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Living Wills: A Tool for Curbing Too Big to Fail

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Although the financial crisis of 2007–08 is gradually receding into history, policymakers and the public are still concerned about avoiding a repetition of the crisis. At issue is not only the economic dislocation that arose from the crisis, but also the public bailouts of major financial institutions such as Bear Stearns and AIG that became financially distressed and were then considered "too big to fail."

These rescues—seen by many as a distasteful brew of private risk-taking and socialized losses—seem to have been in part the outcome of an expectation that policymakers brought about with a series of rescue operations and other interventions going back to the 1970s. Two examples of these are the Fed's support for Continental Illinois National Bank and Trust Co. in 1984 and the Fed's use of its "good offices" to save the hedge fund Long-Term Capital Management in 1998. Such actions are likely to have created a belief in the markets that some institutions are, in fact, too big to fail. Hence, despite an intention to stabilize the financial system, the implied promise of rescue may have actually induced fragility in financial markets through a circle of rescue and failure:

- Policymakers, concerned that the failure of certain institutions would have costly effects on society, intervened to rescue them,
- leading creditors to expect future interventions in support of such institutions in the event of trouble,

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- reducing the incentives of creditors to monitor the risk-taking of those institutions and appropriately price for risk,
- leading to excessive risk-taking that caused the failure of several of those institutions in the 2007–08 crisis,
- spurring another round of rescue interventions.

In short, the expectation of a bailout changed risk-taking behavior, a phenomenon known as "moral hazard." What this cycle means is that policymakers who want to avoid bailouts similar to those of the financial crisis should try to commit in advance not to rescue financial firms. This is hard to do because the costs to the economy of letting a major institution fail are uncertain. As part of the effort to make such a commitment credible, regulators need a strengthened understanding of, and control over, the characteristics of those institutions that may make them difficult to resolve in bankruptcy if they fail.

When Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010, the elimination of bailouts was among its goals. One of the many measures in the Act was the creation of a new tool—known as resolution plans, or "living wills"—aimed at helping policymakers work toward the objective of making the largest and most complex financial institutions resolvable without public assistance if they become financially distressed. These institutions, known as systemically important financial institutions, or SIFIs, are the ones that the policymaking community perceives as posing a risk to the rest of the system if they fail. (They include both bank holding companies, such as Bank of America, and nonbank institutions, such as the insurer AIG.) The provisions of Dodd-Frank on living wills give financial regulators the authority to require these firms to submit a resolution plan to be followed in the event of severe financial distress. On an annual basis, all SIFIs must submit detailed plans to the Fed and the Federal Deposit Insurance Corporation (FDIC).

But living wills don't stop with planning and disclosure. If the Fed and the FDIC find that a plan does not set out a credible path to resolving the firm without public support, they can, if need be, require the firm to increase its capital or liquidity, limit its growth, activities, or operations, and even divest assets to make such resolution a credible option in the future.

Thus, with living wills, Congress has put a tool in regulators' hands that may be critical to curbing rescue pressures. In this essay, we will argue that while the Dodd-Frank Act's limitations on bailouts and its enhanced regulation of safety and soundness are significant steps toward limiting rescues, they leave further work to be done, and living wills can help us do this work. We will look at why living wills, properly implemented, make unassisted bankruptcy a more attractive option for policymakers—and why there are good reasons for bankruptcy to be the preferred route for resolving large distressed institutions. Finally, we will discuss several important obstacles that remain in the project of establishing a credible commitment not to rescue the largest and most complex firms, along with some promising approaches to overcoming them.

1. COMMITTING NOT TO RESCUE

What makes living wills an especially powerful tool is that they can assist policymakers in establishing credibility—in particular, a credible commitment not to rescue.

The word "credibility" here refers to a concept that economists call dynamic consistency or time consistency. It sounds technical, but in its simplest form, it isn't. Roughly speaking, time consistency problems arise when your present self wants to bind your future self to do something that may turn out to be contrary to the wishes of your future self. Our present self sets an alarm clock; our future self doesn't want to get up in the morning. Many of us learned Homer's story of Odysseus and the Sirens, who used music to lure sailors into wrecking their ships. Odysseus, who wanted to hear the Sirens' music, solved his time consistency problem by ordering his sailors to plug their ears with wax, to tie him to the mast, and to keep him tied no matter how much he asked to be let go.

