

DERIVATIVES AND COLLATERAL: BALANCING REMEDIES AND SYSTEMIC RISK[†]

Steven L. Schwarcz*

U.S. bankruptcy law grants special rights and immunities to creditors in derivatives transactions, including virtually unlimited enforcement rights. This Article examines whether exempting those transactions from bankruptcy's automatic stay, including the stay of foreclosure actions against collateral, is necessary or appropriate in order to minimize systemic risk.

TABLE OF CONTENTS

I.	INTRODUCTION	700
II.	THE SAFE HARBOR	702
III.	ASSESSING THE SAFE HARBOR FROM A SYSTEMIC RISK PERSPECTIVE	704
	A. <i>Interconnectedness</i>	706
	B. <i>Size</i>	711
	C. <i>Substitutability</i>	713
	D. <i>The Lessons of Lehman Brothers</i>	715
IV.	CONCLUSION	717

[†] Copyright ©2015 by Steven L. Schwarcz. Portions of this Article are partly based on Steven L. Schwarcz & Ori Sharon, *The Bankruptcy-Law Safe Harbor for Derivatives: A Path-Dependence Analysis*, 71 WASH. & LEE L. REV. 1715 (2014), and are used with permission of the authors.

* Stanley A. Star Professor of Law & Business, Duke University School of Law (schwarcz@law.duke.edu), and Founding Director, Duke Global Capital Markets Center; Senior Fellow, The Centre for International Governance Initiative (CIGI). The author thanks Stephen D. Adams, Colleen M. Baker, Bruce A. Markell, Charles W. Mooney, James M. Peck, Manuel Utset, and participants in the 2014 University of Illinois College of Law-American Bankruptcy Institute academic symposium and a Florida State University College of Law faculty workshop for their helpful comments and Jonathan W. Rash for valuable research assistance. Support is provided in part by a gift to Duke Law School from the Eugene T. Bost, Jr. Research Professorship of The Cannon Charitable Trust No. 3.

I. INTRODUCTION

Bankruptcy law in the United States¹ provides unique protections to creditors in derivatives transactions.² Unlike other creditors of a debtor,³ derivatives counterparties have special rights and immunities in the bankruptcy process, including virtually unlimited enforcement rights against the debtor (the “safe harbor”). The safe harbor’s articulated justification is that it is necessary to protect against systemic risk⁴—the risk that an event will trigger a loss of economic value or confidence in a substantial segment of the financial system that is serious enough to have significant adverse effects on the real economy.⁵

This Article examines, in the context described below, whether the safe harbor is necessary or even appropriate to protect against systemic risk. Although the safe harbor favors derivatives counterparties in three ways,⁶ this Article focuses on only one of those ways: allowing derivatives counterparties to exercise their contractual enforcement remedies against a debtor or its property—including closing out, netting, and setting off their derivatives positions and liquidating collateral in their possession—notwithstanding the Bankruptcy Code’s automatic stay of enforcement actions.⁷ Because this aspect of the safe harbor is, I believe, not only the most intuitively understandable but also the most generally

1. Bankruptcy law in the United States is governed by the federal Bankruptcy Code. *See* 11 U.S.C. §§ 101 *et seq.* (2012).

2. This Article defines a “derivative” in the traditionally broad sense, as any contract whose value is tied to, or dependent upon, the value of an underlying asset. As of June 30, 2013, the notional amount of derivatives outstanding in over-the-counter markets alone was \$693 trillion (worldwide). *See* BANK FOR INT’L SETTLEMENT, OTC DERIVATIVES STATISTICS AT END-JUNE 2013 2 (2013), *available at* http://www.bis.org/publ/otc_hy1311.pdf.

3. A debtor is any person or entity that is the subject of a bankruptcy case.

4. *See, e.g.,* Stephen D. Adams, *Derivatives Safe Harbors in Bankruptcy and Dodd-Frank: A Structural Analysis* 9–13 (Working Paper Dec. 2, 2013), *available at* <http://ssrn.com/abstract=2348828> (discussing the centrality of systemic risk to the safe harbor justifications historically and noting both the unanimity and vagueness of the discussions); *see generally* Steven L. Schwarcz & Ori Sharon, *The Bankruptcy-Law Safe Harbor for Derivatives: A Path-Dependence Analysis*, 71 WASH. & LEE L. REV. 1715 (2014) (explaining the history of this articulated justification).

