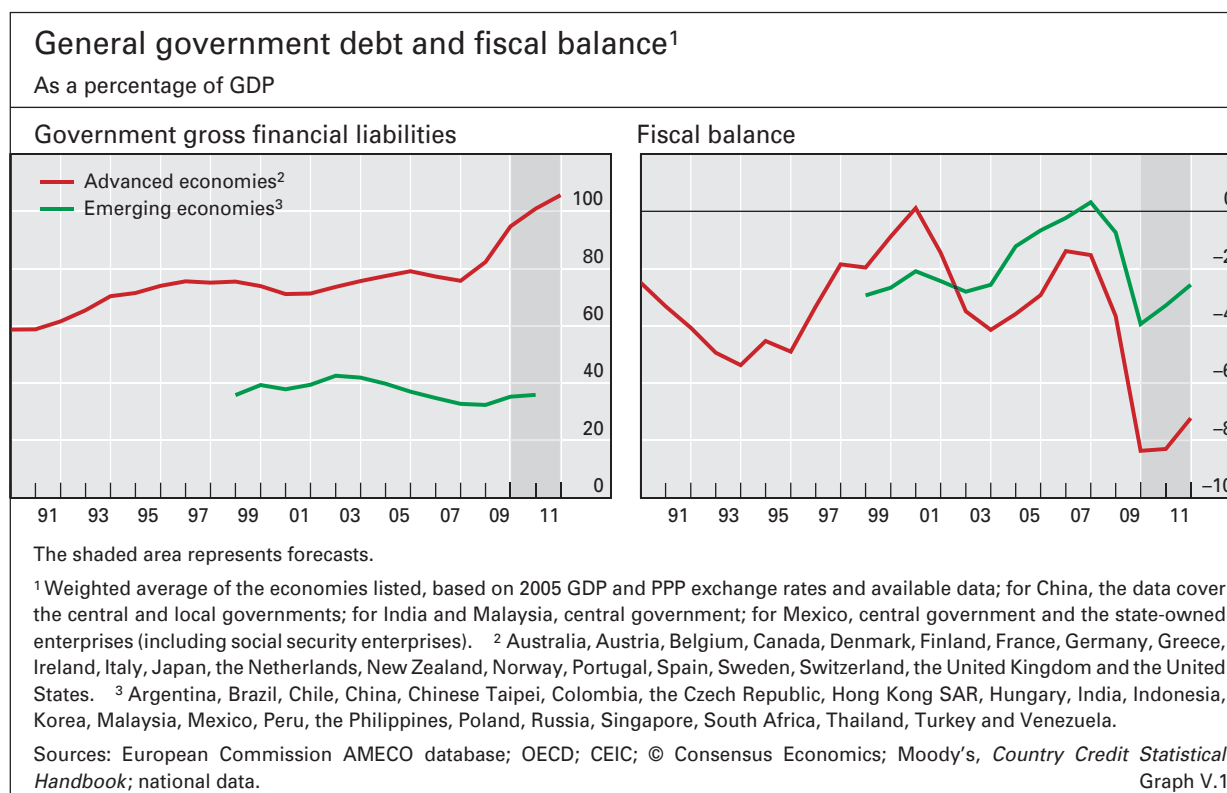


V. Fiscal sustainability in the industrial countries: risks and challenges

Remarkable declines in national incomes, large financial rescue programmes and expansionary fiscal policies in the wake of the financial crisis have led to a dramatic deterioration of fiscal positions in industrial economies (Graph V.1). The aggregate public debt of the advanced economies is projected to rise from 76% of GDP in 2007 to more than 100% in 2011 – a record high in recent decades. Moreover, the full cost of cleaning up the balance sheets of financial institutions – particularly against the backdrop of their continued high vulnerability to adverse shocks – is not yet known. And beyond 2011, many industrial countries face the large, rising pension and health costs associated with their ageing populations. Unless tackled effectively and in a timely manner, such costs could lead to ever increasing deficits and debt levels.

Emerging market economies (EMEs) collectively entered the financial crisis with a relatively strong fiscal position and emerged from it relatively unscathed (Graph V.1). Hence, their aggregate public debt ratio, at around 35% of GDP at the end of 2009, remains low compared with that of the advanced economies and seems unlikely to rise sharply. Nevertheless, fiscal positions across EMEs vary significantly, with several countries struggling to reduce their budget deficits to sustainable levels. And many EMEs face



long-term fiscal challenges from their ageing populations; the challenges are likely to grow more difficult as those EMEs attempt to upgrade or expand essential public services to a larger segment of their populations. These issues are briefly discussed in the box on page 64.

High and rising levels of public debt imply significant risks for the global economy. As demonstrated by the recent European debt crisis, concerns about government default may lead to a sharp rise in interest rates, which could further aggravate financial fragility and put the incipient economic recovery at risk. The introduction of unprecedented support measures in May by European governments, the IMF and the ECB helped to stabilise financial markets, but concerns about long-term fiscal sustainability in Greece and a number of other European countries persisted. A key risk is that those concerns may worsen and engulf other countries unless governments take resolute action to address their fiscal problems. Furthermore, over the long run, persistently higher levels of public debt might make economies more vulnerable to adverse shocks, reduce their long-run growth potential and endanger prospects for monetary stability.

In fact, the increased scrutiny of fiscal positions by investors has already persuaded a number of advanced economies to introduce new or enhanced fiscal consolidation measures, which should facilitate a faster reduction of fiscal deficits than was envisaged at the beginning of 2010. Any efforts to reduce current fiscal deficits should also be accompanied by reforms that ensure the long-term viability of public finances. The latter include measures aimed at boosting productivity and future potential economic growth as well as measures to contain the increase in age-related spending. Provided these measures are implemented with the necessary determination by industrial countries, their possible short-term adverse effects on output growth will be largely outweighed by the benefits of lower and stable interest rates, a less fragile financial system and improved prospects for economic growth.