What does this have to do with "too big to fail"? The answer is that policymakers can sometimes best serve financial stability by tying themselves to the mast—committing themselves not to take certain actions—and ensuring that everyone knows. Here, as noted above, to align the incentives of market participants and bring about market discipline, policymakers must make clear that they will not rescue failing institutions during a crisis no matter how tempting bailouts might appear to be once a crisis occurs.[1] By requiring firms to create living wills, regulators aim to improve the outcomes for the financial system and the economy when they resolve a firm without assistance—so the temptation of a bailout won't be there to start with.

In monetary policy, the importance of time consistency problems has been understood for a long time. In the 1970s, Americans

[1] Federal Reserve Bank of Richmond research has explored the role of credibility and market expectations in curbing public rescues of financial institutions. See, for example, Goodfriend and Lacker (1999); Athreya (2009); Grochulski (2011); Haltom and Lacker (2013); and Lacker (2014).

experienced not only high inflation, but unemployment and inflation rising together. After years of failed approaches such as wage and price policies and stop-and-go monetary policy, Fed Chair Paul Volcker brought, and kept, inflation down with a Fed policy based on a credible commitment to act against inflation. He responded first with a sustained tightening of monetary policy, despite the serious recession that predictably resulted, and then with a determination to act if inflation appeared to rise again, notwithstanding the costs of such action. The Fed has continued to show determination to act against inflation, a policy that has led markets to expect inflation to remain low.[2]

The credibility that the Fed earned during the Volcker era—and that it has maintained since—has been crucial to the price stability that the nation has enjoyed for more than 30 years. To bring about greater stability in financial institutions, policymakers must now establish credibility with respect to rescues of financial institutions.

2. DODD-FRANK TRIED TO FIX THE RESCUE PROBLEM, BUT DIDN'T

The Dodd-Frank reform law was a significant effort to bring about this credibility and thereby put an end to bailouts. One of its sponsors, former Rep. Barney Frank (D-Mass.), remarked at a conference last year, "We did, I believe, the maximum that you could do legally to make clear that if a large financial institution incurs debts it cannot pay, it is out of business and no taxpayer money can be used."

As Frank noted, the law does not allow the direct use of tax funds for rescues.[3] Then why isn't that the end of the issue?

The reason is that Congress stopped short of the larger goal of taking away the possibility of ad hoc support. Such support can still come from another source. Although the Dodd-Frank Act presents unassisted bankruptcy as the preferred option, the Act gives regulators the power to resolve large financial firms in distress through an administrative process known as orderly liquidation if they conclude that unassisted failure would threaten financial stability. The power to do so, known as Orderly Liquidation Authority (OLA), provides a side door through which regulators can provide funds to the distressed firm.

That door is the Orderly Liquidation Fund, a mechanism giving the FDIC the ability to borrow from the Treasury to pay creditors of a firm being resolved under OLA. Subject to various restrictions,

[2] See Goodfriend (1996). Regarding some earlier such episodes, see Sargent (1982).

[3] Dodd-Frank Act § 214, 12 U.S.C. § 5394

Dodd-Frank allows the FDIC to borrow so it can make loans to or guarantee obligations of a covered financial company or a bridge financial company during the orderly liquidation process, including obligations to unsecured general creditors. If the FDIC cannot later recover all the money from the distressed institution, it can levy an assessment on large financial firms to ensure that the borrowings are repaid. Thus, although the process does not draw money from general treasury funds, it is a source of money for rescues.[4]

What the existence of this mechanism means is that, in the absence of a contrary signal from regulators, markets are likely to expect that at least some creditors of SIFIs will be protected from loss. The possibility of an assessment following a major failure could stimulate industry-sponsored arrangements of self-regulation, arrangements that have sometimes arisen in U.S. banking.[5] But the net effect of the Orderly Liquidation Fund is likely to be that the moral hazard problem prevails.

