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NATHAN GORALNIK

Bankruptcy-Proof Finance and the Supply of Liquidity

ABSTRACT. The 2008 financial crisis has prompted widespread criticism of the bankruptcy safe harbors for repurchase agreements (repos) and derivatives, which allow a failed firm's counterparties to enforce these contracts outside of the bankruptcy process. The emerging consensus holds that these provisions facilitated a run on the assets of troubled institutions such as Lehman Brothers, and should be curtailed to afford such firms greater protection from their counterparties. In contrast, this Note argues that proposals to roll back the safe harbors would afford little relief to already-bankrupt firms while substantially undermining the efficiency and stability of the affected markets. Exposing these contracts to bankruptcy risk would render them unsuitable for a valuable function that they serve in the financial markets: offering institutional investors a liquid store of value akin to an insured bank deposit. And it would cause the supply of capital through these instruments to fluctuate, pro-cyclically, based on perceptions of risk to the financial system. The lessons of past crises suggest that a more promising approach would give distressed firms the emergency liquidity they need to weather a panic—not a stay on their obligations once they are already in bankruptcy.

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INTRODUCTION

The tremors that shook Wall Street in 2008 radiated from a set of novel asset markets straddling the boundary between commercial banking and the capital markets. Mortgage-backed securities and related funding instruments had transformed the credit landscape during the preceding years, enabling institutional investors to supply capital for residential mortgages and other opportunities once accessible only to deposit-taking banks.¹ Thus a “shadow” banking system emerged alongside the regulated banking sector, and grew to rival it in size by its 2007 peak.² Only a year later this system collapsed,³ taking with it many of the country’s leading financial institutions and plunging the economy into a deep recession.⁴

Despite the complexity of the transactions involved, the basic dynamics of the 2008 crisis were distressingly familiar. A classic banking panic had occurred,⁵ although it struck outside the traditional banking sector and the regulatory institutions protecting it.⁶ Banking crises occur when depositors

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1. Shadow banks financed hundreds of billions of subprime mortgages in 2005 and 2006 alone. See Gary Gorton & Andrew Metrick, *Securitized Banking and the Run on Repo*, 104 J. FIN. ECON. 425, 430 (2012); see also Douglas W. Diamond & Raghuram G. Rajan, *The Credit Crisis: Conjectures About Causes and Remedies*, 99 AM. ECON. REV. 606, 606 (2009) (explaining how securitization attracted foreign investment to the U.S. housing market).
 2. Zoltan Pozsar et al., *Shadow Banking*, FED. RES. BANK OF N.Y. 5 & fig.1 (July 2010), http://www.ny.frb.org/research/staff_reports/sr458_July_2010_version.pdf.
 3. For example, quarterly issuance of consumer asset-backed securities (ABS) had fallen from an average of \$50 billion to \$70 billion in pre-crisis years to just \$2 billion at the end of 2008. Jeremy C. Stein, *Securitization, Shadow Banking & Financial Fragility*, 139 DAEDALUS 41, 41 (2010).
 4. Federal Reserve Chairman Ben Bernanke told the Financial Crisis Inquiry Commission that of “the 13 . . . most important financial institutions in the United States, 12 were at risk of failure within a period of a week or two” in September 2008. FIN. CRISIS INQUIRY COMM’N, *THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES* 441, 479 (2011).
 5. See GARY B. GORTON, *MISUNDERSTANDING FINANCIAL CRISES: WHY WE DON’T SEE THEM COMING* 182 (2012) (“The global financial crisis . . . was triggered by a bank run, just like those of 1837, 1857, 1873, 1893, 1907, and 1933.”). For a useful summary of this thesis, see Bryan J. Noeth & Rajdeep Sengupta, *Is Shadow Banking Really Banking?*, REGIONAL ECONOMIST, Oct. 2011, at 8, http://www.stlouisfed.org/publications/pub_assets/pdf/re/2011/d/shadow_banking.pdf.
 6. “The shadow banking system has existed outside the explicit banking safety net and, in most cases, with minimal regulatory constraints.” Morgan Ricks, *Regulating Money Creation After the Crisis*, 1 HARV. BUS. L. REV. 75, 87 (2011). In contrast, traditional banks generally expanded their balance sheets even as the nonbank financial sector deleveraged sharply

demand more withdrawals than the system's limited cash reserves can satisfy, forcing banks to liquidate assets or seek emergency assistance.⁷ Like traditional banks, shadow banks such as Bear Stearns and Lehman Brothers held large portfolios linked to mortgages and other conventional bank receivables. However, these institutions funded themselves using commercial paper and other short-term borrowing markets that lacked the stabilizing influence of FDIC deposit insurance.⁸ This left shadow banks vulnerable to a dramatic loss of liquidity as capital fled from mortgage-related assets in 2007 and 2008,⁹ forcing officials to rescue entities that lacked access to backstops such as the Federal Reserve's discount window.¹⁰

Complicating matters, shadow banks faced a paradoxical legal situation as they edged toward the precipice in 2008: although they were *regulated* as nonbanks, applicable *insolvency* law treated these institutions rather like traditional banks. As we shall see, this paradox meant that shadow banks were excluded from both the regulatory safeguards available to commercial banks under Title 12 *and* certain bankruptcy protections available to nonbanks under Title 11.

during the crisis. See Zhiguo He et al., *Balance Sheet Adjustments During the 2008 Crisis*, 58 IMF ECON. REV. 118, 120-21 (2010).

7. See GORTON, *supra* note 5, at 5 (“A financial crisis in its pure form is an exit from bank debt. . . . Financial intermediaries cannot possibly honor these short-term debt obligations if they are withdrawn or not renewed.”); Ricks, *supra* note 6, at 84 (“[R]uns . . . occur when large numbers of funding providers with near-term maturities decline to renew their contracts upon expiration.”).
8. See Tobias Adrian & Hyun Song Shin, *Money, Liquidity, and Monetary Policy*, 99 AM. ECON. REV. 600, 600 (2009) (“At the margin, all financial intermediaries (including commercial banks) have to borrow in capital markets, since deposits are insufficiently responsive to funding needs. But for a commercial bank, its large balance sheet masks the effects of operating at the margin.”).
9. See Markus K. Brunnermeier, *Deciphering the Liquidity and Credit Crunch 2007-2008*, 23 J. ECON. PERSP. 77, 78 (2009) (“[B]anks increasingly financed their asset holdings with shorter maturity instruments. This change left banks particularly exposed to a dry-up in funding liquidity.”); Paul A. McCulley, *Teton Reflections*, GLOBAL CENTRAL BANK FOCUS (PIMCO), Aug./Sept. 2007, at 2, <http://media.pimco.com/Documents/GCB%20Focus%20Sept%2007%20WEB.pdf> (“[U]nregulated shadow banks fund themselves with un-insured commercial paper, which may or may not be backstopped by liquidity lines from real banks. Thus, the shadow banking system is particularly vulnerable to runs—commercial paper investors refusing to re-up when their paper matures, leaving the shadow banks with a liquidity crisis . . .”).
10. This situation proved untenable. By September 2008, “all the five of the largest independent investment banks had either closed down (Lehman Brothers), merged into other entities (Bear Stearns and Merrill Lynch), or converted to bank holding companies to be supervised by the Federal Reserve (Goldman Sachs and Morgan Stanley).” FIN. CRISIS INQUIRY COMM’N, *supra* note 4, at 154.

Banks are not eligible debtors under the Bankruptcy Code,¹¹ and the Federal Deposit Insurance Act provides neither a general stay nor avoiding powers to protect them from their depositors' claims.¹² In contrast, the Bankruptcy Code gives debtors protection from their creditors' recovery efforts through the automatic stay,¹³ avoidance of preferential transfers,¹⁴ and related provisions.¹⁵ Yet unlike most debtors, shadow banks traded heavily in contracts that are *exempt* from protections ordinarily available to debtors in bankruptcy.¹⁶ These include repurchase agreements (repos), a short-term borrowing instrument that Bear Stearns, for example, used to stay afloat during its final months as an independent company;¹⁷ and derivative contracts, which Wall Street firms used to trade mortgage-related risk.¹⁸ The statutory exemptions for these contracts allow the parties to enforce their contractual rights outside of bankruptcy proceedings.¹⁹ These typically include the right to liquidate collateral from, and to terminate dealings and net mutual obligations with, a

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11. 11 U.S.C. § 109(b)(2) (2006).
 12. See Robert R. Bliss & George G. Kaufman, *U.S. Corporate and Bank Insolvency Regimes: A Comparison and Evaluation*, 2 VA. L. & BUS. REV. 143, 157-58, 164 (2007).
 13. 11 U.S.C. § 362(a) (2006).
 14. 11 U.S.C. § 547(b) (2006).
 15. "Thus, while most contracts . . . are automatically stayed by courts in the event of a corporate bankruptcy, the opposite situation obtains in the event of a bank's insolvency." Bliss & Kaufman, *supra* note 12, at 158-59.
 16. *E.g.*, 11 U.S.C. § 362(b) (2006) (automatic stay); *id.* § 546(e)-(g) (avoiding powers); *id.* § 548(d)(2)(B)-(E) (fraudulent transfers); *id.* § 555 (general exemption for securities contracts); *id.* § 556 (commodities or forward contracts); *id.* § 559 (repos); *id.* § 560 (swap agreements); *id.* § 561 (cross-product netting). These carve-outs are reflected in analogous provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act, § 210(c), Pub. L. No. 111-203, 124 Stat. 1376, 1477 (2010) (codified at 12 U.S.C.A. § 5390(c) (West 2012)), and the Federal Deposit Insurance Act, which uses the term "qualified financial contract" to describe "any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, and any similar agreement that the [FDIC] determines . . . to be a qualified financial contract" eligible for certain exemptions from mandatory resolution procedures, 12 U.S.C. § 1821(e)(8)(D)(i) (2006).
 17. A repo is essentially a secured loan characterized as a "sale" of collateral (usually securities) coupled with a promise to buy back ("repurchase") the collateral at the transaction's maturity for a small premium. In this way, a cash lender receives both security and a promised rate of return on a short-term loan. FIN. CRISIS INQUIRY COMM'N, *supra* note 4, at 31. Bear Stearns's repo borrowings rose from \$69 billion to \$102 billion during 2007 as it found itself locked out of the unsecured commercial paper market. *Id.* at 283.
 18. See OFFICE OF THE SPECIAL INSPECTOR GEN. FOR THE TROUBLED ASSET RELIEF PROGRAM, FACTORS AFFECTING EFFORTS TO LIMIT PAYMENTS TO AIG COUNTERPARTIES 3 (2009).
 19. See *supra* note 16.

distressed counterparty.²⁰

The statutory carve-outs, or “safe harbors,” are traditionally justified by the need to protect the financial system from the fallout of a major market participant’s failure.²¹ Yet the exercise of these rights facilitated a kind of bank run on weak institutions as their counterparties moved to protect themselves from the deepening crisis in 2008.

The run on the shadow banking system was most apparent in the repo market, which provided “the main source of funds” for the securitization process.²² Like bank depositors, repo lenders have the option to withdraw credit almost immediately, as many repo loans mature overnight and must be rolled over daily.²³ By 2008, much of the collateral that shadow banks could offer to secure their repo borrowings consisted of structured products tied to the mortgage market or otherwise affected by the credit squeeze.²⁴ As this form of collateral grew increasingly unacceptable to repo lenders, Bear Stearns and other institutions struggled to raise the cash necessary to continue operating.²⁵

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20. See Robert R. Bliss & George G. Kaufman, *Derivatives and Systemic Risk: Netting, Collateral, and Closeout* 1 (Fed. Reserve Bank of Chi., Working Paper No. 2005-03, 2005), <http://ssrn.com/abstract=730648> (stressing “the ability of these contracts to net or setoff offsetting positions between counterparties, to access collateral promptly, and to close-out or terminate positions quickly without being subject to prolonged legal stays”).
 21. See, e.g., Shmuel Vasser, *Derivatives in Bankruptcy*, 60 BUS. LAW. 1507, 1510 (2005) (locating the public rationale of the safe harbors in the need “to protect American financial markets and institutions from the ripple effects resulting from a bankruptcy filing by a major participant in the financial markets”). “Since its adoption in 1978, the Bankruptcy Code has been amended several times to afford different treatment for certain financial transactions upon the bankruptcy of a debtor . . . to further the policy goal of minimizing the systemic risk potentially arising from certain interrelated financial activities and markets.” H.R. REP. NO. 105-688, pt. 1, at 2 (1998).
 22. Gorton & Metrick, *supra* note 1, at 425.
 23. See *Tri-Party Repo Infrastructure Reform*, FED. RES. BANK OF N.Y. 13 (2010), http://www.newyorkfed.org/banking/nyfrb_triparty_whitepaper.pdf.
 24. See, e.g., FIN. CRISIS INQUIRY COMM’N, *supra* note 4, at 284 (“Often, backing Bear’s borrowing were mortgage-related securities and of these, \$17.2 billion—more than Bear’s equity—were Level 3 assets,” meaning that they lacked observable prices.). In the case of nonsubprime asset-backed securities, “the problem was that if a large bank failed or had to dump assets for other reasons . . . then prices of these asset classes would fall.” GARY GORTON, *SLAPPED BY THE INVISIBLE HAND: THE PANIC OF 2007*, at 134 (2010).
 25. See Martin N. Baily et al., *Improving Resolution Options for Systemically Relevant Financial Institutions* 7-8 (Oct. 2009) (Squam Lake Working Group on Financial Regulation), <http://dspace.cigilibrary.org/jspui/bitstream/123456789/27243/1/Improving%20resolution%20options%20for%20systematically%20relevant%20financial%20institutions.pdf>. From August 2007 to January 2009, repo haircuts rose from near 0% to 45%, signaling a massive drop in

Major institutions also hemorrhaged cash through their derivative contracts, which gave parties the right to demand collateral as their counterparties weakened and terminate contracts in events of default.²⁶ For example, AIG and other firms that had sold “protection” against losses on mortgage-backed securities were required to put up cash as these securities plunged in value and as their own finances weakened. By mid-September 2008, AIG had posted more than \$19.5 billion in collateral on credit default swaps written by its Financial Products subsidiary. Mounting demands from its counterparties ultimately forced a costly rescue by the New York Federal Reserve and the Treasury Department.²⁷

These episodes have motivated a growing body of scholarship calling for a rollback of the safe harbors for repos and derivatives, so that distressed firms can invoke traditional bankruptcy protections against their counterparties under these contracts.²⁸ Proponents of a more protective insolvency regime find three principal defects in the safe harbors. First, by permitting counterparties to withdraw credit and seize collateral from weak institutions, the safe harbors may expose weak firms to a sudden loss of liquidity that can quickly spread to other firms.²⁹ Second, the race to grab the assets of an

the amount a financial institution could borrow against a given portfolio. See Gorton & Metrick, *supra* note 1, at 429 fig.4.

