Chapter 1

Restoring macroeconomic and financial stability

Ireland is in severe recession, following several years of high but ultimately unsustainable growth and rising imbalances. A fast expansion of bank credit encouraged a boom in construction activity and property prices, which fuelled domestic spending more widely. This cycle has now reversed dramatically. Output is expected to contract sharply and unemployment is likely to reach 14%. The banking sector, which was at the heart of the credit expansion, has been severely hit by the crisis in international financial markets and faces large losses on heavy property-related lending. Credit conditions have tightened. A return to normal functioning of the financial system is needed and a range of policies is in place to restore the banking system to good health. An economic recovery is likely to begin next year but a protracted period of adjustment will be needed to resolve economic imbalances built up during the expansion. Competitiveness deteriorated during the upswing and the strong real exchange rate is hindering the return to growth. Restoring competitiveness inside monetary union will occur through downward adjustment in wages and prices, which appears to be already underway. With fast-rising public debt, fiscal consolidation, which has begun, will be needed over an extended period. For the longer term, lessons should be learnt to avoid macroeconomic imbalances arising on this scale again.

The economy is experiencing a severe contraction as large domestic imbalances are unwound in an environment of global recession and financial crisis. By the second quarter of 2009, Ireland's GNP had fallen by 13.6% from its peak and industrial output (excluding the mostly foreign-owned "modern" sectors) was 21% below its peak by July. This contraction in activity is the largest in the OECD and has a very strong domestic component, although exports have also fallen somewhat. Unemployment has risen fast, to reach 12.6% of the workforce by September 2009. The fiscal position has deteriorated sharply, even after substantial discretionary tax increases. OECD projections suggest that the peak-to-trough reduction in economic activity is likely to be close to 13% with some signs that the downturn is beginning to bottom out. Economic adjustment on this scale is extremely painful. Ireland has experienced difficult economic times before but this is the first recession since it joined European Economic and Monetary Union (EMU). A substantial adjustment in wages and prices will be needed to restore competitiveness. It is likely that income will be permanently lower than previously assumed. Lessons will need to be learnt and applied about how macroeconomic and macro-prudential policy can avoid the risk of imbalances building up again in the future.

This chapter sets out the main macroeconomic and financial challenges facing the economy, both in achieving short-run stabilisation and ensuring that the economy is put on a more stable path for the future. This includes reform of the financial system and the housing market. The impact of recent developments on potential output and future prospects is also outlined. The macroeconomic outlook is intimately connected to the need for substantial fiscal consolidation, discussed in detail in Chapter 2. The implications of the recession for the labour market and the necessary policy measures are examined in depth in Chapter 3. Competitiveness and long-run growth prospects would be boosted by more favourable structural policy settings, as discussed in Chapter 4.

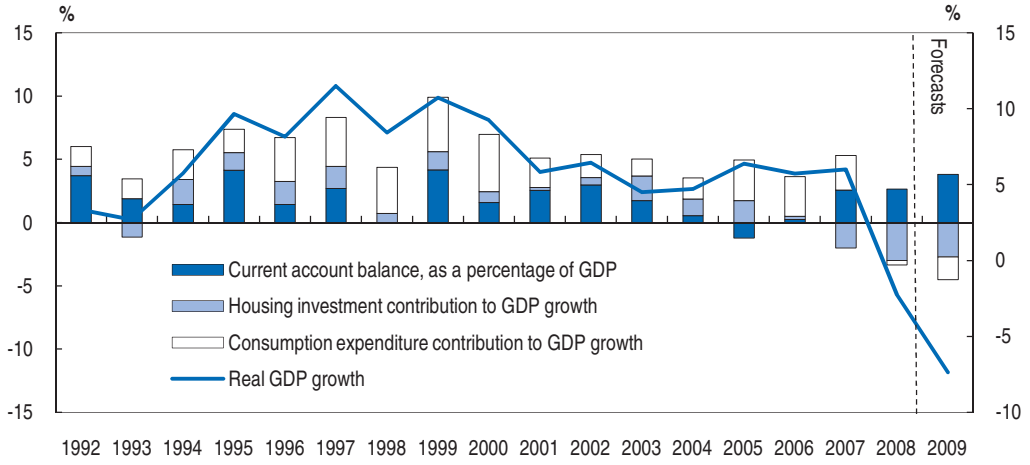
Unwinding imbalances

Ireland is experiencing one of the most severe contractions in activity among OECD countries (Figure 1.1). Growth turned negative in 2008, well before the global slowdown took hold, and the economy began to contract substantially in the second half of 2008. Housing investment peaked in 2006 and fell already by 15% in 2007 and then a further 30% in 2008. Experience of previous banking and financial crises in the OECD suggests that they lead to large losses of output and tend to be more severe when combined with falls in housing and business investment (Haugh *et al.*, 2009). Based on six previous episodes in OECD countries, peak-to-trough output losses range from 2.6% to 10.2% with the length of the downturn ranging from 9 to 16 quarters. The current contraction in Ireland, which has been larger, is therefore particularly severe by historical standards.

The building up of economic imbalances

The economic expansion from 2002 to 2007 was very strong: GNP grew by 5.4% per year on average in real terms. Even allowing for rapid population growth, both natural and

Figure 1.1. **The economy is experiencing a severe contraction**



Source: OECD *Economic Outlook Database* and provisional update to June 2009 *Economic Outlook* 85 projections.

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from inward migration, per capita incomes rose by an average of 3.2% per year. Inflation measured by the HICP index averaged just 2.8%, only 0.7 percentage points above the euro area average. This was partly depressed by the appreciation of the euro against sterling and the US dollar, and inflation measured by the CPI (which includes a large component related to housing costs) rose at a higher average annual rate of 3.6%. More generally, economic growth was heavily dependent on developments in the property and housing markets. By contrast to the period 1995 to 2000, economic performance was weaker on most measures and more domestically focussed (Table 1.1). In particular, productivity growth was sharply lower, although still strong by euro area standards. This pattern of slowing underlying economic performance combined with strong investment in real estate and borrowing has many parallels to the "bubble economy" of Japan in the late 1980s (Hayashi and Prescott, 2002).

Table 1.1. **Economic performance in the most recent expansions**

Average annual growth rate, per cent

	1995 to 2000	2002 to 2007
GNP per capita	7.9	3.2
Labour utilisation	3.9	2.8
Capital services	8.9	6.5
Output per hour worked	5.5	2.6
Real wage (consumption deflator)	1.6	2.8
Export volume	17.7	5.1

Source: OECD (2009); *Economic Outlook 85 Database*.

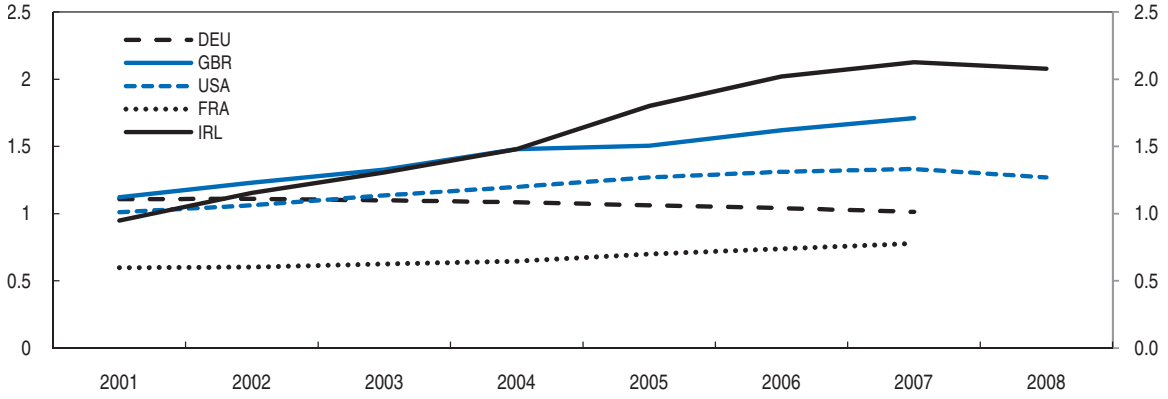
The strong economic performance was predicated on a large increase in borrowing and asset prices. Private sector credit increased from 128% of annual GNP in 2002 to 215% in 2007, growing at an annual average rate of 20%. Mortgage lending was particularly buoyant: it expanded at an average annual rate of around 25%. Housing investment became extremely strong: residential construction reached 13% of GDP in 2006, more than twice the OECD average and a higher share than in any other OECD country, including Spain where there was also a major housing boom. Yet, housing supply was able to

respond only partially to rising demand and so house prices rose dramatically. Ireland had a small housing stock in the mid-1990s (OECD, 2008) and, having experienced strong nominal growth in previous years, it is likely that expectations of future price increases were widespread. The dynamics of the housing market created their own momentum: increases in prices raised the amount of collateral which households could use to bid up prices further, while generating bank deposits from those trading down that could be used to fund additional lending. This is a particular example of the wider phenomenon of the credit channel of monetary policy transmission (Bernanke and Gilchrist, 1995): the balance sheet channel operates as the rising value of collateral eases constraints on the ability to borrow, while the bank lending channel comes as the supply of loans is increased by favourable conditions for banking profits and capital.

The expansion of borrowing, particularly for property, was encouraged by changes in the Irish economy, weak risk-management inside the banks and lax bank supervision. Overall, credit standards for mortgage lending were eased: loan-to-value (LTV) ratios for first-time buyers increased, leading to the share of 100% or more LTVs rising from just 6% in 2004 to 26% in 2007, while, for all buyers, the proportion of new mortgages with terms of more than 25 years increased from 38% to 54% over the same period.[1] As a result, household indebtedness rose substantially and reached a historically and internationally high level (Figure 1.2). Ireland largely managed, however, to avoid the creation of a sub-prime mortgage market through a tightening of consumer protection laws. Other domestic policy errors, however, contributed to the housing expansion. Banks were allowed to expand their lending rapidly and some aspects of financial regulation and supervision were weak, as discussed below. Policies towards housing were generally very favourable and created few disincentives to further increases in borrowing and prices. In addition, a variety of property-related tax reliefs and incentives was provided at different times that contributed to demand for housing and real estate.

Figure 1.2. **Household indebtedness has risen**

Ratio of loans to net household disposable income



Source: OECD Economic Outlook 85 Database.

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Interest rates set by the European Central Bank (ECB) were clearly too low for the state of the Irish economy given the strength of the upswing. Estimates suggest that the ECB policy rate was on average almost one percentage point lower than a standard Taylor rule would suggest for Ireland over the period 2001 Q3 to 2006 Q4, the most expansionary setting

experienced by any euro area country (Ahrend *et al.*, 2008). There is clear positive relationship between this lack of fit of policy rates, and the growth in household lending and increase in housing investment. Secondly, global financial conditions were marked by plentiful liquidity and very low risk aversion across many markets (Guichard *et al.*, 2009). Thirdly, Irish financial intermediaries were able to borrow heavily in international financial markets to help fund the expansion of domestic credit. By December 2007, securitised loans had expanded 4.5-fold over the previous five years, rising to account for 12% of mortgage lending.

