DISTINCTIVE FEATURES OF THE IRISH BANKING CRISIS

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Abstract

The paper reviews the causes, evolution and resolution of the severe property-related macro-financial boom and bust that crippled the Irish economy 2008-13. Among the distinctive features were a blanket government guarantee of banking liabilities, a run on the national banking system financed by a supranational central bank, and a sovereign-bank funding-cost doom loop. There were missteps in both the private and official sectors, at home and abroad, as the authorities felt their way towards corrective policies that were ultimately effective.

1. Introduction and summary

The Irish banking crisis of 2008-13 was among the costliest in history. Though it emerged as a strand of the Great Financial Crisis (GFC) and became entangled in the euro area crisis, it was caused by a bank credit-driven national property price and construction boom which imbalanced the Irish economy, especially from 2004. The lending had been financed by extensive bank borrowing from international financial markets. Irish property prices peaked in early 2007, after which the banks began to have face refinancing difficulties, especially as the GFC tightened financing conditions globally. With property prices continuing to fall, the construction sector led a sharp decline in economic activity, severely weakening the Government fiscal accounts and making the underlying weakness of the banks more evident. Facing a liquidity crunch at the end of September 2008, the main local banks secured a blanket guarantee from the Irish Government, which had been given assurances from the supervisory authorities at the Central Bank that the banks remained adequately capitalized.

Loan delinquencies rose sharply, especially in the construction and property development sectors. Large property-backed loans were compulsorily transferred from the guaranteed banks to a Government-backed asset management company (NAMA) at prices set to be equal to long-term economic value. Residential mortgage arrears soared, with as much as 13 per cent of loans secured on the borrower's principal residence being more than 90 days in arrears by mid-2013. Household and domestic business confidence collapsed, deepening the recession. Despite a jump in net emigration, unemployment soared, reaching 16 per cent.

Despite austerity measures designed to ensure a sustainable evolution of its debt, the Government began to lose access to market finance in September 2010. Two months later, with secondary market yields on Irish Government debt rising significantly and a bank run in progress against all of the main banks, the Government agreed to a large EU-IMF official financial programme. The EU-IMF programme defined further austerity measures and further action to stabilize the banks. The ECB was also supporting bank liquidity on a large scale, including by acquiescing in extensive ELA—which at one point was being used by all six of the guaranteed banks.

Two of the local banks were ultimately liquidated and the others were re-capitalized in 2011, mainly by Government, with equity holders all but wiped-out, and losses imposed on subordinated debt holders.

Despite the adverse side-effects of the contemporaneous euro area crisis, by 2013 the situation had stabilized: the economy resumed growth, the Government began to repay the IMF, and ELA was at an end. Residential mortgage arrears began to decline.

Unemployment continued to fall to below 5 per cent by 2019, and the backlog of unresolved mortgage arrears continued to shrink, though they remained above 5 per cent until 2021. All of the foreign-owned banks that had been active in the domestic market withdrew over the following years leaving just three locally-controlled commercial banks in operation as of 2023.

While many of these events were paralleled by other countries in the years of the GFC and the euro area crisis, Ireland's experience was more severe than most because of the scale of the imbalances that had been created in 2004-7. It was the failure to restrain that credit boom that was the major policy error that made the subsequent adjustment so costly. The blanket and unconditional nature of the September 2008 bank guarantee can also be criticized, though alternative policy choices at that date would probably not have eased matters by much.

The remainder of the paper is arranged as follows. Section 2 describes the boom phase and considers why it was allowed to get out of hand. Section 3 documents the growing realization after the critical moment of September 2008 that this was a problem of solvency, not liquidity, and the steps taken to stabilize the situation. The way in which the banking failures and the weakening government finances fed on each other in a dramatic instance of sovereign-bank doom-loop is discussed in Section 4, which also considers the scale of the inescapable fiscal correction which followed. The importance of interest rates and the risk-premia they incorporate in influencing the ability of the Irish sovereign and the banks to recover from the crisis of confidence is spelled out in Section 5. Default and insolvency was a prospect faced not only by banks, but their customers and the Government: Section 6 considers the policy choices that were made in this regard. In conclusion, Section 7 offers summary answers to four frequently asked questions regarding the role in the crisis of (i) euro area membership, (ii) the 2008 bank guarantee, (iii) multiple equilibria and (iv) fiscal austerity.

2. The boom

The Irish construction and property price boom started back in 1998, was interrupted briefly in 2001, and accelerated fatally from 2004.[1] The scale of the boom was extremely large, exceeding that in other countries with property booms at the same time such as Spain and the United Kingdom.[2]. The average *real* increase in Dublin housing prices over a ten year period to 2006 was 13.2 per cent (Figure 1). Employment soared, with strong net immigration, and

[1] A sustained current account deficit in the Irish balance of international payments began only in 2005.
[2] Iceland's credit boom, somewhat different in character, was of comparable relative size.

at the peak the construction sector directly employed 13 per cent of those at work in the economy (Figure 2).[3]

The funding of the boom was largely though the banking system, which relied increasingly on borrowings from the international market. These were easily and cheaply secured, thanks to the global financial boom that was happening in those years. Net foreign borrowing by the Irish-controlled banks rose from 19 per cent of GNP in late 2003 to 64 per cent in early 2007.

Most of the wholesale funds sourced abroad came through unsecured borrowing (debt and, increasingly, deposits); the use of repo was limited, ranging between 6 and 8 per cent of total assets for the largest banks at the peak in 2006.[4] Banks were also able to boost their capital reserves by issuing subordinated debt at very low spreads.[5]

The Irish Government's AAA credit rating and low debt, the recent history of rapid economic export-based growth in Ireland delivering low unemployment and inward migration, and the low interest rates seemingly assured by euro area membership, all contributed to a backdrop against which sustained growth and demand for housing could—for many market participants—be plausibly (but mistakenly) projected (see Box 1).

Box 1: *Narratives*

Shiller (2019) has emphasized the way in which narratives can both reflect evolving perceptions and misperceptions, and influence the progress of a crisis. He argues that boom-and-bust cycles are normally based on the propagation of a misplaced optimism built on a half-truth which seems to foretell an unprecedented stream of prosperity. As I have previously noted, in Ireland's case the scene was set by the seeming effortlessness of the "Celtic Tiger" boom which, starting in the late 1980s and especially after 1993 had soaked-up unemployment, attracted a huge increase in female participation and even caused a reversal in the traditional pattern of outmigration. Then, on top of this sustained growth in employment, income and household formation, Ireland became a founder member of the eurozone. The euro brought a dramatic and sustained fall in nominal and real interest rates. All the ingredients, then, to sustain a belief that equilibrium house prices would soar and that the demand for housing units would continue to grow for the foreseeable future (Honohan 2010a).

Even before the bubble burst, other narratives began to take hold. Pretty soon, awareness of the reckless banking expansion and how it had spread apparent but false prosperity across the country was encapsulated in the politically imprudent (because exaggerated) "we all partied" remark made by Finance Minister Lenihan in December 2010. This essentially well-founded narrative won over the initial officially sponsored narrative that Ireland's banks were well-capitalized and merely side-swiped by the Lehman bankruptcy.

Soon the official view shifted to a "bad but manageable" message. Consistent with this, middle class Ireland implicitly acknowledged official support coming from abroad in a narrative epitomized by the half-serious quip "the IMF are the best government we ever had". As the economy recovered, though, there was a growing tendency in some quarters to embrace a narrative with an external scapegoat, typically the ECB.

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[3] As the boom progressed, Irish property developers diversified into the UK market, especially London, as well as other locations worldwide, mainly financed by Irish banks. The domestic Irish banks did not participate much in the US structured finance market.

[4] Pace Brunnermeier and Reis (2023).

[5] As late as May 2007, Anglo sold subordinated debt at a spread above EURIBOR of just 25 basis points (Honohan 2019; cf. Lane 2016, Table 1).

Government tax incentives also promoted property lending. Banks lent to property developers and to households whose purchases would help repay the developer loans.

While about 70 per cent of lending in the domestic market was by six Irish-controlled banks, of which two (Anglo and INBS) were the most aggressive in expanding developer loans, two subsidiaries of major UK banks (Ulster, a subsidiary of RBS, and BOSI, a subsidiary of HBOS) led the way in innovations such as 100 per cent LTV residential loans and "tracker mortgages" whose variable rates tracked the ECB's policy rate with a very modest spread. These four were gaining market share until 2005, at the expense of the two largest banks Bank of Ireland and AIB (Lane 2016).[6]

It is not unreasonable to ask why such an imbalance in the economy was allowed to happen. Unfortunately, the gatekeepers—the directors of the banks and the prudential supervisory authority—did not effectively deliver on their mandates.

Even though the boards of all of the banks included accomplished individuals with a high reputation for business acumen and prudence, and their CEOs were very well paid, they did not grasp the scale of the risks that were being adopted. The largest banks should have been fully aware of the systemic imbalance that they and their peers were creating. However, they appear to have been chasing market share rather than market stability. Leader of the pack was Anglo, the real value of whose total assets grew at an annual average rate of 36 per cent over a decade and whose market share grew from 3 to 18 per cent, making it the third largest bank (Figure 3). The equity market liked what it saw at Anglo, and its share price quintupled in the last four years of the boom, while that of the two larger banks AIB and Bank of Ireland only doubled.[7] Though not all of their former directors are willing to say so, it is clear that concern about losing market share to Anglo and to foreign-controlled banks, and the declining ratio of their equity prices to that of Anglo, were important considerations in their continued growth in the period up to 2007 (Oireachtas 2016).

Bankers placed reliance on collateral, but the practice of revaluing property collateral at the sharply increasing market price of property allowed developers to rapidly accumulate debt by cross-collateralizing additional borrowing using the increased value of the old collateral. Since a general price decline would reduce the value of the collateral in just the circumstances where loan repayment was becoming doubtful, the risks being taken by the

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[6] Ireland also hosted numerous foreign-owned banks and other financial institutions in its tax-promoted offshore "International Financial Services Centre" (IFSC). Although some of these also got into trouble in the GFC, including the largest, DePfa Bank, and some of the conduit institutions which were subsidiaries of the failing Sachsen Landesbank, they were not participating significantly in the Irish domestic market. Despite inquiries from Germany when DePfa (which was by then a subsidiary of the German bank HypoRE, whose loan portfolio was in trouble) ran into liquidity problems in September 2008, the Irish authorities had no interest in guaranteeing or providing emergency liquidity to such entities.

[7] Indeed, during 2008 the market value of Anglo's equity briefly exceeded that of each of the others, but it subsequently transpired that this was due to a market manipulation involving a share support scheme, a criminal offence for which the CEO and two other senior bankers at Anglo were subsequently convicted. (I use the common shortening of Anglo Irish Bank's name to distinguish it from the largest bank Allied Irish Banks, which is generally referred to as AIB).

banks were being brushed under the carpet by these accounting and collateral practices.[8] The need for much higher capital requirements for developer loans during a property boom would have been signaled by better-designed stress tests.

As the boom progressed, instead of being more cautious in their residential mortgage loans to households, banks liberalized their loan standards, making more and more of them at loan-to-value ratios in excess of 90 per cent or indeed at 100 per cent or more (Figure 4).[9]

Measurement of capital was severely deficient, with loan-loss provisions based mainly on a very liberal interpretation of incurred loss. In fact, given the sizable risk of default on the property developer loans, a more realistic provision for expected loan losses, if used, would have generated a negative capital calculation for at least some of the banks, despite the high capital ratios they were reporting.[10]

Official financial supervision was deferential and tentative (Honohan 2010b). Supervision focused on governance process in the banks rather than on the banks' business models.[11] Inspectors were looking at procedural aspects of management practice rather than on quantitative aspects such as adequacy of loan-loss provisioning of loans. Reported accounting capital was taken at face value as the key indicator of the buffers that would be available in a downturn, not considering the vulnerability of collateral values to collapse, considering how rapidly property prices had increased.[12]

Some institutional factors also blurred responsibilities and weakened the official capacity to monitor and address the increasingly risky situation of the banks. Although the unusual organizational structure of the Central Bank meant that the supervisory arm (the "Financial Regulator") was dependent on the management and board of the Central Bank for resources, it had a separate governing structure with its own board, and was to take autonomous policy decisions. At the same time, the Central Bank had a responsibility for financial stability and the Governor or the Central Bank board could have issued mandatory policy guidelines to the Financial Regulator, but never did. In practice, macro and micro supervision did not communicate adequately. The statutory obligation (at that time) to have regard to the

[8] The banks themselves were very slow to recognize the scale of losses that were baked into the loans they had made. To take just one example, in its end-2008 accounts (published more than five months *after* the guarantee), AIB's stock of loan-loss provisions stood at €2.3 bn or about 1½ per cent of outstanding balances. By 2012 the figure for loan losses at AIB was about eight times that. (No doubt the narrow accounting interpretation of incurred loss was also a factor in the modest provisions).

