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Making Bank Resolution Credible

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Abstract

Financial difficulties at large financial institutions present governments and regulators with an unenviable dilemma. On the one hand, they are afraid to permit such a firm to enter 'ordinary' insolvency proceedings, lest this transmit financial shock to other, connected, institutions. Yet every voter can grasp the moral hazard problems and distributional inequity associated with government handouts for the financial sector. Consequently many jurisdictions have introduced, or are designing, 'special resolution' mechanisms for financial institutions. The first generation of such mechanisms were based on the US FDIC receivership regime. They focus on waiving property rights so as to effect a very rapid transfer of complex assets and short-term liabilities to a purchaser who will be able to stand behind those liabilities and thereby ensure stability. This model works well for small to medium sized domestic banks, but is insufficient to provide a credible alternative to bailouts for large, complex financial institutions. As a result, a series of new measures — which we have termed 'second generation' resolution mechanisms — have been developed. First, there has been a realization that the level of complexity is such that resolution ex post is impossible without careful planning by supervisors ex ante. Second, this planning process can be used not only to understand, but also to modify, the structure of complex financial institutions and their regulatory oversight so as to facilitate resolution should it be necessary. Third, the use of 'bail-in' or mandated debt to equity swaps provides a potentially very useful additional resolution tool when used in conjunction with such forward planning and oversight. Fourth, in the context of international financial institutions, coordination and allocation of responsibility amongst national regulators is an integral part of the planning process. The implications of this shift are clear. For the resolution of large complex financial institutions to be credible, it must be thought of as an integral part of the ongoing oversight of financial institutions by regulators, and not as simply a set of mechanisms that are kept for troubled times. Investment in regulatory capacity — recruitment and training to build human capital in the regulatory sector — is therefore crucial to ensuring the success of resolution.

Keywords: Bank resolution, bail-in, financial regulation, Lehman, financial crisis

JEL Classifications: G21, G28, G33, H12, H81, K23

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Making Bank Resolution Credible

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1. Introduction

The events of 2007-9 made frighteningly clear the fragility of even the largest financial institutions. Acute difficulties at large financial institutions present governments and regulators with an unenviable dilemma. On the one hand, they are afraid to permit such a firm to enter 'ordinary' insolvency proceedings, lest this transmit financial shock to other, connected, institutions. Such fears were given credence by the Lehman bankruptcy, which very nearly brought about the collapse of the global financial system. Yet the only alternative at the time was the *ad hoc* provision of public funds to 'bail out' troubled financial institutions; indeed it was in trying to avoid such an outcome that the US authorities permitted Lehman to fail. Nevertheless, after the Lehman bankruptcy governments saw themselves as having little alternative but to make such bailouts on a gargantuan scale. In the EU, these commitments peaked at nearly 40 per cent of GDP in 2009;[1] in the US at over 50 per cent in 2008 and in the UK at over 70 per cent in 2009.[2] Whilst most citizens do not understand the complexities of the financial system, every voter can grasp the moral hazard problems and distributional inequity associated with government handouts for the financial sector. One of the most urgent policy questions emerging from the crisis was therefore how to improve upon the tools available to resolve the distress of financial institutions. The goal is to ensure that such firms are able to be dealt with in a way that does not wreck the financial system without losses having to be shouldered entirely by the taxpayer.

An insolvency procedure takes time to identify and realise assets of the debtor firm, take account of debts owing, and pay creditors in accordance with their priorities. In the case of a failing

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[1] European Commission, Executive Summary of the Impact Assessment Accompanying Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC, SEC(2011) 1103 final, Brussels 28.9.2011, 2.

[2] Bank of England, *Financial Stability Report*, December 2009 No 26, 6.

financial institution, such delay can exacerbate systemic contagion. Consequently many policymakers and scholars advocated some form of 'special resolution' mechanism for financial firms.[3] The first generation of such procedures, which generally were based on the Federal Deposit Insurance Corporation (FDIC) receivership regime in the US, involve a waiver of creditors' ordinary property rights in order to complete the process extremely rapidly. 'Good' assets and depositors' claims are transferred to a purchaser literally overnight, and the 'bad' assets that remain in the rump entity are wound down gradually in a way that does not transmit a shock. Resolution regimes of this sort have now been introduced in the UK, Germany, and a number of other countries. Within the EU, national practices will shortly be regularised by a Directive on Bank Recovery and Resolution.[4]

Nevertheless, many commentators remain pessimistic about the ability of special resolution mechanisms based on a transfer of assets to scale up to deal with very large, or 'systemically important', financial institutions. There are three basic problems. The first is that it is necessary to find a buyer. For a large bank that is troubled, sheer size will make this will be a real challenge, especially as competitors may also be suffering liquidity difficulties. The second problem is that some form of external funding will be needed, whether as a sweetener to facilitate a sale, or—more likely—to fund continued operations under temporary control of public authorities until a buyer is eventually found. The challenge is to arrange the provision of this funding in such a way that there will be enough of it, but that it will not be a drain on the public purse. The third problem is the international scope of large banking operations. Property laws cannot be waived extra-territorially. Consequently, unless every jurisdiction in which the banking organisation operates has signed up to an equivalent resolution procedure and there is general agreement about how the costs of the process are to be shared, there is no guarantee that a coordinated outcome can in fact be achieved. A special resolution regime that fails to meet any of these challenges will not be credible, and policymakers will not have escaped the peril of *ad hoc* bailouts. Consequently the interference with the rule of law such asset transfer mechanisms entail is not, in the eyes of some scholars, justified.[5]

A second generation of initiatives has begun to emerge in response to these imperatives. First, there has been a growing realisation that resolution can be made more credible by measures taken *ex ante* to make it easier to restructure and/or divide up a complex financial institution should

[3] See eg, ER Morrison, 'Is the Bankruptcy Code an Adequate Mechanism for Resolving the Distress of Systemically Important Institutions?' (2010) 82 *Temple Law Review* 449.

[4] See Statement of Commissioner Barnier following agreement in ECOFIN on bank recovery and resolution, MEMO/13/601, 27 June 2013; Statement of Commissioner Barnier welcoming trilogue agreement on the framework for bank recovery and resolution, MEMO/13/1140, 12 December 2013.

[5] See eg, K Ayotte and DA Skeel, Jr., 'Bankruptcy or Bailouts' (2010) 35 *Journal of Corporation Law* 469.

problems emerge. The preparation of tailored 'rescue and resolution plans' is becoming part of the package of enhanced requirements that regulators are imposing on firms. Second, at the EU and G20 level there has been considerable attention paid to the need for international coordination. And third, a new generation of proposals for resolution regimes—popularly dubbed 'bail in' (as opposed to 'bail out')—focuses on changing the structure of a troubled institution's financial contracts, as opposed to the ownership of its assets. That is, they would effect a reorganisation, as opposed to a liquidation, of a troubled financial institution. This avoids the need to find a purchaser, and to the extent that the new capital comes from existing creditors, can also avoid the need for public funding. Together, these three initiatives offer the best possibility for credible resolution of a global financial institution: international coordination to identify a 'lead' regulator, which requires the institution to arrange its capital structure such that all contracts are made under the laws of its jurisdiction so as to simplify the execution of a 'bail-in' restructuring.

This paper describes these developments and identifies implications. It is structured as follows. Section 2 examines the rationale for special resolution regimes for financial institutions. Section 3 then describes and evaluates the implementation of such regimes in the UK and US, along with EU proposals. Section 4 explores how 'second generation' resolution regimes have responded to the limits of 'first generation' resolution regimes premised on a sale of assets, and explores more recent initiatives. Section 5 considers two particular issues, namely how resolution mechanisms are initiated ('triggered') and funded. Section 6 concludes.

2. Why Banks Are Different

(a) Contagion

The case for special provision for troubled financial institutions rests on the existence of negative externalities associated with their failure. That is, the failure of such a firm has a propensity to impose losses on the economy at large that are a multiple of the losses to the firm's investors. For example, the market capitalization of Lehman Bros, Inc. peaked in on January 29, 2007 at approximately $60 billion, and the sum of the peak capitalizations of all the 'crisis banks' in the US—those who either failed or required special assistance in order to survive,[6] was approximately $1.2

[6] The 'crisis banks' were those which failed, merged to avoid failure, or received special emergency assistance. They comprised Citigroup, AIG, Bank of America, Lehman Brothers, Bear Stearns, Merrill Lynch, Goldman Sachs, Morgan Stanley, Wachovia, and Washington Mutual. See Charles W. Calomiris & Richard J. Herring, How to Design a Contingent Convertible Debt Requirement (April 2011), available at. http://ssrn.com/abstract=1815406.

trillion.[7] These are large sums by any measure, yet the fallout from the crisis was much larger. Including the various stimulus programs, the US suffered *net* fiscal outlays during the 2008-9 financial year of approximately $5 trillion.[8] Despite these efforts, the US economy contracted by 3.5 percent in the immediately following year 2009, a fall equivalent to a further $9 trillion.[9] These US measures of course do not count the costs incurred elsewhere around the world.

The failure of a financial institution can trigger large social losses through a variety of channels. First, there is the possibility of *contagion* within the financial system. Many financial institutions are structurally fragile, because they rely on short-term financing to support long-term investments. For example, the basic business model of a commercial bank involves raising money from depositors (paradigmatically, households) and then lending it to businesses at a higher interest rate. This 'maturity transformation' means that there is a liquidity mismatch: depositors require liquidity, but the money is invested in illiquid loans. If too much liquidity is demanded by depositors, long-term assets must be liquidated in a way that is destructive of value. Of course institutions actively manage this mismatch, but they remain vulnerable to events that trigger a sudden decline in the value of their liquid assets or a sudden increase in demand for liquidity.