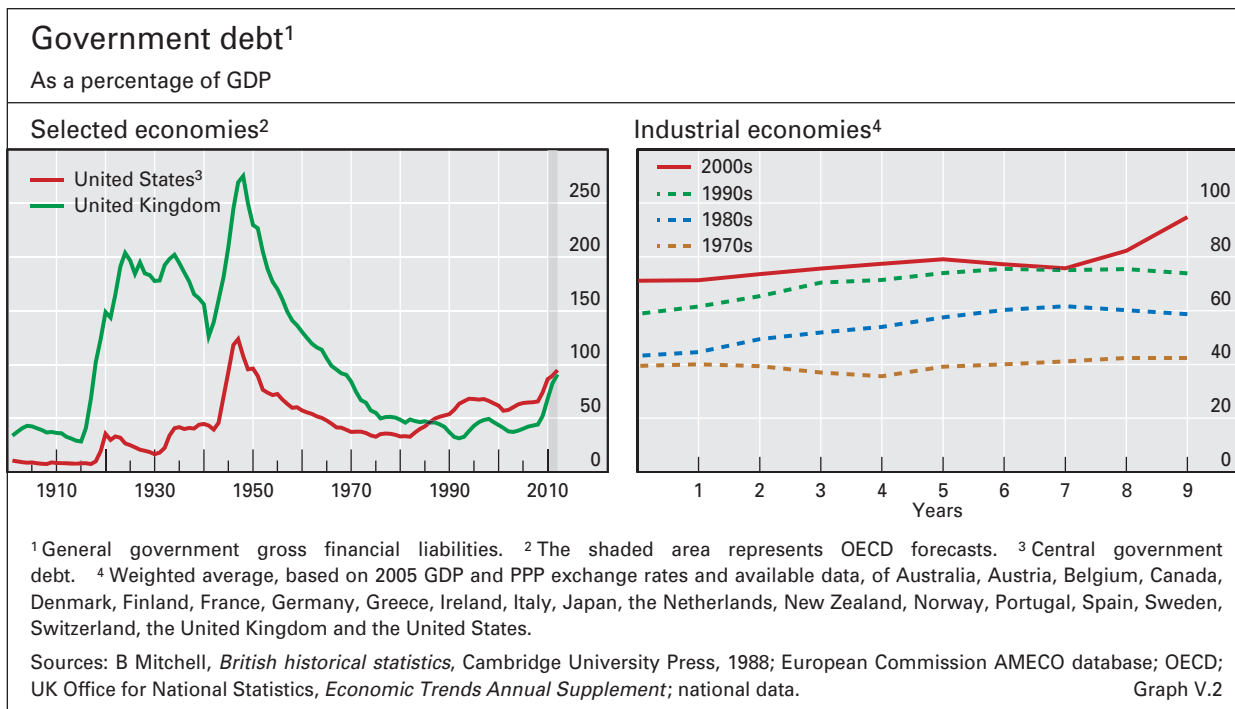
The rest of this chapter addresses the short- and long-term fiscal imbalances faced by industrial countries and discusses their potential implications for the global economy.

The evolution of public debt and its near-term prospects

High levels of public debt are not unknown in the industrial countries. In the wake of the Second World War, for example, public debt reached about 120% of GDP in the United States and 275% of GDP in the United Kingdom. In those two countries, where levels of public debt are projected to reach upwards of 90% of GDP in 2011, the recent rate of increase parallels only that seen during the two world wars (Graph V.2, left-hand panel). What is worse, the current, crisis-related surge took place against the backdrop of a long-term erosion of the fiscal position in many countries. Indeed, from the 1970s to 2007, the collective average public debt ratio in industrial countries had steadily ratcheted up from 40% to 76% (Graph V.2, right-hand panel). The chronic mismatch between revenues and committed expenditures (particularly age-related spending) indicates that, to varying degrees by country, the fiscal

Public debt reached a record high in the post-World War II era

An upward trend in public debt preceded the crisis



situation was already on an unsustainable path before the beginning of the recent financial crisis.

The rise in debt varies across countries

By the end of 2011, public debt/GDP ratios in industrial countries are projected to be on average about 30 percentage points higher than in 2007 – a rise of about two fifths. But the increase for countries that have been hit particularly hard by the crisis will be even greater: for the period from the end of 2007 to the end of 2011, the debt/GDP ratio is expected to rise by more than half in the United States and by four fifths in Spain and to almost double in the United Kingdom and triple in Ireland (Table V.1).

Public debt will continue to rise ...

The recent increase in public debt is unlikely to be halted any time soon, for a number of reasons. The first is that the cyclical deficits caused by the economic downturn – sharp declines in tax revenues combined with a rise in some expenditures (mainly income support) – are unlikely to vanish soon because, as current projections suggest, economic recovery will be slow.

... as large budget deficits are likely to persist

The second reason is that a large part of the currently projected fiscal deficit in 2010 and 2011 is likely to persist despite the recovery in output. The financial crisis is expected to have permanently reduced the level of future potential output for many countries – and hence the tax base of the government.¹ Furthermore, in some countries (notably Ireland, Spain, the United Kingdom and the United States) part of the large increase in tax revenues before the crisis was associated with an unsustainable boom in the construction and financial sectors. As output in these sectors is unlikely to

Lower potential output implies a loss of tax revenue

¹ As a result of the permanent loss of potential output, OECD-wide tax revenues in 2009–11, as a share of GDP, are estimated to be more than 1 percentage point lower than the 2000–07 average; see OECD, *Economic policy reforms: going for growth 2010*, March 2010.

Fiscal situation and prospects in selected advanced economies ¹									
	Fiscal balance			Structural balance ²			Government debt		
	As a percentage of GDP								
	2007	2010	2011	2007	2010	2011	2007	2010	2011
Austria	-0.5	-4.7	-4.6	-1.1	-3.1	-3.2	62	74	77
France	-2.7	-7.8	-6.9	-3.0	-5.7	-5.2	70	94	99
Germany	0.2	-5.4	-4.5	-0.4	-3.7	-3.1	65	81	84
Greece	-5.4	-8.1	-7.1	-5.8	-4.6	-2.4	104	129	139
Ireland	0.1	-11.7	-10.8	-1.3	-8.0	-8.3	28	83	92
Italy	-1.5	-5.2	-5.0	-2.2	-2.4	-2.8	112	132	135
Japan	-2.4	-7.6	-8.3	-3.0	-6.6	-7.6	167	199	205
Netherlands	0.2	-6.4	-5.4	-0.3	-4.4	-3.7	52	75	79
Portugal	-2.7	-7.4	-5.6	-2.6	-5.8	-4.3	71	95	99
Spain	1.9	-9.4	-7.0	1.6	-6.6	-4.6	42	73	78
United Kingdom	-2.7	-11.5	-10.3	-3.4	-8.6	-7.8	47	82	91
United States	-2.8	-10.7	-8.9	-3.1	-9.3	-8.0	62	90	95
<i>Memo:</i> ³									
<i>Emerging Asia</i> ⁴	0.1	-3.1	-2.6	...	...	...	33	36	...
<i>Central Europe</i> ⁵	-2.2	-6.0	-5.0	...	...	...	45	55	59
<i>Latin America</i> ⁶	-0.5	-2.3	-1.9	...	...	...	39	40	...

