Patrick Honohan: Recapitalisation of failed banks – some lessons from the Irish experience

Address by Mr Patrick Honohan, Governor of the Central Bank of Ireland, at the 44th Annual Money, Macro and Finance Conference, Trinity College, Dublin, 7 September 2012.

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When and how to recapitalise

Several countries have faced difficult bank recapitalisation challenges during the crisis. Textbook advice has not always proved easy to implement. That advice has been to recognise losses early and ensure prompt recapitalisation, ideally from the market. Where a bank has lost all of its capital it needs to be resolved, with shareholders losing their investment and debt-holders (apart from insured depositors) also assuming losses as necessary following the normal priority of claims. Where uncertainty continues to prevail, for example in a systemic crisis, over-capitalisation of banks which have lost the confidence of the market should be arranged.

In practice, loss recognition in the 2007–12 crisis has been slow, partly reflecting the complexity of some of the banking relationships (as in structured finance products in the US and large global banks 2007–8), but also the exceptionally severe depth of the recession which has made it exceedingly difficult to narrow the uncertainty of the estimated range of potential loan losses. Furthermore the systemic nature of the crisis and the fact that it has occurred in countries whose banking systems are large in relation to the economy's fiscal capacity has entangled the financial stress of the banks and that of the sovereign, not least because of the reluctance of public authorities in most advanced economies in these years to see sizable losses imposed on bank creditors – only Iceland has imposed any losses on senior bank creditors (of sizable banks) since September 2008.[1]

Decisions on recapitalisation are needed along three main axes.

(a) Transparency: should the basis of capital adequacy calculations be disclosed and crystallised promptly and extensively to the market or is there a case for delay and opacity?

(b) Depth: should the recapitalisation be over-sized, or "just enough" to meet regulatory minima?

(c) Socialisation: should burden-sharing with the private sector go beyond shareholders to cover subordinated and even senior creditors, or should there be extensive socialisation of the banking losses?

In this scheme, the bulk of the professional literature would favour transparency and depth, but not socialisation.

Ironically, whereas a tough approach to requiring high capital is normally seen as protective for the taxpayer and contrary to the interests of the bank shareholders, the scale of public capital injections in this crisis has tended to turn public opinion against high capital. These needed injections would have been lower had there been less socialisation of losses – though it does seem that final losses in some countries will be less than was feared at the outset.

Not all practitioners would agree with the textbook view on the answer to the questions. Furthermore, operational and practical difficulties can hamper policy implementation. Indeed,

[1] Cross-border spillovers from burden-sharing are especially relevant in the euro area, complicating the political economy of this problem.

many of the recapitalisation measures adopted around the World since September 2008 have not seemed consistent with these textbook principles.

The Irish case, involving proportionately the largest fiscal costs of recapitalisation incurred anywhere in the current crisis, provides some important practical lessons.

Bank recapitalisation and the Irish public finances

Although the Irish Government's decision, in the turbulent days of September 2008, to legislate for a blanket guarantee of the liabilities of the main Irish retail banks, was taken on the basis of advice that the banks faced liquidity and not solvency difficulties, it soon became generally accepted that bank capital should be boosted. The demonstration effect of action by British and US authorities will have been influential in this regard, but there was also the continued steady fall in property prices, the deepening recession, and a growing realisation that the banks' exposure to property developer and residential mortgage lending in particular had created a large and hard-to-quantify risk of loan-losses.

In December 2008, the Government announced its intention to inject capital into the three largest banks. Thus began a series of estimates and announcements over the following years as the Irish authorities ramped up efforts to refine estimates of future losses and the resulting capital requirements and eventually to balance the need to ensure adequate capitalisation against a background of increasingly stressed public finances and a lack of investor interest in the Irish banks.

Although the range of uncertainty in bank loan-loss estimates is expected to be rather narrow, reflecting adequate risk-control measures, systematic loan underwriting errors of Irish banks over a number of years into a massively over-heated property market opened-up an extraordinarily wide range of uncertainty. The slowness of bank management to face up to the scale of losses, the inadequacy of management information and the inherent uncertainties – not yet fully resolved – about the ability of debtors to service loans where collateral values fell well below loan amounts (negative equity) complicated the challenge of getting reliable estimates. At best a range of estimates under progressively more extreme but plausible scenarios could be aimed for.

