

THE MORAL HAZARD PARADOX OF FINANCIAL SAFETY NETS

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Moral hazard plays a central role in almost every narrative of the recent financial crisis: the government’s implicit guarantees led to excessive risk-taking, and when the guarantees turned explicit, it exacerbated moral hazard going forward. The moral hazard narrative of crisis causes and effects motivated key reform efforts, including the statutory elimination of authorities regulators used to guarantee trillions of dollars of private debt in an effort to halt widespread panic in late 2008. Some argue that the elimination of these broad guarantee authorities was a mistake, but even these critics acknowledge that the moral hazard costs of guarantees are significant.

This Article argues that the absence of broad guarantee authorities could, counterintuitively, exacerbate moral hazard in the current U.S. financial system. Broad guarantee authorities can be seen as a “strong” tool for stopping panics. Stripped of this strong tool, regulators nevertheless retain a number of weaker tools that, while unequal to containing a full-blown panic, might prevent one from starting in the first place through targeted bailouts of specific firms or their creditors. Lacking a strong panic-prevention tool, regulators are likelier to err on the side of caution in saving a weak firm even when the firm’s failure might not have sparked a panic. It is possible, therefore, that weak firms are more likely, rather than less likely, to be bailed out in the current system.

If guarantee powers make bailouts less likely under some conditions, their impact on moral hazard—which arises from bailout expectations—is ambiguous. This strengthens the case for reestablishing broad guarantee authorities.

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INTRODUCTION

Strong firefighting authorities actually make it easier to let firms fail; when you know you have the ability to prevent fires from spreading out of control, you can afford to let them burn for a while.

- Timothy Geithner¹

Perversely, the lack of deposit insurance [in China] has made [it] even less likely [that any bank would be allowed to go under,] as this would hurt depositors, threatening social stability.

- Aaron Back, Wall Street Journal²

As the financial system unraveled in 2008, regulators engaged in a series of ad hoc interventions to rescue particular financial institutions out of fear that their failure could cause a panic.³ When they finally let a large financial firm fail, it did spark a panic.⁴ Regulators responded by

¹ TIMOTHY F. GEITHNER, STRESS TEST: REFLECTIONS ON FINANCIAL CRISES 431–32 (2014).

² Aaron Back, *China Lays Down Deposit on Banking Reform*, WALL ST. J. (Nov. 28, 2014), <http://www.wsj.com/articles/china-lays-down-deposit-on-banking-reform-heard-on-the-street-1417152249> (describing recent moves by Chinese financial authorities to establish deposit insurance).

³ See FIN. CRISIS INQUIRY COMM’N, THE FINANCIAL CRISIS INQUIRY REPORT chs. 15, 17 & 19–20 (2011), <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf> [hereinafter FCIC REPORT] (describing financial institutions saved by regulatory interventions in 2008, including investment bank Bear Stearns, mortgage giants Fannie Mae and Freddie Mac, insurance behemoth AIG, and bank Wachovia).

⁴ The firm, of course, was Lehman Brothers. See *infra* Part I.A.

using creative interpretations of particular statutory authorities to extend trillions of dollars of guarantees to the financial system.⁵ It is difficult to overstate the damage the panic would likely have wrought had it not been for these guarantees. The guarantees assured creditors that the federal government stood behind the debt of private borrowers, squelching their incentive to run.⁶ The guarantees were extended on the basis of freestanding authorities⁷ that have since been eliminated by statute.⁸

Why would Congress strip regulators of the very tools they used to save the financial system? The most frequent answer is that the guarantees exacerbated moral hazard.⁹ Creditors who believe the government will make them whole when the borrower defaults are unlikely to impose discipline on risky financial institutions by, for example, charging higher interest rates to compensate for the risk of default. This is not mere speculation: studies have established that bond prices do not fully incorporate

⁵ The Department of the Treasury guaranteed money market fund accounts. *See infra* Part I.A. The Federal Deposit Insurance Corporation (FDIC) guaranteed uninsured deposits in non-interest-bearing accounts, as well as certain quantities of long-term debt issued by banks and bank holding companies. For a description of these FDIC guarantees, see *infra* Part II.B–C.

⁶ *See infra* Part I.A. A “run” occurs when short-term creditors of a financial institution (such as depositors at a bank), who in the normal course allow their loans to “roll over,” withdraw their funds *en masse*. For a discussion of a run’s pernicious consequences, see *infra* Part II.

⁷ The term “authorities” refers to particular actions, such as extending a loan to a private institution, that regulators have been authorized to do by statute (or by regulations promulgated pursuant to statutory authority). “Freestanding” refers to authorities grounded in existing statutes that require no further congressional action to be employed by regulators. “Guarantee” here means a legally binding promise to pay creditors what they are owed in the event that the debtor cannot.

⁸ The Emergency Economic Stabilization Act of 2008 repealed the authority relied on by the Treasury Department in providing a multi-trillion-dollar guarantee to the money market fund industry. Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, § 131(b), 122 Stat. 3765, 3797 (codified at 12 U.S.C. § 5236(b)) (2008) (“The Secretary is prohibited from using the Exchange Stabilization Fund for the establishment of any future guaranty programs for the United States money market mutual fund industry.”). For a discussion of the legal basis for Treasury’s guarantee in the first instance, see *infra* Part IV.B. The Dodd-Frank Act of 2010 eliminated the ability of the FDIC to create broad guarantee programs such as the Temporary Liquidity Guarantee Program (TLGP), absent joint congressional authorization. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), Pub. L. No. 111-203, § 1105(c)(1), 124 Stat. 1376, 2121 (2010) (codified at 12 U.S.C. §§ 5612(d), 5613(a) (2010)); see *infra* note 116.

⁹ Another possible answer, closely related to but distinct from moral hazard, is that guarantees are costly and unfair, as they transfer wealth from taxpayers to undeserving risk takers in private markets. It is worth noting, however, that the guarantee programs did not, in fact, cost the taxpayers money. *See infra* note 126 and accompanying text. It is also worth observing that an unmitigated panic can cause significant damage to the real economy, injuring innumerable innocent parties—hardly a “fair” outcome. This creates what Timothy Geithner calls the “paradox of financial crises: What feels just and fair is often the opposite of what’s required for a just and fair outcome.” GEITHNER, *supra* note 1, at 505.

risk for the largest, “too big to fail” financial firms.¹⁰ Firms that enjoy implicit or explicit government guarantees are not, then, penalized in capital markets for taking on more risk, and thus have an incentive to assume too much risk in pursuit of profit. The logic of eliminating free-standing guarantee authorities is that by tying regulators’ hands, Congress yanks the safety net away and forces creditors to protect themselves. By protecting themselves, creditors will, the argument goes, discipline large financial institutions.¹¹

Some view the elimination of free-standing guarantee authorities as a mistake, believing their value in halting panics exceeds the marginal cost of moral hazard (which can potentially be contained through appropriate regulation).¹² This Article makes a stronger claim: the moral hazard cost that provides a plausible policy justification for prohibiting regulators from issuing guarantees may not be a (net) cost at all. If free-standing guarantee authorities do not, on balance, exacerbate moral hazard, it is hard to justify their absence from regulators’ crisis-response toolkit.

This Article makes two broad claims in support of this argument. First, there are significant vulnerabilities that persist in the financial system that could make regulators justifiably anxious about imposing losses on creditors in stressed markets.¹³ Second, regulators’ toolkit is not empty. I will describe a number of tools that regulators can use to save individual financial firms or prevent losses to their creditors, thereby potentially preventing a panic, but that are unequal to saving the system in the event of a full-blown crisis.¹⁴

How might these facts translate into greater moral hazard in the absence of guarantee authorities? If guarantee authorities are “strong” crisis-response tools, then the authorities that permit targeted interventions are “weak” tools. Fearing a panic, and lacking a strong tool to contain

¹⁰ See, e.g., Viral V. Acharya et al., *The End of Market Discipline? Investor Expectations of Implicit Government Guarantees* (John Templeton Found. & World Bank, Working Paper, 2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1961656 (finding that bond credit spreads are sensitive to risk for most financial institutions, but not for the largest institutions).

¹¹ It is worth noting that Congress gave regulators a few *new* tools in addition to eliminating several old ones. Most notably, they empowered regulators to resolve a failed systemically important financial institution outside of bankruptcy, aiming to avoid the dilemma regulators faced repeatedly in 2008 of bailing out an institution or risking a panic. This is the “Orderly Liquidation Authority” created by Title II of the Dodd-Frank Act. Dodd-Frank Act §§ 201–217. For a description of the resolution strategy regulators are poised to adopt pursuant to this authority, see *infra* Part III.A. For a discussion of the strategy’s virtues and limits, see John Crawford, “*Single Point of Entry*”: *The Promise and Limits of the Latest Cure for Bailouts*, 109 Nw. U. L. REV. ONLINE 103 (2014), http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1006&context=nulr_online.

¹² See *infra* Part I.A.

¹³ See *infra* Part II.

¹⁴ See *infra* Part III.A.

one should it start, regulators will more frequently resort to weak tools in order to try to prevent a fragile system from descending into chaos. Sometimes this will be the right choice, but sometimes they may save a firm or protect creditors when failure or losses would not have triggered a panic and may have had salutary effects on market discipline.¹⁵

In order to frame the theoretical discussion with a concrete example of the importance of guarantee authorities, Part I of this Article recounts the fallout from Lehman Brothers' failure in September 2008. It then provides an overview of enacted reforms and reform proposals in the wake of the crisis, and of how the arguments of this piece fit into the literature. The arguments put forward here are consistent with the view of those who believe a financial safety net in the form of guarantee authorities, particularly when paired with other regulatory tools for addressing moral hazard, is cost-justified. They support this view in a novel way, however, by showing how the purported cost of this approach, holding all else equal in the current system, may not be a (net) cost at all. Part II explores lingering vulnerabilities in the financial system that could, in the absence of government intervention, lead to damaging crises. Part III details the "weak" tools regulators can use to bail out specific firms or their creditors, and describes the conditions under which the existence of these tools in the absence of guarantee authorities could exacerbate moral hazard. Part IV responds to potential questions and objections.

I. BACKGROUND

A. *The Panic*¹⁶

On September 15, 2008, Lehman Brothers filed for bankruptcy. On September 16, Reserve Primary, a \$63 billion money market fund (MMF), reported a net asset value below \$1.00 per share, "breaking the buck," as the result of its exposure to Lehman commercial paper.¹⁷ MMF shareholders, who can withdraw their investments on demand, treat their MMF holdings like bank customers treat their deposits; "breaking the buck" was the equivalent of telling depositors they cannot

¹⁵ A financial firm's failure may trigger a crisis if the system is vulnerable enough. If the system is sufficiently stable, however, a large financial firm can fail without destabilizing the system. See, e.g., Joseph H. Sommer, *Why Bail-In? And How!*, 20 *ECON. POL'Y REV.* 207, 214 (2014) ("[F]inancial firms often collapse in isolation, even large firms. They still go down quickly, but they go down smoothly. Enron is one example; others are Barings Bank, Drexel Burnham Lambert, Refco, MF Global, and Amaranth Advisors."). The problem is that when the system is stressed, regulators lack a transparent view into how vulnerable the system is. See *infra* note 149.

¹⁶ Unless otherwise noted, this account of the aftermath of Lehman Brothers' failure is drawn from FCIC REPORT, *supra* note 3, at ch. 20.

¹⁷ Commercial paper is a type of unsecured, short-term debt.

have all their money back. A massive “run” immediately began on the multi-trillion-dollar MMF industry.¹⁸ Though it occurred in a very different institutional setting, the run was structurally identical to the bank runs of the Great Depression, in which panicked depositors formed long lines waiting to withdraw their savings from their local bank branch. MMF investors demanded their money back *en masse*, but the MMFs had not, of course, stashed investors’ money in a vault; they had invested it in assets that had average maturities of several months and extremely limited secondary markets.¹⁹ The MMFs could not turn their assets into cash quickly enough to meet withdrawal demands. Furthermore, as a result of the run, MMFs stopped buying the commercial paper of large corporations, threatening extraordinary disruption to the financial system and the real economy.²⁰ It is hard to overstate the damage the run would have caused if left unabated. As one insider at the Federal Reserve explained, “It was overwhelmingly clear that we were staring into the abyss The overwhelming sense was that this was a catastrophe that we were watching unfold.”²¹

As Secretary of the Treasury Hank Paulson tried to determine how to keep the financial system from imploding, an aide suggested extending Federal Reserve lending programs to MMFs. Paulson rejected this as unequal to stopping the run. “If anything,” he later wrote in his memoirs, “a money fund borrowing from the Fed[ederal Reserve] would be stigmatized and suffer even more withdrawals.”²² The aide then suggested guaranteeing MMFs, with the federal government ensuring MMF shareholders their \$1.00 per share. Paulson, surprised, asked “Could we?” and the aide replied, “I think so.”²³ “Paulson slammed his hand down on his desk. ‘Then that’s what we’re going to do.’ A few participants were aghast. . . . [A]nother cornerstone of moral hazard was being removed. But others argued that the risk of not doing anything, or of doing too little, was far worse.”²⁴

Paulson later echoed the view of most commentators in crediting the guarantee—which never had to pay out a dollar and collected more than

¹⁸ The run was concentrated on a particular type of MMF: MMFs whose investors were primarily institutions rather than retail customers, and which invested in the debt of private companies, as distinct from government debt. For a more detailed account, see *infra* Part II.A.

¹⁹ See *supra* note 18. MMFs that invested in Treasury securities do not, of course, face the same lack of liquid secondary markets for their investments.

²⁰ For example, many large corporations issued commercial paper in order to meet near-term commitments such as payroll.

²¹ FCIC REPORT, *supra* note 3, at 357.

²² HENRY M. PAULSON, JR., ON THE BRINK: INSIDE THE RACE TO STOP THE COLLAPSE OF THE GLOBAL FINANCIAL SYSTEM 252 (2010).

²³ James B. Stewart, *Eight Days: The Battle to Save the American Financial System*, NEW YORKER (Sept. 21, 2009), <http://www.newyorker.com/magazine/2009/09/21/eight-days>.

²⁴ *Id.*

\$1 billion in premium payments—with holding the system together during this period.²⁵ Concerns over moral hazard, however, led Congress to eliminate the legal authority for the guarantee when it passed the Emergency Economic Stabilization Act (EESA) a few weeks later.²⁶

It is worth pausing to consider the potential impact the repeal of this authority might have on regulatory incentives. Larry Summers, Treasury Secretary during the Clinton administration and later the Director of President Obama's National Economic Council, remarked, "It is difficult to see how any prudent policy maker, after witnessing the Armageddon that followed the collapse of Lehman, could have failed to take steps to prevent further collapses."²⁷ Even *with* the guarantee, the situation was dire; without the guarantee, it would have been a cataclysm. Stripped of the guarantee authority, regulators should be even less willing to watch passively as a financial behemoth totters on the edge of failure.²⁸

B. *Financial Reform and Moral Hazard*

Concerns over moral hazard have underlain many, if not most, of enacted reforms, proposed reforms, and general critiques of the regulatory system since the crisis.²⁹ At one end of the spectrum, some observers argue that all regulatory intervention in the financial system, not just bailouts, exacerbates moral hazard and is counterproductive: if regulators would just get out of the way, the market would ensure just, efficient outcomes.³⁰ Most observers, however, find this position unpersuasive

²⁵ PAULSON, *supra* note 22, at 263 ("[The program] was, I believe, the single most powerful and important action taken to hold the system together before Congress acted.")

²⁶ See *supra* note 8.

²⁷ Lawrence Summers, *Lawrence Summers on 'House of Debt,'* FIN. TIMES (June 6, 2014), <http://www.ft.com/intl/cms/s/2/3ec604c0-ec96-11e3-8963-00144feabdc0.html>.

²⁸ This may be offset *somewhat* by the Orderly Liquidation Authority created by Dodd-Frank. See *supra* note 11.