¹ General government; for China, the data cover the central and local governments; for India and Malaysia, central government; for Mexico, central government and the state-owned enterprises (including social security enterprises); forecasts for 2010–11.
² Cyclically adjusted fiscal balance. ³ Weighted averages of the economies listed, based on 2005 GDP and PPP exchange rates. ⁴ China, Chinese Taipei, Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand. ⁵ The Czech Republic, Hungary and Poland. ⁶ Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.
Sources: European Commission AMECO database; OECD; CEIC; © Consensus Economics; Moody's, *Country Credit Statistical Handbook*; national data. Table V.1

return to pre-crisis levels soon, neither is the level of taxes that they generate. In addition, countries can also be expected to pay higher unemployment benefits for many years due to a rise in the number of long-term unemployed workers.

The third reason is the uncertainty surrounding the timing and extent of the reversal of the exceptional discretionary measures implemented in several countries to revive aggregate demand. The recent crisis has forced a number of southern European countries to announce measures to reduce their structural budget deficits more rapidly than previously envisaged, but it remains to be seen whether the major industrial countries will also reverse fiscal stimulus before growth and unemployment have returned to more acceptable levels. Experience in industrial countries indicates that structural primary deficits (deficits excluding interest payments, adjusted for cyclical increases in expenditure and cyclical decreases in revenue) tend to be corrected only slowly.²

Finally, the ultimate cost of cleaning up the financial system is still unknown. Banks in several countries are still fragile and exposed to volatile

Reversal of exceptional discretionary measures is uncertain

Ultimate cost of cleaning up the financial system is unknown

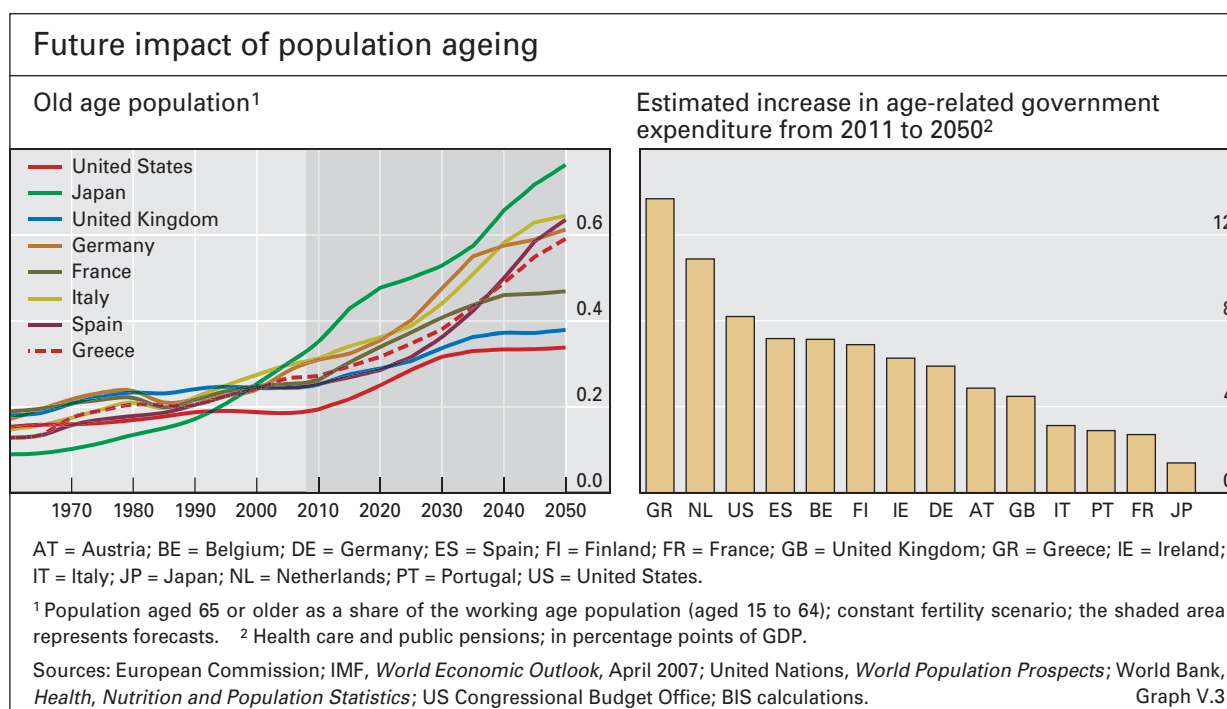
² See S Cecchetti, M S Mohanty and F Zampolli, "The future of public debt: prospects and implications", *BIS Working Papers*, no 300, March 2010.

financial markets and a deteriorating commercial real estate market (see Chapter II).³

How far and for how long the debt/GDP ratios will rise depends not only on future decisions regarding taxes and primary expenditures (expenditures excluding interest payments on outstanding debt) but also on real GDP growth and the path of future real interest rates. In that regard, growth prospects facing many industrial countries are at best weak, and real interest rates are likely to rise.

Unfortunately, the large projected near-term fiscal deficits are not the only source of worry. Governments in advanced economies with a markedly growing ratio of the elderly to the working age population (Graph V.3, left-hand panel) face yet another fiscal challenge – containing and funding the rising costs for health care and pensions in the medium to long term. Some of those countries also face lower growth of potential output, which will make such funding even more challenging. Countries have different pension and health systems – and some of them have already reformed their systems to contain part of the rise in expenditures. Hence, countries with similar projected increases in the ratio of the elderly to people of working age do not necessarily face comparable increases in projected age-related public expenditures. For example, given current policies, such expenditures as a share

Current deficits understate fiscal problems ...



³ The amount of resources pledged so far in support of the financial sector in advanced economies (capital injections as well as purchases of assets and lending by the treasury) is currently estimated by the IMF at 6.2% of 2009 GDP, of which only 3.5% of GDP has so far been used – a rather modest amount compared with the average direct cost of financial rescue programmes in past crises. Yet these figures may hide a more severe situation in some of the countries hardest hit by the financial crisis. For example, the United Kingdom and the United States have pledged 11.9% and 7.4% of 2009 GDP, respectively, of which 6.6% and 4.9% of GDP has so far been used. See IMF, *Fiscal Monitor: Navigating the fiscal challenges ahead*, May 2010.