The Government went into the crisis with a low level of public debt. But with the emergence already in 2008 of budgetary overruns, the sharp deterioration in public finances (reflecting the exceptional degree to which revenue had become dependent on boom-time sources, as well as the operation of automatic stabilisers into the deep recession), the Government was poorly placed to absorb the sudden additional burden of filling the growing capital hole in the banks. Short of defaulting on the formal guarantees it had provided to the depositors and bondholders, however, the Government had to acknowledge a large additional bank-related debt. To be sure, the repayments of exiting bondholders and depositors (especially during early 2009 and late 2010) were financed by central bank liquidity support, but this merely changed the identity of the banks' creditors. Had market confidence remained, allowing the Government to borrow at the low interest rates prevailing for highly-rated Sovereigns, the situation could have been manageable. However, by November 2010 the yield spreads for Ireland had deteriorated to the point where debt sustainability could no longer be assured and the Irish Government sought the assistance of the IMF and the new European Financial Stability Facility. The Programme agreed with these official lenders did not envisage any loss sharing with senior bank creditors (even those which were no longer Government-guaranteed), so the Government had to use a sizable slice of the resources of the Programme to continue the process of strengthening bank capital. The result was a very delicate balance established in 2011 between ensuring adequate bank capital and retaining Government debt sustainability.

Phase 1: the initial capital injection

The initial Government capital injection announced in December 2008 was €2 billion each into AIB and Bank of Ireland (plus a commitment to underwrite a further €1 billion each in new equity to be issued), and €1.5 billion into Anglo taking a 75 per cent stake in that company.

Events overtook this announcement. First, in the face of continuing outflows, Anglo Irish Bank was nationalised on Friday January 16, 2009 and the capital injection decision deferred. For AIB and Bank of Ireland, the scale of these initial recapitalisations was increased before they were actually concluded. Their public offerings were shelved in the face of the further sharp decline in bank share prices following the nationalisation of Anglo; instead, with a view to strengthening market perceptions of the capital adequacy of the two main banks the Government injected €3.5 billion each in cash into AIB and Bank of Ireland in February 2009 in return for preference shares. Anglo itself received €4 billion in capital in June 2009 as the scale of prospective loan losses began to become more evident. By end-year 2009 Anglo was again heading for an undercapitalised situation; this was closed through a written commitment from the Minister for Finance to fill the gap with an instrument approved by the Competition Directorate General of the European Commission (DGCOMP). The instrument duly materialised with the issuance of the first Promissory Note (for €8.3 billion) at end March 2010.

Phase 2A: PCAR2010 – NAMA first tranche and rest of portfolio for the going concern banks

Loss rates

The initial focus on prospective losses was on the large loans that had been made to property developers. The Government's approach to these loans, announced in April 2009 and legislated for in December of that year, was to create an asset management company NAMA to purchase the large property loans at "long-term economic value", thereby crystallising prospective losses. The rest of the banks' portfolio was also becoming evidently stressed, not least the residential mortgages. Sooner or later, these losses would have to be provided for.

By the autumn of 2009 there was a growing recognition that prospective losses on developer loans were likely to be very high, and that these losses would crystallise when NAMA purchases occurred. In order to comply with the specific requirements of DGCOMP, the NAMA purchases had to be based on detailed valuations and it was decided that they would therefore necessarily occur in a sequence of tranches, beginning with the largest loans. As soon as the first tranche was purchased, losses would begin to crystallise and recapitalisation could not be deferred. But how much additional capital would be required? An indicative percentage haircut had been mentioned by the Minister for Finance in a September 2009 statement, but there was no assurance that this would be accurate, and indeed it proved to be a considerable underestimate of the severity of the shortfall. As it became clear that, for operational reasons, final NAMA prices would not be available all at once, the choreography of determining needed capital and requiring capital injections became problematic.

If, as seemed plausible, the larger property developer exposures, which were to be valued first, were likely to generate a higher percentage loss than the smaller exposures, the first NAMA haircuts might not be too optimistic an estimate. Indeed, all of the banks felt this was going to be the case and they argued against being required to put up sufficient capital to meet an overall NAMA loss ratio equal to that of the first tranche. In response, the Central Bank undertook to review the capital requirement on June 30, 2010 and to relax it if subsequent NAMA tranches proved by then to have lower haircuts. Would that it had been so!