²⁹ Most actual reforms since the crisis have been implemented by rules written pursuant to Dodd-Frank. It is worth observing that Dodd-Frank is 848 pages long, but, as *The Economist* noted in 2012, "that is only the beginning": most of the statute does not directly create new rules, but rather directs regulatory agencies to write rules. *The Dodd-Frank Act: Too Big Not to Fail*, ECONOMIST (Feb. 18, 2012), <http://www.economist.com/node/21547784>. The rule-writing process is ongoing: Dodd-Frank mandates an estimated 395 new rules, but as of the end of 2014, only 231 had been finalized. See *Dodd-Frank Progress Report, Fourth Quarter 2014*, DAVIS POLK & WARDWELL (Jan. 1, 2015), http://www.davispolk.com/sites/default/files/Q4_2014_Dodd-Frank_Progress_Report.PDF. Some notable aspects of Dodd-Frank include the creation of a "Financial Stability Oversight Council," which can, *inter alia*, designate non-bank financial companies as "systemically important," subjecting them to prudential supervision by the Federal Reserve (Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, §§ 111, 113, 124 Stat. 1376, 1392, 1398 (2010); Dodd-Frank Act §§ 201–217); the provision for regulation and supervision of previously unregulated swap markets, Dodd-Frank Title VII (Dodd-Frank Act §§ 701–774); and the "Volcker Rule," limiting proprietary trading by banks and bank affiliates (Dodd-Frank Act § 619).

³⁰ See, e.g., John A. Allison, *Market Discipline Beats Regulatory Discipline*, 34 CATO J. 345, 345–51 (2014), <http://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2014/5/>

due to market failures in preventing panics, along with the significant negative externalities that follow from panics.³¹ The more common approach, then, seeks to use regulation either to make failure less damaging when it occurs,³² or to make failure less likely to occur in the first place. Approaches that focus on reducing the likelihood of failure include direct regulation of what banks may do and invest in³³ or of how much capital financial institutions must hold,³⁴ as well as efforts to recalibrate the incentive structures of various parties—including shareholders,³⁵ managers,³⁶ creditors,³⁷ and regulators themselves³⁸—whose decisions could make failure more or less likely. However, relatively few reform propos-

cato-journal-v34n2-9.pdf (“I can tell you with absolute certainty that market discipline beats regulatory discipline. In fact, . . . regulatory discipline will always fail to reduce volatility and will slow economic growth. . . . I would get rid of government deposit insurance. . . . I would get rid of the Federal Reserve . . .”).

³¹ See, e.g., Morgan Ricks, *Regulating Money Creation After the Crisis*, 1 HARV. BUS. L. REV. 75, 103–21 (2011).

³² The forthcoming rules that aim to make orderly resolution of financial behemoths feasible are a good example of this. See Crawford, *supra* note 11. But see Kenneth Ayotte & David A. Skeel, Jr., *Bankruptcy or Bailouts?*, 35 J. CORP. L. 469, 471 (2010) (arguing that bankruptcy should be the preferred option dealing with failed SIFIs, and that “[t]he rescue loan approach favored in the financial crisis increased uncertainty, increased the costs of moral hazard, and dampened the incentive of private actors to resolve distress before a desperate ‘day of reckoning’ arose”).

³³ See, e.g., Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships with, Hedge Funds and Private Equity Funds (Volcker Rule), 79 Fed. Reg. 5808 (Jan. 31, 2014) (codified at 17 C.F.R. pt. 75); see also Eric A. Posner & E. Glen Weyl, *An FDA for Financial Innovation: Applying the Insurable Interest Doctrine to Twenty-First-Century Financial Markets*, 107 NW. U. L. REV. 1307, 1307 (2013) (proposing “that when firms invent new financial products, they be forbidden to sell them until they receive approval from a government agency designed along the lines of the FDA”).

³⁴ See, e.g., Risk-Based Capital Guidelines: Implementation of Capital Requirements for Global Systemically Important Bank Holding Companies, 79 Fed. Reg. 75,473 (proposed Dec. 18, 2014) (codified at 12 C.F.R. pt. 217); see also ANAT ADMATI & MARTIN HELLWIG, *THE BANKERS’ NEW CLOTHES: WHAT’S WRONG WITH BANKING AND WHAT TO DO ABOUT IT* (2011) (calling for significantly higher capital requirements).

³⁵ See, e.g., Peter Conti-Brown, *Elective Shareholder Liability*, 64 STAN. L. REV. 409, 412–13 (2012) (proposing to force shareholders of systemically important financial institutions to elect a regime of significantly higher capital, or relinquish their limited liability).

³⁶ See, e.g., Shareholder Approval of Executive Compensation and Golden Parachute Compensation, 76 Fed. Reg. 6010 (Feb. 2, 2011) (codified at 17 C.F.R. pts. 229, 240 & 249); Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers’ Pay*, 98 GEO. L.J. 247, 249 (2010) (arguing for new compensation schemes to make executives more sensitive to downside risk).

³⁷ See, e.g., *Adequacy of Loss-Absorbing Capacity of Global Systemically Important Banks in Resolution*, FIN. STABILIT. BD. 6 (Nov. 10, 2014), <http://www.financialstabilityboard.org/wp-content/uploads/TLAC-CondDoc-6-Nov-2014-FINAL.pdf> (proposing standards for “total loss-absorbing capacity” for SIFIs, with the aim of creating at least one class of debt for even the largest financial firms that regulators can credibly threaten with losses); Mark J. Roe, *The Derivatives Market’s Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 542 (2011) (arguing that the repayment priority extremely short-term “repo” lenders receive in bankruptcy weakens their incentive to monitor and thus impose market discipline on financial firms).

als affirmatively promote a regime that would save insolvent firms or their creditors.³⁹

Even the few who argue that the economic fallout of an unmitigated financial crisis counsels against letting the system burn, and, rather, calls for guarantee powers combined with some type of (potentially quite onerous) regulation to control the moral hazard costs of a guarantee regime, admit that moral hazard *is* a significant cost of such a regime.⁴⁰ They acknowledge a trade-off between the economic damage from a panic and the moral hazard costs of bailouts.

This Article does not contradict the trade-off view, but argues that denying regulators strong crisis-response tools that can underwrite entire markets *in extremis* can make a resort to weak tools in the form of firm-specific interventions more likely, potentially leading to a net increase in moral hazard costs. This Article bolsters the arguments in favor of restoring guarantee authorities by showing that their moral hazard effects are, in fact, ambiguous.

II. VULNERABILITIES: PAST AND PRESENT

The key systemic vulnerabilities that justify a broader safety net arise from both banking and “shadow banking” activities.⁴¹ Shadow banking refers to the migration of traditional bank functions away from

³⁸ See, e.g., M. Todd Henderson & Frederick Tung, *Pay for Regulator Performance*, 85 S. CAL. L. REV. 1003 (2012) (proposing to link regulator compensation to the downside risk of the firms they regulate in order to increase regulators’ diligence).

³⁹ The exceptions to the anti-bailout stance tend to argue that bailouts are necessary evils and (in any event) likely to continue—so the best course is to formalize the process and limit the costs. See, e.g., Morgan Ricks, *A Regulatory Design for Monetary Stability*, 65 VAND. L. REV. 1289 (2012) [hereinafter *Regulatory Design*] (proposing insurance for all short-term, deposit-like debt, along with severe restrictions on which firms may issue such debt); Jeffrey N. Gordon & Christopher Muller, *Confronting Financial Crisis: Dodd-Frank’s Dangers and the Case for a Systemic Emergency Insurance Fund*, 28 YALE J. ON REG. 151 (2011) (proposing a trillion-dollar insurance fund to inject capital into financial firms upon a consensus determination of a systemic crisis by financial regulators); Stephen J. Lubben, *OLA After Single Point of Entry: Has Anything Changed?*, in AN UNFINISHED MISSION: MAKING WALL STREET WORK FOR US 13, 17–18 (Mike Konczal & Marcus Stanley eds., 2013) (“It’s relatively easy to rail against ‘moral hazard’ in the abstract, and say that large financial institutions should be left to face ‘market forces,’ such as insolvency and liquidation. But the financial system exists so that those with money can lend that money to those who need it, and there are real consequences of allowing that system to fall apart. . . . In the face of those real consequences, it is probably best to acknowledge that large financial institutions will be bailed out in some circumstances. Probably the better goal is to make sure that those bailouts are paid for in advance, by the entities that are most likely to need them.”).

⁴⁰ See, e.g., *Regulatory Design*, *supra* note 39.

⁴¹ See Pedro Nicolaci da Costa & Ryan Tracy, *As Fed Shines Light on Shadow Banking, Its Regulatory Limits Get Laid Bare*, WALL ST. J. (Dec. 21, 2014), <http://www.wsj.com/articles/as-fed-shines-light-on-shadow-banking-its-regulatory-limits-get-laid-bare-1419193684> (observing that by some measures, the shadow banking system in the United States is even larger than the traditional banking system).

the regulatory framework that applies to commercial banks. The vulnerabilities of both banks and shadow banks are rooted in their issuance of short-term debt treated by the debt holders as a type of money—that is, an asset they can use directly (as with checking accounts) or indirectly (as with savings accounts that permit withdrawals on demand) to transact for anticipated goods and services in the near term.⁴² This short-term debt consists of deposits and deposit-like debt. Banks and shadow-banks then use a large portion of the funds raised by issuing deposits and deposit-like debt to invest in longer-term assets, which cannot necessarily be turned into cash quickly and for full value, particularly during times of stress.⁴³ These twin functions provide a valuable service to depositors and deposit-like creditors and expand funds available to lend to creditworthy consumers and businesses, but they give rise to serious risks as well. Above all, absent a government safety net, they create the risk of a run on the institution if creditors grow anxious that if they wait they will not be able to access their full principal immediately upon maturity. Indeed, a bank facing a run without a safety net must generally sell assets at a loss or suspend redemptions, or both.

A bank failure with no safety net is always damaging. At a minimum, depositors' inability to access cash when they need it can lead to consequential losses that range from the irritating to the devastating.⁴⁴ Such a failure in a stressed market may also spark a panic if depositors at similarly situated banks start to run.⁴⁵

Of course, there *is* a safety net for commercial banks and their depositors: they can borrow from the Federal Reserve's discount window and their deposits are insured—up to a limit of \$250,000 (\$100,000 heading into the crisis)—by the federal government.⁴⁶ The FDIC can also make uninsured creditors whole by invoking the “systemic risk exception” to the requirement that it pursue a resolution strategy that will create the “least cost” to the deposit insurance fund.⁴⁷ This safety net was a cornerstone of a financial regulatory system that managed to pre-

⁴² See Ricks, *supra* note 31, at 91.

⁴³ Indeed, one of the defining features of a financial crisis is the utter desiccation of markets that are extremely liquid in normal times.

⁴⁴ See Ricks, *supra* note 31, at 83.

⁴⁵ This “contagion by simile” is just one possible mechanism of loss propagation in a crisis; others include counterparty losses, monetary contraction, and a credit crunch. For an account of these and of how they can amplify initial losses, see John Crawford, *Wargaming Financial Crises: The Problem of (In)experience and Regulator Expertise*, REV. BANKING & FIN. L. 111, 131–41 (2014).

⁴⁶ For a description of the discount window, see *Discount Window Lending*, FED. RESERVE SYS., http://www.federalreserve.gov/newsevents/reform_discount_window.htm (last visited Nov. 16, 2015). For a description of federal deposit insurance, see *Your Insured Deposits*, FED. DEPOSIT INS. CORP., <https://www.fdic.gov/deposit/deposits/brochures/Your%20Insured%20Deposits%20-%20English.pdf> (last visited Nov. 16, 2015).

⁴⁷ 12 U.S.C. § 1823(c)(4)(G) (2012).

vent a banking panic for 75 years, from the establishment of the FDIC in 1933 until the crisis hit with full force in 2008.⁴⁸ As we will see, it was, ultimately, not enough to protect commercial banks from the seeds of contagion during the recent crisis.⁴⁹ The heart of the crisis, however, lay not among commercial banks but in the shadow banking system, which, in addition to avoiding traditional bank regulation, operates *without* the formal benefit of such a safety net.⁵⁰

Narratives of the crisis and the government's response often focus on decisions with respect to specific institutions: Bear Stearns, Fannie Mae and Freddie Mac, Lehman Brothers, and AIG.⁵¹ At key points in September and October 2008, however, regulators realized that the considerable arsenal of tools and interventions they were employing were no longer enough to hold the system together. The arsenal up to that point included interest rate cuts and emergency lending to non-banks by the Federal Reserve. It also included targeted interventions such as facilitating the sale of Bear Stearns, invoking the "systemic risk exception" to the FDIC's "least cost" requirement in resolving the giant commercial bank Wachovia, and seizing (and guaranteeing the debts of) Fannie Mae and Freddie Mac, the government-sponsored, but (until September 2008) formally private, guarantors of the majority of American mortgages.⁵²

Recognizing the inadequacy of emergency lending facilities and ad hoc, firm-specific bailouts to the growing magnitude of the crisis, regulators made several key moves in the fall of 2008. They guaranteed trillions of dollars of previously uninsured financial liabilities,⁵³ and went to Congress to ask for authority to inject capital directly into financial institutions. Congress provided this with the Emergency Economic Stabilization Act (EESA).⁵⁴

⁴⁸ This span is sometimes referred to as "The Quiet Period." See GARY B. GORTON, *MISUNDERSTANDING FINANCIAL CRISES: WHY WE DON'T SEE THEM COMING* 4 (2012) [hereinafter GORTON, *MISUNDERSTANDING FINANCIAL CRISES*] (measuring "The Quiet Period" a bit more stringently as lasting from 1934 until 2007). It is worth observing that the savings and loan crisis of the 1980s created large losses for taxpayers, but did not involve a financial panic or bank run. For a good account of the savings and loan crisis, see LAWRENCE J. WHITE, *THE S&L DEBACLE: PUBLIC POLICY LESSONS FOR BANK AND THRIFT REGULATION* (1991).

⁴⁹ See *infra* Part II.C.

⁵⁰ The safety net was, however, extended on an ad hoc basis to the shadow banking system in 2008 in order to contain the crisis. For an account of the extension of the safety net to shadow banks, see generally DAVIS POLK & WARDWELL LLP, *FINANCIAL CRISIS MANUAL: A GUIDE TO THE LAWS, REGULATIONS AND CONTRACTS OF THE FINANCIAL CRISIS* (2009) [hereinafter *FINANCIAL CRISIS MANUAL*].

⁵¹ For a good first-person account touching on each of these, see PAULSON, *supra* note 22.

⁵² See generally FCIC REPORT, *supra* note 3; *FINANCIAL CRISIS MANUAL*, *supra* note 50.

⁵³ These guarantees extended to MMF accounts, uninsured bank deposits, and long-term debt of banks and bank-holding companies. See *infra* Part II.A–C.

⁵⁴ Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765. The initial capital injections were into the largest, systemically important financial institutions,

After voting down the original version of the EESA,⁵⁵ Congress eventually enacted a new version on October 3, 2008, 13 days after the proposed legislation was announced by the Bush administration.⁵⁶ EESA's enactment was breathtakingly fast by normal congressional standards, but fatally slow by the standards of financial markets. As noted above, without the MMF guarantee, the economic damage during this period would have been significantly worse.⁵⁷

The landscape has, however, changed significantly since 2008; significant reforms have been implemented and the system is in many ways more stable. It is worth asking, then, whether the vulnerabilities that required the use of guarantee authorities in 2008 persist today.⁵⁸ This Part examines different areas of potential vulnerability, concluding that the loci of the crisis in 2008 have not, in fact, been "panic-proofed." There is cause for concern, then, about the wisdom of stripping regulators of guarantee authorities, their greatest panic-fighting tool.

A. *Vulnerability 1: Money Market Funds*⁵⁹

A money market fund (MMF) is a type of mutual fund that serves for its "shareholders" as a close substitute for bank accounts. A "share" of an MMF is never supposed to dip below \$1.00 in value, in the same way that depositors do not expect to lose any of the nominal principal in their bank accounts. Further, much like demand deposits, MMF accounts can be drawn down at will. MMFs engage in (a bit of) maturity

but many non-systemically important institutions ultimately participated as well. See FINANCIAL CRISIS MANUAL, *supra* note 50, at ch. 3.

