	0	-0.2	-6.1	0.6	73	81	49	88	101	69	4.3	3.8	5.9
Canada	-1.2	0	1.6	-5.1	-1.3	23	29	30	65	82	80	4.3	3.2	5.2
Czech Republic	-4.1	3	-0.7	-5.9	-3.7	-14	-1	43	34	42	88	4.3	4.8	5.3
Denmark	-1.4	1	4.8	-2.8	0.3	-4	-5	11	34	52	62	4.3	3.6	5.0
Finland	-0.7	1	5.2	-2.4	-0.2	-73	-63	-24	41	53	94	4.3	3.7	5.4
France	-4.9	8	-2.7	-7.6	-2.9	34	51	76	70	86	113	4.3	3.6	5.9
Germany	-2.9	3	0.2	-3.3	-2.0	43	48	57	65	76	86	4.2	3.2	5.2
Greece	-2.1	1	-5.4	-13.5	-4.2	72	87	105	104	119	137	4.5	5.2	7.4
Hungary	-2.2	1	-4.9	-3.9	-2.6	52	58	70	72	84	97	6.7	9.1	6.7
Iceland	-2.8	1	5.4	-9.1	0.5	-1	41	35	53	123	116	9.8	8.0	8.3
Ireland	-7.8	14	0.1	-14.3	-3.6	0	27	89	28	70	132	4.3	5.2	6.7
Italy	-3.0	1	-1.5	-5.2	-3.6	87	101	102	112	129	130	4.5	4.3	6.7
Japan	-6.8	14	-2.4	-7.2	-1.8	81	108	137	167	193	220	1.7	1.3	4.9
Korea	0.7	0	4.7	0.0	1.1	-33	-31	-32	30	35	32	5.4	5.2	5.0
Luxembourg	-2.3	9	3.6	-0.7	0.7	-44	-46	-12	11	18	53	4.4	3.8	5.2
Netherlands	-3.2	4	0.2	-5.3	-1.5	28	28	44	52	69	85	4.3	3.7	5.2
New Zealand	-2.7	5	4.0	-3.5	-0.1	-13	-8	9	26	35	53	6.3	5.5	5.7
Poland	-6.9	14	-1.9	-7.1	-4.1	17	22	80	52	58	112	5.5	6.1	6.4
Portugal	-4.4	4	-2.7	-9.4	-3.2	44	58	79	71	87	109	4.4	4.2	5.9
Slovak Republic	-3.9	6	-1.9	-6.8	-0.6	-1	12	30	32	39	56	4.5	4.7	5.4
Spain	-4.8	6	1.9	-11.2	-1.6	19	35	57	42	63	85	4.3	4.0	5.3
Sweden	1.2	0	3.5	-1.1	2.7	-25	-23	-31	47	52	42	4.2	3.3	4.8
Switzerland	0.2	0	1.6	0.7	-0.6	9	5	7	46	42	42	2.9	2.2	3.1
United Kingdom	-7.0	14	-2.7	-11.3	-3.8	29	44	99	47	72	128	5.0	3.6	7.1
United States	-8.1	14	-2.8	-11.0	-3.7	42	58	106	62	83	128	4.6	3.3	6.7
Euro Area	-3.6		-0.6	-6.3	-2.4	48	48	68	71	86	101	4.3	3.8	5.7
OECD	-5.8		-1.2	-7.9	-2.5	38	52	80	73	90	117	4.7	3.7	6.1

1. These fiscal projections are the consequence of applying a stylised fiscal consolidation rule and should not be interpreted as a forecast.

2. The number of years of fiscal consolidation is determined so as to stabilise the ratio of government debt to GDP, assuming that each year of consolidation is by ½ percent of GDP (see Box 4.3 for details).

3. General government fiscal surplus (+) or deficit (-) as a percentage of GDP.

4. Includes all financial liabilities minus financial assets as defined by the system of national accounts (where data availability permits) and covers the general government sector, which is a consolidation of central, state and local government and the social security sector.

5. Includes all financial liabilities as defined by the system of national accounts (where data availability permits) and covers the general government sector, which is a consolidation of central, state and local government and the social security sector. The definition of gross debt differs from the Maastricht definition used to assess EU fiscal positions.

6. Interest rate on 10-year government bonds.

Source: OECD Economic Outlook 87 database.

Table 4.4. Changes in ageing-related public spending for selected OECD countries

Change 2010-25, in percentage points of GDP

	Health care	Long-term care	Pensions	Total
Austria	1.2	0.4	0.7	2.3
Australia	1.3	0.4	0.8	2.5
Belgium	1.0	0.4	2.7	4.1
Canada	1.4	0.5	0.6	2.5
Finland	1.3	0.6	2.7	4.6
France	1.1	0.3	0.4	1.8
Germany	1.1	0.6	0.8	2.5
Greece	1.2	1.0	3.2	5.4
Ireland	1.2	1.1	1.5	3.9
Italy	1.2	1.0	0.3	2.5
Japan	1.5	0.9	0.2	2.5
Luxembourg	1.0	0.9	3.5	5.5
Netherlands	1.3	0.5	1.9	3.7
New Zealand	1.4	0.5	2.4	4.2
Portugal	1.2	0.5	0.7	2.4
Spain	1.2	0.8	1.2	3.2
Sweden	1.1	0.2	-0.2	1.1
United Kingdom	1.1	0.5	0.5	2.0
United States	1.2	0.3	0.7	2.1

Note: OECD projections for increases in the costs of health and long-term care have been derived assuming unchanged policies and structural trends. The corresponding hypotheses are detailed in OECD (2006) under the heading "cost-pressure scenario". Projections of public pension spending are taken from EC Sustainability Report (2009) for EU countries, from Visco (2005) for Canada, Japan, Switzerland and the United States and Dang et al. (2001) for Australia, Korea and New Zealand.

Sources: OECD (2006), "Projecting OECD Health and Long-term Care Expenditures: What Are the Main Drivers?", OECD Economics Department Working Papers, No. 477, Paris ; Visco (2005), "Ageing and Pension System Reform: Implications for Financial Markets and Economic Policies", Financial Market Trends, November 2005 Supplement, OECD, Paris ; EC Sustainability Report (2009), Impact of Ageing Populations on Public Spending, European Commission, Brussels and Dang et al. (2001), "Fiscal Implications of Ageing: Projections of Age-Related Spending", OECD Economics Department Working Papers, No. 305, Paris.