26. For example, Lehman Brothers’s counterparties “had the right under U.S. bankruptcy law to terminate their derivative contracts with Lehman upon its bankruptcy, and to the extent that Lehman owed them money on the contracts they could seize any Lehman collateral they held.” FIN. CRISIS INQUIRY COMM’N, *supra* note 4, at 354.
27. See *id.* at 344–50. See generally GORTON, *supra* note 24, at 128 (“Collateral calls . . . were massive, creating liquidity problems for some and windfall funding for others.”).
28. See, e.g., David A. Price, *The Dodd-Frank Act and Insolvency 2.0*, REGION FOCUS, 3d Quarter 2011, at 8, http://www.richmondfed.org/publications/research/region_focus/2011/q3/pdf/federal_reserve.pdf; Darrell Duffie & David A. Skeel, Jr., *A Dialogue on the Costs and Benefits of Automatic Stays for Derivatives and Repurchase Agreements* (Scholarship at Penn Law, Working Paper No. 397, 2012), http://lsr.nellco.org/upenn_wps/397; Baily et al., *supra* note 25, at 3 (“The priority treatment currently given to these contracts should be reevaluated to determine if it unnecessarily adds to systemic risk.”); Stephen J. Lubben, *A Consensus Begins To Emerge on Derivatives in Bankruptcy*, N.Y. TIMES: DEALBOOK (Apr. 27, 2012, 11:59 AM), <http://dealbook.nytimes.com/2012/04/27/a-consensus-begins-to-emerge-on-derivatives-in-bankruptcy>.
29. See, e.g., Viral V. Acharya et al., *Resolution Authority*, in REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE 213, 229 (Viral V. Acharya et al. eds., 2011); Franklin R. Edwards & Edward R. Morrison, *Derivatives and the Bankruptcy Code: Why the Special Treatment?*, 22 YALE J. ON REG. 91, 106 (2005); Randall S. Kroszner, *Making Markets More Robust*, in REFORMING U.S. FINANCIAL MARKETS: REFLECTIONS BEFORE AND BEYOND DODD-FRANK 51, 77 (Benjamin M. Friedman ed., 2011); Edward R. Morrison, *Is the Bankruptcy Code an Adequate Mechanism for Resolving the Distress*

insolvent firm can hamper its orderly resolution and destroy going-concern value.³⁰ Third, counterparties whose contractual rights are unfettered by bankruptcy procedures may lack optimal incentives to monitor their counterparties' risk-taking and may overuse contracts protected by the safe harbors.³¹

Breaking with the emerging consensus, this Note argues that repealing the safe harbors would be a misdirected response to the fragility of nonbank financial companies. Part I lays the foundation for an account of the role of the safe harbors in the supply of liquidity through the shadow banking system. I proceed from the premise that "financial instruments, markets, and institutions

of Systemically Important Institutions?, 82 TEMP. L. REV. 449, 451-52 (2009); Mark J. Roe, *The Derivatives Market's Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 564-69 (2011); David A. Skeel, Jr., *Bankruptcy Boundary Games*, 4 BROOK. J. CORP. FIN. & COM. L. 1, 10-13 (2009); David A. Skeel, Jr. & Thomas H. Jackson, *Transaction Consistency and the New Finance in Bankruptcy*, 112 COLUM. L. REV. 152, 166-68 (2012); Bryan G. Faubus, Note, *Narrowing the Bankruptcy Safe Harbor for Derivatives To Combat Systemic Risk*, 59 DUKE L.J. 801, 827 (2010); Bliss & Kaufman, *supra* note 20, at 19; Baily et al., *supra* note 25, at 7.

30. See, e.g., *Too Big To Fail: The Role for Bankruptcy and Antitrust Law in Financial Regulation Reform (Part I): Hearing Before the Subcomm. on Commercial & Admin. Law of the H. Comm. on the Judiciary*, 111th Cong. 72 (2009) (statement of Harvey R. Miller, Senior Partner, Weil, Gotshal & Manges LLP) (arguing that the exercise of close-out rights by 733,000 counterparties "caused a massive destruction of value for Lehman" following the investment bank's bankruptcy filing); DAVID SKEEL, *THE NEW FINANCIAL DEAL: UNDERSTANDING THE DODD-FRANK ACT AND ITS (UNINTENDED) CONSEQUENCES* 162 (2011) ("The simple expedient of giving managers the benefit of the stay would make bankruptcy a much more viable option for a systemically important firm."); Onnig H. Dombalagian, *Requiem for the Bulge Bracket?: Revisiting Investment Bank Regulation*, 85 IND. L.J. 777, 811 (2010); Stephen J. Lubben, *Repeal the Safe Harbors*, 18 AM. BANKR. INST. L. REV. 319, 320 (2010); Robert R. Bliss & George G. Kaufman, *Resolving Large Complex Financial Institutions: The Case for Reorganization 10-11* (Apr. 11, 2011) (unpublished manuscript), http://www.clevelandfed.org/research/conferences/2011/4-14-2011/Bliss_Kaufman.pdf.
31. See, e.g., SKEEL, *supra* note 30; Thomas H. Jackson, *Chapter 11F: A Proposal for the Use of Bankruptcy To Resolve Financial Institutions*, in *ENDING GOVERNMENT BAILOUTS AS WE KNOW THEM* 217, 236 (Kenneth E. Scott et al. eds., 2009); Roe, *supra* note 29, at 555 ("The Bankruptcy Code's core negative consequence from favoring derivatives contracts and repurchase agreements is to slacken the contracting parties' efforts to contain the risk of counterparty failure."); see also Acharya et al., *supra* note 29, at 230 ("The effective outcome is tremendous liquidity in repo markets for these products in good times, with systemic stress and fragility when the products are anticipated to experience losses. The expansion of safe harbor to repo transactions with underlying mortgage-backed assets . . . has been cited as one of the reasons"); Patrick Bolton & Martin Oehmke, *Should Derivatives Be Privileged in Bankruptcy?* (July 3, 2012) (unpublished manuscript), <http://www.gsb.columbia.edu/faculty/moehmke/papers/BoltonOehmkeDerivatives.pdf> (arguing that risks shifted to firms' general creditors are more efficiently borne by their derivative counterparties).

arise to mitigate the effects of information and transaction costs.³² On this view, bank deposits, for example, create valuable liquidity by offering an investment contract free from the due-diligence and other transaction costs that hamper trading in virtually every other asset class, from home loans to technology stocks.³³ Banks accomplish this by issuing what I call *liquidation rights*, or options to convert assets to cash. For example, a bank depositor indirectly invests in the bank's loan portfolio but retains the right to withdraw her investment without taking a loss. In this way, banking transforms illiquid portfolio assets into a liquid investment contract that enlarges the supply of capital that households are willing to invest.

The subsequent Parts argue that rights allowing repo and derivative counterparties to liquidate these contracts outside bankruptcy play an analogous role in attracting capital from these "depositors" in the shadow banking system.³⁴ In this way, the safe harbors may not only expand the supply of loanable capital, but they may also make that supply more resilient by insulating investors from bankruptcy risk. If it was a loss of repo credit that ultimately felled Bear Stearns, this was because other funding sources with fewer privileges in bankruptcy had long since become unavailable to the troubled investment bank.³⁵

My claim that the law should enforce bank-issued liquidation rights should not be confused with an argument that the banking system should be allowed to fail during a crisis.³⁶ Critics of the safe harbors are undoubtedly right about

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32. Ross Levine, *Financial Development and Economic Growth: Views and Agenda*, 35 J. ECON. LITERATURE 688, 689 (1997). See generally Douglass C. North, *Economic Performance Through Time*, 84 AM. ECON. REV. 359, 360 (1994) ("When it is costly to transact, then institutions matter.").
 33. See Douglas W. Diamond & Philip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POL. ECON. 401, 409 (1983) ("It is precisely the 'transformation' of illiquid assets into liquid assets that is responsible both for the liquidity service provided by banks and for their susceptibility to runs."). See generally Michael Aitken & Carole Comerton-Forde, *How Should Liquidity Be Measured?*, 11 PAC.-BASIN FIN. J. 45, 46 (2003) ("A perfectly liquid market is one where any amount of a given security can be instantaneously converted to cash and back to securities at no cost.").
 34. See GORTON, *supra* note 24, at 7 (arguing that "demand deposits [and] repo with collateral" play analogous roles in the supply of "[t]ransactions (or 'liquidity')").
 35. See FIN. CRISIS INQUIRY COMM'N, *supra* note 4, at 283. To be sure, eventually all "[s]hort-term near money market instruments with a risk of loss—uninsured deposits, commercial paper, and repos—respond to increases in risk primarily through [a contraction in] quantity." Charles W. Calomiris, *The Subprime Turmoil: What's Old, What's New, and What's Next*, 15 J. STRUCTURED FIN. 6, 24 (2009).
 36. As Gorton has written, "banks should be liquidated if they cannot honor their debt in noncrisis periods, but not during a crisis." GORTON, *supra* note 5, at 149.

the consequences of allowing a large institution to unravel under pressure from its repo and derivative counterparties.³⁷ Yet if Lehman Brothers should have gained protection from its counterparties in September 2008, this should have come in the form of emergency liquidity, not a judicial stay imposed after the firm was already in bankruptcy.³⁸ Curtailing the safe harbors would seemingly do little to expand the options available to troubled firms *ex post*, while doing much to undermine the liquidity and stability of the repo and derivative markets *ex ante*.

The challenge for regulators, then, is to supply a framework that reduces the incidence of bank runs at minimal cost to bank liquidity creation. If this task seems daunting, it may be helpful to recall that today's regulated banking sector was once "an inherently fragile, shadow banking system operating without credible public-sector backstops and limited regulation."³⁹ Yet twentieth-century regulators enacted a mix of deposit insurance and prudential oversight that largely ended the threat of panics in the traditional banking sector. An insolvency regime that curtailed depositors' rights in order to prop up weak banks was conspicuously absent from this formula, since it would have undermined the very liquidity services that regulators sought to protect.⁴⁰ Seen in this light, the current so-called "special treatment"⁴¹ of repos and derivatives in bankruptcy is far from anomalous: more remarkable was the absence, in 2008, of regulatory mechanisms to ensure the shadow banking system's resilience to crises of confidence. Instead of trying to legislate away financial fragility through insolvency law, policymakers should work toward a regulatory regime for shadow banking that approaches

37. See, e.g., Acharya et al., *supra* note 29, at 229 (describing the attendant "form of systemic risk involving fire sales . . . and liquidity funding spirals").

38. As Morgan Ricks argues, a bankruptcy stay on counterparties' recovery efforts would offer a counterproductive method for arresting a bank run because, rather than preserving the bank's liquidity, "imposing a legal stay on money-claims would instantly turn them into non-money, which is exactly [the outcome to be avoided]." Ricks, *supra* note 6, at 112; see also Bliss & Kaufman, *supra* note 30, at 10 ("Adding [automatic] stays . . . will not be suffic[ient] to solve this dilemma. . . . Stays can suspend collection of debts but they cannot force continued rolling over of funding or provision of services.").

39. Pozsar et al., *supra* note 2, at 1; see also GORTON, *supra* note 5, at 28 ("[T]he private sector's attempts at money creation—first private banknotes and then demand deposits—were plagued by difficulties rooted in the inability of the private sector to create riskless collateral . . .").

40. See generally Charles W. Calomiris, *Is Deposit Insurance Necessary? A Historical Perspective*, 50 J. ECON. HIST. 283, 284 n.4 (1990) (identifying "the desire to preserve liquidity" as the core motivation of deposit insurance legislation).

41. See Edwards & Morrison, *supra* note 29.

their successes in the traditional banking sector.

I. THE DEMAND FOR LIQUIDITY AND THE ROLE OF BANK INSOLVENCY LAW

Capital traded through repos and derivative contracts has been spotted fleeing the scene of recent history's most prominent financial disruptions, including the 1998 failure of Long-Term Capital Management; the liquidity crises of Bear Stearns, Merrill Lynch, Lehman Brothers, AIG, and other firms in 2008; and the bankruptcy of MF Global in 2011. Accordingly, critics of the safe harbors have argued that ordinary bankruptcy protections should be available to stanch the outflow of liquidity through the repo and derivative books of troubled institutions.

However, this Part argues that such proposals elide important distinctions between the functional principles of bankruptcy law and bank regulation. Bankruptcy generally aims to protect assets from inefficient liquidation and to return an equitable and incentive-compatible recovery to each claimant. Most legal scholars have analyzed repos and derivatives from this perspective, arguing that bankruptcy-law safeguards should be used to protect firms from chaotic unraveling by their counterparties. In contrast, modern approaches to bank regulation recognize that the efficiency of markets for many financial contracts would be undermined if participants could not transact without exposing themselves to uncertainty and delay in a counterparty's insolvency proceeding.⁴²

The choice between bankruptcy and bank-regulatory approaches depends on the nature of the costs imposed by a firm's failure. Bankruptcy is adapted for the typical case where coordination problems prevent creditors' recovery efforts from achieving an optimal allocation of a failed firm's assets and default losses. Financial institutions also encounter coordination problems among customers or creditors racing to withdraw cash or seize collateral.⁴³ However, the resolution of failed financial intermediaries raises additional functional considerations relating to these firms' role as suppliers of liquidity.⁴⁴

Liquidity is the ability to trade an asset at minimal cost or delay.⁴⁵

42. See Bliss & Kaufman, *supra* note 12, at 154-55.

43. See Diamond & Dybvig, *supra* note 33, at 401; cf. Sudipto Bhattacharya & Douglas Gale, *Preference Shocks, Liquidity, and Central Bank Policy*, in LIQUIDITY AND CRISES 35 (Franklin Allen et al. eds., 2011) (characterizing the central bank as a solution to the free-rider problem in interbank lending).

44. See, e.g., *supra* note 40 and accompanying text.

45. See Aitken & Comerton-Forde, *supra* note 33, at 46.

Securities firms, for example, facilitate the issuance and exchange of securities by acting as “market makers” who stand ready to buy or sell securities on demand.⁴⁶ Commercial banks create liquidity for their depositors by allowing them to easily invest or divest their savings. The next Section will rehearse an account of how bank-created liquidity generates valuable gains in market efficiency. At this stage, however, it suffices to observe that when a financial intermediary fails, there is a tradeoff between the typical mechanisms of bankruptcy law—staying or clawing back creditors’ recoveries—and the failed firm’s role in supplying customers with immediate access to funds. For this reason, financial intermediaries have historically been excluded from the mandatory provisions of the Bankruptcy Code.⁴⁷

These same considerations, I will argue, justify the bankruptcy exemptions for transactions in the repo and derivatives markets. Ironically, the argument for *excluding* certain financial contracts from conventional bankruptcy mechanisms has much in common with the argument for bankruptcy itself. Both are rooted in the central observations of institutional economics that information or transaction costs may limit the efficiency of atomistic financial markets.⁴⁸

A. Banking as Liquidity Creation

An efficient financial system should allocate society’s scarce savings to all projects with expected returns exceeding their cost of capital.⁴⁹ However, due to information and transaction costs, most investments incur some amount of *liquidity risk*: an investor may be unable to sell her asset without loss when she experiences a need for cash. Relatively few assets are financed with liquid claims such as common stock or bonds. Most, such as homes or businesses, can be sold only after incurring substantial search costs, due diligence, and other

46. See generally Sanford J. Grossman & Merton H. Miller, *Liquidity and Market Structure*, 43 J. FIN. 617, 618 (1988) (describing how “market makers” satisfy “the demand for immediacy” among market participants by “maintaining a continuous presence in the market”).

47. See 11 U.S.C. § 109(b)-(d) (2006) (excluding insurance companies, banks, stockbrokers, and commodity brokers from relief under portions of the Bankruptcy Code).

48. See Levine, *supra* note 32, at 690 (“The costs of acquiring information and making transactions create incentives for the emergence of financial markets and institutions.”). See generally Sudipto Bhattacharya & Anjan V. Thakor, *Contemporary Banking Theory*, 3 J. FIN. INTERMEDIATION 2 (1993) (surveying theories of banking).