The effect on demand and activity of strong credit growth was large and wide ranging. Although it is difficult to assess empirically and some studies do not find a link, cross-country analysis suggests that consumption in Ireland is sensitive to the housing market (Catte *et al.*, 2004). At the same time, a very large share of economic resources was diverted towards house-building and construction. As discussed in Chapter 2, housing generated very large tax receipts that led to reductions in direct tax rates and reductions in the tax burden, while financing a large increase in public spending. Inflationary pressures appear to have been relatively weak compared with the pressure of rising demand because these were moderated by increases in supply resulting from inward migration and possibly some of the effects of the asset price boom itself on money demand (Boone *et al.*, 2004). Inflationary pressures were also partly absorbed by the strengthening of the effective exchange rate. However, the current account balance moved further into deficit to reach around 5.4% of GDP in 2007, putting Ireland among the OECD countries with relatively large deficits and either very strong internal demand (Australia, Hungary, Iceland, Spain) or poor competitiveness (Greece, Portugal).

The on-going economic correction will be prolonged

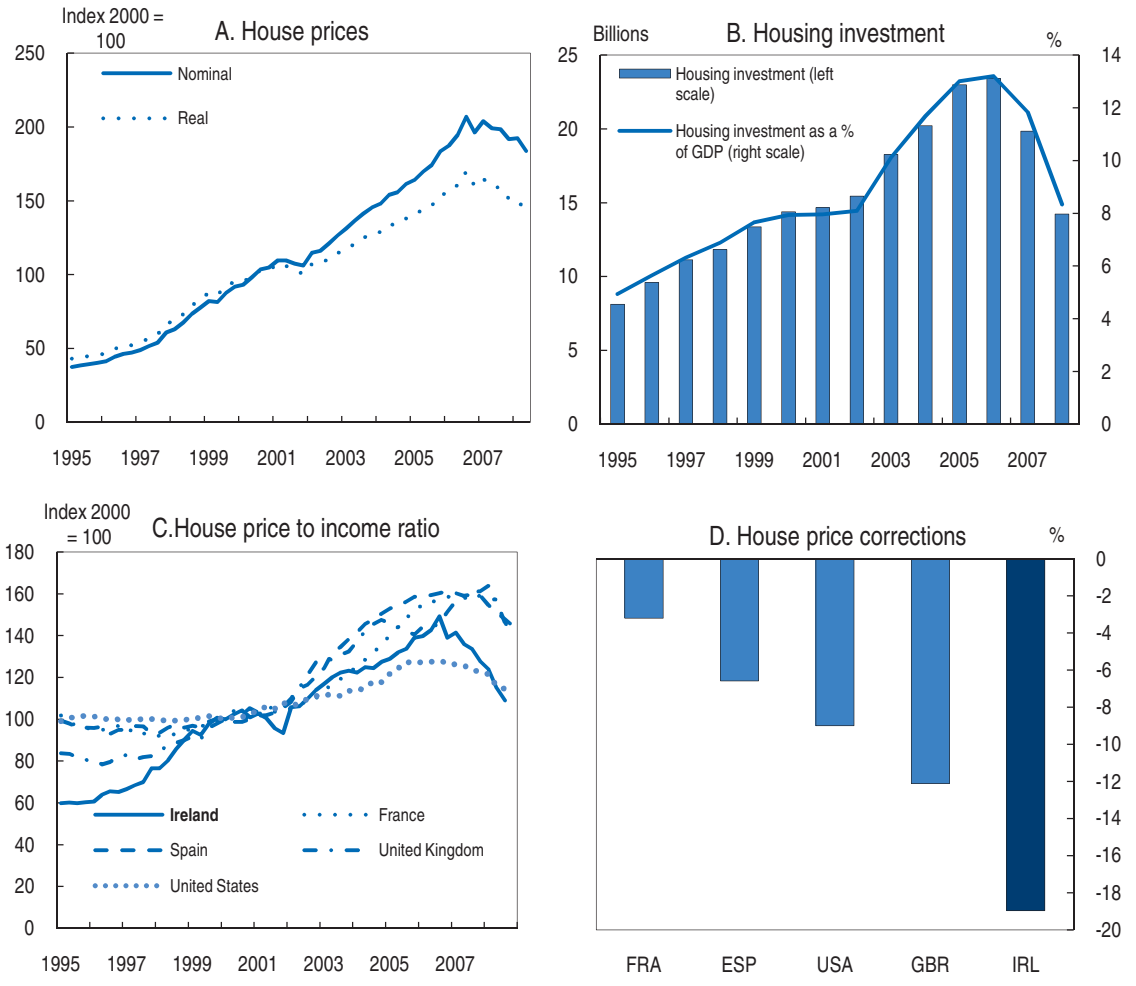
The economic recession has largely unfolded in the aftermath of a sharp tightening of financial conditions, both globally and in the euro area. This has occurred despite the reduction of the ECB refinancing rate to 1% and changes in the conduct of monetary operations that imply a large increase in liquidity at a given interest rate. From the perspective of the Irish economy, this tightness is two-fold. Firstly, turmoil in the money markets and the financial crisis impaired the continuous access to these markets and increased the spread between policy rates and the rate at which private sector agents can borrow. Secondly, the depth of the economic contraction in Ireland would of itself warrant more radical monetary policy action than for the euro area as a whole. The impact of the financial crisis on Irish households has been partly mitigated by the prevalence of "tracker" mortgages, which follow the ECB policy rate directly and so insulated some households from higher interbank interest spreads. Although pressures on Irish banks have been severe, the importance for overall Irish economic output of foreign multinational companies, which are typically not dependent on local sources of finance, implies that much of Irish economic activity is not affected by domestic credit conditions and is more sensitive to global capital markets. In addition, the appreciation of the effective exchange rate adds to the tightness of monetary conditions. Models for other OECD economies suggest these types of contractionary forces are very strong: equivalent to around a 4% reduction in GDP for the euro area as a whole (Guichard *et al.*, 2009) and so likely to stronger be still for Ireland.

The collapse of the housing market is at the heart of the recession and the unwinding of economic imbalances. The fall of residential construction has already subtracted around 10% from the level of GNI and the negative effects from the correction are much wider. House prices on the main permanent/tsb index have fallen up to August by 24% since the

peak, based on a three-month moving average of prices at loan approval stage. Other measures provide a similar picture,[2] although anecdotal evidence suggests that the fall in underlying prices could be larger. While house prices have fallen in many OECD countries, the correction in Ireland is the largest (Figure 1.3). This is in part because it began relatively early, but it is still larger than in the United States which began around the same time. The scale of house-price appreciation in Ireland was very large by international comparison. It was unprecedented in Irish experience. House prices have never fallen substantially in nominal terms in Ireland, except for a brief period of stagnation in the 1980s, although real house prices experienced a prolonged decline in the first half of the 1980s, falling by around a third. Further correction is now needed in real terms to rebalance the market and further nominal falls can be expected.

Consumption has fallen sharply, by almost 9% from the peak by the first quarter of 2009. It is likely to remain weak as households repair their balance sheets, compounded in the short run by increased precautionary saving due to record-low consumer confidence and fears of unemployment. Although purchasing power has been supported by lower prices, the

Figure 1.3. **Housing market developments**



Source: OECD Economic Outlook 85 Database.

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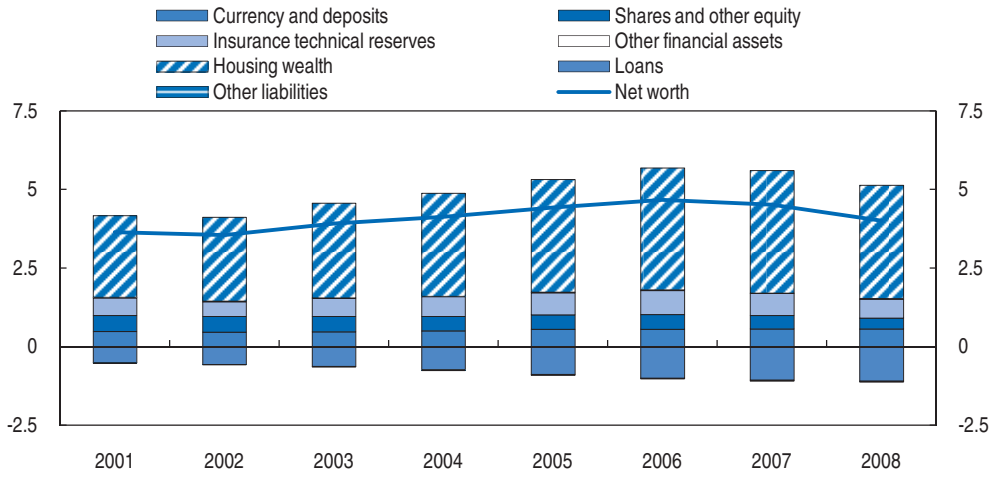
weak labour market has weighed on household incomes. This will intensify as wages fall and taxes increase: OECD projections suggest that nominal post-tax incomes could have fallen by more than 10% by the end of 2010. The savings ratio is also on a sharp upwards path, reaching 8.5% in the fourth quarter of 2008, up 7 percentage points on a year earlier. While some of this increase may be driven by higher uncertainty, much of the increase in saving is likely to reflect a sudden reappraisal of households' circumstances and the burden of outstanding debt. A gloomier outlook in the years ahead and lower incomes will reduce the steady-state level of consumption substantially, even if it takes time for incomes to adjust fully. Furthermore, households should expect lower net incomes in the future as the result of the sharp increase in government debt and the on-going fiscal consolidation.

Household wealth has fallen considerably. Although household assets increased considerably over the economic expansion (Figure 1.4), net worth rose more slowly as the result of increasing borrowing. The household saving rate also declined. Much of the increase in assets was due to rising house prices and higher equity prices, which increased financial assets and pension fund reserves. As a result of sharp falls in equity prices, pension funds recorded large reductions in the value of their assets: indeed, the value of pension funds in Ireland fell by around 40% during 2008, around twice the OECD average, which reflects the relatively high weight of equities in their portfolios (OECD, 2009a). Although this will have been mitigated somewhat by the more recent recovery in financial markets, this vulnerability should be addressed and could have important effects in a country where private pensions are a relatively important part of saving for retirement, even if the population is also young by OECD standards and so there is more time to rebuild savings. While housing wealth is largely redistributive, the redistribution caused by falling house prices may have a depressing effect on consumption. In addition, household debt in Ireland is high by international standards (Figure 1.5). A 30% overall fall in house prices could imply that perhaps one fifth of mortgage-holders would have negative home equity, with the loans on their homes being larger than the debt outstanding (Duffy, 2009).

Figure 1.4. **Household wealth**

Ratio to trend nominal GDP



Source: OECD Financial Accounts Statistics; Department of Environment, Heritage and Local Government; and *OECD Economic Outlook 85 Database*.