Financial institutions are also typically highly interconnected, meaning that problems at one can easily be transmitted to others. In the most literal sense, this occurs through direct connections between balance sheets, with the liabilities of one institution being assets of others that become devalued on its financial distress. Contagion can also be driven by correlation in investment strategies. Fire-sale liquidation of assets by a distressed institution depresses the value price of the assets and consequently affects other institutions' balance sheets. Furthermore, contagion can occur across the liabilities side of firms' balance sheets, where short-term funders (such as depositors) infer from the failure of financial institution A that financial institution B is also likely to face difficulties, consequently provoking a run on B. Such an inference could be drawn if either of the previous two mechanisms of contagion are present—that is, if B holds A's debt, or if B holds assets that A is liquidating. This means that the various mechanisms of contagion can compound each others' effects.

Contagion within the financial sector is particularly harmful because financial institutions collectively perform functions that are of pivotal importance to the 'real' economy. They not only

[7] See J Armour and JN Gordon, 'Systemic Harms and Shareholder Value', forthcoming (2014) *Journal of Legal Analysis.*

[8] J Schildbach, 'Direct Cost of the Financial Crisis', *Deutsche Bank Research*, May 14, 2010, 3-4.

[9] IMF, *World Economic Outlook 2011* (Washington, DC: 2011), 2.

make available credit to business, but also perform valuable screening and monitoring functions in relation to funded business projects.[10]

It is often said that large banks are so systemically important that they are 'too big to [be permitted to] fail'; that is, that the systemic havoc wreaked by their failure would dwarf the costs of any bailout that would be needed to avert the individual institution's failure. The foregoing discussion elucidates that what matters for systemic risk is not the size of a failing institution *per se*, but (i) the impact the institution's failure would have on other fragile financial institutions; and ultimately more significantly, (ii) the impact the failure of the set of affected institutions would have on the real economy.

(b) Bailouts and Bankruptcy

When a financial firm is in difficulties, then if its failure would have systemic consequences, the contagion effects described above make it rational for policymakers and regulators to want to step in to avert its failure. The anticipation of such a bailout, however, is likely to have harmful consequences: creditors of institutions that are 'too big to fail' will anticipate such insurance and consequently fail adequately to monitor such firms, with the result that the banks' risk-taking is under-priced.[11] This gives such banks incentives to take excessive risks, and firms that are not too big to fail have incentives to become so.[12] Moreover, *ex post*, it can lead to the weakening of sovereign balance sheets if the distressed firm is sufficiently large relative to national GDP.[13] Thus before and after crises, policymakers will foreswear such interventions on grounds of moral hazard,[14] but in the midst of a panic, their perspective will inevitably change. Economists refer to this as the problem of 'time inconsistency' on the part of policymakers.

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[10] BS Bernanke, 'Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression' (1983) 73 *American Economic Review* 257.

[11] GH Stern and RJ Feldman, *Too Big to Fail: The Hazards of Bank Bailouts* (Washington, DC: Brookings Institute Press, 2004), Ch 3.

[12] D Baker and T McArthur, 'The Value of the "Too Big to Fail" Big Bank Subsidy', *CEPR Issue Brief*, September 2009 (estimating interest rate spread between large and small banks to have been 0.29% prior to the bailout package in 2008, then widening to 0.78% thereafter).

[13] VV Acharya, I Dreschler and P Schnabl, 'A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk', NBER Working Paper 17136, June 2011.

[14] See House of Commons Treasury Committee, *The Run on the Rock: Fifth Report of Session 2007-08*, Vol II (Oral and Written Evidence), Ev 1 (comments of Mervin King, Governor of the Bank of England).

There is reason to believe that such problems of moral hazard may have been a real contributing cause of the crisis. Because of limited liability, shareholders in highly levered firms benefit from investments in risky assets. Risky assets pay higher returns in good states of the world, which the shareholders will enjoy, and the downside losses in bad states of the world will be someone else's problem. Ordinarily, such risk-taking would increase expected costs for creditors, by raising the probability of default. This in turn could be expected to increase the firm's cost of credit, making such an investment policy more unattractive to shareholders. But if creditors anticipate a full or partial state guarantee, they will underprice the true cost of credit, and shareholders will have incentives to want to increase both leverage and risk-taking. An event study well before the financial crisis reported that shareholders of financial firms declared by US regulators to be 'too big to fail' enjoyed positive abnormal returns, consistent with the foregoing account.[15] Moreover, an emerging body of empirical literature on the financial crisis finds that the financial firms with governance structures that made them most accountable to shareholders (less CEO autonomy, more independent directors, greater shareholder rights, etc) were those that took the greatest risks *ex ante* and suffered the greatest losses *ex post*.[16]

Not only does the prospect of bailouts generate perverse incentives *ex ante*, but their operation *ex post* generates political outcry. Consequently they were very much a last resort: politicians were only willing to undertake them because they believed the alternatives to be worse. It is worth reflecting on why this was the case.

The only *ex post* alternative to a bailout in many cases was ordinary bankruptcy law. Most nations' bankruptcy laws include 'liquidation' and 'reorganization' procedures, which are, respectively intended to provide for an orderly winding-up and for a restructuring of a firm's debts or sale of its assets. However well they work for ordinary industrial firms, such procedures are unlikely to be appropriate for institutions that pose systemic risks.[17] First, bankruptcy procedures take *time* to complete. A payout is not usually made to creditors until it is determined how much

[15] M O'Hara and W Shaw, 'Deposit Insurance and Wealth Effects: The Value of Being "Too Big to Fail"' (1998) 45 *Journal of Finance* 1587.

[16] A Beltratti and R Stulz, 'The Credit Crisis Around the Globe: Why Did Some Banks Perform Better?', (2012) 105 *Journal of Financial Economics* 1; DH Erkens, M Hing and P Matos, 'Corporate Governance in the 2007-2008 Financial Crisis: Evidence from Financial Institutions Worldwide', (2012) 18 *Journal of Corporate Finance* 389; D Ferreira, D Kershaw, T Kirchmaier and EP Schuster, 'Shareholder Empowerment and Bank Bailouts', LSE Financial Markets Group Discussion Paper 714 (2012).

[17] See RR Bliss, 'Resolving Large Complex Financial Institutions', in GG Kaufman (ed.), *Market Discipline in Banking: Theory and Evidence* (Elsevier, Oxford: 2003), 3, 10-12.

money will be available to do so. Consequently creditors must bear liquidity risk associated with delay in the proceedings, even if funds are eventually paid. Second, wholesale liquidation of a financial firm's assets can depress the value of these assets generally, harming the balance sheets of any other firm also holding those assets. Third, speculation about where losses will fall during the period before final accounts are prepared can lead to runs by creditors of institutions who are believed to be exposed to the failed bank.

Given the manifest problems of bailouts, a central goal of policymakers since the crisis has therefore been to design resolution mechanisms in a way that mitigates the transmission of contagion more effectively than ordinary bankruptcy, but is less costly than bailouts with discretionary public funds. We now turn to consider the mechanisms that have so far emerged.

3. First-Generation Resolution Mechanisms

For expository purposes, we can divide resolution mechanisms into 'first-generation' and 'second-generation', according to whether their conception pre-dates or post-dates the financial crisis. The first-generation mechanisms take as their model the US FDIC receivership regime, which has been in operation since the 1930s. During and immediately after the financial crisis, this model was rapidly adopted by a number of other countries.

(a) The Model: FDIC Receivership

The US bank receivership regime, administered by the Federal Deposit Insurance Corporation ('FDIC'),[18] was originally introduced as a corollary of the FDIC's bank deposit guarantee scheme. Deposit insurance in the US was actually introduced to protect the welfare of consumer depositors,[19] although many argue it had the serendipitous consequence of mitigating bank runs by reducing depositors' urge to press for payment.[20] It also had the consequence of reducing depositors' incentives to monitor their banks' activities. By giving the FDIC the right to pursue depositors' claims against a troubled bank, the legislative scheme encouraged the insurer to monitor the banks instead. This makes a lot of sense, as the FDIC can overcome the coordination problems depositors would

[18] Federal Deposit Insurance Act (US) 1950, esp § 11, 12 USC § 1821.

[19] C Calomiris and EN White, 'The Origins of Federal Deposit Insurance', in CG Goldin and GD Libecap (eds), *The Regulated Economy: A Historical Approach to Political Economy* (University of Chicago Press, Chicago, IL: 1994), 145.

[20] D Diamond and PH Dybvig, 'Bank Runs, Deposit Insurance, and Liquidity' (1983) 91 *Journal of Political Economy* 401.

face in monitoring. Consequently, the FDIC's deposit insurance fund has a preferential claim against the assets of any bank in respect of which it makes payouts. Moreover, and importantly for our purposes, the FDIC also has powers to step in as receiver of a failing bank.

Conceptually the simplest case is for the FDIC, acting as receiver, to step in and arrange for the liquidation of the assets of a troubled bank.[21] Insured depositors are paid from the FDIC's insurance fund and so suffer no loss. Meanwhile, as the FDIC does not have a need for early liquidity, it can sell the troubled bank's assets at a considered pace so as to avoid fire sale contagion.