49. See, e.g., Robert G. King & Ross Levine, *Finance, Entrepreneurship, and Growth: Theory and Evidence*, 32 J. MONETARY ECON. 513 (1993).

transaction or agency costs.⁵⁰ Thus, an investor in an illiquid asset need not only evaluate the underlying investment opportunity: there is also the risk that she may at some point be forced to sell the asset at a discount to raise cash.⁵¹ Even socially valuable projects may be unable to attract funding for this reason.⁵²

In response, banks supply liquidity by offering a deposit contract, which allows households to invest their savings while retaining on-demand access to funds.⁵³ This liquidation right performs two liquidity-creating functions.⁵⁴ First, deposits may be withdrawn at any time notwithstanding the long maturities of the bank loans that they finance; this function is known as *maturity transformation*.⁵⁵ Second, bank deposits are *information-insensitive*, meaning that the depositor need not monitor her bank account as vigilantly as

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50. See GORTON, *supra* note 5, at 46 (“You could not realize the value of [a Van Gogh] painting at short notice unless you were willing to take a great loss.”). For further discussion, see Levine, *supra* note 32, at 690-96.
 51. Imagine an investor who has lent \$1 million to a small-business owner and now seeks to sell the loan to an arm’s-length buyer. If the loan matures in five years, each buyer would have to incur costs evaluating the borrower’s business prospects over a five-year time horizon. Moreover, buyers might rightly interpret the investor’s attempt to sell the loan as a discouraging signal about the borrower’s credit risk. Thus the investor may find the loan impossible to sell.
 52. See Bengt Holmström & Jean Tirole, *Private and Public Supply of Liquidity*, 106 J. POL. ECON. 1, 2 (1998) (“The wedge between the full value of the firm and the external value of the firm prevents it from financing all projects that have a positive net present value.”); Jean Tirole, *Illiquidity and All Its Friends*, 49 J. ECON. LITERATURE 287, 291 (2011) (“Financial market imperfections, which encompass moral hazard, adverse selection (asymmetries of information about assets in place and projects), and mere transaction costs, make it hard for cash-strapped corporations to raise financing even for positive net-present-value actions.”).
 53. John Bryant, *A Model of Reserves, Bank Runs, and Deposit Insurance*, 4 J. BANKING & FIN. 335, 338-39 (1980); Diamond & Dybvig, *supra* note 33, at 405. In contrast, Bengt Holmström and Jean Tirole stress the problem of unforeseeable liquidity shocks to firms. They argue that credit lines (contracted for *ex ante*) provide borrowers with a source of liquidity that is incentive-compatible because it is supplied at a lower rate than *ex post* refinancing. Holmström & Tirole, *supra* note 52, at 12-14. Integrating these perspectives, Anil Kashyap and others argue that banks exploit synergies between the provision of on-demand liquidity to borrowers and depositors. Anil K. Kashyap, Raghuram Rajan & Jeremy C. Stein, *Banks as Liquidity Providers: An Explanation for the Coexistence of Lending and Deposit-Taking*, 57 J. FIN. 33 (2002). For further discussion, see XAVIER FREIXAS & JEAN-CHARLES ROCHET, *MICROECONOMICS OF BANKING* 46-49 (2d ed. 2008).
 54. Cf. Ricks, *supra* note 6, at 93 (citing “liquidity and price-protection” as the crucial characteristics of “transaction reserves,” or money-like instruments).
 55. See *id.* at 81; see also FREIXAS & ROCHET, *supra* note 53, at 4 (“[M]odern banks can be seen as transforming securities with short maturities, offered to depositors, into securities with long maturities, which borrowers desire.”).

she might monitor a risky investment.⁵⁶ This is because her deposit represents a share of the bank's entire portfolio, which is highly diversified across borrowers;⁵⁷ because the bank's shareholders absorb all portfolio losses to the extent of their equity;⁵⁸ and because government deposit insurance guarantees against residual default risk.⁵⁹ The result is to allow investments that may be prohibitively illiquid for some investors, such as homes and small businesses, to attract financing in a form that is almost as liquid as cash.⁶⁰

Banking thus plays an essential role in any market economy. The value of bank-supplied liquidity can be seen, for example, in the extremely low yields that demand deposits pay. The difference between deposit rates and the higher interest rates paid on other debt contracts largely reflects the *liquidity premium* that depositors are willing to incur for the greater liquidity of a bank deposit.⁶¹ But a more important clue is the "overwhelming proportion"⁶² of capital that is intermediated through banks: "For centuries, the vast majority of externally financed investments have been funded by banks, for which demandable-debt instruments (bank notes and checking accounts) have been the principal source of funds."⁶³ However elusive conceptually, the potential value created by financial contracts that supply similar on-demand liquidity should not be ignored in scholarship on the shadow banking system.

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56. This function of bank deposits is discussed in Gary Gorton & George Pennacchi, *Financial Intermediaries and Liquidity Creation*, 45 J. FIN. 49, 50 (1990). See generally GORTON, *supra* note 5, at 219 ("[D]ebt is 'least information-sensitive,' meaning that it minimizes the incentives for agents to produce private information, creating adverse selection, and that debt maintains the most value in the presence of aggregate shock.").
57. See Gary Gorton & Andrew Winton, *Financial Intermediation*, in 1 HANDBOOK OF THE ECONOMICS OF FINANCE 431, 455 (George M. Constantinides et al. eds., 2003) ("Financial intermediaries are the natural entities to create such securities, as they hold diversified portfolios of assets. Consequently, their debt should be used for transactions purposes.").
58. See GORTON, *supra* note 5, at 48 ("Bank debt is a senior claim on the collateral: debt holders are paid first and stock or equity is paid last."); Gorton & Pennacchi, *supra* note 56, at 50.
59. See GORTON, *supra* note 24, at 20 ("The need for information-insensitive debt is the logic behind deposit insurance.").
60. In fact, deposits are tracked in the Federal Reserve's official monetary aggregates. See *H.6 Money Stock Measures: About the Release*, FED. RES. STAT. RELEASE, <http://www.federalreserve.gov/releases/h6/about.htm> (last updated Nov. 3, 2011).
61. Cf. Ricks, *supra* note 6, at 96 (making an analogous argument about the most liquid money-market instruments).
62. Gorton & Winton, *supra* note 57, at 433.
63. Charles W. Calomiris & Charles M. Kahn, *The Role of Demandable Debt in Structuring Optimal Banking Arrangements*, 81 AM. ECON. REV. 497, 497 (1991).

B. Implications for Bank Resolution

Banking creates value by shifting liquidity risk from depositors to the bank itself: banks offer a kind of liquidity insurance to their depositors.⁶⁴ However, the underlying assets on the bank's balance sheet remain illiquid—that is, they can be sold only at a discount. For this reason, a bank encountering a surge in withdrawals may *itself* run short of cash, because it cannot repay its depositors at par by liquidating portfolio assets.⁶⁵ Moreover, individual bank failures tend to spread to other banks,⁶⁶ triggering a deleveraging of the banking system and a contraction in economic activity.⁶⁷

Banks' inherent fragility and their susceptibility to contagion effects generate a compelling need to protect them from the demands of panicked depositors. However, if the value of bank deposits is closely related to their liquidity—specifically, the depositor's right to withdraw or transfer her account balance on demand—then the ordinary bankruptcy protections built around automatic stays have, at best, problematic application to the resolution of failed banks.

Ex ante, the risk that an investor's savings will be frozen in a failed bank makes the deposit contract less attractive,⁶⁸ and would likely reduce the supply of capital made available to the banking system generally. Perhaps more importantly, this risk would destroy the information-insensitive quality of bank deposits by forcing depositors to monitor the solvency of their bank. Credit conditions would then tend to tighten in response to rising risk perceptions.⁶⁹ In extreme cases, a panic can ensue

64. Diamond & Dybvig, *supra* note 33.

65. FREIXAS & ROCHET, *supra* note 53, at 4 (“This *maturity transformation* function necessarily implies a risk, since the banks' assets will be illiquid, given the depositors' claims.”).

66. During the era of uninsured banking, bank failures tended to produce knock-on effects that spread to generate system-wide banking panics. By one count, at least ten major banking panics occurred in the United States prior to the Great Depression. See Charles W. Calomiris & Gary Gorton, *The Origins of Banking Panics: Models, Facts, and Bank Regulation*, in FINANCIAL MARKETS AND FINANCIAL CRISES 109, 113-15 (R. Glenn Hubbard ed., 1991).

67. See Ricks, *supra* note 6, at 78 (“By extension, large numbers of near-simultaneous bank failures can lead to a sudden and severe reduction in the money supply—with correspondingly severe economic repercussions.”).

68. See Bliss & Kaufman, *supra* note 12, at 149 (“Liquidity losses occur when depositors are denied immediate access to the insured par value or, in the case of uninsured depositors, the recovery value of their accounts.”).

69. See Calomiris, *supra* note 35, at 26 (“The risk intolerance of money market instruments has been visible historically and in recent times, both in response to idiosyncratic events at particular banks and firms, and in response to aggregate shocks.”).

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a shock occurs that is large enough for bank debt to become information sensitive. It loses its important feature, and so agents do not want it anymore; they want an asset which is surely information insensitive—cash. When that happens, the banking system cannot honor the demands and is insolvent.⁷⁰

Historically, swings in confidence in the banking system have had sharply procyclical effects, as the resulting pullback in bank lending worsens underlying economic conditions.⁷¹ Ex post, a resolution mechanism that freezes a failed bank's contracts may badly disrupt the activities of the households and investors that depend on them.⁷²

These factors explain an important aspect of modern approaches to bank resolution: rather than stymie depositors' recovery efforts, the law has historically sought to shift losses away from banks' depositors and noteholders to other, less risk-averse stakeholders. As Bray Hammond wrote in his landmark history, in the antebellum period the view emerged "that the obligations of banks were not ordinary debts but money; and that a public interest was at stake in them which overrode that of any particular debtor and

70. See GORTON, *supra* note 24, at 32-33.

71. See generally Ben Bernanke et al., *The Financial Accelerator and the Flight to Quality*, 78 REV. ECON. & STAT. 1, 1 (1996) ("[C]hanges in credit-market conditions amplify and propagate the effects of initial real or monetary shocks."). The result may be "a sharp, brief, ultracyclical deterioration of all or most of a group of financial indicators—short-term interest rates, asset . . . prices, commercial insolvencies, and failures of financial institutions." Raymond W. Goldsmith, *Comment on Hyman P. Minsky, The Financial-Instability Hypothesis: Capitalist Processes and the Behavior of the Economy*, in FINANCIAL CRISES: THEORY, HISTORY, AND POLICY 41, 42 (Charles P. Kindleberger & Jean-Pierre Laffargue eds., 1982).

72. See, e.g., Robert R. Bliss, *Bankruptcy Law and Large Complex Financial Organizations: A Primer*, 27 ECON. PERSP., 1st Quarter 2003, at 48, 48 ("[F]inancial institutions provide capital and other financial services to all sectors of the economy and they form the backbone of the financial markets, markets that rely to a great extent on trust. Thus, the failure of a financial intermediary calls into question a multitude of business relations."); Bliss & Kaufman, *supra* note 12, at 149 (stating that disruptions in depositors' access to their savings "reduces the 'moneyness' of demand and other short-term deposits by effectively transforming a short-term liquid deposit into a time deposit of uncertain maturity," and "may produce substantial negative externalities in the markets served by the bank" which depend on its liquidity); Ricks, *supra* note 6, at 108 ("[A] sudden inability to meet transactional needs may lead to consequential losses—opportunity costs, operational disruption, reputational damage, or even default."). *But see* Marvin Goodfriend & Robert G. King, *Financial Deregulation, Monetary Policy, and Central Banking*, ECON. REV., May/June 1988, at 3, 16 ("[B]ank failures . . . even at their worst . . . were roughly of the same order of magnitude as nonbank business failures. Their aggregate effects appear to have been reasonably well contained . . .").

creditor.”⁷³ Thus, historical bank-insolvency regimes have looked to four categories of stakeholders to bear losses in lieu of banks’ customers: (1) bank shareholders or insiders;⁷⁴ (2) other banks;⁷⁵ (3) taxpayers;⁷⁶ and (4) the

73. BRAY HAMMOND, *BANKS AND POLITICS IN AMERICA: FROM THE REVOLUTION TO THE CIVIL WAR 180* (1957).

74. One early approach was to impose superadded liability on banks’ shareholders, abrogating the common law rule of limited liability. For a discussion of this approach, see Jonathan R. Macey & Geoffrey P. Miller, *Double Liability of Bank Shareholders: History and Implications*, 27 WAKE FOREST L. REV. 31 (1992); and Joseph M. Leonard, Note, *Superadded Liability of Bank Stockholders*, 14 TEMPLE U. L.Q. 522, 522 (1940). Congress ultimately imposed double liability on bank shareholders in the National Banking Act of 1864, ch. 106, § 12, 13 Stat. 99, 102-03. By the late 1920s, federal law and the laws of thirty-nine states provided for some form of superadded (usually double) liability. Leonard, *supra*, at 523. More recent law “singles out those with some insider connection to the failed bank and attempts to shift the costs of failure from the [deposit] insurance fund to the insiders.” Peter P. Swire, *Bank Insolvency Law Now that It Matters Again*, 42 DUKE L.J. 469, 485 (1992).

Ex ante capital and liquidity standards also insulate banks’ customers at shareholders’ expense. For discussion of early reserve and capital requirements, see, for example, Arthur J. Rolnick & Warren E. Weber, *The Causes of Free Bank Failures: A Detailed Examination*, 14 J. MONETARY ECON. 267, 270-71 (1984), discussing the Free Banking Era; and David M. Gische, *The New York City Banks and the Development of the National Banking System 1860-1870*, 23 AM. J. LEGAL HIST. 21, 25 (1979), discussing the National Banking era. Of particular significance was a New York statute, enacted in 1838 and widely imitated, that required bank notes to be backed by deposited collateral. See Michael D. Harter, *American Banking and the Money Supply of the Future*, 3 ANNALS AM. ACAD. POL. & SOC. SCI. 559, 562 (1893).

75. A number of early statutes created government insurance funds or imposed mutual liability among banks to cover individual institutions’ shortfalls. New York established the nation’s first bank-obligation insurance scheme in 1829, which combined a member-funded insurance fund with government supervision of member banks. For comparative discussion, see Calomiris, *supra* note 40, at 286-88; and Carter H. Golembe, *The Deposit Insurance Legislation of 1933: An Examination of Its Antecedents and Its Purposes*, 75 POL. SCI. Q. 181, 182-86 (1960). Indiana enacted a very different plan in 1834, later emulated in Ohio and Iowa, which relied on industry self-regulation and unlimited mutual liability among member banks. One commentator argues that the Indiana scheme proved more successful than the New York fund because it “aligned the incentive and authority to regulate and made insurance protection credible through unlimited mutual liability among banks.” Calomiris, *supra* note 40, at 288.

Member-funded deposit insurance through the FDIC forms a crucial feature of the current regulatory architecture. For a useful overview of the FDIC’s operations, see *Resolutions Handbook*, FED. DEPOSIT INS. CORP. (2003), <http://www.fdic.gov/bank/historical/reshandbook>. In addition to straight deposit payoffs, a notable 1935 amendment to the Glass-Steagall Act expanded the FDIC’s toolkit by allowing it to facilitate mergers among insured banks in order to eliminate weak links from the system. Banking Act of 1935, Pub. L. No. 74-305, ch. 614, § 101, 49 Stat. 684, 684-703 (codified as amended at 12 U.S.C. § 1823(c)(2) (2006)). These “purchase and assumption” transactions came to form the cornerstone of the FDIC’s postwar approach to resolving failed financial institutions. See

central bank.⁷⁷ Under present-day FDIC receivership procedures, the experience of even uninsured depositors “is far better than could be expected under general corporate bankruptcy where most payments to creditors are usually delayed until final resolution.”⁷⁸ The current approach, which is highly protective of depositors, has enjoyed substantial success in reducing systemic risk: following the Great Depression, the banking system enjoyed “a panic-free period of 75 years—considerably longer than any such period since the founding of our republic.”⁷⁹

The foregoing suggests two salient observations. First, the liquidation rights built into the deposit contract supply the vector for bank runs—

William M. Isaac, *The Role of Deposit Insurance in the Emerging Financial Services Industry*, 1 YALE J. ON REG. 195, 202 (1984) (“During the past 30 years, the majority of bank failures, and practically all large bank failures, have been handled through [purchase and assumption] transactions.”); *Resolutions Handbook*, *supra*, at 19-40 (describing purchase and assumption transactions).