[9] During the boom, there were no official regulations constraining loan-to-value or debt-to-income ratios for residential mortgages.

[10] The expected loss concept was explicitly applied in international accounting rules only in 2018 (IFRS9 Financial Instruments standard replaces IAS39). The appropriate level of provision for speculative loans under the incurred loss approach was debated at the time.

[11] A similar criticism has been made of the US Federal Reserve's supervision of SVB in the period running up to that bank's failure in March 2023 (Barr 2023).

[12] It is, perhaps, not surprising that the supervisors did not really second guess the risk management of any of the main banks active in the market, considering that every one of the banks, including subsidiaries of two of the largest banks in the UK, were vigorously competing to lend to property developers and residential property purchasers. Indeed, it was only against one of the smaller banks (INBS) that the Central Bank was able (after the crisis) to take enforcement steps having found evidence that INBS had failed to comply with regulatory instructions handed to it pre-crisis. The legal proceedings against INBS directors have dragged on ever since, and were still not fully resolved in 2023.

development of the financial services industry in Ireland also coloured the Central Bank's approach to prudential matters. Furthermore, practical micro supervision, already insufficiently staffed, seems to have been somewhat distracted by the complex task of introducing the Basel 2 capital framework.

Stress tests were carried out by the Central Bank, but the modelled macroeconomic stresses were too mild. The 2006 stress test was the most severe, but it projected a cumulative three year decline in GDP from the starting point at just 5 per cent and house price decline of 21 per cent.[13] (Also, some of the mapping of economic downturn into loan losses was rather optimistic: banks projected continued *growth* in their profits through such a downturn.) Communication around the stress tests was somewhat evasive. Publishing the conclusions of the 2006 stress test in November 2007, the Central Bank stated that "the Irish financial system's shock absorption capacity remains robust and the system is well placed to cope with emerging issues."

Neither the banks nor the regulator had assembled enough relevant loan-by-loan information that would have made them fully aware of the patterns of lending and the risks entailed. Subsequent reviews revealed serious weaknesses in management information and inadequate data processing. Risk awareness was limited by the inadequacy of management information systems being used by each bank and the unreliability of the performance metrics being used.

In late 2007, with the liquidity drain already causing acute concerns, the prudential supervisor belatedly conducted an ad hoc examination to ascertain the exposure of the banks of the five largest property developers. This revealed not only the aggregate scale of the developers' indebtedness to the banking system but the fact that none of the banks realized the extent to which their borrowing customers were also tapping other banks. (For example, one of the banks underestimated the indebtedness to another bank of just one of its largest borrowers by €1 billion). The examination also revealed that the banks had taken comfort from borrowers' personal guarantees without verifying the value of the net assets of these large borrowers. Despite discovering all of this, the regulator made no specific demands on the banks in relation to these exposures (Honohan 2010b).

Reflecting some macro-prudential concerns, a capital requirements surcharge was imposed in May 2006 on developer loans and high loan-to-value residential mortgages. However, this measure was vitiated by the surcharge being too small: all of the banks continued to comply with minimum requirements based on their audited accounts without needing to raise additional capital.[14] Furthermore, despite (or perhaps, as was suggested, because of) their increasingly distressed situation, the banks were allowed by the regulator to continue to pay dividends right through until September 2008, and did so, even though every one of them would need to raise capital during 2009-11.

Most of the loss-making loans were extended even when most of the banks were complying with the law and regulations. A small number of bankers later received criminal convictions,

[13] The base case had GDP rising by 5 per cent per annum and house prices rising by 6 per cent per annum. It was only relative to this rosy base case that the stress case could have seemed pessimistic.
[14] A Pillar 2 increase in the minimum (risk-weighted) capital adequacy ratio (bringing the ratio from 9% to 10%) was imposed on Anglo in 2004.

but the most conspicuous of these cases related mainly to the last few months before the guarantee as Anglo attempted to avoid failure.[15]

The banking and official policy errors of the Irish credit-fueled property price and construction boom echo events in many other countries during the global financialization boom of the 2000s—the difference is chiefly one of amplitude relative to the size of the economy. The narrative propelling Ireland's boom was sufficiently convincing to push it to the extreme end of the international distribution of excesses.

3. The guarantee and the bailout

3.1 *The gradual denouement*

After the run on the British bank Northern Rock in September 2007, liquidity conditions for the Irish banks began to tighten. Over the next three years the crisis unfolded episodically and in slow-motion. It is reasonable to ask why it took so long for the relevant authorities to bottom out the extent of the loan-losses that were going to be incurred.

- Insufficient experience at the financial regulator and over-optimism at the banks clearly both played a part in the delay.
- The fact that a global banking crisis was also evolving in a drawn out step-by-step fashion in the year before Lehman with generally tightening liquidity conditions that could be blamed on the complexities of the US structured finance debacle (in which the Irish banks were not involved) meant that much of banker and policymaker focus in Ireland was, until after the guarantee of September 2008, on protecting the liquidity of the Irish banking system from what were seen as largely external pressures unwarranted by the underlying condition of the Irish banks.
- After the guarantee, recognizing that the Government could be on the hook if bank losses were severe, focus turned to getting a better fix on bank solvency, including the use of external professional service firms for asset quality reviews. But the fall in property prices was very gradual, making it hard to tell where they would bottom out. For example, real house prices in Dublin fell at a fairly constant rate for five years, ending more than 61 per cent below the peak.
- The unprecedented decline in domestic economic activity from 2007, bottoming out only in 2012, also made the recoverable value of non-property lending hard to determine.
- The poor loan documentation and inadequate information concerning the value of collateral and of borrower guarantees which had marked the boom phase left the banks (and the asset management company NAMA) without the basis in the bust phase for calculating likely recoverable values of loans, whether to developers or the personal residential mortgages.[16]

[15] Though Anglo had, during the boom, concealed loans made to its CEO, and those responsible were subsequently convicted.

[16] As reported by NAMA, a bank's loan documentation tended to be held in multiple management information systems, many of them paper-based, with limited central data repositories and poor data collation capacity (Oireachtas 2016).

3.2 *Pre-guarantee: the liquidity drain*

Even though they still had strong credit ratings, from late 2007 the banks engaged in increasingly acrobatic efforts to access liquidity from abroad.[17] They sourced an increasing proportion of their funds from deposits, especially from banks, rather than debt issuance. Maturities shrank as CDS spreads started to rise (Figure 5). Gradually there was an increase in bank borrowing from Eurosystem facilities, though these were limited by availability of collateral satisfying the ECB's then rather restrictive criteria, which were relaxed only after the Irish guarantee (Figure 6).

The inexorable decline in the share prices of all of the principal banks from early 2007 was a concern. This came to a head on 17 March 2008 (just after the rescue of Bear Stearns) when Anglo's share price fell by 15 per cent on that one day (ironically, Irish markets were closed for the National Holiday). The "St. Patrick's Day Massacre" was interpreted as an unjustified speculative attack at a time of volatile market conditions, rather than an indication of underlying solvency difficulties. While some banks were more affected than others, the correlated sectoral exposure to property meant that the increase in perceived risk was systemic, not idiosyncratic (Brunnermeier and Reis 2023, pp 48-9).

Nevertheless, the Irish authorities made some precautionary preparations during 2007-8, especially influenced by the UK Northern Rock experience. Internal central bank procedures for making ELA loans were formalized, though the run on Northern Rock after the ELA loan to that institution by the Bank of England was interpreted as a warning to the authorities to avoid use of ELA if possible. Resolution legislation, such as was introduced in 2008 in the UK (after Northern Rock) was considered, but not then progressed. Introduction of such legislation was seen as likely to trigger a further loss of confidence in the banks. Instead, simpler draft legislation for the nationalization of a bank was prepared to be enacted if necessary as an emergency measure. A government guarantee was contemplated as a way of stemming a bank run.

It was at this point that the buccaneering approach of some banks brought them from sharp practice into illegality. Exploiting the different year-end dates of their accounts, two of the banks (Anglo and ILP) engaged in temporary back-to-back operations to give the impression of a stronger funding performance. Three bankers were subsequently jailed for the criminal offence of conspiracy to defraud. An elaborate share support scheme was conducted by Anglo during mid-2008. This also led to three convictions, but in that case the convicted bankers were not sent to jail, with a judge observing that the Financial Regulator had given the "green light" to the scheme and effectively a "State Agency had led them into error and illegality".[18]

[17] At the start of 2008, the two largest banks were both rated Aa2 by Moodys; Anglo was rated A1.

[18] The share support scheme had its origin in the large CFD position taken in Anglo during 2007 by the prominent businessman Sean Quinn, whose conglomerate business group had sizable operations in cement manufacturing, insurance, hospitality, property and wind-power among other sectors. When the bank realized the extent of this position, and the fact that the providers of the CFD would likely sell the shares they held as a hedge against the CFDs if Quinn did not meet margin calls as the share prices fell, they proceeded to lend him almost €2bn between November 2007 and July 2008 to meet the margin calls. Eventually, the shares (which amounted to over 29 per cent of the total) were sold to members of the Quinn family and a group of ten of

3.3 *The 2008 guarantee*

The liquidity crunch came to a head within days of the collapse of Lehman Brothers. Rumours swirled even among retail depositors in Ireland. The Government promptly increased the deposit insurance ceiling from €20,000 to €100,000 to forestall concerns that were reaching chat shows on national radio. With bank funding markets stuck right across Europe, it became clear to the authorities on September 29 that Anglo would not be able to meet its payment obligations the following day, and that the other main banks would also struggle to survive more than a few weeks at prevailing conditions.

The Government's overnight decision to enact a statutory blanket guarantee of the liabilities of the banks headquartered in Ireland and catering for the Irish market has been exhaustively analysed in several inquiries and commentaries (Honohan 2010b, 2019; Donovan and Murphy 2012; Oireachtas 2015). It is clear that the decision was taken on the basis that all of the banks seemed to be sufficiently capitalized, which is what the Central Bank had advised the Government. This advice was not clearly questioned by the external advisors that the Government had engaged.[19] The blanket nature of the guarantee and the statutory basis on which it was put was intended to remove market doubts, though inclusion of old bonds and subordinated debt was immediately criticized. Irish law made no distinction between the ranking of deposits and other bank debt in an insolvency. (Those criticisms seem correct, though their exclusion could have saved only a moderate part of what the bank bailout ultimately cost).

ELA was not seen by the central bank as a promising solution for a problem that was systemic in nature.

The idea was aired of immediately nationalising the two weakest banks (Anglo and the much smaller INBS), while guaranteeing the others. But this idea was set aside as not likely to be favourable for confidence, and operationally risky if attempted mid-week.

There is a sense that some of those present at the discussions on the night of the guarantee may not have shared the supervisors' confidence about the balance sheet solvency of Anglo, but the accounts that have been provided also give the impression that not everyone had a secure understanding of the difference between the terms "solvency" and "liquidity" that were being bandied about (Oireachtas 2016).

This guarantee, offered by a government with a AAA credit rating, initially secured the needed liquidity for the banks. (Indeed, there was a strong growth in bank liquidity to the end of that year.) The guarantee was not welcomed by financial authorities in the UK or other European countries, who felt pressure to increase explicit support for their own banks, and did not see the merits of a blanket guarantee.

Anglo's largest borrowers (the "Maple 10"), all financed with loans from Anglo. Recourse to the borrowers was limited to 25 per cent of the loans that they took (but the shares became worthless within months). Quinn, who was declared bankrupt in early 2012, was also censured in 2008 for using funds from policyholders of Quinn Insurance to help support the CFD operations. Quinn Insurance subsequently failed, requiring a government rescue of about €1 billion funded by a multi-year 2 per cent levy on premiums for insurance policies sold by the insurance industry in Ireland.

