OECD Economic Outlook

INTERIM REPORT

OECD

March 2009

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Interim Report

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Summary of projections

	2008	2009	2010	2008 Q3	2008 Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	Q4 / Q4 2008	Q4 / Q4 2009	Q4 / Q4 2010
	Per cent															
Real GDP growth																
United States	1.1	-4.0	0.0	-0.5	-6.2	-7.2	-4.3	-1.8	-0.4	0.5	0.9	1.2	1.8	-0.8	-3.5	1.1
Japan	-0.6	-6.6	-0.5	-1.4	-12.1	-10.9	-3.3	-2.8	-0.4	0.0	0.1	0.7	0.9	-4.3	-4.4	0.4
Euro area	0.7	-4.1	-0.3	-1.1	-5.9	-6.8	-4.2	-2.2	-0.8	0.2	0.7	1.1	1.4	-1.4	-3.5	0.8
Other countries[1]	1.9	-3.9	0.3	0.3	-8.6	-5.0	-3.6	-2.3	-0.8	0.8	1.7	2.5	3.1	-1.5	-2.9	2.0
Total OECD	0.9	-4.3	-0.1	-0.7	-7.1	-7.0	-4.0	-2.1	-0.6	0.4	0.9	1.4	1.8	-1.5	-3.4	1.1
Inflation[2]	year-on-year															
United States	3.8	-0.4	0.5	5.2	1.5	0.2	-0.6	-1.8	0.5	0.8	0.6	0.4	0.3			
Japan	1.4	-1.2	-1.3	2.1	1.0	0.0	-0.9	-2.0	-1.7	-1.3	-1.2	-1.3	-1.3			
Euro area	3.3	0.6	0.7	3.8	2.3	1.1	0.6	0.1	0.6	0.9	0.8	0.6	0.5			
Unemployment rate[3]																
United States	5.8	9.1	10.3	6.0	6.9	8.1	9.0	9.5	9.8	10.1	10.3	10.4	10.5			
Japan	4.0	4.9	5.6	4.0	4.0	4.4	4.7	5.0	5.3	5.5	5.6	5.6	5.7			
Euro area	7.5	10.1	11.7	7.4	8.0	9.0	9.7	10.5	11.1	11.5	11.7	11.8	11.9			
Other countries[1]	5.6	7.8	9.4	5.5	6.0	6.8	7.5	8.1	8.6	9.0	9.3	9.5	9.6			
Total OECD	6.0	8.4	9.9	6.0	6.5	7.5	8.2	8.8	9.3	9.6	9.8	10.0	10.1			
World trade growth	2.5	-13.2	1.5	2.4	-23.8	-22.7	-11.8	-4.9	0.4	3.3	4.7	5.9	6.9	-4.8	-10.2	5.2
Fiscal balance[4]																
United States	-5.8	-10.2	-11.9													
Japan	-2.6	-6.8	-8.4													
Euro area	-1.8	-5.4	-7.0													
Total OECD	-3.0	-7.2	-8.7													
Short-term interest rate																
United States	3.2	1.2	0.7	3.2	3.4	1.2	1.2	1.2	1.2	1.0	0.7	0.5	0.4			
Japan	0.7	0.6	0.3	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.3	0.2	0.2			
Euro area	4.7	1.3	0.6	5.0	4.6	2.1	1.1	1.0	1.0	0.9	0.6	0.4	0.4			

Note: Real GDP growth, inflation (measured by the increase in the consumer price index) and world trade growth (the arithmetic average of world merchandise import and export volumes) are seasonally and working-day (except inflation) adjusted annual rates. The "fourth quarter" columns are expressed in year-on-year growth rates where appropriate and in levels otherwise. Interest rates are for the United States: 3-month eurodollar deposit; Japan: 3-month certificate of deposits; euro area: 3-month interbank rate.

Assumptions underlying the projections include:

- fiscal policies are taken into account if they have been legislated or mandated;
- unchanged exchange rates as from 9 March 2009; in particular 1$ = 98.77 yen and 0.79 €;
- price of oil for a barrel of Brent crude is fixed at 45$;

The cut-off date for other information used in the compilation of the projections is 20 March 2009.

1. OECD countries not included in the Euro area or the 7 major countries.
2. USA: consumer price index, Japan: consumer price index, euro area: harmonised index of consumer prices.
3. Per cent of the labour force.
4. Per cent of GDP.

Source: OECD.

EDITORIAL

GLOBAL RECESSION: HOW SHOULD POLICY RESPOND?

The world economy is in the midst of its deepest and most synchronised recession in our lifetimes, caused by a global financial crisis and deepened by a collapse in world trade. Tight financial conditions and low confidence are weighing on output and employment in OECD and non-OECD countries alike. In turn, shrinking activity and income is further undermining bank balance sheets, magnifying the downturn.

These developments have led us to produce, ahead of this week's G20 Summit in London, an *Interim Economic Outlook*, with a focus on the economic policies required to foster a sustained recovery. It should be stressed upfront that there are exceptionally large uncertainties, associated with any forecast in the current climate, especially those related to the assumptions regarding the speed at which financial conditions improve and the effectiveness of the massive macroeconomic policy stimulus that is already in place or being implemented.

Bearing these uncertainties in mind, we anticipate that the ongoing contraction in economic activity will worsen this year, before a policy-induced recovery gradually builds momentum through 2010. In the United States, Japan, the euro area, as well as for the OECD economy at large, output will drop by between 4 and 7% this year and broadly stagnate next year. The major non-OECD economies are not spared from an abrupt slowdown in growth or an outright recession. World real GDP growth is projected to fall by 2¾ per cent this year and to recover by 1¼ per cent in 2010.

This bleak scenario is driven by the strong, negative response of private global demand to a combination of the credit squeeze, negative wealth effects stemming from lower house and equity prices, and a generalised loss of confidence. One of the consequences of the highly synchronised recession will be an exceptional degree of slack, which will push down inflation rates to close to zero in several OECD countries, and some will experience falling price levels.

This forecast is conditional on the assumption that the stress in financial markets dissipates towards the end of 2009, and carries risks that remain firmly tilted to the downside. The most important risk is that the weakening real economy will further undermine the health of financial institutions, which in turn forces them to curtail lending beyond what is anticipated in the *Outlook's* baseline projections. Another risk is that government actions will prove insufficient to restore stability and confidence in financial markets. There is also the risk that some central and eastern European economies, as well as a growing number of developing economies, may face external-payments and domestic-banking crises, intensifying the global downturn and raising the demand for external funding. Against these risks is the possibility that national and international efforts to resolve problems in financial markets and the large macroeconomic policy stimulae being introduced take hold sooner and prove more effective than anticipated, advancing the start and increasing the pace of the recovery.

The impact of the recession on societies will be substantial. Joblessness in all OECD countries will rise sharply, with the rate of unemployment peaking in 2010 or early 2011 and, in many countries, reaching double digit levels for the first time since the early 1990s. The number of unemployed in the G7 countries will almost double from its level in mid-2007 to reach some 36 million people in late 2010. This prospect underscores the need for employment and social policies to complement and reinforce macroeconomic stabilisation efforts to get people into jobs and prevent, as far as possible, any rise in structural unemployment. At the same time, policies to cushion the impact of recession via effective social safety nets and schemes that target those most vulnerable may need to be strengthened for the duration of the recession. But it is vital not to repeat the mistakes of the 1970s and 1980s, when many countries attempted to reduce unemployment by encouraging early retirement, which would only reduce the labour force and cut growth without boosting overall employment.

An essential step to arrest the "economic haemorrhaging" that is ongoing is to devise and implement without delay a coherent strategy that squarely tackles the mess in financial markets. This involves a continuation for the time being with deposit and debt guarantees, insurance schemes and other measures that have helped to create a modicum of stability. But above all, dealing decisively with impaired bank assets and broader concerns about bank solvency is needed to restore credit supply and to restore trust and confidence in financial markets. Doing so calls for action to create transparency about losses and impaired assets, to separate institutions that are viable from those that are not, and, where necessary, to re-capitalise, or as a last resort nationalise, insolvent financial institutions. Efforts are also needed to win broad public acceptance that the cost of these necessary measures will be large and will only be further increased by not acting promptly.

Additional macroeconomic stimulus is also critical to cushion the fall in aggregate demand. Conventional monetary policy should be used fully by keeping or bringing policy rates near zero and committing to keep them at that level for some time to come. The monetary authorities should also be ready to implement or expand their use of direct measures to support credit creation, enhance liquidity in markets and to limit deflationary pressures. In the medium term, central banks should reassess current monetary policy frameworks and their ability to respond to destabilising credit booms and asset price bubbles. Here the biggest challenge will be determining how to put a larger weight on financial stability concerns without weakening the commitment of monetary policy to maintain price stability.

Discretionary fiscal stimulus is already playing an important role in OECD and many non-OECD countries. The need and scope for more ambitious fiscal stimulus than currently planned depends on country-specific circumstances, in particular the size of the negative impact of the crisis, the importance of automatic stabilisers and the level of public debt. Against these criteria, governments in some countries should consider further discretionary fiscal expansion.

On current plans, and considering the deep recession, government indebtedness is projected to rise substantially, and concerns in this regard are already putting upward pressure on bond yields in many countries. Keeping such pressures in check will hinge on establishing credibility for a return to fiscal sustainability. Designing stimulus measures that are explicitly temporary or easily reversed, strengthening fiscal frameworks, and acting now to address long-term fiscal sustainability concerns relating to pensions and health spending would all be helpful in establishing such credibility. As well, action to contain the negative impacts of the recession on long-term sustainable production will limit the associated structural weakening of public budgets.

Because fiscal stimulus in one country has effects in others, there is a role for international co-ordination to achieve the right amount of stimulus. While explicit fiscal coordination is unlikely to be achieved, a common understanding of the severity of the recession and the required policy response should be aimed for. On financial market emergency actions, more coordination will be a desirable component of any exit strategy, as individual countries acting on their own may find it difficult to unwind in an orderly way the exceptional measures that are currently needed.

Beyond these immediate policy actions, the financial system must be reformed in a way that prevents the recurrence of similar crises in the future while at the same time preserving the vital role of financial markets in marshalling and allocating capital and monitoring its use. First, financial emergency measures that have added to moral hazard, additional risk taking and larger financial institutions, should be withdrawn or reformed. Second, large and internationally co-ordinated efforts need to focus on the market and regulatory failures that together caused this global financial crisis. Among the issues that have to be addressed and corrected are the unprecedented lack of transparency in the trading of financial instruments and financial institutions' balance sheets; the extent of distortive government interventions (including the role of government-sponsored enterprises and mortgage-loan guarantees); the inadequate compensation schemes that bias incentives towards excessive risk taking; the misguided reliance on external ratings and bad internal models of risk measurement and management; the inconsistencies and the pro-cyclical nature of banking regulation; and the fragmented structure of financial supervision.

In some countries, governments have introduced support measures for non-financial sectors, or even individual firms. In addition, some support packages have privileged domestic lending by financial institutions or introduced restrictions on government procurement from abroad. However, this distorts competition and resource allocation by delaying the exit of non-competitive producers, unless support is made contingent on ambitious and credible restructuring plans that are subject to strictly enforced time limits.

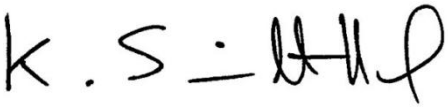
These support measures can also act as an obstacle to trade, risking retaliatory protectionist measures that would prove very costly. To date, border measures to protect domestic markets have been limited. The G20 declaration last November undoubtedly played a role in bringing about this outcome. In a few countries, however, border and behind-the-border measures that may curtail trade have been introduced. A confirmation and extension of the standstill agreement by all countries would demonstrate a commitment to competitive and open markets.

While some have dubbed this severe global downturn a "great recession", it will remain far from turning into a repeat of the 1930s' Great Depression, thanks to the quality and intensity of government policies that are currently being undertaken. The Great Depression was deepened by terrible policy mistakes, ranging from contractionary monetary policy to beggar-thy-neighbour policies in the form of trade protection and competitive devaluations. In contrast, this recession has broadly elicited the right policy.

To sum up, governments -- individually and collectively -- will have to persevere in doing the right thing in eight policy areas. These are: *i)* address even more forcefully the lingering financial crisis by adopting the measures required to stabilise systemically important institutions, reduce market uncertainty and illiquidity, and restart bank lending. This implies removing toxic assets and promoting bank recapitalisation; if necessary, by nationalisation; *ii)* in those countries that still have room to manoeuvre, continue monetary and fiscal easing as the recession deepens; *iii)* avoid disguised trade protection measures in the form of support and subsidies of domestic real-sector firms, both during the crisis and

afterwards; *iv)* once sustained recovery is attained, be prepared to reverse quickly and forcefully financial emergency measures, as well as fiscal and monetary stimulus, to ensure medium-term macroeconomic and financial stability; *v)* work hard together to reach an internationally-agreed global framework for better financial-market regulation and supervision; *vi)* counter-cyclicality of bank behaviour should be strengthened by adopting adequate macro-prudential regulation, complemented by strongly counter-cyclical fiscal and monetary policy rules; *vii)* continue the drive toward world trade integration, both unilaterally and multilaterally through completion of the Doha Round, while ensuring further integration of world financial markets; and *viii)* pursue structural reforms to make domestic product and labour markets more competitive in order to raise long-term growth prospects and strengthen resilience to adverse shocks.

30 March 2009



Klaus Schmidt-Hebbel
Chief Economist

CHAPTER 1

GENERAL ASSESSMENT OF THE MACROECONOMIC SITUATION

Overview

The OECD economy is in a deep recession and the slack will increase throughout 2010

The OECD economy is in the midst of its deepest and most wide-spread recession for more than 50 years (Table 1.1). Output has declined in almost all OECD countries in the past six months and with non-OECD countries slowing sharply, world growth has turned negative. Tight financial conditions and a generalised loss of confidence will continue to weigh on activity in the current year before a projected policy-induced recovery brings growth close to potential by end-2010. By that time, an exceptional degree of slack will have emerged in the OECD economy, with unemployment rates of above 10% in the United States and the euro area. This will push down inflation rates to close to zero in several countries, and some will experience falling price levels.

Table 1.1. **Growth has collapsed**

OECD area, unless noted otherwise

	Average 1996-2005	2006	2007	2008	2009	2010	2008 q4	2009 q4	2010 q4
	Per cent								
Real GDP growth[1]	2.7	3.1	2.7	0.9	-4.3	-0.1	-1.5	-3.4	1.1
United States	3.2	2.8	2.0	1.1	-4.0	0.0	-0.8	-3.5	1.1
Euro area	2.1	3.0	2.6	0.7	-4.1	-0.3	-1.4	-3.5	0.8
Japan	1.1	2.0	2.4	-0.6	-6.6	-0.5	-4.3	-4.4	0.4
Output gap[2]	-0.2	0.7	1.0	-0.4	-6.5	-8.5			
Unemployment rate[3]	6.6	6.0	5.6	6.0	8.4	9.9	6.5	9.3	10.1
Fiscal balance[4]	-2.2	-1.3	-1.4	-3.0	-7.2	-8.7			
Memorandum Items									
World real trade growth	7.0	9.5	6.9	2.5	-13.2	1.5			
World real GDP growth[5]	3.4	4.3	4.1	2.2	-2.7	1.2			

1. Year-on-year increase; last three columns show the increase over a year earlier.
2. Per cent of potential GDP. Estimates of potential have not been revised and therefore do not incorporate a possible reduction in supply implied by the downturn.
3. Per cent of labour force.
4. Per cent of GDP.
5. OECD countries plus Brazil, Russia, India and China only, representing 82% of world GDP at 2000 purchasing power parities.

Source: OECD.

Risks are skewed to the downside

The uncertainty around this projection is unusually wide but risks remain tilted to the downside. The most important risk is that the weak real economy will undermine the health of financial institutions further, which in turn forces them to curtail lending with negative consequences for growth, strengthening the adverse feed-back loop that is already operating beyond current anticipations. Another risk is that government measures will not suffice to restore stability in financial markets, thereby delaying the recovery. On the other hand, a convincing and comprehensive policy response to problems in financial markets might lead confidence to rebound faster than assumed in the projections. Likewise, the strong policy stimulus that has already been decided, as well as further measures to come, might take hold sooner and be more effective than anticipated. In either case the recovery could be earlier and stronger than projected.

Policy requirements at present are:

The policies required to recover from the recession can be summarised as follows:

Repairing the financial system and establishing a lasting regulatory framework…

- *Financial policy*. Substantial policy intervention in financial markets has averted the risk of meltdown and resulted in a degree of stabilisation. However, sustained economic recovery requires well functioning financial intermediation. Getting there will require comprehensive, credible solutions, which separate and address the troubled assets of banks in a systematic manner. Governments also need to provide the necessary capital injections to ensure banks' capacity to lend. It will also require clarifying the main elements of the post-crisis regulatory architecture, because financial markets are intrinsically forward looking and cannot start to work efficiently before it is known how regulation will shape risks and rewards in the future.

… very easy monetary policy, including non-conventional easing,…

- *Monetary policy*. The slump in demand has prompted a strong response of monetary policy. Going forward, conventional policy should be used fully, by keeping or bringing policy rates near zero. Monetary policy can, and should if necessary, to restore the functioning of financial markets or to limit deflationary pressures, provide further support through the use of additional measures including expanding and diversifying central bank balance sheets. This implies, in particular, providing bank reserves in large amounts and buying a wide array of assets in countries where capital markets have a key role in financing the economy.

… supportive fiscal policies in countries where the scope exists…

- *Fiscal policy*. In addition to allowing automatic stabilisers to work, nearly all OECD countries have adopted discretionary fiscal stimulus. The magnitude of stimulus differs across countries, however, reflecting factors such as the strength of automatic stabilisers and initial fiscal positions. Whether a more ambitious fiscal stimulus than currently planned is appropriate depends on country-specific circumstances. For countries with very weak initial fiscal positions, the room for further fiscal expansion is limited. Other countries differ in terms of the costs and benefits of further stimulus. To cushion the projected slump,

additional support would be appropriate in some countries; in other countries, further stimulus would be required if activity were to be even weaker than projected. Ambitious fiscal stimulus should be accompanied by credible commitment to steadily withdrawing and reversing the stimulus once the recovery is underway to avoid adverse reactions from long-term interest rates. They should also aim to increase the long-term supply potential of the economy in addition to increasing aggregate demand.

… and active employment policies

- *Structural policies.* To avoid high cyclical unemployment turning structural it is important to pursue active employment policies. It is imperative to avoid the mistakes of past recessions when labour supply was curtailed and protectionist barriers erected. The proliferation of financial and non-financial support packages represent a particular danger in the latter respect.

An evolving global financial crisis

The financial crisis has become a credit crunch

The financial crisis is now being exacerbated by the feedback from real-economy weakness to financial markets, with stock markets weak and volatile and risk aversion high. The unprecedented policy response has involved drastic conventional monetary policy easing and an array of innovative unconventional measures, focused on central bank balance sheet operations and a variety of direct government interventions in the banking system. It remains to be seen whether these measures, described in detail below, will be sufficient for the situation to stabilise and normal credit supply to resume. However, the crisis is also affecting credit demand, *via* negative wealth and confidence effects and shrinking activity.

While money market panic has eased, concerns about banks remain…

The money market panic that followed the bankruptcy filing of Lehman Brothers in mid-September 2008 has eased in response to the programmes implemented by the authorities to support financial institutions. Spreads between unsecured interbank and expected overnight rates have fallen markedly from the very high levels reached in the last quarter of 2008. However, the cost of insuring bank debt against default, which had fallen following the G7 communiqué on 10 October 2008 that no systematically important large financial institution would be allowed to fail, picked up in early February. This was related to growing concerns about the solvency of a number of large financial institutions and the implications this could have in terms of potential longer-term losses on their bonds (Figure 1.1).

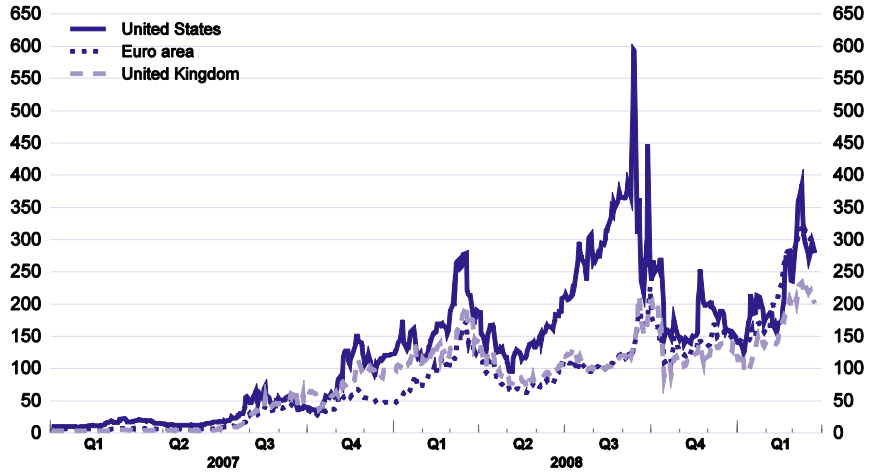
… especially as regards their capitalisation

Capital injections in banks have been commensurate with the losses and write-downs that have been realised so far. Since mid-2007, the 70 largest banks globally have raised $835 billion in capital, which exceeds the near $800 billion in losses and write-downs over the same period.[1]

1. www.bloomberg.com, retrieved on 25 February 2009.

Figure 1.1. Bank credit default swap rates

Last observation: 23 March 2009



Note: Averages of five-year credit default swap rates on senior bonds across the largest banks.

Source: Datastream.

Concerns about the capital position of banks remain, nonetheless, for several reasons. Firstly, the fall in the prices of troubled assets has not been fully registered following relaxation of mark-to-market accounting rules. Secondly, current price indices of asset-backed securities (ABS) may still overestimate their fundamental value.[2] Thirdly, credit losses will keep accumulating as a result of the economic downturn. Bank loan books are particularly exposed to the real estate recession: non-securitised residential mortgages make up 11% of bank assets in the euro area and 14% in the United States where non-securitised commercial mortgages represent a further 15% of commercial bank assets.[3] Finally, the crisis as well as uncertainty about future regulatory requirements may have prompted investors to require larger capital buffers.

Bank lending is weakening…

Bank lending to the private sector has already weakened and more weakness can be expected in the near term. The slowdown was evident across all categories of borrowers in the last months of 2008 and early 2009 in the United States and the euro area (Figure 1.2); monthly series indicate

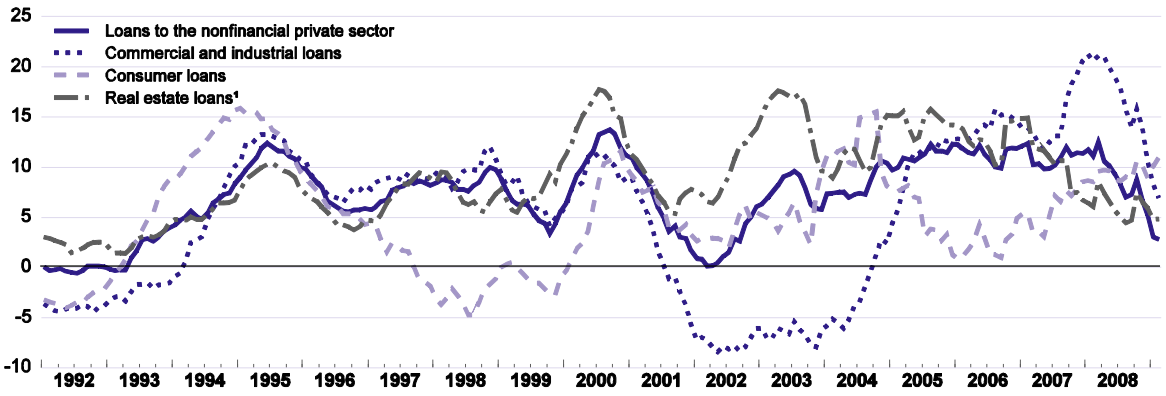
2. ABX indices of collateralised debt obligations (CDO) of ABS issued in 2006-07 (for a total amount of around $450 billion) valued them at about 40% of face value at the end of February. However, for the $100 billion or so of CDOs of ABS that have been liquidated so far, the average recovery rate on the most senior of the AAA-rated tranches has been only 23% (see *Financial Times*, 27 February 2009). With such a lower recovery rate the additional loss would be around $75 billion.

3. Assuming a loss-given-default rate of 28% (FRB Staff, 2003), if delinquency rates on US commercial property loans rose to the same high levels as observed in the early 1990s (13%), commercial banks would suffer nearly $60 billion in credit losses on their loan books. This estimate does not include losses for commercial banks related to commercial mortgage backed securities held on their trading book nor losses for other financial institutions.

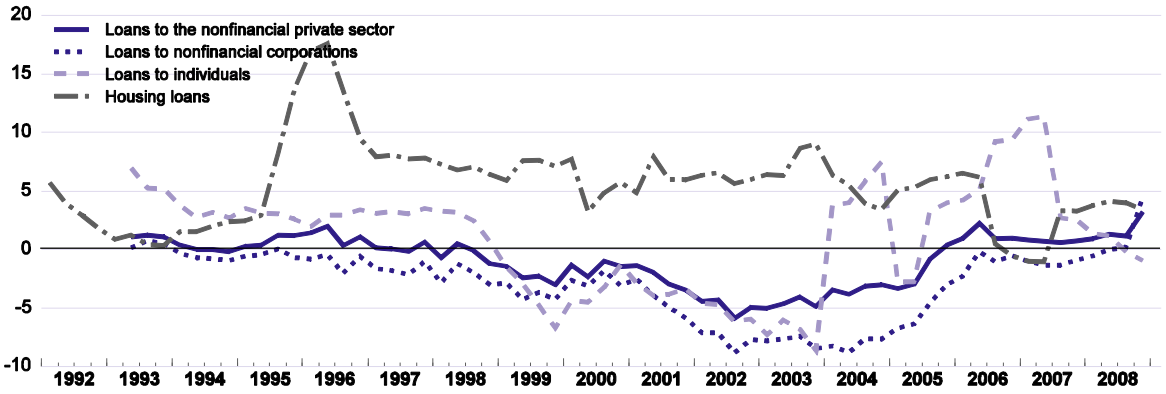
Figure 1.2. Bank lending is slowing down

Year-on-year growth rate

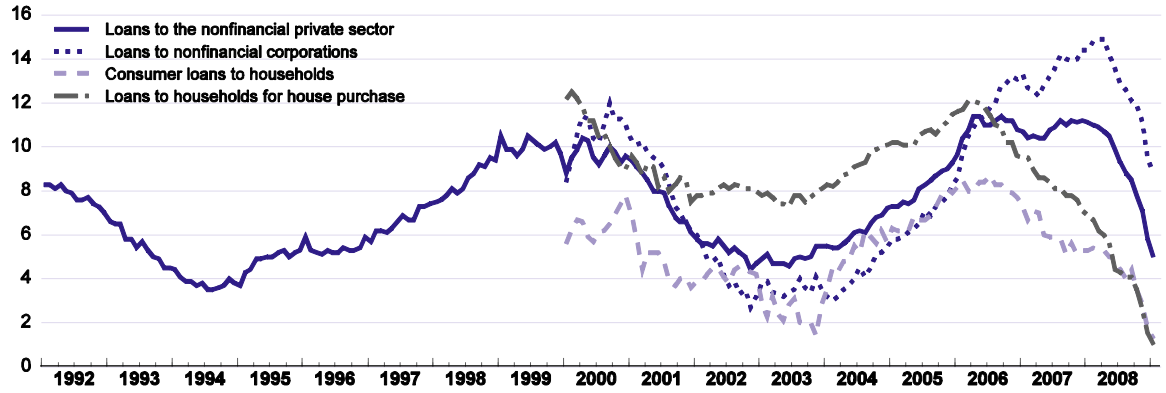
United States



Japan



Euro area



Note: Data refer to all commercial banks for the United States; to monetary financial institutions (MFIs) for the euro area; to all banks for Japan. Year-on-year growth rates are calculated from end-of-period stocks. For the euro area, these are adjusted for reclassifications, exchange rates variations and any other changes which do not arise from transactions.

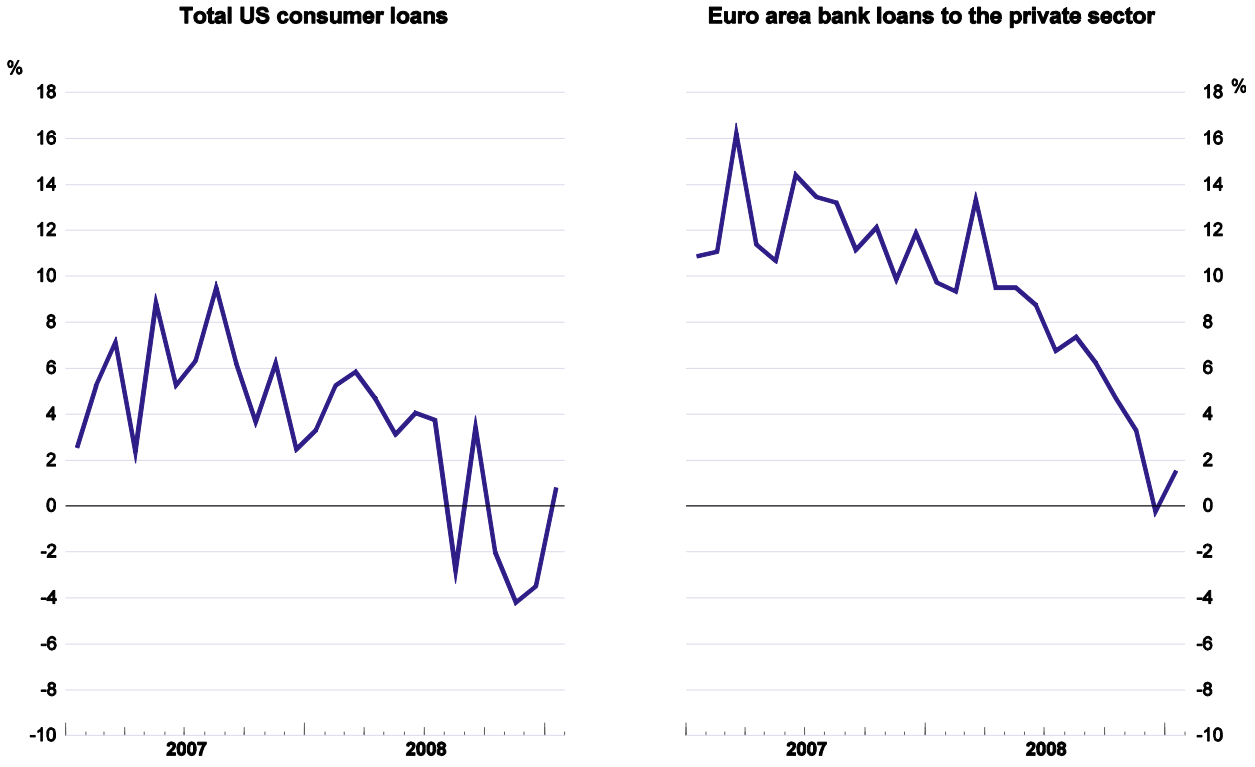
1. The definition of real estate loans for the United States is broader than housing loans as it includes also loans related to commercial real estate. Moreover, both for the United States and for Japan real estate / housing loans can include also loans to the corporate sector.

Source: Datastream.

that loan growth had fallen to very low levels in the euro area and become negative in the United States (Figure 1.3). Further weakening is to be expected due to borrowers having used up their previously-agreed credit lines, delayed effects of tightening bank lending standards (Box 1.1) and the economic downturn reducing the demand for bank loans.

Figure 1.3. Credit has started to show signs of contracting

Annualised monthly rate of change of seasonally adjusted stocks, per cent



Note: Euro area data are adjusted for the impact of securitisation.

Source: Datastream and ECB.

… but securities markets appear to be recovering

While concern about banks is widespread, there are hopeful signs in countries where securities markets are important and where aggressive policy measures have been taken, primarily in the United States, that market-based credit is beginning to flow again to non-financial firms. Since the trough in September 2008, bond issuance by non-financial US corporations more than doubled to reach in January 2009 a monthly level 16% above its ten-year average. Similarly, UK non-financial corporate bond issuance increased more than fivefold between the October-November 2008 trough and December 2008-January 2009 to a monthly level more than twice as large as its five-year average.[4]

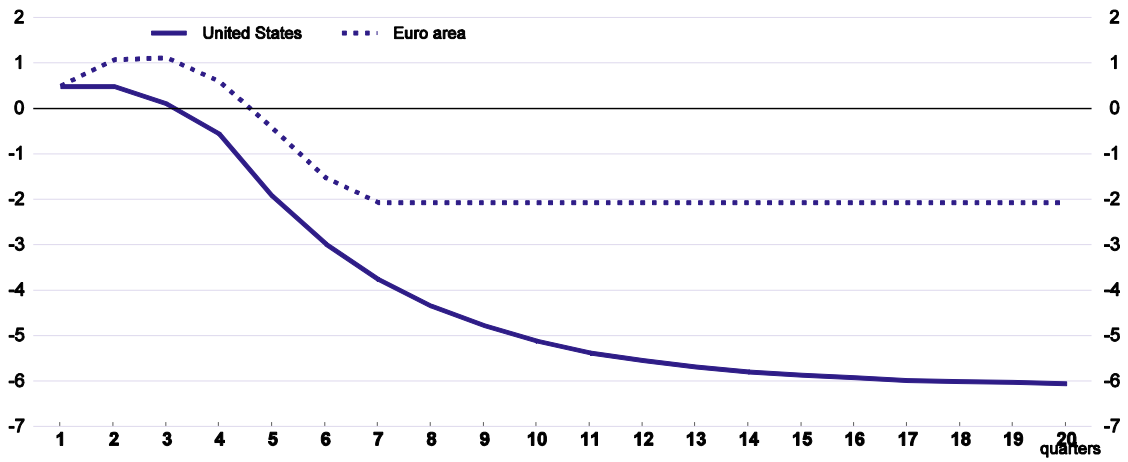
4. These ratios have been calculated after adjusting Federal Reserve and Bank of England statistics for seasonality.

Box 1.1. **The response of bank lending to tighter lending standards**

In the first half of 2008, the tightening in credit standards was accompanied by an increase in the growth of lending to businesses in the United States and the euro area. Lending only started to decelerate substantially in the second half of 2008. Past experience suggests that a lag between the tightening in standards and subsequent slowing in credit growth is not unusual. Simple regressions relating the growth of bank lending to the non-financial corporate sector to GDP growth and a measure of credit standards show that for the euro area and the United States the short-run response to a reported tightening in lending standards is (perversely) increased growth in lending (see Guichard *et al.*, 2009, for detailed econometric results). However, in the long run there is, as might be expected, a reduction in the growth of bank lending. Translating the estimated dynamics into year-on-year growth rates, there is typically a delay of four or more quarters before a tightening in lending standards is reflected in lower growth in lending (Figure). Nevertheless, the residuals from these equations suggest that the delay was unusually long in the current episode.

Response of bank lending to the non-financial corporate sector following a tightening in lending standards

(Year-over-year, annual % growth)



Note: The graphs show the response of bank lending to a one standard deviation increase in lending standards as measured by the Loan Officer Survey. In both cases this is about equal to a 20 percentage point increase in the number of banks reporting a tightening in lending standards.

Source: Datastream; and OECD calculations

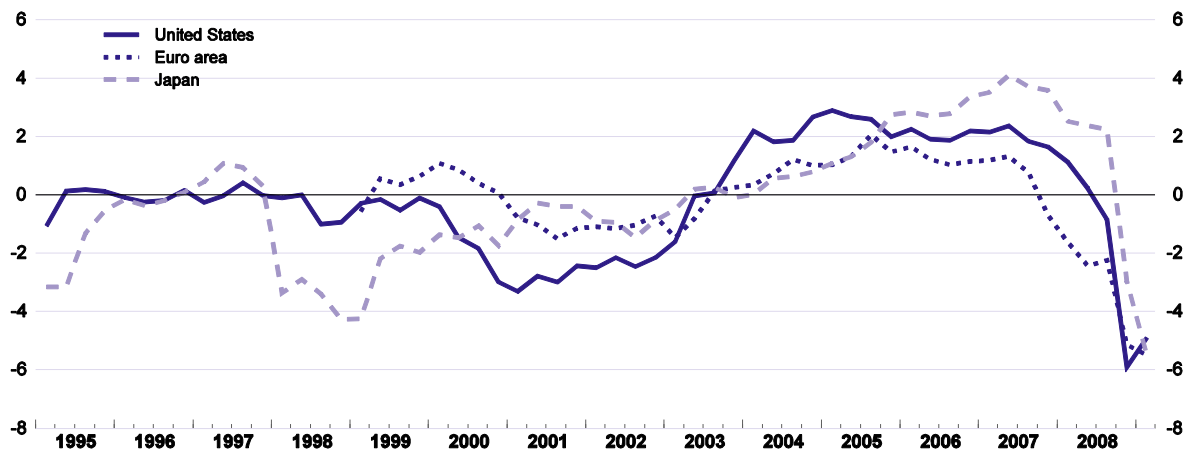
Several factors are likely to have contributed to the unusual delay in the response of credit growth to a tightening in lending standards. First, in the United States, there seems to have been more drawing on past credit lines than during the previous episode of credit tightening in the early 2000s and the drawing on past credit lines has come through faster than in the 1990-92 episode (Guichard *et al.*, 2009). This can be explained by the unusually large reduction in commercial paper issuance, fear of liquidity shortages, and the fact that credit lines were negotiated in unusually good conditions. Many loans issued during the peak of the credit boom have loose covenants, which do not prevent companies from drawing on their credit lines even if their financial conditions worsen. Moreover, selling securitized loans has become more difficult across the OECD area. This trend has resulted in an increase in the loans reported on banks' balance sheets, which in US bank lending data has masked the fact that new loans are contracting sharply.[1] The amount of new loans to large borrowers during the peak period of the financial crisis (September-November 2008) was 37% lower than during the prior three-month period and 68% below the peak of the credit boom (March-May 2007) in the United States (Ivanisha and Scharfstein, 2008). The contraction was steepest for below-investment grade borrowers. New lending for real investment (such as capital expenditures) and for restructuring (LBOs, M&A, share repurchases) were affected equally.

1. In the euro area, securitisation has had the opposite effect on bank lending statistics. Because banks can use securitised loans retained on their balance sheets as collateral in ECB refinancing operations, securitisation has soared, which has worked to depress bank lending statistics (which do not include retained securitised loans). The euro area series reported on the above Figure are corrected for the impact of securitisation.

Overall, financial conditions remain extremely tight in the OECD area…

Nonetheless, overall financial conditions remain extremely tight. The OECD indicator of financial conditions (Figure 1.4) synthesises a range of financial influences on economic activity, including corporate bond spreads, which remain at high levels despite some recent easing (especially in the United States); bank lending standards, which are extremely tight even though they appear to have ceased tightening; equity and house prices, which have declined substantially, thereby reducing household wealth and consumption; policy interest rates and government bond yields, both of which have fallen markedly; and exchange rates, which have depreciated in some countries and appreciated in other countries, notably Japan. The tightening in financial conditions since mid-2007 is estimated to reduce the level of GDP by between 6 to 8% in the main OECD regions. Because there is a lag of four to six quarters before the full effect of changes in financial conditions are estimated to impact on GDP and because the most severe phase of tightening has only occurred since the third quarter of 2008, the full effect of past tightening in conditions has not yet been felt. Indeed, past tightening will continue to be a substantial drag on growth through 2009, so that if financial conditions remain at their current levels through 2009, annualised GDP growth in 2009 will be reduced by up to 4 percentage points in the United States and Japan and up to 3 percentage points in the euro area.[5]

Figure 1.4. Financial conditions are tight



Note: A unit decline in the index implies a tightening in financial conditions sufficient to produce an average reduction in the level of GDP by ½ to 1% after four-six quarters. See details in Guichard et al. (2009).

Source: OECD.

… as well as in emerging market economies

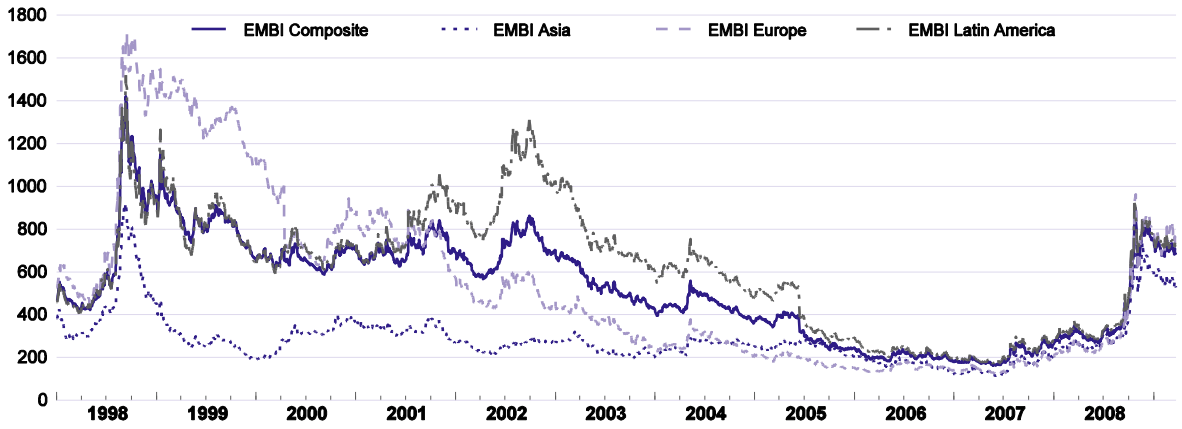
As risk aversion intensified from the fourth quarter of 2008, capital flight meant that emerging market bond spreads soared, even though comparatively healthy fundamentals in many emerging economies kept spreads below levels reached in the past (Figure 1.5). Nonetheless, and in spite of considerable variation in country conditions, a number of emerging

5. For further explanation of how changes in the FCIs translate into effects on the GDP growth rate, see Guichard *et al.* (2009).

market currencies have come under pressure,[6] with double-digit effective depreciations since mid-2008 in Brazil, the Czech Republic, Hungary, Indonesia, Mexico, Poland, the Russian Federation and Turkey. Foreign banks in these and other emerging market economies have suffered currency losses to the extent that their lending has been in domestic currency, or defaults on loans if their lending has been denominated in stronger currencies.

Figure 1.5. Emerging market bond spreads have picked up

Last observation: 23 March 2009



1. Spreads show yield difference in basis points over US Treasury bonds.

Source: JP Morgan.

Recent developments and future implications

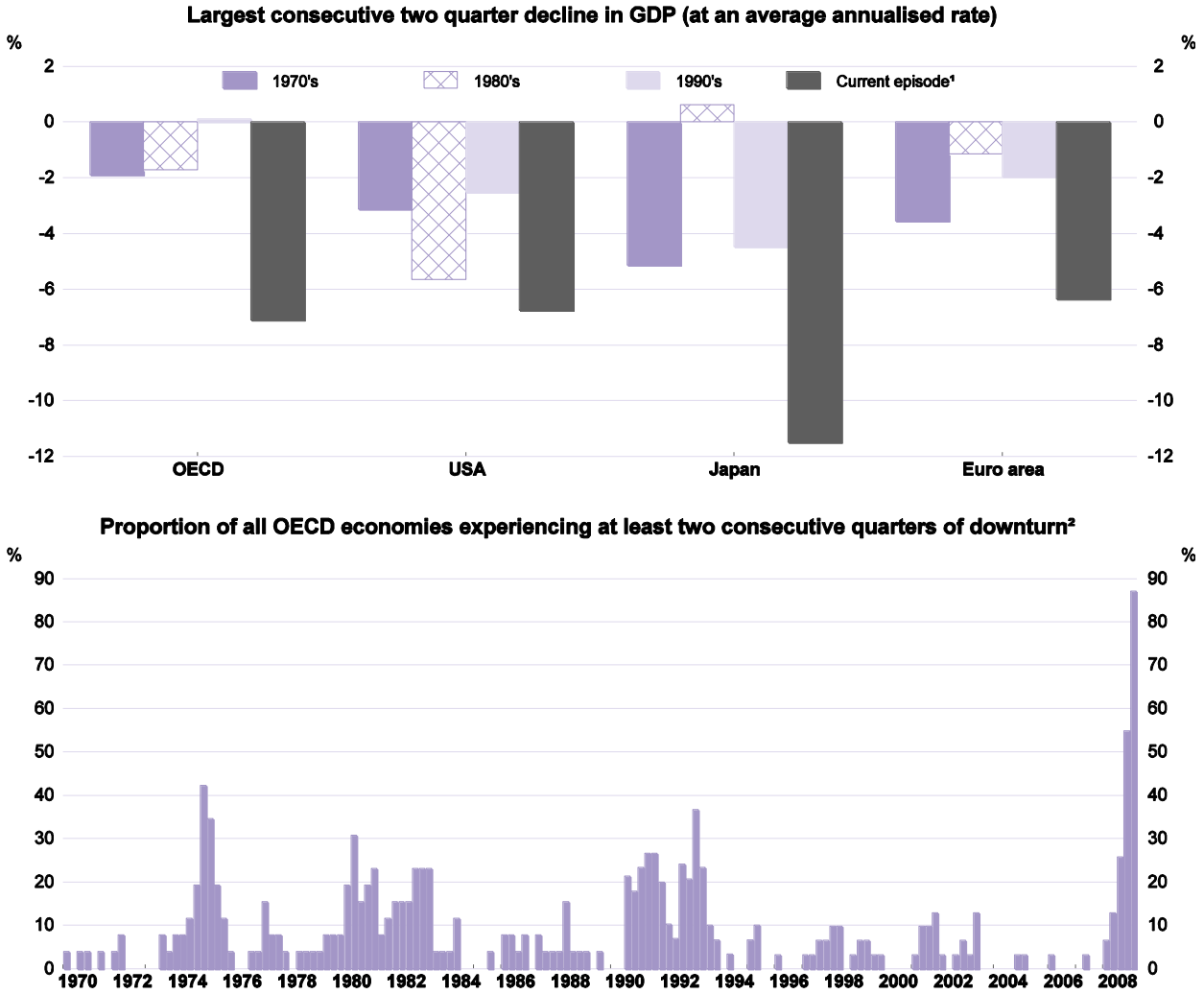
Activity everywhere is turning down sharply

The fall in output has been sharp and highly synchronised

The current sharp downturn in activity is without precedent in the post-war period in terms of both its severity and the high degree of synchronicity (Figure 1.6). This unprecedented degree of synchronicity coincides with a precipitous decline in international trade (Figure 1.7 and Box 1.2). Over the last quarter of 2008 and first quarter of 2009, world trade has fallen at an average annualised rate of more than 20%, a rate of decline not previously experienced over the last four decades. Across all regions, the downturn has affected industrial production unusually hard

6. In addition to capital flight, the currency depreciations can be explained by lower export prices and volumes and monetary easing.

Figure 1.6. The downturn is the most severe and synchronised in post-war history



1. 2008q4-2009q1.
2. The last observation is for 2009q1 and relies on estimates of GDP growth.

Source: OECD.

(Figure 1.8), given its greater integration in world trade. Thus, among the major OECD economies experiencing the biggest recent declines in output are those that have been most reliant on manufacturing exports for growth, notably Japan and Germany, rather than those most closely associated with the financial crisis. Advance indicators, such as survey measures of export orders, suggest further large prospective declines in world trade.

Box 1.2. **International trade in free fall**

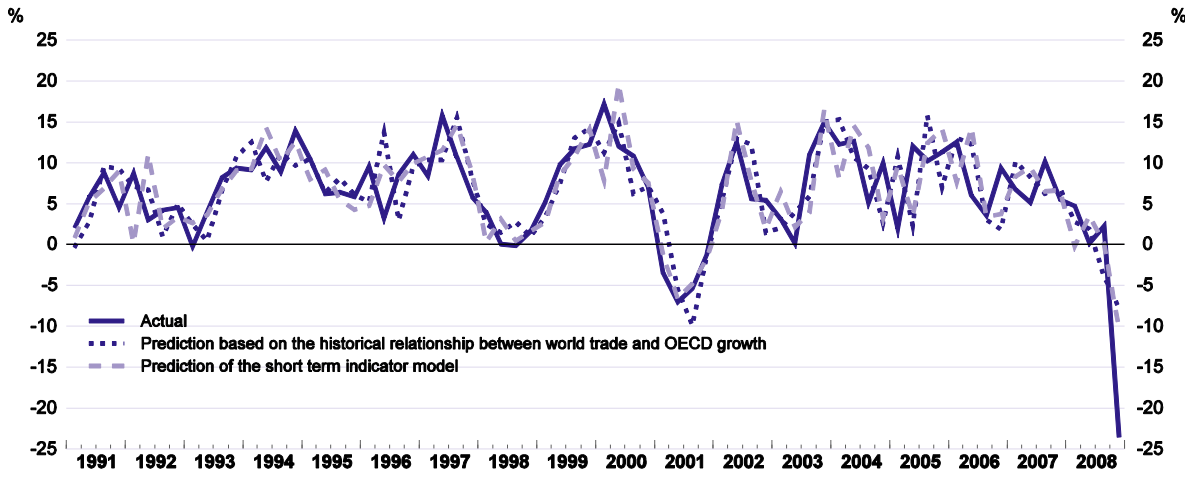
After steady annual growth at around 8% over the past half decade, world trade growth started to weaken in early 2008 and collapsed in the last quarter. This contraction of world trade is broad-based, and affects all regions and is the worst since comparable data exist (1965).

The world trade contraction in the last quarter of 2008 is also worse than suggested by historical relationships linking world trade to either short-term leading indicators or OECD growth.[1] A drop in trade finance following banks' reluctance to lend is often mentioned as a key factor behind the collapse in world trade,[2] but even when global credit conditions are taken into account by means of a proxy it remains difficult to explain the collapse in trade (see figure below).[3] This could reflect that the trade finance squeeze has been deeper than indicated by the proxy or that it had a stronger impact on world trade than in past episodes. Alternatively, the under-estimation of the trade contraction may mirror a stronger link between activity and trade as a result of continued globalisation, notably the prevalence of global supply chains.

The trade forecast associated with this *Interim Economic Outlook* is in line with the models mentioned above, under the assumption that the unexplained part of trade contraction is a one-off shift in the trade level for which the main reasons still have to be identified.[4]

The collapse of world trade growth cannot be explained by past relationships

Quarterly growth rates annualized



Source: OECD.

