

# **Stabilising and Healing the Irish Banking System: Policy Lessons**

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*Ireland—Lessons from its Recovery from the Bank-Sovereign Loop*

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## **Abstract**

Ireland has recovered from a historic banking crisis. This paper reviews the policies to restore order to the Irish banking system. The overall assessment is that the Irish authorities have been successful in the management of the Irish banking crisis.

On balance, there was a strong focus on stabilising banks (restoring solvency, replacing management and closing bad banks), but less emphasis on restructuring loans. The Irish banks are not yet healed with 25 per cent of non-performing loans. A small but important group of highly indebted households and firms cannot resume consumption and investment due to debt overhang. Intensifying write offs of bad loans would broaden the economy recovery.

The Irish taxpayers have been brave in shouldering the full costs of recapitalising the Irish banking system, while part of the resulting stability benefits accrued to the wider European banking system. In the new Banking Union setting with ECB supervision for the large euro-area banks, we recommend that the European Stability Mechanism (ESM) should directly recapitalise troubled banks after resolution measures are taken. The ESM would then become an effective vehicle for risk sharing and cut the bank-sovereign loop.

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## 1. Introduction

In the wake of the Global Financial Crisis, Ireland faced its own banking crisis after the bursting of the property bubble. The property boom, fuelled by domestic and cross-border banking credit, did not only lead to unsustainable residential and commercial real estate prices but also to massive new construction. This resulted in losses on large commercial real estate loans of over 50 per cent. To restore the capital base of the Irish banking system, the Irish government provided up to € 64 bn to the banks (amounting to about 40 per cent of GDP). As taxpayers had to fund this new capital, several questions arise. Has the Irish government been successful in stabilising the banking system? Are the bank balance sheets cleaned up? And ultimately, what is the social return on this massive government investment? As the Irish economy is turning the corner, it is timely to answer these questions.

This paper provides a high-level overview of the crisis management by the Irish authorities. For this post-mortem analysis, we adopt the classical drama structure of three acts: the setup, the confrontation and the resolution. The first act concerns the run-up to the crisis. The Minsky theory of the credit boom-bust cycle is applied to the Irish setting (Minsky, 1986). The second act covers the stabilisation of the Irish banking system. This confrontation involved ‘high’ drama with the closure of two of the six Irish banks, the take-over of a smaller bank and the establishment of a bad asset agency. Four consecutive rounds of recapitalisation were needed to bring the remaining banks back to solvency. The Irish authorities have finished this act largely successful, as confirmed by the ECB Comprehensive Assessment in October 2014. The two broad banks, Bank of Ireland and Allied Irish Banks, have passed the test, while the smaller building society, Permanent TSB, is in need of some further capital. The third and final act is about the healing of the Irish banks. While much has been achieved, our assessment suggests that the climax is not yet reached. Bank balance sheets still carry up to 25 per cent of non-performing loans. This legacy is not only holding back banks in new business, but also indebted households and firms. Firms and households faced with debt overhang suppress new investment and consumption (Myers, 1977; Mian and Sufi, 2014).

The paper draws several policy lessons from the Irish crisis management. First, the establishment of the bad asset agency, NAMA, serves as an international example of successful management of bad assets. Second, the assessment of capital shortfalls should be comprehensive and bottom-up. In that way, the full scale of problems becomes clear. Third, when providing taxpayers money to banks, the government should set policy targets for writing off bad loans. In that way, the health of banks as well as their customers (firms and households) can be restored. On the latter, there is some outstanding work for banks. Only when bad loans are appropriately restructured (including partially written off), the social return on the bank recapitalisations can be fully captured.

More broadly, the Central Bank of Ireland has put in place a macroprudential policy framework to mitigate future credit boom-busts. The decision-making can be further strengthened by the inclusion of external members. Finally, the ECB supervises the large euro-area banks in the new

Banking Union. This centralised ECB supervision should be complemented with direct recapitalisation by the European Stability Mechanism, when needed and justified (Allard *et al.*, 2013; Schoenmaker, 2013a). In that way, the bank-sovereign loop would be cut. Such burden sharing would also have been appropriate in the rescue of the Irish banking system, as this rescue prevented further instability of the wider European banking system.

The paper takes a macro-finance approach, an emerging new field in academia (Brunnermeier *et al.*, 2009; Schoenmaker, 2014). Such an approach is warranted, as the ultimate objective of financial stability policies is to promote sustainable economic growth. We refrain therefore from micro-supervisory issues (see the Investigation Committee, 2011, for a review of the Financial Regulator). The paper is organised as follows. Sections 2 to 4 contain the analysis of the run-up, the stabilisation and the restructuring of the Irish banks. Section 5 makes an assessment of the Irish banking policies and draws policy lessons. Finally, Section 6 concludes.

## **2. Run-up to crisis**

### *2.1. Theory*

The review starts with the macro picture of the financial system. The global financial crisis has revived interest in Minsky's 'financial-instability' hypothesis (Minsky, 1986). In the Minsky model the events leading up to the crisis start with a 'displacement' -some exogenous, outside shock to the macroeconomic system- an invention or an abrupt change of economic policy about which investors get excited. Subsequently there are five stages to the boom and eventual bust:

1. credit expansion, characterised by rising assets prices;
2. euphoria, characterised by overtrading;
3. distress, characterised by unexpected failures;
4. discredit, characterised by liquidation; and
5. panic, characterised by the desire for cash.

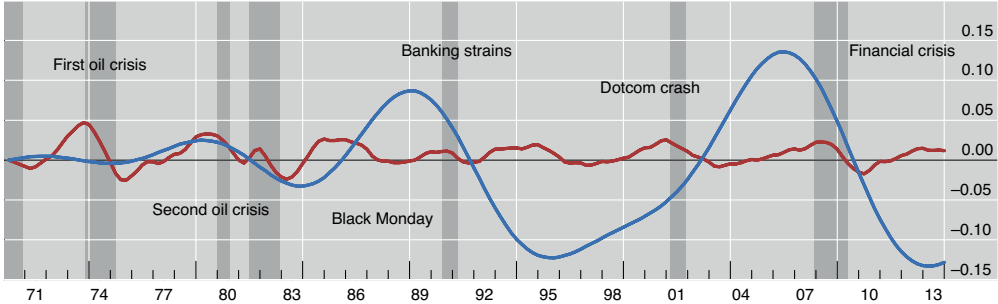
The displacement sets in a boom fuelled by credit. As a boom leads to euphoria, banks extend credit to ever more dubious borrowers, often creating new financial instruments to do the job. Then, at the top of the market, some smart traders start to cash in their profits. The onset of panic is usually heralded by a dramatic event, such as a bank not being able to meet its obligations. Losses on loans begin to mount, and the value of the loans falls relative to liabilities, driving down the capital of financial institutions. With less capital, financial institutions cut back on their lending (deleveraging).

Minsky's financial-instability hypothesis highlights the pro-cyclicality of the financial system. Several factors contribute to this pro-cyclicality. First, the role of risk assessment is important.

While risk tends to be underestimated in good times (euphoria with ‘low risk’), it is overestimated in bad times (distress with ‘high risk’). Moreover, risk can be endogenous. For example, when financial institutions sell a particular asset to reduce risk, the price of that asset may fall further. Second, the amount of debt (leverage) is a key factor explaining the depth of the financial crisis. The more debt is built up in the upswing, the more severe is the deleveraging in the downswing. This is not only an argument for more equity financing in general, but also for more equity capital for banks. Adrian and Shin (2008) show that banks have contributed to the upswing prior to the crisis, by increasing their leverage (more debt; less equity). This resulted in a declining leverage ratio, defined here as equity divided by total assets. Third, Gorton and Ordonez (2014) stress the pro-cyclical role of collateral. Investors are willing to lend short term (e.g. via repos) against collateral without producing costly information about the collateral backing the debt. When the economy relies on such informationally insensitive debt, firms or households with low quality collateral can borrow, generating a credit boom. Financial fragility builds up over time as information about counterparties decays. A crisis occurs when a (possibly small) shock causes investors to suddenly have incentives to produce information. Fourth and last, capital requirements play a role. Banks have to keep minimum capital against new loans. In good times, retained earnings boost capital, which enables banks to increase lending. In bad times, capital shrinks through losses, which may hamper the granting of new credit.

Expanding on Minsky, Borio (2014) argues that not only credit, but also house prices are important macro-drivers of financial cycles (see also Claessens, Kose and Terrones, 2014). Figure 1 illustrates how the financial cycle (measured by credit and house prices) can amplify the business cycle (measured by GDP). The amplitude of the financial cycle over the 1970-2013 period is five times that of the business cycle in the United States (US). Moreover, the duration of the financial cycle tends to be longer than that of business cycle.

**Figure 1. The Financial and Business Cycles in the US**



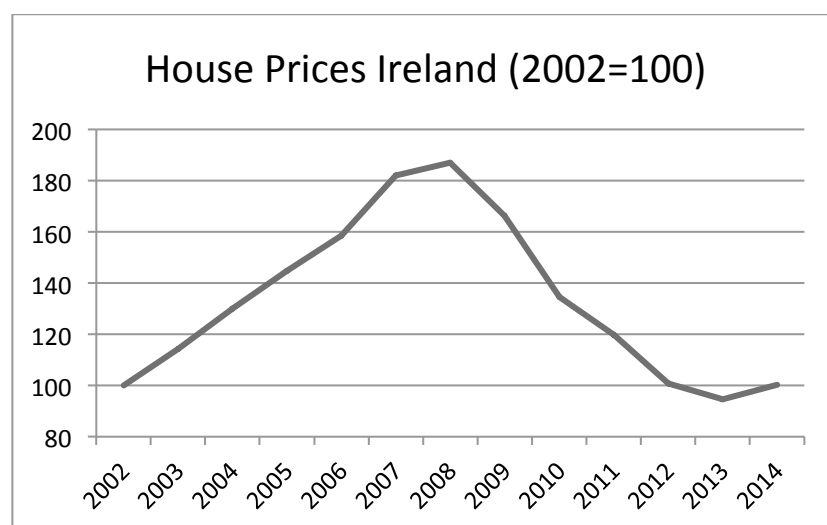
Note: The blue line traces the financial cycle measured by the combined behaviour of the component series (credit, the credit to GDP ratio and house prices). The red line traces the GDP cycle.

