

## Wind-Down Plans as an Alternative to Bailouts

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### **Background**

Bailouts of systemically important financial institutions (SIFIs) have required interventions in the UK, US and euro area totaling over \$14 trillion dollars, equivalent to about a quarter of global GDP.<sup>2</sup> SIFIs are deemed too big, too complex or too interrelated to be permitted to cause loss to creditors or counterparties, although generally these institutions are simply referred to as “too big to fail,” ignoring some of the most important dimensions of the problem. One of the most unfortunate legacies of the current crisis is the lesson that policy makers drew from the market chaos in the aftermath of the bankruptcy of Lehman Brothers, the one SIFI that was permitted to cause losses to creditors and counterparties. The ministers of the G20 appear to have decided that they would provide whatever subsidy necessary to avoid the disruptions that might occur in subjecting any other SIFI to the bankruptcy process, with the headline in the *Financial Times* stating “Ministers pledge ‘no more Lehmans’.”<sup>3, 4</sup>

Leaving aside the troublesome but important problem of identifying SIFIs,<sup>5</sup> reliance on bailouts of all creditors and counterparties has not only been very costly to taxpayers, but has purchased financial stability in the short run at the cost of a heightened risk of larger, more frequent, and even costlier

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<sup>2</sup> See Andrew Haldane, “Banking on the State,” presented at the 12<sup>th</sup> Annual Federal Reserve of Chicago International Banking Conference, September 25, 2009. See Table 1 in the appendix for a disaggregation of the total amount of support. <http://www.bankofengland.co.uk/publications/speeches/2009/speech409.pdf>.

<sup>3</sup> See Krishna Guha, “Ministers Pledge ‘no more Lehmans’,” *Financial Times*, October 13, 2008. It is telling in this regard that there was no criticism of the decision by the U.S. authorities, taken two days after the Lehman bankruptcy, to provide enormous subsidies to AIG, which now amount to \$183 billion.

<sup>4</sup> Although during the most recent meeting of the G20 in St. Andrews, Scotland, the leaders of the G20 discussed ways of imposing the costs of future bailouts on the financial sector, they produced no practical plan to do so.

<sup>5</sup> Some believe that SIFIs should be identified ex ante to impose additional regulatory burdens on them. Some believe they should not be identified ex ante because it would exacerbate moral hazard. Some believe that they cannot be identified ex ante because which institution turns out to be systemically important will always depend on the context. This paper assumes that at least some SIFIs can and should be identified ex ante for the purpose of preparing wind-down plans. The *Financial Times* claimed to have identified the Financial Stability Board’s (FSB’s) list of SIFIs (listed in Table 2). The FSB has not confirmed the existence of this list, much less its accuracy.

crises in the future. When all creditors and counterparties are protected from loss, they have reduced incentives to monitor SIFIs. Moral hazard increases because managers can take greater risks without having to pay higher risk premiums. Indeed, as the stake of equity holders declines to zero, managers may be tempted to play go-for-broke on the basis of the implicit guarantee from taxpayers. As Mervyn King, Governor of the Bank of England, has noted “The massive support extended to the banking sector around the world ... has created possibly the biggest moral hazard in history.”<sup>6</sup>

The costs of financial crises should not be measured simply in terms of their impact on public finances, the destruction of wealth, and the loss of jobs, but also in the loss of trust in the fairness and efficiency of the financial system. This has been particularly true over the last two years in which the principal, direct beneficiaries of bailouts have been sophisticated counterparties (often other SIFIs), which benefited greatly from the preceding boom and should have been in the best position to monitor and exercise market discipline over their peers. Distrust in the fairness of the financial system is only exacerbated when SIFIs that have repaid their subsidies from the Troubled Asset Relief Plan then pay bonuses that dwarf the lifetime earnings of many taxpayers.

Not only do bailouts impose heavy costs on taxpayers and increase incentives for risk-taking, but they also waste resources by sustaining huge, zombie-like institutions that warehouse large amounts of dodgy debt, rather than serving as useful intermediaries. This delays economic recovery and the creative destruction that is the essence of dynamic capitalism.

Moreover, after the crisis is over, the expectation that an institution would be likely to receive a future bailout provides an unwarranted competitive advantage to SIFIs that bears no relationship to their ability to allocate capital efficiently or serve their customers more effectively. Confidence in implicit government backing permits SIFIs to fund themselves more cheaply, and to collect revenues from issuing guarantees they are not prepared to honor. This distortion of competition favors the large and complex financial institutions relative to smaller, simpler institutions that may serve their customers and society more efficiently.

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<sup>6</sup> Mervyn King, “Speech to Scottish Business Organisations, Edinburgh,” Tuesday 20 October 2009, p. 4. <http://www.bankofengland.co.uk/publications/speeches/2009/speech406.pdf>.

Thus bailouts provide incentives for institutions to become increasingly large, interconnected and complex in order to benefit from this implicit government subsidy. Perversely, governments often explicitly subsidize the creation of larger SIFIs as, for example, in the merger of Bear Stearns with JP Morgan Chase, or Merrill Lynch with Bank of America. And, had it not been for a change in the interpretation of the tax law that permitted Wells Fargo to claim \$16 billion in tax losses from merging with Wachovia, the government would have subsidized the merger between two floundering giants -- Wachovia and Citibank. In 1998 the five largest banks controlled 8% of global banking assets, now they control more than 16%.<sup>7</sup>

Why do officials feel compelled to provide bailouts? It is often because they lack tools to unwind the affairs of a SIFI without creating intolerable spillovers to the rest of the financial system. The principal, perceived channels of contagion include (1) interconnections with other SIFIs that are often extremely opaque and can change almost instantly, so that the collapse of one SIFI may possibly lead to the collapse of others;<sup>8</sup> (2) the inability to continue systemically important services during a wind-down of non-essential activities; (3) the inability to deal with international corporate complexity. The latter point is little discussed, but deserves special attention. The sixteen large, complex international financial institutions identified by the IMF and the Bank of England have 2.5 times more majority-owned subsidiaries than the 16 largest multinational manufacturing firms. This difference is undoubtedly due to the fact that banks have greater flexibility than most manufacturing firms in avoiding taxes by booking business in tax havens, and because banks can often avoid burdensome regulations by conducting activities abroad. This suggests that the first-best (though politically difficult) solution to this problem might be for the tax and regulatory authorities to eliminate the incentives they have created, often inadvertently, for banks to adopt complex corporate structures.

