Box D: The Dynamics of Balance Sheet Recessions

This box reviews the underlying dynamics of Ireland's post-crisis balance sheet recession. This remains a significant downside risk to the current macroeconomic forecasts.

There are a number of adverse feedback loops that typify a post-crisis balance sheet recession (Figure D1).[30] Stressed balance sheets in the Government, financial and non-financial sectors tend to interact in ways that slow post-crisis growth. Starting with the Government sector, Ireland's gross debt as a share of GDP rose from about 25 per cent at the end of the boom to close to 125 per cent today. A significant proportion of this increase was due to the direct costs of covering losses of the banking system, with the remainder due to the sharp rise in the deficit as the economy contracted and property-related revenues collapsed. These debt and deficit developments – together with uncertainty about future prospects – led to a loss of the Government's market borrowing capacity, which in turn fed back to the banking system (through lost credibility of liability guarantees, the credibility of capital backstops, and direct losses on Government bonds) and also to the real economy (through the need for pro-cyclical retrenchment and heightened uncertainty).[31, 32] The two-way interaction between the Government and the banks is sometimes referred to as the "diabolic loop".[33]

A feature of a balance-sheet recession is that households and businesses attempt to repair their balance sheets by curtailing spending, reducing debt and selling assets (Koo, 2009). While these actions might be rational at the individual level, they can lead to a cascade of falling incomes and asset prices, worsening the incomes and balance sheets of other businesses and households in the economy. The forces of retrenchment are heightened by the effects of uncertainty in the face of the unpredictable dynamics of the recession, and also by the fact that important trading partners may be simultaneously suffering similar problems.[34]

Figure D2 shows the large rise in the gross saving rate during the crisis, although there are recent signs that the rate has fallen back.[35] Figure D3 shows the rapid build-up of household debt prior to the crisis. The nominal value of household debt has been substantially reduced in recent years, in part because many households remain credit constrained. However, debt has fallen only slightly relative to disposable income given the spillovers from household-

[30] Reinhart and Rogoff (2009) document the long history of weak growth performance following financial crises. IMF (2013) examines the adverse interactions between high levels of debt in the Government, financial and non-financial private sectors of the economy.

[31] See Zoli (2013) for an examination of the links between sovereign risk and the funding costs faced by Italian banks during the crisis.

[32] Jordà *et al.* (2013) examine how the adverse impacts of the credit-driven boom-bust cycle are conditioned by Government debt levels in the aftermath of a financial crisis.

[33] See, e.g., Brunnermeier *et al*. (2011).

[34] Inflation often helped to lower the real burden of household and business debt in past financial crises. Inflation in Ireland and across the Euro Area has remained extremely low, although persistent deflation has been avoided.

[35] CSO, Institutional Sector Accounts measure.

level balance-sheet repair to domestic demand.[36]

FIGURE D1: ADVERSE FEEDBACK LOOPS

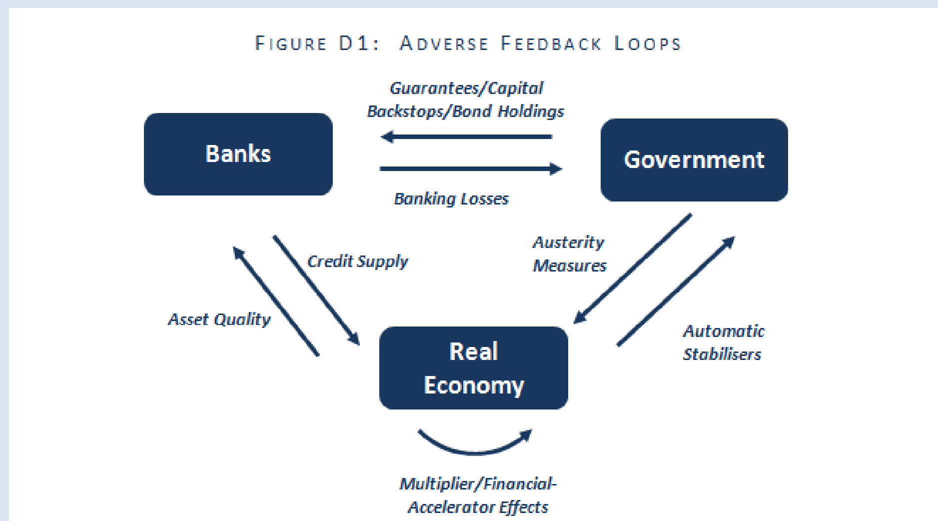
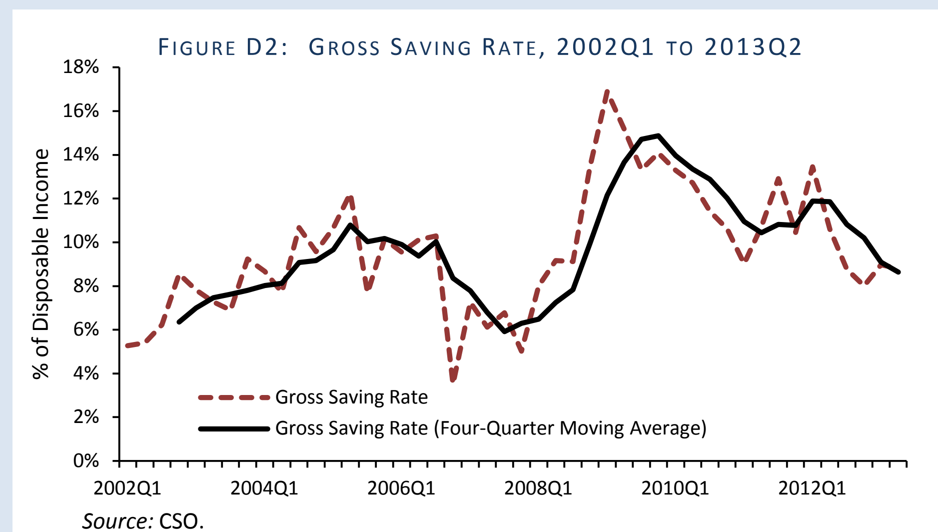