In addition to the Orderly Liquidation Fund, other public financing mechanisms still exist. Among these are the Fed's power to lend to private entities in "unusual and exigent circumstances." The Dodd-Frank Act did narrow the latter power, known as "section 13(3) lending," by requiring that it take place only as part of a program with broad-based eligibility, but this does not eliminate the problem of moral hazard with respect to such lending. Moreover, even without lending powers or other rescue powers already established by law, regulators could—in the absence of a commitment not to bail out distressed firms—go to Congress in the midst of a crisis to seek such authority, much as they did in connection with the Troubled Asset Relief Program, or TARP, created by emergency legislation in 2008.

But do financial markets really pay attention to such possibilities? The answer appears to be yes; early evidence suggests that moral hazard in financial markets remained with us following enactment of the Dodd-Frank law. One way of considering this is to look at how much the largest financial institutions pay to borrow money compared with other institutions; if the largest institutions are paying less on a risk-adjusted basis, the difference reflects investors' expectations of a rescue in the event of distress. In a 2013 paper, Viral Acharya of New York University, Deniz Anginer of Virginia Tech, and Joseph Warburton of Syracuse University analyzed bond credit spreads of 567 financial institutions and found that the passage of the Act does not appear

[4] Price (2011)

[5] Calomiris (1990)

to have reduced expectations of public support for the largest institutions.[6]

Another way of considering the question is to look at the risk-taking behavior of the institutions themselves. This is, in general, a difficult task, and little systematic evidence has been gathered on the effect of Dodd-Frank in this area. One recent attempt is a 2014 article in the *Journal of Financial Stability*. Two researchers, Magdalena Ignatowski and Josef Korte of Goethe University Frankfurt, studied the risk-taking of U.S. banks and bank holding companies using their regulatory filings and other financial reports, as well as mortgage loan information from Home Mortgage Disclosure Act filings. They concluded that the institutions did reduce their risk-taking in response to Dodd-Frank—except for the largest, most systemically important ones, whose risk-taking does not seem to have changed. Although this study necessarily relies on approximate measures of risk-taking that may have been affected by other policies and by the state of the economy following the financial crisis, it suggests that the too-big-to-fail expectation may still be guiding some decisions of the largest financial institutions.[7]

In short, while the Dodd-Frank Act's barrier against bailouts from the general treasury was a good start, more must be done to establish a credible commitment not to rescue. One way we can do so is with the tool that Dodd-Frank itself gave us—living wills.

3. WHAT WE WANT TO SEE IN LIVING WILLS

The value—and costliness—of living wills is easier to understand if you know what goes into them. They are required to include, among other things, information on all of the firm's business units and subsidiaries and their dependencies on each other, its material off-balance-sheet obligations, its key internal reports, and its management information systems and the operations and business lines that they support. Beyond these inventory-like information requirements, of which there are scores, the living wills also must include the firm's detailed strategic plan for rapid and orderly resolution in the event of distress. What will be the firm's capital needs and how will it meet them? How does the firm determine the market values of its business lines and asset holdings? How long will the steps of the plan take to carry out?[8] This information would be helpful to a bankruptcy trustee and to potential lenders or acquirers.

[6] Acharya, Anginer, and Warburton (2013)

[7] Acharya, Anginer, and Warburton (2013)

[8] 12 C.F.R. § 243.4

The Fed and the FDIC are engaged in a back-and-forth process with SIFIs to push the firms to produce living wills that accurately reflect the firms' current state of resolvability as well as highlighting where further progress is needed. This iterative process is necessary because living wills are a new concept. The first wave of living wills came from 11 large banking organizations, which were required to file their first annual plans in mid-2012 and to file revised plans the following year. The agencies have publicly noted some common shortcomings of the plans. Among these were unrealistic or inadequately supported assumptions about the likely behavior of customers, counterparties, and investors when the institution is in distress and the failure to identify the kinds of changes in the firms' structures and practices needed.[9]

At the same time that the agencies are giving guidance to the SIFIs, they are also trying to understand better what a firm needs to look like—in terms of liquidity, complexity, and other factors—to be resolvable without public assistance in a realistic economic scenario.

It's new and difficult terrain for both institutions and regulators. (We'll come back to the challenges later.) But the benefits of achieving greater market discipline seem likely to justify these costs.