5. *Cf.* Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 204 (2008) (more precisely defining systemic risk as “the risk that (i) an economic shock such as market or institutional failure triggers (through a panic or otherwise) either (X) the failure of a chain of markets or institutions or (Y) a chain of significant losses to financial institutions, (ii) resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial-market price volatility”).

6. 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, 645–46 (2005); Shmuel Vasser, *Derivatives in Bankruptcy*, 60 BUS. LAW. 1507, 1509 (2005).

7. *See* 11 U.S.C. §§ 362(b)(6), (7), (17), & (27) (2012); § 553(b)(1); §§ 555–56, §§ 559–62. Bankruptcy law also exempts derivatives counterparties from the so-called “trustee-avoiding powers”—such as preference rules and constructively fraudulent transfers—regarding any payments and collateral received prior to the bankruptcy. 11 U.S.C. §§ 546 (g) & (j). Additionally, bankruptcy law allows derivatives counterparties to enforce bankruptcy-termination (“ipso facto”) clauses by terminating all existing derivatives trading with the debtor and reducing the contracts to single “net” claim. *See* 11 U.S.C. §§ 559–61. This effectively exempts derivatives contracts from a debtor’s ability in 11 U.S.C. § 365 to assume favorable contracts and terminate unfavorable contracts.

applicable,⁸ the limited focus should make the Article transparent and accessible while still being significant to the safe harbor debate.

In accord with this limited focus, references in this Article to the “safe harbor” hereinafter mean allowing derivatives counterparties to exercise their contractual enforcement remedies notwithstanding the automatic stay. The reader is thus cautioned that this Article’s conclusions do not necessarily apply to other special rights and immunities of derivatives counterparties in the bankruptcy process.

The Article proceeds as follows. Part II explains the safe harbor and discusses its significance in the larger context of U.S. bankruptcy law. It also explains why the safe harbor’s evolution has been largely path dependent. Part III then assesses whether the safe harbor fulfills its stated purpose: to protect against systemic risk. To that end, it analyzes the safe harbor from the standpoints of interconnectedness, size, and substitutability, the primary determinants of systemic risk.⁹ It also examines how the lessons of Lehman Brothers might inform that analysis. Part IV concludes that the safe harbor appears, on balance, to increase systemic risk.

Although the Article’s analysis is technically limited to U.S. bankruptcy law, it should also be relevant to the treatment of derivatives under foreign insolvency law. U.S. bankruptcy law generally serves as “an important precedent for the treatment of derivatives under insolvency law worldwide.”¹⁰ For example, the European Commission’s Proposal for a Directive Establishing a Framework for the Recovery and Resolution of Credit Institutions and Investment Firms proposes to “expand[] safe harbors for derivative and financial agreements” across the European Union.¹¹ The Directive’s rationale parallels that of the safe harbor in the United States: that derivatives contracts deserve special treatment “to ensure the continuity of critical functions” and “to avoid significant adverse effects on financial stability.”¹² Similarly, the Financial Stability

8. This aspect of the safe harbor allows a counterparty to enforce its contract, including foreclosing on collateral, notwithstanding another counterparty’s bankruptcy. That appears to be more intuitively understandable—and certainly is more generally applicable—than aspects of the safe harbor addressing trustee-avoiding powers and ipso facto clauses. *See supra* note 7.

9. *See* INT’L MONETARY FUND ET AL., GUIDANCE TO ASSESS THE SYSTEMIC IMPORTANCE OF FINANCIAL INSTITUTIONS, MARKETS AND INSTRUMENTS: INITIAL CONSIDERATIONS 8 (Oct. 2009), available at <http://www.imf.org/external/np/g20/pdf/100109.pdf> [hereinafter INITIAL CONSIDERATIONS].

10. Schwarcz & Sharon, *supra* note 4, at 1716.

11. Christoph Henkel, *Harmonizing European Union Bank Resolution: Central Clearing of OTC Derivative Contracts Maintaining the Status Quo of Safe Harbors*, 22 TRANSNAT’L L. & CONTEMP. PROBS. 81, 110 n.245 (2013) (citing COMMISSION PROPOSAL FOR A DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ESTABLISHING A FRAMEWORK FOR THE RECOVERY AND RESOLUTION OF CREDIT INSTITUTIONS AND INVESTMENT FIRMS arts. 62(3)–(4)).

12. EUROPEAN UNION, DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ESTABLISHING A FRAMEWORK FOR THE RECOVERY AND RESOLUTION OF CREDIT INSTITUTIONS AND INVESTMENT FIRMS AND AMENDING COUNCIL DIRECTIVE 82/891/EEC, AND DIRECTIVES 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU AND 2013/36/EU, AND REGULATIONS (EU) NO 1093/2010 AND (EU) NO 648/2012, OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 164 (Apr. 25, 2014), available at <http://register.consilium.europa.eu/doc/srv?l=EN&f=PE%2014%202014%20INIT> (quoting arts. 26(2)(a), (b)).

