Banking Crisis Resolution Policy – Lessons from Recent Experience

Which elements are needed for robust and efficient crisis resolution?

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Abstract

The current financial crisis has sparked intense debate about how weak banks should be resolved. Despite international efforts to coordinate and converge on such policies, national policy advice and resolution practices differ. The resolution methods adopted in the Nordic banking crises in the 1990s are generally acknowledged to include important elements of "best practice". But some of these lessons have proved hard to implement during the current crisis, and new policies have been developed as a response, particularly in the UK. Still, unresolved issues remain. These are discussed in a review of the resolution methods in the US, UK and NZ.

JEL Code: G01, G21, G28.

Keywords: crisis resolution, banks, special resolution regime.

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1. Introduction

This paper deals with four main issues for crisis resolution of immediate relevance that have emerged as a result of experience in the present crisis. They are:

1. how to intervene early enough to resolve problems before they become too serious
2. how to take temporary government control should other resolution methods fail
3. how to use a special banking bankruptcy law to ensure effective and prompt handling of problems
4. how to manage 'toxic' assets, that is, assets with uncertain value

It tackles these issues by reviewing first how they have been addressed in course of the crisis and then considers the implications for improving resolution policy.

1.1 The main lessons from the present crisis

The current crisis has provided a most unwelcome test of the ability of authorities round the world to handle distressed banks and in general most systems for handling these problems have been found wanting. This is particularly surprising as there has been a string of serious high profile financial crises round the world over the last 20 years, starting with the Japanese and Nordic crises and moving on to the Asian Crises in 1997 and the Russian crisis of 1998. Many of the lessons for intervention and resolution policies just do not seem to have been learnt even in the countries themselves. It is amazing for example that the Icelandic disaster could have been allowed to happen when the system was recognised as being seriously fragile and incapable of resolution within Iceland over five years beforehand.[1]

Despite extensive attempts to ensure early action systems that protect the taxpayer both from direct loss from having to support the banking system and indirect loss from the collapse in economic activity following a financial crisis both have occurred and on an unprecedented scale, particularly in the US, UK, Netherlands, Belgium, Latvia and of course Iceland. While many other countries have avoided this, the main reason has been the lack of an adequately adverse shock rather than the quality of their crisis avoidance and crisis resolution systems.

The key lessons from the crisis can be summarised as follows:

- Prolonged periods of financial stability can lead to major underestimation of risks
- Innovative products and opportunities will always offer unexpected problems
- The authorities tend to allow unsustainable pressures to build up because it is very difficult to call a halt to success – automatic stabilisers need to be developed to offset this
- Intervention in individual banks tends to occur late requiring very rapid action – traditional capital triggers for action cut in too late and more qualitative triggers are needed
- Modern banking and market structures can lead to drastic collapses in funding – while liquidity and leverage limits can offset this the authorities have to be able to move more rapidly
- The extent and speed of contagion across the world to seemingly unrelated countries means almost all markets are affected within a short period
- With modern internet banking, better public information and greater wealth traditional systems of depositor protection do not work – access to deposits needs to be almost unbroken and runs can be initiated much more readily
- Extensive prepositioning is necessary for rapid action to be possible
- A special resolution regime that allows the authorities to step in while an undercapitalised bank still has value lies at the heart of the ability to resolve problems cheaply and effectively

[1] The paper by Benediktsson et al. (2004), one of whose authors was then Chief Economist at the central bank and is now the incoming Governor, made it very plain that already during the privatization process three years earlier that Iceland had come close to a financial crisis because of the over-rapid growth of the main banks.

- There needs to be an organisation that has a clear responsibility for resolving problems and a clear objective for how that is to be achieved and for its success to be assessable after the event – this implies some form of loss minimisation
- Where cross-border banks are involved the problem can be a great deal worse as there is no one authority that has either the power or in some cases the resources to handle the problem with the same effectiveness as a national authority for a domestic bank – the system of cooperation among countries needs to be reformed to make this possible.

This paper therefore proceeds in three steps. It considers what the main issues are now before reviewing the regulation and experience of the US, UK and New Zealand. It ends by appraising what can be done at present both to insure early intervention while problems can still be addressed and corrected and to ensure speedy and cost effective resolution. Recommendations for action are set out.

2. Resolution issues today

2.1 Requirements for an efficient and effective crisis resolution regime

A The regime has to be able to cover the full range of problems

An intervention and resolution regime has to be able to handle problems along two dimensions – size and speed – as well as across borders. This implies a range of techniques and powers. Typically authorities are faced by the failure of small banks in a world where the system as a whole is healthy. Such a system needs to have a clear incentive structure for prudential behaviour on the part of banks and for private sector solutions before the authorities need to get involved. More major problems require state involvement, if only to give reassurance that the problem will be spread over a number of years and over more of society if the concentration of expected losses might lead to a loss of confidence in the system. Having these dichotomies imposes its own problems as most large crises start small and with the authorities hoping they are small. The knowledge of this likely transition makes it difficult to avoid the moral hazard where each bank thinks it likely that in the event of a problem it will be part of a system-wide difficulty and hence is less inclined to take special provision against the risks.

B It needs to be able to handle any individual bank in a manner that will not trigger a more general crisis

The decisions about individual institutions without overtones of systemic contagion should be entirely technical and predictable. When they have to be taken in a hurry the range of options will be much smaller and techniques such as bridge banks or temporary public ownership may be required while an orderly solution that will endure is worked through. Furthermore, the system needs to be constructed in such a way that the boundary of what constitutes a systemic problem is pushed as far out as possible. Ideally it should be able to handle any individual bank however large outside a general crisis. Even within a general crisis it should be clear what the intervention and exit strategy of the state is going to be. A major lesson re-emphasised by the present crisis is that where the authorities are unprepared there is no real alternative to open bank assistance even if the authorities are able to exert some control over management and those responsible for mismanagement can be relieved of their jobs.

C ‘Too Big To Fail’ should be an outdated concept, the system should have a means of allowing functions vital for financial stability to continue while permitting ‘failure’

One stumbling block is the concept of ‘too big to fail’. Because of difficulties in handling large institutions some governments have found themselves having to offer open bank assistance rather than make the shareholders bear the full extent of the loss. In a concentrated system it is difficult either to let a major bank fail or to find a likely partner for it that does not result in even more unwelcome concentration. Stern and Feldman (2004) argue that it should be a duty of the resolution agency, the FDIC, (or the Federal Reserve) to spell out how all banks can be resolved if they cannot recapitalise adequately. If this is not possible then the bank needs to be split up.[2] Such a scheme might work for large countries but it is problematic for small countries where the banks may be large or have large market shares because they are part of the wider international market, particularly in Europe. There is much dispute about the minimum efficient scale for the modern bank in the Nordic-Baltic region (Koskenkylä, 2002) but it appears to be larger than an oligopolistic share of the markets in the smaller countries. Even in Sweden the large banks are such that merger or purchase would be difficult.

With modern resolution techniques, 'too big to fail' means 'too big to stop trading' not literally that the bank cannot be removed from its current owners, turned into a bridge or even nationalised. The key requirement is that there should be continuity of the principal functions that are thought necessary for stability. This includes the banking operations and trading operations where the bank is key to the good functioning of the market.

D The market for corporate control has not worked well making private sector solutions more difficult than hoped

One clear feature of the present crisis has been that the market for corporate control has not worked well. Not only has it proved difficult to sell troubled banks but some of the deals done not long before the crisis broke have themselves contributed to the problems. The government has thus ended up as investor of last resort.[3] In a crisis, the rest of the banking system is unlikely to have the resources to purchase the troubled banks, even though their market values may be at a substantial discount. A straightforward case to consider is that of Barclays, one of the large banks in the UK, which managed to survive without government investment. Barclays raised capital from Middle Eastern sources – not actually a sovereign wealth fund. After less than a year the investor could sell out at a considerable profit.[4] The poorly operating market is the cause of the discount; the question is who should benefit from it.[5]

E Government intervention to correct this market failure needs to ensure that taxpayers can share in the benefits of the recovery and not just in the losses

There is a strong temptation to argue that the state should take the opportunity of the downturn to invest on the taxpayers' behalf, i.e. that it should make sure that when it has to invest in the interest of maintaining financial stability that it opens itself up symmetrically to all of the upside gains as well as downside losses of the risks it is taking. Like any sovereign wealth fund, it should respond to the opportunity to purchase underpriced assets when markets cease to operate efficiently.[6] It appears from Moe et al. (2004, Appendix B) that the Norwegian investments represented a gain for the Norwegian taxpayer by 2001 even after allowing for discounting.[7] Certainly it appears sensible

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[2] The Bank of England has been advancing a similar argument, suggesting that all such banks should prepare a 'living will' that sets out how they can be resolved in the case of failure.

[3] As clearly explained by Wall (2009) the crisis avoidance mechanism has three pillars: macro-prudential oversight, micro-prudential supervision and market discipline. What has been shown very clearly in the present crisis is that market discipline has not worked as expected, in part because existing shareholders/management were unwilling and potential purchasers unable to respond to the clear share price and related signals. A second explanation that has been offered is that there is a herding problem and hence people have been prepared to take a heavily leveraged bet on ever-increasing prices because there appears little downside to such bets.

[4] HSBC also did not require public sector assistance it was the best capitalized of the UK banks and managed to raise funding from traditional sources despite the difficulties in the market.

[5] Of course the example of those investors who have made heavy losses in supporting banks, which have turned out to have much greater losses than anticipated will not have helped encourage others.

[6] It certainly assists the political acceptability of government intervention if it can be shown that it sometimes provides a gain for taxpayers.

[7] There is of course a difficult decision to be made over when to sell. Insofar as it is simply an emergency injection, then the implication is that the holding should be sold as soon as the market is functioning well again. However, to make the full gains one might argue that sale should be delayed until bank shares have started performing normally again – not a concept that is readily defined. In any case selling all at one time might well distort markets.

for governments to choose a form of investment that allows them to participate in the upside of the process and not simply the downside. Deals such as Bear Stearns that involve both loans and an agreement to bear secondary losses move completely in the opposite direction. If more general, voluntary, investment is used in addition to the emergency intervention then the taxpayer has a much better chance of lower losses and possibly even gains from the process of restructuring. Clearly management of such commercial investment decisions and portfolios requires a separate and differently tasked fund from the sort of Government Investment Fund that is set up to manage the emergency investments.[8]

F In this crisis the market failure has extended beyond individual banks and into financial markets so the same arguments apply to government intervention there

However, while one might argue that banks are a special case as their problems have to be resolved, the argument can be applied generally. If the government, or rather its professional advisors, feels that stock prices are clearly undervalued and the market is not functioning well then there is a case for public sector intervention even if the funds used effectively have to be borrowed.[9] Thus in order to support government investment in underpriced bank shares alone in a crisis one has to be able to argue both that it is possible for a government-backed fund to recognise under-pricing and produce a reason why this should not be part of general government inspired wealth management on behalf of society. The Hong Kong authorities were successful in the 1987 market crash in investing the share market more generally, thereby preventing some of the problems of debt-deflation that otherwise occur when deleveraging requires the sale of assets at a time when their prices are temporarily depressed.

It is worth noting finally that having an ineffective regime itself contributes to creating a crisis. It is arguable that by failing to have workable early intervention and resolution regimes countries have not simply turned problems into crises (as with Northern Rock for example) but have made the chance of crises emerging much higher. Not only have some banks been allowed to take on positions that were clearly irresolvable, such as Glitnir, Kaupthing and Landsbanki, but others have been able to become seriously over-leveraged, Fortis and RBS, for example. In a properly functioning system, the intervention and resolution rules should on the one hand dissuade banks from over risky actions and on the other encourage a change in ownership if banks underperform, thereby reducing the chance of the drift into problems or high risk strategies to turn the bank round. Thus what will be done in resolution of itself encourages prudence if the outcome is likely to be no public financing, the wiping out of shareholders and junior debtholders and the firing of management.[10]

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8 Norway already has such a sovereign wealth fund to manage the excess proceeds from oil revenues but this can be applied in any country that wishes to manage the time mismatch between revenues and claims. The New Zealand equivalent is the Superannuation Fund that is steadily building up assets for the period when the dependency ration will be much more unfavourable in the future. There is an obvious management problem when the funds holdings in the market are sufficiently large as to affect market prices.

9 Just such a debate is taking place in New Zealand in regard to the Superannuation Fund. The extent of the fiscal deficits from the present crisis are sufficiently large that the government has halted the process of borrowing for new investment. However, the opposition (which started the fund when in power) is arguing that now is an excellent opportunity to invest so as to recoup some of the losses the fund made when stock markets dived across the world.

10 The line of argument is the same as is applied in the Excessive Deficit Procedure in the EU’s Stability and Growth Pact. If a member state is insufficiently prudent in good times in structuring its fiscal policy against downside risks it will have to make the adjustments when the economy is performing badly and the experience will be much more unpleasant economically and politically. The procedure thus has both deterrent and corrective qualities. The drawback is that also like the SGP it faces a time inconsistency problem, when the difficult times actually occur then the parties suspend or alter the Pact. If that is known in advance then its deterrent effects only idiosyncratic problems and not when the problem is system wide.

2.2 Issues for the four problem areas

Within the four headings of – early intervention, temporary government ownership, special resolution regimes and the treatment of toxic assets this section addresses three main conundrums that authorities face

- Withdrawing the bank's licence is a 'nuclear option' - the bank is closed.[11] With a large bank it is usually essential and with a smaller bank often more efficient that the main banking operations continue uninterrupted but this needs to be achieved without open bank assistance. Thus a legal arrangement has to be found that on the one hand takes the bank away from its existing shareholders' control but on the other does not interrupt its vital operations.[12]
- The key to getting the system going again is the removal of uncertainty about where the losses are. Yet it is impossible to value assets rapidly and accurately. How can the government solve this without acquiring all the losses and leaving the private sector to reap the benefit if assets turn to be worth more than originally thought?
- To be able to react fast enough particularly for large banks extensive pre-positioning is required. Thus considerable effort and costs have to be expended to prepare for something that may not happen. The need is particularly great in the case of being able to allow depositors almost uninterrupted access to their accounts in the event of a failure. If that is not expected then trouble will lead to a run.

2.2.1 Avoiding the nuclear option

When a bank fails the authorities have an obligation to minimise the losses to the creditors and to the taxpayer. However, in many countries that obligation is rather vaguely expressed or forms part of a series of obligations involving the maintenance of stability so the exact requirement is not clear. (We explore this in more detail in the next section by looking at the cases of the UK, US and New Zealand.) If a bank is small it is likely that all such obligations will be met simply by closing it promptly before it runs out of capital completely. This intervention requires a fine balance. All options for a private sector solution agreeable to the shareholders and the authorities need to have been exhausted before the authorities can reasonably step in. However, banks, like other companies, are usually worth more if they can be sold as a going concern rather than simply being liquidated. In the case of banks there are some particular concerns.