Non-NAMA loss projections also needed to be made. Here the question was different. At least NAMA purchases would crystallise the banks' losses; furthermore, NAMA was mandated to value the loans it purchased on the basis of the market prices for land and property prevailing when the legislation was being enacted in November 2009. (To be clear, the loans were not themselves valued at mark-to-market prices, but the property prices input into the long-term economic value calculations that were made were based on that fixed date.) Accordingly, future property price and macroeconomic developments would not play a central role in these valuations. But for the non-NAMA loans, their recoverability would depend on future economic conditions of firms and households, on the banks' ability to recover on distressed loans, and not simply on current collateral values.

The banks had made their own unpublished estimates for these, but the Central Bank made an independent top-down estimate of loan-losses over a three-year horizon for a base and stress case. These estimates were considerably higher than those of the banks, and the latter strongly contested them. The estimates drew on the experience of the Central Bank's in-house credit specialists – many of them hired within the previous year or so. Analysts' estimates published by rating agency and other sources were factored-in, especially in relation to the banks' non-Irish exposures. Separate loan-loss ratios were assigned to each bank for 12 different loan categories.[2] The challenge was to choose loss rates, all of which were sure to lie well beyond all local experience. The projected loss rates that were chosen varied widely across the different categories (for example the stress-loss rate on Irish commercial development property non-NAMA for Bank of Ireland was 60%; for Irish retail mortgages it was 5.6%), and to a lesser extent across the banks. These were all well above the banks' own published estimates and far in excess of provisions taken.

The limitations of stress-testing as an exercise across the globe are pretty well appreciated. Both the choice of stress scenarios in terms of macroeconomic and other external factors, and the mapping from those factors to default probabilities and to loss-given-default are always subject to uncertainty. Variances are high. This is all the more so when the economy moves outside of the previously experienced range. Given the steepness of the decline in economic activity (between the peak quarter in late 2007 and the trough in late 2009, real GDP fell by 11.5%; GNP by 13.9%) and employment and the steady decline in house prices both actual and forecast, there was very little in historical experience – either in Ireland or in other advanced economies with large financial sectors – to guide those attempting to estimate the range of plausible outcomes for a bank lending portfolio which had clearly been inadequately underwritten. Loan losses were certain to be beyond almost all previous experience not just in Ireland, but in advanced economies: just how far beyond was clouded in uncertainty.[3]

From loss rates to capital requirements

The Central Bank's March 2010 projection for non-NAMA loss rates, combined with the first tranche haircut grossed up to apply to all NAMA loans, were employed with projections of capital and income generation from the rest of the banks' activities over a three-year horizon, and a small buffer, to arrive at a needed capital amount by end-2012 that would ensure that the bank would satisfy the Central Bank's chosen core capital adequacy thresholds. These thresholds were higher than current international standards, reflecting evolving international discussions. They were set at 8 per cent Core Tier 1 on Basel 2 basis in a base case

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2 For ROI and UK separately: retail mortgages, retail other, investment property, development property, non-property commercial. For "capital markets" lending: investment property, commercial property, non-property.

3 Projecting macroeconomic variables following such a deep decline was already a challenge, but even if they could be known, attempting to map macro forecasts into loan-losses brought any existing models (the banks had some) well beyond the range within which they could be relied upon. In practice, macroeconomic projections had little practical impact on the PCAR2010 loan losses estimates.

scenario, (of which at least 7 per cent to be in the form of common equity); and at 4 per cent Core Tier 1 in the stress case.

The outcome (known as PCAR2010) of these calculations for three banks BOI, AIB and EBS, imposing the equivalent of €11 billion of new capital on these banks, was published at end-March 2010.[4] The future of Anglo and INBS as going concerns being in question, no specific new forward-looking capital requirements (beyond standard Basel 2) were imposed on them by PCAR2010.

However, the NAMA read-across and preliminary indications for their non-NAMA book were officially stated to imply further future losses of over €20 billion for those two banks, which were also immediately capitalised to meet crystallised losses. The PCAR2010 exercise, implying, as it did, a total of almost €31 billion in additional capital, was the largest capital deficiency announcement during the period 2008–12.

Too much or too little?

Given the scale of needed recapitalisation and the fact that much of it would have to come from the State, the decision on precisely how much capital to require as of the first transfer of developer loans to NAMA presented risks in both directions. Insist on much too much capital – more than seemed likely to be needed – and the ability of the State to retain access to market finance could be immediately and unnecessarily be lost; on the other hand, fixing an amount of required capital that subsequently proved inadequate would have reputational consequences.