... which leads to higher long-term interest rates

One consequence of the increase in government debt is that there may be upward pressure on long-term interest rates. Although there is considerable uncertainty and controversy about the effect of fiscal imbalances on long-term interest rates (for surveys see OECD, 2009 and IMF, 2009), there is reason to believe that interest rates may now be more responsive to fiscal imbalances than suggested by the empirical literature. Indeed, one consequence of the crisis may be a permanent increase in risk aversion and hence risk premia.⁷

7. Recent empirical work by Haugh *et al.* (2009b) suggest that euro area spreads are conditioned on a general measure of risk, which is proxied in the empirical work by the spread between US corporate bonds and US government bonds

Box 4.4. Fiscal policy assumptions used in the medium-term baseline scenario

The fiscal consolidation path

The fiscal path that has been assumed in the baseline scenario from 2012 onwards is one in which there is gradual and sustained increase in the underlying fiscal primary balance sufficient to ensure that the ratio of government-debt-to-GDP is stable over the medium term. It should be noted that in many cases this assumption implies a degree of fiscal consolidation which is less ambitious than incorporated in current government plans. In some cases the stylized rule may also generate fiscal projections which conflict with legislated objectives for fiscal balances or debt, which for the sake of cross-country comparability are ignored for the purpose of this exercise.

The basis for the assumption can be derived from the government budget identity, whereby the change in the net government debt-to-GDP ratio (d) is explained by the primary deficit ratio ($-pb$) plus net interest rates payments on the previous period's debt, where i_t is the effective interest rate paid on net government debt, so that approximately:

$$\Delta d_t = -pb_t + (i_t - g_t) d_{t-1},$$

where g is the nominal GDP growth rate. Then to avoid an ever-increasing debt-to-GDP ratio (so that $\Delta d_t \leq 0$), and if the effective interest rate on debt exceeds the nominal growth rate, the required primary balance (pb^*) must be in surplus and by a magnitude which is approximately given by:

$$pb^*_t \geq (i_t - g_t) d_{t-1}$$

To operationalise this rule the rate of growth g is taken to be the nominal growth rate of potential output over the medium term and i as the long-term interest rate on government debt (towards which it is assumed the effective interest rate on debt will tend). Then for each year, starting with 2012, if the underlying primary balance (adjusted for cyclical effects) satisfies this condition it is held stable as a share of GDP. Otherwise, for each year that the underlying primary balance does not satisfy this condition the fiscal stance is tightened by raising the underlying primary balance by $\frac{1}{2}$ per cent of GDP per annum, through a combination of a reduction in government spending and higher taxes, until the condition is satisfied.

The implied pattern of fiscal consolidation varies greatly across countries according to this rule: for some countries which are already running a primary surplus or which are running a primary deficit which is explained by cyclical factors, the rule does not require any consolidation (including Norway, Korea and Switzerland); other countries which start out with large underlying deficits as well as substantial debt require more than a decade of continuous consolidation (including the United States and Japan); but most OECD countries lie somewhere in between these extremes.

Other fiscal assumptions

There are no further losses to government balance sheets as a result of asset purchases or guarantees made in dealing with the financial crisis.

Effects on public budgets from population ageing and continued upward pressures on health spending are not explicitly included or, put differently, implicitly assumed to be offset by other budgetary measures.

In addition, albeit possibly partly related, there is some evidence of non-linearities so that the responsiveness of interest rates may be greater at the higher post-crisis levels of indebtedness. For the purpose of the current exercise it is assumed that when gross government indebtedness passes a threshold of 75% of GDP then long-term interest rates increase by 4 basis points for every additional percentage point increase in the government debt-to-GDP ratio -- a result which is consistent with the work of Laubach (2003) for the United States as well as more recent OECD work.⁸ An important exception is Japan which has seen a substantial increase in indebtedness over the last two decades with little obvious effect so far on interest rates probably because of the high proportion of debt which is financed domestically rather than from overseas, so the responsiveness of interest rates to debt is assumed to be only one-quarter that for other countries.^{9,10} On this basis, the increase in government debt compared to pre-crisis levels could eventually add about 125 basis points to OECD long-term interest rates.

Current-account imbalances are set to re-emerge

Current-account imbalances declined sharply during the crisis (see the chapter on General Assessment, Figure 1.14.). A part of this improvement is likely to persist, as asset price bubbles that were fuelling the deficits in the United States and in several European countries have burst, translating into higher savings rates and/or lower investment rates in those countries, and as measures are being taken to prevent their reappearance. Fiscal consolidation in the large current-account-deficit countries, to the extent it exceeds that in the surplus countries, should also help limit the increase in global imbalances, at least in the short run. Another part of the recent narrowing of imbalances, however, was of a temporary nature and has already started to reverse. This reversal reflects the rebound in commodity prices and also the recovery in demand in large-deficit countries. The further unwinding of cyclical effects is also likely to lead to some increase in global imbalances. In particular, as all economies return to full capacity both the US trade deficit and the Chinese trade surplus are likely to

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8. Recent OECD empirical work suggests that over the period since the crisis there is a clearer impact of government debt on long-term interest rates which is greater at higher levels of indebtedness. Among the major OECD countries, but with the exception of Japan, panel threshold regressions suggest that since 2007 long-term interest rates relative to short-term rates are boosted by 0.04 basis points for each percentage point that general government debt exceeds 75% of GDP (Egert, 2010).
 9. Debt dynamics in Japan, which already by a wide margin has the largest gross debt burden in the OECD, would obviously be highly sensitive to investor behaviour becoming more akin to that in other countries. It belongs in the assessment that Japan has been in deflation for a good part of the last decade and taking this into account the anomaly of Japanese bond yields is somewhat less pronounced.
 10. For the sake of simplicity the assumptions adopted here are highly stylised. In practice, differences in the responsiveness of sovereign interest rates to fiscal imbalances are likely to depend on other country-specific factors. For example, Haugh *et al.* (2009b) find that among euro area countries, for a given worsening in the fiscal position, effects on interest rates may be larger in those countries with a poor fiscal track record, for those countries which start from a weaker fiscal position and for those countries which start from a higher tax-to-GDP ratio.

increase.¹¹ Thus, as the recovery continues and output gaps close, and in the absence of changes to policies that affect international imbalances, global current-account imbalances are set to continue to rise.¹²

Demographics and income convergence will not help

Recent empirical work (Cheung et al., 2010a) suggests that demographic trends will tend to exacerbate global current-account imbalances in the medium run, particularly for both China and the United States, although there would be some offsetting effect to reduce the surplus in Japan. In addition, based on past historical trends, “catch-up” in per capita incomes in many emerging and developing economies, is not likely, in itself, to significantly reduce the scale of current-account imbalances in the absence of additional structural policy changes.

