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POLICY PAPER

Deleveraging, Banks and Economic Recovery in Ireland

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Abstract: The challenge that the Irish economy faces can best be described in the context of flows and stocks of assets and liabilities. Under the Memorandum of Understanding with the IMF/EU/ECB Troika, Ireland must implement a severe fiscal austerity programme and reduce the size of its banking system. These goals must be achieved in the context of a deleveraging process in the household sector brought about by the need to repair balance sheets following a collapse in the value of housing assets. The current policy mix, which aims to reduce these stocks simultaneously, is unlikely to be successful, a feature we term the domestic trilemma. An external trilemma arising from the constraints of EMU membership also limits the policy choices for high-debt economies attempting to engineer an export-led recovery. This paper argues that a sequencing of policies is required for Ireland to achieve its goals.

I INTRODUCTION

"Whatever role the markets may have played in catalysing the sovereign debt crisis in the eurozone, it is an undisputable fact that excessive state spending has led to unsustainable levels of debt and deficits that now threaten our economic welfare"

Wolfgang Schauble[1]

This paper was presented at the Thirty-fourth Dublin Economic Workshop Economic Policy Conference in Kenmare, Co. Kerry on 14 October 2011.
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[1] *Financial Times*, September 5, 2011.

The policy prescription for solving current problems in the euro area, as articulated by the German minister of finance appears quite simple: fiscal austerity measures should be implemented to return state finances to a stable footing and structural changes be introduced to improve competitiveness and engineer an export-led recovery. This is the textbook adjustment process to address imbalances in a monetary union, whereby highly indebted countries need to run financial surpluses in order to repay creditors. In relative terms, lower inflation and unit labour costs are the primary means of delivering competitiveness improvements in debtor countries.

During the previous Irish fiscal crisis of the 1980s, a large public debt burden was reduced through fiscal austerity. However, private debt levels remained low throughout the decade. Combined public and private debt peaked at 150 per cent of GDP in 1987, but today that figure stands at 300 per cent. For the sick Irish patient, Schauble's prescription fails to take account of the role that the explosion in private sector credit had in the Irish crisis dynamic and the role that deleveraging will play in the coming years.

The challenge that Ireland currently faces is best described by the interaction of financial *flows* and the *stock* of wealth. The ultimate destination for the economy in terms of a balance sheet *stock* adjustment is: (i) a lower private debt level; (ii) a smaller banking sector; and (iii) a sustainable public debt position. Finding the optimal route to the desired destination, in terms of maximising the growth and employment performance of the economy, is the key focus of this paper.

Led by the household and financial sectors, the Irish economy is engaged in a process of deleveraging, which, given the scale of debt, is likely to be a long process with significant implications for the flow of savings, consumption and, ultimately, economic growth over the coming years.

Household deleveraging needs to occur to repair damaged balance sheets following a sharp decline in the value of housing assets. However, this process is happening simultaneously with a forced contraction of bank balance sheets and aggressive fiscal consolidation, a situation which in our view is unsustainable from a domestic growth and debt repayment perspective.

The arrival of the Troika into Ireland was precipitated by problems in the banking sector. Despite this, the role of the banking sector in Ireland's problems has been underplayed, with European policymakers continuing to insist that the euro area's problems are the result of excessive public sector spending.[2]

[2] In the case of Greece, there was a blatant attempt to conceal the true picture of the public finances, with subsequent disclosures uncovering an unsustainable situation in terms of deficits and debt levels, along with a whole host of structural impediments to a proper functioning economy. Competitiveness problems are also prevalent in Portugal.

The current banking policies being pursued in Ireland are largely at the behest of the ECB, which has taken on a significant exposure to Irish banks. Banking sector restructuring has already brought huge costs to the Irish taxpayer. Were it not for the insistence of the ECB, these costs would probably have been shared with private sector creditors by way of deeper burden-sharing. The Irish government did not, however, attempt to put the wider European banking system at risk by going down this route. On the assumption that there is no write-down of debt (private or public), we argue that slowing the pace of banking sector deleveraging is the most important policy change required for the economy to reach its desired destination.

The paper is divided as follows: Section II explains our notion of dual trilemma constraints on Irish policymakers and how these can exacerbate the effects of a balance sheet recession. Section III examines the evolution of financial flows across sectors in a historical and international context. Section IV deals with the stock of debt build-up in the Irish economy and, in particular, on the balance sheets of Irish households. The loss of wealth and the associated challenge of balance sheet repair are discussed in Section V. Some policy implications of the analysis are discussed in Section VI. A brief conclusion is provided in Section VII.

II BALANCE SHEET RECESSION AND A DUAL POLICY TRILEMMA

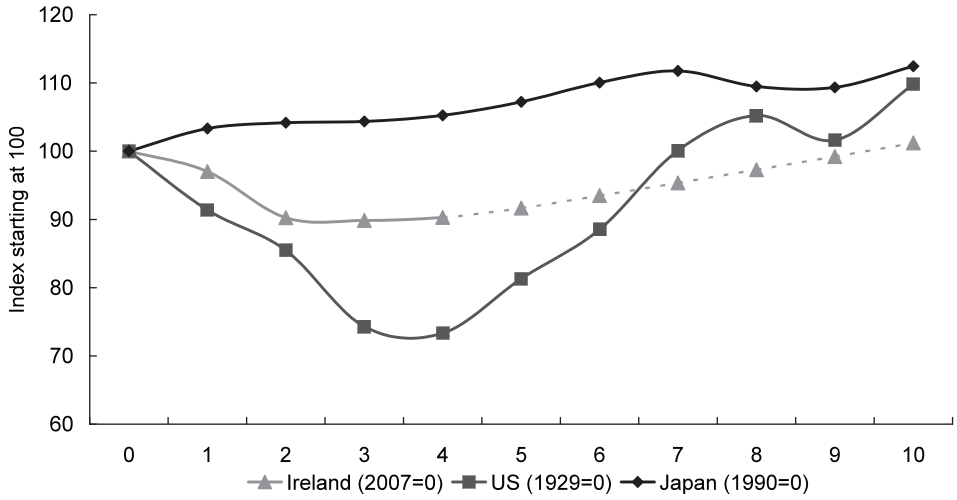
2.1 *Ireland's Balance Sheet Recession and the Lost Decade*

Although Irish GDP recovered modestly at the beginning of 2011, it is still 10 per cent below peak levels in real terms and 18 per cent below in nominal terms. Under the assumption that real GDP grows by an average of 2 per cent per annum in the 2012-2017 period, output levels in the Irish economy will only return to 2007 levels in 2017. This is Ireland's lost decade. As a comparison, US real GDP returned to pre-crisis levels following the Great Depression after seven years, while Japanese GDP never dipped below its boom levels despite experiencing a so-called "lost decade" (Figure 1).

We argue there are similarities between the experiences of Japan in the 1990s, the US in the 1930s and the situation Ireland finds itself in today. Indeed, many countries in the developed world are now dealing with the effects of deleveraging of private debt levels following a prolonged credit boom. These periods of deleveraging occur due to the necessity of repairing balance sheets following a collapse in asset values. Richard Koo[3] has identified these episodes as "Balance Sheet Recessions". In a balance sheet recession, private

[3] *The Holy Grail of Macroeconomics* (2009).

Figure 1: *Real GDP Performances in "Balance Sheet Recession" Decades*



Source: CSO, BEA, Datastream, authors' estimates.

sector demand for funds remains depressed at even low interest rates due to the presence of negative net worth. In the case of Japan in the 1990s, it was businesses that went through a prolonged period of deleveraging due to a collapse in commercial property values of 87 per cent. Koo calculates that the Japanese economy endured a loss in wealth equivalent to three times GDP, compared with a loss of one times GDP in the US during the Great Depression.

In a balance sheet recession, private agents (such as households and businesses) do not respond to the usual incentives. In the case of Japan, Koo argues that the collapse in asset prices (–87 per cent in the case of commercial land prices, again similar to the Irish experience), resulted in companies falling into a negative net worth situation and their motivation becoming debt minimisation rather than profit maximisation. As a result, companies continued to pay down debt. Koo calculates that this resulted in a loss of corporate sector demand of 20 per cent of GDP. Despite this loss of demand, Japanese GDP remained above its peak GDP levels of GDP in both real and nominal terms. The reason for this was twofold: (1) while households were still a net supplier of funds to the economy, this surplus actually fell after the initial collapse in 1990, and; (2) the government replaced the lost demand from the corporate sector by maintaining large budget deficits over the period.

Koo also argues that the major reason for the Great Depression was these Balance Sheet Recession dynamics at work. The US Depression of the 1930s was halted by two episodes. The first was an increase in government spending

and slower pace of private deleveraging in the 1934-1936 period that led to a temporary recovery in the economy. This was subsequently reversed in 1937 and the economy contracted once more. The slump was eventually halted by the beginning of World War II. Koo's arguments can now be applied to developed economies such as the US, the UK and parts of the euro area. In this environment, a pre-occupation with fiscal consolidation represents a dangerous threat to economic growth internationally over the coming years.

2.2 *A Dual Trilemma for Irish Policymakers*

Ireland's Memorandum of Understanding (MoU) with the Troika sets out the route to achieving necessary balance sheet adjustments. Specifically, the MoU requires that: (i) banks take measures to reduce their loan-to-deposit ratios to 122 per cent by the end of 2013; and (ii) fiscal consolidation measures be maintained to reduce the budget deficit to 3 per cent of GDP by 2015. These goals must be reached in the context of the private sector deleveraging process that is largely outside the control of domestic policy. However, within a framework that explicitly recognises domestic and international constraints – which we term "Ireland's dual trilemma" – we argue that the current policy course is not consistent with the achievement of the MoU policy goals. While the policy objectives are correct, we argue that their inter-connectedness (the achievement of one goal affects the other and vice versa) makes it unlikely that they will all be achieved. Some sequencing or "staggering" of policy objectives is required.