4. VIRTUES OF BANKRUPTCY

The existence of a living will that sets out a credible path to resolving the firm without public support makes it more plausible that regulators would actually opt for bankruptcy rather than feeling forced to mount a rescue.

Even though the word "bankruptcy" does not bring warm feelings to most of us, unassisted bankruptcy has benefits over an administrative procedure such as OLA. Bankruptcy differs from OLA in a number of ways that are helpful to the task of establishing market discipline. One difference is in the way that the two are triggered. Bankruptcy protection is sought by the institution itself based on its inability to raise money to operate (or, in some cases, by unpaid creditors), while OLA is triggered by regulators whose motivations in a particular case may be uncertain and may be distinct from the financial issues at stake. For example, regulators with political accountability may have an incentive to forbear from instituting proceedings until after an election; alternatively, if financial institutions have political power, they

[9] Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation (2014); Hoenig (2014)

may be able to prevail upon regulators to use the discretion afforded by OLA in a manner favorable to them.[10]

Additionally, creditors in bankruptcy have more certainty about their priority; they generally get the priority that they contracted for when they granted credit to the institution. In OLA, on the other hand, the agency carrying out the resolution process—the FDIC—has the discretion to pay a creditor more than bankruptcy priority rules would dictate if it believes doing so is "necessary or appropriate to minimize losses."[11]

Finally, and most importantly, a bankruptcy court does not have access to a pre-existing pool of money to pay out to creditors—unlike the OLA process with its Orderly Liquidation Fund. Even though the Orderly Liquidation Fund does not come from taxpayers, its existence makes a rescue, and therefore moral hazard, more probable.

While the bankruptcy process, like any resolution process, is imperfect, the experience with the 2008 bankruptcy of Lehman Brothers has been a source of insight into what may be the main difficulties of bankruptcy in the case of a distressed SIFI and the mistakes to avoid. As of March 2014, Lehman's unsecured creditors had recovered an average of 28 percent of the value of their allowed claims—lower than historical norms but higher than initially expected. This figure was likely boosted by the Fed's provision of short-term lending to Lehman's broker-dealer subsidiary for less than a week and by other support to financial markets by the Fed and the Treasury Department. At the same time, it is reasonable to assume that the recovery was depressed by Lehman's lack of resolution planning.[12]

Given the magnitude of these losses, a natural question is why creditors of firms such as Lehman were not already demanding resolution plans before and during the crisis. We consider this question in the next section.

5. WHY DIDN'T MARKETS ALREADY DEMAND LIVING WILLS?

In theory, a good living will should benefit the firm by lowering its cost of funding. Because a living will sets out information that creditors would value, such as its complementarities and interconnections and its financing needs, creditors should be willing to lend money more cheaply

[10] Imai (2009); Brown and Dinç (2005); Kane (1990)

[11] Pellerin and Walter (2012)

[12] Fleming and Sarkar (2014)

to firms that have one in place. So why was action by regulators needed to bring them about?

Certainly, living wills are costly. The creation and revising of living wills requires the time of firms' employees, as well as legal and consulting fees. The Fed and the FDIC have estimated that the process of initially creating the living will, together with the process of obtaining approval, will require 5,500 to 10,200 hours of staff time per institution.[13] (The lower figure is for institutions that are predominantly banking companies, from whom less detail is required.) Beyond the cost of producing the living wills, the changes needed to make a firm resolvable—that is, easy to liquidate in an efficient manner—may be highly costly. These changes may include, as we will see, major revisions in debt structure and organization.

Given these costs, shareholders considering the creation of living wills would need to evaluate the savings in financing costs that a good living will was likely to bring about. In a world with public guarantees through either implied expectations or explicit deposit insurance or both, lenders will not demand a premium for complexity that makes firms more difficult to resolve—and hence creating living wills would entail significant costs and no benefits. Moreover, even without government support, if the failure of a SIFI is believed to hurt the stability of financial markets through fire sales of assets or payment disruptions, then private lenders would be less concerned about failure than society as a whole—since the institution and its creditors do not bear the full damage that the failure would induce in the rest of the economy. For both of these reasons, we would expect financial markets not to demand living wills, or not ones of sufficient quality.