However the FDIC if possible prefers a second type of outcome, whereby it arranges for a purchase of the assets *and* assumption of deposits by a transferee bank.[22] Such a 'purchase and assumption' obviates the need for depositors to seek payment from the insurance fund, as their claims become solid once more. After the sale, the FDIC oversees the payment of non-depositor creditors out of the purchase price received.[23] Here, the differences from ordinary bankruptcy are twofold: the assets are sold more rapidly, and liabilities are transferred as well. An overnight transfer is made possible by the sweeping powers given to the FDIC in a bank receivership, which permit waiver of the ordinary property rights of the bank and its creditors. Where there are doubts about the quality of some of the assets, it becomes necessary to effect partial transfers, whereby the purchaser takes only 'good' assets, leaving 'toxic' assets behind. The rump entity is then subjected to an orderly wind-down over a period of time.

A third possible outcome, known as a 'bridge bank', is a compromise between the first two.[24] This is used if an immediate sale cannot be agreed, but a sale of the troubled bank's business as a whole may be effected at some point in the future. The FDIC transfers the business to a new 'bridge bank', which is owned and operated by the FDIC itself. Depositors who want immediate repayment are paid; the claims of those remaining are guaranteed by the FDIC. In due course, the business is sold to a private sector purchaser—or if none emerges, liquidated.

(b) The UK's Special Resolution Regime and EU Developments

In the aftermath of the failure of Northern Rock plc in 2007, the UK adopted a range of new provisions for dealing with the distress of financial institutions. At the core of these was the Banking

[21] Federal Deposit Insurance Act (US) 1950, §§ 11(d)(2)(E),(f),(g).

[22] *Ibid*, § 11(d)(2)(G).

[23] See RL Bennett and H Unal, 'The Effects of Resolution-Method Choice on Resolution Costs in Bank Failures', FDIC Working Paper, July 2009.

[24] Federal Deposit Insurance Act (US) 1950, § 11(m).

Act 2009, which introduced a 'Special Resolution Regime' (SRR) for banks, modelled quite closely on FDIC receivership.[25] It is worth describing this in some detail as the way in which the SRR is implemented under the UK legislation has subsequently been followed in the EU's proposals for bank resolution.[26]

At the core of the SRR is a series of mechanisms for waiving ordinary property rights to effect a transfer of the troubled firm (or its assets and liabilities), in return for a payment of compensation. The relevant mechanisms, exercisable through Parliamentary Orders, can effect transfers either of shares in the troubled bank,[27] or of property: that is, some or all of the troubled bank's assets (including those subject to security interests) and liabilities (e.g. deposits).[28] In each case, the transfer may be to a private purchaser or to public ownership. In the case of a transfer of property, a shift to public ownership is effected via a transfer to a bridge bank—a new entity owned and operated by the Bank of England on a temporary basis with a view to its subsequently being sold to a private purchaser.

The Banking Act invokes sweeping disapplications of ordinary property law so as to bring about property transfers by operation of law. Thus section 34(4) of the Act provides that, "[a property] transfer takes effect despite any restriction arising by virtue of contract or legislation or in any other way."[29] The powers extend to waiving contractual termination provisions, and to imposing obligations on the transferor entity in relation to the transferee post-transfer. What is more, the legislation also contains a so-called "Henry VIII" clause, permitting for any other laws (apart from the

[25] Northern Rock itself was resolved using emergency legislation, the Banking (Special Provisions) Act 2008, upon which the Banking Act 2009 builds.

[26] European Council, Proposal for a Directive of the European Parliament and of the Council establishing a framework for the recovery and resolution of credit institutions and investment firms ('Proposed Recovery and Resolution Directive'), 2012/0150 (COD), Brussels, 28 June 2013; European Commission, Proposal for a Regulation of the European Parliament and of the Council establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Bank Resolution Fund ('Proposed SRM Regulation'), 2013/0253 (COD), Brussels, 10.07.2013.

[27] Banking Act 2009 (UK), ss 14-32. Provisions of this kind were first introduced by the Banking (Special Provisions) Act 2008 s 3, 5.

[28] Banking Act 2009 (UK), ss 33-48.

[29] Whilst the Act purports to grant extraterritorial effect to such transfers, clearly this may not be recognised by the courts of other jurisdictions as regards assets within their territory. The Act consequently obliges parties to the transfer to take any necessary steps to ensure that the transfer is effective as a matter of foreign law.

Act and associated secondary legislation) to be amended as necessary—even retrospectively—so as to give effect to the purposes of the Act.[30]

Pre-transfer owners are granted rights to compensation. The simplest of these are orders for a stipulated payment of money (a 'compensation scheme order') to the troubled bank or its shareholders, in the case of property or share transfers respectively.[31] The value of the compensation is determined by an independent valuer,[32] who must in arriving at a quantum assume no state support for the troubled bank. Alternatively, where the assets are transferred either into temporary public ownership, or to a bridge bank, an order may be made giving the transferor an interest in the ultimate consideration obtained from the sale of the assets (a 'resolution fund order'). Where a property transfer is effected, the compensation will be payable to the troubled bank. That entity will then be placed in liquidation to provide for the payment of its creditors in order of priority. If the transfer is only partial—that is, some but not all assets and liabilities are transferred—then unsecured creditors in the remaining entity must receive at least as much as they would have obtained in its liquidation, assuming no financial assistance had been provided to the failing bank by the authorities. Moreover, a so-called 'third party compensation order' must be made in favour of any third party whose property rights were affected by the transfer—for example, secured creditors whose collateral is transferred but whose claims remain against the transferor.[33]

(c) Legality of waiver of property rights

The dramatic disruption of property rights entailed by the SRR raises the question whether it can be justified, consistently with constitutional guarantees.[34] Article 1 of the First Protocol to the European Convention on Human Rights, incorporated into English law by the Human Rights Act 1998, provides that no person (legal or natural) shall be "deprived of his possessions except in the public interest and subject to the conditions provided for by law...". Many other constitutions contain similar restrictions on governmental takings. A group of former Northern Rock shareholders challenged the

[30] Banking Act 2009 (UK), s 75.

[31] *Ibid,* s 49(2), 50-52. Compensation may be paid either by a private sector recipient of assets, or by the Treasury, or by the FSCS (*ibid,* s 61). It is to be expected that the transferee will ordinarily be liable to pay the compensation, by way of purchase price.

[32] Independent' in the sense that they are not directly appointed by the authorities; rather the Treasury appoints the *person who appoints* the valuer: *ibid*, s 54(2).

[33] Banking Act 2009 (UK) ss 49(3), 59-60.

[34] See generally, E Hüpkes, 'Special Bank Resolution and Shareholders' Rights: Balancing Competing Interests' (2009) 17 *Journal of Financial Regulation and Compliance* 277.

compulsory acquisition of their shares by the UK government in February 2008 under the Banking (Special Provisions) Act 2008, emergency legislation which was the partial predecessor of the Banking Act 2009.[35] They argued that the government had violated their Convention rights because they had received inadequate compensation, making the expropriation disproportionate relative to the public benefit it achieved.[36] Specifically, the statutory formula—repeated in the Banking Act 2009—required the shares to be valued on the basis that no government support had been provided. Without liquidity support from the Bank of England, Northern Rock would have had to close and sell its assets on a break-up basis, which the statutory valuer determined would have yielded the shareholders nothing once the firm's creditors and the costs of administration had been paid. However, the firm's assets, valued on a going concern basis, were worth more than its liabilities. On this basis, the shareholders argued that it was disproportionate for the government to mandate valuation on a basis that would treat them as worthless. The Court of Appeal rejected the shareholders' argument, pointing out that the intervention by the Treasury had not been for the benefit of the shareholders, but to secure the public interest. Concomitantly, the Treasury was bearing all of the risks associated with the enterprise going forwards, because no private sector buyer was willing to acquire the assets without government guarantees. Consequently there was no question that the valuation rule was outside the 'margin of appreciation' left to national governments over the determination of the proportionality of particular measures. The shareholders then applied to the European Court of Human Rights, which also decided against them on the basis that in matters of macro-economic policy, governments should be accorded a wide 'margin of appreciation'; especially so in order to combat systemic risk.[37] This is an important precedent because the EU's proposed resolution mechanisms will require all Member States to make available to supervisors a very similar set of resolution tools, with the same approach to valuation.[38]

(d) Financial Collateral and Termination Provisions

Paradoxically, given that the essence of the Northern Rock shareholders' complaint was that the government asserted excessive powers, a second legal difficulty with the waiver of property rights under the UK regime is that domestic governments lack *sufficient* power to effect a successful outcome. Despite the expansive framing of the powers to waive property rights granted by the Banking Act, domestic legislation is not capable of affecting rights protected by EC law. Under EC

[35] See generally, UKSA Action Group: Northern Rock, http://www.uksa.org.uk/action/northern_rock.

[36] *SRM Global Master Fund LP v The Comissioners of HM Treasury* [2009] EWCA Civ 788.

[37] *Grainger v UK,* ECtHR 10 July 2012 (Application No 34940/10).