The baseline scenario implies persistent global imbalances...

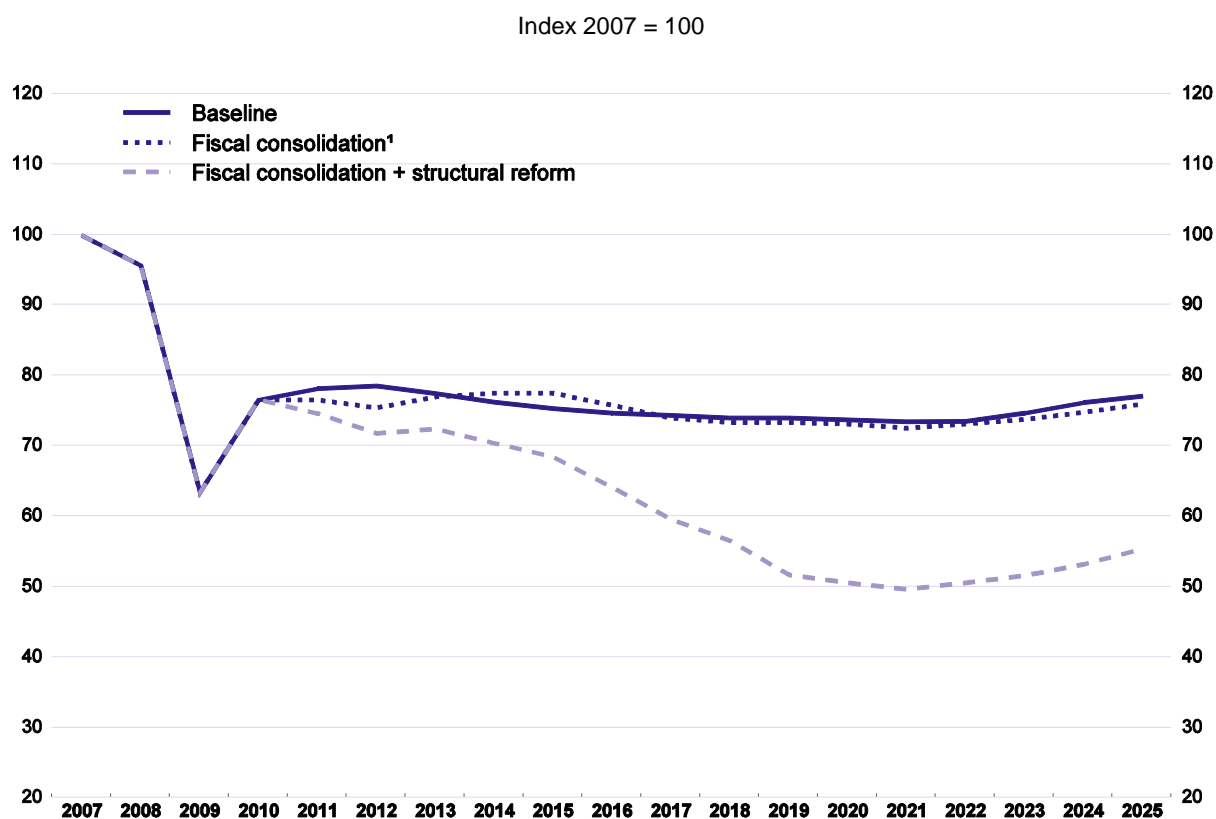
On this basis, the baseline scenario foresees a widening of the US current-account deficit to about 4% of GDP by 2015 followed by a subsequent stabilisation, while the Chinese surplus would rise from about 4% in 2015 to about 5½ per cent of GDP in 2025 (Table 4.5). A recovery in oil and commodity prices would also bring about a rise in the current account surpluses of the main net oil-exporting countries. The net effect of the unwinding of cyclical factors and the effect of ageing populations imply a surplus in Japan of around 2-3% of GDP going into the next decade. The current-account balance of the euro area would stabilise at about 1% of GDP, although much bigger imbalances would remain within the area.

... and risks of disorderly adjustments

In summary, under the baseline scenario of mild fiscal consolidation and otherwise unchanged policies, no significant rebalancing of growth should be expected and the overall scale of global external imbalances would edge slightly higher over the medium term albeit remaining below immediate pre-crisis levels (Figure 4.1). The risks of a disorderly unwinding of global current-account imbalances, including abrupt changes in exchange rates, would thus persist.

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11. Recent OECD empirical work, which has further developed the estimation work reported in *Economic Outlook* No.83 and 86, finds a robust inverse relationship between the non-oil trade balance (expressed as a percentage of GDP) and the *relative* output gap for the United States, Japan, euro area and China. The relative output gap measures the output gap in the country concerned relative to the output gap in a weighted average of trading partners. These measures suggest that the further unwinding of cyclical effects beyond 2011 balance could increase the Chinese current-account balance by about ½ percentage point of GDP and increase the US deficit by about ¼ of a percentage point.
12. See Blanchard and Milesi-Ferretti (2009) for an overview of the underlying distortions that may cause current-account imbalances.

Figure 4.1. Size of global imbalances



1. Fiscal consolidation including exchange rate response.

Note: A summary measure of global current account imbalances is constructed as an absolute sum of the current balances in each of the main trading countries or regions expressed as a share of world GDP. This is then converted to an index so that the pre-crisis level of imbalances in 2007 is equal to 100.

Source: OECD calculations.

A policy scenario to reduce OECD fiscal indebtedness

Rising government indebtedness is a major concern

The build-up of government indebtedness in many OECD countries in the baseline scenario (Table 4.5), and the effect this may have on long-term interest rates is a cause for concern. Higher indebtedness is likely to constrain a government's ability to use fiscal policy to deal with future shocks (see Chapter 6) and to adjust to further fiscal costs of ageing. Higher interest rates on government debt, as well as substantially raising the costs of servicing debt for highly-indebted countries, are also likely to raise the interest rates paid by the corporate sector and so reduce business investment and hence potential growth, although this negative effect on potential output is not in the baseline scenario.