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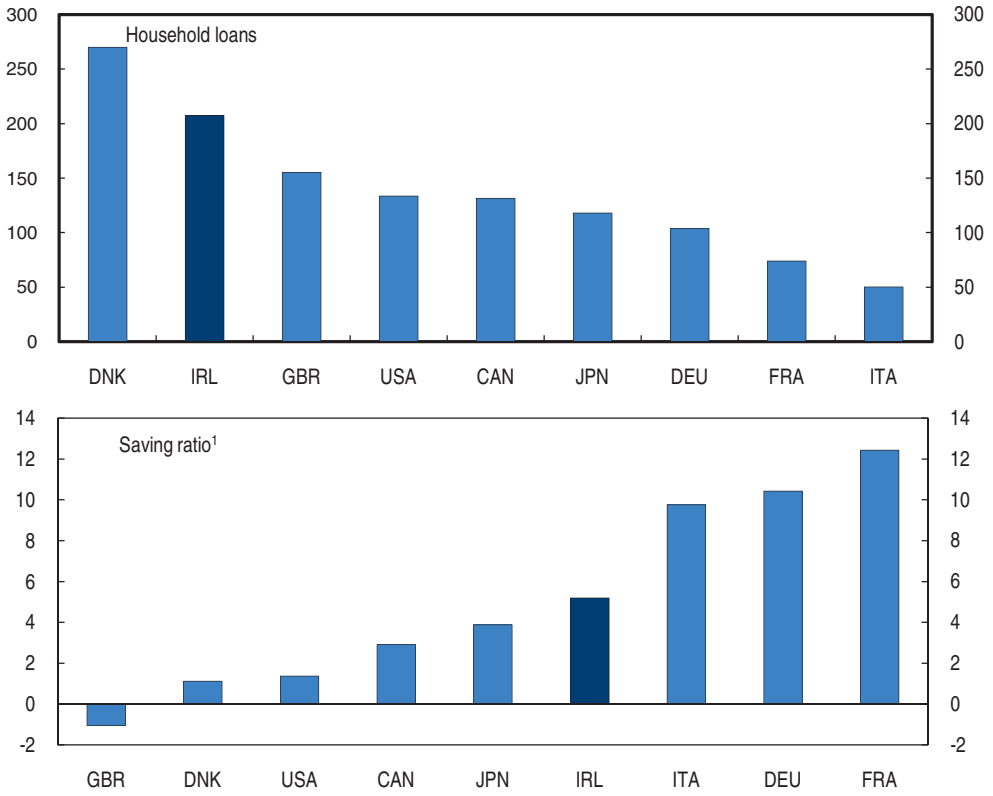
Figure 1.5. **Household saving and indebtedness (average 2005 to 2007)**

Ratio of loans to net household disposable income



1. Net saving ratio including changes in net equity of households in pension fund reserves, except for Canada, France and the United States where these are excluded.

Source: OECD Economic Outlook 85 Database and *OECD Financial Accounts Statistics*.

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As well as sharp retrenchment by the household sector, other factors will also weigh on demand (Table 1.2). Domestically, discretionary tightening of fiscal policy will have a strong contractionary effect, although this could be mitigated by positive Ricardian-type effects on confidence. Internationally, the world has experienced a sharp collapse in trade, although the fall in Irish exports has not been particularly large compared with some other OECD countries because of its specialisation in less cyclical activities such as pharmaceuticals. Weak imports have nevertheless led to positive contributions to GDP from net trade in recent quarters and the current account is moving towards surplus. Although a large part of Irish production is traded across the world, the more price-sensitive relatively basic industries are heavily reliant on trade with the United Kingdom and so have been exposed to the depreciation in sterling, both through weaker exports and greater competition from imports.

Ireland has experienced tough economic circumstances before. There was a long period of stagnation in the 1980s but this was followed by a recovery in the 1990s and subsequent growth that were unusually strong. There are several factors that make such a robust recovery less likely in this episode. *Firstly*, Ireland is a more mature economy and therefore lacks the same latent potential for "catch up" growth. *Secondly*, as argued in Chapter 2, there is an overriding need for fiscal consolidation. While fiscal policy also tightened in the early 1990s, the scale of the required tightening is very much larger now.

Table 1.2. **Key macroeconomic developments**

	Current prices € billion	Percentage changes, volume (2006 prices)				
	2005	2006	2007	2008	2009	2010
GDP at market prices	162	5.7	6.0	–3.0	–7.5	–2.4
GNP				–2.8	–10.5	–2.8
Private consumption	74	7.0	6.0	–0.7	–7.5	–2.2
Government consumption	25	5.3	6.8	1.5	–2.6	–2.9
Gross fixed capital formation	43	4.0	1.0	–15.6	–28.9	–16.4
Final domestic demand	142	5.8	4.6	–4.6	–11.7	–5.0
Stockbuilding[1]	1	0.3	–0.8	0.1	–1.0	0.7
Total domestic demand	143	6.1	3.6	–4.5	–12.7	–4.2
Exports of goods and services	132	5.7	6.8	–1.0	–2.2	0.9
Imports of goods and services	113	6.4	4.1	–2.0	–7.7	–0.6
Net exports[1]	20	0.3	2.6	0.6	3.8	1.3
Memorandum items						
Harmonised index of consumer prices	. .	2.7	2.9	3.1	–1.5	–0.3
Private consumption deflator	. .	2.2	3.0	2.7	–3.6	–1.0
GDP deflator	. .	3.4	1.4	–1.2	–3.9	–1.4
Unemployment rate	. .	4.4	4.6	6.0	11.9	14.0
General government financial balance[2, 3]	. .	3.0	0.2	–7.2	–12.2	–11.3
Current account balance[2]	. .	–3.5	–5.4	–5.4	–2.2	–0.8

1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. As a percentage of GDP.
3. The balance includes additional fiscal measures outlined by the authorities for 2010 in the April 2009 Supplementary Budget.

Source: OECD Economic Outlook Database and provisional update to June 2009 *Economic Outlook 85 projections*.

Thirdly, as argued in Chapter 3, high unemployment benefit replacement rates combined with weak activation policies create the risk of persistent unemployment during any recovery. *Fourthly*, the financial crisis may make it difficult for firms to borrow as the economy recovers. *Fifthly*, the international economic climate is much less favourable than at the time of the previous recovery when Ireland's export markets continued to grow, albeit sluggishly. By contrast, these are estimated to have contracted by around 15% from the peak and are anticipated to pick up sluggishly over the next year.

This is also the first major correction Ireland has experienced since EMU. This implies that adjustment will have to take place in a different way from the past, where the nominal exchange rate could be adjusted. Ireland has actually been in fixed exchange rate regimes since independence, but it followed a very similar macroeconomic path to the United Kingdom when the currency was pegged to sterling and there was a number of realignments during Irish membership of the European Exchange Rate Mechanism (ERM), including a 10 per cent devaluation in 1993. Facing idiosyncratic shocks within a large monetary union, policy rates are unlikely to be set at the same level as they would if Ireland had an independent monetary policy, although the ECB policy rate is now close to zero.

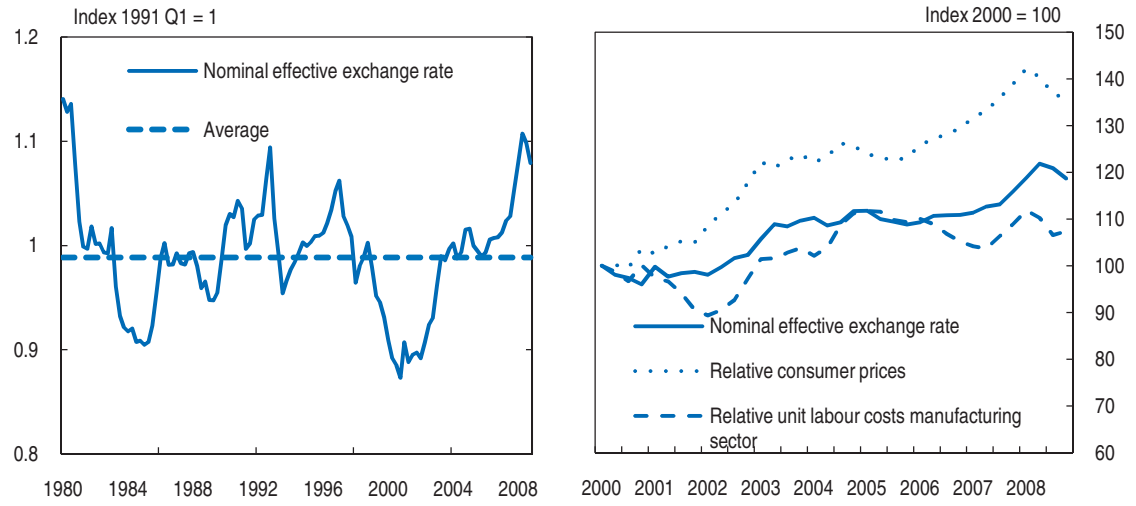
The adjustment to rebalance the Irish economy in response to the fall in demand will involve a reduction in prices, as well as changes in relative prices between different activities and sectors. A key factor in the rebalancing of demand and supply, leading to recovery, is the level of potential output. As discussed below, the sustainable level of output is falling and is likely to be lower than previously estimated. With both supply contracting and demand falling, it is unclear whether prices in the domestic economy should be higher or lower to

achieve balance. OECD estimates, however, suggest that there is considerable slack in the economy even if this weakness in demand only accounts for part of the overall fall in output since the peak (OECD, 2009). Within a monetary union and given the overriding need for fiscal consolidation, there is little that policy can do to boost domestic demand from its current level. A fall in price levels should boost demand for goods and services by raising purchasing power. For a small open economy such as Ireland, much of the economic adjustment occurs through boosting external competitiveness. Lower prices will make non-tradeable goods more attractive for consumers and encourage production to switch to tradeables. This adjustment in prices has significant implications for nominal wages. To maintain real wages, lower nominal wages are needed if the price level falls. In addition, to restore competitiveness, unit labour costs need to be lower to reduce the costs of producing tradeable goods, which would in turn lower the real wage defined in terms of the price of consumption. As part of the return to economic balance at a lower and more sustainable level of output, real wages and average costs are likely to be lower than in the recent past.

Considerable adjustment in wages and prices already appears to be taking place. Inflation has decelerated at a fast pace and the general price level is falling: year-on-year headline CPI inflation has dropped to –5.9% in August 2009, compared with positive inflation of 4.3% inflation a year earlier. Falling mortgage costs explain a large part of this decline, together with the unwinding of the steep increase in global food and energy prices. Core HICP inflation, defined as excluding food and energy and with no housing cost element, has also dropped and turned negative, standing at –1.5% in August 2009. OECD forecasts suggest that Ireland will experience a period of mild deflation, a fall in the general price level, in both headline and underlying terms. As discussed in Chapter 3, wages also appear to be falling at a fast pace: OECD forecasts suggest that average nominal wages will decline by around 5% from their peak (OECD, 2009b). This adjustment is without precedent in recent times among industrialised countries.

A key question is how far prices and wages will need to fall to restore macroeconomic balance and competitiveness. In part, this will depend on developments elsewhere. However, the scale of falls in prices and wages in Ireland appears exceptional compared with most of the OECD countries and it is therefore contributing effectively to improving its relative position. While the falls have been relatively large, wages and prices remain high in Ireland by international comparison. The overall level of competitiveness is particularly difficult to assess in the Irish context because it depends on productivity and how the value of additional production compares with the cost. This is hard to measure for Ireland due to the importance in overall production of some activities with very high measured value-added but with relatively low labour-intensity. Estimates based on more sophisticated models suggest that the real exchange rate may be overvalued by up to 20% (IMF, 2009). Irrespective of the level, it is clearer that competitiveness eroded over the period 2002 to 2007 (Figure 1.6). Compared with the past, Irish exports are likely to be much less price-sensitive as there is a large share of more sophisticated products for which there are few substitutes and because of the importance of intra-firm trade. A simple exercise suggests that wages may be well above productivity levels, proxied by national income, but this simple comparison depends crucially on the true level of labour productivity (Figure 1.7). Although the export sector is exposed to strong international competition, the domestic sheltered sectors do not face strong competitive pressures in many respects, as discussed in Chapter 4. Price adjustment therefore could be more modest in these sectors, which implies that greater adjustment will

Figure 1.6. **Competitiveness indicators**



Source: Economic Outlook 85 Database.