[19] This was a team from Merrill Lynch. They were very critical of Anglo's business model and management style.

While there is much to criticize about the guarantee, it is not obvious that the alternative of allowing the Irish banks, one after the other, to fail to meet their obligations, would have been better. That would surely have exacerbated the economic downturn and turned the focus on Ireland as an epicentre of the crisis.[20]

In the weeks after the guarantee, the Government sought to put the finances of the main banks on a secure footing, announcing in December 2008 a €10 billion recapitalization fund to be applied to the three largest banks.[21] This estimate of recapitalization needs (which proved to be over-optimistic), was based on a high level asset quality review concentrated on the large property loans (carried out by the accountancy firm PWC). Injections of €3.5 billion each were made into the capital of Bank of Ireland and AIB in the first months of 2009. By then, revelations about the market manipulation at Anglo and its persistently more severe liquidity problems induced the Government to nationalize Anglo on 15 January 2009. Far from stabilizing matters, however, the nationalization triggered further outflows of funds from all of the banks and a further decline in their share prices. [22] Anglo ran out of eligible collateral within weeks and began to receive ELA from the Central Bank of Ireland, a position which would persist for the following four years.

3.4 *The financial restructuring of the banks*

At this point it is worth pausing to take an analytical view of the five main approaches that were used in the effort to stabilize the Irish banking system. These were:

(i) Government guarantee

(ii) Recapitalization by State without restructuring

(iii) De-risk by transferring the most toxic loans to an asset management company

(iv) Deep dive granular AQR leading to recapitalization mandate on a more credible scale

(v) Bail-in of subordinated debt

(i) The guarantee of September 2008 quickly stemmed the outflow of funds, but transferred sizable risk from bank creditors to the Government. Eventually the direct net cost was of the order of €37 bn (27 per cent of GNP in the trough year), and it also eventually resulted in the

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[20] In order to support the issuance by the banks of new debt, a further guarantee programme was put in place in December 2009 covering new debt and deposit liabilities of the banks; it was closed to new liabilities in March 2013.

[21] Nominal GNP (GDP) in the peak year of 2007 was €169 (€197) billion, but by 2010 had fallen to €139 (€170) billion. It is important to note that using GDP for scaling purposes is quite misleading in Ireland because of the distorting effect of tax-driven accounting practices of US MNCs (cf. FitzGerald and Honohan 2023). For many years, GNP was commonly used as a better reference than GDP. But GNP too is increasingly distorted and an alternative aggregate national income indicator, known as modified gross national income (GNI*) is now used for Ireland by specialists where GDP is used for other countries. Before the crisis, GNI* was only 2-3 per cent below GNP, but the gap has widened. GNI* was €165 billion in 2007, and fell as low as €127 billion in 2012.

[22] The question of compensating the shareholders of Anglo was deferred. In the end no compensation was paid because the true value of the equity was nil. Indeed, having peaked at €54 billion two years earlier, the aggregate market capitalization of the four listed domestic banks was less than €0.15 billion in January 2009.

Government losing market access, which exacerbated business and consumer uncertainty. Also, the effectiveness of the guarantee faded with the Government's loss of market access.

(ii) Following the contemporary example of the US and other countries, the Government decided in December 2008 to inject capital into the largest banks to restore their capital adequacy and re-establish their financial autonomy. However the estimated capital need was based on a fairly high level asset quality review concentrating on only the largest property loans; it proved to be quite overoptimistic. By injecting insufficient capital without a sufficient dilution of shareholders, this strategy risked transferring resources to the shareholders. Indeed, the share prices of the largest banks did recover somewhat in subsequent months, though the recovery was temporary only, as later capital injections diluted the original shares almost to zero.

(iii) Following the example of, among others, Sweden in its 1990s banking crisis, the Government decided in April 2009 to establish an asset management company NAMA which would compulsorily exchange the guaranteed banks' large property-related loans for government guaranteed bonds.[23] Both performing and non-performing loans were to be transferred, and the collateral included office blocks, shopping centres and hotels as well as residential property. Land and property under development also formed part of the collateral. The exchange was to be at a market-related price.[24] The objective was to replace some of the riskiest assets of the banks with securities that would be eligible for Eurosystem refinance. Not only would the banks' capital position be thereby de-risked, but the task of recovering on these loans, a distraction from their continuing business of financing the economy, could be largely removed from the banks. Although this operation too could have transferred risk to the Government, the risk was limited by the fact that only 95 per cent of the purchase price was paid for in senior bonds, the remainder in subordinated bonds which would be paid only if NAMA proved to be sufficiently profitable – which in the end it was. NAMA returned a *total* profit of about 11 per cent on the purchase price paid for the loans, with the first profit transfer to the Exchequer occurring in 2020, thus after about a decade of NAMA's operations.[25]

The NAMA purchases crystallized much higher losses for the banks on the transferred loans than had been provided for in the banks' accounts. Extrapolating the haircut on the first tranche of loans transferred (which were the largest loans), combined with the results of an AQR and stress test on the remainder of the portfolio, led to the Central Bank insisting (March 2010) on additional capital injections, most of which were eventually met by the Irish Government.

The process of NAMA valuation and purchases proved to be very protracted. Later tranches were priced even lower than the first tranche, as it turned out that the smaller property developers, many of them sole traders, had been even less skilled and professional in their activities and completely dependent on bank debt (Oireachtas 2016). Publication of these

[23] The compulsion required special legislation, which was enacted in November 2009.

[24] In order to satisfy the requirements of EU state aid rules, the price was to be not greater than "long-term economic value", to be calculated in accordance with detailed prescriptions set by the EU Commission.

[25] At first, the one-year NAMA notes gave the issuer roll-over rights, but the gap between the yield on the notes and long-term bond yields limited the collateral value of NAMA bonds in eurosystem refinancing, so the roll-over was in 2011 made subject to prior consent of the holder.

higher haircuts during the summer of 2010 resulted in a confidence-sapping drip-feed of bad news about the financial condition of the banks. NAMA purchases were completed only in October 2011.[26] All in all, NAMA acquired €74 billion face value of loans, but paid only €32 billion – an average haircut of 57 per cent.[27]

(iv) As part of the EU-IMF programme, a new round of AQRs and stress tests was embarked upon in early 2011. This was conducted on a much larger scale and required banks to produce data on a loan-by-loan granularity which not all could achieve. Indeed, the banks that did find ways of producing this data did so under the implicit threat of being required to have even more additional capital. The external scrutiny of the EU-IMF and the willingness of the Central Bank to publish and respect the detailed estimates of the consultants (BlackRock Research) in imposing additional capital requirements in March 2011 turned the corner on market confidence in the capital position of the banks. This round of capital increases also provided for the accelerated deleveraging of the banks insisted on by the EU-IMF programme.[28,29] (In subsequent years the Central Bank continued to demand such loan-by-loan data from the banks, allowing detailed research which was used to underpin the development of macroprudential tools in 2014 and thereafter.)

(v) Some of the new capital injected after the March 2011 stress tests was obtained by debt-equity swaps and restructuring of subordinated bank debt under the shadow of new legislation, introduced at the behest of the EU-IMF programme, that would make it possible for subordinated debt to be bailed-in if needed to restore a bank's capital position without liquidation. Full resolution legislation allowing more extensive bail-in and other tools had to await the EU-wide BRRD legislation in 2014. Most of the new money injected in mid-2011 was from Government funds, but about €1 billion was invested by North American private equity funds.[30]

The full recapitalization of the banks took almost two and a half years 2009-11, during which the price of housing was falling steadily. Could stability have been restored by imposing a steeper increase in capital requirements earlier? Perhaps. But, lacking earlier evidence as to the full extent of the prospective loan losses of the banks and on their utter dependence on the Government guarantee for survival, it would have been difficult for the authorities to insist on such a large capital requirement any earlier against the objections of bank management who already were challenging the March 2010 requirements; nor would the Government have

[26] In addition, NAMA acquired the remaining portfolio of IBRC (former Anglo) after its liquidation in 2013.
[27] In 2015 NAMA estimated that 56 per cent of the property collateral supporting the loans was in Ireland; about 4 per cent in Northern Ireland, a third in the rest of the UK and 6 per cent elsewhere (Oireachtas 2016). By 2021, with almost all of the loans disposed of, sales results showed that the assets located outside of Ireland were relatively more valuable. (Thus, the corresponding percentages for the assets sold were 53; 2; 36 and 7).
[28] While the subsequent 2011 stress test triggered additional capital requirements, it is worth noting that the *2010* estimates of residential mortgage loan-losses proved to be adequate in subsequent years. Total non-NAMA loan-losses for BOI subsequently materialized at about €10bn, just as projected in this 2010 stress case; for AIB, losses materialized a few billion higher that the €10bn also projected for it in 2010.
[29] Heavy losses at foreign-owned banks active in the Irish market also meant substantial injections of capital by their parents.
[30] These well-timed investments (in Bank of Ireland) made a very substantial profit because share prices recovered strongly. The return was somewhat better than if the funds had bought Irish Government bonds at the same time, though bond yields peaked at that time.

been in a position to provide the necessary capital without the support of the EU-IMF programme.

4. The bank-sovereign doom loop

4.1 From AAA rating to the need for an IMF programme

That the end of the property price and construction boom would have a serious effect on the fiscal accounts was fully evident before the Lehman bankruptcy and the Irish bank guarantee. On the tax revenue side many key revenue sources had suddenly contracted: the sizable stamp duty revenues on house purchase, the income tax, capital gains tax and corporation tax receipts from those involved in the property business, and even the VAT revenues on construction materials and furniture. Rising unemployment added to spending pressures.

Already by mid-2008, with the Government heading towards a record annual borrowing requirement, a tough budget was being foreshadowed, even before anyone was worrying about direct costs of bank bailouts. Indeed, preparations for the budget (which was unveiled on 14 October 2008) were already using up policymaking bandwidth in the Department of Finance as the bank liquidity crunch was coming to a head in September.

The announcement of a bank guarantee covering some €440bn (about three times GNP at the trough) did not immediately raise widespread fears of a sovereign debt sustainability problem, though there was a rise in the CDS spread on the Sovereign and a fall for the guaranteed banks). After all, at end-2007 the "National Debt" (net of cash balances) had been only €38 bn or 23 per cent of GNP, and the assets of the sovereign wealth fund NPRF at the same date had amounted to €21bn or 13 percent of GNP.[31] Ireland's credit rating from all three of the main international rating agencies was then at the maximum (AAA or Aaa).

Doubts began to cloud the situation as concerns grew about the condition of the banks and with the global downturn adversely affecting the Irish economy too. On 9 January 2009 S&P announced a negative outlook for the Irish sovereign credit rating, and the other two agencies followed suit within weeks. The first actual downgrade was by S&P on 30 March 2009. By the end of that year S&P and Fitch both had Ireland at AA. Still, rating agencies did not lead the market in their downgrades. Indeed, when Ireland entered discussions towards the EU-IMF programme, with 5-year CDS spreads exceeding 500 bp, its sovereign ratings from the three agencies were Aa2, A+ and A, levels that were hardly indicative of a fiscal crisis (Figure 7).

Neither the guarantee nor the nationalization of Anglo in January 2009 provided insulation to banks from outflows. As shown in Figure 8, there were very sizable outflows in the early months of 2009, and while matters stabilized for a while, net outflows resumed on an even larger scale, and even among retail depositors, in the Autumn of 2010, as market confidence in both banks and sovereign plummeted.

The EU-IMF programme's design did not impress the rating agencies: they did not see it as ensuring debt sustainability. Moodys and Fitch downgraded Ireland by five and three notches respectively in the days following the programme's announcement. This is perhaps

[31] Though international equity price declines meant that this had fallen to €16bn by the end of 2008.

unsurprising given the lukewarm opinion offered on debt sustainability in the IMF's staff briefing for its decision-making Executive Directors (International Monetary Fund 2010).