⁵⁵ See Alison Vekshin & Laura Litvan, *U.S. House Rejects \$700 Billion Financial-Rescue Plan*, BLOOMBERG (Sept. 29, 2008), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aeqvQcX6sRe4>.

⁵⁶ See David M. Herszenhorn, *Bailout Plan Wins Approval; Democrats Vow Tighter Rules*, N.Y. TIMES (Oct. 3, 2008), <http://www.nytimes.com/2008/10/04/business/economy/04bailout.html>. The initial proposal for the legislation was announced on September 20, 2008. See *Text of Draft Proposal for Bailout Plan*, N.Y. TIMES (Sept. 20, 2008), <http://www.nytimes.com/2008/09/21/business/21draftcnd.html>.

⁵⁷ See *supra* Part I.A.

⁵⁸ In a recent opinion piece, Glenn Hubbard and Hal Scott decry the post-crisis limitations placed on regulatory authority with respect to both guarantees and lending. Glenn Hubbard & Hal Scott, *A Financial System Still Dangerously Vulnerable to a Panic*, WALL ST. J. (Mar. 1, 2015), <http://www.wsj.com/articles/glenn-hubbard-and-hal-scott-a-financial-system-still-dangerously-vulnerable-to-a-panic-1425249064> ("Some claim there is nothing to worry about because of new regulations to prevent another crisis: enhanced capital requirements, new liquidity requirements and new resolution procedures. This approach calls to mind a strategy of two wings and a prayer.").

⁵⁹ For a description of money market funds, see generally Securities and Exchange Commission, *Money Market Funds* (Jan. 16, 2013), <http://www.sec.gov/answers/mfmmkt.htm>.

transformation by investing in short-term, high-quality debt of governments and private insurers.⁶⁰

The MMF industry is significant: as of November 2015, MMFs accounted for approximately \$2.7 trillion in assets.⁶¹ MMFs play a central role in the shadow-banking system, as they provide deposit-like services to their “shareholders” while investing in (slightly) longer-term assets.⁶² At the same time, MMFs create potential risks similar to those of banks in the era prior to the Federal Reserve and the FDIC. MMFs are not, however, subject to anything like the prudential supervision or capital requirements that banks are subject to. Moreover, MMFs do not benefit from banks’ explicit safety net of deposit insurance or the Federal Reserve’s liquidity facilities.

It is worth observing that MMFs are *formally* like other mutual funds in that fund “shareholders” do not have a contractual right to receive \$1.00 per share, but rather only the per-share net asset value (NAV) of the fund. If the per-share NAV drops below \$1.00 (thus “breaking the buck”), the failure of an MMF to pay its shareholders \$1.00 per share does not technically constitute default, unlike the case of a bank that fails to repay its depositors 100 cents on the dollar. However, unique accounting rules, along with a strong norm of sponsor support in the face of fund losses, assure that MMFs virtually never “break the buck.”⁶³ Specifically, MMFs have traditionally been permitted to use

⁶⁰ Money market funds (MMFs) arose in the 1970s as an alternative to bank deposit accounts, and were initially attractive because banks faced a cap on the interest rates they were permitted to pay depositors, while interest rates everywhere else in the economy were rising. The first MMFs invested the funds raised from issuing “shares” in Treasury bills, and because the interest on government debt was much higher than the maximum interest on deposits banks were allowed to pay, the MMFs’ “shareholders” benefited from a higher return on their holdings vis-à-vis bank accounts while retaining many of the same attractive benefits of a bank account, including liquidity, transaction services, and price stability. MMFs soon emerged that invested in high-quality debt *other* than Treasury bills. MMFs with diversified portfolios including private debt are referred to as prime MMFs.

⁶¹ *Money Market Fund Assets*, INV. CO. INST., https://www.ici.org/research/stats/mmf/mm_11_05_15 (last visited Nov. 5, 2015).

⁶² MMFs are restricted to investments in relatively short-term securities (though much longer term than the zero maturity status of the MMFs’ liabilities). SEC § 270.2a-7 creates two limits on the weighted average maturity of an MMF portfolio. First, it cannot exceed 60 days, taking in account of a number of exceptions. 17 C.F.R. § 270.2a-7(c)(2)(ii) (2014); *see, e.g.*, 17 C.F.R. § 270.2a-7(d)(1) (noting that “[a] Government Security that is a Floating Rate Security shall be deemed to have a remaining maturity of one day,” regardless of its actual maturity). Second, the weighted average maturity of an MMF portfolio cannot exceed 120 days, regardless of the exceptions that apply with respect to the 60-day limit. 17 C.F.R. § 270.2a-7(c)(2)(iii).

⁶³ Sponsor support to prevent investor losses is the strong norm for MMFs in danger of breaking the buck. For example, one study showed that 29 MMFs suffered losses large enough to break the buck in September and October 2008, but only Reserve Primary actually broke the buck as the others all received sponsor support. Patrick E. McCabe et al., *The Minimum Balance at Risk: A Proposal to Mitigate the Systemic Risks Posed by Money Market*

“amortized” accounting and penny rounding to maintain their \$1.00 per-share NAV.⁶⁴ These accounting rules, however, help make runs an existential, if seemingly remote, threat to MMFs in the event a sponsor cannot or will not step in to protect fund shareholders. This is because amortized accounting can create a discrepancy between the reported NAV—which determines funds paid out per withdrawn share—and the actual value of an MMF portfolio. If investors perceive a gap, they will have an incentive to redeem their shares before the reported NAV comes into alignment with the (lower) true value.

September 2008. The run on MMFs in the wake of Lehman’s failure and Reserve Primary “breaking the buck” constituted, perhaps, the most harrowing moment of the crisis.⁶⁵ The Treasury’s response was to guarantee MMFs with something called the Exchange Stabilization Fund (ESF), established by the Gold Reserve Act of 1934 and intended for use in stabilizing the value of the dollar vis-à-vis other currencies.⁶⁶ The guarantee succeeded in halting the run, and, as described above, was widely seen as “the single most powerful and important action taken to hold the system together before Congress acted.”⁶⁷ Despite this, the EESA, as noted, specifically removed authority to use the ESF to guarantee MMFs, and there is currently no plausible statutory basis for providing a similar sort of guarantee to the industry in future emergencies.

Reform Efforts Since 2008. While the right side of MMF balance sheets proved to be extraordinarily vulnerable during the crisis—with no capital cushions and mostly runnable debt (even if formally termed “shares”)—the left, or asset, side has always been highly regulated to minimize the risk of loss. SEC Rule 2a-7 under the Investment Company Act of 1940 contains a large number of prescriptive and proscrip-

Funds 29 (Fed. Res. Bank of N.Y., Staff Report No. 564, 2012), <http://www.federalreserve.gov/pubs/feds/2012/201247/201247pap.pdf>.

⁶⁴ The “*Amortized Cost Method* of valuation means the method of calculating an [MMF’s] net asset value whereby portfolio securities are valued at the fund’s [a]cquisition cost as adjusted for amortization of premium or accretion of discount rather than at their value based on current market factors.” 17 C.F.R. § 270.2a-7(a)(2). The “*Penny-Rounding Method* of pricing means the method of computing an [MMF’s] price per share for purposes of distribution, redemption and repurchase whereby the current net asset value per share is rounded to the nearest one percent.” 17 C.F.R. § 270.2a-7(a)(20).

⁶⁵ For a description of the run and the government’s response, see *supra* Introduction.

⁶⁶ Gold Reserve Act of 1934, Pub. L. No. 73–87, 48 Stat. 337. For a discussion of the (controversial) legal grounding for this use of the ESF, see *infra* Part IV.A. It is also worth noting that Paulson’s team’s initial plan had a fatal flaw: providing an unlimited guarantee to all MMF accounts would almost certainly create a run on uninsured deposits in the commercial banking system, as large depositors sought greater safety combined with the slightly higher returns offered by MMFs. Sheila Bair, the chairwoman of the FDIC at the time, apprised Paulson of the problem and proposed a solution that was eventually adopted: guaranteeing only existing MMF account balances. See PAULSON, *supra* note 22, at 262.

⁶⁷ PAULSON, *supra* note 22, at 263.

tive guidelines for MMF investments.⁶⁸ In 2010, prior to the passage of Dodd-Frank, the SEC amended Rule 2a-7 to strengthen the risk profile of MMF portfolios even further,⁶⁹ and added a new rule permitting MMF boards of directors to suspend redemptions and liquidate the MMF if its per-share NAV “may result in material dilution”—that is, breaks the buck.⁷⁰

The SEC finalized further reforms in 2014, aimed more squarely at the risk MMFs face of a run.⁷¹ These reforms, however, fall short of solving the fundamental vulnerability of MMFs. The new rules adopt two basic approaches to addressing MMF vulnerability, both of which apply only to sections of the industry. The first forces institutional prime MMFs to adopt a “floating” NAV. *Prime* MMFs, unlike government MMFs,⁷² have diverse portfolios that generally include private issuer debt.⁷³ *Institutional* MMFs are distinct from *retail* MMFs in that they include (often exclusively) institutional investors among their shareholders.

The idea behind the floating NAV requirement—which requires a greater degree of accounting for assets at current market value rather than according to amortized cost—is that it will train MMF investors to accept that the per-share NAV could fluctuate, and will remove the in-

⁶⁸ 17 C.F.R. § 270.2a-7.

⁶⁹ See Press Release, Sec. & Exch. Comm’n, SEC Approves Money Market Fund Reforms to Better Protect Investors (Jan. 27, 2010), <http://www.sec.gov/news/press/2010/2010-14.htm>.

⁷⁰ 17 C.F.R. § 270.22e-3.

⁷¹ Press Release, Sec. & Exch. Comm’n, SEC Adopts Money Market Fund Reform Rules (July 23, 2014), http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370542347679#.VNk-_010yRs. The reform came after a fraught, tortuous process. Immediately after Dodd-Frank, more fundamental reforms were considered, but in August 2012, after failing to get a majority of commissioners on board with meaningful reform, SEC Chairman Mary Schapiro announced that the Commission would not propose new rules to address the structural problems of MMFs. See Press Release, Sec. & Exch. Comm’n, Statement of SEC Chairman Mary L. Schapiro on Money Market Fund Reform (Aug. 22, 2012), http://www.sec.gov/News/PressRelease/Detail/PressRelease/1365171484078#.VNk_1C7K9_A. Several months later, pursuant to Dodd-Frank Act § 120, the Financial Stability Oversight Council prepared a recommendation that the SEC proceed with MMF reform nonetheless. FINANCIAL STABILITY OVERSIGHT COUNCIL, PROPOSED RECOMMENDATIONS REGARDING MONEY MARKET MUTUAL FUND REFORM (2012) [hereinafter FSOC REPORT], <http://www.treasury.gov/initiatives/fsoc/Documents/Proposed%20Recommendations%20Regarding%20Money%20Market%20Mutual%20Fund%20Reform%20-%20November%2013,%202012.pdf>.

⁷² Money Market Fund Reform; Amendments to Form PF, 79 Fed. Reg. 47,736, 47,791 (Aug. 14, 2014) (to be codified at 17 C.F.R. pts. 230, 239, 270, 274, 279) (defining government money market funds under the new rules as funds that “invest [] at least 99.5% of [their] total assets in cash, government securities, and/or repurchase agreements that are ‘collateralized fully’ (*i.e.*, collateralized by cash or government securities)” and encompass Treasury money market funds, which invest solely in U.S. Treasury securities or in repo agreements collateralized by U.S. Treasury securities).

⁷³ *Id.* at 47,738 (including “[t]ax-exempt funds,” which invest primarily in municipal debt, in the SEC definition of “Prime MMF”).

centive to be first to withdraw—the primary motivation in a run—by eliminating any discrepancies between MMFs’ reported NAV and actual asset value.

Unfortunately, the new rules do not eliminate the risk of a run on institutional prime MMFs, as shareholders may still perceive a gap between the reported NAV (even though it is technically “floating”) and the market value of the MMF’s underlying portfolio. The perception of a gap incentivizes investors to withdraw before the gap closes—i.e., before the reported NAV reflects the (less rosy) reality. The perception of a gap could arise from at least two sources. First, MMFs may still take advantage of the general rule for mutual funds that permits amortized cost accounting for assets with a maturity of less than 60 days.⁷⁴ The second, more difficult problem is the illiquidity of the typical prime MMF’s assets, the majority of which are commercial paper and certificates of deposit.⁷⁵ Although the valuation of these securities must be determined in good faith by the MMF board, valuing illiquid instruments inevitably involves a significant degree of discretionary judgment, which could, in a crisis, lead MMF investors to believe that being first in the queue to redeem their shares will (despite the floating NAV) assure them a higher recovery than those whose redemption demands arrive after the fund has been “forced to meet [such] demands by selling assets that have not yet matured.”⁷⁶

Even aside from the lingering possibility of perceived gaps between the reported and the true NAV, imposing a floating NAV on (some) MMFs is problematic. MMF shares have served as a money substitute precisely because of their liquidity and price stability; if price stability is successfully eliminated, it would, as Jill Fisch has observed, “substantially reduce the utility of MMFs for many investors, which could, in turn, affect the availability of short-term credit.”⁷⁷ Another possible con-

⁷⁴ See Squam Lake Group, SEC Comment Letter, No. S7-03-13, 2 n.2, (Sept. 17, 2013) [hereinafter Squam Lake Group Comment Letter], <https://www.sec.gov/comments/s7-03-13/s70313-198.pdf> (observing that “[a]lthough the SEC has indicated that funds are supposed to use fair value where it is less than amortized cost, we believe that this provision effectively makes amortized cost the default option and provides a degree of discretion to fund managers that is unwarranted”); see also Money Market Fund Reform; Amendments to Form PF, 79 Fed. Reg. at 47,812 (stating that “floating NAV money market funds . . . may . . . continue to use amortized cost to value debt securities with remaining maturities of 60 days or less if fund directors, in good faith, determine that the fair value of their debt securities is their amortized cost value, unless the particular circumstances warrant otherwise”).

⁷⁵ Squam Lake Group Comment Letter, *supra* note 74, at 2–3 (“These assets have extremely limited secondary markets and an average maturity well in excess of the period over which a run would occur.”).

⁷⁶ *Id.* at 3.

⁷⁷ Jill E. Fisch, *The Broken Buck Stops Here: Embracing Sponsor Support in Money Market Fund Reform*, 93 N.C. L. REV. 935, 935 (2015) (making a strong case for requiring sponsor support for MMFs, but questioning whether it is worth noting that the run on MMFs in

sequence is that the reduced utility of institutional prime MMFs will, rather than reducing short-term credit in the economy, push institutional investors to seek money substitutes in other, potentially less regulated, corners of the shadow banking system.⁷⁸

A second major element of the recently finalized MMF rules requires “gates and fees” at all prime funds, retail and institutional,⁷⁹ in order to limit the damage of a panic after it has begun. The rule would require prime MMFs to impose liquidity fees and withdrawal restrictions (or “gates”) in the event of a run on the fund. (Government MMFs will be able to opt into the regime of fees and gates, as long as they disclose this to investors *ex ante*.) Both fees and gates will be triggered if the fund’s “weekly liquid assets” fall below a certain threshold. Weekly liquid assets are defined to include “cash, U.S. Treasury securities, certain other Government securities with remaining maturities of 60 days or less, or securities that convert into cash within one week.”⁸⁰ If the fund’s weekly liquid assets fall below thirty percent of its *total* assets, the fund’s board of directors may, in its discretion (after finding it would be in the fund’s best interest), impose a fee of up to two percent on further withdrawals, and temporarily suspend further redemptions for up to ten days. If the fund’s weekly liquid assets fall below ten percent of total assets, the fund is *required* to impose a withdrawal fee of one percent, unless the

2008 was not triggered by sponsors’ unwillingness to support their funds). See generally McCabe et al., *supra* note 63, at 5. For a good précis of the research on sponsor support, see Marco Cipriani et al., *Twenty-Eight Money Market Funds that Could Have Broken the Buck: New Data on Losses During the 2008 Crisis*, LIBERTY ST. ECON. (Oct. 9, 2013), http://libertystreeteconomics.newyorkfed.org/2013/10/twenty-eight-money-market-funds-that-could-have-broken-the-buck-new-data-on-losses-during-the-2008-c.html#.VNID8y7K9_A (“In a 2010 report, Moody’s found 144 cases in which U.S. MMFs received support from sponsors between 1989 and 2003. Brady, Anadu, and Cooper (2012) documented 123 instances of support for seventy-eight different MMFs between 2007 and 2011, including thirty-one cases in which support was large enough that it probably was needed to prevent funds from breaking the buck. . . . [W]hat made Reserve Primary Fund unique in 2008 was neither its exposure to Lehman Brothers nor its portfolio losses, but the fact that its sponsor could not absorb its losses.”). In the end, therefore, it is not clear that concerns over the *willingness* of sponsors to support their funds would, as the industry is currently structured, be a greater trigger for runs than concerns over sponsors’ *ability* to support their funds.

