

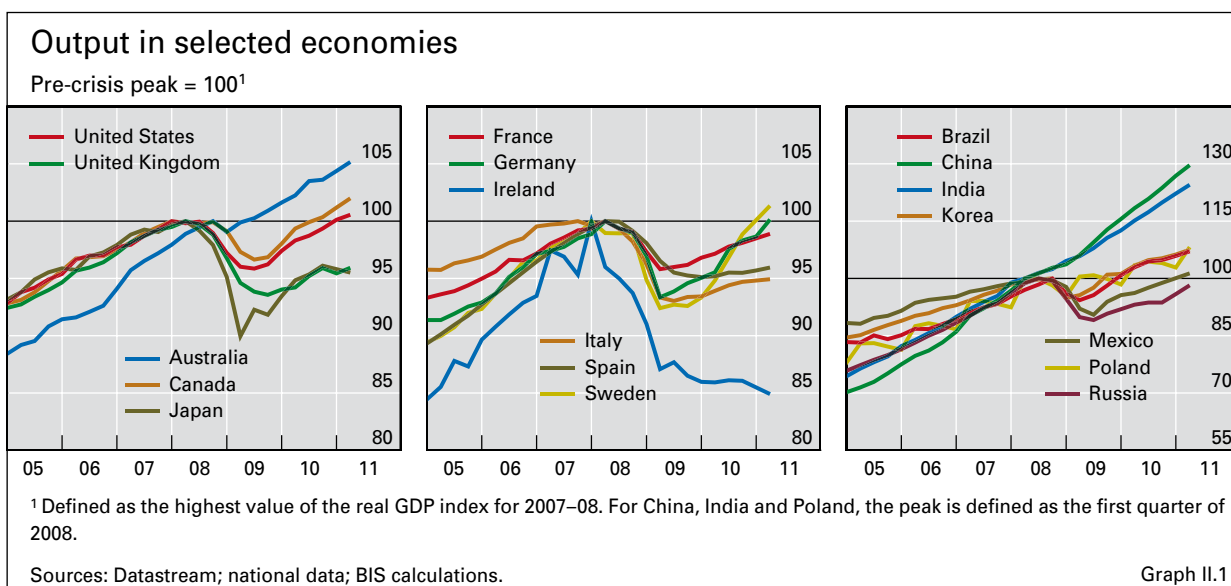
II. Building new foundations for sustainable growth

The imbalances that accompanied the boom in a number of advanced economies are still with us today. In some of those countries, the financial and construction sectors grew out of proportion to the rest of the economy and may have to shrink. The debt taken on by households and firms during the housing boom has heightened their vulnerability to future shocks and may weigh on growth. Many governments cut their debt during the boom years, in some cases considerably. Yet, with hindsight, much of the improvement in public finances was directly or indirectly related to the housing boom and thus transient.

Almost three years after the failure of Lehman Brothers led many advanced economies to their sharpest contraction since the Great Depression, output remains at or below its pre-crisis levels in most instances (Graph II.1, left-hand and centre panels). The persistence of the imbalances that led to the crisis is one reason why the recovery in those cases has so far been tepid.

Growth in the emerging economies has generally been much faster (Graph II.1, right-hand panel), but some of these economies risk building up their own imbalances. For example, property prices in some cases are advancing at rates reminiscent of those in some of the advanced economies during the pre-crisis housing boom, and private sector debt levels are soaring. To be sure, these indicators are increasing from a low level, but that was also the case for some advanced economies, including Ireland and Spain, in the early 2000s.

The first section of this chapter gives a brief account of growth and its associated imbalances during the years of the housing boom. In the subsequent three sections, we discuss in turn sectoral imbalances, private sector indebtedness and fiscal challenges. In the final section, we draw some lessons for economic policy.



Imbalances, financial crises and growth

Output costs of the crisis are unlikely to be recovered ...

The global financial crisis had enormous costs in many regards, not least in terms of lost output. The major advanced economies may be returning to pre-crisis levels of output, but – with the possible exception of Australia – production is still well below what it would have been had these economies continued on their pre-crisis growth path. Recovering those losses would thus require a substantial period of above-trend expansion, but unfortunately that seems unlikely for several reasons. First, the economic losses produced by the Great Recession, such as the destruction of human capital due to long-term unemployment, may weigh on growth for years to come.¹ Second, growth in the years before the crisis was boosted by a series of unsustainable imbalances whose correction may reduce growth until the excesses have been reabsorbed.

The existence of these imbalances also implies that an extrapolation of pre-crisis growth is neither the correct matrix by which to assess the state of the recovery nor a useful guide for policy. Some of the (physical and human) capital put in place during the boom years is less useful than originally thought. A sizeable part of investment in the construction and financial sectors probably falls into this category. The unsustainability of pre-crisis growth also has to be reflected in measures of potential output, which are important inputs in policy discussions. In order to be useful, such measures, above all those that rely on estimates of the stocks of physical and human capital, have to be adjusted to take into account this obsolescence.²

... as suggested by previous crises

The historical record supports the notion that systemic banking crises can have long-lasting, possibly permanent output costs relative to trend. A recent survey of the literature on the costs of financial crises found that post-crisis growth is usually not sufficient to regain the former trend in output.³ In other words, the output lost during the crisis will probably never be recovered.

The boom in house prices ...