76. Congress established the Reconstruction Finance Corporation in 1932, but many banks failed to borrow from it, since doing so signaled weakness and often provoked bank runs. *The First Fifty Years: A History of the FDIC 1933-1983*, FED. DEPOSIT INS. CORP. 36-37 (1984), <http://www.fdic.gov/bank/analytical/firstfifty>.
77. The Federal Reserve, as the lender of last resort, supplies backup liquidity to otherwise solvent institutions that might fail due to a liquidity shortage, “when no other lender is either capable of lending or willing to lend in sufficient volume to prevent or end a financial panic.” Allan H. Meltzer, *Financial Failures and Financial Policies*, in DEREGULATING FINANCIAL SERVICES: PUBLIC POLICY IN FLUX 79, 83 (George G. Kaufman & Roger C. Kormendi eds., 1986). Prior to the establishment of the Federal Reserve System, the New York Clearinghouse Association coordinated a private form of central banking that allowed depositors to replace claims on individual banks with certificates issued against the clearinghouse, backed by all of its member banks. See Gary Gorton, *Clearinghouses and the Origin of Central Banking in the United States*, 45 J. ECON. HIST. 277, 282 (1985); T.B. Paton, *The New York Clearing House and the Associated Banks*, 12 BANKING L.J. 593, 607-09 (1895) (detailing the program).
78. Bliss & Kaufman, *supra* note 12, at 175; see also *id.* at 172 (“The prompt and full payment of insured-depositor claims at legally closed institutions before the FDIC may have collected the proceeds from selling the assets has gone a long way to reducing the liquidity losses of most depositors.”). By comparison, bankruptcy creditors are subject, for example, to the Code’s provisions for the automatic stay, 11 U.S.C. § 362 (2006); the trustee’s power to assume or reject executory contracts and unexpired leases, *id.* § 365; statutory priorities, *id.* § 507; the effects of discharge, *id.* § 524; the trustee’s avoiding powers, *id.* §§ 547-549; and limitations on setoff rights, *id.* § 553; notwithstanding contractual terms providing otherwise.
79. Gary Gorton & Andrew Metrick, *Regulating the Shadow Banking System*, BROOKINGS PAPERS ON ECON. ACTIVITY, Fall 2010, at 261, 261, http://www.brookings.edu/~media/projects/bpea/fall%202010/2010b_bpea_gorton.pdf.

withdrawal of deposits—but also the liquidity that makes banking valuable.⁸⁰ Imposing bankruptcy-style restrictions on depositors' accounts would render the banking system less efficient and more prone to panics. Second, bank insolvency law should prevent runs on weak banks without impairing depositors' rights, and can do so by shifting losses to other stakeholders. It should be stressed that such approaches do not eliminate risk, but *shift* it, so that one set of claims on the bank (the equity) is risky and information-sensitive, while another set of claims (the deposits) is information-insensitive and can function as a form of money.⁸¹

These design principles explain important and surprisingly enduring features of American insolvency law. In contrast to the pro-debtor bankruptcy model advocated by critics of the safe harbors, the law governing the banking sector has traditionally protected the enforcement of liquidation rights against their issuers, while employing other methods, including deposit insurance, to maintain system stability. This approach reflects the valuable role that banks' creation of safe, money-like instruments plays when real assets are imperfectly liquid.

II. THE STRUCTURE OF SHADOW BANKING

While the banking system has exhibited remarkable stability since the advent of federal deposit insurance, the cap on insured balances (currently \$250,000) has forced asset managers, governments, and corporations to look elsewhere for “safe, interest-earning, short-term investments” akin to an insured deposit.⁸² This demand has been met by an array of nonbank financial companies and markets that comprise a kind of parallel banking system for institutional investors.⁸³ While a comprehensive discussion is well beyond the scope of this Note, this Part will describe two transactions, securitization and repo, that lay at the center of the shadow banking system and its 2008 crisis.

80. See Diamond & Dybvig, *supra* note 33, at 403 (“Illiquidity of assets provides the rationale both for the existence of banks and for their vulnerability to runs.”).

81. See generally Gorton & Pennacchi, *supra* note 56, at 50 (“By issuing debt and equity securities against their risky portfolios, intermediaries can attract informed agents to hold equity and uninformed agents to hold debt which they can use for [transactions].”).

82. Gorton & Metrick, *supra* note 79, at 263; see also GORTON, *supra* note 24, at 15 (“These depositors are not willing to deposit, say, \$500 million in a bank because it cannot be insured.”).

83. By one estimate, the total assets under management by U.S. institutional investors alone exceed two-hundred percent of U.S. gross domestic product. Gorton & Metrick, *supra* note 79, at 276 fig.7.

A. Securitization: Bank Lending Unbundled

Part I argued that banks create value by transforming illiquid assets into liquid deposits. Thus “the existence of financial intermediaries implies the creation of bank loans that banks should be unable to sell [to outside investors].”⁸⁴ However, the advent of securitization—the packaging of bank loans into tradable debt securities—overcame this constraint by allowing banks to market their assets to a wide array of institutional investors beyond a bank’s depositor base. Traditionally, banks have intermediated credit by originating loans and taking deposits, which appear on their balance sheets as assets and liabilities, respectively.⁸⁵ In a securitization, by contrast, the bank sells pools of bank loans (such as mortgages) to a special-purpose vehicle, which finances the purchase by selling investors claims on the pool; these claims are known as asset-backed securities (ABS).⁸⁶ In this way, securitization blurs the line between banking and the capital markets by allowing large outside investors to finance loans originated by a bank.

The origins of securitization date to 1968, when the Government National Mortgage Association (Ginnie Mae) began issuing securities backed by federally guaranteed mortgages. The Federal National Mortgage Association (Fannie Mae) began offering mortgage-backed securities (MBS) in 1981.⁸⁷ Because the loans underlying these deals (known as “agency” MBS) are guaranteed by the government, investors in these securities enjoy a backstop analogous to FDIC deposit insurance.

84. Gary B. Gorton & George G. Pennacchi, *Banks and Loan Sales: Marketing Nonmarketable Assets*, 35 J. MONETARY ECON. 389, 390 (1995); accord Lawrence H. Summers, *Macroeconomic Consequences of Financial Crises: Planning for the Next Financial Crisis*, in THE RISK OF ECONOMIC CRISIS 135, 147 (Martin Feldstein ed., 1991) (“[B]ank assets are illiquid. If all bank assets could readily be traded on a secondary market, the need for banks would be greatly reduced.”).

85. See Gorton & Metrick, *supra* note 1, at 426 fig.1.

86. See Gary B. Gorton & Nicholas S. Souleles, *Special Purpose Vehicles and Securitization*, in THE RISKS OF FINANCIAL INSTITUTIONS 549, 550 (Mark Carey & René M. Stulz eds., 2007); John H. Langbein, *The Secret Life of the Trust: The Trust as an Instrument of Commerce*, 107 YALE L.J. 165, 172-73 (1997); Paul Mizen, *The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses*, 90 FED. RES. BANK ST. LOUIS REV. 531, 537 (2008); Steven L. Schwarcz, *The Alchemy of Asset Securitization*, 1 STAN. J.L. BUS. & FIN. 133, 135-36 (1994). These securities, in turn, may be packaged into collateralized debt obligations (CDOs) backed by the mortgage pools underlying each asset-backed security in the deal. See FIN. CRISIS INQUIRY COMM’N, *supra* note 4, at 128 fig.8.2. For useful overviews of the securitization process see Gorton & Metrick, *supra* note 1, at 427 fig.2; and Pozsar et al., *supra* note 2, at 11-13.

87. Mizen, *supra* note 86, at 536-37.

However, the following decades saw securitization spread quickly to non-agency-backed (“private-label”) mortgages, and to other types of consumer and business debt.⁸⁸ In lieu of a government guarantee, these transactions employ other methods to protect investors from credit risk in the loan pool. For example, ABS are divided into a series of “tranches” that absorb losses in reverse order of seniority. The most junior tranche is the first to take losses, while the senior tranche is paid first and is consequently the safest.⁸⁹ The use of tranches gives ABS a capital structure analogous to that of traditional banks, in which stockholders absorb losses to the extent of their equity before any uninsured depositors are impaired.

Asset-backed securities, including subprime MBS, “became subject to explosive demand from investors around the world” in the years before the crisis.⁹⁰ By 2005, issuance of securitized bonds exceeded corporate bond issuance in the United States, “even excluding mortgage-related securitization.”⁹¹ According to the Bank of England, the global ABS market reached \$10.7 trillion at the end of 2006.⁹² By 2008, hedge funds and investment banks had greater combined exposure to subprime mortgages than

88. *Id.*; Lynn M. LoPucki, *The Death of Liability*, 106 YALE L.J. 1, 24 (1996).

89. See Mizen, *supra* note 86, at 537-38. For example, a structure may have a “first-loss” or “equity” tranche, which absorbs losses up to a par value of 3% of the pool; a “mezzanine” tranche that absorbs losses impairing the next 7% of the pool; and a “senior” tranche claiming the other 90% of the pool. This example is borrowed from *Credit Risk Transfer*, BASEL COMMITTEE ON BANKING SUPERVISION 45 (Mar. 2005), <http://www.bis.org/publ/joint13.pdf>. Thus, for example, if the loan pool experienced a default rate of 6.5%, the equity tranche would be wiped out, and the remaining 3.5 percentage points of losses would deal a loss of 50% to the mezzanine tranche, while the senior tranche would be unimpaired.

Note that the sponsor typically retains first-loss exposure in ABS deals. By giving the sponsor a junior position in the payment waterfall, this risk retention should, in principle, align the sponsor’s incentives with those of the other investors, like bank capital in a commercial bank. See Gorton & Pennacchi, *supra* note 84, at 409 (“If the selling bank retained a fraction of the loan or it gave loan buyers an implicit guarantee against default, this could explain why market participants would buy loans”); Steven L. Schwarcz, *Enron and the Use and Abuse of Special Purpose Entities in Corporate Structures*, 70 U. CIN. L. REV. 1309, 1316 n.38 (2002).

90. *The Financial Crisis and the Role of Federal Regulators: Hearing Before the H. Comm. of Gov’t Oversight & Reform*, 110th Cong. 2 (2008) (statement of Alan Greenspan, Former Chairman of the Board of Governors of the Federal Reserve System), <http://democrats.oversight.house.gov/images/stories/documents/20081023100438.pdf>.

91. GORTON, *supra* note 5, at 50.

92. Mizen, *supra* note 86, at 538.

the commercial banks that had originated these loans.⁹³

Securitization thus provided a way for institutional investors to finance bank loans that had previously been funded by bank deposits.⁹⁴ But rather than buy securitized bonds outright, many investors “deposited” funds in short-term loans, including asset-backed commercial paper (ABCP) and repos, which used securitized assets as collateral. While the ABCP market reached \$1.2 trillion at its peak, our focus is on the repo market, which may have reached \$10 trillion, roughly the same size as the total assets of the U.S. commercial banking sector.⁹⁵ Safe and highly liquid, repos furnished the “deposits” of the shadow banking system.

B. Repos: Shadow Bank “Deposits”

Like bank deposits, repos are short-term debt instruments that are designed to be highly liquid and insulated from credit risk.⁹⁶ In substance, a repurchase agreement is a short-term secured loan, typically made by a cash-rich investor, which takes securities such as Treasuries, MBS, or other debt securities as collateral.⁹⁷ The lender extends credit by “purchasing” the collateral from the borrower, which agrees to “repurchase” the collateral (perhaps the next day⁹⁸) at a small premium over the purchase price.⁹⁹ Gary

93. David Greenlaw et al., *Leveraged Losses: Lessons from the Mortgage Market Meltdown* 25 ex. 3.8 (2008) (U.S. Monetary Policy Forum Conference Draft), <http://www.chicagobooth.edu/usmpf/docs/usmpf2008confdraft.pdf>.
94. See Stuart I. Greenbaum & Anjan V. Thakor, *Bank Funding Modes: Securitization Versus Deposits*, 11 J. BANKING & FIN. 379, 379 (1987) (describing “the transformation of illiquid financial claims . . . held by depository financial intermediaries, into tradeable ones” through securitization).
95. See GORTON, *supra* note 5, at 190-91.
96. See Kenneth D. Garbade, *The Evolution of Repo Contracting Conventions in the 1980s*, FRBNY ECON. POL’Y REV., May 2006, at 27; *Tri-Party Repo Infrastructure Reform*, *supra* note 23, at 6 (“Cash lenders use tri-party repos as investments that offer liquidity maximization, principal protection, and a small positive return, while cash borrowers rely on them as a major source of short-term funding.”). Note that while many market participants enter repo transactions to borrow cash, an identical transaction (dubbed “reverse repo”) may be used to borrow securities rather than cash. Garbade, *supra*, at 31-32.
97. *Tri-Party Repo Infrastructure Reform*, *supra* note 23, at 3, 7 tbl.1, 19 app. ii.
98. Safe-harbor-eligible repos may have maturities of no longer than one year. 11 U.S.C. § 101(47)(A)(i) (2006); 12 U.S.C. §§ 1787(c)(8)(D)(v)(I), 1821(e)(8)(D)(v)(I) (2006); see also *Tri-Party Repo Infrastructure Reform*, *supra* note 23, at 11 fig.4 (illustrating an hour-by-hour breakdown of an overnight repo transaction).
99. “A market participant might, for example, sell securities for \$10 million and simultaneously agree to repurchase them ten days later for \$10,005,555. . . . [T]his is comparable to

Gorton explains:

Repos are like demand deposits. One party deposits (lends) money in a bank, usually overnight, and will receive interest. To make the deposit safe, the depositor is provided with collateral in the form of a bond. . . . If the bank fails, then the institutional investor can sell the bond, without going into a bankruptcy procedure. . . . The institutional investor can always withdraw the money, so to speak, by not rolling the repo.¹⁰⁰

Consequently, the lender should incur only negligible liquidity risk to the extent that the borrower is solvent or the collateral is relatively liquid. Repos are not just functionally analogous to deposits: the law also treats repos as money-like reserve assets rather than as risky debt securities.¹⁰¹

Repos' predominant use for much of the twentieth century was to finance Treasury securities,¹⁰² but since the 1980s they have become a key source of day-to-day funding for financial institutions and an important vehicle for idle cash held by corporations, governments, and asset managers.¹⁰³ Repos ultimately became an important method of financing the securitization process

borrowing \$10 million for ten days at an interest rate of 2 percent per annum." Garbade, *supra* note 96, at 27.