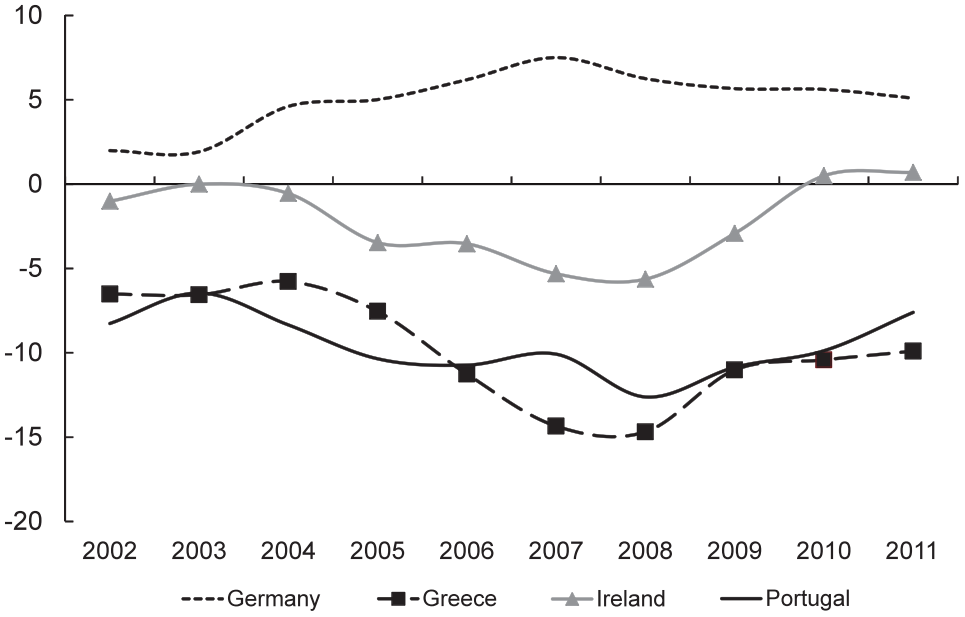
It can be seen from Figure 2 that export-led growth in Ireland has accelerated the move in the Irish current account towards surplus relative to the other peripheral EMU countries.[4] On a flow basis, this development is indicative of a gain in competitiveness which is underpinning the export-led growth strategy. Moreover, a disinflationary pulse is consistent with the predicted balance of payments adjustment for a highly indebted economy in a monetary union.

However, where the *stock* of debt is significant relative to GDP, policymakers historically have insulated domestic demand from the worst effects of this debt reduction process through a combination of currency devaluation, default, and loose monetary policy. EMU membership and the associated international "trilemma"[5] constraints, imply that these tools

[4] Throughout this paper, "Peripheral EMU Countries" refers to Ireland, Italy, Portugal, Spain and Greece. "Core" EMU refers to France and Germany.

[5] The External or International "Trilemma" refers to the constraint of being able to simultaneously achieve only two of the following three policy goals at any one time: Fixed Exchange Rate; Independent Policy; Perfect Capital Mobility.

Figure 2: *Current Account Balance (Percentage of GDP)*



cannot be used unilaterally in a monetary union to control the pace of debt repayment for individual member states. The lack of monetary policy autonomy applies to all member states but the "one size fits all" is likely to amplify balance sheet effects in small countries relative to large ones.

The adjustment process following a severe balance sheet shock involves significant differentials in borrowing requirements, both within and between euro area member states. Where borrowing requirements are deemed excessive, the capital markets will force internal deleveraging through higher capital outflows and penal borrowing costs. In this context, and with no institutional mechanism in place for fiscal transfers across member states, the scope for Koo's deficit spending solution to the balance sheet recession is severely limited in the euro area. It follows that in a monetary union, members with large debt burdens are forced to tackle the debt overhang exclusively by means of running large primary surpluses for long periods. The low growth/high borrowing cost combination generates default premia in bond markets, which only serves to strengthen the balance sheet recession dynamic. In the case of Irish households, for example, we argue that debt paydown will keep savings ratios high over the coming years, creating a drag on consumer spending. Based on the financial flows data, the shift in the household's financial position from a large deficit position to a large surplus amounts to 15 per cent of GDP.

Individually, the banking sector deleveraging and fiscal consolidation measures set out by the Troika for Ireland make sense. The Irish banking sector growth was largely facilitated by interbank funds and must be reduced. Also, a budget deficit of 10 per cent of GDP is unsustainable. However, when these policies coincide with the need for private sector deleveraging, an internal policy trilemma emerges where the simultaneous deleveraging by the household, financial and government sector, only serves to intensify default risk by way of low growth and a rising real debt burden.

These policy goals are not independent and there are important feedback mechanisms at play. Fiscal consolidation affects economic growth which in turn impacts on the value of bank assets and the funding environment which, in turn, directly impacts on the ability to maintain adequate capital levels. Similarly, striving to meet loan-to-deposit targets of 122 per cent laid out in the *Financial Measures Programme Report* in March 2011 encourages the banks to decrease the size of their loan books, which impacts economic growth, and impinges on the government's ability to reduce the budget deficit.

This entire process operates in tandem with sustained private sector deleveraging creating a particularly severe drag on domestic demand flows. If we think about domestic policy formation from the perspective of dual trilemma constraints, we can conclude that in the absence of the correct actions:

- The debt reduction process will remain solely reliant on the domestic economy's ability to run primary surpluses; and,
- A synchronised and rapid pace of deleveraging across all sectors of the economy is likely to aggravate debt repayment pressures due to low growth, negative feedback loops and a rising real debt burden.

This dual trilemma (domestic and external) constraint is a key policy concern given that historical analysis by the Bank of International Settlements (BIS)[6] suggests that debt reduction tends to be split evenly between credit contraction, economic growth and inflation. We will argue that current policies and trilemma constraints place excessive drag on our ability to outgrow our debt burden and a change of emphasis in the policy mix is urgently required.

[6] BIS *Quarterly Review*, September (2010).

III BALANCE SHEET DYNAMICS – FLOWS

3.1 *International Pressures for Net Wealth Flow Adjustments*

Wealth effects are important drivers of consumption and investment decisions both within and across countries. Changes in net wealth arising from the behaviour of the institutional sectors are reflected, in part, in the flow of saving and borrowing, and ultimately have a significant bearing on GDP growth, which is the key flow for the economy.[7] If a sector is a net lender, it is saving more than it borrows, thereby adding to the stock of financial wealth in the economy. The reverse applies if the sector is a net borrower. Net lending, therefore, is the difference between transactions in assets and transactions in liabilities. For the economy as a whole the net lending flows can only lead to an overall change in net wealth if there is a corresponding counterparty transaction with the rest of the world.

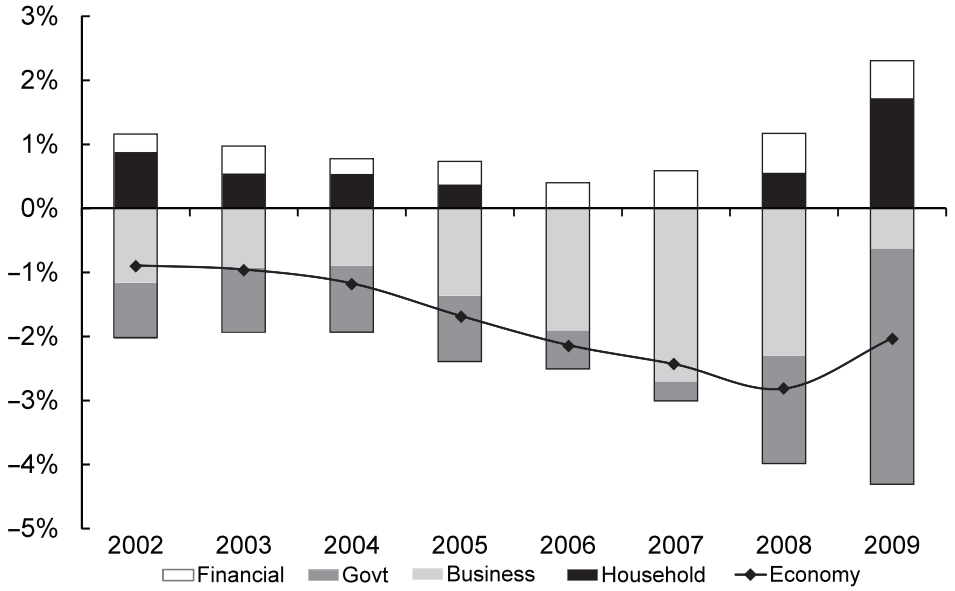
For Ireland and the other peripheral EMU countries, the private sector has been pre-occupied with debt repayment since the crisis, which is mirrored in a large increase in the public sector borrowing requirement (Figure 3). In general, there has been an increase in net saving in the periphery, which has been facilitated by a moderate reduction in net saving at the core. For the euro area as a whole net saving has remained largely unchanged. If this trend were to continue, one would expect an effective transfer of domestic demand flows from the peripheral EMU countries to the core. This is the natural flow response to correct external imbalances in a monetary union. However, from Ireland's perspective, growth may well be export-led but overall GDP growth could be severely depressed if balance sheet recession dynamics take control.

It can be seen from Figures 3 and 4 that the bulk of the peripheral EMU countries' financing requirements are provided by the euro area "core" countries of Germany and France. Specifically, the household sector in the euro area core provides the bulk of the net saving flows in the euro area.