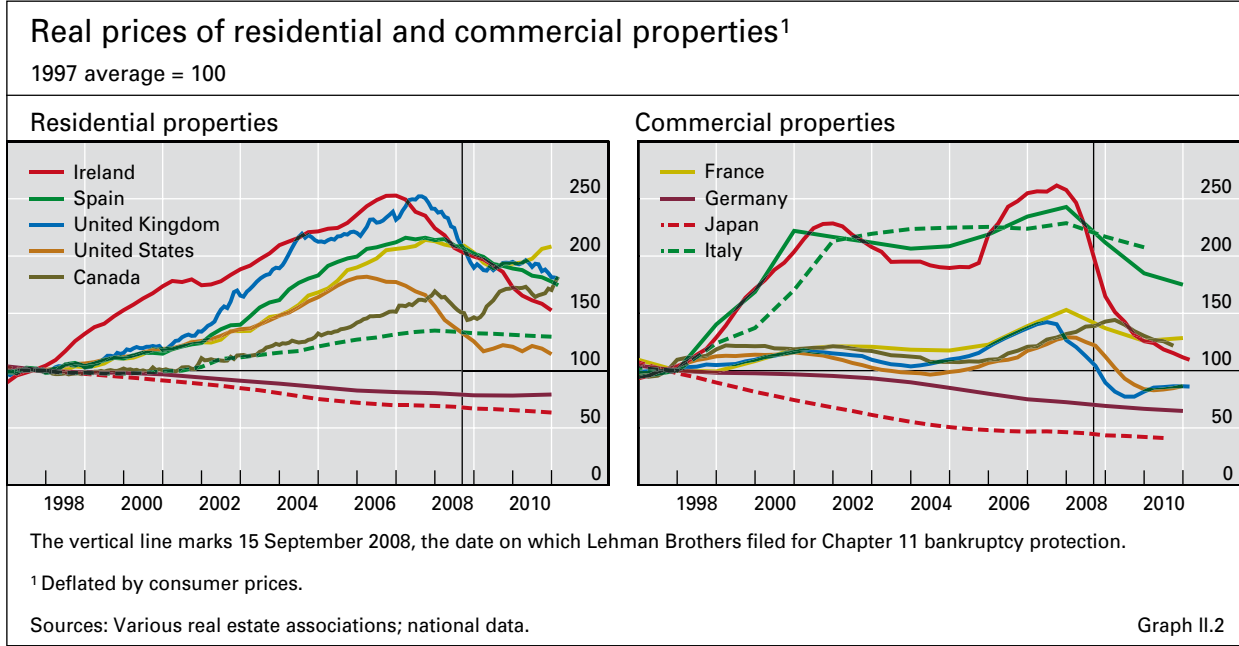
The problems plaguing the advanced economies today have their roots in the pre-crisis boom. House prices went up in many countries in the years before the crisis (Graph II.2), and the countries where prices rose most strongly were, in many cases, those that later suffered the most. Examples are Ireland, Spain and the United Kingdom. Yet there were exceptions. In France, house prices increased by almost as much as those in Spain, yet France was spared many of the financial sector problems that assailed other countries. And it was Germany and Japan, where house prices posted no aggregate increases at all, which experienced some of the sharpest (albeit short-lived) contractions in output among the advanced economies.⁴

¹ For instance, OECD data indicate that, in the United States, the share in total unemployment of those unemployed for more than one year increased from 10.0% in 2006 to 16.3% in 2009.

² See P Gerlach, "The global output gap: measurement issues and regional disparities", *BIS Quarterly Review*, June 2011, pp 29–37.

³ Basel Committee on Banking Supervision, *An assessment of the long-term economic impact of stronger capital and liquidity requirements*, August 2010.

⁴ The main reason behind the drop in output in these two countries was the contraction in international trade rather than any home-made problems.



Sharp increases in credit extension to households and corporations fuelled the appreciation in property.⁵ The ratio of household debt to GDP (Graph II.3) rose in all countries that experienced a housing boom, far exceeding their long-term trends. Non-financial corporations also added to their debt, with those in the United States being a notable exception. As shown by the left-hand scale of the graph, Irish and Spanish non-financial corporations saw particularly large increases in their debt ratios, with the lion's share of the debt being used to finance real estate. That said, the increase in indebtedness looked much smaller when set against the market value of the real estate portfolios being financed. In the case of Spain, real estate firms increased their ratio of debt to total assets from 50% in 2000 to 63% in 2007.

... was fuelled by a build-up of private sector debt

The housing and credit booms changed the sectoral composition of output. The relative weight of the construction sector rose in all economies where house prices increased. In 2007, construction employed 13% of all workers in Spain, up from 10% a decade earlier (Graph II.4, left-hand panel). In Ireland, the corresponding increase was even sharper, from 8½% to 13%. A similar picture emerges if one measures the share of construction in total value added.⁶ Canada, the United Kingdom and the United States also saw growth in the share of construction in employment and GDP, but to a much lesser extent than in Ireland and Spain.

Demand for mortgages drove the growth of the financial sector

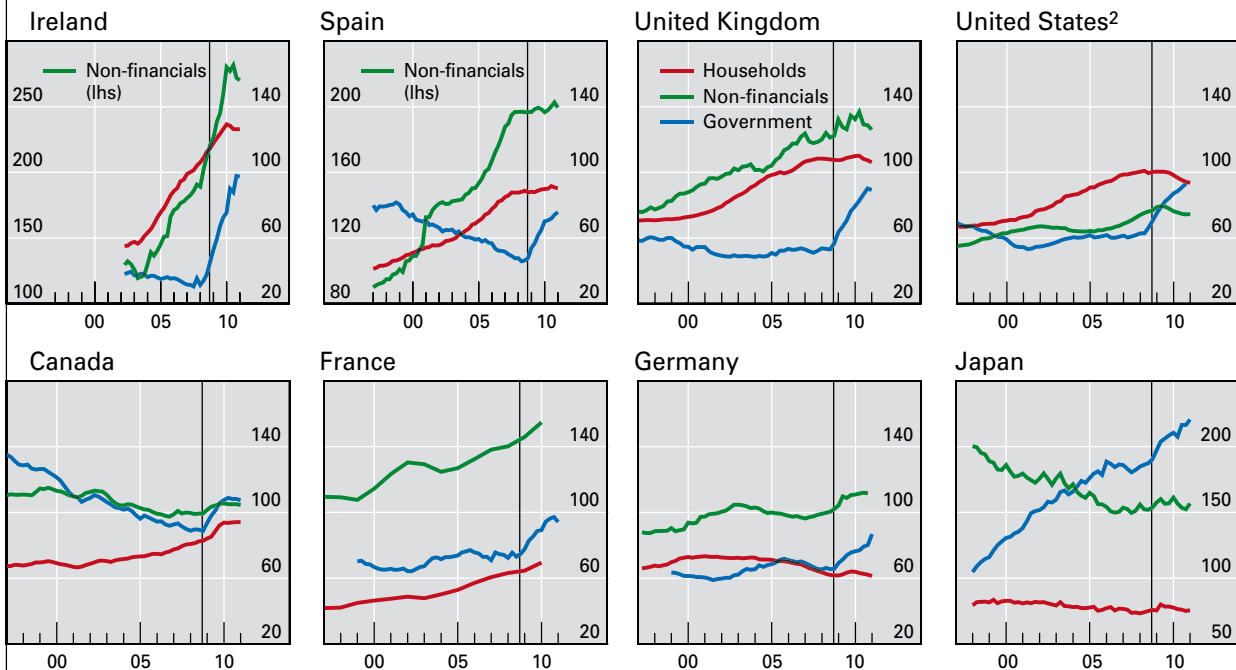
Strong expansion of real estate finance as property prices went up was one factor behind the rapid growth of the financial sector during the pre-crisis

⁵ See the discussion in BIS, *80th Annual Report*, June 2010, pp 10–12.