Board has included safe-harbor-type protections in its recommendations for the effective resolution of financial institutions.¹³

II. THE SAFE HARBOR

To fully grasp the impact of the safe harbor, consider the rationale for the bankruptcy-law protection that it undermines. By enhancing debtor rehabilitation, the automatic stay is “one of the fundamental debtor protections provided by the bankruptcy laws.”¹⁴ The stay gives companies attempting to restructure their debt under Chapter 11 “a breathing spell and time to work constructively with [their] creditors.”¹⁵ By shielding the debtor’s assets against a creditor grab-race, the stay “avoids dismemberment of a firm with going-concern value and facilitates a collective proceeding in which the parties (debtor and creditors) can negotiate the terms under which the firm will continue as a going concern.”¹⁶

The safe harbor was not, in its current form, originally part of the Bankruptcy Code. Instead, it became part of the Code, at least in part, through path dependence. To understand path dependence, consider Professor Mark Roe’s example of an 18th century fur trader who cuts a winding path through the woods to avoid dangers.¹⁷ Later travelers follow this path, and in time it becomes a paved road and houses and industry are erected alongside.¹⁸ Although the dangers that affected the fur trader are long gone, few question the road’s inefficiently winding route.¹⁹

Legal path dependence occurs when an initial path effectively blinds lawmakers to alternative paths. Informational and political burdens can

13. See FIN. STABILITY BOARD, KEY ATTRIBUTES OF EFFECTIVE RESOLUTION REGIMES FOR FINANCIAL INSTITUTIONS 11–12 (Oct. 2011), available at http://www.financialstabilityboard.org/publications/r_111104cc.pdf.

14. H.R. REP. NO. 95-595, at 340 (1978), reprinted in 1978 U.S.C.C.A.N. 5963, 6296–97; S. REP. NO. 95-989, at 54–55 (1978), reprinted in 1978 U.S.C.C.A.N. 5787, 5840–41 (explaining that “The automatic stay . . . gives the debtor a breathing spell from his creditors. It stops all collection efforts, all harassment, and all foreclosure actions. It permits the debtor to attempt a repayment or reorganization plan, or simply to be relieved of the financial pressures that drove him into bankruptcy”). Cf. Douglas G. Baird, *Bankruptcy’s Uncontested Axioms*, 108 YALE L.J. 573, 583 (1998) (noting that a creditor, for example “should not be able to seize assets and remove them from the firm if doing so will reduce the value of the remaining assets” to the detriment of the firm and other creditors).

15. Adam R. Waldman, *OTC Derivatives & Systemic Risk: Innovative Finance or the Dance into the Abyss?*, 43 AM. U. L. REV. 1023, 1063 n.271 (1994) (citing H.R. REP. NO. 595, 95th Cong., 2d Sess. 174 (1977), reprinted in 1978 U.S.C.C.A.N. 5963, 6135).

16. Franklin R. Edwards & Edward R. Morrison, *Derivatives and the Bankruptcy Code: Why the Special Treatment?*, 22 YALE J. ON REG. 91, 95 (2005); see also Bryan G. Faubus, *Narrowing the Bankruptcy Safe Harbor for Derivatives to Combat Systemic Risk*, 59 DUKE L.J. 801, 828–29 (2010) (“In other words, the automatic stay restrains creditors not only to preserve the resources of the debtor firm but also to ensure that resources are distributed to creditors in an efficient and equitable fashion. In this way, bankruptcy law avoids the unnecessary costs that a grab race would otherwise impose on both the debtor and slower creditors.”).

17. Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 643–44 (1996).

18. *Id.* at 643.