FIGURE D2: GROSS SAVING RATE, 2002Q1 TO 2013Q2



Source: CSO.

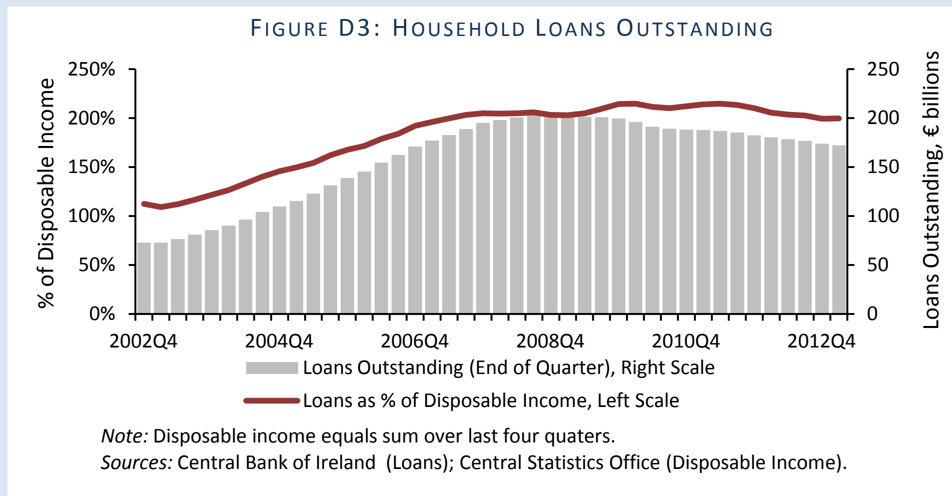
A central feature of Ireland's balance-sheet recession has been the impairment of balance sheets in the banking system. A two-way positive interaction between credit and property prices fuelled the initial price and construction bubbles. In the wake of the bursting of those bubbles, this interaction has worked in reverse. While the impairment of bank balance sheets is not the only contributor to weak credit growth – other factors are the impaired balance sheets of potential borrowers and weak credit demand – there is evidence that banks across the Euro Area have tightened lending standards and raised interest margins as they themselves attempt to deleverage and improve operating income in the face of

[36] See IMF 2012 for an examination of how the balance-sheet recession has affected the consumption of Irish households. See Mian *et al*. (2013) for county-level evidence from the United States on how marginal propensities to consume are affected by household-balance-sheet health.

uncertain capital positions and funding conditions.