1. Two models are used to explain world trade. The first model is an indicator-based model that relates world trade to industrial production in the OECD countries and Brazil, China, India, Indonesia and the Russian Federation; export orders in the G7 countries (except Canada); the US tech pulse index; world semiconductor billings; and US credit standards. Monthly VAR models are used to forecast these variables over the very short term. The second model is based on the historical relationship between world trade growth, OECD GDP growth and US credit standards.

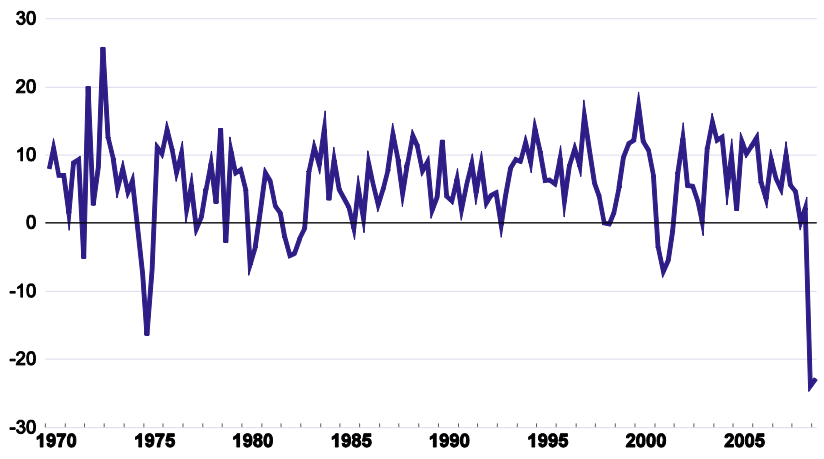
2. See for instance IMF (2009).

3. In the absence of any other available data, the US loans officer survey results on credit standards applied to large and medium sized companies are used as proxy for global trade financing availability.

4. On the assumption that financial conditions do not improve before end-2009 and start improving slowly, this one-off shift was not removed over the projection period.

Figure 1.7. World trade growth has plummeted

Annualised quarter on quarter growth (%)



Note: 2009q1 is an estimate.

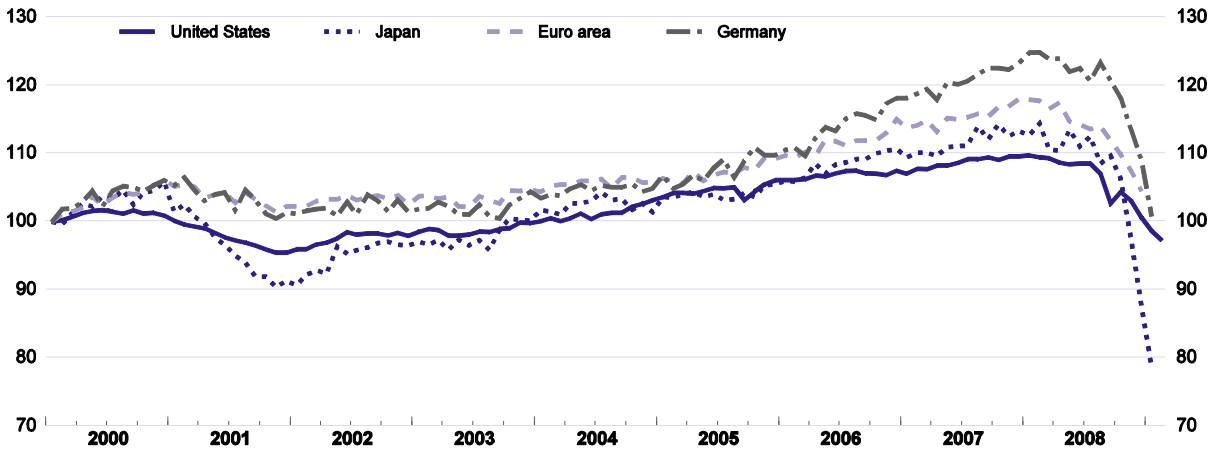
Source: OECD.

The trade collapse invalidates the decoupling hypothesis

The collapse in international trade explains why distress has spread so rapidly to many economies, particularly in Asia, which six months ago were expected to be only lightly touched by the financial crisis. The value of exports of non-OECD Asia fell at an average annualised rate of over 30% over the last quarter of 2008 and first quarter of 2009.

Figure 1.8. Industrial production has plunged

Index, January 2000 = 100

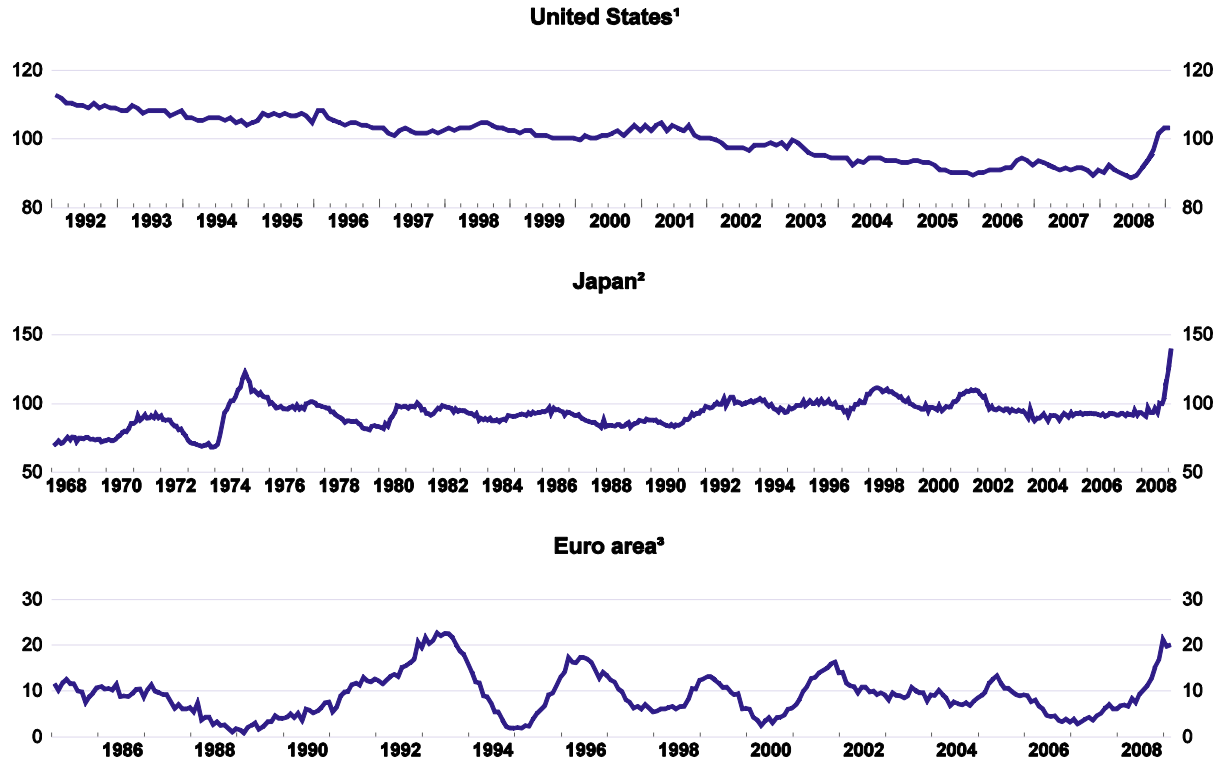


Source: Datastream.

Inventory build-up implies further impending weakness

Another factor likely to bear down on near-term activity is the need to unwind what appears to have been a substantial build-up of inventories in most major OECD countries (Figure 1.9).

Figure 1.9. Inventories have risen steeply



1. Inventory/sales ratio, index January 2000 = 100, seasonally adjusted, total business.
2. Inventory/shipments ratio, index January 2000 = 100, seasonally adjusted, mining and manufacturing.
3. Stock of finished goods, balance of index diffusion, seasonally adjusted, industry survey.

Source: Datastream.

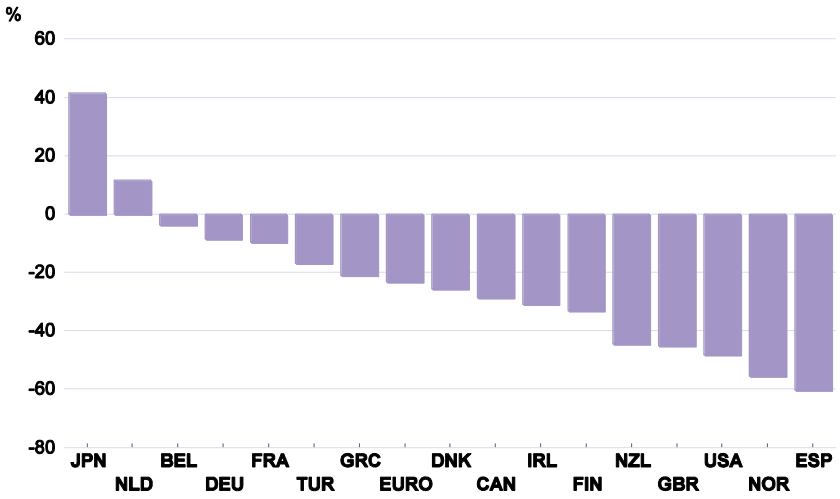
Housing investment is still contracting

A further drag on activity is coming from the continuing downturn in housing. Over the past year, housing investment has fallen in most OECD countries,[7] and by more than 10% in about one-third, with particularly large falls to year-end 2008 in the United States (by 20%), United Kingdom, Ireland and New Zealand (20-30%) and Iceland (more than 40%). Substantial drops in housing permits suggest that housing investment is likely to continue to fall in many countries over the near term (Figure 1.10), though recent indicators for the United States may suggest some future stabilisation.

7. For Japan, following corrections of procedures and regulations introduced in 2007, housing investment recovered strongly during 2008.

Figure 1.10. Residential permits are falling sharply

Latest data, year-on-year growth rate[1]



1. Monthly data mostly ending between October 2008 and January 2009; three-month average over the previous year's three-month average, seasonally adjusted.

Source: Eurostat; and OECD, Main Economic Indicators database.

Real house prices are falling in nearly all countries

For virtually all OECD countries for which data are readily available, year-on-year real house prices are now falling (Table 1.2). In Germany and Japan, real house prices have been falling for a number of years (with no obvious tendency for this to become more pronounced), but in most other countries real house prices have begun to fall only within this past year. In previous housing cycles, the phase of contracting house prices typically lasted around five years with an average fall in real house prices of the order of 25%.[8] Negative effects of falling house prices on consumption are likely to be larger among those countries where mortgage markets have in the past facilitated housing equity withdrawal,[9] particularly where the effect of reduced housing collateral is combined with more stringent lending standards as a result of the financial crisis.

Unemployment is increasing

Labour markets are weakening throughout the OECD area, in some cases dramatically. In the United States, this process has been underway since early 2008, with the unemployment rate rising at an accelerating pace to its highest level since the early 1980s. In the euro area, the increase in unemployment commenced only in the third quarter and the rate was only ½ percentage point higher in January than in September, but job losses are now becoming widespread. Though so far not showing up in higher unemployment rates, the weakness of the labour market in Japan is evident

8. The main characteristics of real house price cycles from 1970 to the mid-1990s can be summarised as follows: the average cycle lasted about ten years; during the expansion phase of about six years, real house prices increased on average by close to 40%; and in the subsequent contraction phase, which lasted around five years, the average fall in prices has been on the order of 25% (Girouard *et al.*, 2006).

9. This has been the case, for example, in the United States, United Kingdom, Canada, Australia and some Nordic countries. These also tend to be the countries where consumption is most strongly correlated with house prices (Catte *et al.*, 2004).

in the withdrawal from the labour force. With employment reacting to output developments with a lag, the decline in output in recent months has yet to be fully reflected in unemployment. The intensifying risk of job losses has contributed to the sharp decline in household confidence, which has reached record low levels in many countries, which in turn is weighing on private consumption.

Table 1.2. **Real house prices are falling in virtually all countries**

	Per cent annual rate of change				*Level relative to long-term average* [1]		
	2000-2006	**2007**	**2008** [2]	**Latest quarter** [3]	**Price-to-rent ratio**	**Price-to-income ratio**	**Lastest available quarter**
United States	5.4	-0.4	-6.2	-5.9	117	100	Q4 2008
Japan	-4.3	-1.1	-2.4	-3.8	68	66	Q3 2008
Germany	-2.9	-1.2	-2.7	-1.8	71	64	Q4 2008
France	9.5	4.9	-1.1	-2.7	156	136	Q3 2008
Italy	6.1	3.1	-1.1	-2.9	123	109	Q3 2008
United Kingdom	8.8	8.4	-4.3	-12.1	139	132	Q4 2008
Canada	6.7	8.5	-3.4	-11.5	165	117	Q4 2008
Australia	7.1	8.8	0.4	-6.7	160	128	Q4 2008
Denmark	7.9	2.9	-6.0	-9.1	154	143	Q3 2008
Finland	4.7	5.6	-2.4	-7.1	140	99	Q4 2008
Ireland	8.3	-1.8	-9.6	-13.3	155	128	Q3 2008
Netherlands	2.9	2.6	0.7	-0.3	154	154	Q4 2008
Norway	5.5	11.4	-5.2	-10.7	149	112	Q4 2008
New Zealand	9.2	8.3	-6.6	-11.2	146	143	Q3 2008
Spain	11.2	2.6	-3.7	-6.2	180	144	Q4 2008
Sweden	6.7	8.6	0.0	-4.4	154	119	Q4 2008
Switzerland	1.7	1.3	0.2	2.1	85	76	Q4 2008
Euro area[4,5]	4.5	2.0	-2.0	-3.0	124	109	
Total of above countries[5]	4.1	1.5	-4.0	-5.4	117	102	

Note: House prices deflated by the Consumer Price Index.
1. Long-term average = 100, latest quarter available.
2. Average of available quarters where full year is not yet complete.
3. Increase over a year earlier to the latest available quarter.
4. Germany, France, Italy, Spain. Finland, Ireland and the Netherlands.
5. Using 2000 GDP weights.

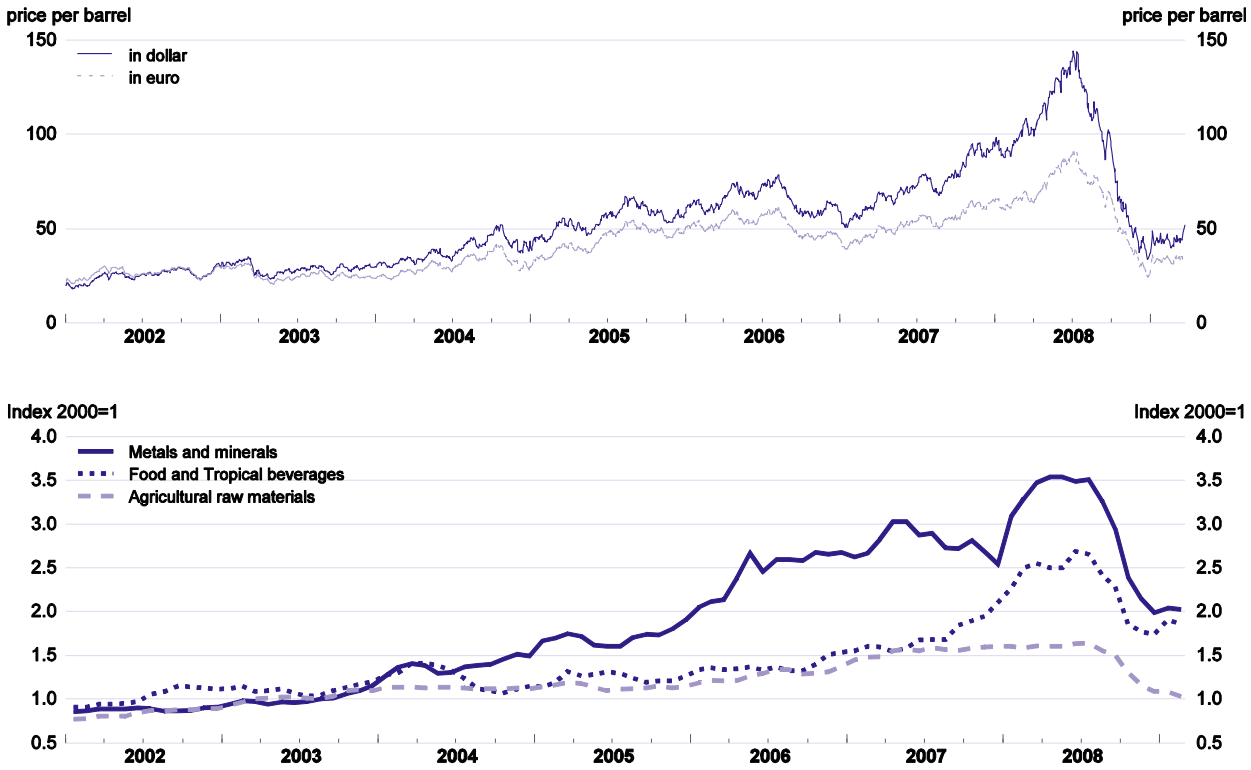
Source: Girouard *et al.* (2006), OECD.

Inflation is coming down

Headline inflation has fallen sharply since mid-2008 mainly as a consequence of the collapse in commodity prices (Figure 1.11), to annual rates of around 1% or below in the euro area and the United States (Figure 1.12). The fall in commodity prices also has had some impact on measures of underlying inflation and the interpretation of such measures is made more difficult by the different readings across indicators and over different time horizons. Nonetheless, it appears that underlying inflation has declined but not nearly to the same extent as headline inflation and in many countries it may still be in the 1½ to 2% range. Survey measures (from consumers and professional forecasters) of longer-term inflation

expectations over the next five to ten years for the United States and euro area are not substantially different from recent history and do not provide any evidence of expected deflation, but the risks of deflation should not be discounted.[10] For Japan, core inflation (excluding food and energy) has again dipped below zero, while headline and central tendency measures are only slightly positive.

Figure 1.11. Oil and other commodity prices have tumbled



Source: OECD, Main Economic Indicators database.

Growth prospects

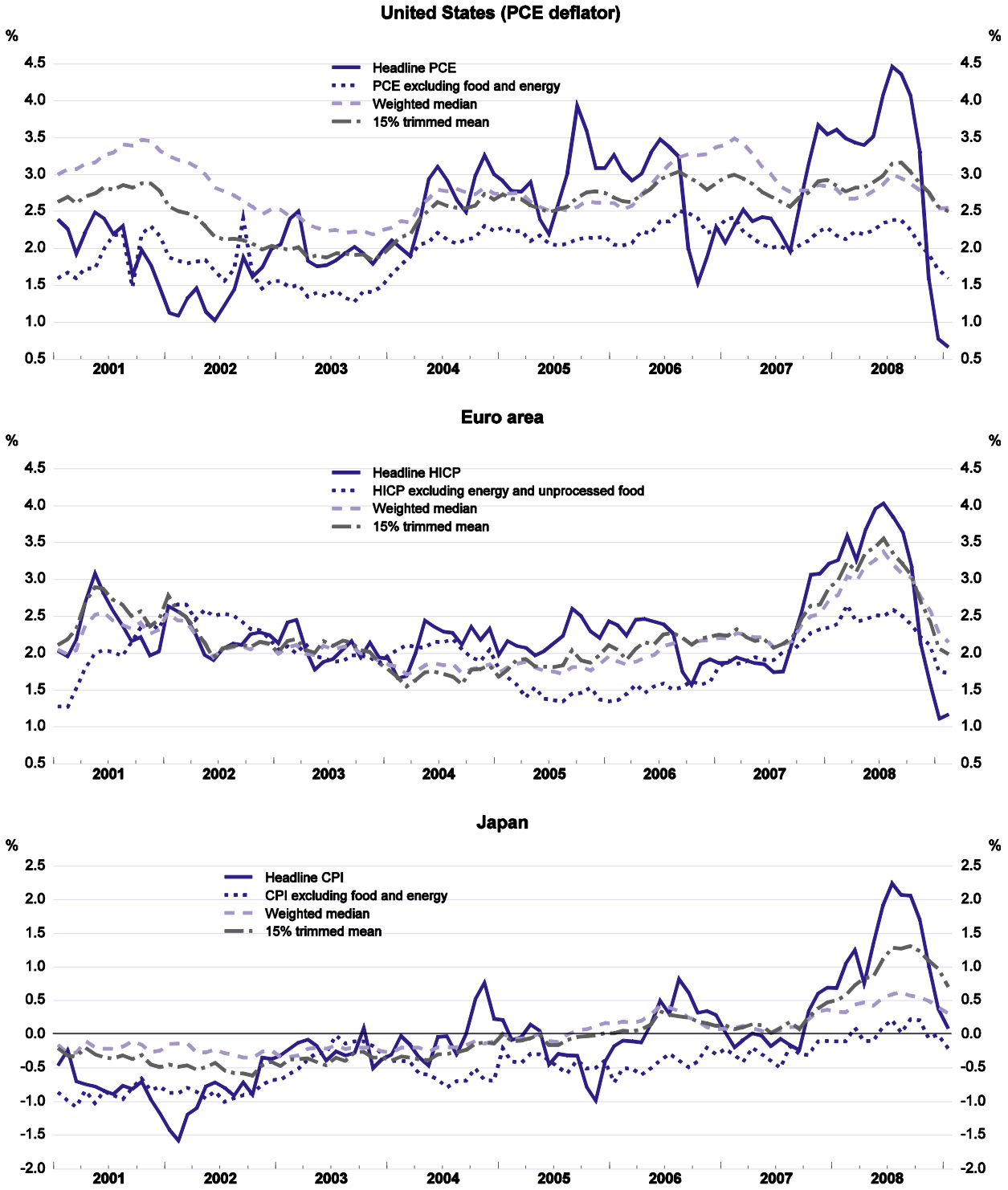
Area-wide activity is projected to decline in 2009 with a weak recovery starting in 2010

1. Activity in the OECD area is projected to decline throughout 2009 with a muted recovery only starting in the first half of 2010 (Figure 1.13). The recovery is based on an assumption that the tensions in financial markets dissipate towards the end of 2009, supportive monetary and fiscal policies (Box 1.3) and a pick-up in growth in the non-OECD

10. Measures of financial market inflation expectations, derived from the difference between nominal and index-linked government bonds, have shown a marked dip, but this probably mainly reflects a preference for nominal bonds during the current crisis because of their greater liquidity.

Figure 1.12. Inflation is falling

12-month percentage change



Note: PCE refers to personal consumption expenditures, HICP to harmonised index of consumer prices and CPI to consumer price index.

Source: OECD, Main Economic Indicators database; and OECD calculations.

Box 1.3. **Policy and other assumptions underlying the projections**

Fiscal policy assumptions are based as closely as possible on legislated tax and spending provisions (current policies or "current services"). Where policy changes have been announced but not legislated, they are incorporated if it is deemed clear that they will be implemented in a shape close to that announced. Details on discretionary fiscal measures in response to the crisis are available on the Economic Outlook webpage on the OECD website (www.oecd.org/oecdEconomicOutlook**)**. The fiscal costs of the measures to support financial institutions could be large but they are not fully reflected in current projections. First, guarantees are contingent liabilities and thus are off-balance sheet as long as they are not called. Second, some recapitalisation plans have been announced after the cut-off date and are still conditional. For the present projections, the implications are as follows:

- For the United States, the *American Recovery and Reinvestment Act of 2009* is estimated to add more than 2% of GDP to the federal government deficit over this year and next. It is also assumed that some Alternative Minimum Tax relief in the *Emergency Economic Stabilisation Act* will be extended in 2010. In these projections the funds disbursed under the Troubled Asset Relief Program (TARP) will not have an impact on the government financial balance. This is in contrast to the methodology adopted by the US Treasury which records most TARP transactions on a cash basis.

- In Japan, the projections include the supplementary budgets in 2008 and 2009, the Fiscal Year (FY) 2009 budget plan, and the medium-term fiscal reform plan. The pension contribution rate will continue to rise each year under the FY 2004 reform.

- For Germany, the two fiscal stimulus packages as well as additional measures, such as the lowering of unemployment insurance contributions, an increase in child benefits and allowances, a scheduled increase in the tax deductibility of health and long-term care contributions and the re-introduction of the tax allowance for commuters, have been built into the projections. For France, the combination of the economic stimulus package and the loss of exceptionally buoyant tax revenues associated with falling asset prices is assumed to induce a widening of the cyclically-adjusted general government deficit of around 1 percentage point of GDP between 2008 and 2010. By contrast, for Italy the projections incorporate some underlying fiscal tightening through reductions in current expenditure, although some slippage relative to announcements is assumed.

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

- In the United States, the target federal funds rate is assumed to remain constant at ¼ per cent until the end of 2010 as inflation falls and the economy continues to grow below the potential rate.

- In the euro area, policy rates are assumed to be set so as to bring the overnight rate close to zero by the end of the second quarter of 2009, amid a severe economic downturn. They will then remain at this level until the end of 2010.

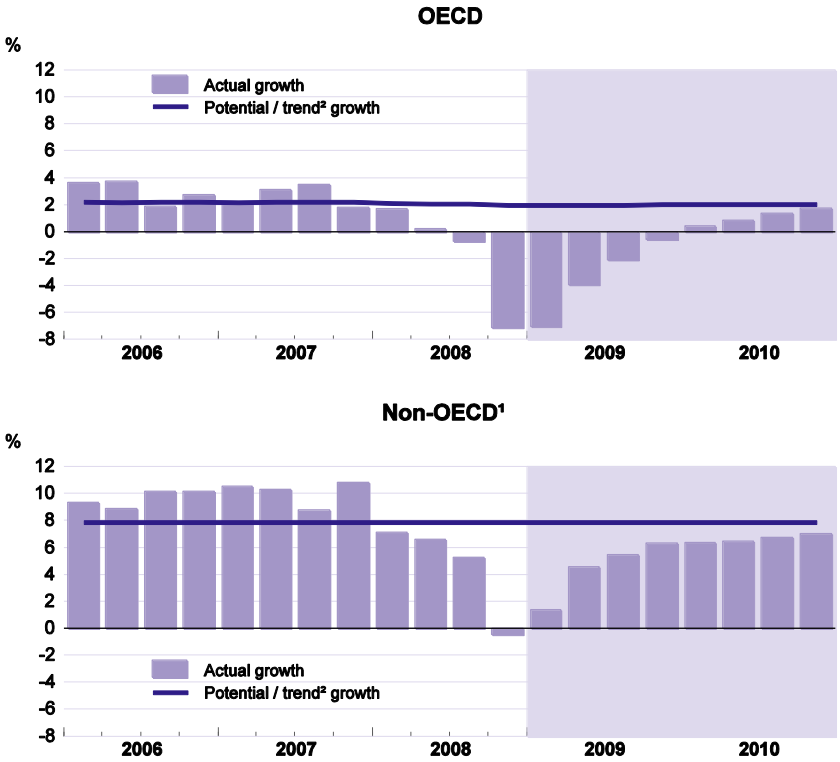
- In Japan, the short-term policy interest rate is assumed to remain at 10 basis points until the end of 2010 as the economy is likely to remain in deflation.

The projections assume generally unchanged exchange rates from those prevailing on 9 March 2009: $1 equals ¥ 98.770, € 0.792 (or equivalently, € 1 equals $1.263) and CNY 6.840.

Over the projection period the price for a barrel of Brent crude is assumed to remain at $45. Food prices as well as prices for metals and ores are assumed to stabilise around current reduced levels.

The cut-off date for information used in the projections is 20 March 2009. Details of assumptions for each of the major seven OECD countries are provided in Chapter 2.

Figure 1.13. The cycle is global



1. The non-OECD region is here taken to be a weighted average, using 2000 GDP weights and PPPs, of Brazil, China, the Russian Federation and India which together accounted for about half of non-OECD output in 2000.

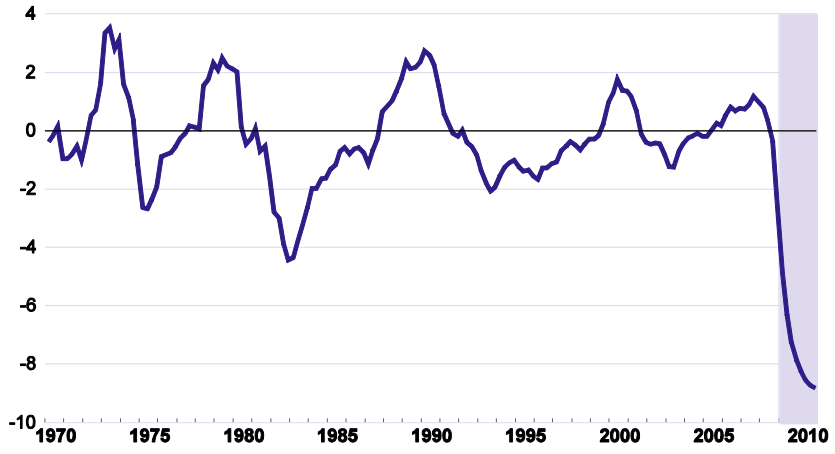
2. Trend growth for the non-OECD is the average over the period 2000-07.

Source: OECD.

area. However, growth in the OECD area is expected to be below potential throughout 2010 with a widening slack in the economy. By the end of 2010, area-wide output could be far below the long-run potential, with the gap put at around 8% based on estimates of potential that do not take into account any negative effects of the crisis -- the largest gap in four decades and twice as large as in the recession in the early 1980s (Figure 1.14). The OECD unemployment rate is expected to increase from 7½ per cent in the

Figure 1.14. The OECD output gap will be the largest in four decades

In percentage of potential output



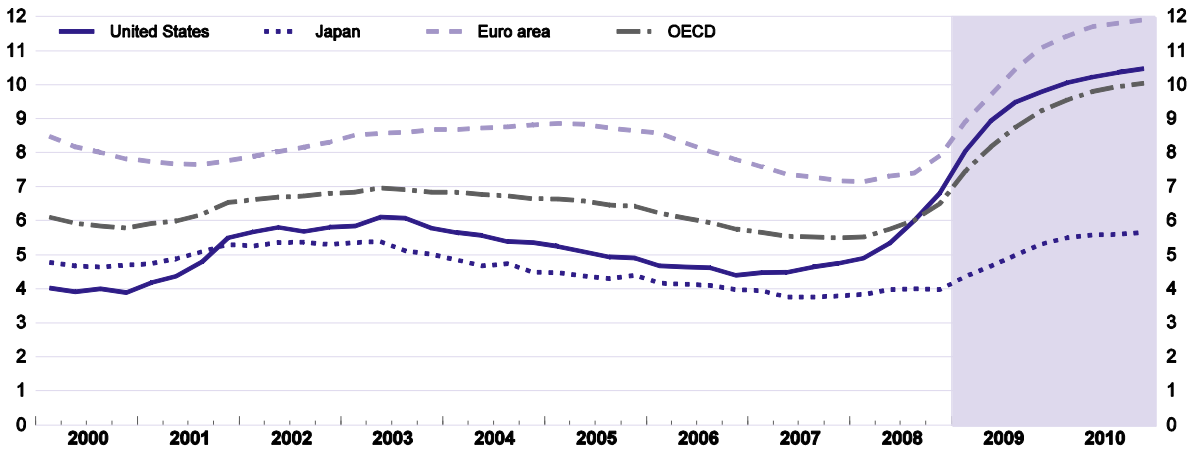
Note: Estimates of potential output have not been revised and therefore do not incorporate the reduction in supply implied by the downturn.

Source: OECD.

first quarter of 2009 to above 10% at the end of 2010 (Figure 1.15). With output gaps increasing to record levels and unemployment on the rise, inflation will decelerate to very low levels across the OECD area while remaining in negative territory in Japan (Figure 1.16).

Figure 1.15. Unemployment will rise substantially

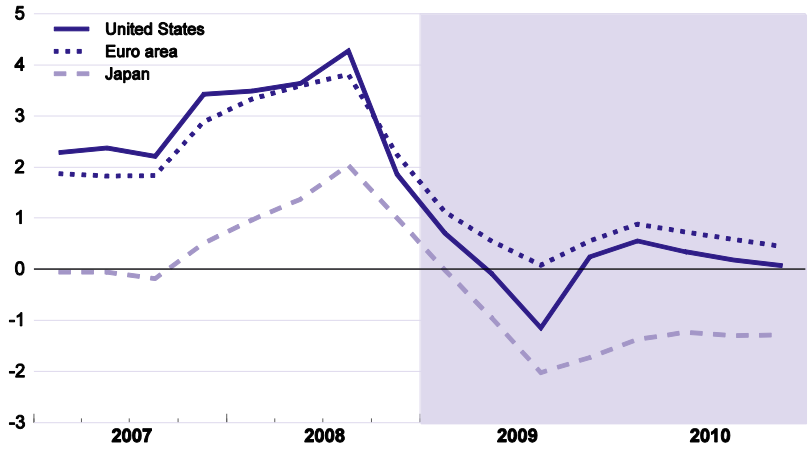
In percentage of labour force



Source: OECD.

Figure 1.16. Inflation will fall to very low levels

Year-on-year growth rate, %



Note: Personal consumption expenditures deflator for the United States; Harmonised index of consumer prices for euro area; Consumer price index for Japan.

Source: OECD.

Growth performance will reflect vulnerability to headwinds

While the cycle continues to be highly synchronised across the major OECD regions, the composition of the contraction differs significantly (Table 1.3). For the United States, where negative wealth effects are likely to be strong and credit conditions are especially tight, domestic demand is likely to be particularly weak. For Japan and the large euro area countries, which are more exposed to external trade than the United States, dwindling exports are likely to have a particularly negative impact on activity as parts of Asia and eastern Europe compress their external demand. The composition of the recovery in GDP is expected to be more uniform.

The salient features of the economic outlook for major countries and areas are as follows:

Recoveries will be driven by a gradual return to stability in financial markets and strong policy stimulus in the United States…

- In the near term, the US economy is projected to contract sharply as an inventory overhang is corrected. Thereafter, the contraction will continue throughout 2009 but at a diminishing rate, reflecting strong fiscal stimulus, progress in stabilising financial markets and reduced drag on growth from residential investment. By early 2010, these factors are expected to pull the economy out of recession, growth turning positive and accelerating to levels that are nonetheless still below potential at the end of the year. With the negative output gap widening to close to 10% and the unemployment rate exceeding 10%, inflation will ease to close to zero.

Table 1.3. **Weakness extends across all categories of demand**

Contributions to GDP growth, per cent of GDP in previous period [1]

	2006	2007	2008	2009	2010
United States					
Final domestic demand	2.8	1.8	0.0	-3.9	0.0
of which: Business investment	0.8	0.6	0.2	-2.1	-0.7
Residential investment	-0.4	-0.9	-0.8	-0.6	0.0
Private consumption	2.2	2.0	0.2	-1.7	0.1
Stockbuilding	0.0	-0.4	-0.2	-0.4	0.0
Net exports	0.0	0.6	1.3	0.3	0.0
GDP	2.8	2.0	1.1	-4.0	0.0
Japan					
Final domestic demand	1.0	1.0	-0.6	-2.6	-0.1
of which: Business investment	0.4	0.9	-0.6	-2.5	-0.2
Residential investment	0.0	-0.3	-0.2	-0.1	0.0
Private consumption	0.9	0.4	0.3	-0.8	-0.3
Stockbuilding	0.1	0.3	-0.1	0.0	0.0
Net exports	0.8	1.1	0.1	-3.8	-0.3
GDP	2.0	2.4	-0.6	-6.6	-0.5
Euro area					
Total domestic demand	2.8	2.3	0.7	-2.8	-0.3
Net exports	0.2	0.3	0.0	-1.3	0.0
GDP	3.0	2.6	0.7	-4.1	-0.3
Major 7 countries					
Final domestic demand	2.4	1.9	0.2	-3.1	0.0
of which: Business investment	0.7	0.7	0.0	-2.0	-0.4
Residential investment	-0.1	-0.4	-0.5	-0.5	0.0
Private consumption	1.6	1.4	0.3	-1.2	0.0
Stockbuilding	0.0	-0.1	-0.1	-0.4	0.0
Net exports	0.2	0.4	0.5	-1.0	-0.1
GDP	2.6	2.2	0.6	-4.4	-0.1

1. Chain-linked calculation for stockbuilding and net exports in USA and Japan.

Source: OECD.

… Japan…

- The Japanese economy will continue to contract through 2009 as the fall in external demand more than offsets policy-induced support to domestic demand. As the drag from the external sector fades and domestic demand picks up, the economy should stabilise in the first half of 2010 before resuming growth. The output gap will exceed 10% at the end of 2010 and the unemployment rate will have climbed to 5¾ per cent. Prices will decline throughout the projection period.

… and the euro area

- In the near term, output in the euro area economy is projected to decline sharply due to an inventory correction, with the contraction continuing at a more moderate rate for the rest of 2009. With the drag on growth from investment subsiding and external demand rising, a very moderate pick-up is projected in 2010. With the negative output gap widening to over 8% and the unemployment rate rising to 12%, the inflation rate is likely to decline to close to zero.

World trade will recover strongly from the current slump

The exceptional contraction of world trade towards the end of 2008 and at the beginning of 2009 will gradually ease and come to a halt by end 2009, and robust recovery is projected in 2010. This turnaround is largely driven by strong imports and exports of non-OECD countries, reflecting recoveries from the slowdown in growth in these countries. Thus, growth in Brazil, China and India is projected to rise significantly, the pick-up in China being driven by supportive policies. However, the Russian Federation is only expected to recover weakly, reflecting very large adverse external shocks and fragile confidence in banks and the currency. Current account imbalances in the major OECD regions have been reduced over the past year and some additional reduction may take place up to 2010.

Risks are skewed to the downside

The downturn could further aggravate financial difficulties by…

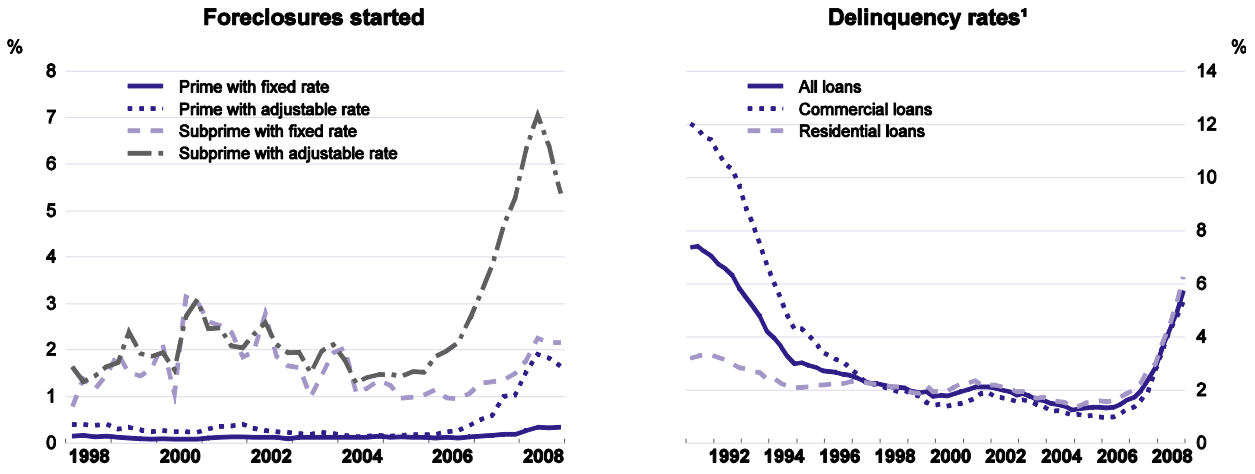
A general downside risk to the outlook is that the worsening of the real economy may further aggravate the financial crisis. There are a number of ways this could come about:

… raising defaults on residential mortgages…

- Foreclosure and delinquency rates on residential mortgages have already surpassed levels of the 1990s recession in the United States (Figure 1.17); with the current recession set to be much deeper, default rates could be correspondingly higher which in turn would aggravate conditions in the banking sector and markets for mortgage-backed securities.

Figure 1.17. US foreclosure and delinquency rates are rising

Share of loans



1. Delinquent loans are those past due 30 days or more.

Source: Datastream.

… commercial mortgages…

- While delinquency rates on commercial mortgages have risen, they are still much lower than at the height of the recession in the early 1990s; they could catch up with normal recession levels and default rates could be further amplified given the unusual depth of the current recession.

… particular debtors…

- Particular default "events" could result in a reassessment of the riskiness of classes of assets and groups of debtors, further weakening the asset side of banks' balance sheets.

… and particular countries…

- Banks' balance sheets in some countries may be at risk due to cross-border activities. Banks in Austria, Italy, Belgium and Sweden are vulnerable to losses due to their exposure to some Eastern European countries that are facing difficulties, although the risks for banks will depend on which of these countries they are exposed to.

… as well as reducing equity prices further

- Although equity markets already seem to have priced in significant cuts in profits and dividends (Figure 1.18), with price-earnings ratios falling well below historical norms, surprises on the downside could drive share prices further down, with implications not just for households but also for balance sheets of banks and other financial institutions.

The financial crisis and emerging markets could also have more negative effects than projected

Apart from more adverse feedback from the real economy to financial markets and institutions, there is also a risk that financial conditions exert a more powerful negative effect than estimated in the current projections. Moreover, rising unemployment could have a more negative impact on household consumption than embedded in these projections. In addition, the downturn in emerging markets could be more intense than projected, weighing on recovery prospects for OECD countries.

There are also upside risks

Not all the risks are on the downside. The unprecedented monetary and fiscal policy stimulus put in place throughout OECD countries could prove to have more powerful effects than projected. Also, it is possible that financial markets return to normality faster than assumed in the projections, in which case the recovery could be earlier and stronger than projected.

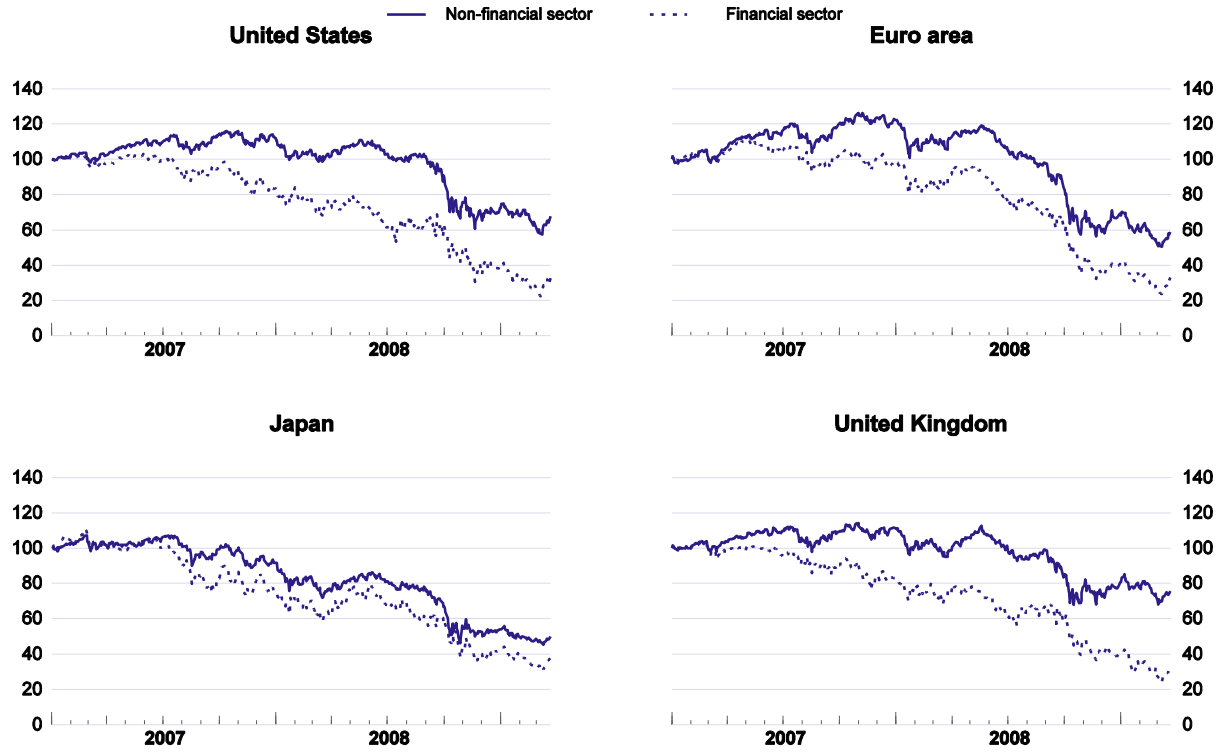
Policy actions and requirements

Policies need to stabilise the financial system and boost aggregate demand

Extraordinary policy measures have been introduced to support the financial system and aggregate demand. However, given the unsolved financial crisis and the grim economic outlook, additional measures are needed to stabilise banking systems, and monetary and fiscal policy needs to use the remaining scope to bolster aggregate demand. At the same time, it is essential that the productive capacity of the economy is not reduced by crisis-driven, flawed changes in labour and product market policies.

Figure 1.18. Stock markets have plunged

Share price indices, 1 January 2007 = 100, last observation: 23 March 2009



Source: Datastream.

Financial market policies

Policy responses have been very broad

Financial emergency measures in support of both banks and other financial institutions have increased in scale and scope since the start of the crisis and now comprise recapitalisation, deposit guarantee extensions, debt guarantees, extension of credit and liquidity, and acquisition or ring-fencing of bad assets (Table 1.4). So far, however, measures taken or announced do not yet appear to have created confidence that authorities are "ahead of the game". Devising a clear strategy that gains the trust of markets is an important first step in restoring wider economic confidence.

Dealing with impaired bank assets

Policies have to deal with troubled assets

The authorities initially focused on certain financial relief measures, such as capital injections, because they could be implemented swiftly and prevent a collapse in confidence. Indeed, capitalisation ratios need to be increased if capital is to perform a buffer function against future losses from the economic downturn. At the same time, additional measures will be

Table 1.4. **Governments have introduced a wide array of financial relief measures since mid-2008**

	Bank liabilities				Bank assets				
	Increase deposit insurance	Guarantee or buy bank debt	Inject capital[1]	Nationalise[2]	Ring-fence bad assets	Plan to purchase toxic assets	Fund commercial paper	Fund asset-backed securities	Ban or restrict short-selling
United States	x	x	x	x	x	x	x	x	x
Japan		x	x				x	x	x
Euro area	x								
Germany	x	x	x			x			x
France	already high	x	x						x
Italy	x		x						x
United Kingdom	x	x	x	x	x		x	x	x
Canada		x					x	x	x
Australia	x	x						x	x
Austria	x	x	x						x
Belgium	x	x	x						x
Czech Republic									
Denmark	x	x	x					x	x
Finland	x	x	x				x		x
Greece	x	x	x						
Hungary	x	x	x						
Iceland	x		x	x					x
Ireland	x	x	x	x					
Korea		x							
Luxembourg	x	x	x						
Netherlands	x	x	x	x					x
New Zealand	x	x							
Norway	already high	x	x						
Slovak Republic	x								
Poland	x		x						
Portugal	x	x	x						
Sweden	x	x	x					x	
Spain	x	x						x	x
Mexico		x							
Switzerland	x		x			x	x	x	
Turkey									

Note: the coverage of nationalisations and measures to ring-fence bad assets is incomplete.

1. Capital has already been injected in banks, or funds have been allocated for future capital injections. The law allows the Japanese government to inject capital into financial corporations, but so far this option has not been used.
2. Nationalisation is defined as the government taking control of a substantial share of banking activities (defined in a broad sense). The cell for the United States is ticked to acknowledge the actions taken by the authorities to take control of Fannie Mae and Freddie Mac and unwind Washington Mutual.

Source: OECD.

needed to deal with troubled assets, which are difficult to value and generate uncertainty about the underlying value of financial institutions, even after recapitalisation. Two main approaches to deal with the risks imposed by impaired assets have been advanced by OECD governments.

Ring-fencing troubled assets is used in some cases…

The first approach is to ring-fence troubled assets on a case-by-case or more systematic basis. The idea is to provide government guarantees for the value of bad assets, which are separated from the rest of the bank's balance sheet and managed separately. Banks can then resume normal lending activities to creditworthy businesses and households. The United States and the United Kingdom have used this approach on a large scale: the assets guaranteed at Citigroup and Bank of America are worth 3% of US GDP, and the assets guaranteed at Lloyds TSB and Royal Bank of Scotland amount to 38% of UK GDP.[11]

… while creating "bad banks" is a more systematic response…

A second, more systematic approach -- the so-called "bad bank" approach -- involves creating a centralised asset management company which would buy troubled assets from banks through a standardised procedure that may involve reverse auctioning. This was the original purpose behind the US Troubled Assets Relief Program and this is the focus of the $500 billion (with a potential expansion to $1 trillion) Public-Private Investment Program (PPIP).[12] The PPIP aims at cleaning banks balance sheets by buying both toxic loans and securities from banks and at creating a market for illiquid asset-backed securities.

…and nationalisation can be a last resort

Since the crisis broke, distressed lenders have been nationalised, or brought under effective government control, in many OECD countries including the United States and the United Kingdom (see Table 1.4). This trend may continue, including in the United States where the authorities will take convertible preferred equity stakes in large banks identified as at risk under stress scenarios. These preferred shares are meant to be converted into common equity gradually as losses rise above a certain threshold. As such, these capital injections provide a path to endogenous nationalisation if the downturn proves to be similar to the present projections.

These options have their pros and cons

Each strategy has its advantages and disadvantages:

- Ring-fencing troubled assets have the main advantage of not requiring an upfront disbursement of public money, which facilitates its political acceptance. However, keeping government guaranteed troubled assets on bank balance sheets or in individual special purpose vehicles implies that the parent companies have little incentive to manage them in a way that maximises recovery rates, since they are protected from most of the losses above a

11. The loss sharing mechanism both in the United States and the United Kingdom is the following: banks absorb a lump sum amount (of approximately 10% of the estimated value of the asset pool) and losses exceeding that level are shared between the government (90%) and the institution (10%). In the UK guarantee scheme, an "insurance fee" is paid by the banks to the Treasury in the form of preferred shares (a form of liability that is junior to all debt but does not share the upside potential of common equity).

12. Participation in the scheme is conditional on banks having first undergone a stress test to assess the risks remaining on their balance sheets and further capitalisation needs. The programme is restricted to banks with assets in excess of $100 billion. The stress test is based on macro-economic assumptions that are not dissimilar from the projections presented above.

certain threshold. Furthermore, having multiple pools of bad assets limits economies of scale and may impair the potential learning process in disposing of such assets. Keeping bad assets near banks, even with government guarantees, may also undermine confidence, as far as economic agents perceive some political risk that each bank may remain liable in one way or another for losses at its asset pool.