⁶ Between 1997 and 2007, the share of construction in GDP went up from 6½% to 10% in Spain and from 5% to 8% in Ireland.

Debt¹

As a percentage of GDP



The vertical line marks 15 September 2008, the date on which Lehman Brothers filed for Chapter 11 bankruptcy protection.

¹ For households and government, debt is total liabilities. The household sector includes non-profit institutions serving households. Except for the United States, non-financial sector debt is total liabilities minus shares and other equity of non-financial corporations.

² Debt for the non-financial corporate sector is total credit market instruments.

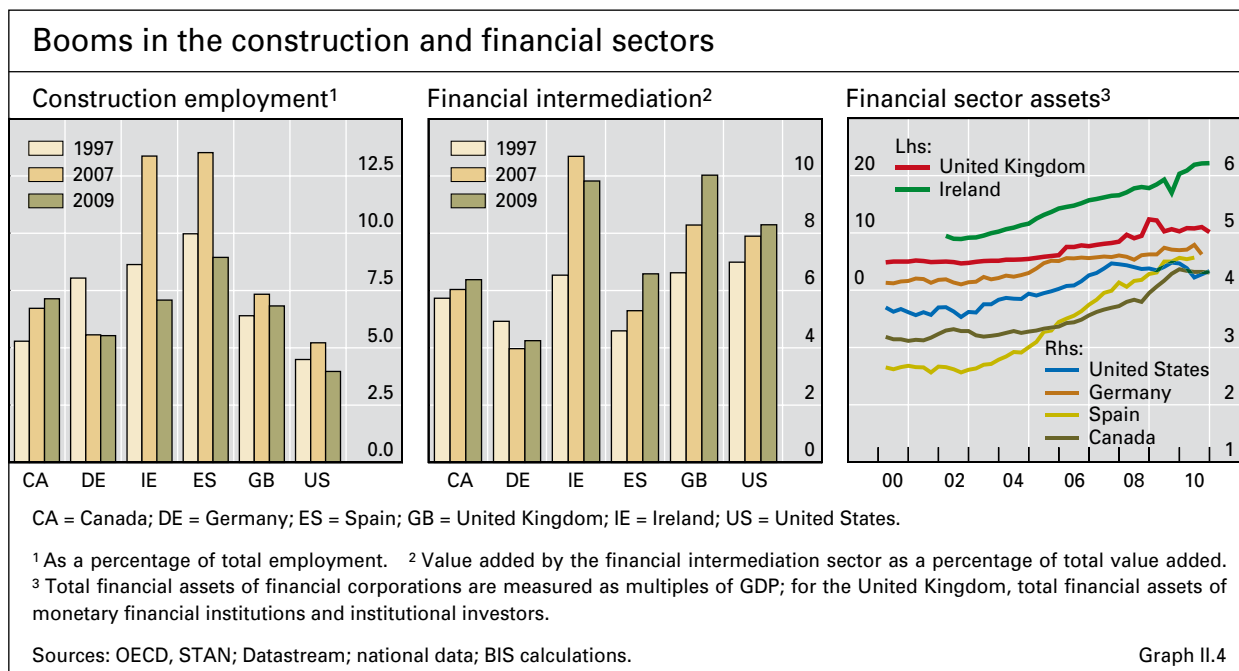
Sources: Central banks; national data; BIS calculations.

Graph II.3

period. By almost any measure, the sharpest growth in the financial sector took place in Ireland, where the assets of financial institutions increased from 10 times GDP in 2002, an already high level, to more than 20 times GDP on the eve of the crisis (Graph II.4, right-hand panel). The weight of financial intermediation in total value added in Ireland rose from around 6% in 1997 to more than 10% in 2007 (centre panel). Admittedly, foreign-owned financial institutions – located in Dublin but with little connection to the remainder of the Irish economy – accounted for part of this increase, but the balance sheets of domestic banks also soared. Spain, which unlike Ireland is not an offshore financial centre, also saw a rapid expansion of domestic banks' balance sheets. There, the ratio of bank assets to GDP increased from a stable 2.6 between 2000 and 2003 to more than 4 just before the financial crisis.

The burst of growth originating in the credit and housing booms and the associated expansion of the construction and financial sectors was ultimately not sustainable. This was first revealed when US house prices stopped going up in 2006, and then began to fall. Borrowers whose creditworthiness relied exclusively on future house price appreciation were the first ones to default. As house prices continued to fall, losses started to spread from the subprime to the prime mortgage sector. In other countries house prices peaked somewhat later than in the United States, and so write-offs on home mortgages also increased later, and they generally remained below the US level. However,

The decline in house prices revealed structural weaknesses



some countries, such as Ireland, Spain and the United Kingdom, saw a surge in non-performing loans to the non-financial corporate sector, in particular property developers.

The financial crisis and the Great Recession that followed led to a sharp reversal in the sectoral trends. The construction sector shrank even more rapidly than it had grown before the crisis, probably in response to the large stock of unsold houses. The rate of contraction of the housing sector in Spain and Ireland from 2007 to 2009 was much faster than that during the bust phase of construction cycles in other countries. In Germany, the share of construction in total employment fell from 8.5% at the peak of the unification boom in 1995 to 5.5% in 2006, a change of 3 percentage points in about 10 years. In Spain and Ireland, the share fell by 4 and 6 percentage points, respectively, in just three years.⁷

Only the financial sector showed no sign of shrinking. Its share in value added receded somewhat in Ireland but increased in Spain and the United States. The ratio of financial sector assets to GDP continued to go up almost everywhere, in part due to unprecedented public support.

Fiscal balances deteriorated significantly during the crisis and have not improved substantially since. Massive outlays by governments to save the financial system were only one reason for the sharp rise in deficits. Together with declining tax revenues and increased overall spending in the wake of the recession, they resulted in unprecedented peacetime deficits. Another reason for the weak state of public finances was the overestimation of potential, or sustainable, output in the boom years. The credit-financed housing boom boosted fiscal revenues, but these revenues disappeared during the crisis.

The construction sector shrank ...

... but finance did not

Public finances deteriorated sharply as spending increased

⁷ See the much more extensive discussion of previous construction booms in BIS, *76th Annual Report*, June 2006, pp 26–8.