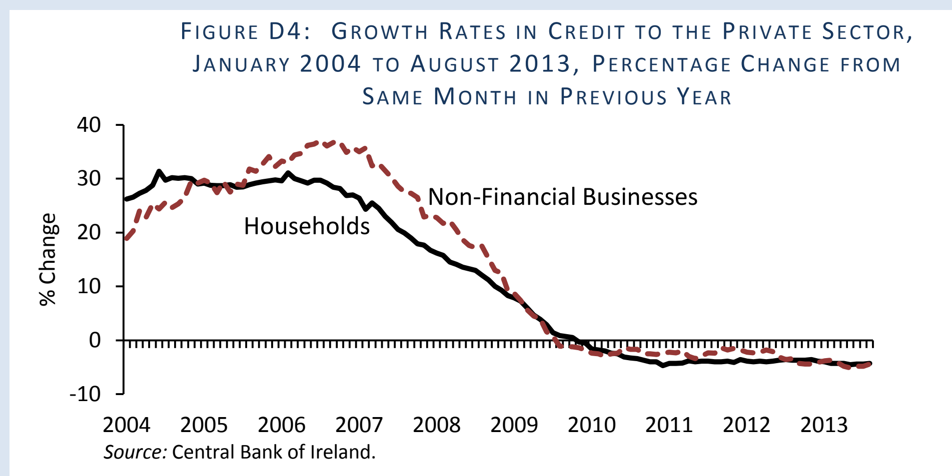
Figure D4 shows the rapid pre-crisis growth and then contraction in the stock of credit extended to households and businesses.[37] A significant part of the contraction reflects the paying down of loans as part of the balance-sheet repair process. Concerned about risks to solvency, businesses may forgo profitable investment opportunities, instead choosing to pay down debt and build liquidity reserves.

FIGURE D3: HOUSEHOLD LOANS OUTSTANDING



Note: Disposable income equals sum over last four quaters.
Sources: Central Bank of Ireland (Loans); Central Statistics Office (Disposable Income).

FIGURE D4: GROWTH RATES IN CREDIT TO THE PRIVATE SECTOR, JANUARY 2004 TO AUGUST 2013, PERCENTAGE CHANGE FROM SAME MONTH IN PREVIOUS YEAR

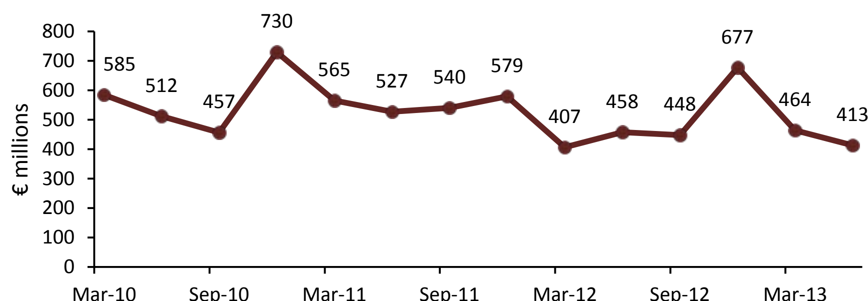


Source: Central Bank of Ireland.

In terms of supporting domestic demand growth, it is important that new lending continues to take place. Figure D5 shows the recent evolution in gross new lending to the non-financial/non-property SME sector. This lending has not yet shown significant signs of recovery.

[37] There is a large literature in macroeconomics that studies the effects of credit availability on business-cycle dynamics. The credit-channel of shock transmission focuses on the way that shocks are amplified through "financial-accelerator" effects, as balance sheets become impaired and credit rationing increases (see, e.g., Bernanke *et al*.1994; Bernanke and Gertler, 1995).

Figure D5: New Credit Advanced to Non-Financial/Non-Property Irish SMEs, March 2010 to June 2013



Note: Gross new lending is the amount of new credit facilities drawn-down during the quarter by SME counterparties, i.e. where this credit facility was not part of the outstanding amount of credit advanced at the end of the previous quarter. Gross new lending is defined to exclude renegotiations or restructuring of existing loans.

Source: Central Bank of Ireland.

Set against these adverse dynamics, stabilising forces should eventually gain momentum, as balance sheets are repaired, the stock of postponed spending increases, liquidity targets are reached and fears about the future gradually recede. The restoration of the Government's own creditworthiness is likely to be a necessary stabilising force, helping to underpin confidence in the banking system, and lessening fears that it will be unable to effectively phase required fiscal adjustments over time.

1.5.2 *Budget 2014* Forecasts Compared with Other Agencies

The *Budget 2014* forecasts are generally in line with the broad consensus among the forecasting community that the economy will grow modestly this year but that GDP growth will pick up in 2014 (Annex C). Most agencies foresee growth of about 0.5 per cent in 2013 with growth of approximately 2 per cent forecast for 2014. Exceptions include the ESRI who foresee real GDP growth of 2.6 per cent in 2014 with the European Commission expecting growth of 1.7 per cent.

As noted in previous *Fiscal Assessment Reports*, forecast agencies have consistently revised down forecasts over time. This could reflect an underestimation of downward pressures created by the balance sheet recession as well as weaker than expected international growth outturns. This pattern has continued during the second half of 2013 with downward revisions to growth projections. In Figure 1.6, current estimates of growth in 2013 by the main forecasting agencies are shown relative to forecasts made at the end of 2011/beginning of 2012.