Fiscal prospects in emerging market economies

Emerging market economies (EMEs) are likely to face fiscal challenges in the years ahead. At first glance, their fiscal position overall seems manageable. Indeed, unlike in the industrial countries, the ratio of public debt to GDP for EMEs as a whole is projected to change very little from its pre-crisis level of around 35%. Also, the rapid growth enjoyed by many EMEs raises the hope that their public debt ratios will not rise as fast as those of the industrial economies. Moreover, the high return to public investment in the EMEs can help sustain higher debt provided the latter is not financing wasteful consumption.

However, the aggregate fiscal position of EMEs masks important cross-country differences. For instance, the ratio of public debt to GDP of some EMEs such as Hungary and India, at around 80% or more at the end of 2009, remains high. More generally, some of the factors that have made EMEs less capable of supporting levels of public debt similar to those of more advanced economies might continue to be relevant.

First, weaker inflation credibility in EMEs requires their governments to depend to a greater extent on foreign currency borrowing to finance their fiscal deficits, which exposes them to fluctuations in the external value of their currency and to sudden reversals of capital flows. For example, foreign currency debt accounted for 63%, 58% and 40% of total public debt in Indonesia, Hungary and Poland, respectively, in 2009. However, Brazil and India, which are among the EMEs with the highest debt, finance their deficits mostly from domestic sources.

Second, the tax base – and, hence, tax revenue relative to GDP – is generally smaller in EMEs and cannot be easily expanded, given their lower degree of urbanisation and development. For example, the revenue/GDP ratio is below 25% in several Asian EMEs, compared with an OECD average of about 38% in 2008. Third, EMEs tend to be more vulnerable to adverse shocks in international trade and financial markets. A great concern now is that a possible intensification of fiscal problems in advanced economies may spill over to EMEs through weaker demand for exports as well as through an increase in investors' risk aversion and a deterioration of credit conditions. Fourth, fiscal policy remains very expansionary in some EMEs, contributing to booms in asset prices that may prove unsustainable. For instance, large fiscal stimulus programmes in China have been associated with the recent rapid expansion of bank credit there, which has created major risks for the economy and the financial system.

In addition to traditional challenges, several EMEs also face a rapidly growing elderly population as well as an increasing demand for social welfare coverage. Expanding the social safety net is desirable not only on its own merits but also because of the need to reduce large national savings in some countries and, thereby, global current account imbalances. But any such expansion must not jeopardise the long-term viability of the fiscal system.

of GDP are projected to rise in the period 2011–50 by several percentage points in Germany, Greece, Spain, the United Kingdom and the United States but by a more modest amount in France, Italy and Japan (Graph V.3, right-hand panel).

... as age-related spending is set to rise

Long-term projections of public debt

The severity of the fiscal problems facing industrial countries is illustrated by long-term projections of public debt/GDP covering the period 2010–40 in selected countries (Graph V.4). The first two years of the projections – 2010 and 2011 – correspond to the data shown in Table V.1; from 2012 onwards, the projections abstract from short-term variations in output and interest rates. As such, they are best thought of as trends around which actual debt ratios might fluctuate. In addition, a number of simple assumptions are made. First, the real effective interest rate paid on debt is assumed to be the same as its 10-year pre-crisis average (1998–2007). Second, real GDP is assumed to grow at its potential rate as estimated by the OECD for the period 2012–25. Finally,

Projections of public debt up to 2040

possible interactions among output, interest rates and fiscal policy are not considered.

Three illustrative scenarios

In the first scenario (labelled “Baseline” in Graph V.4), revenues and non-age-related spending as a share of GDP for the 2012–40 period remain constant at the OECD-projected 2011 values, and the rate of increase in age-related spending is set so as to make the cumulative increase up to 2040 match the estimates made by the sources used for Graph V.3.⁴ In this scenario, part of the cyclical deficit is expected to linger for some years. As it moves further into the projection period, the baseline scenario becomes increasingly unrealistic. Sooner or later, something will occur to prevent debt from exploding: governments will adopt corrective measures on their own, or they will be forced to act as sovereign risk premia reach unbearable levels.

Public debt will continue on an unsustainable path ...

The second and third scenarios are simulations of two possible courses of corrective action. In the second scenario (labelled “Gradual adjustment”), the primary budget balance (revenues less expenditures excluding interest payments on outstanding debt), excluding age-related spending, is assumed to improve relative to GDP by 1 percentage point a year for 10 years (a total swing of 10 percentage points – large by historical standards) and then to remain constant at the new level as a share of GDP for the rest of the projection period. In the third scenario (“Gradual adjustment and constant age-related spending”), the 10 percentage point improvement is coupled with the assumption that age-related expenditures will remain constant, as a share of GDP, at OECD-projected 2011 levels throughout the projection period.

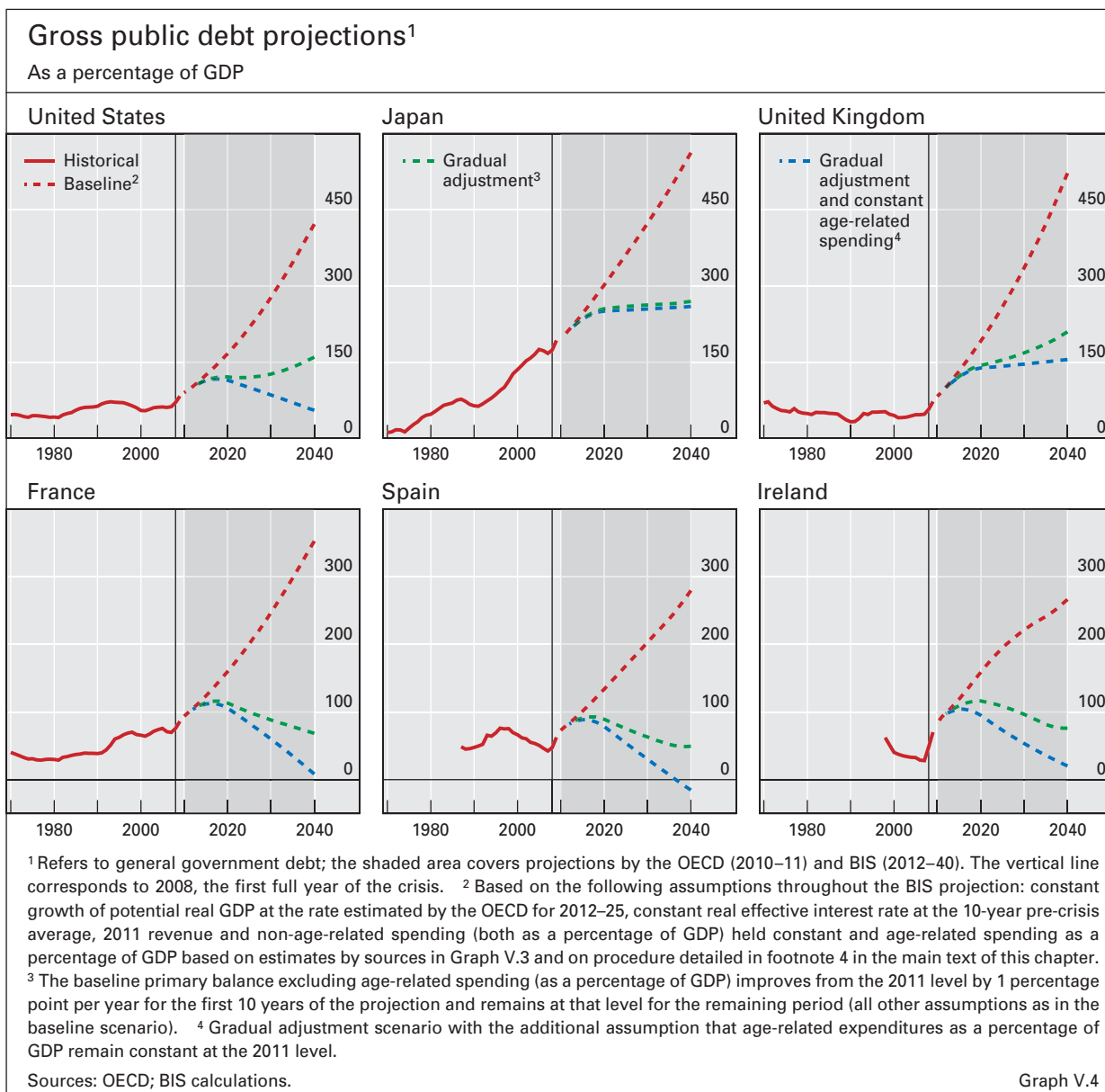
... unless large deficits are cut ...