19. *Id.*

cause the blindness.²⁰ Informational burdens arise when the choice of one legislative path makes it harder to assess other paths.²¹ Political burdens are created when groups wield their influence to maintain and perhaps magnify an initial path.²²

The derivatives safe harbor, at least in part, is an outcome of decades of sustained industry pressure on Congress to exempt the derivatives market from the reach of bankruptcy law, with each exemption serving as an historical justification for subsequent broader exemptions. The initial exemptions—which were included in 1977 in the bill that became the Bankruptcy Code²³—were promoted by a derivatives-industry representative who suggested that Congress grant commodities brokers authority to “close out” an insolvent customer’s account, in order to prevent “a potential domino effect.”²⁴ He argued that such an effect could occur because the commodities futures market is fragile.²⁵ As sole evidence of market fragility, he cited a court case²⁶ without explaining why the inability of a commodities broker to freely close out an insolvent customer’s account could cause a domino effect. Nonetheless, Congress followed his suggestion and included several narrow exemptions in the Bankruptcy Code. These exemptions were later used as precedent to justify broader exemptions, which in turn served as precedent for increasingly broader exemptions.²⁷

The only expansion of the safe harbor that was not clearly due to path dependence was a 2005 amendment to the Bankruptcy Code, which allowed creditors to terminate and net amounts owed under most financial market contracts.²⁸ This expansion was based on a recommendation in a report by the President’s Working Group on Financial Markets (the “PWG Report”), which studied the near failure of the Long-Term Capital Management hedge fund (“LTCM”).²⁹ The PWG Report argued that if LTCM had defaulted, the ability of creditors to terminate and net amounts owing under derivatives contracts, free of bankruptcy law’s automatic stay of enforcement actions, would have mitigated their losses and reduced the likelihood of instability in the financial markets.³⁰

20. See J.B. Ruhl & Harold J. Ruhl, Jr., *The Arrow of the Law in Modern Administrative States: Using Complexity Theory to Reveal the Diminishing Returns and Increasing Risks the Burgeoning of Law Poses to Society*, 30 U.C. DAVIS L. REV. 405, 415 (1997).

21. Schwarcz & Sharon, *supra* note 4, at 1723.

22. *Id.*

23. H.R. 8200, 95th Cong. (1977).

24. *Bankruptcy Reform Act of 1978: Hearings on S. 2266 and H.R. 8200 Before the Subcomm. on Improvements in Judicial Mach. of the H. Comm. on the Judiciary*, 95th Cong. 521–24 (1977) (statement of Stuart D. Root, Esquire, Cadwalader, Wickersham & Taft LLP), available at http://www.archive.org/stream/bankruptcyreform1978unit/bankruptcyreform1978unit_djvu.txt.

25. *Id.* at 524.

26. *Id.* (citing *Geldermann & Co. v. Lane Processing, Inc.*, 527 F.2d 571 (8th Cir. 1975)).

27. Schwarcz & Sharon, *supra* note 4, at 6.

28. *See id.* at 17.

29. *Id.* at 12–13.

30. *Id.*

In enacting the 2005 amendment, Congress did not, however, appear to take into account opposing views. The National Bankruptcy Conference advised, for example, that there is “no indication that the absence of” these expanded rights “has led to widespread difficulties or systemic disruptions in the financial markets.”³¹ Congress also ignored the Conference’s warning that certain aspects of the “netting could deprive a [bankrupt counterparty] of much-needed cash collateral, which in some instances may lead to conversion and liquidation to the detriment of other creditors.”³² Furthermore, the International Swap and Derivatives Association (“ISDA”), a powerful derivatives lobby, played a “significant role in the drafting of the relevant provisions of [the 2005 amendment and] worked in close collaboration” with the President’s Working Group on Financial Markets.³³ ISDA “prepared a position paper . . . setting forth the need for [the expansion] and proposing [its statutory] language.”³⁴ ISDA also “participated in many of the hearings that led up to the eventual adoption of the” expansion.³⁵

III. ASSESSING THE SAFE HARBOR FROM A SYSTEMIC RISK PERSPECTIVE

To the extent the safe harbor is path dependent, that does not necessarily make it bad.³⁶ The relevant question is whether the safe harbor fulfills its stated purpose of protecting against systemic risk. To that end, I next assess the merits of the safe harbor from the standpoint of the three most significant determinants of systemic risk: interconnectedness, size, and substitutability.³⁷ Thereafter, I examine how the lessons of Lehman Brothers might inform that assessment.

31. *Bankruptcy Reform Act of 1999 (Part III): Hearing on H.R. 833 Before the Subcomm. on Commercial and Admin. Law of the H. Comm. on the Judiciary*, 106th Cong. 360 (1999) (statement of Randal Picker, Leffmann Professor of Commercial Law, University of Chicago Law School, on behalf of the National Bankruptcy Conference), available at http://commdocs.house.gov/committees/judiciary/hju63847.000/hju63847_0.HTM [hereinafter Statement of Randal Picker].