Source: Updated from Borio (2014)

## 2.2. The macro-finance side of the Irish crisis

For a full review of the run-up to the Irish banking crisis, we refer to Regling and Watson (2010), Honohan (2010) and the Investigation Commission (2011). These papers show that not only macro factors, but also a weak supervisory approach played an important role. On the macro-finance side, we examine house prices and credit growth as important components of the financial cycle in Ireland. Figure 2 shows that house prices (i.e. residential property) almost doubled from 2002 to 2008. Commercial real estate prices were also rising fast. The Investigation Commission (2011) indicates that ‘groupthink’ among bankers, supervisors, and central bankers may explain that the dangers of the strong build-up of house prices were not appreciated. This is a characteristic feature of the euphoria stage in the Minsky model. The strong rise in property prices led to massive new construction in Ireland.<sup>2</sup> With hindsight the construction bubble caused a misallocation of resources, aggravating the problems (Gros and Alcidi, 2013).

**Figure 2.** Residential property prices in Ireland



*Note:* Index of residential property prices, 2002=100.

*Source:* BIS Residential Property Price database

Moving to the second component of the financial cycle, Ireland experienced strong credit growth, with total banking assets almost tripling from 2002 to 2008 (see Table 1). This credit growth was fuelled predominantly by credit flows from other EU countries. Figure 3 indicates

<sup>2</sup> France and the Netherlands, for example, also experienced a housing price bubble, but without a construction bubble.

that domestic banking assets and third country banking assets (though a very minor component of 10 per cent, as Table 1 shows) grew with an overall rate of 250 per cent over the full period from 2002 to 2008. By contrast, EU country banking assets increased with almost 400 per cent over this period. The relative share of banking assets from other EU countries rose from 30 per cent in 2002 to 40 per cent in 2007/2008 and is now back at 30 per cent (see Table 1). Foreign credit (from EU and third countries) was 50 per cent of overall credit in Ireland at the height of the financial crisis.

It may be interesting to compare credit growth in Ireland with other crisis-stricken countries like Spain and Portugal. Figure 4 illustrates that both domestic credit and credit from other EU countries were growing at a more or less even pace in Spain. Moving to Portugal, Figure 5 shows that credit growth was mainly domestic and more subdued than in Ireland or Spain. Moreover, credit from other EU countries went up to 300 in Spain (with the index at 100 in 2002), while this went up to close to 400 in Ireland. So, Ireland had both higher and more foreign-fuelled credit growth preceding the global financial crisis than Spain and Portugal.

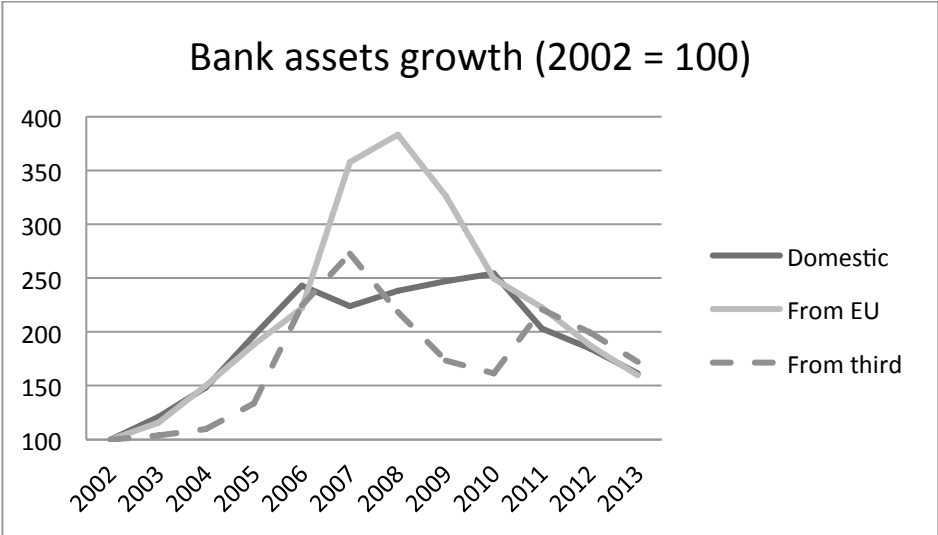
**Table 1.** Irish banking system, 2002-2013.

In € bln	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total assets	600	708	873	1,128	1,412	1,607	1,672	1,577	1,462	1,264	1,124	972
Domestic	366	444	544	719	890	819	872	904	930	743	676	590
From EU	175	202	263	330	388	625	670	570	436	389	328	279
From third	60	62	66	80	134	163	130	103	96	132	119	103
In %												
Domestic	61%	63%	62%	64%	63%	51%	52%	57%	64%	59%	60%	61%
From EU	29%	29%	30%	29%	27%	39%	40%	36%	30%	31%	29%	29%
From third	10%	9%	8%	7%	9%	10%	8%	7%	7%	10%	11%	11%

*Note:* Total assets of the Irish banking system are split in domestic, from the rest of the EU and from third countries.

*Source:* Author calculations based on ECB Structural Financial Indicators.

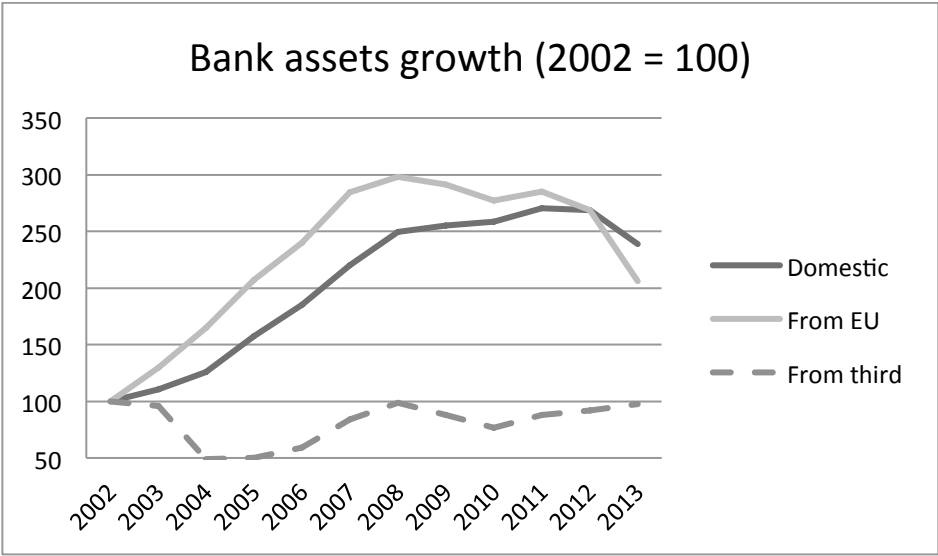
**Figure 3.** Banking assets Ireland (foreign vs domestic)



*Note:* Growth in total assets of the Irish banking system is split in domestic, from the rest of the EU and from third countries; Figure represents an index with 2002=100.

*Source:* Author calculations based on ECB Structural Financial Indicators.

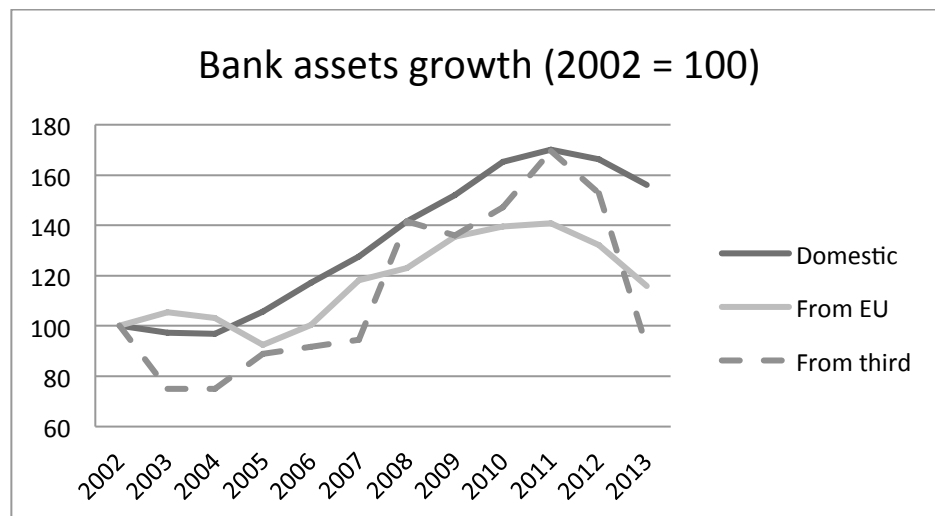
**Figure 4.** Banking assets Spain (foreign vs domestic)



*Note:* Growth in total assets of the Spanish banking system is split in domestic, from the rest of the EU and from third countries; Figure represents an index with 2002=100.

*Source:* Author calculations based on ECB Structural Financial Indicators.