- Centralised asset management companies (bad banks) detached from individual banks can benefit from focussed management with an incentive to maximise recovery rates. Gathering assets in bad banks can also reduce fixed costs and facilitate the price discovery process, which may be particularly important in the current crisis given the technical complexity of many of the bad assets. And cleaned-up banks may resume business or be sold more easily. However, this approach requires the up-front capitalisation of the bad bank which, to insulate against political pressure and to reap the full benefits in terms of confidence and price discovery, has to be seen as ample. It also requires establishing a price on difficult-to-value toxic assets.

- Nationalisation may reduce the near-term pressure to address bad assets. It raises, however, the political economy problems associated with government control over commercial operations and ultimately the bad assets problem would still have to be dealt with. Experience suggests that nationalisation can be effective if banks are managed at arms' length from political processes, cleaned-up as quickly as efficiently possible and resold to private investors once resolved. On the other hand, some instances of bank nationalisation followed by long-term public ownership have been associated with high fiscal costs, inefficient financial intermediation and low economy-wide productivity.[13]

The Japanese and Swedish experiences hold lessons

The experiences of Japan and Sweden, and their contrasted outcomes, suggest a number of lessons which may apply in the current situation, notably the importance of swift reaction, initial over-capitalisation of bad banks, bankruptcy legislation that allows for orderly asset disposal and management at arms' length from previous banks owners and the political process (see Appendix 1.1).

Minimising the cost to the taxpayer

The fiscal costs can vary considerably…

Many factors affect the final fiscal cost of a strategy to deal with troubled assets and capitalising banks. A first element is the design of capitalisation packages. In the case of Sweden, where bank owners lost their stakes, the taxpayer benefited from the sale of the nationalised banks

13. See the case studies in Kehoe and Prescott (2007) and in particular the comparison between the experiences of Chile and Mexico in the 1980s in Bergoeing *et al.* (2007) or Fernández de Cordoba and Kehoe (2009).

at a later stage. An alternative that has been used so far in the United States is to issue warrants and preferred shares with relatively high coupon rates. Such a strategy presents the drawback that it does not alter the incentive for common equity holders to "gamble for resurrection" by taking excessive risk with *de facto* guaranteed debt and *de jure* guaranteed deposits. In addition, its potential upside for taxpayers is very limited. The upside is greater under the new measures using convertible shares, as they give the government common equity stakes. These new measures, however, leave the incentive problem for previous common equity holders unchanged as long as realised losses are not large enough that the government holds a controlling stake.

… depending on troubled asset valuations

A key factor affecting the final fiscal cost of establishing a single bad bank is the transfer price of the troubled assets. In a ring-fencing strategy the key is the share of losses faced by banks in the first place, which is largely determined by how the assets are valued when the government guarantee is issued. In addition, if bad banks are established with the additional constraint of avoiding nationalisation, which puts a floor on the transfer price of the assets, there is a distinct risk of over paying them, with attendant fiscal costs. Instead, buying assets at sizable discounts may allow the taxpayer to benefit from the future liquidation of the troubled assets at higher prices. It has also the advantage of increasing the likelihood that private investors will participate in such enterprise.

An issue is whether to impose losses on bond holders

Implicit in both the bad bank and ring-fencing models is usually that existing institutions will survive and continue to service their debt. Forcing debt-holders to accept losses might in principle allow taxpayers to suffer smaller direct losses and would also have the implication that the market for bank debt could be expected to exert a disciplinary force on future bank behaviour. Some of these features could be introduced in the bad bank and ring-fencing models to the extent they are conditional on haircuts for debt holders or debt-equity swaps. Nonetheless, while in principle the risk of losses is priced into bond yields, it is likely that the prospect of such losses would generate considerable turmoil in bond markets, which given the fragile state of financial markets would seem undesirable.

Reshaping financial regulation

Deeper reform will be needed to reduce future financial risks

Reforms will be needed to reduce the risks and costs of future systemic financial crises. The crisis has brought to the fore major market and regulatory failures, including ill-designed compensation schemes, deficiency of information, insufficient transparency, distortive government intervention (*e.g.* the role of mortgage interest relief and government-sponsored enterprises in fuelling the housing boom), pro-cyclical regulation, misguided reliance on ratings and internal models in banking regulation, and fragmented supervision. In addition, the crisis has prompted responses -- especially the now explicit policy that "too big" and "too interconnected" institutions will not be allowed to fail -- which may increase the risks both that crises occur again and that they are more costly. This is because of moral hazard, which needs to be countered by stricter

oversight. Furthermore, the crisis has resulted in massive further concentration in the financial sector, compounding the too-big-to-fail issue. Financial regulation will have to be reformed thoroughly to address these challenges.

Conventional and unconventional monetary policies

Monetary authorities are responding vigorously to the crisis

Central banks have responded vigorously to the crisis with both conventional and unconventional measures. On the conventional side, there have been unprecedented cuts in policy rates by all major OECD central banks (Figure 1.19). With headline inflation set to remain below implicit or explicit inflation targets and risk of deflation in many countries, further cuts in interest rates are called for in countries where rates were initially high and where cuts have been comparatively mild, bringing rates close to zero in most cases:

Policy rates are close to zero in the United States…

- The US Federal Reserve (the Fed) has established a target range for the federal funds rate of 0 to 0.25%, committing itself to exceptionally low rates for some time. Since February, the Fed has started publishing in the FOMC minutes target ranges for steady-state inflation (of the order of 1.7 to 2.0%). This change in strategy is intended to increase the commitment towards inflation targeting and therefore to lead to better anchored inflation expectations. Once economic recovery is well underway and financial conditions are normalised, the Fed will need to start raising interest policy rates in order to keep inflation expectations well anchored, something expected to happen beyond 2010.

… Japan…

- The Bank of Japan has used its limited scope for manoeuvre to cut rates to 0.1% and the outlook militates in favour of maintaining that rate.

… the euro area …

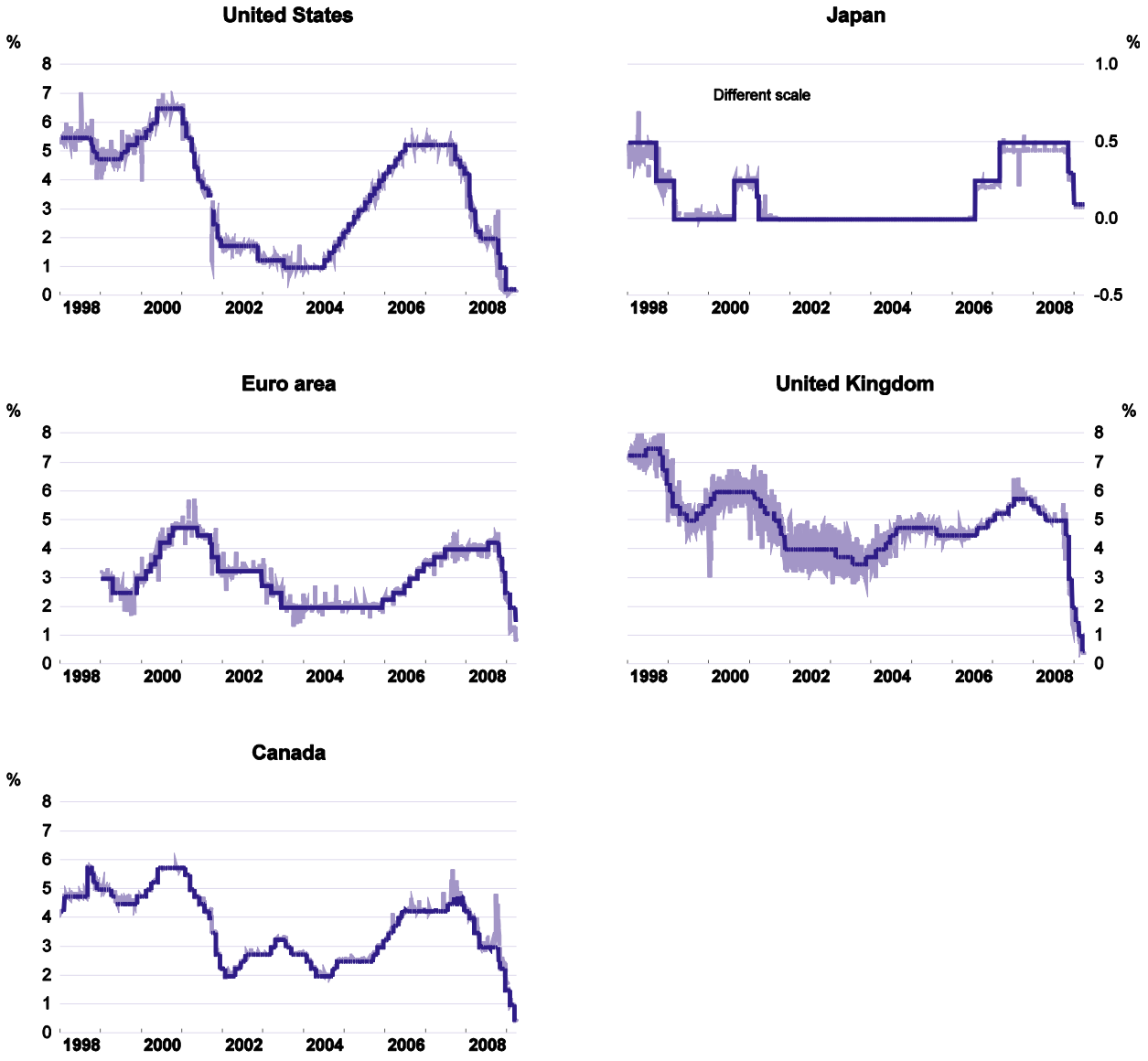
- The European Central Bank (ECB) has cut its main policy rate less aggressively, to 1½ per cent in March, though changes at the operational level of monetary policy imply that overnight interest rates have in fact fallen more, to below 1%. The grim outlook for economic activity in the euro area and widespread evidence of falling inflation call for exhausting the remaining scope for further cuts.

… and the United Kingdom

- The monetary authorities in the United Kingdom have slashed policy rates by an unprecedented 500 basis points since the beginning of 2008 to ½ per cent; the economic outlook warrants keeping the policy rate as close to zero as possible up to end-2010.

Figure 1.19. Policy rates have been slashed

Last observation: 23 March 2009



1. The grey line represents the main policy rate of the central banks. The light blue line plots the effective overnight rate.

Source: s: Bloomberg, Bank of Japan, Datastream, ECB.

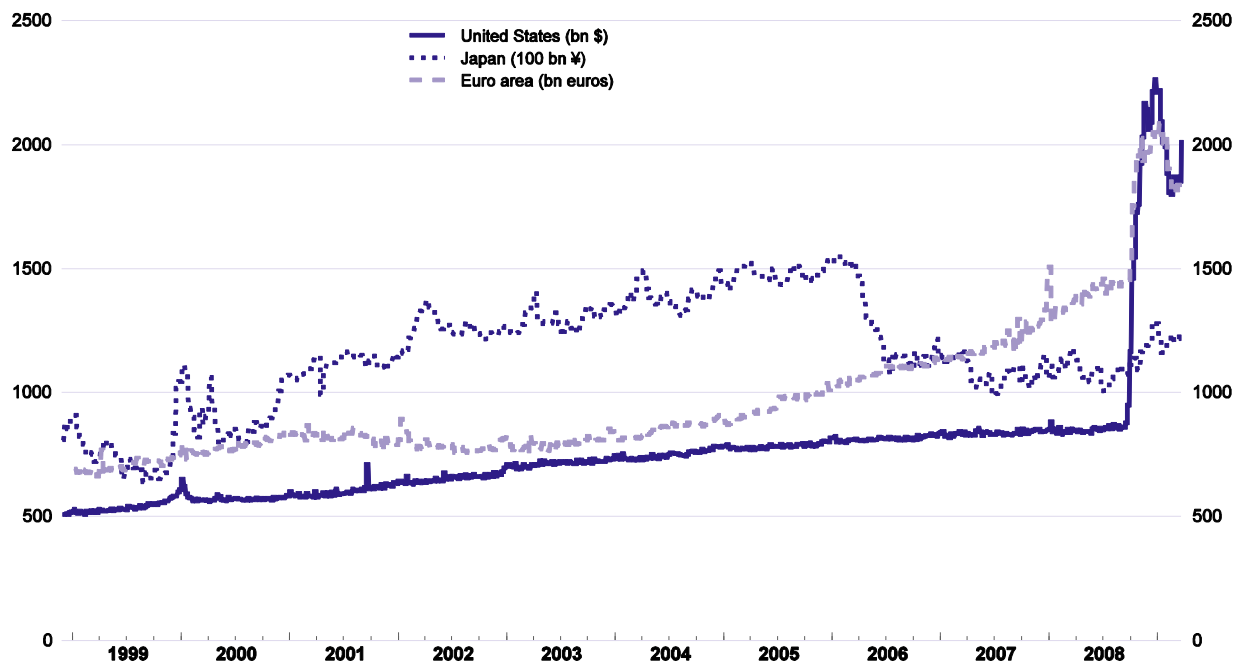
When there is a perceived risk of entering a period of deflation and interest rates have already reached near zero levels, it is important to commit to low levels for a sufficient period of time.[14] Reaffirming the will to make inflation converge to target over the medium term will also be a useful tool to anchor inflation expectations efficiently.

Unconventional measures are also used in…

Unconventional monetary policy measures have led to a sizable expansion of central bank's balance sheets (Figure 1.20) and seem to have led to some improvement in the functioning of financial intermediation.

Figure 1.20. Central banks have expanded their balance sheets

Last observation: 18, 20 and 23 March 2009



Source: Datastream.

… the United States…

- The Fed is expanding (in duration and depth) the programmes already in place, and has started to purchase longer-term Treasury securities.[15] The enlargement of its balance sheet is thus set to remain for some time. Yields on government bonds fell after the

14. Existing empirical studies indicate that this commitment had the effect of lowering the yield curve, cantering on the short to medium term, at least as far as the Japanese case is concerned (Ugai, 2007).

15. The Term Asset backed securities Loan Facility (intended to restart securitisation and therefore lending) has been expanded and the size of TALF has been increased from the original $200 billion and broadened in its scope. In March, the Fed announced that it was increasing its purchases of agency mortgage-backed securities by $750 billion and agency debt by $100 billion.

new policy was announced. Also, purchases of agency debt and mortgage-backed assets by the Fed have lowered interest rates on new long-term fixed-rate mortgages to record lows since end-October. And the commercial paper funding facility implemented by the Fed seems to have helped to stabilise the commercial paper market, substantially lowering interest rates at all maturities.

… the euro area…

- While the ECB does not rule out the possibility of implementing non-standard monetary policy measures if financial conditions deteriorate further, no official programme has been announced so far. This largely reflects that the option to pursue such operations was already available at the onset of the recession and the ECB balance sheet has expanded significantly. With the bleak economic outlook, quantitative easing should be used to support demand.

… Japan…

- The Bank of Japan has introduced unconventional measures, such as outright purchases of commercial paper and asset-backed commercial paper to relieve financial pressure on firms during the first quarter of 2009. It has also commenced outright purchases of corporate bonds. In addition, the Bank has recently introduced temporary measures to facilitate corporate funding,[16] resumed a programme of buying corporate shares from banks and will provide subordinated loans to banks.

… and the United Kingdom

- The United Kingdom has started to implement a quantitative easing strategy, including the purchase of private and public sector assets.[17] Yields on government bonds have fallen since the Bank of England started buying gilts.

Liquidity provision schemes seem to have reduced spreads

Policy initiatives taken so far seem to have led to some improvement in the functioning of financial intermediation even if markets remain very volatile by historical standards. Liquidity provision schemes in particular have contributed to reductions in the spread between uncollateralised three-month interbank lending rates and expected overnight rates in both the United States and the euro area (Figure 1.21).[18]

16. The Bank of Japan introduced in January 2009 a facility that provides unlimited funds against the collateral of corporate debt at the target overnight rate.

17. The Bank of England will finance £ 75 billion (5% of GDP approximately) of purchases of private sector assets (Asset Purchase Facility) and medium- and long-maturity gilts in the secondary market. The Asset Purchase Facility includes a Commercial Paper Facility to purchase investment-grade sterling commercial paper issued by UK corporations. The Bank of England is also considering a corporate bond secondary market scheme.

18. Empirical evidence for the United States shows that the Term Auction Facility (TAF) helped to ease money markets conditions: TAF announcements and its operations have lead to a cumulative reduction of more than 50 basis points in the LIBOR-OIS spread over the first phase of the financial crisis (1 January 2007 to 24 April 2008). The reduction is economically important because it is approximately 90% of the average level of the LIBOR-OIS spread in the estimation period (McAndrews *et al.*, 2008). Kwan (2009) reports that counterparty risk can explain about 44% of the variation in Libor-OIS spreads.

Figure 1.21. Money market spreads have eased

Note: Spread between three-month EURIBOR and EONIA swap index for euro area; spread between three-month LIBOR and overnight indexed swap for the United States.

Source: Datastream; and Bloomberg.

Ensuring a smooth return to normal financial conditions

Exit strategies have to be prepared…

Going forward, it is important that measures be designed and implemented in ways that allow their orderly removal as conditions in financial markets normalise, to avoid future instabilities. In particular, there is a concern that unless liquidity is withdrawn at a pace commensurate with the eventual improvement in financial markets, financial conditions could become too easy and thereby destabilise inflation expectations and ultimately inflation. Consistent with this, most measures have already been announced as temporary, including specific deadlines for their lifetime operation. This is the case for programmes to boost financial market activity, which are intended to be in place for relatively short periods of time. Public guarantees for impaired assets have typically been granted for longer periods of time (five to ten years), while for bank capitalisation, even when there is no specific deadline, there is a commitment to unwind government's positions as soon as financial conditions normalise.

… though some measures may unwind automatically

Some financial rescue packages are designed in such a way that market participants' incentives for using public assistance diminishes as conditions in credit markets improve.[19] Moreover, some programmes come with curbs on executive pay and dividend payments, giving owners and managers a strong incentive to get rid of the public help as soon as

19. For bank capitalisation, for example, preferred capital injections include a very high dividend yield. And for impaired assets guarantees, there are fees to participate in such programmes.

possible.[20] Finally, the maturity of many assets bought by monetary authorities is relatively short term, allowing a rapid shrinking of central banks balance sheets as the programmes are discontinued. In the case of the Fed, these include loans to financial institutions, currency swaps and commercial paper. For longer-term maturity assets (like agency debt and mortgage-backed securities in the case of the United States, and corporate bonds and equities in the case of Japan), it is important that they be sold gradually to avoid disrupting financial markets shortly after they have healed. All of this notwithstanding, a number of measures may be more difficult to unwind unless this is done in an internationally co-ordinated fashion. For example, changes in the extent of deposit guarantees will affect banks' competitive positions if undertaken unilaterally.

Monetary frameworks

Monetary policy frameworks will have to evolve

While it is necessary for monetary authorities at present to boost aggregate demand to attain their current objectives, it might be appropriate to reassess monetary policy frameworks once these targets have been met. Indeed, current monetary policy frameworks have been brought into question by the frequency with which deflation has taken hold of or threatened OECD economies. Japan went through a period of deflation in 2000-06 while the United States was perceived to be exposed to a deflation risk in 2001 and again in 2003. Presently, deflation appears to be a significant risk for many OECD countries in 2010. Against this background of actual or threatened deflation episodes, an upward adjustment of inflation targets once the situation has normalised might be seen as a possible option to decrease this vulnerability. Any economic cost of a permanent but modest increase in inflation could then be considered as an insurance premium to be paid for reducing deflation risk. Alternatively, monetary policy could target a path for the price level, an option that would dramatically reduce the risk of deflation if perceived as credible.[21] A revision of monetary policy frameworks could also involve requiring that inflation is close to its target rate on average over an extended period of time, such as the business cycle (as is currently the case in Australia). This option would offer benefits similar to price-level targeting in terms of avoiding liquidity traps while it could be implemented with a more marginal adjustment to current monetary frameworks. Another lesson from the current crisis is that asset price bubbles can be very destabilising. While targeting asset prices is fraught with difficulty and probably not desirable as such, monetary and financial policy frameworks will have to put a greater weight on asset market developments in economies where this is not currently the case.

20. Another problem is that these restrictions may also undermine participation in the first place.

21. See Cournède *et al.* (2009) for recent OECD research in support of this conclusion.

Fiscal policy

The severity of the downturn has resurrected discretionary fiscal action

The severity of the downturn coupled with impaired monetary transmission mechanisms and, in many countries, little or no scope for further cuts in policy rates, means that virtually all OECD countries and many non-OECD countries (notably China) have introduced discretionary fiscal measures to support the economy.[22] A detailed documentation and assessment of these measures, together with an analysis of the benefits and costs of additional discretionary fiscal easing, is provided in Chapter 3, which is drawn on in what follows.

Fiscal packages differ widely in scale across countries

The size of these fiscal packages, as measured by cumulated deviations of fiscal balances over the period 2008-10 amounts to about 3½ per cent of OECD 2008 GDP, and the level of support from the stimulus to GDP both in 2009 and 2010 will be around ½ per cent for the average OECD country. There is, however, considerable cross-country variation in the size of packages and their impact on output. Only for the United States and Australia will fiscal expansion provide a stimulus that clearly exceeds 1% of GDP in both 2009 and 2010. For other countries the likely impact of the fiscal packages is more modest judged against the magnitude of the impending output gap.

Fiscal positions are set to deteriorate dramatically

The deterioration in area-wide budget balances of close to 6 percentage points of GDP over the 2009-10 period is only to a small extent accounted for by the discretionary fiscal response to the crisis. The bulk of the increase in deficits is related to automatic stabilisers (Table 1.5), with disappearance of previous extraordinary revenue buoyancy and non-crisis-related discretionary measures also contributing. The accumulation of large deficits implies a rapid build-up of government debt, with general government gross financial liabilities projected to reach 100% of GDP in 2010 for the OECD area. This number does not include contingent liabilities associated with financial rescue operations.

The scope for additional support depends on the degree of government indebtedness

The biggest constraint on introducing additional fiscal stimulus may be the reaction of financial markets to greater government borrowing needs. This will be influenced by the indebtedness of government and the expected future path of government budget positions (which take into account increased ageing-related spending with unchanged policies) together with the credibility government have in ensuring fiscal stability in the longer run. On this basis, the countries with most scope for fiscal manoeuvre would appear to be Germany, Canada, Australia, Netherlands, Switzerland, Korea and some of the Nordic countries. Conversely, countries where the scope for fiscal stimulus is very limited would include Japan, Italy, Greece, Iceland and Ireland.

22. The few OECD countries that have tightened fiscal policy are Hungary, Iceland and Ireland.

Table 1.5. **Fiscal positions are deteriorating dramatically**

Per cent of GDP / Potential GDP

	2006	2007	2008	2009	2010
United States					
Actual balance	-2.2	-2.9	-5.8	-10.2	-11.9
Underlying balance[1]	-2.9	-3.3	-5.4	-7.6	-8.2
Underlying primary balance[1]	-0.9	-1.2	-3.5	-6.1	-6.7
Gross financial liabilities	61.7	62.9	71.9	88.1	100.0
Japan					
Actual balance	-1.6	-2.5	-2.6	-6.8	-8.4
Underlying balance[1]	-3.5	-3.2	-3.7	-4.6	-4.6
Underlying primary balance[1]	-2.8	-2.6	-2.9	-3.7	-3.4
Gross financial liabilities	172.1	167.1	172.1	186.2	197.3
Euro area					
Actual balance	-1.3	-0.7	-1.8	-5.4	-7.0
Underlying balance[1]	-1.3	-0.9	-1.4	-2.1	-2.7
Underlying primary balance[1]	1.3	1.7	1.2	0.5	-0.1
Gross financial liabilities	74.6	71.2	71.0	77.7	84.4
OECD					
Actual balance	-1.3	-1.4	-3.0	-7.2	-8.7
Underlying balance[1]	-2.1	-2.1	-3.2	-4.8	-5.2
Underlying primary balance[1]	-0.3	-0.2	-1.4	-3.1	-3.5
Gross financial liabilities	76.0	74.5	78.8	90.6	99.9

Note: Actual balances and liabilities are in per cent of nominal GDP. Underlying balances are in per cent of potential GDP. The underlying primary balance is the underlying balance excluding the impact of the net debt interest payments.

1. Fiscal balances adjusted for the cycle and for one-offs.

Source: OECD.

Additional fiscal support can come from automatic stabilisers and discretionary measures

Should downside risks materialise, other countries may also consider further stimulus. Whether to do so would depend in part on the extent to which negative impulses are offset by automatic stabilisers. These automatic stabilisers tend to be relatively strong in Europe, though their strength varies markedly across European countries, and relatively low in the United States and Japan. Hence, to cushion a common shock, European countries require less discretionary stimulus than the United States.

Fiscal credibility is all important

The need to minimise adverse financial market reaction and so enhance the effectiveness of any discretionary fiscal action also underlines the importance of a credible medium-term framework, backed by political commitment, to ensure fiscal sustainability. One strategy for trying to ensure that fiscal sustainability is not undermined by a stimulus package is to also announce reforms that will generate fiscal savings in the future. Also, measures that enhance the supply potential of the economy in the long run, and hence strengthen public finances, may help to limit adverse reactions in financial markets.

Fiscal stimulus in one country has spillover effects in other countries

Fiscal stimulus undertaken in one country will have spillover effects for others. These may both be positive (via trade) and negative (via interest rates). *A priori* the former type of spillover is more prevalent for stimulus

undertaken by small open economies and the latter more prevalent in the case of stimulus by large economies. In principle, such spillovers could create a case for co-ordination but in practice such co-ordination is hard to implement.

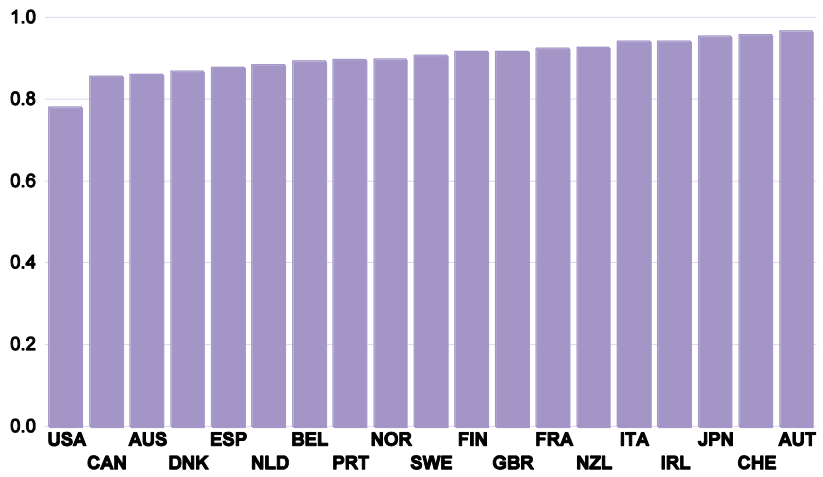
Labour market and other structural policies

High unemployment rates are likely to be persistent…

In the past, large cyclical increases in unemployment have tended to become structural in part, reducing productive potential for an extended period. The degree of unemployment persistence has varied across countries: a rise in the unemployment rate in the United States has tended to revert back at a relatively fast rate, while the adjustment process in Japan and some European countries typically has been protracted (Figure 1.22). This cross-country variation in persistence is related to some extent to differences in the stance of structural policies, notably regulations in product and labour markets. It may be hoped that reforms in these areas in recent years, notably progress in reducing barriers to competition in product markets, will help to speed up the return of unemployment to pre-crisis levels.[23]

Figure 1.22. Many OECD countries have highly persistent unemployment

1970-2007



Note: The measure shows the strength of the link between unemployment rates in one year and the previous year. It is the coefficient on lagged unemployment in first-order autoregressive equations. A higher value implies that unemployment is more persistent.

Source: OECD.

23. While more flexible policy settings speed up adjustment to shocks, they also tend to increase the amplitude of reactions to shocks. On average, the former effect outweighs the latter one, as argued in Duval *et al.* (2008). However, one reason why flexible policy settings speed up adjustment is that they give more room to monetary policy to react to shocks. In the current circumstances with interest rates close to zero, such reactions are not possible and hence the advantage of flexible labour and product market policies may be less than in normal times.

… which would reduce potential growth with implications for fiscal and monetary policy

Nonetheless, the risk is clear that the high unemployment rates projected for 2010 will turn structural to some extent in subsequent years. In this case, structural budget deficits will be higher than otherwise as revenues will be lower and spending higher when the economy returns to potential. At the same time, it implies that monetary policy has to be tightened earlier in the recovery phase to avoid the emergence of inflationary pressures. If unemployment became stuck at high levels, it would be a repeat of the 1970s crisis, which set the stage for protracted macroeconomic imbalances. All of this underlines the need for crisis-related measures in labour markets to, as far as possible, prevent any rise in structural unemployment.

Various policies can cushion structural unemployment

Policies to cushion structural unemployment could focus both on limiting the rise in actual unemployment and on reducing the risk that actual unemployment turns structural. Apart from general demand stimulus, measures to reduce barriers for young people to enter further education could help limit the increase in unemployment. From an economy-wide perspective, the opportunity costs of training may also be particularly low at the current juncture, suggesting that temporary measures to let government bear part of the associated costs, including wage costs, may be contemplated. Other short-term measures to bolster labour demand and to allow a certain degree of work-sharing may also be helpful provided they are associated with precautions against misuse and come with either clear sunsets or incentives that lead to automatic scaling back once the economy recovers. Active labour market measures may limit the risk of unemployed persons drifting too far away from the active labour market but fiscal packages seem so far not to have put a great weight on such spending.

Some crisis measures need to be scaled back as the recovery takes hold…

It is also important to ensure that measures introduced as part of a crisis response but likely to be harmful over the longer run are unwound in an orderly manner. Thus, to protect people against hardship some countries have extended the duration and levels of social protection. While this is understandable in the circumstances, such measures may need to be scaled back once there is a recovery. Another type of measure, introduced in response to rising unemployment in the 1970s and subsequently difficult to abolish, is reductions in labour supply through various early retirement schemes. Past experience, and the future need to extend working lives, militate strongly against experimenting with such measures.

… when labour market reforms need to come back on the policy agenda

More generally, as the recovery takes hold, the need to reform labour market policies in many OECD countries will need to come back on the agenda. The *Reassessment of the OECD Jobs Strategy* and *Going for Growth* have identified policies to improve labour market performance, and introducing them at an early stage in an upswing could provide powerful employment gains and sharp cuts in unemployment.

Crisis measures are also weakening competition in financial and product markets…

Crisis measures may also have adverse effects on competition in financial and product markets. The restructuring of the financial sector, with increased involvement of the state as an owner, may reduce competition in financial markets. Indeed, some support packages (*e.g.* in the United Kingdom and Ireland) have privileged domestic lending by

financial institutions, thereby reducing competition abroad. As concerns non-financial enterprises, recently announced support to particular sectors, notably the car industry, in many countries (including Australia, Canada, France, Italy, Spain Sweden and the United States) have aimed at softening the amplitude of job losses in already weak economies. However, they distort competition and efficient resource allocation by blocking or delaying the exit of badly performing producers, unless support is made contingent on ambitious restructuring plans and subject to strict time limits. Even so, these measures may be seen as behind-the-border protectionist arrangements, which invite retaliation by trading partners. Also, government fiscal measures in some countries have given the impression of overtly discriminating against foreign producers (for example, "Buy America" provisions in the US fiscal package legislated in February 2008 though it also includes a clause stating that these provisions should be compatible with international obligations).

… and protectionist pressures are on the increase

So far, at-the-border protectionist measures have been few and confined to non-OECD countries. However, anti-dumping complaints to the World Trade Organisation have risen strongly in recent months. As unemployment rises everywhere, protectionist pressures are likely to strengthen and it will take political determination to defend the free trade and investment regimes.

APPENDIX 1.1: DEALING WITH THE FINANCIAL CRISIS: THE SWEDISH AND JAPANESE PRECEDENTS

Sweden and Japan had to deal with financial crisis in the 1990s

This appendix provides information about the experiences of Sweden and Japan in dealing with financial crises in the 1990s. For each of the countries, it documents the origin of the crisis, policy responses and eventual resolution. It concludes by drawing lessons from these episodes.

Sweden

The origins of the crisis

Financial deregulation resulted in excessive bank lending in Sweden

In the early to mid-1980, Sweden started deregulating the financial sector that had been characterised by lending ceilings, restrictions to invest in government bonds and mortgage institutions, and careful oversight by the Riksbank. Sudden deregulation coupled with lack of experience in risk analysis led the banking sector to engage in excessive risk taking. Moreover, deregulation took place without reforming the tax code which allowed full interest deductibility and thus strengthened incentives to borrow. Real estate lending, construction as well as equity and house prices boomed. Loss of competitiveness, higher interest rates in the wake of the German reunification in 1990 (which affected Sweden as a result of the fixed-exchange rate policy pursued at the time) and tax reform which reduced the value of interest deductions combined to depress economic growth, prompting a run on the currency and substantial hikes in interest rates. With growth faltering and unemployment increasing, a large number of private sector loans became non-performing, and banks curtailed credit extension to build up loan loss reserves.[24]

The policy response

The government nationalised many banks

When property prices imploded in 1991, the Swedish banking system became insolvent. The first response to the financial crisis was a piecemeal approach to deal with troubled banks (capital injections and guarantees). In the spring of 1992, the government issued blanket insurance for a period of four years to creditors to all the country's 114 banks. This paved the way to address insolvent banks. The government first requested participating banks to recognise losses promptly with the bad assets being transferred to two independent state-owned asset management companies at book value. As a

24. See Englund (1999).

second step, the government recapitalised and took direct ownership in these banks. The government followed the principle of saving the banks but not the owners of the banks. By the end of the crisis, the Swedish government had seized a vast portion of the banking sector.

Strong asset management companies were established

The asset management companies enjoyed a high degree of independence. From the start, they were adequately capitalised in relation to the expected losses to be faced during their lifetime. This ensured that they would be able to carry out the winding down operations autonomously and avoid requesting additional funding from the legislature which could have imposed political pressure. Moreover, rules were adjusted in recognition of the possibility that the asset management companies might need more than the three-year limit foreseen under insolvency provisions in banking legislation so that they could dispose of the troubled assets without putting too much pressure on market prices.

The resolution

The overall fiscal cost has been moderate

By 1997 the troubled assets had been liquidated, at a faster pace and at a lower cost to the Swedish taxpayers than initially projected. While Sweden spent 4% of its GDP (65 billion kronor) to rescue ailing banks, the final cost is estimated to have been less than 2% of GDP.[25] The difference can be attributed to the success of the asset management companies in recovering any economic value left in the non-performing loans they had received. Such efforts included taking equity stakes in borrowers to maintain and restore values and even taking over defaulting firms until they could be liquidated.

The Japanese case

The origins of the crisis

Low interest rates fuelled a property boom in Japan

The initial pattern in the case of Japan is very similar to that in Sweden: the source of banking losses stemmed from a sharp increase and drastic subsequent decline in real estate and stock prices. A main difference is, however, that the crisis extended for almost 14 years, which prompted many analysts to speak about Japan's lost decade.

Towards the end of the 1980s, the yen had appreciated substantially following the Plaza Accord of September 1985. In order to sustain growth, the monetary authority flooded the market with liquidity to reduce interest rates and boost investment. But this excess liquidity also prompted a bubble in Japan's stock market and real estate sector. As in the case of Sweden, investors tended to under-estimate and misprice risks. The Bank of Japan reacted to the bubble by tightening monetary policy in the late 1980s,

25. Banks' nonperforming loans increased from a range of 0.2-0.5% of total loans in the 1980s to 5% in 1992. They reached a high of 11% of GDP by 1993. For further details, see Ergungor (2007).

causing stock, and later real estate, prices to fall. As banks in Japan are allowed to hold equities as part of their capital base, when the stock bubble burst the value of unrealised capital gains plummeted, drastically reducing the capital reserves of many banks. And when real estate prices declined inexorably, the value of collateral underlying many bank loans fell below principal, which resulted in an increase in non-performing loans.

The policy response

The policy response was initially piecemeal and slow

The collapse in asset prices and the ensuing credit crunch led the economy to a severe recession. The government's first response to the crisis was forbearance, greater deposit protection, provision of emergency liquidity and assistance to facilitate and encourage mergers of failed institutions where large banks would rescue smaller financial institutions, absorbing their losses. The first capital injections took place by 1996, amid a deterioration of the crisis following the bankruptcy of several specialised housing loan companies. Capital injections became more widespread starting in 1997, when Japan's banking sector was recognised to be in full systemic crisis after the bankruptcy of major banks. Capital injections took the form of subscriptions to stock (preferred shares, convertible preferred shares), grants, and subordinated loans. Towards the end of 1997, accounting changes were approved, by which banks could choose either market or book valuations of their assets.

An asset management company had been established in 1992, but was entirely private given the public's resistance to use taxpayer money to rescue banks. A new asset management company was established in 1995 using both private and public funds, with the Bank of Japan financing more than 90% of its capital. A third one, also co-financed with public and private money was created in 1996 to deal with troubled housing loan companies. As the main policy guideline was to encourage banking sector consolidation, the scope of these entities was limited. The conditions for support were very stringent, discouraging banks' participation. As a result, banks tried instead to bolster their balance sheets by cutting lending, and the recovery of the banking sector and economy in general was delayed.

Two large financial institutions eventually failed

The strategy of encouraging consolidation reached its limit when two of the biggest financial institutions went bankrupt and had to be nationalised in 1998. All the creditors of the banks were paid but the existing shareholders saw their holdings eliminated. This prompted a new round of government capitalisations of large banks during 1998-99, but the amounts involved were perceived to be too low. The government was then forced to launch new measures, offering budgetary help to the financial sector amounting to 12% of GDP.[26] Concomitantly, the Bank of Japan cut interest rates aggressively, so that banks could profit from new lending. The government expected that, by keeping banks afloat, operational profits and

26. See Nanto (2008).

capital gains were going to ultimately provide the new funds needed to finance the necessary write-offs. The two asset management companies that were created in 1995 and 1996 merged in 1999.

The dotcom stock market boom delayed workout efforts

A new global stock market boom associated with the information technology and consolidation in the banking sector provided some relief to the financial market towards the end of 1999 and the beginning of the 2000s, but this proved to be short lived. Two new mechanisms to inject public capital into the financial sector were created in 2001 and 2004. A new asset management company was created in 2003 and was granted two years to buy bad loans and three years to finish restructuring them. The newly created asset management company bought troubled assets at a steep discount from their face value. A new set of legal measures was passed in 2000-01. These included faster and more diverse bankruptcy disposal measures and three models to address different levels of bank systemic risk: *i*) capital injections in extremely serious cases; *ii*) protection of debt in the case of small financial institutions; and *iii*) nationalisation in the most severe cases. Moreover, banks' write-offs accelerated in 2002 and new regulations increased transparency of bank finances and more rigorous evaluations of banks were performed.

The resolution

Costs have been large

All in all, it is estimated that the value of bad debt that has been written-off amounted to nearly 20% of GDP.[27] Market confidence in the financial system was gradually restored and, at the same time, an export-led recovery took hold. Coupled with the inflow of foreign risk capital, this helped to stabilise stock and property markets and asset prices more generally. After many years of capital injections, new laws and regulations, stronger oversight, bank consolidation, economic recovery, and the write-offs of non-performing loans, the banking sector eventually had recovered by 2005. The two banks that were nationalized were later sold to private investors. Bank capital increased substantially between 2002 and 2007 due to improved operating performance (higher retained earnings) and capital gains on the stock portfolio.

Lessons learnt

Transparency, large funding and independence are key

The contrasted outcomes of the two experiences underline the importance of ensuring that the institutions put in charge of managing troubled assets are well funded and recapitalisation is sufficiently large. In the Japanese experience, where the authorities underestimated the nature and severity of the banking problem, losses were not recognised early, generating lingering fears (which ultimately proved founded) about the solvency of banks. Both banking capitalisation schemes and asset management efforts were not only delayed for a long time, but, the amounts involved were also perceived to be small and their objectives unclear,

27. See Ozeki (2008) and Hoshi and Kashyap (2008).

failing to bring confidence to markets and preventing the normal functioning of the banking sector. Indeed, the Swedish experience shows the benefits of adequately funding (including overcapitalisation) the asset management companies with respect to expected losses. Financial independence also proved to be an important ingredient in Sweden because it shielded decision makers from political pressures and allowed a rapid response as funding needs emerged without the delays and risks inherent to having to turn to the legislature.

Bankruptcy law may have to be adjusted

The Swedish experience shows the importance of being prepared to revise bankruptcy and foreclosure laws because disposing of troubled assets effectively can take more time than foreseen in pre-crisis regulations. In the case of Sweden, banking regulations required troubled assets to be disposed within a period of three years while it took about four to five years to work out and sell these assets.

BIBLIOGRAPHY

Bergoeing, R., P.J. Kehoe, T.J. Kehoe, and R. Soto (2007), "A Decade Lost and Found: Mexico and Chile in the 1980s," in Kehoe and Prescott (eds.), *Great Depressions of the Twentieth Century*, Federal Reserve Bank of Minneapolis.

Catte, P., N. Girouard, R. Price and C. André (2004), "Housing Markets, Wealth and the Business Cycle", *OECD Economics Department Working Papers*, No. 394.

Cournède, B., D. Moccero and R. Price (2009), "Is there a case for price level targeting?", *OECD Economics Department Working Papers*, forthcoming.

Duval, R., J. Elmeskov and L. Vogel (2008), "Structural policies and economic resilience to shock", *OECD Economics Department Working Papers*, No. 567.

Englund, P. (1999), "The Swedish Banking Crisis: Roots and Consequences", *Oxford Review of Economic Policy*, Vol. 15.

Ergungor, E. (2007), "On the Resolution of Financial Crisis: The Swedish Experience", *Federal Reserve Bank of Cleveland Policy Discussion Papers*, No. 21.

Fernández de Córdoba, G. and T. Kehoe (2009), "The Current Financial Crisis: What Should we Learn from the Great Depressions of the Twentieth Century?", *Federal Reserve Bank of Minneapolis Research Department Staff Report* No. 421.

FRB Staff (2003), "Loss Characteristics of Commercial Real Estate Portfolios," a white paper by the staff of the Board of Governors of the Federal Reserve System, June.

Girouard, N., M. Kennedy, P. van den Noord and C. André (2006), "Recent House Price Developments: The Role of Fundamentals", *OECD Economics Department Working Papers*, No. 475.

Guichard, S., D. Haugh and D. Turner (2009), "Quantifying the effect of financial conditions in the euro area, Japan, United Kingdom and United States," *OECD Economics Department Working Papers*, No. 677.

Hoshi, T. and A.K. Kashyap (2008), "Will the US Bank Recapitalization Succeed? Lessons from Japan", *NBER Working Paper*, No. 14401, Cambridge, MA.

International Monetary Fund (IMF) (2009), "Global Financial Stability Report", *GFSR Market Update*, 28 January 2009, Washington, DC.

Kehoe, T. and E. Prescott (ed.) (2007), *Great Depressions of the Twentieth Century*, Federal Reserve Bank of Minneapolis.

Kwan, S. (2009), "Behavior of Libor in the Current Financial Crisis", *FRBSF Economic Letter*, No. 2009-04, Federal Reserve Bank of San Francisco.

McAndrews, J., A. Sarkar and Z. Wang (2008), "The Effect of the Term Auction Facility on the London Inter-Bank Offered Rate", *Federal Reserve Bank of New York Staff Reports*, No. 335.

Nanto, D.K. (2008), "The U.S. Financial Crisis: Lessons from Japan", *CRS Report for Congress*, September.

Ozeki, K. (2008), "Responding to Financial Crisis: Lessons to Learn from Japan's Experience", *Japan Credit Perspectives*, PIMCO, November.

Ugai, H. (2007), "Effects of the Quantitative Easing Policy: A Survey of Empirical Analyses", *Monetary and Economic Studies*, Vol. 25.

APPENDIX 1.2:
SUPPLEMENTARY TABLES

Real GDP

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	2.5	3.6	2.9	2.8	2.0	1.1	-4.0	0.0	2.3	-0.8	-3.5	1.1
Japan	1.4	2.7	1.9	2.0	2.4	-0.6	-6.6	-0.5	2.2	-4.3	-4.4	0.4
Germany	-0.2	0.7	0.9	3.2	2.6	1.0	-5.3	0.2	1.7	-1.6	-3.8	1.2
France	1.1	2.2	1.9	2.4	2.1	0.7	-3.3	-0.1	2.2	-1.0	-3.0	0.9
Italy	0.1	1.4	0.8	2.1	1.5	-1.0	-4.3	-0.4	0.3	-2.9	-3.1	0.6
United Kingdom	2.8	2.8	2.1	2.8	3.0	0.7	-3.7	-0.2	3.0	-1.9	-2.8	1.0
Canada	1.9	3.1	2.9	3.1	2.7	0.5	-3.0	0.3	2.8	-0.7	-2.9	1.3
Total of above countries	1.8	2.8	2.3	2.6	2.2	0.6	-4.4	-0.1	2.2	-1.7	-3.5	1.0
Euro area	0.8	1.9	1.8	3.0	2.6	0.7	-4.1	-0.3	2.1	-1.4	-3.5	0.8
Other countries[1]	2.8	4.8	4.2	4.9	4.2	1.9	-3.9	0.3	4.4	-1.5	-2.9	2.0
Total OECD	2.0	3.2	2.7	3.1	2.7	0.9	-4.3	-0.1	2.6	-1.5	-3.4	1.1

Note: These numbers are working-day adjusted and hence may differ from the basis used for official projections.
1. OECD countries not included in the Euro area or the 7 major countries.
Source: OECD.

Real private consumption expenditure

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	2.8	3.6	3.0	3.0	2.8	0.2	-2.4	0.1	2.2	-1.5	-1.4	0.7
Japan	0.4	1.6	1.3	1.5	0.7	0.5	-1.4	-0.5	0.4	-0.2	-1.6	0.2
Germany	0.1	-0.2	0.2	1.2	-0.3	-0.3	0.0	0.0	-1.3	-0.6	-0.1	0.2
France	2.0	2.4	2.5	2.5	2.4	1.3	-0.2	0.2	2.9	0.6	-1.0	1.3
Italy	1.0	0.8	1.2	1.3	1.2	-0.9	-3.0	0.0	0.7	-1.5	-2.7	0.8
United Kingdom	3.0	2.9	1.9	2.1	3.1	1.7	-2.2	-0.4	3.6	-0.1	-2.1	0.3
Canada	3.0	3.3	3.7	4.3	4.5	3.0	-2.2	0.1	5.3	0.3	-2.3	1.2
Total of above countries	2.0	2.6	2.3	2.4	2.1	0.4	-1.8	-0.1	1.7	-0.9	-1.4	0.6
Euro area	1.2	1.5	1.8	2.1	1.6	0.4	-1.3	-0.1	1.2	-0.2	-1.6	0.6
Total OECD	2.1	2.9	2.6	2.8	2.5	0.7	-2.0	0.1	2.2	-0.9	-1.5	0.9

Note: These numbers are working-day adjusted and hence may differ from the basis used for official projections.
Source: OECD.

Real public consumption expenditure

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	2.5	1.5	0.3	1.6	1.9	2.8	2.0	2.8	2.1	3.3	1.8	2.6
Japan	2.3	1.9	1.6	0.4	2.0	0.9	2.4	2.9	3.4	0.1	2.8	3.0
Germany	0.4	-0.7	0.4	0.6	2.2	2.0	0.6	0.9	2.0	2.1	0.4	1.2
France	2.0	2.2	1.3	1.4	1.4	1.6	1.3	1.3	1.3	1.8	1.4	0.8
Italy	1.9	2.2	1.9	0.5	1.0	0.6	0.3	0.2	0.7	0.6	0.2	0.2
United Kingdom	3.5	3.4	1.7	1.6	1.7	3.5	2.8	1.5	1.5	4.4	2.0	1.4
Canada	3.1	2.0	1.5	3.8	3.7	3.4	3.0	3.0	4.6	2.0	3.7	2.1
Total of above countries	2.3	1.6	0.9	1.3	1.9	2.2	1.8	2.2	2.2	2.4	1.8	2.1
Euro area	1.7	1.6	1.5	1.8	2.2	1.8	1.5	1.2	2.0	1.7	1.7	0.9
Total OECD	2.3	1.7	1.4	1.9	2.2	2.3	2.2	2.1	2.4	2.5	2.0	1.9

Note: These numbers are working-day adjusted and hence may differ from the basis used for official projections.
Source: OECD.

Real total gross fixed capital formation

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	3.2	6.1	5.8	2.0	-2.0	-3.4	-14.3	-3.3	-1.0	-6.6	-13.9	1.2
Japan	-0.5	1.4	3.1	0.5	1.1	-4.6	-10.5	-1.9	-1.6	-6.9	-8.9	0.4
Germany	-0.3	-1.3	1.3	8.5	4.5	3.6	-6.6	0.7	2.6	-0.5	-4.9	2.1
France	2.2	3.3	4.5	5.0	4.9	0.4	-7.1	-1.7	3.8	-2.4	-7.7	0.7
Italy	-0.9	1.5	1.4	3.2	1.6	-2.9	-11.7	-0.8	0.2	-9.3	-7.0	0.8
United Kingdom	1.1	4.9	2.2	6.0	7.2	-4.3	-12.5	-2.7	4.1	-9.7	-11.5	0.9
Canada	6.2	7.8	9.2	7.1	3.9	0.8	-9.3	-0.2	4.2	-3.8	-8.2	3.4
Total of above countries	1.9	4.0	4.4	3.2	0.8	-2.4	-11.9	-2.2	0.3	-6.0	-10.9	1.2
Euro area	1.2	1.8	3.5	5.8	4.3	0.0	-9.0	-2.1	3.0	-4.6	-7.6	0.6
Total OECD	2.3	4.8	5.0	4.2	2.2	-1.6	-11.0	-2.6	1.7	-5.4	-10.4	0.8

Note: These numbers are working-day adjusted and hence may differ from the basis used for official projections.
Source: OECD.