As the peripheral EMU countries embark on a path to reduce their external borrowing requirement in the interests of debt sustainability, it is clear that this can only be accommodated internally by a reduction in the financial surpluses at the core. The changes in net wealth depicted in Figures 3 and 4 would suggest that this process has already begun. Of course, the net borrowing requirement of the euro area as a whole could increase which could have implications for the external value of the euro and euro area interest rates. For a country such as Ireland with significant non-euro trade links, a

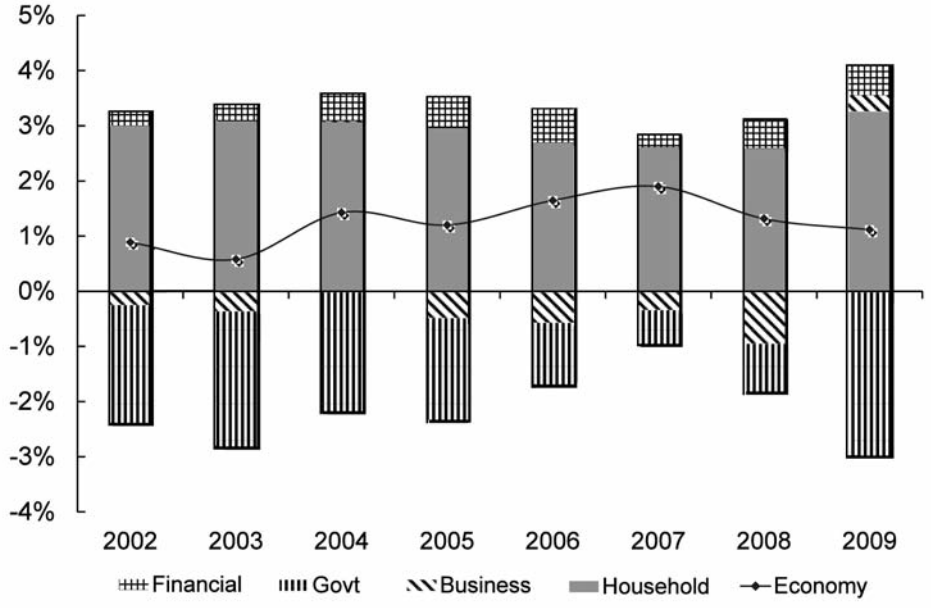
[7] Changes in Net Wealth are also affected by valuation changes. The effects of valuation effects on net wealth are considered in more detail in Section IV.

Figure 3: *Net Lending/Borrowing Peripheral EMU (% GDP)*



Source: OECD, Calculations based on GDP Weighted Averages.

Figure 4: *Net Lending/Borrowing – Core (% GDP)*



Source: OECD, Calculations based on GDP Weighted Averages.

weaker euro could confer the twin benefits of increased price competitiveness and a reduction in the real debt burden. Beyond the euro area, there are important balance sheet dynamics in the US and the UK, Ireland's key trading partners.

The UK has remained a net borrower throughout the crisis, with an increase in the government's financing requirements aimed at supporting aggregate demand offsetting higher private saving. The pace of deleveraging in the UK should have a significant bearing on the optimal pace of deleveraging in Ireland given the importance of trade links for aggregate demand in Ireland.

Developments in the financing requirements of the US economy are also worth monitoring from an Irish perspective. US households and businesses are deleveraging at the margin which is likely to act as a drag on domestic demand. While many observers would view this adjustment as necessary for global financial stability, the pace of this adjustment is important from the perspective of net export flows in Ireland.

As part of the adjustment process globally, therefore, the expectation is that the US and the UK will be paying down debt at the margin, which is likely to dampen domestic demand and may well have negative implications for Irish export growth. In this context, the over-reliance on an export-led growth strategy for relieving the economy's debt burden is a threat to optimal GDP and employment growth.

3.2 *Changing Net Wealth in Ireland*

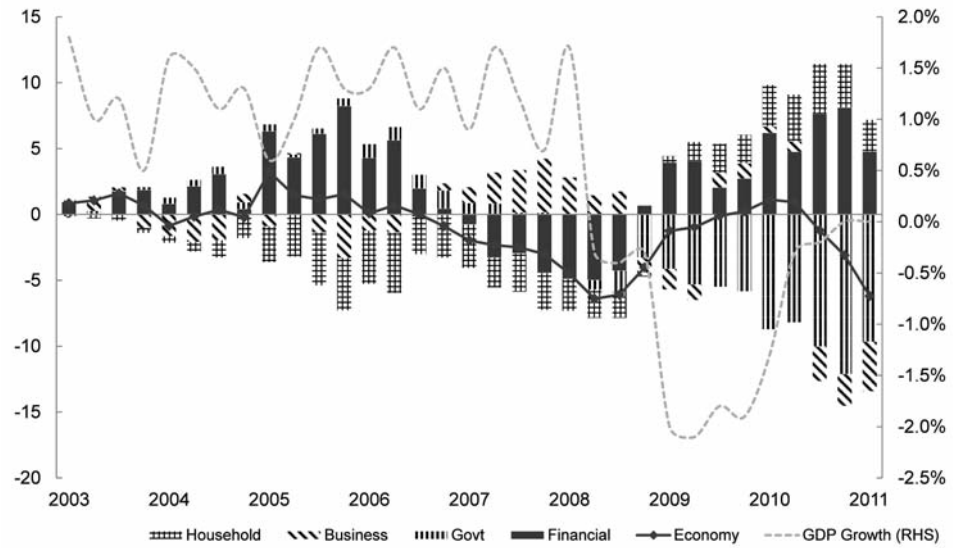
When faced with an economic shock, changes in savings and borrowing behaviour in one sector can have significant knock-on effects on the financing decisions of other sectors. This dynamic interaction is an important consideration as feedback loops involving the financing decisions of sectors are likely to amplify changes in aggregate demand and GDP. In Ireland's case, the effects of simultaneous deleveraging in the Household and Financial sectors are particularly noteworthy as the financial system is unable to recycle savings back into the economy, which places an additional drag on aggregate demand growth. This is the dynamic of the "balance sheet recession".

Figure 5 places Irish GDP growth (4-qtr moving average) against the backdrop of savings and borrowing behaviour of individual sectors in the economy.[8] It is clear that the financial crisis and subsequent recession has led to significant changes in saving and borrowing behaviour for all sectors.

For the economy as a whole, the scale of investment during the period 2006 to 2009 could not be financed internally and the economy relied on the

[8] It is worth noting that the behaviour of the financial sector is heavily influenced by the large international funds industry based in Ireland.

Figure 5: *Net Lending/Borrowing by Sector (€bn)*



Source: Central Bank, Central Statistics Office.

rest of the world for funding. These funds were largely in the form of bank borrowing, the value of which has not changed significantly when compared to the sharp drop in the value of domestic property, the asset which absorbed the bulk of this funding.[9] Households added to the net borrowing requirement while the Government and Business sectors were net savers at the margin.

As the international financial crisis intensified, it was impossible for banks to raise money on interbank markets and Irish financial institutions became net savers on a flow basis. The reduction in net external liabilities of the banking system has occurred despite a significant increase in the borrowing requirement of the Irish Central Bank from the Eurosystem. From early 2010 onwards, Ireland has again become a net borrower which reflects the massive increase in the government's financing requirements arising from the banking crisis and the fall in aggregate demand.

As highlighted by Cussen and Phelan (2011), Irish credit institutions are now net borrowers from the household sector. While this dynamic remains a significant drag on household consumption activity, the business sector has turned into a net borrower in recent quarters.

The recessionary toll on tax revenues in conjunction with significant capital injections into Irish credit institutions has led to a substantial increase in government net borrowing since 2009. Anglo Irish Bank, EBS and Irish

[9] See Cussen and Phelan (2011).

Nationwide received a total of €35.6 billion between 2009 and 2010 which significantly increased the government's borrowing requirement.[10] In 2009 the government borrowing requirement was €23 billion, which increased to €48 billion in 2010. In the context of significant private sector deleveraging in the economy, the combination of an escalation in the government's borrowing requirement and falling aggregate demand generated a rise in default premia in the market for Irish sovereign debt.

As a result of the housing market collapse, household balance sheet behaviour changed markedly with the household sector becoming a net saver (lender) from 2009 onwards. Elevated savings by Irish households should, in theory, lead to higher net wealth over time. An important caveat, however, is that higher savings will only result in higher net wealth if they are not offset by further declines in asset prices. Moreover, if the savings are used to facilitate deleveraging and balance sheet repair in the banking sector, this flow is lost to investment which will act as a drag on economic activity. The danger here is that a destructive feedback loop emerges where weaker economic activity drives down asset prices and aggravates the problem of non-performing loans which requires further deleveraging in the banking sector and so on.

In summary, Ireland's balance sheet problems are somewhat different from those of Japan. In contrast to the Japanese experience, the flow of net wealth data show that non-financial corporates were not significant net borrowers in the Irish economy during the 2003-2007 period, and adjusted their behaviour to become net lenders early in the cycle. The same cannot be said for households. From 2003-2007, Irish households were net borrowers to the tune of 12 per cent of disposable income per annum (6 per cent of GDP), on average. This borrowing mainly took the form of long-term loans, which account for 91 per cent of household liabilities. These loans were primarily used to purchase property.

The collapse in property values has thus triggered a substantial reduction in household net worth. Under the assumption that residential property prices decline by 60 per cent,[11] we calculate that this reduction amounts to €250 billion or 288 per cent of disposable income in aggregate from the 2006 peak. This loss in wealth has mainly been borne by younger cohorts of the population who purchased property at the peak of the boom. Irish households have now begun a process of deleveraging that could be prolonged. Previous

[10] €10.7 billion of capital injections into the AIB and Bank of Ireland are treated in the financial sector accounts as investments and do not impact on net borrowing.

[11] Although official CSO data show that residential property prices have fallen by 43 per cent from the peak as of August 2011, recent evidence suggests that this indicator will continue to show further large scale declines.

studies suggest that deleveraging episodes are roughly in proportion to the scale of their preceding boom. Ominously, Ireland's boom was among the largest in the 2003-2007 period.

While there can be no argument on the need to put the government finances on a sound footing, the pace with which we do so has significant implications for domestic demand flows. Although the pace of balance sheet repair in the private sector is not necessarily the business of government, much of the financial sector is now under state control and the pace of deleveraging here is a legitimate policy concern.