**Figure 5.** Banking assets Portugal (foreign vs domestic)



*Note:* Growth in total assets of the Portuguese banking system is split in domestic, from the rest of the EU and from third countries; Figure represents an index with 2002=100.

*Source:* Author calculations based on ECB Structural Financial Indicators.

It should be noted that the financial cycle components, house prices and credit growth, are correlated, as 80 per cent of the new credit in Ireland went to housing and commercial real estate (Gerlach, 2014). A salient feature of the increase in house lending is that banks lowered credit standards. High loan-to-value (LTV) ratios indicate loose credit standards. While in 2005, only half of first time buyers had LTV rates above 90 per cent, with very few above 100 per cent, these numbers went up in 2005 and 2006. By then, two-thirds of mortgages to first time buyers had LTV rates over 90 per cent and one third over 100 per cent (Honohan, 2009).

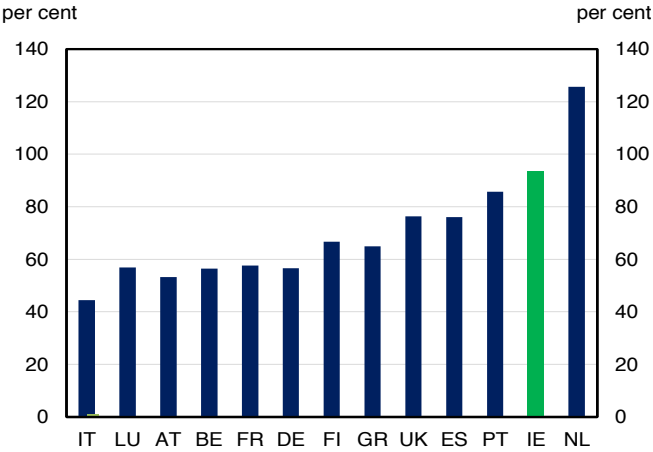
Jorda, Schularick and Taylor (2014) show in a historical overview spanning 140 years that the link between loose monetary conditions and booms in mortgage lending and house prices has become stronger post-WW2. Loose monetary conditions are in particular a problem when monetary policy is largely set elsewhere, for example in a monetary union, like EMU, or in a currency board, like Hong Kong. Applying the Taylor rule, Jorda *et al.* (2014) estimate that the policy interest rate was 5 to 10 per cent too low for Ireland and Spain during the 1999-2008 period. The level of mortgage debt to GDP in each country subsequently doubled in the space of about eight years. Next, the house price to income ratios in Ireland and Spain rose by 65%–75% over the same time frame.

More generally, Jorda *et al.* (2014) show that the 20th century has been an era of increasing “bets on the house”. The strong rise in aggregate private debt over GDP in many Western economies in the second half of the 20th century has been mainly driven by a sharp increase in mortgage debt (see Figure 6). Mortgage credit has risen dramatically as a share of banks’ balance sheets



from about one third at the beginning of the 20th century to about two thirds today. The next sections indicate that the restructuring of mortgage loans appears to be one of the most intricate challenges in the crisis management of the Irish banking sector.

**Figure 6.** Household debt-to-GDP ratio in Europe, 2014



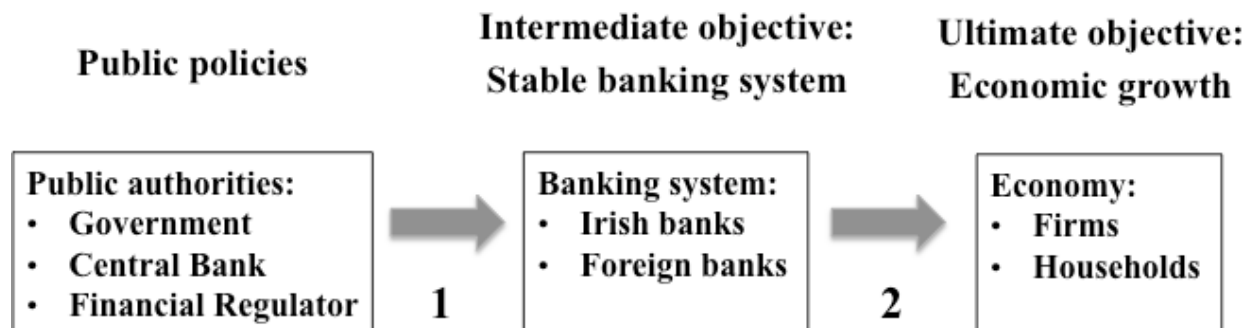
Source: Central Bank of Ireland, Macro-Financial Review, 2014-II

**3. Crisis management – stabilising banks**

The management of the Irish banking crisis happened in several stages. In the first stage, the emphasis was on public policies to stabilise the banking system. In the second stage, the restructuring of loans to firms and households (mainly mortgages) took centre stage. Although the two stages are interrelated, we make this split for analytical purposes. Figure 7 illustrates the banking system and public policies, whereby the first arrow reflects the first stage and the second arrow the second stage. This section discusses public policies to stabilise the banking system and the next section analyses the restructuring of bank loans (“healing the banks”).

It is important to note that stabilising and restructuring the banking system is only an intermediate objective in the overall policy framework for the monetary and financial system (Schoenmaker, 2013b). The ultimate objective of the government and the central bank is stable economic growth. Nevertheless, the credit channel theory stresses that an efficient working banking system is crucial for economic growth (Bernanke and Gertler, 1995). So, the effectiveness of Irish policies to stabilise and restructure the banking system should be judged on their contribution to resuming stable economic growth in Ireland.

**Figure 7.** Public policies and the banking system



### *3.1. Blanket guarantee and early recapitalisation*

The global financial crisis started with the fall of Lehman Brothers on 15 September 2008. This panic stage of the Minsky model put pressure on wholesale funding of banks, including Irish banks. In response, the Irish government introduced a blanket guarantee scheme covering virtually all Irish bank liabilities on 30 September 2008 (Gerlach, 2014). The original assumption was that the guarantee scheme had to cover liquidity problems at banks (Investigation Committee, 2011). But as almost always, liquidity problems forebode underlying solvency problems at the troubled banks. In contrast, most other European countries as well as the US provided only government guarantees for new borrowings or injections of preference or ordinary shares.

The underlying solvency problems -and subsequent capital injections- were revealed over an extended period of about three years from late 2008 to 2011 (see Table 2). Whereas the groupthink prior to the crisis led to a massively overheated property market building up over several years (the euphoria stage), it also took some time to grasp the full scale of the unfolding banking crisis (the distress and panic stages). Several factors contributed to the slow recognition of bank loan-loss estimates (Honohan, 2012): 1) the slowness of bank management to face up to the scale of the losses; 2) inadequacy of management information; 3) declining property prices, and 4) importantly, the inherent uncertainty about the ability of debtors to service loans where collateral fell well below loan amounts (negative equity).

Table 2 provides an overview of the recapitalisation efforts (Honohan, 2012). The initial capital injection in phase 1 was € 3.5 bn for Bank of Ireland (BOI) and Allied Irish Banks (AIB). In the face of continuing outflows, Anglo Irish Bank (Anglo) was nationalised in early 2009 and received a capital injection of € 4 bn. Phase 2 started with the creation of the National Asset Management Agency (NAMA) to take care of the large loans to property developers. By purchasing the large property loans at ‘long-term economic value’, banks had to recognise prospective losses. The first tranche of larger property developer exposures was valued first

(phase 2A) and the full NAMA sample later (phase 2B). A similar exercise was done for the smaller loans to SMEs and mortgages to households, which stayed on the balance sheet of the banks.

In a top-down stress test exercise, the Central Bank of Ireland estimated loan losses for the NAMA and non-NAMA loans of the Irish banks. The subsequent calculation of the capital shortfall is known as the Prudential Capital Adequacy Review (PCAR). The March 2010 PCAR amounted to € 32 bn.

**Table 2.** Recapitalisation of Irish banks, 2009-2011, (in € bn)

	BOI	AIB	Anglo	INBS	EBS	ILP	Total
Phase 1: Early 2009	3.5	3.5	4.0				11.0 (14%)
Phase 2A: March 2010 (PCAR)	2.7	7.4	18.0	2.6	0.9		31.6 (40%)
Phase 2B: September 2010	0.0	3.0	7.3	2.8		0.1	13.2 (16%)
Phase 3: March 2011 (PCAR)	5.2	13.3			1.5	4.0	24.0 (30%)
Total	11.4	27.2	29.3	5.4	2.4	4.1	79.8 (100%)

Source: Honohan (2012).

### 3.2. Expiration of guarantee and further recapitalisation

The blanket government guarantee was for 2 years, expiring on 30 September 2010. Due to maturing bank paper and non-renewal of deposits, emergency liquidity assistance (ELA) was needed from the Central Bank of Ireland. The backing-up of the banking system moved thus from the government to the central bank (which is *de facto* also government guaranteed). The growing ELA as well as reliance of the Irish banks on Eurosystem funding were not sustainable, as central banks should not use liquidity assistance to prop up ailing banks for a longer time.

Due to the government's lack of market access, the EU-IMF Programme of Financial Support was meant to provide the Irish government with sufficient funding to adequately recapitalise the Irish banks. Importantly, the European Financial Stability Facility did not recapitalise the Irish banks directly, but provided funds to the Irish government for bank recapitalisation.

A contentious issue was, and still is, the burden sharing of bondholders in the recapitalisation. While subordinated bondholders had borne losses of € 15.5 bn (Honohan, 2012), senior bondholders were exempted. The IMF negotiation mission and the Irish authorities were preparing a proposal to involve senior bondholders. But to prevent contagion effects to Irish and other European banks, the ECB pressured the Irish government to bail out senior bondholders. The US Treasury Secretary also urged the Irish authorities to exempt senior bondholders because of fears of the potential negative effects on the CDS markets (Pisani-Ferry *et al.*, 2013).