One is related to the paying out of insured depositors. The bank's computer systems need to be kept running to identify the 'claimants'[13] readily and if the bank's position in the payments system can be maintained then account holders can wind down and transfer their balances in an orderly manner or the authorities can organise it for them probably by transferring the balances to an alternative service provider. In the easiest case this new provider simply takes over the relevant computer systems and knowledgeable staff along with sufficient physical outlets to make the transfers. (Clearly this is easiest for an internet bank – the website merely has to continue operating.) In the US one easy alternative exists which does not in many European countries, namely, the deposit insurer can mail each depositor a cheque to cover their insured deposit, with which they can open a new account in another bank. In countries where cheques no longer exist it is

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[11] While like any nonfinancial company a bank is normally worth more as a going concern, the consequences of closure even for a short period of time are much more catastrophic than for most non-financial companies except those providing 'essential services'. All its network of transactions and contracts will start to unwind and the basis for doing business will disappear. This is not easily recreated.

[12] In Norway, for example, if a failing bank is placed in administration it is automatically closed out of the payment system so the administrator does not have effective access to bridge bank or other techniques that allow the bank to continue uninterrupted.

[13] With good prepositioning it may not be necessary for the depositors themselves to register a claim. The authorities should be able to identify the depositors and the extent of their insured deposits from the bank's systems. It is only where some of the deposits are not insured or in the event of an error that the depositor needs to register a claim or indeed to repay any excess refund.

more difficult to arrange an instant payout without the depositor providing notification of the new account details. Where there is a state-owned ‘post bank’ or similar entity a temporary account could be opened for each depositor. Indeed all depositors could be given shadow accounts that are only activated in the case of bank failure. Most other solutions are likely to contravene competition law requirements unless service providers can bid to offer this facility for the deposit insurer.

However, these practical concerns for small banks are trivial compared to the case of large banks where the process of transfer from the original shareholders to a new ‘owner’, be it the state or another bank, has to be achieved without triggering any closeout clauses. It is thus not just a matter of a seamless physical transfer but a non-disruptive legal transfer as well. If straightforward nationalisation is to be avoided, even if the consideration paid to the existing shareholders is zero, this is difficult to organise. Before the bank gets to the point of closure it remains under the control of the shareholders, even if the management’s actions are being heavily constrained by the supervisors. The problem is how the supervisors can actually get control of the bank without simply withdrawing the licence or placing it in administration where either of these represents the nuclear option.

It appears that in the US, UK and New Zealand legal routes exist to avoid this outcome. In New Zealand the authorities require the bank to be structured in such a way that there is no material break in the bank’s payments, and the bank is open for business the following morning under the control of the authorities (a statutory manager) after having written down the claims on the bank far enough that it is again adequately capitalised and guaranteed against further loss while in statutory management. However this arrangement has never been used so both its practicality and legal certainty remain to be verified. All the systemically important banks are Australian owned and the Australian authorities appear sceptical about the success of this arrangement. They view their own scheme of statutory management as being a ‘closed bank’ resolution method. The New Zealand scheme certainly involves very extensive prepositioning.

In the United States, if the failed bank is closed and transferred immediately to either another provider or to a bridge bank under FDIC control then the law explicitly provides that this shall constitute continuity and closeouts will not be generated. There is not likely to be a rating downgrade that could act as a trigger, although one could be applied to the acquirer, something they would no doubt bear in mind when deciding whether to bid for the deal. It appears from the Banking Act 2009 in the UK that a similar ability to transfer without closeout exists.

If we compare this with the position in Norway under the Guarantee Schemes Act of 1996, the position is mixed. On the one hand there is a clear route to take over by the authorities (nationalization) if an audit reveals that the existing equity has been lost, as was used in the previous crisis. The supervisory authority (Kredittilsynet) can under chapter 3 of the Act intervene if it believes that the bank may fail to meet its commitments or capital requirements or if it believes there will be losses or a loss of confidence large enough to ‘weaken or threaten the institution’s financial position’. In these circumstances it can convene a shareholders’ meeting rapidly, alter the composition of the board and demand an audit in addition to taking a range of unspecified measures to make sure that management do not worsen the position of the bank or the prospects of the creditors.

There are then three possible outcomes depending on the audit:

- If the audit reveals only limited problems then there is no requirement for further action
- If it reveals ‘substantial’ loss of equity or a fall in share or total primary capital of more than 25% since the last annual accounts then the shareholders meeting must decide whether they can continue – subject to supervisory approval – or whether they should transfer the whole business to other financial institutions. The alternative is closure.
- If only 25% or less of the share capital is intact the share capital must be written down accordingly. The Crown can also require a new subscription for shares if it thinks the bank should continue to operate and can specify who is eligible to subscribe to these shares. Hence it is possible for the Crown to take over the bank at this point. Furthermore if the

share capital has been totally eroded the Crown can also write down the subordinated debt.[14] The problem in the Norwegian case would be if this process were too slow. In which case Chapter 4 of the Act would apply and the bank would need to be taken into public administration. Although the administrator can conclude that the bank should resume operations, after appropriate reorganisation, initial closure will have occurred. Even rapid audits are not instantaneous. If a bank is in serious trouble it may fail before the audit comes through and the shareholders meet.[15] The difference between triggering Chapter 4 rather than chapter 3 is the degree of certainty. If Kredittilysnet 'has reason to believe' that an institution is unable to meet it liabilities as they fall due or meet its capital adequacy requirements or that the some of its assets and incomes do not cover its liabilities then Chapter 4 is triggered and the bank has to be placed in administration if a way of recapitalising it cannot be found.

2.2.2 Valuing assets

The audit of the bank should include a valuation of assets following normal standards. If this is undertaken when markets in general are functioning normally then the valuation could be reasonably accurate and avoid fire sale characteristics. However this is no longer true in a system wide crisis. In part this can be addressed by a change in accounting practices to give longer term valuations but where assets are impaired it may be very difficult to assess either the chance of default or the likely loss given default.

2.2.3 Prepositioning

If the resolution authority is to be able to move fast enough to organize an outcome short of public administration or other closed bank solutions it has to be prepared in several respects. The need to have extensive knowledge of the banks computer systems and for the banks to have to hand a full statement of the individual insured deposits was noted in section 2.1, as was the need to have suitable vehicles for making payments or holding the accounts of the depositors. However being prepared in the resolution process also forms part of this picture. Clearly early indication of problems is essential but the process of undertaking an audit also needs to be rapid. To some extent this can be achieved through detailed knowledge of the major institutions.

3. Banking resolution in the US, UK and NZ

3.1 US

At the time of the present crisis the US had got one of the most developed systems of Structured Early Intervention and Resolution (SEIR) systems in the world, with an organisational structure that sought to align incentives with the objectives of having prudently run banks and resolving any problems that did occur at minimum cost and with those responsible for taking the risks bearing the cost in order of priority. This special regime should have been ideally suited to handling the crisis. However, the system proved seriously inadequate in the face of such a widespread problem. It failed in 4 respects:

- The US had a very narrow definition of what constituted a bank and action was required to intervene in the government supported mortgage institutions (Fannie Mae and Freddie Mac), insurance companies (AIG), thrifts (Indy Mac, WaMu) and most especially investment banks (Bear Stearns, Lehman Brothers)
- The scale of some problems meant it had to invoke the systemic risk exemption (Wachovia, Citigroup)

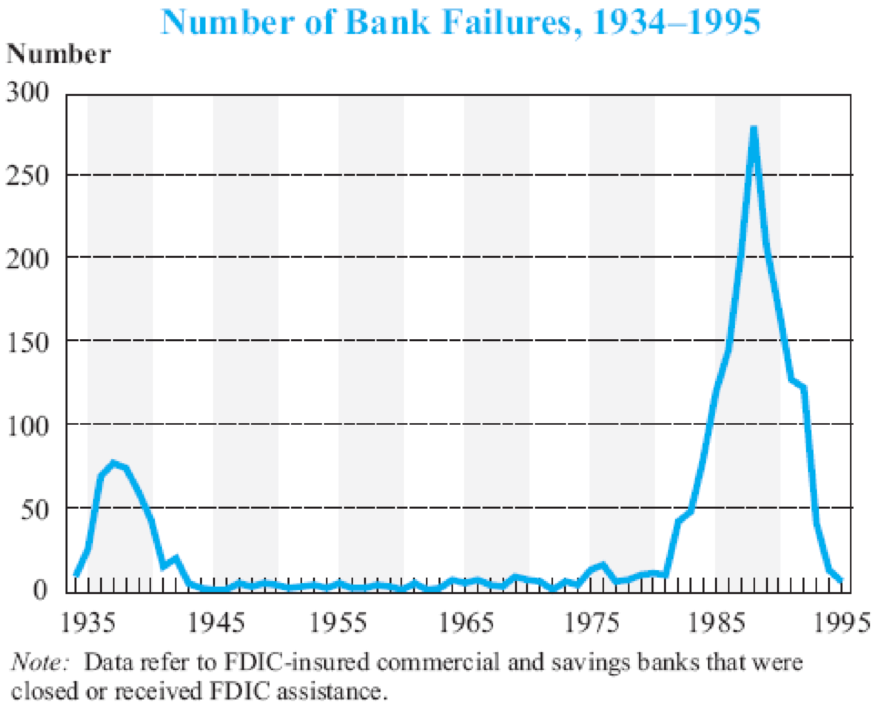
[14] There was a transition period to protect existing subordinated debt contracts but now all such contracts have to comply with this provision (and will be priced accordingly).
[15] If the audit reveals only moderate problems so the capital cannot be written down a second audit and shareholders' meeting could be required later if problems were thought to have worsened.

- It could not cope with the closure of markets – for so-called toxic assets and for wholesale funding, requiring support for many of the major institutions (Bank of America)
- It permitted highly imprudent lending on mortgages and a growth in derivatives markets and asset prices that was clearly unsustainable

The last of these is the most serious as it was the proximate cause of the world-wide crisis but it largely lies outside the scope of the present study as it reflects problems in macro-prudential supervision and in specific aspects of regulation and not simply problems with the framework of SEIR.

The failings of the US system in the present crisis are considered in some detail below under the four facets of the crisis resolution system featured here (early intervention, temporary government control, special bankruptcy law, treatment of toxic assets) as they have clear implications for the sort of system that might work well in Norway. However, it is worth emphasising first that the US SEIR system has worked well in the years since it was reformed following the Savings and Loan crisis of the late 1980s. The position prior to these changes is remarkable by European standards. Between 1980 and 1994, 1600 banks failed in the US, representing approximately 9% of assets and deposits (see Figure 1).[16] Their distribution was far from even across the country, with the main losses being concentrated in Texas, New York and Illinois.[17] The number of bank closures in the present crisis have been small by comparison (just 123 between January 2008 and the date of writing in October 2009)[18] but the whole scale of the support operation in terms of GDP has been immensely larger. However, Continental Illinois, which failed in 1981, was one of the 10 largest banks in the US.

Figure 1 Bank Failures in the United States



The causes of this remarkable crisis between 1980 and 1994 are decidedly particular to the US but the scale of the failures and the overall cost to the taxpayer after recoveries of around $120bn helps explain some of the anomalies of the US experience and regulatory structures. The major regulatory

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[16] 9755 banks were closed in the US between 1929 and 1933.

[17] The FDIC has undertaken two comprehensive studies of this period, the first (FDIC, 1997) explores the causes, while the second (FDIC, 1998) gives a full exposition of the processes used to manage it.

[18] Even so 106 is very large in number compared to the whole of the EU, although not so large in terms of total assets.

response after the institutional changes embodied in the FIRREA (Financial Institutions Reform, Recovery, and Enforcement Act of 1989) was FDICIA (the Federal Deposit Insurance Corporation Improvement Act 1991). FIRREA largely put in place the mechanisms necessary to clear up the S&L crisis and included the formation of the RTC (Resolution Trust Company) to dispose of the assets of the failed thrifts. It is noticeable that FIRREA focused on establishing or extending institutions to handle both the continuing supervision, OTS (Office of Thrift Supervision), FHFB (Federal Housing Finance Board) and deposit insurance – FSLIC (Federal Savings and Loan Insurance Corporation) which failed was replaced by the SAIF (Savings Association Insurance Fund) run by the FDIC. It is FDICIA however that has handled future banking problems by mandating early intervention, a staged programme of increasingly firm attempts to recapitalise and restructure troubled banks as their capital position worsened (with constraints to make sure that managements did not make problems worse or divert resources away from the creditors) ending finally in compulsory receivership within 90 days (renewable twice under certain conditions) all with a clear mandate that the process was to be managed with a view to minimising the loss to the FDIC.[19]

It is not necessary to list all the provisions of FDICIA for SEIR/PCA because they are well known. The key points worthy of note at this stage are that the triggers for action all relate to capital adequacy and that closure is generated by having too low a leverage ratio – i.e. that it occurs before insolvency – an insolvent bank would be closed anyway. FDIC (1997) asserts that of the 1600 failures in the 1980-94 period some 343 (21%) would have had to be closed earlier under FDICIA.[20] Furthermore, 143 that survived would have had to be closed *unnecessarily* (their word), i.e. they fell below the minimum leverage ratio but did not fail. There are thus pluses and minuses to having such rigid rules and the FDIC does not estimate whether, if FDICIA had been in place, the losses either to itself or others would have been smaller – they argue that this is an impossible judgement to make. The FDIC has not only found that relying on capital triggers is not adequate but even before FDICIA it did not do so.

The important consideration is the CAMELS assessment as this takes into account all aspects of the bank's structure, risk-taking and inherent riskiness. Peek and Rosengren (1997) make clear that more is needed for early warning. But even CAMELS ratings are insufficient; a quarter of the banks that failed in 1980-94 had CAMELS ratings in the top two categories a year before failure (FDIC, 1997). The degree to which warning is going to be 'early' is clearly limited but this negative assessment does not answer the question of 'what proportion of banks can be successfully resolved without failing if the trigger points were to be earlier according to some identifiable criteria. CAMELS style ratings are those used in most assessments in the literature[21] and they are generally found to work reasonably well at least a year ahead of failure, although some banks will be missed and others identified that do in fact not fail. The key issue here is that the institution responsible for tackling problems has to have access to a wide range of supervisory information in order to act early and not simply to some key ratios such as Tier 1 and Tier 2 capital that can be revealed more readily. Secondly, such warnings need to generate an on-site inspection such that a much more informed and detailed assessment can be made.

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[19] Subsequent legislation, the Omnibus Budget Reconciliation Act of 1993, imposed national depositor preference giving depositors and the FDIC when it succeeded to the claims of insured depositors a payout preference over other creditors. This made the task of minimizing losses to the FDIC rather easier and enhanced the need for other claimants to monitor banks carefully in order to protect themselves. However, it distorts the relative treatment of creditors in an insolvency and does not bear any regard as to whether this is the best way to minimize the losses to society at large or promote financial stability. It virtually ensures that the other creditors will sue the FDIC for advancing its own interests over theirs.

[20] Many of these banks that would have been closed earlier were national banks subject to the OCC (Office of the Comptroller of the Currency) that had to rely on traditional insolvency for closure and not the special regime.

[21] See Mänäsoo and Mayes (2008) for a survey.