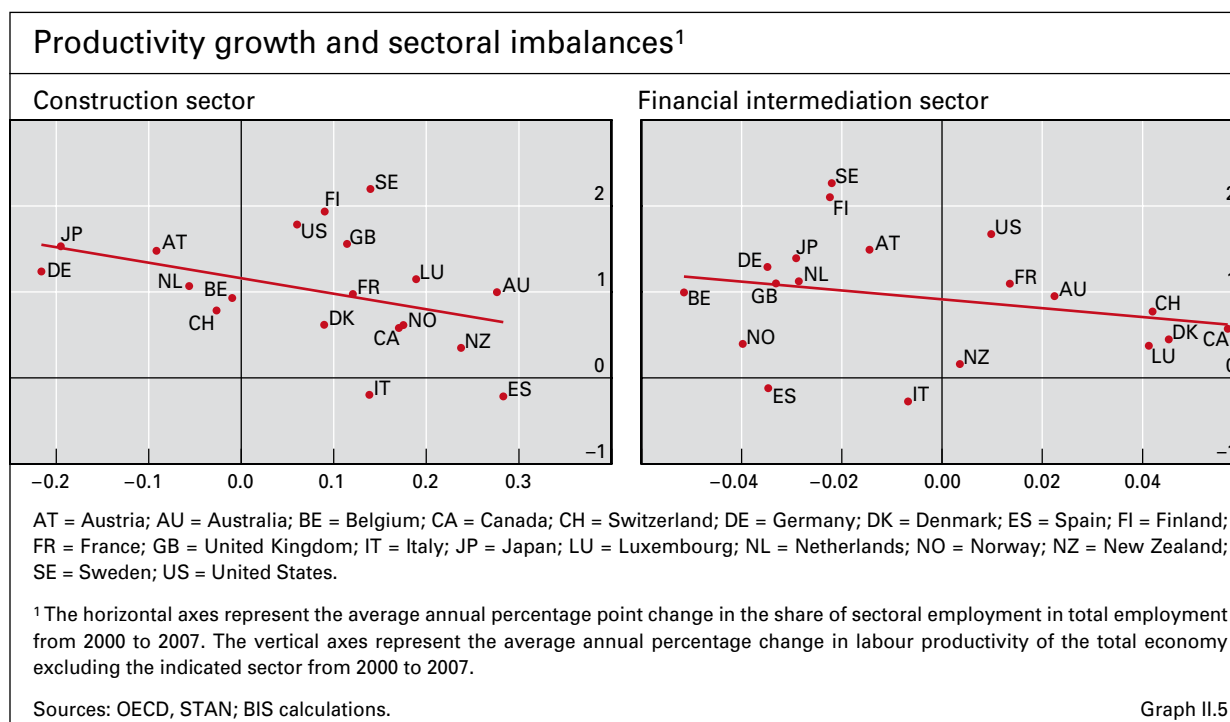
Some countries used the increase in revenues to reduce their public debt/GDP levels (Graph II.3), but some of the additional revenues were absorbed by increased spending.

Sectoral imbalances

Unbalanced growth

Growth in the years before the financial crisis was heavily weighted towards the increasingly bloated construction and financial sectors, and the effect of their prolonged rapid expansion was probably to reduce growth in the rest of the economy. Of course, because the financial sector allocates capital throughout the economy, its expansion can actually stimulate overall growth. But as with the growth of any sector, expansion of the construction and financial industries after a point would remove resources from the rest of the economy. The expansion of the capital-intensive construction sector would make it more difficult for other sectors to attract capital. And a massively expanding financial industry would probably make it more difficult for other knowledge-intensive industries to attract highly skilled labour.⁸

The cross-country evidence indicates that, indeed, the boom in construction and financial intermediation coincided with lower productivity growth in the rest of the economy (Graph II.5). The most notable example is the construction sector in Spain, where the employment share (horizontal axis of the left-hand panel) grew on average by 0.3 percentage points each year from 2000 to 2007, while productivity in the rest of the Spanish economy (the vertical axis) saw virtually no gain. The effect also appears for finance (Graph II.5, right-hand



⁸ See T Philippon and A Reshef, "Wages and human capital in the US financial industry: 1909–2006", *NBER Working Papers*, no 14644, January 2009.

panel), although to a lesser degree.⁹ However, a more rigorous econometric analysis suggests that the effect in the case of financial intermediation may have been even stronger than for construction (see box).

Other sectors will have to take over from construction and financial intermediation as the engines of growth. Which sectors will do so is difficult to say, since past performance is not necessarily a good guide to the future. Nonetheless, the likely (relative or absolute) stagnation of construction and finance could liberate resources for use in other sectors – so long as authorities do not prevent such a reallocation through subsidies or other measures that preserve the status quo.

Private sector debt reduction

Many of the loans made during the housing boom, particularly its final stages, were extended on the implicit or explicit assumption that house prices would continue to go up. This premise turned out to be false. It is therefore natural that both lenders and borrowers would react and adjust their target rates of debt to the new reality.

Debt reduction ...

Households in Ireland, Spain, the United Kingdom and the United States have begun to reduce their debt-to-income ratios (Graph II.6), although to varying degrees. In the United States and the United Kingdom, where the process has gone furthest, household debt has fallen by approximately 15 percentage points to 120% and 150% of disposable income, respectively. In the aggregate, Spanish households reduced their debt-to-income ratio by 8 percentage points between 2008 and early 2010, but the ratio has since rebounded. The debt ratio of Irish households has fallen by 7 percentage points from its peak.

... has begun ...

The historical record suggests that households will further reduce their debt. Almost all systemic banking crises that were preceded by an expansion in the ratio of credit to GDP were followed by marked decreases in that ratio.¹⁰ The extent of debt reduction varied across episodes but was generally substantial. On average, private credit-to-GDP fell by 38 percentage points over a period of about five years. The magnitude of the debt reduction was only slightly smaller than that of the increase before the crisis (which was 44 percentage points on average).

... but history suggests that the process is not yet complete

The debt-to-income ratios of households and other sectors can be reduced in essentially four ways: (i) repayment; (ii) default, write-offs or debt forgiveness; (iii) higher real disposable incomes; and (iv) inflation, by reducing the real value of debt.¹¹ The available data allow us to break down the decline in the

Drivers of debt reduction

⁹ The fact that the negative relationship is less clear-cut in the case of financial intermediation may have to do with the previously mentioned positive effects that expansion of the financial sector can deliver.