Real total domestic demand

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	2.8	4.1	3.0	2.6	1.4	-0.2	-4.1	0.0	1.4	-1.8	-3.4	1.1
Japan	0.8	1.9	1.7	1.2	1.3	-0.8	-2.8	-0.1	0.8	-1.5	-2.7	0.8
Germany	0.6	-0.6	0.2	2.3	1.2	1.5	-1.7	0.2	1.4	1.8	-2.2	0.8
France	1.7	3.1	2.6	2.6	2.9	1.0	-2.4	0.1	2.6	-0.2	-2.4	1.3
Italy	0.8	1.3	1.0	2.0	1.3	-1.3	-3.8	-0.2	-0.1	-2.4	-2.9	0.7
United Kingdom	2.9	3.4	1.9	2.6	3.7	0.7	-4.1	-0.4	3.6	-2.3	-3.0	0.6
Canada	4.5	4.1	4.8	4.6	4.3	2.3	-3.0	0.7	6.2	-1.0	-2.6	1.9
Total of above countries	2.1	2.9	2.3	2.4	1.7	0.0	-3.4	0.0	1.6	-1.3	-3.0	1.0
Euro area	1.4	1.7	2.0	2.9	2.3	0.7	-2.8	-0.3	1.9	-0.1	-3.0	0.6
Total OECD	2.3	3.3	2.8	3.0	2.4	0.4	-3.6	-0.2	2.3	-1.3	-3.2	0.9

Note: These numbers are working-day adjusted and hence may differ from the basis used for official projections.
Source: OECD.

Contributions to changes in real GDP

As a per cent of real GDP in the previous period

	2006	2007	2008	2009	2010
United States					
Final domestic demand	2.8	1.8	0.0	-3.9	0.0
Stockbuilding	0.0	-0.4	-0.2	-0.4	0.0
Net exports	0.0	0.6	1.3	0.3	0.0
GDP	2.8	2.0	1.1	-4.0	0.0
Japan					
Final domestic demand	1.0	1.0	-0.6	-2.6	-0.1
Stockbuilding	0.1	0.3	-0.1	0.0	0.0
Net exports	0.8	1.1	0.1	-3.8	-0.3
GDP	2.0	2.4	-0.6	-6.6	-0.5
Germany					
Final domestic demand	2.3	1.0	0.9	-1.2	0.3
Stockbuilding	-0.1	0.1	0.5	-0.4	-0.1
Net exports	1.0	1.4	-0.4	-3.7	0.0
GDP	3.2	2.6	1.0	-5.3	0.2
France					
Final domestic demand	2.8	2.7	1.2	-1.4	0.1
Stockbuilding	-0.1	0.2	-0.2	-1.1	0.0
Net exports	-0.3	-0.8	-0.3	-0.8	-0.3
GDP	2.4	2.1	0.7	-3.3	-0.1
Italy					
Final domestic demand	1.5	1.2	-1.0	-4.1	-0.1
Stockbuilding	0.5	0.1	-0.3	0.4	0.0
Net exports	0.1	0.2	0.2	-0.5	-0.2
GDP	2.1	1.5	-1.0	-4.3	-0.4
United Kingdom					
Final domestic demand	2.7	3.6	1.0	-3.0	-0.4
Stockbuilding	0.0	0.2	-0.3	-1.2	0.0
Net exports	0.1	-0.7	0.1	0.5	0.2
GDP	2.8	3.0	0.7	-3.7	-0.2
Canada					
Final domestic demand	4.8	4.3	2.6	-2.9	0.7
Stockbuilding	-0.2	0.1	-0.2	-0.2	0.0
Net exports	-1.3	-1.5	-1.9	-0.2	-0.3
GDP	3.1	2.7	0.5	-3.0	0.3
Total of above countries					
Final domestic demand	2.4	1.9	0.2	-3.1	0.0
Stockbuilding	0.0	-0.1	-0.1	-0.4	0.0
Net exports	0.2	0.4	0.5	-0.9	-0.1
GDP	2.6	2.2	0.6	-4.4	-0.1
Euro area					
Total domestic demand	2.8	2.3	0.7	-2.8	-0.3
Net exports	0.2	0.3	0.0	-1.3	0.0
GDP	3.0	2.6	0.7	-4.1	-0.3

1. Chain-linked calculations for stockbuilding and net exports except for the euro area.

Source: OECD.

Output gaps

Deviations of actual GDP from potential GDP as a percentage of potential GDP[1]

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
United States	1.3	2.2	0.3	-0.5	-0.5	0.6	1.0	1.2	0.7	-0.7	-6.8	-8.8
Japan	-2.4	-0.6	-1.6	-2.5	-2.4	-1.2	-0.5	0.3	1.5	-0.3	-7.9	-9.6
Germany	-0.4	1.6	1.6	0.3	-1.2	-1.6	-1.8	0.1	1.2	0.7	-5.9	-7.2
France	0.5	1.9	1.2	0.1	-0.7	-0.3	-0.1	0.7	0.9	-0.2	-5.3	-7.1
Italy	-2.2	0.1	0.6	0.0	-0.9	-0.5	-0.7	0.1	0.3	-1.9	-7.3	-8.9
United Kingdom	0.2	1.1	0.7	0.1	0.3	0.5	0.0	0.4	1.3	0.2	-5.0	-7.0
Canada	0.7	2.6	1.2	1.2	0.3	0.6	0.8	1.3	1.6	-0.3	-5.6	-7.3
Total of major countries	0.1	1.4	0.3	-0.6	-0.8	0.0	0.2	0.8	0.9	-0.5	-6.6	-8.5
Euro area	-0.2	1.6	1.3	0.2	-0.9	-0.9	-0.9	0.2	0.8	-0.4	-6.3	-8.2
Other countries[2]	0.5	1.1	-0.3	-0.9	-1.2	-0.3	0.2	1.2	1.8	0.2	-5.7	-8.4
Total OECD	0.2	1.5	0.4	-0.5	-0.9	-0.1	0.1	0.7	1.0	-0.4	-6.5	-8.5

1. Potential output for countries where data availability permits follows the methodology outlined in Beffy, P.O., P. Olivaud, P. Richardson, and F. Sedillot (2006), "New OECD Methods for Supply-Side and Medium-Term Assessments: A Capital Services Approach", Economics Department Working Papers No. 482, ECO/WKP(2006)10. This combines a production function with some smoothing of its components using a statistical filter. The smoothing is both country and component specific. In countries where extensive data are not available, more simplified methodologies are used that essentially apply statistical filters to whatever data are available. The smoothed series from all these procedures are then used to generate a measure of potential output that determines the output gap -- which signals the presence, or absence, of inflationary pressure.
2. OECD countries not included in the Euro area or the 7 major countries.

Source: OECD.

GDP deflators

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	2.1	2.9	3.3	3.2	2.7	2.2	1.8	0.5	2.6	2.0	1.4	0.3
Japan	-1.6	-1.1	-1.2	-0.9	-0.7	-1.0	2.2	-1.0	-1.3	0.7	1.1	-1.4
Germany	1.2	1.0	0.7	0.5	1.9	1.5	1.6	0.5	1.9	2.2	0.8	0.4
France	1.9	1.6	2.0	2.5	2.5	2.2	1.2	0.6	2.3	1.8	1.0	0.4
Italy	3.1	2.6	2.1	1.8	2.4	2.8	1.1	0.2	2.9	2.8	0.4	0.2
United Kingdom	3.1	2.5	2.2	2.6	2.9	2.4	2.3	1.6	2.7	2.4	1.9	2.0
Canada	3.3	3.2	3.4	2.5	3.1	3.9	-2.7	0.2	3.5	1.8	-1.5	0.2
Total of major countries	1.6	1.9	2.0	2.1	2.1	1.7	1.6	0.3	1.9	1.9	1.1	0.2
Euro area	2.2	1.9	2.0	2.0	2.3	2.2	1.3	0.6	2.3	2.3	0.8	0.5
Other countries[1]	6.4	5.7	3.2	4.0	3.8	5.8	3.3	2.0	4.2	5.7	2.6	1.7
Total OECD	2.5	2.6	2.3	2.5	2.4	2.5	1.9	0.7	2.3	2.6	1.3	0.5

1. OECD countries not included in the Euro area or the 7 major countries.

Source: OECD.

Consumer prices

Percentage changes from previous year

	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	2.3	2.7	3.4	3.2	2.9	3.8	-0.4	0.5	4.0	1.5	0.5	0.3
Japan	-0.2	0.0	-0.6	0.2	0.1	1.4	-1.2	-1.3	0.5	1.0	-1.7	-1.3
Germany	1.0	1.8	1.9	1.8	2.3	2.8	0.6	0.5	3.1	1.7	0.7	0.3
France	2.2	2.3	1.9	1.9	1.6	3.2	0.4	0.6	2.5	2.0	0.6	0.4
Italy	2.8	2.3	2.2	2.2	2.0	3.5	0.7	0.7	2.6	2.9	0.4	0.4
United Kingdom	1.4	1.3	2.0	2.3	2.3	3.6	2.0	1.7	2.1	3.9	1.3	1.4
Canada	2.8	1.9	2.2	2.0	2.1	2.4	-0.6	0.5	2.4	1.9	-0.2	0.4
Euro area	2.1	2.2	2.2	2.2	2.1	3.3	0.6	0.7	2.9	2.3	0.6	0.5

Note: For the United Kingdom, the euro area countries and the euro area aggregate, the Harmonised Index of Consumer Prices (HICP) is used. In the United Kingdom the HICP is known as the Consumer Price Index .

Source: OECD.

Unemployment rates

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Fourth quarter 2007	2008	2009	2010
United States	5.8	6.0	5.5	5.1	4.6	4.6	5.8	9.1	10.3	4.8	6.9	9.8	10.5
Japan	5.4	5.3	4.7	4.4	4.1	3.9	4.0	4.9	5.6	3.8	4.0	5.3	5.7
Germany	8.3	9.2	9.7	10.5	9.7	8.3	7.3	8.9	11.6	7.9	7.1	10.5	11.8
France	7.9	8.5	8.8	8.8	8.8	8.0	7.4	9.9	10.9	7.5	7.8	10.7	10.9
Italy	8.8	8.6	8.1	7.8	6.8	6.2	6.8	9.2	10.7	6.4	7.0	10.3	10.9
United Kingdom	5.2	5.0	4.8	4.8	5.4	5.4	5.7	7.7	9.5	5.2	6.3	8.4	10.1
Canada	7.6	7.6	7.2	6.8	6.3	6.0	6.1	8.8	10.5	5.9	6.4	9.8	10.8
Total of above countries	6.4	6.6	6.3	6.1	5.8	5.4	5.8	8.2	9.6	5.4	6.4	9.1	9.8
Euro area	8.1	8.6	8.8	8.8	8.2	7.4	7.5	10.1	11.7	7.2	8.0	11.1	11.9
Other countries[1]	7.2	7.3	7.3	7.1	6.2	5.5	5.6	7.8	9.4	5.4	6.0	8.6	9.6
Total OECD	6.7	6.9	6.8	6.6	6.0	5.6	6.0	8.4	9.9	5.5	6.5	9.3	10.1

1. OECD countries not included in the Euro area or the 7 major countries.
Source: OECD.

Short-term interest rates

					2008	2009				2010			
	2007	2008	2009	2010	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
United States	5.3	3.2	1.2	0.7	3.4	1.2	1.2	1.2	1.2	1.0	0.7	0.5	0.4
Japan	0.7	0.7	0.6	0.3	0.8	0.7	0.5	0.5	0.5	0.4	0.3	0.2	0.2
United Kingdom	6.0	5.5	1.3	0.6	4.6	2.0	1.1	1.1	1.1	0.9	0.7	0.4	0.3
Canada	4.6	3.5	1.0	0.6	3.0	1.5	0.9	0.9	0.9	0.8	0.6	0.4	0.4
Euro area	4.3	4.7	1.3	0.6	4.6	2.1	1.1	1.0	1.0	0.9	0.6	0.4	0.4

Source: OECD.

Long-term interest rates

					2008	2009				2010			
	2007	2008	2009	2010	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
United States	4.6	3.7	3.1	3.6	3.3	2.9	3.1	3.2	3.2	3.4	3.5	3.7	3.8
Japan	1.7	1.5	1.4	1.7	1.4	1.3	1.3	1.4	1.4	1.5	1.6	1.8	1.9
Germany	4.2	4.0	3.1	3.5	3.5	3.1	3.0	3.1	3.2	3.3	3.4	3.5	3.7
France	4.3	4.2	3.7	3.8	3.9	3.7	3.6	3.7	3.7	3.7	3.7	3.8	4.0
Italy	4.5	4.7	4.4	4.3	4.7	4.5	4.3	4.3	4.4	4.3	4.3	4.3	4.4
United Kingdom	5.0	4.6	3.6	4.0	4.2	3.6	3.5	3.6	3.7	3.8	4.0	4.1	4.3
Canada	4.3	3.6	3.0	3.4	3.4	2.9	2.9	3.0	3.1	3.2	3.4	3.5	3.7
Euro area	4.3	4.3	3.6	3.8	4.0	3.6	3.6	3.6	3.7	3.7	3.8	3.9	4.0

Source: OECD.

General government financial balance

Surplus (+) or deficit (-) as a percentage of nominal GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
United States[1]	1.6	-0.4	-3.8	-4.8	-4.4	-3.3	-2.2	-2.9	-5.8	-10.2	-11.9
Japan	-7.6	-6.3	-8.0	-7.9	-6.2	-6.7	-1.6	-2.5	-2.6	-6.8	-8.4
Germany	1.3	-2.8	-3.6	-4.0	-3.8	-3.3	-1.5	-0.2	-0.1	-4.5	-6.8
France	-1.5	-1.6	-3.2	-4.1	-3.6	-3.0	-2.4	-2.7	-3.4	-6.6	-8.3
Italy	-0.9	-3.1	-3.0	-3.5	-3.6	-4.4	-3.4	-1.5	-2.5	-4.7	-5.9
United Kingdom	3.7	0.6	-2.0	-3.7	-3.7	-3.3	-2.7	-2.8	-4.4	-9.3	-10.5
Canada	2.9	0.7	-0.1	-0.1	0.9	1.5	1.3	1.4	0.3	-4.4	-6.2
Total of above countries	-0.1	-1.7	-4.1	-4.8	-4.2	-3.7	-2.0	-2.2	-3.9	-8.1	-9.8
Euro area	0.0	-1.8	-2.6	-3.1	-3.0	-2.6	-1.3	-0.7	-1.8	-5.4	-7.0
Other countries[2]	2.0	0.9	0.5	-0.9	0.4	1.3	1.9	3.0	2.4	-1.8	-2.6
Total OECD	0.2	-1.3	-3.3	-4.0	-3.4	-2.8	-1.3	-1.4	-3.0	-7.2	-8.7

Note: Financial balances include one-off factors such as those resulting from the sale of the mobile telephone licenses. As data are on a national account basis (SNA93/ESA95), the government financial balances may differ from the numbers reported to the European Commission under the Excessive Deficit Procedure for some EU countries. For more details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. These numbers take into account public entreprises.
2. OECD countries not included in the Euro area or the 7 major countries.

General government cyclically-adjusted financial balance

Surplus (+) or deficit (-) as a percentage of potential GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
United States	0.9	-0.7	-3.6	-4.6	-4.4	-3.6	-2.6	-3.2	-5.6	-7.8	-8.4
Japan	-7.3	-5.7	-7.1	-7.0	-5.7	-6.5	-1.7	-3.0	-2.6	-4.4	-5.1
Germany	-1.9	-3.6	-3.8	-3.5	-2.9	-2.3	-1.3	-0.6	-0.6	-2.1	-3.2
France	-2.2	-2.5	-3.5	-3.9	-3.4	-2.9	-2.5	-3.1	-3.6	-4.3	-4.5
Italy	-1.7	-3.3	-3.0	-3.1	-3.2	-4.0	-3.3	-1.7	-1.7	-1.1	-0.8
United Kingdom	1.0	0.3	-2.1	-3.8	-3.9	-3.4	-2.9	-3.2	-4.6	-7.3	-7.0
Canada	2.1	0.2	-0.5	-0.2	0.7	1.3	0.9	0.8	0.3	-2.3	-3.0
Total of above countries	-1.0	-2.0	-3.9	-4.5	-4.1	-3.6	-2.3	-2.6	-3.8	-5.7	-6.1
Euro area	-1.8	-2.5	-2.7	-2.6	-2.5	-2.1	-1.4	-1.1	-1.6	-2.1	-2.6
Other countries[2]	-0.5	-1.4	-1.8	-1.8	-1.2	-0.5	-0.3	0.4	0.4	-1.1	-0.5
Total OECD	-1.0	-1.9	-3.4	-3.9	-3.6	-3.1	-1.8	-2.1	-3.2	-4.9	-5.3

Note: Cyclically-adjusted balances exclude one-off revenues from the sale of mobile telephone licenses. For more details on the methodo used for estimating the cyclical component of government balances see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

2. OECD countries not included in the Euro area or the 7 major countries.

Source: OECD.

General government underlying financial balance

Surplus (+) or deficit (-) as a percentage of nominal GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
United States	0.8	-0.8	-3.7	-4.5	-4.4	-3.6	-2.9	-3.3	-5.4	-7.6	-8.2
Japan	-6.9	-6.3	-7.2	-6.7	-6.7	-5.1	-3.5	-3.2	-3.7	-4.6	-4.6
Germany	-1.9	-3.4	-3.7	-3.2	-2.9	-2.2	-1.4	-0.4	-0.5	-2.0	-3.1
France	-2.3	-2.4	-3.6	-4.1	-3.5	-3.4	-2.5	-3.1	-3.5	-4.2	-4.3
Italy	-1.7	-3.0	-2.6	-3.9	-3.5	-3.7	-2.1	-1.3	-1.6	-1.3	-1.1
United Kingdom	0.8	0.3	-2.1	-3.7	-3.9	-3.5	-2.6	-3.1	-4.4	-7.2	-7.1
Canada	2.1	0.1	-0.5	-0.2	0.8	1.4	1.1	0.9	0.3	-2.3	-3.0
Total of above countries	-1.1	-2.1	-3.9	-4.4	-4.2	-3.5	-2.5	-2.6	-3.9	-5.6	-6.0
Euro area	-1.8	-2.4	-2.6	-2.9	-2.5	-2.1	-1.3	-0.9	-1.4	-2.1	-2.7
Other countries[2]	-0.5	-1.1	-1.4	-1.7	-1.3	-0.5	-0.4	0.4	0.4	-1.1	-0.5
Total OECD	-1.1	-1.9	-3.4	-3.9	-3.7	-2.9	-2.1	-2.1	-3.2	-4.8	-5.2

Note: The underlying balances are adjusted for the cycle and for one-offs. For more details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

2. OECD countries not included in the Euro area or the 7 major countries.

Source: OECD.

Quarterly demand and output projections

Percentage changes from previous period, seasonally adjusted at annual rates, volume

	2008	2009	2010	2008 Q4	2009 Q1	2010 Q2	2010 Q3	2010 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	Fourth quarter[1] 2008	Fourth quarter[1] 2009	Fourth quarter[1] 2010
Private consumption															
United States	0.2	-2.4	0.1	-4.3	-2.5	-2.0	-1.0	0.0	0.3	0.5	0.8	1.1	-1.5	-1.4	0.7
Japan	0.5	-1.4	-0.5	-1.7	-2.7	1.0	-3.5	-1.0	-0.3	-0.1	0.5	0.7	-0.2	-1.6	0.2
Germany	-0.3	0.0	0.0	-0.4	0.3	0.6	-0.8	-0.4	0.0	0.2	0.4	0.4	-0.6	-0.1	0.2
France	1.3	-0.2	0.2	1.8	-0.8	-1.2	-1.2	-0.8	0.4	1.0	1.6	2.1	0.6	-1.0	1.3
Italy	-0.9	-3.0	0.0	-3.3	-5.7	-3.1	-2.0	0.1	0.3	0.8	1.0	1.0	-1.5	-2.7	0.8
United Kingdom	1.7	-2.2	-0.4	-2.7	-3.2	-2.6	-1.8	-0.8	-0.4	0.4	0.6	0.7	-0.1	-2.1	0.3
Canada	3.0	-2.2	0.1	-3.3	-3.5	-3.2	-1.8	-0.5	0.5	1.2	1.5	1.7	0.3	-2.3	1.2
Euro area	0.4	-1.3	-0.1	-0.5	-2.4	-2.0	-1.6	-0.5	0.3	0.5	0.7	0.8	-0.2	-1.6	0.6
Total OECD	0.7	-2.0	0.1	-3.7	-2.4	-1.8	-1.5	-0.3	0.4	0.8	1.1	1.4	-0.9	-1.5	0.9
Public consumption															
United States	2.8	2.0	2.8	2.2	-0.1	0.8	3.1	3.5	3.0	2.8	2.3	2.3	3.3	1.8	2.6
Japan	0.9	2.4	2.9	5.6	2.6	2.8	2.8	2.9	3.0	3.0	3.0	3.0	0.1	2.8	3.0
Germany	2.0	0.6	0.9	0.0	0.4	0.4	0.4	0.4	1.2	1.2	1.2	1.2	2.1	0.4	1.2
France	1.6	1.3	1.3	0.3	0.6	1.0	2.0	2.0	1.0	1.0	0.8	0.4	1.8	1.4	0.8
Italy	0.6	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.2	0.2
United Kingdom	3.5	2.8	1.5	6.1	2.6	2.0	1.8	1.5	1.4	1.3	1.4	1.4	4.4	2.0	1.4
Canada	3.4	3.0	3.0	2.8	3.2	3.5	4.0	4.0	3.0	2.5	2.0	1.0	2.0	3.7	2.1
Euro area	1.8	1.5	1.2	-0.6	1.4	1.9	2.2	1.5	1.1	0.6	0.9	0.9	1.7	1.7	0.9
Total OECD	2.3	2.2	2.1	2.6	1.4	1.8	2.5	2.4	2.0	1.9	1.9	2.0	2.5	2.0	1.9
Total investment															
United States	-3.4	-14.3	-3.3	-17.6	-23.3	-16.0	-9.5	-5.9	-1.7	0.3	2.0	4.2	-6.6	-13.9	1.2
Japan	-4.6	-10.5	-1.9	-10.9	-16.6	-11.6	-5.6	-1.0	-1.4	-1.2	2.0	2.0	-6.9	-8.9	0.4
Germany	3.6	-6.6	0.7	-10.2	-11.8	-6.1	-2.1	1.0	1.5	2.0	2.0	2.9	-0.5	-4.9	2.1
France	0.4	-7.1	-1.7	-4.5	-11.9	-9.6	-6.4	-2.5	-0.2	-0.3	1.4	2.1	-2.4	-7.7	0.7
Italy	-2.9	-11.7	-0.8	-25.0	-15.0	-5.9	-5.9	-0.6	0.4	0.8	1.0	1.2	-9.3	-7.0	0.8
United Kingdom	-4.3	-12.5	-2.7	-8.9	-20.7	-11.6	-7.8	-5.1	-2.0	0.5	2.1	3.3	-9.7	-11.5	0.9
Canada	0.8	-9.3	-0.2	-14.7	-13.7	-11.2	-6.4	-1.2	1.2	2.9	4.2	5.4	-3.8	-8.2	3.4
Euro area	0.0	-9.0	-2.1	-14.3	-12.3	-9.1	-5.3	-3.4	-2.2	0.3	0.8	3.5	-4.6	-7.6	0.6
Total OECD	-1.6	-11.0	-2.6	-14.4	-16.7	-12.1	-7.6	-4.7	-1.6	0.4	1.6	3.0	-5.4	-10.4	0.8

Note: The adoption of new national account systems, SNA93 or ESA95, has been proceeding at an uneven pace among OECD member countries, both with respect to variables and the time period covered. As a consequence, there are breaks in many national series. Moreover, some countries are using chain-weighted price indices to calculate real GDP and expenditures components. See Table "National Account Reporting Systems and Base-years" at the beginning of the Statistical Annex and *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Year-on-year growth rates in per cent.

Source: OECD.

Quarterly demand and output projections *(cont'd)*

Percentage changes from previous period, seasonally adjusted at annual rates, volume

	2008	2009	2010	2008	2009				2010				Fourth quarter[1]		
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2008	2009	2010
Total domestic demand															
United States	-0.2	-4.1	0.0	-5.6	-7.2	-4.1	-1.7	-0.3	0.5	0.9	1.2	1.8	-1.8	-3.4	1.1
Japan	-0.8	-2.8	-0.1	-0.5	-6.4	-1.5	-2.7	-0.2	0.1	0.3	1.3	1.4	-1.5	-2.7	0.8
Germany	1.5	-1.7	0.2	-0.3	-6.3	-1.6	-0.8	0.0	0.5	0.7	0.9	1.1	1.8	-2.2	0.8
France	1.0	-2.4	0.1	-3.2	-4.5	-2.9	-1.5	-0.5	0.4	0.8	1.8	2.0	-0.2	-2.4	1.3
Italy	-1.3	-3.8	-0.2	-6.0	-5.8	-3.1	-2.3	-0.2	0.3	0.7	0.8	0.9	-2.4	-2.9	0.7
United Kingdom	0.7	-4.1	-0.4	-6.9	-5.9	-3.1	-2.0	-1.0	-0.3	0.6	1.0	1.3	-2.3	-3.0	0.6
Canada	2.3	-3.0	0.7	-5.6	-5.0	-3.9	-1.6	0.3	1.2	1.9	2.2	2.3	-1.0	-2.6	1.9
Euro area	0.7	-2.8	-0.3	-1.9	-6.3	-3.2	-1.6	-0.7	0.0	0.5	0.7	1.4	-0.1	-3.0	0.6
Total OECD	0.4	-3.6	-0.2	-4.9	-6.1	-3.6	-2.1	-0.8	0.1	0.7	1.2	1.7	-1.3	-3.2	0.9
Export of goods and services															
United States	6.2	-11.3	0.2	-23.6	-20.0	-10.0	-3.0	-1.0	1.0	2.5	3.5	4.0	-1.8	-8.8	2.7
Japan	1.7	-26.4	-2.0	-44.9	-43.6	-18.4	-5.7	-2.6	-0.4	1.1	1.9	2.5	-12.9	-19.3	1.2
Germany	2.3	-16.5	-0.1	-26.2	-27.1	-15.0	-8.1	-2.0	2.0	4.0	6.0	7.5	-5.6	-13.6	4.9
France	1.1	-11.4	-2.3	-14.1	-18.5	-12.9	-9.6	-5.5	0.8	0.8	2.0	4.3	-2.7	-11.8	2.0
Italy	-3.7	-15.9	-1.1	-26.6	-20.5	-15.1	-8.5	-2.0	1.4	2.5	3.3	4.1	-10.7	-11.8	2.8
United Kingdom	-0.1	-9.8	2.2	-20.2	-14.4	-8.9	-3.9	0.8	3.6	5.3	6.6	7.4	-5.3	-6.8	5.7
Canada	-4.7	-10.8	0.1	-17.5	-18.6	-9.0	-2.2	-0.1	0.8	1.5	2.5	3.5	-7.4	-7.8	2.1
Total OECD[2]	3.2	-14.0	0.1	-25.4	-23.3	-12.3	-5.1	-1.2	1.6	3.1	4.3	5.1	-4.9	-10.9	3.5
Import of goods and services															
United States	-3.4	-10.1	0.3	-16.0	-17.0	-8.0	-2.0	0.0	0.5	2.0	3.0	3.5	-7.1	-7.0	2.2
Japan	1.1	-4.8	0.7	12.4	-19.3	-5.9	-4.6	-1.2	0.9	2.5	6.4	6.5	3.0	-8.0	4.1
Germany	3.6	-10.0	0.0	-13.5	-21.9	-11.5	-7.8	-1.0	1.5	3.1	5.1	6.8	1.5	-10.9	4.1
France	2.0	-7.5	-1.0	-8.7	-14.0	-7.8	-7.8	-3.9	0.8	1.2	4.1	6.6	0.3	-8.4	3.1
Italy	-4.5	-13.8	-0.2	-22.1	-21.9	-11.5	-7.8	0.0	1.6	2.8	3.6	4.1	-8.8	-10.6	3.0
United Kingdom	-0.5	-10.4	1.3	-21.6	-15.1	-8.9	-3.9	0.8	2.8	3.9	4.5	4.9	-7.1	-7.0	4.0
Canada	0.8	-10.6	1.1	-23.3	-15.0	-8.0	-3.0	0.0	2.2	3.2	4.2	5.0	-8.3	-6.7	3.6
Total OECD[2]	0.0	-10.5	0.2	-15.1	-18.6	-9.9	-5.0	-1.2	1.2	2.9	4.4	5.2	-4.4	-8.9	3.4
GDP															
United States	1.1	-4.0	0.0	-6.2	-7.2	-4.3	-1.8	-0.4	0.5	0.9	1.2	1.8	-0.8	-3.5	1.1
Japan	-0.6	-6.6	-0.5	-12.1	-10.9	-3.3	-2.8	-0.4	0.0	0.1	0.7	0.9	-4.3	-4.4	0.4
Germany	1.0	-5.3	0.2	-8.2	-9.6	-3.6	-1.2	-0.4	0.7	1.2	1.4	1.5	-1.6	-3.8	1.2
France	0.7	-3.3	-0.1	-4.6	-5.4	-4.0	-1.8	-0.7	0.4	0.7	1.3	1.4	-1.0	-3.0	0.9
Italy	-1.0	-4.3	-0.4	-7.5	-5.1	-4.0	-2.4	-0.7	0.1	0.6	0.7	0.8	-2.9	-3.1	0.6
United Kingdom	0.7	-3.7	-0.2	-6.0	-5.4	-2.9	-1.9	-1.0	-0.1	0.9	1.4	1.8	-1.9	-2.8	1.0
Canada	0.5	-3.0	0.3	-3.4	-6.3	-4.1	-1.4	0.3	0.7	1.3	1.6	1.8	-0.7	-2.9	1.3
Euro area	0.7	-4.1	-0.3	-5.9	-6.8	-4.2	-2.2	-0.8	0.2	0.7	1.1	1.4	-1.4	-3.5	0.8
Total OECD	0.9	-4.3	-0.1	-7.1	-7.0	-4.0	-2.1	-0.6	0.4	0.9	1.4	1.8	-1.5	-3.4	1.1

Note: The adoption of new national account systems, SNA93 or ESA95, has been proceeding at an uneven pace among OECD member countries, both with respect to variables and the time period covered. As a consequence, there are breaks in many national series. Moreover, some countries are using chain-weighted price indices to calculate real GDP and expenditures components. See Table "National Account Reporting Systems and Base-years" at the beginning of the Statistical Annex and *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Year-on-year growth rates in per cent.
2. Includes intra-regional trade.

Source: OECD.

Quarterly price, cost and unemployment projections

Percentage changes from previous period, seasonally adjusted at annual rates, volume

	2008	2009	2010	2008 Q4	2009 Q1	2010 Q2	2010 Q3	2010 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	Fourth quarter[1] 2008	Fourth quarter[1] 2009	Fourth quarter[1] 2010
Consumer price index[2]															
United States	3.8	-0.4	0.5	-8.3	-0.8	1.2	0.9	0.6	0.4	0.3	0.2	0.2	1.5	0.5	0.3
Japan	1.4	-1.2	-1.3	-2.5	-2.7	-1.8	-1.0	-1.2	-1.3	-1.3	-1.3	-1.2	1.0	-1.7	-1.3
Germany	2.8	0.6	0.5	-1.6	0.0	1.1	0.9	0.7	0.5	0.3	0.2	0.1	1.7	0.7	0.3
France	3.2	0.4	0.6	-1.3	-0.6	1.1	0.9	0.8	0.6	0.5	0.3	0.2	2.0	0.6	0.4
Italy	3.5	0.7	0.7	0.5	-1.5	1.2	1.0	0.9	0.7	0.5	0.4	0.2	2.9	0.4	0.4
United Kingdom	3.6	2.0	1.7	0.5	1.2	1.5	1.2	1.1	4.1	0.6	0.5	0.4	3.9	1.3	1.4
Canada	2.4	-0.6	0.5	-5.9	-3.0	0.8	0.7	0.6	0.5	0.5	0.4	0.3	1.9	-0.2	0.4
Euro area	3.3	0.6	0.7	-1.0	-0.6	1.1	1.0	0.9	0.7	0.5	0.4	0.3	2.3	0.6	0.5
GDP deflator															
United States	2.2	1.8	0.5	0.5	3.1	1.5	0.7	0.5	0.5	0.3	0.3	0.3	2.0	1.4	0.3
Japan	-1.0	2.2	-1.0	6.5	5.0	0.7	-0.3	-0.9	-1.3	-1.4	-1.5	-1.5	0.7	1.1	-1.4
Germany	1.5	1.6	0.5	3.9	1.2	0.8	0.6	0.7	0.5	0.4	0.4	0.3	2.2	0.8	0.4
France	2.2	1.2	0.6	1.2	1.4	1.1	0.9	0.7	0.6	0.5	0.3	0.2	1.8	1.0	0.4
Italy	2.8	1.1	0.2	1.8	0.4	0.6	0.3	0.2	0.2	0.2	0.2	0.2	2.8	0.4	0.2
United Kingdom	2.4	2.3	1.6	2.9	3.2	2.0	1.4	1.0	1.4	1.8	2.2	2.6	2.4	1.9	2.0
Canada	3.9	-2.7	0.2	-10.4	-6.6	0.4	0.2	0.3	0.2	0.2	0.2	0.2	1.8	-1.5	0.2
Euro area	2.2	1.3	0.6	1.9	0.7	0.9	0.8	0.7	0.6	0.5	0.4	0.3	2.3	0.8	0.5
Total OECD	2.5	1.9	0.7	1.8	2.2	1.6	1.0	0.6	0.5	0.6	0.5	0.4	2.6	1.3	0.5
							Per cent of labour force								
Unemployment															
United States	5.8	9.1	10.3	6.9	8.1	9.0	9.5	9.8	10.1	10.3	10.4	10.5	6.9	9.8	10.5
Japan	4.0	4.9	5.6	4.0	4.4	4.7	5.0	5.3	5.5	5.6	5.6	5.7	4.0	5.3	5.7
Germany	7.3	8.9	11.6	7.1	7.5	8.1	9.5	10.5	11.1	11.7	11.7	11.8	7.1	10.5	11.8
France	7.4	9.9	10.9	7.8	8.9	9.7	10.3	10.7	10.9	10.9	10.9	10.9	7.8	10.7	10.9
Italy	6.8	9.2	10.7	7.0	7.9	8.8	9.7	10.3	10.5	10.7	10.8	10.9	7.0	10.3	10.9
United Kingdom	5.7	7.7	9.5	6.3	6.9	7.6	8.0	8.4	8.8	9.2	9.7	10.1	6.3	8.4	10.1
Canada	6.1	8.8	10.5	6.4	7.6	8.5	9.3	9.8	10.1	10.4	10.6	10.8	6.4	9.8	10.8
Euro area	7.5	10.1	11.7	8.0	9.0	9.7	10.5	11.1	11.5	11.7	11.8	11.9	8.0	11.1	11.9
Total OECD	6.0	8.4	9.9	6.5	7.5	8.2	8.8	9.3	9.6	9.8	10.0	10.1	6.5	9.3	10.1

Note: The adoption of new national account systems, SNA93 or ESA95, has been proceeding at an uneven pace among OECD member countries, both with respect to variables and the time period covered. As a consequence, there are breaks in many national series. Moreover, some countries are using chain-weighted price indices to calculate real GDP and expenditures components. See Table "National Account Reporting Systems and Base-years" at the beginning of the Statistical Annex and *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Year-on-year growth rates in per cent.
2. For the United Kingdom, the euro area countries and the euro area aggregate, the Harmonised Index of Consumer Prices (HICP) is used.

Source: OECD.

CHAPTER 2

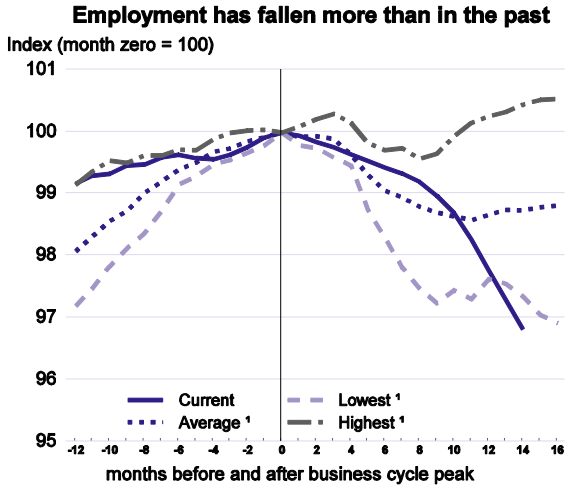
DEVELOPMENTS IN SELECTED OECD AND NON-OECD COUNTRIES

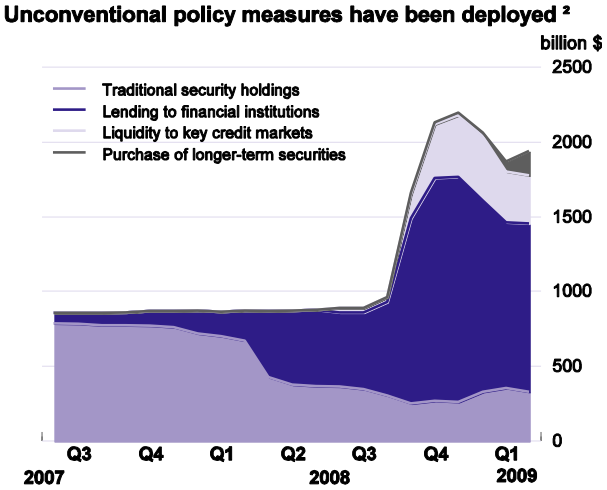
UNITED STATES

The financial crisis has triggered a sharp recession, which is projected to deepen in 2009. With sizeable fiscal and monetary stimulus, growth is likely to resume in early 2010 but the pace of recovery will be curbed by substantial negative wealth effects and the ongoing, albeit diminishing, credit squeeze. Deflation is a distinct possibility at some point.

Following rigorous stress tests, further infusions of public funds into systemically important financial institutions are likely to be needed to rebuild capital and restore confidence in the banking system. In some cases, the government may have to take control of some institutions temporarily. The Federal Reserve should continue to expand its balance sheet as required to keep the risk of deflation at bay. While additional fiscal stimulus may be necessary in the near term if the economic outlook deteriorates further, ambitious measures to restore fiscal sustainability will need to be implemented once economic recovery is firmly in place.

United States





1. Average, lowest and highest values of past six recessions.
2. Composition of the Federal Reserve's balance sheet.

Source: Datastream, Federal Reserve Bank of Cleveland and OECD.

The recession has intensified

The recession has deepened sharply, with output contracting at an alarming pace and the labour market weakening rapidly: since December 2007, nearly 4½ million jobs have been lost. Industrial production has continued to fall steeply, and weak export orders and gloomy business surveys indicate that foreign demand for US goods and services has also declined further. The intensification of the recession and the plunge in commodity prices have resulted in a marked drop in inflation.

United States: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices $ billion	Percentage changes, volume (2000 prices)				
Private consumption	8 694.1	3.0	2.8	0.2	-2.4	0.1
Government consumption	1 957.5	1.6	1.9	2.8	2.0	2.8
Gross fixed investment	2 440.6	2.0	-2.0	-3.4	-14.3	-3.3
Public	397.8	2.1	3.0	3.5	1.9	2.8
Residential	769.7	-7.1	-17.9	-20.7	-20.0	-1.4
Non-residential	1 273.1	7.5	4.9	1.7	-17.8	-6.4
Final domestic demand	13 092.2	2.6	1.8	0.0	-3.7	0.0
Stockbuilding[1]	43.3	0.0	-0.4	-0.2	-0.4	0.0
Total domestic demand	13 135.5	2.6	1.4	-0.2	-4.1	0.0
Exports of goods and services	1 311.5	9.1	8.4	6.2	-11.3	0.2
Imports of goods and services	2 025.1	6.0	2.2	-3.4	-10.1	0.3
Net exports[1]	- 713.6	0.0	0.6	1.3	0.3	0.0
GDP at market prices	12 421.9	2.8	2.0	1.1	-4.0	0.0
GDP deflator		3.2	2.7	2.2	1.8	0.5
Memorandum items						
Consumer price index		3.2	2.9	3.8	-0.4	0.5
Core consumer price index[2]		2.2	2.2	2.2	1.1	0.3
Unemployment rate		4.6	4.6	5.8	9.1	10.3
General government financial balance[3]		-2.2	-2.9	-5.8	-10.2	-11.9
Export performance[4]		-0.1	1.3	2.4	0.6	-1.2

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Contributions to changes in real GDP, actual amount in the first column.
2. Price index for personal consumption expenditure excluding food and energy.
3. As a percentage of GDP.
4. Ratio between export volume and export market of total goods and services.

Source: OECD.

Stress in financial markets is persistent

The financial system remains fragile and some parts of the banking sector are under considerable stress, as witnessed by the high level of credit default swap rates for many US banks. As a consequence, even if aggressive policy action has revived some key financial markets, credit conditions remain extremely tight for both households and firms. Consumer credit and business loans by commercial banks have been declining since late last year. Indeed, these and other readily available statistics on banks' loans are likely to underestimate the degree of the credit crunch because there has been significant re-intermediation of financial flows through the

commercial banking system, following the collapse of large parts of the structured finance market. Assuming that financial conditions improve only around the beginning of next year, the resulting credit crunch is projected to exert a considerable drag on growth, both in 2009 and 2010.

Falling employment and wealth are curbing consumer spending

US households' incomes are being depressed by the deterioration in labour market conditions, and their wealth has fallen markedly with declines in housing and equity prices. An increasing number of households are having difficulty servicing their debt; almost 12% of US mortgages were delinquent or in foreclosure at the end of 2008. Furthermore, heightened economic uncertainty is inducing households, even those that can afford it, to postpone purchases, especially of cars. Consumer spending may remain weak for several years, as households boost savings and rebuild their wealth. Tight credit, declining demand and falling exports are depressing business investment even further.

The recovery is likely to be tepid…

A gradual recovery may take hold next year as financial conditions improve and macroeconomic policies exert a growing positive impulse. In response to the opening of a substantial output gap and with commodity prices assumed to remain flat, inflation should fall noticeably and deflation may become a threat in 2010.

… despite very loose monetary policy…

The US authorities have taken aggressive steps to support real activity. The Federal Reserve has lowered its policy rate to nearly zero, has greatly expanded its balance sheet and has implemented innovative measure to address strains in key credit markets, such as those for commercial paper and for conforming mortgages. The zero-interest-rate policy and many of the new credit facilities should be maintained through 2010. Furthermore, to stave off deflationary pressures and to further support economic growth, the scale of quantitative easing operations may have to be expanded further with additional purchases of longer-term US Treasuries and agency securities. Once the recovery has firmed up, the size of the Federal Reserve's balance sheet should be reduced promptly to keep inflation under control and to avoid fuelling another bubble.

… and a massive fiscal stimulus

The new Administration has quickly enacted the fiscal stimulus American Recovery and Reinvestment Act, which includes discretionary measures estimated at 2.1% and then 2.4% of GDP over 2009 and 2010, respectively. The fiscal package is very broad, with spending measures being somewhat larger than tax reductions, and will provide support even past 2010. Additional fiscal stimulus would be warranted if the economic outlook were to deteriorate further. Once an economic recovery has firmly taken hold, the Administration should implement a more ambitious fiscal consolidation programme than envisaged in its budget proposal.

It is essential to stop the financial bleeding,…

The key to ending the financial crisis, and thereby laying the foundation for a more rapid recovery, is to ensure some measure of financial stability so that credit can flow normally to creditworthy households and firms. The Financial Stability Plan launched in February requires large banks to go through comprehensive stress tests, to be completed by the end of April, in order to determine which institutions

require additional capital. Those institutions found to be under-capitalised will then be given the opportunity to raise the capital from private investors. If these institutions are unable to do so, they will be required to accept new infusions of public funds. In March, a new initiative, the Public-Private Investment Program, was set up to cleanse bank balance sheets of bad loans and to create a market for some illiquid mortgage- and asset-backed securities. Though the Plan should be helpful in resolving the financial crisis, it is essential that its implementation proceeds swiftly and that the Administration stand ready to take more decisive action if required. To ensure that the Plan is more effective in helping to overcome the financial crisis, the Administration should clarify implementation details (such as how long banks would be given to raise private capital) and make it clear that it will not hesitate to restructure systemically important but fragile financial institutions, even if that entails taking control of them, putting them into receivership, removing bad assets, and recapitalising the remaining "good bank" with public funds.

… put a stop to the rise in foreclosures…

Another policy priority should be to reduce the mounting wave of mortgage foreclosures. The Administration's Homeowner Affordability and Stability Plan, to assist distressed borrowers by providing incentives to reduce the cost of servicing debt, will help. However, a more comprehensive plan is needed to more effectively induce lenders to reduce outstanding debt for homeowners owing more than what their homes are worth.

… and begin to reform financial sector supervision

The crisis exposed significant weaknesses in financial supervision and regulation. The authorities should soon turn to the task of overhauling this system with a view to closing gaps and ensuring systemic stability.

JAPAN

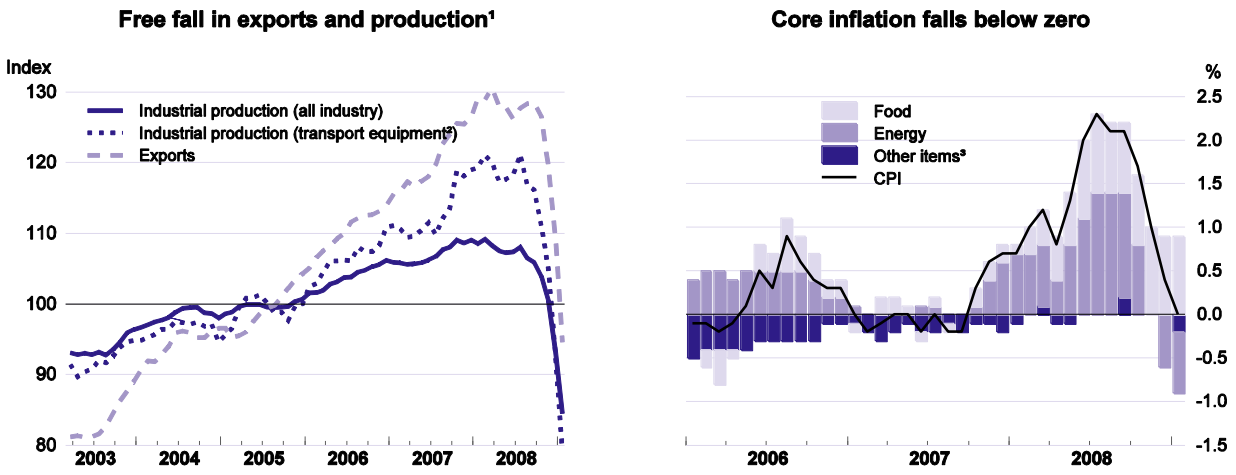
The current downturn is projected to be the most severe in Japan's post-war history. In the wake of the global financial crisis, exports and business investment have plummeted, while the yen has appreciated substantially and equity prices have fallen by half. Output is projected to decline by around 6½ per cent in 2009, raising unemployment and pushing Japan back into deflation. A recovery in domestic demand from mid-2010 is expected to lift output growth into positive territory, although well below potential.

The Bank of Japan should implement additional measures to mitigate deflation. While the fiscal stimulus packages will help cushion the downturn, it will be important to focus again on fiscal consolidation as the economy stabilises, given the high public debt ratio. Reforms of the tax and social insurance systems, accompanied by structural reforms that would boost domestic demand, particularly in the service sector, remain a priority to improve living standards in the face of a shrinking working-age population.

The plunge in exports triggered by the global economic crisis…

The sharpest export decline in Japan's post-war era is resulting in a steep contraction of production and business investment. The negative demand shock and the appreciation of the yen, by 25% in trade-weighted terms in the fourth quarter of 2008 (quarter-on-quarter), led to a sharp deterioration in profitability. This contributed to a fall in equity prices that

Japan



1. Data are three-month moving averages of seasonally-adjusted volume indices (2005=100).
2. Excluding ships and rolling stock.
3. OECD measure of core inflation.

Source: Ministry of Economy, Trade and Industry and Bank of Japan; Ministry of Internal Affairs and Communications.

was accompanied by a widening interest rate gap between government and corporate bonds, especially for lower grades. In addition, the lending attitude of financial institutions is tightening, particularly for small and medium-sized enterprises. The deterioration in financial conditions contributed to a double-digit increase (year-on-year) in the number of bankruptcies during the first two months of 2009.

Japan: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices ¥ trillion	Percentage changes, volume (2000 prices)				
Private consumption	285.9	1.5	0.7	0.5	-1.4	-0.5
Government consumption	90.6	0.4	2.0	0.9	2.4	2.9
Gross fixed investment	116.9	0.5	1.1	-4.6	-10.5	-1.9
Public[1]	22.9	-5.7	-7.0	-6.2	5.4	-4.6
Residential	18.2	0.5	-9.3	-6.9	-2.8	0.7
Non-residential	75.7	2.3	5.8	-3.7	-16.0	-1.6
Final domestic demand	493.4	1.1	1.0	-0.6	-2.8	-0.1
Stockbuilding[2]	1.4	0.1	0.3	-0.1	0.0	0.0
Total domestic demand	494.8	1.2	1.3	-0.8	-2.8	-0.1
Exports of goods and services	71.9	9.7	8.4	1.7	-26.4	-2.0
Imports of goods and services	65.0	4.2	1.5	1.1	-4.8	0.7
Net exports[2]	7.0	0.8	1.1	0.1	-3.8	-0.3
GDP at market prices	501.7	2.0	2.4	-0.6	-6.6	-0.5
GDP deflator		-0.9	-0.7	-1.0	2.2	-1.0
Memorandum items						
Consumer price index		0.2	0.1	1.4	-1.2	-1.3
Core consumer price index[3]		-0.4	-0.2	0.1	-0.3	-1.2
Unemployment rate		4.1	3.9	4.0	4.9	5.6
General government financial balance[4]		-1.6	-2.5	-2.6	-6.8	-8.4
Export performance[5]		0.1	1.1	-0.4	-15.3	-5.0

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Including public corporations.
2. Contributions to changes in real GDP, actual amount in the first column.
3. Consumer price index excluding food and energy.
4. As a percentage of GDP.
5. Ratio between export volume and export market of total goods and services.

Source: OECD.

… is boosting unemployment and bringing back deflation

Household income is falling as employment stalls and the decline in wages that began in late 2008 is accelerating, resulting in a contraction of household consumption. The significant drop in the job-offer-to-applicant ratio indicates that unemployment will increase significantly from its current level of around 4%. Core consumer price inflation (excluding energy and food) has fallen below zero.

Output is projected to contract further

With the external sector remaining a drag on activity, output is projected to continue contracting during the course of 2009. Domestic demand is expected to lead a modest recovery in 2010, although growth will still be less than 1% by the end of the year. A resumption of the correction

in housing investment, following the bungled regulatory change in 2007, should make a positive contribution to domestic demand. In addition, business investment may rebound following its sharp decline since 2007. While the fall in real wages will improve business profitability, it will also undermine the strength of private consumption. With output growth remaining below potential through 2010, the unemployment rate is likely to rise above 5½ per cent and deflation may become entrenched.