6. LIVING WILLS IN ORDERLY LIQUIDATION

At least in the short run, policymakers may continue to be drawn to administrative resolution and ad hoc support despite the benefits of bankruptcy. This could happen if policymakers are fearful about the possible systemic effects of letting a SIFI be resolved through unassisted bankruptcy. To the extent that policymakers want to retain OLA in their toolkit during a transitional period, living wills can still have significant value.

Living wills give regulators the authority to shape firms in ways that will make them less likely to need assistance during any resolution process, whether the process takes place within bankruptcy or OLA.

[13] Federal Reserve System and FDIC. November 1, 2011. "Resolution Plans Required." Federal Register 76 (211): 67323-67340.

Additionally, as an article published in 2011 by the FDIC has noted, if a SIFI became financially distressed and policymakers opted to use OLA, the living will would likely prove useful to the FDIC during the resolution process.[14]

The level of complexity revealed by living wills can also be used by regulators as a tool in itself. For example, a group of a dozen highly accomplished financial economists, known as the Squam Lake Group for the location of its first meeting in New Hampshire in 2008, has suggested that capital requirements and limits on short-term debt could be set on the basis of the level of complexity indicated by the living wills. Such uses of the complexity information are another potential benefit of living wills that would apply regardless of resolution regime.[15]

7. CHALLENGES AHEAD

The cycle of moral hazard, crisis, and intervention tells us that to avoid future bailouts and to improve stability, the better form of resolution is unassisted bankruptcy. For regulators who must oversee the transition of firms to resolvability, whether through unassisted bankruptcy or OLA, there are significant challenges to be dealt with. We consider some of the most prominent ones below.

Challenge 1: Short-Term Financing

One of the challenges facing policymakers is that SIFIs in their present form have large liquidity needs. By definition, SIFIs tend to be very large firms, and there is limited experience with resolving financial firms of such a scale. The largest bank resolution by regulators so far, that of Washington Mutual in September 2008, involved assets of $302 billion; the bankruptcy of Lehman Brothers, the largest bankruptcy in history, involved assets of $639 billion. In contrast, the distress of one of the largest SIFIs would involve assets of more than $1 trillion. Also, financial firms in general tend to have high short-term liquidity needs to the extent that their business models are based on maturity mismatch (for example, accepting deposits that can be withdrawn on demand and using them to fund long-term loans). Both the size and the typical financial structure of SIFIs, then, pose an obstacle to their unassisted resolution.

When firms other than SIFIs are in bankruptcy, they meet their short-term financing needs through "debtor-in-possession," or DIP,

[14] FDIC (2011), pp. 10-11, 12

[15] Squam Lake Working Group on Financial Regulation (2009)

financing. This type of financing, which must be approved by the bankruptcy court, is generally senior to the firm's already-existing debt. The firm's creditors nonetheless are often willing to approve DIP financing because it keeps the firm in operation. The question is, would a failing SIFI be able to obtain sufficient DIP financing to see it through the bankruptcy process?

By virtue of its size, a SIFI relying heavily on maturity mismatch could have DIP financing needs without precedent—needs that lenders might not be willing or able to meet, especially if the distress occurs during a time of market crisis. Given this challenge, even strong proponents of bankruptcy as a means of resolving SIFIs, such as the Resolution Project at Stanford University's Hoover Institution, hold that while a reformed bankruptcy procedure may improve the unassisted resolution of SIFIs, it should not rule out the possibility of government-provided DIP financing in some instances.[16]

How, then, can living wills help policymakers maintain a credible commitment not to provide financing—that is, not to rescue the firm?

The answer lies in the fact that the approval process for living wills does not require regulators to take the existing operations of a firm as given. The combination of a very large institutional size and heavy reliance on maturity mismatch is not essential to financial markets. When reviewing living wills, regulators may determine that if a SIFI wishes to retain its large scale, it will need to reduce its reliance on short-term liabilities. Alternatively, if the firm believes that the costs of reducing its maturity transformation would be unacceptable, it could instead make itself smaller by shutting down certain business lines or, more likely, spinning them off. Ease of resolution should play, together with safety and soundness considerations, a critical role in determining what constitutes acceptable practice in financial intermediation.