100. See GORTON, *supra* note 5, at 38. In addition, "[r]epo collateral can be rehypothecated; that is, the collateral received in a repo deposit can be freely reused in another transaction with an unrelated third party," so that the repo lender enjoys continuous liquidity even *before* the contract matures. Gorton & Metrick, *supra* note 79, at 277.
101. Ricks, *supra* note 6, at 90 ("In area after area [of law], these instruments are treated like deposits—a classic form of 'money'—rather than ordinary debt securities.").
102. The original bankruptcy safe harbor recognized only repos backed by certificates of deposit, eligible bankers' acceptances, and government or government-guaranteed securities. Bankruptcy Amendments and Federal Judgeship Act of 1984, Pub. L. No. 98-353, § 391, 98 Stat. 333, 365 (codified as amended at 11 U.S.C. § 101(47)(A)(i) (2006)). However, mortgage-related assets were recognized in the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, §§ 901(e), 907, 119 Stat. 23, 152-55, 171 (codified at 11 U.S.C. § 101(47)(A)(i); 12 U.S.C. §§ 1787(c)(8)(D)(v)(I), 1821(e)(8)(D)(v)(I) (2006)).
103. See S. REP. NO. 98-65, at 45-46 (1983); Garbade, *supra* note 96, at 29; Gorton & Metrick, *supra* note 1, at 432. As the *Wall Street Journal* reported in 1979, "Repurchase agreements are attractive to corporate treasurers for a variety of reasons: they make money, they involve little if any risk and they provide the liquidity that can't be found in other short-term investments." Lawrence Rout, *More Firms Use Repurchase Agreements as a Way To Earn Interest on Idle Funds*, WALL ST. J., Apr. 16, 1979, at 15.

prior to the 2008 crisis.¹⁰⁴ Shadow banks such as Goldman Sachs and Bear Stearns borrowed extensively in the repo market, offering their structured-finance portfolios as collateral.¹⁰⁵ Thus investors “depositing” funds in the repo market financed asset-backed securities based on bank loans. In this way, shadow banking “open[ed] up potentially new sources of funding for the banking system by tapping new creditors.”¹⁰⁶

III. BANKRUPTCY-PROOFING SHADOW BANKING

As Part I showed, the liquidity of a traditional bank deposit depends on two basic features that have changed little since the 1930s: the withdrawal right and deposit insurance. Together, these devices render bank deposits highly liquid and information-insensitive: a depositor is guaranteed substantially uninterrupted access to her savings, even if her bank fails. Not only does this protection increase the attractiveness of banking to prospective depositors, but it also appears to have eliminated the threat of panics in the traditional banking sector, which occurred with alarming frequency before the advent of the FDIC.¹⁰⁷

The development of similarly liquid, information-insensitive instruments in the shadow banking system has proven to be a far more intricate—and in many ways unfinished—problem. First, as the previous Parts have shown, the marriage of asset securitization and repo-based financing brings together a complex chain of financial companies and off-balance-sheet vehicles, each of which introduces an increment of counterparty risk. Second, unlike insured deposits, the markets for private-label ABS and repos lack an explicit government guarantee. That is, the shadow banking system must mitigate risks affecting not only the ultimate borrowers (such as subprime homebuyers), but also the various entities involved in the intermediation process. Thus the development of low-risk shadow bank “deposits” has required extensive contractual innovation and legal accommodation, most importantly within applicable insolvency law.

¹⁰⁴. See Gorton & Metrick, *supra* note 1, at 425 (“Securitized banking is the business of packaging and reselling loans, with repo agreements as the main source of funds.”).

¹⁰⁵. See GORTON, *supra* note 5, at 191.

¹⁰⁶. Hyun Song Shin, *Securitisation and Financial Stability*, 119 *ECON. J.* 309, 310 (2009).

¹⁰⁷. See *supra* note 66.

A. Securitization and Bankruptcy-Remoteness

To transform illiquid bank loans into highly rated securities, a securitization must ensure that an investor has exposure only to risks affecting the loans themselves—not the creditworthiness of the sponsor. To accomplish this, a sponsor moves the loan pool off its balance sheet by “selling” it to a special-purpose vehicle, which finances the purchase by issuing ABS. This structure ensures that the securitized loans remain segregated from the prospective bankruptcy estate of the sponsor. For example, MBS backed by mortgages originated by Countrywide Financial would have been unimpaired even if Countrywide had gone bankrupt in early 2008. Additionally, the transaction documents in a securitization are written to exclude events of default that would place an ABS issuer itself in bankruptcy. For example, a missed coupon payment or other significant breach triggers an accelerated repayment schedule (“early amortization”) rather than a court-supervised liquidation.¹⁰⁸

Together, these contractual devices ensure that ABS deals are “bankruptcy-remote”—that is, potential buyers can be assured that amounts owed under the transaction will not be tied up in the unanticipated bankruptcy of the sponsoring bank or the issuer. In so doing, they ensure that investors need not monitor the financial condition of the other participants in the securitization process; they also allow ABS to carry a higher credit rating than the other entities involved in the deal. Thomas Plank explains that “[s]ecuritization reduces the bankruptcy tax . . . and therefore has reduced the bankruptcy premiums charged to the obligors of mortgage loans and other receivables.”¹⁰⁹

B. The Repo Safe Harbors

The relevance of bankruptcy is not limited to the securitization process. Like bank depositors, repo investors require protection from the risk that the borrower will fail. In particular, they must be able to sell the collateral in their possession if the borrower defaults on its repurchase obligation. The investor’s rights in the collateral are akin to the benefit of deposit insurance; they should guarantee uninterrupted access to cash even if the repo borrower becomes

108. For further discussion, see Gorton & Souleles, *supra* note 86, at 549; and Schwarcz, *supra* note 86, at 135-36.

109. Thomas E. Plank, *Toward a More Efficient Bankruptcy Law: Mortgage Financing Under the 2005 Bankruptcy Amendments*, 31 S. ILL. U. L.J. 641, 654 (2007).

insolvent.¹¹⁰ This is why repos, like securitizations, are structured as “true sale” transactions rather than as secured debt. Just as securitized loans are “sold” to an off-balance-sheet vehicle to separate them from the sponsor’s bankruptcy estate, repo collateral is “sold” to the repo investor so that the investor may sell the assets if the borrower breaches its obligations under the agreement.

A repo investor’s liquidation rights in the collateral are thus central to the deposit-like characteristics of the transaction. Realizing these rights in practice, however, has involved a decades-long evolution of repo-market institutions,¹¹¹ which, as the 2008 financial crisis showed, remains far from complete.¹¹² To appreciate the importance of these rights, it is helpful to recall the tumultuous path of the repo market during the early 1980s, when repos lacked protection under the Bankruptcy Code and other institutional problems limited the security of repo collateral. As a result of these issues, a string of failures by government-securities dealers left many repo investors holding illiquid, impaired claims on transactions that were supposed to be liquid and relatively riskless. These ordeals underscored the need to ensure the effectiveness of each party’s liquidation rights in the event of its counterparty’s failure.

An early, dramatic example was the 1982 failure of Drysdale Government Securities, which had lost money shorting Treasury bonds via reverse repos. (A reverse repo is simply a repo that the cash lender enters with the motive of borrowing securities.¹¹³) Consistent with existing custom, Drysdale’s counterparties had taken cash equal to the market value of the securities Drysdale had borrowed, with no provision for the interest accruing during the term of the contract.¹¹⁴ This meant that when Drysdale failed, its counterparties held too little cash to replace the securities they had lent. Concern arose that Drysdale’s “failure to pay interest on these borrowings could leave the dealers short of funds to meet their own obligations” and could cause other dealers to fail as well.¹¹⁵

110. See Gorton & Metrick, *supra* note 79, at 263 (describing collateral in repos as offering “protection similar to that provided by deposit insurance”).

111. See Garbade, *supra* note 96 (detailing consequential changes in repo-market institutions during the 1980s).

112. For discussion, see *Tri-Party Repo Infrastructure Reform*, *supra* note 23.

113. See *supra* note 96.

114. *Mfrs. Hanover Trust Co. v. Drysdale Sec. Corp.*, 801 F.2d 13, 16 (2d Cir. 1986).

115. Michael Quint, *Lessons in Drysdale’s Default*, N.Y. TIMES, May 20, 1982, <http://www.nytimes.com/1982/05/20/business/lessons-in-drysdale-s-default.html>.

The Drysdale affair sparked a crisis of confidence in the repo market.¹¹⁶ Fearing the fallout,¹¹⁷ “the Fed sharply expanded the volume of government securities it lends temporarily to dealers who need them to complete transactions”¹¹⁸ and made an extraordinary announcement that it “‘stood ready as lender of last resort’ to help commercial banks meet ‘unusual credit demands related to market problems.’”¹¹⁹ The ensuing flight from the repo market depressed demand for Treasury securities as market participants reassessed the stability of their counterparties and firms shifted away from short-maturity financing.¹²⁰

The failure of E.S.M. Government Securities several years later would deal a similar blow to market confidence. Like Drysdale, E.S.M. had borrowed securities worth far more than the cash given to its securities lenders.¹²¹ Thus, E.S.M.’s collapse cast a pall over the solvency of its creditors, which included numerous municipalities.¹²² And it precipitated a run on Ohio’s thrift industry when it became clear that the Cincinnati-based Home State Savings Bank had some \$600 million in repo exposure to the bankrupt dealer—an amount

116. See, e.g., John Andrew, *Some Expect Shakeout in U.S. Securities*, WALL ST. J., July 6, 1982, at 27 (“Now government securities dealers and others on Wall Street are wondering who’s next.”); Robert A. Bennett, *Less Risk, More Worry for the Banks*, N.Y. TIMES, Oct. 10, 1982, <http://www.nytimes.com/1982/10/10/business/less-risk-more-worry-for-the-banks.html> (“[I]f the retreat from risk goes too far, there are grave dangers. For as the banks pull back, borrowers are left short of cash, making it tough—or even impossible—for them to repay their remaining creditors.”).

117. See Bd. of Governors of the Fed. Reserve Sys., *Record of Policy Actions of the Federal Open Market Committee*, 68 FED. RES. BULL. 417, 418-19 (1982) (noting the Federal Open Market Committee’s attention on May 18, 1982, to the impact of Drysdale’s failure). Referring to brokerage houses, a Federal Reserve official warned the Securities Investor Protection Corporation that “some of these people might be going under.” Richard L. Hudson & Kenneth H. Bacon, *How Agencies Helped Avert Drysdale Panic*, WALL ST. J., June 1, 1982, at 29, 36.

118. Hudson & Bacon, *supra* note 117, at 36.

119. Robert J. Cole, *A Dealer in Bonds Defaults on Debt*, N.Y. TIMES, May 19, 1982, <http://www.nytimes.com/1982/05/19/business/a-dealer-in-bonds-defaults-on-debt.html>.

120. Michael Quint, *Weakness in Treasury Issues: Post-Drysdale Caution Seen*, N.Y. TIMES, June 7, 1982, <http://www.nytimes.com/1982/06/07/business/credit-markets-weakness-in-treasury-issues.html>.

121. *Warner v. Zent*, 997 F.2d 116, 120-21 (6th Cir. 1993); *State v. Warner*, 564 N.E.2d 18, 23 (Ohio 1990).

122. Martha Brannigan, *ESM Collapse Prompts S&P to Add 4 More Municipalities to Credit Watch*, WALL ST. J., Mar. 8, 1985, at 10.

exceeding the entire assets of Ohio's deposit guarantee fund.¹²³ The resulting insolvency of that fund forced the Governor to shutter Ohio's seventy-one state-chartered thrifts.¹²⁴ News of the chain of failures rocked international markets, causing the dollar to suffer its biggest one-day plunge in fifteen years.¹²⁵

The Drysdale and E.S.M. failures highlighted the need to effectively collateralize dealings in the repo market. Yet the uncertain treatment of repos under the Bankruptcy Code prior to 1984 raised a parallel concern about liquidity risk: even adequately collateralized creditors could face problems if they became caught in the bankruptcy proceeding of a failed borrower. This concern gripped the markets after the 1982 failure of Lombard-Wall, a small government securities dealer,¹²⁶ and lingered for months afterward.¹²⁷

Following its bankruptcy filing, Lombard-Wall had argued that the automatic stay barred moves by its counterparties to exit their repo positions,¹²⁸ and the court temporarily froze hundreds of millions of dollars in repo collateral.¹²⁹ Lombard-Wall's failure did not pose credit exposure

123. John Bussey, Gregory Stricharchuk & Martha Brannigan, *Thrift's Ex-Owner, Stung by Failure of ESM, Says He's One of the Victims*, WALL ST. J., Mar. 14, 1985, at 20; Todd S. Purdum, *Cincinnati Thrift Unit Seeks Sale: E.S.M. Failure Caused a Run at Home State*, N.Y. TIMES, Mar. 11, 1985, <http://www.nytimes.com/1985/03/11/business/cincinnati-thrift-unit-seeks-sale.html>.

124. *Thrift Crisis: Closing of Ohio S&Ls After Run on Deposits Is One for the Books*, WALL ST. J., Mar. 18, 1985, at 1.

125. Al Swift, *Fed, Not Treasury, Should Take the Lead*, N.Y. TIMES, Aug. 4, 1985, <http://www.nytimes.com/1985/08/04/business/fed-not-treasury-should-take-the-lead.html>.

126. Robert J. Cole, *Wall St. Securities Firm Files for Bankruptcy*, N.Y. TIMES, Aug. 13, 1982, <http://www.nytimes.com/1982/08/13/business/wall-st-securities-firm-files-for-bankruptcy.html>; *Repo Market Remains Weak as Legal Issues Trouble Many Dealers*, WALL ST. J., Jan. 30, 1984, at 43.

127. *Repo Market Remains Weak as Legal Issues Trouble Many Dealers*, *supra* note 126, at 43.

128. Robert J. Cole, *Forced Sale of Securities Is Opposed by Lombard*, N.Y. TIMES, Aug. 14, 1982, at 37; Gary Putka & George Anders, *Two U.S.-Securities Firms File Plea of Bankruptcy, Jarring Wall Street*, WALL ST. J., Aug. 13, 1982, at 3.

129. Tim Carrington, *Securities in Lombard-Wall Case Termed Loan Collateral by a Bankruptcy Judge*, WALL ST. J., Sept. 20, 1982, at 10; *Lombard Securities with Buy-Back Plan Are Frozen by Court*, WALL ST. J., Aug. 18, 1982, at 7 ("In its ruling, the court agreed with Lombard that securities held in connection with repurchase agreements should be considered loans rather than purchases.").

The same year, the FDIC made a parallel move following the failure of Mount Pleasant Bank and Trust, deciding that the bank's repo creditors "would have to wait along with other creditors for their share of the bank's assets remaining after liquidation." Michael

concerns comparable to those raised by Drysdale because its repo obligations were adequately collateralized,¹³⁰ but the automatic stay left Lombard's creditors unable to sell the collateral and badly short of liquidity.¹³¹ Government agencies affected by Lombard's bankruptcy threatened to default on their bonds,¹³² and a major money-market mutual fund warned "that its holders might panic and sell their shares."¹³³ Hoping "to keep the wheels moving," the bankruptcy judge later granted partial relief from the stay for many repo lenders,¹³⁴ but he later recharacterized some of Lombard's repos as secured loans subject to the automatic stay.¹³⁵ Thus, the Lombard-Wall bankruptcy frustrated the repo market's expectation that participants would enjoy immediate recourse to the cash (or securities) in their possession following a counterparty's default. The episode "severely

Quint, *Repo Backing Is Under Cloud: Lombard and Iowa Rulings Spur Review*, N.Y. TIMES, Sept. 29, 1982, <http://www.nytimes.com/1982/09/29/business/repo-backing-is-under-cloud.html>.