Fiscal and monetary policies are supporting economic activity

The three successive fiscal packages introduced since August 2008, which together total about 2% of GDP, coupled with the impact of the automatic stabilisers, will mitigate the depth and length of the recession. However, the additional spending and lower revenue will also increase the budget deficit, from 2.6% in 2007 in terms of the primary budget (excluding one-off factors), to around 8% by 2010, far above the official target of a primary budget surplus for the combined central and local governments in Fiscal Year 2011. These estimates do not include the fourth fiscal package planned for April 2009. Given mounting deflationary pressures and the stress in financial markets, the Bank of Japan lowered its policy interest rate from 0.3% to 0.1% in December 2008 and implemented a number of measures to provide liquidity, including purchases of up to 3 trillion yen of commercial paper and 1 trillion yen of corporate bonds by September 2009. Moreover, the Bank announced in March that it would increase the amount of outright purchases of government bonds. In addition, it will purchase up to 1 trillion yen in shares held by eligible banks by April 2010.

Additional measures are needed for a lasting recovery

Although firms are more resilient to external shocks and the banking sector is stronger than in the past, the global financial crisis has taken a heavy toll on Japan's export-dependent economy. The Bank of Japan should keep the policy interest rate close to zero and continue measures to increase liquidity until there is a definitive end to deflation. With the debt ratio projected to approach 200% in 2010, the scope for additional fiscal stimulus is limited even if it were self-reversing and focused on measures most likely to be effective in promoting growth and employment. Moreover, the objective of a primary budget surplus for the combined central and local governments should be reaffirmed. The government should pursue pro-growth tax and social insurance reforms, including an earned income tax credit to support low-income households. Structural reforms to boost productivity, particularly by strengthening competition in the service sector, are necessary to help improve living standards over the longer run.

EURO AREA

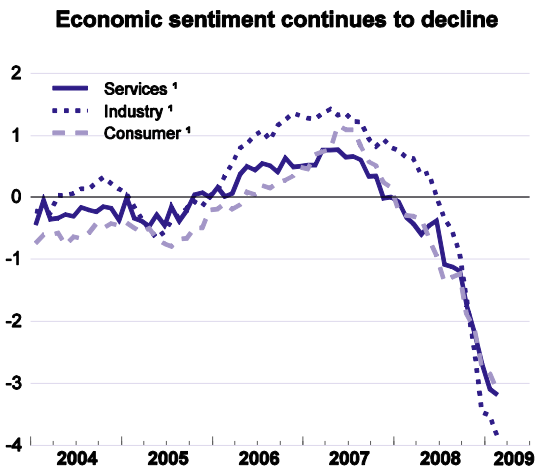
The euro area has entered a deep recession, propelled by very tight financial conditions, declining asset prices, a sharp drop in external demand and heightened uncertainty. Activity is expected to contract throughout 2009 and pick up only slowly in 2010, as the tensions in financial markets gradually dissipate. Rising unemployment and an increasingly negative output gap will dampen inflationary pressures throughout the projection period, with core inflation projected to fall to near zero during 2010.

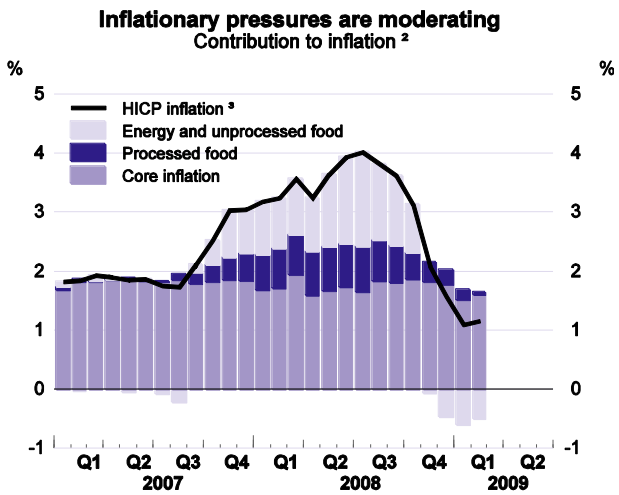
Given the weak outlook for inflation, additional monetary stimulus through further reductions in policy rates and quantitative easing is warranted. Additional discretionary fiscal measures are also warranted in member countries that have sufficient budgetary scope. Medium-term growth prospects would be enhanced by safeguarding the internal market and the liberal external trade and investment regime.

A deep recession has developed

Output has fallen rapidly in the euro area and further significant declines in GDP in the near term are likely. Both business and consumer sentiment are at very low levels and new industrial orders continue to drop markedly, pointing to further weakness in both industrial production and exports. Area-wide retail sales have also weakened, albeit to a lesser extent. GDP declined by an annualised rate of almost 6% in the fourth quarter of 2008 and a similar decline appears likely in the first quarter of 2009.

Euro area





1. The series are normalised and averaged 0 over 1999m1-2009m2.
2. Represented by the harmonised consumer price index (HICP).
3. Year-on-year percentage change.

Source: Eurostat and OECD.

Financial conditions have continued to tighten

Financial conditions have tightened further, driven by weaker asset prices, more stringent bank lending standards and high interest rate spreads. Credit growth to households and non-financial firms has slowed rapidly. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

Inflationary pressures continue to recede

Headline inflation has fallen to just over 1%, from a peak of 4% last July, reflecting the sharp decline in global commodity prices. Both exclusion-based and statistical measures of core inflation have also drifted down, but to a lesser extent. However, rising unemployment and the continued widening of the output gap will further moderate wage and price pressures in 2009 and 2010.

Euro area: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices € billion	Percentage changes, volume (2001 prices)				
Total domestic demand	7 934.6	2.8	2.3	0.7	-2.8	-0.3
Net exports[1]	123.7	0.2	0.3	0.0	-1.3	0.0
GDP at market prices	8 058.3	3.0	2.6	0.7	-4.1	-0.3
GDP deflator		2.0	2.3	2.2	1.3	0.6
Memorandum items						
Harmonised index of consumer prices		2.2	2.1	3.3	0.6	0.7
Core harmonised index of consumer prices[2]		1.4	1.9	1.8	1.6	0.7
Unemployment rate		8.2	7.4	7.5	10.1	11.7
General government financial balance[3]		-1.3	-0.7	-1.8	-5.4	-7.0

Note: The euro area aggregates cover the euro area countries that are members of the OECD.

1. Contributions to changes in real GDP, actual amount in the first column.
2. Harmonised index of consumer prices excluding food, energy, alcohol and tobacco.
3. As a percentage of GDP.

Source: OECD.

Monetary policy can ease further

The European Central Bank has reduced its policy rate by 275 basis points since last September, and the operation of liquidity management has led to an even larger fall in overnight rates. However, the financial turmoil has dampened the transmission of lower policy rates to money market and retail interest rates. The growing disinflationary pressures anticipated during the next two years implies that the remaining scope for cutting policy rates should be used quickly and quantitative easing policies implemented.

Fiscal measures are supportive

Member states have introduced new discretionary fiscal measures to support demand, amounting to almost 1% of GDP in 2009, with an additional, but somewhat smaller, stimulus in 2010. This will have some positive impact on activity, especially by the latter half of this year, but will not prevent sharp output declines. Additional support is coming from the relatively large automatic stabilisers in the euro area and the measures taken to support the financial sector. Fiscal deficit and debt ratios are rising rapidly as a result, and sovereign bond spreads are widening in some

countries. Additional stimulus may be warranted in some countries in the short term, especially if the situation should deteriorate further than presently projected, but will have to be withdrawn rapidly once the recovery is well underway.

The recovery will be subdued

Economic activity is projected to decline further until the end of 2009, with marked weakness in domestic demand being reinforced by the adverse impact of weak global demand growth on exports. Household incomes have benefitted from past falls in commodity prices, but consumption will be depressed by rising unemployment and negative wealth effects. Policy support, combined with an easing of financial conditions should induce a subdued recovery in 2010, although with growth remaining below trend throughout the year and unemployment continuing to rise.

The balance of risks remains on the downside

The rapidly weakening domestic and global economy, combined with the possibility of a further deterioration in financial conditions means that the risks remain firmly weighted on the downside, with marked tail risks. In particular, declining activity will intensify pressures on financial institutions, possibly leading to further tightening of financial conditions, thereby generating additional negative effects on the real economy and additional obstacles to the effective transmission of monetary and fiscal policies.

GERMANY

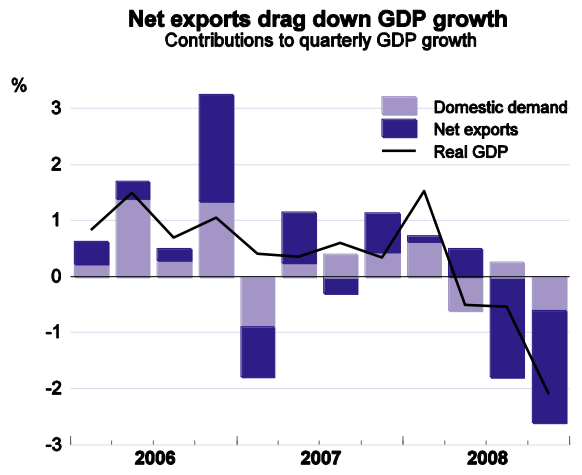
The fall in economic activity has accelerated substantially as the collapse in world trade is depressing growth particularly strongly in Germany. In 2009, real GDP is projected to fall by about 5%, before starting a slow recovery in 2010. Unemployment is projected to rise sharply in 2009 and further in 2010, and inflation will be low and falling throughout the projection horizon.

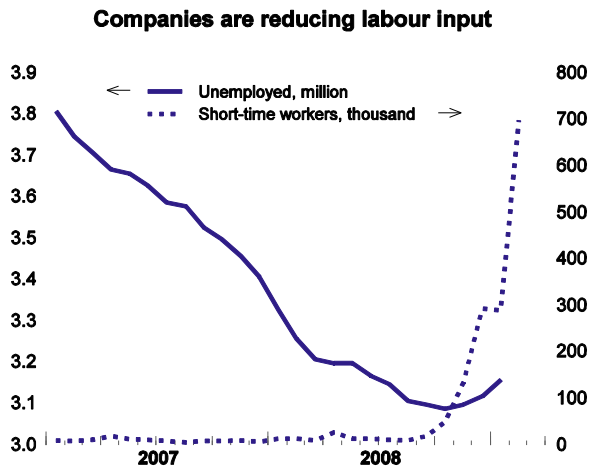
Government finances are set to worsen notably on account of cyclical factors and the fiscal stimulus packages. Nevertheless, given the rapid deterioration in activity, further temporary stimulus measures are needed and should be implemented quickly. To strengthen confidence, the government has rightly decided to reform the fiscal rule and to provide guidance on the future repayment of the additional debt incurred now in order to avoid a long-term worsening of the outlook for public finances and raise the effectiveness of current stimulus measures.

The decline in economic activity has accelerated sharply…

The decline in economic activity accelerated substantially towards the end of 2008 with record negative quarterly growth. This is mostly due to a strong fall of exports, as demand from major trading partners collapsed. The product mix of German exporters, with its focus on investment goods, has made the economy particularly vulnerable to the global business cycle. Private investment spending also declined sharply as capacity utilisation fell and incoming orders shrank. Household consumption remained relatively stable, due to lower inflation, strong income growth locked in by past wage negotiations and still high levels of employment.

Germany





Note: Domestic demand excludes inventories. Unemployment is according to the ILO concept. Number of people on short-time work refers to workers with reduced working time for economic reasons according to employers' notifications. Their loss of earnings is in part compensated by short-time working benefits paid by the Labour Office for a maximum of 18 months.

Source: OECD *National Accounts* database; Statistisches Bundesamt Deutschland; *Statistik der Bundesagentur für Arbeit*.

… and the situation is set to worsen further

Exports continued to fall sharply at the beginning of the current year and the decline of industrial production has accelerated. The labour market is showing first signs of weakness with unemployment having risen slightly in the first months of 2009. In addition, the incidence of temporary short-time work subsidised by the Labour Office increased sharply, suggesting that companies are reducing their labour input. At the same time, private consumption is supported temporarily by car purchases in response to government subsidies for scrapping old vehicles and buying new ones.

Germany: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices € billion	Percentage changes, volume (2000 prices)				
Private consumption	1 323.0	1.2	-0.3	-0.3	0.0	0.0
Government consumption	420.0	0.6	2.2	2.0	0.6	0.9
Gross fixed investment	388.9	8.5	4.5	3.6	-6.6	0.7
Public	30.9	3.8	4.4	4.4	9.9	12.8
Residential	116.4	6.5	0.4	-0.1	-1.8	0.5
Non-residential	241.6	10.1	6.5	5.3	-10.9	-1.2
Final domestic demand	2 131.9	2.4	1.1	0.9	-1.2	0.3
Stockbuilding[1]	- 11.4	-0.1	0.1	0.5	-0.4	-0.1
Total domestic demand	2 120.4	2.3	1.2	1.5	-1.7	0.2
Exports of goods and services	918.6	13.1	7.7	2.3	-16.5	-0.1
Imports of goods and services	799.7	12.2	5.2	3.6	-10.0	0.0
Net exports[1]	118.9	1.0	1.4	-0.4	-3.7	0.0
GDP at market prices	2 239.3	3.2	2.6	1.0	-5.3	0.2
GDP deflator		0.5	1.9	1.5	1.6	0.5
Memorandum items						
Harmonised index of consumer prices		1.8	2.3	2.8	0.6	0.5
Core harmonised index of consumer prices[2]		0.7	1.9	1.3	1.1	0.5
Unemployment rate		9.7	8.3	7.3	8.9	11.6
General government financial balance[3]		-1.5	-0.2	-0.1	-4.5	-6.8
Export performance[4]		3.6	0.8	-0.1	-5.2	-0.4

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Contributions to changes in real GDP, actual amount in the first column.
2. Harmonised index of consumer prices excluding food, energy, alcohol and tobacco.
3. As a percentage of GDP.
4. Ratio between export volume and export market of total goods and services.

Source: OECD.

Activity will stabilise only slowly

Output losses will continue throughout 2009, reflecting weak exports and private investment in machinery and equipment. Some support will come from additional public investment in infrastructure, transfers to households and cuts in income taxes and social security contributions, starting in mid-2009. However, the impact of the latter measures is projected to be temporarily compensated by an increase of precautionary saving.

Unemployment will rise and inflation will fall further

The unemployment rate is projected to climb to almost 12% by end-2010, as growth converges only slowly towards its potential rate and subsidised short-time work expires. The widening output gap and rising unemployment will put downward pressure on inflation, which may fall to near zero in 2010. Given the very large increase of unemployment it will also be likely that new wage agreements will trade off wage increases against job security.

Policy responded quickly to the financial crisis but more slowly to weaker growth

The government has put in place several measures to stabilise the banking system and stimulate growth. A *Financial Market Stabilization Fund* was set up last autumn to guarantee debt issuance by banks for up to € 400 billion with an additional € 80 billion available for bank recapitalization or asset purchases. Furthermore, two fiscal stimulus packages have been adopted comprising infrastructure spending, cuts in income tax and social security contributions, tax relief for companies, subsidies for car purchases, and one-off payments for families. Together with other discretionary measures, additional support is equivalent to 3½ per cent of GDP over 2009-10. These measures and the cyclical deterioration will widen the budget deficit to close to 7% of GDP. Given the rapid deterioration in activity, further stimulus measures are needed and should be implemented quickly. Such measures should be temporary and be selected on the basis of their short-term impact. Given the expected steep increase in unemployment, additional fiscal measures should focus on active labour market policies to counter the threat of increasing long-term unemployment. Once the recovery takes hold, it is important that policymakers ensure a rapid return to medium term consolidation. Credible actions in this regard may also help to raise the effectiveness of the current stimulus measures. The government's plan to put in place a reformed fiscal rule requiring a balanced budget in structural terms is helpful from this perspective and so are specific announcements on the future amortisation of increased government debt.

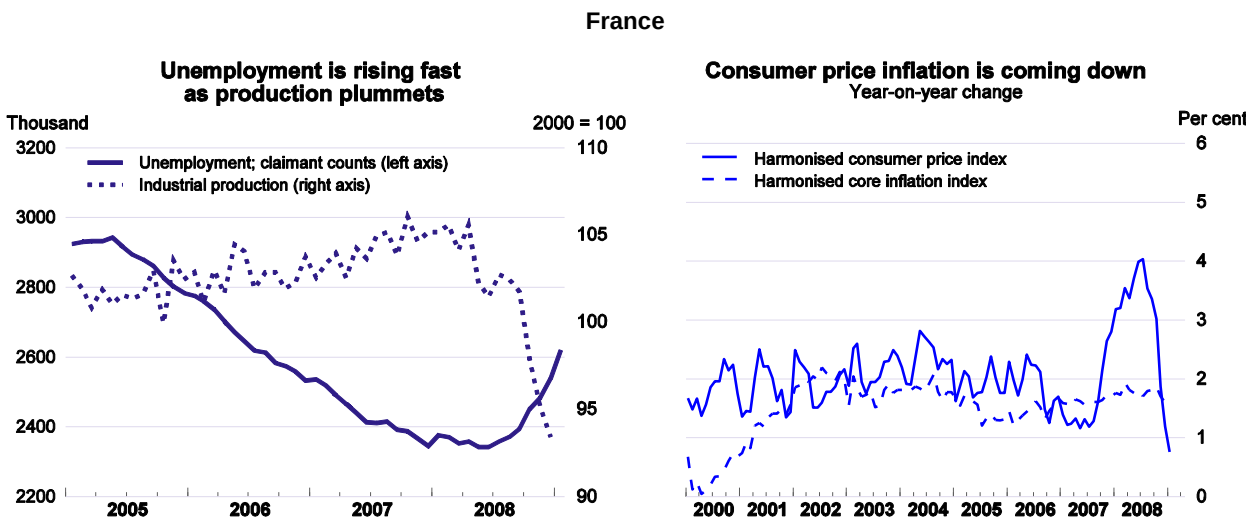
FRANCE

Real GDP is projected to shrink by over 3% in 2009, with the pace of contraction gradually diminishing throughout the year. Improving credit conditions and policy stimulus at home and abroad will contribute to a recovery in 2010, although activity will remain subdued and fragile due to weak private-sector balance sheets. Inflation could fall to near zero by end-2010.

The budgetary measures put in place to face the crisis, which concentrate on investment, are largely self-reversing and should take effect quickly. However, aid to specific sectors should be resisted. Support should focus instead on sustaining the income of laid-off workers. Even though the deficit is set to increase sharply, additional expansionary measures should be considered if the outlook were to deteriorate further. In any case, a credible plan is required to restore healthy public finances when the economy recovers.

Production is falling rapidly

The pace of decline in production probably intensified in the first quarter of 2009, as firms continued to run down inventories and to reduce investment in response to weak orders and low confidence. Despite some improvement in recent months, borrowing conditions faced by households and businesses remain tight. Combined with widespread declines in profits and little sign of recovery in order books, this will likely lead to further inventory decumulation in the first half and falling business investment through most of 2009, as firms seek to bolster their balance sheets. For



Source: OECD Main Economic Indicators database and DARES.

households, economic uncertainty related to the sharp increase in unemployment and losses in housing and stock market wealth will lead to a retrenchment in private consumption and residential investment in coming quarters, despite a modest increase in real disposable income. The fiscal stimulus plan voted in early 2009, along with substantial monetary easing and the additional measures to strengthen the banking system, will contribute to limiting the recession and support the recovery in 2010.

And further contraction is projected, albeit at a diminishing rate

Real GDP is thus expected to shrink throughout 2009, but at a steadily diminishing rate. The recovery projected for 2010 will be weak, with growth remaining below potential rates, reflecting in part a persistently weak demand abroad. Headline consumer price inflation is likely to return to positive rates in the second half of 2009 as the impact of past energy price declines tails off. However, the build-up of substantial excess supply in product and labour markets will maintain downward pressure on wages and prices across the board, contributing to a gradual decline in underlying inflation to near zero by the end of 2010.

France: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices € billion	Percentage changes, volume (2000 prices)				
Private consumption	980.4	2.5	2.4	1.3	-0.2	0.2
Government consumption	408.4	1.4	1.4	1.6	1.3	1.3
Gross fixed investment	343.8	5.0	4.9	0.4	-7.1	-1.7
Public	56.9	-2.1	1.7	-1.2	-1.6	1.7
Residential	96.3	6.9	2.9	-1.1	-6.2	-2.3
Non-residential	190.6	6.3	6.8	1.6	-9.1	-2.4
Final domestic demand	1 732.7	2.7	2.7	1.2	-1.3	0.1
Stockbuilding[1]	5.9	-0.1	0.2	-0.2	-1.1	0.0
Total domestic demand	1 738.5	2.6	2.9	1.0	-2.4	0.1
Exports of goods and services	448.8	5.6	3.2	1.1	-11.4	-2.3
Imports of goods and services	463.5	6.5	5.9	2.0	-7.5	-1.0
Net exports[1]	- 14.7	-0.3	-0.8	-0.3	-0.8	-0.3
GDP at market prices	1 723.8	2.4	2.1	0.7	-3.3	-0.1
GDP deflator		2.5	2.5	2.2	1.2	0.6
Memorandum items						
Harmonised index of consumer prices		1.9	1.6	3.2	0.4	0.6
Core harmonised index of consumer prices[2]		1.5	1.6	1.8	1.3	0.6
Unemployment rate		8.8	8.0	7.4	9.9	10.9
General government financial balance[3]		-2.4	-2.7	-3.4	-6.6	-8.3
Export performance[4]		-3.4	-2.6	-1.4	1.4	-2.8

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Contributions to changes in real GDP, actual amount in the first column.
2. Harmonised index of consumer prices excluding food, energy, alcohol and tobacco.
3. As a percentage of GDP.
4. Ratio between export volume and export market of total goods and services.

Source: OECD.

Access to credit remains a concern

To avoid a prolonged paralysis of the financial system the authorities have created two vehicles, one to allow the banks to refinance themselves with a state guarantee and another to provide them with equity to bolster their solvency. These steps have allowed banks to continue lending, thus offsetting to some extent the drying-up of the primary securities market. Even though the major French banks appear to be, on the whole, in a somewhat better position than their counterparts elsewhere, close monitoring by the authorities is required to ensure access to credit.

A widening government deficit supports demand

The government adopted an economic recovery programme amounting to over 1% of GDP, focusing mostly on infrastructure spending and on relieving cash-flow difficulties for small and medium-sized enterprises. Subsequent measures included one-time income tax exonerations for low-income households, more generous compensation for the part-time unemployed and loans to the car and aircraft industries. This discretionary stimulus, the loss of exceptionally buoyant tax revenues resulting from the bursting of the financial and housing market bubbles and sizeable automatic-stabiliser effects will cushion activity but will also push the general government deficit to above 8% of GDP by 2010. Nonetheless, if activity looks to turn out even weaker than projected, the authorities should consider further discretionary expansion. There is in any case a need to put in place a credible plan to return to fiscal sustainability once the economic recovery takes hold.

ITALY

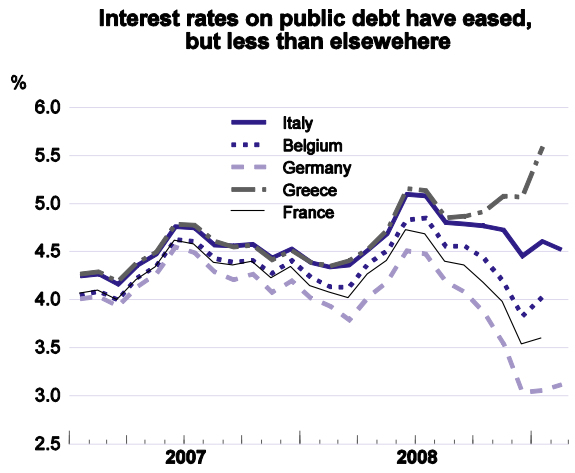
The recession is projected to deepen in 2009 as investment falls sharply, export markets contract and uncertainty dampens consumer expenditure. Italy's open economy and export product mix expose it to the full force of recession in other countries. The recovery is likely to be slow and unemployment will rise steeply this year and into 2010. Inflation will fall to near zero by the end of next year. The budget deficit will widen sharply reaching nearly 5% of GDP this year and 6% in 2010.

The high level of public debt and fears that it might be difficult to roll over have rightly restrained discretionary fiscal action. Improved spending control and efficiency are needed to improve Italy's creditworthiness. Meanwhile, re-targeting spending to widen support for the unemployed and their families will be more effective in sustaining demand than support to individual industries or attempts to direct bank lending.

The output decline has accelerated

The economy weakened during 2008 and the pace of decline is accelerating. Exports are falling steeply, as Italy's specialisation in luxury products, consumer durables and investment goods exposes it to the full force of recession in partner countries. Investment demand has also fallen sharply, and consumer expenditure, especially on cars and durables, is weak, even if car registrations may have ticked up slightly in February.

Italy



Source: OECD, Main Economic Indicators database.

The labour market is weakening and inflation has declined

Unemployment began to rise in 2007, even though overall employment was increasing through the first three quarters of 2008. Wage growth increased in 2008, with a large number of national settlements being renewed, but price inflation slowed significantly as energy-related costs came down. The budget deficit rose last year, partly because of the slightly expansionary budget for 2008, though remaining under 3% of GDP.

Italy: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices € billion	Percentage changes, volume (2000 prices)				
Private consumption[1]	844.0	1.3	1.2	-0.9	-3.0	0.0
Government consumption	290.8	0.5	1.0	0.6	0.3	0.2
Gross fixed investment	296.7	3.2	1.6	-2.9	-11.7	-0.8
Machinery and equipment	142.2	5.4	2.4	-4.1	-13.7	-0.9
Construction	154.4	1.1	0.8	-1.8	-9.9	-0.8
Residential	69.9	4.1	1.1	-0.9	-7.1	-0.8
Non-residential	84.5	-1.3	0.6	-2.7	-12.4	-0.7
Final domestic demand	1 431.5	1.5	1.2	-1.0	-4.1	-0.1
Stockbuilding[2]	- 0.7	0.5	0.1	-0.3	0.4	0.0
Total domestic demand	1 430.7	2.0	1.3	-1.3	-3.8	-0.2
Exports of goods and services	371.4	6.5	4.0	-3.7	-15.9	-1.1
Imports of goods and services	372.2	6.2	3.3	-4.5	-13.8	-0.2
Net exports[2]	- 0.9	0.1	0.2	0.2	-0.5	-0.2
GDP at market prices	1 429.9	2.1	1.5	-1.0	-4.3	-0.4
GDP deflator		1.8	2.4	2.8	1.1	0.2
Memorandum items						
Harmonised index of consumer prices		2.2	2.0	3.5	0.7	0.7
Core harmonised index of consumer prices[3]		1.6	1.8	2.2	1.7	0.7
Unemployment rate		6.8	6.2	6.8	9.2	10.7
General government financial balance[4]		-3.4	-1.5	-2.5	-4.7	-5.9
Export performance[5]		-3.3	-3.1	-6.9	-4.0	-1.4

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Final consumption in the domestic market by households.
2. Contributions to changes in real GDP, actual amount in the first column.
3. Harmonised index of consumer prices excluding food, energy, alcohol and tobacco.
4. As a percentage of GDP.
5. Ratio between export volume and export market of total goods and services.

Source: OECD.

Short term indicators point to further output falls

Indicators such as orders and producers' and consumers' expectations for the future all point to further declines in output. The stock of bank credit was still rising up to the end of 2008, but at a declining rate. The rate at which loan requests are being refused has increased significantly and the share of non-performing loans has begun to rise (though not for loans to households). Together with tight credit, poor trade prospects will further accentuate the decline in investment, which will recover only slowly ever when financial market conditions improve. Real income gains to

households from energy price falls may be substantial but rising unemployment and uncertainty is expected to generate more precautionary saving, limiting any recovery in consumption until 2010.

Emergency bank recapitalisation facilities have not been needed…

Italian banks have up to now seemed less exposed to risky products than those of other large countries, both as originators and investors, partly due to conservative behaviour and also due to some regulatory caution on mortgage lending. However, the two largest banks (accounting for a third of total banking sector assets) have acquisitions in eastern European countries, in some of which problems are more severe. Despite what appears to be an overall favourable position, credit standards have been tightened much in line with those in other European countries, perhaps because capital ratios are low (in part due to conservative treatment of the definition of tier 1 capital by the regulator).

… although a voluntary facility was recently set up

The government set up an emergency recapitalisation facility in October for banks in severe difficulties. In late February the government announced a facility for injecting funds, in the form of bonds, to any bank wanting them. Terms include a commitment to maintain lending to small companies and a rate of interest which rises after the first year. No bank has yet taken up this facility.

Fiscal policy, starting from a weak position, has been restrained

Budget plans set last year for 2009 and 2010 included a substantial consolidation of the structural deficit, mainly through restricted spending growth, to reduce the high level of debt. Two subsequent sets of crisis measures, in November and February, have maintained this strategy though the weakening economy means the original targets are now well out of reach. Both sets of crisis measures made some changes to the pattern of spending, to focus more on poverty alleviation, but the net effect on the budget balance was designed to be near zero. The government has been concerned to improve credibility in the government bond market, as it needs to refinance some € 300 billion of public sector debt falling due in 2009. Thus, useful measures to cushion the effects of recession by widening eligibility for unemployment benefits and to support low-income families were offset by cuts in other spending.

There are limits to fiscal action

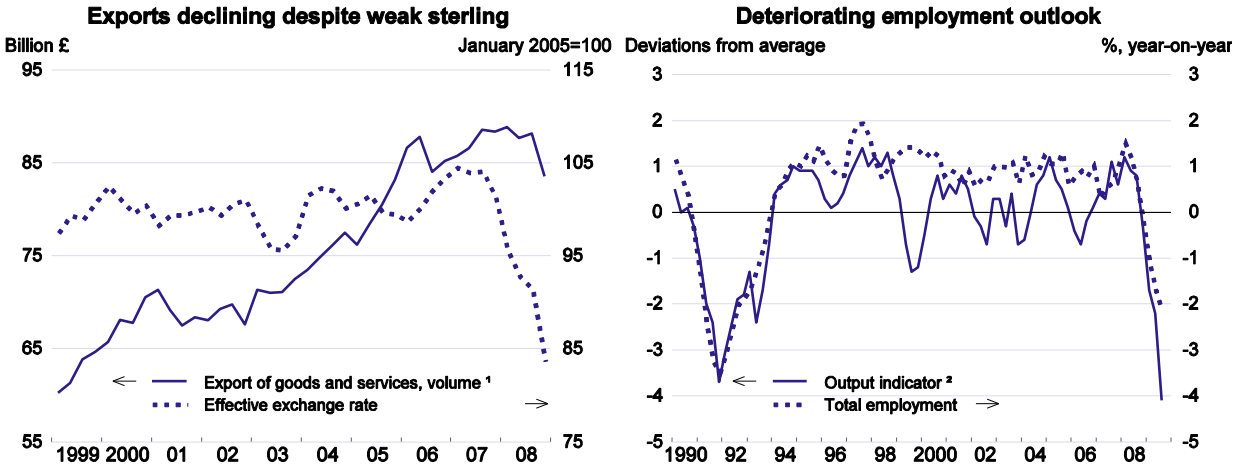
The government will need to focus on measures to anchor expectations for long-term budget consolidation, for example by accelerating or extending the pension reform process and pressing on with reforms to improve efficiency in public administration. Over the projection period the deficit widens substantially as the government should allow automatic stabilisers to work; with such high public debt, and so long as debt markets are nervous, not much more can be done. Recapitalising banks with equity could be considered as an alternative to loan capital.

UNITED KINGDOM

Economic conditions are set to deteriorate further, with output projected to decline by 3.7% in 2009. Equity and property prices have tumbled, contributing to the erosion of financial sector balance sheets and impeding the supply of credit, thus restraining household and business spending. The government has introduced wide-ranging measures to address the financial sector, most recently providing substantive asset protection to address concerns about the value of assets on banks' balance sheets. Monetary policy has eased dramatically and government borrowing is set to increase very significantly, reflecting a structural deterioration, the operation of automatic stabilisers and a discretionary fiscal stimulus of 1.4% of GDP, a large part of which was implemented quickly. These policy measures, the lower exchange rate and some improvement in the external environment should underpin a moderate recovery during 2010. The unemployment rate could rise to over 10%, while inflation is likely to stay well below the 2% target for an extended period.

With interest rates effectively at the zero bound and only limited room for fiscal manoeuvre, the central bank has embarked on quantitative easing, in addition to operations to improve liquidity in securities markets. If economic circumstances deteriorate significantly more than projected, further fiscal measures would be warranted. However, any additional fiscal stimulus should be accompanied by a stronger and more credible commitment to a robust fiscal consolidation once the recovery takes hold. To strengthen this commitment the government should undertake to re-examine the medium-term fiscal framework, particularly in light of the suspension of the fiscal rules late last year in favour of a temporary operating rule.

United Kingdom



1. Excludes MTIC fraud.
2. British Chamber of Commerce (BCC) survey outlook for manufacturing and services industry (weighted average, lagged three
3. uarters). Deviations from averages since 1999 in standard deviations.

Source: Bank of England, BCC, ONS and OECD.

The economy is contracting sharply

Output declined by 2.2% during the second half of 2008 as housing investment, business investment, and exports fell. House and commercial property prices are falling sharply. While sterling has depreciated by around 20% in effective terms since the end of 2007, the gain in competitiveness has so far been offset by substantial declines in external demand. Receding economic activity has pushed up unemployment in recent months, and inflation has trended downwards.

Monetary policy has eased substantially

As it became clear that the financial crisis was taking hold and indicators began turning sharply negative, the Bank of England cut the bank rate dramatically from 5% in October to 0.5% in March -- the lowest level in the 300 year-history of the institution. Now that interest rates have effectively reached the zero bound, the Bank of England has embarked on quantitative easing, with a first tranche of £ 75 billion of asset purchases over the next three months.

United Kingdom: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices £ billion	Percentage changes, volume (2003 prices)				
Private consumption	810.7	2.1	3.1	1.7	-2.2	-0.4
Government consumption	268.6	1.6	1.7	3.5	2.8	1.5
Gross fixed investment	211.3	6.0	7.2	-4.3	-12.5	-2.7
Public[1]	8.0	273.5	2.9	17.9	12.0	9.4
Residential	63.8	8.9	3.0	-20.2	-21.2	-7.1
Non-residential	139.5	-7.2	9.9	-1.2	-14.5	-4.5
Final domestic demand	1 290.6	2.6	3.5	1.0	-2.9	-0.4
Stockbuilding[2]	4.6	0.0	0.2	-0.3	-1.2	0.0
Total domestic demand	1 295.2	2.6	3.7	0.7	-4.1	-0.4
Exports of goods and services	331.0	11.0	-4.2	-0.1	-9.8	2.2
Imports of goods and services	373.7	9.6	-1.6	-0.5	-10.4	1.3
Net exports[2]	- 42.7	0.1	-0.7	0.1	0.5	0.2
GDP at market prices	1 252.5	2.8	3.0	0.7	-3.7	-0.2
GDP deflator		2.6	2.9	2.4	2.3	1.6
Memorandum items						
Harmonised index of consumer prices		2.3	2.3	3.6	2.0	1.7
Core harmonised index of consumer prices[3]		1.3	1.6	1.7	1.7	1.2
Unemployment rate		5.4	5.4	5.7	7.7	9.5
General government financial balance[4]		-2.7	-2.8	-4.4	-9.3	-10.5
Export performance[5]		2.2	-9.8	-1.9	2.7	1.9

1. Including nationalised industries and public corporations.
2. Contributions to changes in real GDP, actual amount in the first column.
3. Harmonised index of consumer prices excluding food, energy, alcohol and tobacco.
4. As a percentage of GDP.
5. Ratio between export volume and export market of total goods and services; affected by MTIC fraud.

Source: OECD.

Fiscal stimulus is modest but the deficit will rise sharply

Coming into this downturn, government net debt levels were relatively low but the structural balance had deteriorated considerably. A stimulus package was announced in the November Pre-Budget Report, with the main elements being a temporary 2.5 percentage point cut in the standard value-added tax rate and a bringing forward of £ 3 billion of capital investment.

The discretionary fiscal easing (1.4% of GDP in 2009) was accompanied by plans for consolidation beginning in 2010/11. The automatic stabilisers and the contraction of revenue-rich sectors, however, are more significant factors behind the increase in the deficit, which is projected to rise to over 9% of GDP this year and even higher in 2010. The room for additional fiscal manoeuvre to respond to worse-than-expected activity developments is therefore limited and new measures would need to be accompanied by detailed and credible fiscal consolidation plans, in order to ensure that confidence is not eroded. In this regard, the formulation of a strong and credible medium-term fiscal framework would be helpful.

Weaknesses in financial market regulation are being addressed

The financial crisis highlighted significant weaknesses in the regulation of the financial sector and the government has responded with a number of reforms. The Banking Act 2009 puts in place an improved framework for dealing with risks to overall financial stability, including an array of options to manage failing institutions; facilitates faster deposit insurance payouts; and provides a financial stability objective for the Bank of England. Further strengthening of supervision will be needed, as envisaged in the recent Turner Report. Numerous measures have been taken to address failures in the financial sector and to support economic recovery by increasing the capacity of banks to lend, including the provision of protection for legacy assets, recapitalisation, liquidity support and guarantees for wholesale funding. These measures have resulted in the full or partial public ownership of a number of banks and the assumption of potentially large risks on the public balance sheet. They will have to be unwound as the economic recovery proceeds.

A protracted period of adjustment is expected

Continuing financial sector weakness, further declines in house prices, and a weak global economy are projected to depress output through 2009. Policy support, combined with an easing in financial conditions should underpin a recovery during 2010. However, growth will remain below potential, as the adjustment of households' and firms' balance sheets will take time. The weaker exchange rate is likely to hold up prices in coming quarters but the very large slack in the economy means that headline consumer price inflation will decline through 2009 and be very low in 2010. Unemployment will rise substantially over the projection period.

The outlook is clouded by substantial uncertainty

Substantial risks surround these projections. Conditions in the financial sector may take longer to normalise than assumed and public debt may rise even higher than expected, both of which constitute substantial risks to the outlook. House prices may also continue to decline further than projected, resulting in greater numbers of mortgagees holding negative equity and requiring even larger household balance sheet adjustments, thereby restraining consumption for longer. On the positive side, monetary and fiscal policy could provide a stronger stimulus to growth, although the magnitude of their impacts, especially that of quantitative easing, are currently difficult to gauge.

CANADA

The economic downturn that started in late 2007 through slowing exports turned into a full-fledged recession in the fourth quarter of 2008 as weakness spread and deepened in all sectors of the economy. Output, employment and inflation are all declining sharply. Slack is projected to grow and disinflationary pressures to continue over the entire projection period.

The Bank of Canada and the federal government have acted to support domestic financial markets and invigorate the economy. Given well-anchored inflation expectations and a strong fiscal position, however, both monetary and fiscal authorities are in a position to do more. The Bank should consider quantitative easing measures. Provinces should use their scope for fiscal action, and the federal government also has room for further fiscal measures.

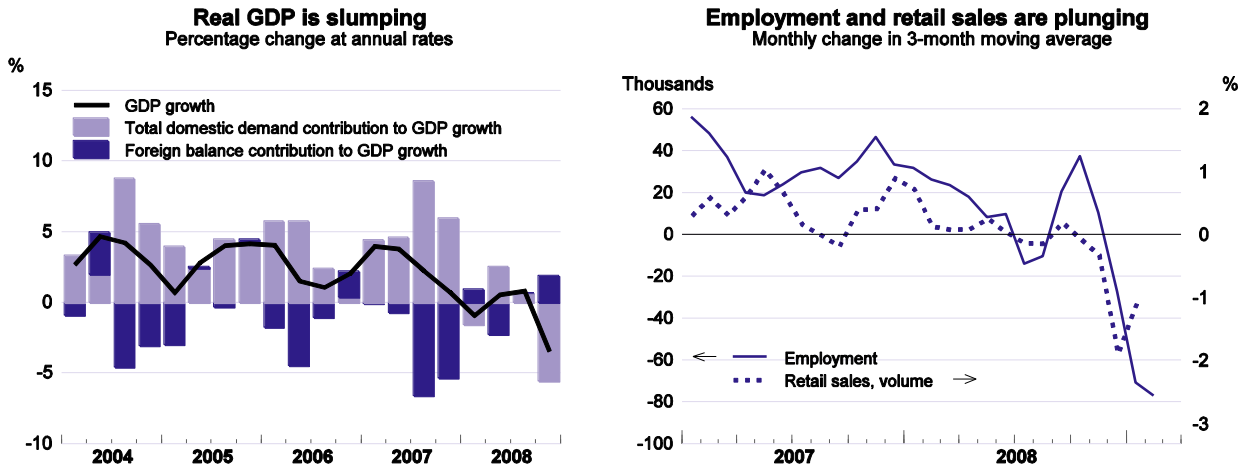
Economic weakness is now broad-based…

Real GDP declined at an annual rate of 3.4% in the fourth quarter of 2008 and, according to the latest indicators, it is now contracting at an even faster pace. Employment is falling more rapidly than in the downturns of the 1980s and 1990s, and the unemployment rate has jumped. The year-over-year headline inflation rate was down to 1.4% in February from 3.5% last summer, reflecting mainly lower energy prices.

… and continues to deepen

The global economic slowdown, and more particularly the very weak US auto and housing sectors are cutting Canadian exports. Declining consumer confidence, falling asset valuations and accelerating job losses are undermining consumer spending. The large reversals in the terms of

Canada



Source: Statistics Canada and OECD.

trade, which have fallen an estimated 14% since mid-2008, have turned around a key source of recent domestic income growth and external surpluses. Uncertainty about the economic outlook, deteriorating profitability and rising unused capacity are depressing business investment. Residential construction is also down sharply. Fortunately, Canada's large financial institutions have not been as badly affected by the financial crisis and credit conditions therefore remain much healthier than in other major countries. The latest year-over-year figures show continued growth in household credit and limited deceleration in business credit.

Conditions will get worse before they get better

Current strains in global financial markets are projected to continue to the end of 2009. The deep and protracted economic slowdown in the entire OECD area means Canada's export volumes will shrink until early 2010, which, along with the loss on the terms of trade, will push the current account into a sizeable deficit. Real private consumption should decline through 2009, as will both housing and other private investment. Sharply

Canada: **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices CAD billion	Percentage changes, volume (2002 prices)				
Private consumption	759.2	4.3	4.5	3.0	-2.2	0.1
Government consumption	260.2	3.8	3.7	3.4	3.0	3.0
Gross fixed investment	292.3	7.1	3.9	0.8	-9.3	-0.2
Public[1]	36.5	6.8	7.9	5.8	5.5	12.1
Residential	90.2	2.2	3.0	-2.9	-15.1	-4.6
Non-residential	165.6	9.9	3.5	1.7	-9.9	-1.6
Final domestic demand	1 311.7	4.8	4.2	2.5	-2.8	0.7
Stockbuilding[2]	9.9	-0.2	0.1	-0.2	-0.2	0.0
Total domestic demand	1 321.6	4.6	4.3	2.3	-3.0	0.7
Exports of goods and services	518.9	0.6	1.0	-4.7	-10.8	0.1
Imports of goods and services	467.9	4.6	5.5	0.8	-10.6	1.1
Net exports[2]	51.1	-1.3	-1.5	-1.9	-0.2	-0.3
GDP at market prices	1 372.6	3.1	2.7	0.5	-3.0	0.3
GDP deflator		2.5	3.1	3.9	-2.7	0.2
Memorandum items						
Consumer price index		2.0	2.1	2.4	-0.6	0.5
Core consumer price index[3]		1.9	2.1	1.7	1.1	0.7
Unemployment rate		6.3	6.0	6.1	8.8	10.5
General government financial balance[4]		1.3	1.4	0.3	-4.4	-6.2
Export performance[5]		-5.7	-2.0	-2.8	-0.5	-0.5

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods *(http://www.oecd.org/eco/sources-and-methods).*

1. Excluding nationalised industries and public corporations.
2. Contributions to changes in real GDP, actual amount in the first column.
3. Consumer price index excluding the eight more volatile items.
4. As a percentage of GDP.
5. Ratio between export volume and export market of total goods and services.

Source: OECD.

declining tax revenues and fiscal stimulus will open up significant budgetary deficits in both 2009 and 2010. The effects of aggressive monetary and fiscal policy actions in Canada and other major economies may begin to be felt in the second half of this year and will build up through 2010. Nevertheless, a sustained recovery is not expected until financial market conditions begin to normalise and recoveries get underway in other large OECD countries, during 2010.

Further stimulus is called for

The Bank of Canada has cut its policy rate to 0.5%, a cumulative monetary policy easing since December 2007 of 400 basis points. At the same time the Bank has taken unprecedented steps to provide short-term liquidity to the Canadian financial system, mostly by expanding the provision of term purchase and resale agreements, widening the range of assets that it accepts in these operations and extending the range of counterparties with whom it transacts. To support long-term financing, the government has introduced a number of initiatives, including direct lending to businesses and purchases of corporate and mortgage debt. In January, the federal government presented a budget focused on expansionary measures, with tax cuts and spending initiatives officially estimated at 1.9% of GDP in 2009 and 1.4% in 2010, including expected co-financing by provinces. These measures come in addition to personal and business tax cuts announced previously that take effect in 2008 and 2009. Nevertheless, the strong position that had been established by sustained fiscal surpluses provides scope for further action. This is true not only for the federal budget; provinces should build on the momentum provided by the federal government to inject their own stimuli. Supplementary fiscal measures should be quickly implementable and self-reversing. Aid to specific sectors should be resisted. Income support for laid-off workers and retraining programs should be favoured, as should infrastructure projects that have already passed stringent cost-benefit analyses. Likewise, the remaining limited scope for further cuts in policy interest rates should be used and quantitative easing measures considered.

BRAZIL

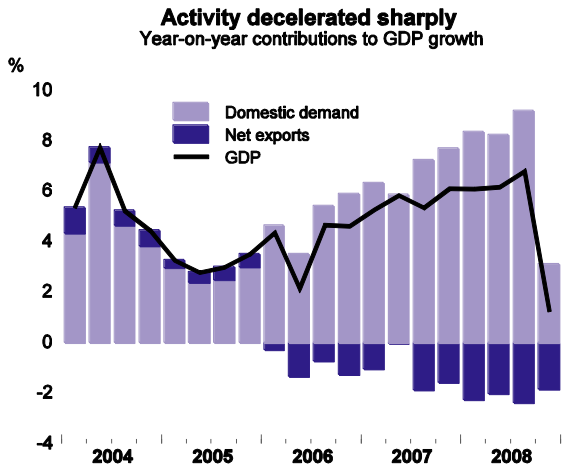
GDP is expected to shrink by a small margin in 2009. Activity lost considerable momentum in the last quarter of 2008, dragged down by a fall in industrial production, but may be showing signs of bottoming out. Ongoing policy easing, coupled with improvement in credit conditions, will buttress the recovery towards year-end and in 2010.

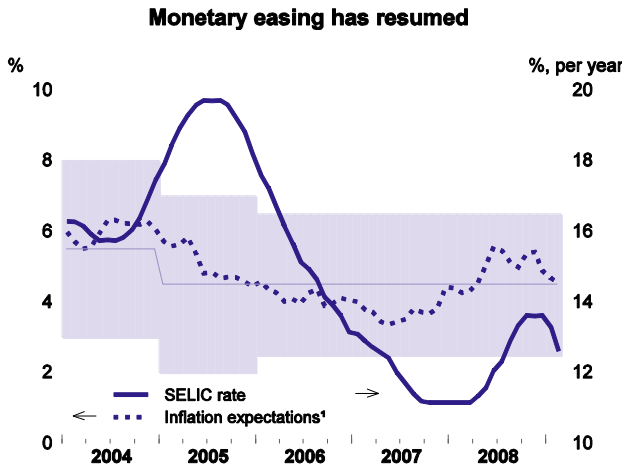
The initial response to the crisis included liquidity-boosting measures to shore up credit. Monetary policy began to be relaxed in January, and additional rate cuts are expected by mid-year. Supportive fiscal measures have been announced, including temporary tax cuts, hikes in spending on social protection and public investment, and capital injections into government-owned banks to bolster credit growth. Fiscal policy should now focus on letting the automatic stabilisers operate unimpeded, rather than on additional activism.

Activity plunged in the last quarter of 2008

GDP growth slowed to 1.3% on a year-on-year basis in the last quarter of 2008, from 6.8% in the previous quarter. As the global financial crisis intensified, industrial production tumbled in credit-sensitive sectors, such as the motor industry and other consumer durables. However, industrial production edged up in January, and sales of vehicles began to recover early in 2009, albeit from a depressed level. Credit conditions remain tight but are showing some signs of improvement.

Brazil





1. 12-month ahead, year-on-year percentage change.

Source: Central Bank of Brazil and IBGE.

The immediate policy response to the crisis was appropriate

The central bank responded to the rapidly deteriorating credit outlook through a number of liquidity-enhancing measures. Compulsory reserve requirements for banks, which have been traditionally tight, were eased, boosting liquidity by about 3.3% of GDP. Export credit lines, which had dried up as the global crisis worsened, were created using receivables as collateral. The tax burden was reduced by about 0.6% of GDP on a range of financial transactions, personal income and on selected sectors, such as the motor industry on a temporary basis and agriculture. Capital injections of about 3.5% of GDP into the National Development Bank (BNDES) and other government-owned banks are paving the way for an expansion of these institutions' loan portfolios.

Monetary policy should continue to be eased

The worsening of the economic outlook and a retreat in inflation expectations allowed for a cumulative 250 basis-point reduction in the policy rate in January-March. There is ample room for additional monetary easing by mid-year, because a widening output gap is reducing inflationary pressures, inflation expectations are falling below the end-year central target, and the pass-through to consumption prices of the significant exchange-rate depreciation that has taken place since mid-2008 has been modest.

Brazil: **Macroeconomic indicators**

	2006	2007	2008	2009	2010
Real GDP growth	3.8	5.4	5.1	-0.3	3.8
Inflation (CPI)	3.1	4.5	5.9	4.3	4.3
Fiscal balance (per cent of GDP)	-3.0	-2.3	-1.5	-2.2	-1.3
Primary fiscal balance (per cent of GDP)	3.9	4.0	4.1	2.8	3.5
Current account balance (per cent of GDP)	1.3	0.1	-1.8	-1.7	-1.7

Note: Real GDP growth and inflation are defined in percentage change from the previous period. Inflation refers to the end-year consumer price index (IPCA).
Source: Figures for 2006-08 are from national sources. Figures for 2009-10 are OECD projections.