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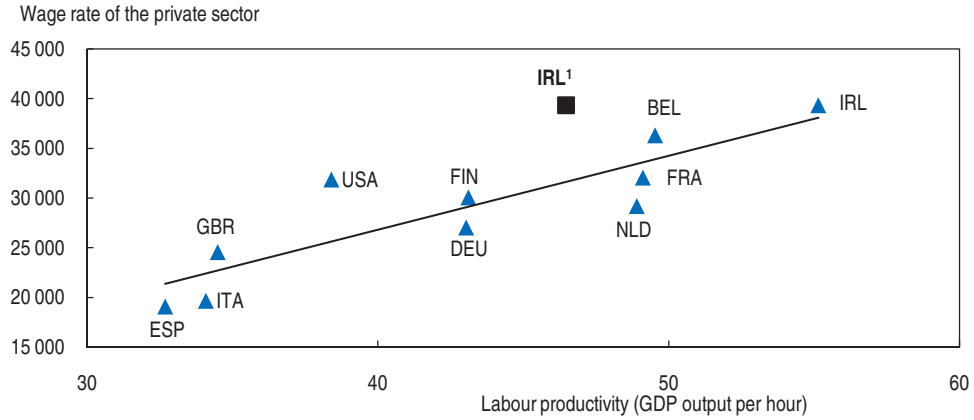
Figure 1.7. **Wages and productivity (2008)**



1. Labour productivity for Ireland is calculated using GNP instead of GDP.

Source: Economic Outlook 85 Database.

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be needed externally. Policies to increase competitive pressures in those sectors would be helpful, both to reduce domestic costs and increase price flexibility.

There are risks associated with deflation as a means to restoring competitiveness and few precedents in recent history available as a guide. One significant risk is debt deflation: the value of debt is in general specified in nominal terms at origination, so that a fall in prices increases the real value of debt outstanding. This is particularly problematic if the fall in prices is unexpected. With floating interest-rate debt such as most Irish mortgages, this problem may be attenuated because the nominal interest rate would adjust downwards in line with weaker inflation expectations. However, Irish borrowers face interest rates that depend on expectations of euro area, not Irish, inflation and hence will not benefit fully from this effect. The aggregate impact of debt deflation is less than the impact on debtor households because lenders gain from the increase in the real value of loans.

Deflation also has other implications. Firstly, with nominal interest rates set at a level appropriate for the euro area, the real interest rate in Ireland could be relatively high and, if prices are expected to fall further, there is a strong incentive for households to postpone consumption. Secondly, inflation is not neutral in a number of respects. In particular, social benefits and elements of the tax system are not indexed to either wages or prices, although they have typically been up-rated in the past to reflect the rising cost of living. It will be important to make the necessary adjustments to reflect changes in the cost of living, both to maintain the appropriate value in real terms and to avoid putting further pressure on the public finances.

Within monetary union, the Irish authorities have relatively few instruments to support demand. Furthermore, the budgetary situation requires substantial fiscal consolidation. This will inevitably have a depressing impact on demand, although the pace of consolidation should not be frontloaded more than necessary to avoid undue negative effects on activity and this effect may partly be mitigated by Ricardian-type responses to the consolidation. It is also necessary to resolve the banking crisis. Adjustment in the private sector through prices and wages appears to be quite rapid so far and Ireland may eventually fare better than other countries such as Portugal and Germany that have taken many years of weak economic performance to deal with the aftermath of construction booms and to restore competitiveness within the monetary union. Structural policy settings, with some important exceptions, are also relatively favourable to the effective reallocation of resources.

Resolving the banking crisis

Normalising financial conditions, including returning the banking sector to health, is a precondition for economic recovery. Uncertainty and the weight of prospective losses on past lending have led to significant restrictions in the normal functioning of the financial system in Ireland and internationally. The European Central Bank (ECB) Bank Lending Survey shows a considerable tightening in credit standards up to July 2009, more so in Ireland than in the euro area as a whole (although the small number of banks in Ireland makes this indicator difficult to interpret), and this tightening appears to have continued at a high rate up to the most recent observation. Business surveys also point towards tighter conditions in bank lending. In addition, interest-rate spreads on bank lending have increased. Although surveys suggest that loan demand has also weakened significantly, higher lending spreads and tighter non-price conditions have depressed credit. A significant reduction in the availability of bank credit has resulted from the pulling back of foreign banks' activities. Overall private-sector credit fell by 3.0% year-on-year in August, a sharp slowdown from growth of 12.8% a year previously. Credit outstanding peaked in late 2008 and is now somewhat below that level. These figures are net of provisions, which have sharply increased. The growth rate of mortgage lending has slowed sharply and there has been a strong flow of repayments of outstanding debts.

Although reduced confidence in Irish banks during the financial turmoil initially constrained their ability to borrow, this was reflective of underlying weaknesses. During the period before the financial crisis, Irish banks were very heavily dependent on short-term funding in the international interbank markets (Table 1.3). Retail clearing institutions in aggregate drew on interbank deposits for around 40% of their funds in 2007. When problems in the US sub-prime market emerged in mid-2007 banks became reluctant to lend to each other given the uncertainty about the scale and distribution of losses, Irish

Table 1.3. **Aggregated balance sheet of retail clearing credit institutions**

	December 2002		December 2007	
	€ billion	% of total assets	€ billion	% of total assets
Total assets/liabilities	128		441	
Debt securities	8	6.6	70	15.8
Interbank deposits	42	32.5	183	41.6
of which: Foreign	*36*	*27.9*	*117*	*26.6*
Capital and reserves	9	7.3	22	5.0
Central bank deposits	2	1.8	5	1.2
Other deposits	64	50.1	131	29.7
Residential mortgages	16	12.3	51	11.6
Other loans	53	41.6	168	38.1
Other assets	59	46.2	222	50.3
Leverage (ratio[1])	13.8		19.9	
Funding gap[2]	44	34.2	288	65.3
GNP	106		161	

1. Simple leverage ratio measure defined as ratio of total assets to capital and reserves.
2. Simple funding gap measure defined as total liabilities less other deposits, capital and reserves.

Source: Central Bank and Financial Services Authority of Ireland.

banks were therefore particularly severely affected. This occurred despite public information that they had no substantial exposure to sub-prime lending, in part provided by a survey published by the CBFSAI. As a result of the difficulties faced by the Irish banks, there was a sharp increase in their credit-default swap spreads and a steep fall in their share prices: while overall euro area equity prices are around 60% of their January 2007 levels, financial stocks have fallen more sharply with Irish financial institutions particularly severely affected. From the peak in values of February 2007 to the trough of March 2009, share prices in the two main banks fell over 98%, although there has since been a significant recovery in the share prices. Currently their shares are worth less than a quarter of their peak value, despite the benefits of extensive government support.

The underlying problem, however, is that the Irish banking system undertook enormous borrowing to fund a huge extension of credit, heavily concentrated in property-related lending. The total assets of the core banks in Ireland (retail clearing and other institutions with primarily domestic business) are around five times annual GDP, far higher than appears the case in most other industrial countries (Box 1.1).[3] Much of the lending by this group of institutions was to Irish residents. Total lending to Irish residents from all sources is about two and a quarter times GDP. These Irish banks also lent extensively abroad, but this was often biased towards property-related assets and to markets highly correlated to Ireland, with Irish banks having been very active in providing mortgages in the United Kingdom at the height of the housing boom there. Risk diversification was therefore limited. Over 60% loans in 2007 were property-related (CBFSAI, 2007). There was heavy lending to residential development and commercial real estate, as well as for residential mortgages. The buy-to-let sector accounted for 23% of outstanding mortgages in 2007. The expansion in credit is striking: over the five years from 2002, total assets increased by a factor of almost 3.5. This led to large increases in property prices. As a result, the value of collateral increased and further lending became possible. However, this increased the vulnerability of banks if the cycle reversed. In addition, the absolute and relative dependence on short-term financing increased the

Box 1.1. **How big is the Irish banking sector?**

Comparing the "size" of banks across countries should be a useful indicator of the state of financial systems and the risks they pose to their national economies. Unfortunately, internationally comparable data in this area are scarce and cannot be interpreted straightforwardly.

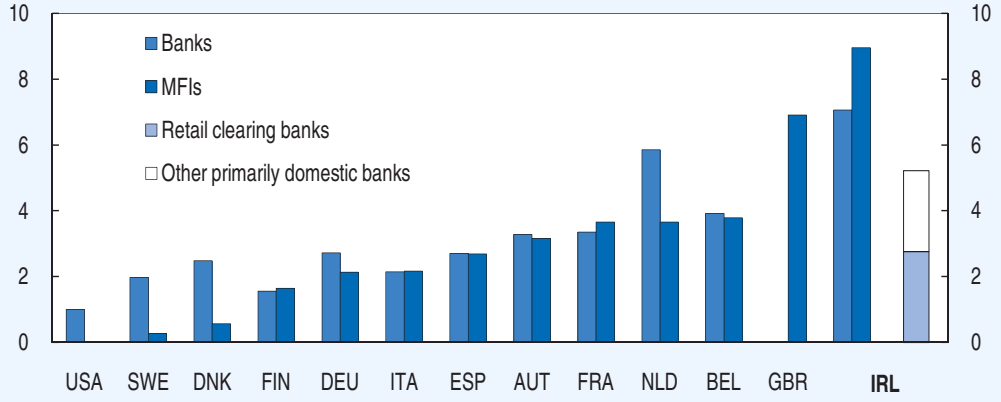
A key difficulty is that banking and finance are very international activities. What exactly is an "Irish" bank? Most national accounts and other financial statistical sources define nationality in terms of residency: banks resident in Ireland include Irish banks' activities carried out through domestic companies, subsidiaries of foreign banks that are incorporated and regulated in Ireland, and the branches of foreign banks that are regulated by their home authorities. It excludes the foreign subsidiaries of Irish banks and branches of Irish banks abroad.

But, "residency" is not the relevant economic concept in many cases. Irish resident banks are not necessarily Irish-owned as this includes foreign-owned branches and subsidiaries, and it excludes the foreign activities of Irish head-quartered banks. Of course, even banking groups headquartered in Ireland have foreign shareholders. Furthermore, credit to the Irish economy does not necessarily come from resident banks. Equally, banks resident in Ireland may not have close links to the domestic economic and financial system. Regulatory responsibility, including any need for public support, does not apply to resident financial institutions only. These problems with "residency" as a proxy for other aspects of the banking system are a particular issue for Ireland, where the International Financial Services Centre (IFSC) houses activities of a wide range of international banking institutions which often have few links to the Irish economy.