The second scenario’s gradual improvement of the primary budget stance succeeds, after a decade or so, in putting the debt/GDP ratio on a steadily declining path in France, Ireland and Spain but not in Japan, the United Kingdom or the United States. The improved primary balance stabilises the debt/GDP ratio in the United States only until 2025, after which pressure from the increase in age-related expenditures causes the ratio to start drifting up again. In Japan and the United Kingdom the ratio does not stabilise, but its ascent is slowed. The second scenario thus suggests that, in reality, the adjustment in the primary balance could be larger than assumed in the projections, or front-loaded, in some of the countries with the worst debt dynamics.

... and age-related spending is contained

Coming on top of the improvement in the primary balance, the freeze of the GDP share of age-related expenditures leads to a faster decline in the debt/GDP ratio or a slower rate of increase. Preventing age-related spending from growing faster than GDP for the entire projection horizon may be somewhat unrealistic. Nonetheless, the results suggest that early efforts to reduce future age-related spending or finance the spending through additional taxes and other measures (discussed below) could significantly improve fiscal sustainability in several countries over the medium term. Moreover, the fact

⁴ The European Commission provides projections for age-related expenditure between 2008 and 2060; see “2009 ageing report: economic and budgetary projections for the EU-27 member states (2008–2060)”, provisional version, *European Economy*, no 2, 2009; and “European economic forecast: autumn 2009”, *European Economy*, no 10, 2009. Using these projections, we interpolated an annual series for age-related expenditure from 2012 to 2040.



that the debt/GDP ratio falls in some countries to very low levels towards the end of the forecasting period suggests that the fiscal adjustment in those countries could be smaller than assumed in this scenario.

Consequences of high debt

History and compelling economic arguments warn against a large and rapid build-up of public debt. Such profligacy threatens the government's solvency, reduces potential growth and lowers living standards. It also impairs the ability of the monetary authority to control inflation.

Risks of sovereign default

Apart from Germany and Japan in the wake of the Second World War, no industrial country has defaulted since 1945. But a longer view of history reveals

Among industrial countries, default is not unknown ...

that large increases in public debt – often the consequence of banking crises – tend to be followed by episodes of high inflation and an increase in the number of sovereign defaults, even among the advanced economies of the time. Typically, countries chose to incur the consequences of defaulting on their debt or rescheduling it when they viewed the financial and other consequences of inflation to be even worse.⁵

... and its probability has now increased

Recently, the spectre of sovereign default descended again on southern Europe. Greece, with its bond yields spiralling upwards, had to ask for external financial help to continue refinancing its debt. A combination of factors – very weak growth prospects, high unemployment rates, a constant erosion of international competitiveness and the lack of fiscal transparency – had led to a continued weakening of investors' confidence in the government's creditworthiness. The erosion of confidence accelerated when it became clear that other European countries were struggling to agree on the extent and conditions of financial support. Risk premia on Greece's debt shot up, exposing financial firms in several countries to potentially large capital losses and the private sector to a tightening of credit conditions.

As the bailout package for Greece was being finalised, the crisis took a turn for the worse when yields on sovereign bonds of other countries, especially Portugal and Spain, began to rise sharply. The fiscal position in both those countries is better than in Greece, but like Greece they have poor growth prospects and large trade deficits and cannot adjust through currency depreciation or monetary expansion. New support measures announced in May by European governments, the IMF and the ECB managed to calm markets' fears, at least temporarily, allowing governments some time to introduce the necessary measures to consolidate public finances and improve the prospects for economic growth.