IV BALANCE SHEET DYNAMICS – STOCKS

Irish private sector debt levels in the 1980s (as a percentage of GDP) remained stable, starting the decade at 49 per cent and finishing at 48 per cent. The credit boom that followed was a prolonged one but can be divided into two distinct phases.

First, while the 1990s did see a substantial increase in credit, particularly in the latter half of the decade, this was largely justified by the improvement in debt servicing due to lower interest rates as Ireland readied itself for entry into EMU. At a little over 100 per cent of GDP at the beginning of the 2000s, debt levels could not have been described as unsustainable. As a comparison, the German private sector had debt equal to 130 per cent of GDP at that point in time.

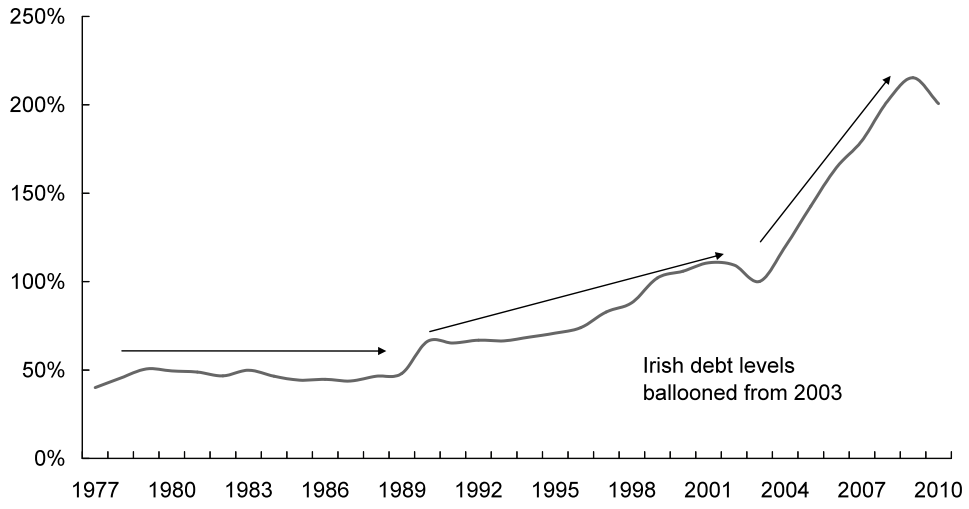
The trend from 2003 onwards was the most dramatic. After doubling in the previous four years, private non-financial credit outstanding grew from €143 billion in 2002 to a peak €364 billion in 2008, an increase of over 150 per cent. Expressed as a percentage of GDP, private sector credit grew from roughly 100 per cent to 215 per cent. It could be argued, given the role that multi-national profits play in Irish GDP, that credit should be expressed as a percentage of GNP. On this measure, Irish debt levels reached a peak of 260 per cent in 2009, compared with 118 per cent in 2003.

4.1 *International Comparisons*

While debt accumulation was a feature of most developed economies over this time period, the pace of credit growth was unprecedented in Ireland. In the euro area as a whole private sector credit rose from 86 per cent of GDP at the end of 1999 to 120 per cent of GDP ten years later.[12] While this is a

[12] Note we use the private sector credit to non-financial domestic sector statistics here from the ECB. This looks at the exposure of the banking sector in these countries. Numbers may differ in the later analysis which uses the balance sheet data from the relevant sectors.

Figure 6: *Irish Private Sector Debt/DGP Ratio*



Source: Central Bank, Department of Finance.

significant increase, there was a steady build-up over time and not the explosive growth path in the euro area as a whole that was witnessed in Ireland.

This may explain the relatively relaxed nature of policymakers in the euro area to the risks of debt accumulation that have since manifested themselves.[13] However, these broad aggregates do not capture the substantial variation in credit trends within the region. Table 1 compares private sector credit levels (credit outstanding to the domestic private sector) relative to GDP at the beginning of the euro area and the level prevailing as of Q2 2011.[14]

The dispersion in credit growth is quite dramatic. On the one extreme, Germany (125 per cent), having the largest ratio of the original eleven members of the euro area in Q1 1999 (Cyprus, which joined in January 2008, had a private sector credit to GDP ratio of 177 per cent in Q1 1999), reduced this ratio by seventeen percentage points to 108 per cent by Q2 2011. This is now the sixth lowest ratio in the euro area. Belgium and Estonia are the only two other countries that witnessed a fall in this ratio over this time.

The vast majority of euro area countries experienced an increase in credit/GDP ratios. Four countries – Ireland, Spain, Portugal and Greece – at least saw a doubling of the credit/GDP ratio since the foundation of the euro.

[13] References at ECB press conferences over the period simply referred to the upside risks to price stability posed by "strong monetary and credit growth".

[14] We include all of the current euro area members but report their positions from the original launch of the euro in Q1 1999.

From an already high position, the credit/GDP ratio in Cyprus, at 291 per cent of GDP, remains the highest in the euro area. All of these countries have experienced significant fiscal problems since the financial crisis in 2008. Greece, Ireland and Portugal have had to turn to the IMF/EU for assistance, while Cyprus has recently received assistance from Russia.[15,16]

Expressed as a percentage of GNP, Ireland witnessed the largest increase in private sector credit in the euro area (second largest when expressed as a percentage of GDP). As shown in Section II, this period was very much facilitated by the rapid expansion in the balance sheets of the domestic Irish banks. Importantly, the growth in bank assets was not funded by growth in domestic deposits, but by recourse to international lines of credit via the interbank funding market, reflected in a net borrowing position for the financial sector.[17]

Table 1: *Domestic Private Sector Credit/GDP (%)*

	2011Q2	*1999Q1**	*Change*
Ireland (GNP)	235	96	139
Cyprus	291	177	115
Ireland (GDP)	186	83	103
Spain	176	81	95
Portugal	165	83	82
Greece	119	41	78
Luxembourg	161	89	72
Italy	125	69	57
Netherlands	168	121	47
Finland	92	48	43
France	111	76	35
Slovakia	96	62	34
Malta	124	104	20
Slovenia	49	37	12
Austria	109	102	7
Estonia	89	92	–3
Belgium	76	84	–8
Germany	108	125	–17

*Or earliest date available.
Source: European Central Bank.

[15] See *Financial Times*, 14 September 2011.
[16] As of writing, Spain has not had to receive financial aid, but the purchases of Spanish sovereign debt by the ECB in a bid to cap the increase in funding costs can be taken to mean that that country has also had to receive external support.
[17] The important caveat with the financial sector flows in Ireland is that it is overshadowed by the size of the international banking sector in the IFSC which has no great significance to domestic Irish economic activity.

4.2 *The Expansion of Bank Balance Sheets*

In 1998, total household loans were exactly in line with household deposits of €26 billion. At the end of 2002, household credit outstanding represented 132 per cent of household deposits. By the end of 2011, this had ballooned to 210 per cent of household credit. An even more dramatic expansion of loans relative to deposits occurred in credit to non-financial corporations in Ireland.

None of the domestic covered banks,[18] as we now know them, was absent from this trend from 2003 onwards in particular. Irish Life and Permanent (ILP) was the most aggressive, doubling its LDR from 143 per cent at the end of 2002 to 288 per cent by the end of 2007, following a 249 per cent increase in its loan book, primarily into residential mortgages.

ILP did not, however, witness the largest loan growth over the period. Rather, the increase in its LDR was due to substantially lower deposit growth (+13 per cent from 2002 to 2007, relative to an aggregate of +89 per cent for the six covered banks). Anglo Irish Bank witnessed the largest loan growth by a quite significant margin (+394 per cent from 2002-2007, relative to an aggregate +168 per cent). It also experienced the largest deposit growth, but the majority was non-retail and thus saw a large deposit outflow at the height of the financial crisis of 2008.[19]

The trends in the "pillar banks" – AIB and Bank of Ireland – were remarkably similar. Both grew their loan to deposits ratios to 157 per cent by the end of 2007. Loan growth was exactly the same over the period (+139 per cent) with Bank of Ireland slightly outperforming in terms of attracting deposits (+78 per cent versus +53 per cent). These LDR trends are to be reversed in the coming years in the context of the restructuring of the system.

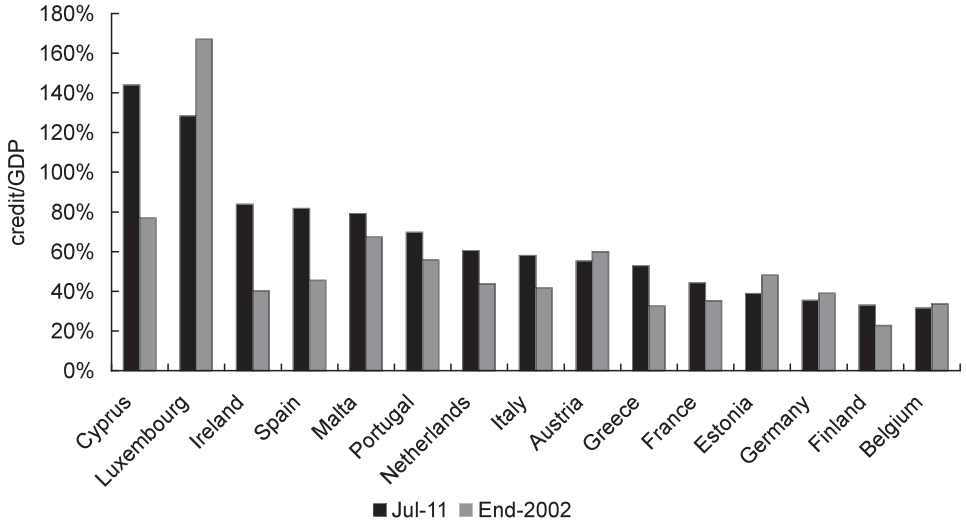
4.3 *Measuring Indebtedness by Sector*

It is clear that the boom in credit levels was unprecedented in a European context and the levels of outstanding credit in the Irish economy have few parallels. We now move on to show the composition of this indebtedness, using both a historical and international context. Figure 7 shows that Ireland went from below average credit levels (as a percentage of GDP) for both households and non-financial corporates in 2002, to above the average in each case in 2011. The situation has improved somewhat from 2008.