The most complex SIFI has 2,435 majority-owned subsidiaries, 50% of them chartered abroad.<sup>9</sup> This international corporate complexity presents a formidable challenge to an orderly unwind, because

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<sup>7</sup> Haldane (2009, p. 9).

<sup>8</sup> Policymakers are understandably risk-averse when they think that withholding a bailout may set off a systemic crisis, and so are vulnerable to being bullied by SIFIs that may have superior information (and have an obvious interest in collecting subsidies).

<sup>9</sup> See Herring & Carmassi (2009).

countries differ with regard to virtually every aspect of how they resolve a failing financial institution. But even within one country, a SIFI may be subject to multiple regulators, each of which has different objectives and different procedures for dealing with a failing institution. In the absence of an ex ante agreement on the sharing of losses, it is likely that most regulatory authorities will ring-fence the assets that they can control (by requiring financial institutions operating within their borders to be separately incorporated and thus to meet host country capital and liquidity requirements, among others) in order to make sure that they fulfill their responsibilities to the groups they are charged with protecting, which inevitably leads to lengthy litigations.

For example, in the US, a financial conglomerate may be subject to separate resolution actions by multiple entities – each with different processes, different objectives and different timetables. A failed depository institution will be subject to Federal Deposit Insurance Corporation (FDIC) procedures constrained by least-cost resolution requirements and domestic depositor preference laws. A failed broker/dealer will be subject to Securities Investor Protection (SIPC) procedures. An Edge Act subsidiary could be liquidated by the Federal Reserve Board (Fed), or the Fed may choose to turn it over to the bankruptcy courts. A failed insurance subsidiary would be subject to separate, state-specific procedures in each of the states in which it operates. The parent holding company and most other subsidiaries would be subject to normal bankruptcy processes. These separate proceedings serve different policies with different priorities and objectives. The US is not alone in this respect. The Cross-border Bank Resolution Group of the Basel Committee noted in its 2009 Report that “At the national level few jurisdictions have a framework for the resolution of domestic financial groups or financial conglomerates.”<sup>10</sup>

What can be done to end bailouts? Three alternatives are currently under consideration: (1) accept the fact that we will have an increasing number of SIFIs, but subject them to much tougher capital regulation and more intensive supervision in an attempt to prevent all failures; or (2) require that each SIFI devise a wind-down plan that will assure its board, primary supervisor, and college of supervisors (which may be necessary if the SIFI operates lines of business that are overseen by different domestic regulators) that it can be wound down without creating intolerable spillovers; or (3) streamlined

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<sup>10</sup>Report and Recommendations of the Cross-Border Resolution Group, p.18.  
<http://www.bis.org/publ/bcbs162.pdf?noframes=1>

bankruptcy or resolution procedures for non-bank SIFIs. The efficiency of either of the options under alternative three would be enhanced if wind-down plans were introduced and so discussion will focus on the first two alternatives.

### **Higher capital requirements and more intense supervision**

The G20 has agreed that all banks will be subject to higher capital requirements, and will be required to meet these requirements with higher quality capital that can serve as a buffer against loss. Based on past performance, it is difficult to be optimistic about this approach. The five largest US financial institutions that either failed or were forced into government-assisted mergers in 2008 – Bear Stearns, Washington Mutual, Lehman Brothers, Wachovia and Merrill Lynch – were each subject to Basel Capital standards and each reported Tier 1 capital ratios ranging from 8.3 per cent to 11.0 percent in the last quarterly report before they were effectively shut down.<sup>11</sup> These capital levels were from 2 to almost 3 times the regulatory minimums. More capital is a very slender reed to sustain the stability of the financial system. Although the leverage ratios were lower, they were still above regulatory standards set for well-capitalized banks.

As the examples above show, capital can decline at an alarming rate in a crisis. This is partly because of accounting conventions that permit banks to conceal losses in a variety of ways until the end is near, and partly because regulators often prefer to forbear rather than force losses to be recognized. The main problem, however, is that any reasonable level of capital may be simply overwhelmed by the losses that can occur in a crisis. Moreover, higher capital requirements can lead to greater risk-taking unless they are perfectly crafted to deter banks from attempting to maintain high returns by reaching for more risk. In addition, reliance on capital requirements ignores the remarkable ability of financial institutions to devise new ways to engage in regulatory capital arbitrage.

A recent case is the attempt by the Basel Committee to impose punitive capital charges on securitizations, in order to discourage banks from holding CDOs and other complicated, securitized assets. For the example, a BB-rated tranche of a mortgage-backed security incurs a risk weight of 350% under the Basel II standardized approach. Under the new rules, the BB-rated tranche of a securitized

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<sup>11</sup> See the 10Q filing for each firm the quarter before it was forced to merge or failed.

asset incurs a capital charge of 650%. Similarly, a AAA-rated tranche of an original securitization receives a 20% risk weight, while a resecuritized tranche receives a 40% risk weight.<sup>12</sup> The market quickly responded to this increase in capital requirements by devising a new resecuritization technique called a Re-Remic.<sup>13</sup> Re-Remics have been used to resecuritize senior, private-label mortgage-backed securities (MBS) tranches that have been downgraded from their original AAA ratings to BB. In a typical Re-Remic, a downgraded tranche is subdivided into a new, resecuritized AAA-rated senior tranche and a lower, mezzanine resecuritized tranche rated BB. Additional credit enhancement is provided by an option for the new senior tranche to be resubdivided into two exchange classes of securities, in the event the resecuritized senior AAA tranche loses its AAA rating. This new technique enabled banks to hold more risk with less capital. A typical Re-Remic structure is depicted in Table 2 in the annex.<sup>14</sup>

Still more troubling than regulatory arbitrage is evidence that bank examiners, who are the front line of the supervisory system, and are supposed to be making candid evaluations of the institutions they monitor, may be giving more lenient treatment to SIFIs. The primary tool of bank supervision is the CAMELS rating assigned to each bank, which is based on the examiner's assessment of the bank's capital adequacy, asset quality, management, liquidity and sensitivity to market risks. These ratings are shrouded in secrecy and, until last June, have been more successfully protected than nuclear secrets. But the CAMELS rating for a very large SIFI was revealed last June in material subpoenaed by Congress from the Federal Reserve Board.<sup>15</sup> This SIFI had received a \$34 billion bailout and had an order to raise \$34 billion more in capital. It had made two disastrous acquisitions, and its CEO was in trouble with the SEC and being sued by shareholders. Moreover, the board had made no succession plan for departure of the CEO, surely one of the most fundamental responsibilities of good corporate governance.