¹⁰ See G Tang and C Upper, "Debt reduction after crises", *BIS Quarterly Review*, September 2010, pp 25–38. Their results are based on a sample of 20 systemic banking crises that were preceded by a build-up in the ratio of credit to the non-financial private sector to GDP. Except in three cases (Argentina, 1995; Paraguay, 1995; and Korea, 1997), these crises were followed by a substantial period of debt reduction.

¹¹ Assuming that loan contracts are in nominal terms, as is generally the case in the economies we are examining.

The effect of sectoral imbalances on growth: the case of manufacturing

The economics literature has generally found that a larger financial sector is associated with higher GDP growth. Indeed, sectors that face financing difficulties should benefit more from a larger financial sector. The recent experience, however, suggests a more nuanced view. Rapid increases in credit and asset prices may inflate the profitability of the financial sector to the point that it diverts resources away from other sectors. A conjecture is that the sectors most likely to be disadvantaged are those that, like financial services, depend heavily on highly skilled labour. To test this conjecture, we use the propensity to undertake research and development (R&D) as a proxy for the demand for highly skilled labour. Focusing on manufacturing industries, we identify those that have a higher R&D intensity than others. We then estimate whether a fast-growing financial sector – and, separately, whether a fast-growing construction sector – would have a disproportionate effect on the growth of the higher-intensity, versus the lower-intensity, manufacturing industries. The negative coefficients reported in Table II.A for value added growth and employment growth in the financial intermediation and construction sectors (first and third lines and fifth and seventh lines of data) suggest that they would have such an effect and that it would be stronger in the case of finance than in the case of construction.

Sectoral imbalances, R&D intensity and manufacturing growth

Dependent variable: growth rate of real value added

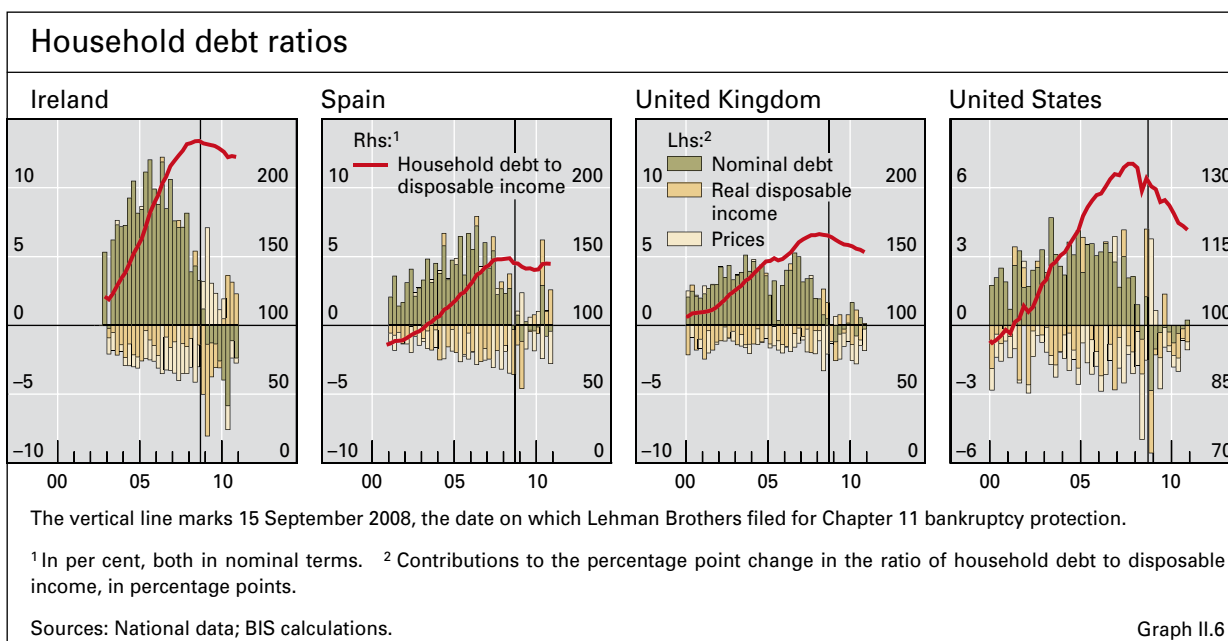
Interaction of R&D intensity with sector growth or sector share for value added or employment ¹	R&D intensity ²							
	Value added				Manufacturing			
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Financial intermediation sector:								
Value added:								
Growth³	-3.73***				-2.36***			
Initial share in total economy ⁴	11.58				5.35			
Employment:								
Growth³		-7.12**				-5.58***		
Initial share in total economy ⁴		32.13				21.45**		
Construction sector:								
Value added:								
Growth³			-5.36***				-2.40***	
Initial share in total economy ⁴			-9.14				-19.71	
Employment:								
Growth³				-5.33***				-2.27*
Initial share in total economy ⁴				12.6				11.45
<i>Memo:</i>								
<i>Number of observations</i>	317	317	338	338	309	309	330	330
<i>R²</i>	0.36	0.325	0.355	0.325	0.339	0.325	0.331	0.302

Parameters are estimated with a generalised least squares regression based on a cross-country cross-industry panel comprising 18 OECD countries and 27 manufacturing industries. The dependent variable – the growth rate of real value added – is computed for each industry and each country of the sample over the period 2000–07. Estimations include country and industry dummies as well as a control variable for initial conditions (the log of the ratio of industry value added in 2000 to total manufacturing value added in 2000 for each industry in each country of the sample). ***/**/* indicate significance at the 1/5/10% level.

¹ Explanatory variables are defined as the products of the indicated variables. ² The ratio of R&D expenditures to value added (columns (i)–(iv)) and to total manufacturing R&D expenditures (columns (v)–(viii)) for the corresponding industry in the United States (which for this purpose represents the technological frontier) for the period 1980–89. ³ Computed over the period 2000–07. ⁴ Computed for the year 2000.

Source: BIS calculations based on OECD STAN data.

Table II.A



ratio of debt to disposable income into three of these components (Graph II.6): repayment/default (without distinguishing between the two;¹² shown by “Nominal debt” in the graph), real income growth (“Real disposable income”) and inflation (“Prices”).¹³ The relative weight of these drivers varies across countries. Households in all four countries shown in Graph II.6 have cut their nominal debt levels, with Ireland leading, followed by the United States. Real disposable income proved more resilient during the crisis and continued to grow even as GDP fell, thus lowering debt ratios. In Ireland and, to a lesser extent, the United States, the damping effect of repayments/defaults and of growth in real disposable income was at least partly offset by a drop in consumer prices immediately after the crisis, which pushed up the real value of debt.