Analysis on the basis of the loans on the balance sheets of the financial institutions can be distorted due to the presence of securitisations or agencies, such as NAMA, that have taken the exposure off the balance sheets of the

[18] AIB, Bank of Ireland, Anglo Irish Bank, Irish Nationwide and EBS.
[19] See Nyberg (2011) and Appendix 1 for more detailed bank balance sheet data.

Figure 7: *Non-financial Corporate Credit*



Source: European Central Bank.

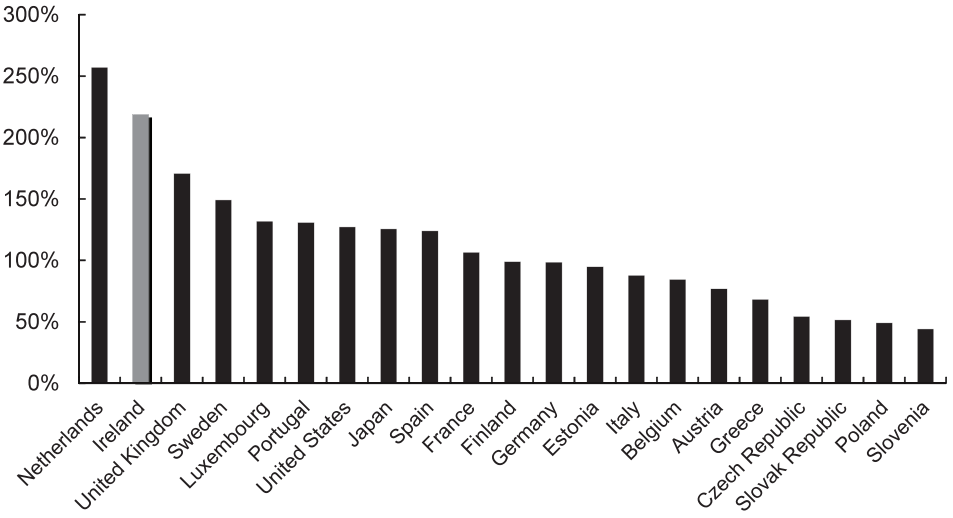
financial institutions but should still be considered as indebtedness in the economy.[20]

For household indebtedness, it is instructive to use disposable income as the comparative in the debt ratio analysis (Figure 8). Among the countries analysed (most of the euro area countries plus a selection of others), we find that Irish households are the second most indebted in the world. In 2009, Irish household debt levels stood at 211 per cent of disposable income. The Netherlands had the most indebted households in our sample, with debt of 266 per cent of disposable income. UK households are also highly indebted, with a ratio in 2009 of 171 per cent. At the other end of the scale, it is notable that Greek and Italian households have relatively low levels of debt.

Ireland experienced the largest increase in household debt over the boom years from 2003 onwards. Next in line were the Netherlands, Estonia and Spain. Households in Germany and Japan were the only ones in our sample that had less leveraged households at the end of the period than at the beginning. Despite its housing boom, US households increased liabilities by a relatively low amount over the period examined, but have been deleveraging since 2007, when the ratio peaked at 138 per cent.

[20] To get around these issues, we also utilise financial accounts data, which reports balance sheets by individual sector. This data series has only been available since summer 2010 in Ireland so the data analysis is relatively new.

Figure 8: *Household Debt/Disposable Income 2009*



Source: Central Statistics Office.

4.4 *Analysis of Household Assets*

To get a truer picture of the health Irish of households' balance sheets, one must also take account of household assets. Table 2 provides estimates for household assets and liabilities.[21]

We draw a number of conclusions:

1. Gross Irish household financial assets, at 322 per cent of disposable income in 2009, were in line with the average across the countries analysed. Ireland's position had not changed dramatically from 2003 on this metric.
2. Net financial assets in Ireland fell from 186 per cent of disposable income to 111 per cent in 2009. This was the largest fall in net financial assets in any of the countries analysed. This resulted in Irish households having the fourth lowest net financial assets in 2009, in line with Spain, and slightly better than Finland, Greece and Slovakia.
3. Despite the fall in house prices up to the end of 2009, the value of Irish household non-financial assets[22] (as a percentage of disposable income) was still above the average. Non-financial assets were worth 372 per cent of disposable income in 2009. The largest decline in the value of non-financial assets over the period occurred in the United States.

[21] Raw Data are taken from the OECD *Statistical Database.*

[22] In instances where data are limited for non-financial assets, we use housing assets as a proxy. For Ireland, we estimate the value of housing assets.

Table 2: *Household Wealth and Indebtedness (% Disposable Income)*

2003	*Financial Assets*	*Financial Liabilities*	*Net Financial Assets*	*Non-Financial Assets*	*Net Wealth*
Netherlands	499	197	301	486	787
Italy	344	65	279	490	769
United Kingdom	411	145	266	482	748
France	269	80	190	432	621
Japan	495	134	361	367	728
Germany	269	111	158	390	548
Belgium	405	65	340	243	583
United States	421	118	303	259	562
Ireland	316	130	186	401	587
Luxembourg	n/a**	n/a	n/a	n/a	n/a
Estonia	137	50	88	227	314
Finland	191	74	117	155	272
Slovakia	62	22	41	243	283
Austria	238	77	161	n/a	161
Portugal	295	118	177	n/a	177
Slovenia	142	33	109	n/a	109
Spain	249	99	150	n/a	150
Greece	179	42	137	n/a	137
Average*	290	92	198	348	443
2009	*Financial Assets*	*Financial Liabilities*	*Net Financial Assets*	*Non-Financial Assets*	*Net Wealth*
Netherlands	575	266	310	563	873
Italy	364	88	276	581	857
United Kingdom	457	171	286	514	801
France	308	107	202	545	746
Japan	501	126	376	341	717
Germany	301	99	202	430	632
Belgium	401	85	316	277	593
United States	400	127	273	214	486
Ireland	322	211	111	372	483
Luxembourg	333	131	202	194	396
Estonia	231	117	114	199	313
Finland	209	109	100	172	272
Slovakia	93	74	19	211	230
Austria	269	89	181	n/a	181
Portugal	314	146	168	n/a	168
Slovenia	172	51	121	n/a	121
Spain	244	130	113	n/a	113
Greece	159	75	85	n/a	85
Average*	314	122	192	355	448

Source: OECD, Authors' calculations.
*unweighted **not available.

On the broadest measure of household net wealth, Ireland ranked eighth out of the thirteen countries where both financial and non-financial data are available. In 2003, Irish households ranked fifth out of twelve. The drop in the ranking can be explained by a combination of a large increase in financial liabilities and a substantial fall in property values. The latter factor has deteriorated substantially since 2009.

4.5 *The Evolution of Irish Household Net Wealth and Implications of Further House Price Declines*

We can augment the analysis above by analysing the Irish data on a quarterly basis and by using more recent evidence on household assets and liabilities. For financial assets and liabilities we use Quarterly Financial Accounts, while we calculate our own measure of non-financial assets based on estimates of private households from the Census and calculating the intra-Census period based on house completions.[23]

At the peak in Q4 2006, we estimate that Irish households were in a net asset position to the tune of €590 billion, or 670 per cent of disposable income.[24] This comprised of assets of 867 per cent of disposable income and liabilities of 199 per cent (Figure 9). Housing assets represented 60 per cent of total assets at that time.

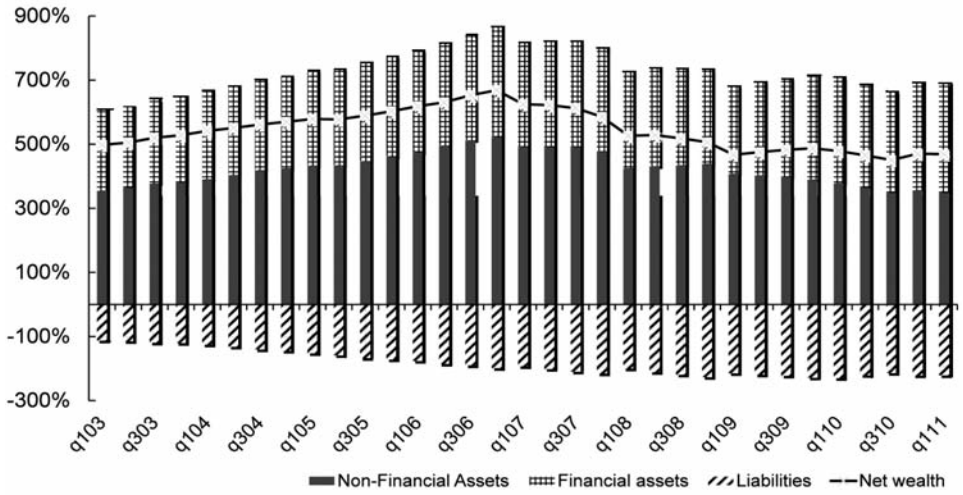
Our calculations suggest that as of Q1 2011, Irish household net worth had fallen by about €180 billion to an estimated €408 billion, equivalent to 477 per cent of disposable income, since the Q4 2006 peak . Some of the notable observations since the peak in household net worth in 2006 are:

- The entire decline in non-financial assets is attributable to the collapse in house price values, which declined by 43 per cent from the peak according to official statistics to that point. In monetary terms, the value of housing assets fell by about €160 billion from the peak to Q1 2011. In Q1 2011, housing assets are estimated to amount to 355 per cent of disposable income, relative to 521 per cent at the peak.
- Financial assets (as a percentage of disposable income) have remained effectively flat over the period at an estimated 348 per cent.
- While household assets peaked in 2006, liabilities continued to grow until Q4 2008. Since the peak in asset values, household liabilities have increased in monetary terms from €178 billion to €193 billion.