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<sup>12</sup> See Basel Committee on Banking Supervision, "Enhancements to the Basel II framework," July 2009 p. 5. <http://www.bis.org/publ/bcbs157.pdf?noframes=1>.

<sup>13</sup> For additional information on Re-Remics, see the IMF Global Financial Report, October 2009, chapter 2. This is also the basis for the diagram. <http://www.imf.org/external/pubs/ft/gfsr/2009/02/pdf/text.pdf>

<sup>14</sup> Even if the bank retains the complete resecuritization on its books, its required capital will fall relative to the initial situation in which it would be charged 350% against the full amount of the downgraded security. This remains true even if the bank exercises the exchange option. Moreover, banks can and do simply exchange downgraded securities in a Re-Remic transaction, and each ends up with less capital required to support the same amount of risk.

<sup>15</sup> See Bradley Keoun and David Mildenberg, "Bank of America has Second-Highest 'Camels' Rating", June 25, 2009, Bloomberg.com. <http://www.bloomberg.com/apps/news?pid=20601103&sid=adfHDDmHmgU>.

Nonetheless, this firm received a CAMELS rating of 2, which is used to designate banks that present “few, if any supervisory concerns.”<sup>16</sup>

It is hard to imagine that a non-SIFI with similar problems would have received nearly as favorable a CAMELS rating. Unfortunately, neither the Administration’s proposal nor the G20 proposals address the underlying causes of poor supervisory performance. Supervisors are burdened with a wide variety of ill-defined objectives, making it very difficult to hold them accountable for any particular objective. Moreover, their compensation system is generally not designed to motivate strong performance in protecting the interests of taxpayers.<sup>17</sup>

### **Wind-Down Plans<sup>18</sup>**

Fortunately, the G20 has proposed another approach that may turn out to be more promising. The G20 has agreed to force SIFIs to “develop internationally consistent, firm-specific...resolution plans.”<sup>19</sup> Although the G20 has so far supplied few specifics about what such plans should contain, based on interviews with bankruptcy practitioners and bankruptcy lawyers, I will speculate about what an ideal plan should contain. The wind-down plan should be designed to accomplish a number of different objectives. First, it should protect taxpayers from the necessity of bailing out SIFIs by providing an alternative resolution method that will not require a taxpayer subsidy or impose intolerable spillovers on the rest of the financial system. Second, it will make clear to SIFIs, the market in general, and creditors and counterparties in particular, that no SIFI need be bailed out. This should increase market discipline and help level the playing field by removing the implicit government guarantee. Third, making a credible wind-down plan will force SIFIs to anticipate and internalize some of the spillover costs that might occur if they should become insolvent and will force the managers and directors to think about

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<sup>16</sup> Jose Lopez, “Using CAMELS Ratings to Monitor Bank Conditions,” *Federal Reserve Bank of San Francisco Economic Letter*, 99-19, June 11, 1999. <http://www.frbsf.org/econsrch/wklyltr/wklyltr99/el99-19.html>

<sup>17</sup> See Richard Herring, “The Known, the Unknown and the Unknowable in Financial Risk Management,” *Yale Journal of Regulation*, forthcoming.

<sup>18</sup> The British prefer to call these “Recovery & Resolution Plans” although they are popularly known as living wills. The Obama Administration has referred to the concept as rapid resolution plans, and sometimes they are known simply as funeral plans. I prefer to use the term wind-down plan to distinguish it from these other concepts. The plan I describe would be equally useful to a bankruptcy administrator or a resolution authority.

<sup>19</sup> *Progress Report on the Actions to Promote Financial Regulatory Reform*, issued by the U.S. Chair of the Pittsburgh G-20 Summit, September 25, 2009. <http://www.pittsburghsummit.gov/documents/organization/129866.pdf>.

the worst case and may help discourage any tendency toward disaster myopia. Ideally, maintaining a credible wind-down plan should be viewed as much a part of good governance as maintaining a business continuation plan. Fourth, it will make the primary supervisor aware of what it must be prepared to do if a SIFI approaches insolvency. Fifth, it will make the college of supervisors aware of the measures they must take to minimize spillovers that might otherwise occur if a SIFI should become insolvent. This will have the dual advantages of forcing each member of the college to reveal what they are likely to do in the event a SIFI becomes insolvent and, over time, may provide an impetus for harmonizing at least some resolution concepts and procedures.

The wind-down plan begins with the assumption that the SIFI is insolvent.<sup>20</sup> The SIFI should write a plan that would specify precisely what it would do in the event of insolvency.<sup>21</sup> (Note that in contrast with the British living will concept which takes into account plans for averting insolvency, this wind-down plan begins with the assumption of insolvency.) The wind-down plan should contain several elements.

First, the SIFI must map its lines of business into the corporate entities that must be taken through some sort of resolution process in the event of insolvency, and each of these separate entities must be justified to the board and, ultimately, the primary supervisor and college of supervisors. The resolution procedures must be described for each entity, including an estimate of how long they will take. The dialogue between the SIFI and the primary supervisor is likely to be contentious at first because it will represent a dramatic change from past practice. As Lord Turner, chairman of the Financial Services Authority in Britain, has noted “In the past, authorities around the world have tended to be tolerant of

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<sup>20</sup> The British approach mixes this with a recovery plan which complicates the process with a number of very subjective assumptions. Institutions have strong incentives to devise recovery plans, but almost none to devise wind-down plans.