*An alternative scenario
to reduce government
debt to pre-crisis levels...*

A variant policy scenario considered here is one in which there is sufficient fiscal consolidation across OECD countries to reduce government debt-to-GDP ratios in 2025 to the pre-crisis levels prevailing in each region (Table 4.6). Japan is an exception, where, because of the particularly large increase in government debt combined with limited or no scope to lower monetary policy rates in the short run, returning debt to pre-crisis levels even by 2025 would be extremely ambitious, so in the variant scenario considered here only half of the increase in debt is reversed by 2025. For all countries the additional consolidation begins in 2011 and is assumed to be initially focused on spending cuts, although it is later supported by tax increases.¹³ Experience of previous fiscal consolidation episodes in OECD countries suggests they are more likely to be successful if focused on spending cuts rather than tax increases (Guichard et al., 2007). This supports the optimistic assumption that much of the fall in long-term interest rates predicated on lower government indebtedness occurs immediately, which in turn builds on the assumption that the fiscal consolidation plans are credible in financial markets.¹⁴ However, in this first alternative scenario, consolidation plans are not assumed to entail any reaction in the currency markets.

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13. The fiscal consolidation is implemented in progressive steps, initially in the form of government spending cuts over five years, with the lower spending held as a stable share of GDP thereafter. The size of the initial step reductions in government spending are 1½, 1 and ¾ percentage points of GDP, for the United States, Japan and euro area, respectively. Beyond five years changes in taxes are used to target the required reduction in debt. It is assumed that fiscal consolidation measures do no harm to potential growth, which implies, for example, that spending cuts should avoid leading to inferior outcomes in areas such as infrastructure, innovation and education, and tax increases should avoid increasing labour costs; see Chapter 1 of OECD (2010a) for further discussion
14. An alternative scenario in which the effect on long-term interest rates only materialises once falls in debt are actually realised, implying financial market scepticism about government fiscal consolidation plans, greatly extends the period over which GDP effects are negative.

Table 4.5. A baseline scenario

	2008	2011	2015	2020	2025	Period averages		
						2011-15	2016-20	2021-25
GDP growth (% pa)								
United States	0.4	3.2	2.8	2.4	2.3	2.7	2.5	2.3
Japan	-1.2	2.0	1.3	0.9	0.9	1.5	1.0	0.9
Euro area	0.5	1.8	2.5	1.7	1.5	2.2	1.7	1.6
OECD total	0.5	2.8	2.7	2.0	1.9	2.6	2.1	2.0
China	9.6	9.7	9.0	7.3	5.8	9.5	8.0	6.4
Other non-OECD Asia	5.1	7.6	6.2	5.8	5.1	6.7	5.9	5.4
Non-OECD total	6.6	7.0	4.7	4.4	4.0	5.5	4.5	4.2
World	2.8	4.5	3.4	3.0	2.9	3.7	3.1	3.0
Fiscal balance (% of GDP)								
United States	-6.5	-8.9	-7.7	-6.0	-3.7	-8.2	-6.7	-4.7
Japan	-2.1	-8.3	-5.7	-3.9	-1.8	-6.9	-4.6	-2.7
Euro area	-2.0	-5.7	-2.9	-2.3	-2.4	-4.2	-2.4	-2.3
OECD total	-3.2	-6.5	-4.7	-3.6	-2.5	-5.5	-4.0	-3.0
Gross government debt (% of GDP)								
United States	70	95	114	127	128	105	122	129
Japan	174	205	217	223	220	212	221	222
Euro area	76	97	102	101	101	100	102	101
OECD total	79	100	111	117	117	106	115	117
Current balance (% of GDP)								
United States	-4.9	-4.0	-4.1	-4.1	-4.2	-4.0	-4.1	-4.2
Japan	3.3	3.5	3.1	2.5	2.0	3.3	2.8	2.2
Euro area	-0.8	0.8	1.1	1.2	1.3	1.0	1.1	1.3
China	9.4	3.4	4.0	4.8	5.5	3.7	4.5	5.3
Other non-OECD Asia	2.7	1.9	1.7	1.6	1.5	1.8	1.6	1.5

Note: The baseline scenario extends the short-term projections described in chapters 1 and 2 under a set of stylised assumptions, including that output gaps are closed by 2015 and that there is a minimal degree of fiscal consolidation to ensure that an explosive path for government debt is avoided. For further details see text.

Source: OECD Economic Outlook 87 database.

Table 4.6. **A fiscal consolidation scenario without exchange rate response**

						Difference from the baseline scenario			
	2008	2011	2015	2020	2025	2011	2015	2020	2025
GDP growth (% pa)									
United States	0.4	1.9	3.4	2.7	2.6	-1.3	0.7	0.3	0.2
Japan	-1.2	0.9	1.2	1.4	1.5	-1.1	-0.1	0.4	0.6
Euro area	0.5	1.1	3.2	1.7	1.7	-0.7	0.7	0.0	0.2
OECD total	0.5	1.8	3.1	2.2	2.2	-1.0	0.5	0.2	0.3
China	9.6	9.2	9.2	7.4	5.9	-0.5	0.2	0.1	0.1
Other non-OECD Asia	5.1	7.0	6.0	5.8	5.2	-0.6	-0.1	0.0	0.1
Non-OECD total	6.6	6.7	4.7	4.4	4.0	-0.4	0.0	0.0	0.0
World	2.8	3.7	3.8	3.2	3.1	-0.9	0.4	0.2	0.2
Fiscal balance (% of GDP)									
United States	-6.5	-7.4	-1.7	0.2	2.0	1.5	5.9	6.2	5.7
Japan	-2.1	-7.4	-3.5	-0.5	1.8	0.9	2.3	3.5	3.5
Euro area	-2.0	-5.0	-0.2	0.2	0.7	0.6	2.7	2.5	3.1
OECD total	-3.2	-5.6	-1.2	0.1	1.2	0.9	3.4	3.7	3.7
Gross government debt (% of GDP)									
United States	70	95	99	91	76	0	-14	-36	-53
Japan	174	206	216	213	191	1	-1	-10	-29
Euro area	76	97	95	86	77	0	-7	-15	-25
OECD total	79	101	107	100	88	1	-4	-16	-29
Current balance (% of GDP)									
United States	-4.9	-3.7	-4.0	-4.1	-4.2	0.3	0.1	0.0	0.0
Japan	3.3	3.8	4.3	3.8	2.7	0.3	1.2	1.2	0.7
Euro area	-0.8	1.1	0.4	1.2	1.4	0.2	-0.7	0.1	0.1
China	9.4	3.2	3.9	4.5	5.3	-0.2	-0.2	-0.3	-0.2
Other non-OECD Asia	2.7	1.3	1.6	1.4	1.2	-0.5	-0.1	-0.2	-0.3

Note: This scenario builds in additional fiscal consolidation from 2011 onwards, over and above that built in the baseline scenario, in order to bring government debt-to-GDP ratios back close to pre-crisis levels by 2025, except for Japan where debt is reduced by half that amount. The effects of the additional fiscal consolidation are evaluated using simulations of the OECD Global Model.