The fall in household net worth, therefore, is almost solely due to the collapse in the value of housing assets. Based on more recent evidence, we

[23] We have also taken account of the issue of vacant stock.
[24] Due to lack of data, we have estimated quarterly disposable income based on the annual data.

Figure 9: *Household Net Worth Breakdown (% of Disposable Income)*



Source: OECD, Authors' calculations.

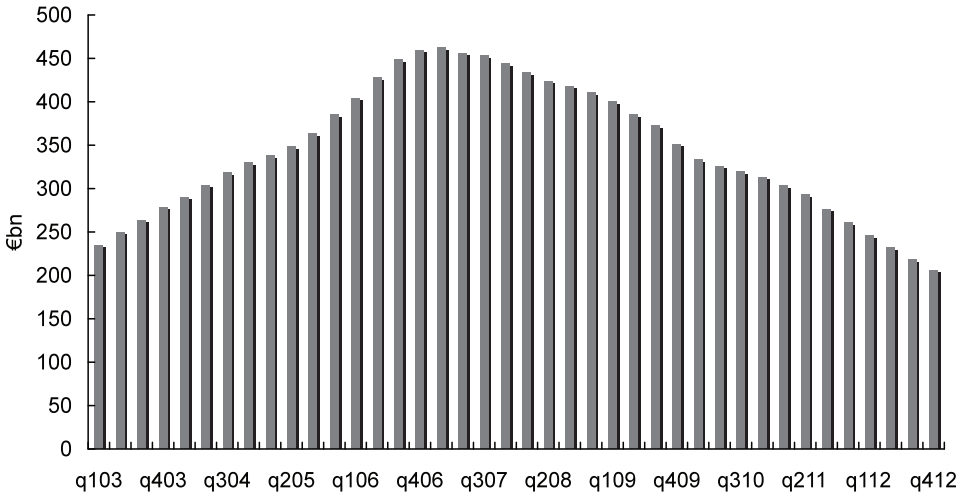
believe it is correct to conclude that the official price data will continue to indicate further house price declines, with a 60 per cent peak-to-trough decline now likely. On this basis, we have modelled the further impact on household balance sheets if this were to occur by the end of 2012 (Figure 10).

In the simulation, we assume that the value of financial assets remains the same and liabilities continue to fall in line with recent trends in debt repayment (household liabilities fall to €173 billion in Q4 2012 from €193 billion in Q1 2011). Finally, we assume that household disposable incomes remain flat in 2012 following a 1 per cent decline in 2011.

On this basis, we calculate that household net worth falls to 388 per cent of disposable income by Q4 2012, amounting to €330 billion. Relative to peak, this would represent a cumulative fall in net wealth of more than €250 billion (Figure 11). This is an enormous amount, with all of the fall attributed to the collapse in housing value.

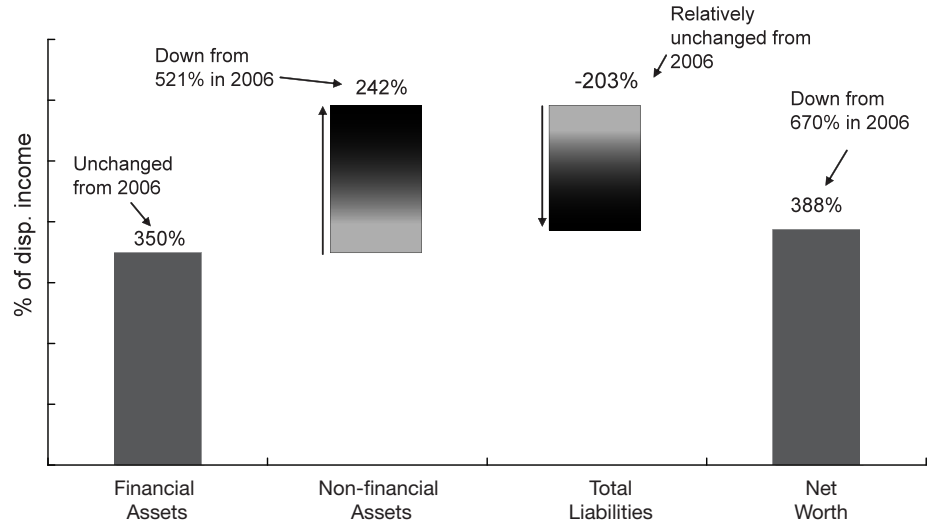
Unfortunately, we do not have data on the distribution of household assets and liabilities. However, we do know that during the period from 2005 to the peak of the market in 2008,125,000 first-time buyers were provided with mortgages totalling €28 billion. Of these, over 80 per cent (102,000) were aged below 36 years at the time of purchase. The average mortgage issued to these first-time buyers was €225,000. For those trading-up and investors, the average mortgage was even higher. With the average house price in the State now estimated at €170,000, and in Dublin at €220,000, most of these households are now in a negative equity situation.

Figure 10: *Value of Irish Housing Assets*



Source: CSO, DOELG, Authors' estimates.

Figure 11: *Irish Household Net Worth Q4 2012 – Simulation Based on 60 Per Cent House Price Fall*



Source: OECD, CSO, PTSB, Authors' estimates.

Although households in aggregate have a positive net worth, there are significant deviations from the average relating to households that purchased property in recent years, with young first-time buyers being particularly likely to be in a negative equity situation.

V THE CHALLENGE OF BALANCE SHEET REPAIR

5.1 *Savings Behaviour of Irish Households*

This unprecedented balance sheet shock will have important implications for the behaviour of Irish households, in terms of savings and spending decisions over the coming years. To rebuild balance sheets, households will have to remain net lenders to the rest of the economy to deleverage from a very high debt position. This will affect the economy in two ways:

1. A high savings rate will have to continue as debt paydown continues; and,

2. This excess savings has multiplier effects on the economy and will negatively influence income trends.

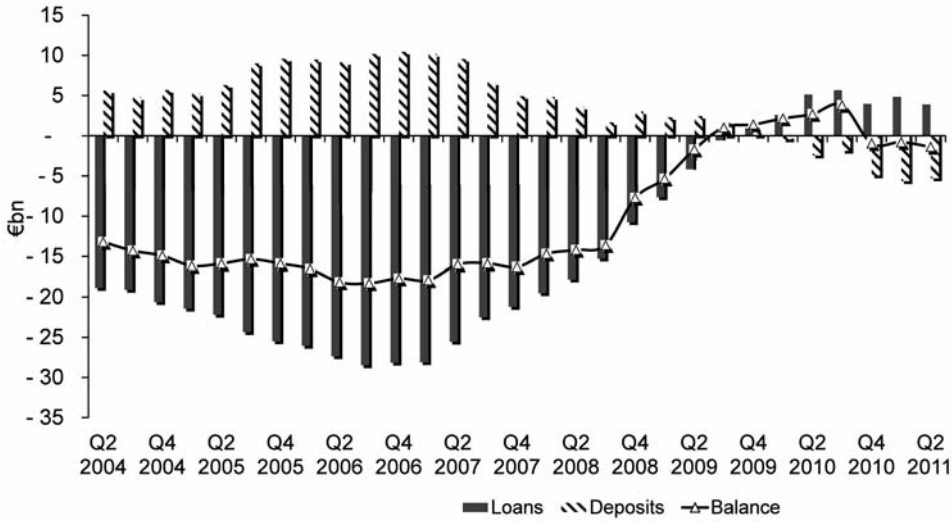
On a net basis, the savings ratio of Irish huseholds fell to 0 per cent in 2007, at the peak of the housing boom, before rising strongly to a peak of 12.3 per cent in 2009.[25] On a gross basis (accepted international standard), the Irish household savings ratio fell to a low of 6.6 per cent in 2007, before rising sharply to a peak of 16.8 per cent in 2009. In 2010, the gross savings ratio is estimated at 12.2 per cent, above the estimated long-term average for the savings ratio of 8.1 per cent.

There is a view that these savings are unnecessary high due to the uncertain environment and thus can be regarded as precautionary savings. There is, however, an alternative view. Household savings may be high because of the need to rebuild balance sheets following the collapse over recent years. This can be done by: (1) accumulating assets; (2) reducing liabilities; and/or (3) valuation uplifts on assets. (1) and (2) can only be achieved by households investing or saving more, and in the latter case, using these savings to reduce debt.

Households are not investing more given that gross fixed capital formation into housing continues to decline. If households were saving for precautionary purposes, this would appear as an addition to assets, but as Figure 12 shows, this has not been the case as the household sector is now a supplier of funds to other sectors of the economy. Figure 12 shows the transactions of loans and deposits with the banking sector. It confirms that while savings have increased over recent quarters, deposits and loans are in decline. This suggests that household savings is going into debt reduction.

[25] Note that we use institutional sector accounts based on National Income and Expenditure 2009 for these calculations. Updated estimates based on NIE 2010 will be published in October 2011.

Figure 12: *Households' Transactions with Financial Institutions*



Source: Central Bank.