<sup>21</sup> It is very difficult to define insolvency because of the difficulty of valuing intangible assets and because of accounting differences and regulatory differences across different sectors of the financial services industry. The difficulties in evaluating the insolvency of an internationally active SIFI (as most are) are even greater because of national differences in accounting and solvency laws. Even within a country the decision may not be clear cut. For example, the British appointed a committee to determine whether Northern Rock was solvent in the absence of liquidity support from the Bank of England. Of course, one of the most difficult challenges of an effective unwind policy is ensuring that socially valuable intangible assets can be protected in the unwind process. For an insightful discussion of some of the valuation challenges see Calomiris and Nissim (2007)

the proliferation of complex legal structures designed to maximize regulatory and tax arbitrage. Now we may have to demand clarity of legal structure.”<sup>22</sup>

Second, the SIFI must identify key interconnections across affiliates such as cross-guarantees, stand-by lines of credit, or loans that link the fate of one affiliate to that of another. The plan should also identify operational interdependencies such as IT systems, liquidity, and risk management procedures that would impede the separation of one unit from another.

Third, the SIFI will be required to develop and maintain a virtual data room that contains information that an administrator or resolution authority would require to make an expeditious resolution of the entity. This is likely to require investment in new management information systems that can provide information such as organizational structures, loan exposures and counterparty exposures disaggregated by borrower or counterparty and by legal entity.<sup>23</sup>

Fourth, the SIFI must identify key information systems, where they are located, and the essential personnel to operate them. Plans must be made to make these systems available to all entities during the resolution process, whether they are operated by the SIFI or are outsourced to a third party. As a practical matter this may require that IT operations be segregated in a separate subsidiary that could continue to function while the rest of the firm is being resolved.

Fifth, the SIFI must identify any activities or units it regards as systemically relevant, and demonstrate how they can continue to operate during a wind-down. This will usually require that they be separately incorporated and capitalized and easily detached from the group, so that some other entity can keep the systemically important function going.

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<sup>22</sup> This notion has generated a considerable amount of controversy in Britain with bankers generally taking the view that the supervisory authorities have no business monitoring their tax avoidance strategies, and with Alistair Darling, Chancellor of the Exchequer, tartly responding “I do worry when an organization is structured for tax purposes rather than for the efficiency of its business and the strength of its business.” As quoted in Chris Giles, George Parker and Patrick Jenkins, “Living wills to be forced on banks,” *The Financial Times*, September 15, 2009. <http://www.ft.com/cms/s/0/4bb9fd1e-a17b-11de-a88d-00144feabdc0.html>.

<sup>23</sup> This will undoubtedly be a contentious point as demonstrated by the years it has taken the FDIC to gain authority to require insured banks to identify insured deposits to facilitate rapid payouts. Banks successfully resisted for a number of years claiming that it would be an overwhelming technological challenge.

Sixth, the SIFI must consider how its actions may affect exchanges, clearing houses, custodians, and other systemically important elements of the infrastructure. Ideally it should identify ways it can disconnect from these highly automated systems without creating serious knock-on effects. This will require cooperation with these systemically important parts of the infrastructure. A particularly good example of this in the past was the effort to make the Clearing House Payments System able to sustain the failure of its four largest members.

Seventh, the SIFI must identify precisely the procedures it would follow in a wind-down. This report should be quite detailed including at a minimum a list of bankruptcy attorneys and administrators who might be consulted, individuals who would be responsible for press releases and the various notifications, and a good faith estimate of the time it would take to unwind each separately-chartered entity.

Eighth, the unwind plan must be updated annually, or more often if a substantial merger or acquisition or restructuring introduces additional complexity.

Management of the SIFI must demonstrate to its board that the unwind plan is complete and feasible. Boards should recognize that oversight of wind-down plans is as much their responsibility as oversight of business continuation plans. Indeed, when the SIFI approaches insolvency, the board's fiduciary duty becomes one of maximizing the bankruptcy estate that can be passed on to creditors.<sup>24</sup> If the board finds the plan is excessively complex or time consuming, it has a duty to require management to simplify the corporate structure of the firm, invest in more powerful IT systems or reduce the geographic range or scope of its activities so that it can be wound down in a reasonable amount of time.<sup>25</sup> This process may also have a useful side benefit. Considerable research in cognitive psychology shows that decision makers are likely to be more risk averse when they are forced to confront worst case scenarios even if they consider them unlikely to happen.<sup>26</sup>

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<sup>24</sup> The absence of a plan would be presumptive evidence of a failure to carry out this fiduciary duty.

<sup>25</sup> Precisely what is "a reasonable amount of time" will likely change as the approach is implemented. The ultimate goal ought to be a plan that can be implemented over a weekend, but earlier iterations will clearly be much longer.

<sup>26</sup> See Jack Guttentag and Richard Herring, "Credit Rationing and Financial Disorder," *Journal of Finance*, December 1984, and the references cited therein.

Next, the primary supervisor must evaluate the wind-down plan in detail (if appropriate with a national college of supervisors). It must certify that the plan is feasible, and the estimated time for the wind-down is plausible and acceptable. In addition, it must ensure that all systemically important activities have been identified and properly insulated, so that they could be spun-off to another firm in the event of insolvency. If the primary supervisor finds the plan is not feasible or would take an unacceptable amount of time to execute, it should have the power to compel the SIFI to propose alternative options to simplify its corporate structure, improve its IT infrastructure, or spin-off activities that cannot be unwound without creating intolerable spillovers.<sup>27</sup>

This is a highly controversial point, but unless some authority has the power to compel action, no meaningful action is likely to be taken and the entire exercise will become a senseless and costly ticking-off of boxes. It may even prove counterproductive to the extent it encourages market participants to believe that a problem has been solved, when in fact it has not. It would be undesirable for regulators to force a cookie-cutter structure on a SIFI purely for supervisory convenience, but supervisors should be empowered to meet the goals of a good wind-down process, perhaps by raising the costs of supervising complex institutions substantially and in proportion to their complexity. Institutions could then have some degree of choice over how they become less complex. Many experts would prefer a much softer approach in which the supervisor would send the plan back to the board and management with comments noting perceived deficiencies and asking for remedial action or an explanation.