The drivers of debt reduction have changed with time. The crisis in Ireland and Spain turned out to be more structural than it first appeared, and disposable income in these two countries began to fall in 2010, thus driving up debt ratios.

To put the debt issue into perspective, it is worth considering what the impact on growth would be if debt ratios were not cut. High debt levels make households (and firms) more vulnerable even to small shocks. In a recent survey, more than one fifth of US households with mortgage debt reported that their mortgage balance exceeded the value of their house.¹⁴ The proportion was higher among the young and those living in states with particularly large

High debt makes households vulnerable to shocks

¹² Disentangling the two factors is difficult. Write-offs do not reduce the amount of outstanding debt one-to-one since the buyers of repossessed homes may take on new debt. See M Brown, A Haughwout, D Lee and W van der Klaauw, “The financial crisis at the kitchen table: trends in household debt and credit”, Federal Reserve Bank of New York, *Staff Reports*, no 480, December 2010.

¹³ For details of this decomposition, see Tang and Upper, op cit.

¹⁴ R Chakrabarti, D Lee, W van der Klaauw and B Zafar, “Household debt and saving during the 2007 recession”, Federal Reserve Bank of New York, *Staff Reports*, no 482, January 2011.

increases in house prices – precisely the groups that are also more likely to have lost their jobs in the Great Recession or to have experienced other types of income shocks. In some European economies, the overwhelming majority of mortgages are linked to short-term money market rates. These rates are currently very low, but at some point they will increase and add to households' debt burden, further heightening their vulnerability if debt ratios remain high.

How to reduce debt?

That said, there is a risk that reducing debts rapidly in order to lessen the vulnerability of households to shocks will precipitate a collapse in private consumption. Public policy cannot fully manage this risk. What it can do is facilitate growth in other sectors of the economy that could take over from construction and household consumption as the engine of recovery.

There are also ways to reduce debt that are unlikely to be effective. Surprise inflation is one of them. Admittedly, a burst of surprise inflation will reduce the real value of debt, thus redistributing wealth from lenders (and, ultimately, savers) to borrowers. That said, because surprise inflation is generally associated with lower real incomes if wage contracts are in nominal terms, it could offset the impact on the real value of debt. Moreover, the transfer of wealth will not occur if inflation is anticipated. In this case, higher inflation will tend to drive up nominal interest rates and thus increase borrowers' debt servicing costs. This, in turn, acts like a forced acceleration of repayment. Regardless of whether inflation is anticipated, it imposes the substantial long-term cost of reduced central bank credibility.¹⁵

Public debt and fiscal consolidation

Public debt has soared since the crisis ...

Public debt surged after the default of Lehman Brothers in September 2008 (Table II.1), particularly in the countries that had experienced housing booms. The deterioration in governments' fiscal position was due to a combination of lower tax revenues and higher spending.

... as automatic stabilisers drove up deficits

There are obvious reasons why deficits increase during recessions. Automatic stabilisers support spending and were one reason why the Great Recession did not turn into another Great Depression. The problem is that the deficits have shown no signs of declining two years into the recovery and that debt levels continue to soar. Today's fiscal deficits are largely structural (Graph II.7), suggesting that governments need to do more to restore fiscal positions. Moreover, the cyclical component of fiscal deficits may be overestimated if, as argued above, measures of potential output are upwardly biased.

The reduction in government debt before the crisis was not sustainable ...

This picture of high structural deficits and rapidly increasing debt levels contrasts with surpluses and declining deficits before the crisis. Several countries did use the good years to reduce their public debt. Government debt in Canada, Ireland, Spain and the United Kingdom fell markedly between 2000 and 2007, and it remained broadly stable in France and the United

¹⁵ In any case, inflation in the advanced economies in the short term is most likely to be of the cost-push variety because of rising commodity prices. Cost-push inflation directly reduces the capacity of households and firms to spend and thus makes debts even more burdensome.

Public debt ¹					
As a percentage of GDP					
	2002	2007	2010	2011	2012
United States	56.8	62.0	93.6	101.1	107.0
Euro area	75.2	71.6	92.7	95.6	96.5
Germany	62.2	65.3	87.0	87.3	86.9
France	67.3	72.3	94.1	97.3	100.0
Italy	119.4	112.8	126.8	129.0	128.4
Spain	60.3	42.1	66.1	73.6	74.8
Netherlands	60.3	51.5	71.4	74.3	75.2
Belgium	108.4	88.1	100.7	100.7	100.4
Greece	117.6	112.9	147.3	157.1	159.3
Portugal	65.0	75.4	103.1	110.8	115.8
Ireland	35.2	28.8	102.4	120.4	125.6
Japan	152.3	167.0	199.7	212.7	218.7
United Kingdom	40.8	47.2	82.4	88.5	93.3
Total OECD	71.6	73.1	97.6	102.4	105.4

¹ General government gross financial liabilities; for 2011 and 2012, forecasts.
Source: OECD, *Economic Outlook*, vol 2011/1. Table II.1

States. However, this favourable trend concealed vulnerabilities, in particular the reliance of apparently sound fiscal positions on a small number of dynamic sectors such as construction and finance. For example, Suárez (2010) estimates that, in the case of Spain, the “construction and real estate sectors might have inflated fiscal revenues by 2.9 percent of GDP at the peak of the boom”.¹⁶