Put another way, the market clearly desires certainty and was not going to welcome repeated revisions in projected loan losses. But the only way of ensuring a one-bite capital increase in the face of gradually emerging information would have been to overcapitalise the banks by an amount sufficient to cover *any* potential eventuality.[5] Given the degree of uncertainty that then existed – albeit some of which would crystallise quite soon, as successive tranches of NAMA valuations were determined – that would have required a much larger capital injection than was decided upon in March 2010. To insist on overcapitalising to that extent would have pushed all of the banks into majority State ownership even if there was no need or clear justification for this. Above all, a sufficient overcapitalisation to cover any eventuality (or even to meet the much higher ratio subsequently adopted as a standard in 2011) would have undermined the State's already precarious finances and tipped it into an immediate need for a programme of assistance from the IMF and EU partners.

Accordingly, having been assured by NAMA that there was no basis for assuming that the first NAMA tranche was unrepresentative of haircuts that would come in subsequent tranches, the Central Bank decided to apply this first-tranche haircut across the board to the whole portfolio of developer loans. There was no realistic alternative, despite the risk of a confidence-reducing sequence of upward revisions in required capital.

In the event, that is what actually happened: as became clear in August, the later NAMA haircuts would be uniformly higher than those of the first tranche that had been announced in March 2010. It remains somewhat puzzling why the later tranches should have been systematically worse than the first lot. After all, these were generally smaller exposures and

4 http://www.centralbank.ie/press-area/press-releases/Documents/30%20March%202010%20Prudential%20Capital%20Assessment%20Review.pdf

5 Only if NAMA were allowed to make a global purchase on the basis of a less detailed and time-consuming loan-by-loan evaluation could the uncertainty be removed. But this was ruled out by DGCOMP – and indeed could have been inconsistent with the Government's intent not to bail-out the banks' shareholders.

– all other things being equal – that alone would, if anything, tend to predict lower loss rates).[6]

Phase 2B: adjustment for full NAMA sample and for Anglo wind-down

By end-August 2010, then, higher than anticipated losses on later NAMA tranches began to eat into the buffers that had been provided for in March. In early September, the latest NAMA tranche information, together with indicative but reasonably firm estimates for the remaining NAMA tranches, made it unavoidable that additional capital of about €3 billion would be needed for AIB.[7] The buffer for Bank of Ireland was, however, sufficient.

The increasing haircuts for the NAMA loans being transferred by Anglo[8] and INBS were even larger. Accordingly, the Government decided to abandon the plan to build a new business bank out of Anglo and to proceed to a dismantling of that bank.[9] Following this announcement, Anglo management were asked to provide a firm assessment of their prospective losses under the new structure. This estimate implied higher non-NAMA losses than had been envisaged under the previous plan. Together with the higher NAMA haircuts, this gave rise to the announcement that Anglo's future losses over its remaining life-time in wind-down mode could imply a need for capital over €12 billion higher than had previously been pencilled in.[10] The figure for INBS was almost €3 billion higher than at March 2010.

These figures were all announced[11] on September 30, 2010, just after the expiry of the 2008 guarantee, an event which had been preceded by substantial maturities of bank paper and non-renewal of deposits, giving rise to a surge in the need for ELA funding from the Central Bank of Ireland.

Three factors have been mentioned as contributing to the surge in the spread of Irish Government bonds in October and November of 2010 leading to Ireland's application for financial support from the EU and IMF.

> First: the market's revised perception of the scale of banking losses following the announcement of September 30, 2010.

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6 For one thing, smaller loan projects should be easier for the lender to value. Also, positive lender valuation errors will tend to increase approved loan size, while negative errors will reduce size.

7 The announcement of an additional capital need for AIB was highly significant in a European context also, as this was a bank which had been subjected to the CEBS stress test in July 2010. In fact, AIB and Bank of Ireland had been subjected to a more aggressive stress than the minimum set by CEBS in that the first tranche NAMA loss rates were applied to the full developer portfolio in place of the lower minimum loss rates specified in the CEBS rules. Thus, even though it resulted simply from the time-consuming nature of the NAMA valuation procedures (mandated by the European Commission DGCOM), the need to revise the CEBS result so soon was seen as a negative reputation event both for the Irish and European authorities.

8 As Anglo's losses crystallised, the amount of the Promissory Note provided by the Minister for Finance to meet Basel 2 regulatory capital requirements increased: by €2.0 billion on 28 May, €8.6 billion on 23 August and €6.4 billion on 31 December 2010 giving a total of €25.3 billion. INBS likewise received a promissory note whose value had increased to €5.3 billion at end-2010. Anglo and INBS were merged in July 2011 to form IBRC.