Further sovereign rating downgrades occurred after the announcement of 31 March 2011 about the scale of recapitalization and the implication that it would entail further Government injections of capital given the absence of a bail-in of senior bank debt. This clearly illustrated the bank-to-sovereign leg of the doom loop. A weakening of the Government's creditworthiness also pointed to the limits of its ability to support the banks, and indeed to the likelihood that a stressed sovereign might lean on the banks through special taxation, or by moral suasion.[32] (This is a point which was not at the time sufficiently understood by the official lenders, who prioritized the recapitalization of the banks over ensuring the debt sustainability of the sovereign).

Indeed, as in other countries, CDS spreads on Government and the major banks became closely correlated (Acharya et al. 2014). In the secondary market, the Irish Government 10 year spread over bunds peaked at over 1200bp in July 2011 (the level partly reflecting euro area break-up fears). Of course, protected by the official financing, the Government was not borrowing at such rates (Figure 9).

Of the rating agencies, only Moodys ever put Ireland below investment grade. Ironically, they took this decision just as the sale of part of the Government's stake in the least weak of the large banks (Bank of Ireland) to a consortium of the North American investors was being finalized in July 2011, a date which can be considered the turning point of the banking restructuring.[33]

4.2 Restoring macroeconomic and fiscal balance

Although the public finances (and many in the economy) had benefitted substantially in the debt-fueled boom period (a rough calculation suggests that the boom brought in extra tax revenues greater than one-half of the net direct fiscal costs of the bank creditor bailout), the disruption created by the loss of market confidence in Ireland's ability and willingness to service that debt, and the associated deepening of the recession during the bust greatly outweighed those benefits.

Given the severity of the fiscal impact of the collapse of the construction boom from 2007 and the ensuing broader economic decline, policy adjustment was unavoidable. The Government responded with contractionary budgets in 2008 and 2009, including tax increases and reductions in nominal wage rates for public servants.

Despite these measures, the fiscal stance by mid-2010 was clearly unsustainable, and would still have been even if there had been no burden of debt arising from the recapitalization of banks. The Government's four year plan of further fiscal consolidation, prepared before the Troika negotiators arrived (though informed by an awareness of the scale of consolidation which the official lenders would expect), formed the fiscal basis of the programme's

[32] Cf. Altavilla et al. (2017) and Ongena et al. (2019) who point to evidence that banks in stressed euro area countries invested disproportionately in debt of their own sovereigns. (Though the recapitalized Irish banks were discouraged by supervisors from increasing their holdings of Irish Government debt).

[33] It was only in late 2019 that Ireland's credit rating recovered as high as AA- with Standard and Poors, and not until 2023 that all three agencies agreed that Ireland's credit rating was at least that good.

conditionality. It envisaged a return to a borrowing requirement of 3 percent of GDP by 2015, which indeed was achieved. The cumulative amount of fiscal contraction over the period 2008-15 was about €150 billion (several times the direct cost of the bank recapitalizations).[34]

Without the financial support from the official lenders the fiscal contraction would necessarily have been more severe and more abrupt. The turnaround in the fiscal situation restored Ireland's access to international financial markets as evidenced by the narrowing spreads of Irish Government bond yields over those of Germany (less than 100 bp by mid-2014).[35]

Unemployment soared with the downturn, and net emigration increased sharply, both of Irish born and of those who had recently come from Eastern Europe and elsewhere. A relatively strong subsequent recovery in levels of employment brought the unemployment rate down back below 5 per cent by 2019. The redistributive character of the tax and welfare structure limited the adverse impact of the downturn on inequality (Madden 2014, Honohan 2016).

5. Interest rates: key to recovery

Because of the scale of indebtedness involved, whether for banks, their borrowers or the Government, interest rate movements became of vital importance in relation to the ability of the Irish economy to recover from the crisis. If the additional borrowing needs were going to incur a high risk premium, recovery would be difficult.

5.1 On Government borrowing

Spreads on Irish Government securities started to rise sharply from late April 2010 (Figure 9). It was this rise that eventually forced the Government's hand and pushed it into an official financing programme.

By the end of September 2010, the Government announced that they would not raise more funds from the market, having enough on hand to cover net spending and debt servicing until the middle of the following year.

Spreads continued to rise into November 2010, pushed along by some poorly considered statements from European officials, including the Deauville agreement between President Sarkozy and Chancellor Merkel, which seemed to imply that debt restructuring would have to precede any assistance to stressed sovereigns from European funds. The rise in the ten-year spread over German bunds to 500 bp seemed a tipping point in terms of market confidence and the Irish authorities realized that recourse to the IMF, already being urged by G-7 Finance Ministers and the ECB (including in unhelpful public statements and media briefings), was now the best option for Ireland.

Whether the Government's debt (including the contingent liability from the bank guarantee) was sustainable at this level of spread was doubtful. However, the interest rate on offer from

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[34] The Government ultimately absorbed about one-third of the €108 billion total losses of the banking system in the crisis, with the remainder borne mainly by bank shareholders in Ireland and abroad, as well as by subordinated debt-holders of the banks (Honohan 2019),

[35] From 2015, the fiscal balance was further improved by unexpectedly strong corporation tax receipts resulting from the activities of large MNCs established in Ireland.

the IMF and the European funds was not sufficiently low to remove those doubts.[36] The main reason here was the interest rate surcharges related both to the scale of Ireland's IMF borrowing in relation to its quota and the duration of the EFF loan. These surcharges meant that the cost of the IMF borrowings would be approximately 5.7 per cent per annum. The IMF component of the financial support (€22.5 billion) was one-third of the total, and it had been agreed in Europe (in the context of the earlier programme for Greece) that the European funds would be made available at rates comparable to the IMF rates.[37] This was equivalent to about a 300 bp spread over bunds. As mentioned above, market sentiment was that, at these rates, Ireland's creditworthiness was still doubtful, and the main credit rating agencies immediately posted a multi-notch downgrade.

Ireland understood at the time of the programme negotiations that it would benefit from the read across of any review of the European interest rates applying to Greece; this materialized in mid-2011, when it was decided that the European funds would not charge significant spreads over their cost of funds (Oireachtas 2016: Evidence by Brian Cowen 8 July 2015). Consequential annual interest savings in excess of €1 billion were estimated (https://www.kildarestreet.com/wrans/?id=2011-09-22.633.0). The agreed maturity of the European loans was also extended from 7½ years to at least 15 years.[38] These changes sharply improved the prospects of debt sustainability, though that was not recognized in credit ratings for several years.

The IMF interest rates still embodied high surcharges and this incentivized the Government to repay the IMF loans early. The clauses in the programme contracts that envisaged that any early repayments would be shared *pari passu* between the IMF and the European funds were waived by the Europeans, allowing the IMF loans to be repaid more quickly. With the Government's market access restored, the bulk of the IMF borrowing was repaid between December 2014 and March 2015. By end-2017 all of the IMF loans (and the bilateral loans from Denmark and Sweden—but not the UK) had been repaid ahead of schedule.[39] The total interest savings on the early IMF repayment amounted to about €2 billion.

5.2 On bank borrowing

Despite the Government guarantee, and their ability to repo Irish Government bonds in the market (albeit with increasing haircuts), the access of banks to market funding was increasingly limited during 2009-10 and the cost increasingly high as they struggled even to retain the deposits of their traditional customer base. Banks did draw increasingly on

[36] The importance of prospective interest rates (and the potential role of the central bank in influencing this) is elegantly reviewed by Willems and Zettelmeyer (2021).

[37] Some of the European money came at a higher rate, reflecting additional costs borne by the European Financial Stability Mechanism EFSF, leaving the estimated net cost of funds in the programme at 5.82% (https://www.ntma.ie/news/technical-note-on-eu-imf-programme-borrowing-costs).

[38] Gourinchas et al (2020) observe that the IMF assumes little default risk in its lending given its super-senior status. Accordingly, they suggest that IMF loans do not involve a transfer to borrowing countries like Ireland. That is, of course, not to say that the borrower does not benefit from the financial assistance. Other official lending, such as that made to Ireland by European funds, may be easier to renegotiate without damaging side effects, as indeed occurred.

[39] The Danish and Swedish loans totalled €1 billion. Early repayment of the UK loan (of almost €4 billion) would have entailed pre-payment penalties. It was paid on schedule in early 2021.

eurosystem facilities for which they paid just the ECB policy rate (Figure 6).[40] These central banking facilities were much cheaper than the rates at which the Government was borrowing. Admittedly, the interest rate on bank eurosystem borrowings was about 100 bp higher than money market rates in Europe given that the liquidity surplus conditions had driven money market rates close to the ECB's deposit rate. Nevertheless, the availability of this substantial block of funding did considerably ease average interest rate costs for the banking system.

During 2011 there were concerns at the ECB that having a block of such persistent heavy users of eurosystem facilities might contaminate the workings of the euro area-wide auction for liquidity, thereby compromising the effectiveness of monetary policy (if the ECB were to discontinue the fixed-rate full-allotment liquidity allocation). In order to avoid this outcome, ECB staff drew up detailed plans to penalize persistent heavy users of eurosystem facilities. Given the further costs that this would have imposed on Ireland in particular, it was a relief that, in the end, these proposals were not proceeded with.[41]

But access to eurosystem facilities was limited by the availability of eligible collateral. Much of the banks' mortgage portfolios was not originally eligible (and even when eligibility rules were relaxed, severe haircuts were assigned to the newly eligible collateral). Under the terms of the EU-IMF programme, the banks were also mandated to reduce their loan-to-deposit ratios. During 2011-2 in particular the banks competed for the limited pool of domestic deposits. All of this served to keep upward pressure of the banks' cost of funds (Goggin et al. 2012; Holton et al. 2013).

At the height of the crisis at the end of 2010, all of the locally-controlled banks had recourse to ELA. There was an interest surcharge of a 100bp on ELA borrowings. Following an elaborate transaction in February 2011, mandated by the EU-IMF programme, ELA became mostly concentrated in a new entity, IBRC.[42]

5.3 The end of ELA and the Promissory Notes Arrangement

Intended as a short-term facility, the extended use of ELA by IBRC became increasingly a focus of concern at the ECB. By 2012, the continued provision of such a big block of ELA (more than €39 billion), was considered unsatisfactory by most members of the ECB Governing Council. After all, IBRC was now a Government-owned bank whose business was being run off, and about two-thirds of the total collateral provided by IBRC for the ELA consisted of idiosyncratic non-marketable Government promissory notes (PNs). As the Government began to repay its IMF borrowings, the ECB brought increasing pressure to bear to bring this situation to an end.

On the other hand, the PNs which had been used for recapitalization entailed sizable annual payments from the Government to IBRC. These payments were contributing to the fragility of the public finances, and were the source of public discontent in Ireland. It was out of the

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[40] NAMA bonds were eligible as collateral for eurosystem operations. During the most acute period of the crisis 2010-11, having exhausted their stock of collateral eligible for normal eurosystem operations (partly because of the limited eligibility of Irish mortgages), the banks also drew on ELA.

[41] Full allotment continues today at the ECB, more than a decade later.

[42] In this transaction, the deposit books of the two gone concern banks, Anglo and INBS (soon to be merged to create IBRC), were sold, along with their holdings of NAMA bonds, to other local banks.

question for the Government to provide even more cash immediately in order to enable IBRC to repay the ELA promptly.

Various alternative plans were considered to resolve this unsustainable situation. For example, could the ELA be replaced by a very long-term Central Bank loan to IBRC at a reasonable interest rate?

In the end, the only solution that seemed acceptable to the ECB Governing Council was one developed by the Irish authorities. This involved the liquidation of IBRC and the exchange of the PN collateral for long-term Government floating rate notes. The liquidation was effected in February 2013.

From a central banking point of view, this arrangement had the advantage that, unlike the PNs, the FRNs were marketable, and their sale could result in a much earlier end to central bank financing of this debt.

There were also considerable advantages for Ireland, which are worth explaining, though the mechanism is somewhat intricate (see Box 2). In essence, the arrangement allowed the bulk of the banking indebtedness to be refinanced at the very low interest rates that prevailed from 2015.