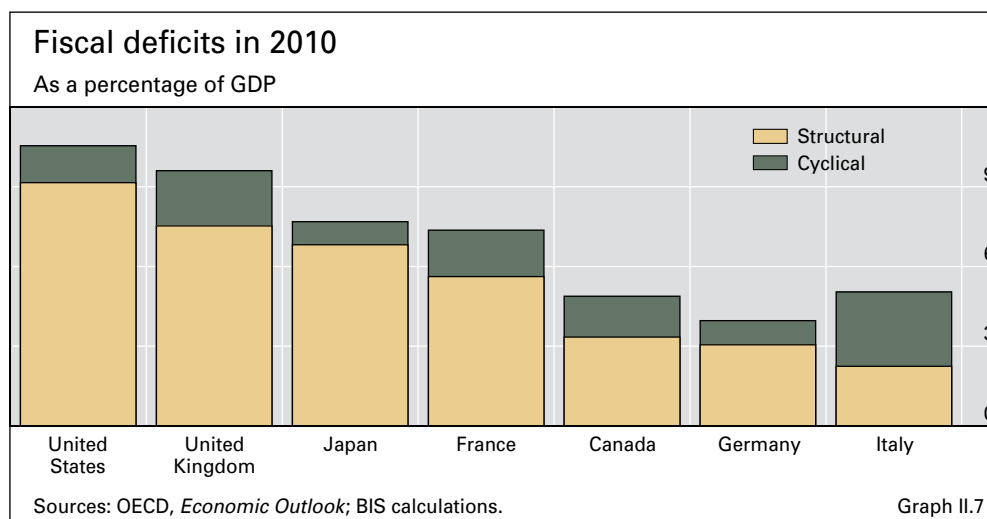
The view that fiscal accounts can be highly dependent on some particular sectoral developments is borne out by a more systematic investigation. Indeed, government revenues and government total balance do improve considerably when the construction sector expands, after controlling for the usual determinants of fiscal positions (Graph II.8, left-hand panel). For instance, an increase in the construction sector share in value added by 1 percentage point is estimated to improve the cyclically adjusted fiscal balance by 0.3 percentage points of potential GDP. In contrast, changes in the relative size of the financial intermediation sector do not have significant effects on net fiscal positions. The specific effect of construction booms is therefore to boost the revenue side of fiscal accounts. To be sure, this jolt to revenues is likely to come from various sources. Revenues may be driven up by the one-off component associated with construction booms, but the overestimation of potential output can also contribute to improving the cyclically adjusted fiscal position.

With these calculations in hand, it is possible to compute what fiscal positions would have looked like had the construction boom not happened (Graph II.8, right-hand panel). In the case of Ireland, for instance, the fiscal surplus in 2007 was almost entirely due to the bloated construction sector;

... being highly dependent on the housing and financial sectors

High sensitivity of tax revenue to the bloated construction sector ...

¹⁶ J Suárez, “The Spanish crisis: background and policy challenges”, *CEPR Discussion Papers*, no 7909, July 2010.



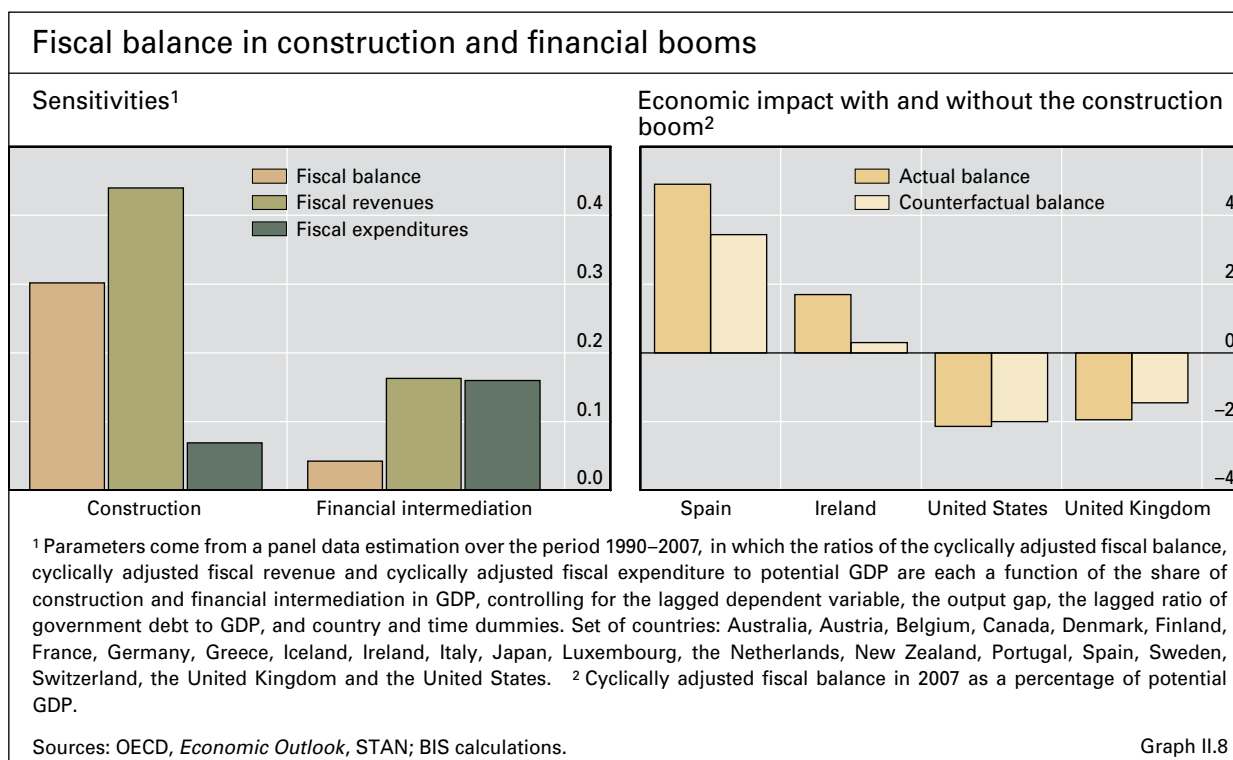
without the construction boom, its fiscal position would have been close to balance. In Spain, approximately one third of the surplus in 2007 was due to construction, a result somewhat lower than Suárez's bottom-up estimates but nonetheless substantial.¹⁷

The revenue intensity of construction means that the gap between revenues and expenditures opened by the crisis is unlikely to disappear even as the economy recovers. This, in turn, implies that governments cannot avoid strong measures to adjust their fiscal positions in the short run, in addition to a credible plan over the medium term. Different circumstances call for different approaches to how consolidation should be carried out while minimising its short-term costs in terms of growth. Yet fiscal policy can strongly influence reallocations across industries through measures such as cuts in subsidies to declining industries and support for retraining of workers, which should help to both raise growth and reduce unemployment. For the longer term, this assessment illustrates the need to go beyond balancing budgets over the cycle. Besides some well known challenges ahead – like ageing – the above analysis suggests that the true state of public accounts may reveal itself only during downturns, when sectoral imbalances tend to eliminate what in fact were only temporarily engorged revenues.

Last but not least, the state of public accounts has fundamental implications for financial stability, which calls for further caution. Valuation losses on government bonds, for instance, directly affect the creditworthiness of the institutions holding them and reduce the amount of collateral they can borrow against. This mechanism appears to be at work in Greece, where banks have found it increasingly difficult to raise funding as investors focus on the risk of a restructuring of the country's public debt. But most obviously, large-scale government support for banks in trouble represents a severe drain on the treasury (Ireland is a case in point) which cannot be absorbed in the absence of a strong fiscal position.