[38] Proposed Recovery and Resolution Directive, Art 66; Proposed SRM Regulation, Art 17.

law, certain classes of claimant, namely those holding 'financial collateral arrangements', are entitled to protection from the application of insolvency laws or other impediments to the enforcement of their collateral.[39] The protected transactions include those involving a financial institution party whereby cash or securities are transferred by way of security, including under 'repos', and protected mechanisms of enforcement include close-out netting.[40] This permits counterparties to terminate existing positions readily on an event of default, and is intended to serve as a 'firebreak' to contagion following the failure of a financial institution.[41] Unfortunately, such protection poses a major impediment to successful resolution, as automatic termination provisions cannot be caught by the statutory waiver, causing the very rapid erosion of the troubled financial firm's goodwill.[42] Consequently, the European Commission's proposals for resolution powers will involve modifications to the Financial Collateral Directive, to permit a stay of enforcement and close-out netting provisions for at least 48 hours so as to allow resolution to occur.[43]

(e) Scope of application

The FDIC's receivership regime originally applied only to deposit-taking institutions, on the basis that these were the only institutions covered by the insurance fund. Lehman Brothers, being a pure investment bank, was therefore not eligible for the receivership regime. The Dodd-Frank Act of 2010 introduced an extended form of the receivership regime, which can be used to resolve non-bank entities designated as systemically risky. This has been done through the establishment of the new OLA (Orderly Liquidation Authority), which is in essence an extension of the FDIC's receivership powers to non-bank financial institutions designated by the new Financial Stability Oversight Council have as 'systemically risky' even though not deposit-taking. The Orderly Liquidation Authority contains very similar powers to those available to the FDIC under receivership and is handled by the FDIC.

The rationale for extending the OLA regime to non-bank institutions was that systemic risk is not limited to banks. In particular, nonbank financial institutions such as Lehman can transmit

[39] Directive 2002/47/EC on Financial Collateral Arrangements [2002] OJ L 168/43, as amended by Directive 2009/44/EC [2009] OJ L146/37.

[40] *Ibid*, Arts 2, 4.

[41] *Ibid*, Recital 17.

[42] M Roe, 'The Derivatives Market's Payment Priorities as Financial Crisis Accelerator' (2011) 63 *Stanford Law Review* 539.

[43] Proposed Recovery and Resolution Directive, Art 63.

contagion to deposit-taking banks,[44] and thence to the real economy. It may also be the case that the failure of an investment bank directly harms the real economy, harm in particular being suffered by their underwriting clients and derivatives counterparties.[45] Despite this, the UK's Banking Act 2009 initially applied the special resolution regime only to deposit-taking institutions. The Financial Services Act 2012 extended its reach to include large investment firms, central counterparties and firms in the same group as a failing bank.[46] Similarly, the EU's proposed resolution mechanisms will apply not just to credit institutions, but also to investment firms, financial institution subsidiaries, and holding companies.[47] A recent consultation exercise has explored the extension of similar powers to other systemically important financial institutions such as central counterparties, central securities depositaries and systemic insurance companies.[48]

(f) The Limits of First-Generation Resolution Mechanisms

The first-generation resolution mechanisms we have discussed can provide a viable mechanism for saving troubled banks. Indeed, over 4,600 deposit-taking institutions have been through the FDIC's receivership regime in the US since its inception in 1934.[49] However, there are strong reasons for thinking that even these powers are insufficient to deal with the failure of a large complex financial institution, of the type that has been dubbed 'too big to fail'. In short, the mechanisms available do not ensure the *credibility* of the resolution procedures. This means that, should an institution of this variety find itself in financial difficulties, policymakers equipped only with the tools of first-generation resolution mechanisms would not have any viable alternative to a bailout.

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[44] N Dumontaux and A Pop, 'Contagion Effects in the Aftermath of Lehman's collapse: evidence from the US financial services industry', Banque de France WP No 427, March 2013, (forthcoming *J. Financial Stability*), http://www.banque-france.fr/uploads/tx_bdfdocumentstravail/DT-427_03.pdf.

[45] CS Fernando, AD May and WM Megginson, 'The Value of Investment Banking Relationships: Evidence from the Collapse of Lehman Brothers' (2012) 67 *Journal of Finance* 235.

[46] Financial Services Act 2012 (UK), s 101. This provision has not yet been brought into force. It is envisaged that the regime's application to investment firms will be narrowed by secondary legislation to large firms (defined as those required to hold initial capital of €730,000 by the Capital Adequacy Directive), of which there are approximately 250 in the UK: HM Treasury, *Secondary Legislation for Non-Bank Resolution Regimes*, 26 September 2013, at [3.1], https://www.gov.uk/government/consultations/secondary-legislation-for-non-bank-resolution-regimes/secondary-legislation-for-non-bank-resolution-regimes.

[47] Proposed Recovery and Resolution Directive, Art 1; Proposed SRM Regulation, Art 2.

[48] European Commission, Consultation on a Possible Recovery and Resolution Framework for Financial Institutions other than Banks, Brussels, 5 October 2012.

[49] From 1934-2013, a total of 4,619 deposit-taking institutions have been through FDIC receivership: FDIC, Summary Report of Failures and Assistance Transactions, 1934-2013: http://www2.fdic.gov/hsob/.

Three problems in particular remain. First, despite the sweeping disapplication of ordinary property law rules regarding transfers, it is practically impossible to arrange for the transfer of the assets of a very large complex financial institution over the typical timescale of such procedures—'before the markets open on Monday'. This complexity is particularly acute where, as is likely, the transferee wishes to take some but not all of the troubled institution's assets, which must consequently be partitioned according to their preferred criterion.

Secondly, most large complex financial institutions operate across borders. This means that for resolution to succeed there must be coordination between those handling the process in each of the relevant jurisdictions.

Thirdly, the operation of a purchase and assumption transfer requires that a transferee be found with the financial resources to underwrite the liabilities that have been transferred. The bigger—and probably, more systemic—the firm that has been resolved, the more difficult it will be to find a suitable transferee. For example, Lloyds TSB Group plc acquired the distressed HBOS plc in October 2008, in a deal the scale of which was only possible with a special relaxation of competition rules by the UK government. However, the acquisition soon proved to be too much for Lloyds to swallow, itself requiring assistance from the UK government in early 2009.

The nature of these problems forms the impetus for what we may call 'second-generation' resolution mechanisms. These comprise those measures that have been conceived in response to the problems of the financial crisis, as opposed simply to being based on the FDIC receivership regime. We shall now to consider them.

4. Second-Generation Resolution Mechanisms

(a) Ex Ante Planning

A response to the challenge of complexity in resolving large financial institutions has been for supervisors to engage in dialogue with these institutions *ex ante* regarding how resolution might successfully be achieved *ex post*. This requires the preparation of detailed resolution *plans*—colloquially known as 'living wills'—setting out how, if an institution fails, its businesses can safely be continued within the framework of resolution. The idea is that, should a resolution process ever be initiated, those conducting it will have a roadmap of the necessary actions for them to carry out in the course of a short period of time.

The FSB and European policymakers distinguish between 'recovery' and 'resolution' plans.[50] *Recovery plans* are aimed at averting a potential failure of the firm: that is, they encompass strategies for ensuring the continued operation of the firm under circumstances of extreme stress. Such plans are made by financial firms and reviewed by the regulatory authorities. *Resolution plans*, by contrast, are about minimising the impact of the firm's failure on the rest of the financial system by facilitating the effective resolution by the authorities of a failed firm. These are to will be made by the authorities, on the basis of information required to be provided to them by the financial institutions.[51]

The UK provides a representative example of how such plans may be implemented.[52] The Financial Services Act 2010 requires bank supervisors (initially the FSA, now the PRA) to mandate the production by financial institutions of 'recovery and resolution plans'.[53] The requirement to produce recovery and resolution plans applies not only to deposit-taking institutions but also to investment firms deemed to be systemically significant. Each relevant firm is required to nominate an executive director who will have responsibility for the firm's recovery and resolution plans.

Recovery plans identify objective measures of financial stress, and a range of 'in extremis' options which the institution can pursue under these circumstances. These can include disposals of sections of the business, raising fresh equity capital, cancelling dividends and variable remuneration, debt-equity swaps and sale of the firm outright. They also must contain analysis of how the firm would make use of central bank facilities at such a time. Financial institutions required to produce recovery plans are expected to submit them to the authorities for review and also to be reviewed by the firm's board annually.

Resolution plans are made by the authorities, on the basis of extensive information provided by the financial institutions. These include details about group structure, interbank exposures, derivative positions and counterparties, and the like. Most crucially, institutions are also required to give a complete picture of the economic functions they perform in the UK, so that the authorities can assess which of these may be critical to UK financial stability. The core of the planning then consists of devising ways in which critical economic functions can be separated from non-critical

[50] FSB, *Effective Resolution of Systemically Important Financial Institutions: Consultative Document*, 19 July 2011, 53; FSA, *Recovery and Resolution Plans*, Consultation Paper 11/16, August 2011, 8-9.

[51] *Recovery and Resolution Plans*, *supra* note 52, 29-30.

[52] FSA, *Recovery and Resolution Plans*, Consultation Paper 11/16, August 2011.

[53] Financial Services Act 2010 (UK), s 7 (inserting new sections 139B-139F into the Financial Services and Markets Act 2000).

aspects of the business, so as to minimise taxpayer support in any resolution. Firms are also expected to identify and eliminate barriers to resolution inherent in their business structure. For example, they must put in place provisions to ensure continuity of key service providers (e.g. IT) and employees, and to have a fund of liquid operational reserves to pay them for a short period post-insolvency.