⁷⁸ Bruce Tuckman, *Federal Liquidity Options: Containing Runs on Deposit-Like Assets Without Bailouts and Moral Hazard* 9 (Center for Financial Stability, Policy Paper, 2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2018873 (describing the strong demand for money-like assets and observing that “reducing the attractiveness of money market funds to institutional cash pools will almost certainly result in a rush to satisfy this demand in other ways, including ‘less regulated or unregulated cash management vehicles’”).

⁷⁹ See Money Market Fund Reform; Amendments to Form PF, 79 Fed. Reg. at 47,794 (defining a retail money market fund as “a money market fund that has policies and procedures reasonably designed to limit all beneficial owners of the [money market] fund to natural persons”).

⁸⁰ *Id.* at 47,745 n.84.

board makes a specific finding that a higher or lower (or no) fee would be in the fund's best interest.⁸¹

These gates and fees could help prevent the destructive liquidation of an MMF in a panic, but it could also exacerbate the *early* stages of a run, as gates or fees imposed at one MMF could inspire investors in other MMFs to run to try to withdraw all they can before the "weekly liquid asset" threshold at their fund is triggered. Further, if we recall that investors in money markets care above all about immediate access to their full principal, it becomes clear that gates and fees, though preferable to an unfettered run, may impose considerable consequential damage on those investors who cannot access funds they thought would be immediately available to them.⁸²

A final point is that while government MMFs can opt into a regime of gates and fees, their general exemption from these reforms appears to reflect a belief that they are run-proof. Contrary to this view, the Financial Stability Oversight Council, in its "recommendations" on MMF reform in the face of SEC inertia in 2012, stated that "[g]overnment MMFs . . . may pose the same structural risks [as prime MMFs], in that the funds' investors would have an incentive to redeem if they feared even small losses."⁸³ It bolsters this position by pointing to specific instances that suggest vulnerability for government MMFs.⁸⁴

B. Vulnerability 2: Broker-Dealers

Broker-dealers⁸⁵ were a central pillar in the shadow banking system leading up to the crisis. Like banks, the largest broker-dealers invested in longer-term assets, and financed these assets largely with runnable, deposit-like debt. Although commonly referred to as "investment banks," they were subject to nothing like the prudential regulation to

⁸¹ See *id.* at 47,757–58.

⁸² See Ricks, *supra* note 31, at 83 ("[B]ecause money-claims [such as money market shares] are held for *instrumental* purposes, their defaults cause *consequential* losses to their holders—opportunity costs, operational disruption, reputational damage, or even default. (Critically, these losses are distinct from, and might far exceed, any *investment* losses that their holders may experience.)").

⁸³ FSOC REPORT, *supra* note 71, at 26.

⁸⁴ *Id.* (describing the large outflow of government MMFs during the last three business days in July 2011 and how the U.S. Government Fund had to suspend redemptions in September 2008).

⁸⁵ See 15 U.S.C. § 78c(a)(4)(A) (2012) (defining broker as "any person engaged in the business of effecting transactions in securities for the account of others"); see also 15 U.S.C. § 78c(a)(5)(A) (2012) (defining dealer as "any person engaged in the business of buying and selling securities . . . for such person's own account through a broker or otherwise"). Most major firms engaged in brokering and dealing do *both*, and are routinely referred to as "broker-dealers"; this includes the classic Wall Street investment banks such as Goldman Sachs and Morgan Stanley. (Technically, Goldman Sachs and Morgan Stanley are now financial holding companies with broker-dealer subsidiaries.)

which commercial banks were subject,⁸⁶ and they were not supposed to have access to commercial banks' safety net, that is, deposit insurance and eligibility for emergency loans from the Federal Reserve.

The most prominent type of runnable funding that broker dealers used was the repurchase agreement, or "repo loan," which involved a borrower (the broker-dealer) financing a bond by posting it as collateral for a short-term loan.⁸⁷ The loan was often overnight, but was routinely rolled over, and so functioned for the creditor much like a demand deposit. The loan was uninsured, but the lender felt safe due to the credit quality of the collateral (and, perhaps, expectations of government support if the borrower were considered "too big to fail"). The large broker-dealers relied heavily on repo funding prior to the crisis, and continue to do so today.⁸⁸ A run on repo was just one of several channels that could drain liquidity from a weakened broker-dealer; other channels include derivatives counterparties novating agreements and withdrawing collateral, and prime brokerage clients moving their accounts.⁸⁹

2008. In March 2008, Bear Stearns' repo lenders began demanding more collateral and refusing to roll over their loans *en masse*—the functional equivalent of a bank run from the pre-FDIC era.⁹⁰ It soon became clear that Bear Stearns would fail absent some drastic action. Regulators at the Treasury Department and the Federal Reserve orchestrated a sale of Bear Stearns to JP Morgan, but had to take on the risk of loss on \$30

⁸⁶ See, e.g., Daniel M. Gallagher, Commissioner, The Securities and Exchange Commission—the Next 80 Years: The 15th Annual A.A. Sommer Jr. Lecture on Corporate, Securities and Financial Law (Oct. 16, 2014), <http://www.sec.gov/News/Speech/Detail/Speech/1370543190122#.VOF7KC4YPuY> ("Despite robust market activity over the last few years, the U.S. capital markets, the manner in which they are regulated, and the SEC itself collectively face an existential threat: the encroaching imposition of so-called prudential regulation on markets wholly unsuited to that regulatory paradigm."). Broker-dealers' primary regulator, the Securities and Exchange Commission, has traditionally focused on investor protection and promoting capital formation rather than on the safety and soundness of broker dealers. ("Safety and soundness" regulation can for most purposes be used synonymously with "prudential" regulation.) The SEC has differed in this respect from the regulators of commercial banks because broker-dealers did not traditionally fund themselves with deposit-like debt, and so their failure was unlikely to have the same type of systemic implications as a commercial bank. Even today, after the rise of shadow banking and the crisis, there is resistance to the notion that the SEC should incorporate prudential concerns into its mission.

⁸⁷ Tobias Adrian & Hyun Song Shin, *The Shadow Banking System: Implications for Financial Regulation* 8 (Fed. Res. Bank of N.Y., Staff Report No. 382, 2009), http://www.newyorkfed.org/research/staff_reports/sr382.pdf ("In a repo, the borrower sells a security today for a price below the current market price on the understanding that it will buy it back in the future at a pre-agreed price.").

⁸⁸ See Eric S. Rosengren, Keynote Remarks at Conference on the Risks of Wholesale Funding, Broker-Dealer Finance and Financial Stability 14 fig.8 (Aug. 13, 2014), <http://www.bostonfed.org/news/speeches/rosengren/2014/081314/081314figuresandcomments.pdf>.

⁸⁹ See Darrell Duffie, *The Failure Mechanics of Dealer Banks*, 24 J. ECON. PERSP. 51, 60–68 (2010).

⁹⁰ FCIC REPORT, *supra* note 3, at 288.

billion in risky assets to close the deal.⁹¹ A run on repo was also a chief proximate cause of the demise of Lehman Brothers, which, of course, was permitted to file for bankruptcy. In the wake of Lehman's failure, the remaining stand-alone broker-dealers came under intense liquidity strains, as well.⁹²

Regulators' Response. Regulators' first-line response, starting in March 2008, was to serve as lenders of last resort for broker-dealers via the Federal Reserve's emergency lending powers, which were authorized by Federal Reserve Act § 13(3), allowing loans to non-banks in "unusual and exigent circumstances."⁹³ Through a series of lending programs including the Primary Dealer Credit Facility and the Term Securities Lending Facility (both established in March 2008), broker-dealers that were no longer able to get adequate funding through private markets could borrow from the Federal Reserve.⁹⁴ The large broker-dealers relied on these facilities to an extraordinary degree; by the end of September 2008, for example, Morgan Stanley had borrowed \$96.1 billion from these facilities, and Goldman Sachs \$31.5 billion.⁹⁵ The Federal Reserve still has the power to engage in this type of lending,⁹⁶ but this was not enough to save the banks in 2008. In particular, even after the passage of EESA and the decision to inject capital directly into the largest banks, regulators determined that systemic stability required a broad debt guarantee program available to *all* banks and bank holding companies. The program was meant to ensure that large bank holding companies—whose health was intricately tied up with their subsidiaries, including both banks and broker-dealers—did not face additional liquidity strains by being unable to roll over *long-term* debt that was going to mature over the coming months. Recall that although the iconic Wall Street firms—Goldman Sachs, Lehman Brothers, Morgan Stanley, Merrill Lynch, and Bear Stearns—were all unaffiliated with banks and bank holding companies at the beginning of 2008, by the time the Debt Guarantee Program was rolled out in October 2008, *all* major broker-dealers were part of

⁹¹ FINANCIAL CRISIS MANUAL, *supra* note 50, at 26 (noting that the Federal Reserve made "a secured loan of up to \$30 billion to a special purpose vehicle, Maiden Lane, in order to purchase 'less liquid' assets of Bear Stearns and facilitate the acquisition of Bear Stearns by JPMorgan," that "[t]he loan was authorized pursuant to Section 13(3)," that "JPMorgan would be required to lend Maiden Lane \$1 billion," and that "[t]he Federal Reserve's loan was to be secured by the assets held by Maiden Lane" because JP Morgan did not want Bear's assets).

⁹² FCIC REPORT, *supra* note 3, at 360–63.

⁹³ 12 U.S.C. § 343(3)(A) (2012).

⁹⁴ See generally FINANCIAL CRISIS MANUAL, *supra* note 50.

⁹⁵ FCIC REPORT, *supra* note 3, at 354.

⁹⁶ See *infra* Part III.A (arguing that Dodd-Frank created certain limitations on lending under § 13(3), but these are unlikely to seriously constrain the Federal Reserve's use of the authority in a crisis).

bank holding companies, and all would thus benefit from the program.⁹⁷ The program was established by the FDIC as part of a “Temporary Liquidity Guarantee Program” (TLGP) pursuant to its authority to protect creditors under the systemic risk exception to the least cost requirement of FDIC resolutions.⁹⁸ Participants, who had to pay premiums, were eligible to receive FDIC guarantees for debt issuances of up to 125 percent of the long-term debt that was due to mature in the period between September 30, 2008, and June 30, 2009.⁹⁹ In addition to bolstering the stability of the corporate families that included broker-dealers, the program—via a special exemption from provisions that limited eligibility to banks and bank holding companies—directly guaranteed the long-term debt issuances of Citigroup’s broker-dealer subsidiary.¹⁰⁰

This debt guarantee program (DGP) was an important part of a comprehensive strategy to stabilize the system, but authority to establish a similar program in the future is no longer part of the (freestanding) regulatory toolkit. Dodd-Frank requires joint congressional approval for any such comprehensive guarantee program in the future.¹⁰¹

Changes and Reforms Since 2008. Could broker-dealers again pose the type of risk to the system that they did in 2008, when debt guarantees were deemed a vital part of a comprehensive stabilization plan? As noted above, the big broker dealers that were not part of bank holding companies in the years leading up to the crisis were not subject to any serious prudential oversight.¹⁰² Today, all of the major broker-dealers are affiliated with bank holding companies,¹⁰³ and thus subject to prudential rules and oversight by the Federal Reserve on a consolidated basis.¹⁰⁴ Additionally, the largest broker-dealers belong to bank holding companies

⁹⁷ See FCIC REPORT, *supra* note 3, chs. 15, 18 & 20 (describing how Bear Stearns was sold to JP Morgan; Merrill Lynch was sold to Bank of America; Lehman Brothers failed; and Goldman Sachs and Morgan Stanley converted to bank holding companies).

⁹⁸ For a detailed description of the TLGP, see FINANCIAL CRISIS MANUAL, *supra* note 50, at ch. 5. The systemic risk exception is codified at 12 U.S.C. § 1823(c)(4)(G) (2013). Note that invocation of the exception requires the votes of two-thirds of the Board of Directors of the FDIC and two-thirds of the Federal Reserve Board of Governors, as well as the approval of the Secretary of the Treasury. *Id.*

⁹⁹ FINANCIAL CRISIS MANUAL, *supra* note 50, at 127. The program was extended several times. *Temporary Liquidity Guarantee Program*, FED. DEPOSIT INS. CORP. (Feb. 27, 2013), <https://www.fdic.gov/regulations/resources/TLGP/>.

¹⁰⁰ See SHEILA BAIR, *BULL BY THE HORNS: FIGHTING TO SAVE MAIN STREET FROM WALL STREET AND WALL STREET FROM ITSELF* 117 (2012).

¹⁰¹ 12 U.S.C. §§ 5612(c)(1) & 5613(a) (2010).

¹⁰² See *supra* note 86.

¹⁰³ See *supra* note 97.

¹⁰⁴ The prudential role of the Federal Reserve encompasses both rulemaking and supervision. With respect to rulemaking, for example, all bank holding companies are subject to capital requirements on a *consolidated* basis. See 12 C.F.R. pt. 225, app. A–B, D–E & G. With respect to supervision, see generally *Bank Holding Company Supervision Manual*, FED. RES. BD. (July 2015), <http://www.federalreserve.gov/boarddocs/supmanual/bhc/bhc.pdf>.

that automatically qualify as “systemically important” by virtue of holding assets in excess of \$50 billion, and are thus subject to stricter prudential standards, such as heightened capital and liquidity requirements.¹⁰⁵ While prudential oversight is extremely important for addressing bank-like risks, it has never been enough on its own to prevent panics.¹⁰⁶ The heightened prudential requirements that are applied to the largest broker-dealers are significant improvements over the status quo ante, as is the possibility of resolution under Title II of Dodd-Frank.¹⁰⁷ The fact remains, however, that broker-dealers continue to rely heavily on short-term, runnable debt, which could contribute to a system-wide run, and that the removal of the FDIC’s freestanding guarantee authority weakens the regulatory toolkit with which regulators can respond to such a run. Furthermore, while the largest broker-dealers today belong to bank holding companies, it is possible that stand-alone broker-dealers will grow in size, and—unless designated as systemically important by the Financial Stability Oversight Council¹⁰⁸—lack any effective prudential oversight.¹⁰⁹

C. *Vulnerability 3: Commercial Banks*

A third area that proved vulnerable to panic during the crisis was the commercial banking industry. This was surprising because many believed that we had “solved” runs for commercial banks through a combination of regulation, emergency lending, and deposit insurance. Nevertheless, in the days after Lehman Brothers’ failure, Washington Mutual, the sixth largest bank in the United States, experienced a fatal run, primarily on business transaction accounts above the deposit insurance cap.¹¹⁰ The FDIC seized the bank on September 25, 2008.¹¹¹ The

¹⁰⁵ See 12 U.S.C. § 5365 (2010).

¹⁰⁶ It did not prevent runs on banks prior to deposit insurance, and even with deposit insurance, some large commercial banks faced runs in 2008. See *infra* Part II.C. It is also worth noting that a few of the most bailout-dependent firms in the crisis, such as Citigroup and Bank of America, were bank holding companies that had been subject to Federal Reserve prudential oversight for years leading up to 2008.