But there is only quite limited room for additional fiscal activism

The automatic fiscal stabilisers should be allowed to work freely, even though the consolidated primary budget surplus will surely fall well short of the target of 3.8% of GDP. This is due to cyclical revenue losses and discretionary expenditure hikes on means-tested income transfers and to an increase in the minimum wage by nearly 6% in real terms. Government support for social housing and infrastructure development, together with a scheduled rise in compensation for civil servants, is expected to add to the fiscal stimulus. But the financing of additional activism might well put further pressure on domestic credit markets at a time when credit remains scarce for private-sector borrowers. The pace of monetary easing may also be constrained if the fiscal impulse turns out to be excessive.

Activity is set to gather pace towards year-end…

Both domestic demand and exports are expected to remain weak through most of 2009. Activity is projected to regain dynamism towards year-end and into 2010 due predominantly to a supportive policy mix. Improving credit conditions on the back of ongoing monetary easing and plentiful liquidity, coupled with an increase in government transfers to

households, are set to prop up private consumption. Swifter execution of public infrastructure development programmes, especially those under the Growth Acceleration Programme (PAC) that was launched in 2007, would compensate in part for a weakening of private investment growth.

… but there are risks to the outlook

The pace and breadth of the recovery would certainly suffer from a further deterioration of the global financial outlook. In particular, any delay in the recovery of Brazil's trading partners would take its toll on the country's export outcomes. The recovery might also be delayed should interest rates rise due to a worse-than-expected deterioration in public finances.

CHINA

Growth has slowed markedly in China, mainly owing to the sharp contraction in world trade. With a sizeable monetary and fiscal stimulus, activity is projected to pick up in the course of 2009 and 2010, although growth would remain below potential. In the process, some rebalancing towards domestic demand is projected to occur. Prices are expected to continue to decline as margins of slack widen.

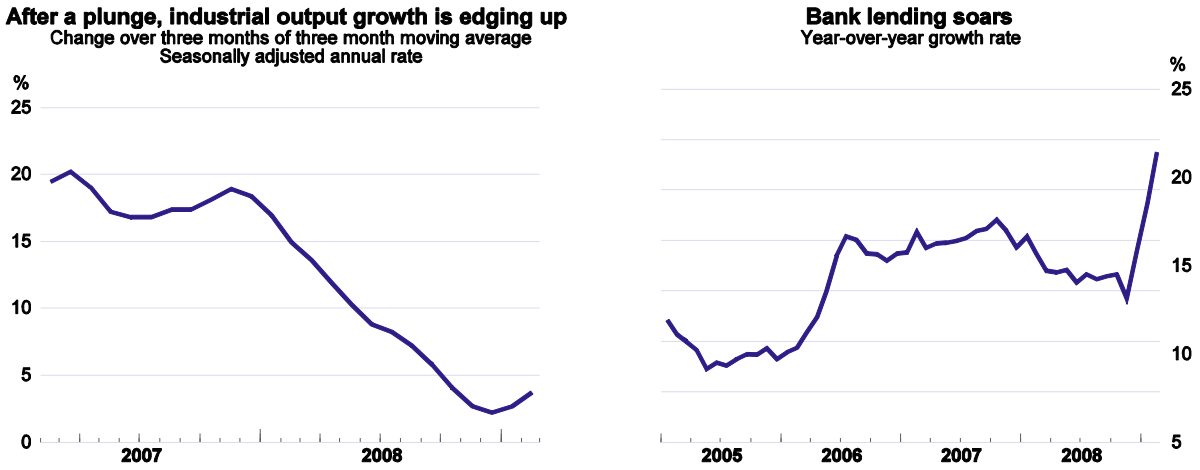
A pick up in credit growth is helping the economy regain momentum, but it will be important for financial sector supervisors to keep an eye on the quality of banks' portfolios. The government has room for further fiscal expansion given the low level of public debt and its high level of cash holdings. In any event, there seems to be scope for measures to improve the social safety net.

Economic growth shows some signs of bottoming out

Exports contracted in late 2008 and real GDP growth slowed down to its slowest pace in years. Since the beginning of 2009, however, some signs suggest that the slowdown in growth may be bottoming out. In January and February, indicators suggest that buoyant private consumption and investment have resulted in domestic demand offsetting the impact of much lower exports. As a result, industrial production showed a slight uptick at the beginning of the year. Business surveys also point upwards, albeit modestly.

The slowdown in economic activity, together with the steep falls in oil and other commodity prices, has contributed to rapid disinflation. A generalised fall in the price level has already started, with

China



Source: CEIC.

consumer prices in February down 1.6% over a year earlier. Chinese exporters are cutting prices to try and keep up sale volumes in the face of falling foreign demand.

Financial conditions are stimulative

A key reason for the relatively more limited slowdown in China is that adverse wealth effects have been much smaller and overall financial conditions have by no means tightened as much as in OECD countries. Household wealth has been only modestly affected by the fall in equity prices, as less than one-third of the total value of shares is held by the private sector, the remainder being in the hands of government-controlled entities. Moreover, in the five months to early March 2009, the composite share price index bounced back by 26%. Housing is a more important component of household wealth, the value of which has continued to rise in nominal terms. If the lag in the impact of wealth on demand is similar to those in OECD economies, the small negative wealth effect from earlier falls in equity prices should be dissipating by mid-2009.

The banking sector is not significantly exposed to overseas high-risk assets, partly due to capital controls. As a result, bank lending has not been constrained by concerns over capital adequacy. The central bank holds over $500 billion in US mortgage-backed securities, but these are mainly claims on US government-sponsored enterprises. Lending has been constrained by administrative controls and these have now been ended. In addition, the central bank has cut policy rates and reserve ratios. As a result, bank lending has accelerated sharply since November. If needed, the central bank has room to cut interest rates further.

China: **Macroeconomic indicators**

	2006	2007	2008	2009	2010
Real GDP growth	11.6	13.0	9.0	6.3	8.5
Inflation[1]	3.3	7.4	7.2	2.0	0.5
Consumer price index[2]	1.6	4.8	5.9	-1.0	-1.5
Fiscal balance (per cent of GDP)[3]	1.6	3.5	4.2	1.2	0.7
Current account balance (per cent of GDP)	9.4	11.0	10.2	11.7	10.0

Note: Real GDP growth and domestic demand growth are percentage changes from the previous year.
1. Percentage change in GDP deflator from previous period.
2. Change in Laspeyres fixed-base-year index (base year 2005).
3. Consolidated budgetary and extrabudgetary accounts on a national accounts basis.
Source: National sources and OECD projections.

Fiscal policy has become expansionary

In November 2008, the government announced a major investment plan for 2009-10, with total expenditure under this plan amounting to 4 trillion yuan (5.8% of projected GDP in the period of the plan). A large part of the plan, however, appears to represent projects that were already foreseen. The new government budget shows that the increase in central and local government spending amounts to a projected 2.6% of GDP in 2009, with an emphasis on some forms of social spending, notably

healthcare. In addition, the rate of value added tax charged on exports and investment is to be cut to zero, which would bring China into line with standard international practice. Part of these tax reductions will be offset by the introduction of a 20% tax on petroleum products. Overall, the government expects a budget deficit of 3% of GDP in 2009.

The outlook is for a gradual acceleration in activity

Over the next two years, overall investment growth is projected to pick up, not least because state-controlled enterprises are under pressure to raise capital spending. In contrast, foreign-controlled firms may wait to step up their investment outlays until exports are clearly on the rise again. In the residential sector, many of the constraints placed on the purchase of investment property have been lifted and a number of taxes reduced, but the sector is unlikely to grow fast in a deflationary environment. The current account surplus should rise significantly in 2009, reflecting the recent fall in import prices, to over 11% of GDP, but might ease back in 2010.

There are a number of risks

A key risk surrounding this projection is that business investment may react more negatively to the continued weakness of the export sector than projected. This would affect employment with further layoffs of migrant workers and would impart a deflationary impetus. It might also put pressure on the government to allow the exchange rate to follow the depreciation of a number of other Asian currencies.

INDIA

India's long economic upswing has now ended, with GDP growth well below potential by late 2008. The government has recently introduced some limited fiscal measures, following a sizeable increase in public outlays in 2008. In 2009, falling exports are projected to offset continued expansion in domestic demand. With the gradual recovery of the global economy, growth is projected to pick up in 2010.

The extent of the deterioration in the fiscal position prior to the slowdown implies that there is little scope for discretionary fiscal policy action. Rather the emphasis should be on a further monetary easing, as there is still room to lower interest rates. Recourse to protectionist measures should be avoided.

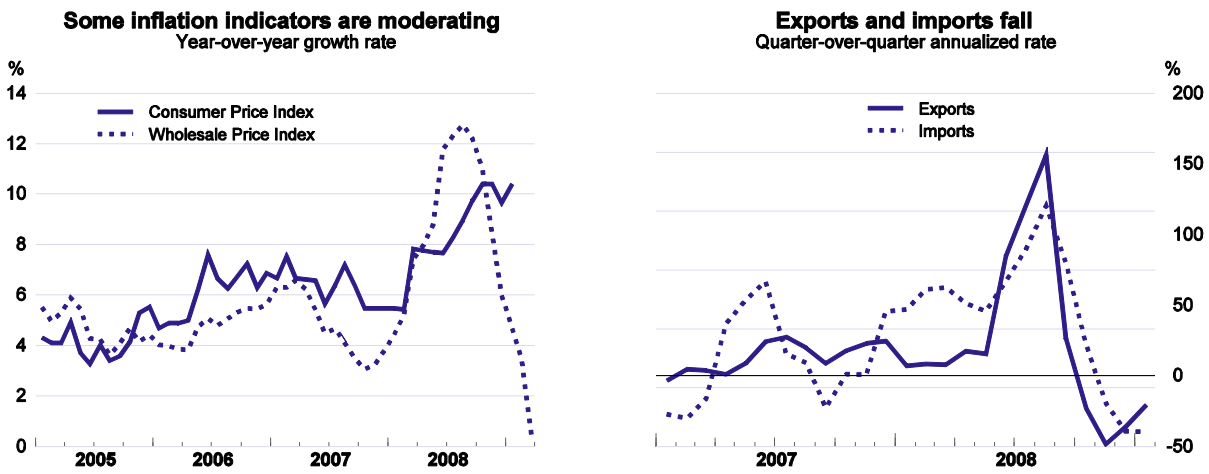
Economic growth weakened markedly in late 2008

In the final quarter of 2008, the decline in exports led to a marked slackening in output growth, even though investment and consumption growth held up. Further weakening in external demand in early 2009, together with a likely unwinding of the excess stock building that occurred in the fourth quarter, caused a contraction in industrial production in January.

Wholesale price inflation has come down

Inflation has moderated markedly at the wholesale price level, to under 1% by March. Much of this decline is due to lower commodity prices, which carry a high weight in this index. Consumer price

India



Source: Reserve Bank of India.

inflation has yet to moderate, however, not least because transport disruptions kept food prices high around the turn of the year.

Fiscal policy became expansionary in 2008

Unbudgeted expenditure led to a marked increase in the fiscal deficit last year. The 2008 Budget projected a central government deficit of just 2.5% of GDP, in line with the targets of the Fiscal Responsibility and Budget Management Act. However, no account had been taken of the large public sector pay rises, of up to 40%, that had already been granted, nor was any allowance made for the cost to public finances of the government's decision to order banks to write-off the overdue debt of small farmers. Furthermore, subsidies were paid to oil companies through off-budget accounts. As a result, the central government budget deficit ballooned to 6% of GDP and the total public sector deficit exceeded 10% of GDP.

India: **Macroeconomic indicators**

	2006	2007	2008	2009	2010
Real GDP growth	9.7	9.0	6.0	4.3	5.8
Inflation[1]	5.2	4.7	8.4	4.5	3.5
Consumer price index[2]	6.7	6.2	8.8	4.5	3.0
Wholesale price index (WPI)[3]	5.4	4.7	8.6	-0.4	3.0
Short-term interest rate[4]	8.2	8.9	9.6	6.8	6.5
Long-term interest rate[5]	8.3	8.4	8.3	7.2	6.7
Fiscal balance (per cent of GDP[6]	-7.4	-6.1	-10.1	-12.2	-12.7
Current account balance (per cent of GDP)	-1.1	-1.0	-1.3	-0.9	-0.8

Note: Data refer to fiscal years starting in April.
1. Percentage change in GDP deflator from previous period.
2. Consumer price index for industrial workers.
3. All commodities.
4. Mumbai three month offered rate.
5. 10 year government bond.
6. Gross fiscal balance for central and state governments, includes net lending and transfers to oil, food and fertiliser companies and recurrent Pay Commission awards, but not backpay nor debt write-offs for small farmers.

Source: CMIE and OECD projections.

Tax cuts have been accompanied by a few protectionist measures

Given this deterioration in public finances, the government has announced only limited fiscal measures to offset falling external demand. No further stimulatory measures were taken in the 2009 Budget, which was of an interim nature given the general elections coming up in May 2009. However, one week after the Budget, the government announced that the cut in the central value added tax rate announced last year would be prolonged in 2009 and that this tax and the service tax would be reduced by a further 2 percentage points. Subsidies for export credits were also increased. The cost of these measures is estimated at 1.1% of GDP. The government also raised tariffs on steel and some other products, while temporarily banning Chinese toys imports and launching a number of anti-dumping investigations against Chinese imports.

The monetary stance has been eased

The central bank has eased interest rates since the slowdown in activity became evident. From a peak of 9% last September, rates have been lowered to 5% by early March. Banks, however, have not reduced their prime lending rate by as much as the fall in official rates. In addition, the cash reserve ratio has been reduced from 9 to 5%. The rupee's exchange rate has depreciated by 20% against the US dollar in the year to March, and 11% in effective terms. These easier monetary conditions have helped to stabilise the stock market. Against these positive factors, property prices have been falling, though only modestly.

The outlook is for a gradual acceleration in activity

The impact of easier monetary conditions and the marked increase in the fiscal deficit should be sufficient to counteract the impact of lower exports on employment and, hence, household income and spending. Households should also benefit from lower inflation. With consumption remaining fairly buoyant, adequate bank finance and the impact of the weaker exchange rate beginning to show on exports, business investment is also projected to remain relatively strong. Once world trade stabilises, the economy should recover momentum, although growth is set to remain subpar in 2010.

There are downside risks

A major risk to this projection is that firms do not take into account the likely turnaround in world trade at the end of 2009 and hence scale down their investment plans more than expected. Even though much machinery is imported, this could still lead to falls in employment and further downward pressure on prices.

RUSSIAN FEDERATION

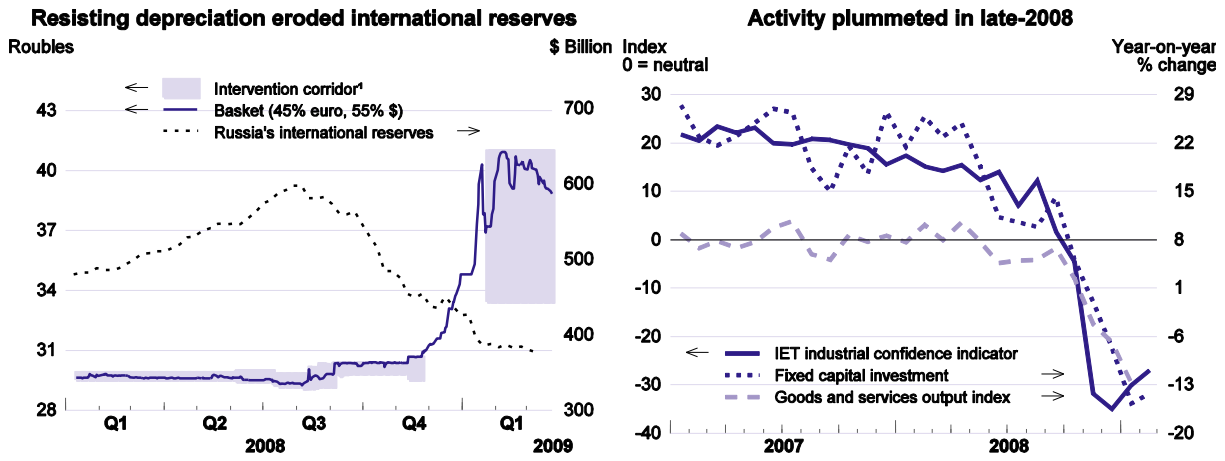
Sharply lower oil prices sap domestic demand both directly and indirectly. GDP growth has been negative since summer 2008 and is projected to recover only weakly. Notwithstanding some passthrough of the exchange rate depreciation, inflation should fall in 2009-10. The budget will switch from large surpluses to even larger deficits, while the impact of lower commodity prices on exports will be partly offset by weaker imports, leaving the current account still in surplus.

Aggressive fiscal stimulus should aim to maximise the multiplier effect on domestic demand, and should be cast in a credible medium-term framework. Monetary policy should not resist fundamental pressures which may emerge for further rouble depreciation. There is scope for considerable consolidation of the banking sector. Resorting to protectionism is unwelcome.

The global crisis hit Russia hard

Until mid-2008 Russia was growing strongly. Although some Russia-specific factors had negatively affected net private capital flows during the summer, the main shock was the intensification of the global crisis in September 2008, after which oil prices plunged, sapping domestic demand directly and aggravating capital outflows. Meanwhile, banks curbed lending as credit risks increased and international trade slumped as the crisis hit demand world-wide. The combination of these factors has provoked a sharp output decline.

Russian Federation



1. Between late-November 2008 and 23 January 2009 the central bank formally widened the corridor in increasingly frequent steps, but de facto there was no binding limit in that period.

Source: Central Bank of Russia, Russian Federal Service for State Statistics and Institute for the Economy in Transition.

A deep recession is underway

Output is set to continue falling at least through mid-2009. Negative wealth effects and rising unemployment will weigh on private consumption, while falling demand and financing constraints will hit investment. Exports are expected to continue to fall, reflecting weakening demand in partner countries. Imports will be compressed even more, however, as a result of high income elasticities and the lower relative price of Russian goods and services, given the moderate depreciation of the rouble in real effective terms since the onset of the crisis.

Inflationary pressures are weakening

Large net capital outflows and a weakening current account surplus resulted in falling money supply. This, coupled with lower food prices and weakening aggregate demand, is creating disinflationary pressure, which has so far been partly offset by passthrough of rouble depreciation. As the latter effect fades, inflation is expected to trend down this year and next.

Russian Federation: **Macroeconomic indicators**

	2006	2007	2008	2009	2010
Real GDP growth	7.7	8.1	5.6	-5.6	0.7
Inflation [1]	9.0	11.9	13.3	8.0	6.0
Fiscal balance (per cent of GDP)[2]	8.4	6.0	4.8	-8.0	-6.0
Current account balance (per cent of GDP)	9.5	5.9	5.9	2.0	2.5

1. End-of-period.
2. Consolidated budget.
Source: Data for 2006-07 are from national sources. Data for 2008-10 are OECD estimates and projections.

Liquidity support to banks intensified pressure on the rouble

In mid-September, as falling securities prices provoked a drying-up of interbank lending, the authorities moved quickly to ease liquidity shortages. At the same time, the central bank was intervening to resist exchange rate pressures, but liquidity support fed demand for dollars. Thus, although the central bank allowed increasingly frequent step depreciations, resulting in a 28% decline in the rouble against the US dollar-euro basket, by late-January it had spent about a quarter of its reserves.

The government announced a range of crisis-response measures

Further measures were taken to bolster trust in banks, including raising deposit insurance ceilings, guaranteeing interbank loans to smaller banks, and bringing a few ailing minor banks under state ownership. Beyond measures to support the financial system, the government also cut the corporate profit tax rate, increased unemployment benefits, and drafted plans to help "core" enterprises. There has been an unwelcome tendency to resort to protectionist measures including an increase in tariffs on imported second-hand cars, subsidies to domestic enterprises, and preferential public procurement practices.

Monetary policy should increasingly target inflation

Monetary policy is largely endogenous in the short term, given the adherence to an exchange rate band. Fundamental pressure on the exchange rate should not be resisted, however. The authorities should foster broad recognition that the real exchange rate eventually has to move in line with

swings in fundamentals, such as oil prices. The authorities should accelerate the shift to inflation targeting by increasing the degree of exchange rate flexibility and giving more weight to inflation objectives.

Fiscal stimulus should be large and timely, but withdrawn after the crisis

The need to maximise the demand impact of fiscal stimulus suggests relying principally on expenditure measures such as accelerated infrastructure spending or transfers to credit-constrained households or lower levels of government. That is broadly consistent with the government's proposals, which include a discretionary stimulus equivalent to about 2½ per cent of GDP. Notwithstanding Russia's low levels of public debt, the combination of large deficits in the next few years and long-term spending pressures, arising both from negative demographic trends and environmental degradation problems, make it important to set stimulus efforts in a medium-term framework which credibly charts a return to a sustainable public debt path.

Support for banks should be selective

The functioning of the banking system is essential for the effectiveness of other measures. The challenge is to counter the credit crunch while minimising moral hazard and the cost to taxpayers. The authorities should recapitalize systematically important banks, while ensuring speedy closure and liquidation of smaller insolvent banks, facilitating consolidation.

Risks are balanced, depending on global recovery and oil prices

Even though policy responses are providing considerable support to the economy, the combination of extremely large adverse external shocks and certain domestic vulnerabilities (notably fragile confidence in banks and the currency) make a quick return to strong growth unlikely. If global conditions turn out even worse than expected, recovery in Russia could be delayed into 2010 or beyond. On the other hand, current oil prices have recently risen above those assumed in the projections, and if higher prices are sustained then recovery could be earlier and more rapid than projected.

CHAPTER 3

THE EFFECTIVENESS AND SCOPE OF FISCAL STIMULUS

Introduction and summary

Discretionary fiscal action is at the forefront of the policy agenda

Discretionary fiscal stimulus is playing an important role in OECD countries' policy response to boost demand in the wake of the financial crisis. This reflects the severity of the downturn, both in terms of depth and duration, combined with the limits of monetary policy, both because the room for additional interest rate cuts is becoming increasingly slim in many OECD countries and especially because monetary transmission channels may be impaired.

The focus here is on the macro stabilisation objective of fiscal policy

The focus of this chapter is on the use of fiscal policy for short-term macroeconomic stabilisation objectives, although other aims such as enhancing long-term growth, as well as social objectives such as cushioning the effect of the downturn on households or environmental objectives should also be pursued. The chapter documents the fiscal policy measures introduced in response to the crisis on the basis of cross-country comparable data, evaluates the effectiveness of fiscal measures in boosting activity, assesses the costs and benefits of further fiscal action and considers issues related to the timing of any fiscal stimulus.

The main findings with respect to crisis-related fiscal measures already announced can be summarised as follows:

Most countries have taken fiscal measures, but there is wide variation in size

- Virtually all OECD countries have introduced discretionary measures in response to the crisis, though the crisis-driven stimulus packages represent only one among other influences boosting budget deficits. In most countries, these other factors, which include so-called automatic stabilisers and discretionary easing unrelated to the crisis, account for the largest part of the run-up in debt over the period 2008-10. There is considerable cross-country variation in the scale of crisis measures introduced. For the average OECD country carrying out a stimulus package, their cumulated budget impact over the period 2008-10 amounts to more than 2½ per cent of GDP, with the United States having the largest fiscal package at about 5½ per cent of 2008 GDP.

Fiscal multipliers may be reduced in the current conjuncture

- A review of the available evidence suggests that, under normal circumstances, fiscal multipliers may be around unity for government spending and about half that for tax measures, although with lower multipliers for more open economies. However, in the current conjuncture the propensity of households and businesses to save has likely increased, so reducing multipliers, particularly for tax cuts.

- For the average OECD country, such multipliers suggest that the level of support from discretionary stimulus to GDP both in 2009 and 2010 will be of the order of ½ per cent. Only for the United States and Australia will the estimated multiplier effect clearly exceed 1% of GDP in both 2009 and 2010. These effects do not include cross-border spillovers.

The size of fiscal packages varies inversely with automatic stabilisers

- There is an inverse correlation between the size of discretionary fiscal packages announced/implemented among OECD countries and the strength of so-called automatic stabilisers. Overall, the size of the latter is typically three times that of the former.

Countries differ in terms of the relative costs and benefits they face from additional stimulus. The main findings are as follows:

Countries differ in their scope for further action

- Whether a more ambitious fiscal stimulus than currently planned is appropriate depends on country-specific circumstances. Evidence shows that adverse reactions in financial markets are likely in response to higher government debt and that such reactions may depend on the initial budget situation. For countries which are identified as having a weak initial fiscal position -- including Japan, Italy, Greece, Hungary, Iceland and Ireland -- the room for fiscal expansion is limited. Other countries differ in terms of the costs and benefits of further stimulus. For some, further action to cushion the projected downturn seems warranted. Countries with most scope for fiscal manoeuvre appear to be Germany, Canada, Australia, Netherlands, Switzerland, Korea and some Nordic countries. For others, action would only be warranted in case activity looks to turn out even weaker than projected.

Design of packages is important with respect to instrument …

- The design of additional fiscal packages in terms of individual components will be crucial in maximising their effectiveness. The largest short-run impact on aggregate demand is likely to come from government spending measures, but where tax cuts are implemented they are most effective if targeted at households that are likely to be liquidity-constrained. Complementary criteria for selecting individual measures are those which are both most likely to raise aggregate demand in the short run as well as aggregate supply in the long run, including: increased public spending on

infrastructure; increased spending on active labour market policy, including on compulsory training courses; and reduction of personal income taxes, notably on low-income earners.

… and timing

- In practice, and outside the G7, a majority of countries have given priority to tax cuts over boosting spending, although Australia is a clear exception. G7 countries are more balanced in this respect. The reason for the relative weight on tax cuts may be the ease of implementation of such measures. Timing issues are also key in respect of the fiscal stimulus. To the extent that the output gap widens further into 2010, as in the OECD projections, those countries that have scope for further action, should consider boosting the stimulus in 2010.

Fiscal stimulus may be more effective within a framework ensuring its scaling back

- For the typical OECD country, however, the level of fiscal stimulus falls off significantly in 2010 compared to 2009, although there are exceptions where the packages are broadly maintained through 2010 (United States, Finland, Germany and Canada) or increase in 2010 (Denmark and Slovak Republic). Fiscal stimulus is likely to be more cost effective if accompanied by credible commitments to scale it back or even reverse it as the recovery gains traction. This underlines the importance of strengthening medium-term fiscal frameworks for ensuring fiscal sustainability.

Co-ordination is hard to put into practice

- Fiscal stimulus will have international spillovers both through trade and interest rate channels. Smaller countries perceive only part of the global benefit provided by their action; larger countries perceive only part of the costs involved. This suggests a role for international co-ordination, while taking into account each country's scope for fiscal action. In practice this may be difficult to achieve and swiftness of action should be given the priority.

Fiscal measures in response to the crisis

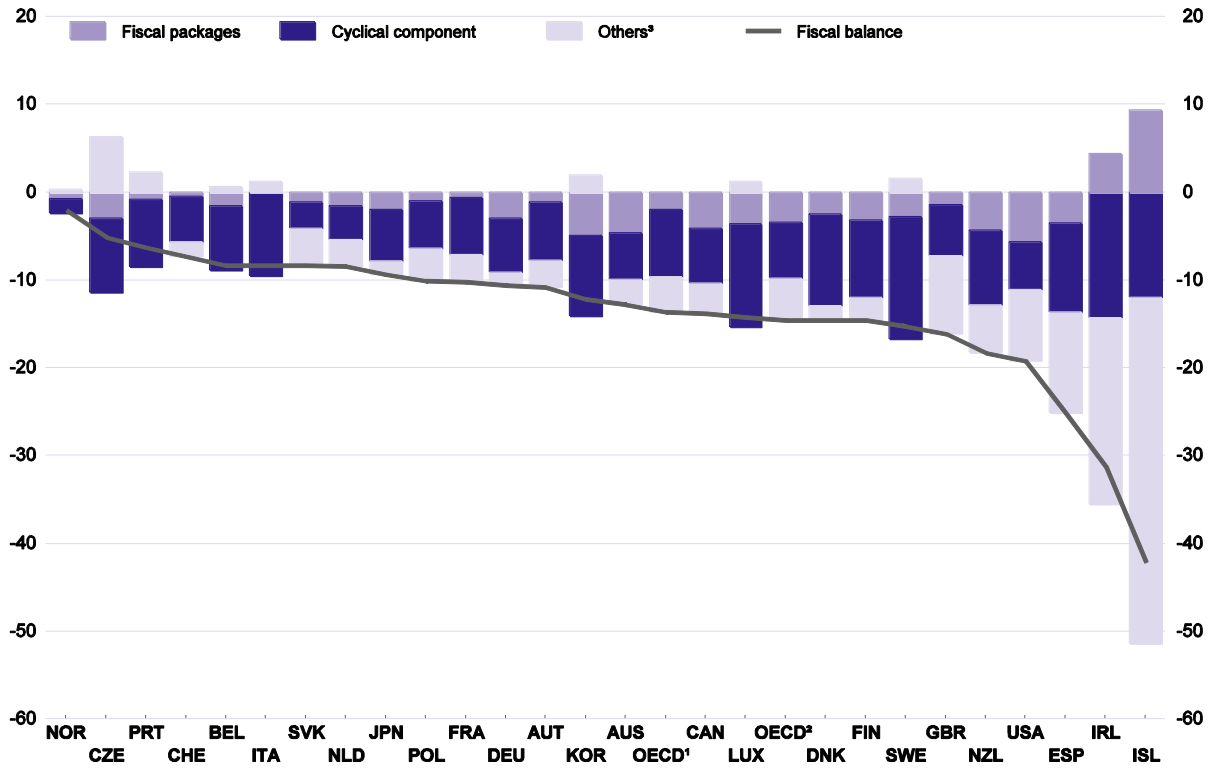
Discretionary measures need to be put in context of massive fiscal changes

Discretionary fiscal policy actions in response to the crisis need to be seen in the context that the area-wide deficit is projected to widen from around 1½ per cent of GDP in 2007 to nearly 9% in 2010, with gross government debt increasing from about 75% of GDP to about 100%. Most of this increase can be related to a cyclical effect due to the operation of automatic stabilisers in the deep downturn (Figure 3.1) and which, for the average OECD country, have a fiscal balance effect over the period 2008-10 which is about three times the discretionary fiscal action currently planned by governments in response to the crisis.[28] Revenues had been

28. This is a calculation of the unweighted average across those OECD countries taking positive stimulus measures. Only in the United States does the discretionary fiscal action exceed the effect of the automatic stabilisers on this basis.

Figure 3.1. Accounting for the increase in government debt

Cumulative impact on net lending, % of GDP, 2008 to 2010



1. Simple OECD average.
2. Weighted OECD average.
3. Includes other discretionary measures, not in response to the financial crisis, disappearance of exceptional revenues linked to the asset cycle, and other one-off measures.

Source: OECD.

buoyed in previous years by high asset prices and activity in financial and construction sectors and the disappearance of this extraordinary revenue buoyancy also contributes to the run-up in debt. Finally, a number of countries have undertaken discretionary fiscal easing unrelated to the crisis.

Fiscal packages differ widely in scale across countries

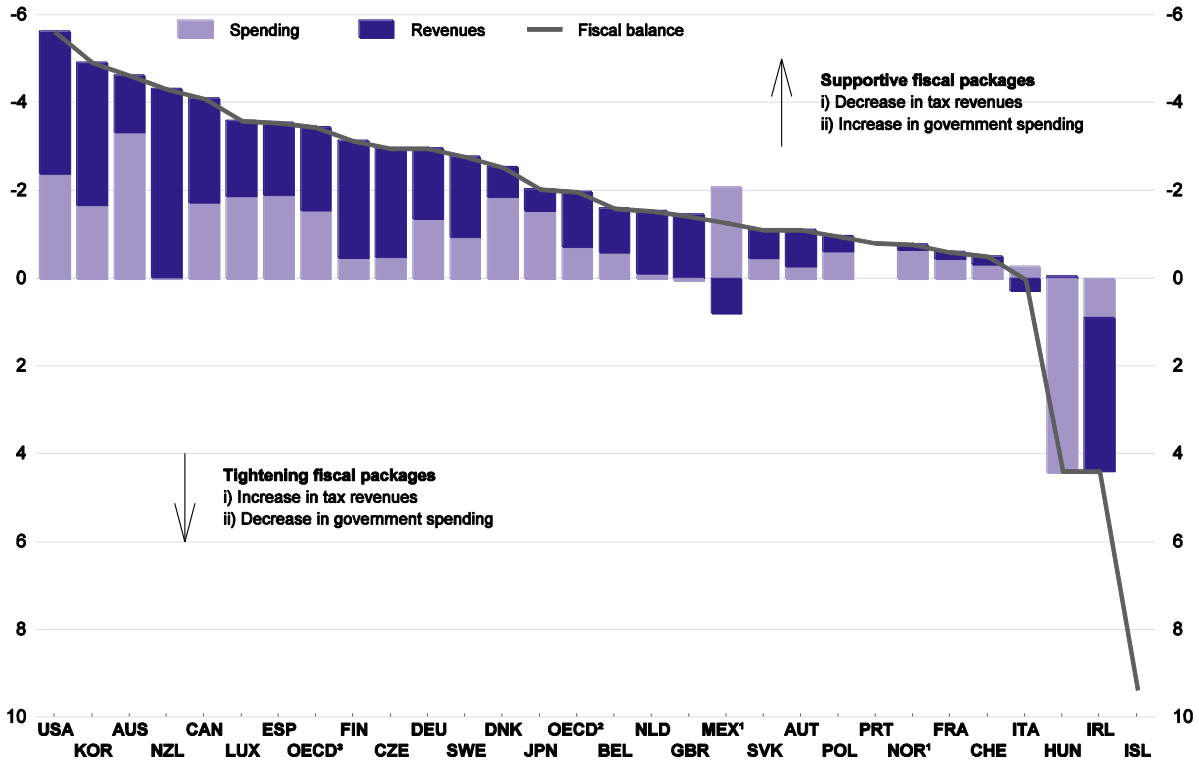
In addition, virtually all OECD countries have introduced discretionary measures to support the economy in the face of the crisis. Based on a consistent approach to the definition of packages (described in Appendix 3.1), the size of fiscal packages, introduced as a direct response to the crisis and measured by their cumulated impacts on fiscal balances over the period 2008-10, amounts to about 3½ per cent of area-wide 2008 GDP.[29] However, there is considerable variation in the size of packages

29. These data reflect the impact of fiscal packages on fiscal balances and may not reflect all the measures introduced to boost activity. In particular, recapitalisation operations and increases in public enterprises investment are not included. For further details of how the stimulus packages have been identified, see Appendix 3.1. Details of the fiscal responses in each OECD country are available on the OECD Economic Outlook webpage on the OECD website (www.oecd.org/oecdEconomicOutlook).

across countries (Table 3.1 and Figure 3.2), partly reflecting the severity of the economic crisis, the fiscal position before the onset of the crisis and the size of automatic stabilisers. An unweighted average of countries introducing positive stimulus packages implies a typical stimulus package amounting to more than 2½ per cent of GDP over the period 2008-10. But five countries (Australia, Canada, Korea, New Zealand and the United States) have introduced fiscal packages amounting to 4% of 2008 GDP or more, the US package -- at about 5½ per cent of 2008 GDP -- being the largest. In contrast, a few countries (in particular Hungary, Iceland and Ireland) are expected to drastically tighten their fiscal stance.

Figure 3.2. The size and composition of fiscal packages

Cumulative impact of fiscal packages over the period 2008-2010 on fiscal balances as % of 2008 GDP



Note: See notes to Table 3.1.

1. Only 2008-2009 data are available for Mexico and Norway.
2. Simple average of above countries except Greece, Iceland, Mexico, Norway, Portugal and Turkey.
3. Weighted average of the above countries excluding Greece, Iceland, Mexico, Norway, Portugal and Turkey.

Source: OECD.

Measures changing the timing of payments are not included in these estimates

An important qualification to these estimates of the size of discretionary packages is that they record fiscal measures on a national-accounts (*i.e.* accrual) basis, so that measures based on changing the timing of payments, such as bringing forward government payments or allowing

Table 3.1. **The size and timing of fiscal packages**

	2008-2010 net effect on fiscal balance[1]			Distribution over the period 2008-2010			*Memorandum item:* Measures affecting the timing of payments[2]
	Spending	Tax revenue	Total	2008	2009	2010	
	Per cent of 2008 GDP			Per cent of total net effect			Per cent of 2008 GDP
Australia	-3.3	-1.3	-4.6	15	54	31	
Austria	-0.3	-0.8	-1.1	0	84	16	
Belgium	-0.6	-1.0	-1.6	0	60	40	-0.1
Canada	-1.7	-2.4	-4.1	12	41	47	
Czech Republic	-0.5	-2.5	-3.0	0	66	34	..
Denmark	-1.9	-0.7	-2.5	0	33	67	..
Finland	-0.5	-2.7	-3.1	0	47	53	
France	-0.4	-0.2	-0.6	0	75	25	-0.5
Germany	-1.4	-1.6	-3.0	0	46	54	
Greece	..	..	..	..	..	..	
Hungary	4.4	0.0	4.4	0	58	42	
Iceland	..	..	9.4	0	33	67	
Ireland	0.9	3.5	4.4	15	44	41	0.3
Italy	-0.3	0.3	0.0	0	15	85	
Japan	-1.5	-0.5	-2.0	4	73	24	
Korea	-1.7	-3.2	-4.9	23	49	28	
Luxembourg	-1.9	-1.7	-3.6	0	76	24	0.0
Mexico [3]	-2.1	0.8	-1.3	0	100	..	
Netherlands	-0.1	-1.4	-1.5	0	51	49	..
New Zealand	0.0	-4.3	-4.3	5	46	49	
Norway [3]	-0.7	-0.1	-0.8	0	100	..	
Poland	-0.6	-0.4	-1.0	0	77	23	
Portugal	..	..	-0.8	0	100	0	
Slovak Republic	-0.5	-0.6	-1.1	0	42	58	-0.8
Spain	-1.9	-1.6	-3.5	31	46	23	-1.0
Sweden	-0.9	-1.8	-2.8	0	52	48	..
Switzerland	-0.3	-0.2	-0.5	0	68	32	
Turkey	..	..	..	..	..	..	
United Kingdom	0.0	-1.5	-1.4	15	93	-8	
United States [4]	-2.4	-3.2	-5.6	21	37	42	
Major seven	-1.6	-2.0	-3.6	17	43	40	
OECD averages							
All (unweighted) [5]	-0.7	-1.2	-2.0	10	53	37	
All (weighted) [5]	-1.5	-1.9	-3.4	17	45	39	
Positive stimulus only (unweighted) [6]	-1.1	-1.6	-2.7	9	53	38	
Positive stimulus only (weighted) [6]	-1.7	-2.0	-3.7	17	45	39	

Note: cut-off date for information is 24 March 2009.

1. Includes only discretionary fiscal measures in response to the financial crisis. Estimates provided here do not include the potential impact on fiscal balances of recapitalisation, guarantees or other financial operations. They also exclude the impact of a change in the timing of payment of tax liabilities and/or government procurement.
2. Several countries have changed the timing of payment of government procurement and/or tax liabilities. When applying the accrual principle, such measures should not be reflected in the national account data. Still, they affect fiscal balances measures on a cash basis and may have an impact on the economy. They have not been included in the size of fiscal packages.
3. Data not available for 2010.
4. Figures for the United States refer to the federal government. Available information indicates that a few states, including California, have passed restrictive fiscal measures which are not included here.
5. Average of above countries excluding Greece, Iceland, Mexico, Norway, Portugal and Turkey.
6. Average of above countries excluding Greece, Hungary, Iceland, Ireland, Italy, Mexico, Norway, Portugal and Turkey.

Source: OECD.

of packages. However, a number of countries have introduced measures of this type, as summarised in the final column of Table 3.1. While it is difficult to quantify the effect of such measures on activity, they do have the merit that over a medium-term horizon their fiscal implications may be negligible while they may provide an important short-term stimulus.

Packages differ across countries by composition…

Most countries have adopted broad ranging stimulus programmes, adjusting various taxes and spending programmes simultaneously (Table 3.2 and Figure 3.2). A majority of countries have given priority to

Table 3.2. **Composition of fiscal packages**

Total over 2008-2010 period as % of GDP in 2008

		Tax measures					Spending measures					
	Net effect	Total	Indivi-duals	Busi-nesses	Consump-tion	Social contri-butions	Total	Final consump-tion	Invest-ment	Transfers to households	Transfers to businesses	Transfers to sub-national government
Australia	-4.6	-1.3	-1.1	-0.2	0.0	0.0	3.3	0.0	2.6	0.8	0.0	0.0
Austria	-1.1	-0.8	-0.8	-0.1	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.1
Belgium	-1.6	-1.0	-0.3	-0.6	-0.1	0.0	0.6	0.0	0.1	0.5	0.0	0.0
Canada	-4.1	-2.4	-0.8	-0.3	-1.1	-0.1	1.7	0.1	1.3	0.3	0.1	..
Czech Republic	-3.0	-2.5	0.0	-0.4	-0.1	-2.0	0.5	-0.1	0.2	0.0	0.4	0.0
Denmark	-2.5	-0.7	0.0	0.0	0.0	0.0	1.9	0.9	0.8	0.1	0.0	0.0
Finland	-3.1	-2.7	-1.9	0.0	-0.3	-0.4	0.5	0.0	0.3	0.1	0.0	0.0
France	-0.6	-0.2	-0.1	-0.1	0.0	0.0	0.4	0.0	0.2	0.1	0.0	0.0
Germany	-3.0	-1.6	-0.6	-0.3	0.0	-0.7	1.4	0.0	0.8	0.2	0.3	0.0
Greece[1]	..	..	..	..	..	..	..	0.0	0.1	0.4	0.1	0.0
Hungary	4.4	0.0	-0.1	-1.5	1.6	0.0	-4.4	..	0.0	..	..	0.0
Iceland	9.4	..	1.0	..	..	..	..	-1.8	-1.7	-1.7	..	..
Ireland	4.4	3.5	2.0	-0.2	0.5	1.2	-0.9	-0.7	-0.2	-0.1	0.0	0.0
Italy	0.0	0.3	0.0	0.0	0.1	0.0	0.3	0.3	0.0	0.2	0.1	0.0
Japan	-2.0	-0.5	-0.1	-0.1	-0.1	-0.2	1.5	-0.2	0.3	0.5	0.4	0.3
Korea	-4.9	-3.2	-1.4	-1.2	-0.2	0.0	1.7	0.0	0.9	0.1	0.5	0.2
Luxembourg	-3.6	-1.7	-1.2	-0.5	0.0	0.0	1.9	0.0	0.7	1.0	0.2	0.0
Mexico[1]	-1.3	0.8	0.0	0.0	-0.4	0.0	2.0	0.0	1.1	0.3	0.4	0.0
Netherlands	-1.5	-1.4	-0.2	-0.4	0.0	-0.8	0.1	0.0	0.0	0.1	0.0	0.0
New Zealand	-4.3	-4.3	-4.3	0.0	0.0	0.0	0.0	0.1	0.6	-0.6	0.0	0.0
Norway[1]	-0.8	-0.1	0.0	-0.1	0.0	0.0	0.7	0.0	0.3	0.0	0.0	0.3
Poland	-1.0	-0.4	0.0	-0.1	-0.2	0.0	0.6	0.0	1.3	0.1	0.0	0.0
Portugal	-0.8	..	..	..	..	..	..	0.0	0.4	0.0	0.4	0.0
Slovak Republic	-1.1	-0.6	-0.6	-0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0
Spain	-3.5	-1.6	-1.6	0.0	0.0	0.0	1.9	0.3	0.7	0.2	0.7	0.0
Sweden	-2.8	-1.8	-1.5	-0.2	0.0	-0.2	0.9	0.7	0.3	0.1	0.0	0.0
Switzerland	-0.5	-0.2	-0.2	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0
Turkey	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	-1.4	-1.5	-0.6	-0.1	-0.7	0.0	0.0	0.0	0.1	0.1	0.0	0.0
United States	-5.6	-3.2	-2.4	-0.8	0.0	0.0	2.4	0.7	0.3	0.5	0.0	0.9

Note: See note on Table 3.1.

Total columns are not the sum of columns shown because some components either have not been clearly specified or are not classified in this breakdown.

1. Data not available for 2010

Source: OECD.

tax cuts over boosting spending (although Japan, France, Australia, Denmark and Mexico are clear exceptions). In the United States the balance will shift; in 2008 the stimulus was entirely focused on tax cuts whereas in 2009 about two-thirds will be on spending measures. Tax cuts are concentrated on personal income taxes (Figure 3.3, panel A) in most countries and to a lesser extent on business taxes, the United Kingdom being the main exception with a generalised temporary VAT cut. On the spending side, virtually all OECD countries have launched and/or brought forward public investment programmes. Australia, Poland, Canada and Mexico are projected to be the most pro-active in this domain, with an increase in public investment as a response to the crisis close to 1% of 2008 GDP or more (Figure 3.3, panel B). Transfers to households have often been made more generous in particular for those on low income. A few countries (including the Czech Republic, Japan, Korea, Portugal, Mexico and the Slovak Republic) have also announced larger subsidies to the business sector (Figure 3.3, panel C).

… and in timing

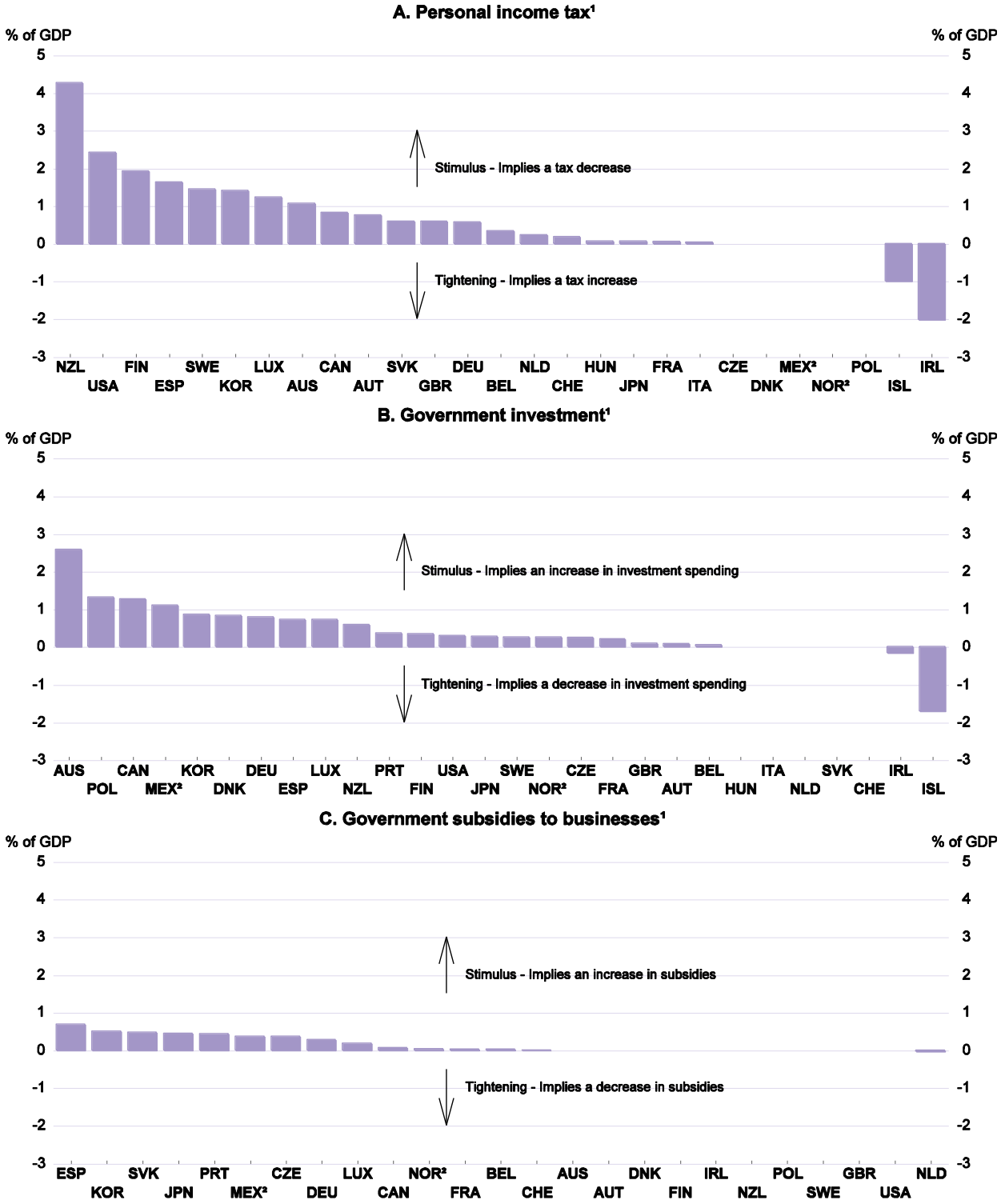
On the basis of currently announced measures, the crisis-related fiscal injection is typically expected to be strongest in 2009, although again with some country variation. For several countries (the United States, Finland, New Zealand, Germany and Canada), the sizes of fiscal packages in 2009 and 2010 are broadly comparable, implying a more or less continued pace of fiscal injection into 2010; there are a few countries (notably Denmark) that plan to have significantly larger packages in 2010. On the other hand, for most other countries, the fiscal injection tapers off in 2010.

Fiscal multipliers are difficult to pin down in the current conjuncture...

The effectiveness of fiscal policy in boosting activity, measured by so-called fiscal multipliers, is particularly hard to gauge in the current context. A review of the evidence, summarised in Box 3.1, typically suggests a first-year government spending multiplier of slightly greater than unity, with a tax cut multipliers of around half that, with smaller multipliers for more open economies.[30] However, a number of factors, including an impaired functioning of financial markets, heightened uncertainty and the desire of households and business to repair balance sheets as a result of massive capital losses on equity and home values, are likely to alter the fiscal policy effect on economic activity in the current conjuncture. On balance, these factors are more likely to reduce multipliers and accordingly the multipliers used to evaluate current fiscal packages have been judgementally scaled down, and by more for tax cuts than for government spending, to give a "reference" multiplier estimate to distinguish it from the "high" multiplier estimate for which no such adjustment is made (see Appendix 3.2 for further details).

30. Results from a Dynamic Stochastic General Equilibrium Model appear broadly consistent with these findings (Appendix 3.4).

Figure 3.3. Selected fiscal measures at a glance



1. See notes to Table 3.1.
2. Data are not available for 2010.

Source: OECD.