3.1.1 Early intervention

The failure to intervene early enough has been clearly revealed as a problem, even with the US SEIR system, especially in the case of Fannie Mae and Freddie Mac, although these were not supervised by the FDIC. This issue of early warning and the failure to take notice is a critical feature of the present crisis in the US. Garcia (2009) argues that all of the normal warning red flags were clearly visible for the US institutions that have failed in the present crisis yet on the whole they were ignored. However, the FDIC procedures worked well in the cases to which they could be applied even though some of the banks involved were large by international standards. In so far as these failings relate to concern that the methods of resolution would not work they are of relevance to us here. She goes on to argue that most of the rules for good crisis management have been broken in the US. She derives her lessons from the IMF recommendations and the experience of previous crises in the US, Japan and Sweden. All 17 of her points are worthy of note.

Early diagnosis of the nature and extent of the crisis

Here the issue is straightforward. The choice of resolution regime will in part depend upon the estimate of the extent of the crisis and where the losses are in the system. Clearly at the outset it is impossible to make any detailed judgement as the full extent will depend inter alia on the level of the confidence in the system that people hold while the crisis develops. In the Nordic crises the assessment was made fairly early on once it was clear that there was a full blown crisis.[22] In the Japanese crisis it was heavily delayed and as a result many outside commentators believe that the cost became much higher than it need have done. However, the Japanese justification is that recognising the full extent of the losses early on would have been disastrous as people would not have believed that the authorities could cope with a problem on such a scale. It was therefore necessary to try to work the problem out slowly and avoid realising a lot of assets at the initially depreciated prices. To some extent this also affects the decision over whether to use a 'bad bank' or TARP-style programme of removing impaired assets from the banks. The greater the doubt over the size of the impairment the more difficult it will be to retain the assets inside the existing bank and help it through the crisis by temporary capital injection. These issues are discussed in section 3.1.4.

Take prompt action

This requirement follows very much from the first. It is necessary first to assess the size and probable consequences of the crisis and then decide on and execute the programme of actions to handle it. Garcia's criticisms here may seem a little harsh as the US has attempted a whole series of actions as the severity of the crisis has developed. The Federal Reserve for example in following quantitative easing, credit easing, lending and a whole range of programmes has attempted to live up to the idea of doing as much as it can and being prepared to innovate in a way to restore confidence and get the economy restarted. The US government has been prompt but has not been able to be complete. Other than the failure over the housing finance agencies that were outside the system, action has been swift once the problems have been clear, despite the number of agencies involved. One problem worth noting is that when approval by Congress for expenditure was required. At this point confidence needed to be injected. Congress raised a number of reasonable objections to the President's proposals, thereby delaying implementation and helping markets slide further.

It is not that such legislative validation should not take place; indeed it is easy to argue that the intervention improved the quality of the policy actions. In any democratic system it is unlikely that the government has sufficient power, especially when major expenditures are involved to take

[22] However, while the assessment was made quite rapidly after the full onset of the crisis in 1991, the early stages of the problem were encountered in 1988. Part of the difficulty in this as in any other crisis is that initially it is not at all clear how big the problem may be. It is only when the causes and nature are understood that it is clear what the potential losses are that need to be identified. These could be sectoral losses, unhedged foreign exchange losses, collateral losses etc.

action without recourse to the legislature. Where governments has a built in majority the passing of legislation will be a foregone conclusion as described in the case of the UK below but elsewhere this is not true. Clearly, early measures with the government's mandate need to be taken promptly, firmly and with an authority that is not likely to be unwound. Where major costs are to be spread over future generations, the debate is likely to be real and the risk of ideas being modified or overturned a possibility that has to be accepted.

Using an autonomous agency

In the FDICIA framework the institutional arrangements were clear and incentive compatible (for banks at any rate). The FDIC was in charge of the programme of prompt corrective action or rather SEIR. It had a clear objective to run the system at minimum cost to itself and, with the Material Loss Review of the handling of each case where the loss is more than $25million or 2% of the bank's assets going to congress, it has a strong incentive to carry this out. The reviews within the FDIC are undertaken by an independent Office of the Inspector General (OIG). Some of them are critical of the FDIC's supervisory actions.

What is of particular interest in these reviews is that the bank failures during the crisis were all of banks that were deficient in the operations in some way or other. It was not that the crisis was of sufficient magnitude that well run banks encountered difficulties with which they could not cope but that banks that were already failing in some respect of the FDIC's supervisory standards could not manage to recover or recapitalize adequately. However, the case of Alpha Bank in Georgia, which failed in October 2008, was the fastest failure between 1993 and 2008. The bank only managed just less than two and a half years. It had a CAMELS rating of 2 until April 2008 when it slipped to 4 and then 5 in June. The report concludes:

> In the case of Alpha, however, supervisory actions were not timely and effective in addressing the bank's most significant problems. … Alpha's significant growth was noted as a potential problem during the 2007 examination. However, the risks associated with weak loan underwriting and administration and compensation policies should have warranted greater concern. The extent of loan deterioration did not become evident to examiners until 2008. Greater concern regarding Alpha's compliance with regulatory orders, loan underwriting administration, and ADC concentrations could have led to earlier supervisory action, particularly given the bank's de novo status.

Alpha was set up with a strong focus on real estate lending just before the house price boom peaked and could not cope with the fall in house values and the increasing number of defaults as the economy weakened.

However, this strong structure of both an independent institution with aligned incentives and a clear route for accountability did not apply to the macro-prudential handling of the crisis. The US suffered from having a number of agencies involved: the Federal Reserve with its supervisory powers, the Treasury, the FDIC and the SEC in the case of the investment banks. The problems with the OTS and the predecessor of the FHFA, the OFHEO (Office of Federal Housing Enterprise Oversight) have already been noted).

The weak supervision of both Fannie Mae and Freddie Mac were an important factor leading to their failure and their being taken into conservatorship in September 2008. Both organizations were very powerful and influential compared to their small supervisor. Both made extensive campaign contributions to influential Senators, including both Presidential candidates in the 2008 election. Freddie Mac received the largest ever fine by the Federal Electoral Commission for illegal contributions. Their importance to the financial system meant they were TBTF and needed to be kept open but under government agency control. A conservator assumes the rights of shareholders and managers under a court order until the institution can be turned round and continue under normal control while meeting supervisory requirements. If conservation fails then the likely outcome is that an institution would go into receivership where the rights of shareholders and managers are extinguished. In other jurisdictions it is up to the administrator of the failed company to see whether the shareholders have any value left in the company and where appropriate to ensure that they are paid that value by the government if the authorities wish to take over the bank.

The system thus had a number of failings:

- weak supervision meaning that problems were not detected as early as they might be
- insufficient follow-up so that SEIR/PCA did not progress at an adequate rate or with sufficient resolve[23]
- multiple agencies
- the dwarfing of the problem of small institutions by the need to keep large institutions open (where there was a counter example – Lehman Brothers – this tuned out to be very costly in terms of indirect contagion round the world and not just in the US)

3.1.2 Temporary Government Control

Provide government support in incentive-compatible ways (equity not debt) This strikes at the heart of one of the dilemmas in bank resolution. Initially central banks wish to provide only short-run lending to solvent institutions to handle liquidity problems. If the problem is to be more enduring then the lender should be the government as an enduring problem is more likely to be one of solvency rather than illiquidity.[24] Here too the government normally does not want to get into any long-term relationship and hence the concept of a loan sounds appropriate rather than an equity investment, especially if the terms of the loan are such that the bank will want to repay it at the earliest opportunity. This has certainly been the case in the US, where 10 of the largest banks rapidly repaid the funding they had received under TARP (17 June, 2009) as other sources of finance available by then offered less onerous terms.

The US has tried to avoid the wholesale ownership route that has been followed in the UK. Although one technique widely applied elsewhere is to purchase preferred stock which can be turned into equity if the loan cannot be short lived. One of the problems is that in order to achieve the necessary recapitalization in an enduring manner, what is required is new equity, as it cannot then be withdrawn but only sold to the private sector at a suitable date in the future, through a body like UKFI in the UK. (As discussed below there is a debate about whether UKFI is acting simply as an arm's length investor or whether in practice the government is seeking to have very considerable influence of the actions of the banks.)

The three holding companies Maiden Lane, Maiden Lane II and Maiden Lane III that were set up by the New York Fed as part of the rescues of Bear Stearns and AIG are dealt with later but the issue here is that different agencies were not necessarily following policies consistent with each other. In a sense this is normal as each agency will tend to do what it can but it does mean that the pressure on the resolution agencies can then be confusing. If they are simply to follow the least cost route unless they feel the systemic exception should be triggered (as it was for Wachovia) then this is straightforward but if they are unsure whether the government will want to step in or the way it will step in whether by loans, guarantees, recapitalization or purchase of impaired assets then this will make the process much more difficult.

Prompt corrective action will work because the parties know there will be no alternative and hence there is intense pressure to come to a conclusion that will not result in outright failure but recapitalization and at least something for the shareholders and senior management. With the possibility of government intervention the threat becomes less acute for the larger institutions. The effectiveness of the threat is illustrated by the rapidity of the response of the remaining four main investment banks after the failure of Lehman Brothers. They immediately either opted to become bank holding companies so they could be treated like banks or sought to merge with banks so that

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[23] In the case of Fannie Mae and Freddie Mac the supervisory agency was not only rather weak but it was not governed by the SEIR/PCA framework that applied to banks.

[24] In the present crisis the enduring liquidity problem has been related to the market in general and hence has been addressed by an expansion in monetary operations and other facilities provided to the market as a whole.

they could get inside the special resolution regime and the support available for the TBTF banks.

Operational restructuring as well as financial restructuring

In the event of a normal bank resolution in the US by the FDIC, the restructuring of the business, even if it is to continue say through the formation of a bridge bank, or its equivalent in the case of Indy Mac, usually has to be drastic restructuring to make sure that a viable prospect is offered to potential buyers. In most cases there is substantial dismemberment of the institution, with deposits being transferred along with some viable parts of the business and the remainder be assigned to the insolvency estate and liquidated under the best terms that can be achieved for the creditors. If the bank is kept in being then this pattern changes and the existing management often remains in place, who quite naturally try to change as little as possible and simply gain new finance for the existing structure. However such changes can be quite substantial – witness for example the changes in Barclays in the UK, which managed to avoid taking government funding but nevertheless restructured its business, taking on some of Lehman Brothers' main operations and selling its strongly performing iShares business. (In addition to the financial restructuring where it went for sovereign and related funding from the Gulf States.)

3.1.3 Special Bankruptcy Law

Firm exit policies for banks and non-banks

Up until the crisis the US did indeed have such firm policies. Banks would be resolved under a timetable under the terms of FDICIA while non-bank financial institutions would be dealt with under ordinary corporate insolvency law. Both have had to be revised. Larger banks have not been allowed to fail and key non-bank financial institutions have been subject to a similar form of public sector bailout. The latter is more understandable as the US has had a narrow definition of what counts as a bank, which is a product of history rather than a careful assessment in recent times. A widening of the definition and indeed an increasing wish by other financial institutions themselves to get within the banking framework will do much to correct this.

It is the bailout of the larger institutions which is more difficult both to explain away and to establish it a more satisfactory framework in the future. The systemic risk exemption had not been used since the introduction of FDICIA, nor had government sought to get round the strict closure rules of FDICIA but then the scale of bank closures had never before been sufficient to provide any serious political threat to the rules. It is clear now therefore that at some point even governments with strong closure rules can decide not to apply them. In part the problem was that the FDIC had not as yet got to the point where it could intervene readily in a LCFI. It had already put in place the necessary rule-making FDIC (2008) but this was not implemented at the time. The amount of information required to be able to handle a large institution is much greater than that for a small one and hence the amount of prepositioning needs to be much greater both on the part of the authorities and of the banks themselves.

There is no opportunity for due diligence – this is admitted in the Wells Fargo takeover of Wachovia. Wells Fargo had to act quickly if it was going to trump the bid agreed by Citigroup and supported by the FDIC. The cost of errors, as normally there are hidden problems in troubled banks as well as the problems that have been publicly acknowledged, can be crippling in the case of a large institution. That makes it more difficult to find market solutions as few buyers would be prepared to take such a risk.[25] Wachovia was the fourth largest bank at the time of its failure and hence is about as big a test of the system as it is likely to get. Citigroup itself received open bank assistance on November 23rd 2008.

In some respects the US did not follow the well known advice - do not merge weak banks. Garcia cites the cases of Bank of America acquiring Countrywide and Merrill Lynch and the Wells

[25] As described below, in 2009, the Lloyds Group encountered substantial unexpected extra losses in HBOS which it had acquired the previous year.

Fargo acquisition of Wachovia. The problem here is that at some point it is difficult to find any credible purchaser that is not itself under some strain. Even if the purchaser itself is quite strong it will become much weaker in the short run as a result of the acquisition. There is trade off here between substantial losses being realized in the short run, including by the government on behalf of the taxpayer and the contingent risk that an even worse problem will occur if the combined institution itself needs support.

It is worth considering the largest cases in a little detail as they illustrate different features of the problem. To quite some extent the US has followed the advice that small and large banks should be treated in the same way. Certainly in the case of Washington Mutual (WaMu) they handled a bank which would be very large in most countries symmetrically with small banks and asymmetric treatment of the FHLBs. AIG, Bear Stearns and Merrill Lynch reflect the fact that none of these were within the special resolution regime.

Washington Mutual (WAMU)

In 2008 there were 25 bank resolutions in the US, the largest of which was WaMu with $299bn in assets and $152bn in deposits. The remaining 24 comprised $63bn in assets and $43bn in deposits. The projected loss for the FDIC from these was $18bn or nearly 30% of those banks' assets. WAMU, the largest Savings and Loan and 6th largest financial institution in the US, was closed on 25 September and sold to JP Morgan Chase for $1.9bn by the FDIC, which was appointed as the receiver/conservator.[26] This was a standard purchase and assumption transaction and the bank opened again for business on 26 September. The shareholders and sub-debt holders were wiped out along with most senior bonds, some $17bn in total. The FDIC had invited bids for various proportions of the liabilities along with the assets. As a result there was no loss for the FDIC or uninsured creditors. WAMU's problem came directly from poor quality lending to the housing sector. It not only had a large share of poorly or undocumented loans but had grown very rapidly during the previous two years, following a long period of growth assisted heavily by acquisition since its demutualization. It specialized in loans to lower and middle income families, knowing that this was a higher risk sector. The closure followed a 10 day bank run when 9% of deposits totaling over $16bn were withdrawn from the bank.

Two further features of the WAMU resolution stand out. First the speed as it was resolved during the week rather than over the proverbial weekend – the plan had been to close on the following day, the Friday, but the speed of the run was too great. Second the fact that it was purchased by JP Morgan who had already tried to acquire the bank in March of the same year and had therefore undertaken a detailed investigation of WAMU's position earlier, which helps explain both the speed and the ability to find a buyer. The position of the bank had been weakening ever since the sub-prime crisis began and the owners had undertaken restructuring in the form of major closures of parts of the business, had raised $7bn of new capital and in the later stages had tried to find a buyer. However, WAMU's holding company, which applied for bankruptcy protection under Chapter 11 following the seizure of the bank by the OTS on 25 September, has since sued the FDIC for $13bn claiming unwarranted seizure and sale for an unreasonably low price. It also complained that the FDIC's actions before seizure in trying to line up a buyer had helped frustrate its own efforts to find such a buyer. There is thus a conundrum here in that the conservator/receiver needs to be ready before taking control of the bank if the resolution is to be immediate but this process in itself may make a private sector solution more difficult.