9 It was decided that Anglo would be split into a Funding Bank (containing the deposits and central bank funding, with eligible and Government-guaranteed assets) and a Recovery Bank (containing the rest).

10 This reflects losses under the management's "stress" case; their base case losses were €5 billion lower. The non-NAMA losses envisaged in these scenarios were considerably higher than provided as late as August 2010 when Anglo management still envisaged it continuing as a going concern.

11 http://www.centralbank.ie/press-area/press-releases/Pages/STATEMENTONIMPLEMENTATIONOF PRUDENTIALCAPITALASSESSMENTREVIEWEQUIREMENTSFORIRISHBANKS.aspx; http://www.centralbank.ie/press-area/press-releases/Pages/StatementonAngloIrishBank restructuringcapitalcosts.aspx. This included a requirement for ILP, which, as a non-NAMA bank, had not been included in the March exercise.

Second: growing market awareness of the scale of ELA that had been provided to the banks, calling into question their future viability.

Third: the Deauville Agreement of October 18, according to which private sector lenders to Governments seeking financial assistance from the new EFSF facility would have to experience losses on their holdings. All three factors were no doubt relevant.

Although the scale of the additional capital requirements announced at end-September was not in itself sufficient to undermine radically the manageability of the public finances, the market had not focused on the fact that the end-March 2010 announcement left open the possibility of downside risk on the later NAMA tranches and did not itself purport to account for Anglo's prospective non-NAMA losses. As a result, the market was unpleasantly surprised that a further capital announcement was needed so soon. Still, market spreads actually declined in the days after the announcement and only started to widen again after Deauville.

The growing ELA, and overall reliance of the Irish banks on Eurosystem funding was also a matter of evident concern to the ECB, and this concern clearly communicated itself to the markets in these weeks.

Inasmuch as the unaided public finances were at the limit of their capacity, making unavailable the option of over-capitalisation of the banks, a major objective, especially of the funders, in the EU-IMF Programme of Financial Support was to remove this constraint and provide sufficient funding to allow whatever capital needs were going to be identified by a new and more in-depth stress test, lifting capital of the banks to a new threshold (10.5% risk-weighted), and also providing for the additional costs of deleveraging the banks so that their reliance on central bank funding, especially ELA, would be reduced. The nexus between Government and banking system was not, however, reduced in that the additional capital was not injected directly, but added to the Government debt. Furthermore, overall eurosystem policy dictated that senior bondholders – even those that were no longer Government-guaranteed – should not be required to share the burden of the losses.

It should not be thought, however, that all of the additional capital mandated by PCAR2010 was obtained from the Government. Instead some was secured through sale of assets at above book value (which both generated additional book capital and reduced the risk-weighted asset base on which the capital requirements were calculated), and some through burden-sharing offers to subordinated debt-holders.[12] There was also an underwritten rights issue by Bank of Ireland.

Phase 3: PCAR 2011: higher ratio; deleveraging costs; bottom-up estimates

To meet the Programme requirements, the PCAR2011 exercise[13] was prepared on a more granular basis employing an extensive list of external consultants, among which BlackRock Solutions were the leading player, steering the loan-loss estimation. A more systematic, and formal (and very expensive!) approach was adopted. Loan-by-loan information was collected from each of the banks and a systematic process of data verification provided assurance that the underlying data being used was sufficiently robust. At the heart of the exercise was a bottom-up multi-year loan-loss forecasting exercise carried out by BlackRock using Central Bank base and stress projections about GDP, house prices and other macroeconomic variables, and applying parameters estimated from emerging patterns of loan delinquency. It

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[12] Shareholder writedowns for the Irish banks covered in this note exceeded €29 billion; burden-sharing with subordinated creditors totalled almost €14 billion.

[13] http://www.centralbank.ie/press-area/press-releases/Pages/CapitalandLiquidityResultsPublishedfor BankingSector.aspx.

is important to realise that, although arrears were mounting steadily, and the inevitability of sizable losses in the non-NAMA portfolio was recognised by all, even at this stage banks had recognised relatively few write-downs.

As already noted, the forecasting exercise was being conducted in circumstances that were largely out of the range of historical experience: absent that, it is of interest to explain the assumptions that were made (at the instance of BlackRock) to underpin a data-based loss projection.