As part of the EU-IMF Programme, Ireland had to do another PCAR exercise. But this time a more granular bottom-up approach -involving external consultants- was required. More stringent

conditions were applied: 1) higher percentage capital ratios; 2) higher projected 3-year loan losses; 3) buffer for post-3 year loan losses; and 4) projected losses from selling non-core assets (deleveraging). The PCAR2011 exercise led to an additional capital injection of € 24 bn.

Table 2 summarises the overall capital injections amounting to € 80 bn into the Irish banks, whereby € 64 bn was provided by the government and € 15.5 bn from exchanges on subordinated debt and some private equity.<sup>3</sup> The first conclusion is that the capital injections were done in several rounds. Next, it is clear that the comprehensive assessments (PCAR) lead to larger estimates than ad-hoc calculations. Finally, a bottom-up approach with loan-by-loan estimates, by an independent third party, has been instrumental in getting the full picture. A parallel may be drawn with the ECB Comprehensive Assessment, which also employed a very detailed estimation of loan provisions as well as external consultants.

### *3.3. Nationalisation / mergers*

While all Irish banks were involved in residential and commercial property lending, Anglo and Irish Nationwide Building Society (INBS) were the most aggressive both in growth and riskiness of the property portfolio (Investigation Commission, 2011). Anglo was active in commercial property, while INBS was involved in speculative site finance. Moreover, these two banks were found to have severe shortfalls in corporate governance. To prevent throwing good money after bad, the government decided to nationalise Anglo in January 2009 and INBS in August 2010. Anglo deposits were moved to AIB, and INBS deposits to Irish Life and Permanent (ILP). The two banks were subsequently merged into the Irish Bank Resolution Corporation (IBRC), which was put in special liquidation in February 2013.

Next, the bank-insurance conglomerate ILP was split. The profitable insurance part Irish Life was sold on by the government, and the banking part received state aid and was renamed permanent TSB (PTSB). Finally, the smallish Educational Building Society (EBS) needed substantial capital injections and had to restructure, just like the other Irish banks with state aid, under European Commission approved plans. Its restructuring was to merged into by AIB in July 2011.

The result of these liquidations and mergers is a domestic banking system with six banks turning into a consolidated (and concentrated) system with two broad banks, BOI and AIB, and one small bank, PTSB. The surviving banks had to rebuild profitability through cutting operations costs and some widening of interest margins. Moreover, the foreign-owned resident banks have stopped or substantially downscaled their banking operations in Ireland.

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<sup>3</sup> It should be noted that the € 80 bn estimate of Table 2 only deals with the six Irish banks covered by the blanket guarantee of the Irish government. A further € 40 bn can be added for losses by the non-Irish banks (McArdle, 2012).

#### 4. Restructuring – healing banks

After stabilisation, the next stage in crisis management is to restructure banks in order to return their business to viability. First, the restructuring or healing of banks involves the splitting of good and bad assets. Only when its bad assets are written down and/or hived off, a bank can start to plan for the future. Next, banks may need to downscale their operations (deleveraging) living up to the new reality of a smaller banking system, as the banking system had outgrown itself prior to the crisis. Finally, restructured banks may then resume their core function of providing credit to firms with positive NPV investment projects and to households wanting to buy a house on the basis of reasonable LTV rates.

##### 4.1. NAMA

In 2009, the National Asset Management Agency (NAMA) was set up as agency of the Department of Finance to deal with the bad assets of the banks. The Irish banks were allowed to transfer property related loans to NAMA at a discount. Table 3 shows that banks transferred loans of € 74 bn at a discount of 57 per cent. Only loans in excess of € 20 mn were transferred. There was a plan (NAMA II) for the transfer of smaller commercial real estate loans out of the banks, but the government elected in early 2011 decided not to proceed. The latter was not appropriate. The great advantage of transferring bad assets is that banks had to recognise losses on these loans early on. The sale of loans to NAMA at November 2009 values protected the banks from any further deterioration of the Irish property market (NAMA Review, 2014).

**Table 3.** Transfers by the covered Irish banks to NAMA, (in € bn)

Transfers to end-2011	BOI	AIB	IBRC	Total
Nominal loan value	9.9	21.3	43.0	74.2
Discount	43%	56%	61%	57%
Transfer value	5.6	9.4	16.8	31.8
Realised Loss	4.3	11.9	26.2	42.4

*Note:* Only five of the six Irish banks (see Table 2) participated in the NAMA process. Anglo and INBS merged into IBRC. EBS was acquired by AIB.

*Source:* NAMA Review (2014).

Within some overall targets, NAMA had the freedom to time the selling of its assets. As the London property market recovered first, these assets were initially disposed. Irish properties were disposed at a later stage, when the Irish market recovered. This freedom to run down the portfolio, depending on market circumstances, worked very well so far (NAMA Review, 2014).

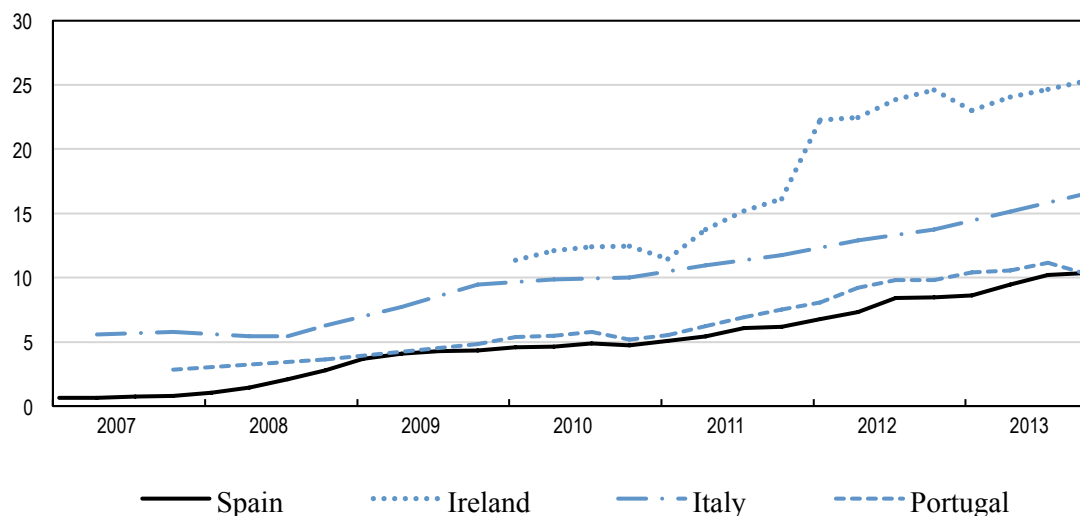
Almost 60 per cent of the bad assets were taken over from the most troubled banks Anglo and INBS, which also had the largest and riskiest commercial real estate portfolios. This is reflected

in the higher discount rate of 61 per cent for IBRC (the merged entity of Anglo and INBS). Unfortunately, NAMA could not help for the smaller commercial residential loans (below € 20 mn) and the mortgages.

#### 4.2. Small loans

But what happened to the remaining loans in the banks? Figure 8 illustrates that non-performing loans (NPLs) as a percentage of total loans are very high for Ireland at 25 per cent in 2013. NPLs are usually well below 10 per cent. The other crisis-stricken countries have NPLs at 15 per cent (Italy) and 10 per cent (Spain and Portugal). Irish banks have taken large provisions for NPLs at 53 per cent in June 2014. But write offs as a percentage of provisions are extremely low at 5.2 per cent in June 2014 (data obtained from the Central Bank of Ireland). The emerging picture is that banks have made provisions for losses in their accounts, but are still holding out to write down bad loans. Households (as takers of mortgages) and firms (in particular SMEs) are thus burdened with a large debt overhang. This debt overhang is a drag on consumption and investment (Main and Sufi, 2014; Myers, 1977).

**Figure 8.** Non-performing loans in selected countries, 2007-2013 (% of total loans)



*Note:* The data cover gross value of loans on which payments of principal and interest is past due by 90 days or more as a percentage of the total value of the loan portfolio (including non-performing loans, and before the deduction of specific loan loss provisions). Data are not strictly comparable across countries.

*Source:* OECD Economic Surveys: Spain 2014

Looking to property loans in more detail, the small commercial property loans (below € 20 million) and mortgages stayed on the balance sheet of the Irish banks. Table 4 indicates that commercial real estate (CRE) loans and mortgages amounted to almost € 160 bn at end 2013, while table 3 shows that about € 74 bn of large CRE loans was transferred by end 2011 to NAMA. About two thirds of property loans thus stayed on the balance sheets of the surviving banks.

**Table 4.** Outstanding loans and impairments of Irish banks, end-2013, (in € bn)

	Outstanding loans				Impaired loans	
	BOI	AIB	PTSB	Total	Impairment rate	Impaired loans
Mortgages	51.6	40.7	29.0	121.3	17.7%	21.5
CRE	16.8	19.7		36.5	56.9%	20.8
SME	13.6	13.7		27.3	25.1%	6.9
Corporate	7.8	4.3		12.1	25.1%	3.0
Consumer	2.8	4.3	0.3	7.4	6.1%	0.4
Total	92.6	82.7	29.3	204.6	25.7%	52.6

*Note:* Only five of the six Irish banks (see Table 2) participated in the NAMA process. Anglo and INBS merged into IBRC. EBS was acquired by AIB.