¹⁰⁷ Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111–203, §§ 201–217, 124 Stat. 1376, 1442–1520 (2010).

¹⁰⁸ See 12 U.S.C. § 5323 (2010).

¹⁰⁹ See *supra* note 86.

¹¹⁰ FCIC REPORT, *supra* note 3, at 365.

¹¹¹ See *id.* at 365 (noting that this was the *Thursday* of the week following Lehman Brothers’ bankruptcy filing); see also ALAN S. BLINDER, *AFTER THE MUSIC STOPPED: THE FINANCIAL CRISIS, THE RESPONSE, AND THE WORK AHEAD* 155 (2013) (arguing that the fact that the FDIC acted a day early spoke to the urgency and gravity of the situation). As Alan Blinder notes, it is almost unheard of for the FDIC to seize a bank on a Thursday; they generally wait until Friday so that they have the weekend to ensure all the potential kinks in dealing with insured depositor funds (usually transferring them to another bank) can be ironed out with minimal disruption.

bank was insolvent, but the FDIC declined to invoke the “systemic risk exception” to protect uninsured creditors of the bank.¹¹² The FDIC did not have to tap into the deposit insurance fund at all, and in the end no depositors, including those over the insurance cap, lost any money. Unsecured bondholders, however, wound up recovering only fifty-five cents on the dollar.¹¹³ The mere fact that the FDIC made it clear it would not protect uninsured creditors at Washington Mutual was enough, however, to trigger a run on Wachovia, the fourth largest bank in the country. The following day, when it became clear that Wachovia would fail without assistance, the FDIC, reversing course from its decision on Washington Mutual, agreed to invoke the systemic risk exception to protect all the bank’s creditors.¹¹⁴

While the unquestioned authority of the FDIC (in concert with the Federal Reserve and the Treasury Secretary) to invoke the systemic risk exception on a bank-by-bank basis would—even absent a broader guarantee—have helped avoid the utter catastrophe that would have resulted from the MMF run absent the use of the Exchange Stabilization Fund, it would also have been cumbersome and costly, and would not have provided quite the panic-slaying certainty a broad guarantee to protect all depositors would. To address the *systemic* problem, then, the FDIC rolled out, as part of the TLGP, the Transaction Account Guarantee Program, which insured *all* deposits held in non-interest bearing accounts, without limit.¹¹⁵ These, again, were typically used by depositors with large periodic needs for transactional liquidity, such as businesses meeting monthly payroll, who had no tolerance for any risk of either delay or loss on their transaction accounts, and whose withdrawals could have been fatal to many banks.

Once again, this particular use of the systemic risk exception is no longer available as a freestanding authority for the FDIC to employ in a crisis.¹¹⁶ The absence of this broader authority could make the case-specific invocation of the systemic risk exception *more* likely, weakening

¹¹² FCIC REPORT, *supra* note 3, at 365–66.

¹¹³ PAULSON, *supra* note 22, at 293.

¹¹⁴ See FCIC REPORT, *supra* note 3, at 367; see also *id.* at 370 (stating that the FDIC did not ultimately need to cover any losses as part of the deal to sell Wachovia to Wells Fargo).

¹¹⁵ See FINANCIAL CRISIS MANUAL, *supra* note 50, at 137–40.

¹¹⁶ The “systemic risk” exception is codified at 12 U.S.C. § 1823(c)(4)(G)(i) (2006). Use of the exception to provide “open assistance,” or guarantees of debts other than insured deposits for banks and bank holding companies *not* in resolution, was removed by Dodd-Frank. 12 U.S.C. § 5613(a) (2010) (“Effective upon July 21, 2010, the Corporation may not exercise its authority under section 1823(c)(4)(G)(i) of this title to establish any widely available debt guarantee program for which section 5612 of this title would provide authority.”). Section 5612 authorizes this type of widely available debt guarantee program only upon joint congressional approval and that “[a]bsent such approval, the [FDIC] shall issue no such guarantees.” 12 U.S.C. § 5612(d) (2010).

market discipline. To illustrate the problem, consider that under many market conditions, haircuts for Washington Mutual's uninsured creditors would likely *not* have had the contagion effects they did in September 2008. Further, Washington Mutual was not well managed, and the credibility of the threat of losses for (some) creditors of a poorly managed bank is essential to creating *any* market discipline.¹¹⁷ However, to the degree that there is real-time opacity as to the extent of systemic fragility in a stressed market, regulators *without* the broad guarantee authority may be more likely to err on the side of caution and invoke the systemic risk exception in the first instance in a case like Washington Mutual. Again, sometimes this will be the right choice, sometimes not. The point here is simply that if we want uninsured creditors to impose meaningful discipline on banks, the threat of losses must be credible, and this threat would be more credible if regulators were confident that they could prevent potential runs from spreading with broad guarantee authorities.

The commercial banking system remains potentially vulnerable to a run on uninsured deposits. As of September 30, 2014, the aggregate deposits held in domestic offices by all U.S. depository institutions totaled approximately \$9.365 trillion, of which only approximately \$5.43 trillion was insured.¹¹⁸

D. Vulnerability 4: Regulatory Arbitrage

This Part so far has analyzed specific areas of vulnerability in 2008 that have yet to be “panic-proofed.”¹¹⁹ Even if these specific vulnerabilities are eliminated, however, it is possible that similar vulnerabilities could crop up in other places in the financial system. Shadow banking, in the form of short-term debt funding a portfolio of longer-term assets, could emerge in new institutional settings. Unless and until the problem of very short-term debt issuance outside the deposit insurance umbrella is effectively addressed, not only at broker-dealers and money-market funds but everywhere, conditions conducive to financial panic could reemerge.¹²⁰ It is worth noting that the extraordinary demand for short-term debt as a cash substitute creates a powerful incentive for regulatory

¹¹⁷ For a description of Washington Mutual's demise, see generally DEP'T OF THE TREAS. OFF. OF INSPECTOR GEN., EVALUATION OF FEDERAL REGULATORY OVERSIGHT OF WASHINGTON MUTUAL BANK (2010), <http://fdicoig.gov/reports10%5C10-002EV.pdf>.

¹¹⁸ *Statistics on Banking*, FED. DEPOSIT INS. CORP. (Nov. 15, 2012), <https://www2.fdic.gov/SDI/SOB/> (under “Assets and Liabilities,” click on “Deposit Liabilities,” and then click on “Run Report”).

¹¹⁹ Again, this is despite the traditional view that deposit insurance solved the problem of panics in commercial banking. See, e.g., MILTON FRIEDMAN, A PROGRAM FOR MONETARY STABILITY 38 (1960) (noting that “federal deposit insurance has performed a signal service in rendering the banking system panic-proof”).

¹²⁰ Morgan Ricks calls the traditional prohibition on non-banks issuing deposits “the first law of banking.” Ricks, *supra* note 31, at 78–79. Shadow banking complies with the letter but

arbitrage to create new types of “near-money” assets if current alternatives are eliminated.¹²¹

III. HOW A WEAKER SAFETY NET MAY EXACERBATE MORAL HAZARD

This Article argues that the absence of a strong crisis response tool in the form of freestanding guarantee authorities increases the likelihood of a more promiscuous resort to weaker crisis-response tools, in the form of bailouts of specific institutions or their creditors. This Part specifies what form these weak-tool bailouts might take and then examines in greater detail the conditions under which the lack of guarantee authorities will make bailouts more likely, exacerbating moral hazard.

There are a number of ways in which regulators may (still) effect targeted bailouts. By “bailout” I mean steps the government takes either to ensure the continued existence and operation of an insolvent firm, *or* to ensure that if the institution ceases to exist in its erstwhile form, at least one class of creditor does not suffer losses that it otherwise would in the absence of intervention.

As a preliminary point, it is important to observe that some of the authorities regulators could rely on to bail out a specific institution or its creditors *formally* prohibit bailouts under this definition. These authorities may nevertheless be used to affect a bailout, primarily because of the immense difficulty of determining when a firm is actually insolvent in a crisis.¹²² The difficulty of distinguishing mere *illiquidity*¹²³ from fundamental *insolvency* under highly stressed market conditions arises in part because markets become unreliable barometers of “fundamental value” during a crisis. In a crisis, markets for previously liquid financial assets dry up as potential buyers and creditors “fly to safety” and hoard cash out of prudence. As Tim Geithner explains, “Imagine you had to sell your house tomorrow in a market where no one could get a mortgage.

not the spirit of this prohibition. Panic-proofing banks is not enough; to panic-proof the system we must *both* panic-proof banks *and* apply the “first law of banking” to all non-banks.

¹²¹ See Zoltan Pozsar, *Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System* 14–15 figs.7 & 8 (Int’l Monetary Fund, Working Paper 11/190, 2011), <https://www.imf.org/external/pubs/ft/wp/2011/wp11190.pdf>.

¹²² Charles Goodhart goes so far as to call the notion that we can distinguish between insolvency and illiquidity a “myth.” Charles Goodhart, *Myths About the Lender of Last Resort*, in *FINANCIAL CRISES, CONTAGION, AND THE LENDER OF LAST RESORT* 227, 229 (Charles Goodhart & Gerhard Illing eds., 2002) (observing that “[t]he possibility of large shocks—for example, large jumps in asset prices, especially in crises when such a jump is downwards—means that there may be multiple equilibria, to use the current jargon”).

¹²³ Illiquidity here means that the firm is unable to sell assets quickly enough, or to find investors to inject new cash, in order to meet its *own* debt obligations. For example, a bank that is fundamentally solvent may still be illiquid if its depositors run. The bank will not be able to sell its assets fast enough, nor will new customers deposit cash quickly enough to enable the bank, left to its own devices, to honor all its depositors’ withdrawal demands.

You'd have to sell it at a tiny fraction of its potential value."¹²⁴ Further, even in normal market conditions, large financial institutions' balance sheets are vast and opaque, and the valuation of many of their assets requires a huge degree of judgment.¹²⁵

Distinguishing insolvency from illiquidity may also be difficult because, in a crisis, the question of a firm's insolvency may be endogenous to the government's decision to intervene or not. For example, if failing to halt a panic leads to a deep recession, then many borrowers in the real economy, who would otherwise have been able to pay off debts, wind up defaulting, pushing a bank that would have been solvent into insolvency. While it is likely that at least some of the firms regulators saved with loans, capital injections, and guarantees in 2008 were fundamentally insolvent at the time and have since earned their way back to solvency, it is nevertheless worth noting that the Treasury and the FDIC both wound up making money on their guarantee programs.¹²⁶ The Treasury made

¹²⁴ GEITHNER, *supra* note 1, at 283.

¹²⁵ In discussing Bank of America's reported results for the third quarter of 2014, financial columnist Matt Levine provides a piquant and amusing account of the impact differences among various accounting conventions—each acceptable for different regulatory purposes—can have on a bank's putative profitability. See Matt Levine, *Bank of America Made \$168 Million Last Quarter, More or Less*, BLOOMBERG (Oct. 15, 2014), <http://www.bloombergvie.com/articles/2014-10-15/bank-of-america-made-168-million-last-quarter-more-or-less> (explaining how different valuation approaches, each valid under U.S. Generally Accepted Accounting Principles (GAAP), yield three different numbers for Bank of America's third-quarter earnings). Levine writes:

So you get at least three numbers—positive \$168 million, negative \$70 million or negative \$636 million—using just U.S. generally accepted accounting principles. But why stop there? Other accounting principles are sometimes accepted. There is tax, for instance. Bank of America had \$663 million of tax expense this quarter, on \$831 million of pre-tax income, which looks a bit like an 80 percent tax rate. This is not because the tax rate applicable to Bank of America is 80 percent. It's because tax accountants get a different number for Bank of America's income than GAAP accountants do. For instance, if Bank of America paid a 35 percent tax rate, then its pre-tax income, for tax purposes, was \$1.9 billion, and its post-tax income, under tax accounting, was \$1.2 billion. Positive \$1.2 billion. Why not.

Or regulatory capital. Bank of America's common equity tier 1 capital went down by \$1.6 billion this past quarter. Some of that is dividends—it accrued about \$526 million in common dividends—but most of it is not. It's just that regulatory capital and GAAP measure income differently in some respects. And the same in other respects. This is very confusing. It's so confusing that Bank of America got it wrong by \$4 billion earlier this year. Or by \$2.7 billion. Depending how you count!

Id.

¹²⁶ See Press Release, Fed. Deposit Ins. Corp., FDIC-Insured Institutions Earned \$34.7 Billion in The Fourth Quarter of 2012 (Feb. 26, 2013), <https://www.fdic.gov/news/news/press/2013/pr13014.html> (noting that the Temporary Liquidity Guarantee Program “contributed a total of \$9.3 billion to the [Deposit Insurance Fund] over the life of the program”); see also Press Release, U.S. Dep't of the Treasury, Treasury Announces Expiration of Guarantee Program for Money Market Funds (Sept. 18, 2009), <http://www.treasury.gov/press-center/press-releases/Pages/tg293.aspx> (noting that over the life of the MMF guarantee program, the Treasury “had no losses . . . and earned approximately \$1.2 billion in participation fees”).

money on its TARP injections,¹²⁷ and the Federal Reserve made money on its emergency lending programs.¹²⁸ As Larry Summers has observed, “[t]he government got back substantially more money than it invested” during the crisis.¹²⁹

A. Targeted Interventions

What, then, may regulators do to save particular institutions or their creditors? First and foremost, the FDIC can still invoke the systemic risk exception to bail out uninsured creditors of a bank in resolution, though it can no longer use it to provide broad guarantees or “open assistance” to banks not in resolution.¹³⁰

The Federal Reserve, as lender of last resort, can lend to banks through its discount window and to non-banks under § 13(3) of the Federal Reserve Act, which permits such lending in “unusual and exigent circumstances.”¹³¹ This, of course, was one of the central crisis response tools in 2008. The Federal Reserve’s § 13(3) powers have been constrained somewhat by Dodd-Frank,¹³² which restricts § 13(3) lending to programs of broad-based eligibility,¹³³ and prohibits lending to insolvent institutions.¹³⁴ In practice, however, this may not impose much of a constraint on the Federal Reserve’s emergency lending in a crisis. First, as noted above, the line between illiquidity and insolvency can be impossible to draw with certainty in a crisis, and the statute does little to constrain the Federal Reserve’s discretion in making a solvency determination.¹³⁵ Second, programs intended for individual institutions

¹²⁷ See, e.g., Chris Isidore, *U.S. Ends TARP with \$15.3 Billion Profit*, CNN MONEY (Dec. 19, 2014), <http://money.cnn.com/2014/12/19/news/companies/government-bailouts-end/>. While few in the financial sector would consider this a healthy return on a six-year, \$426 billion investment program, it is, nevertheless, worth noting that, with the exception of the auto manufacturers, all of the “systemically significant” TARP recipients paid back more to the Treasury than they received. See, e.g., Ryan Tracy et al., *Bank Bailouts Approach a Final Reckoning*, WALL ST. J. (Dec. 19, 2014), <http://www.wsj.com/articles/ally-financial-exits-tarp-as-treasury-sells-remaining-stake-1419000430>.

¹²⁸ See, e.g., Chris Isidore, *Fed Made \$9 Trillion in Emergency Overnight Loans*, CNN MONEY (Dec. 1, 2010), http://money.cnn.com/2010/12/01/news/economy/fed_reserve_data_release/.

¹²⁹ Summers, *supra* note 27.

¹³⁰ See *supra* note 116.

¹³¹ 12 U.S.C. § 343(3)(A) (2010).

¹³² See Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), Pub. L. No. 111-203, § 1101, 124 Stat. 1376, 2113 (2010).

¹³³ See 12 U.S.C. § 343(3)(A).

¹³⁴ See 12 U.S.C. § 343(3)(B)(ii).