Thus, for residential mortgages, BlackRock – extrapolating from UK experience – assumed that, in the end, bank forbearance on delinquent loans would not be successful in avoiding foreclosures, and they modelled negative equity as the major driver of delinquencies. Thus, in effect, a significant proportion of negative equity loans was assumed to default in each quarter, and little of the unsecured portion of the loan would be recovered.[14] Since the house price forecasts entailed a large fraction of the mortgage book remaining in negative equity throughout the horizon of the exercise, this produced a higher estimate of life-time losses than had been envisaged in the top-down exercise of the previous year.

For commercial property loans, the ability of the debtor to secure rental renewals was assumed to be low, so that for this segment too BlackRock's lifetime loan-loss assumptions were heavily driven by loan-to-value ratios.

In choosing parameters, BlackRock also made subjective judgments about the banks' operational ability to make effective loan recovery.

Mapping the BlackRock loan losses into capital requirements for PCAR2011 entailed some judgment as to how much of future prospective losses to provide for in the banks' capital right away. Here there was some tension between accounting and economic approaches. It was deemed, from the accounting point of view, unnecessary to insist that the banks hold sufficient capital immediately to meet all of the lifetime projected loan losses. On the other hand, holding enough to meet projected three year losses (and still end after 3 years with 10.5% Core Tier 1 capital in the base case and 6% in the stress case) was deemed insufficient from the perspective of the underlying economics of the situation.[15] A sizable buffer over three year losses was therefore included in the required capital announced in March 2011. In addition, some of the banks' non-core assets were slated for deleveraging: projected realisations for these entailed further losses which could have been avoided if funding had been available to hold these to maturity.

The combination of the four factors: (i) higher percentage capital ratios; (ii) higher projected 3-year loan losses per BlackRock methodology; (iii) buffer for post-three years loan-losses; and (iv) deleveraging costs, combined with projections for the evolution of net income and risk-weighted assets, gave the March 2011 required capital figures. A breakdown is shown in

[14] In essence, BlackRock's methodology began by estimating the influence of each loan's LTV and seasoning (and the borrower's interest-to-initial-income ratio) and macroeconomic variables on the probability of that loan being in arrears status (defined as nonperforming for at least 90 days). This estimate was based on a 24-month panel (subsample) of individual loans. Then it was assumed that a given fraction of each month's loans in arrears will default, the fraction being based on UK experience. Finally, arrears percentages were projected forward for a couple of decades using the estimated and assumed parameters, together with projected house price and other macroeconomic variables. Central Bank staff shadowed this exercise and explored alternative assumptions, drawing on estimates of monthly migration of delinquent loans into higher arrears categories, based on actual Irish experience 2009-10 calculated from the new loan-by-loan data. In several instances this produced somewhat higher projections of loan cure, but only the BlackRock loan-loss estimates were used to calculate the new capital requirements.

[15] Another complication in assessing needed capital was the extraordinary term and credit risk premia prevailing in banking and sovereign debt markets during 2010 to 2012. The net present value of a long stream of payments differed widely depending on which of several market-relevant discount factors were employed.

Figure 1.[16] This time an additional €24 billion was being called for, well within the €36 billion pencilled into the Programme financing envelope by the Troika.

Table 1 shows the requirements bank-by-bank. Figure 2 shows the cumulative additional capital requirements reached in the crisis. The bank with the largest cumulative amount (€29.3 billion) is Anglo (and, this bank being in a wind-down mode, that figure does not include an additional €5 billion of announced potential losses in a stress case). Although AIB's cumulative requirements are not far behind at €27.2 billion, this does reflect the higher target capital ratio set for going concern banks in a stress scenario; furthermore, Anglo's reported pre-crisis total assets stood at €96.7 billion: much lower than the €177.8 billion reported by AIB. As such, Anglo's overall loss experience was much worse than AIB. The other large going concern entity Bank of Ireland loss rate had to meet €11.4 billion of additional capital requirements, which may be compared with its pre-crisis total assets of €197.4 billion.

Towards PCAR2013

In all banking systems around the world, evolving international standards has tended to increase required capital levels (especially for core capital – those elements that can absorb losses while the bank continues to be a going concern). Growth of the business also means a need for more capital. In normal circumstances, the additional capital can be generated through retained earnings or by issuing new equity in the market. When conditions return to normal, this will be the case for Irish banks too. But for the present, their profitability and access to additional equity has been limited. There is also the question of keeping track of and responding to any deviations in the actual and prospective loan-loss situation by comparison with what has been assumed in PCAR 2011.