130. Cole, *supra* note 128, at 37 ("Unlike last May's default of Drysdale Government securities, which nearly touched off a financial crisis, Wall Street took Lombard's collapse with comparatively little reaction.").
131. Daniel Hertzberg, *Lombard-Wall Failure May Cause Losses for Dozens of New York State Institutions*, WALL ST. J., Aug. 17, 1982, at 4 ("[A] more immediate threat is a cash squeeze for a handful of the institutions whose unspent construction funds are 100% invested at Lombard-Wall. It is possible that the bankruptcy proceedings could tie up the money for months.").
132. *Id.* Moody's, the credit rating agency, suspended the ratings on thirty-eight bond issues affected by Lombard-Wall's collapse. See Robert Metz, *Lombard Fall and Ratings*, N.Y. TIMES, Aug. 25, 1982, <http://www.nytimes.com/1982/08/25/business/market-place-lombard-fall-and-ratings.html>.
133. George Anders & Daniel Hertzberg, *Lombard-Wall Felt the Effect of Other Crisis*, WALL ST. J., Aug. 16, 1982, at 15, 18; see Martin Baron, *Money-Market Funds Are Cash-Rich but Face Some Problems*, L.A. TIMES, Sept. 19, 1982, at E1 (noting that "[m]oney-fund managers believe one of the most serious close-calls occurred" when Lombard-Wall's bankruptcy threatened the liquidity of the Reserve Fund's repo positions).

This episode repeated itself on a catastrophic scale when the Reserve Primary Fund "broke the buck" in September 2008 after Lehman Brothers's collapse left the Fund holding \$785 million in impaired commercial paper and triggered a run on the money markets. See Marcin Kacperczyk & Philipp Schnabl, *When Safe Proved Risky: Commercial Paper During the Financial Crisis of 2007-2009*, at 2 (Nat'l Bureau of Econ. Research Working Paper, No. 15538, Nov. 2009), <http://www.nber.org/papers/w15538.pdf>.

134. *Judge Approves Lombard-Wall Creditor Pacts*, WALL ST. J., Aug. 19, 1982, at 5 (quoting Edward Ryan, Judge, U.S. Bankruptcy Court for the Southern District of New York); see *More Securities Sales by Lombard Creditors Are Cleared by Judge*, WALL ST. J., Aug. 26, 1982, at 29.
135. Stephen A. Lumpkin, *Repurchase and Reverse Repurchase Agreements*, in INSTRUMENTS OF THE MONEY MARKET 59, 63-64 (Timothy Q. Cook & Robert K. Laroche eds., 1998).

dislocated [the] financial markets,"¹³⁶ and accelerated investors' post-Drysdale flight from the repo market.¹³⁷

In reaction to the Lombard-Wall bankruptcy, the Federal Reserve urged Congress to exempt certain repurchase agreements from the operation of the Bankruptcy Code.¹³⁸ Congress responded in 1984 with Code amendments exempting many repo transactions from the automatic stay and the trustee's avoiding powers.¹³⁹ Additionally, the law established a new, open-ended exemption for parties' contractual rights to unwind a repurchase agreement, modeled after earlier carve-outs for securities and commodity contracts.¹⁴⁰ Forming a direct rebuke to the Lombard-Wall ruling, the 1984 amendments sought to eliminate the Bankruptcy Code as an obstacle to repo participants' access to liquidity in the event of a future dealer failure.

IV. ASSESSING THE REPO SAFE HARBORS

Together, asset securitization and improvements in wholesale funding techniques allowed institutional investors to finance bank lending through a structure with liquidity and flexibility approaching that of a traditional bank deposit. However, the resulting drastic expansion of credit availability seemingly spurred on the improvident "search for yield" that brought mortgage lending to increasingly risky borrowers in the last years of the housing bubble. Hyun Song Shin invokes an image

of an inflating balloon which fills up with new assets. As the balloon

¹³⁶. Putka & Anders, *supra* note 128, at 3.

¹³⁷. *Repurchase Accord Issue*, N.Y. TIMES, Jan. 25, 1983, <http://www.nytimes.com/1983/01/25/business/repurchase-accord-issue.html>.

¹³⁸. Lumpkin, *supra* note 135, at 64; Michael Quint, *Securities Dealers in Reforms*, N.Y. TIMES, Jan. 31, 1983, <http://www.nytimes.com/1983/01/31/business/securities-dealers-in-reforms.html>; *see, e.g.*, H.R. CONF. REP. NO. 98-882, at 8 (1984) (statement of Rep. Robert W. Kastenmeier).

¹³⁹. Bankruptcy Amendments and Federal Judgeship Act of 1984, Pub. L. No. 98-353, § 392, 98 Stat. 333, 365 (1984) (codified as amended at 11 U.S.C. § 362(b)(7) (2006)) (automatic stay exemption); *id.* § 393, 98 Stat. at 365 (codified as amended at 11 U.S.C. § 546(f)) (avoiding powers exemption).

¹⁴⁰. As amended, 11 U.S.C. § 559 provides in pertinent part:

[T]he exercise of a contractual right . . . to cause the liquidation, termination, or acceleration of a repurchase agreement because of [the financial condition of the debtor] shall not be stayed, avoided, or otherwise limited by operation of any provision of [the Bankruptcy Code] or by order of a court or administrative agency in any proceeding under the [Code]

expands, the banks . . . look for borrowers they can lend to. However, once they have exhausted all the good borrowers, they need to scour for other borrowers—even subprime ones. The seeds of the subsequent downturn in the credit cycle are thus sown.¹⁴¹

Moreover, the collateral-based safeguards created to protect shadow bank “depositors” could not ensure the stability of the entire *system*.¹⁴² As Jeremy Stein explains, “one of the most damaging aspects of the crisis was not just the problems of . . . big firms” such as Bear Stearns, Lehman Brothers, and AIG, “but also the *collapse of an entire market*, namely the market for asset-backed securities.”¹⁴³

The collapse of Bear Stearns in March 2008 provides an instructive stress test of the repo market and the applicable bankruptcy safe harbors. With mounting mortgage-related losses and a limited capital cushion, by the end of 2007 Bear Stearns was clearly the shakiest of the large investment banks.¹⁴⁴ Increasingly unable to borrow on an unsecured basis, Bear Stearns turned to the repo market to replace its commercial paper funding.¹⁴⁵ In early 2008, Bear Stearns’s counterparties began to demand additional collateral or to refuse exposure to the ailing investment bank. By March 13, it was clear that the firm could not raise enough cash the following day to continue operating, and Bear Stearns avoided bankruptcy only by a Federal Reserve-backed merger with J.P. Morgan.¹⁴⁶

For critics of the safe harbors, the collapse of Bear Stearns and other firms symbolized the dangers of leaving a systemically important financial institution without access to bankruptcy protection against its repo and derivative counterparties. Mark Roe argues that the safe harbors allowed counterparties to disregard Bear Stearns’s weakening risk profile and encouraged the firm to become overly reliant on a funding method that could dry up virtually overnight.¹⁴⁷ David Skeel and Thomas Jackson add that the bailout of Bear Stearns suggested that regulators were concerned that the disposal of Bear Stearns’s collateral outside the bankruptcy process “could drive down the

141. Shin, *supra* note 106, at 331.

142. Cf. Holmström & Tirole, *supra* note 52, at 5 (explaining that bank-created liquidity will be insufficient when there is an aggregate shortage of liquidity).

143. Stein, *supra* note 3, at 41.

144. FIN. CRISIS INQUIRY COMM’N, *supra* note 4 at 256.

145. *Id.* at 283.

146. *Id.* at 286–90.

147. Roe, *supra* note 29, at 552–53.

values of mortgage-related securities and further destabilize the markets.”¹⁴⁸ This fear, they argue, “suggests that the very [bankruptcy] exclusions that were justified as reducing systemic risk—allowing counterparties to terminate (and sell collateral) notwithstanding the automatic stay—can actually exacerbate it through the very sale of that collateral.”¹⁴⁹

These criticisms have motivated a number of proposals to curtail the bankruptcy safe harbors for repurchase agreements. Roe has proposed that the filing of a bankruptcy petition should stay repo creditors from demanding and liquidating collateral.¹⁵⁰ Skeel and Jackson’s gentler call for “transaction consistency” would allow repo creditors to immediately liquidate the most cash-like collateral, such as Treasury securities or agency debt, without court approval, but would impose an automatic stay in the case of “other, more opaque, forms of collateral.”¹⁵¹ Yet these proposals misdiagnose the source of the problems affecting the repo market in 2008, and they risk undermining the efficiency and stability of the financial system

The view that the safe harbors created attractive “incentives”¹⁵² for financial institutions to rely on overnight funding misconstrues the financing choices facing Bear Stearns and other repo borrowers at the height of the financial crisis. It was not by choice that Bear Stearns was dependent on \$102 billion in repo borrowings by the end of 2007. Instead, the commercial paper market’s growing aversion to Bear Stearns forced the bank to fall back on repos as the safest debt structure it could offer its creditors.¹⁵³ Put differently, the problem was not that Bear Stearns was excessively dependent on repos at the market’s peak, but that Bear Stearns’s *other* funding sources (principally short-term commercial paper) became unavailable at the height of the firm’s troubles and could not be replaced except by repos. Far from a source of volatility, then, repos were in fact a *lifeline* to a firm suffering from high leverage, a toxic balance sheet, and growing problems raising funds in the commercial paper market.

On this analysis, a world without the repo safe harbors would likely have

148. Skeel & Jackson, *supra* note 29, at 163.

149. *Id.*

150. Roe, *supra* note 29, at 572-73.

151. Skeel & Jackson, *supra* note 29, at 179. The debtor’s post-petition obligations would be limited to adequate protection of the collateral’s value; the debtor would have no further obligation to post collateral. *Id.* at 176-77.

152. *Id.* at 168.

153. FIN. CRISIS INQUIRY COMM’N, *supra* note 4, at 283 (“Throughout 2007, Bear Stearns reduced its unsecured commercial paper . . . and replaced it with secured repo borrowing (which rose from \$69 billion to \$102 billion).”).

left Bear Stearns in an even more precarious position. Without the ability to pledge collateral to its lenders free of bankruptcy risk, the firm's options would have been limited to (1) issuing commercial paper, which it was unable to do by late 2007, or (2) pledging even *more* collateral, to compensate its repo lenders for the growing risk that they would be caught in a Lombard-Wall-style bankruptcy. Referring to traditional banks, economist Franklin Allen explains:

Raising new capital is problematic when a bank is beset with difficulties. The bank is effectively suffering from a *debt overhang*. Suppliers of capital will know that in the event of default their money will go to the depositors and other creditors and so will be unwilling to supply it.¹⁵⁴

This problem came to the fore during the financial turmoil of the early 1980s, when investors not yet protected by the safe harbors chose to withdraw from the repo market rather than risk tying up funds in costly bankruptcy proceedings.¹⁵⁵ As a Wall Street professional told the *Wall Street Journal* in the wake of one securities dealer's failure in the early 1980s, "There are hundreds of [repo] transactions out there that look safe until one participant goes under."¹⁵⁶

These risks were also realized during the 2008 crisis when the market for commercial paper—an analogous market *without* safe-harbor protection—seized up in response to losses taken in the Lehman Brothers bankruptcy. Nearly \$2 trillion in commercial paper was outstanding at the beginning of 2007, the vast majority of which was issued by financial services firms.¹⁵⁷ Like repo, commercial paper is a form of short-term debt that must be rolled over frequently. When Lehman's bankruptcy filing dealt losses to the Reserve Primary Fund, a large money-market fund, in September 2008, the news "triggered the modern-day equivalent of a bank run."¹⁵⁸ Money funds faced \$172 billion worth of redemptions over the next three days, and the flight of capital abated only when the federal government announced that it would guarantee all money fund shares. Still, the industry massively reduced its

154. Franklin Allen, *Financial Structure and Financial Crisis*, 2 INT'L REV. FIN. 1, 9 (2001) (internal citations omitted).

155. See *supra* Section III.B.

156. Tim Carrington & George Anders, *Drysdale's Default Shows Dangers of Intricate Financing Arrangements*, WALL ST. J., May 20, 1982, at 29.

157. Kacperczyk & Schnabl, *supra* note 133, at 1.

158. *Id.* at 2.

holdings of commercial paper, whose total outstanding value fell by 15 percent within a month. To stem the decline, the Federal Reserve made the extraordinary decision to begin purchasing commercial paper directly; by early January 2009, it held on its balance sheet 22.4 percent of the commercial paper market.¹⁵⁹

Like the episodes that gripped the repo market before the enactment of the safe harbors in 1984, the panic in the commercial paper market illustrated the dangers of injecting bankruptcy risk into the instruments used as deposits by the shadow banking system.¹⁶⁰ As collateralized lending instruments, repos mitigate this problem by allowing distressed firms to issue a form of debt with a risk profile tied primarily to the collateral rather than to the bankruptcy risk of the borrower.¹⁶¹

Critics of the safe harbors correctly note that the mass liquidation of repo collateral following the failure of a major institution might roil asset markets, as regulators apparently feared when they decided to bail out Bear Stearns. Even this insight, however, risks confusing cause and effect. If the financial markets were incapable of absorbing a massive sell-off of Bear Stearns's assets in March 2008, it was because liquidity had vanished from every segment of the credit markets: “[M]oney, corporate debt, securitization, [and] collateralized debt obligations (CDOs) . . . ground to a halt.”¹⁶² Even solvent firms were conducting fire sales in every asset class in a desperate bid to hoard cash and retire debt.¹⁶³

Selling off the assets of a major institution could easily exacerbate these extreme conditions. However, the critics' proposal to stay the liquidation of counterparty collateral could hardly improve matters. Instead, it would merely replace one form of contagion mediated by asset markets with another form, mediated by the impact of an automatic stay applicable to billions of dollars in financial contracts on a distressed and highly interconnected market. It could also make crises more likely by encouraging counterparties to rush for the exits at the first signs of bankruptcy risk.

159. *Id.*

160. See Calomiris, *supra* note 35, at 24 (“Short-term near money market instruments with a risk of loss—uninsured deposits, commercial paper, and repos—respond to increases in risk primarily through [a contraction in] quantity.”).

161. See generally René M. Stulz & Herb Johnson, *An Analysis of Secured Debt*, 14 J. FIN. ECON. 501, 519 (1985) (“[I]f the existing debt of the firm is risky enough and there is a significant underinvestment problem one would expect secured debt to be used.”).

162. Tirole, *supra* note 52, at 287.

163. See Gary B. Gorton, *Questions and Answers About the Financial Crisis* 14 (Nat'l Bureau of Econ. Research, Working Paper No. 15787, 2010), <http://www.nber.org/papers/w15787.pdf>.

Like withdrawing bank deposits, liquidating collateral may be benign under normal conditions yet damaging in the midst of a crisis; as Gorton argues, “Debt during crises is not the debt of noncrisis times.”¹⁶⁴ But the distress facing asset markets during the 2008 crisis suggests a need for regulators to respond to the crisis, not for Congress to overturn, after the fact, the legal foundations of the credit markets. Indeed, timely interventions such as the Term Securities Lending Facility were “uniquely effective” in removing toxic assets from shadow banks’ balance sheets and allowing them to return to the debt markets with high-quality collateral.¹⁶⁵ And forward-looking changes, such as minimum liquidity standards contemplated by the Dodd-Frank Act,¹⁶⁶ offer regulators more targeted responses to funding-market fragility than do proposals to subject the repo market to bankruptcy risk.

Skeel and Jackson suggest that using a bankruptcy stay to prevent repo lenders from selling their collateral could give regulators breathing room to achieve an orderly disposition of these assets.¹⁶⁷ Yet this is precisely the approach already taken by the Federal Deposit Insurance Act (FDIA) and the Dodd-Frank Act’s Orderly Liquidation Authority, which provide for a one-day stay on the closeout of derivatives, repos, and other safe-harbored contracts pending their transfer to a third-party acquirer or bridge institution.¹⁶⁸ This gives regulators a window to rescue a troubled firm without overburdening its counterparties with an indefinite freeze of their rights in the collateral. Proposals for a lengthier stay, in contrast, risk undermining the goal of creating a deposit-like instrument that offers continuous liquidity to investors and a lifeline for troubled institutions.