Estimates of the size of the Irish banking system in terms of total assets vary considerably depending on the statistical measure used (Figure 1.8). The highest estimates shown cover monetary and financial institutions (MFIs) resident in Ireland: this includes money market mutual funds, around one fifth of the total, many of whose assets and liabilities are foreign. Estimates of the size of the resident *banks* alone lead to a substantially lower estimate for Ireland. Data that relate more closely to domestically-owned and active banks is available from the Irish central bank. These identify "retail clearing" banks, those with the closest links to domestic activity and which are primarily Irish-owned, and other banks with "primarily" domestic business. These definitions are quite broadly drawn and one large institution in fact has quite limited domestic business in Ireland. 5 foreign-owned banks have a retail presence in Ireland. Nevertheless, the size of the banks in Ireland with strong domestic links appears to be large relative to GDP compared with many other OECD countries, although it is difficult to draw exact international comparisons as comparable data do not exist across countries using these definitions.

Figure 1.8. **Alternative measures of banking sector size (2008)**

Ratio to GDP



Source: European Central Bank, Central Bank and Financial Services Authority of Ireland, *OECD Bank Profitability Statistics*.

StatLink http://dx.doi.org/10.1787/732164883015

maturity mismatch of banks' balance sheets and raised the vulnerability to shortages of liquidity. Furthermore, although tier-1 risk-weighted capital ratios were broadly maintained, leverage measured by the value of assets for each unit of equity capital increased substantially. Increased risk-taking raised the vulnerability of Irish banks to reversals and led to a huge expansion of credit that was inherently unsustainable.

Banks are likely to face very large losses on their assets. The ultimate scale of losses, however, is essentially unknown at present. It depends both on the exact nature of the lending that banks undertook, whether specific projects will yield the expected return, and the overall state of the economy and availability of credit. In particular, property development-related loans are a large part of banks' overall balance sheets and are largely dependent on the future performance of the economy with, in extremis, a floor set by future land values. Standard and Poor's, for example, estimates the cost of bank rescues in Ireland as between € 20 and € 25 billion. Provisions at Anglo Irish Bank for the six months to March 2009 were € 4.1 billion. These sums are very large relative to the amount of equity capital and the immediate ability to generate profits of Irish banks.

Securing bank funding

A guarantee scheme was introduced on 30 September 2008 in the wake of the collapse of Lehman Brothers to address the lack of market confidence in systemically important institutions created by fears about the viability of the Irish banking system, in addition to reinforcing deposit insurance. The guarantee scheme covers almost all bank liabilities (both retail deposits and market finance) for two years from 30 September 2008, with reviews every six months. It covers banks with significant domestic business in Ireland and is voluntary. Banks must accept additional controls on their activities to participate, which has given the supervisory authorities much greater involvement in the banking system and access to additional information. The scale of guarantees is substantial: initial covered liabilities at September 2008 stood at € 365 billion. Covered liabilities have fallen significantly since then and, for the second quarter of 2009, averaged € 275 billion. This is around 1.5 times annual GDP. The banks pay a charge for the guarantee based on initial estimates of the additional cost of government borrowing due to the scheme. This was in the range of 10-15 basis points and was intended to raise € 1 billion over the lifetime of the guarantee scheme. Although this arrangement has been approved under the EU state aid regime, the fees should be priced as an insurance premium and not solely on the basis of the estimated impact on government funding costs. The price of the guarantee appears very low compared with both the increase in government funding costs over the past year and credit default swap rates for Irish banks, however other factors notably the government deficit have also impacted on government costs. There is therefore a large element of transfer to the banking system implied by this regime. It would be appropriate to address this imbalance at the earliest opportunity to lower the transfer and to bring the cost to institutions more into line with that faced by European peers.

Overall, the initial guarantee was more comprehensive than similar arrangements put in place in many other countries, although this reflects the earlier emergence of liquidity pressures in Ireland. The Irish authorities were faced with an urgent need to act and could not wait for a common approach to be established across other countries. In addition, market funding was very large in Ireland so efforts to secure deposits alone would have had a more limited impact than elsewhere. Although there was little choice in the short run, there are a number of problems with issuing such guarantees. The most immediate is finding an

exit-strategy by which the banks return to borrowing without public support. A new Eligible Liabilities Guarantee (ELG) scheme has been proposed to supersede the existing guarantee: this envisages guaranteed debt (including deposits) being issued by participating institutions up to 29 September 2010 with a maximum maturity of five years for the debt/deposit with the guarantee fee set according to ECB guidelines. Provided it is approved, this would allow banks to raise debt using the guarantee at longer horizons but also defines when this arrangement will end. Guarantees on the scale that has occurred in Ireland have a large bearing on how banking problems are resolved and can further complicate shifting any of the burden of losses onto private debt holders. In the long run, guarantees in Ireland and elsewhere have increased moral hazard as banks may expect that they will again be protected when they are in trouble, which increases the need for vigorous regulation and supervision.

Before the guarantee scheme was put in place, a change had been made to the Deposit Guarantee Scheme (DGS) in September 2008 to raise the limit from € 20 000 to € 100 000 per depositor per institution and remove the previous coinsurance element so that the entire deposit is safeguarded up to the ceiling, initially through the DGS and then through a direct government guarantee. The current minimum ceiling for coverage in the EU is € 50 000, which will rise to € 100 000 by end 2010. Following the adoption of a new Directive in March 2009 amending the 1995 EU Deposit Guarantee Schemes Directive, new legislation was introduced in June 2009 in Ireland. This reduces the maximum pay out time from three months to twenty working days, extends the scheme to credit unions and makes a number of institutional changes. This pay out delay, although in line with the new EU directive, is relatively long compared with some other OECD countries (such as the United States) and could provide insufficient reassurance to savers. Consideration should therefore be given to reducing it further, say to no more than seven working days as the United Kingdom is adopting as a target pay out period from 2010, and the appropriate operational measures taken to ensure that the scheme is credible. The DGS has been simplified by removing the netting arrangements across different accounts held by the same depositor, making it simpler to administer. Over time, banks' contributions to the fund should be raised from the current level of 0.2% of eligible deposits to reflect the increase in the guarantee provided as well as any revisions to the likelihood of payout, both for individual institutions and for several institutions at the same time. Consideration should be given to making the contributions risk-based.

Although the risk spread on the lending of Irish banks remains higher than prior to the financial crisis, the system of guarantees has allowed the banks to continue to access international markets. As conditions in interbank markets have improved in recent months, Irish banks have benefitted from this reduction in funding costs. The two main banks have issued paper to mature beyond the guarantee date of September 2010. The expansion of the ECB's balance sheet since August 2007 has also provided considerable support to the Irish banking system: retail clearing banks' central bank deposits rose from under € 1.64 billion before the crisis to close to € 46 billion by June 2009, a much faster increase than for the Eurosystem's balance sheet as a whole and representing around 8% of all Irish retail bank liabilities. In addition, the volume of outstanding mortgages that has been securitised has also increased substantially. This may be because securitising such assets makes them eligible for repo at the ECB and therefore a source of liquidity funding.

Restoring the banking system to good health

Given the large accumulated and prospective losses, it is necessary to ensure that the banking system is returned to good health and able to function normally. This requires that

banks are well-capitalised and not burdened by uncertainty about future losses. In common with most other countries, the Irish authorities have provided capital to the major banks. However, Ireland is unusual in having taken the further step of creating the National Asset Management Agency (NAMA) to deal with problem assets (OECD, 2009c).[4]

The government announced its intention to recapitalise the banks in December 2008 with the aim of increasing the stability of the financial system and restoring confidence in Irish banks. Following the initial plan to inject € 5.5 billion into the three largest banks, a package was announced on 11 February 2009 for Allied Irish Bank (AIB) and Bank of Ireland (BOI), after the nationalisation of Anglo Irish Bank in January 2009. Under the scheme, the government has provided € 3.5 billion of Core Tier I capital each to AIB and BOI in the form of preference shares with a dividend of 8% payable in either cash or common equity at the banks' discretion. The banks have the option to repurchase these preference shares at face value for the first five years and then at 25% premium thereafter. Warrants give the state the option to purchase up to 25% of the ordinary share capital of each institution at strike prices that place a very low valuation on the banks' equity, prices that were subsequently reached but are below the current level. Although the 8% yield on preference shares gives banks a strong incentive to repay the government's investment, it also acts as an additional drain on the banks' cash resources. The use of preference shares removes any upside gains to the taxpayer as the performance of the banks has improved. A number of additional conditions were imposed. The Minister has the power to appoint 25% of directors in each bank and has 25% voting rights for appointments, and the banks need permission for further changes to their capital structures. The banks also accepted to reduce compensation for senior executives. Each committed to raise lending capacity to first-time buyers by 30%, increasing credit availability to small and medium enterprises by 10%, to participate in a "clearing group" to resolve problems of lack of credit for viable projects, and to make contributions to funds for venture capital and "green" innovation. AIB committed to generating a further € 1.5 billion of capital in April, based on needs identified by independent auditors as part of the due-diligence for the initial capital provision. All banks must abide by new codes of conduct on business lending and mortgage arrears. In May 2009, following the publication of Anglo Irish Bank's half-year results, the Government committed to providing up to € 4 billion in capital for Anglo, with an initial € 3 billion provided in June 2009. Anglo increased capital by a further € 1.6 billion through a debt buy-back exercise completed in August 2009.

The recapitalisation of the banks and the creation of NAMA are important steps in resolving the banking crisis in an effective way. Although Ireland has not explicitly used public "stress tests" along the lines of the United States, the authorities were able to get a good picture of the state of the banking system through the analysis associated with the guarantee scheme and due diligence exercises associate with state recapitalisations, in part carried out by independent consultants, and to act accordingly. This allowed the requirements to return the institutions to good health to be identified and for Anglo Irish Bank to be treated in a different way from the other institutions. This kind of "triage" is extremely important in getting to grips with underlying problems in a timely way; although there is limited evidence of what works and each crisis is different, evidence from cross-country experience suggests that allowing impaired institutions to continue to operate for extended periods of time can significantly increase the fiscal costs associated with resolving banking crises (OECD, 2002).