*Source:* Annual reports 2013 of banks for outstanding loans; Central Bank of Ireland for impairment rates; there is only a joint impairment rate for SME and Corporate available.

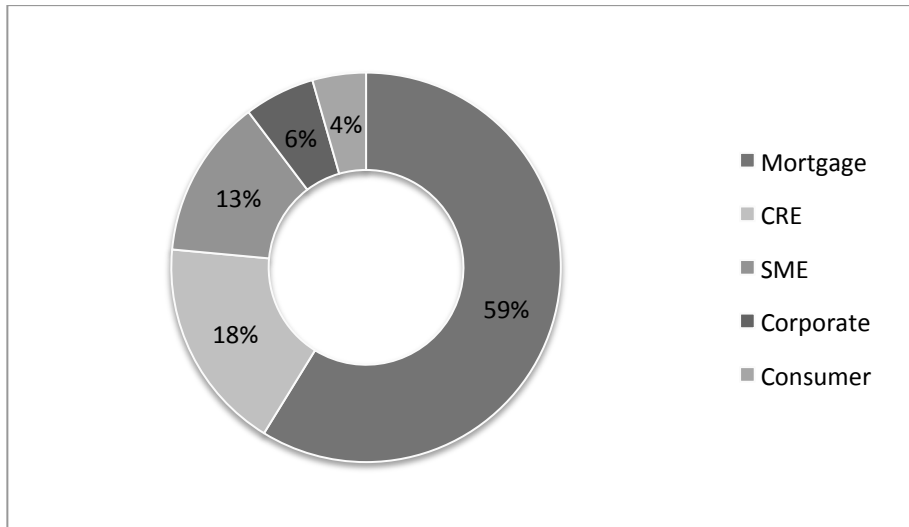
With an impairment rate of 18 per cent for mortgages and 57 per cent for CRE, more than € 40 bn of impaired property loans are still in the banks. While they have substantial loan provisions for impaired loans (53 per cent at June 2014; data from Central Bank of Ireland), banks have not yet taken write offs. If they would take write-offs, the losses would crystallise.

Table 4 and figure 9 also provide details of outstanding loans for the other sectors. SMEs count for 13 per cent and corporates for 6 per cent of total loans. The NPLs are also broken down by sector. Figure 10 shows that NPLs have increased to about 25 per cent for SME, corporate and consumer loans. While Irish SME and corporate debt has been declining in recent years, the sector is still highly indebted (Macro-Financial Review, 2014 II). It should be noted that SMEs, that are not active in the property sector, could also have property loans on their books. McCann and McIndoe-Calder (2014) show that about 20 per cent of non-real estate SMEs has property exposures, aggravating the debt overhang problem. These SMEs have a 5 per cent higher probability of default than SMEs with only debt related to their core enterprise activity.

Banking data cover only SMEs and corporates with a loan. Survey data indicate that 34 per cent of SMEs has no debt, while a further 50 per cent has debt of less than one third of turnover (McCann, 2014). Table 5 shows that the remaining 16 per cent has higher debts (a debt to turnover ratio of more than one third). In particular, the medium sized firms are at risk with higher debts of 23 per cent. More than half of this latter group has even a debt to turnover ratio

of greater than one. Combining Table 4 (25 per cent of loans are impaired) and Table 5 (66 per cent of SMEs has a loan) indicates that 16.5 per cent of SMEs has arrears on its loans.

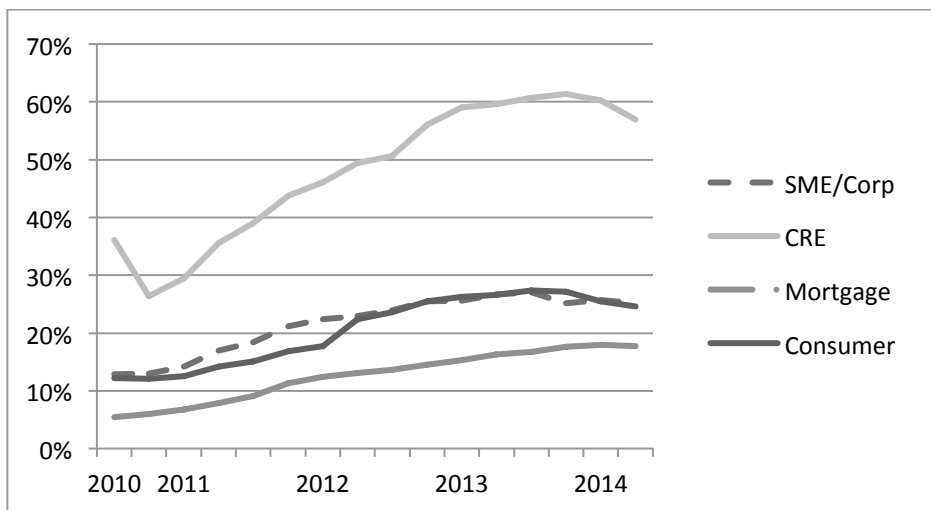
**Figure 9.** Outstanding loans by sector, end-2013 (% of total)



*Note:* The data cover outstanding loans of the Irish banks.

*Source:* Table 4

**Figure 10.** Non-performing loans by sector, 2010-2014 (% of total loans)



*Note:* The data cover gross value of loans on which payments of principal and interest is past due by 90 days or more as a percentage of the total value of the loan portfolio (including non-performing loans, and before the deduction of specific loan loss provisions). The weighted average of NPLs for the total banking sector is 25 per cent for 2013, as shown in Figure 8.

*Source:* Central Bank of Ireland.



**Table 5.** Debt to Turnover by firm size (as %)

Size	Zero debt	0 to 1/3	1/3 to 1	>1
Micro	36.1	49.8	8.3	5.9
Small	32.2	52.9	9.4	5.4
Medium	32.4	45.0	11.0	11.7
Total	33.8	49.9	9.3	7.0

*Note:* Rows sum to 100.

*Source:* McCann (2014).

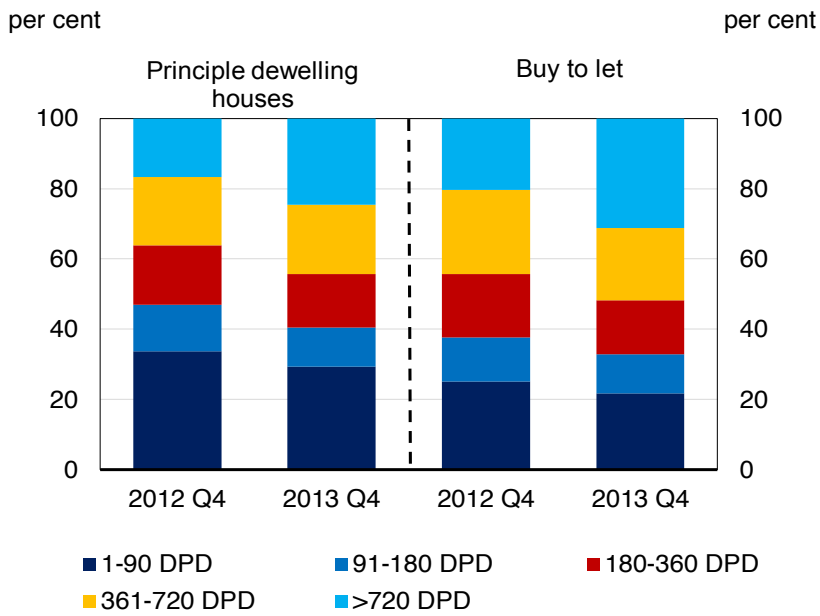
### 4.3. Mortgages

Mortgages are the most important component of bank balance sheets at 59 per cent of outstanding loans (see Figure 9), as also indicated in Section 2. We therefore examine mortgage in arrears in more detail. Mortgage arrears as a percentage of total outstanding mortgages balances are very high at 20 per cent for principle dwelling houses (PDH) and 36 per cent for buy to let houses (BLT) end-September 2014 (CBI, 2014b). These figures for mortgage arrears are given for all arrears, including arrears up to 90 days. NPLs contain only arrears at 90 days or more. The NPL figure is 16.5 per cent for PDH and 30.5 per cent for BTL. The weighted average NPL for mortgages is 19.5 per cent. External asset management, like NAMA for commercial property loans, should have been considered for distressed mortgages. That may have accelerated their resolution. But the ECB made such schemes financially unattractive as it limited ECB funding to banks only, excluding resolution vehicles.

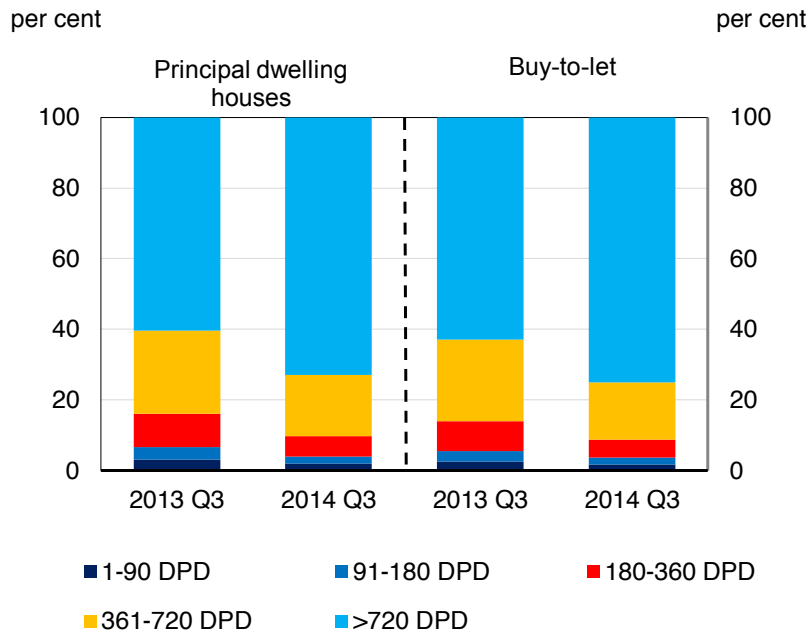
The composition of the arrears is also important. Panel A of Figure 11 indicates that the proportion of mortgages with arrears over 2 years (720 days past due) is growing and well above 20 per cent for both categories. Panel B shows that this category is very large with about 75 per cent of arrears in value terms for both categories.