Other regulatory initiatives may also move large institutions toward less use of short-term funding; these include efforts dealing with capital and liquidity requirements. The focus in the living wills process is somewhat different, however: While safety and soundness regulations may limit short-term financing with the objective of preventing the failure of a financial institution, the living wills process addresses the expected need for DIP financing once the failure has happened.

Once policymakers have established a commitment not to rescue firms in distress, and that commitment is widely perceived as credible, that commitment in itself will reduce the need for DIP financing. The lack of a safety net would cause the price of debt to become more

[16] Jackson (2014), p. 17

sensitive to the amount of maturity transformation, leading SIFIs to restrain their reliance on short-term funding.

Challenge 2: Organizational Complexity

Another potential obstacle to making institutions resolvable is that they may have highly complex structures. One simple measure of this complexity is the sheer number of entities within today's institutions: In 2012, six U.S. bank holding companies had more than 1,000 subsidiaries, up from only one such firm in 1991. Four of them had more than 2,000 subsidiaries.[17]

The rise in complexity has come from a number of sources that have contributed to growth in firm size and diversification. Among these have been cost advantages to large financial firms from technological scale economies, the pursuit of regulatory arbitrage (for example, moving activities into the nonbanking sector), the pursuit of favorable tax treatment, the rise of asset securitization, and significant industry consolidation.[18] Moreover, both globalization and the elimination of legal restrictions within the United States on expansion across state lines has helped banking institutions grow to a point where it is profitable for them to expand into nonbank financial services.[19] Finally, the industry consolidated during the financial crisis as regulators arranged for distressed institutions to be acquired.

Why might complexity matter? One reason that complexity may be a hurdle to unassisted resolution is that regulators might want to separate the parts of the institution that are most important to the stability of the overall financial system and arrange for those to be taken over by another institution. Regulators refer to the functions of a firm that they believe to be highly important to the operation of markets as "critical functions." Such functions might include clearing and settlement services, for example. The larger the number of subsidiaries, the more challenging it may be to untangle their relationships and to single out which ones perform critical functions. In addition, when bankruptcy courts resolve a large, complex institution, their options may be constrained to some degree by the existence of critical shared services—for example, information systems that are run by one entity but relied on by other entities within the firm.

As with the challenge of short-term funding, to the extent that regulators believe complexity may stand in the way of unassisted

[17] Avraham, Selvaggi, and Vickery (2012)
[18] Avraham, Selvaggi, and Vickery (2012)
[19] Cetorelli, McAndrews, and Traina (2014)

resolution, the Dodd-Frank Act gives them the power to take action: They can require SIFIs to reduce their complexity. They might, for example, direct the firm to spin off lines of business, consolidate subsidiaries, or duplicate certain functions to make some entities more self-sufficient. In doing so, regulators should seek to strike the right balance, as changes of this nature will involve adjustment costs and perhaps forgoing economies of scope and scale. (A different case would be one where complexity has been driven by the pursuit of tax advantages; in this case, the increased taxes that may result from undoing that complexity should not be a concern to financial regulators.)

Market forces should also prove helpful. Like the amount of maturity mismatch, the degree of complexity may itself be partly a result of the expectation of support. Once regulators have established the credibility of their commitment not to rescue, debtholders will have an incentive to monitor institutions for excessive complexity that might reduce their ability to recover their money in a bankruptcy proceeding.

Challenge 3: Cross-Border Issues

One aspect of the complexity of systemically important institutions is that they often operate across numerous national boundaries. For example, at the time Lehman Brothers failed in 2008, it had activities in 40 or more countries, leading to insolvency proceedings around the world.[20]

In a sense, the existence of cross-border difficulties is nothing new to financial regulators. All large international institutions are already subject to supervision by regulators in multiple countries. What is different here is that while supervision of these institutions is an everyday event, resolution of them is a rarity, leaving room for uncertainty about what a cross-border resolution would look like.