Box 2: *Refinancing of the ELA debt with FRNs*

At the time of issue, the market value of the FRNs and the PN payments were equal. But the debt servicing payments of the FRNs were backloaded relative to the PNs, with most of the value coming from the coupon, which was set at 263 basis points above 6-month EURIBOR. The subsequent fall in the market risk-premium on Irish Government bonds resulted in a sharp increase in the market value of the FRNs. This was amplified by the decline in euro area interest rates generally in 2014-5. Since the FRNs were still held by the Central Bank of Ireland when the risk premium fell, the capital gain stayed in the Irish public sector widely defined.[43]

(The FRNs were disposed of gradually over the period 2014-23, in order to avoid any adverse effect on financial stability. Rather than have such FRNs traded in the market, the Government's treasury managers chose to buy them directly from the Central Bank, refinancing the sums involved through the issue into the market of fixed interest bonds at the much lower interest rates that were now available.)

Over the period 2013-23, the Central Bank earned about €17 billion from the FRNs, of which about a quarter was net interest income and the remainder capital gain. This would come to a net present value of €15 billion if discounted back to 2013 at 2 per cent per annum (to reflect a risk-free rate at the time). Actually, although the FRNs were disposed of gradually over subsequent years in order to obviate any financial instability risk, almost all of this saving was already priced in by 2015-6: from the Central Bank Annual Accounts it can be calculated that the Bank had received interest and realized capital gains of €5.7 billion at end-2016 and an unrealized capital gain of €10.7 billion.

(A further €1 billion profit was earned by the Central Bank from the sale of another Government bond which had been used as collateral by IBRC and was also acquired by the Central Bank at the time of the liquidation of IBRC.)

[43] It is sometimes thought that the gain has been offset by the fact that the bonds have been sold to the National Treasury Management Agency, but this is a fallacy that neglects the reduction in interest servicing of the debt and the difference between market value and face value of government debt.

Most of IBRC's remaining banking assets were sold to NAMA in return for NAMA bonds; NAMA disposed of these assets in the same manner as the rest of its own portfolio.

When it was announced, the PN/FRN arrangement was criticized by some as coming close to a monetary financing of a government obligation, especially because of the potential duration of the Central Bank's holding of the FRNs. However, in the end the FRNs were all disposed of fully eight years before the PN payment schedule would have been completed. Besides, it has to be recognized that the Government had assumed the banking debt on the 2008 advice of the Central Bank in order to protect financial stability; it would clearly have been perverse in 2013 to insist on an accelerated and potentially disruptive repayment of this debt.

5.4 Bank lending rates

The banks increased the spread of their "standard variable rate" (SVR) mortgage rates above the ECB's policy rate during 2010-4 (Figure 10). As very little new borrowing was happening at this time, the normal competitive pressure inhibiting a bank from doing so was greatly weakened. But much of the banks 'mortgage lending had been on tracker rates with very small margins above the ECB policy rate. The banks took every opportunity to move borrowers from tracker contracts onto the unconstrained SVR. Although the banks claimed that they did not go beyond their rights in this practice, the clamour from aggrieved borrowers (some of whom had temporarily switched from tracker to fixed-term rates when the ECB policy rate had been rising before the crisis) eventually led the Central Bank to mandate an in-depth case-by-case examination in 2015. The results of this examination revealed that in very many cases the banks could not show that they had the right to move the borrower onto the unfavourable SVR rate. The banks were ordered to make redress and were also subject to heavy administrative fines, with the total cost exceeding €1 billion.

The limited competition in Irish banking worsened over the years, with the withdrawal of the foreign-owned banks from the domestic mortgage market.[44]

* * *

Borrowing at high interest rates can add a crippling additional burden to an over-indebted country. Ireland did borrow at some high interest rates, including those baked into the PNs arranged to recapitalize the weakest banks. That made it all the more important to find ways of lowering the cost of borrowing.

The lowering of the European fund interest rates in 2011, the early repayment of the IMF and especially the substitution of FRNs for PNs all combined to remove almost all of the cost of the crisis-related risk-premium on the servicing of Irish Government debt. All in all, these savings came to about 20 percent of the trough 2012 value of GNP (or GNI*). Without them measures, debt sustainability would have been doubtful.

[44]The withdrawal was a gradual process, starting in 2010 with the local subsidiary of the UK bank Lloyds and ending in 2023 with the exit of the local subsidiaries of UK-based RBS and Belgian KBC. With only three banks then left active in the mortgage, the lack of competitive pressure was illustrated by the slow upward adjustment of SVR mortgage rates when the ECB policy rate began to increase in 2022. Even less constrained by competitive considerations, funds that acquired large blocks of mortgages, including non-performing loans, from the banks after the crisis have increased the rates charged on these mortgages even more than the banks.

Of the official lenders, the IMF in particular earned a good return on its outlay. Indeed, largely because of the surcharges, its net income from the Irish loan, even though it was repaid early was of the order of US$ 1 billion.

6. Issues of default and debt restructuring

The banks

In September 2008, all of the banks were facing a situation which would today be assessed as "failing or likely to fail". But the concept of orderly resolution was not yet well developed in Europe, let alone Ireland, and there was no special bank insolvency legislation such as had been enacted in Britain earlier that year following the failure of Northern Rock. The guarantee of September 2008 effectively removed the threat of failure of the guaranteed banks for the following two years.

While legislation also guaranteed most of the new liabilities assumed by the banks over the following few years, some of the bonds guaranteed by the original guarantee were no longer guaranteed after September 2010, and the question arose as to whether they should continue to be honoured. (Indeed, there were some commentators who suggested that the Government should renege on the guarantee as a whole in the run up to a cliff-edge of bank bond maturities that clustered around the end date of the original guarantee; this would, of course have been a type of sovereign default, and was not considered as advisable by officials). There was a clear hierarchy of these bonds in the degree to which they could profitably be dishonoured.[45]

Legislation was enacted in December 2010 to allow the authorities to bail-in subordinated debt under certain circumstances (and there were negotiated restructurings of subordinated debt under the shadow of this legislation). The law was carefully drafted to ensure its compliance with the strong protection of private property embodied in the Irish Constitution. From the technical point of view, it could easily be amended to enable bail-in of senior bonds. As the banks had been recapitalized, the net saving to the State of bailing in bonds of the continuing banks through a debt-equity swap would likely have been small.[46]

It was a different matter for the two banks that were heading towards wind-up (Anglo and INBS); bail-in of the €5bn or so in unguaranteed senior bonds remaining in those banks was seriously considered by the Government, but was effectively blocked by international opposition especially from the ECB which feared knock-on effects on the cost of bank funding in other euro area countries.[47] So the bank bonds were all paid, and all depositors were also made whole in the Irish banking crisis.[48]

[45] There was little point in considering a restructuring of secured bank bonds: it would have been unrealistic to suppose that creditors could be prevented from seizing the security.

[46] For this reason, the figure of €7 billion discussed in Oireachtas (2016) as potential savings from a bail-in of the senior bonds of the continuing banks seems wholly unrealistic.

[47] Blocked in November 2010 and again in March 2011 (Oireachtas 2016; Honohan 2019). Whether such knock-on effects would have been severe is hard to assess (cf. Bonaldi et al. 2015).

[48] A handful of small credit unions (credit cooperatives) became insolvent and were intervened and closed by the Central Bank; the first in November 2013. Their depositors were promptly repaid by the Deposit Insurance Fund.

The Government gradually sold down the equity stakes it had acquired through the recapitalizations of the three continuing domestic banks, but still held over 50 per cent in two of them until mid-2023.

Bank customers

Issues of debt default and debt restructuring were clearly relevant not only at the level of government and the banks, but also for the overindebted customers of the banks.

These included property developers, but also other firms laid low by the economic downturn either from their main business or because they had overextended themselves in property development on the side. And then there were households with unaffordable mortgages on owner-occupied or buy-to-let properties.

Most of the large commercial property portfolios were handled by NAMA, and the remaining commercial loans including to SMEs were dealt with by the banks, using conventional debt restructuring and, where necessary, bankruptcy procedures. With the Central Bank pressing banks to accelerate the resolution of non-performing loans (NPLs), corporate NPLs fell sharply from 2014 (Figure 11).

Personal over-indebtedness was an even more intractable problem. Arrears on residential mortgages rose steadily from 2007 to 2013 as housing prices fell and overall economic conditions weakened. Public policy at first discouraged repossession of homes by banks and a moratorium was put in place for a time. Soon, however, it became clear that the banks themselves were reluctant to take vigorous action against delinquent borrowers. For one thing, they had little experience in this kind of activity: previous economic downturns had not been accompanied by widespread delinquencies. It would be hard to sell repossessed residential properties in such a weak market; better, it seemed to many bankers, especially when interest rates went very low, to wait for a period of economic and housing price recovery. But this approach left stressed households in an unresolved and unsustainable financial condition.

In early 2013, the Central Bank mandated action plans by each of the banks to deal with the mortgage arrears situation by engaging with delinquent borrowers, ensuring that, where necessary, they were placed on a new sustainable debt servicing schedule (Donnery et al. 2018). Some of the solutions used were short-term in nature, such as temporarily reducing the monthly servicing charges; but solutions progressively involved longer term relief.

Insolvency law was well-established for firms, but the legal situation for personal over-indebtedness was unsatisfactory. A 19th Century personal bankruptcy code was heavily weighted against the borrower (with, for example, a mandatory twelve year period before discharge of the bankruptcy). This legislation urgently needed to be modernized so that it would offer over-indebted households a fresh start. A new Personal Insolvency Act was enacted in late 2012, introducing simplified procedures for dealing with personal insolvency. It was much more debtor-friendly. Conditions were further eased in amended legislation in 2015, which introduced a court review limiting the discretion of lenders. Even secured debt could now be compulsorily written down to enable the debtor to retain ownership of their principal private residence. The period before discharge from bankruptcy was reduced to one year. The courts have dealt with the cases before them under the new law in a way that has been seen as generally sympathetic to debtors. Admittedly, relatively few cases actually came to court, or to the administrative insolvency service that was established to deal with smaller restructurings, but the shift in legal powers must have influenced voluntary debt restructuring by the banks and other lenders. Whether there could have been a better approach to debt relief remains a matter of debate (cf. Labonne et al. 2021).

With improving economic conditions, and rising property prices, many stressed households began to be able to service loans again, especially where loan modifications had been made by the banks to achieve sustainable solutions. All in all, loan-modifications and self-cure accounted for the bulk of the reduction in non-performing mortgages (Donnery et al. 2018). Repossessions and voluntary surrenders of owner-occupied homes accounted for only a small fraction of the cases resolved: totaling about 10,000 or a little over 1 per cent of the stock of mortgages (or roughly ½ per cent of Irish households) over a decade.

The stock of owner-occupier mortgage in arrears for more than 90 days declined from a mid-2013 peak of almost 100,000 (or 13 per cent) but was still over 50,000 until the end of 2017.[49] A hard core of long-term arrears cases with arrears of over two years persisted though, with 20,000 such cases still outstanding at the end of 2022 (Figure 12). After 2013, with the more favourable market conditions, banks began to dispose of sizable blocks of mortgages to non-bank purchasers (mostly foreign owned). Legislation ensured that borrowers whose loans were acquired by these non-bank funds would retain the same protections as they had when their loans were with banks (for example, those set out in the Central Bank's Code of Conduct for Mortgage Arrears).[50]

The cumulative effect of the protections put in place for over-indebted personal borrowers may have contributed to the decision, one-by-one, of all the foreign-owned banks to exit the market and the limited entry of new mortgage lenders.

7. What could have been done better? Four FAQs

Was the 2008 guarantee the best option?

Under the modern FSB/BRRD approach to bank resolution, had it been in place in 2008, and had the authorities realized how big the capital deficiency was likely to be at the two weakest banks Anglo and INBS, it is clear that these two would have been intervened and losses imposed on creditors. Neither was providing financial services that could not easily be substituted by other banks. A guarantee of the remaining banks might still have been necessary to avoid contagion causing the payments system to freeze.

But this scenario supposes counterfactuals which were very far from reality in 2008. The authorities should have realized that these banks were deeply insolvent, but they did not. Furthermore, for Ireland to close a €100 billion bank with creditor losses would have triggered a vigorous reaction from the ECB and from EU partner countries. This is especially true given what was happening across Europe and the United States in those fraught weeks. I have suggested elsewhere that Ireland could have bought some time with ELA provision and meanwhile bargained with other EU countries for a risk-sharing of possible bank losses.