**Figure 11. Mortgage accounts in arrears by duration**

Panel A: Mortgages in arrears as a percentage of total mortgages in arrears (number)



Panel B: Mortgages in arrears as a percentage of total arrears (value)



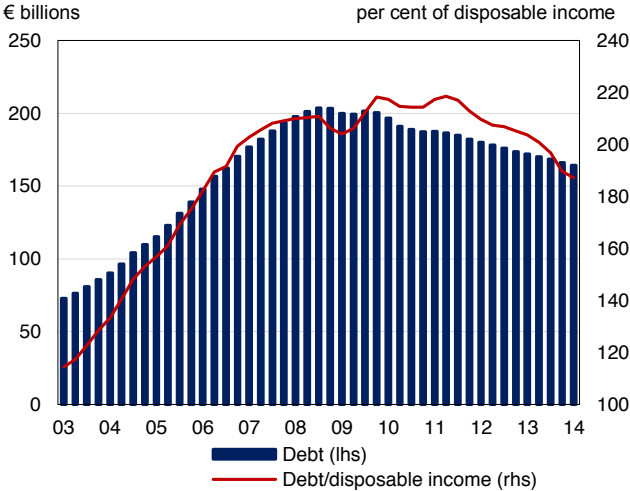
Note: DPD means days past due.

Source: Central Bank of Ireland, Macro-Financial Review, 2014-I and 2014-II

While banks seem to be on track to meet the Central Bank’s MART targets for restructuring mortgages, the impact is limited. It is telling that the largest component of restructures is arrears capitalisation. This component amounts to 26 per cent of the number of restructured PDH mortgages reflecting 47 per cent of restructured PDH mortgages balances (CBI, 2014b). Capitalising arrears does little to reduce household indebtedness.<sup>4</sup> Banks are thus more or less rolling over rather than writing off mortgages. Beck (2014) observes that antiquated insolvency laws prevented a proper workout of non-affordable mortgages and restructuring of viable enterprises. Reforms of personal insolvency were enacted in late 2012, which included a shortening of the discharge period for bankruptcy from the former penal 12 years to 3 years.

While household debt has increased at a fast pace in the run up to the bursting of the bubble in 2008, the decline in household debt is slow. Figure 12 shows that household debt levels remain high at 190 per cent of disposable income. The level of Irish household debt to GDP is only second to the Netherlands<sup>5</sup> in the European context (see Figure 6).

**Figure 12.** Household debt



Source: Central Bank of Ireland, Macro-Financial Review, 2014-II

Again banking data only cover households with a mortgage. There are some 1.650.000 private households in Ireland (Irish Central Statistics Office). The number of outstanding PDH

<sup>4</sup> While the housing market shows some signs of recovery (Macro-Financial Review 2014-II), the number of transactions is still thin compared to the boom days of 2006.

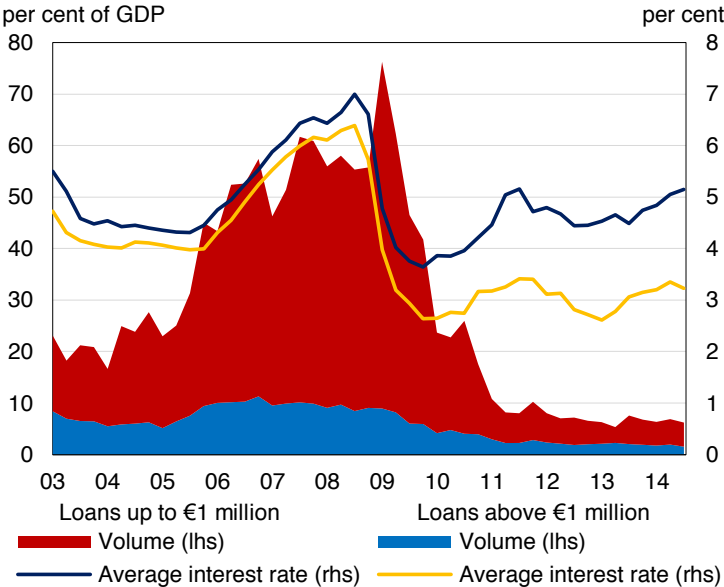
<sup>5</sup> The high mortgage debt in the Netherlands can be explained by the generous interest rate deductibility for income tax. As the effective interest payments are only half of the nominal amounts (with a marginal income tax rate of about 50 per cent), the Dutch mortgage debt at 120 per cent of GDP is about twice the European average of 60 per cent (see Figure 6).

mortgages is about 760,000, with 118,000 of these mortgages in arrears (CBI, 2014b). So, up to 7.2 per cent of Irish households have a mortgage in arrears (as some distressed households have more than one mortgage outstanding).

4.4. New lending

New lending to domestic non-financial corporations remains extremely weak, with interest rates at slightly above 5 per cent for loans up to € 1 million (see Figure 13). SMEs, which have limited access to other sources of finance, face thus a high lending rate. Section 3.3 explains that the Irish banking sector has become very consolidated with two broad banks and one small bank remaining. In response, the public authorities have taken several initiatives to support *inter alia* SME financing (Macro-Financial Review, 2014-II). The recently launched Strategic Banking Corporation of Ireland will lend to SMEs via the banks on longer and more favourable terms than currently available. The Strategic Banking Corporation of Ireland will have €800 million to lend and will be initially financed by the German Promotional Bank (KfW), the European Investment Bank (EIB) and the Ireland Strategic Investment Fund. Next, the National Pension Reserve Fund (valued at € 6.8 bn) is being re-oriented from a long-term pension fund to a domestically focused investment fund, the Ireland Strategic Investment Fund (ISIF), to support economic activity and employment.

Figure 13. New lending by banks to NFCs



Note: This chart shows lending by credit institutions resident in Ireland to euro area NFCs (non-financial corporates, which consists of SMEs and corporates). Irish NFCs represent about 87 per cent of the sample.

Source: Central Bank of Ireland, Macro-Financial Review, 2014-II

## 5. Assessment and policy lessons

The previous sections contain a high-level overview of the run-up to the Irish crisis and the subsequent crisis management. This section provides an outsider's assessment of Irish banking policies from a macro-finance perspective. Figure 7 above highlights that the effectiveness of Irish policies to stabilise and restructure the banking system should be judged on their contribution to resuming stable economic growth in Ireland. Are firms and households ready to resume investment and consumption?

We will also draw policy lessons from an international perspective. This section follows the structure of the earlier sections: 1) preventive macroprudential policy; 2) stabilising policies; and 3) restructuring policies.

### 5.1. Macroprudential policy

The dangers of the building up of the strong housing bubble -fuelled by abundant credit- were neither appreciated by the banks nor by the authorities. Ireland was not unique in this respect. A similar assessment can, for example, be made for the US and Spain. Three features stand out in the Irish case, as described in section 2. The first is the 'groupthink' among high-ranking policymakers and bankers. The second is the loosening of credit standards on mortgages, with LTVs well above 90 per cent. The third is the strong contribution of cross-border banking flows from other European countries.

External views can be helpful to counter groupthink. External reviews, such as the regular IMF Article 4 Mission, are useful, but can still be ignored by the authorities. Ireland participates in the European Systemic Risk Board (ESRB), which can provide warnings and recommendations, and in the ECB's Financial Stability Committee. The ECB can tighten macro-prudential tools, if it believes that a country sets them too low. The ECB has only this power for CRR/CRD IV related measures like the countercyclical capital buffer, but not for important tools such as the LTV and LTI ratios. The most powerful mechanism to counter groupthink is to incorporate external views in the decision-making process of macroprudential policy. The UK Financial Policy Committee provides an interesting example, with four external members, including one foreign-based.

With a one-size-fits-all monetary policy for EMU, country specific macroprudential policy is very important. This also applies to Ireland, whose contribution to the euro-area is less than 2 per cent. So, monetary policy is thus not set to Irish conditions, but *de facto* exogenous. This is similar to Hong Kong, where the Hong Kong dollar is linked to the US dollar and the Hong Kong Monetary Authority (HKMA) runs a currency board. To contain housing and real estate prices, the HKMA follows a time-varying LTV policy (HKMA, 2011). When house prices rise too fast, the HKMA reduces the LTV ratio to constrain credit availability and vice versa.

The LTV ratios were at the high end in Ireland, just as in the Netherlands, resulting in a high mortgage debt to GDP ratio. LTV ratios at 95 or higher were not uncommon, as documented in Section 2. But more recent evidence suggests that such high LTV ratios have become less common (see Table 6). International experience suggests maximum LTV ratios of 80 to 90 per cent. In a consultation paper, the Central Bank of Ireland (2014a) proposes to restrict lending by banks for primary dwelling purchase above 80 per cent LTV to no more than 15 per cent of the aggregate value of the flow of all housing loans for PDH purposes. Furthermore, a lower threshold is proposed for BTL mortgages, requiring banks to limit BTL loans above 70 per cent LTV to 10 per cent of all BTL loans, as purchasing properties for investment purposes is riskier. These proposals are sensible to limit the risk from over-borrowing. We assume that the LTV caps will be applied to all mortgage providers (not only banks) and further suggest applying dynamic (time-varying) application of the LTV ratios (see below).