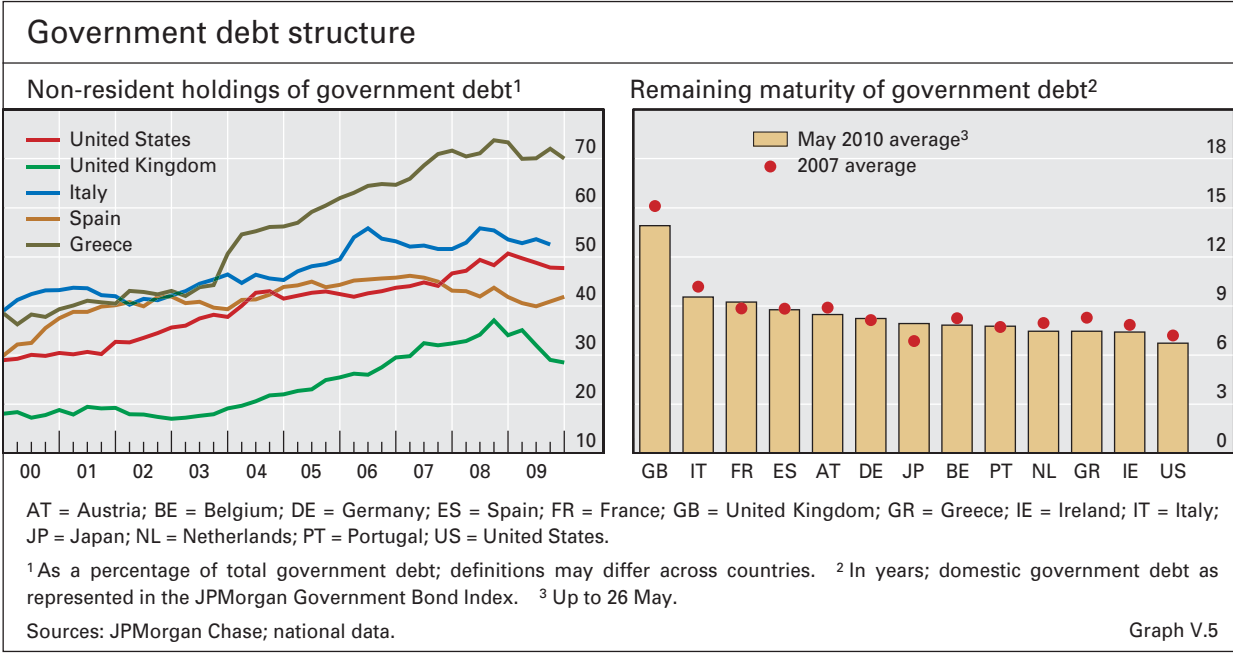
Countries are more vulnerable when dependent on capital flows ...

The recent European crisis also showed that the risk of adverse debt dynamics taking hold is greater in countries with a low saving rate relative to investment, which forces them to rely in part on inflows of foreign capital to finance their budget deficits. Currently, non-residents hold a substantial part of the government debt of many industrial countries, particularly of Greece, Italy and the United States (Graph V.5, left-hand panel).

... and short-term financing

In addition, the vulnerability to a run on the debt is clearly higher when a country has to refinance a large portion of its debt every year. As demand for long-term bonds weakens, governments may be forced to increasingly borrow short term, leading to a steady reduction of their average debt maturities. In Italy, for example, the average maturity of public debt shortened from about seven years in 1973 to only about one year in 1982, making the country more vulnerable to a run in those years. Currently, the average public debt maturity in most industrial countries is relatively long, but it could start to shorten again if investors come to see long-term investment as risky (Graph V.5, right-hand panel).

⁵ See C Reinhart and K Rogoff, "From financial crash to debt crisis", *NBER Working Papers*, no 15795, March 2010; and C Reinhart and K Rogoff, "The forgotten history of domestic debt", *NBER Working Papers*, no 13946, April 2008.



Macroeconomic consequences

Even if adverse debt dynamics can be avoided, three key factors that accompany higher levels of public debt may lead over time to a reduction of potential economic growth and a fall in living standards: higher interest payments, greater competition for portfolio investment and the impairment of fiscal policy.

Lower growth may result ...

First, the larger share of fiscal resources needed to service a higher public debt might crowd out productive expenditures (such as for infrastructure, education and health) and could also lead to higher distortionary taxation. Second, the higher level of public debt will compete with other investments in private portfolios, including other countries' government bonds. The competition, along with higher default and inflation risk premia, could push up real interest rates and lead to an offsetting fall in the private stock of capital. International flows of capital could limit these effects, but the interest paid to foreign residents would reduce domestic income. Third, higher debt may limit the scope and effectiveness of fiscal policy, including the operation of automatic stabilisers; the resulting higher macroeconomic volatility is likely to discourage capital accumulation.

Although the evidence on the growth implications of high levels of public debt is slim, it suggests that the effects could be significant. Among countries with a debt/GDP ratio of more than 90%, the median growth rate of real GDP is 1 percentage point lower (and the average is 4 percentage points lower) than in countries with a lower ratio. Recent evidence also suggests that the expected increase in the debt/GDP ratio in the advanced economies for the 2007–15 period may permanently reduce future growth of potential output by more than half a percentage point annually.⁶

... but the evidence is limited

⁶ See C Reinhart and K Rogoff, "Growth in a time of debt", *NBER Working Papers*, no 15639, January 2010; and IMF, *Fiscal Monitor: Navigating the fiscal challenges ahead*, May 2010.

Challenges for central banks

Fear of future inflation is related to ...

The continued deterioration of fiscal balances could also complicate central banks' task of keeping inflation low and stable, for at least two reasons. One is that rapidly mounting public debt heightens the temptation to tolerate an unexpected rise in inflation to reduce the real value of the debt, particularly when a large part of the outstanding domestic currency debt is long-term and a large share is foreign-owned. That temptation will also be greater if the public budget is based mainly on nominal flows, so that unexpectedly higher inflation would boost the real value of tax revenues and reduce that of public expenditure. As a result, the political pressure on the central bank to accommodate higher inflation may increase. Yet any benefit from unexpected inflation would be temporary, while the cost would certainly be higher and longer-lived. The cost includes permanently higher future real interest rates, the misallocation of resources caused by higher inflation, and the loss of output that would probably be needed to bring inflation back to its original level.

... the temptation to inflate away public debt ...

... or the unwillingness of the public to hold government debt

A second reason why high and rising debts may lead to higher inflation is that the public, confronted with the continued failure of government to close the fiscal gap, may eventually become unwilling to hold government bonds. To avert an outright sovereign default when the outstanding debt can no longer be rolled over, the central bank would be forced to purchase government bonds and thus let the money supply expand. Unlike in the previous case, this is more likely to occur the shorter the average maturity of the debt. Moreover, when a large fraction of the debt is of short maturity, efforts to reduce inflation by raising interest rates might eventually fail to work: the rise in interest rates would be rapidly translated into higher interest payments and hence higher debt, thereby bringing forward the likely time for monetisation.

High-inflation scenarios are tail risks ...