[49] The rate of arrears on personal buy-to-let mortgages was higher.
[50] This does not place any ceiling on interest rates.

Even if that bluff was called, having some extra time would have allowed the guarantee to be better designed, for example, excluding old debt and subordinated debt.

It was risky to leave two deeply insolvent banks in the hands of the management that had created the problem and might have had the incentive to loot: in fact, no significant looting occurred at these banks in the following months before their governance was overhauled.

Did euro membership help or hinder Ireland in the crisis?

Although the single currency surely made bank access to foreign funding easier and cheaper, the fact that Iceland, Latvia and other countries not in the euro zone also sourced enormous bank inflows in the same years suggests that euro membership was not an essential factor in the boom.

When boom turned to bust, euro membership was helpful in some respects, though not as much as it could have been, and harmful in other respects. It was helpful in that there was no collapse in the exchange rate and surge in inflation as happened, for example, in Iceland. The banking system was able to access liquidity in euros and foreign currency and at interest costs which, though not as low as in other parts of the euro area, were on average quite low in historic terms.

The absence of an exchange rate depreciation did, however, mean that real wages remained too high to ensure a quick return to full employment. The distributional consequences of this were significant when compared, for example, to Iceland. There were some nominal reductions in public service pay rates, but private sector employees who kept their jobs did not suffer much fall in real income, whereas very large number of people who lost their jobs suffered quite extended periods of unemployment, or emigrated.

But there were missed opportunities that euro membership could have provided. Although in the end, extensive central bank financing was retained for as long as necessary, the ECB's evident reluctance to bailout stressed countries, and their decision to block bail-in of bank senior debt, likely worsened the loss of business and consumer confidence in Ireland in the period 2009-12, deepening and prolonging the economic downturn. Furthermore, EU funds should have adopted a risk-sharing approach to the financing arrangements (as was suggested to them), for example by taking equity stakes in the banks instead of lending to the Government for it to do the same. The decision to pitch the cost of the bailout funds at such a high interest rate at first also deferred the recovery. These shortcomings were symptomatic of the EU's wider failure to use its collective economic weight fully to limit the corrosive effect of the GFC on the Union's economy.

Multiple equilibrium or unavoidable insolvency?

Much discussion around financial crises relates to issues around contagion, collapses of confidence and multiple equilibria. Was the Irish banking crisis just a victim of a self-fulfilling collapse in confidence? As far as the banks are concerned, probably not. Even without significant subsequent fire-sales, all of the main banks lost sums equal to or greatly in excess of their regulatory capital. The modest profit made by NAMA and by the 2011 investors in Bank of Ireland shares do not alter this fact Admittedly the wider economic downturn will have adversely affected the recoverability of the banks' loans during the early years of the downturn. And it is true that the price of residential property did start to recover vigorously about five years after the initial guarantee; and that NAMA sold properties into a rising market. But to suppose that an alternative, optimistic or good, equilibrium could have been attained, that would have maintained bank capital at required levels, is to suppose that NAMA's disposal strategy left really large sums on the table. It is worth bearing in mind that the foreign-owned banks also experienced severe losses and required recapitalization.

The position is somewhat different for the Sovereign. Clearly here we do have a potential multiple equilibrium. In November 2010 the market situation was settling to an equilibrium which would have involved default and/or a much deeper recession. Instead the official financing, mostly at what were eventually very low interest rates, ensured a better equilibrium, with very little further economic activity decline after end-2010, and a strong recovery in creditworthiness without any market default.

Was austerity too deep?

Fiscal austerity across the advanced economies was, of course, too severe from 2010. Having lost market access, the Irish Government had little choice in this matter: no more official lending to Ireland was on offer. Anyway, it is arguable that a slower fiscal adjustment would have had a less favourable long-term impact on economic welfare. After all, for a country whose debt sustainability was in doubt, and which had experienced a long pre-boom period of rather expansive government spending, ensuring predictability was vital for the recovery of both consumer and business confidence. The reasonably prompt correction to restore market confidence in Ireland's creditworthiness likely helped secure the strong recovery that followed from 2012-3.

Confounding many pessimistic commentators who supposed Ireland's growth model (of seizing the opportunities offered by globalization) to be broken after the crash, the subsequent vigorous macroeconomic recovery, with rapid employment growth and healthy fiscal accounts, showed the effectiveness of this overarching policy orientation (cf. FitzGerald and Honohan 2023).

A decade on, though, there is still evidence of economic scarring from the crisis, not least in the much reduced rate of home ownership, especially among younger households. In particular, the long-term outcome has not been good for the performance of the banking sector. The withdrawal of all of the foreign-owned banks from the domestic market has left an uncompetitive sector charging relatively high costs to borrowers and offering low returns to savers. As such, it is a return to the conditions like those of the 1970s—before Irish banking became exciting.

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Figure 1: *Dublin real housing prices* (deflated by CPI)
Sources: Department of the Environment; Economic and Social Research Institute; Central Statistics Office (cf. Honohan 2019)

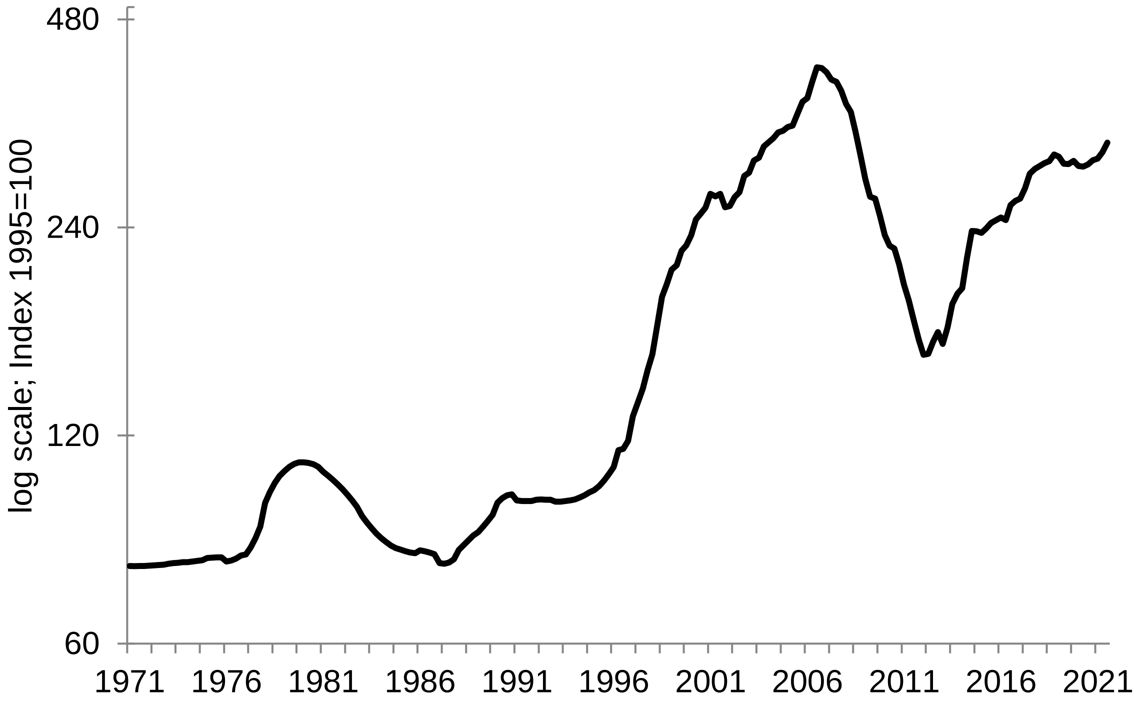

Figure 2: *Total employment: Boom, bust and recovery 1998-2017*
Source: Central Statistics Office

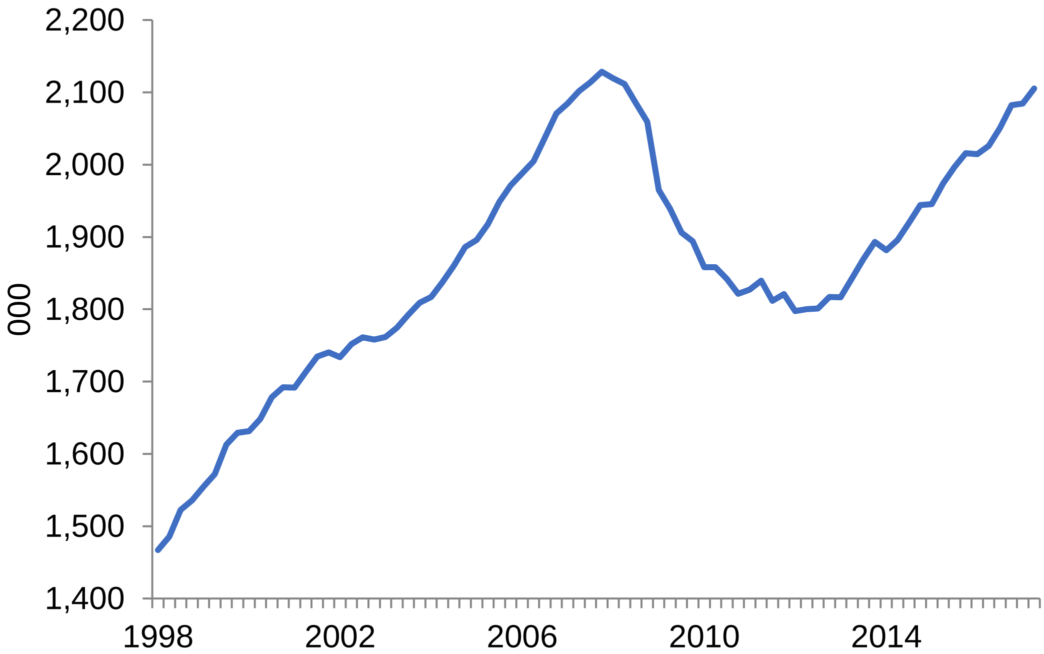

Figure 3: *Total assets of six Irish banks 1998-2008*
Source: Bank Annual Reports

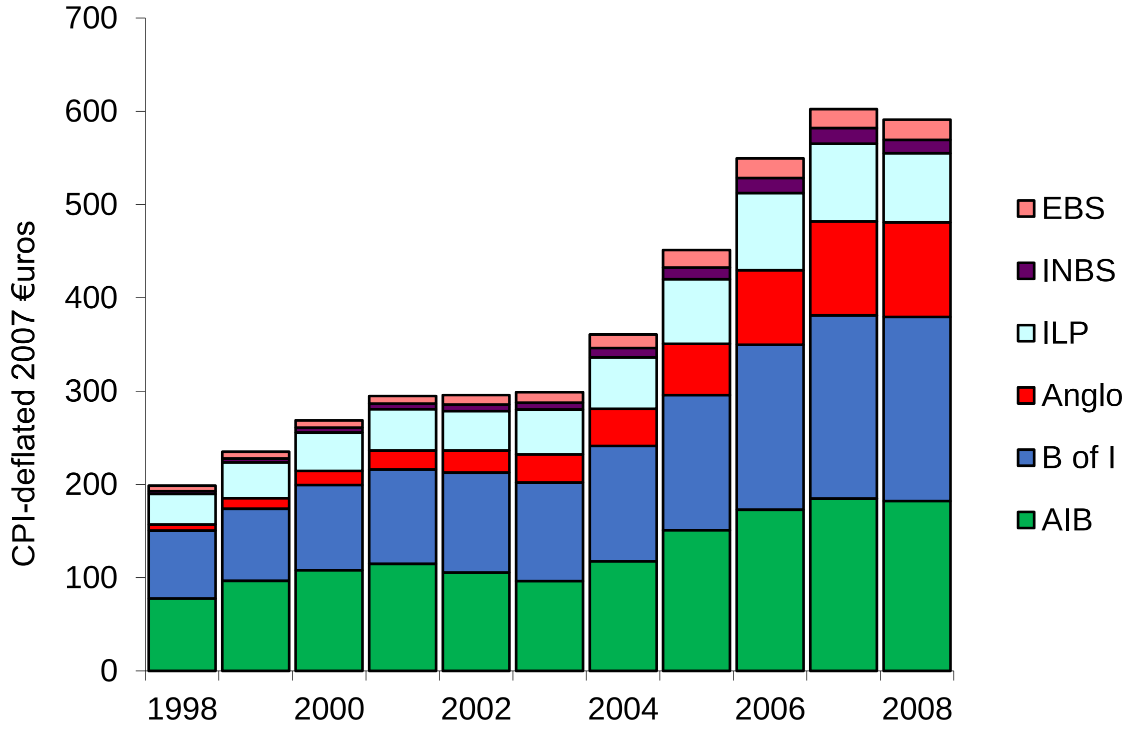

Figure 4: *Increasing use of high loan-to-value ratios for residential mortgage lending 2004-2007.*
Source: Honohan (2019)