The possibility of multiple proceedings may be a problem when different entities within an institution, under the jurisdiction of different countries, are interdependent. Authorities in country A may have control over significant financial or operational assets of a subsidiary in country A needed by another subsidiary in country B. Although the optimal approach from a collective point of view is for authorities in all countries to cooperate to maximize the value of the institution as a whole, the incentives facing authorities are likely different than this. Regulators in a country where the firm's assets are located may have an incentive to exercise control of those assets to pay for losses occurring

[20] Carmassi and Herring (2013)

within its borders. (But regulators will not necessarily act in such a manner; for example, the Fed's rescue of AIG in 2008 partly benefitted foreign parties, while U.S. taxpayers bore all the risk.)

Beyond the possible differences in incentives, multiple insolvency proceedings may give rise to difficult practical issues. The proceedings may be subject to inconsistent legal regimes in different countries.

Regulators in one country may have difficulty learning about an institution's foreign-based operations. When resolution takes place within bankruptcy proceedings, cross-border coordination could be still more challenging because courts may be less apt than administrative agencies to coordinate internationally; cross-border cooperation among courts, when it occurs, typically occurs on a case-by-case basis, while financial regulators have had experience cooperating broadly on issues, including resolution policy.

Part of the answer to these concerns about multiple proceedings may be found in the notion of country-level separability—that is, making sure the local operations of an institution are resolvable independently of its foreign-based entities. The more self-contained and self-supporting an institution's operations within a country can become, the less cross-border issues will arise in the resolution process, and the more credibly regulators can commit to a no-bailout policy. As with the issue of short-term funding, regulators are already working on separability outside the context of living wills; for example, a rule issued by the Fed in February 2014 requires large foreign banking organizations operating in the United States to establish an intermediate holding company over their U.S. subsidiaries.[21]

To be sure, separability comes at a cost, limiting the adaptability of the institution in how it uses its resources and where it positions them. Nonetheless, such costs will probably be necessary to some degree to keep cross-border issues in resolution reasonably manageable.

Challenge 4: Transparency

Even if SIFIs achieve a financing structure and an organizational structure that make them resolvable, this outcome will not lead to market discipline if market participants do not believe that it has happened. If markets do not believe that institutions will be resolvable in the event of distress, then the credibility of policymakers' commitment not to rescue will be reduced. Another challenge for regulators, then, is deciding

[21] Board of Governors of the Federal Reserve System. February 18, 2014. "Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations." Federal Register 79 (59): 17239–17338.

whether markets will accept the agencies' own determinations about resolvability—or whether markets will need to see some of the underlying facts for themselves. In other words, regulators need to decide how much transparency in living wills is desirable.

When an institution submits a proposed living will to the Fed and the FDIC, the institution itself designates the material that will be included in the publicly released section of the document, subject to the requirements and approval of the agencies. In the view of some, the outcome of this process has generally been a minimal level of public disclosure. Indeed, a study of the living wills submitted in 2012 found that most institutions "took full advantage of their discretion to maintain confidentiality of information that is crucial to understanding how easily they could be resolved."[22] This is consistent with financial firms wishing to disclose publicly as little as possible about their strategies and operations.

The right level of public transparency for living wills is an open question. The treatment of public disclosure by regulators so far has been influenced by the longtime concern for maintaining the confidentiality of proprietary information in the supervision process. At the same time, as we noted earlier, the concern for maintaining confidentiality of proprietary information must be weighed against the need for a meaningful level of disclosure about the firm's ability to be resolved without assistance. Moreover, in a democracy, voters arguably have a legitimate interest in transparency so they can assess the progress made in stabilizing the financial system.

Changes may be in store. The Fed and the FDIC stated in August 2014 that they are jointly "committed to finding an appropriate balance between transparency and confidentiality of proprietary and supervisory information in the resolution plans" and that they will be working with SIFIs "to explore ways to enhance public transparency of future plan submissions."[23]

8. CONCLUSION

Living wills promise to be highly useful complements to safety and soundness regulation. While there is significant work to be done and there are challenges to overcome, the reward, if we do our jobs well, will be a more stable economic environment for businesses and individuals.

[22] Carmassi and Herring (2013)
[23] Board of Governors of the Federal Reserve System and FDIC (2014)

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