Source: OECD calculations.

... suggests additional fiscal consolidation could delay the recovery...

The monetary policy response together with lower long-term interest rates provide an offset to the multiplier effects of lower public spending and higher taxes, however the longer lags before lower interest rates affect the economy implies that fiscal consolidation would delay the recovery. The effects on GDP would depend on the timing of consolidation measures. If financial markets were convinced about governments' fiscal consolidation plans, then measures might be back-loaded with the most severe tightening delayed until the recovery had gathered momentum. Alternatively, and especially for those countries with the largest fiscal imbalances, it is likely that an early demonstration of intent would be required to establish credibility. The stylised profile of consolidation implemented for the model simulations reported here imply that for all OECD economies the GDP growth rate would be lowered in 2011 and 2012, depending on the extent of the required consolidation, with beneficial effects from lower interest rates gaining the upper hand and leading to a boost in growth (relative to the

baseline scenario) in 2013 and beyond.¹⁵ Japan is particularly hard hit by the additional fiscal consolidation because the scope for easing monetary policy is constrained by the zero interest rate bound on policy rates and because long-term interest rates are less sensitive to any reduction in indebtedness. For the euro area in aggregate, where the amount of consolidation required to return debt to pre-crisis levels is less than for either the United States or Japan, the initial adverse effects on GDP would be commensurately less. However, it is likely that the recovery would be more seriously delayed in a number of euro area countries (including Portugal, Ireland, Spain and Greece) which would have to undergo substantial fiscal consolidation to reduce debt to pre-crisis levels and which would receive little support from a more accommodative monetary policy which is set to reflect area-wide conditions.

... although it would provide a boost to output over the medium term

Lower long-term interest rates would, however, boost medium-term growth and lead to gains in the level of OECD and global GDP. By 2025 the level of OECD and global GDP is about 2% higher than in the baseline, with the GDP growth rate in all major OECD countries higher (relative to the baseline scenario) over the period 2016-25. The fiscal consolidation scenario has only limited impact on external imbalances, in part because all OECD economies engage in consolidation.

Exchange rate responses could reduce imbalances

Fiscal consolidation in most OECD countries would be likely to generate some depreciation of OECD exchange rates vis-à-vis the non-OECD. For the purposes of a variant scenario, OECD currencies are assumed to fall by 10% immediately and by a further 10% over the following ten years in response to the announcement of the consolidation path. This has the effect of reducing the current account surpluses in China and other non-OECD Asian countries by about ½ percentage point of GDP, as well as reducing the US deficit by a similar amount relative to the “pure” fiscal consolidation scenario (Table 4.7).

15. Net gains to the overall level of GDP from additional fiscal consolidation undertaken in 2011 would not materialise until 2014 or 2015 for most OECD economies and for Japan it would take much longer.

Table 4.7. A fiscal consolidation scenario with exchange-rate response

	2008	2011	2015	2020	2025	Difference from the baseline scenario			
						2011	2015	2020	2025
GDP growth (% pa)									
United States	0.4	2.1	3.4	2.6	2.5	-1.1	0.6	0.2	0.2
Japan	-1.2	1.1	1.3	1.4	1.5	-0.9	-0.1	0.5	0.6
Euro area	0.5	1.4	3.0	1.7	1.6	-0.3	0.5	0.0	0.1
OECD total	0.5	2.1	3.1	2.2	2.2	-0.7	0.4	0.2	0.2
China	9.6	9.1	9.1	7.3	5.8	-0.6	0.1	0.0	0.0
Other non-OECD Asia	5.1	6.6	6.1	5.8	5.2	-1.0	0.0	0.0	0.1
Non-OECD total	6.6	6.4	4.6	4.4	4.0	-0.6	-0.1	0.0	0.0
World	2.8	3.8	3.7	3.2	3.1	-0.7	0.3	0.2	0.2
Fiscal balance (% of GDP)									
United States	-6.5	-7.4	-2.0	-0.2	1.7	1.5	5.7	5.8	5.4
Japan	-2.1	-7.4	-3.4	-0.5	1.7	1.0	2.3	3.4	3.4
Euro area	-2.0	-5.0	-0.5	-0.2	0.1	0.7	2.3	2.1	2.5
OECD total	-3.2	-5.6	-1.4	-0.1	0.9	0.9	3.3	3.5	3.4
Gross government debt (% of GDP)									
United States	70	94	98	89	74	-1	-15	-37	-54
Japan	174	205	213	208	185	1	-4	-15	-35
Euro area	76	96	95	86	78	0	-7	-15	-24
OECD total	79	100	106	98	86	0	-5	-18	-30
Current balance (% of GDP)									
United States	-4.9	-3.6	-3.6	-3.5	-3.5	0.4	0.5	0.6	0.7
Japan	3.3	4.0	4.6	4.3	3.5	0.5	1.5	1.8	1.5
Euro area	-0.8	1.1	0.7	1.4	1.7	0.3	-0.4	0.2	0.3
China	9.4	2.8	3.3	3.8	4.7	-0.6	-0.7	-1.1	-0.8
Other non-OECD Asia	2.7	1.5	1.3	1.0	0.7	-0.4	-0.4	-0.6	-0.8

Note: This scenario builds on the fiscal consolidation scenario summarised in Table 4.6 by assuming an adjustment of exchange rates. All non-OECD exchange rates are assumed to appreciate by 10% in 2011 and by an additional 1% per annum vis-a-vis OECD. The effects of the exchange-rate adjustment are evaluated using simulations of the OECD Global Model.

Source: OECD calculations.

... and strengthen OECD fiscal positions, but other imbalances would remain

Other imbalances could, however, emerge. Firstly, in order to compensate for tighter fiscal policy, monetary policy would be much looser so that short-term interest rates in most OECD countries would remain extremely low over much of the coming decade, leaving little scope for active monetary policy in case of negative shocks. Secondly, if the recovery in OECD countries is significantly delayed, then from a starting point of already low inflation the risk of deflation increases over the remainder of this decade for more countries than just Japan.

A policy scenario for healthy growth and lower imbalances

Global imbalances would not be resolved by OECD fiscal consolidation

In the fiscal consolidation scenarios considered above, global imbalances would remain substantial with the US current-account deficit remaining at around 4% of GDP and the Chinese surplus at around 5 per cent of GDP. Moreover, imbalances would widen elsewhere, notably in

Japan, leaving the overall size of global external imbalances roughly unchanged from the baseline (Figure 4.1). This suggests that further policy measures would be required to address underlying savings imbalances and support medium-term growth in some regions.