IndyMac

Indy Mac (a federal savings bank) also specialized in non-standard housing loans, with $30bn in assets and $19bn in deposits. In July, Indy Mac had the FDIC appointed as receiver who immediately created IndyMac Federal Bank, which was placed in conservatorship. This is the

[26] Despite its name WAMU's mutual status ended in 1983

nearest equivalent of a bridge bank for an S&L for whom the bridge bank technique is not available. IndyMac failed quickly when the securitization market collapsed so there had not been time to organize a sale before closure. Almost all IndyMac's funding in addition to the insured deposits ($18.4bn of the $19bn deposits) was in the form of secured advances from the Federal Home Loan Banks. There was thus virtually no cushion before the FDIC's exposure. It took 6 months to sell IndyMac FB, for $14bn leaving the FDIC with a loss of nearly $12bn. What is interesting is that IndyMac was sold not to another bank but to a private equity group (IMB) that was formed for the purpose. It had required a change in regulation to permit such a group to run a bank (they would not otherwise have qualified as fit and proper persons).

Wachovia Corporation

Ultimately Wachovia with $782bn of assets and $475bn of deposits did not need to be resolved as Wells Fargo purchased it from the existing owners. Thus there were no losses to creditors, and shareholders received a small pay out. However, just prior to this a resolution had been agreed but not completed. This involved acquisition by Citigroup, which would bear the first $42bn of losses after which this would fall on the FDIC, which was to take $12bn in preferred stock and warrants as cover for the risk. As noted above this transaction required the triggering of the systemic risk exemption, although this was ultimately not needed. Given the subsequent problems experienced by Citigroup this could have simply replaced a large problem by a very large one.

Citigroup

Citigroup with $2.1trillion assets and $803bn deposits (Citibank and its foreign subsidiaries also held $554bn in foreign deposits) received open bank assistance from the TARP programme in addition to $20bn preferred stock at 8% from the US Treasury. This assistance also required a systemic risk exemption. The main programme involved guaranteeing a $301bn set of real estate loans, where Citigroup took the first $40bn loss and then shared the remaining losses 90/10 with the government, TARP bearing the first $5bn, the FDIC the next $10bn and the Federal Reserve funding the remainder. The guarantees were funded with preferred stock at the same 8% rate. This is hence a good example of the early stages of SEIR coming into play and being able to turn the institution round without any need to approach insolvency. It is not a good example in that its sheer size meant that more normal channels were not followed. The assistance differs from simple liquidity support in that it involves exposure to losses and an outright capital injection by the government. Clearly the US government was not prepared to see Citigroup struggle to raise finance in the market for fear this would destabilize the whole financial system.

Colonial Bank

The 98 further banks that have closed during 2009 up to October have by and large been small banks. All banks bar seven have been resolved by purchase and assumption. In five cases depositors have been paid out and in two a bridge bank has been formed. The largest bank was Colonial which illustrates the conventional treatment, as described in the FDIC press release on 14 August:

> Colonial Bank, Montgomery, Alabama, was closed today by the Alabama State Banking Department, which appointed the Federal Deposit Insurance Corporation (FDIC) as receiver. To protect the depositors, the FDIC entered into a purchase and assumption agreement with Branch Banking and Trust (BB&T), Winston-Salem, North Carolina, to assume all of the deposits of Colonial Bank.
>
> Colonial Bank's 346 branches in Alabama, Florida, Georgia, Nevada and Texas will reopen under normal business hours beginning tomorrow and operate as branches of BB&T. Depositors of Colonial Bank will automatically become depositors of BB&T. Deposits will continue to be insured by the FDIC, so there is no need for customers to change their banking relationship to retain their deposit insurance coverage. Customers should continue

> to use their existing branches until BB&T can fully integrate the deposit records of Colonial Bank.
>
> This evening and over the weekend, depositors of Colonial Bank can access their money by writing checks or using ATM or debit cards. Checks drawn on the bank will continue to be processed. Loan customers should continue to make their payments as usual.

A comprehensive approach

The argument over how to handle the whole problem in co-ordinated manner can run in two opposing directions with respect to resolution policy. The first would argue that the rules should be clear in advance so that the outcomes are predictable and the other authorities, particularly the Treasury will know how to react. Thus in the US case, under FDICIA there was a clear, correct presumption that all except the TBTF banks would be allowed to fail in whatever manner was least cost in its impact on the FDIC. The indecision came because much of the early pressure fell not on 'banks' but on thrifts, investment banks and on the Federal Home Loan agencies (FHLs), which were not subject to the same regime.

In the case of thrifts the main issue is not so much that the legislation is somewhat different in that some techniques such as bridge banks are not directly available but that the supervisor, the Office of Thrift Supervision (OTS) has not pursued a path of correction with the same vigour as the FDIC has followed under FDICIA. Similarly the FHLs were in a different position owing not simply to the fact that they were supervised by the Office of Federal Housing Enterprise Oversight now amalgamated into the Federal Housing Finance Agency but also because they were effectively government guaranteed. Hence instead of allowing them to fail the government as implicit owner recapitalized them as would be the first line of action for the correction of problems in any bank (or other financial institution). Hence although this may have been in line with expected procedure it set an unfortunate precedent. The sheer scale of the interventions required in Fanny Mae and Freddie Mac were such as to show that the government was prepared to act on an unprecedented scale. This gave an expectation of the willingness to act in other areas outside the traditional framework of small and medium-sized banks that closed by the FDIC in increasing numbers.

This expectation was fuelled by the treatment of Bear Stearns, the first of the investment banks to get into difficulty. Since it was not a bank it was not subject to the normal bank insolvency procedures but to general insolvency proceedings that would be applied to any other commercial company. Failure in these circumstances would result in the cessation or close out of many of the financial contracts undertaken by the company, as the company would apply for protection from its creditors under Chapter 11. This would result in a major problem of recontracting and change in pricing, disrupting financial markets. The extent of the problem was revealed by the treatment of Lehman Brothers, which was allowed to fail. A similar problem was encountered with the potential failure of AIG, where it was also felt that the ending of a whole raft of insurance contracts underpinning a large proportion of financial contracts would be disastrous for the financial system and worse in its consequences than providing a public sector bailout.[27]

However, perhaps the worst problem in this regard was that action was not consistent. Markets and no doubt Lehman Brothers themselves expected that a deal would be brokered and that they would not fail. Failure therefore came as surprise and triggered much greater contagion round the financial system not just in the US but also abroad than would have been the result of simple recontracting and direct losses if the outcome had been expected. In many respects therefore the problem was that when Bear Stearns got into difficulty the New York Fed thought it could handle the problem because it was a single case. Later into the downturn the worry was that the scale of intervention might become impossibly large so Lehman Brothers was allowed to fail in an attempt to draw a line and limit the government's commitment.

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[27] AIG was a major writer of credit default swaps (CDSs).

3.1.4 Treatment of Toxic Assets

Garcia (2009) does not deal with the issue of the treatment of toxic assets in any detail but this lies at the heart of the US experience. With the TARP programme the US decided that the appropriate way to try to handle the major facet of the crisis, which was the drying up of credit markets because of the unknown nature, extent and holding of impaired assets, was to get the banks to identify such assets and for the government to buy them and take them off bank balance sheets until such time as they could be properly valued and sold.

In many respects this did not work. It did not prove much easier for experts employed by the government to value such assets and hence avoid the danger of the government overpaying than it did for the market to perform such valuations. The important difference was that the TARP programme provided an opportunity for rebundling the assets so that it was not the entire position of a bank that needed to be assessed but just the portfolio of troubled assets. However, in practice it proved more helpful to provide guarantees on the back of such assets with the government agreeing the order and magnitude of the contingent losses that would be met by the various parties in the event of impairment. (See the discussion of Citigroup above for example). It seems clear that the traditional IMF advice of trying to carve out the impaired assets has encountered problems in the US.

In one respect that Garcia does deal with, the US has stepped outside the normal framework in trying to handle toxic assets. It seems that the traditional Bagehotian approach to the LOLR and indeed to Emergency Liquidity Assistance is not being followed in the US. The Federal Reserve Bank of New York has become more involved, particularly with the rescues of Bear Stearns and AIG where they have set up financial companies to which they have then expended credit – Maiden Lane LLC in the case of Bear Stearns and Maiden Lane II and III LLC in the case of AIG. All three hold the very risky assets from the failed institutions that could not easily form part of the portfolio in the continuing institution for it to continue. The approximate size of the portfolio in Maiden Lane is \$27bn which showed a book loss of \$2bn at its last valuation in 2009. That in Maiden Lane II, which is composed of residential mortgage-backed securities, is \$18bn and that in Maiden Lane III is \$26bn composed of CDOs (May 2009 values).

Bear Stearns was thought to be solvent at the time of the Takeover by JP Morgan in early 2008 but the form of assistance by the New York Fed was thought likely to result in losses because it was not providing loans with high seniority. They are provided against collateral (although this is thought to be inadequate) and they are at rates above that prevailing in the market. AIG on the other hand was thought to be insolvent at the time of the rescue and the FRBNY loans represent only part of the government's support package. It is relatively difficult to explain this division of responsibility but the easiest gloss that can be put on it is that the FRBNY thought itself able to value the assets and assess the risk whereas the Treasury Department was not able to do so in the time available. In other countries it is likely that the Treasury would have acted on the advice from the central bank.

The route chosen merely illustrates the short cuts that the authorities find they have to take in a crisis. There will obviously be problems of precedent here and hence subsequent moral hazard. No doubt the FRBNY hopes that there will be no further such opportunities in the present crisis and that it will be able to change expectations by the time there is any realistic threat of another crisis. Nevertheless the boundary between central bank liquidity support and governmental solvency support is a fine one and actions intended to be the former may very well turn out to be the latter and procedures need to be in place to transfer responsibility when it is discovered that the wrong decision has been made.

3.1.5 Two Other Concerns for Crisis Management from the US experience

Monitor restructuring policies and restructuring operations

There does not appear to have been a clear role for monitoring in the US beyond the agencies themselves except of course through congressional committees. This is quite a tricky issue for any government. In a crisis key ministers will be involved in decision making because of the scale of the funds that need to be committed. It is rather difficult to see therefore where the additional scrutiny is going to come from except from parliament. This has been clearly exercised in the case of the UK as noted below but the action envisaged by the IMF is more detailed ensuring that the actions are properly evaluated and their success assessed as they go along so they can be improved. Thus this is importantly different from the normal sorts of parliamentary enquiry after the event. The Norwegian parliamentary enquiry in 2000 was very much a special event.

Explain events and policies clearly to the public

One of the difficulties of crisis management is that a large element of its success relates to confidence. There is thus a very difficult balance to be drawn between confident assurance on the one hand and realistic assessment of the difficulties on the other. Clearly the proof comes from the reaction and the TARP programme was in general not very well received. The scale of the intervention may have been judged correctly but its form and then the problems with its execution then did not give confidence. In part this was because it was innovative but it also reflects an underlying problem with the assessment of losses or rather the value of impaired assets, irrespective of whether the state is going to purchase them, underwrite them or place them in a bad bank (or even in the continuing bank).

3.2 UK

The UK has probably had the largest crisis compared to GDP of any of the main countries and hence has illustrated the problems in most aspects of crisis management. It has also made sweeping changes to its systems in the light of these problems and this also helps provide a basis for considering what other countries might do in the light of this experience. Since the most striking changes relate to the Special Resolution Regime this is dealt with first.

3.2.1 Special resolution Regime

The UK proved to be an excellent testing ground of the traditional methods of court directed approaches to insolvency using general corporate law rather than a lex specialis for banks. It was disastrous and prompted the UK to be the first country to overhaul its system drastically, actually managing to put in place a new Special Resolution Regime (SRR) in time for what are hopefully the latter stages of the crisis.

The UK was thrust early into the crisis in that the first serious banking problems emerged in August 2007, when Northern Rock required intervention by the Bank of England to stem a run, and not just in the autumn of 2008, when the main thrust of the crisis burst on continental Europe in the wake of the Lehman Brothers collapse. Thus the authorities were able to conduct a review in the autumn both by the parties themselves: central bank, supervisor and finance ministry (the Treasury); and by parliament. The Parliamentary Review (House of Commons, 2008) and the first set of proposals by the authorities (Bank of England et al., 2008a) emerged in January 2008 but were swiftly followed by the failure of the first bank, Northern Rock, in February. Although the new proposals were only in draft form at this stage they were rushed through Parliament (Banking (Special Provisions) Act 2008) primarily to enable the nationalisation of Northern Rock, an action which was actually the last resort in the set of interventions laid out and not the first. It merely reflected that while the UK had the powers for support it did not have them for resolution. The new Act was deliberately temporary and would expire after a year. During that year there was a process of consultation and discussion with two further papers from the tripartite authorities (Bank of England et al., 2008b,c), before the longer term replacement was laid before parliament in October, coming into force in February 2009.

The new Act (Banking Act 2009) was almost immediately used in the failure of the Dunfermline Building Society but the Special Provisions Act also had to be used in the case of the failure of the Bradford and Bingley and in the collapse of the Icelandic banks in October 2008.

Thus the legislation has already been well tested. Appendix 2 lists the main reports together with their hyperlinks to their internet versions.

The key ingredients of the SRR, as set out in the 2009 Act, are that:

- Banks fall under one of three circumstances
  - normal 'green' conditions where they comply with all regulatory requirements and are not thought to pose any risks that are of concern for their health, that of others or the financial system
  - problem 'orange' conditions, where heightened supervision is necessary and a close dialogue with the institution is required in order to make sure that the bank concerned resolves its problems
  - a 'red' zone where the bank has to be resolved by the authorities
- In the red zone the authorities, in the form of the Bank of England, have the power to step into banks if the FSA, the supervisory agency, thinks that they no longer meet the conditions for registration as a bank (or will shortly fail to meet them) and that is not likely that actions will be forthcoming to restore the conditions (without intervention) – these 'threshold conditions' relate to the usual capital adequacy, fit and proper directors and lack inappropriate connections, ability to pay etc. The condition is not insolvency and the expectation is that intervention will take place before that point[28]
- The three main stabilisation powers are
  - the ability to transfer assets and liabilities, whether as a whole or in part to another registered service provider
  - the ability to create a bridge bank for the whole or part of the failing institution
  - the ability to nationalise the whole or part of the operation should either of the above fail

If a bank is deemed by the FSA to have reached the point where the SRR is triggered the expectation is that insolvency will follow unless it is deemed by the Bank of England that the stabilisation powers should be invoked in the public interest in

- the stability of the financial systems in the UK
- the maintenance of public confidence in the stability of the financial systems in the UK
- the protection of depositors

In making this judgement and deciding what to do the Bank of England has to consult the FSA and the Treasury.[29] However, these conditions apply only to the use of the transfer to the private sector and to a bridge bank powers. The conditions for temporary public ownership are more onerous, namely 'to resolve or reduce a serious threat to the stability of the financial systems in the UK'.[30]

Most of the interest in the new UK Banking Act lies in what is known as the stabilisation options: transfers to - a private sector purchaser, a bridge bank, temporary public ownership. However, the SRR also contains an insolvency procedure and a 'bank administration procedure'. Of these two it is the administration procedure which is perhaps the more interesting.