The establishment of the NAMA was proposed in April 2009 to purchase property development-related loans (Box 1.2). Creating NAMA to deal with troubled loans may improve the chances of minimising the losses on these loans by allowing greater

Box 1.2. **The National Asset Management Agency**

The National Asset Management Agency (NAMA) was proposed in April 2009 to take property-development related loans off banks' balance sheets. Combined with additional capital injections as required, this would leave the banks in a stronger position to undertake new lending by reducing the uncertainty about future losses on these loans and improving their capital position. Draft legislation was published in July and the proposal submitted to the parliament in September 2009. It is currently pending parliamentary approval and therefore the details of the scheme remain to be confirmed. The NAMA will be a semi-state entity under the National Treasury Management Agency (NTMA). The main features of this scheme are:

- **Participation** in the scheme by banks is voluntary. It is anticipated that five of the institutions covered by the guarantee scheme will seek to participate, including Anglo Irish Bank which has been nationalised.
- The **assets covered** are land for development loans and certain associated loans. In applying to participate, banks would have to agree to sell to NAMA all eligible loans identified by it for transfer. The current book value of the assets projected to be transferred to NAMA from these institutions is around € 77 billion, of which € 49 billion are land and development loans and the rest is associated lending. € 9 billion is estimated to be rolled-up interest. The projected portfolio amounts to around 21 500 loans from almost 2 000 customers, primarily in Ireland but also internationally. The average loan to value ratio is estimated to be approximately 77%. It is estimated that € 28 billion of the loans were originated by Anglo Irish Bank, while € 24 billion and € 16 billion come from Allied Irish Bank and Bank of Ireland respectively.
- **Asset valuation** by NAMA is based on the current market value of the underlying collateral, adjusted to reflect longer-term economic value. The valuation methodology will comply with EU guidelines. In practice, it is assumed on an illustrative basis that there has been a 47% average decline in the value of underlying property collateral since origination of the loans but that the long-term economic value of the assets is around 15% than the estimated current market value. This suggests that NAMA would pay € 54 billion for the loans, a 30% discount on their current book value.
- There is a **risk-sharing mechanism** whereby 5% of the government securities or guaranteed-debt used to purchase the assets from the banks is in the form of subordinated debt, which will not be repaid in the event that the NAMA makes a loss on those loans. It is estimated that this margin, together with a 10% recovery in asset prices (rather than 15% assumed above), would avoid any loss to the tax payer.
- The government intends to use a **levy** to recoup any losses if the NAMA makes a loss over its lifetime.

specialisation in the working out of bad assets and by ensuring that this is the management's main focus. Given the amount of loans to property development in Ireland, the NAMA may be able to play an important role in ensuring that loans made by different banks are dealt with in a way that preserves the most value by internalising some of the externalities that can arise between different real estate projects. For the NAMA to fulfil these roles, it is essential that it has the necessary resources and expertise, that appropriate incentives exist for those working with the NAMA to achieve its objectives, and that its independence from political and industry pressures is ensured. It is also important that the NAMA scheme is not too narrow in scope: as discussed below, Ireland has little experience of losses on household

mortgages but the pressures may be stronger in this episode than in the past and lead to losses in this segment as well. The draft legislation envisages that the NAMA could be extended to other classes of assets, increasing the scope and scale of the agency, although the government has stated that it has no intention at the present time to do so.

The creation of the NAMA should in principle help to resolve uncertainty about future losses on banks' balance sheets and enable future lending on a sound footing, in combination with the guarantee and government recapitalisation. The key issue with the NAMA is at what price it purchases the troubled loans and how risks are shared between the banks and taxpayers: a low price tends to reduce the risks of large fiscal costs but imposes greater losses on banks, requiring additional recapitalisation and greater public ownership of some banks. It is inherently difficult to establish such a price given the state of financial markets and the idiosyncratic nature of property-development loans. This also makes it unfeasible to use market or auction-based mechanisms. In terms of the overall portfolio, the valuation scheme for the assets that is being used is based on explicit assumptions about falls in the value of the underlying collateral but builds in an expectation that prices will return to a higher level as a result of economic fundamentals in the medium term. To avoid undue risk to the tax payer if this price were to higher than the ultimate value that is recovered from the assets, there is an explicit risk-sharing mechanism covering the first 5% through subordinated debt. Any profit made by the NAMA would be retained by the state. In addition, the government is making provision for a levy which will be applied after 10 years or on the winding up of NAMA. It would be important to act on this if these circumstances were to arise. In addition, introducing such risk sharing is somewhat at odds with the original intention of insulating the banks from losses on their portfolios, although the NAMA approach may make the initial losses more explicit than if they remained on banks' balance sheets, and in an accounting sense these residual losses would not have to be recognised as quickly. Public ownership of bank equity also brings in an element of risk sharing: the largest source of assets in the NAMA is Anglo Irish Bank, which is nationalised and so the price paid for its assets is in essence a transfer within the government balance sheet, and the government has a significant stake in most of the other institutions concerned.

Bank recapitalisation has also increased the role of the state in the banking system. Although the government has been keen to maintain private-sector discipline and market listing for private banks, this is difficult when they are so heavily reliant on public support and there is such close interaction with the authorities. This raises a difficult dilemma. Private ownership of banks is likely to be the best solution in the long run but, the greater the private stake, the more likely are private individuals to profit from state support. Given the high level of public involvement already, the lines are somewhat blurred between different forms of ownership. It is clear that banks, irrespective of their ownership, should be run on as close as possible to a profit-making basis without being used to support other social objectives. Temporary nationalisation would have a number of drawbacks, but it should not be ruled out altogether provided that appropriate safeguards are in place. Exit from public ownership will ultimately be required and should aim to maximise the return to the tax payer.

Overall, the combination of different instruments amounts to maintaining the existing level of liabilities and then trying to provide sufficient capital to absorb the losses. As a result, substantial banking losses are ultimately likely to be met by the taxpayer. Although this solution has only been adopted in a few cases during the crisis and may be especially difficult to implement for a small country within the global financial system, an alternative would have been to impose some losses on unsecured creditors. This would

have reduced the size of banks' balance sheets and compensated for the losses on the asset side. By swapping bad assets for relatively high yielding government debt and with sizeable margins between government-supported funding costs and lending rates, banks' profits before credit losses will be high in coming years and this will to a great extent contribute to restoring them to good health. In addition, the government debt that will be taken by banks to replace their NAMA assets can be used for market funding or as collateral at the ECB and therefore also contributes to liquidity. The authorities may have had a wider range of options and been able to act more quickly if Ireland had a special bankruptcy procedure for banks, allowing banks to be restructured rapidly and in an orderly way. The Special Resolution Regime in the United Kingdom, introduced following the financial crisis, provides a basic framework where banks can be sold, wound down or taken into public ownership. Consideration by the government of options for the introduction of a legislative regime to deal in a systematic way with distressed financial institution is underway and proposals are anticipated next year. An exit strategy is required to move from the current situation towards the long-run sustainable situation of a privately-owned banking system run without public support and this is currently being examined. Support should be withdrawn gradually so as not to jeopardise progress that has been made (OECD, 2009c).

Financial regulation and supervision

The financial and banking crisis has revealed a number of weaknesses in the regulatory and supervisory framework, both in Ireland and internationally. While the Irish approach in these areas takes place within a framework of European regulations (OECD, 2009d) and international practices, there is substantial national discretion to impose tighter regulations and the way supervision is applied is largely a national matter. The European and international regulatory contexts may change substantially as a consequence of the financial crisis, but there is nevertheless important scope for Ireland to strengthen its own arrangements.

The main supervisory issues were two-fold. Firstly, there have been serious and well-documented issues in Irish banks recently. These related mainly to Anglo Irish Bank and are currently under official investigation. Although there may be an idiosyncratic element to these breaches and Anglo was in serious financial difficulties at the time, these transactions suggest that the threat of enforcement was too weak. The regulator should be better informed about what banks are doing and enforce the rules more strictly.

Secondly and more fundamentally, Irish banks took enormous risks by such heavy reliance on market funding and the scale of exposure to housing and other real estate lending. As a result, asset prices ballooned and borrowing in the Irish economy reached high levels by international standards. This has resulted in large losses to the banking sector and a high cost to the economy. This reflects a number of regulatory and supervisory shortcomings. At the level of individual institutions, excessive lending growth was tolerated. For example, the total assets of Anglo Irish Bank increased at an average annual rate of 38% over the five years to 2007 (PWC, 2009). Very high asset growth is a well-established predictor of banking difficulties; other states have taken action to reduce the possibility of this problem from arising in the future without a regulatory response, for example as with the US Prompt Corrective Action regime. More generally, there was a failure to recognise the full impact of the decisions being taken by each institution. However, the regulator did take some measures: the risk-weighting in calculating capital requirement for high loan-to-value residential mortgages was increased, while a 150%

risk-weighting was applied to speculative real estate lending, well-above the international norm. In addition, with the implementation of the Basel II system, the three banks that adopted the Internal Ratings-Based (IRB) approach were required to hold 95% of the capital held under Basel I, more than required by international standards, and the transition to this level was made very slow. In addition, a new Consumer Protection Code came into effect in 2007 and the CBFSAI's remit was widened to halt the nascent sub-prime mortgage market. New forward-looking liquidity requirements were introduced.

As the result of recent experience with greater supervisory activity related to the guarantees, substantial changes are underway in financial supervision. There is a move away from principles-based regulation to a more intrusive model. To support this, approval has been given to hire 40 additional staff and the organisation will have these positions filled at the earliest possible date. Examination teams have been strengthened by the addition of a credit specialist who is able to bring cross-cutting experience from different supervised institutions to benchmark banks. Information systems are being enhanced beyond the standard EU requirements to better reflect the key risks for Irish banks. On-site supervisors have been introduced and banks are required to make monthly reports to the regulator. Supervisors now attend a sample of internal bank meetings, up to Board level, rather than relying on minutes. The regulator has a particular focus on how institutions can improve their risk management procedures. Supervisory attention is being increased for institutions in the IFSC.

Taken together, these new procedures represent a major shift in the model of supervision. It will be important to ensure that these measures, which have grown out of the immediate crises and government support, continue to be developed in a systematic and effective way. As financial conditions normalise, it will be crucial to define the boundaries between more intrusive supervision and banks' management of their own affairs. While the regulator should have detailed information about what banks are doing, it should also maintain an independent judgment and sufficient distance from the regulated institutions. A system of numerical triggers should be adopted for certain supervisory actions in line with practice in some other countries. This could include loan growth and the size of funding gaps, as well as the size of exposure to particular types of lending. Where these need to be supplemented by judgment, the regulator should be as transparent as possible. Over time, banks should be required to hold more capital overall in line with developments in international regulations.

The governance of the Financial Regulator is also being enhanced. While currently the Financial Regulator is legally an autonomous entity within the Central Bank and Financial Services Authority of Ireland (CBFSAI) with responsibility for the supervision of banks and a wide range of other financial institutions, the new institutional framework for financial regulation, currently being put into practical effect in anticipation of future legislation, will move responsibility for financial regulation to the central bank, while certain responsibilities related to consumer protection which currently lie with the Financial Regulator, such as consumer information and education and financial inclusion, will be given to a separate agency. The Head of Financial Regulation will sit on the new Central Bank of Ireland Board, which replaces the current board structure. Currently, in order to facilitate joint Central Bank Board and Regulatory Authority consideration of financial stability and prudential supervisory issues, the two meet in joint session monthly and central banking and financial regulatory working arrangements are more closely linked.

Macroeconomic stability and macro-prudential policy

The downturn raises the question of what can be done to reduce the cyclicality of the economy and avoid a similar unsustainable run up of credit and asset prices in the future. Although the debate about macroeconomic and macro-prudential stability is much wider, the issues are particularly important in Ireland given its small open economy and large financial sector. While participation in monetary union has many benefits and has had a stabilising influence during the crisis, it implies that monetary policy in Ireland may deviate from the optimal from an Irish perspective for very long periods, which can encourage large deviations in credit from what economic fundamentals might suggest, in addition to the standard workings of the credit channel. Many of the feedback mechanisms that might have helped to balance the economy appeared to act very weakly during the past cycle.

A number of different policies were used in Ireland during the boom to "lean against the wind" of growing asset-price and credit imbalances:

- A number of changes to housing taxation were made over the period 1998-2001, including higher stamp duties and reductions in tax relief. These changes managed to slow the housing market considerably, particularly during the period 2001-02, but were largely reversed in 2002.[5]
- Special Saving Incentive Accounts (SSIAs) were introduced in May 2001 to try to increase saving temporarily and reduce consumer spending.[6] There could have been a problem as these matured during 2006 and 2007, injecting funds of around 15-20% of household disposable income at a time when demand was already especially strong, but this effect ultimately appears to have been fairly limited.
- The National Pension Reserve Fund was established in April 2001 to prepare to meet future costs related to social welfare and public service pensions from 2025. Although this is not a countercyclical measure *per se* and was instituted before the most recent phase of economic expansion, it did have the effect of increasing the national saving rate relative to what it would otherwise have been during the years of strong growth, and it provided a pool of funds that have been available to deal with the financial crisis.
- Financial regulations were tightened, as discussed above, in recognition of growing risk associated with some property-related activities, the need to protect the consumer and ensure that the liquidity regime was sufficient.
- The government budget was mostly in surplus over a long period including the most recent expansion, peaking at close to 3% of GDP in 2006 and with a cyclically-adjusted underlying surplus of around 2%, although this was boosted by very buoyant property-related receipts.