Box 3.1. **The size of short-term fiscal multipliers**

Fiscal multipliers provide a quantitative summary of the effect of fiscal measures on aggregate activity, expressing the magnitude of the final increase in GDP in a given year in relation to the *ex ante* cost of the measure, thus including not only any 'first round' impact effect of stimulus on output, but also subsequent induced second-round effects. Although there is uncertainty regarding their magnitude, as evidenced by a wide range of estimates, results summarised below are based on an average of simulation results from various macro models surveyed for OECD countries, where only simulations in which monetary policy is set to be accommodative are considered, since these apply better to the current environment.

- Short-run multipliers from increased government spending generally exceed those from revenue measures; direct spending by government does not suffer from leakage to savings at the first round stage and estimated multipliers tend to be slightly higher than 1.0.[1]
- Multipliers from revenue measures are smaller; a personal income tax cut tends to have a slightly larger effect (around 0.5 to 0.8) than other forms of tax cuts (around 0.2 to 0.6).
- The multiplier tends to increase slightly between the first and second years. This is particularly the case for tax measures for which the effects tend to build up more slowly as they feed through the economy indirectly via consumption expenditures.
- Evidence from multi-country models suggests that multipliers are systematically smaller the more open the economy is, an issue considered further below.

Range of estimates of short-term fiscal multipliers based on large-scale models

	All studies			Studies with both 1st and 2nd year multipliers					
	Year 1			Year 1			Year 2		
	Low	High	Mean	Low	High	Mean	Low	High	Mean
Purchases of goods and service	0.6	1.9	**1.1**	0.9	1.9	**1.2**	0.5	2.2	**1.3**
Corporate tax cut	0.1	0.5	**0.3**	0.1	0.5	**0.3**	0.2	0.8	**0.5**
Personal income tax cut	0.1	1.1	**0.5**	0.1	1.1	**0.5**	0.2	1.4	**0.8**
Indirect tax cut	0.0	1.4	**0.5**	0.0	0.6	**0.2**	0.0	0.8	**0.4**
Social security contribution cut	0.0	1.2	**0.4**	0.0	0.5	**0.3**	0.2	1.0	**0.6**

Note: Models surveyed are National Bank of Belgium Model, Interlink, Deutche Bundesbank Model, Banca d'Italia model, Banco de Portugal model, Banco de España model, Area-Wide Model, ESRI Short-Run Macroeconometric Model of the Japanese Economy, Department of Finance's Canadian Economic and Fiscal Model, averages of US models as reported by Fromm and Klein 1976, averages of US models as reported by Bryant et al 1988, averages of US models as reported by Adams and Klein 1991 and averages of UK models as reported by Church et al 1993. These models cover United States, Japan, Euro Area, Germany, France, Italy, United Kingdom, Canada, Spain, Belgium and Portugal.

Source: Adams and Klein (1991), Bryant (1988), Church et al. (2000), Fromm and Klein (1976), Henry et al. (2004), Roeger and in't Veld (2009) and Perotti (2005).

These results are broadly consistent with results from the OECD global model; when monetary policy is accommodative, for large (less open) economies short-term multipliers for government expenditure average around 0.9 in the first year rising to 1.3 in the second year, while for income tax cuts the first year multiplier is 0.6 rising to about to 1.0 in the second year.

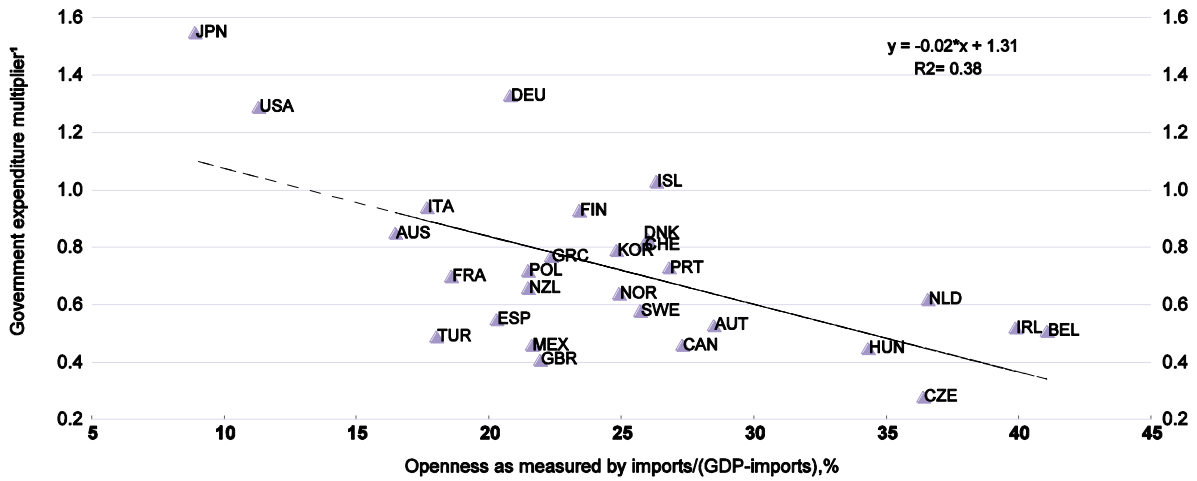
Two adjustments have been made to the averages of these surveyed results before using them to evaluate current packages: firstly, to allow for differences in the degree of openness across countries, and, secondly, to allow for the unusual circumstances of the current conjuncture.

1. Although models surveyed rarely make a distinction between government investment and consumption, the former may in principle exhibit a higher multiplier due to lower import contents.

Box 3.1. **The size of short-term fiscal multipliers** (continued)

The more open a country is to trade the more likely that effects of domestic fiscal expansion will leak abroad through imports, so reducing fiscal multipliers. To quantify how the size of multipliers relates to openness, country government expenditure multipliers are compared from a single multi-country model, namely the last (2002) vintage of the OECD's INTERLINK model. A scatter plot of first year multipliers against openness does indeed suggest an inverse correlation between multiplier values and openness. The slope coefficient from this scatter plot has been used as the basis for making cross-country adjustments to the multipliers.

Government expenditure multiplier versus openness



1. From OECD interlink.

Source: OECD.

In the current conjuncture, fiscal stimulus may be *more effective* than under normal circumstances: dysfunctional financial markets mean that more private agents are likely to be credit constrained so that, to the extent that any fiscal stimulus impacts on such agents, a larger portion of any fiscal injection is likely to be spent rather than saved. On the other hand, fiscal stimulus may be *less effective* in the current conjuncture; firstly, faced with heightened risks to employment and income, the desire for precautionary savings may be higher; secondly, in many countries there is a need for households to repair overstretched and damaged balance sheets which implies an increase in the marginal savings propensity. The same holds true for businesses, with uncertainty about the economic outlook combined with the perceived need to hoard cash caused by the dysfunctional financial system, leading to the postponement of investment decisions. Overall, it is judged that on balance such factors are likely to be negative and so the average survey multipliers have been judgmentally adjusted *downwards*. This adjustment is smaller for government spending measures than revenue measures because 'first-round' effects are not affected by changes in private-sector savings behaviour. Although there may be a similar effect on transfers to households, they may be targeted to the credit-constrained, thereby limiting the negative impacts from savings.

These adjustments give rise to 'reference' multiplier estimates for each instrument and country based on the multipliers derived from the survey results adjusted for openness and is further judgmentally reduced to allow for the effect of the current conjuncture. As an alternative, 'high' multiplier estimates are also shown that are adjusted only for openness.

Box 3.1. **The size of short-term fiscal multipliers** (continued)

The multipliers used to evaluate the fiscal packages are set out in the table below, distinguishing five different types of fiscal measure and three representative countries (representing differing degrees of openness). A full tabulation of these multipliers for all OECD countries is given in Appendix 3.2.

The multipliers used to evaluate the fiscal packages

	United States		Germany		Belgium	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
Spending measures						
Infrastructure investment	0.9	1.1 - 1.3	0.8	1.0 - 1.2	0.7	0.9 - 1.1
Government purchase of goods	0.7	0.8 - 1.1	0.4	0.5 - 0.8	0.3	0.4 - 0.7
Transfers to household	0.5	0.8 - 0.9	0.3	0.5 - 0.7	0.2	0.4 - 0.6
Revenue measures						
Personal income tax cuts	0.3 - 0.5	0.5 - 0.9	0.2 - 0.3	0.3 - 0.7	0.1 - 0.2	0.2 - 0.6
Indirect tax cuts and other measures	0.2 - 0.3	0.3 - 0.5	0.1 - 0.2	0.2 - 0.4	0.1	0.1 - 0.3

Source: OECD.

... and the likely activity impacts differ widely by country

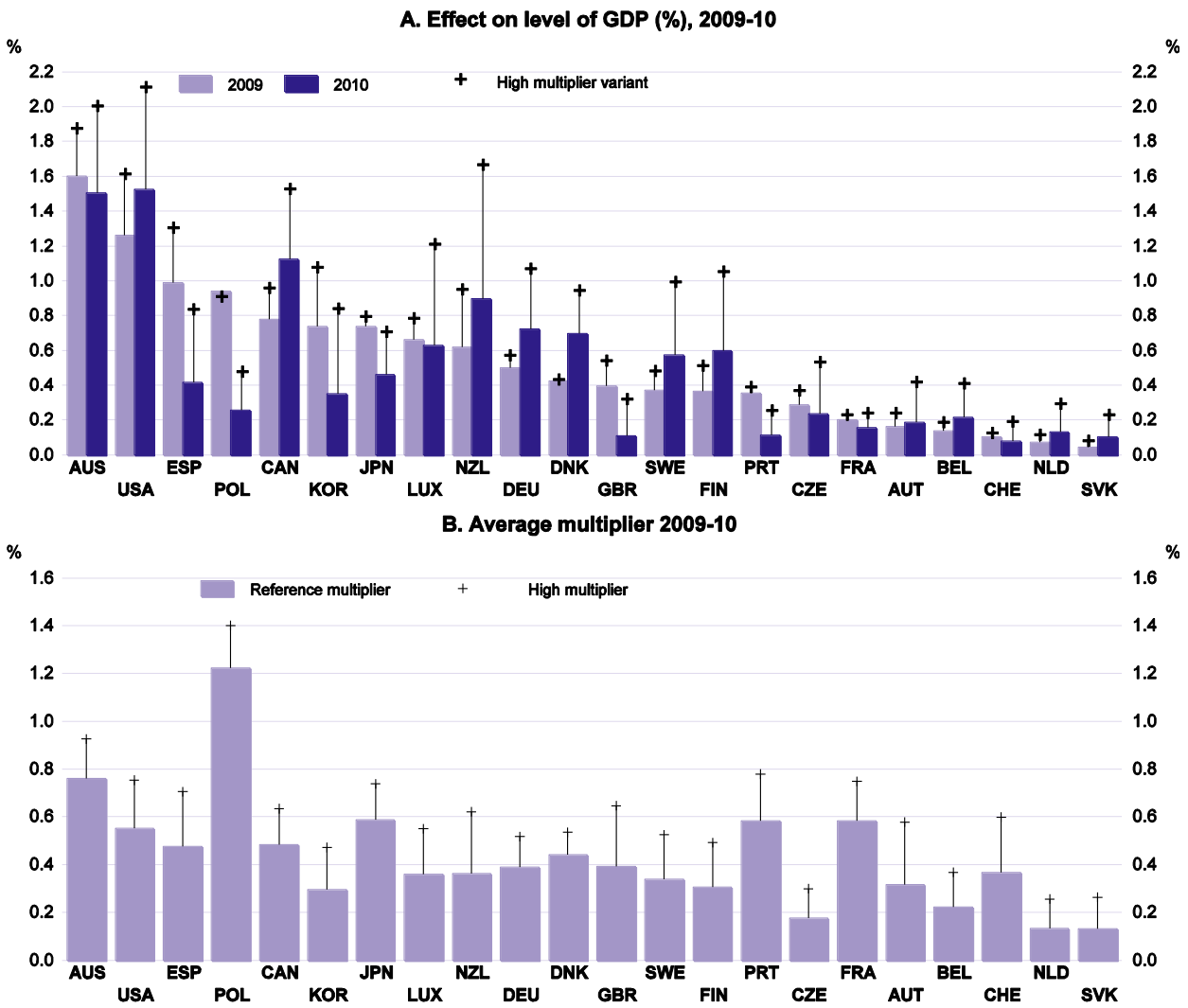
The stimulus effect of these fiscal packages on GDP is thus estimated by applying a set of multipliers which vary both across policy instrument and country. On the basis of the reference multipliers, the implied effect on GDP is largest from the fiscal packages in Australia and the United States at between 1.2 and 1.6% of GDP over 2009 and 2010 (Figure 3.4), although the effect is about 1% of GDP for Poland and Spain in 2009 as well as Canada and New Zealand in 2010. For other countries the likely impact of the fiscal packages is small, particularly judged against the magnitude of the impending output gap. These estimates do not take into account cross-country spillovers, such as when, for example, Belgian activity benefits from stimulus in Germany.

The case for further discretionary fiscal action in the current crisis

Additional room for monetary policy still exists for some countries

With many OECD countries facing their most severe downturn in the post-war period, the benefits from additional discretionary fiscal policy action varies among countries according to the depth of the downturn but also the available room for further monetary easing. While some central banks have cut policy rates to a point where the zero lower bound is either very close or already binding, others still have additional room for cuts, which implies that the need for discretionary fiscal action is reduced. With the effectiveness of monetary policy open to question in the current situation, and with an argument that more demand stimulus may be desirable than can be delivered by monetary policy, fiscal stimulus may be desirable even though monetary policy has scope to ease further.

Figure 3.4. The effect of fiscal packages



Note: Bars indicate values based on the reference multiplier case. Crosses show estimates based on a high multiplier alternative. See Box 3.1 for explanation of the basis for the multiplier assumptions. Countries are arranged according to the size of effect in 2009.

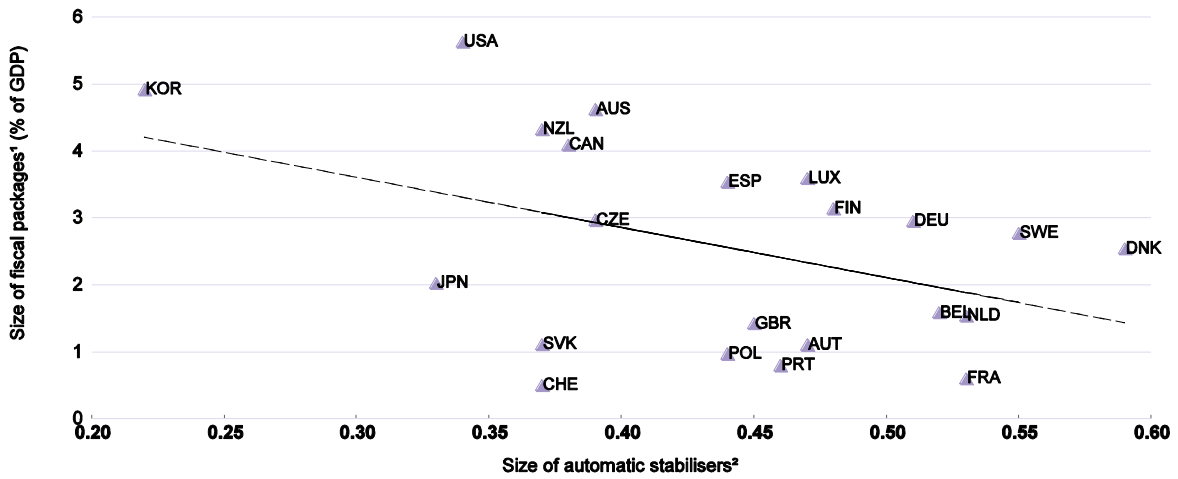
Source: OECD.

The size of fiscal packages is inversely related to automatic stabilisers

The case for additional discretionary fiscal stimulus will also depend on the materialisation of further negative shocks and the extent to which these are mitigated by automatic stabilisers. These operate more powerfully in some economies than in others. The extent of automatic stabilisation depends on several factors: the size of the public sector, the cyclicality of the tax base, the design of the public social security system and the progressivity of taxes. It tends to be particularly weak in Korea, Japan, United States, Switzerland and New Zealand and particularly strong in northern European countries with well developed social security systems. The extent of discretionary fiscal measures planned or implemented over the period 2008 to 2010 indeed varies inversely with the strength of

automatic stabilisers (Figure 3.5). Moreover, one of the priorities for discretionary fiscal action in some countries, including the United States, is to avoid weakening automatic stabilisation by addressing funding shortfalls at lower levels of government where the operation of balanced budget rules can otherwise lead to severe fiscal tightening.

Figure 3.5. Size of discretionary fiscal packages varies inversely with the automatic stabilisers



1. Total ex ante cost of discretionary fiscal packages over the period 2008-10.

2. Coefficient summarising the automatic change in the fiscal balance due to a 1 percentage point change in the output gap.

Source: Girouard and André (2005) and Table 3.1.

The scope for discretionary fiscal policy: ensuring fiscal sustainability

Scope varies widely across countries

The scope for additional fiscal stimulus varies widely across countries according to their initial fiscal conditions, both in terms of the current underlying deficit and debt position as well as, at least in principle, contingent liabilities related to the financial crisis and future long-term spending pressures relating to factors such as ageing.

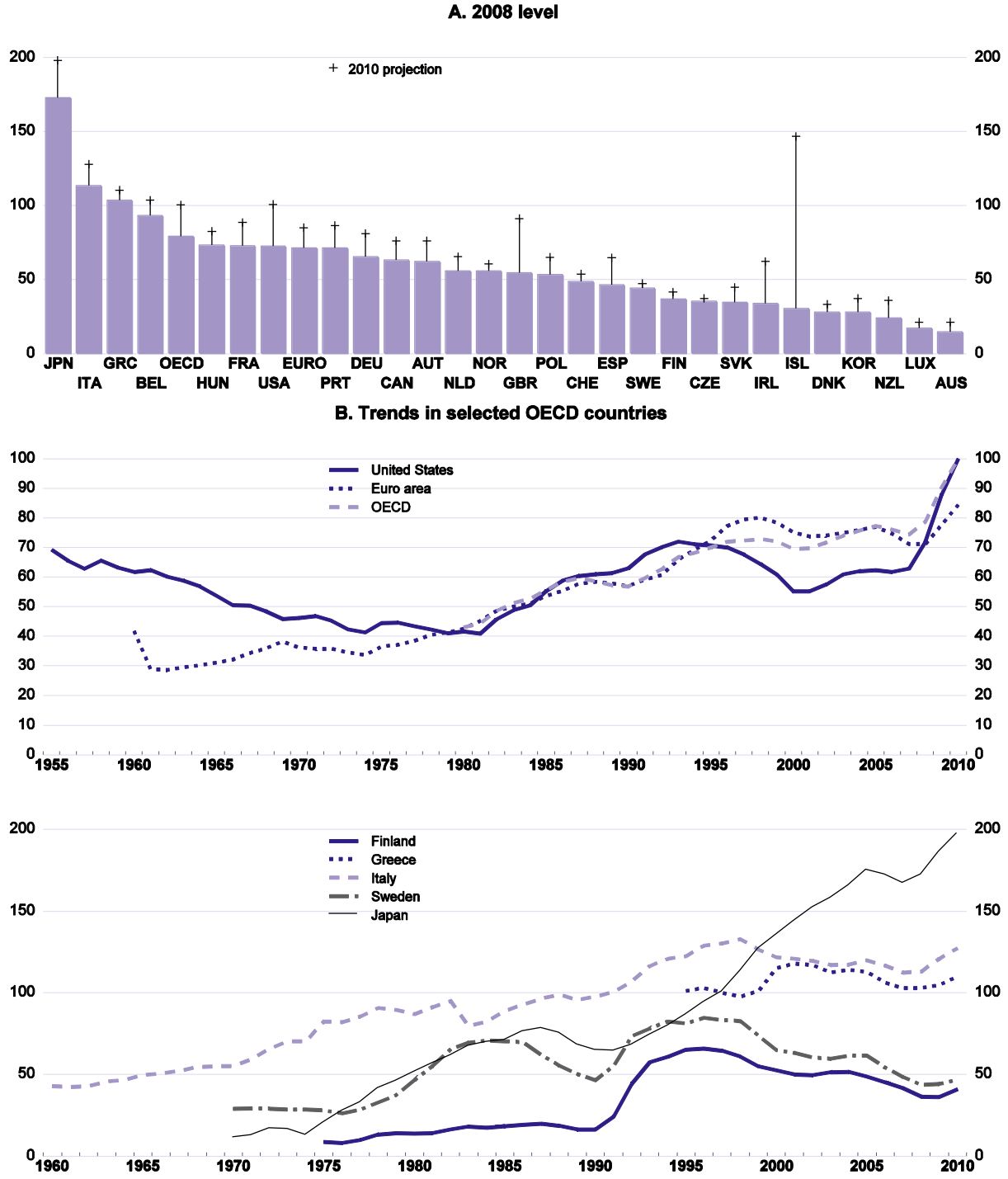
Gross government debt is set to increase substantially

OECD gross government debt as a share of GDP is projected to increase sharply, from 75% of GDP in 2007 to about 100% of GDP in 2010, reflecting substantial budget deficits and off-budget spending in many countries (Figure 3.6).[31] Increases in the debt ratio of this magnitude have usually occurred in conjunction with banking crises, such as for the Nordic countries in the early 1990s, Mexico in 1994 and Japan during the 1990s. The projected increase in OECD gross debt reflects a combination of

31. Gross debt is often considered to be more relevant than net debt for gauging the impact of public borrowing on financial markets (Fatás, 2005). In addition, true economic value of gross financial assets is sometimes difficult to pin down and the quality (and liquidity) of some assets may be questionable (*e.g.* when loans to public and private enterprises have *de facto* subsidy component and may not be fully paid back).

Figure 3.6. General government gross financial liabilities

Per cent of GDP



Note: Gross debt data are not always comparable across countries due to different definitions or treatment of debt components. Notably, they include the funded portion of government employee pension liabilities for some OECD countries, including the United States. The debt position of this country is thus overstated relative to countries that have large unfunded liabilities for such pensions, which according to ESA95/SNA93 are not counted in the debt figures but rather as a memorandum item to the debt.

Source: OECD.

loss of previous exceptional revenues, mostly associated with the collapse of financial-asset and house prices, the operation of automatic stabilisers as well discretionary fiscal measures, notably the stimulus packages described above. It also includes debt incurred to finance capital injections into banks and financial institutions as well as purchases of financial assets. However, it does not build in possible additional costs associated with the financial crisis through providing government guarantees or losses made on asset purchases, although the experience of previous banking crises suggests that such costs can be substantial.[32] Further pressure on fiscal positions may result if potential output is adversely affected by the economic crisis, for example through a rise in structural unemployment. There is also some evidence from previous episodes to suggest that the more prolonged a banking crisis becomes the greater the risk of an adverse effect on trend productivity growth (Haugh *et al.*, 2009).

Scope for stimulus also depends on longer-term spending pressures

The rise in taxes or cuts in current spending needed to stabilise or even reverse government debt should be seen against the background of rising spending on pensions and health care, unless these areas are thoroughly reformed. Recent projections for public spending on old-age pensions show an increase by almost 4½ percentage points of GDP among a panel of 26 OECD countries over the period 2005 to 2050, but with considerable cross-country variations (Table 3.3). Demographic effects are also projected projected to raise public spending on health and long-term care by 2 percentage points of GDP on average in OECD countries over the period 2005 to 2050 (Table 3.3). Combined with the other key drivers and unless policy action to control costs becomes more successful than in the past, public spending on health and long-term care could double from 6½ to almost 13% of GDP on average in OECD countries between 2005 and 2050, but with significant differences across countries (Oliveira Martins and de la Maisonneuve, 2006).

Measures of the "tax gap" imply limited fiscal scope for many countries

A simple summary measure of the extent of such future spending pressures is provided by estimates of the increase in the current primary balance, sometimes referred to as a "fiscal gap" or "tax gap", that would be required to keep the general government debt ratio to its 2008 level -- which was already very high in some countries -- in 2050 (Table 3.4).[33] This

32. According to Claessens and Klingebiel (2000), these costs amounted to more than 10% of GDP in Finland in the early 1990s and to about 20% of GDP in Japan between 1992 and 2000. See also Box 1.5 of OECD (2008).

33. Such calculations are sensitive to the underlying assumptions regarding growth and interest rates as well the somewhat arbitrary choice of a debt target. For the purpose of the calculations reported in Table 3.4 the assumptions are chosen so as to err on the side of optimism. Key assumptions underlying the calculations include that: *i)* from 2010 onward, potential growth rates and long-term real interest rates are assumed to remain unchanged from OECD projections for 2010. Thus, possibilities of lower potential growth rates in the long run (due either to the financial crisis or aging) as well as higher interest rates for government bonds are excluded; *ii)* real GDP growth rates between 2011 and 2013 have been calculated based on the assumption that output gaps remaining in 2010 will be closed by 2013 and growth thereafter is assumed to be equal to the potential rate; *iii)* to calculate effects on gross debt, gross assets are assumed to remain a constant share of GDP from 2011 onwards; and iv) no direct effect is included on government gross debt for the direct effect of additional costs from dealing with the financial crisis.

Table 3.3. **Public spending on health care, long-term care and pensions is set to increase considerably**

2005-2050 increase, in percentage points of GDP

	Health care	Long-term care	Pensions	Total
United States	3.4	1.7	1.8	7.0
Japan	4.3	2.2	0.6	7.1
Euro area	3.7	2.2	3.0	8.9
Germany	3.6	1.9	2.0	7.5
France	3.5	1.7	2.1	7.3
Italy	3.8	2.9	0.4	7.0
United Kingdom	3.6	1.9	1.7	7.2
Canada	4.1	2.1	1.7	7.9
Belgium	3.3	1.9	5.1	10.3
Netherlands	3.8	2.0	3.8	9.6
Sweden	3.2	1.1	0.8	5.1
Switzerland	3.5	1.4	3.6	8.5
Australia	4.2	2.0	1.7	7.9
Denmark	3.5	1.5	3.2	8.2
Finland	3.6	2.4	3.3	9.3
Greece	3.9	2.7	10.3	16.8
Ireland	4.0	3.8	6.5	14.4
Korea	4.9	3.8	7.8	16.4
Luxembourg	3.7	3.1	7.4	14.3
New Zealand	4.2	2.0	5.9	12.0
Norway	3.4	1.7	8.7	13.9
Portugal	4.2	2.0	9.3	15.5
Spain	4.1	2.4	7.0	13.5

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 EU EPC (2006) 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.

Source: 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 ; EU EPC (2006), *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.

calculation underestimates the extent of fiscal pressures on those countries, such as Japan and Italy, which start with a very high level of debt in 2008 and correspondingly overestimate pressures on countries with low 2008 debt ratios such as Australia and Korea. With these caveats in mind, the results suggest that almost all OECD countries face a substantial fiscal gap and so a need to raise their underlying primary surplus over the medium term. The required primary surplus is particularly large for countries with a less favourable outlook on expenditure increases over long horizon

Table 3.4. **Measures of the increase in underlying primary balance required to stabilise debt**

	Gross debt ratios[1]		Underlying primary balances					Fiscal gap *vis-à-vis*	
	Outcomes	Projections	Outcomes	Projections		Required primary surpluses to keep gross debt ratios in 2050 to 2008 levels			
	2008	2010	2008	2010		2008	2010	2008	2010
			A	B	B-A	C	D	C-A	D-B
United States	71.9	100.0	-3.5	-6.7	-3.2	3.4	4.1	6.9	10.8
Japan	172.1	197.3	-2.9	-3.4	-0.5	4.6	5.0	7.5	8.5
Euro Area	71.0	84.4	1.2	-0.1	-1.3	4.2	4.5	3.0	4.6
Germany	64.8	80.4	1.9	-0.9	-2.8	3.5	3.9	1.6	4.8
France	72.2	88.0	-0.9	-2.1	-1.2	3.6	4.1	4.5	6.1
Italy	113.1	127.2	3.2	4.0	0.8	4.9	5.1	1.8	1.1
United Kingdom	54.1	90.5	-2.3	-5.2	-2.9	3.4	4.2	5.7	9.4
Canada	62.7	75.4	0.6	-2.6	-3.3	3.7	3.9	3.0	6.6
Australia	14.2	20.7	2.3	-0.7	-3.0	4.2	4.1	1.8	4.9
Austria	61.7	75.4	1.2	-1.2	-2.3	2.4	2.7	1.2	3.8
Belgium	92.7	103.0	2.6	2.4	-0.2	5.0	5.0	2.4	2.6
Czech Republic	34.8	36.5	-0.6	1.9	2.5	5.2	4.9	5.8	3.0
Denmark	27.4	32.7	3.2	1.9	-1.3	3.4	3.6	0.2	1.7
Finland	36.3	41.0	3.4	0.8	-2.6	6.1	5.8	2.7	5.0
Greece	103.0	109.8	-0.9	1.3	2.2	7.9	7.6	8.8	6.3
Hungary	72.7	81.7	1.3	7.9	6.7	6.8	6.8	5.5	-1.2
Ireland	33.5	61.7	-5.4	-6.1	-0.7	7.3	7.2	12.8	13.4
Korea	27.4	36.6	2.8	1.8	-1.1	9.5	9.6	6.7	7.8
Luxembourg	16.5	20.7	1.8	1.4	-0.4	8.8	8.3	7.0	6.9
Netherlands	55.3	64.6	1.9	-0.7	-2.5	4.6	4.7	2.7	5.3
New Zealand	23.6	35.1	2.3	-1.7	-4.0	4.9	5.0	2.6	6.8
Poland	52.7	64.5	-1.9	-3.0	-1.2	-0.2	0.4	1.6	3.4
Portugal	70.7	85.9	1.5	1.4	-0.1	7.0	7.3	5.6	5.9
Slovak Republic	34.0	44.2	-3.7	-4.2	-0.5	4.2	4.3	7.9	8.6
Spain	45.9	64.1	-0.8	-1.0	-0.3	6.0	6.2	6.8	7.2
Sweden	43.6	46.6	4.0	2.7	-1.3	2.2	2.2	-1.9	-0.6
Switzerland	48.0	52.8	1.5	0.6	-0.9	4.2	4.1	2.7	3.5
Simple average	57.9	70.6	0.5	-0.4	-0.9	4.9	5.0	4.4	5.5
Weighted average	79.7	101.3	-1.3	-3.3	-2.0	4.1	4.5	5.4	7.8

Notes: Required primary surpluses have been estimateded based on the interim OECD projections up to 2010. Thereafter, potential growth rates and long-term real interest rates are assumed to remain unchanged. Real GDP growth rates between 2011 and 2013 have been calculated on the assumption that the output gap remaining in 2010 will be closed by 2013. Growth thereafter is assumed to be equal to the potential rate. Projections on health, long-term care and pension expenditures to 2050 are based on Cournède (2008). Gross assets are assumed to remain constant, as a percent of GDP, from 2011 onward. The fiscal gap in 2010 incorporates the impact of fiscal packages.

1. Gross debt data shown in this table correspond to the implementation of the System of National Account principles. They differ from gross debt data according to the Maastricht criterion.

Source: OECD.

(including Greece, Korea, Portugal and Ireland) and/or with weaker initial fiscal conditions (including the United States,[34] Japan, United Kingdom, Greece, Iceland and Ireland). The crisis has added to this through the need to reverse fiscal packages in the medium term and to compensate for the loss of exceptional revenue buoyancy. The expected deterioration of the fiscal gap between 2008 and 2010 is greatest for those countries which plan to introduce the largest stimulus packages and/or will experience the largest losses of "exceptional revenues" or incur large costs associated with supporting the financial system. For the OECD area as a whole, the fiscal gap is expected to deteriorate from just over 5% in 2008 to nearly 8% in 2010. Taking into account both the initial level of government debt as well as measures of the fiscal gap, suggests that countries which might have most scope for additional fiscal manoeuvre include Germany, Canada, Australia, Netherlands, Switzerland, Korea and some Nordic countries.

High indebtedness is likely to incite Ricardian behaviour

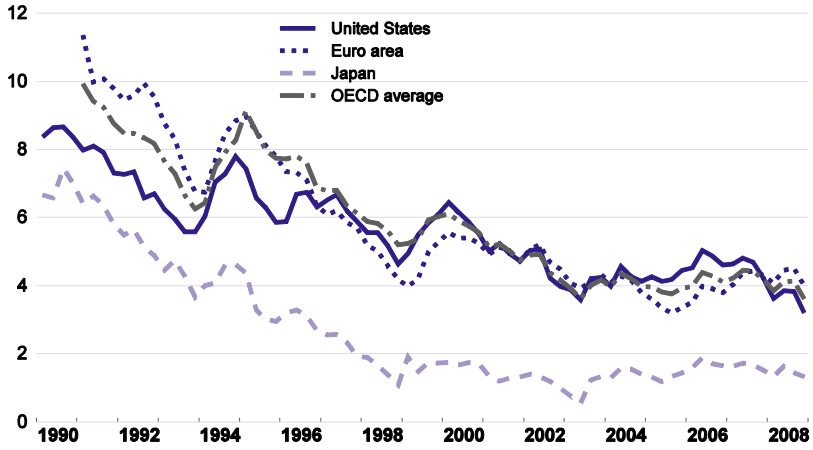
The more limited the scope for discretionary fiscal action the less effective any such action is likely to be. A relatively robust conclusion in the literature is that Ricardian equivalence, implying an offsetting increase in private sector savings behaviour, is more likely to hold where governments are highly indebted (Berben and Brosens, 2007): when the debt ratio is high, the fiscal situation becomes increasingly unsustainable and economic agents consider future increases in tax more likely and tend to offset fiscal injection by increases in saving. Alternatively, to the extent that there is not a complete offset in private savings behaviour, the higher the level of government debt the more likely that there will be a rise in long-term interest rates which will have both offsetting effects on aggregate demand and for highly indebted countries imply a substantial increase in debt servicing costs.

Interest rates are likely to rise over the medium term

Concerns about additional pressures from fiscal imbalances on long-term interest rates should be put in the context that this may occur on top of a more general rise in long-term interest rates over the medium term. Over most of the past decade, long-term interest rates in the major OECD countries have been unusually low (Figure 3.7). While this may partly reflect global factors including lower inflation (Bernanke, 2005), it is also a reflection of policy rates that have been unusually low for much of this period, and in retrospect possibly even too low in some cases (Ahrend *et al*., 2006), while risk was under-priced. Interest rates on long-term government bonds for the major OECD countries have also been pushed lower during the current crisis by a flight of capital to safer financial assets. The eventual normalisation of financial conditions and policy rates is thus likely to involve a general increase in long-term interest rates.

34. The estimate of the fiscal gap for the United States to stabilise gross debt at the 2008 level is similar to the estimate of between 7 to 9% of GDP, found by Auerbach and Gale (2009), once the effect of the stimulus package is excluded.

Figure 3.7. Nominal interest rates on ten-year government bonds



Source: OECD.

Higher government debt raises interest rates

The evidence regarding the effect of fiscal imbalances on interest rates is both mixed and controversial. However, the spread between a measure of long and short-term interest rates across all OECD countries since the mid-1990s is positively correlated with government indebtedness (Figure 3.8). Moreover, an increasingly common finding in the economic literature is that expected, rather than current, fiscal deficits have an effect on long-term interest rates on government bonds (Table 3.5).[35] For example, Laubach (2003) finds that a 1 percentage point of GDP increase in expected fiscal deficits in the United States increases interest rates on 10-year government bonds by about 25 basis points. Further evidence of a link between fiscal imbalances and interest rates is provided by the recent widening in euro area sovereign bond spreads which can be explained by a combination of measures of government indebtedness, expected fiscal deficits as well as previous fiscal track record (Box 3.2). There is also some evidence that interest rate effects are non-linear and tend to be greater at higher levels of indebtedness.[36] On this basis, stimulus will have a higher fiscal cost for highly-indebted countries, not only because higher interest rates will affect a larger debt but also because the interest-rate effect itself will be larger.

35. There are a number of inherent econometric difficulties in examining the link between fiscal imbalances and interest rates. In particular, any relationship may be obscured by the cycle as the effect of a downturn will tend to raise fiscal deficits as well as lower interest rates due the response of monetary policy. However, some problems relating to unobserved variables such as long-term inflation expectations or exchange rate risk are eased by considering interest rate differentials within a common currency region.

36. Such non-linear effects are also found in Bayoumi *et al.* (1995) among US states and by Conway and Orr (2002) and O'Donovan *et al*. (1996) among the major OECD countries.

Table 3.5. **Estimated impact of fiscal variables on interest rates**

Reference	Countries	Fiscal variables[1]	Estimated effects on long-term interest rates in basis points (bps)
Studies that focus on flow fiscal variables			
Thomas and Wu (2009)	United States	A 1% point increase in projected fiscal deficit in 5 years	30-60 bps
Bernoth et al (2006)	14 EU countries	A debt -service ratio 5% above Germany's	32 bps (Spread vis-à-vis Germany, post-EMU period, some non-linear effects)
Dai and Philippon (2005)	United States	A 1% point increase in fiscal deficit lasting 3 years	20-60bps
Ardagna et al (2004)	16 OECD countries	A 1% point deterioration in primary balance	10 bps
Laubach (2003)	United States	A 1% point increase in projected fiscal deficit	25 bps
Literature review by Gale and Orzag (2003)	United States	A 1% point increase in projected fiscal deficit	40-50 bps
Literature review by Gale and Orzag (2002)	United States	A 1% point increase in projected fiscal deficit	50-100 bps (macro models) 50 bps (others)
Canzeroni, Cumby and Diba (2002)	United States	A 1% deterioration in projected fiscal balance, 5 to 10 year ahead	41-60 bps (Spread of 10-year yield over 3-month)
Linde (2001)	Sweden	A 1% deterioration in fiscal balance	25 bps after 2 years (Domestic-foreign long-term interest differential)
Reinhart and Sack (2000)	19 OECD countries	A 1% deterioration in fiscal balance in current and next years	9 bps (yield)
	G7		12bps (yield)
Orr, Edey and Kennedy (1995)	17 OECD countries	A 1% point deterioration in fiscal balances	15 bps
Studies that focus on stock fiscal variables			
Chinn and Frankel (2005)	Germany, France, Italy, UK and Spain	A 1% increase in current net debt	5-8 bps
		A 1% increase in net public debt ratio projected 2 years ahead	10-16 bps
	USA	A 1% increase in current or projected net debt	5 bps over period 1998-2002, but obscured when extended to 2004
Ardagna et al (2004)	16 OECD countries	Public debt	non-linear
Engen and Hubbard (2004)	United States	A 1% point increase in debt ratio	3 bps (with ranges)
Laubach (2003)	United States	A 1% point increase in projected debt ratio	4 bps
Chinn and Frankel (2003)	Germany, France, Italy, Japan, Spain UK and USA	A 1% increase in net public debt ratio projected 2 years ahead	3-32 bps (individual country) 7-12 bps (European interest rates)
Codogno et al (2003)	9 EMU countries	Debt-to-GDP ratio	Small and significant effects on spreads for Austria, Italy and Spain
Conway and Orr (2002)	7 OECD countries	A 1% point increase in net public debt	Less than 1 bps (Real 10-year bond yields, starting from zero net debt) 1.5 bps (Real 10-year bond yields, starting from 100% net debt)
O'Donovan, Orr and Rae (1996)	7 OECD countries	A 1% point increase in net public debt	Less than 1 bps (Real 10-year bond yields, starting from zero net debt) 2 bps (Real 10-year bond yields, starting from 100% net debt)
Ford and Laxton (1995)	9 countries	A 1% point increase in world net public debt	14 - 49 bps (Real 1-year bond yields)
	World		15 -27 bps (Real 1-year bond yields)

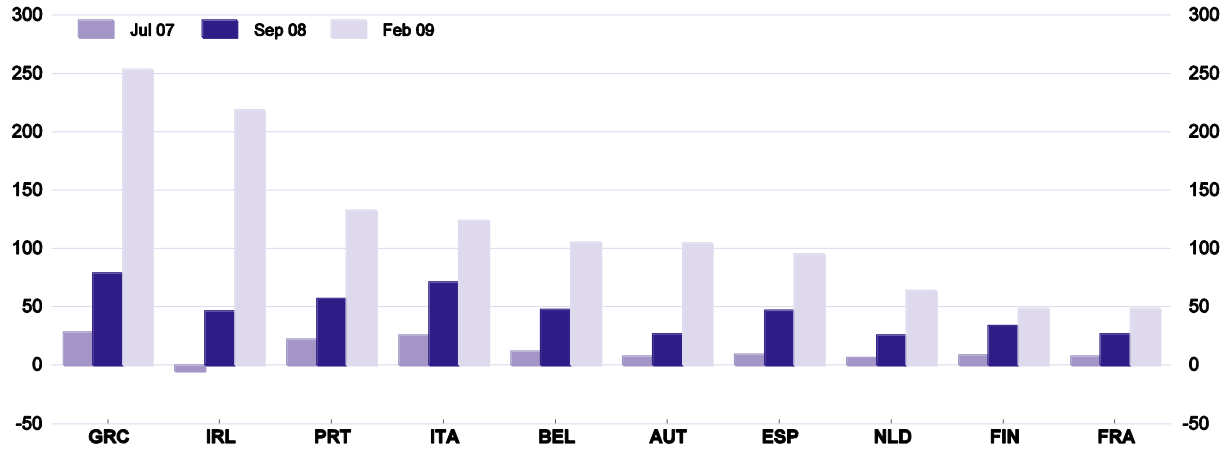
1. All changes are expressed in relation to GDP unless otherwise specified.
Source: OECD.

Box 3.2. **What drives sovereign bond spreads in the euro area?**

Since the onset of the financial crisis there has been a marked rise in the spreads between the yield on German ten-year sovereign bonds and those issued by other countries in the euro zone. To shed light on these developments, a simple panel model is estimated to explore a range of potential drivers. Potential explanatory variables include various measures of government indebtedness (both the gross and net debt-to-GDP ratios, as well as a debt service ratio measured as the ratio of interest payments on government debt to current government revenue), expected future fiscal deficits over the next five years (proxied by successive *Economic Outlook* forecasts) and a bivariate 'fiscal track record' indicator which takes a value of unity if a country has a history of running large fiscal deficits over a prolonged period and zero otherwise. The general degree of risk aversion is also reflected by using a measure of the euro area corporate bond spread.

Euro area ten-year government bond spread with Germany

Basis points



Note: Monthly averages.

Source: OECD, Main Economic Indicators database; and Datastream.

Two preferred equations from this analysis, reported in the table below, are able to explain the general pattern of relative upward movements in spreads since the beginning of the crisis, while a more comprehensive set of results is discussed in Haugh and Turner (2009). The preferred measure of indebtedness is the debt service ratio, which follows similar findings to those of Bernoth *et al.* (2004) who argue that the debt service ratio is closer in concept to measures of borrower quality used in corporate finance and allows for the fact that countries differ in their ability to raise taxes from a given volume of GDP and so focuses on the constraint that high debt burdens impose on annual budgetary flows. The influence of the debt service ratio is non-linear (as denoted by the significance of a squared debt service term), another finding common to Bernoth *et al.* (2004), and amplified by both a poor fiscal track record and the degree of general risk aversion. Thus, for a country with an initial debt service ratio and expected deficit equal to the euro area average, and for December 2008 levels of risk aversion, successive one standard deviation (3 percentage points) increases in the debt service ratio are predicted to result in an increase in the spread of 14, 34, 59 and 90 basis points, while for a country with a poor fiscal track record the increases would be 18, 43, 76 and 115 basis points. Higher expected future deficits are also important in explaining recent movement in spreads, particularly in the case of Ireland which has experienced a substantial widening in its spread, although current levels of debt and debt service remain relatively modest. General risk aversion also intensifies the effect of a poor fiscal track record and higher expected deficits.

Box 3.2. **What drives sovereign bond spreads in the euro area?** (continued)

Panel equations of interest rate spreads in the euro area

	Equation 1		Equation 2	
	Coefficient	t-statistic	Coefficient	t-statistic
Constant	-1.39	-0.61	1.55	0.76
Risk[1]	2.12	4.60	1.55	3.57
Risk*track record[2]	1.08	1.81		
Risk*expected fiscal balance[3]	-0.30	-3.09	-0.35	-3.45
Risk*debt service squared[4]	0.02	2.38	0.03	3.79
Track record*debt service squared	0.09	2.39		
Track record*risk*expected fiscal balance			-0.38	-1.76
Adjusted R^2	0.87		0.85	

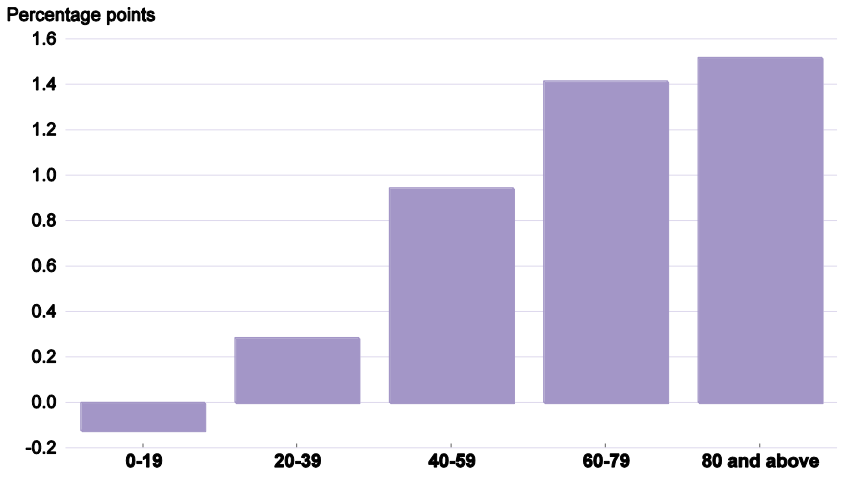
Note: Estimation Period: 2005 Q4 - 2008 Q4. Frequency: 6 monthly. Countries: Austria, Belgium, Finland, France, Greece, Ireland, Italy, Netherlands, Portugal and Spain.

1. Yield spread between high yield corporate bonds and government bonds.
2. Track record equals 1 if the country has a history of sustained fiscal deficits greater than 3% of GDP, otherwise 0.
3. Average of OECD forecasts for the fiscal balance as a percentage of GDP in the following 5 years.
4. Gross government interest payments divided by current government receipts.

Source: OECD calculations

Figure 3.8. Higher government debt tends to raise long-term interest rates

Spread between long-term and short-term interest rates versus gross government debt in % of GDP



Note: Bars represent average across all OECD countries for which data are available over the period 1994 to 2007. Short-term interest rates are typically rates on 3-month Treasury bills and long-term interest rates those on 10-year government bonds.

Source: OECD.

Appropriate design of fiscal stimulus packages

Design of fiscal packages is crucial

The design of fiscal packages, both in terms of the composition of individual measures as well as their timing, is very important in maximising their effectiveness. The previous multiplier analysis suggests that the largest short-run impact on aggregate demand is from government spending measures, but that where tax cuts are implemented they are most effective if targeted at households that are likely to be liquidity-constrained. A complementary criteria for selecting individual measures is the potential to both raise aggregate demand in the short run as well as aggregate supply in the long run. A recent OECD report (OECD, 2009), *Going for Growth*, identifies three broad fiscal/structural reforms that could yield such a "double-dividend" at present: increased spending on infrastructure; increased spending on active labour market policy, including on compulsory training courses; and reduction of personal income taxes, notably on low-income earners.

Concerns about timeliness may be reduced

One of the disadvantages often cited against using discretionary fiscal policy is the problem of timeliness, both in terms of the measures being implemented when they are most needed and then being subsequently adjusted or removed. Thus infrastructure investment, because of its typically long implementation and gestation lags, scores poorly in this regard unless there are projects which are "shovel-ready" or there are repair and maintenance programmes that can readily be brought forward. However, the magnitude of the current downturn is likely to have reduced these concerns somewhat, both because it appears that political decision-making can be more rapid during a period of crisis and because the downturn is expected to last a number of years. Nevertheless, an important issue in the current context is how long any stimulus should be sustained, since an abrupt phasing out of a positive stimulus has an adverse impact on the growth rate of output.

The duration of any fiscal stimulus is key in determining fiscal costs

An implication of the finding that higher expected deficits increase long-term interest rates is that a temporary fiscal injection may be more effective than a more sustained fiscal injection which is expected to significantly worsen the long-term fiscal outlook. This is illustrated by a simple stylised model (described fully in Appendix 3.3) with an effect from expected fiscal deficits calibrated so that an increase in the average expected fiscal deficit over the coming five years by 1% of GDP increases the sovereign risk premium on long-term government bonds by 25 basis points (consistent with Laubach, 2003). Similar results suggesting that a temporary fiscal stimulus can be almost as effective as a more sustained stimulus, but with much lower debt costs, are a feature of the DSGE model outlined in Appendix 3.4.

A simple model…

The model can be calibrated so as to represent stylised features of different OECD economies. In the first instance, it is calibrated to be representative of the US economy[37] and subject to a substantial adverse shock. In the absence of any policy response, the shock would generate an output gap of 7% in the first two years and the gap would only be closed after eight years.[38] In the absence of any discretionary fiscal policy action, monetary policy together with the effects of the automatic stabilisers would offset nearly 30% of the adverse shock to the output gap (first column of Table 3.6 and Figure 3.9). However, the effect of monetary policy (and the automatic stabilisers) is roughly half compared to their effectiveness in offsetting a more modest (and typical) adverse shock because the zero interest rate floor for short-term policy rates is quickly encountered.[39]

Table 3.6. **Summary of model simulation results on the effects of discretionary fiscal policy**

		Profile of discretionary fiscal injection			
		None	Sustained	Temporary	Reversed
Maximum output gap	(1)	-5.8	-4.0	-3.8	-3.8
Cumulative output gap	(2)	20.3	12.1	14.6	13.5
Cumulative ex ante output gap shock	(3)	30.0	30.0	30.0	30.0
Cumulative output gap as % of shock	(4)=(2)/(3)	68 %	40 %	49 %	45 %
Increase in debt after 10 years (% pts of GDP)	(5)	8.4	23.0	13.5	4.0
Debt per % pt of output gap reduced	(5)/[(3)-(2)]		1.3	0.9	0.2

Source: OECD.