When stabilisation involves the transfer of part of the previous entity, either to a private sector party or a bridge bank, some of the essential services will still be provided by the residual entity. It is therefore not possible simply to liquidate it without regard to the viability of the parts that have been transferred. To this end therefore the Act provides for the appointment of an administrator to run the 'residual bank' that contains these essential services. Such an administrator

[28] The FSA's approach to handling problem banks is not essentially changed by the Act. The UK does not apply either PCA or SEIR per se and it is for the FSA to determine whether a bank is likely to breach its conditions for registration and hence how to handle the difficulty. There is thus very considerable discretion up to the point of deciding on whether the bank should enter the SRR.

[29] There is a second circumstance, where the Treasury is already providing financial support to the bank in order to deal with a serious threat to financial stability in the UK. In which case the Treasury can recommend to the Bank of England that stabilization powers be used (and the Bank agrees).

[30] There is also the same second condition as in previous footnote.

is appointed by the court on the application of the Bank of England. Like the liquidator for a small bank that is allowed to fail and move into simple insolvency, the administrator, in addition to providing the necessary services, has the secondary objective of rescuing 'the residual bank as a going concern'. He should only seek to wind up the bank if that would achieve a better result for the creditors.

Given that transfer of depositors is likely as the only route that will provide continuity of access but may well pose problems through the operation of the IT systems involved, some continuation of functions in the existing bank seems likely and therefore this form of administration may well be required.[31] A similar duty is placed on other parts of the banking group – a 'continuity obligation' - where they have to 'provide such services and facilities as are required to enable a transferee to operate the transferred business, or part of it, effectively'. Of course the obligation to provide these services 'is subject to a right to receive reasonable consideration'. (The Bank of England decides what these services are and indeed can modify the arrangements and transfer property, rights and liabilities with the consent of the Treasury. Such transfers can be of items not previously transferred or 'onward' transfers to a third party of items already transferred, with associated obligations.)[32]

The Act is careful to try to protect the rights of those involved but with some provisos. It enables the making of transfers without the triggering of netting, close out or other clauses that might otherwise have occurred on the failure of the bank. When transfers take place there should be independent valuation of any compensation that should be made to those whose rights are thereby overridden. If a residual bank later enters insolvency, the creditors of the bank are not to be made worse off than they would have been had insolvency taken place before the residual bank was set up.

There are a number of key differences from the US system, the most striking of which is simplicity. The US is characterised by having many supervisors and regulators. The UK has just the one supervisor for the entire financial system, which can therefore tackle entire financial groups as well as simply the 'banking' elements of it however defined. The one important distinction is that building and other friendly societies (mutuals) have been dealt with by separate legislation in the past and therefore have to be separately addressed in the new Act – but with similar provisions. In fact the first institution dealt with under the new Act was the Dunfermline Building Society (DBS).

The second aspect of simplicity is that there are just three zones of bank behaviour under which the new regime operates instead of the five under the US system. While there might be some arguments for having four zones – effectively dividing the orange zone into two: one where a problem is only suspected and a second where it is detected but deemed curable[33] – the key difference is that the UK system does not mandate a series of actions by the authorities, nor does it impose a timeline for their execution. In a word, the UK SRR is characterised by more discretion.

There is no need for this extra discretion to be a hindrance to the pressure for speedy resolution in the orange zone, indeed the FSA and the Bank of England could easily draw up a set of operating rules which would make clear to banks how the process was to be operated and that delay would merely bring the bank more rapidly into the red zone. This is the approach used in Canada by the CDIC.

What is perhaps lacking in the UK arrangements compared to their US counterparts is the adoption of a single clear objective. In the US it is the duty of the FDIC to run the whole procedure

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[31] In the first use of the Act in the case of the Dunfermline Building Society this procedure was used when the retail business was transferred to the Nationwide Building Society, the social housing portfolio was transferred to a bridge bank and the administration procedure used for the residual bank that contained the commercial lending portfolio. (There is a specific treatment of building societies as opposed to banks under the Act but the arrangements are the same.) The administrator is KPMG.

[32] Negative actions are also permitted in terms of the termination of contracts between the transferred bank and other parts of the group.

[33] This was the structure of the original Benston and Kaufman (1988) proposals that were very influential in the design of FDICIA.

in such a manner that it minimises losses to itself. If the FDIC were a junior creditor treated pari passu with the other junior creditors this would be very similar to maximising the value of the insolvency estate. Unfortunately, however, there is depositor preference so interests are not perfectly aligned. In the UK there is simply a list of considerations that are to be borne in mind with no specific ranking of importance or weights to be applied:

The Special Resolution Regime is:

- To protect and enhance the stability of the financial system of the UK
- To protect and enhance public confidence in the stability of the banking systems in the UK
- To protect depositors
- To protect public funds
- To avoid interfering with property rights in contravention of the European Convention of Human Rights

Clearly it would be possible to devise a restructuring of these requirements such that they were all met but that the 'protection of public funds' - or perhaps more explicitly minimizing the cost to the public in some form such as minimizing the fiscal cost – was the clear objective of the technical resolution procedures. In any event there is some problem of matching responsibility here as the deposit insurance expenditures are borne by the surviving banks (or rather their customers) and not by the taxpayer, yet the Bank of England decides how they shall be used in a wider interest than just that of the depositors.

The deposit insurer, the FSCS, performs a largely passive role in this environment. Its task is to pay out on the determination of the Bank of England and the FSA, although the circumstances under which its funds are used and the purposes for which they can be used are defined.[34] It is probably of no import that the central bank rather than the deposit insurer runs the resolution process and indeed there are clear advantages if there are systemic implications, since it is the central bank's role to look after financial stability and macro-prudential regulation. Nevertheless, an active deposit insurer will have extensive regard for prepositioning. Again the case of Canada is probably more apposite than that of the US, where the FDIC is also involved in supervision. By having the resolution agency be a supervisor, that agency can not only ensure that it has the maximum opportunity for an early warning but it can insist that the bank structure itself and its information systems in such a way that a very rapid resolution and pay out to depositors is possible (FDIC, 2008, for example). In the Canadian case such pre-positioning is also needed although the CDIC needs to request the Office of the Commissioner of Banks for any detailed inspection and relies on it for any early warnings that come from confidential supervisory data.

The danger therefore is that the Bank of England comes into the picture too late in the day. In the case of the failure of Bradford and Bingley, which like Northern Rock was a demutualised building society, it took the Bank of England two months to plan for an orderly resolution. Fortunately in this case they had adequate warning and were able to transfer the deposits to another provider to avoid any material break in service.[35] (Bradford and Bingley were dealt with using the emergency legislation introduced to enable the government to nationalise Northern Rock and not under the Banking Act of 2009.) Thus whatever the institutional structure, the resolution agency requires both adequate 'pre-positioning' to handle sudden problems and as long a lead time as possible once problems are suspected. Thus the resolution agency has to start preparations as soon as the orange zone is entered and not wait until the red zone is reached, otherwise all resolutions will be a rushed job.

Clearly from the rapidity of the decision over the Dunfermline Building Society the Act is being applied by working through how the resolution is going to be undertaken while the 'bank' is in the orange zone. Thus attempts at a private sector solution and a backstop public sector

[34] It can be required to contribute to the costs of the exercise of the stabilization powers provided that these do not exceed the liability of the FSCS had the bank been put into administration.

[35] Presumably the Bank of England is required to take bids from interested parties under these circumstances although this would need to be done in confidence.

resolution are undertaken together. While this may sharpen the resolve of the directors and owners of the bank to find a voluntary solution it may also encourage the potential purchasers to hold out for government assistance and thereby push the bank into the SRR. In a private sector rescue, the impaired assets remain on the acquirer's books. In a transfer arrangement under the SRR, they can be left with the residual bank, thereby transferring the risk away from the acquirer to the FSCS or to the government/Bank of England.

It is also noticeable that the first use of the Act has led to a dispute by the (now former) directors of the DBS that they failed to meet the threshold conditions for registration.[36] The FSA decided on the basis of their own stress tests that progressively the DBS needed to raise additional capital because of the risks in their commercial lending portfolio. While the initial raising was successful it became clear that the likely other building societies who would assist, merge with or takeover the DBS wanted further guarantees and these were not forthcoming without government assistance – that there were not prepared to make outside the SRR.[37]

If the insolvency provision under the Act is invoked, i.e. if there are no stability concerns that push the Bank of England towards advocating transfers, bridge banks or temporary public ownership, then the process is similar in many respects to insolvency of other companies other than its initiation:

- The bank enters the process under a court order, which appoints a liquidator[38]
- The liquidator arranges for the transfer of insured deposits or for compensation from the FSCS[39]
- The liquidator then winds up the bank as in other liquidations.

The grounds for such an application and for its granting by the court are that either the 'bank is unable, or likely to become unable, to pay its debts' or that the winding up would be 'fair'. The Minister can however apply in the public interest.

In a liquidation the liquidator acts to achieve the 'best result' for the creditors as a whole but reports to a liquidation committee that ensures he exercises his functions 'properly'. Initially this committee consists of representatives from the Bank of England, FSA and FSCS up to point that the insured depositors have paid out or transferred. At that point the Bank of England and the FSA nominees withdraw and the FSCS may do so as well and are replaced by members elected by a meeting of creditors if they so choose.

The Banking Act 2009 also corrects some other problems which were revealed by the crisis relating to the FSCS, oversight of the inter-bank payment system by the Bank of England and the pursuit of financial stability.

- To make the FSCS more credible it is now able to raise funds from the industry in advance and to borrow from the National Loans Fund – so that it could make an immediate payment to depositors or to facilitate a transfer.[40] It can therefore now be required to contribute to the costs of the SRR where these are lower than it would have incurred from paying out depositors in an insolvency (the amounts are subject to independent valuation and can be

[36] House of Commons Scottish Affairs Committee hearing 10 June 2009.

[37] The evidence in the House of Commons hearing suggests that subsequent pressure on the building society industry as a whole has led to the provision of guarantees that might have been sufficient to avoid the need to intervene in the case of DBS, had they been available before DBS got into serious problems. Indeed the evidence suggests that other societies might have failed without this assistance. This illustrates a common problem in crises in that the order and timing of events results in what ex post looks like unequal treatment of individual institutions. Thus as a unique case without the expectation of a string of further failures the DBS could be subject to the SRR but when more were challenged as the result of ratings downgrades for the industry a different approach to systemic concerns could be applied. Several of the surviving building societies have issued preference shares which rank above the claims of the members in an insolvency which may threaten the whole status of such mutuals.

[38] Only the Bank of England, the FSA and the Minister can apply to the court for such an order.

[39] If there are no insured depositors, general and not bank insolvency rules would be applied.

[40] These changes are made by way of Amendment to the Financial Services and Markets Act 2000, which set out the framework governing the FSA and consequently the FSCS.

appealed through the courts)[41]

- The ability of Treasury to make payments or loans to banks in an emergency are eased
- The Act enables the Treasury in future to treat investment banks in the same way as the deposit banks and building societies covered by the Act,[42] where inter alia they must have regard to
    - Ensuring certainty for investment banks, creditors, clients, liquidators and administrators
    - Minimising the disruption of business and markets, and
    - Maximising the efficiency and effectiveness of the financial services industry in the UK.
- The Bank of England now has a clear financial stability mandate, requiring it to work with the FSA and Treasury with a 'Financial Stability Committee', composed of the Governor, Deputy Governors and four directors of the Bank, to advise the Bank in its exercise of the financial stability objective and of the stabilisation powers under the Act
- The requirement that the Bank of England make weekly returns (that made it rapidly obvious when it was giving emergency liquidity assistance) has ceased.

The UK has now given some indications of where it might go next in its discussion document released by the Treasury on 8 July 'Reforming Financial Markets'. It has decided to follow a version of what Rajan (2009) describes as 'shelf' Bankruptcy procedures. In other words it is required of all large financial institutions that could not simply be placed in insolvency proceedings or handled readily under the current Banking Act 2009, that they should have in place clear plans of how they could be resolved in a crisis (without the use of taxpayer funds). This would involve them being transparent enough that such a resolution could take place and having the appropriate pre-positioning that the authorities could work sufficiently rapidly to achieve it. This would act as an encouragement to the banks to have relatively simple structures. In particular it would ensure that they can carve out the essential parts of the organisation that need to continue in an operable manner from those that can be dealt with in a more normal manner. This fits clearly with the approach of Hupkes (2004) focusing on the continuity of specific functions of the organisation and not simply the organisation as a whole.

Indeed all banks will need to have such plans but their complexity and detail will reflect the systemic importance of the functions of the bank. For smaller institutions for example they will need to organise themselves so that it is easier to transfer the deposit book to another provider.

The discussion paper phrases it as follows (HM Treasury, 2009, p.13)

> **managing failure**: the Government believes that all firms should have detailed, practical resolution plans for dealing with their own failure, and in particular expects the FSA to work with "high impact" firms to make sure they have such plans in place. This will mean ensuring that their legal structure facilitates resolution, should that be necessary. The Bank of England, as lead resolution authority under the Banking Act 2009, should also be involved in the evaluation of resolution plans; and

The proposals have four sides to them, three designed to make the chances of failure lower and the fourth, as described above, to make resolution easier should failure occur: (p.69)

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[41] It is perhaps a little surprising that a body funded by the industry can be subject to such direction by the authorities.

[42] By issuing regulations.

However, large, complex, financial institutions whose operations span many countries, and whose failure would represent a significant threat to financial stability, pose a particular challenge to authorities.

The Government's strategy for dealing with all systemically significant institutions will be to use:

- strengthened market discipline, especially through corporate governance and remuneration policies;
- enhanced prudential supervision by the FSA – both generally, and targeted specifically on large, complex firms;
- stronger resolution arrangements, both in terms of the regulatory toolkit, and the plans that large firms must make to manage their own failure; and
- improvements to the overall framework such as enhancements to market infrastructure in key markets to reduce the likelihood of contagion effects.

By reducing both the likelihood and the cost of failure, while tackling problems of moral hazard, this approach will allow the Government to address directly the main problems arising from systemically significant firms, including those that have been described as "too big to fail".[1]

The UK proposals also accept the proposition that if LCFI's are to receive preferential treatment in the event of failure there is a cost attached to this in terms of how they have to run prudential risk management: (p.71)

Linking capital requirements to the size and complexity of a firm

5.11 The Government believes that systemically significant firms should, consistent with risk-based regulatory approaches, be subject to more regulation. This would include higher capital requirements, thus "internalising" their higher costs of failure. This would go beyond current practice, with the FSA in future determining level of capital by reference to the potential cost as well as the likelihood of failure.