Although these restrictive measures went in the right direction, their scale was clearly insufficient to counter the growing domestic imbalances and forces, both Irish and international, adding to the housing and credit cycles. Some measures were limited in scope or time and might have been more effective if introduced a great deal earlier, before the credit cycle became self-sustaining. Such policies should be further developed and applied more aggressively in the future. While annual Financial Stability Reports provided a good indication of some of the emerging difficulties, they did not translate into sufficient action. These reports have not been published since 2007 and their publication should be reinstated as they give an important overview of developments related to financial stability. Bringing the Financial Services Authority within the Central Bank should increase the ability to put macro- and micro-prudential information together and to vary

regulations in an appropriate way. Changes in European and international regulations may also help but, given that the credit cycle will not always be the same across all euro area countries, it is important to have some local variation in the regulatory stance. Consideration should be given to the use of an overall leverage ratio, covering all assets, to put a limit on the amplitude of the cycle, while either dynamic provisioning or counter-cyclical capital requirements could contribute to dampening the cycle. A rules-based numerical framework may be helpful in ensuring that these policies are applied consistently: this could limit forbearance by regulators, and make counter-cyclical measures easier to apply in an environment where the financial sector might appear to be thriving and different measures could be in force at the same time in other jurisdictions. However, there is little experience internationally of effectively applying such counter-cyclical regulations. More effective regulation and supervision may therefore play an important role in achieving stability: making each institution as a whole more stable contributes to overall stability even if it is not sufficient in itself. In particular, competition from fast-growing institutions put significant commercial pressure on other banks to reduce their lending standards during the credit expansion. By avoiding such regulatory failures related to some institutions, these pressures are less likely to exist elsewhere. Furthermore, reforms to the housing market and a strengthening of fiscal institutions to achieve a more counter-cyclical outcome would contribute greatly to financial and broader economic stability.

The housing market needs to be reformed

The current situation in the housing market creates immediate challenges. With rising unemployment and falling incomes, the high burden of debt is likely to become a more serious constraint. Low policy interest rates in the short run are attenuating these effects, but there will be more pressure to meet mortgage interest payments as the ECB raises interest rates in the future. Furthermore, negative equity has become more common. As people are paying mortgages that are greater than the value of their homes, there is a strong incentive not to pay but mortgages in Ireland are with recourse so it is difficult for homeowners to distance themselves from this situation. Historically, home repossessions have been extremely rare and there is little evidence of a substantial pick up in repossession orders at present, by contrast with the United Kingdom that has a somewhat similar legal framework but much greater experience of repossessions both in the past and in the current slowdown. The very limited increase in the number of Irish repossessions to date largely relates to the small amount of "sub-prime" lending that took place. What will happen to repossessions in the coming years is a major uncertainty: the level of indebtedness is much greater than in the past and negative equity is a far greater problem, because house prices are now falling in nominal terms even as deflation is raising the value of debt outstanding. In addition, the increased maturity of mortgages reduces the scope to reduce the burden of mortgage payments by extending the term further.

The government has introduced a new Mortgage Arrears Code in the context of recapitalising the banks, but this only sets out procedures for dealing with mortgage arrears. In addition, a Mortgage Interest Supplement is available to households without work to assist with their mortgage interest payments, subject to various conditions. A ceiling and time limit should be applied to this payment. Although the number of people claiming this benefit over the past year has doubled, it remains a very small fraction of the total number of unemployed. The government introduced a temporary Home Choice Loans scheme for first-time buyers to help them buy newly-built houses if rejected by

commercial banks. It is unclear what such a scheme can achieve and, by targeting newly-built houses only, the main effect would be to support the price of such homes, which transfers the support to developers. Take up of this scheme appears to have been extremely limited. One problem with negative equity is that it can be difficult to move house, as this would require a new loan with a very high loan-to-value ratio. Home owners can therefore be stuck in their existing properties, which can be harmful both to labour mobility and for the smooth functioning of the housing market. Banks should be encouraged to allow existing loans to be transferred to new homes.

For the longer term, the housing market needs to be reformed as it played a key role in the build up of imbalances, with poorly-designed policies contributing to the extent of the over-heating. Ireland's tax system is biased towards housing, homeownership and property, as argued in the previous *Survey* (OECD, 2008). It is the only country in the OECD to give mortgage interest tax relief without having a tax on primary residences. This distortion makes housing more expensive and adds to the volatility of the housing market: there is a strong positive association between the volatility of house prices and the generosity of the tax system towards housing (van den Noord, 2004). Policy towards housing and property should ensure that it is treated in a consistent way with other assets to avoid any bias in how consumption or investment is allocated, while channelling housing support for those with low incomes in the most efficient way. In addition to these reliefs, a number of other tax inducements were given towards property more generally (often through so-called "Section 23" reliefs). Although many have now been abolished, their effects continued to influence the property market throughout the boom, and others remain in place. Such schemes distort the allocation of resources towards property, and are likely primarily to result in higher prices and gains to existing landowners. All such inducements should be removed. Limited progress is already being made in this direction with the introduction of an annual € 200 levy on second homes, although the recommendations of the Commission on Taxation and government statements indicate that this is likely to be the beginning of a wider reform (see Chapter 2).

In the Supplementary Budget in April 2009, mortgage interest relief for owner-occupiers was restricted to the first seven years of a mortgage. The government announced that this would be kept under review with a view to eventual abolition over successive budgets. As set out in the previous *Survey*, there are a number of options for achieving a phasing out of the distortion caused by mortgage interest tax relief.[7] The most recent change is limited in the sense that it only covers some mortgage holders and continues a trend to limit the upper limit of relief for this group. Concern about placing additional financial pressure on households who have purchased houses in the past seven years, whose value has since fallen, may limit further reductions in interest deductibility for this group in the short run, but this should be addressed in the future. More fundamental and immediate changes should be targeted at future home buyers, including reducing the ceiling for relief and the number of years over which it can be claimed. This can begin now. The main constraint is to ensure that the discrepancy between the terms on new and existing mortgages is not too great, to avoid trapping existing mortgage holders with their current loans. This would provide a clear signal to future home buyers about the nature of taxes around housing in the future. While this may depress house prices in the short run as the present discounted value of property taxes is frequently capitalised in property values, this effect is part of a necessary adjustment. The need to reduce reliefs would be less if a local property tax were introduced, which could have the advantage of

being used to pay for local services and internalising some of the gains to homeowners form public infrastructure investment. The current economic difficulties created by the housing market, as well as low interest rates, ease some of the political economy constraints on reforming mortgage interest relief.

Public support for housing should be provided in more efficient ways. While the government is increasing the supply of public housing, this is a costly way of providing support and the number of families who can be helped in this way is necessarily limited. Although home ownership can have benefits, the Affordable Housing Scheme and tenant purchase scheme, which has been extended to include flats, are both inherently costly because they involve selling public housing at below the market value. Assistance for housing should be switched into more effective channels, such as the Rental Accommodation Scheme (RAS), which makes use of good standard private rental accommodation to meet long-term needs. The current state of the housing market may create opportunities to use private housing to meet public housing needs, although these schemes should be judged on their own merits and not targeted at supporting the private housing market. As argued in Chapter 3, the Rent Supplement should be redesigned to remove the joblessness traps created by the high taper rate.

Potential output is crucial for the outlook

The prospects for potential output are central to the medium-term outlook. The path of long-run sustainable growth determines how living standards will evolve in the future and what kind of country Ireland will be. The amount of resources and the rate at which this increases is extremely important for how much income there will be available in the future to repay the burden of accumulated debts, both for the private sector and for the government. Low growth would imply that the debt-to-GDP ratio would tend to remain high for longer. Potential output is also critical to judging the underlying structural fiscal position. More immediately, the sustainable level of demand depends on the supply that is available. Financial crises are typically associated with large permanent falls in the level of economic activity (Reinhart and Rogoff, 2009). As a result, estimated potential output is now likely to be lower than previously thought. In addition, the booming conditions in the run up to the crisis are likely to have presented too positive a picture of the underlying state of the economy.

It is inherently difficult to judge the potential level of output as it is unobserved. For Ireland, these difficulties are compounded by its being a small and highly open economy, so that inputs such as labour can vary greatly in response to changes in demand. In addition, Ireland recently experienced a period of extremely rapid "catch up" from 1995 onwards so it is difficult to assess what the "normal" steady-state of the economy might look like. The most relevant concept of potential output corresponds to the level of output where production evolves along an efficient growth path, which should be smooth given that rapid adjustment is costly. This concept is neither a necessary nor a sufficient condition for inflation to be at its "neutral" level. Although Irish inflation was slightly above the euro area average in recent years, this understated the true excess of demand over sustainable supply because resources were drawn in from abroad in an unsustainable way. Equally, money demand increases with wealth so that the asset-price cycle would have depressed price pressures relative to changes in the money supply (Boone *et al.*, 2004).

OECD estimates of potential output for Ireland have been revised very substantially, both over past history and over the forecast horizon (Box 1.4). With outward migration, rising long-term unemployment and a contracting capital stock, the level of potential falls

Box 1.3. **Re-estimating potential output for Ireland**

The estimated level of potential output for 2009 for Ireland was revised down over 7% in the most recent OECD *Economic Outlook* compared with the previous forecast (OECD, 2009b). In addition, the long-term growth rate was revised down to a little below 3% per year. While forecasts for other countries were also revised down in light of the international financial crisis, the revisions for Ireland were particularly large. Potential output in other countries heavily affected by the turning of the credit and housing cycles, such as Spain, were among those also revised down substantially.

OECD estimates of potential output published in the *Economic Outlook* are based on a whole economy aggregate production function (Beffy *et al*, 2006). This approach relates potential supply to the available capital services and potential labour inputs through a production function that allows for trend changes in total factor productivity (TFP). This approach was modified in the most recent estimates so that capital is based on actual rather than smoothed capital, tracking the evolution of capital more closely (OECD, 2009b).

Long-term potential growth in 2017 is estimated to be around 2.8%. Growth is mostly driven by rising employment resulting from expansion of the working-age population and technical progress. Capital deepening continues to contribute to growth. This is somewhat lower than the estimates for 2015 to 2020 produced by the ESRI in their *Medium-Term Review* (Fitzgerald, 2008), in large part due to differences in population growth assumptions. Long-term growth is assumed to be well above the euro area average of 1.4% principally because of stronger assumed growth in the working-age population in Ireland compared with the more rapidly ageing European average.