32. *Id.*

33. Schwarcz & Sharon, *supra* note 4, at 1741 (quoting Brief for the International Swaps and Derivatives Association, Inc. as Amici Curiae 1–2, n.1, *In re Nat'l Gas Distribs., LLC*, 556 F.3d 247 (2009) (No. 07-2105)).

34. *Id.* (citing Brief for the International Swaps and Derivatives Association, Inc. as Amici Curiae 1–2, n.1, *In re Nat'l Gas Distribs., LLC*, 556 F.3d 247 (2009) (No. 07-2105)).

35. *Id.* (citing Brief for the International Swaps and Derivatives Association, Inc. as Amici Curiae 1–2, n.1, *In re Nat'l Gas Distribs., LLC*, 556 F.3d 247 (2009) (No. 07-2105)).

36. *Cf. Roe*, *supra* note 17, at 647–51 (describing three forms of path dependence, with only two leading to inefficient outcomes).

37. This Article does not purport to assess the merits of the safe harbor from the standpoint of non-systemic-risk considerations. *Cf. Exploring Chapter 11 Reform: Corporate and Financial Institution Insolvencies; Treatment of Derivatives: Hearing Before the Subcomm. on Regulatory Reform, Commercial and Antitrust Law of the H. Comm. on the Judiciary*, 113th Cong. 15 (2014) (statement of Hon. Christopher S. Sontchi, United States Bankruptcy J. for the District of Delaware) [hereinafter Statement of Christopher Sontchi] (testifying that “[a]s applied to mortgages, the safe harbors allow for the repo counter party/lender to grab what otherwise would be its collateral and prevent the mortgage lender/debtor from maximizing the value of those loans for the benefit of the bankruptcy estate.”). Judge Sontchi observes that “[t]his is contrary to the treatment of secured loans in bankruptcy and [unjustifiably] turns the Bankruptcy Code on its head.” *Id.*

These three determinants of systemic risk relate to contagion, and thus, they implicitly assume that a component of the financial system—a financial firm or market—fails. So a threshold question in assessing the safe harbor is whether there is anything inherently risky about derivatives that might cause such a failure in the first place. The standard answer is volatility: “Unlike other contracts, the value of [derivatives contracts] typically can change rapidly based on the fluctuating value of the underlying assets or collateral, prevailing market conditions and other factors.”³⁸ Thus, if counterparty A is owed \$100 by counterparty B and secured by \$105 of collateral at the time of the counterparty B’s bankruptcy, counterparty A would then be protected. But if counterparty A “is unable to terminate, and the value of the [derivatives] contract changes such that [counterparty B] owes [counterparty A] [\$]120 and additional collateral is not posted, [counterparty A] is exposed to a loss of [\$]15.”³⁹

Volatility can therefore be seen as an inherently risky characteristic of derivatives transactions. To the extent it could cause a counterparty’s failure,⁴⁰ such volatility could also be seen as systemically risky.⁴¹ To that extent, regulation could reduce systemic risk by limiting the volatility of derivatives, without even addressing contagion. The safe harbor arguably

38. *Exploring Chapter 11 Reform: Corporate and Financial Institution Insolvencies; Treatment of Derivatives: Hearing Before the Subcomm. on Regulatory Reform, Commercial and Antitrust Law of the H. Comm. on the Judiciary*, 113th Cong. 8 (2014) (statement of Seth Grosshandler, Partner, Cleary Gottlieb Steen & Hamilton LLP) [hereinafter Statement of Seth Grosshandler]. To the extent Grosshandler suggests that certain other risks may be unique to derivatives, that would be inaccurate. *Id.* at 8–9. For example, all secured creditors exposed to the risk mentioned that their collateral would reduce in value during the pendency of a bankruptcy case. *Id.* at 8. Nonderivatives financing transactions are often conducted through back-to-back structures. *Id.* at 9. Grosshandler is correct that derivatives contracts—at least those that are standardized—are traded through central counterparties. *Id.* It is less clear, though, whether (as he claims) the “risks are particularly acute with respect to” those counterparties. *Id.* Central counterparties, such as clearinghouses, “rely on a variety of risk-management strategies, including margin requirements and the maintenance of a loss-sharing pool funded by members to cover losses arising from any clearing member defaults.” Iman Anabtawi & Steven L. Schwarcz, *Regulating Systemic Risk: Towards an Analytical Framework*, 86 NOTRE DAME L. REV. 1349, 1394–95 (2011). Moreover, Article VIII of the Dodd-Frank Act enables derivatives clearinghouses to be designated as “financial market utilities,” potentially giving them access to Federal Reserve liquidity. Colleen Baker, *The Federal Reserve as Last Resort*, 46 U. MICH. J.L. REFORM 69, 109–12 (2012) (discussing Dodd-Frank Act Section 806). To reduce taxpayer cost and the risk of moral hazard, derivatives clearinghouses that gain this access could be required to contribute to a government fund that would be structured to internalize costs. *Cf.* Anabtawi & Schwarcz, *supra*, at 1404–06 (explaining how privatized funding of a systemic risk fund could internalize costs, thereby reducing taxpayer cost and the risk of moral hazard). It also is unclear, empirically, if the use of clearinghouses as central counterparties will ultimately decrease or increase systemic risk. *Id.* at 1395; *see also* Ben S. Bernanke, *Clearing and Settlement During the Crash*, 3 REV. FIN. STUD. 133, 144 (1990) (“[T]here seems to be a potential structural problem with the clearinghouse arrangement. The problem is . . . that a shock large enough to exhaust the clearinghouse’s capital and assessment powers would have a serious *prospective* effect on the ability of the clearinghouse and thus of the futures market itself to function [I]n the shorter run the poor functioning or shutdown of the futures market might exacerbate the adverse conditions that precipitated the problem in the first place.”).