PCAR2013, employing a further refinement of methodology, embodying recent work on loan arrears migration and the results of a micro-data survey of indebted households, will allow capital requirements to be updated on a more secure basis. An emphasis on the effectiveness of bank loan recovery and the management of mortgage and SME arrears will also become more central. The more effective the banks are proving to be in managing problem loans, the less the required capital is likely to be. The likely enactment during 2012 of new personal insolvency legislation could affect behaviour in relevant ways, behaviours that should be taken into account in the loan-loss models.

The passage of time will also help to narrow the remaining range of uncertainty somewhat, although the deterioration in global economic conditions since PCAR2011 and waves of increased market uncertainty in the euro area and worldwide continue to present challenges to accurate loan-loss forecasting. Furthermore, the continuing dislocation – to date – in the transmission of monetary policy throughout the euro area presents banks in stressed countries like Ireland with profitability challenges, especially in respect of tracker mortgages (whose running yield is tied to the ECB policy rate). Since March 2011, economic conditions (both in Ireland and in Ireland's main international trading partners) have generally been worse than the base case employed in PCAR2011, but rather better than the stress case.

Of course in the coming years the implementation of Basel 3 will also lead to higher capital ratios. The aim must be to have the banks return to sufficient profitability in a stable overall

[16] The deleveraging losses are the highest component. Partly this reflects the unavoidable discount that would be incurred by a seller of opaque loan contracts (even if "firesale" conditions do not prevail), partly reflecting the informational disadvantage of likely purchasers. Note, however, that this figure should be interpreted with caution inasmuch as prospective hold-to-maturity losses on the assets to be deleveraged were not separately evaluated. As such the loss shown on deleverage overstates the cost actually incurred by having to dispose of assets rather than holding to maturity.

environment so that additional needed capital in future years can come from investors other than the State.

Instruments used

Just as with the previous capital increases, the going concern banks worked to reach the objectives as far as they could by liability management exercises and the sale of non-core assets. In the case of Bank of Ireland, some new cash was raised from issuance of equity.

When a Government recapitalises a bank, it generally provides an asset to the bank in return for the acquisition of a capital claim on the bank. As things have worked out, to a first approximation, the Irish Government's practice has been to inject cash into going concern banks (AIB, Bank of Ireland, ILP), and non-marketable Promissory Notes into the entities now being wound down (IBRC, formed from the former Anglo and INBS). The cash was sourced either from the National Pension Reserve Fund, a Sovereign Wealth Fund established by the Irish Government in the late 1990s at a time of fiscal strength, or directly from the Exchequer. The Promissory Notes represented a bespoke contract to pay a constant sum annually for about 13 years, with the fair value at issue equal to the needed capital amount. This represented a compromise between the State's desire to postpone the need for cash and the bank's preference not to have too much maturity mismatch in its portfolio. The Irish Government's credit rating was AA when the first Promissory Note was issued; subsequent rating downgrades would have undermined the recipient banks' market access, but by September 2010 both Anglo and INBS were in wind-down ("gone concern") mode. Nevertheless, they retained their banking license and satisfied regulatory capital minima, remaining eligible for ELA from the Central Bank.

Concluding remarks: practical difficulties

Prompt, transparent over-capitalisation[17] in a systemic crisis should remain the preferred option for dealing with failing banks that it is deemed necessary to save. Losses should be shared by both junior and senior creditors where necessary (unless the amounts involved are small) in cases where the banks are put into resolution. Experience shows, however, that this may be a counsel of perfection not always achievable.

Where did the Irish recapitalisation exercise lie along the three dimensions of transparency, depth and socialisation identified above? The answer is not altogether straightforward.

a. The process was arguably quite transparent. So much so that the immediate crystallisation of losses on transfer to NAMA was criticised by some observers who contrasted it with the approach adopted in Germany, where problem loans were transferred to defeasance vehicles at or close to book value, leaving any future losses to be clawed back from the transferring bank in future years. My own view is to the contrary, indeed, in retrospect a more granular disclosure of the basis for the PCAR2010 projections for non-NAMA losses could have been more effective in allowing the market to infer how uncertain future loan losses remained.

b. On depth of the recapitalisation, some (for example shareholders of ILP) vigorously contested the capital requirements imposed in March 2011 as entailing excessive dilution. Previously, though, the discovery in September 2010 that AIB's losses on the property developer loans transferred to NAMA were going to be €3 billion more than had been implied by the haircuts on the first tranche of NAMA transfers re-opened a capital deficiency in that bank and highlighted the "just enough" capitalisation approach that had been used in March 2010.