Lower LTVs (and thus less debt) are only possible, when households have sufficient savings for the necessary equity component. Germany has an interesting system of ‘bausparen’, which encourages German households to accumulate savings for buying their house. Another example is Canada and Switzerland, where households can draw on their own pension fund assets for equity financing of their first house.

**Table 6.** LTV and LTI ratio breakdown on new PDH mortgage lending in 2013

<b>LTV ratio</b>	<b>% of the euro amount of new lending</b>	<b>% of the number of new loans</b>	<b>LTI ratio (times)</b>	<b>% of the euro amount of new lending</b>	<b>% of the number of new loans</b>
<b>Over 90%</b>	12	11	<b>Over 4.5</b>	7	6
<b>Between 85% and 90%</b>	23	21	<b>Between 4 and 4.5</b>	6	5
<b>Between 80% and 85%</b>	9	8	<b>Between 3.5 and 4</b>	10	9
<b>80% and below</b>	56	60	<b>3.5 and below</b>	77	80

*Source:* Central Bank of Ireland (2014a).

More broadly, the macroprudential authority is at the minimum responsible to increase the resilience of the financial system against financial shocks (see also CBI, 2014a). Gersbach and Rochet (2014) go further, preferring countercyclical policies to constrain financial booms, which are largely related to housing and property markets. They recommend ‘stabilisation of the credit cycle’ as aim of macroprudential policy. The countercyclical capital buffer (which is implemented as part of the CRD4 package) and the LTV ratio are based on the residence of the

borrower. So domestic banks and foreign-owned banks operating in Ireland face the same capital buffer and LTV ratio for Irish borrowers. In that way, the Central Bank of Ireland can contain domestic as well as cross-border banking credit simultaneously.

### *Policy lessons*

1. The Central Bank of Ireland, as macroprudential authority, should aim to stabilise the credit and housing cycle. It should adopt *inter alia* time-varying LTV ratios, which in the long run should not exceed 80 to 90 per cent.
2. The Central Bank of Ireland may consider establishing a formal Financial Stability Committee with external members. A separate committee with published minutes also increases accountability.

### *5.2. Crisis management - stabilising banks*

From the start of the global financial crisis, the Department of Finance and the Central Bank of Ireland have been pro-active to stabilise the Irish banks. The outcome of the ECB Comprehensive Assessment shows the success of the Irish authorities. The two broad Irish banks, BOI and AIB, passed the test, and only the small bank, PTSB, experienced a capital shortfall.

In this high-level review, we cannot assess whether the blanket guarantee of Irish bank liabilities to address wholesale funding pressures was appropriate (see Investigation Commission, 2011). It may have served its purpose initially, but it forestalled timely resolution with burden sharing by creditors. With hindsight, the expiration of the two-year government guarantee was a watershed in the Irish banking crisis. While an expiration of a guarantee is generally a ‘tipping point’, there was no clear exit strategy of the guarantee.

A contentious issue in the early days of the crisis management was the handling of senior debt holders: writing down to absorb losses or rescuing because of contagion. At the time, the contagion concerns were real. Be that as it may, if the ECB (and others, like Brussels and the US Treasury Secretary) argues for protecting senior debt holders because of potential contagion to the wider European banking system, then the costs should be borne at the European level (see Goodhart and Schoenmaker, 2009, on burden sharing).<sup>6</sup> But European and IMF support was

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<sup>6</sup> A distinction can be made between general and specific burden sharing. General burden sharing is based on some fixed key, such as the ECB capital key used by the ESM, while specific burden sharing is based on the location of the banking assets (in this case Ireland for the six Irish banks). To the extent that EU-wide financial stability is affected, general sharing is preferable. When only stability in the countries where the bank is located is affected, specific sharing is the preferred solution. Goodhart and Schoenmaker (2009) argue to apply a division of general and specific sharing, depending on the relative stability concerns.

channelled to the Irish government, which subsequently rescued the Irish banks on its own risk and account. That is clearly a policy mistake. The IMF staff (Allard *et al.* 2013) recommends that the European Stability Mechanism (ESM) should recapitalise banks directly, and not through the books of the government. Similarly, Goodhart and Schoenmaker (2014) argue that the ECB instead of the national central banks should provide Emergency Liquidity Assistance (ELA) to banks under ECB supervision in the new Banking Union.

More generally, the financial trilemma suggests that authorities have to choose two out of the three objectives of financial stability, cross-border banking and national financial policies (Schoenmaker, 2013a). With the advance to Banking Union, a choice is made for supranational financial policies, which should not only be applied to banking supervision (micro component) but also financial stability (macro component).

Next, the Irish authorities set up NAMA to deal with bad property loans in excess of € 20 mn. The establishment of NAMA was instrumental in the successful management of the Irish banking crisis. It allowed the banks to recognise fully the losses on these loans, and thus removed an important source of uncertainty for the banks. Next, the government set only overall targets for NAMA in its resolution of the bad assets. The relative freedom in running down the bad loan portfolio allowed NAMA to realise a relative good price for its assets disposals.

The recapitalisation of Irish banks happened in several rounds. Early top-down calculations appeared to be imprecise and insufficient, which is of course partly due to fact that the full depth of the crisis was not yet known. Acharya *et al.* (2011) advise, therefore, to slightly overdo recapitalisations and overcapitalise banks, as a no-regret policy. Any excess funds can later be returned to the government, while the probability of further capital shortfalls is reduced. Next, a bottom-up approach, preferably aided by independent consultants, is needed to assess the full scale of the capital needs. The second PCAR in Ireland was bottom-up. The Dutch government followed a similar bottom-up approach, when it provided a 90 per cent guarantee of ING's Alt A portfolio. To ensure an appropriate price for the guarantee, the government had (in secret) hired a consulting agency for a valuation of the US houses underlying the Alt A mortgages

### *Policy lessons*

3. In the new setting of the Banking Union with ECB supervision of the large euro-area banks, the ECB and the ESM should provide directly the liquidity and capital backstop to these large banks when needed.
4. Ireland followed international best practice by setting up NAMA, as asset management agency to run down the bad assets of the Irish banks. Releasing bad assets from bank balance sheets is instrumental in the path to recovery.



5. Assessment of capital needs for troubled banks should be comprehensive, aided by external consultants, and ideally bottom-up. Ad-hoc assessments may lead to repeated rounds of recapitalisation.

### *5.3. Crisis management - restructuring banks*

The next step after stabilisation is the restructuring of the Irish banks. The restructuring involved rearranging the banking system and cleaning the balance sheet (“healing”). On the banking system, the authorities took several decisions on closures and mergers. As Anglo Irish and the smaller INBS appeared to be beyond salvage, it was a good decision to put these banks into liquidation. Another decision was to find a safe haven for EBS, a small building society. EBS became a subsidiary of AIB. The result is a two-pillar banking system, with two broad banks, BOI and AIB, with € 80 to 90 bn in total loans (see Table 4) and a smallish bank, PTSB, with only € 30 bn in total loans. While a reduction of the oversized banking system of six Irish banks was clearly needed, the two-pillar system may lead to too little competition in Irish banking. This may result in high interest rate margins with high borrowing costs and low saving rates for business and retail customers.

An alternative would have been to merge EBS and PTSB becoming a third bank. In that setting, there would be two broad banks with € 70 to 90 bn in assets and one medium-sized bank with about € 45 bn in assets. Although PTSB is still loss making, a properly restructured combined bank can turn into an affective challenger of the two larger banks. To compare, the troubled SNS bank in the Netherlands was nationalised as stand-alone bank and not taken over by one of the three large banks (ING, Rabobank, ABN AMRO). The SNS has adopted a challenger strategy in the pricing of its mortgages, savings and payment services.

Competition from foreign banks will be very limited in the near future, due to disaster myopia (Guttentag and Herring, 1984). As the recent Irish banking disaster is still fresh in everybody’s memory, foreign bank managers will not enter the Irish market. The foreign banks, Lloyds, Rabobank and Danske Bank, are running off their Irish operations. Only Ulster Bank, which is part of the RBS Group, is on record to remain active in Ireland.

Turning to cleaning bank balance sheets, progress is still slow. With non-performing loans (NPLs) at 25 per cent, there is a lot of work to do for banks. But banks are holding out to achieve write backs when the economy turns around (thus generating returns for shareholders and distressed debt investors), instead of writing off bad loans. After several years of strong provisioning, banks have built sizeable provisions (up to 53 per cent, which is coming close to the discount of 57 per cent on the property loans transferred to NAMA), which would allow them to take write offs.

This ‘wait and see’ approach (forbearance) comes with a cost, both for the banks and their borrowers. For banks, the outstanding NPLs are a continuing source of uncertainty, which may refrain them from new lending. The Department of Finance has recently created a national development bank, the Strategic Banking Corporation of Ireland, to support lending to SMEs at a time when they have difficulties accessing finance and face financing costs that are higher than the European average. These challenging credit conditions primarily reflect legacy issues in the banking sector. The SBCI will lend to SMEs via the banks on longer and more favourable terms than currently available at the private banks.