¹⁷ We estimate the effect on revenues to be around 2.2% of GDP, compared with 2.9% in Suárez, op cit.

... could pose challenges ahead



Conclusions

The key message of this chapter is that growth during the boom years before the crisis was unsustainable and that the imbalances built up during those years threaten to hold back growth in the advanced economies for some time to come.

Unsustainable growth pre-crisis

Real estate and finance are unlikely to drive growth in the future as much as they did prior to 2007. Many countries are faced with large amounts of unsold properties, and it will take years to absorb this overhang. Similarly, the growth in the financial sector in the years up to 2006–07 was at least partly a response to inadequate regulation and is thus unlikely to be repeated in the coming years (see Chapter V). Therefore the sectoral composition of the economy needs to change if we want to take advantage of new opportunities for growth. Propping up declining sectors risks crowding out more dynamic sectors.

The sectoral composition of the economy has to change

Policy should also put the banking system in order so that future growth sectors have access to healthy credit. This means that banks need to have sufficient capital to be able to take losses and write off doubtful assets. The example of Japan in the mid-1990s shows that unrecognised losses lead to a misallocation of resources, create uncertainty and thus hinder economic growth. When banks are not forced to write down loans (and shrink their books), they are actually provided with incentives to “evergreen”, ie to roll over non-performing loans to firms that should have been bankrupt.¹⁸ In Japan, evergreening contributed to stagnation by preventing restructuring

Fix the banking system to restore availability of credit

¹⁸ See J Peek and E Rosengren, “Unnatural selection: perverse incentives and the misallocation of credit in Japan”, *American Economic Review*, vol 95, no 4, September 2005, pp 1144–66.

and thus curtailing profit opportunities for healthy firms.¹⁹ It was only after a rigorous examination of banks' non-performing loan portfolios in 1998 and a second round of capital infusions that banks in Japan began to lend again.

Growth will help
debt reduction

Getting the economy back on a growth path through the policy measures described above will greatly help the necessary process of public and private debt reduction. But while growth is an essential element of the debt reduction process, it cannot be the only one. Households are already dedicating a significant fraction of their income to repaying debt.

Required: fiscal
consolidation ...

Government debt, by contrast, continues to go up. Running large budget deficits was appropriate during the crisis and its immediate aftermath, when expansionary fiscal policy helped prevent the worst outcomes. With recovery under way, however, running large deficits is becoming more and more dangerous. Market sentiment can quickly change, forcing governments to take even more drastic measures than those that would have been necessary at an earlier stage.

Fiscal consolidation will not happen overnight, but it has to start now. The measures taken will vary across countries but, if they are to be credible, they will have to address the fundamental weaknesses of the fiscal framework. Depending on the country, governments variously face large future liabilities from ageing populations,²⁰ unsustainably high entitlements and unbalanced

Boom in the emerging market economies: falling into the same trap?										
In per cent										
	Real GDP growth	Inflation	Credit growth		Credit/GDP	General govt fiscal balance/GDP ¹	General govt structural fiscal balance/potential GDP ¹	Public debt/GDP ¹	House price growth	
	2010			2006–10 average	2010					2006–10 average
Brazil	7.5	5.0	26.0	24.7	53.4	-2.9	-3.0	66.1
India	10.4	9.6 ²	26.8	21.8	53.5	-9.4	-10.0	72.2
China	10.3	3.3	20.3	20.2	132.0	-2.6	-2.9	17.7	10.6	11.3
	2006			2002–06 average	2006					2002–06 average
Ireland	5.3	2.7	23.4	20.3	181.4	2.9	-4.2	24.8	13.6	10.7
Spain	4.0	3.6	24.3	19.2	167.2	2.0	0.7	39.6	10.4	15.0
United Kingdom	2.8	2.3	13.3	10.6	170.8	-2.6	-2.8	43.1	6.3	11.1
United States	2.7	3.2	9.6	8.3	58.9	-2.0	-2.0	61.1	7.1	8.1

¹ April 2011 estimate. ² Wholesale prices.
Sources: IMF, *Fiscal Monitor*, *World Economic Outlook*; CEIC; national data. Table II.2

¹⁹ See R Caballero, T Hoshi and A Kashyap, "Zombie lending and depressed restructuring in Japan", *American Economic Review*, vol 98, no 5, December 2008, pp 1943–77.

²⁰ See BIS, *80th Annual Report*, June 2010, pp 64–6.

sources of revenues, to name but three factors. Many of the required structural changes will take time to generate lower deficits, and so it is important to start implementing them now. A legislated schedule for their implementation would make such reforms more credible and would reduce uncertainty about possible consolidation measures. That said, promises lose credibility if their implementation cannot be monitored.

But fiscal challenges go beyond the immediate need to reduce deficits and bring down debt levels. More structural changes to the tax system are needed to avoid a rerun of the credit booms that ultimately led to the crisis. The tax system is still biased towards debt accumulation, for example through the tax deductibility of some interest payments. More generally, with government taxes and expenditures accounting for an increasing fraction of total output in the future, the distortions implied by fiscal policy will become ever more important, and even revenue-neutral reforms that reduce these distortions could be beneficial.

... and new fiscal strategies

The crisis has revealed important weaknesses in fiscal frameworks, which need to be addressed. In particular, budgeting before the crisis did not take into account the sensitivity of public finances to asset price and credit booms. If we do not want to repeat this mistake, we need better measures of cyclically adjusted deficits that not only filter out the impact of the normal business cycle but also that of asset price and credit booms. In addition, we need fiscal rules that ensure that temporary increases in revenues are treated as such and do not lead to excessive optimism in assessing fiscal accounts.

In addition, the close relationship between fiscal and financial stability during the crisis highlights the importance of fiscal room for manoeuvre to deal with future crises, even those not caused by the financial sector. Governments faced with natural disasters, for example, will be able to respond more quickly and thoroughly if they can mobilise large amounts of resources without approaching their borrowing limits.

At this writing, many emerging market economies are experiencing rapid growth, booming housing markets and rising indebtedness in the private sector. For instance, Brazil, China and India all saw credit grow by an annual average of more than 20% between 2006 and 2010, equal to or greater than the rates of growth recorded in Ireland and Spain (Table II.2). The emerging market economies escaped the worst of the last crisis. If they can heed what perhaps was its most important lesson – that prevention is better than cure – they may be able to avoid suffering their own version of it.

Similar imbalances are building up in emerging economies