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[17] Along the lines delivered by the US TARP in late 2008.

c. The extensive socialisation of losses – initially through the September 2008 guarantee and subsequently when the Troika refused to countenance burden sharing with the unguaranteed senior bondholders – has been rightly[18] subject to extensive criticism. On the other hand, the achieved burden-sharing with subordinated debt-holders (eventually totalling over 10 per cent of GNP) was also subject to litigation by aggrieved creditors.

On a balanced overall view, it seems fair to say that transparency of the process was high in Ireland, but that it proved hard to generate reliable and precise information quickly. Clearly it would have been better if comprehensive accurate estimates of future loan-losses had been available from the outset. However, despite best efforts, accurate information emerged only slowly. Given the early decision to socialise the losses by guaranteeing all senior debt and some subordinated debt for two years, the scope for over-capitalisation was very limited in Ireland because the Government's finances quickly became over-stressed.

By removing the possibility of more extensive burden-sharing with private creditors, the initial guarantee narrowed the options available to Irish policymakers and pushed public debt levels to the limits of sustainability. Not only was over-capitalisation no longer a serious option and the chance of deeper burden-sharing with bank creditors shut-off, but in addition some resolution actions had to be deferred lest they trigger an immediate cash call on the guarantee. Likewise, the absence at the outset of comprehensive specific legislation to deal with bank resolution exposed the authorities to litigation risks that slowed action.

To be sure, it is very doubtful that, absent the guarantee, European official partners would have countenanced the imposition of losses on senior bank creditors at any stage during 2008–11, so it is probably wrong to over-emphasise the guarantee: some form of guarantee or de facto cover would probably have been insisted upon. Because that propelled Ireland to a very stressed level of public indebtedness, it seems implausible that any subsequent decisions on recapitalisation modalities could have materially improved the eventual outcome.

[18] It would have been better had Anglo and INBS been put into resolution as soon as it became clear that their capital was going to be wiped-out by unavoidable losses on developer loans. This should have been evident before September 2008, but was not, leading the Government of the day to include these two failed entities in its blanket guarantee.

Table 1

Increasing recapitalisation requirements for Irish banks, 2009–11

€ billion	BOI	AIB	Anglo	INBS	EBS	ILP	*Reason*
Phase 1: Early 2009	3.5	3.5	4.0				Initial global estimate.
Phase 2A: March 2010 (PCAR)	2.7	7.4	18.0	2.6	0.9		First NAMA tranche haircuts applied; top-down PCAR (non-NAMA) estimates for 3 banks (BOI, AIB, EBS).
Phase 2B: September 2010	0.0	3.0	7.3	2.8		0.1	Later NAMA haircuts applied; non-NAMA base case losses projected on wind-down basis for Anglo, INBS.
Phase 3: March 2011 (PCAR)	5.2	13.3			1.5	4.0	Higher capital ratio target; deleveraging costs; bottom-up PCAR (non-NAMA) loan-loss estimates using BlackRock methodology

Figure 1

Components of Phase 3 (PCAR2011) recapitalisation (€ billion)

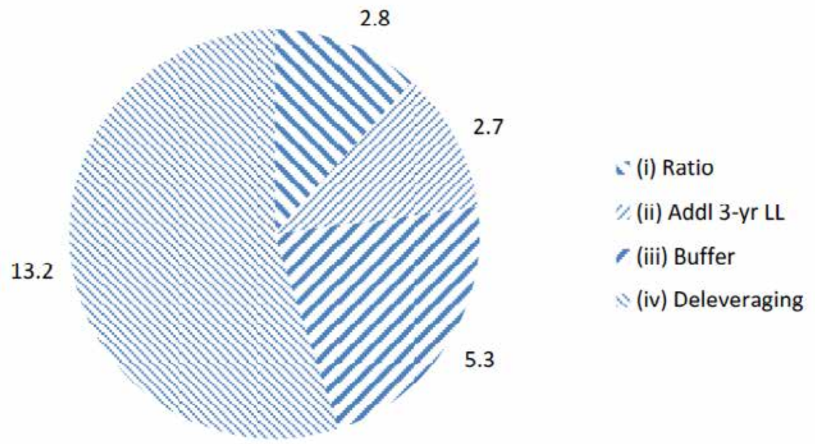

Figure 2

Cumulative recapitalisation requirements on Irish-owned banks by announcements date 2009–11 (€ billion)