¹³⁵ See *id.* (“The Board shall establish procedures to prohibit borrowing from programs and facilities by borrowers that are insolvent. Such procedures may include a certification from the chief executive officer (or other authorized officer) of the borrower, at the time the borrower initially borrows under the program or facility (with a duty by the borrower to update the certification if the information in the certification materially changes), that the borrower is not insolvent.”).

can often be established with general eligibility requirements. Indeed, as part of its mandate under the EESA, the Treasury established a widely available Asset Guarantee Program that was used once to guarantee \$301 billion of troubled assets held by Citigroup.¹³⁶ It also established a Significant Failing Institutions Program with general eligibility requirements that it used once (for AIG),¹³⁷ and a Targeted Investment Program with similar general eligibility requirements that it used twice (for Citigroup and Bank of America).¹³⁸

The Orderly Liquidation Authority, established by Title II of the Dodd-Frank Act, is supposed to provide a credible alternative to a bailout in a Lehman-like situation, but may nonetheless be a tool for providing a backdoor bailout to creditors of a systemically important financial institution (SIFI) resolved under its auspices. The current regulatory strategy is to require the SIFI holding company to issue enough long-term debt—debt that is not runnable and that does not have the systemic importance of money market debt—so that *all* the SIFI's consolidated losses can be absorbed at the holding company level.¹³⁹ A SIFI's actual operations, however, are generally not carried out by the holding company, but rather by its operating subsidiaries.¹⁴⁰ All these operating subsidiaries would be transferred untouched to a new “bridge holding company;” the old SIFI shareholders would be wiped out, and the old SIFI holding company long-term debt holders would trade their debt claims for equity in the new holding company (which would presumably be worth much less at the moment of resolution).¹⁴¹

A recapitalized SIFI in Title II may, however, face a liquidity crunch even if it is fundamentally solvent. The short-term creditors of its operating subsidiaries may (out of an abundance of caution due to the opacity of the SIFI's true value) refuse to roll over their loans, and the SIFI may not have enough cash and liquid securities to pay them all back. In such a situation, to avoid the SIFI subsidiaries defaulting on the short-term debt, or the occurrence of fire sales of assets that could weaken the SIFI (as well as other institutions holding similar assets),¹⁴²

¹³⁶ See FINANCIAL CRISIS MANUAL, *supra* note 50, at 53–54. Bank of America also took steps to use the program, but ultimately did not. *Id.*

¹³⁷ *Id.* at 76–77.

¹³⁸ *Id.* at 77–78.

¹³⁹ For a description of the resolution strategy, see Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy, 78 Fed. Reg. 76,614, 76,615–19 (proposed Dec. 18, 2013) [hereinafter FDIC Proposed Rule].

¹⁴⁰ *Id.*

¹⁴¹ The actual mechanics are, of course, slightly more complex. See *id.*

¹⁴² See Anil K. Kashyap et al., *Rethinking Capital Regulation*, FED. RESERVE BANK OF KAN. CITY 13 (Aug. 2008), <http://online.wsj.com/public/resources/documents/Fed-JacksonHole.pdf> (“When bank A adjusts by liquidating assets [through a fire sale] . . . it imposes a cost on another bank B who holds the same assets: the mark-to-market price of B’s assets will be

the Treasury is authorized to lend to the bridge holding company (which can then channel the loans to the subsidiaries).¹⁴³ The loans require the bridge holding company to be solvent (and must be fully collateralized), but, again, whether or not a SIFI in such a situation is solvent is not always a clear-cut issue. Some valuations require discretion, and a few optimistic assumptions could, in ambiguous situations, ensure that the necessary solvency determination is made for the Treasury to proceed with the required loans. If the Treasury fails to recuperate all its money, then it can recover its losses by a levy on other SIFIs,¹⁴⁴ but that does not make the action vis-à-vis the resolved SIFI's short-term creditors any less a bailout.

Finally, regulators may use moral suasion to facilitate private bailouts, as they did with creditors of Long-Term Capital Management in 1998.¹⁴⁵ Indeed, all accounts of the infamous "Lehman Weekend" reported that the other Wall Street banks were ready to assume the risk of losses on billions of dollars of Lehman's bad assets if a pending sale to Barclays had not been nixed by British regulators.¹⁴⁶

B. Conditions for Increasing Moral Hazard Costs

I argue that the existence of the "weak" tools discussed in Part III.A, combined with the absence of stronger tools in the form of guarantee authorities, makes it *more* likely that the worst-managed financial firms will be saved and their creditors made whole by the government. The net moral hazard costs in the absence of guarantee authorities could, therefore, be greater. This, again, is not *necessarily* the case, but is very plausibly true under current conditions in the United States. What are these conditions?

First, there is often a lack of clarity in the early stages of market turmoil as to whether such turmoil is a sign of a healthy correction, or a

pushed down, putting pressure on B's capital position and in turn forcing it to liquidate some of its positions. Thus selling by one bank begets selling by others, and so on, creating a vicious circle.").

¹⁴³ See FDIC Proposed Rule, *supra* note 139.

¹⁴⁴ See *id.* at 76,617.

¹⁴⁵ Long-Term Capital Management (LTCM) was a prominent and highly leveraged hedge fund that risked defaulting in 1998. Fourteen private firms agreed to infuse capital into LTCM to keep it from failing. The negotiations of the firms participating in the private bailout of LTCM were coordinated and hosted by the Federal Reserve Bank of New York. For accounts of the events surrounding LTCM's near demise and the role of the Federal Reserve in saving it, see Michael Fleming & Weiling Liu, *Near Failure of Long-term Capital Management*, FED. RES. BANK OF N.Y. (Nov. 22, 2013), <http://www.federalreservehistory.org/Events/DetailView/52>; Alan Greenspan, Chairman, Testimony Before the Committee on Banking and Financial Services (Oct. 1, 1998), <http://www.federalreserve.gov/boarddocs/testimony/1998/19981001.htm>.

¹⁴⁶ PAULSON, *supra* note 22, at 210 (describing how the other major Wall Street firms had agreed in principle to "put up more than \$30 billion" to facilitate a sale).

symptom of a mild downturn, or instead a harbinger of crisis. There is an impressive body of evidence that regulators were consistently behind the curve in diagnosing the crisis through most of 2007 and 2008.¹⁴⁷ Better data could certainly help regulators,¹⁴⁸ but there are compelling reasons to believe that this problem cannot be completely addressed by more or better information.¹⁴⁹ In particular, regulators will often be unable—and will know they are unable—to predict with any confidence the consequences of the failure of a large bank in jittery markets.

Second, conditions can move from stressed to panicked with great speed, before regulators have a chance to react. Financial crises tend to occur in line with Ernest Hemingway's description of how one goes bankrupt: "[g]radually and then suddenly."¹⁵⁰ A good example of this is the slow decline of Lehman Brothers (lasting through the summer of 2008), followed by its quick collapse, which led within two days to the Reserve Primary breaking the buck and the run on the money market fund industry.

Third, without guarantee authorities, regulators' other tools are likely to be unequal to the task of containing a full-blown panic. Again, absent the use of the ESF to guarantee MMF accounts, the run on MMFs would have been catastrophic. Congress would probably have acted *eventually*, but the damage a run like this could cause in the time it would plausibly take Congress to act is terrifying to contemplate.¹⁵¹

¹⁴⁷ See, e.g., Jon Hilsenrath, *New View into Fed's Response to Crisis*, WALL ST. J., Feb. 21, 2014, at A1 (discussing the release of transcripts from Federal Reserve meetings during the crisis after a five year lag, and describing how officials "spent much of the spring and summer [of 2008] hamstrung by uncertainty, disagreement and an unexpected inflation jump").

¹⁴⁸ See generally Andrew G. Haldane, Speech at the Sec. Indus. & Fin. Mkts. Ass'n Symp., *Towards a Common Financial Language* (Mar. 14, 2012), <http://www.bankofengland.co.uk/publications/Documents/speeches/2012/speech552.pdf>.

¹⁴⁹ One problem is that financial systems exhibit features of nonlinearity, meaning that infinitesimal differences in conditions today can lead to outside differences in outcomes tomorrow. See, e.g., Nimalan Arinaminpathy et al., *Size and Complexity in Model Financial Systems*, 109 PROC. NAT'L ACADEM. SCI. 18,338 (2012), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3494937/>. Another problem is that data requires accurate and timely *interpretation* for it to be useful. For example, Gary Klein has argued persuasively that a lack of data was *not* the problem in a variety of governmental failures to anticipate crises, including Pearl Harbor, 9/11, and Enron; rather, the lack of an appropriate interpretive framework impeded effective data filtering and regulators' ability to connect the dots. See GARY KLEIN, *STREETLIGHTS AND SHADOWS: SEARCHING FOR THE KEYS TO ADAPTIVE DECISION MAKING* 136–43 (2011).

¹⁵⁰ To be precise, it is how one of his characters describes how he (the character) went bankrupt. ERNEST HEMINGWAY, *THE SUN ALSO RISES* 127 (1996).

¹⁵¹ See, e.g., Stewart, *supra* note 23, at 73 ("The Treasury official described the situation: 'Lehman Brothers begat the Reserve [Primary] collapse, which begat the money-market run, so the money-market funds wouldn't buy commercial paper. The commercial-paper market was on the brink of destruction. At this point, the banking system stops functioning. You're pulling four trillion out of the private sector'—money-market funds—'and giving it to the government in the form of T-bills. That was commercial paper funding GE, Citigroup, FedEx,

(Recall that it took 13 days and one failed vote for Congress to pass TARP).

Fourth, regulators know that they lack the power to guarantee the system if worse comes to worst, and could, therefore, be anxious and less willing to let a small financial brush fire burn—to let a firm or two fail, clearing out the dry underbrush—for fear that it could suddenly turn into a fierce conflagration. This would mean that they will be more likely to use the weaker tools mentioned above—moral suasion, emergency lending, and so on—early, before the problem becomes bigger than they can handle. These (smaller) steps could often be employed when inaction would not have led to a crisis, and would, in fact, have made the system more robust, by weeding out weak performers.

Finally, market actors perceive this state of affairs—i.e., the limitations of regulatory tools and the incentives regulators have to avoid worst-case scenarios—and come to rely *more* on regulators to act early to prevent crises by bailing out specific firms or their creditors.

A brief, highly stylized numerical example may help illustrate the decision-making calculus top regulators face when a systemically important firm falters. Assume that guarantee authorities would be able to halt a panic once it starts, but that “weak” tools cannot. Weak tools can, however, prevent a panic from starting. Assume further, for purposes of exposition, that refraining from a weak-tool bailout can lead to a panic with a probability greater than zero but less than one. Finally, assume that regulators are risk neutral and want to minimize expected social costs.¹⁵²

Imagine first that the regulators lack guarantee authorities but retain weak bailout tools, and are considering intervening to save a particular firm, “BigBank.” Whether or not regulators will intervene to save BigBank depends on how they perceive several key variables: p , the probability that BigBank’s failure will lead to a broad panic; $c1$, the net social cost of that panic;¹⁵³ b , the net social benefit of BigBank’s failure if it does not lead to a panic;¹⁵⁴ and $c2$, the net social cost of an early,

all the commercial-paper issuers. This was systemic risk. Suddenly, you have a global bank holiday.”).

¹⁵² Relaxing the assumptions about regulators would likely accentuate the dynamics outlined here to the degree that regulators are risk averse and that they perceive the cost of a panic as significantly larger than the cost of a bailout. For example, if a panic were low-probability but very high cost, risk-averse regulators might bail out a bank even if they believed it was not cost-justified in expected-value terms.

¹⁵³ For a discussion of panic costs, see *supra* note 45 and accompanying text.

¹⁵⁴ A firm’s failure could have a salutary impact on market discipline, increasing systemic stability and overall efficiency in the allocation of capital.

targeted bailout.¹⁵⁵ Regulators should intervene to bail out BigBank if they believe that

$$p * c1 + (1-p) * b < c2.$$

For example, if regulators believe that the probability (p) that BigBank's failure will lead to a panic is 0.2, the cost ($c1$) of a panic is -100, the benefit (b) of BigBank's failure if a panic does not ensue is 5, and the cost ($c2$) of a bailout is -10, then regulators will have a strong incentive to intervene. ($0.2 * -100 + 0.8 * 5 = -16 < -10$.)¹⁵⁶

The calculus shifts, however, if regulators *have* freestanding guarantee authorities. First and most importantly, the (perceived) cost of panic will be significantly lower; for purposes of illustration, suppose regulators now believe $c1$ is -20. (The lingering costs may be due to a combination of the fact that some damage may be wrought prior to regulators establishing guarantee programs, and to the fact that the guarantee program itself may exacerbate a different type of moral hazard, as described below.) Further, the *likelihood* of a panic may be diminished, as the mere fact that regulators can halt a run may dampen incentives to run at the margin. Suppose regulators believe p is 0.1. Now, from regulators' perspective, it makes more sense to let BigBank fail, since the inequality sign is reversed. ($0.1 * -20 + 0.9 * 5 = 2.5 > -10$.)

In this model, therefore, BigBank is more likely to be saved by regulators if they lack guarantee powers. *With* guarantee authorities, regulators will be more ready to allow the weakest and worst-managed firms to die and to let losses fall on creditors, as they can be confident in their ability to contain the fire if it starts to rage out of control. This would *increase* market discipline for large financial firms. Without guarantee authorities, the worst firms will be likelier to receive targeted bailouts, weakening discipline.

This is not, of course, the end of the story. The moral hazard effect described above must be balanced against *other* possible incentive distortions that guarantee powers could exacerbate. For example, if guarantee authorities are invoked in systemic crises, financial firms may have an incentive to over-invest in, and even create, "tail-risky" assets that are highly correlated with the broader market and likely to default only in

¹⁵⁵ Bailouts could skew incentives going forward, creating conditions that demand further bailouts, undermining stability, and lessening efficiency in the allocation of capital.

¹⁵⁶ Any values assigned to these variables will, of course, be highly contestable; indeed, the essence of the debate over whether bailout tools (strong or weak) should be deployed hinges on one's view of which cost is greater: $c1$ or $c2$. (As noted below, these costs depend as well on a number of features of regulation and the markets in addition to any bailout decision.) The numbers in this illustration seem plausible to me as (highly abstract and simplified) representations of the actual stakes in these decisions, but the more important point for purposes of this Article is that they are, I argue, plausible representations of decision-makers' *perceptions*, since decisions will be driven by those perceptions.

systemic crises.¹⁵⁷ I do not purport to prove that one moral hazard effect outweighs the other; indeed, I do not believe such proof is possible.¹⁵⁸ If, however, *net* moral hazard costs *are* exacerbated by guarantee authorities, it brings us back to the trade-off with which the debate started: the potential costs of short-run instability in the absence of guarantees versus long-run moral hazard costs *with* guarantees. This Article supports the arguments of the pro-guarantee side of the debate by showing that while guarantee authorities may exacerbate moral hazard, there may also be moral hazard costs to *failing* to provide regulators with guarantee authorities. *Ex ante*, the net effect is ambiguous.

Some might also question a key assumption upon which the argument of this Article rests: that regulators would, in fact, be more likely to resist the urge to use weak tools to bail out firms and creditors if they had guarantee powers. It is, of course, impossible to disprove the possibility that regulators, perhaps irredeemably “captured” by banks, will always and everywhere act to prevent financial firm failures and losses to creditors. This Article argues, however, that a more plausible reading of regulators’ incentives is that they are at least ambivalent about saving faltering firms, and will often find it distasteful. It is instructive here to recall the intense pressure regulators faced in early September 2008 to show toughness and to punish moral hazard: “The bailouts [prior to Lehman] had brought into rare alignment the Republican right wing, averse to any tampering with the free market, and the Democratic left, outraged by the government rescue of Wall Street’s overpaid élite.”¹⁵⁹ Regulators will often *want* to let a firm fail, and giving them the tools to contain the damage if failure sparks a panic will allow them to yield to popular pressure on this point with a clear conscience.¹⁶⁰ (The argument of this piece, of course, is that in the absence of guarantee powers such yielding is *both* less likely to occur *and* much less likely to be a good thing if it *were* to occur).