Some idea of what may be intended is deductible from their quotation of the proposed Swiss arrangements whereby banks would have to hold twice the current risk weighted capital at the peak of the economic cycle, i.e. 16%. They also reiterate the point that such capital would be primarily Tier 1 as Tier 2 only offers a buffer in the event of failure (Wall, 2009) not if the firm is to continue, even under state administration.

3.2.2 Early Warning

The FSA in the UK is still reviewing how it might improve its supervision and the ability to detect problems rather earlier. It has embarked on a Supervisory Enhancement Programme, which in the short term involves taking on a substantial number of new staff so that it can monitor all of the more important financial institutions more closely. In the relatively short period since its inception the FSA has developed an approach to supervisory assessment labelled ARROW[43] (now ARROW 2). The idea behind this approach is that the resources put in to supervision should reflect the risk both for the institution itself and its impact on the rest of the financial system. There is thus a periodic risk assessment along with an assessment of how well the bank's structures and procedures, including its access to capital and liquidity mitigate those risks. These risks are discussed with the management of the bank in question and where necessary a programme of more intensive supervision and action is implemented.

This system is relatively complex and not very transparent and the results are not made public. It is clear from the number of supervisory failures, notably Northern Rock, that the system has not worked as planned, even by its own assessment (FSA, 2008) but further reservations have been expressed about the advice in the lead up to the failure of the Dunfermline Building Society (House of Commons Scottish Affairs Committee, 2009).

[43] ARROW stands for Advanced, Risk-Responsive Operating Frame-Work.

This process does not have triggers nor does it have any clear process of prompt corrective action. The final intervention rule is also far from the simple 'bright line' leverage ratio rule that applies in the US.

3.2.3 Government Ownership

In addition to the two nationalisations, Northern Rock and Bradford and Bingley and the bridge bank, Dunfermline Building Society, the government has also found that it has had to invest extensively in some of the major banks, principally Royal Bank of Scotland where it owns virtually 80% of the bank and the Lloyds Group following its purchase of HBOS, an action 'encouraged' by the authorities when HBOS got into major difficulty raising new capital, where its holding is somewhat less than 50%. What is interesting here is that, because these were large banks, whose continuing strength reflected on the viability of the banking system as a whole, the government did not wait until the banks had lost all value in their share capital but acted as soon as there were clear question marks over their future. This differentiates the intervention from that in Norway for example during the Nordic crises where the existing shareholders could be written down to zero first and the government injection did not benefit them but only the taxpayer.

This share capital has two forms, one an outright injection (£78bn) and the other £22bn of shares as payment for asset insurance. This latter covers some £585bn of troubled assets from the two banks (£325bn RBS, £260bn Lloyds), where, after the first loss accruing to the banks, the taxpayer covers 90% of the remaining loss. By contrast the support to Northern Rock was £15bn, to Bradford and Bingley £24bn and the costs of intervening in the Icelandic banks £9bn – a total of £127bn. The contingent liabilities were all the insured/guaranteed assets in four main schemes to be worthless would be £777bn according to the IMF but the actual exposure is likely to be smaller.

On the whole the government has sought to stand bank from direct intervention in the banks despite this high degree of ownership. But it has sought to influence remuneration policy to hold down the widely unpopular level of bonuses and to encourage lending, particularly on housing. The equity stakes are held through a company called UK Financial Investment (UKFI) that is wholly owned by the Treasury. (The Northern Rock and Bradford and Bingley holdings may also be transferred when it is clear that the European Commission has no concerns over illegal state aid.) The objective of the company is to 'protect and create value for the taxpayer as shareholder, with due regard to financial stability and acting in a way that promotes competition' while also ensuring that the banks they own provide 'competitively priced' loans to small businesses and homeowners 'at 2007 levels'.[44] Its mandate requires it to manage the portfolio commercially with a 'view to exit'. In doing this it is to:

- 'maximis[e] sustainable value for the taxpayer, taking account of risk;
- maintain financial stability by having due regard to the impact of its value realization decisions; and
- promot[e] competition in a way that is consistent with a UK financial services industry that operates to the benefit of consumers and respects the commercial decisions of the financial institutions.'

Thus the intention is to return the banks acquired to private ownership 'The Government will not be a permanent investor in UK financial institutions and will over time seek to dispose of the investments in an orderly way, through sale, redemption, buy-back or other means, in accordance with the UKFI's objectives.' However, the extent of the arms-length arrangement is somewhat unclear as the government has also made plain its determination to try to influence the governance of the banking system – in particular its behaviour with regard to remuneration. The discussions thus far have been more in terms of moderating the system of remuneration rather than in trying to ensure that it should be less pro-cyclical and short term in character. However, it is normal practice

[44] http://www.hm-treasury.gov.uk/press_114_08.htm

for large commercial shareholders, such as pension funds, to express views on this subject

3.2.4 Treatment of Toxic Assets

As is clear from the previous section the UK government has sought to provide guarantees and support for the banks as they struggle with toxic assets rather than purchase them outright and place them in asset management companies. In part this is because there are only three main banks that have reached the point of failure. In the case of Northern Rock the entire bank was purchased. In the case of Bradford and Bingley the bank was split with the government continuing with the impaired part. In the case of Dunfermline there is a three way split with one set of difficult to sell assets being transferred to the bridge bank and the impaired assets to the insolvency estate, while the deposits, branches and normal loan book were transferred to the Nationwide Building Society.

3.2.5 Other Issues

Much of the rest of the discussion paper on 'Reforming Financial Markets' is not of direct relevance to the present study but it is worth noting that among the ideas put forward for consideration is the option of buying capital insurance so that recapitalisation in times of difficulty can be arranged at prices that reflect normal times and not the distorted emergency terms that make the process so costly just when it is most difficult to afford them.

The discussion paper announces that the government intends to set up a Council of Financial Stability, composed of the Treasury, Bank of England and FSA and chaired by the Chancellor of the Exchequer that will have the duty to analyse the challenges to financial stability and have the tools to do something about it.

3.3 NZ

Before the crisis New Zealand had in place a regime that offered a practical possibility for a small host country, dominated by foreign-owned banks, to implement an effective resolution of problems on its own territory to maintain financial stability irrespective of the wishes of the home countries (in this case effectively Australia). Fortunately this system has not been tested and the main Australian banks have remained well capitalised during the crisis. However, in the absence of such a test it remains debatable whether the system will actually work as is hoped.

Two aspects of the New Zealand system, set up under the Reserve Bank Act of 1989 and modified in 1996 and again in 2006, are of particular interest. The first relates to the powers of intervention and principal resolution method to be employed and the second to the requirements for structure and prepositioning. A third facet of the present crisis is also worth noting in that the Reserve Bank has had the reach of its powers widened to include other near banks, such as finance companies, and also insurance. At the same time regulation is being widened to address financial agents and advisors more thoroughly, to make sure that there is less danger of creating high risk contracts between ill-informed households and indirect lenders (and between households and high risk borrowers).

3.3.1 Resolution methods

New Zealand has an SRR but unlike the UK it hopes to follow a straight forward approach where all banks can be subjected to the same sort of regime irrespective of size. In particular the scheme is designed to rule out the concept of 'too big to fail' and there is no provision for assistance from the government in the form of open bank assistance or financed reorganisation (still less nationalisation). Since there was no deposit insurance the scheme involved taking the existing bank and either allowing it to go into insolvency or reorganising it in a manner that the losses are identified, allocated and the bank recapitalised using existing resources. No doubt like other authorities the Reserve Bank would do its best to assist banks in finding a private sector solution prior to failure. But the underlying principle is that any bank should be able to fail in a manner that does not threaten financial stability and does not call on the taxpayer. This is a radical approach.

The New Zealand scheme thus addresses the final stage of resolution. It does not implement the panoply of SEIR and PCA with the RBNZ as the regulator imposing on itself a mandatory set of triggers or actions following the triggering. Up to that point it has considerable discretion and acts only according to a set of principles.

Under the Reserve Bank Act, the Reserve Bank, as the supervisor, is the authority that will start the resolution process. In all cases it will open insolvency proceedings by petitioning the courts. It applies for a statutory manager to be appointed, who has powers similar to that of a receiver, who will act under the general direction of the Reserve Bank.

The statutory manager needs to decide, upon appointment, whether the bank should simply be closed and normal insolvency procedures be followed or whether some other form of resolution involving keeping the operations of the bank functioning should be followed. For small banks, closure or transfer of business to another provider is the most likely outcome, whereas for larger banks, continuing operation is to be expected. In any event the normal objectives under insolvency are to be followed, namely, maximisation of the value of the insolvency estate, respect for the priority of claimants and equal treatment of those within each claimant class. It is in the last case of continuing operation that New Zealand has a unique approach by applying what has been labelled bank creditor recapitalisation (BCR).

BCR operates very much along the lines of the system for insolvency recommended by Aghion et al. (1993). The statutory manager needs to make a summary valuation of the bank upon taking over and decide upon the extent of writing down of claims that will be necessary to return the bank to adequate capitalisation. This writing down is then applied to each creditor class until the desired point of capitalisation is reached. Thus if the Reserve Bank has not intervened early enough that the entire loss can be borne by the shareholders, who will be wiped out completely then the claims of the most junior creditors may have to be written down or even wiped out altogether until the point is reached that the claims have been written down far enough that the bank is again properly capitalised.[45] Each of the groups that is written down receives in return a tradable paper claim on the assets of a new bank that is formed under the management of the statutory manager, incorporating such of the assets that the statutory manager chooses not to leave in the insolvency and the written down liabilities. Netting agreements are enforced.

This is in effect a compulsory debt for equity swap. While the previous losses are wiped out in this process, a government guarantee is issued against further losses so that all stakeholders can have confidence in the new bank. This new bank is supposed to start operating at the beginning of the very next trading day so that there is no break in operation. This would thus be similar in practical outcome to what was arranged for WAMU customers but without a new purchaser. In this manner close out proceedings will not be generated. Given that the bank now has a state guarantee it is unlikely that any ratings driven close outs will occur as ratings are likely to rise rather than fall. The legislation is framed such that the new bank can succeed to all of the contracts of the previous institution, without their needing to be rewritten (except in so far as they are part of the writing down process).

The requirements are set out as follows (RBNZ, 2006):

> A statutory manager of a failed bank would … very probably be directed by the Reserve Bank immediately to restore the bank’s operations such that:
>
> (a) the bank is able to continue to meet its daily settlement and other time-critical obligations,

[45] Clearly the shareholders cannot meet the loss on their own without involving the subordinate debt holders otherwise the bank would not be undercapitalized. Unlike a ‘normal’ resolution in other countries where the claims would be written down to the point that the net loss is extinguished and the new owner has to provide the capital to bring the bank up to regulatory compliance here it is the existing creditors that do this so there is no need to look for a new buyer. The statutory manager provides the new management as the bank is taken away from the existing shareholders. Clearly the statutory manager will have to agree the reconstruction of the bank including the new management team with the creditor owners and ensure that they meet the regulatory standards before returning the bank to private sector operation. No doubt many of the creditors will wish to sell their claims if they do not wish to get into the business of bank ownership.

so as to avoid disruption and damage to the rest of the financial system

(b) the statutory manager is able to understand and cover the bank's credit and market risk positions, thereby limiting further damage to the bank's balance sheet

(c) the statutory manager has at hand the systems and balance-sheet data necessary for the New Zealand authorities to have available on the day of failure a range of options for managing the failed bank; and

(d) the bank is able to provide basic services to existing customers, including liquidity – crucially, access to deposit and credit lines – and account-activity reporting.

It remains to be seen whether a transfer of this nature can be effected in the time available. No doubt the hope is that failures can be organised for Fridays so that there is a weekend to elapse before the bank reopens on Monday morning, rather than having a single night in which to complete the process. In either event substantial prepositioning would be required so that the claimants can be identified and that depositors can retain access to the unwritten down portion of their deposits. In the days before ATMs and the internet this would not have represented a material break but in current circumstances both services will need to be uninterrupted if a run is to be avoided.

Two points are worth noting here. First that New Zealand does not have deposit insurance, although deposits are currently government guaranteed in the present crisis – without premium for the smaller banks and with a premium paid by the banks for the larger ones. (It remains to be seen what the government will decide to do for the longer term.) This means that all depositors have something at risk in this process and that they have no idea of how much their deposits may be written down as a result of the failure.

This leads directly to the second point, that if there is any danger of a bank failure there will be a retail run. In other countries most depositors would be 100% covered and will hence only run on a bank if they fear that the interruption in access to their accounts is likely to be significant. This fear of a run means that the time available for a private sector solution before the Reserve Bank steps in may be less than in other environments.

When the new disclosure-based banking supervision regime was introduced at the beginning of 1996, the major intention was that there should be strong direct incentives for directors to run banks prudently and strong indirect incentives for other claimants to exert pressure through the market so that poor performance would be corrected, either by internal changes or by acquisition, before the matter became a concern for the Reserve Bank. Under that regime each bank has to issue quarterly disclosure documents that reveal the important characteristics of their risk position (more than is required under Pillar 3 of Basel 2). The direct incentives involved personal responsibility by directors for the disclosure documents. Not only can directors be jailed for up to 3 years for false disclosures but they can be sued for consequent losses. The indirect pressures from reactions to the contents of the disclosures were expected to occur through the share market, through sub-debt markets, through the labour market with high quality staff leaving and through withdrawal of deposits. However, it is now generally accepted that ordinary depositors do not exercise this discipline (McIntyre et al., 2009).

Hence the feature of the New Zealand system which encourages early response by the market to head off the need either for early intervention by the authorities or for compulsory resolution may be a little weaker than initially envisaged. That said, no bank has got to the point of compulsory intervention, so in that sense the system has worked as intended. Clearly if a bank were to become undercapitalised the New Zealand authorities would undertake the same process of cajoling and help to get the bank recapitalised and only if this fails then impose the special resolution regime with the appointment of the statutory manager. New Zealand does not have any mandatory set of PCA along the lines of the US. The final intervention is intended to be as close to the point of insolvency as possible so that total losses that have to be handled by bank creditor recapitalisation are small.

The willingness of the New Zealand authorities to permit failures is revealed by their treatment of finance companies, which in many countries would be regarded as banks. Until the present crises these institutions, which provided a range of consumer credit and commercial lending but not retail banking facilities, were lightly regulated. They have now been brought under the responsibility of the Reserve Bank but still with lighter regulation than banks. As is described below, most finance companies in New Zealand have now failed but these failures started before the present crisis and were simply the consequence of high risk taking which resulted in losses when the New Zealand economic cycle peaked.

3.3.2 Required structures

The second key feature of the New Zealand system which makes it worthy of study is that New Zealand hopes it has put in place a system that will enable it to maintain domestic financial stability as a country dominated by foreign-owned banks irrespective of the decisions taken by the home country authorities.

It has divided banks into two groups: those that are deemed of systemic importance in the sense that their business must be kept going even if they need to be compulsorily resolved and those that can be allowed to fail because the consequences of such failure, even for uninsured depositors will not be such as to cause a systemic problem. The division between the two groups was easy to establish as the main four banks are all much larger than any of their competitors and the next largest retail bank, Kiwibank, is in any case government owned.[46] Thus although other countries have found in the present crisis that the dividing line between banks that can be allowed to fail and those whose business must continue comes at a rather smaller size than was previously thought, this is not an issue in New Zealand.[47] Furthermore, as described below, New Zealand was prepared to let most of its finance company sector fail even though depositors had no insurance.