Similarly, the EU's proposed Recovery and Resolution Directive provides for all firms to which it applies to be required to draw up recovery plans, and provide their supervisory authorities with such information as is necessary for the preparation of resolution plans.[54] However, Member States will have the option to exempt from some or all of these obligations those institutions the failure of which they do not consider to be systemically important. In contrast, the Dodd-Frank Act imposes similar requirements only on bank holding companies with total consolidated assets of more than $50bn, and nonbank financial companies which the Financial Stability Oversight Council designates as giving rise to systemic risk.[55]

The effective preparation of resolution plans requires supervisors to take a very active role in demanding and scrutinising information they are given by the firms. The more credible the prospect of resolution, the less likely a financial institution is to obtain a bailout. To the extent that the country in which they are based is able to afford a bailout, complex financial institutions with credible recovery and resolution plans are therefore likely to face a higher cost of debt finance than those which do not.[56] This gives firms in wealthy nations every incentive to drag their feet over the production of the necessary information for resolution plans.

Moreover, the successful execution of a resolution plan requires the other problems identified in section 3(f)—namely, international coordination and lack of potential purchasers—also to be resolved. As we shall see, these problems can also be mitigated by appropriate forward thinking, albeit at a higher level of generality. It is at this level that the FSB has urged supervisory

[54] Proposed Recovery and Resolution Directive, Arts 4-12. For firms to which the SRM will apply, national authorities will submit the information received as regards resolution plans to the SRM Board, who will be responsible for preparing the resolution plans: Proposed SRM Regulation, Art 7.

[55] Dodd-Frank Act (US) §165(d).

[56] This assumes that the institution is based in a country which has sufficient sovereign balance sheet resources to bail the firm out. To the extent that this is not the case, the firm may be expected to *reduce* its cost of credit by preparing credible recovery and resolution plans.

authorities to develop what come to be called 'resolution *strategies*'—frameworks for ensuring that generic problems do not derail a resolution.[57]

(b) Multinational Co-ordination of Supervision

Significant moves have been made toward the coordination of supervisory authorities as regards both the *ex ante* design of resolution plans and *ex post* execution of resolution. The FSB has encouraged countries to enter into cooperation agreements specific to systemically important financial institutions with multinational operations, specifying how in the event of crisis resolution authority will be allocated and exercised.[58] The appropriate delineation of such agreements of course depends on interaction with supervisory authorities and the nature of any living wills prepared by the organisation. An example is the EU's Recovery and Resolution Directive, which requires Member States to establish ground-level resolution colleges, responsible for information-gathering, assessment of resolution plans, and execution of any necessary resolution.[59]

Two general strategies may be employed in allocating resolution powers under such agreements. The first is what the US authorities term the 'Single Point of Entry' approach.[60] The core idea is that only the holding company of a complex financial institution enters the resolution process, and operating companies remain outside. This strategy would greatly reduce the complexity, and increase the chances of success, of a resolution attempt, especially if the firm is multinational. This is because operating companies in diverse jurisdictions would not need to be restructured, and so resolution powers need only be exercised in a single jurisdiction. Moreover, it greatly expedites any exercise of transfer powers: all that need be transferred from the parent company are shares in the operating companies.

For the Single Point of Entry strategy to work, it must be possible for any weaknesses in the balance sheets of operating companies to be addressed through intra-group financing from the parent company. In other words, the group's principal outside financing should be raised at the parent company level. This precondition is satisfied for many large US financial institutions, because of the bank holding company structure utilised as a legacy of the Glass-Steagall separation of

[57] FSB, *Effective Resolution, supra* note 50; FSB, *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Developing Effective Resolution Strategies*, 16 July 2013.

[58] *Ibid.*

[59] Proposed Recovery and Resolution Directive, Art 80.

[60] JR Wigand, Director, FDIC Office of Complex Financial Institutions, 'Improving Cross Border Resolution to Better Protect Taxpayers and the Economy', remarks to US Senate Subcommittee on National Security and International Trade and Finance, 15 May 2013.

commercial and investment banking. However, it could also be utilised elsewhere if supervisors required the group to be structured in this way as part of its resolution planning.[61]

The alternative approach is coming to be known as 'Multiple Point of Entry'.[62] As might be expected, it envisages multiple entities in different jurisdictions going into distinct national resolution procedures, each supervised by a different authority. The likely result is that the group is broken up into constituent parts. This approach would suit organisations for which it is determined that the internal recapitalisation necessary for the SPE approach would not work, or for which break-up is deemed appropriate.

Multinational coordination in Europe is likely to be greatly strengthened by the implementation of rapidly-maturing proposals concerning bank resolution. Their operation can be understood as two concentric circles. The outer circle comprises the proposed Recovery and Resolution Directive, which will require Member States to implement common rules regarding the powers available to authorities for bank resolution. In conjunction with colleges of supervisors, this will greatly increase the chances of successful common planning.

The inner circle is defined by the establishment of the Eurozone Banking Union. This will apply to all Eurozone countries, and to any non-Eurozone EU Member States who elect to opt in. Under the Banking Union, supervisory powers for all banks in relevant countries are to be transferred to a new Single Supervision Mechanism, for which the ECB will be the supervisor.[63] The ECB's supervision will be direct for banks having assets exceeding €30bn, or more than 20% of their home country's GDP, and delegated to national authorities for smaller banks. A new European Single Resolution Mechanism ('SRM') will also be established, [64] which will create a European-level Board and associated institutional architecture for resolution decision-making, along with a single set of rules governing resolution process and powers. The SRM Board will be responsible for executing resolution procedures in relation to banks directly supervised by the ECB, and national

[61] JN Gordon and WG Ringe, 'Banking Union Resolution without Deposit Guarantee: A Transatlantic Perspective on what it would Take', working paper, Columbia Law School / Copenhagen Business School, December 2013.

[62] FSB, *Recovery and Resolution Planning, supra* note 57.

[63] European Commission, Proposal for a Council Regulation conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions, COM (2012) 511 final, Brussels 12.09.2012; Michel Barnier, DG Markt, 'L'Union bancaire européenne : où en est-on?', speech in Plenary session of European Parliament, 12 September 2013.

[64] European Council, Council agrees general approach on Single Resolution Mechanism, 17602/13 PRESSE 564, 18 December 2013.

authorities will have delegated powers in respect of other banks. The content of the powers to be granted to the SRM track those to be made available to national authorities under the Recovery and Resolution Directive.

(c) Bail-in Tool

The difficulties with effecting a rapid transfer, and even more importantly, of finding a suitable purchaser, have lead European policymakers to advocate a new type of resolution mechanism, which has come to be known simply as 'bail in'.[65] The nomenclature emerged as a contrast to 'bail outs': the idea is that, rather than the state stepping in to make payments that save creditors from losses, the creditors should be expected to bear the losses themselves. In a sense, this is what any effective resolution mechanism should permit. However, the 'bail-in' powers are very different from the first-generation resolution mechanisms: they are, in effect, expedited *reorganisation* procedures, as opposed to liquidation procedures. That is, they envisage the same corporate entity remaining, but with a restructuring of the terms of its financing.

Just as the first-generation resolution tools seek to expedite the process of liquidating assets by waiving normal property laws, bail-in powers expedite the process of restructuring by waiving shareholders and creditors' ordinary contractual rights. In a normal restructuring, creditors have the right to vote on the terms of any new contracts. Bail-in powers provide for the restructuring of creditors' (and shareholders') rights without their consent *ex post*. The most commonly envisaged such restructuring would be a debt-equity swap, but other possibilities—such as a simple cancellation of equity or debt—also exist.

Just as the asset transfer powers achieve the same outcome as bankruptcy sales, save that interested parties' property rights are waived, a reorganisation achieved in this way would waive affected security holders' property rights. Instead of an entitlement to compensation, however, they would be given new (junior) claims against the troubled firm, in a compulsory debt-equity swap. Broadly speaking, there are two ways in which such a restructuring could be effected:

1. *Contractual trigger* ('contingent capital'): the terms of the relevant debt contracts provide that on the occurrence of a relevant event, the contractual terms will automatically transform.
2. *Regulatory trigger* ('bail-in'): regulators have the power to mandate the transformation of contractual terms, on the occurrence of certain specified events.

[65] See eg Proposed Recovery and Resolution Directive, Section 5; Financial Services (Banking Reform) Act 2013 (UK), s 17 and Sch 2.

The contractual trigger version clearly requires the creditors to consent *ex ante* to subject themselves to the possibility of transformation: in effect, they are buying *contingent capital* claims. Whilst a regulatory trigger may seem non-consensual, provided that the power for such a trigger to be exercised was in existence at the time that the debt was negotiated, creditors can still price in the expected effect of such a power on the value of their claims.[66]

The fact that creditors will price in the expected transformation of their debt has several significant implications. First, the more predictable the circumstances under which restructuring would be triggered, the easier it will be for creditors to price the debt. This will avoid any unnecessary adverse impact on the firm's cost of capital. However, great care must be taken in specifying triggers in order to avoid generating feedback problems. For example, if a conversion is triggered by loss of equity capital as measured by the market price, and is dilutive of shareholders, then the anticipation of conversion will itself cause the price to drop, which in turn will hasten conversion.[67] The possibility of such outcomes has the potential to exacerbate, rather than smooth, instability in periods where financial institutions are stressed.