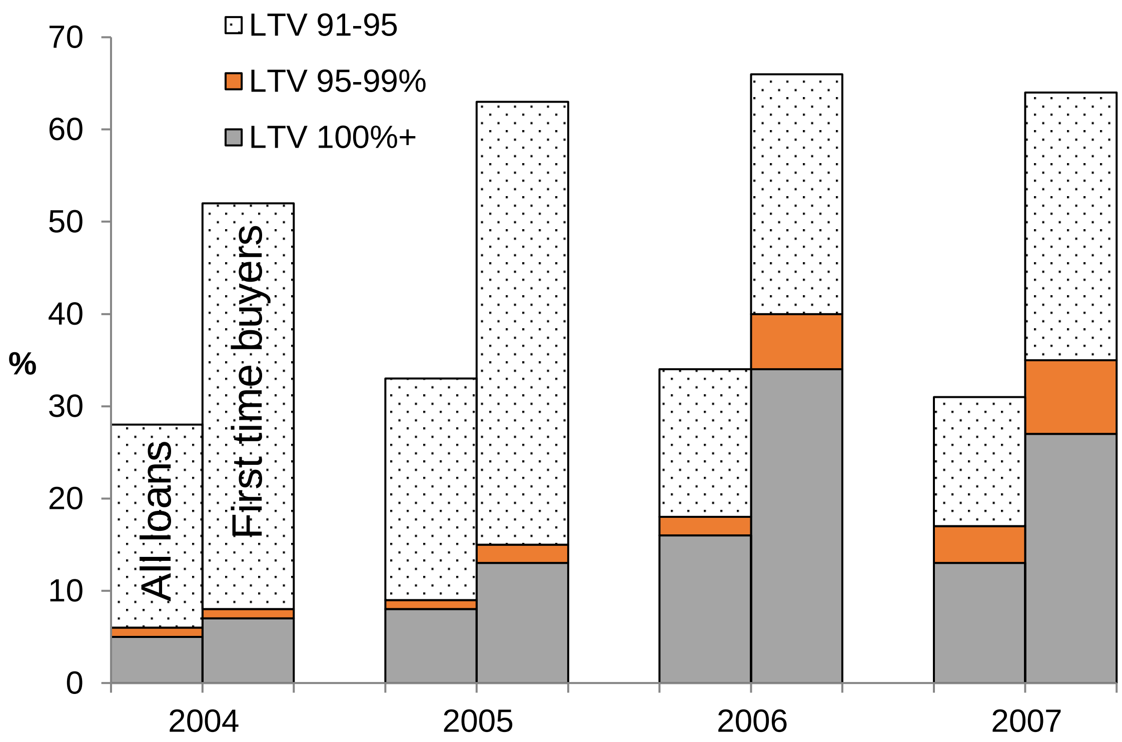

Figure 5: *Spreads on credit default swaps for Irish bank debt* (5 year senior)
Source: Lane (2016)

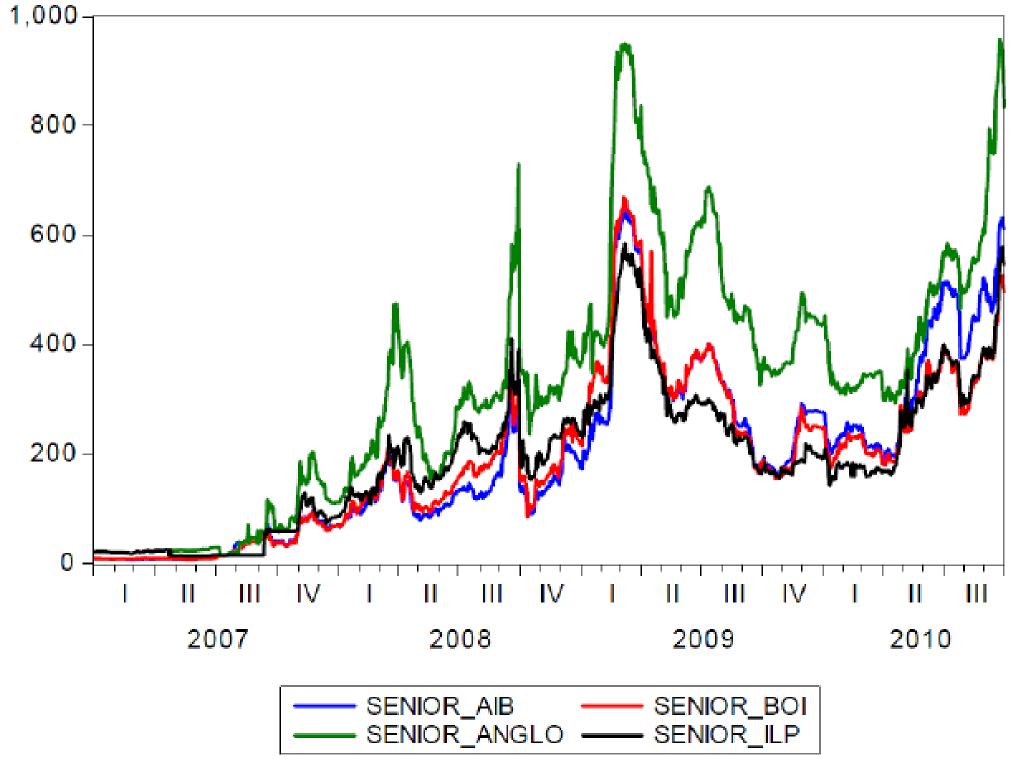

Figure 6: *Irish headquartered banks' borrowing from eurosystem facilities*
Source: Central Bank of Ireland. Note: Does not include ELA

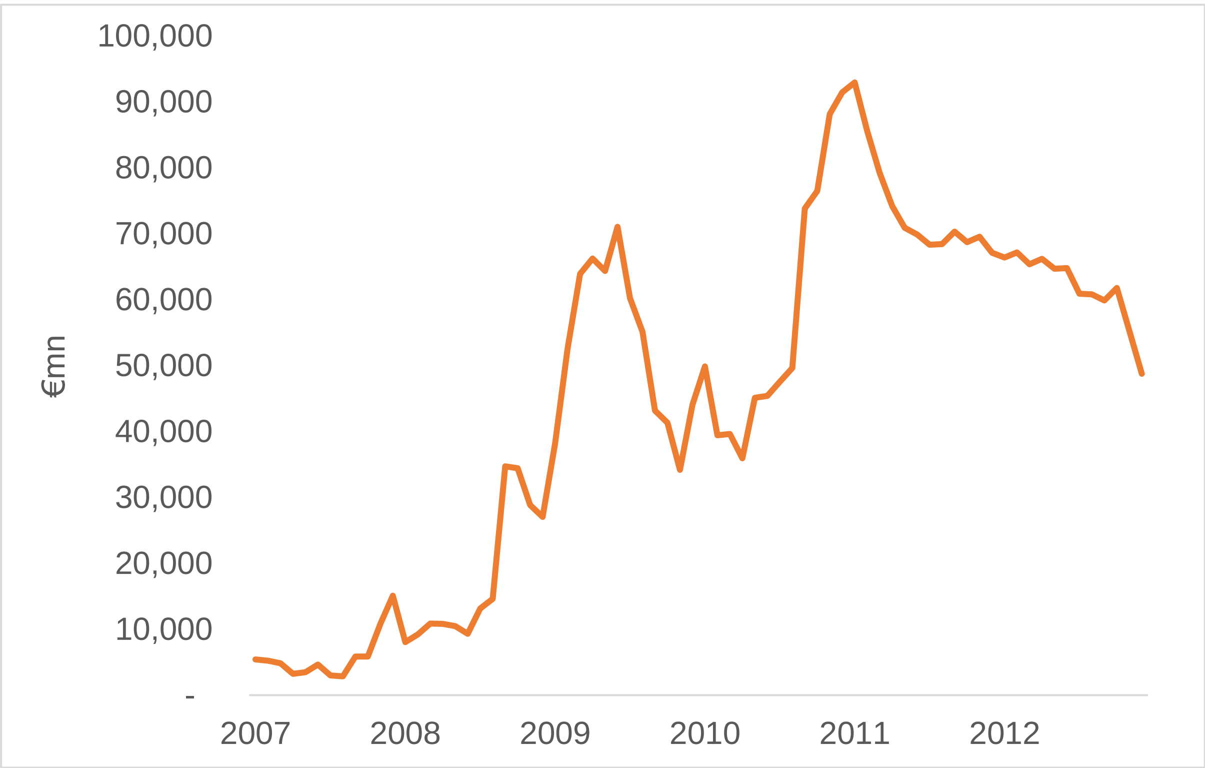

Figure 7: *Ireland: Sovereign credit ratings 2009-22*
Note: “1”=AAA or equivalent; “2”=AA+ etc.

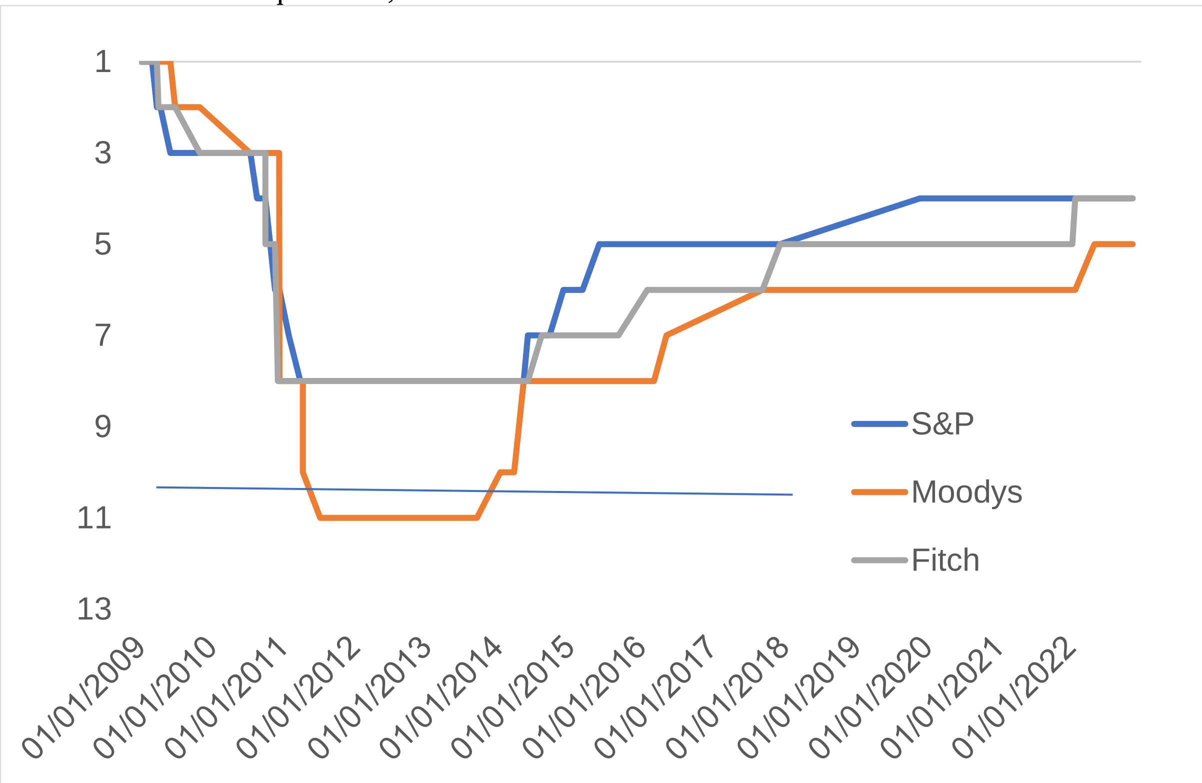

Figure 8: *Sources of funding of Irish banks 2009-12* (September 2009=100)
Source: Central Bank of Ireland