There are no restrictions on how the smaller banks organise themselves except in the requirement to have directors who are liable under the disclosure regime. Indeed some, such as Deutsche Bank, actually insure their New Zealand depositors under their home country system. The systemic banks, however, now have to be locally incorporated (since 2006 – prior to that Westpac operated as a branch) with adequate local capitalisation. The key requirement, however, is that they should not simply be legally a separate unit in New Zealand but that they should be capable of operating on their own within the value day should they or their parent fail.

It is thus essential that either a statutory manager or the subsidiary itself can operate the business without a material break. As it happens, although a number of services have been centralised, such as brokerage advice, the New Zealand subsidiaries were relatively free-standing, with separate treasury operations, computer systems and management. The requirement is set out in what is described as the 'outsourcing policy' (RBNZ, 2006). The set up must be such that:

> the board of directors of the registered bank has legal and practical ability to control the management and operation of the New Zealand banking group's assets, liabilities and systems such that the bank may be operated on a stand-alone basis. … For the purposes of this condition of registration the term "systems" means all property, rights, controls, data and staff (including property, rights, controls, data and staff related to management, administrative and information technology functions, including any functions relating to any business of the bank that are carried on by a person other than the bank) owned, operated or used by the bank.

These are extensive requirements and clearly offer some difficulties if the parent were to fail and

[46] There are 5 large banks in New Zealand but one, The National Bank of New Zealand, is owned by another, ANZ, as a result of a fairly recent takeover. (The National Bank was previously owned by Lloyd's-TSB of the UK.

[47] Of course, theoretically it could become so if another privately owned bank were to become substantial. The example of the finance company sector discussed in the next section does not provide a good guide, since if the whole finance sector that has failed had been a single institution and a bank we cannot know whether the authorities would have felt impelled to require them to enter the Bank Creditor Recapitalization process rather than proceed to normal insolvency. At the time the first few finance companies failed the expectation of how many more might be at risk was much less than the toll to date.

the Australian authorities chose not to maintain vital services. Only some services are transferable to another provider and then usually not without considerable delay. This arrangement is therefore predicated on the Australian authorities wanting to keep the parent institution open, which is likely to be reasonable as the parents of the New Zealand subsidiaries are in turn the main four banks in Australia, all of which would be of systemic importance.

There are some specific reasons why New Zealand has felt it necessary to have such a firm structure for the cross-border relationship, which will not apply to the same extent as elsewhere. The first is that Australia applies domestic depositor preference, so New Zealand depositors would be ranked along with other junior creditors while Australian depositors had priority. That would mean that the Australian authorities could wipe out junior creditors without having an impact on their own depositors and hence seriously disadvantage New Zealand depositors, who are in any case uninsured. (There are other possible ways round this, such as equal treatment or indeed deposit insurance.) The second specific issue is that Australia and New Zealand operate very different supervisory regimes. While that in New Zealand is light-handed and based on disclosure, that in Australia is a typical detailed intrusive regime as is common in Europe. Hence neither country would be comfortable that the other's system would deliver equivalent prudential behaviour or supervisory action in the event of difficulty.

3.3.3 The demise of the finance company sector

The finance company sector in New Zealand started its decline in May 2006 with the failure of National Finance. Between then and the end of February 2009 30 further companies have either gone into liquidation or have a moratorium and have frozen repayments. This is the majority of the sector and includes many well-known names. Most of these companies have been involved in property finance, largely in the commercial sector and are hence heavily hit by the economic downturn as commercial property is notoriously cyclical. They have typically provided mezzanine finance with banks taking the first charge on the assets. Other companies have been involved in consumer finance, similarly caught out when defaults increase and collateral values are found to be well below those of the outstanding loans.

The issue here is not the poor level of supervision – the Registrar of Companies of companies report in March 2009 gives a long list of deficiencies from extensive related party lending, through inappropriate choice of directors both in terms of skills and poor previous records through to misleading prospectuses and inadequate credit assessments of borrowers – it is that failures on this scale can happen without disrupting the financial system.

Many of the debenture holders have been retail savers interested in high returns either in retirement or in preparation for it. Clearly the companies have been able to exploit financial ignorance in much of this group and the complacency that comes with a long period of growth and rapidly rising property prices. Some of the schemes seemed little better than Ponzi arrangements and hence collapsed as soon as the inflow of funds slowed.

If this sector had not existed there would have been two main effects. Some of this lending might have been on the balance sheets of banks, some of the rest would have been in the form of even less regulated arrangements among companies and individuals – and of course some would simply not have occurred. The lending contributed to the boom but the form in which it has been issued has meant that the consequences in the downturn have been less of a threat to financial stability.

It is however unlikely that other countries would want to follow this route, particularly those in the EU/EEA where consumer protection is more developed and regulation much more comprehensive in its scope. Nevertheless it does illustrate that having a fringe sector can contribute to the strength of the core. If these companies had been part of financial groups including banks then the contagion might have been far greater.

3.3.4 Remaining issues in Crisis Management

The New Zealand system does not have much to add on the subject of early intervention, although the Reserve Bank has strong powers. There is no attempt to put together parts of SEIR other than the SRR. Since the SRR involves creditor recapitalisation there is no role for the government as an owner and the recapitalisation assumes that the assets will remain in the new bank (or that everything will be in the insolvency estate). However, the system has not been used (although statutory managers have been appointed in the past) so it is not quite clear what a statutory manager might decide to do. Some of the standard resolution tools are available such as the split into a good and a bad bank just as there would be in any receivership.

3.4 pro & cons

3.4.1 Early Intervention

From the experience of these three countries, see Table 1 for a summary, it is clear that only the US feels that it is essential to have a comprehensive SEIR in place. All three countries both see early intervention as important and that it should be possible to resolve a bank before it becomes insolvent. It appears that the sorts of capital related triggers that are used in the US, while helpful, tend to cut in too late and are corroborating evidence rather than the primary trigger of initial action. There is no clear evidence whether the particular schedule of intervention set out in Appendix 1 has much in the way of benefits beyond being a means of restricting forbearance and ensuring that troubled banks do not disadvantage their creditors unfairly, except as a deterrent. The deterrent value of SEIR is also difficult to substantiate. The fact that the number of bank failures had fallen to very low levels before the present crisis struck could be an indicator of many things only one of which is deterrence.

It is clear that most other triggers to early intervention are relatively soft, although some are quantified in the CAMELS framework. Such softness has two main disadvantages. The first is that it is easier for the supervisor to dismiss, particularly when the risk is thought normal by a number of banks as was the case with what are now deeply troubled derivative products. The second is that it becomes more difficult to provide a non-contestable case to the subject banks. Thus to make early intervention effective there have to be clear incentives to make sure that these soft indicators are nevertheless acted upon. Mandatory independent reviews of performance that will be published in the case of any failures may help.

Parallel work suggests that there will be a string of new requirements for prudential behaviour, whose infringement would result in action by the authorities. The most obvious of these areas is liquidity. The RBNZ has already introduced its proposals for liquidity cover, considering in particular the period out to a month ahead so that banks do not get caught by liquidity problems in the short run. These new requirements will act as triggers, whether they are pro-cyclical capital requirements, collateral ratios or risk assessments under pillar 2 of the Basel framework.

3.4.2 Government control

Of the three countries New Zealand has taken the strongest stand against government ownership, although alone of the countries it has developed a public sector bank. Kiwibank is a subsidiary of New Zealand Post, which is itself a state-owned enterprise.[48] It operates to normal commercial principles but it has deliberately restricted its operations to narrow retail operations – traditional lending to households and small corporates as well as mortgage lending in particular. By doing so it hopes to be able to have lower margins and hence offer attractive rates to both savers and borrowers. At present it is growing market share rapidly in part because of the adverse reaction to

[48] There used to be a Post Bank in New Zealand. It was originally simply part of the New Zealand Post Office, which was a government department. In 1987 along with other government enterprises the Post Office was split into two corporations, New Zealand Post and the Post Office Bank which traded as PostBank. New Zealand Post has remained a state owned enterprise but PostBank was sold to the ANZ in 1989 and the trading name disappeared a decade later.

the remainder of the main banks that are foreign (Australian) owned and seen to be excessively profitable and not responsive to New Zealand concerns. It also offers a safe haven in country that does not have deposit insurance.

Table 1 The Key Features of the Different Systems

	Early intervention	Temporary Government control	Special Resolution Regime	Toxic Assets
US	Based on supervisory information (CAMELS) plus mandatory capital triggers above the Basel equivalent basic requirement. PCA/SEIR	Bridge bank option. FDIC has control as receiver Only occasionally used	FDICIA For deposit banks. Systemic risk exemption. Compulsory receivership when below 2% leverage ratio within 90 days	No prior arrangement. TARP introduced
UK	The regular risk assessment (ARROW2) can generate a heightened review	Bridge bank and nationalisation options. BoE has control as administrator or through exercise of stabilisation powers Nationalisation used twice bridge bank once but major share ownership in RBS and Lloyds Group	Banking Act 2009 for banks and building societies Stabilisation powers	No prior arrangement. Asset Protection Scheme introduced
NZ	No explicit early triggers	Any measure of use of public funds avoided through liquidation or Bank Creditor Recapitalisation except guarantee of a resolved bank RBNZ has control through process of statutory management	Statutory management	None

It is not clear how much this is a specific reaction to the unusual structure of the New Zealand market but other countries may come up with narrow bank proposals. In any case it is rather difficult to see how government ownership can be applied to foreign owned subsidiaries in quite the way it is to domestic entities unless they can be separated out into free-standing entities in the way required by New Zealand's 'outsourcing policy'. Otherwise the support could leak back to the parent. This issue is dealt with in Section 6.

There is a clear contrast between the ways in which the UK and the US have adopted elements of state ownership. The UK has followed the principle that if it must get involved then it should benefit from the upside as well as the downside. In its treatment of toxic assets discussed below it still faces largely downside exposure but in accepting shares as payment for the toxic assets it has managed to get some ability to benefit on the upside it the losses on toxic assets turn out to be trivial and hence the shares rise considerably in value. The US on the other hand has not opted for ownership but for assistance as in the case of AIG, or indeed Citigroup and Bear Stearns. One consequence is that banks have rapidly exited public support programmes where these imposed controls on their behaviour and have switched to private sector finance. It is thus not at all clear how much of the upside is going to benefit the US taxpayer.

While the UK is unlikely to earn much from its nationalisation of Northern Rock and Bradford and Bingley even if they turn out well, with its investment in RBS and Lloyds amounting to 5.5% of GDP it stands an important chance of earning an excellent payoff for the taxpayer. Bank shares had fallen by over half from the beginning of 2008 by the time of their acquisition and hence the scope for recovery is considerable. Similar gains were made by Norway and Sweden in the Nordic crises.

3.4.3 Special Resolution Regime

Of all the areas in which there seems to be consensus it is that a special regime is needed to resolve banks and that this needs to cut in early while banks still have positive net worth. The special regime has worked even with very large banks in the US. WaMu was the largest example that had to be acted upon, although the process had already started for Wachovia, which was eventually sold to Wells Fargo without assistance.

The only people who are likely to be disadvantaged in this approach are the shareholders if they feel that the rapid deals done in resolution undervalue the enterprise. And indeed they have in some cases sued the FDIC. In the US case a second group could also be disadvantaged namely the other junior creditors. By imposing depositor preference and seeking to minimise its own losses the FDIC has moved away from the idea that a resolution should treat creditors in a similar way that they are treated in an ordinary insolvency only that the outcome should be better as the value of the failed bank is likely to be larger if it is resolved earlier than insolvency. If the deposit insurer remains a junior creditor as appears to be the case in the UK then this symmetry is maintained.

However, in the UK case the authorities do not have the other requirement namely that they minimise losses to the deposit insurer. Not only is the UK insurer the FSCS a passive participant that pays out on the say of the FSA but the FSA has no requirement to minimise the loss, although the cost to the taxpayer is something it should bear in mind. Since the FSCS is financed by the private sector, viz the member banks, this seems a slightly strange arrangement as having a duty to minimise the cost to the FSCS would only seem fair since the contributions are not voluntary.

3.4.4 Toxic Assets

Valuation has proved the most difficult issue in trying to handle problem banks. In the US it has meant that the TARP programme has not functioned as intended and it has not been possible to purchase assets at what can be adjudged a fair price. A revision to accounting practice seems likely, both to get away from the artificially low prices that can apply in a recession or when markets fail to function normally and to ensure that there are fewer distortionary incentives to move assets off the trading book onto the banking book in a way that does not really reflect their use.

From the point of view of whether the bank is a going concern in this period, mark to market valuation is probably the most appropriate as this reflects the position in the reasonably short run. However, even this is disputable as a central bank providing liquidity support against assets that are unsaleable in markets that are effectively closed may well be providing a different basis for valuation. From the point of view of a takeover, the appropriate value is longer term as the acquirer can choose when to realize any assets and may well be prepared to hold many of them to maturity – the firesale element is no longer appropriate. However, valuation of impaired assets can only be indicative. The true value can only be known with the benefit of hindsight, as when an insolvency is worked through. In a private sector solution both parties are voluntary contractors. With public sector intervention compulsion is normally involved although it may well be that the bank applies for assistance because it cannot meet its obligations and shareholders may agree a write down in these circumstances.

A valuation of the assets and liabilities of the bank is needed simply for the public sector to decide what form of resolution works best, even if it does not ultimately decide to take over the bank from the shareholders and hence pay appropriate compensation. In a well organized failure it has been possible to organize an auction of the assets beforehand, which at least gives a valuation of a form from a number of sources according to what potential buyer is prepared to bid. If the failure is rapid then there is less to go on and the valuation will be summary in nature. In these circumstances it is normal for bidders to insist on some form of get out clause if the problems turn out to be much worse than thought at the time of the agreement.

One would expect the government to be conservative for a number of reasons. First it allows the transaction to be completed in one go and reduces the chance that supplementary payments or losses are encountered. Second if shareholders are paid too little it will always be possible to pay them out from the accrued funds without drawing further on the taxpayer. Lastly, if the valuation is conservative it will tend to mean that recapitalization is somewhat more generous, which will help in repairing the standing and creditworthiness of the bank.

A fairly rapid determination of what if anything is to be paid to the shareholders should clearly be made but there is no need for this to be final. What has to be final is the transfer to public ownership, irrespective of any valuation of the shares. If this was a liquidation then it is possible to review at a series of dates and make an interim payment, with the last payment being made at the end of the process. However, liquidation is normally a unidirectional process, with payments only as assets are realized. With compensation to shareholders it is not immediately clear to what extent if any they should participate in the recovery of the bank. Moen (2004) offers estimates of the return to the Norwegian government and Norges Bank in both 1995 and 2001 from their intervention in the banking crisis. The individual investments have quite quickly established their character, either remaining negative and if anything mounting in cost as the years have gone past or turned from loss into profit, with profits rising.