Finally, it is worth emphasizing that if freestanding guarantee authorities were reestablished, they should be coupled with tighter regula-

¹⁵⁷ See Joshua D. Coval et al., *Economic Catastrophe Bonds*, 99 AM. ECON. REV. 628 (2009) (analyzing structured financial products as “economic catastrophe bonds” that “default only under severe economic conditions”).

¹⁵⁸ See John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 888 (2015) (“[F]inance is at the heart of the economy; is social and political; and is characterized by non-stationary relationships that exhibit secular change (that is, long-term structural changes). These features undermine the ability of science to precisely and reliably estimate the effects of financial regulations, even retrospectively.”).

¹⁵⁹ Stewart, *supra* note 23.

¹⁶⁰ *Id.* (explaining a comment by a Treasury official about the immediate aftermath of Lehman’s failure, before the full extent of the fallout was clear: “‘Everybody in some part of their brain thought it was a good thing for Lehman Brothers to go under’ ‘Was this ten per cent of the brain? I don’t know. . . . But the thought was there somewhere.’”).

tion of entities that issue deposit-like debt. The costs of instability and of moral hazard do not depend solely on the existence of insurance; they depend very much on other features of the regulatory system as well, including effective supervision, appropriate prudential rules such as capital and liquidity requirements, the existence and efficacy of a resolution mechanism for huge banks, and the existence and efficacy of market disciplinary forces.

IV. OBJECTIONS AND QUALIFICATIONS

A. *“Regulators Will Find a Way”*

One possible critique of the view advanced in this Article is that the formal authorities of regulators are irrelevant: when push comes to shove in a crisis, they will do what is needed to save the system. I am somewhat sympathetic of this view when it comes to the targeted interventions described above in Part III.A, but I believe this view significantly overstates the likelihood that regulators would, without congressional action, find a way to provide the sorts of guarantees they did in 2008 if another crisis erupted today.

Admittedly, the government’s response to the crisis in 2008 lends some support to the optimistic view of regulatory ingenuity. Indeed, the guarantees that played such a central role in holding the system together were based on statutes that most top regulators likely did not believe, heading into the crisis, actually authorized anything like the programs that were eventually extended under their aegis. For example, as indicated in Part I.A, accounts of the decision to guarantee MMFs make clear that Paulson himself did not know it was possible until one of his aides suggested it at the moment of gravest risk to the system.¹⁶¹

As noted, the Treasury guaranteed MMFs through the Exchange Stabilization Fund (ESF), which was established as part of the Gold Reserve Act of 1934 in order to stabilize the U.S. dollar vis-à-vis other currencies. Some have cast a skeptical eye on the legal justification for this. Economist and former vice chairman of the Federal Reserve Alan Blinder states the skeptical view:

Ever since Bear Stearns, Secretary Paulson had insisted that he had no slush fund to tap. . . . After what must have been some interesting internal discussions at the Treasury, Paulson decided that the Exchange Stabilization Fund (ESF) was such a fund, after all. His putative rationale? Because some of the skittish money fund investors were foreign, “a collapse of the money fund

¹⁶¹ See *supra* Part I.A.

industry could easily lead to a run on the dollar.” Thin. Almost any adverse event in the United States could potentially “lead to a run on the dollar.” But in the Treasury’s view, the governing statute set a pretty low bar for the use of the ESF. After all, there was a panic going on, wasn’t there? Didn’t that imperil the dollar?¹⁶²

Blinder later asks, “[W]hy couldn’t the ESF have been used for Lehman? . . . [P]art of the answer is clear: The two decisions were made in different milieus (political versus technocratic), under different laws, *and by different lawyers*.”¹⁶³ In fairness, part of the difference in milieus *also* had to do with the perceived risk of a total and thoroughly destabilizing meltdown—a plausible reading of contemporary accounts is that such perceived risk had climbed from something still fairly well below fifty percent leading into the “Lehman weekend” to significantly above fifty percent in the days following Reserve Primary’s implosion. Consistent with this observation, Professor Morgan Ricks, who worked on Geithner’s crisis response team when he became Treasury Secretary, provides a more sympathetic account of the legal rationale:

As . . . amended, the authorizing statute [for ESF] entitles the Treasury Secretary to use Exchange Stabilization Fund resources to “deal in gold, foreign exchange, and other instruments of credit and securities” in a manner “[c]onsistent with the obligations of the Government in the International Monetary Fund on orderly exchange arrangements and a stable system of exchange rates.” The pertinent IMF obligations, in turn, include an undertaking by members to “seek to *promote stability* by fostering orderly underlying economic and financial conditions and a monetary system that does not tend to produce erratic disruptions.” Reasonable people might disagree as to whether these provisions furnished a sound legal foundation for the money market fund guarantee program—but Treasury’s reading does appear to be at least in the range of plausible legal interpretations.¹⁶⁴

At any rate, since Congress affirmatively legislated away this use of the ESF in the EESA, it is doubtful that a similarly plausible freestanding legal authority exists to forestall a run on MMFs should one erupt.¹⁶⁵

¹⁶² BLINDER, *supra* note 111, at 145.

¹⁶³ *Id.* at 146.

¹⁶⁴ RICKS, *supra* note 31, at 132 (footnotes omitted).

¹⁶⁵ GEITHNER, *supra* note 1, at 52–55 (noting one previous occasion when Congress restricted the use of the ESF). The ESF had been tapped in 1994 to provide an emergency loan

The legal basis for the FDIC's guarantees under the TLGP arose out of a "systemic risk exception" to the "least cost requirement" for resolving banks under the Federal Deposit Insurance Corporation Improvement Act of 1991.¹⁶⁶ The use of this exception to provide "open" assistance in the form of guarantees to (i) banks that were not in resolution and (ii) non-banks (specifically bank holding companies as well as GMAC and Citi's broker-dealer subsidiary) was controversial.¹⁶⁷ The FDIC chairwoman at the time, Sheila Bair, writes in her memoirs that "[l]awyers at the Treasury Department and Federal Reserve insisted that we did have the authority to guarantee holding company debt; our lawyers thought their interpretations were a stretch but couldn't definitively determine that we were legally prohibited from doing so."¹⁶⁸ Was there another plausible authority to ground this guarantee? The likely answer is "no." Skeptical even of the legal basis for injecting capital into financial institutions, Bair tells us that "[s]ince Treasury had requested that Congress give it the authority to buy troubled assets, the legal authority for Treasury to make capital investments was ambiguous at best and *nonexistent for debt guarantees*. The FDIC, with our authority to provide systemic risk assistance, was the Treasury's best bet."¹⁶⁹

It may very well be that a clever lawyer in the Treasury or the Federal Reserve will find *some* provision that, with a sufficiently creative legal interpretation, could ground necessary guarantee authorities *in extremis*, though I remain skeptical. The argument here, however, does not rest on proof of the *absence* of some provision that an imaginative lawyer might seize on to authorize action in an emergency. Rather, the claim is that regulators themselves understand that they are constrained by law and that the law prohibits broad guarantees.¹⁷⁰ Any deviation from this would invite intense political backlash and this is enough to

to the government of Mexico, which was facing a run on its currency. The loan was paid back with interest, but aroused enough populist outrage that Senator Al D'Amato of New York sponsored a provision limiting the Treasury's ability to make similar loans in the future. This proved particularly burdensome when the U.S. tried to orchestrate a response to the run on Thailand a few years later. No one considered trying to skirt the requirement, however).

¹⁶⁶ 12 U.S.C. § 1823(c)(4)(G) (2013).

¹⁶⁷ See generally U.S. GOV'T ACCOUNTABILITY OFFICE, GAO 10-100, FEDERAL DEPOSIT INSURANCE ACT: REGULATORS' USE OF SYSTEMIC RISK EXCEPTION RAISES MORAL HAZARD CONCERNS AND OPPORTUNITIES EXIST TO CLARIFY THE PROVISION app. II (2010), <http://www.gao.gov/assets/310/303248.pdf>.

¹⁶⁸ See BAIR, *supra* note 100, at 113.

¹⁶⁹ *Id.* (emphasis added).

¹⁷⁰ For example, in his memoirs, Timothy Geithner makes clear that, in his view, the Achilles' Heel of Dodd-Frank is its elimination of the FDIC's freestanding authority to create another TLGP-like guarantee program during a crisis—a view that only makes sense if he considers the elimination of the authority binding. See, e.g., GEITHNER, *supra* note 1, at 432 (arguing that Congress will have to restore the FDIC's authority "in the heat of the next crisis if not before" and that "[e]ven in an emergency, Congress is likely to be slow to restore it, which is why its loss is so dangerous").

motivate them to try to prevent the failure of systemically important financial institutions and the risk of contagion and catastrophe in stressed markets. It is instructive to recall that even as regulators made unprecedented use of the authorities they had in 2008, they did not pretend such authorities were without limit: they *did* believe congressional action was required for injecting capital directly into financial institutions, precisely because of the absence of any provision plausibly providing freestanding authority for such action.

B. “Congress Will Rise to the Occasion”

A variation on the argument that regulators will find a way to save the system is that if they lack the necessary authorities, Congress can supply them, as it did with capital injections with the EESA, and as Dodd-Frank specifically provides for with respect to joint congressional authorizations of TLGP-type guarantees.¹⁷¹ This is certainly possible, but a number of considerations counsel against relying on Congress to act with the necessary alacrity in the midst of a market panic. The plan that ultimately became EESA was announced on September 20, 2008, but did not pass Congress until October 3, 2008, thirteen days later.¹⁷² The capital injections authorized under the EESA were an essential part of the medium-term solution to the crisis; the run on MMFs was a near-term emergency requiring immediate action. The damage such a run could have wreaked over thirteen days is extraordinary.

In the event of another run on MMFs, we would need Congress to act much more quickly than it did in September and October 2008; there are reasons to fear that it may not even be able to act as quickly as it did. In a recent interview Nobel Laureate Paul Krugman observed,

I find myself in meetings with international financial types. It’s all the usual discussions, and they don’t like to talk domestic U.S. politics, but then at some point, somebody says, what if we had another major financial crisis? What if we really needed something like TARP again? What are the chances that something like TARP could actually happen in this political environment? And everybody goes quiet, and looks down at their blotter.¹⁷³

Even aside from partisan gamesmanship, it is possible that a nontrivial number of senators and representatives hold views that, while under-

¹⁷¹ See 12 U.S.C. §§ 5612(c)(1), 5613(a) (2010).

¹⁷² See *Text of Draft Proposal for Bailout Plan*, N.Y. TIMES (Sept. 20, 2008), <http://www.nytimes.com/2008/09/21/business/21draftnd.html>; see also Herszenhorn, *supra* note 56.

¹⁷³ Ezra Klein, *What is Paul Krugman Afraid of?*, VOX (Dec. 29, 2014), <http://www.vox.com/2014/12/29/7458807/paul-krugman-economist>.

standably popular on Main Street, have been pejoratively described by Geithner as embodying “moral hazard fundamentalism” and “Old Testament populism.”¹⁷⁴ Even those in Congress who are more willing to consider bailouts if the damage of inaction is serious enough often need to see blood on the tracks before acting.¹⁷⁵ For example, the run on Wachovia was a near-catastrophe that could have sparked widespread runs on other commercial banks for the first time since the early 1930s; though a targeted intervention by the FDIC (announcing its intent to invoke the systemic risk exception) forestalled a panic and facilitated the sale of Wachovia to Wells Fargo,¹⁷⁶ it was—since everyone had assumed commercial banks were immune from panic—a shocking illustration of the fragility of the system. Yet Paulson tells us in his memoirs,

[W]ithout intervention [Wachovia] certainly would have collapsed. Many in Congress, however, didn’t understand how precarious the situation was. All weekend as we negotiated the fine points of TARP on the Hill, I had warned that another huge bank was about to go down. Now, even as we struggled to get \$700 billion for the entire financial system, the FDIC had guaranteed nearly \$300 billion worth of assets for one bank and no one had blinked an eye. We said, “It’s urgent we get TARP—look at Wachovia,” and they said, “Wachovia was just acquired.” They didn’t seem to get it.¹⁷⁷

In any event, as with the response to presumptions of a regulatory *deus ex machina*, the argument respecting moral hazard does not require proof that Congress will *not* act in time; it requires establishing that there is sufficient uncertainty to inspire regulators to try to avoid situations in which they must rely on congressional action.

C. *Why Not Really Tie Regulators’ Hands? (The Limits of the Ransom Analogy)*

In removing regulators’ broader guarantee authorities, Congress was a bit like a fictional plutocrat—let’s call him Midas—with myriad children and grandchildren who pays ransom for a kidnapped grandchild

¹⁷⁴ GEITHNER, *supra* note 1, at 178.

¹⁷⁵ See, e.g., *id.* at 432 (“We saw in 2008 that even after the panic induced by Lehman and the falling dominos that followed, the House rejected TARP and crashed the markets before coming to its senses. Politicians don’t like taking votes that can be caricatured as pro-bailout.”).

¹⁷⁶ Wachovia’s sale to Wells Fargo followed a tortuous turn of events in which Citigroup made an initial (seemingly) successful bid for Wachovia, and then was outbid by Wells Fargo after most had thought the bidding was done. For a brief account of the Wachovia-Citi-Wells-Fargo mini-saga, see FCIC REPORT, *supra* note 3, at 366–71.

¹⁷⁷ PAULSON, *supra* note 22, at 317–18.

and, in order to discourage further kidnappings, announces that he will never pay ransom again. The problem, of course, is that potential kidnapers will not believe him—this is a classic case of “cheap talk.” So Midas may try to seek a pre-commitment device not to pay ransom. Half-measures will not work, however; to the degree that Midas leaves himself loopholes in order to pay ransom if a kidnapping should occur, kidnapers would expect him to exploit the loopholes. But what if Midas could *credibly* commit to a “no ransom” strategy, either by *completely* tying his own hands (perhaps by putting all his wealth into an irrevocable trust with strict instructions to the trustee not to take any actions to facilitate the payment of ransom), or by sacrificing one or two offspring to prove to kidnapers that his talk is not cheap? This could eliminate kidnappings.¹⁷⁸

I have argued that removing guarantee authorities while retaining weaker crisis-response tools constitutes a half measure that fails to lessen moral hazard, but could Congress completely tie regulators’ hands? Given its ability to rewrite laws, could it tie its *own* hands? Without getting into how this might be credibly accomplished (a constitutional amendment?), let us assume *arguendo* that it could. Would we then solve the moral hazard problem, just as a credible policy against ransom should eliminate kidnappings (at least those carried out with pecuniary motives)? Here the ransom analogy breaks down, because what public policy should be concerned with preventing is not moral hazard per se, but rather the devastating economic damage arising as a negative externality from a full-blown financial crisis. As Larry Summers has observed, “the prospect that people may smoke in bed is not usually taken as an argument against the existence of fire departments.”¹⁷⁹

How confident can we be that the credible elimination of any possibility of government intervention in a crisis would actually reduce fire damage—that is, prevent the occurrence of damaging crises? History should inspire an extraordinary degree of skepticism. The basic crisis response tools regulators have today were not in existence, for example, in nineteenth- and early-twentieth-century America. Did market discipline prevent banking panics? No—damaging and disruptive panics occurred every decade or so.¹⁸⁰ It was only with the introduction of the

¹⁷⁸ See, e.g., David S. Cohen, *Why the U.S. Does Not Pay Ransoms for Americans Kidnapped by Terrorists*, NEWSWEEK (Aug. 23, 2014), <http://www.newsweek.com/why-us-does-not-pay-ransoms-americans-kidnapped-terrorists-266315> (arguing that this logic is part of what motivates the United States policy against paying ransom to terrorists).

¹⁷⁹ Lawrence Summers, *Beware Moral Hazard Fundamentalists*, FIN. TIMES (Sept. 23, 2007), <http://www.ft.com/intl/cms/s/0/5ffd2606-69e8-11dc-a571-0000779fd2ac.html#axzz3RrK91Fxs> (attributing the analogy to Michael Mussa).