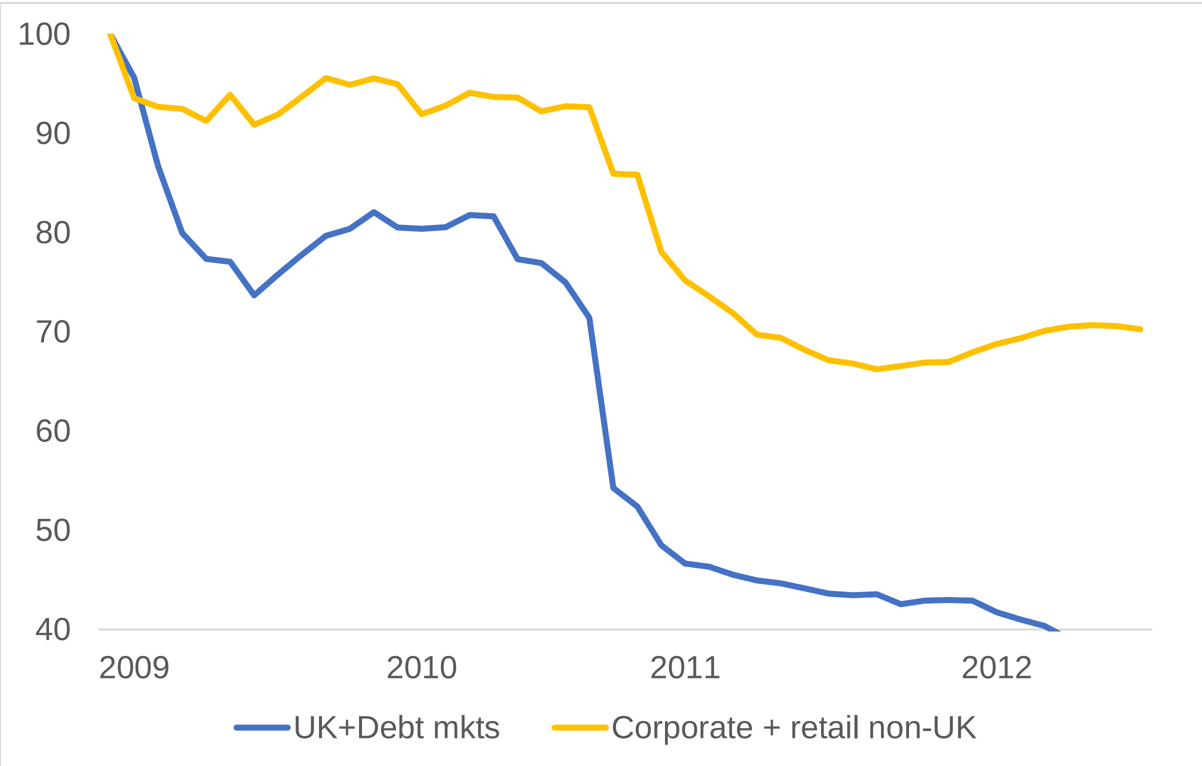

Figure 9: *Government 10-year bond yields: Ireland and Germany, 1995-2015*
Source: Central Bank of Ireland

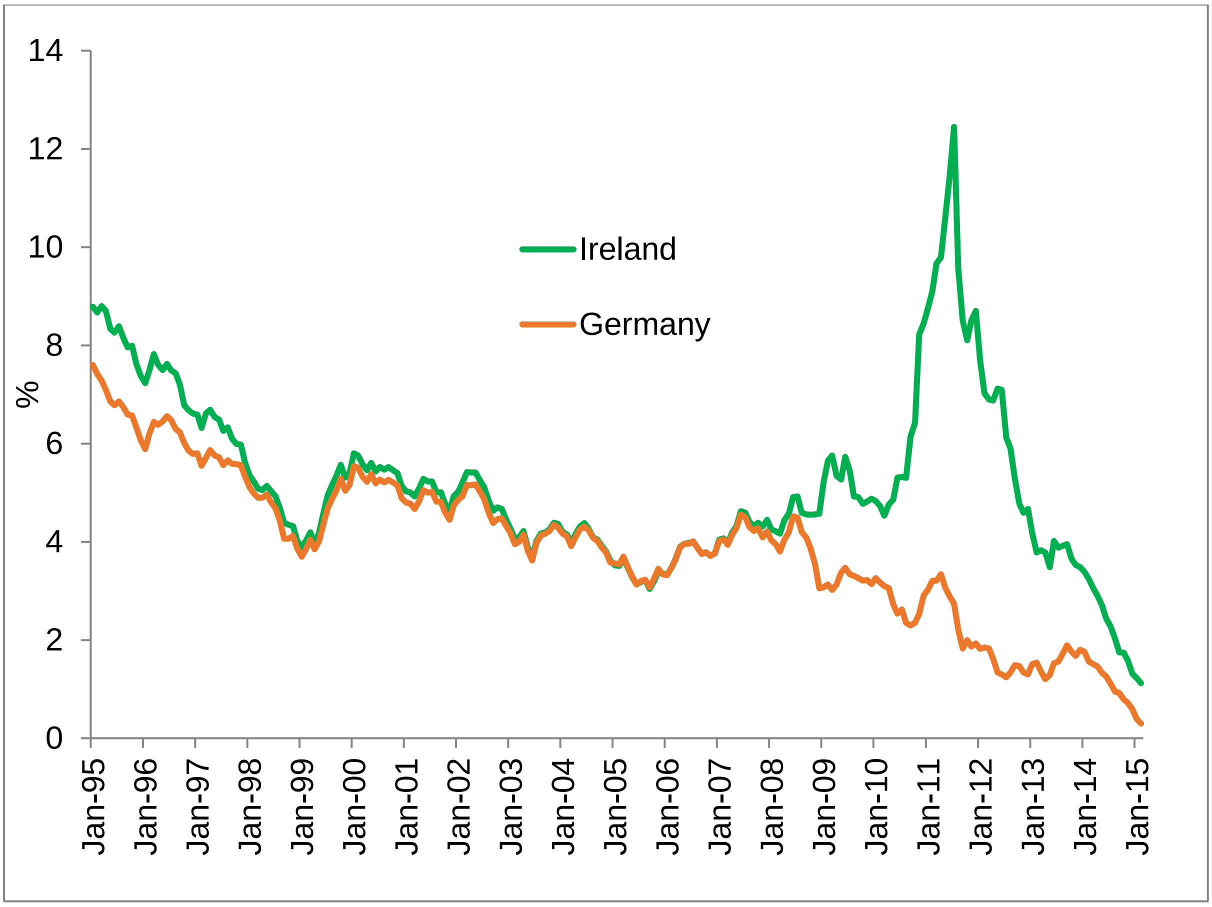

Figure 10: *Ireland: Bank retail interest rates 2003-17*
Source: Central Bank

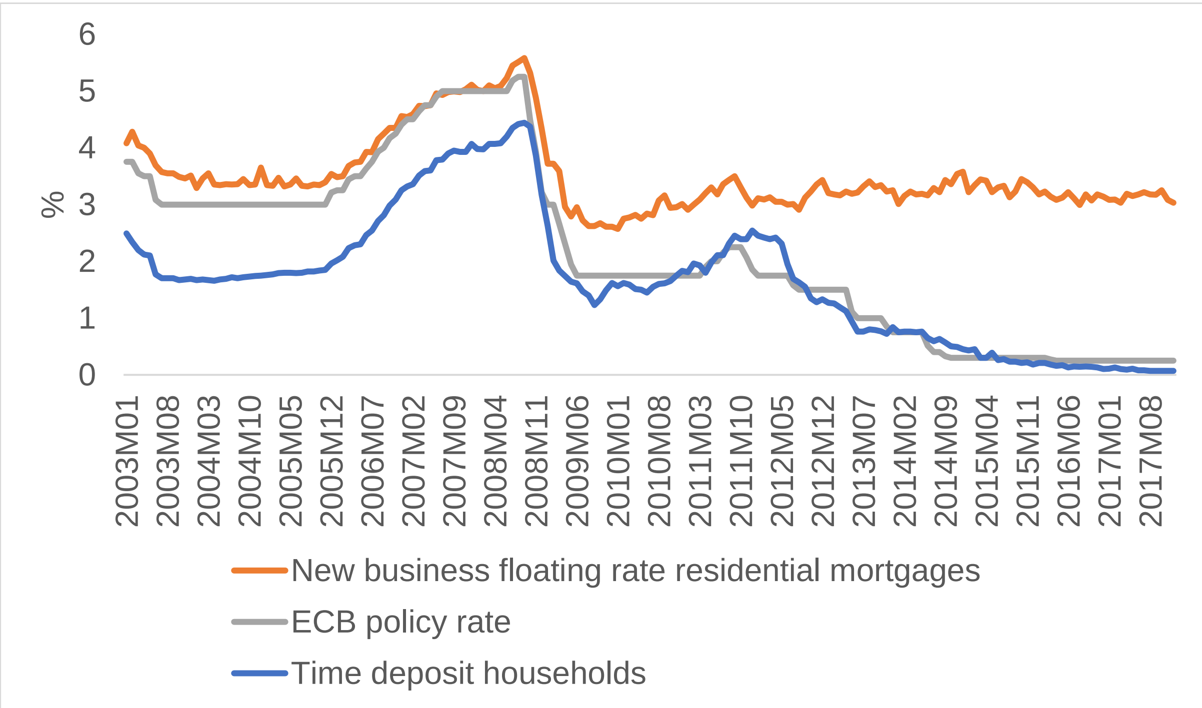

Figure 11: *Irish banks: Non-performing loans by sector 2014-7*
Source: Donnery et al. (2018)

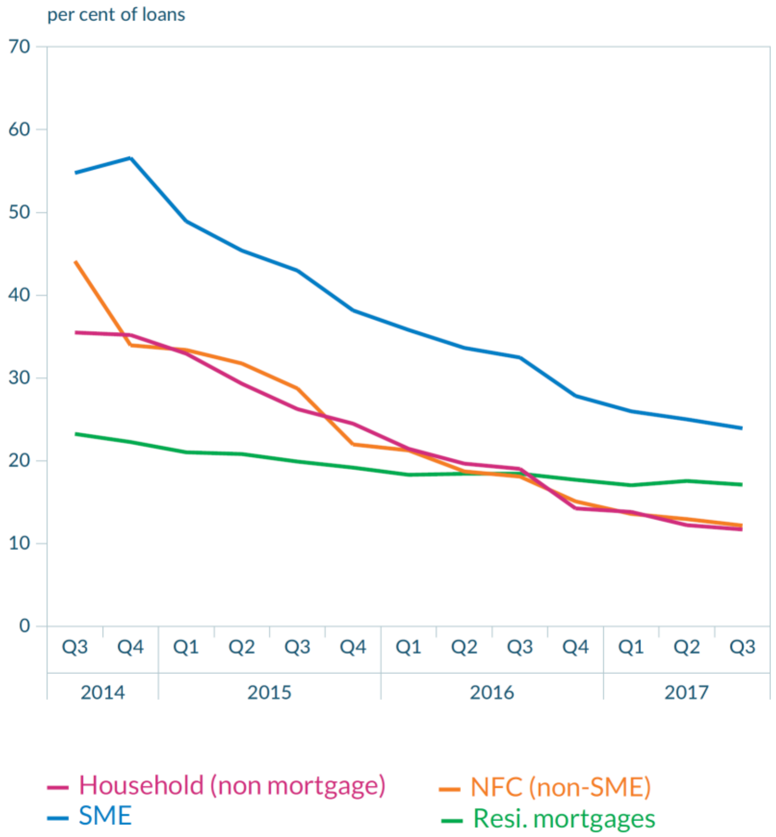

Figure 12: *Ireland: Residential mortgages in arrears 2009-22* (Owner-occupier, numbers)
Source: Central Bank of Ireland. Note: Includes loans sold to non-banks