Skeel and Jackson also suggest limiting the safe harbors to the most liquid (“cash-like”) collateral, such as Treasury securities, since the liquidation of

164. GORTON, *supra* note 5, at 99.

165. *Id.* at 58. Other interventions were conducted through programs such as the Federal Reserve’s Discount Window, Primary Dealer Credit Facility, “Maiden Lane” programs, Term Asset-Backed Securities Loan Facility, and, later, successive rounds of quantitative easing. See FIN. CRISIS INQUIRY COMM’N, *supra* note 4, at 290, 294-95, 376, 396. The Treasury Department’s involvement included, for example, the Troubled Asset Relief Program (TARP) and the temporary guarantee for money-market mutual funds. See *id.* at 359, 371-76.

166. For example, Dodd-Frank directs the Federal Reserve Board of Governors to establish prudential liquidity requirements for banks and nonbank financial companies under its supervision. Dodd-Frank Act § 165(b)(1)(A)(ii), Pub. L. No. 111-203, 124 Stat. 1376, 1424 (to be codified at 15 U.S.C. § 8305(b)(1)(A)(ii)).

167. Skeel & Jackson, *supra* note 29, at 179 n.118.

168. See 12 U.S.C. § 1821(e)(10)(B) (2006); Dodd-Frank Act § 210(c)(10)(B), Pub. L. No. 111-203, 124 Stat. 1376, 1491 (to be codified at 12 U.S.C. § 5390(c)(10)(B)).

these assets is least likely to generate fire-sale conditions.¹⁶⁹ However, this proposal would deny the benefits of the safe harbors to the firms and asset classes that most need them. Firms depleted of high-quality assets would be unable to offer their remaining assets as bankruptcy-proof collateral to repo creditors, and would likely fail. At the same time, illiquid assets could see their value plunge during crises, since without a bankruptcy safe harbor they would be useless to repo borrowers. Thus, even a partial rollback of the safe harbors could limit the efficiency of shadow banking without meaningfully ameliorating fire-sale risks.

The repo safe harbors allow contracting parties to protect their liquidation rights from the hazards of a formal bankruptcy process. To be sure, this self-help regime cannot maintain the stability of the financial system as a whole: when liquidity is scarce, one party's efforts to seize and sell collateral can negatively affect the condition of other market participants. However, repealing the safe harbors would have the perverse effect of exposing entire markets to instability by leaving parties without any means of contracting around bankruptcy risk. Moreover, if shadow banks could not offer a deposit-like liability to investors, then institutional investors would be forced to look to other, likely less efficient financing methods.¹⁷⁰

V. SYNTHETIC SECURITIZATION AND THE DERIVATIVE SAFE HARBORS

Repurchase agreements are not the only instruments with liquidation rights exempted from formal bankruptcy procedures. Derivatives—a much larger,¹⁷¹ more diverse, and more complex class of contracts—also frequently permit parties to unilaterally terminate and liquidate their dealings outside of bankruptcy, ahead of other creditors. These instruments, which allow parties to take positions on a “reference” asset (such as a corporate bond) or indicator

169. Skeel & Jackson, *supra* note 29, at 179; accord Acharya et al., *supra* note 29, at 231 (“[Assets] that are liquid should keep the exemption. . . . [Assets] that are illiquid—or potentially illiquid . . . would be subject to the ordinary rules of bankruptcy, including the automatic stay.”).

170. See Gorton & Metrick, *supra* note 79, at 267 (“[I]f repo had not been granted this [bankruptcy-proof] status, the private sector would have sought a substitute, which likely would have been even less efficient.”).

171. The notional value referenced in the credit default swap market alone reached \$62.2 trillion at its peak. *Summaries of Market Survey Results*, INT’L SWAPS & DERIVATIVES ASS’N, <http://www.isda.org/statistics/recent.html> (last visited Oct. 5, 2012): “Since 1996, the credit default swap market has seen almost 100 percent annual growth It is by far the largest part of the overall credit derivatives market” GEORGE CHACKO ET AL., CREDIT DERIVATIVES: A PRIMER ON CREDIT RISK, MODELING, AND INSTRUMENTS 186 (2006).

(such as the London Interbank Offered Rate, or LIBOR) without investing in the reference entity itself, have an enormous array of applications that are well beyond the scope of this Note.

However, prior to the 2008 mortgage crisis, these contracts found prominent use in constructing “synthetic” mortgage-related products that grew to represent a large share of the assets traded in the shadow banking system. The bankruptcy safe harbors for derivatives were thus important to ensure that investors who had purchased these assets (or taken them as collateral) were unimpaired by the failure of the party with payment obligations under the contracts. In this limited but important context, this Part argues that the rationale for the repo safe harbors also applies to the safe harbors for derivatives used to construct synthetic financial products. Whether the derivative safe harbors are justified with respect to the far wider universe of uses to which derivative contracts can be applied is a more challenging issue, but this Part will conclude by suggesting that they are.

A. Credit-Risk Transfer in Shadow Banking

Part II of this Note described traditional “cash” or “cash-flow” securitizations, in which loans are sold to an off-balance-sheet vehicle that issues securities representing claims on the pool. Frequently, the ABS are themselves pooled and structured into CDOs. These financial products were often financed by repo lenders, which took these assets as collateral for a form of short-term lending analogous to a bank deposit. In this way, “the banking system . . . developed a method by which it could focus on generating assets while at the same time getting these funded by the capital markets.”¹⁷²

Synthetic securitization recapitulates this process but with an important difference: the sponsor need not transfer the underlying assets to the issuer. Instead, the sponsor executes a credit derivative, such as a credit default swap or a credit-linked note, that transfers only the *credit risk* affecting the asset pool to the investors in the structure.¹⁷³ Synthetic transactions proved attractive as a way for “financial institutions to pass their unwanted credit risks on to the capital markets” in a cheaper, more flexible manner than could be achieved by securitizing whole loans.¹⁷⁴ The synthetic CDO market grew rapidly following

172. Ian Bell & Petrina Dawson, *Synthetic Securitization: Use of Derivative Technology for Credit Transfer*, 12 DUKE J. COMP. & INT’L L. 541, 550 (2002).

173. CHACKO ET AL., *supra* note 171, at 200-01. A cash-based deal, in contrast, “brings in addition to credit risk all the normal risks associated with owning an asset, such [as] interest rate, prepayment, and currency risk.” *Id.* at 221.

174. Bell & Dawson, *supra* note 172, at 550.

its emergence in 1997, accounting for a large share of total CDO issuance and becoming a major component of the credit derivative market.¹⁷⁵

Because cash flows in a synthetic CDO are based on an agreement between the parties, rather than derived from the reference portfolio itself, parties to a synthetic CDO incur counterparty risk: the risk that another party will default on payment obligations.¹⁷⁶ Thus, as in traditional “cash” securitizations, there is a need to make the structure bankruptcy-remote, so that the resulting securities are linked solely to the performance of the reference portfolio, rather than to the credit risk of the sponsor.¹⁷⁷

Accordingly, the derivatives market and the applicable law have responded in a manner similar to the repo market: the trend has been toward use of collateral to eliminate counterparty risk,¹⁷⁸ accommodated by the enactment of safe harbors to ensure the effectiveness of the parties’ liquidation rights. As with repos, “in most cases collateral posted against derivatives positions is under the control of the counterparty and may be liquidated immediately upon a covered ‘event of default.’”¹⁷⁹ Additional liquidation rights embedded in derivative contracts allow a party to terminate and net out payment obligations under outstanding transactions if the counterparty defaults. This is known as “closeout netting.”¹⁸⁰

A simple example will illustrate the importance of these rights to the parties to a derivative contract. Consider a typical interest rate swap, which might require Party A to periodically pay Party B \$5 million based on a floating

175. See CHACKO ET AL., *supra* note 171, at 220; YURI YOSHIZAWA, MOODY’S INVESTORS SERV., MOODY’S APPROACH TO RATING SYNTHETIC CDOs 1 (2003).

176. See EUR. CENT. BANK, CREDIT DEFAULT SWAPS AND COUNTERPARTY RISK 20 (2009); see also JAN JOB DE VRIES ROBBÉ, STRUCTURED FINANCE: ON FROM THE CREDIT CRUNCH—THE ROAD TO RECOVERY 21-22 (2009); Bell & Dawson, *supra* note 172, at 555-56; James Bullard, Christopher J. Neely & David C. Wheelock, *Systemic Risk and the Financial Crisis: A Primer*, 91 FED. RES. BANK ST. LOUIS REV. 403, 407 (2009).

177. ERIK BANKS, THE CREDIT RISK OF COMPLEX DERIVATIVES 40 (3d ed. 2004); FRANK J. FABOZZI & VINOD KOTHARI, INTRODUCTION TO SECURITIZATION 5 (2008) (describing the need to “de-link[] . . . the credit risk of the collateral asset pool from the credit risk of the originator”). The International Swaps and Derivatives Association (ISDA) estimates that some ninety-seven percent of over-the-counter (OTC) credit derivatives are collateralized. *Market Review of OTC Derivative Bilateral Collateralization Practices*, INT’L SWAPS & DERIVATIVES ASS’N 6 (Mar. 1 2010), http://www.isda.org/c_and_a/pdf/Collateral-Market-Review.pdf.

178. See, e.g., EUR. CENT. BANK, *supra* note 176, at 48 (noting “a sharp increase in the use of collateral in the last ten years: according to the ISDA’s findings, two-thirds of the net credit exposures derived from OTC credit derivatives were collateralised at the end of 2008”).

179. Bliss & Kaufman, *supra* note 20, at 7.

180. See BANKS, *supra* note 177, at 22.

interest rate tied to LIBOR, in return for \$4 million according to a fixed rate. These obligations, which sum to a periodic \$1 million payment from *A*, represent a valuable asset for *B*; thus the swap might have a mark-to-market value of, say, \$10 million. Yet *B* may also have countervailing obligations to *A* under other contracts that reduce *A*'s net liability to *B*. In this context, the sudden insolvency of *B* poses potential problems for *A* that may be ameliorated by appropriate liquidation rights.

First, *B*'s insolvency could leave *A* locked into a position with no potential upside. While the swap is currently "out of the money" for *A*, which owes *B* a payment stream valued at \$10 million, an insolvent *B* would be unable to perform any future obligations to *A* that would arise if interest rates were to swing in *A*'s favor. *A*'s right to terminate the transaction protects it from this risk.¹⁸¹

Second, *B*'s insolvency could substantially increase *A*'s total exposure to *B* by impairing the value of *B*'s countervailing obligations to *A*. Assume that *A* and *B* have other outstanding derivative contracts, collectively worth \$10 million, which are "in the money" for *A* and thus perfectly offset *A*'s liability under the interest rate swap. If *A* and *B* terminated all their dealings, the safe harbor for closeout netting would allow them to net their offsetting exposures to zero, so that no termination payment would change hands.¹⁸² Without the safe harbor, *A* could be required to seek relief from the automatic stay or file a bankruptcy claim for the value of *B*'s offsetting liability.¹⁸³

Third, if we assume instead that *A*'s net position is "in the money," any collateral available to *A* would limit its losses in the event of *B*'s default.¹⁸⁴ Crucially, *A*'s ability to promptly dispose of the collateral and replace the terminated contract (instead of being hamstrung by the automatic stay) minimizes any disruption to its hedging strategy arising from *B*'s default.

Following the template used for repos and other financial products,

181. See *id.* at 395. Termination rights are enforceable under 11 U.S.C. § 560 (2006). Absent this safe harbor, the bankruptcy trustee would have the right to "assume or reject any executory contract" notwithstanding the debtor's default. 11 U.S.C. § 365(a)-(b)(2).

182. Bliss & Kaufman, *supra* note 20, at 6; see also Adam R. Waldman, *OTC Derivatives & Systemic Risk: Innovative Finance or the Dance into the Abyss?*, 43 AM. U. L. REV. 1023, 1058-60 (1994) (describing the mechanics of netting). 11 U.S.C. § 560 (2006) protects "[t]he exercise of any contractual right . . . to offset or net out any termination values or payment amounts arising under or in connection with the termination, liquidation, or acceleration of one or more swap agreements."

183. See 11 U.S.C. § 362(a)(7) (2006) (providing for a stay of "the setoff of any debt owing to the debtor that arose before the commencement of the [bankruptcy] case . . . against any claim against the debtor").

184. See Bliss & Kaufman, *supra* note 20, at 11-12.

Congress has written safe harbors into the Bankruptcy Code and the FDIA in order to protect the enforceability of many liquidation rights commonly embedded in derivatives.¹⁸⁵ In 1990, Congress provided a safe harbor to closeout netting of swaps in a new Code section 560,¹⁸⁶ and in provisions relating to the automatic stay and the trustee's avoiding powers.¹⁸⁷ Additionally, these protections were given expansive applicability: swaps were defined as a laundry list of agreements or "any other similar agreement,"¹⁸⁸ and eligible "swap participant[s]" included any "entity that . . . has an outstanding swap agreement with the debtor."¹⁸⁹ The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 represented a major further expansion of the safe harbors for derivative contracts.¹⁹⁰

In these ways, rights to terminate, net out, and liquidate derivative contracts protect each party from the risk of counterparty default by allowing each to exit the transaction unimpaired. Significantly, these liquidation rights also allow synthetic transactions to replicate the bankruptcy-remoteness of a traditional "cash" securitization by limiting the impact of a counterparty's bankruptcy on the derivative contracts backing the CDO. Just as the "true sale" structure of a cash securitization ensures that the sponsor's bankruptcy will not affect an investor's rights in the securitized assets, so the use of collateral and the application of the safe harbors ensure that amounts owed under a synthetic transaction are insulated from the counterparty's bankruptcy risk. For example, in a typical "funded" transaction, the investors' principal is invested in safe, liquid collateral that secures any amounts owed to the sponsor or the investors

185. Derivatives enjoy safe harbor under the Bankruptcy Code "in three main areas: (i) allowing the enforceability of bankruptcy termination or ipso facto clauses, (ii) exempting close-outs, setoffs and foreclosure on collateral from the automatic stay, and (iii) exempting payments made under them from preference and constructive (but not actual) fraudulent transfer causes of action." Vasser, *supra* note 21, at 1509.

186. Act of June 25, 1990, Pub. L. No. 101-311, § 106, 104 Stat. 267, 268 (1990) (codified as amended at 11 U.S.C. § 560 (2006)); see H.R. REP. NO. 101-484, pt. IV, at 5 (1990).

187. Act of June 25, 1990, §§ 102-103, 104 Stat. at 267-68 (codified as amended at 11 U.S.C. §§ 362(b)(17), 546(g)).

188. *Id.* § 101, 104 Stat. at 267 (codified as amended at 11 U.S.C. § 101(53B)); see H.R. REP. NO. 109-31, pt. I, at 121 (2005).

189. Act of June 25, 1990, § 101, 104 Stat. at 267 (codified as amended at 11 U.S.C. § 101(53C)).

190. Edward R. Morrison & Joerg Riegel, *Financial Contracts and the New Bankruptcy Code: Insulating Markets from Bankrupt Debtors and Bankruptcy Judges*, 13 AM. BANKR. INST. L. REV. 641, 641 (2005) ("The reforms of 2005 . . . might appear only to eliminate longstanding uncertainty surrounding the protections available to financial contract counterparties But the ambit of the reforms is much broader.").

under the terms of the transaction.¹⁹¹ “Unfunded” transactions, in which no collateral is purchased at the outset, may give investors the right to demand security based on subsequent declines in the sponsor’s credit rating.¹⁹²

These precautions enable the creation of highly liquid synthetic financial products that can circulate through the shadow banking system unimpaired by bankruptcy risk. For institutional investors, these synthetic assets expand the collateral available for the creation of shadow bank “deposits,” while for borrowers, they may expand credit availability by allowing lenders to efficiently offload credit risk to outside investors.¹⁹³

B. Ongoing Challenges

While the expansive wording of the derivative exemptions aimed to provide legal certainty to market participants,¹⁹⁴ the boundaries of the safe harbors remain uncertain and have been extensively litigated in the Lehman Brothers bankruptcy, indicating that legal risk related to liquidation rights in the derivatives market remains far from resolved.¹⁹⁵ This litigation provides a helpful context for investigating the impact of a limitation on the safe harbors on the liquidity and efficiency of derivatives used in the shadow banking system.