Policies could increase absorption in China and the rest of Asia...

Policy actions, that are desirable in their own right, could help reduce such imbalances by removing domestic restrictions and distortions that limit absorption in the surplus countries and saving in the deficit countries. Previous and ongoing OECD work suggests that structural policy reforms can have an effect on saving, investment and current-account balances (see Box 4.5). Higher spending on social welfare in countries where provision is currently low could help reduce precautionary saving. This effect could be particularly important in China, where social protection programmes have improved tangibly, but coverage remains uneven across regions. Further reforms to reduce segmentation in social assistance and expand the provision of affordable health care and pension benefits could thus help lower saving rates and a more generous social system would not have to be fully financed by taxation but could be partly financed by maintaining a less strict fiscal stance over the cycle (OECD, 2010b). Improving the business environment and the functioning of financial markets to expand access to consumer credit and reduce excessive corporate savings would also contribute to lowering the current-account surplus. In addition, if the renminbi was allowed to adjust flexibly the Chinese currency would likely appreciate, which would help rebalance growth away from exports towards domestic demand while reducing inflationary pressure. In some dynamic Asian economies with strong underlying fiscal positions, loosening fiscal stances to shift away from reserve accumulation strategies, as well as developing local financial markets would also help lower private savings and contribute to further reducing the overall current-account surplus. In surplus European countries, as well as in Japan, the easing of product market regulation in sheltered sectors could also boost investment, increase growth and lead to a shift of resources away from production of tradables. All these reforms would contribute to boosting growth and well-being in the referencing country, in addition to their helping rebalance current-account positions.

Box 4.5. The impact of structural policy reforms on current-account balances

The primary goal of structural reforms is not to address global current-account imbalances, and their long-run impact on current accounts would be expected to be small in general since they boost both supply and demand. However, structural reforms can have more or less persistent side effects on current accounts, through their impact on the saving and investment behavior of private agents:¹

- **Improvements in the sophistication and depth of financial markets** -- if accompanied by strong prudential regulation -- should, for example, foster investment by lifting credit constraints, reducing borrowing rates and/or enhancing financial market completeness. The impact on saving is more ambiguous. Easier access to credit should reduce saving, but the greater availability of saving instruments may increase it. Likewise, the higher expected returns may increase or reduce saving depending on which of the intertemporal substitution effect or the income and wealth effect dominates. Overall, insofar as the positive investment effect dominates any positive domestic saving effect, improvements in the sophistication and depth of financial markets would trigger a reduction in the current account balance, a net capital inflow and an appreciation of the real exchange rate. These effects would hold also if a greater supply of investor-friendly financial vehicles were to lead to a capital inflow, putting downward pressure on domestic interest rates and upward pressure on the exchange rate.
- **The easing of competition-unfriendly product market regulation** should stimulate investment through greater firm entry and lower adjustment costs (less red tape) for existing firms. However, to the extent that reforms are accompanied by the privatisation of public enterprises that have been heavy investors, investment may also fall. On the saving side, household saving will decline temporarily if stronger product market competition boosts expected future income growth and consumers attempt to frontload some of those benefits by raising consumption (the so-called permanent income effect). This latter effect is likely to be especially strong when financial markets are sufficiently developed and competitive to allow households to borrow against future income. This highlights the role of financial market reforms for magnifying the current account impact of product market reforms in some countries with current-account surpluses such as e.g. Japan or China. It is also the case that reforms in sheltered sectors, making investment and employment in these more attractive, is likely to have a stronger negative effect on the current accounts than reform in traded-goods sectors.
- More developed **social security programmes** reduce the need for precautionary saving as a means of preparing against emergencies such as unemployment, sickness or disability and are therefore likely to be associated with lower household saving. Moreover, the asset tests associated with means-tested social programmes could discourage asset holding (and thus saving) in order to qualify for benefits. Pension reforms -- in particular unanticipated ones -- are also likely to have a sizable effect on private saving given the importance of the precautionary motive (having sufficient income in retirement) in the saving decisions of many (especially older) households.
- **Labour market reforms** that reduce the level of employment protection should encourage households to save more for precautionary purposes.² The impact is likely to be smaller in countries with more generous social security systems (e.g. a higher level or longer duration of unemployment benefits) as this mitigates the size of the income loss due to unemployment. At the same time, by raising job turnover, lower employment protection should also lead to a better match between jobs and employees, thereby boosting productivity and, ultimately, investment. The net impact on the current account is therefore ambiguous in the medium term, after a positive short-term impact. Generous unemployment benefits which are available over long periods can lead to higher structural unemployment and may also tend to reduce precautionary savings.
- **Tax reforms** should also affect the investment and saving decisions of firms and households, not least via their impact on after-tax income, the after-tax rate of return on saving and via the tax deductibility of the expenses for fixed assets (depreciation allowances) and of interest expenses on loans. In deficit countries where the tax treatment of interest expenses on loans is particularly generous, such as in the United States, phasing out this special treatment could contribute to reduce global current-account imbalances.

Ultimately, the direction and size of the impact of structural policy reforms on saving, investment and the current account depend on their precise nature and are sometimes ambiguous and thus remain to a large extent an empirical issue. Previous OECD work suggests that financial market reforms have a positive impact on investment (e.g. Cheung *et al.*, 2010; OECD, 2003; Pelgrin *et al.*, 2002), and a negative impact on the current account position (e.g. Cheung *et al.*, 2010; Kennedy and Sløk, 2005). Likewise, there is some tentative evidence that product market deregulation boosts investment (Alesina *et al.*, 2005) and worsens the current account (Kennedy and Sløk, 2005), while changes in employment protection legislation have no significant effect (Kennedy and Sløk, 2005). Regarding taxation, OECD analysis suggests that corporate tax cuts and increases in depreciation allowances boost firm investment (Vartia, 2008; Schweltnus and Arnold, 2008).

Box 4.5. The impact of structural policy reforms on current-account balances (continued)

There is also evidence that higher social spending reduces private saving. Following the approach of Baldacci *et al.* (2010) and Furceri and Mourougane (2010), new OECD estimates suggest that the effect of higher social spending on the GDP share of national saving is non-linear, implying larger marginal impacts in countries with lower levels of social spending. The results imply, for example, that a 1% of GDP increase in social spending would reduce the saving-to-GDP ratio by about ½ percentage point in the average OECD country, but by as much as 1 percentage point in China. As a result the simulated increase by 1¼ percentage points of GDP in social spending in China could reduce saving by about 1½-2% of GDP in the medium and long term.³

Forthcoming OECD work will reassess previous OECD evidence on the link between structural policies and current accounts along a number of dimensions. In particular, an ongoing study is investigating the impact on both aggregate and private saving and investment of reforms of the tax and benefit system as well as of financial, product, and labour market regulations.