A range of alternative triggers have been proposed in order to minimise the potential for feedback. Some have suggested triggers based on accounting measures—linked, for example, to impairment of regulatory capital, although these may respond too slowly to rapid declines in asset values to be of effective use.[68] A more promising possibility is to condition on a trailing average stock price, damping the effect of sudden swings.[69] Alternatively, pre-emptive rights for existing shareholders can be coupled with convertible debt in a way that also mitigates the problem. For example, if existing shareholders are offered the right to purchase the newly-created equity at the conversion price, this removes any incentive for speculative triggering.[70] Yet another suggestion is to

[66] No proposals seek to impose such a power on pre-existing debt contracts, which could raise issues in respect of the ECHR Article 1 Protocol 1.

[67] S Sundaresan and Z Wang, 'Design of Contingent Capital with Stock Price Trigger for Conversion', working paper Columbia University/FRBNY, April 2010.

[68] D Duffie, 'A Contractual Approach to Restructuring Financial Institutions', in G Schulz, K Scott and J Taylor (eds), *Ending Government Bailouts as We Know Them* (Washington, DC: Hoover Press, 2010), 109 at 114-5.

[69] CW Calomiris and RJ Herring, 'Why and How to Design a Contingent Convertible Debt Requirement', working paper Columbia Business School / Wharton School, April 2011, 25.

[70] G Pennacchi, T Vermaelen and CCP Wolff, 'Contingent Capital: The Case for COERCs', working paper University of Illinois / INSEAD / Luxembourg School of Finance, March 2011.

make the debt convertible at the option of the issuer (a so-called 'reverse convertible') at any point up to maturity.[71]

The lack of consensus over the desirable properties of pre-specified triggers has lead regulators generally to refrain from mandating the use of contractual triggers for recapitalisation. On the other hand, there has been general support amongst policymakers for recapitalisation mechanisms based on a regulatory trigger, or 'bail-in', as a desirable part of the resolution toolkit. These do not specify the trigger point in advance; rather they are intended to be used by regulators only *in extremis,* as part of the resolution toolkit. Given that first-generation resolution powers are already available, and that their exercise will result in uncertain losses for creditors, the reasoning is that the addition of a bail-in power will *enhance* certainty, relative to the existing first-generation type resolution powers, by making clearer how losses will lie in a resolution.[72]

Secondly, it is practically impossible to include very short-term debt in such a compulsory restructuring. To do so could lead to negative feedback loops whereby the prospect of recapitalisation becomes a self-fulfilling prophecy. Short-term creditors, fearful of being forced to convert, might either dramatically increase their 'haircuts' or simply refuse to roll over their claims.[73] The threat of a bail-in would then force the firm into failure at an earlier stage.

Thirdly, firms have an incentive to raise debt finance on terms that would be exempt from restructuring: this would reduce their cost of capital significantly. This could be done by using short term debt which, as explained, would need to be excluded from any bail-in, or by using debt raised in a jurisdiction which does not recognise the authority of the regulator to effect a transformation of the financial contracts.

These points all have the same implication: for bail-in to work, the firm's debt structure must be designed and monitored carefully by the regulator. That is, the amount of debt subject to bail-in, and the laws under which it is raised, should be subject to scrutiny by the firm's supervisors. This is really just the application of the idea of a 'living will' to restructurings. However, the sorts of issues that are implicated for supervision under it mean that it should be thought of as a conversation running in parallel with the supervision of the firm's capital adequacy requirements. In effect, the bail-in powers create a new form of regulatory capital.

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[71] P Bolton and F Samama, 'Contingent Capital and Long Term Investors: A Natural Match?', working paper, Columbia Business School, September 2010. On conversion, the issuer foregoes the option to convert at a potentially even more favourable price in the future, and consequently proponents argue this would encourage triggering only in times of severe financial difficulty.

[72] ICB, *Final Report*, *supra* note **Error! Bookmark not defined.**, 103.

[73] See G Gorton, *Slapped by the Invisible Hand*: *The Panic of 2007* (Oxford: OUP, 2010).

Provided such *ex ante* design and oversight can be achieved, bail-in also offers the possibility of reducing the problems of international coordination relative to first-generation resolution regimes. As no transfer of assets is required, the only need for regulatory coordination is over the triggering of the restructuring. This can be made more straightforward by requiring the firm to raise all the relevant debt in contracts governed by laws of jurisdictions which recognised the authority of the regulator to impose bail-ins.

European countries have lead the way with bail-in proposals. The idea is said to have originated with a large Swiss banking group, and modifications to Swiss banking legislation over 2011-13 have made possible the exercise of bail-in powers as a preferred resolution strategy for large complex financial institutions.[74] The EU's proposed Recovery and Resolution Directive and SRM Regulation contain powers for authorities to impose mandatory restructuring of shareholders' and creditors' claims. They will apply to all credit institutions and investment firms established in the EU (or within the Eurozone in the case of the SRM), along with their financial institution subsidiaries and financial holding companies. Very short-term and secured liabilities are excluded from bail-in, as are client money claims, the claims of employees, trade creditors and the tax authorities.[75] Equivalent powers were enacted in the UK ahead of the Directive's implementation, under the Financial Services (Banking Reform) Act 2013.[76]

The EU's proposals for resolution require supervisory authorities to ensure that relevant firms have sufficient 'bail-inable' debt available.[77] This comprises long-term debt which is not already counted as Tier 1 or 2 capital, which is free from any guarantees or self-funding by the firm and which is not associated with derivative transactions. Such liabilities must governed by the laws of jurisdictions which recognise the decision of a resolution authority to write down the debt. How much debt will be sufficient is a question that is left to be determined by the relevant supervisors—or in the case of Eurozone banks, the SRM Board—depending on the size, business model, and propensity for systemic risk of the firm in question. The European Commission reserves the option to harmonize these requirements by submitting a legislative proposal by the end of 2016; for Eurozone banks they will be harmonized in any event by the decision-making of the SRM Board.

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[74] FINMA, *Resolution of Globally Systemically Important Banks,* 7 August 2013, 3-4, http://www.finma.ch/e/finma/publikationen/Documents/pos-sanierung-abwicklung-20130807-e.pdf.

[75] Proposed Recovery and Resolution Directive, Art 38; Proposed SRM Regulation, Art 24(3).

[76] Section 17 and Sch 2 (amending Banking Act 2009). However, these provisions had not been brought into force as of the date of publication.

[77] Proposed Recovery and Resolution Directive, Art 39; Proposed SRM Regulation, Art 10.

Sir Paul Tucker, former Deputy Governor of the Bank of England, expressed the provisional view that the appropriate minimum could be set at the firm's Tier 1 capital requirement, plus a margin, minus any surplus equity. This would ensure that there would be sufficient bail-inable debt (plus surplus equity) to ensure that the firm could be recapitalised back to the Tier 1 minimum even if all Tier 1 capital was lost.[78] Moreover, there will be a prohibition on any contribution being made from resolution funds—whether national or the Eurozone's Single Bank Resolution Fund—unless at least 8% of the outstanding liabilities of the firm have been recapitalised by shareholders and eligible creditors.[79] This will have the effect of placing a floor on the level of bail-inable claims a financial firm must issue.

Whilst the use of bail-in has the potential to solve many of the problems identified in relation to 'first generation' resolution procedures, it in turn raises a new set of issues: the position of creditors holding the bailed-in debt. A sudden recapitalisation, devaluing their holdings, could itself be a channel for contagion. It is therefore imperative that authorities not only supervise the quantum of such debt raised, but also to which parties it is issued. It is inappropriate, for example, to permit banks or systemically relevant financial institutions to hold bail-inable debt in each other. Rather, it is desirable for such debt to be issued primarily to pension funds and insurance companies, which have long time horizons in their investment portfolios, so are not structurally fragile and will not act as conduits for transmission of contagion.

We have so far characterised a bail-in as a form of expedited corporate reorganisation for a failing bank, which occurs in accordance with a pre-arranged plan. However, the ability to convert debt into equity could also be used in conjunction with a 'bridge bank' tool. In this variant, assets would be transferred to a bridge bank *along with bailed-in claims*. This is in fact the preferred approach to resolution announced by the US FDIC.[80]

The advantage bail-in of the debt claims brings over a straightforward transfer to a bridge bank is that creditors have greater liquidity. The bridge bank tool without bail-in would give creditors shares in whatever proceeds arise from the ultimate sale of the bridge bank assets. This could take years to establish. With bail-in, the creditors' claims are converted to equity at a conversion rate

[78] P Tucker, Deputy Governor Financial Stability, Bank of England, 'Resolution and the Future of Finance', Speech given at INSOL International World Conference, the Hague, 20 May 2013.

[79] Proposed Recovery and Resolution Directive, Art 38; Proposed SRM Regulation, Art 24(7).

[80] See FDIC, 'Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy', (2013) 78 *Federal Register* 76614.

determined by reference to current valuations. The creditors can then sell their shares in the market, which will price them according to expectations about the bank's performance.

Less obvious, however, is what advantage use of a bridge bank brings to straightforward recapitalisation of a troubled entity using bail-in. The answer is that this has particular appeal in the US, because of the particular features of the Dodd-Frank Act. Section 214 of the Dodd-Frank prohibits outright the giving of taxpayer assistance to troubled financial institutions. The goal was to prevent taxpayer funds being used to recapitalise troubled firms, and thereby to minimise moral hazard. The way this was implemented in section 214 includes an outright stipulation that all financial companies put into the Dodd-Frank resolution process must be liquidated. This means that US supervisors are not permitted simply to bail in the holding company's creditors; rather the holding company must in fact be liquidated. Transfer of its assets to a bridge bank meets this requirement.[81] However, given that all that need be transferred are shares in subsidiaries, this is unlikely to make a significant difference to outcomes.