For borrowers, the debt overhang causes subdued investment and consumption (Myers, 1977; Main and Sufi, 2014). Our calculations in Section 4 suggest that 16.5 per cent of SMEs and 7.2 per cent of households face payment arrears. But that is a conservative estimate of firms and households confronted with debt overhang, as some firms and households struggling with high debts still fulfil their payment obligations to their bank. So, up to 20 per cent of SMEs and 10 per cent of households are suppressing new investment and consumption. While the Irish economy is fortunately recovering, there is a two-track economy with the majority of firms and households contributing to economic growth but a significant minority standing on the sidelines.

Ireland appears to be struck between the Anglo Saxon system of easy credit provision and the Roman system of strong creditor’s rights. In the US, mortgages were (too) easily provided in the run-up to the subprime crisis, but indebted households could walk away from their house without further debt because of the so-called non-recourse mortgages. In the European tradition of strong creditor’s rights, Ireland had recourse mortgages and antiquated personal bankruptcy procedures. In the wake of its banking crisis, Ireland has already modernised personal bankruptcy procedures. But it is still difficult for borrowers (firms and households) to free themselves from old debts. Moreover, it is not in the mindset of bankers to write off loans in an equitable way, as they are afraid of moral hazard by setting a precedent of debt forgiveness.

Nevertheless, the Irish banking crisis can be seen as a one-off, justifying a unique programme of (partial) debt forgiveness.<sup>7</sup> A government-enforced programme of debt forgiveness would free both the banking sector and its borrowers from lingering legacy issues, broadening the base for economic recovery. As banks were recapitalised with taxpayers funds, the argument could be made that banks in turn have the responsibility to write off legacy loans in order to support new lending to firms and households, and thus increase the social return on the recapitalisations. The taxpayer-funded recapitalisations are now sitting partly idle in the banks. Writing off loans should have been set as a condition for the EU-IMF support package.

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<sup>7</sup> It could be argued that this argument was used for the recapitalisation of the Irish banks. Under normal conditions, the government would not recapitalise the banking sector, but due to the severity of the crisis the government did recapitalise.

## *Policy lessons*

6. The Irish authorities took some bold restructuring decisions, such as replacing management and closing two troubled, property-lending banks. While banking consolidation is a key tool of crisis management, it is important to ensure that the banking system remains competitive post-crisis.
7. Taking sufficient provisions for NPLs is a first step to heal banks. A necessary second step is to write off bad loans, to clean up bank balance sheets. On the first step, Ireland has been pro-active. On the second, progress is very slow.
8. Recapitalisation of ailing banks may be needed for economic growth. When providing financial support to banks, the government should set targets for banks to partially write off bad loans to corporates and households.

## **6. Conclusions**

Ireland faced a very severe banking crisis when the credit fuelled property bubble burst. Our overall assessment is that the Irish authorities have been successful in the management of the Irish banking crisis. This success has been instrumental in the economic recovery. Ireland has turned the corner.

On balance, there was a strong focus on stabilising banks (restoring solvency, replacing management and closing bad banks), but less emphasis on restructuring loans. The Irish banks are not yet healed with 25 per cent of non-performing loans (NPLs). A small but important group of highly indebted households and firms cannot resume consumption and investment because of debt overhang. Intensifying write offs of bad loans would broaden the economy recovery and increase the social return on the publicly funded bank recapitalisations.

The Irish taxpayers have been brave in shouldering the full costs of recapitalising the Irish banking system. While European authorities argued strongly against loss sharing by senior debt holders because of contagion fears for the wider European banking system, they did not cover part of the burden. That is enjoying the stability benefits, but not paying for it. In the new Banking Union setting with ECB supervision for the large euro-area banks, we recommend that the European Stability Mechanism (ESM) should directly recapitalise troubled banks after resolution measures are taken (Allard *et al.*, 2013; Schoenmaker, 2013a). The ESM would then become an effective vehicle for risk sharing and cut the bank-sovereign loop (the theme of the conference).

Finally and importantly, a repeat of the ‘irrational housing exuberance’ should be avoided. We recommend using the new macroprudential tools of countercyclical capital buffers and LTV ratios in a pro-active way to stabilise the credit cycle. Establishing a financial stability committee at the Central Bank of Ireland with external members may be helpful to avoid groupthink.

## References

- Acharya, V., D. Schoenmaker and S. Steffen (2011), How much capital do European banks need? Some estimates, VoxEU Column, CEPR, 22 November.
- Adrian, T. and H. Shin (2010), Liquidity and leverage, *Journal of Financial Intermediation* 19, 418–437.
- Allard, C., P. Koeva, J. Bluedorn, F. Bornhorst, K. Christopherson, F. Ohnsorge, T. Poghosyan, and an IMF Staff Team (2013), Toward a Fiscal Union for the Euro Area, IMF Staff Discussion Note No. 13/9, IMF, Washington D.C.
- Beck, T. (2014), Ireland’s Banking System – Looking Forward, *The Economic and Social Review* 45, 113–134.
- Bernanke, B. and M. Gertler (1995), Inside the Black Box: The Credit Channel of Monetary Policy Transmission, *Journal of Economic Perspectives* 9, 27-48.
- Borio, C. (2014), The Financial Cycle and Macroeconomics: What Have We Learnt?, *Journal of Banking and Finance* 45, 182-198.
- Brunnermeier, M., A. Crockett, C. Goodhart, A. Persaud, and H. Shin (2009), The Fundamental Principles of Financial Regulation, Geneva Reports on the World Economy, No 11, ICBM, Geneva, and CEPR, London.
- Central Bank of Ireland (2014a), Macro-Prudential Policy for Residential Mortgage Lending, Consultation Paper 87, Dublin.
- Central Bank of Ireland (2014b), Residential Mortgage Arrears and Repossessions Statistics: Q3 2014, Statistical Release, 3 December, Dublin.
- Claessens, S., A. Kose and M. Terrones (2014), Understanding financial cycles, in: D. Schoenmaker (ed.), *Macroprudentialism*, VoxEU eBook, CEPR, London.
- Gerlach, S. (2014), Banking and Finance: Back to Stability, in: R. Lissek and M. Coleman (eds), *Ireland and Germany: Partners in European Recovery*, Oak Tree Press, Cork.
- Gersbach, H. and J.C. Rochet (2014), Capital regulation and credit fluctuations, in: D. Schoenmaker (ed.), *Macroprudentialism*, VoxEU eBook, CEPR, London.
- Gros, D. and C. Alcidi (2013), Country adjustment to a ‘sudden stop’: Does the euro make a difference?, Economic Papers No. 492, Brussels.
- Goodhart, C. and D. Schoenmaker (2009), ‘Fiscal Burden Sharing in Cross-Border Banking Crises’, *International Journal of Central Banking*, 5, 141-165.
- Goodhart, C. and D. Schoenmaker (2014), The ECB as Lender of Last Resort?, DSF Policy Brief No. 36, Duisenberg school of finance, Amsterdam.
- Gorton, G. and G. Ordoñez (2014), Collateral Crises, *American Economic Review* 104, 343-378.
- Guttentag, J. and R. Herring (1984), Credit Rationing and Financial Disorder, *The Journal of Finance* 39, 1359-1382.
- Hong Kong Monetary Authority (2011), Loan-to-value ratio as a macroprudential tool – Hong Kong SAR’s experience and cross-country evidence, *BIS Papers*, No 57.

- Honohan, P. (2009), Resolving Ireland's Banking Crisis, *The Economic and Social Review* 40, 207–231.
- Honohan, P. (2010), The Irish Banking Crisis and Regulatory and Financial Stability Policy 2003 - 2008, A Report to the Minister for Finance by the Governor of the Central Bank, Dublin, 31 May.
- Honohan, P. (2012). Recapitalisation of Failed Banks – Some Lessons from the Irish Experience, Address at the 44th Annual Money, Macro and Finance Conference, Trinity College, Dublin, 7 September.
- Investigation Commission (2011), Misjudging Risk: Causes of the Systemic Banking Crisis in Ireland, Report of the Commission of Investigation into the Banking Sector in Ireland, Dublin.
- Jorda, O., M. Schularick, and A. Taylor (2014), Betting the House, NBER Working Paper No. 20771.
- McArdle, P. (2012), The Euro Crisis: Refinancing the Irish bailout – the options post the June 2012 Summit, Working Paper, The Institute of International and European Affairs, Dublin.
- McCann, F. (2014), Profiling the indebtedness of Irish SMEs, *Economic Letter Series*, Vol 2014, No.3, Central Bank of Ireland.
- McCann, F. and T. McIndoe-Calder (2014), Property debt overhang: The case of Irish SMEs, VoxEU Column, CEPR, 23 September.
- Mian, A. and A. Sufi (2014), *House of Debt*, Chicago University Press, Chicago.
- Minsky, H. P. (1986), *Stabilizing An Unstable Economy*, Yale University Press.
- Myers, S. (1977), Determinants of Corporate Borrowing, *Journal of Financial Economics* 5, 147-175.
- NAMA Review (2014), National Asset Management Agency – Section 227 Review, Department of Finance, Dublin.
- Pisani-Ferry, J., A. Sapir and G. Wolff (2013), EU-IMF assistance to euro-area countries: an early assessment, Bruegel Blueprint Series, Vol. 19, Brussels.
- Regling, K. and M. Watson (2010), A Preliminary Report on the Sources of Ireland's Banking Crisis, Dublin.
- Schoenmaker, D. (2013a), *Governance of International Banking: The Financial Trilemma*, Oxford University Press, New York.
- Schoenmaker, D. (2013b), An Integrated Financial Framework for the Banking Union: Don't Forget Macro-Prudential Supervision, Economic Papers No. 495, European Commission, Brussels.
- Schoenmaker, D. (ed.) (2014), *Macroprudentialism*, VoxEU eBook, CEPR, London.