An important problem concerns the enforceability of provisions giving priority over a collateral pool to the non-defaulting party in a synthetic transaction. In a common structure, the investors purchase notes linked to credit risk in the reference portfolio. The issuer of the notes, a special-purpose vehicle, enters into a credit default swap with the deal’s sponsor (e.g., Lehman

191. See YOSHIZAWA, *supra* note 175, at 4.

192. See Bell & Dawson, *supra* note 172, at 556.

193. *But see* Beverly Hirtle, *Credit Derivatives and Bank Credit Supply*, 18 J. FIN. INTERMEDIATION 125 (2009) (finding limited evidence that derivatives expand credit supply).

194. See, e.g., H.R. REP. NO. 109-31, pt. I, at 125 (2005) (“Express recognition of the enforceability of such cross-product master agreements furthers the policy of increasing legal certainty and reducing systemic risks in the case of an insolvency of a large financial participant.”); Morrison & Riegel, *supra* note 190, at 644 (“By relying on broad market definitions, the [2005] Act gets judges out of the (largely futile) business of second-guessing financial contracts.”).

195. See generally *Lehman Brothers, Sharper Image, Bannigan’s, and Beyond: Is Chapter 11 Bankruptcy Working?: Hearing Before the Subcomm. on Commercial & Admin. Law of the H. Comm. on the Judiciary*, 110th Cong. 8 (2008) (statement of Jay Westbrook, Professor, University of Texas School of Law) (“Unfortunately, the 2005 amendments not only expanded the scope of the exemptions but it made them much fuzzier, and much more ambiguous than they had been before, so that now it is not clear exactly what a swap agreement is for this purpose . . .”).

Brothers), under which the issuer incurs obligations based on credit losses in the reference portfolio (“sells protection” to the sponsor). The proceeds of the issue are used to purchase high-quality collateral that is held in trust for the benefit of the sponsor to secure its exposure to the issuer’s obligations under the swap.

Such transactions include an important liquidation right for the investors to protect them from counterparty risk.¹⁹⁶ To prevent the collateral from being funneled into the bankruptcy estate of the sponsor, a “flip” clause reverses the parties’ priority over the collateral, allowing the investors to recover their remaining principal once the deal is terminated.¹⁹⁷ However, in two recent rulings, the judge presiding over the Lehman Brothers bankruptcy ruled that such clauses are unenforceable under the ipso facto provisions of the Code,¹⁹⁸ holding that they do not fall within the safe harbor protecting a party’s contractual right to liquidate, terminate, or accelerate a swap agreement.¹⁹⁹ A potentially damaging consequence of these rulings has been to reintroduce

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196. Aline van Duyn & Nicole Bullock, *Lehman Ruling Creates New Doubts for CDOs*, FIN. TIMES, Feb. 9, 2010, <http://www.ft.com/intl/cms/s/o/88904bfo-1519-11df-ad58-00144feab49a.html> (“It had long been assumed that investors in structured deals—the ones owning the notes—will get paid before swap counterparties do.”).
197. INT’L SWAPS & DERIVATIVES ASS’N & SEC. INDUS. & FIN. MKTS. ASS’N, COMMENTS ON THE SECURITIES AND FUTURES COMMISSION CONSULTATION PAPERS ¶ 6.10, at 15 (2009) (“[I]t is not uncommon[] for documentation to provide for the priority between the swap counterparty and the investors to be reversed in the event that the swap counterparty is in default or insolvent . . .”).
198. These render unenforceable any agreements purporting to modify the debtor’s interests under an executory contract or in property in the event of the debtor’s bankruptcy. See 11 U.S.C. § 365(e)(1) (2006) (“[A]ny right or obligation under [an executory contract] . . . may not be terminated or modified, at any time after the commencement of the [bankruptcy] case solely because of a provision in such contract . . . that is conditioned on . . . (B) the commencement of a case under this title . . .”); *id.* § 541(c)(1) (A debtor’s interest in property “becomes property of the estate . . . notwithstanding any provision in an agreement . . . (B) that is conditioned on . . . the commencement of a case under this title . . . and that effects or gives an option to effect a forfeiture, modification, or termination of the debtor’s interest in property.”).
199. *Lehman Bros. Special Fin. Inc. v. Ballyrock ABS CDO 2007-1 Ltd.* (*In re Lehman Bros. Holdings Inc.*), 452 B.R. 31, 40 (Bankr. S.D.N.Y. 2011); *Lehman Bros. Special Fin. Inc. v. BNY Corporate Tr. Servs. Ltd.* (*In re Lehman Bros. Holdings Inc.*), 422 B.R. 407, 421 (Bankr. S.D.N.Y. 2010). Relying on Judge Peck’s ruling in *BNY*, Lehman Brothers’s trustee has filed suits claiming billions of dollars in additional losses based on liquidation rights embedded in synthetic transactions. See, e.g., Complaint, *Lehman Bros. Special Fin. Inc. v. Bank of Am. Nat’l Ass’n* (*In re Lehman Bros. Holdings Inc.*), No. 08-13555, Adv. No. 10-03547 (Bankr. S.D.N.Y. Sept. 14, 2010); Chelsea Emery & Jonathan Stempel, *Lehman Seeks \$3 Billion from CIBC, Others in Lawsuits*, REUTERS (Sept. 15, 2010, 10:25 AM), <http://www.reuters.com/article/idUSTRE68E39D2o100915>.

counterparty risk into the credit ratings of synthetic transactions.²⁰⁰ If investors in a synthetic CDO lack protection from the sponsor's bankruptcy, then the credit rating applicable to a particular synthetic product can be no higher than the rating of the sponsor. Investors in such a transaction are thus in a position comparable to a depositor in an uninsured bank. The likely impact will be to reduce the attractiveness of the synthetic CDO market while making these instruments less resilient to volatile market conditions.

C. The Scope of the Rationale for the Derivative Safe Harbors

Thus far, this Part has focused on the limited use of credit derivatives to create synthetic CDOs that may be used as collateral for repos. However, because the bankruptcy safe harbors protect a far wider universe of applications of derivative contracts, this Section suggests a broader rationale for these provisions. To be sure, the heterogeneity of the derivatives market resists general statements about the social value of these contracts. Nevertheless, a set of general functional considerations suggests a plausible justification for the exemption of the broader derivatives market from the bankruptcy process.

The value of the derivatives market reflects the basic insight that most financial instruments involve a wide variety of risks, not all of which are efficiently borne by a given investor. It might be efficient, for example, for a loan originator to lay off credit risk to outside investors with greater credit-risk appetites in the form of a synthetic CDO. Similarly, an investor in Tokyo real estate may find a willing buyer for its exposure to the Japanese yen through a currency swap; a municipality financing new infrastructure may seek protection from volatile borrowing costs through an interest rate swap; a hedge fund may use derivatives to gain *greater* exposure to risks unwanted by other market participants. By allowing the distinct risks of a given investment strategy to be decomposed and shifted to their most efficient bearer, the derivatives market may facilitate the more efficient supply of capital to valuable investment projects.²⁰¹ Part II argued that depository banking improves the

200. See, e.g., Evan Jones et al., *Lehman Bankruptcy Judge Prevents Trigger of CDO Subordination Provision Based on Credit Support Provider and Swap Counterparty Bankruptcy Filings*, 127 *BANKING L.J.* 338, 343-45 (2010).

201. See Alan Greenspan, Chairman, Bd. of Governors of the Fed. Reserve Sys., Remarks Before the Futures Industry Association (Mar. 19, 1999), <http://www.federalreserve.gov/boarddocs/speeches/1999/19990319.htm> (arguing that “[t]his unbundling improves the ability of the market to engender a set of product and asset prices far more calibrated to the value preferences of consumers than was possible before derivative markets were developed”). *But see* Hirtle, *supra* note 193.

supply of capital by allowing households to insure their investments against liquidity risk. The derivatives market may provide an analogous facility to investors facing a more diverse array of unwanted risks.

The next step in making a more general case for the derivative safe harbors is to show that these forms of risk transfer could not be conducted efficiently if market participants were exposed to the risk of a counterparty's bankruptcy. For example, a yen hedge with a risky counterparty may be no more palatable to our Tokyo real estate investor than the underlying yen risk. As a general matter, derivative contracts that are not insulated from counterparty risk are less liquid and, to that extent, less efficient than transactions that are liquid. For example, an "unfunded" synthetic instrument (in which no collateral is purchased at the outset) cannot be freely traded across the capital markets because each counterparty must be freshly evaluated for default risk.²⁰² These considerations suggest that counterparty risk might frequently prove prohibitive in the context of an otherwise efficient derivatives transaction.

To be sure, contractual liquidation rights protected by statutory safe harbors are not the only strategy for managing counterparty risk. A potentially important innovation in the Dodd-Frank Act is the imposition of mandatory clearing on many swap agreements,²⁰³ which would interpose a central clearinghouse between the parties so that each party faces the clearinghouse, rather than the other party, as its counterparty.²⁰⁴ By alleviating market participants' need to monitor and guard against the risk of default by their counterparties, mandatory clearing may improve liquidity in the swaps market and mitigate some of the core concerns that the derivative safe harbors were designed to address.²⁰⁵ However, traditional counterparty-risk protections, including collateral and the safe harbors, will have ongoing relevance for the vast segments of the derivatives market that are not subjected to mandatory clearing under the Dodd-Frank Act.

202. See Bell & Dawson, *supra* note 172, at 556-57 ("[T]o the extent that the originator/protection buyer relies on the investor to make a payment if a credit event occurs, the former needs some degree of comfort that the latter is going to be good for the money. This cannot be achieved with a traded instrument that may change hands at the whim of its present holder.").

203. Dodd-Frank Act § 713, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

204. See Duffie & Skeel, *supra* note 28, at 13 ("By 'clearing' a derivatives contract, a [central clearing counterparty] . . . becomes the counterparty to each of the two original participants to the contract. That is, the [central clearing counterparty] becomes the seller to each buyer, and the buyer to each seller. The main purpose of clearing is to insulate the original counterparties from counterparty default risk.").

205. For a discussion of the interaction between mandatory clearing and the derivative safe harbors, see *id.* at 13-17.

Critics of the safe harbors have correctly noted that the use of bankruptcy-proof liquidation rights to manage counterparty risk is not without substantial costs. Moreover, these costs are largely borne not by the contracting parties themselves, but by junior claimants (such as a firm's bondholders) who likely have little visibility into the size of the firm's liability to its derivative counterparties.²⁰⁶ Thus, for example, whether the benefits of the safe harbors for Lehman Brothers's heterogeneous derivative counterparties and the wider derivatives market outweighed the costs imposed on its commercial paper holders is inevitably an empirical question and a fruitful area for research. Perhaps the most promising task for future scholarship would be to specify more clearly the social costs and benefits of derivatives trading, so that regulators can achieve the most compelling benefits of bankruptcy-proof finance while aiming to minimize its most serious costs.

CONCLUSION

The safe harbors have faced withering scholarly criticism following the 2008 financial crisis. Critics argue that the safe harbors left troubled firms without recourse to bankruptcy protection as their counterparties exercised contractual rights to withdraw credit and seize collateral. In addition to draining liquidity from weak institutions, these self-help efforts seemingly roiled the broader financial markets as parties liquidated collateral and replaced terminated contracts in distressed markets. Scholars also claim that the safe harbors fueled the pre-crisis expansion of the repo and derivative markets by according them advantages vis-à-vis other contracts in bankruptcy. Accordingly, there has been overwhelming agreement in the recent literature that the safe harbors should be rolled back, leaving repo and derivative counterparties on more equal footing with other bankruptcy claimants.

In contrast, this Note has argued that scholarly emphasis on the actions of failed firms' repo and derivative counterparties is akin to blaming bank runs on depositors' right to withdraw funds. That is, it identifies the contractual vector that brought down Lehman Brothers and other firms, but does not illuminate a promising path for reform. Imposing post-petition limits on repo and derivative counterparties' liquidation rights could not have kept a troubled firm like Lehman Brothers on its feet.²⁰⁷ Worse, such proposals would promote self-

²⁰⁶ See Roe, *supra* note 29, at 555-60.

²⁰⁷ See Bliss & Kaufman, *supra* note 30, at 10 ("The major problem stems from the fact that . . . the firm is in liquidation. . . . Stays can suspend collection of debts but they cannot force continued rolling over of funding or provision of services.").

reinforcing panics in these markets by exposing risk-averse capital suppliers to impairment in a counterparty's bankruptcy. Critics of the safe harbors have overlooked the extent to which bankruptcy-proof repos offered a lifeline to Bear Stearns, for example, which had lost access to unsecured funding sources amid the market's flight from bankruptcy risk.

To be sure, the safe harbors alone do not furnish a comprehensive framework for resolving large financial institutions, let alone for ensuring their stability. The rescues of Bear Stearns and AIG in 2008, like that of Long-Term Capital Management ten years earlier, put regulators in the ironic position of bailing out institutions precisely to prevent the disorderly unwinding of these firms through the recovery efforts of their counterparties.²⁰⁸ Yet in each case, regulators chose not to prop up the bailed-out firm through a stay of its obligations, but rather to supply emergency funds to ensure these obligations were met. Thus these episodes are consonant with the basic structure of modern bank regulation, which insures depositors rather than staying their claims.²⁰⁹ Criticism of the safe harbors' role in these episodes is, at best, a distraction from more pressing questions about how to regulate and structure emergency assistance to shadow banks.

More broadly, I have argued that the safe harbors play a valuable role in enabling institutional investors to finance traditional bank lending through the structured-finance and repo markets. If deposit-taking banks have historically supplied the overwhelming share of the economy's external investment capital,²¹⁰ then scholars should not underestimate the potential value of analogous contracts issued by shadow banks. By aiding the flow of institutional investment into traditional bank assets, liquidation rights embedded in repos and derivative contracts help to transform vast reserves of "dead capital" into "live capital" available to homebuyers, entrepreneurs, and other borrowers.²¹¹ To be sure, the mortgage bubble and subsequent credit crisis underscore the potential consequences of sudden transformations in the

208. See Edwards & Morrison, *supra* note 29, at 94 (noting this irony in the context of Long-Term Capital Management).

209. Critics have argued that curtailing the safe harbors could enhance market discipline by forcing parties to manage their exposure to potential losses stemming from their counterparties' risk taking. See *supra* note 31. Yet as Ricks observes, "market discipline by money-claimants is incompatible with financial stability: runs and panics are the very manifestations of market discipline by short-term creditors." Ricks, *supra* note 6, at 139.

210. See *supra* notes 62-63 and accompanying text.

211. Tirole, *supra* note 52, at 299 (citing HERNANDO DE SOTO, *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* (2003)).

financial system.²¹² These opportunities and dangers should challenge lawmakers to manage the flow of this capital based on principles drawn from our successful experiments in bank regulation during the twentieth century.

212. Historically, sudden credit expansions frequently fuel credit bubbles followed by downturns in the credit cycle. See Allen, *supra* note 154, at 7.