5.2 *How Long Will Deleveraging Take?*

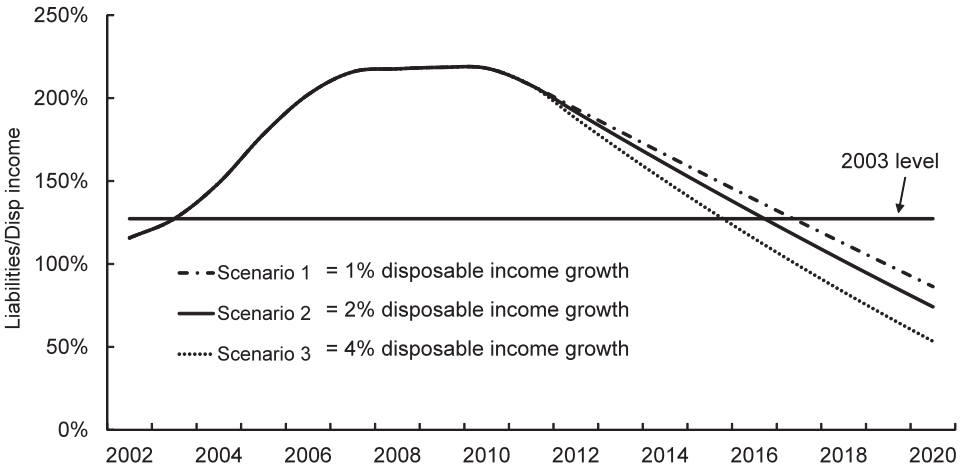
Using the sample data from a broad range of countries above, it is clear that the reason for the relatively low level of household net wealth in Ireland is a higher level of financial liabilities (96 per cent of which are loans). For this reason, our focus is on this element.

Among the sample of countries analysed, liabilities amounted to 120 per cent of disposable income on average in 2009. This is also in line with the level pertaining in Ireland in 2002/2003, prior to the substantial boom in credit. We have simulated below, based on different assumptions for disposable income growth from 2012 onwards (we assume that disposable income growth in Ireland falls at the same pace as in Q1 2011, i.e. –1 per cent), trends in liabilities. We also assume that excess household savings go towards debt paydown. The simulations show that debt reduction will be a protracted process if it is to occur through full paydown. Under the assumptions of average disposable income growth of 1 per cent to 4 per cent, liabilities return to 2002/2003 levels and in line with international averages by 2016-2018 (Figure 13).

Ultimately, we are taking the view that Ireland, within the tight monetary policy setting of the euro area, will remain in a low inflation environment while also experiencing a sluggish recovery due to the continued fiscal contraction over the coming years. Higher inflation would accelerate this

process, but appears unlikely to us at this stage as most of the developed world, given high unemployment, does not have inflationary pressures.

Figure 13: *Trajectory of Irish Household Debt Levels*



Source: Authors' calculations, CSO, Central Bank.

5.3 *International Debt Reduction Episodes*

Private sector leveraging and deleveraging are not new phenomena. There are numerous instances down through history of credit booms being followed by systemic banking crises which are then succeeded by periods of deleveraging/debt reduction. As we have shown, Ireland was certainly not the only country to experience a significant increase in private sector credit relative to GDP in recent years. Here, we draw on historical experience to gauge how long deleveraging episodes tend to be and what is their severity.

The Bank of International Settlements published a report on this issue in 2009 and we use its analysis here.[26] Its analysis supports the earlier work of the McKinsey Global Institute.[27] The latter study finds that deleveraging has "… followed nearly every major financial crisis in the past half-century". The former's conclusion, referring to credit cycles, is that "… what goes up tends to come down". Specifically, the BIS find that in its sample of 20 systemic banking crises that were preceded by rapid credit growth, 17 experienced a subsequent reduction in private indebtedness. The following table illustrates the main findings of the BIS analysis (Table 3).

[26] BIS *Quarterly Review*, September (2010).
[27] *Debt And Deleveraging: The Global Credit Bubble And Its Economic Consequences*, January (2010).

Table 3: *Private Debt Reduction after Systemic Banking Crises*

Country	*Credit Cycle Dates*					*Change in Credit/ GDP*		*Debt Reduction Decomposition*		
	First Trough	*Length of Boom (Qtrs)*	*Peak*	*Second Trough*	*Peak to Trough (Qtrs)*	*Up*	*Down*	*Credit*	*Real GDP*	*Price Level*
Argentina	Q4 1991	42	Q2 2002	Q3 2005	13	28	–30	–14	–10	–6
Chile	…	…	Q4 1982	Q3 1983	3	…	–10	…	…	…
Colombia	Q1 1992	27	Q4 1998	Q1 2005	25	17	–16	5	1	–21
Dominican Republic	Q2 1995	32	Q2 2003	Q1 2007	15	29	–26	6	–6	–26
Finland	Q1 1980	48	Q1 1992	Q1 1998	24	51	–44	–24	–11	–9
Indonesia	Q1 1993	22	Q2 1998	Q2 2002	16	83	–104	–53	–19	–33
Ivory Coast	Q3 1984	14	Q1 1988	Q3 1994	26	14	–27	–15	–5	–6
Japan	Q4 1980	74	Q2 1999	Q4 2008	38	…	–26	–18	–19	12
Malaysia	Q3 1993	18	Q1 1998	Q1 2001	12	72	–33	2	–24	–11
Mexico	Q3 1988	26	Q1 1995	Q4 1996	7	24	–16	1	–1	–16
Nicaragua	Q2 1996	18	Q4 2000	Q1 2002	5	19	–15	–11	–1	–3
Norway	Q1 1980	41	Q2 1990	Q4 1996	26	66	–38	6	–25	–19
Philippines	Q2 1991	26	Q4 1997	Q3 2007	39	60	–50	…	…	…
Russia	Q1 1996	12	Q1 1999	Q2 2001	9	29	–27	13	–15	–25
Sweden	Q3 1985	20	Q3 1990	Q1 1996	22	46	–35	–7	–12	–17
Thailand	…	…	Q4 1997	Q4 2001	16	…	–78	–66	–7	–5
Uruguay	Q1 1995	30	Q3 2002	Q1 2007	18	70	–64	–31	–11	–22
Average		30			18	44	–38	–14	–11	–14

Source: Bank of International Settlements.

A number of conclusions can be taken from this historical analysis:

- The reduction in debt levels is roughly equivalent (–38 per cent versus +44 per cent) to the size of the boom.
- The average length of the deleveraging episodes in the sample is 4½ years, but there is a huge range around this. In the case of Chile, the deleveraging lasted for less than a year whereas in Japan and the Philippines, private sector deleveraging persisted for ten years.
- The reasons for the reduction in debt levels (–38 per cent) are evenly split between credit contraction (–14 per cent), economic growth (–11 per cent) and inflation (–14 per cent).

These findings have important implications for Ireland. Conclusions on the length of Ireland's credit boom are sensitive to the starting date used. For our purposes, we assume that the credit expansion phase ran for 24 quarters

from the start of 2003, so slightly less than the average. One could argue that the credit expansion actually began well before that date. In terms of the size of the boom, Ireland's was substantially bigger than the episodes detailed above. The BIS findings would suggest that Ireland's deleveraging phase is going to be much larger than the average above also. The real debt burden is unlikely to be reduced by substantial inflation due to the relatively tight policies of the ECB. Finally, debt write-off is not suggested as a policy at this point. The fact that most of the burden is then being borne by rapid and synchronised deleveraging under current policy is worrying.

VI DOMESTIC POLICY IMPLICATIONS OF THE DUAL TRILEMMA

6.1 *Sequencing of Policy Measures*

While the achievement of household deleveraging, banking sector deleveraging and fiscal consolidation is required in Ireland over the coming years, attempts to achieve these goals simultaneously are flawed in our view. Continuing with the current policy course risks a prolonged period of depression in Ireland that exceeds the experience of the US in the Great Depression. The question, therefore, arising from this dual trilemma is what policy goal must give way in the short term to promote long-term stability.

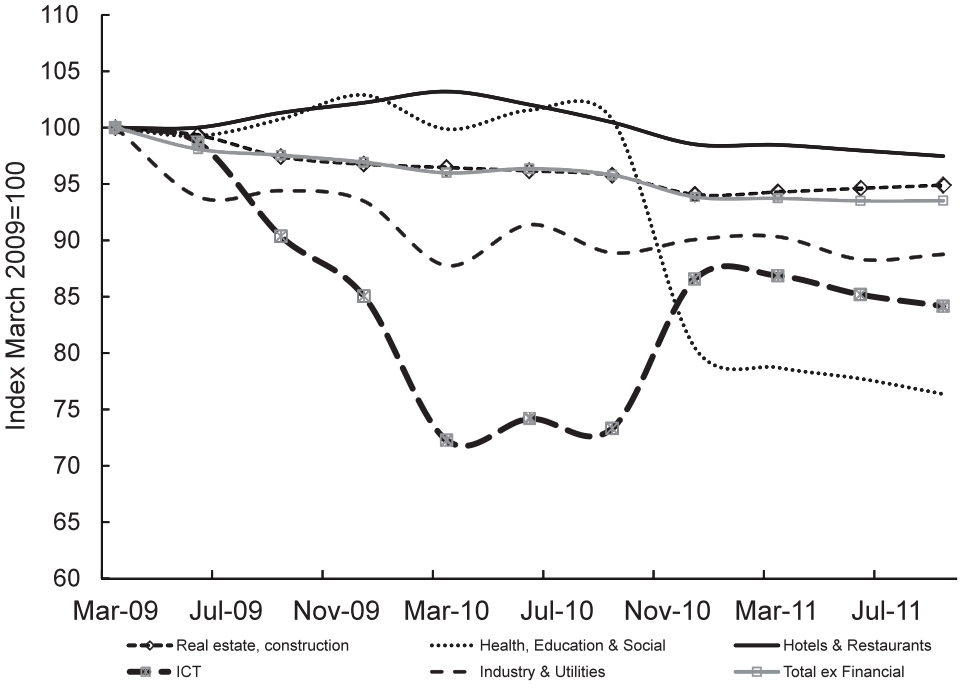
Within the constraints of the domestic policy trilemma, we believe that there is little that the government can do to directly offset the need for balance sheet repair in the household sector, given its own balance sheet constraints. Ireland is currently running a large, primary deficit, estimated at 6 per cent of GDP in 2011. This is the largest in the euro area. Given this reality, not only is it quite clear that this deficit needs to be closed from a debt sustainability point of view, it would politically be impossible to argue the case that the pace of fiscal consolidation should be slowed with the Troika in the midst of a wider euro area sovereign crisis.