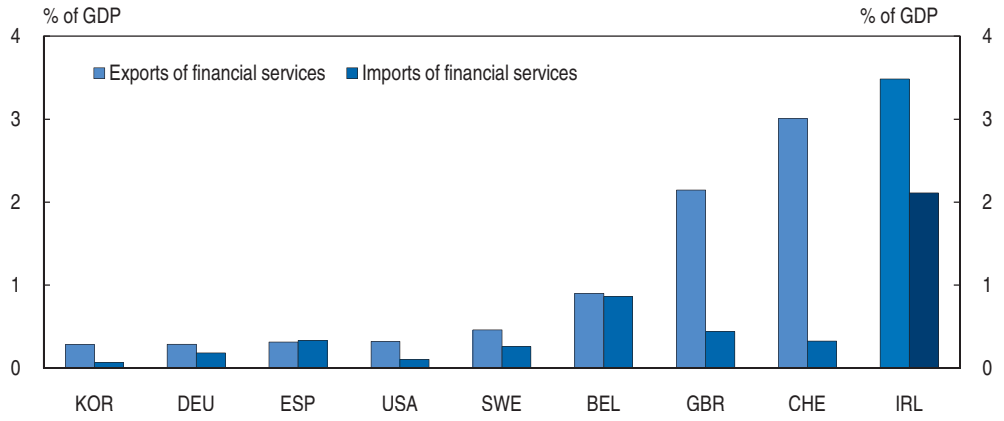
There is massive uncertainty around any estimates of this nature. Key judgments for Ireland include future population growth and the sensitivity of net migration flows to the state of the economy. Historically, Ireland has the most cyclically sensitive flow of net migration of any OECD country. In addition, it is assumed that three-quarters of the increase in long-term unemployment feeds into a higher NAIRU as for all euro area countries based on Laudes (2005). This could overestimate the degree of stickiness in Irish labour markets and so understate the level of potential. It is assumed that the scrapping rate of capital will increase as a result of the slowdown and financial crisis. Trend total factor productivity is derived using an econometric filter, taking into account forecasts for the coming years. These techniques are sensitive to the assumptions about developments at the end point but would fail to estimate the trend properly if there were an abrupt change or if the credit cycle had significantly distorted the picture of the underlying path of the economy in recent years. The risk of abrupt changes is real: the change in estimated potential between 1995 and 2000 made in 1998 in *OECD Economic Outlook* 64 is around 4 percentage points lower than the current estimates of the change over the same period, as the view at the time did not pick up on the sharp "catch up" growth that was achieved.

over the short run and takes some time to reach its trend growth rate through the sluggish recovery. The financial crisis and short-run economic weakness will reduce potential output through a number of channels. Although policy interest rates are low, the credit-spread and the availability of loans have deteriorated. This will limit capital formation, as reflected in the sharp fall in investment. Some of this effect may be temporary as firms hold off on investment until economic uncertainty has cleared, but the required rate of return on projects is likely to be permanently higher than during the early years of the decade when international financial conditions were exceptionally loose.

During recessions, the scrapping rate often increases as parts of installed capital are written-off, either because there is no longer demand for them or because capital is scrapped as firms are liquidated or production is halted.

Ireland developed a relatively large financial sector during the global credit cycle (Figure 1.9). A permanent downsizing of the financial sector would lower average labour productivity because value-added per worker in finance is significantly higher than in the economy as a whole, a gap which grew in most OECD countries since the 1990s. This could occur if employment in the financial sector were permanently reduced and workers move to less productive activity in the non-financial sector. The value-added of the financial-sector workers may also fall, either because productivity falls or because past productivity may have been overstated by the credit cycle.

Figure 1.9. **Trade in financial services (2006)**



Source: OECD *Statistics on International Trade in Services* and *National Accounts*.

StatLink http://dx.doi.org/10.1787/732172177174

The massive fall in construction activity, particularly house-building, could have several effects on potential output. Construction is a labour-intensive activity: output per employee in building is at least one-fifth lower than average productivity in the economy as a whole. If the number of construction employees returns to its 1998 level and all workers are reallocated to jobs with average non-construction productivity, this would suggest a gain in the level of productivity of around 1.5 to 2.5%, although this could be towards the upper-limit of the possible effect as some construction workers may be re-employed in activities with below average productivity, particularly those who are young and not well-educated. The stock of non-residential buildings and structures increased by over one-third in the five years to 2006 (the latest year for which data are available). This boom in non-housing construction accounts for around one-quarter of the overall increase in capital services over that period. Of the countries for which data are available over this period, the contribution of non-housing structures to the increase in overall capital services was the highest in Ireland, just ahead of Spain. Given that the credit cycle may have distorted the allocation of construction investment, this poses the risk that productivity of these investments will be low and may even lead to higher scrapping in the coming years.

There will be a substantial impact on potential output from high unemployment in the short run. As discussed in Chapter 3, the size of this effect depends on how rapidly the economy adjusts and on structural policies. While the wage and price flexibility to date

suggest that adjustment could be swift, high unemployment replacement rates and weak activation could allow short-term unemployment to translate into a high permanent level of the non-accelerating inflation rate of unemployment (NAIRU), implying a lower effective supply of workers. There is clear evidence that net migration has begun to reverse, both because migrants are taking decisions to leave Ireland and because the inflow of new migrants has fallen too low to replace the outflow of migrants that would have occurred in any case. In addition, the incentive for Irish nationals to work abroad has increased. The scale of these outflows is difficult to assess. In addition to problems of measuring flows accurately, the inward migration in recent years was unprecedented in Ireland's history and so it is difficult to know how sensitive migrants will be to the deterioration of economic conditions in Ireland. Based on historical relationships since the 1960s, net outward migration could be in the range of 200 000 to 300 000 people (OECD, 2008). These econometric relationships, however, seriously under-predicted the scale of inward migration since 2002. If the stock of foreign nationals working in Ireland were to fall from its peak to its 2001 level, this would imply net outward migration of around 375 000.

The revision to estimates of potential output over the past is partly driven by changes in the trend as more recent data are taken into account. In addition, the degree to which the credit cycle and related activity were unsustainable is now becoming clearer. Based on OECD forecasts, if the period 2002 to 2010 is a cycle, growth from trough to trough will have averaged an annual rate of just 1.65% compared with a rate of growth of over 5% over the expansion alone. Although there is no requirement that the output gap averages zero over the cycle, this indicates the scope for potential to have been overestimated. In particular, estimates of trend growth may have been excessively backward-looking and therefore projected forward part of the "catch up" growth of the late 1990s that was not be repeated. Such a failure in identifying turning points in the underlying position of the economy is a common problem that has led to policy errors in other settings, such as monetary policy. The revisions in Ireland have important implications, suggesting for example that the underlying fiscal position was less strong.

The impact of policy on potential output

The level of potential output is determined in part by policy. Well-designed market-oriented structural policies can contribute to encouraging long-term growth, while restrictive policies can constrain the level of output and impair growth prospects. An important channel for these effects is the flexibility of the labour and product markets and hence their ability to transfer economic resources from redundant to emerging activities. Compared with the OECD average, indicators suggest that Ireland has considerable flexibility and relatively favourable structural policy settings as a whole even if there are some significant remaining weaknesses. As discussed in Chapter 4, there is a range of measures that would make the sheltered services sector more competitive and reduce costs and prices, as well as further investment and improvements in research and development, education and infrastructure.

Structural policy changes that are already underway as the result of the economic downturn and the fiscal consolidation, which are necessary in themselves, will tend to lower potential growth. An increase in the tax wedge of one percentage point is on average in OECD countries associated with a 0.2 percentage point increase in the NAIRU (Gianella *et al.*, 2008). This suggests that the measures taken through the Income and Health levies might raise the NAIRU by around 0.5 percentage points in the long-run. An increase in the average unemployment benefit replacement rate of the same size raises the NAIRU marginally as well.

Box 1.4. **Summary recommendations to restore macroeconomic stability**

Resolving the banking crisis

- The National Asset Management Agency (NAMA) should be swiftly established and the assets identified as eligible under the scheme transferred to the NAMA at the appropriate price with risk-sharing mechanisms to protect the taxpayer. Appropriate resources and expertise should be available to get the most value out of the assets.
- The government should remain ready to provide additional capital to the banks as required in the form of common equity shares, even if this requires greater public ownership. While it cannot be ruled out, nationalisation would carry significant costs and risks, and should only be undertaken with the utmost reluctance. Any form of public ownership of banks should be temporary and transparent.

Financial regulation and supervision

The main policy actions to strengthen financial regulation need to be taken at European and international level through the implementation of such initiatives as the ECOFIN Financial Turmoil and Financial Stability Roadmaps. In addition, some measures can be taken at national level:

- Introduce a special resolution and bankruptcy mechanism for banks so that the authorities have the legal powers to implement the full range of options in dealing with failing financial institutions if this were to become necessary. Explicit quantitative thresholds, such as high loan growth or exposure to particularly sectors, should feed into the triggering of this procedure in line with practice in some other countries.
- Banks should be more tightly regulated and supervised, together with other financial institutions. Banking supervision should be made more effective by increasing the resources and capacity to monitor major institutions, and developing an enhanced understanding of overall developments in the credit market and comparative performance of different institutions. The quality of financial and macroprudential analysis should be enhanced. The emphasis should be increased on a rules-based approach, including quantitative limits on overall bank leverage and balance sheet growth.
- Banks should be required to hold more capital against risks in line with developments in international financial regulation.
- The regulation of funding should be kept under review in the light of market developments and evolution in international best practice.
- The Deposit Guarantee Scheme should be strengthened further by reducing the payout time, both in law and operationally. After a transitional period, the fee should be raised in line with the increase in protection and any revision to the risk of claims. Consideration should be given to making funding risk-based.

Macroprudential policy

- The Central Bank should be given a more explicit macroprudential mandate. The Financial Stability Report should continue to be published annually.
- The development of more effective macroprudential instruments should be considered. These could include an overall leverage ratio, covering all assets, and either dynamic provisioning or counter-cyclical capital requirements. A rules-based numerical framework may be helpful in avoiding forbearance.

Box 1.4. **Summary recommendations to restore macroeconomic stability** *(cont.)*

Housing

- Reduce the bias towards home ownership in the tax system, by continuing to phase out mortgage-interest tax relief, and by introducing a property or capital gains tax on owner-occupied housing. Tax relief could be limited immediately for new buyers. A property tax could help to fund local infrastructure and services.
- Social housing policy should become less reliant on direct provision of publicly-owned housing. Assistance should provided to a greater extent through schemes such as the Rental Accommodation Scheme (RAS), which make use of good standard private rental housing to meet long-term housing assistance needs.

Notes

1. See Department of the Environment, Heritage and Local Government Housing Statistics, online.
2. See Box: "Measuring House Prices in Ireland" (Barrett *et al.*, 2009) for further details about house price measures in Ireland.
3. The analysis in this section largely relates to this set of retail clearing banks and other institutions with primarily domestic business. The data on these institutions includes intra-group lending, It also includes the assets of some foreign-owned banks, including one very large international institution with limited domestic business. This group does not include the building societies.
4. The approach of other countries in this regard is reviewed in Box 1.6: "Dealing with impaired assets across the OECD" of *OECD Economic Outlook 86* (OECD, 2009b). This helps to put the NAMA scheme in context, although solutions are likely to vary across countries according to the situation.
5. See Box 7.1: "Tax breaks for housing and policy flip-flops" (OECD, 2006).
6. Each adult was allowed to contribute up € 3 048 over the following year with the government topping this amount up by 25% and the accounts being closed after 5 years.
7. See Box 2.1: "Reforming taxation of housing" (OECD, 2008).

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