39. Statement of Seth Grosshandler, *supra* note 38, at 8.

40. This Article does not purport to answer that question, other than to note that the consequence of counterparty A becoming undercollateralized merely appears to be that counterparty A may be unable to recover all of the gain on its derivatives “bet” with counterparty B.

41. *See* Statement of Seth Grosshandler, *supra* note 38, at 5.

could help to limit that volatility by allowing counterparties to close out their derivatives positions.⁴² Nonetheless, that volatility could be addressed effectively in a more limited fashion: by enabling derivatives counterparties to enforce bankruptcy-termination (*ipso facto*) clauses.⁴³ Because certain provisions of the more broadly defined safe harbor already enable that enforcement,⁴⁴ the safe harbor—as defined in this Article—is not needed to limit volatility. The analysis next refocuses on contagion.

A. *Interconnectedness*

Interconnectedness is especially significant to systemic risk, because interconnections among financial firms and markets can cause crises in one sector of the financial system to spread to other sectors, in turn disrupting the real economy.⁴⁵ The derivatives market is highly interconnected,⁴⁶ with the trade in derivatives concentrated among relatively few major firms.⁴⁷ It, therefore, is feared that the collapse of one or more interconnected firms might systemically disrupt the derivatives market, which could then impact the financial system more broadly:

Much OTC [over the counter] derivatives activity in the United States is concentrated among 15 major U.S. dealers that are extensively linked to one another, end-users, and the exchange-traded markets. This combination of global involvement, concentration, and linkages means that the sudden failure or abrupt withdrawal from trading of any of these large dealers could cause liquidity

42. See *supra* note 7 and accompanying text.

43. For example, counterparty A could be allowed to terminate its derivatives contract with counterparty B upon the latter's bankruptcy.

44. See 11 U.S.C. §§ 559–61 (2012) (enabling derivatives counterparties to enforce ipso facto clauses); see also *supra* notes 6–7 and accompanying text.

45. Waldman, *supra* note 15, at 1055.

46. *Id.* (“Following substantial market losses, there is the risk that the failure of one significant participant to make payments could result in their counterparty's suspension of payments, causing a rapid, global transmission of defaults to numerous participants wedded to the initial failed participant by OTC derivatives contracts. *This risk is heightened by the fact that much of the derivatives business is concentrated in a small number of banks.*”) (emphasis added); see also DAVID SKEEL, *THE NEW FINANCIAL DEAL: UNDERSTANDING THE DODD-FRANK ACT AND ITS (UNINTENDED) CONSEQUENCES*, 135 (2011) (“The argument that serious counterparty risk was at stake was based on the concentration of the derivatives industry, with the major players—known before the crisis as the Fourteen Families—heavily connected with one another. If one fell, some have argued, the others could fall.”); Manuel A. Utset, *Complex Financial Institutions and Systemic Risk*, 45 GA. L. REV. 779, 797–801 (2011) (explaining how interconnectedness among different components of a financial system increases complexity and thereby contributes to systemic risk).