1. To the extent that internal and external sources of financing are not perfectly substitutable, any impact on the saving decisions of private agents will also have repercussions on their investment behavior.
2. While the actual likelihood of unemployment should also increase, this effect is likely to be partly countered by a shorter duration of unemployment spells.
3. Pension and health care reforms are also found to have a significant impact on household saving in China. Feng *et al.* (2009) show that the pension reform for enterprise employees in China implemented in the late 1990s lowered pension wealth and raised household savings. Barnett and Brooks (2010) show that each Yuan increase in health spending leads to up to a two Yuan increase in urban household consumption.

Sources: Baldacci, E., G. Callegari, D. Coady, D. Ding, M. Kumar, P. Tommasino and J. Woo, "Public Expenditures on Social Programs and Household Consumption in China", *IMF Working Papers* 10/69. Barnett, S. and R. Brooks (2010), "China: Does Government Health and Education Spending Boost Consumption?" *IMF Working Papers* 10/16. Feng, J., L. He and H. Sato (2009), "Public pension and household saving: Evidence from China" *Bank of Finland Discussion Paper*. Furceri, D. and A. Mourougane (2010), "The Influence of Age Structure on Saving and Social Spending", *ADB Working Paper* (forthcoming). OECD (2003), *The sources of economic growth in the OECD countries*, OECD, Paris. Kennedy, M. and T. Sløk (2005), "Structural policy reforms and external imbalances", *OECD Economics Department Working Papers*, No.415. Cheung, C., D. Fuceri and E. Rusticelli (2010), "Current-account balances: structural and cyclical determinants", forthcoming. Vartia, L. (2008), Do corporate taxes reduce productivity and investment at the firm level? Cross-country evidence from the Amadeus dataset, *OECD Economics Department Working Papers*, No.641. Schwellnus, C. and J. Arnold (2008), How do taxes affect investment and productivity? An industry-level analysis of OECD countries, *OECD Economics Department Working Papers*, No.656. Alesina, A., S. Ardagna, G. Nicoletti and F. Schiantarelli (2005), Regulation and investment, *Journal of the European Economic Association*, Vol.3., pp.791-825. Pelgrin, F., S. Schich and A. de Serres (2002), "Increases in business investment rates in OECD countries in the 1990s: How much can be explained by fundamentals", *OECD Economics Department Working Papers*, No.327.

***... and reduce it in the
United States***

Structural reforms would also help in deficit countries. In particular, in the United States, the improvement of financial sector regulation should foster household deleveraging over the medium term and could narrow the current-account deficit by further increasing the private savings rate. Also a tax reform including the elimination of distortionary tax incentives could support household saving (OECD, 2005). In particular, the mortgage interest deduction could be reduced and a value-added tax (VAT) introduced. The pricing of environmental externalities of fossil fuel use will also reduce the fuel intensity of the US economy and possibly fuel imports and the overall external deficit.

***Structural reforms could
support growth in
Europe and Japan***

In the euro area where the crisis is expected to have a stronger and more durable effect on structural unemployment reforms in the product and labour markets could boost potential growth and reduce structural unemployment. This should also help fiscal consolidation by reducing social expenditures. In Japan, where the priority is to durably reflate the economy, reforms that boost demand would be preferable. In particular,

easing product market regulation and deepening financial markets could be helpful. It may also be the case that the current corporate sector saving surplus reflects structural impediments that could be reformed with the effect of boosting household income and possibly consumption.

***A policy package
including structural
reforms...***

A further scenario is considered in which it is assumed that a package of generic policy reforms, along the lines described in Box 5, is adopted in combination with OECD fiscal consolidation. The specific scenario considered here includes a combination of policy reforms to improve social safety nets, access of households to credit and reforms to the business and financial environment which is assumed to lower private and public saving by 3% of GDP in China and other non-OECD Asian economies. Reforms are also assumed to increase private demand by 2% of GDP in Japan, while raising private saving by 1% of GDP in the United States. These changes are all assumed to be phased in over eight years beginning from 2011. It is assumed that exchange rates adjust additionally to the previous scenario of fiscal consolidation by a magnitude sufficient that the resulting change in net exports compensates for the change in domestic spending. Thus the renminbi is assumed to appreciate sufficiently, by 20% over two years, so that the impact of lower private savings on GDP is roughly compensated by lower net exports. Similarly the dollar is assumed to depreciate sufficiently, by 10%, so that the impact of higher private savings on GDP is roughly compensated by higher net exports. Finally, policy reforms in the euro area are assumed to gradually reduce structural unemployment by 2 percentage points over the next eight years to bring it more into line with the average across other OECD countries.¹⁶

***... could promote strong
and balanced global
growth***

In such a scenario, short-term interest rates would move substantially higher than in the baseline scenario. Japan would exit deflation more durably and achieve sufficient gains in nominal output growth to allow a further reduction in debt levels compared with the fiscal consolidation scenarios. Short-term inflation pressures would be better contained in China. Structural reforms would also boost growth in the euro area. In the longer term, current-account imbalances would be substantially lower and put on a declining path (Table 4.8). The combination of policies would lower the external deficit of the United States by 2½ percentage points of GDP relative to the scenario with fiscal consolidation and exchange rate adjustment, while reducing the surplus of China by more than 1½ percentage points of GDP. The combined scenario would raise the medium-term level of output and the growth rate of the OECD as compared with the baseline and the fiscal consolidation scenario (Figure 4.2), while returning government debt to pre-crisis levels. Furthermore, overall external imbalances would narrow substantially relative to the baseline over the medium term (Figures 4.1 and 4.3).

16. Structural reforms are also required in individual euro area countries to help reduce current-account imbalances within the euro area, as discussed in Box 1.5 in Chapter 1.