Unfortunately, this more gentle approach, akin to moral suasion, is unlikely to be very effective, particularly when we start from a position in which so many financial firms have become much too complex to take through any kind of resolution procedure in a reasonable amount of time. Moreover, it seems naive to expect that firms would willingly give up the complexity that virtually assures them access to the safety net and a competitive edge over other smaller, less complex institutions.

Imposing constraints on the size or structure of firms has traditionally been justified on grounds of competition policy, not as a way of enhancing financial stability. But what was once unthinkable is now being widely discussed. As former Secretary of State and the Treasury George Schultz has said “Any

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<sup>27</sup> In a private conversation, Charles Calomiris has suggested that in lieu of a forced divestiture of a line of business, a SIFI should be permitted to place that line of business in an affiliate with no financial connection to any other affiliate and financed entirely by equity.

bank that is too big to fail is simply too big.”<sup>28</sup> In addition Allen Greenspan has recently spoken in favor of breaking up banks that are too big to fail because they interfere with the creative destruction that is essential to a dynamic economy.<sup>29</sup> Philipp Hildebrand, Vice Governor of the Swiss National Bank, has stated the case a bit more cautiously, “A size restriction would, of course, be a major intervention in an institution’s corporate strategy...For this reason, the advantages and disadvantages of such a measure would have to be examined and weighed very carefully. Nevertheless, in the case of the large international banks, the empirical evidence would seem to suggest that these institutions have long exceeded the size needed to make full use of these advantages.”<sup>30</sup>

Paul Betts and Joe Leahy have put the case more forcefully, “The lesson of gargantuan institutions – the likes of Citigroup – is that these banks have become too big to succeed, impossible to run as well as too big to fail. And the bigger the group the bigger the systemic risk in the event of a financial meltdown,”<sup>31</sup> Perhaps, most surprisingly, Jamie Dimon, CEO of JPMorgan Chase has endorsed a resolution mechanism that would wipe out shareholders and impose losses on creditors but protect the financial system when a SIFI fails. “We think everything should be allowed to fail...but we need a resolution mechanism so that the system isn’t destroyed. To dismantle a bank in a way that doesn’t damage the system should be doable. It’s better than being too big to fail.”<sup>32</sup>

Moreover, such restrictions can be justified on grounds of competition policy. Indeed, the EU has a mechanism for doing so. In recent months European Commissioner for Competition Neelie Kroees has required that ING, The Royal Bank of Scotland, and Lloyds downsize to compensate for the anti-competitive effects of the subsidies they have received. The Competition Commissioner can force banks to take a range of actions, including mandates to “sell billions of euros of assets, close branches, cut balance sheets drastically, restrict payments to investors, executives and staff, and focus more narrowly

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<sup>28</sup> George Shultz, Wall Street Journal, August 14, 2008.

<sup>29</sup> Alan Greenspan, speech to the Council on Foreign Relations, October 15, 2009.

[http://www.cfr.org/publication/20417/c\\_peter\\_mccolough\\_series\\_on\\_international\\_economics.html](http://www.cfr.org/publication/20417/c_peter_mccolough_series_on_international_economics.html)

<sup>30</sup> Philipp Hildebrand, “Introductory Remarks by Philipp Hildebrand,” June 18, 2009.

[http://www.snb.ch/en/mmr/speeches/id/ref\\_20090618\\_pmh/source/ref\\_20090618\\_pmh.en.pdf](http://www.snb.ch/en/mmr/speeches/id/ref_20090618_pmh/source/ref_20090618_pmh.en.pdf).

<sup>31</sup> Betts and Leahy, “Bankers must resist temptation to think bigger,” *The Financial Times*, October 27, 2009.

<sup>32</sup> Henny Sender, “Dimon backs means to close down banks,” *The Financial Times*, October 28, 2009.

on retail banking.”<sup>33</sup> The US lacks any mechanism for considering such issues. And although this is action taken after the extension of a bailout, it seems preferable to the frequent pattern in the US of subsidizing the merger of a very large bank with another even larger bank without any regard for competitive effects except in the case of an intra-market merger.

During this process the primary supervisor will gain an understanding of the regulations and tax provisions which provide SIFIs with incentives to adopt such complex corporate structures. It may be excessively optimistic to hope that these insights will help inform future regulatory, accounting and tax reforms, but it would be useful, nonetheless, to confront regulators with some of the unintended consequences of their actions.

Finally, the college of supervisors will examine the plan. Each member of the college must verify that the assumptions the SIFI has made about how the activities that take place within its domain can be wound down are accurate and feasible. In addition, each member must make clear whether it would ring-fence the SIFI’s operations in its country. If a member of the supervisory college does not believe that it has sufficient control over the activities of a branch of the SIFI, it may require that it operate as a subsidiary with its own capital and liquidity requirements.

The potential benefits from developing wind-down plans are substantial. First, the process should reduce moral hazard by making it clear to creditors and counterparties that a SIFI can be resolved in such a way that it may impose losses on them without catastrophic consequences for the rest of the financial system. In its reaction to the “living will” proposal in the U.K., Moody’s provided indirect evidence that this might be quite effective. It warned the British authorities that such an approach “would remove the necessity to support banks as banks would no longer be too interconnected or complex to fail. This could potentially result in rating downgrades where ratings currently incorporate a

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<sup>33</sup> Reuters, “E.U. Competition Chief Readies Ruling on Bank Bailouts,” October 16, 2009.  
[http://www.nytimes.com/2009/10/17/business/global/17kroes.html?\\_r=1](http://www.nytimes.com/2009/10/17/business/global/17kroes.html?_r=1)

high degree of government support.”<sup>34</sup> Of course this benefit is realized only to the extent market participants believe a workable wind down plan exists and will be used.<sup>35</sup>

Second, gaining approval of the wind-down plan will cause SIFIs to simplify their corporate structures and make preparations so that less of the bankruptcy estate is consumed by a frantic, last-minute attempt to formulate and execute a wind-down plan. These amounts can be quite substantial. The administrators of the Lehman bankruptcy have estimated that at least \$75billion<sup>36</sup> was wasted because of the lack of any preparation for bankruptcy.