This leaves us with banking sector policy. Current policies have been expensive for the Irish government, with fiscal costs coming to an estimated 40 per cent of GDP. The enormous cost is as a result of the small of amount of private sector burden-sharing, which is said to be a condition of the continued liquidity support of the ECB.

A thorough analysis of the loan books has already taken place, identifying as much as possible the likely future loan losses in the Irish banks. The restructuring of the Irish banking system requires the banks to meet a 122 per cent loan to deposit target by the end of 2013, which is to be met by a combination of deleveraging and asset sales. The Irish government has set out

plans to meet the deleveraging targets by focusing on "non-core" activities (including foreign assets), but we question how this could be achieved in practice. For example, Figure 14 shows that in terms of business lending flows, there is no large difference between the trends observed across sectors. Second, the disposal process for bank asset comes at a time when banks internationally are attempting to deleverage themselves, thus making favourable sales prices difficult.

Figure 14: *Building Lending Flows* by Sector 2009–2011*



6.2 *Stock and Flow Dynamics in the Deleveraging Process are Key Policy Issues*

It is important to note that periods of deleveraging can be accompanied by economic growth. Work by the Dutch Central Bank[28] demonstrates empirically that new borrowing (the flow of credit) has a closer relationship with GDP growth than the stock of credit. Therefore, if policies can be introduced to slow the pace of deleveraging – one of those being less pressure on banks to reduce in size – this can lead to an expansion in economic activity, particularly domestic demand. The work shows that the strong rebound in US

[28] See Biggs, Mayer and Pick (2009).

economic growth in 1934 and 1935 coincided with an increase in the flow of credit.

The way this process works in practice is best illustrated by way of a stylised example. Table 4 below takes an example of an economy with an income of 100 and a stock of private debt also equal to 100. We assume that incomes and the level of debt repayment remains constant.

In year 1, the stock of debt increases by 10 and all of this extra "income" is spent i.e. the "savings rate" is zero. The economy is still in debt accumulation mode in Year 2, but the scale of the increase declines because of a fall in gross lending. Because income (sum of income and debt accumulation/ repayment) falls, this leads to a fall in spending. Year 3 represents the most intense period of deleveraging due a large decline in gross lending such that the stock of debt begins to be paid down. With increased income going towards debt repayment, domestic spending suffers.

Years 4 and 5 are the most relevant for the points we are attempting to make in relation to the speed of deleveraging. In this period, while deleveraging continues, the level of new lending increases, which has a positive "impulse" on the flow of domestic demand.

Table 4: *Interaction of Spending and Credit Growth*

	Income	*Gross Lending*	*Repay-ment*	*Net Lend-ing*	*Spend-ing*	*Stock of Debt*	*Growth in Spending %*	*Growth in Gross Lending %*	*Growth in Net Lending %*
Year 0	100	40	40	0	100	100			
Year 1	100	50	40	10	110	110	10	25	10
Year 2	100	45	40	5	105	115	–5	–10	5
Year 3	100	30	40	–10	90	105	–14	–33	–9
Year 4	100	35	40	–5	95	100	6	17	–5
Year 5	100	37	40	–3	97	97	2	6	–3

One can take the Irish mortgage market as a case in point. Even in the aftermath of house price declines of 60 per cent in some cases, gross mortgage lending remains more than 90 per cent below peak levels, and the number of mortgages issued in 2011 is expected to be back to levels last seen in 1971. With the rate of repayment exceeding new loans, the stock of loans is falling at an annual pace of 2 per cent. Net lending would be falling at an even faster pace were it not for the renegotiation of mortgage terms by the banks.[29]

[29] As of June 2011, there were 70,000 restructured owner-occupied mortgages, representing about 9 per cent of the total stock.

In terms of new demand for credit, however, gross lending is a better gauge. If we were to see a loosening in terms for mortgages, which triggered an increase in gross mortgage lending, the loan books would continue to contract, but the increase in activity would lead to a better economic environment and lead to an improvement in economic growth.

6.3 *Supporting a European Solution to a European Problem*

Ireland has paid a heavy price for its lax regulatory framework during the boom years. As capital holes emerged, taxpayers in the main have had to assume the losses that would ordinarily have been assumed by private creditors. It is often argued that this was a consequence of the introduction of the blanket bank guarantee in September 2008, but the continued strong opposition from the ECB makes it highly likely that Ireland could not have taken a unilateral decision to burden-share at any time since the beginning of the crisis.

This resistance is as a result of not having in place a euro-wide resolution agency for failing banks. This failure makes the orderly winding-down of a banking institution difficult to implement, with unknown contagion effects on the rest of the system. Importantly, it would have allowed a process in which a sharing of losses could be achieved, thus lessening the impact on domestic taxpayers. Although the crisis is well-advanced, there are still advantages to a euro-wide banking agency,[30] not just for Ireland but also in dealing more efficiently with future banking failures. We would highlight three benefits in particular:

1. Piecemeal approaches to recapitalisation are undesirable and influenced by domestic politics. A wider euro area agency could impose capital standards more efficiently.
2. Individual sovereign risk due to propping up domestic banking systems can be reduced.
3. Financial transfers from the core to the periphery can occur in a much more politically acceptable way.

Domestically, the current policy of setting strict targets for loan to deposit ratios by a certain date creates perverse incentives for the banks to reduce the size of their loan book, thus exacerbating the deflationary impulse of the private sector deleveraging. A more growth-friendly deleveraging process would centre on the following:

[30] Some of these arguments have recently been articulated by Wolfgang Munchau in the *Financial Times* ("A euro area quick-fix will create a political monster", October 10, 2011).

1. Foreign ownership**:** Recent investments in Bank of Ireland have shown that foreign investors do have an interest in investing in an Irish economic recovery. However, the bulk of the Irish banking system remains in the ownership of the Irish government. Foreign ownership of Irish banks by well capitalised, well funded international banks would reduce funding concerns and also remove the contingent liability from the Irish government, resulting in a double benefit.
2. Further European support may be required. This could be achieved by way of the utilisation of the EFSF or another European agency (a European TARP) taking direct stakes in the banks or providing forms of guarantees to potential purchasers or for depositors.
3. Delaying the period by which the banks have to achieve the loan-to-deposit targets. In their current form, the Irish covered banks still have a large dependence on central banks for funding. In August 2011, this dependence for the covered banks (AIB, Bank of Ireland, Irish Life and Permanent, EBS, Anglo Irish Bank and Irish Nationwide) amounted to €124 billion. Part of the motivation for setting LDR targets for the banking system was to reduce this dependence. Delaying the process of reduction would mean that the ECB would need to confirm a funding vehicle for the period in question.

VII CONCLUSIONS

The policy direction that the Irish economy is taking in the 2011-2013 period is largely dictated by the Troika. This lack of policy control is a direct result of the loss of market trust that manifested itself most visibly in 2010. Along with growth-enhancing structural reforms, the policy course is neatly described as a simultaneous restructuring/deleveraging of the banking system and fiscal consolidation. Less focus has been placed on the concurrent deleveraging that is taking place in the household sector, in particular, due to the need to repair balance sheets following a collapse in asset prices.

The goal of an export-led growth strategy is the correct one, and appears to be yielding some benefits already, but the external strategies of fiscal consolidation in developed economies puts this under threat. Indeed, the external trilemma of policy autonomy, fixed exchange rates and capital mobility, close off some of the traditional routes to achieving an acceleration of export growth and/or real debt reduction.

Ireland wants to reach a destination whereby it will have a smaller private debt level, a smaller banking system and stable public finances. That is the story of stocks. How it gets there, outside of default, is determined by flows.

This paper shows that the current policy course is inconsistent with the achievement of all three goals in a reasonable timeframe and sustainable way. With private sector deleveraging largely outside of domestic policy control and political imperatives pushing for fiscal consolidation, we view the slowing of banking sector deleveraging as a way to ease the damaging circular dynamic that is currently taking place in the Irish economy. Further European assistance will be needed to achieve this, but the policy recommendations laid out here are unlikely to be exclusively beneficial to Ireland if they were implemented.

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APPENDIX 1:
COVERED BANK LOANS AND DEPOSITS

Table A1: *Irish "Covered" Banks Loans and Deposits*

	2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*% Change 2002-2007*
Loans (€bn)											
AIB	51	53	50	66	85	107	128	129	103	86	139
BKIR	57	57	68	80	101	125	136	134	119	114	139
ANGLO	11	13	17	24	34	49	66	72	31	25	394
ILP	13	15	17	21	26	34	39	40	39	37	168
INBS	3	4	4	6	8	10	12	10	2	2	249
EBS	5	6	7	10	12	15	16	17	16	16	154
Total Loans	140	148	164	206	267	340	397	403	310	280	168
Aggregate Loan growth (%)		6	11	26	29	28	17	2	–23	–10	
Deposits (€bn)											
AIB	55	53	45	50	63	75	81	93	84	52	53
BKIR	51	48	54	60	62	72	86	83	85	65	78
ANGLO	9	12	15	20	25	37	53	51	27	13	345
ILP	10	10	10	12	13	14	14	14	15	13	33
INBS	2	3	3	5	5	7	7	7	5	4	112
EBS	5	5	6	7	9	10	10	10	10	9	78
Total Deposits	131	132	133	154	177	214	251	258	226	157	89
Aggregate Deposit Growth (%)		1	1	16	15	21	17	3	–13	–30	
Loan to Deposit Radio (%)											
AIB	94	101	113	131	136	143	157	140	123	165	56
BKIR	111	117	124	133	164	173	157	161	140	175	40
ANGLO	124	113	118	121	136	133	125	140	112	185	12
ILP	136	143	169	176	205	248	288	284	264	273	145
INBS	133	104	123	116	141	158	170	154	45	52	67
EBS	107	117	121	140	138	145	166	167	167	174	50
Total LDR	107	112	123	134	151	159	158	156	137	178	46

Source: Company Accounts.