Table 4.8. **A combined scenario of fiscal consolidation, exchange-rate realignment and structural reform.**

	2008	2011	2015	2020	2025	Difference from the baseline scenario				
						2011	2015	2020	2025	
GDP growth (% pa)										
United States	0.4	2.1	3.4	2.7	2.5	-1.1	0.6	0.3	0.2	
Japan	-1.2	1.5	1.5	1.3	1.4	-0.5	0.2	0.3	0.5	
Euro area	0.5	1.5	3.1	1.8	1.8	-0.2	0.5	0.2	0.3	
OECD total	0.5	2.2	3.1	2.3	2.2	-0.6	0.4	0.3	0.3	
China	9.6	9.4	9.1	7.2	5.7	-0.3	0.1	-0.2	-0.1	
Other non-OECD Asia	5.1	7.0	6.6	5.7	5.2	-0.6	0.4	0.0	0.1	
Non-OECD total	6.6	6.6	4.7	4.4	3.9	-0.4	0.0	-0.1	0.0	
World	2.8	3.9	3.7	3.2	3.1	-0.6	0.3	0.2	0.2	
Fiscal balance (% of GDP)										
United States	-6.5	-7.4	-2.0	0.0	1.8	1.5	5.7	6.1	5.5	
Japan	-2.1	-7.3	-3.1	-0.2	1.9	1.0	2.6	3.7	3.6	
Euro area	-2.0	-5.0	-0.5	0.1	0.5	0.7	2.3	2.4	2.9	
OECD total	-3.2	-5.6	-1.3	0.1	1.1	1.0	3.3	3.7	3.6	
Gross government debt (% of GDP)										
United States	70	94	99	91	75	0	-15	-36	-54	
Japan	174	204	203	192	170	-1	-14	-31	-50	
Euro area	76	96	94	85	76	0	-8	-16	-26	
OECD total	79	100	104	96	83	0	-7	-21	-33	
Current balance (% of GDP)										
United States	-4.9	-3.5	-2.8	-1.6	-1.0	0.5	1.3	2.5	3.2	
Japan	3.3	3.9	4.8	4.0	2.9	0.4	1.7	1.5	0.9	
Euro area	-0.8	1.2	0.7	1.2	1.8	0.3	-0.4	0.0	0.5	
China	9.4	2.3	2.2	2.2	3.1	-1.0	-1.9	-2.6	-2.4	
Other non-OECD Asia	2.7	1.5	0.7	0.0	-0.7	-0.4	-1.0	-1.6	-2.2	

Note: This scenario builds on the fiscal consolidation plus exchange rate adjustment scenario summarised in Table 4.7 by assuming the implementation of additional structural policies as described in the text. The effects of the structural policies are evaluated using simulations of the OECD Global Model.

Source: OECD calculations.

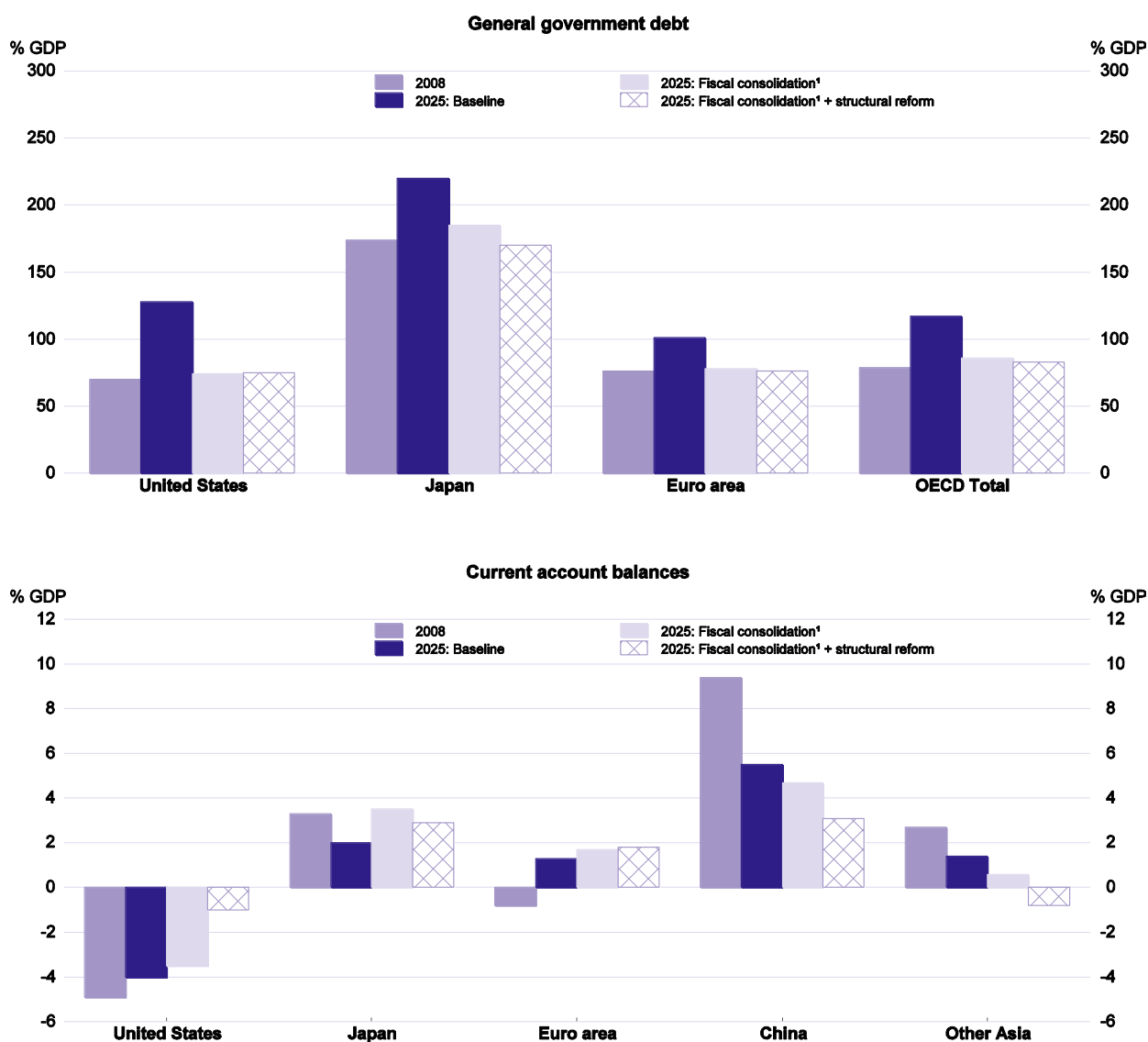
Figure 4.2. A comparison of GDP growth across scenarios



1. Fiscal consolidation including exchange rate response.

Source: OECD calculations.

Figure 4.3. A comparison of major imbalances across scenarios



1. Fiscal consolidation including exchange rate response.

Source: OECD calculations.

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