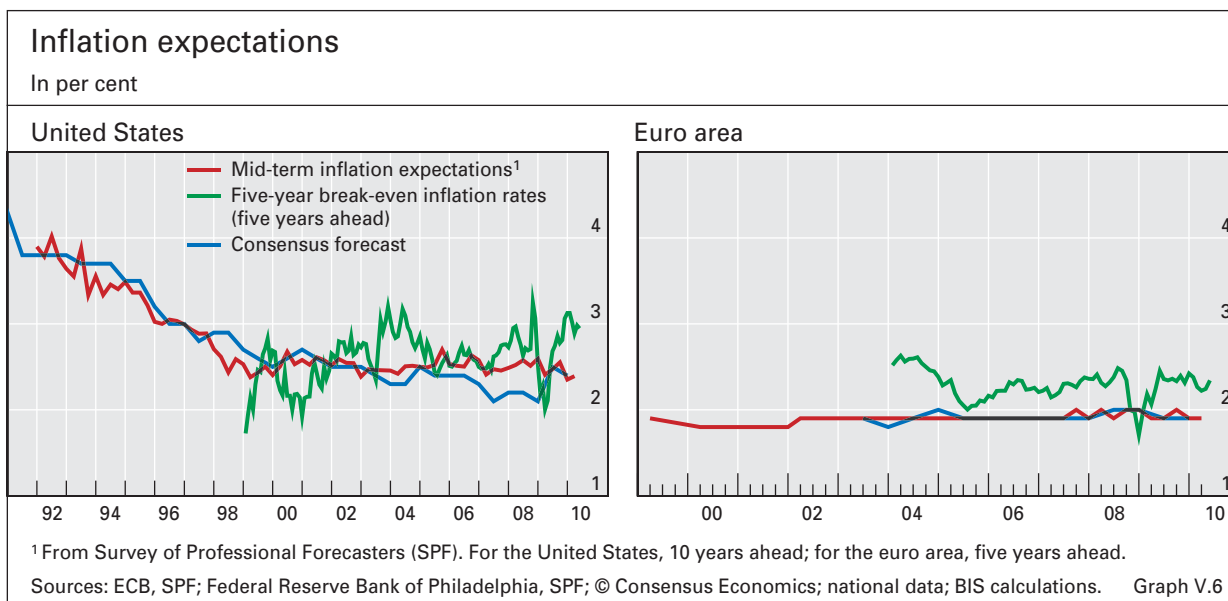
Even if these high-inflation scenarios remain unlikely in the immediate future, any increase in the probability attached to them could quickly have adverse effects. One is that agents would revise up their expectations of future inflation as well as demand greater compensation for inflation risk, causing medium- and long-term interest rates to rise.⁷ Another potential effect is that investors would take refuge in foreign assets, causing a sharp depreciation of the currency and a consequent rise in inflation. Any of these effects might reduce central banks' room for manoeuvre in stabilising inflation at both short and long horizons.

... which could push up interest rates and unsettle exchange rates

Inflation expectations remain anchored

How realistic is the worry that fiscal deterioration will lead to higher inflation? So far, there is no evidence that inflation expectations have become unanchored (Graph V.6). However, a failure by governments to make headway in restoring fiscal sustainability increases the risk that inflation expectations may abruptly and unexpectedly change.

⁷ For example, even if the central bank does not yield to political pressure to accommodate higher inflation, the rise in perceived inflation benefits could be interpreted by financial markets as an increase in the risk that the central bank will lose its independence under the pressure of unsustainable public finances, and therein could lie a rise in expected inflation.



Addressing fiscal imbalances

Given the unsustainable trajectories of public debt in many industrial countries, a prolonged period of fiscal tightening that brings the primary budget balance to a sizeable surplus is inevitable. In this regard, the experiences with a number of tightenings by industrial countries in the past 30 years offer grounds for optimism (Table V.2). Several of the consolidation efforts involved swings in the structural primary balance (SPB) of nearly 10% of GDP and lasted for several years. Each instance of consolidation either stabilised the debt/GDP ratio or reduced it; and in some episodes the reduction of the debt/GDP ratio continued for several years after the end of the consolidation period.

For example, after a large rise in public debt in the early 1980s, Denmark managed to raise its SPB from a deficit of 6.4% of GDP in 1982 to a surplus of 7.0% in 1986 (a swing of more than 13 percentage points in four years). Sweden, still in the midst of a recession after a banking crisis in the early 1990s, launched a consolidation plan that raised its SPB from a deficit of 7.1% of GDP in 1993 to a surplus of 4.7% in 2000 (a swing of almost 12 percentage points). Despite an initial reversal and a change of government, Ireland managed to move from a deficit of 7% of GDP in 1980 to a surplus of almost 5% in 1989 (a move of nearly 12 percentage points). And after a comprehensive spending review, Canada gradually adjusted its SPB from a 5.4% deficit in 1985 to a 5.7% surplus in 1999. Its run of surpluses lasted until 2008 and reduced its debt/GDP ratio from a peak of 102% in 1996 to 65% in 2007.

An assessment of the relevance of these cases of large fiscal adjustments to today's needs shows that, on the one hand, they overcame employment conditions that were quite difficult (Table V.2) – Canada, Ireland and Italy in particular experienced rising unemployment at the beginning of the consolidation period or at some point during its course. On the other hand, the countries making the adjustments enjoyed real GDP growth over the adjustment period that was comparable to the growth rates prevailing in several industrial

Large fiscal consolidations took place in the past ...

... under different macroeconomic conditions

Examples of successful large fiscal adjustments																
Country and period of consolidation ¹	Structural primary balance ²			General government debt ³			Real GDP growth	Inflation rate	Interest rate ⁴	REER ⁵ change	Un-employment rate					
	Swing	Start ⁶	End	Start ⁶	Peak	End						Average over the episode				
	As a percentage of GDP											In per cent				
Denmark (1983–86)	13.4	-6.4	7.0	65	77	72	3.9	5.4	11.8	1.7	6.8					
Sweden (1994–2000)	11.8	-7.1	4.7	78	84	64	3.7	1.0	6.1	-0.9	10.1					
Ireland (1980–89)	11.8	-7.0	4.8	68	114	100	3.1	9.3	10.5	1.0	14.5					
Canada (1986–99)	11.1	-5.4	5.7	67	102	91	2.8	2.8	11.1	-1.4	9.2					
Belgium (1984–98)	10.3	-3.6	6.7	107	141	123	2.3	2.6	8.3	0.3	8.9					
Italy (1986–97)	10.2	-3.4	6.7	89	130	130	2.1	5.0	10.6	-0.1	10.2					
Sweden (1981–87)	8.6	-5.7	2.9	47	71	62	2.2	7.6	9.0	-1.7	3.7					
United Kingdom (1994–2000)	7.7	-4.4	3.3	49	53	45	3.5	1.8	7.0	2.7	7.3					
Japan (1979–90)	7.0	-4.9	2.1	41	77	64	4.6	2.7	6.6	0.5	2.4					
Western Germany (1980–89)	5.2	-3.7	1.5	29	41	40	1.9	2.9	7.8	-1.5	5.2					
United States (1993–2000)	4.9	-1.7	3.2	70	72	54	3.9	2.6	6.7	2.4	5.2					
Netherlands (1991–2000)	4.6	-2.2	2.5	88	96	64	3.2	2.4	6.4	-0.6	4.8					
Spain (1995–2006)	3.7	-0.6	3.1	64	76	46	3.6	3.1	5.4	0.9	12.6					

¹ The choice of the initial and final year of each consolidation period is based on the observed troughs and peaks in the structural primary balance, with some arbitrary adjustments in those cases where the data do not suggest a clear pattern. ² General government cyclically adjusted primary fiscal balance. ³ For Ireland, the data source is the European Commission annual macroeconomic database (AMECO). ⁴ Nominal effective interest rate on public debt computed from government gross interest payments at period *t* divided by government gross financial liabilities at period *t*-1. ⁵ Real effective exchange rate based on consumer price index; an increase indicates an appreciation. ⁶ The starting value refers to the period preceding the adjustment episodes; for Ireland, structural primary balance not available before 1980.