47. The Financial Crisis Inquiry Report released in January 2011 found that “[m]uch of the risk of CDS and other derivatives was concentrated in a few of the very largest banks, investment banks, and others—such as AIG Financial Products, a unit of AIG—that dominated dealing in OTC derivatives. Among U.S. bank holding companies, 97% of the notional amount of OTC derivatives, millions of contracts, were traded by just five large institutions (in 2008, JPMorgan Chase, Citigroup, Bank of America, Wachovia, and HSBC)—many of the same firms that would find themselves in trouble during the financial crisis. The country's five largest investment banks were also among the world's largest OTC derivatives dealers.” FIN. CRISIS INQUIRY COMM'N, *FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES* 50 (2011) (citations omitted).

problems in the markets and could also pose risks to the others, including . . . the financial system as a whole.⁴⁸

The purpose of the safe harbor is to help ensure that large derivatives dealers can enforce their remedies against a failed counterparty, thereby minimizing the dealer's losses and reducing its chance of a systemically risky collapse.⁴⁹ There are, however, multiple flaws in the safe harbor's design to accomplish that. One such flaw is that if a dealer itself is the defaulting counterparty, the safe harbor enables the dealer's other counterparties to enforce their remedies, thereby hastening the dealer's collapse. This appears to have occurred, for example, in the case of Lehman Brothers.⁵⁰

Another flaw is that there is "little actual evidence to support" the claim that the collapse of a dealer might systemically disrupt the derivatives market.⁵¹ To the contrary, economists Bliss and Kaufman have estimated that the net exposure of the major derivatives dealers to their five largest dealer counterparties (adjusting for collateral) averaged only 1.15%.⁵² If this estimate is correct,⁵³ it is highly unlikely that a collapse of one dealer could directly cause the failure of another major dealer.⁵⁴

48. U.S. GEN. ACCOUNTING OFFICE, GAO/GGD-94-133, FINANCIAL DERIVATIVES: ACTIONS NEEDED TO PROTECT THE FINANCIAL SYSTEM 7 (1994); *see also* Edwards & Morrison, *supra* note 16, at 98 ("Fear that a counterparty insolvency could trigger a systemic meltdown in the 'over-the-counter' (OTC) derivatives market stems partly from the fact that this huge market is dominated by a few large international banks and securities firms.") (citation omitted). Based on a 2009 Office of the Comptroller of the Currency study, Professor Roe reports that "[t]he derivatives market is strongly centralized, with five firms accounting for nearly 90% of the industry's net credit exposure." Mark J. Roe, *The Derivatives Market's Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 561 (2011).

49. *See* H.R. REP. NO. 109-31, pt.1, at 3, 20, 131-32 (2005), *reprinted in* 2005 U.S.C.C.A.N. 88, 89, 105-06, 190-91 (implying that the safe harbor is designed to reduce the systemic risk posed by the collapse of a derivatives counterparty); H.R. REP. NO. 97-420, at 2 (1982), *reprinted in* 1982 U.S.C.C.A.N. 583, 583-84 (relying on systemic risk to justify the initial exemption for derivatives from the automatic stay).

50. *See* Chrystin Ondersma, *Shadow Banking and Financial Distress: The Treatment of "Money-Claims" in Bankruptcy*, 2013 COLUM. BUS. L. REV. 79, 109, 115-17 (2013) ("Thus, for debtors like Lehman Brothers and MF Global, who had a substantial number of creditors entitled to this immunity—or superpriority—bankruptcy results in the immediate dismemberment of the firm.") (citation omitted); Roe, *supra* note 48, at 553-54 (describing Lehman's collapse); *see also* *Too Big to Fail: The Role for Bankruptcy and Antitrust Law in Financial Regulation Reform: Hearing Before the Subcomm. on Commercial and Admin. Law of the H. Comm. on the Judiciary*, 111th Cong. 6-7 (2009) (statement of Harvey R. Miller, Partner, Weil, Gotshal and Manges LLP), *available at* <http://www.judiciary.house.gov/hearings/pdf/Miller091022.pdf>.

51. Stephen J. Lubben, *Repeal The Safe Harbors*, 18 AM. BANKR. INST. L. REV. 319, 331 (2010). Professor Lubben observes that "[t]here is little actual evidence to support even th[e] narrow claim" that "the special interrelations among financial firms, combined with some special volatility of derivatives, necessitates altering the Bankruptcy Code to prevent a systemic crisis." *Id.*

52. Robert R. Bliss & George G. Kaufman, *Derivatives and Systemic Risk: Netting, Collateral, and Closeout*, 2 J. FIN. STABILITY 55, 67 (2006).