We have now seen that second-generation resolution mechanisms have the potential to make resolution of large complex financial institutions feasible. In Section 5, we explore in more detail two crucial aspects of these schemes: how resolution is initiated ('triggered'), and how any shortfall in funding is met.

5. Triggering and Funding Resolution

(a) Triggering Resolution

The decision to trigger a resolution process is one for which the stakes are high. Exercise of these powers will expropriate investors, and could result in a significant bill for the public purse. Conversely, failure to exercise them in a timely fashion could result in contagion and the spread of systemic risk and even greater losses for investors and the public purse. These considerations are built into the structuring of legal authority to commence proceedings.

In contrast to ordinary bankruptcy proceedings, resolution proceedings are generally viewed as an administrative, rather than a judicial, process. They operate outside the ordinary framework of the rule of law, in order to permit a more rapid—and, ideally, more expert—decision to be made.[82]

[81] See *ibid*, 76615.

[82] The EU's proposed Recovery and Resolution Directive gives Member States the option to provide for *ex ante* judicial approval—by an expedited process—of decisions to trigger resolution powers (Proposed Recovery and Resolution Directive, Art 78(1)). However, no such judicial process is envisaged for the triggering of the Single Resolution Mechanism, which will apply to financial institutions in the Eurozone and other countries choosing to opt into it: See Proposed SRM Regulation, Art 16.

The relevant decision to trigger the process is therefore one for specialist agencies. It is desirable for the relevant agency to have both the best available information, and the strongest incentives, to make an appropriate decision. These considerations may to some degree cut against one another. The best available information will be in the hands of the financial institution's regular *supervisor*, who is responsible for monitoring ongoing compliance with capital adequacy requirements and the like. However, there is a concern that this agency may lack strong incentives to take corrective action *ex post*, because to do so may require (or be perceived to require) an admission of its own failure in supervising the institution. To combat the associated problem of regulatory forbearance, it might be thought desirable to place authority for triggering resolution in the hands of a different organisation from those responsible for ongoing supervision, namely a *resolution authority*. However, separation of these two functions creates its own problems, especially as the supervisor's role will be crucial in ensuring that feasible recovery and resolution plans are in place, and that adequate bail-inable capital is in place in firms' capital structures. In other words, either the supervisor will be crucial to the credibility of resolution, or the resolution authority must have some ongoing role in the supervision process. This suggests that combined decision-making may well have advantages. These considerations do not point to any obviously superior allocation of decision-making power. In recognition of this, the EU's Recovery and Resolution Directive leaves the choice to Member States, simply requiring that any conflicts of interest be managed.[83]

The emerging practice appears to be seek to manage these tensions by involving a combination of authorities in the decision trigger resolution proceedings: supervisory authorities, resolution authorities, and (where necessary) those controlling any public funds which may be available. For example:

- In the UK, the Banking Act 2009 puts responsibility on the supervisory authority (formerly the FSA, now the PRA) to determine whether a bank is, or is likely to fail to meet its threshold conditions (compliance with regulatory capital requirements etc).[84] If the PRA so determines, then the decision whether to trigger the resolution regime is for the resolution authority (Bank of England), in consultation with supervisors and the Treasury.[85] Where public ownership is

[83] Proposed Recovery and Resolution Directive, Art 3.

[84] Banking Act 2009 (UK), s 7. The same mechanism will be used for the exercise of bail-in powers: Financial Services (Banking Reform) Act 2013 (UK), Sch 2, para 2.

[85] Banking Act 2009 (UK), s 8.

envisaged, the decision must be made by the Treasury, in consultation with the Bank and the supervisors.[86]

- In the US, entry into the Orderly Liquidation Authority under the Dodd Frank Act requires a decision requires a recommendation be made by supervisors (the Federal Reserve) and the resolution agency (the FDIC),[87] followed by a determination by the Secretary of the Treasury.[88]
- Under the proposed Single Resolution Mechanism for the Eurozone, the process would be initiated by the supervisor (the ECB) indicating that a bank is in severe financial difficulties.[89] The SRM Board would then prepare a recommendation about how resolution would operate and with what utility. This would come into effect unless the Commission opposes the decision and its opposition is backed by a simple majority of the Council.[90]

In addition to the need to ensure appropriate information and incentives on the part of the decision-maker, there are also serious concerns about the application of the rule of law to procedures which are likely to operate in an expropriatory fashion at least as regards some investors. To guard against this, the US process gives firms in relation to which the FDIC is to be appointed receiver the option to seek expedited judicial review of the decision. This is a very 'streamlined' judicial review process: a first instance decision must be received within 24 hours, and the sole criterion on which the decision may be reviewed is whether it was 'arbitrary and capricious'.[91] The EU's Recovery and Resolution Directive requires Member States to provide for a right to appeal judicially against the exercise of resolution powers, [92] and the Proposed SRM Regulation will give the CJEU jurisdiction to hear claims to review the exercise of the SRM Board's powers.[93]

[86] Ibid, s 9.

[87] or for broker dealers, the SEC in consultation with the FDIC and for insurance companies the Federal Insurance Office in consultation with the FDIC

[88] Dodd-Frank Act (US), §203.

[89] Proposed SRM Regulation, Art 16.

[90] EU Council, Council Agrees General Approach on Single Resolution Mechanism, PRESSE 564 17602/13, 18 December 2013.

[91] Dodd-Frank Act (US), §202.

[92] However, such an appeal shall be subject to a presumption that suspension of enforcement of resolution authority decisions shall be against the public interest Proposed Recovery and Resolution Directive, Art 78.

[93] Proposed SRM Regulation, Art 78.

(b) Funding Resolution

Another extremely challenging set of issues in bank resolution concerns funding. In a transfer process, if the purchaser is unwilling to assume deposits without some form of guarantee, then external funding must be sought. For example, JP Morgan was offered an inducement to buy Bear Stearns in the form of a non-recourse loan from the NY Federal Reserve Bank secured by Bear's assets.[94] Similarly, external funding may be necessary in a recapitalisation, there is insufficient bail-inable debt to return the firm to adequately capitalised status. The source of such funding is an important controversy in the design of resolution mechanisms. If the money comes from discretionary public expenditure, it becomes a species of bailout, with the associated problems they entail. Rather than turn to discretionary taxpayer funds, most resolution mechanisms have built into them a fund which can be used to make good such shortfalls.

In the UK, there is a relatively modest role for pre-funded assistance. Where, using the SRR, it is sought to get a purchaser to take on deposits—as will usually be the case—then the Financial Services Compensation Scheme ('FSCS') is required to guarantee the deposits insofar as it would have been liable to pay out had the bank gone into insolvency.[95] The FSCS provides deposit guarantees and compensation to investors who have actionable claims against insolvent UK financial services firms,[96] and is funded by a levy on regulated financial institutions.

Beyond this, the UK would rely on discretionary public funding to assist in the resolution of a distressed institution—that is, a bailout. The Banking Act clarified the position as regards accountability over the provision of state financial assistance to support troubled banks and financial institutions. Ordinarily, this is to be done only with the approval of Parliament,[97] but the Treasury has power to pledge public funds—with no limit—even without Parliamentary approval where it is satisfied that the need is 'too urgent to permit arrangements to be made for the provision of money by Parliament.'[98] Importantly, the power to provide financial assistance thereby granted may be

[94] BJ Orticelli, 'Crisis Compounded by Constraint: How Regulatory Inadequacies Impaired the Fed's Bailout of Bear Stearns' (2009) 42 *Connecticut Law Review* 647, 662-4.

[95] Banking Act 2009 (UK) s 171 (inserting section 214B of the Financial Services and Markets Act 2000 (UK)).

[96] A Kuczynski, 'Financial Redress—Complaints, Disputes and Compensation', in M Blair, G Walker and R Purves (eds), *Financial Services Law*, 2nd ed. (Oxford: OUP, 2009), 285, 330ff.

[97] HM Treasury, *Managing Public Money* (London: TSO, 2007), para 2.1.1.

[98] Banking Act 2009 (UK), s 228(5). "Financial assistance" is defined broadly to include 'giving guarantees and indemnities and any other kind of financial assistance (actual or contingent).' (*Ibid*, s 257). In this case Parliamentary accountability is achieved only by means of an *ex post* report and account, although this itself

exercised in favour not only of bank but any 'financial institution' defined as any institution the Treasury has by order so provided to be classed.[99] The Treasury therefore has executive power to bail out any troubled financial firm.

The US Dodd-Frank Act grapples expressly with the problem of resolution funding. A central premise of the legislation is that taxpayers are not to subsidise 'bailouts', and section 214(c) of the Act consequently provides that, "[t]axpayers shall bear no losses from the exercise of [the Orderly Liquidation A]uthority." The Act instead establishes an 'Orderly Liquidation Fund' (OLF) for the purpose of providing funding to institutions undergoing OLA. However, this is not purely privately funded. Rather, it raises funds in the first instance by FDIC borrowing from the US Treasury.[100] To make good on undertaking in section 214, safeguards are built in to minimise the OLF's exposure, and it is given recoupment rights from financial institutions.