Sources: European Commission AMECO database; OECD; Datastream; national data; BIS calculations. Table V.2

countries in the years preceding the recent crisis. In some episodes, favourable external demand conditions may indeed have facilitated the adjustment.

Another fact that stands out is that large consolidation efforts took place amid a wide range of conditions regarding real exchange rates and real interest rates. In particular, currency depreciation and monetary policy accommodation may have facilitated fiscal adjustment in some countries, but not in all. Unfortunately, empirical research that seeks to control for the influence of various factors has so far failed to reach a consensus on the role played by external and monetary conditions in ensuring the success of fiscal consolidations.

The same research, however, unequivocally points to the importance of the “quality” of fiscal adjustment.⁸ Most of the successful consolidations were

Composition of fiscal adjustment is key to success ...

⁸ See eg A Alesina and R Perotti, “Fiscal adjustments in OECD countries: composition and macroeconomic effects”, *IMF Staff Papers*, vol 44, no 2, June 1997; S Guichard, M Kennedy, E Wurzel and C André, “What promotes fiscal consolidation: OECD country experiences”, *OECD Economics Department Working Papers*, no 553, May 2007; J McDermott and R Wescott, “An empirical analysis of fiscal adjustments”, *IMF Staff Papers*, vol 43, no 4, December 1996; and M Kumar, D Leigh and A Plekhanov, “Fiscal adjustments: determinants and macroeconomic consequences”, *IMF Working Papers*, no WP/07/178, July 2007.

biased towards expenditure cuts – specifically, reductions in government consumption including public wages – while the least effective were biased towards cuts to productive public investment. In countries that started from a low level of taxation, increases in tax revenues were also helpful, in which cases taxes on consumption and measures to broaden the tax base were the most effective. And consolidation efforts were often accompanied by structural reforms that improved the functioning of the labour market and reduced taxes on labour and capital.

... as are structural reforms

One important conclusion from the examination of past episodes is that consolidation efforts of the size required today can be implemented, although the growth and employment conditions facing countries may be tougher now than before. Countries with a high and rapidly increasing level of public debt and whose creditworthiness has been questioned have no option but to implement fiscal adjustment immediately. For those countries, any delay is itself a threat to the financial system and the economic recovery. Indeed, if they undertake fiscal tightening now, the improved confidence and lowered risk premia that result will outweigh the short-term output cost. At the time of writing, the governments of Greece, Portugal and Spain had announced a number of austerity measures, including cuts to public wages and increases in taxes. If implemented fully, such measures should lead to a sizeable reduction in fiscal deficits in the short and medium term. Yet these countries would still face significant challenges in making the adjustment needed to restore investors' confidence in the sustainability of their finances.

Fiscal adjustment is unavoidable for most countries ...

Other countries that continue to enjoy investors' confidence have a higher degree of fiscal credibility and so may have some flexibility in choosing the timing and pace of their fiscal consolidation. But if they are to preserve that flexibility – by forestalling any rise in default and inflation risk premia – they should announce clear and credible plans to reduce their current fiscal deficits and to address their long-term fiscal imbalances.

... but some may have more flexibility in choosing its timing and pace

Countries have at least two broad options to ensure the long-term viability of their public finances. The first is to promote an increase in overall productivity and in the growth of potential output through measures such as a commitment to cutting unproductive expenditures, changing the structure of the tax system and implementing reforms in labour and product markets. The speedy introduction of such measures would contribute to underpinning market confidence and keeping interest rates low, thereby facilitating the reduction of current fiscal deficits.

Two options for the long term: boost productivity and growth ...

The second option is to boost the size of the labour force relative to the size of the elderly population. To this end, one approach is to favour immigration into countries with a rapidly growing elderly population. Another is to increase the rate of labour market participation, especially of women (at 64% in the OECD countries in 2008, it is well below the rate of 84% for males) and of older workers. In this regard, an effective and enduring solution is to favour a lengthening of employees' working life through some combination of an increase in the statutory retirement age and an increase in the incentives to retire later. An increase in the expected age of retirement may partly alleviate the need to cut benefits – announcing such cuts could lead to higher saving

... and increase the size of the workforce

rates and hence work against supporting aggregate demand. Likewise, a later retirement age could alleviate the need to raise taxes to high levels, which would significantly distort labour market choices and weigh more heavily on young and future generations.⁹

Summing up

Deteriorating public finances in industrial countries pose major macroeconomic risks to the global economy. Not only can high and rising levels of public debt endanger medium- and long-term growth prospects, but they can also undermine the credibility of monetary policy in maintaining low inflation. In addition, the massive long-term fiscal imbalances in the industrial countries are hidden by the much smaller current official figures for their public debt – a problem that certainly points to the need for greater transparency in reporting. Equally important is the need to base budget projections on prudent assumptions. On both points, the establishment of independent agencies to monitor public accounts and projections could prove beneficial.

The required adjustment currently facing advanced economies is surely large but not unprecedented. A credible commitment by governments to reduce or eliminate their current and future fiscal deficits will pay rewards over time. Any possible initial costs of fiscal tightening in terms of reduced short-term output growth will be outweighed by the persistent benefits of lower real interest rates, greater stability of the financial system and better prospects for economic growth.

⁹ See eg R Barrell, I Hurst and S Kirby, "How to pay for the crisis or: macroeconomic implications of pension reform", *Discussion paper*, no 333, National Institute of Economic and Social Research, London, 2009; and D Krueger and A Ludwig, "On the consequences of demographic change for rates of return to capital, and the distribution of wealth and welfare", *Journal of Monetary Economics*, vol 54, January 2007, pp 49–87.