Third, developing the plan may cause SIFIs to reduce their risk exposures because of greater awareness by the board, more thorough analysis by supervisors, and greater discipline by creditors and counterparties.

Fourth, the presence of a wind-down plan will ensure that supervisors in all key countries are prepared to cope with insolvency of the SIFI, if it should happen.

Fifth, it will level the playing field between SIFIs and smaller, less complex institutions so that profits and market share flow to institutions that provide the best services most efficiently rather than to institutions that benefit from an implicit guarantee.

Of course, wind-down plans may have both private and social costs as well as these benefits. With regard to private costs, it will certainly increase the compliance costs for SIFIs. But some of the upgrades in IT systems may enable them to manage their businesses more effectively, as well as facilitate a wind-down.<sup>37</sup> It may also reduce the efficiency with which the SIFI can deploy its capital and

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<sup>34</sup> Quoted from Jane Croft and Patrick Jenkins, “Moody’s warns over ‘living wills’,” *The Financial Times*, September 23, 2009

<sup>35</sup> Equally, it is important that market participants believe that firms without wind-down plans will not be bailed out.

<sup>36</sup> Ann Cairns, “Breaking the Insolvency Mould,” *International Corporate Rescue*, 2009, p. 115.  
<http://www.chasecambria.com/site/journal/article.php?id=384>

<sup>37</sup> Robert Eisenbeis has pointed out that like the preparations for Y2K, which enabled a number of banks to deal more effectively with the shock of 9/11, this improvement in IT systems may have unexpected benefits.

liquidity, but often these efficiencies have proven illusory in a crisis.<sup>38</sup> To the extent that capital and liquidity may be ring-fenced by regulators (both domestic and foreign) who believe their main duty is to protect the customers of the SIFI in their regulatory domains. It may increase capital requirements and tax payments to the extent that corporate simplification requires the elimination of entities used to engage in regulatory arbitrage and tax avoidance. But this is a private cost, not a social cost.

With regard to social costs, there is a danger that wind-down plans could limit potential economies of scope and scale. But there is little evidence of either in the academic literature for institutions of even \$100 billion.<sup>39</sup> In any event, technology-intensive activities, which because of their heavy fixed costs do appear to create the potential for genuine scale economies in some lines of business, can be spun-off and operated as separate units from which firms of all sizes could benefit. By reducing leverage, wind-down plans may increase the costs of intermediation. But since excessive leverage is heavily implicated as a cause of the recent crisis, this may actually be a benefit rather than a cost.

### **Concluding Comment**

The Financial Stability Board (then named the Financial Stability Forum) has produced a set of principles for Cross-Border Cooperation on Crisis Management that have been endorsed by the G20, which has formed more than 30 supervisory colleges for international financial institutions<sup>40</sup> The primary supervisor is responsible for convening a meeting of the college of supervisors at least once a year. The college is to play a role in monitoring and sharing information about the institution. The case of BCCI, the first time this approach was attempted, suggests that it is unlikely to be effective. Some supervisors are constrained by bank secrecy laws and privacy laws. And most are constrained by the knowledge

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<sup>38</sup> The collapse of AIG provides a good example of this fallacy of consolidation. Presumably the ratings agencies granted the derivatives unit a AAA rating on the basis of the capital of the AAA-rated parent. But when losses at the derivatives unit spiraled, regulators would not permit capital to be upstreamed from the solvent insurance subsidiaries over to the derivatives affiliate. Instead, the burden fell on taxpayers. Moreover, the current allocations may seem optimal, given the regulations in place, but prove suboptimal if various authorities ring-fence in a crisis.

<sup>39</sup> See, for example, Berger and Mester (1997). Although there are numerous empirical studies that attempt to quantify economies of scale, all are subject to criticism because of the paucity of relevant data. This is, of course, particularly true for enormous banks. But it does seem clear that scale economies cannot be the main driving force behind the creation of trillion dollar banks. A more robust and perhaps more relevant empirical regularity is that the compensation of senior executives tends to increase proportionately with scale. See for example Frydman and Saks (2007).

<sup>40</sup> As noted in the progress report from the St. Andrews summit of the G20, November 7, 2009.

that once they share bad news with their peers they lose their scope for discretion in dealing with the problem institution and may even precipitate an outcome they hope to avoid.

But the document also mandates that supervisors should work to identify obstacles to effective management of a crisis involving the institution. The agreement also would “Strongly encourage firms to maintain contingency plans and procedures for use in a wind-down situation... and regularly review them to ensure that they remain accurate and adequate.”<sup>41</sup> If this requirement were strengthened and the college of supervisors were required to vet and simulate a wind-down along the lines suggested above, this might be a huge advance.

The college of supervisors should review and sign-off on the wind-down plan produced by management, endorsed by the board, and vetted by the primary supervisor. With such diversity in approaches to resolution the college of supervisors is in an ideal position to verify whether the assumptions that the SIFI has made about how the activities that take place within its domain can be unwound are accurate and feasible. In addition, each member must make clear whether it would ring-fence the SIFI’s operations in its country. If a member of the supervisory college does not believe that it has sufficient control over the activities of a branch of the SIFI, it should be empowered to require that it operate as a subsidiary with its own capital and liquidity requirements.

Ideally, the college of supervisors can identify resolution concepts and approaches that would lead to a cooperative solution.<sup>42</sup> But if, as seems likely, each country and regulator would ring-fence the assets of the SIFI in its domain in a crisis, the whole panoply of consolidated supervision and regulation should be fundamentally reconsidered. If capital and liquidity cannot be moved across borders in the event of the crisis, it is foolhardy to base regulation and supervision on the assumption that they can be moved.

Of course, the key question that must be asked of any such costly approach to resolution is: would this have reduced the costs incurred in the collapse of Lehman Brothers and AIG?

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<sup>41</sup> Financial Stability Forum, 2009, p.3.

<sup>42</sup> Although it is, perhaps, pleasant to contemplate international harmonization of resolution procedures, I regard it as the equivalent of expecting Esperanto to be adopted as the international language. Still it may be possible for a handful of key countries of an integrated economic region, like the EU, to move toward harmonization at least with regard to the treatment of SIFIs.