The first safeguard is that funds provided from OLF to firms in OLA are limited by reference to the asset value of the troubled firm—up to ten per cent of the total value of the firm's assets, and ninety per cent of the fair value of its assets available for repayment 30 days after the commencement of proceedings.[101] Second, OLF funding enjoys administrative expense priority as regards repayment, meaning that it ranks ahead of all unsecured creditors—and *a fortiori,* shareholders—of the troubled firm in relation to the assets available for repayment. These two safeguards are together intended to ensure that the OLF will be able to get the money it has advanced repaid.

The FDIC is required to seek to repay any OLF borrowings to the Treasury by an assessment on large financial institutions. In the first instance, this is to be imposed on financial institutions who are creditors of a firm undergoing OLA to the extent that they have received repayments in the proceedings—a form of extension of the administrative expense priority enjoyed by the OLF's claims against the firm. To the extent that this is insufficient, the FDIC is to make an assessment on large financial institutions generally, weighted according to its evaluation of their contribution to systemic risk.[102] This is intended to reduce the problems of moral hazard associated with resolution. By placing the responsibility on the shoulders of financial institutions, it generates a degree of potential

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may be delayed or dispensed with if the Treasury thinks it necessary on public interest grounds: *Ibid*, ss 228(6)-(7).

[99] *Ibid*, s 230.

[100] The Treasury may then re-sell the debt: Dodd-Frank Act (US), § 210(n)(5); 12 USC § 5390(n)(5).

[101] *Ibid*, § 210(n)(6); 12 USC § 5390(n)(6).

[102] *Ibid*, § 210(o); 12 USC § 5390(o).

cross-monitoring, with firms having incentives to encourage each other not to place the others at risk. The fact that financial institutions will be paying for any resolution will make them very interested parties in the design of any mechanism, and introduce a natural constraint on the extent to which unnecessary insurance will be paid out.[103]

Despite these safeguards, there is arguably still scope for continued discretionary public support of troubled financial institutions in the US. The FDIC is permitted to operate a troubled firm by way of a bridge bank for up to five years.[104] And whilst the FDIC is required to make risk-weighted assessments on SIFIs, it seems likely that the very times when such assessments are most needed—that is, financial crises—are the times when they are least likely to be able to be paid. In light of this, the prohibition on taxpayer losses looks little more than hortative.[105]

The EU resolution proposals emphasise an approach that involves pre-funded resolution financing. For Member States subject to the Banking Union, this will be done through a new Single Bank Resolution Fund (SBRF), controlled by the SRM Board,[106] and non-Banking Union EU Member States will be obliged to establish analogous domestic resolution funds.[107] These are to be pre-funded, in the sense that firms within the reach of the relevant resolution mechanisms (that is, credit institutions and applicable investment firms) will be obliged to contribute by way of an annual levy until the funds meet a 'target size', determined as a proportion of the liabilities of relevant financial institutions. The proposed initial targets are 1% and 0.8%, respectively, of the covered deposits of credit institutions in the Banking Union and non-Banking Union Member States, over a 10 year time horizon.[108] In the event that a resolution must take place at a time when the funds

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[103] See C Calomiris, 'How to fix the Resolution Problem of Large, Complex, Nonbank Financial Institutions', paper presented at Columbia Law School conference on the Global Financial Crisis, March 2010 (http://www.law.columbia.edu/null/download?&exclusive=filemgr.download&file_id=154847).

[104] Dodd-Frank Act (US), § 210(h)(12); 12 USC § 5390(h)(12). Whilst a bridge bank is explicitly not an 'agency' of the US government and its employees are not public employees (*ibid*, § 210(h)(8); 12 USC § 5390(h)(8)), it is funded by public debt in the first instance (*supra*, text to notes 100-103) and pays no taxes (*ibid*, § 210(h)(10); 12 USC § 5390(h)(10)).

[105] See DA Skeel, Jr, *The New Financial Deal: Understanding the Dodd-Frank Act and its (Unintended) Consequences* (Hoboken, NJ: Wiley & Sons, 2011); CW Calomiris, 'An Incentive-Robust Program for Financial Reform', working paper, Columbia Business School, February 2011, 25-26.

[106] Proposed SRM Regulation, Arts 64-66.

[107] Proposed Recovery and Resolution Directive, Art 91.

[108] *Ibid*, Art 93; Proposed SRM Regulation, Art 65.

raised are insufficient, both the SRBF and national funds will have the power to raise extraordinary *ex post* contributions, and to borrow against future levies.

The pre-funding proposal received strong opposition from the financial industry, who were concerned about its implications for European competitiveness.[109] Excessive contribution requirements might, it was argued, deter financial institutions from operating in the EU, as opposed to the US, if the latter imposes only *ex post* funding. In particular, it is important that any contribution be based on an appropriate risk-weighting so as to impart incentives to reduce risk, and not to deter low-risk firms. Seemingly because of concerns about imposing excessive obligations on financial institutions, the non-Banking Union proposals also envisage that Member States will be permitted to use funds levied to support deposit guarantee schemes—which member states are already being obliged to enhance[110]--as part of their national resolution funds.[111] However, there is no equivalent provision in relation to the SBRF for Banking Union countries.

Finally, another funding source for EU bank resolution—both SRM and non-Banking Union—is to require deposit guarantee funds to assist in funding resolution procedures insofar as the funds are spared having to make payments to depositors by the resolution process.[112]

6. Conclusion

This paper has considered the problem of the 'resolution' of distressed financial institutions. Many financial institutions differ from ordinary firms in that their failure has the potential to engender systemic risk: contagion in the financial system which ultimately creates losses in the real economy amounting to many times the losses to investors in the institution. Consequently, a strong case exists for the application of special procedures to mitigate the transmission of financial shocks. *Ad hoc* government bailouts create moral hazard for financial firms, encouraging them to take more risks *ex ante*. Conversely, the application of ordinary insolvency law—even with some streamlining—may do too little to stop the spread of contagion.

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[109] See European Commission, Overview of the Results of the Public Consultation on Technical Details of a Possible EU Framework for Bank Resolution and Recovery, May 5, 2011 (http://ec.europa.eu/internal_market/consultations/docs/2011/crisis_management/consultation_overview_en.pdf), 17-18.

[110] Directive 2009/14/EC amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay, OJ [2009] L68/3; European Commission, Proposed Directive on Deposit Guarantee Schemes [recast], COM (2010) 368 final, 12.7.2010.

[111] Proposed Recovery and Resolution Directive, Art 99(5).

[112] *Ibid*, Art 73; Proposed Recovery and Resolution Directive, Art 99.

Consequently many jurisdictions have introduced, or are designing, 'special resolution' mechanisms for financial institutions. The first generation of such mechanisms were based on the US FDIC receivership regime. They focus on waiving property rights so as to effect a very rapid transfer of complex assets and short-term liabilities to a purchaser who will be able to stand behind those liabilities and thereby ensure stability. Shortfalls are covered by an insurance fund which mutualises losses across the industry. This model works well for small to medium sized domestic banks. However, it is insufficient to provide a credible alternative to bailouts for large, complex financial institutions of the sort which got into difficulty during the financial crisis.

As a result, a series of new measures—which we have termed 'second generation' resolution mechanisms—have been developed. First, there has been a realisation that the level of complexity is such that resolution *ex post* is impossible without careful planning by supervisors *ex ante*. Second, this planning process can be used not only to understand, but also to modify, the structure of complex financial institutions and their regulatory oversight so as to facilitate resolution should it be necessary. Third, the use of 'bail-in' or mandated debt to equity swaps provides a potentially very useful additional resolution tool when used in conjunction with such forward planning and oversight. Fourth, in the context of international financial institutions, co-ordination and allocation of responsibility amongst national regulators is an integral part of the planning process.

What policy implications may be drawn from the analysis? First, the central message of this paper is that for bank resolution to be credible—that is, to provide a meaningful alternative to discretionary bail-outs—it must be thought of as an integral part of the ongoing oversight of financial institutions by regulators, and not as simply a set of mechanisms that are kept for troubled times. Investment in regulatory capacity—recruitment and training to build human capital in the regulatory sector—is therefore crucial to ensuring the success of resolution. The FSB's programme of developing guidance as to best practice and dialogue between peer regulators is a welcome initiative that may help in this capacity-building.

Second, in designing resolution mechanisms, some interference with investors' enjoyment of property rights is likely to be necessary and justified notwithstanding constitutional safeguards in many countries concerning such enjoyment.

Third, the advent of bail-in as a resolution tool means that care should be taken by domestic regulators to ensure that long term debt issued by foreign (or domestic) banks which may be subject to bail-in is not bought by domestic banks. This could otherwise generate a channel for contagion in the event that the holders of the bail-inable debt are asked to crystallise a loss.

Beyond these observations, much depends on the nature of a country's banking sector. If a country's banks are primarily domestic institutions of modest size, then resolution can credibly take the form of transfers of assets and insured liabilities to other market participants. In such a milieu, 'first-generation' resolution mechanisms modelled on the FDIC's receivership regime would be perfectly adequate to provide the legal infrastructure to execute the resolution strategy.

However, to the extent that a country's banks form part of a wider international group, resolution will need to rely on the 'second generation' mechanisms outlined above, if it is to be credible. Consequently it must be thought about in conjunction with regulators of other countries, and may well vary across institutions. Whilst the lead players may likewise vary, it is likely that a handful of jurisdictions—including the US, UK and the Eurozone—will drive the agenda in the majority of cases.

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