¹⁸⁰ See, e.g., BEN S. BERNANKE, *THE FEDERAL RESERVE AND THE FINANCIAL CRISIS* 9–10 (2013) (counting six financial panics between 1873 and 1914); see also GORTON, *MISUNDER-*

Federal Reserve (and its discount window as lender of last resort) in 1913, and then with deposit insurance in 1933, that we were able to “solve” the problem of panics in traditional banking.¹⁸¹ Again, the largest risks today lie in shadow banking, which does not formally enjoy commercial banks’ safety net; shadow banks thus remain vulnerable to panic. Trying to ensure that risk-takers internalize the downside costs of their risks is an important goal, but punishing risk-takers, no matter the collateral damage, cannot be the *overriding* goal. As Tim Geithner writes in his memoirs, “[t]aking away the fire department’s equipment certainly ensures that the equipment won’t be used”—thus ensuring, to build on Summers’ observation above, that those who smoke in bed bear the downside costs of this risky activity—“but it isn’t much of a strategy for reducing fire damage.”¹⁸²

In any event, it is not clear that completely eliminating the possibility of government intervention in a crisis would, in fact, have a salutary effect on risk-taking—indeed, there is a plausible story that it would inspire a lesser degree of prudence in the financial system, though through a different channel than the one examined in this Article. Leaving *everything* to market discipline could, that is, make decision makers within banks and shadow banks less careful in avoiding downside risks if they viewed the possibility of financial contagion as an *exogenous* risk.¹⁸³ Contagion risk may be endogenous to the financial system as a whole, but remain exogenous to each individual firm to the degree that its risk-

STANDING FINANCIAL CRISES, *supra* note 48, at 29 (quoting THEODORE GILMAN, FEDERAL CLEARING HOUSES 183 (1899)) (“Since 1793 [financial] panics have occurred [in the United States] in the following years: 1797, 1811, 1813, 1816, 1819, 1825, 1837, 1847, 1857, 1866, 1873, 1884, 1890, and 1893.”).

¹⁸¹ In addition to the safety net, the Quiet Period depended on what Gary Gorton has referred to as “carrots,” in the form of supernormal returns due to regulatory limits on competition, and “sticks,” in the form of direct regulation limiting bank risk-taking. GARY B. GORTON, *SLAPPED BY THE INVISIBLE HAND: THE PANIC OF 2007*, at 54 (2010). The supernormal returns that created the “carrots” were facilitated by limits on branching, ceilings on the deposit rates that banks were allowed to pay to depositors, and the lack of other plausible debt financing sources for businesses. All of these began to erode starting in the 1970s and 1980s. The carrots, however, provided an incentive for bank decision makers to protect their supernormal returns going forward by avoiding idiosyncratic risks that could lead to their failure. This is consistent with the argument discussed below that exposing banks to an exogenous risk of failure could make it *less* careful to avoid the risk of idiosyncratic failure. *See infra* note 183 and accompanying text.

¹⁸² GEITHNER, *supra* note 1, at 430.

¹⁸³ This account is drawn from Giovanni Dell’Ariccia & Lev Ratnovski, *Bailouts and Systemic Risk Insurance* (Int’l Monetary Fund, Working Paper No. 13/233, 2013). Dell’Ariccia and Ratnovski developed a model of when the “systemic risk insurance” effect—prompting banks to be more prudent in order to protect their long-term franchise value—will outweigh the straightforward moral hazard effect of insurance. Their model has two key variables: “The extent of moral hazard depends on the rents that the government leaves to bailed out banks, while the importance of the ‘systemic insurance’ effect depends on the probability of contagion.” *Id.* at 5.

taking *by itself* is unlikely to be decisive in triggering a panic. The greater the exogenous risk of a panic, the lower the firm's long-term franchise value. The lower the firm's long-term franchise value, the more willing bank decision-makers will be to ramp up portfolio risk in order to boost short-term profits. Just as those living in a war zone are probably less likely, *ceteris paribus*, to save for retirement,¹⁸⁴ so banks facing an unmitigated risk of contagion may be less concerned, for example, about the potential long-term consequences of lowering underwriting standards in order to increase lending volume.¹⁸⁵

D. *Regulatory Discretion or Explicit Commitment?*

A threshold question in designing a safety net is whether or not it should be automatic, as with deposit insurance, or discretionary,¹⁸⁶ as with most of the authorities used to bail out faltering SIFIs and their creditors. Different economists have reached different conclusions about the optimal approach, depending on the parameters of their model.¹⁸⁷

¹⁸⁴ *Id.* at 3.

¹⁸⁵ Market discipline imposed by the bank's *own* creditors could counteract this dynamic to some degree, but there are reasons to doubt it would be entirely effective. First, deposit-like creditors tend to exercise either no discipline at all, or to run, which is a very blunt way to control discipline *ex ante*, particularly when run risk is seen to arise in large part from sources external to the bank's operations. See *infra* note 189 and accompanying text. Second, it is likely that investors demanding "safe" assets neglect certain risks; the story of financial engineering and structured finance leading up to the crisis is largely one of bankers manufacturing assets that would remain safe in all circumstances *except* those in which the "neglected risk"—such as housing prices falling by some threshold percentage nationwide—materialized. See Nicola Gennaioli et al., *Neglected Risks, Financial Innovation, and Financial Fragility* (Nat'l Bureau of Econ. Res., Working Paper No. 16,068, 2010), <http://www.nber.org/papers/w16068.pdf>.

¹⁸⁶ Of course, even with traditional banks, there is the possibility of invoking the systemic risk exception to cover the losses of uninsured creditors, and the invocation of this authority is discretionary. 12 U.S.C. § 1823(c)(4)(G) (2013). Note that invocation of the systemic risk exception requires "three keys turning": a two-thirds majority of (i) the Board of Directors of the FDIC and (ii) the Board of Governors of the Federal Reserve must recommend it; and the Secretary of the Treasury (in consultation with the President) must make an affirmative determination of systemic risk. 12 U.S.C. § 1823(c)(4)(G)(i).

¹⁸⁷ See, e.g., Charles A. E. Goodhart & Haizhou Huang, *A Model of the Lender of Last Resort* 25 (Int'l Monetary Fund, Working Paper No. 99/39, 1999), <https://www.imf.org/external/pubs/ft/wp/1999/wp9939.pdf> (noting that to avoid a situation in which banks game explicit bailout guidelines, "regulators should, and do, use 'constructive ambiguity' to make their decisions on which banks they are likely to rescue"). But see Tito Cordella & Eduardo Levy Yeyati, *Bank Bailouts: Moral Hazard vs. Value Effect* (Int'l Monetary Fund, Working Paper No. 99/106, 1999), <https://www.imf.org/external/pubs/ft/wp/1999/wp99106.pdf> ("[W]e show that the 'constructive ambiguity' approach often recommended to attenuate moral hazard, in which the terms of the [lender of last resort] arrangement are left to the discretion of the central bank, is always dominated by a policy that commits to rescuing banks *with certainty*, conditional upon the realization of an adverse aggregate shock."). For what it is worth, I believe that Cordella and Yeyati may underestimate the opacity of real time information as a financial crisis unfolds, as well as the nonlinear impact a particular shock may have on the system. See *supra* note 149.

An advantage of an explicit commitment is that, if it is well-designed, it will cover only specific types of creditors, rather than institutions. Thus, the FDIC has resolved hundreds of banks without sparking a bank run, because its backstop applies only to depositors. The institution can fail; this helps nurture *some* degree of market discipline, as equity and long-term debt claimants know they can suffer losses, and will thus “price” the bank’s riskiness in lending them money or buying shares.¹⁸⁸ The creditors likely to be protected by such a commitment—depositors and their shadow banking equivalents—are, in any event, lousy disciplinarians.¹⁸⁹ They hold their deposits not (primarily) for the return, but in order to have quick access to cash to be able to meet their near-term transactional needs.¹⁹⁰ If the deposit-like debt is functioning as it should, it is “informationally insensitive,” above some (often very low) threshold, and depositor-like creditors are rationally indifferent to information about the borrowers’ risk.¹⁹¹ The kind of discipline they exercise tends *not* to be a measured increase in interest rates, but rather a run—precisely the outcome we wish to avoid.

A possible advantage of discretionary guarantee authority is that it creates uncertainty in market actors about the likelihood of the guarantees, inspiring them to exercise *some* market discipline; but when push comes to shove, if guarantees are needed to save the system, regulators can extend them. This policy of “constructive ambiguity” can, in theory, provide the best of both worlds, limiting both moral hazard and system-wide instability. In the wake of the crisis, however, the policy has been attacked as having had the opposite effect—instilling complacency during good times and creating destabilizing uncertainty once the crisis hit.¹⁹²

¹⁸⁸ See Acharya et al., *supra* note 10 (finding that bond credit spreads *do* rise with portfolio risk for financial institutions that are *not* “too big to fail”).

¹⁸⁹ See Anat R. Admati & Martin F. Hellwig, *Does Debt Discipline Bankers? An Academic Myth About Bank Indebtedness* 4 (Rock Ctr. for Corp. Governance, Working Paper No. 132, 2013) (explaining the theory that deposits constitute an attractive type of debt because of their liquidity, and observing that this theory “envisions depositors and other short-term creditors as being *unconcerned* about the risk of default by the bank”); see also David Min, *Understanding the Failures of Market Discipline* 1 (Univ. of Cal., Irvine Sch. of Law, Research Paper No. 2014-15, 2014) (arguing that the notion of market discipline in shadow banking “relies too heavily upon investors in money instruments,” that is, deposits and deposit-like debt, “who are relatively insensitive to risk and thus particularly poor monitors of banks”).

¹⁹⁰ Ricks, *supra* note 31, at 91.

¹⁹¹ GORTON, *supra* note 181.

¹⁹² For a succinct statement of an analogous experience with constructive ambiguity (in the United Kingdom rather than the United States) leading up to and during the crisis, see Andrew Hauser, *Lender of Last Resort Operations During the Financial Crisis: Seven Practical Lessons from the United Kingdom*, (Bank of Int’l Settlements, Paper No. 79e, 2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2504704 (“Ambiguity led to significant—and ultimately damaging—uncertainty about the circumstances in which the Bank would lend, and the terms and conditions at which it would do so. Banks’ expectations in this area swung from

Another possible advantage of discretionary authority is that it is compatible with the sort of flexibility that I believe would make regulators more confident in being tough in the early stages of market turmoil. For example, it *could* allow for the guarantee of non-deposit-like debt in the jumpiest of markets when it really would contribute to stabilization, just as the Debt Guarantee Program did with long-term debt issuances of banks and bank holding companies.¹⁹³ In the vast majority of cases, of course, this type of debt *should* be able to absorb losses without systemic consequences; it would be extremely ill-advised to cover it with an explicit guarantee. Discretionary authority could also allow more flexibility to address risks that arise in new markets that, perhaps, are nascent or not yet even in existence, without a commitment to protect the first, riskiest firms, or creditors in the market from failure.

Some may be uncomfortable handing regulators too much discretionary authority, and would prefer to impose constraints to ensure that they do not abuse their authority or waste taxpayer money. This Article argues that under current conditions, the half-constraints imposed on regulators make it *likelier* that they will waste resources bailing out firms that should not be saved. As argued in Part IV.C, completely tying regulators' hands is unlikely to increase financial stability or limit the costs of financial crises.¹⁹⁴

In the current system, then, I believe that some type of discretionary guarantee authority is called for. The potential costs of vesting too much decision-making authority in one (unelected) decision-maker could be mitigated to some degree by a process similar to the "three keys turning"—i.e., approval by the majority of the boards of the Federal Reserve and the FDIC, along with the approval of the Treasury Secretary—required to invoke the systemic risk exception in a bank resolution or to place a firm into Title II resolution.¹⁹⁵

E. *Why Not a Private Insurance Scheme?*

Market forces in private insurance markets tend to ensure that moral hazard costs are offset by the benefits of risk-spreading and the risk-mitigation techniques of insurance companies.¹⁹⁶ We cannot, however,

excess optimism about the prospects of central bank support in the pre-crisis period to excess pessimism later in the crisis period, even long after the Bank had demonstrated its willingness to provide truly exceptional amounts of liquidity.”).

¹⁹³ See *supra* Part II.B.

¹⁹⁴ See *supra* Part IV.C.

¹⁹⁵ See *supra* note 186.

¹⁹⁶ If insurance is voluntary, then the mere fact that insurers are able to remain solvent is strong prima facie evidence that the social benefits of insurance outstrip the costs. Insurance companies remain solvent by charging appropriate premia, making appropriate investments with the premia they receive, and regulating the risk of the insured. See Omri Ben-Shahar &

automatically presume that government-provided guarantees are similarly cost-justified, as government actors do not operate with the same incentive to be profitable or the same threat of insolvency that private insurers do.

Given the advantage of private insurance, a threshold question is whether it could do a *better* job than the government at maintaining stability by providing a safety net in a cost-effective manner. A potential problem with this approach is that financial firms—those firms that would purchase insurance—are under-incentivized to insure at the optimal level, given the fact that the potential systemic costs of their *own* failure would be borne primarily by others. This problem could, however, be overcome simply by requiring financial firms to purchase insurance at an appropriate threshold level. A more fundamental problem is whether any private scheme would have the firepower to forestall a true systemic panic; if not, the moral hazard and “too-big-to-fail” problems will simply be pushed back a level, to the undercapitalized private insurer. It is hard not to cast a skeptical eye on the notion that a private insurer could have effectively halted the run on the multi-trillion-dollar money market fund industry in September 2008. It is also worth observing that the track record of non-federal deposit insurance schemes in this country has been dismal.¹⁹⁷ For our purposes here, it is enough to note that to serve its stabilization function effectively, a private insurance scheme would likely require intensive government oversight with respect to, at a minimum, maintaining appropriate capital levels, as well as a government backstop in the case of insolvency. The advantages of privatization would, then, largely fade away.

CONCLUSION

Insurance has many virtues, but one big cost: moral hazard. Parties who are insured against bad outcomes often take less care in avoiding those outcomes. This Article has, however, argued that the *lack* of free-standing guarantee authorities that could be used to insure creditors

Kyle D. Logue, *Outsourcing Regulation: How Insurance Reduces Moral Hazard*, 111 MICH. L. REV. 197, 247 (2012) (“Insurers regulate risk in various ways. From mandating specific investments in risk reduction, to offering premium discounts for favorable claims experience, to selling cost-containment expertise to policyholders and even designing safety technologies and codes, insurers perform many of the same regulatory functions that government regulators and courts perform. However, in many (though obviously not all) situations, private insurers, because of their inherent informational comparative advantage, should be expected to do the job of regulation better than public regulators and courts.”).

¹⁹⁷ RICHARD SCOTT CARNELL ET AL., THE LAW OF BANKING AND FINANCIAL INSTITUTIONS 272 (5th ed. 2013) (“Most economists agree that only the federal government has the financial muscle to assure the credibility and effectiveness of deposit insurance. Nearly all state-sponsored insurance funds have failed disastrously. Private insurance funds have proved even less reliable.”).

against losses during a financial crisis may, contrary to conventional wisdom, exacerbate moral hazard. This is because regulators *retain* authorities that, while unequal to stopping a full-blown panic, may prevent a panic from starting in the first place through targeted interventions to protect particular firms or their creditors.

If regulators have freestanding guarantee authorities, they can feel more confident in taking on even a small chance of crisis-like dynamics emerging from the failure of a systemically important financial institution, since guarantees could, as with the run on MMFs, forestall such dynamics and significantly limit damage to the real economy. If, on the other hand, regulators lack strong tools in the form of guarantee authorities, they will be *more* likely to use weak authorities to prevent a large financial firm from failing in the first place, or its creditors from suffering losses. In doing so, they will exacerbate moral hazard, as the weakest firms and their creditors come to understand that regulators are *less* likely to stand by if those firms falter. If this account is correct, it undermines the moral-hazard-based justification for eliminating regulators' guarantee authorities.

While the arguments advanced in this Article do not purport to settle the debate about the appropriate role of guarantees in financial regulation, they bolster the view that broad and freestanding guarantee authorities should be part of the regulatory crisis-response toolkit, and that restoring these authorities should be a priority of financial reform efforts.