If such a resolution procedure had been in place, I think there are at least five reasons to be hopeful that we might have had a less costly outcome. First, both SIFIs would have had less complex corporate structures and, to the extent they were obliged to contemplate the possibility of collapse, might well have taken on less risk. Second, if the markets were convinced that the authorities had a way of resolving these institutions that would not produce intolerable spillovers and would not require a bailout, market discipline would have been enhanced, further reducing their ability to take excessive risks. Third, the process would have ensured that the primary supervisor and the college of supervisors would understand the challenges they would have to deal with in a wind-down. Fourth, if the worst happened, the resolution authority or bankruptcy administrator would have had a clear plan to follow in order to minimize spillovers and maximize the bankruptcy estate to be distributed to creditors. Fifth, and most importantly, the authorities would have had a feasible alternative to providing a costly bailout.

## Appendix

**Table 1: Support packages**

(\$ Trillions)	UK	US	Euro
<b>Central Bank</b>			
- "Money creation"	0.32	3.76	0.98
- Collateral swaps	0.30	0.20	0.00
<b>Government</b>			
- Guarantees	0.64	2.08	>1.68
- Insurance	0.33	3.74	0.00
- Capital	0.12	0.70	0.31
<b>Total (% GDP)</b>	<b>74%</b>	<b>73%</b>	<b>18%</b>

Source: Bank of England *Financial Stability Report*, June 2009. Figures for UK updated to November 4th 2009.

Notes: (1) Exchange rates used: FSR Euro / US dollar exchange rate of 0.710. Sterling / US dollar exchange rate of 0.613.

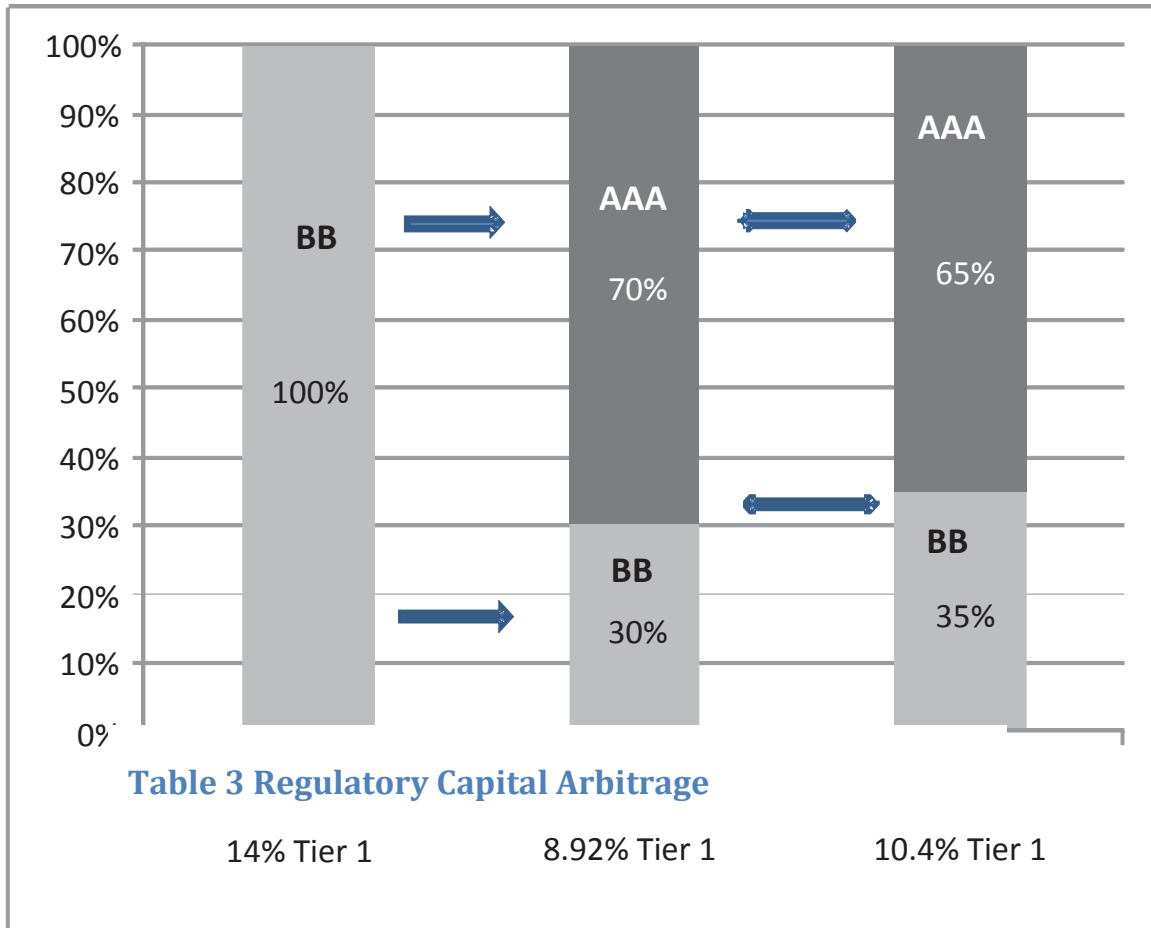
(2) Money creation includes both monetary and financial stability operations.

**Table 2. The List of SIFIs Reported by the *Financial Times*<sup>43</sup>**

1. In the US: Goldman Sachs, JPMorgan Chase, Morgan Stanley, Bank of America Merrill Lynch & Citigroup
2. In the UK: HSBC, Barclays, Royal Bank of Scotland & Standard Chartered
3. In Canada: Royal Bank of Canada
4. In Switzerland: UBS and Credit Suisse
5. In France: Société Générale and BNP Paribas
6. In Spain: Santander and BBVA
7. In Japan: Mizuho, Sumitomo Mitsui, Nomura, Mitsubishi UFJ
8. In Italy: UniCredit & Banca Intesa
9. In Germany: Deutsche Bank
10. In the Netherlands: ING
11. Insurance groups: Axa, Aegon, Allianz, Aviva, Zurich and Swiss Re:

<sup>43</sup> Patrick Jenkins and Paul Davies, "Thirty groups on systemic risk list," *Financial Times*, November 29, 2009