… illustrates that fiscal policy can help to moderate the downturn…

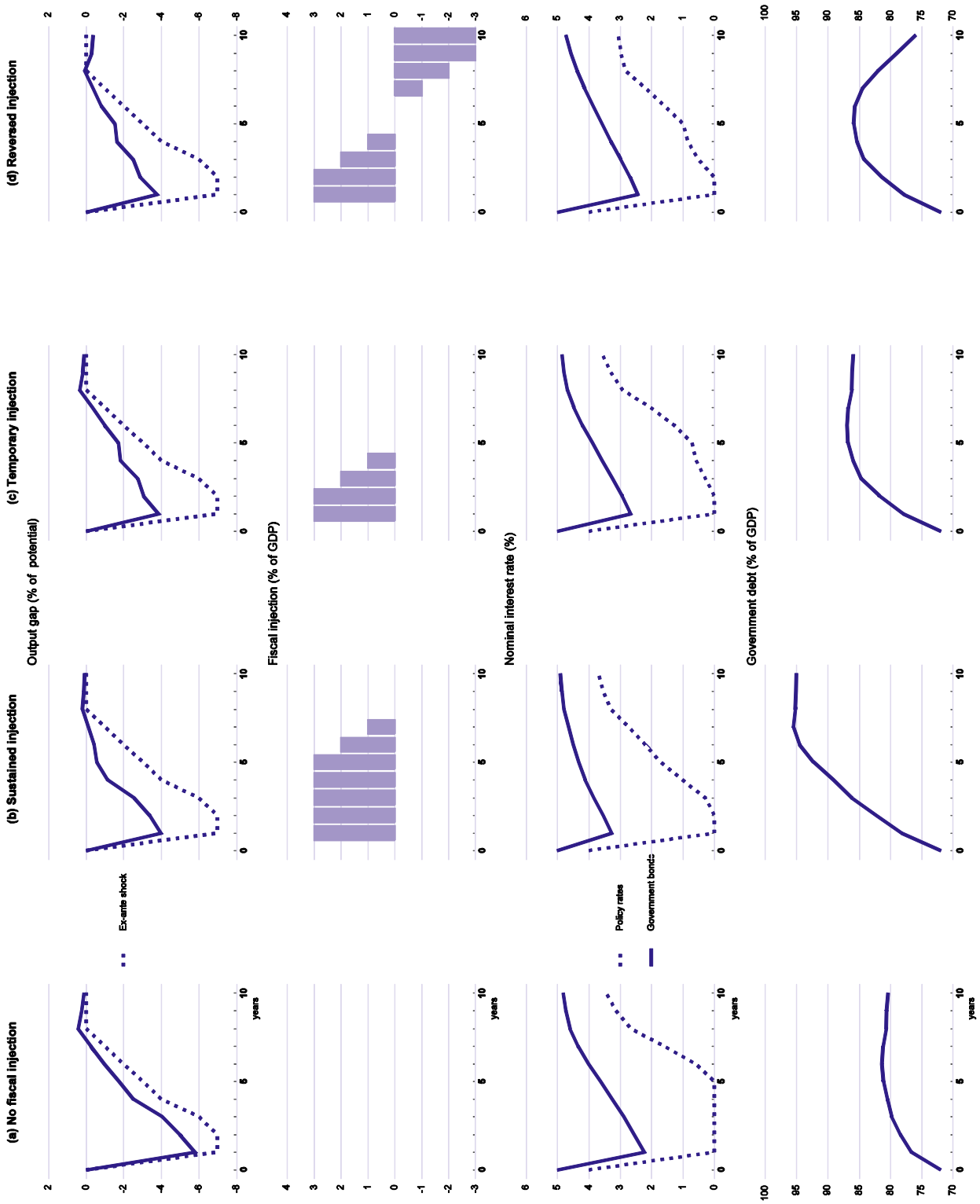
Under these circumstances discretionary fiscal stimulus can play a useful role in offsetting the effect of the shock, but the time profile of the stimulus can have very different implications for the fiscal costs of reducing the output gap. Three alternative time profiles for a fiscal injection, which in the first two years amounts to 3% of GDP for all three cases, are considered (corresponding to the second, third and fourth columns of Figure 3.9): in the first case the fiscal injection is "sustained" throughout the recession and only phased out with the recovery; in the second case the

37. The calibration assumes that relative to the OECD average, aggregate expenditures are more interest-sensitive, multipliers are larger, automatic stabilisers weaker and debt levels in relation to GDP are close to the average.

38. This magnitude of shock is broadly consistent with effect of current financial conditions, under the assumptions that they remain at 2009 Q1 levels throughout the remainder of 2009 and normalise only gradually by the end of 2010, see Guichard *et al.* (2009).

39. The model cannot capture monetary policy actions beyond the zero-interest policy rate floor and therefore may exaggerate the weakness of the economy and the time spent at the zero floor.

Figure 3.9. Differing responses to a large negative shock depending on size and profile of the fiscal injection



Source: OECD.

fiscal injection is "temporary"[40] being phased out as the trough of the recession is passed; in the final case the fiscal injection is "reversed", with this process beginning even before the output gap is closed.

… but sustained stimulus is not more effective than a temporary one…

For all three profiles of fiscal injection the output gap is substantially reduced relative to the case of no fiscal action. However, the differences between the three cases in terms of their effect on the output gap are relatively modest; the sustained fiscal injection has a marginally smaller cumulative output gap, whereas if the fiscal injection is reversed the trough of the recession is marginally reduced. A sustained fiscal injection is not substantially more effective because, although long-term interest rates fall in all three scenarios (because policy rates are expected to persist at zero or very low rates), they fall by significantly less in the case of the sustained fiscal injection. This is both because fiscal deficits are expected to be more persistent and so raise the risk premium and because monetary policy needs to begin tightening earlier in the recovery to offset some of the fiscal stimulus.

… and much more costly in terms of public debt

There are, however, major differences in terms of the resulting increase in government debt with the sustained fiscal injection resulting in a much larger increase in government debt relative to the temporary injection, whereas the reversed fiscal injection implies a much smaller increase in debt. Thus, simple measures of the fiscal cost of reducing the output gap clearly favour a temporary or reversed fiscal stimulus.

And additional simulations…

These simulations results are for a model calibrated for the US economy, but variant simulations summarised in Appendix 3.3 suggest they are robust, or even strengthened, for alternative parameter settings. For example, variant simulation results suggest that:

… either confirm these results …

- The model can be calibrated more in line with a typical large European economy, so that (relative to the United States) multipliers are smaller, automatic stabilisers are larger, and the interest-rate sensitivity of activity is reduced. The results imply that national fiscal policy is generally less effective in reducing the output gap, but this mainly reflects the larger spillovers associated with a smaller economy. The relative cost advantage of temporary or reversed stimulus over a sustained stimulus remains.

… or strengthen them if a country starts from a weak fiscal position

- The model can also represent the case of a highly-indebted country, by replicating the previous calibration, except that the initial level of government indebtedness is set to be twice the OECD average and the responsiveness of the risk premium to expected deficits is doubled. The debt cost of a sustained stimulus is substantially increased and the output gains, relative to either a

40. The "temporary" fiscal injection in this example is maintained at 3% of GDP for two years, but should be seen in the context of the assumed magnitude and length of the *ex ante* adverse shock, and is labelled as temporary to distinguish it from the other policy responses.

temporary or reversed stimulus, substantially reduced. This illustrates that the cost of fiscal action is much higher for highly-indebted countries.

The appropriate fiscal response thus varies across countries

In summary, the simulation exercises suggest that, for countries which do not start out with a weak initial fiscal position, fiscal policy can play an important role in cushioning the downturn when monetary policy is constrained. This suggests that for those countries starting from a strong initial fiscal position, some further action may be warranted, even if automatic stabilisers effects are relatively large. For others, action will only be warranted if the outlook turns out to be much weaker than expected.

Commitment to medium-term sustainability remains a key issue

The need to minimise adverse financial market reaction and so enhance the effectiveness of any discretionary fiscal action underlines the importance of a credible medium-term framework, backed by political commitment, to ensure fiscal sustainability. In this respect, it is encouraging that some OECD countries that have adopted discretionary fiscal stimulus measures have also made announcements relating to sustainability over medium horizon.[41] Among the major countries, some recent examples include the following:

- In the United States, President Obama has pledged to cut the federal deficit in half by the end of his first term, although it has yet to be framed in any formal fiscal rule.

- In Japan, with the aim of stabilising and decreasing the debt ratio by the mid-2010s, the government has explicitly committed to implement comprehensive tax reform, including a hike in the consumption tax rate, in three years, contingent on economic recovery actually taking place.

- In Germany, along with the second stimulus package, there were announcements of a debt repayment plan for some part of the additional debt incurred and the intention to introduce a new fiscal rule, anchored in the constitution, that sets the limit of a structural budget deficit to a maximum of 0.35% of GDP for the central government from 2016 onwards and would require balanced budgets for the *Länder* by 2020.

Co-ordination and spillovers

Fiscal stimulus has important spillover effects…

The high degree of synchronicity of the current downturn raises the issue of the extent to which fiscal stimulus responses should be co-ordinated. Fiscal stimulus will have international spillover effects both through trade and interest rate channels. The former will be relatively more important in smaller more open economies where the multiplier effects of

41. For instance, although fiscal packages of six OECD countries (out of the sample of 29 OECD countries) resulted from relaxation of existing fiscal policy, eight countries have also made simultaneous announcement of measures aiming to restore fiscal sustainability over the medium to long-run.

domestic policy action are correspondingly weaker due to import leakage, whereas with integrated capital markets global interest rate effects per dollar of stimulus are expected to be similar in smaller and larger countries. The possible scale of positive trade spillover effects from the discretionary fiscal packages so far announced/implemented can be gauged from simulations of the OECD's global model (Hervé *et al.*, 2009): figures on the diagonals of Table 3.7 provide an estimate of the "own-country" effects of the stimulus packages whereas off-diagonal figures provide an estimate of spillover effects. The largest spillover effects result from the US fiscal package, amounting to about ¼ per cent of OECD GDP in 2010 (comparing the final two columns of Table 3.7) which is due mainly to the large absolute size of the US fiscal package. However, in relative terms a larger share of the euro area and 'other OECD' fiscal packages -- about one-third and one-half, respectively -- lead to spillovers rather than own-country stimulus. Effects on the level of GDP are greater in 2010 than 2009, partly because the model suggests that second year multipliers tend to increase.

Table 3.7. **Own-country/region and spillover effects from fiscal packages**

	US	Japan	Euro area	Other OECD	Total OECD	Of which [1] "own country"
Shock to:	GDP effects, % differences from baseline: 2009					
United States	**1.41**	0.24	0.12	0.31	**0.68**	**0.56**
Japan	0.01	**0.39**	0.01	0.02	**0.09**	**0.07**
Euro area	0.05	0.06	**0.52**	0.11	**0.18**	**0.13**
Other OECD	0.08	0.10	0.14	**0.53**	**0.18**	**0.09**
Total OECD	**1.55**	**0.78**	**0.76**	**0.95**	**1.11**	
	GDP effects, % differences from baseline : 2010					
United States	**2.36**	0.37	0.26	0.54	**1.15**	**0.93**
Japan	0.02	**0.45**	0.01	0.02	**0.10**	**0.07**
Euro	0.08	0.08	**0.53**	0.16	**0.20**	**0.13**
Other OECD	0.13	0.11	0.12	**0.65**	**0.26**	**0.11**
Total OECD	**2.60**	**1.03**	**0.99**	**1.32**	**1.70**	

Notes: The table reports the effect of simulating the fiscal packages summarised in table 3.1 using the OECD's global model. Interest rates are held constant at baseline values in all simulations.

1. "Own country" effect corresponds to the "own country" multiplier weighted by its share in OECD GDP.

Source: OECD.

… although these need to be qualified

There are, however, a number of important qualifications to these simulation results. Firstly, the implied multipliers are somewhat higher than those used to evaluate the packages in Figure 3.4, particularly because no specific adjustment has been made to the OECD global model to reflect the current circumstances which may tend to increase savings propensities.[42]

42. Typically own-country GDP effects of the fiscal packages are 0.1-0.2% higher in the model simulation than when evaluated using the reference multipliers shown in Figure 3.4, although there is a larger difference for the second-year own-country GDP effect in the United States which is ¾ percentage point higher according to the model simulation than when evaluated using the reference multiplier.

Secondly, it is assumed that there is no increase in interest rates in 2009-10 as a consequence of the fiscal stimulus, whereas if interest rates did increase this would also tend to dampen multiplier effects both at home and abroad, involving partially offsetting negative spillover effects. Further fiscal actions would raise positive trade spillover effects, but also increase the likelihood of an adverse reaction from interest rates.

There are potential benefits from co-ordination

These qualifications notwithstanding, the simulations illustrate the importance of spillovers. Co-ordination of fiscal actions could help internalise spillover effects and so lead to a potentially better global response than if each country acted alone. In practice, explicit co-ordination may be difficult to achieve with the needed urgency, partly because spillover effects, especially from interest rates, are difficult to identify. Thus co-ordinated action, to the extent it takes place, may tend to be of an implicit character, for example by establishing benchmarks for desired stimulus. Co-ordination would not, however, loosen the constraints for fiscal action in those countries which start from a very weak fiscal position.

APPENDIX 3.1: METHODOLOGICAL PRINCIPLES IN MEASURING FISCAL PACKAGES

Data on fiscal packages include…

In computing data on fiscal packages reported in the main text,[43] consistent methodology has been applied across OECD countries. Because this methodology may differ from the one commonly used in individual countries, data referred to in the OECD documentation may depart from those widely communicated by national governments and the media. The main principles adopted in defining and measuring the size of fiscal packages in this chapter are as follows:

… discretionary crisis-related measures…

- Fiscal packages include discretionary measures implemented and/or announced in response to the crisis up to 24 March 2009. Although fiscal packages are expansionary in most OECD countries, restrictive discretionary measures have also been taken as a response to the crisis and are included. In a few countries, the overall package is restrictive (in particular Hungary, Iceland and Ireland). Changes in fiscal balances resulting from automatic stabilisers are not included. Discretionary measures which cannot be considered as a response to the crisis, even if they are implemented over the period 2008 to 2010, are also excluded from the definition of fiscal packages. As an illustration, tax cuts decided in 2006 or 2007 but implemented over the period 2008-2010 in Denmark, France, Poland and Spain are not included, although they have contributed to cushion the economic downturn. Similarly, discretionary measures resulting from a constitutional court decision (*e.g.* Germany) are not included. It should be acknowledged, however, that defining whether a discretionary measure has been adopted as a response to the crisis involves sometimes an element of judgment.

… relative to a "no-crisis-related-action scenario"…

- The overall size of fiscal packages is measured as the deviation of fiscal balances compared with a "no-crisis-related-action scenario" over the period 2008-10. As an example, were a temporary tax relief to be implemented in 2009, the loss in tax revenues resulting from this measure would be recorded in 2009. If the same tax relief is considered as permanent, or if the government has not announced *ex ante* if and when the measure will be reversed, then the loss in tax revenues is recorded for both 2009 and 2010. And the overall size of the fiscal package for the period 2008-10 reflects the loss of revenue in both 2009 and 2010.

43. Details of fiscal packages for each OECD country are available on the Economic Outlook page on the OECD website (www.oecd.org/oecdEconomicOutlook).

… recorded on national accounts principles…

- The size of a fiscal package reflects only those measures with a direct and immediate impact on general government balances, following national accounts principles. This implies, in particular, that fiscal packages do not reflect changes in investment by public enterprises (*e.g.* France) nor actions initiated by central banks, because public enterprises and central banks are not included in the general government sector. Changes in the timing of payment of either tax liabilities and/or government liabilities are not included insofar as they do not affect spending and revenues measured on accrual basis (*i.e.* the basis used for national accounting).[44] Similarly, the granting of loans and guarantees by the government as well as the acquisition of equities, bonds and loans issued by the corporate sector have no immediate impact on the fiscal balance.[45]

… for calendar years…

- Data are recorded on a calendar year and accrual basis, as far as possible.

… and general government…

- The data concern, as far as possible, the consolidated general government, *i.e.* the central government, state governments, local governments and social security funds. Information on sub-national governments' response to the crisis is, however, not available for several countries. In particular, data provided for Belgium, Canada and the United States do not include sub-national government measures.

… broken down by main revenue and spending categories

- Spending and revenue measures have been broken down, to the extent possible, by main categories so as to allow drawing consistent cross-country comparisons on the composition of fiscal packages. On the revenue side, these categories are: taxes on individuals; business taxes; consumption taxes; social security contributions; and others (positive numbers signal tax cuts). On the spending side, the categories are: general government consumption and investment; transfers to households; transfers to businesses; transfers to sub-national governments, and other spending measures (positive numbers signal spending increases). Consolidated general government accounts should not record "transfers to sub-national governments". However, getting consolidated data has been difficult for some countries and this required recognising such transfers. It should be noted, however, that such an approach risks introducing a bias when assessing the

44. Several countries (including Belgium, France and Spain) have made efforts to reduce payment delays on government procurement or changed the timing of tax liabilities. These measures have not been included when assessing the size of fiscal packages.

45. Loans granted by the general government sector and the acquisition of equities and bonds are reflected in the government balance sheet (as an increase in both assets and gross debt), though with no impact on net debt. Guarantees are off-balance sheet as long as they are not called. See Box 1.4. of the *OECD Economic Outlook No. 84* for further details on how these operations are recorded in the OECD set of projections.

composition of fiscal packages. Since adjustments in transfers to sub-national governments may ultimately be used to finance specific spending projects and/or aim at avoiding pro-cyclical tax increases, the composition of fiscal packages on a consolidated basis would be different from the one shown here for some countries.

APPENDIX 3.2: DETAILED MULTIPLIERS BY COUNTRY AND BY INSTRUMENT

Table 3.8 shows the multipliers by country and by instrument used to evaluate the fiscal packages. High estimates are based on the survey of results described in Box 3.1 adjusted only for openness, as measured by the ratio of imports to GDP plus imports. Reference estimates are further judgementally adjusted for the effect that the current conjuncture is likely to have on increasing saving propensities. For further details, see Box 3.1.

Table 3.8. **Multipliers used to evaluate the fiscal packages**

	Openness in 2008[1]	Spending increases												Tax cuts							
		Government consumption				Government investment				Transfers to household				Personal Income tax				Indirect tax			
		Year 1		Year 2		Year 1		Year 2		Year 1		Year 2		Year 1		Year 2		Year 1		Year 2	
		Ref.	High	Ref.	High	Ref.	High	Ref.	High	Ref.	High	Ref.	High	Ref.	High	Ref.	High	Ref.	High	Ref.	High
USA	15.4	0.7	0.7	0.8	1.1	0.9	0.9	1.1	1.3	0.5	0.5	0.8	0.9	0.3	0.5	0.5	0.9	0.2	0.3	0.3	0.5
JPN	14.7	0.7	0.7	0.8	1.1	0.9	0.9	1.1	1.3	0.5	0.5	0.8	0.9	0.3	0.5	0.5	0.9	0.2	0.3	0.3	0.5
DEU	29.5	0.4	0.4	0.5	0.8	0.8	0.8	1.0	1.2	0.3	0.3	0.5	0.7	0.2	0.3	0.3	0.7	0.1	0.2	0.2	0.4
FRA	22.5	0.6	0.6	0.7	1.0	0.8	0.8	1.0	1.2	0.4	0.4	0.7	0.8	0.2	0.4	0.4	0.8	0.2	0.2	0.2	0.4
ITA	22.5	0.6	0.6	0.7	1.0	0.8	0.8	1.0	1.2	0.4	0.4	0.7	0.8	0.2	0.4	0.4	0.8	0.2	0.2	0.2	0.4
GBR	23.9	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.8	0.2	0.4	0.4	0.8	0.2	0.2	0.2	0.4
CAN	25.2	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.7	0.2	0.4	0.4	0.7	0.1	0.2	0.2	0.4
AUS	19.5	0.6	0.6	0.7	1.0	0.9	0.9	1.1	1.3	0.4	0.4	0.7	0.8	0.3	0.4	0.4	0.8	0.2	0.3	0.3	0.5
AUT	35.2	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.3	0.6	0.1	0.1	0.2	0.3
BEL	47.9	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
CZE	41.8	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
DNK	34.8	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.3	0.6	0.1	0.1	0.2	0.3
FIN	28.9	0.4	0.4	0.5	0.8	0.8	0.8	1.0	1.2	0.3	0.3	0.5	0.7	0.2	0.3	0.3	0.7	0.1	0.2	0.2	0.4
GRC	25.1	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.7	0.2	0.4	0.4	0.7	0.1	0.2	0.2	0.4
HUN	44.7	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
ISL	32.6	0.4	0.4	0.5	0.8	0.7	0.7	0.9	1.1	0.3	0.3	0.5	0.6	0.2	0.3	0.3	0.6	0.1	0.2	0.2	0.3
IRL	41.4	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
KOR	36.4	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
LUX	59.0	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
MEX	23.1	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.8	0.2	0.4	0.4	0.8	0.2	0.2	0.2	0.4
NLD	41.1	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
NZL	25.1	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.7	0.2	0.4	0.4	0.7	0.1	0.2	0.2	0.4
NOR	23.0	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.8	0.2	0.4	0.4	0.8	0.2	0.2	0.2	0.4
POL	30.0	0.4	0.4	0.5	0.8	0.8	0.8	1.0	1.2	0.3	0.3	0.5	0.7	0.2	0.3	0.3	0.7	0.1	0.2	0.2	0.4
PRT	29.3	0.4	0.4	0.5	0.8	0.8	0.8	1.0	1.2	0.3	0.3	0.5	0.7	0.2	0.3	0.3	0.7	0.1	0.2	0.2	0.4
SVK	45.7	0.3	0.3	0.4	0.7	0.7	0.7	0.9	1.1	0.2	0.2	0.4	0.6	0.1	0.2	0.2	0.6	0.1	0.1	0.1	0.3
ESP	24.8	0.5	0.5	0.6	0.9	0.8	0.8	1.0	1.2	0.4	0.4	0.6	0.7	0.2	0.4	0.4	0.7	0.1	0.2	0.2	0.4
SWE	31.7	0.4	0.4	0.5	0.8	0.7	0.7	0.9	1.1	0.3	0.3	0.5	0.6	0.2	0.3	0.3	0.6	0.1	0.2	0.2	0.4
CHE	31.8	0.4	0.4	0.5	0.8	0.7	0.7	0.9	1.1	0.3	0.3	0.5	0.6	0.2	0.3	0.3	0.6	0.1	0.2	0.2	0.4
TUR	22.5	0.6	0.6	0.7	1.0	0.8	0.8	1.0	1.2	0.4	0.4	0.7	0.8	0.2	0.4	0.4	0.8	0.2	0.2	0.2	0.4

Note: High estimates are based on survey results adjusted only for openness. Low estimates are further judgementally adjusted for the effect of the current conjuncture.

1. Openness is measured as ratio of imports to GDP plus imports.

Source: OECD.

APPENDIX 3.3: SIMULATION MODEL TO ILLUSTRATE THE STIMULUS -- INTEREST RATE NEXUS

This appendix describes the model used to generate the model simulations described in the main paper. The model is based on a reduced form equation for the output gap where real short-term and long-term interest rates enter separately as explanatory variables, based on the work by Guichard *et al.* (2009). This equation is augmented with a calibrated effect from fiscal policy, using the same multipliers that are used to evaluate current fiscal packages based on a review of the literature regarding fiscal multipliers summarised in Appendix 3.2. The other key equation is that for long-term interest rates which are determined as a forward sum of model-consistent expectations of short-term nominal interest rates over the future 10 years plus a risk premium which is related to the average expected fiscal deficit over the next five years. The model is completed with a Taylor-rule for short-term policy rates, a Phillips curve for inflation, and various identities to complete the government accounts.

A reduced form output gap equation

(1) $GAP = - \alpha_1(L)\,(r^s - r^{s*}) - \alpha_2(L)\,(r^l - r^{l*}) + FSHK + fiscal$

where GAP = output gap

r^s = $i^s - \pi$ = real short-term policy interest rate, where i^s is the nominal policy interest rate and π is the inflation rate.

r^{s*} = steady state equilibrium real short-term policy interest rate.

r^l = $i^l - \Sigma\,\pi^e$ = real long-term interest rate on government bonds, where i^l is the nominal interest rate on 10-year government bonds and $\Sigma\,\pi^e$ is the forward sum of model-consistent expectations of inflation over the future 10 years.

r^{l*} = steady state equilibrium real long-term interest rate.

FSHK = other components of financial conditions, treated as exogenous and to which a negative shock is applied to simulate the effect of the financial crisis.

fiscal = multiplier effect of fiscal policy on the output gap.

The effect of interest rates on the output gap is calibrated according to Guichard *et al.* (2009) which suggests that the effect of a given change in long-term rates is about three times the size of an effect on short-term rates and that interest rate effects are larger in the United States and United Kingdom than the euro area and Japan.

Multiplier effects from fiscal policy

(2) $\text{fiscal} = \gamma_1(L)\ \Delta g + \gamma_2(L)\ \Delta tax + \gamma_2(L)\ \mu\ \Delta GAP$

where g = government spending as a share of GDP.
tax = taxes as a share of GDP.

$\gamma_1(L)$, $\gamma_2(L)$ are lag polynomials which over the first two years reflect the effects of fiscal multipliers surveyed in Appendix 3.2. Beyond the second year they are assumed to decay at an annual rate of 10% per annum. The μGAP term reflects the operation of automatic stabilisers. The coefficient reflecting the magnitude of automatic stabilisers, μ, is based on Girouard and André (2004) and for the average OECD country is 0.44.

A Phillips curve inflation equation

(3) $\pi = \theta_1\pi^* + (1 - \theta_1)\ \pi_{-1} + \theta_2(L)\ GAP$

where π = inflation
π^* = long-term expected inflation, set equal to the implicit/explicit inflation target of the central bank.

If $\theta_1 = 0$, then inflation expectations are entirely backward looking, but if $\theta_1 > 0$ then the central bank's inflation target provides some anchor for inflation expectations. For the simulations reported here $\theta_1 = 0.2$. $\theta_2(1\ ) = 1/6$, implying a sacrifice ratio of 6 if expectations are backward-looking.

A Taylor rule for policy interest rates

(4) $i^s = \pi + r^{s*} + 1.0\ (\pi - \pi^*) + 1.0\ GAP$

Term structure of interest rates

(5) $i^l = \Sigma\ i^s + term + risk$

where $\Sigma\ i^s$ = the forward sum of model-consistent expectations of short-term nominal interest rates over the future 10 years.
term = term premium, assumed exogenous.
risk = risk premium, assumed to be a function of the expected fiscal position (see below).

Risk premium on interest rates

(6) $risk = \lambda\ (b_{+5} - b)^e\ /5$

where $(b_{+5} - b)^e\ /5$ is the average (model-consistent) expected change in government debt (as a share of GDP) which proxies for the average expected fiscal balance over the next 5 years. The parameter λ is set equal to 0.25 in the base simulation based on Laubach (2005), and doubled in a variant simulation.

Government primary fiscal balance (as % of GDP)

(7) $pbal = tax - g + \mu\ GAP$

Net interest payments on government debt (as % of GDP)

(8) $ipay = \psi\ ipay_{-1} + (1 - \psi)\ i^{l} . b$

where ψ is the proportion of the government debt stock that is re-financed each year.

Government fiscal balance (as % of GDP)

(7) $fbal = pbal - ipay$

Government bond stock (as % of GDP)

(9) $b = [(1 + ib^{l})/ (1 + \pi + g)]. b_{-1} - pbal$

where $g = \Delta GAP + \rho$ = real GDP growth rate, where ρ is the potential growth rate, assumed exogenous.

$ib^{l} = ipay/b$ = effective average long-term interest rate paid on government debt.

In the simulations, after about 30 years (*i.e.* well beyond the simulation discussed) the bond stock as a share of GDP is stabilised using a simple rule for taxes, which at this point are assumed to be lump-sum and to not affect activity.

Variant simulations

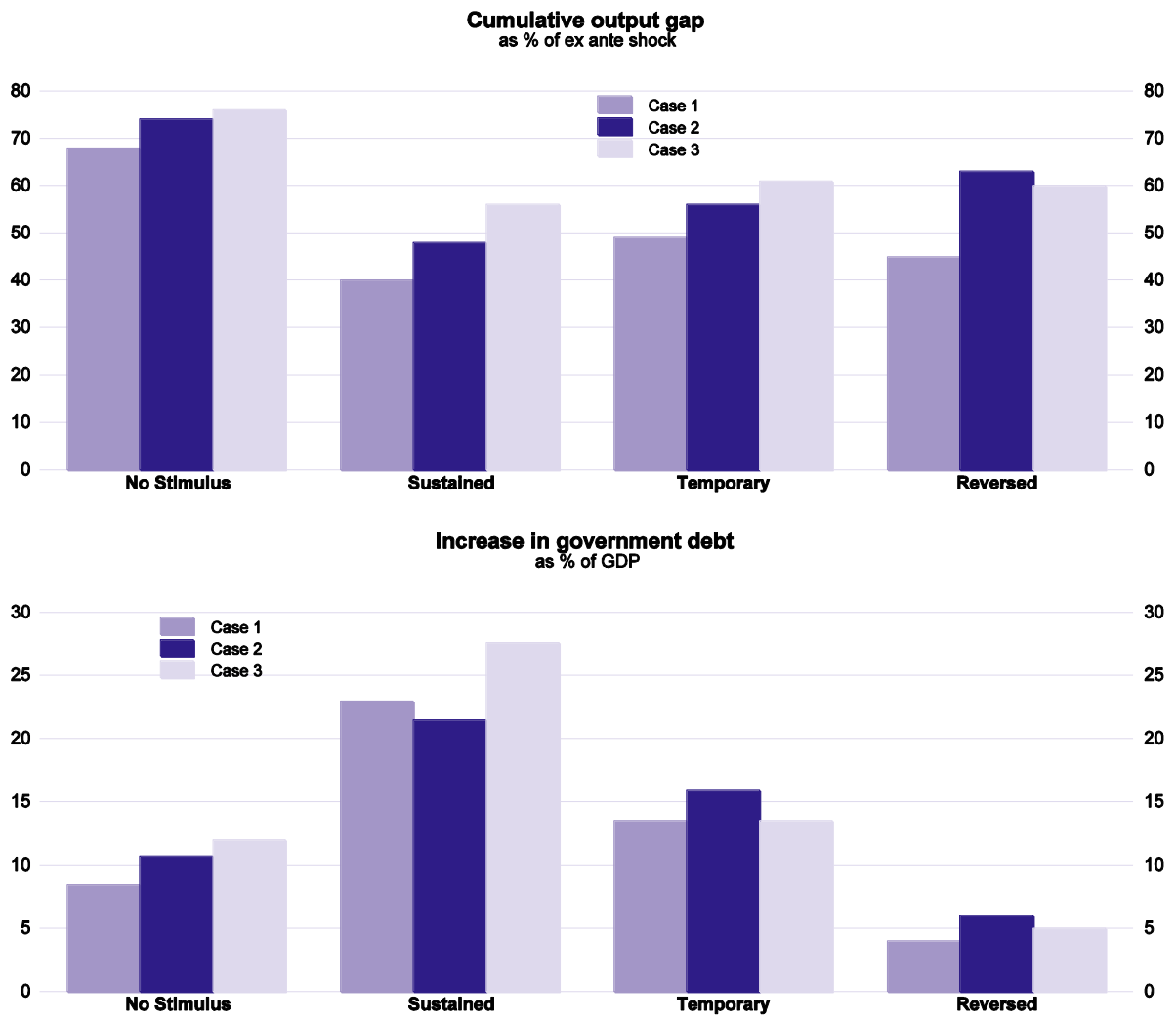
Figure 3.10 and Table 3.9 summarise the results of variant simulations discussed in the main text. The same set of fiscal shocks are simulated for three different model parameterisations characterising three different OECD economies.

Table 3.9. **Variant simulation details**

	Case 1	Case 2	Case 3
Interest rate sensitivity	High	Average	Average
Automatic stabilisers	Low	Average	Average
Multiplier	High	Average	Average
Risk premium sensitivity	Moderate	Moderate	High
Initial level of debt	Moderate	Moderate	High

Source: OECD.

Figure 3.10. Model simulation results for alternative fiscal stimulus profiles



Note: The charts summarise the results of the simulated responses to a large negative shock for four different profiles of the fiscal stimulus (none, sustained, temporary and reversed) for three different country cases with the characteristics outlined in Table 3.9.

Source: OECD.

APPENDIX 3.4: FISCAL POLICY EFFECTS IN A DSGE MODEL

Model description

The model is characterised by monopolistic product markets and encompasses a heterogeneous household sector (with Ricardian and liquidity-constrained households), and employment and investment adjustment costs.[46] As such, the model draws extensively on pre-existing DSGE models (Smets and Wouters, 2003; Ratto *et al.*, 2009). However, contrary to previous models the feed-back effects of public finance variables (deficit and/or public debt) on government bond rates are explicitly modelled, allowing an examination of effects of a fiscal package on the debt pattern through interest rate movements. This mechanism is important to capture the trade-off between the short-term effectiveness of fiscal policy to counter the downturn and the long-term sustainability risks it entails.

Multiplier values

Fiscal multipliers have been calculated by simulating a 1% of GDP increase in different spending measures and a 1% rate cut in wage, capital and consumption taxes. The simulations have been undertaken, under the assumption that monetary policy cannot be used to support demand and a fiscal rule is imposed to ensure long-term sustainability of public debt. Although these assumptions alter the pattern of public debt, their effect on the size of fiscal multipliers is limited.

A stronger short-term GDP impact is found for an increase in public investment, as the latter also have also a marked positive supply-side effect (Table 3.10). An increase in public consumption would also sustain activity

Table 3.10. **Short-term multipliers based on a DSGE model**

	Effect on activity the first year (per cent)
1% of GDP increase in :	
Government consumption	0.6
Government investment	1.0
Transfer to liquidity-constrained households	0.3
1% increase in :	
Consumption tax rate	0.2
Wage tax rate	0.7
Capital tax rate	0.05

Source: Furceri and Mourougane (2009)

46. See Furceri and Mourougane (2009) for more details on the model specifications and calibration.

by a significant amount, while a transfer to liquidity-constrained households would have a more limited aggregate impact. Tax cuts would be on average less effective to sustain demand than spending measures, with the strongest effect found for a tax cut on wage income. Indeed the latter would lead to a more pronounced fall in real wage and thus more employment creation than other tax cuts.

These results are robust to a change in calibration of the structural parameters. Although the results are qualitatively robust and can provide insights on the relative effectiveness of each fiscal instrument, point estimates of short-term multipliers should be interpreted with caution given the stylised features of the model.

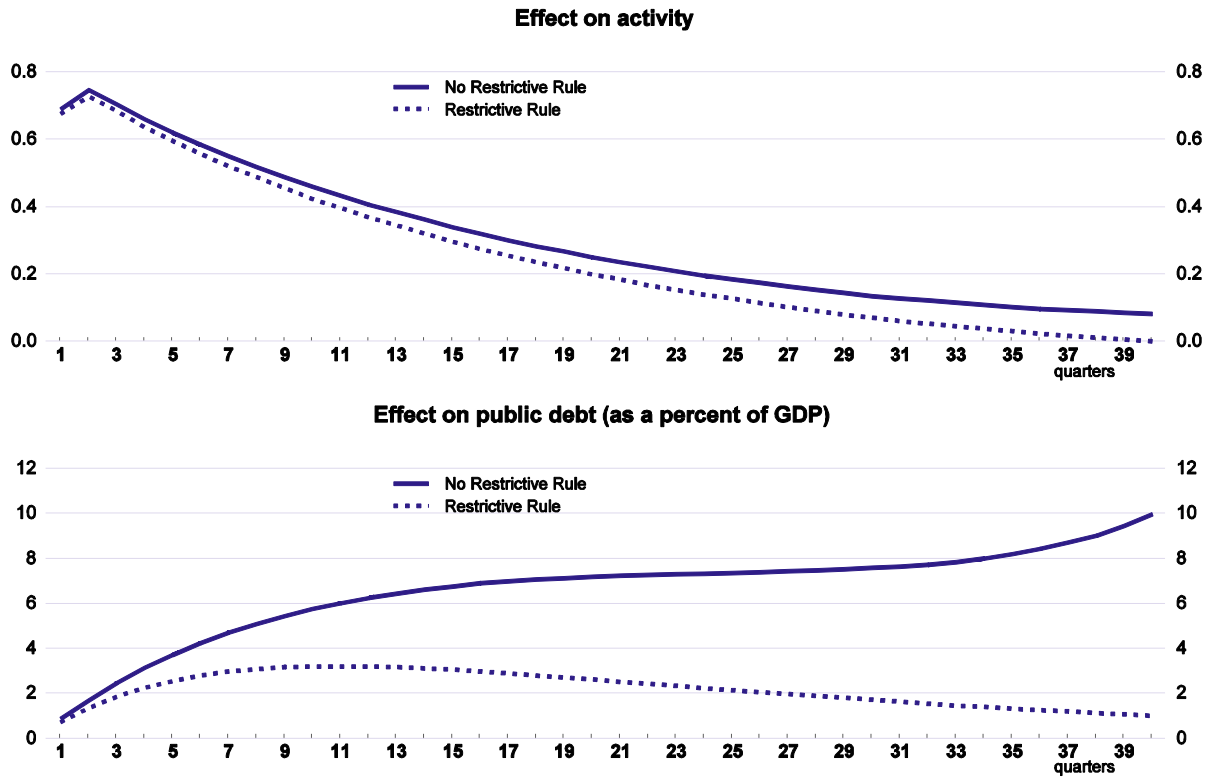
The trade-off between short-term stimulus and long-term fiscal sustainability

Although fiscal policy is an effective tool to counter economic downturns, its use also entails risks regarding the long-term sustainability of public finances. Indeed, the financing of discretionary policy measures is likely to increase the risk premium associated with government bonds and in turn augment debt refinancing costs. The rise in the risk premium will also impinge negatively on activity, though to a small extent.

As an illustration, a DSGE-based simulation of a temporary 1% of GDP increase in government consumption leads to a continuous increase in public debt in the absence of a stringent fiscal rule (Figure 3.11). In this scenario,

Figure 3.11. Impact of 1% of GDP increase in public consumption

%, compared to baseline



Source: Furceri and Mourougane (2009).

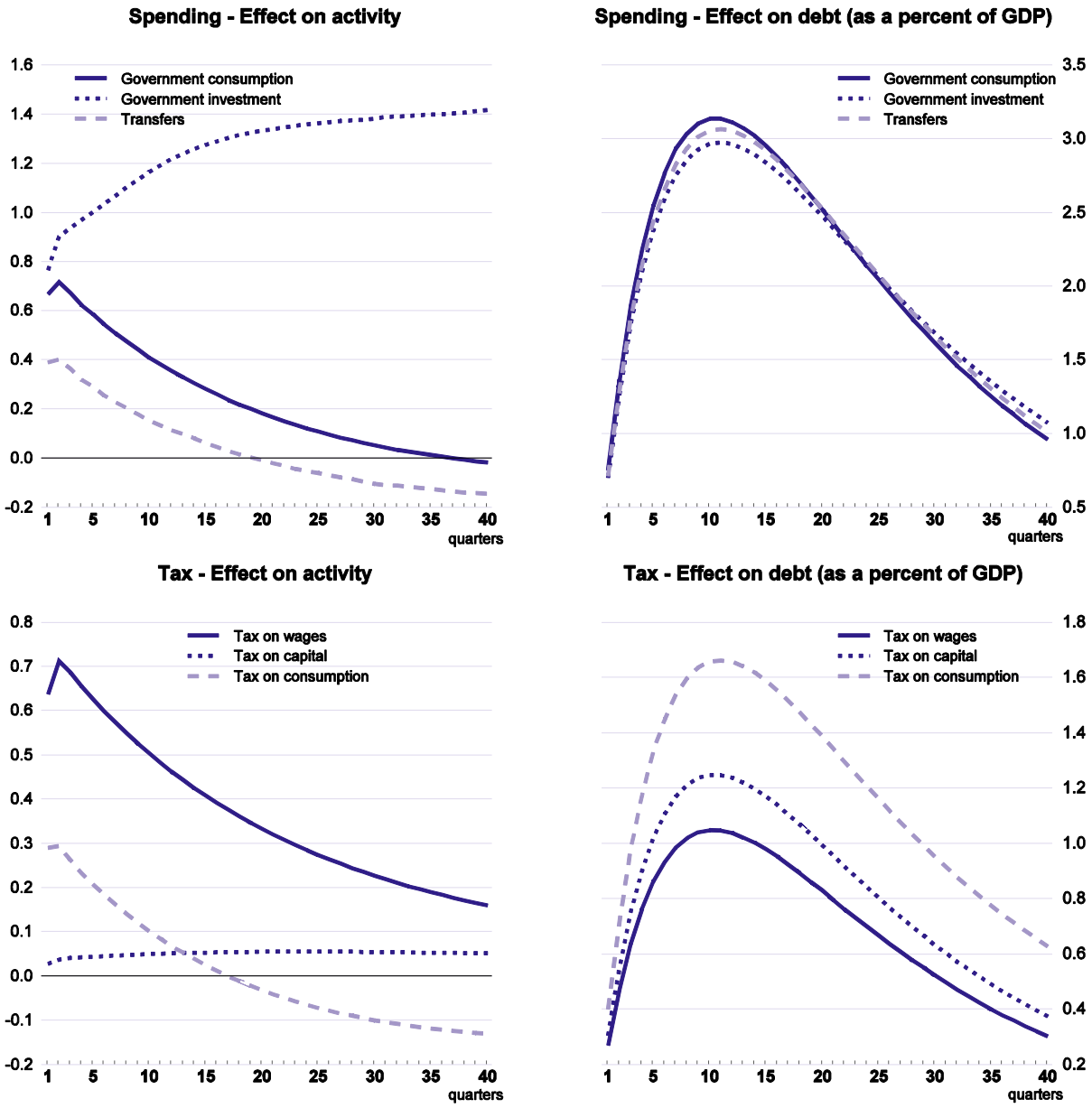
fiscal policy sustains demand through a hefty rise in liquidity-constrained household consumption in the short-term. The monetary policy interest rate increases, as the output gap rises and inflation edges up, mitigating the initial effect of fiscal policy and the public deficit gradually deteriorates. The risk premium on government bonds rises, contributing to a steady creeping up in debt.

Imposing a stringent fiscal rule is found to be relatively costless in terms of foregone activity to ensure that debt returns to a sustainable path over the medium term. This could be achieved for instance through an increase in lump sum taxes, which lowers the fiscal stimulus, but limits the extent of the deficit deterioration. As a result, the rise in debt would be muted, with a debt increase amounting to half its level in the baseline scenario after a year. The introduction of such a rule would have a limited effect on the size of the short-term fiscal impulse on activity.

The debt implication of a fiscal impulse varies with the instrument used. To illustrate this point, a 1% of GDP increase in government consumption, investment and transfers and a 1% rate cut in wage, consumption and capital taxes have been simulated, under the assumption of an ineffective monetary policy and the imposition of a stringent fiscal rule. Amongst the revenue instruments, the largest debt increase is associated with a consumption tax cut (Figure 3.12). By contrast, a wage tax cut would lead to a subdued rise in debt. On the spending side, the rise in net debt following an increase in government investment would be less pronounced than in the case of a government consumption increase.

Figure 3.12. Impact of selected fiscal policy shocks on activity and public debt

%, compared to baseline



Source: OECD.

BIBLIOGRAPHY

Adams, F.G., and L.R. Klein (1991), "Performance of quarterly econometric models of the United States: A new round of model comparisons", in L.R. Klein (ed.), *Comparative performance of U.S. econometric models*, Oxford University Press.

Ahrend, R., P. Catte and R. Price (2006), "Factors behind low long-term interest rates", *OECD Economics Department Working Papers*, No. 490.

Ardagna, S. (2009), "Financial Markets' Behavior Around Episodes of Large Changes in the Fiscal Stance", *European Economic Review*, Vol. 53.

Auerbach, A.J. and W. Gale (2009), "The Economic Crisis and the Fiscal Crisis: 2009 and Beyond", Tax Policy Center, Brookings Institution.

Bayoumi, T., M. Goldstein, G. Woglom (1995), "Do Credit Markets Discipline Sovereign Borrowers? Evidence from U.S. States", *Journal of Money, Credit & Banking*, Vol. 27.

Bernanke, B. (2005) "The Global Saving Glut and the US Current Account Deficit", Sandridge Lecture, Virginia Association of Economics, Richmond, Virginia, March.

Berben, R.P. and T. Brosens (2007), "The Impact of Government Debt on Private Consumption in OECD Countries", *Economics Letters*, Vol. 94.

Bernoth, K., J. von Hagen and L. Schuknecht (2004), "Sovereign Risk Premiums in the European Government Bond Market", European Central Bank, *Working Paper Series*, No. 369.

Bernoth, K., J. von Hagen and L. Schuknecht (2006), "Sovereign Risk Premiums in the European Government Bond Market", *Discussion Paper*, No. 151, *Governance and the Efficiency of Economic Systems*.

Bryant, R.C. (1988), *Empirical Macroeconomics for Interdependent Economies*, Washington, DC: The Brookings Institution.

Canzoneri, M., R. Cumby, and B. Diba (2002), "Should the European Central Bank and the Federal Reserve be concerned about fiscal policy?", in *Rethinking Stabilisation Policy*, Federal Reserve Bank of Kansas City.

Claessens, S. and D. Klingebiel (2000), "Fiscal Risks of the Banking System: Approaches to Measuring and Managing Contingent Government Liabilities in the Banking Sector", in *Government Contingent Liabilities and Fiscal Vulnerability*.

Chinn, M. and J. Frankel (2005), "The Euro Area and World Interest Rates", *Working Paper Series*, No. 1031, Department of Economics, University of California, Santa Cruz.

Church, K.B., J. E. Sault, S. Sgherri and K. F. Wallis (2000), "Comparative Properties of Models of the UK Economy", *National Institute Economic Review*, No 171.

Codogno, L., C. Favero and A. Missale (2003), "EMU and Government Bond Spreads", *Economic Policy*.

Conway, P. and A. Orr (2002) "The GIRM: A global interest rate model", Wellington, Westpac Institutional Bank, *Westpac Institutional Bank Occasional Paper.*

Cournède, B. (2008), "The Political Economy of Delaying Fiscal Consolidation", *Public Finance and Management*, Vol. 8.

Dai, Q. and T. Philippon (2005), "Fiscal Policy and the Term Structure of Interest Rates", *NBER Working Paper*, No. 11754.

Engen, E. and R. G. Hubbard (2004), "Federal Government Debts and Interest Rates", *NBER Working Paper*, No. 10681.

Fatás, A. (2005), "Is There a Case for Sophisticated Balanced-budget Rules", *OECD Economics Department Working Papers*, No. 466.

Ford, R. and D. Laxton (1995), "World Public Debt and Real Interest Rates", *IMF Working Paper*, WP95/30.

Fromm, G. and L.R. Klein (1976), "The NBER/NSF Model Comparison Seminar: An Analysis of Results", *Annals of Economic and Social Measurement*, Vol. 5.

Furceri, D., and A. Mourougane (2009), "The Effects of Fiscal Policy on Output and Debt Sustainability: A DSGE Analysis", *OECD Economics Department Working Paper*, forthcoming.

Gale, W.G. and P.R. Orszag (2002), "The Economic Effects of Long-term Fiscal Discipline", *Brookings Tax Policy Center Discussion Paper*, The Brookings Institution.

Gale, W.G. and P.R. Orszag (2003), "Economic Effects on Sustained Budget Deficits", *National Tax Journal*.

Girouard, N. and C. André (2005), "Measuring Cyclically-Adjusted Budget Balances for OECD Countries", *OECD Economics Department Working Papers*, No. 434.

Guichard, S., D. Haugh and D. Turner (2009), "Quantifying the effect of financial conditions in the euro area, Japan, United Kingdom and United States", *OECD Economics Department Working Papers*, No. 677.

Guichard, S, M. Kennedy, E. Wurzel and C. André (2007), "What promotes fiscal consolidation: OECD country experiences", *OECD Economics Department Working Papers*, No. 553.

Haugh, D. and D. Turner (2009), "What drives sovereign risk premiums?: An analysis of recent evidence from the Euro Area", *OECD Economics Department Working Papers*, forthcoming.

Haugh, D., P. Ollivaud and D. Turner (2009), "The Macroeconomic Consequences of Banking Crises in OECD Countries" *OECD Economics Department Working Papers*, No. 683.

Henry, J., P. Hernández de Cos and S. Momigliano (2004), "The Short-term impact of government budgets on prices: evidence from macroeconometric models", Temi di discussione, Banca d'Italia.

Laubach, T. (2003), "New Evidence on the Interest Rate Effects of Budget Deficits and Debt", Federal Reserve Board, *Finance and Economics Discussion Series*, Vol. 12.

Lindé, J. (2001), "Fiscal policy and interest rates in a small open economy", *Finnish Economic Paper*, Vol. 14.

O'Donovan, B., A. Orr and D. Rae (1996), "A world interest rate model", *National Bank of New Zealand Ltd, Financial Research Paper*, No. 7.

OECD (2008), *OECD Economic Out*look, No. 84, Paris.

OECD (2009), *Going for Growth*, Paris.

Oliveira Martins, J. and C. de la Maisonneuve (2006), "The Drivers of Public Expenditure on Health and Long-Term Care: an Integrated Approach", *OECD Economic Studies*, No. 43.

Orr, A., M. Edey and M. Kennedy (1995), "Real long-term interest rates: the evidence from pooled time-series", *OECD Economic Studies*, No. 25.

Perotti, R. (2005), "Estimating the Effects of Fiscal Policy in OECD countries", *CEPR Discussion Papers*, No. 4842.

Ratto, M., W. Roeger and J. in't Veld (2009), "Quest III: An estimated open-economy DSGE model of the euro area with fiscal and monetary policy", *Economic Modelling*, Vol. 26.

Reinhart, V. and B. Sack (2000), "The Economic Consequences of Disappearing Government Debt", *Brookings Papers on Economic Activity*, No. 2.

Roeger, W. and J. in't Veld (2009), "Fiscal Policy with Credit Constrained Households", European Commission, *Economic Papers*, No. 357.

Smets, F., and R. Wouters (2003), "An Estimated Dynamic Stochastic General Equilibrium Model of the Euro Area", *Journal of the European Economic Association*, Vol. 1.

Thomas, L.B. and D. Wu (2009), "Long-term Interest Rates and Expected Future Deficits: Evidence from the Term Structure", *Applied Economics Letters*, No. 16.

OECD Economic Outlook

INTERIM REPORT

This interim *OECD Economic Outlook* analyses the current crisis and examines the economic policies required to foster a sustained recovery in member countries. The present issue covers the outlook to end-2010 for both OECD and major non-OECD economies. A particular spotlight is put on fiscal policy in a special chapter entitled *The Effectiveness and Scope of Fiscal Stimulus*. It addresses the following questions:

- How have governments in OECD countries changed the stance of fiscal policy in response to the crisis?
- What is the scope for additional fiscal stimulus in OECD countries to cushion the recession and help the recovery?

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