If the issue is not closed fairly rapidly this offers an opportunity for a continuing debate only in the cases where the public sector investment pays off, thus giving an asymmetric outcome for the investment as a portfolio. This argues in favour of the UK style of rapid determination of the extent of compensation. Judicial review is of course always possible if a prima facie case can be made that the shareholders (or indeed junior creditors) have not been treated fairly. We can expect in the case of the Icelandic bank failures in the present crisis that such a review will be required as claimants have not all been treated equally. Nevertheless, the position of shareholders and creditors is not worsened with respect to their treatment under an insolvency when they have to wait for final payment if any until all the assets have been sold at the best available price.

4. The case for early intervention

Opinion is rather divided on the subject of the nature of triggers for early intervention in banks. It has been very obvious that where the authorities have managed to start to deal with a problem early that they have managed to come up with more organised solutions. Thus in the UK the handling of Northern Rock, where intervention started much too late by the FSA's own admission and that of Bradford and Bingley where there was an ordered route to failure and resolution form an obvious illustration. The problem with early intervention however is that it is not possible to come up with incontrovertible signs. Some cases will inevitably be missed while other potential problems will be identified which turn out not to be problematic after the event. Where a bank is wrongly diagnosed it will not be enthusiastic about paying the fees for enhanced supervision. There is thus a possibility for bias among supervisory authorities towards not intervening soon enough. Thus, while additional triggers for early intervention will tend to be soft they will need to be backed up by incentives for the authorities to act on them.

Although not part of the sample it is worth quoting the early warning conditions applied by Canada, where the supervisor, the Office of the Superintendent of Financial Institutions (OSFI) is responsible for the classification and the deposit insurer, the CDIC, is responsible for deciding upon the remedial measures. Like the case of the US, the CDIC and the OSFI operate a five stage procedure in moving progressively towards the resolution of a bank with problems, where the first category represents 'normal activities' or 'no significant problems'.

The early warning stage is described as follows in the 'Guide to Intervention for Federally Regulated Deposit-Taking Institutions':

> The following conditions could lead to OSFI categorizing an institution as Stage 1:
>
> • the combination of the institution's overall net risk and its capital and earnings compromises the institution's resilience.
>
> • the institution has issues in its risk management or has control deficiencies that although not serious enough to present a threat to financial viability or solvency could deteriorate into more serious problems if not addressed.

This is thus a suspicion based on describable evidence but not a simple quantitative rule as in the US. However, as described above the purpose of the quantitative rules in the US, based on capital ratios, is to act as a backstop and ensure action whereas it is to be expected that the authorities will already be concerned above such quantitative ratios.

It would be extraordinarily difficult to harmonize soft triggers across countries or indeed to get different groups of people to come up with exactly the same conclusions from the same evidence. But this is not particularly important for this first trigger that results in more intensive supervision and investigation to determine whether there is a problem and, if there is, how serious it may be. In the case of Northern Rock, for example, a decision-maker without access to supervisory information could have detected a problem simply from the behaviour of the share price, augmented by financial market gossip, some of which was reflected in the media. If one took a version of the Norwegian arrangements discussed above, a fall in share price by over 25%, particularly compared to much of the rest of the industry might be a prima facie case for closer supervision and in the Norwegian case for requiring an audit.[49]

The other trigger which is of crucial importance is the one that triggers the implementation of the resolution regime. Here again the US stands out as having a 'bright line' criterion of the leverage ratio, something that it is less easy to manipulate. Other countries tend not to have such a hard and fast rule but the key feature of the US system that is replicated elsewhere is that it should not be necessary to show simply that the bank is unable to meet its obligations, although of course that would naturally be a criterion. Banks can continue to operate and sell off assets at a discount after they have passed the point of their assets covering their liabilities thereby exacerbating the losses to creditors and depositors (or the deposit insurer when it succeeds to the insured depositors' claims). Thus most countries tend to have either a forward-looking criterion or an assets versus liabilities criterion as is normal in insolvency law.[50]

For any such closure rule to work effectively all of the work necessary to effect an orderly resolution needs to have taken place beforehand. Thus, the early warning trigger needs to operate early enough that the position can be evaluated before serious action is needed. After this, there needs to be enough time both to try all the reasonable routes for recapitalization through the private sector and to prepare for resolution should the private sector solution fail. To some extent these latter two can take place in parallel but attempting to find purchasers while at the same time trying to find another service provider who will be willing to take on the deposits of the troubled bank may well interfere with each other. The Bradford and Bingley experience suggests that a couple of months is necessary for orderly closure. Organizing a sale is similarly likely to take a while if there is to be any attempt at due diligence – all this after the period of ascertaining whether there is a problem and its extent in the first place. One of the sources of delay is the need to get shareholders to agree solutions up to the point that the authorities take over from them and enforce a solution. It may be necessary/helpful for the authorities to be able to insist that such meetings are convened rather more rapidly than is normal or indeed for them to be called before the full nature of the proposal is clear.

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[49] There are clearly some other issues to consider here as the decline would need to be sustained otherwise attempts at short-selling could manipulate the market so as to tip banks into this intensive supervision phase.

50 In the Norwegian case the phraseology is 'an institution's assets and incomes combined are not sufficient to meet its liabilities in full.

Such a progressive procedure therefore only works for banks that are declining slowly. Handling a more rapid process would require extensive prepositioning, certainly extending as far as a living will.

Any detailed requirements for the process of increasingly vigorous attempts to find a solution and increasing restrictions on what the bank can do as it declines are of less importance than the achievement of early starting points and prompt closure points before the losses mount. However a clear process of progressive prompt corrective action, whether with quantitative definitions as in the US or qualitative ones as in Canada, will help improve the incentives to find a solution.

5. The way forward

The experience of the present crisis has emphasised that however well it has been thought out and tested, the drawbacks in a bank resolution regime will only become apparent when it is being used in practice. This means that the range of powers available to a resolution agency need to be wide to cover unforeseen eventualities and that the process of obtaining new powers through parliament in an emergency must be swift. The new Special Resolution Regime in the UK that was developed over 18 months provides a good illustration. The fact that the FDIC has been able to resolve 123 banks between the beginning of 2008 and the beginning of October 2009 using the SRR set out in FDICIA shows the success of this system, especially since one, WaMu, with some $300bn in assets was the sixth largest bank in the country. (This is in stark contrast to the difficulties in resolving institutions such as investment banks, insurance companies and the federal housing enterprise organisations that fell outside the SRR.)

The present crisis will have generated a lot of willingness to devote more resources to the avoidance of future crises. However, as long as the financial system is given the ability to take on risk, which it needs to undertake its role of intermediation, the chance of future crises will always exist. Hence adequate effort has to be put in to ensuring that the safety net and the process of crisis management and resolution is always in good order and ready to operate immediately should the need arise. This entails a level of provisioning and pre-positioning not widely seen outside North America. In a small country these provisions do not need to be extensive or costly but they must exist and be fully operational.

Three main ingredients are necessary:

1. appropriate institutions with clear mutually consistent objectives and incentives to achieve them
2. enabling legislation to ensure early intervention and resolution of problems before the value of banks is totally eroded
3. a full tool kit so that any action required can be put into place rapidly without the need for new legislation

5.2.Appropriate Institutions

The institutions required in this framework relate first to normal times when problems need to be identified early and potential risks addressed: these have three aspects:

- macroprudential oversight and action to maintain financial stability
- microprudential supervision
- high-level coordination among the three main parties (central bank, supervisor and government (ministry of finance)

There seems to be widespread acceptance that the first of these should be some identifiable part of the central bank – led for example by the deputy governor – but in the EU case they seem to want a large scale committee because of the number of countries involved, which will be less workable. Since there is a potential conflict of interest between the objectives of monetary policy and those of financial stability it is important that the requirements of the two objectives should remain clear and set out before the conflict is resolved by the highest policy authority in the central bank, at which stage the compromise needs to be explained. At present there is a shortage of instruments available to the central bank to achieve financial stability so the chance of a conflict is increased.

In troubled times:

- someone needs to be responsible for resolution

but this agency needs to exist all the time as most of its work will be preparatory. It needs to put in place all the mechanisms for each bank such that it can be resolved rapidly when the time comes. If this is not an agency separate from the supervisor there is an incentive problem as to some extent problems may be viewed as a supervisory failure.

This agency must have a clear objective – minimizing losses to the deposit insurer for example – unless this is overridden by systemic concerns. In which case the override should be explicit. Otherwise there is a danger that practice will not be clear to those involved and incentives will be blurred increasing the potential cost. There is also a concern here about who should pay if the cost to the deposit insurer is increased. The reaction in the UK is that where this is an individual bank which is systemically important, this possibility should have been covered by a higher premium on the bank itself. Where it is a system-wide problem for a range of banks that are not individually systemically important the answer is more difficult and would reflect a judgement on whether this was a collective problem in the banking industry or outside it. In the latter case a cost to the taxpayer.

In the US and Canada the Deposit Insurer fulfils the role of being the resolution agency. In New Zealand everything is combined in the central bank. In the UK much of the role is to be undertaken by the Bank of England but the early stages remain with the FSA. The Canadian arrangement looks the neatest. The CDIC has a staff of around 60. It is not a supervisor but can request information from the supervisor and require on-site inspections and heightened supervision. In a small country it may be unrealistic to assign the deposit insurer such powers and a UK-style arrangement may well appeal.[51]

The biggest problem lies with systemically important banks, i.e. banks where some of their functions, particularly their normal banking business must operate without a break if financial stability is to be maintained. This may require a change to current structures and certainly poses a problem for cross-border banks. The idea of 'shelf-insolvency' or a 'living will' to use the words of Mervyn King seems appropriate here. Simplification of structures and divestiture in the most complex cases may be required.

- the deposit insurer needs to be able to pay out without a material break in the access to funds for depositors

This entails substantial prepositioning.[52] If the deposit insurer is the resolution agency then this is all done at one time as in Canada, if it is separate then two lines of preparedness are required.

- a high level group is required to oversee the process

Suggestions vary as to whether this should be the same group that meets under normal times. There is a danger of the process being treated as routine if it is dominated by normal times.

5.2 Enabling legislation.

The Banking Act 2009 in the UK both illustrates what is required and offers a good template for powers. However, it lacks two characteristics. The first is a clear mechanism that appears incentive compatible for triggering the early warning stage whether with respect to individual institutions or

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[51] There are two obvious reasons. The first is simply that much of the work of such an agency is purely preparatory – everyone hopes it will rarely have to perform resolutions. Being part of a larger organization will make it possible to be much more flexible in the use of resources. The second is that the organization needs to be powerful. There are major vested interests at stake in a resolution and the authority will be assigning losses, which will never be a popular task.

52 As noted above this has considerable implications for the form of a resolution. A simple payout is likely for only the smallest of banks. The computer systems and the means of accessing the accounts in the failing bank will need to be available to whoever is going to do the payout. This suggests either a merger and acquisition or a purchase and assumption in the case of all but the larger banks, where some bridging arrangement may be required.

the economy as a whole. The triggering is to come from the FSA. That may be the only organization that is adequately informed.[53] The second and related point is that there is no mechanism of prompt corrective action. The trigger points are not stated and there is no requirement for particular actions or indeed permission for them and no timetable as to how fast they should take place. Given the temptations for forbearance something stronger seems required here. That said most countries seem reluctant to adopt these constraints. In many respects this reinforces their importance as those who are reluctant are those who would be pushed to act.

5.3 The toolkit.

It seems clear that again the UK Banking Act 2009 has listed much of the requirement by being general. On the one hand it is necessary to be able to create the required legal forms:

- purchase and assumption – i.e. transfer of all or part of a troubled bank to another institution or institutions
- creation of bridge banks under public control when the problem cannot be sorted out fast enough and operations must be kept going either for financial stability or least cost resolution – again for all or parts of the institution
- nationalization – as a last resort

Secondly it is necessary to have all the powers to transfer securities, assets, property etc. and to have sufficient prepositioning to make this possible in the time available.

An interesting question to address here is that it is clearly essential to be able to write down or wipe out shareholders against an independent valuation in a manner where the decision cannot be challenged in the courts but of course the precise valuation can. In Norway it appears to be possible to go further than this and write down junior debtors. This makes an important difference to the meaning of Tier 1 and Tier 2 capital. Normally only Tier 1 capital can be used up in a resolution and using up Tier 2 capital involves closure. If this Norwegian arrangement can be exercised without triggering close out clauses then this is a very important addition to normal procedures.[54] This approach forms the basis of the proposal by the Squam Lake Working Group on Financial Regulation (2009) which suggests that banks should be required to issue some of their long term financing in the form of hybrid capital that can be converted into equity in the event of a crisis. Thus recapitalization could be immediate. Obviously such bonds will be more expensive than traditional bonds as the exercise of this option would move the bondholder from being a senior to being the most junior claimant on the bank. This does, however, have the advantage over some of the ideas for contingent capital (Rajan, 2009, for example) as the investment has already been made. The bondholder does not need to contribute any new capital.[55] Bridge banks in the US are not capitalized by the FDIC, the guarantee by the FDIC of all new claims stands in lieu of such capitalization until such time as the bank can be sold.

Guidelines should be issued for banks on how the resolution and pre-resolution tools will be used so they know what to expect (CDIC in Canada provides a good example).

An essential element for any resolution system to work well is time. While it has to be able to cope with the sudden crises that emerge, as with fraud, when both the bank management and the

[53] In the US the FDIC has the information itself from its supervisory powers. In Canada the CDIC believes it can obtain sufficient information from external surveillance and its close links with the OSFI.

[54] In New Zealand recapitalization can be achieved directly in the writing down process by writing down the claimants beyond the point of equality of assets and liabilities in a more extensive debt for equity swap. While others have not adopted this, taking the issue of having extensive hybrid capital or contingent capital such that such a recapitalization can be achieved has considerable appeal to it.

[55] The Squam Lake Group go on to suggest that there need to be two triggers for the exercise of such an option, viz. that the authorities should declare that there is a crisis and that the bank in question should breach its regulatory capital requirements. Clearly the second is needed, but it is not immediately clear that this option should not be exercisable at any time should the bank get into difficulty. It needs to judged against the other options being suggested for increasing banks capital requirements. One is simply that they should hold more equity. Hybrid capital may be less costly than this.

authorities suddenly find out about a massive loss that has to be dealt with immediately, most problems emerge over a period of time and hence a system that offers a window of two to three months for resolution is likely to be adequate, provided the width is created by an early start not delayed failure.

7.4 The valuation of assets

It is noticeable in the efficient resolution system in the US that problem assets frequently get left out of the purchase/transfer and remain for eventual realisation in the insolvency. In a sense this is partly a self-solving problem. If due diligence reveals enough for both the buyer and the seller (the authorities) to agree on a price then the toxic assets can be taken into the good bank. If it does not then they remain in the residual (bad) bank. Other schemes such as that intended in New Zealand imply conservative valuation based on imperfect information with recompense to those who have thereby lost out when the final values are revealed on sale. The deposit insurer will always retain exposure to the impaired assets if they cannot be sold but this avoids exposure to the taxpayer.

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