**Table 3. An Example of Regulatory Capital Arbitrage: The Re-Remic**



## References

- Bank of England, 2009, Financial stability report, June.  
<http://www.bankofengland.co.uk/publications/fsr/2009/index.htm>.
- Basel Committee on Banking Supervision, "Enhancements to the Basel II framework," July 2009 p. 5.  
<http://www.bis.org/publ/bcbs157.pdf?noframes=1>.
- Betts, Paul, and Joe Leahy, 2009, Bankers must resist temptation to think bigger, *The Financial Times*, October 28.
- Berger, Alan and Loretta Mester, 1997, "Efficiency and productivity change in the U.S. commercial banking industry: A comparison of the 1980s and 1990s", *Federal Reserve Bank of Philadelphia Working Paper No. 97-5*. <http://www.philadelphiafed.org/research-and-data/publications/working-papers/1997/wp97-5.pdf>.
- Calomiris, Charles and Doron Nissim, 2007. "Activity-Based Valuation of Bank Holding Companies," *Working Paper, Columbia University, May*.
- Cairns, Ann, 2009, Breaking the insolvency mould, *International Corporate Rescue*, 115.  
<http://www.chasecambria.com/site/journal/article.php?id=384>.
- Croft, Jane, and Patrick Jenkins, 2009, "Moody's warns over 'living wills' ", *The Financial Times*, September 23.
- Cross-border Bank Resolution Group of the Basel Committee, September, 2009, Report and Recommendations of the Cross-border Bank Resolution Group.  
<http://www.bis.org/publ/bcbs162.pdf?noframes=1>.
- Frydman, Carola, and Raven Saks, 2007, "Executive Compensation: A New View from a Long-Term Perspective, 1936-2005, *Federal Reserve Board Technical Report No. 2007-35*.  
<http://www.federalreserve.gov/pubs/feds/2007/200735/200735abs.html>.
- Financial Stability Forum, 2009, "FSF Principles for Cross-border Co-operation on Crisis Management," 2 April.
- G-20, Pittsburgh Summit, 2009, Progress report on the actions to promote financial regulatory reform, September 25. <http://www.pittsburghsummit.gov/documents/organization/129866.pdf>.
- G-20, St. Andrews Summit, 2009, Progress report, November 7.  
[http://docs.google.com/viewer?a=v&q=cache:DY2gE-EDOEsJ:www.g20.org/Documents/20091107\\_progress\\_report\\_standrews.pdf+G20,+St.+Andrews+progress+report&hl=en&gl=us&sig=AHIEtBR-uEgwOibec3LVIbCY-SJAOb-Kqg](http://docs.google.com/viewer?a=v&q=cache:DY2gE-EDOEsJ:www.g20.org/Documents/20091107_progress_report_standrews.pdf+G20,+St.+Andrews+progress+report&hl=en&gl=us&sig=AHIEtBR-uEgwOibec3LVIbCY-SJAOb-Kqg)
- Giles, Chris, Patrick Jenkins, and George Parker, 2009, Living wills to be forced on banks, *The Financial Times*, September 15. <http://www.ft.com/cms/s/0/4bb9fd1e-a17b-11de-a88d-00144feabdc0.html>.
- Guha, Krishna, 2008, Ministers pledge "no more Lehmans," *Financial Times*.
- Greenspan, Allen, 2009, Speech to the Council on Foreign Relations, October 15.  
[http://www.cfr.org/publication/20417/c\\_peter\\_mccolough\\_series\\_on\\_international\\_economics.html](http://www.cfr.org/publication/20417/c_peter_mccolough_series_on_international_economics.html).
- Guttentag, Jack, and Richard Herring, 1984, Credit rationing and financial disorder, *Journal of Finance*, 39(5), 1359-1382.
- Haldane, Andrew, 2009, Banking on the State, presented at the 12<sup>th</sup> Annual Federal Reserve Bank of Chicago International Banking Conference.  
<http://www.bankofengland.co.uk/publications/speeches/2009/speech409.pdf>.
- Herring, Richard, 2009, The Known, the Unknown, and the Unknowable in Financial Risk Management: An application to the subprime crisis, *Yale Journal of Regulation*. Forthcoming.

- Richard Herring and Jacopo Carmassi, 2009, The corporate structure of international financial conglomerates: complexity and its implications for safety and soundness, *Oxford Handbook of Banking*, Chapter 8, Oxford University Press.
- Hildebrand, Philipp, 2009, Introductory remarks by Philipp Hildebrand. June 18.  
[http://www.snb.ch/en/mmr/speeches/id/ref\\_20090618\\_pmh/source/ref\\_20090618\\_pmh.en.pdf](http://www.snb.ch/en/mmr/speeches/id/ref_20090618_pmh/source/ref_20090618_pmh.en.pdf).
- Hughes, Jennifer, 2008, Lehman creditors to face years of waiting, *Financial Times*, November 14.
- International Monetary Fund (IMF), 2009, Global financial stability report, October, Chapter 2.  
<http://www.imf.org/external/pubs/ft/gfsr/2009/02/pdf/text.pdf>.
- King, Mervyn, 2009, Speech to Scottish business organizations, Edinburgh, 20 October 2009, 4.  
<http://www.bankofengland.co.uk/publications/speeches/2009/speech406.pdf>.
- Keoun, Bradley, and David Mildenberg, 2009, Bank of America has second-highest "CAMELS" rating, Bloomberg.com, June 25.  
<http://www.bloomberg.com/apps/news?pid=20601103&sid=adfHHDDmHmgU>
- Lopez, Jose, 1999, Using CAMELS ratings to monitor bank conditions, *Federal Reserve Bank of San Francisco Economic Letter*, 99-19, June 11. <http://www.frbsf.org/econsrch/wklyltr/wklyltr99/el99-19.html>.
- Reuters, "E.U. Competition Chief Readies Ruling on Bank Bailouts," October 16, 2009.  
[http://www.nytimes.com/2009/10/17/business/global/17kroes.html?\\_r=1](http://www.nytimes.com/2009/10/17/business/global/17kroes.html?_r=1).
- Sender, Henny, 2009, "Dimon backs means to close down banks," *The Financial Times*, October 28.