53. The estimate might be inaccurate in individual cases because its adjustment for collateral does not take into account dealers' increased exposure due to asset-firesale runs, and the estimate is somewhat circular insofar as it is based on full netting which might be facilitated by the safe harbor. The estimate is not, however, entirely circular: it does not necessarily assume unrestricted collateral enforcement, nor does it assume close-out of derivatives positions. *Id.*

54. *Id.* at 68; *see also* SKEEL, *supra* note 46, at 135 (referring to the concentration argument in favor of the safe harbor, Skeel observes that "we know now that Lehman's bankruptcy filing did not

Still another flaw is that the safe harbor incentivizes systemically risky market concentration by enabling dealers and other parties to virtually ignore counterparty risk. If a counterparty defaults, the dealer can simply foreclose on the collateral, notwithstanding the bankruptcy stay.⁵⁵ For this reason, creditors “are not overly concerned with their debtor’s financial stability, because they protect themselves with the debtor’s collateral, rather than with their understanding of the firm itself.”⁵⁶

Similarly, although the safe harbor’s close-out netting provisions might otherwise reduce systemic risk,⁵⁷ they can contribute to increased market concentration, which increases systemic risk. Unrestricted close-out netting permits derivatives positions to be adjusted by executing an offsetting position with the same party without incurring additional costs (in terms of cash flow, collateral, credit-risk management, or even being required to engage the market for an alternative offsetting position from a weak bargaining standpoint).⁵⁸ That in turn allows market participants to concentrate their positions with relatively few dealers.⁵⁹ Without unrestricted close-out netting, “the concentrations we see in the dealer market which give rise to systemic concerns simply would likely not exist [because t]he capital available to support gross credit risk exposures would far exceed [the] capital currently needed to support net exposures.”⁶⁰

The safe harbor’s close-out netting provisions can also trigger the very type of liquidity crisis that, due to interconnectedness, can spread a chain of defaults among financial institutions. In a banking context, the classic liquidity crisis arises from maturity transformation: the asset-liability mismatch that results from the short-term funding by depositors

lead to the failure of any of the bank’s counterparties. . . . Within a couple of weeks, the vast majority [of Lehman’s derivatives trades] had been closed out, without any of the counterparties failing.”)

55. PRESIDENT’S WORKING GROUP ON FIN. MKTS., HEDGE FUNDS, LEVERAGE, AND THE LESSONS OF LONG-TERM CAPITAL MANAGEMENT 8 (1999), available at <http://www.treasury.gov/resource-center/fin-mkts/Documents/hedgfund.pdf> [hereinafter PWG].

56. Roe, *supra* note 48, at 559.

57. Compare Schwarcz, *supra* note 5, at 220 (observing that the “extent to which the[] netting provisions will be effective to reduce systemic risk is ultimately an empirical question”), and *Statement from FDIC Vice Chairman Thomas M. Hoenig on the Use of International Financial Reporting Standards in Computing the Leverage Ratio for Systemically Important Financial Institutions*, FDIC, www.fdic.gov/about/learn/board/hoenig/statement7-23-2013.html (last updated July 23, 2013) (asserting that “allowing netting [of derivatives obligations] is inconsistent with similar situations” involving nonderivatives obligations, and that “there is no sound rationale for why regulators should give derivative transactions more favorable treatment than similar economic arrangements”), with David L. Mengle, *Close-Out Netting and Risk Management in Over-the-Counter Derivatives 1* (Int’l Swaps and Derivatives Ass’n and Fordham Univ. Graduate Sch. of Bus., Working Paper No. 1619480, 2010), available at <http://ssrn.com/abstract=1619480> (arguing that removing the safe harbor’s close-out netting provisions “could have significant adverse consequences for financial stability”). Note that Mengle is ISDA’s Head of Research. See *infra* p. 710 and note 70.

58. Bliss & Kaufman, *supra* note 52, at 61–62.

59. *Id.* at 61 (observing that this creates “incentives to deal with one counterparty rather than many”).

60. *Id.* at 67. Although ISDA has expressed concerns regarding the increase in exposure that could result from limiting the safe harbor, such an increase would likely be temporary, diminishing as market participants rearrange their portfolios to adapt to the changed risk. See David Mengle, *The Importance of Close-Out Netting*, ISDA RESEARCH NOTES 6 (Nov. 1, 2010).

of long-term bank loans and other investments.⁶¹ This mismatch is at the core of a bank “run”—the risk that panicked depositors will collectively demand their money.⁶² The problem is that the bank’s long-term assets rarely can generate cash quickly enough to pay the current depositor demands, causing the bank to default. If (as is usual) the defaulting bank is contractually interconnected to other banks, the defaulting bank’s failure to pay its obligations to those other banks can, in turn, cause those other banks to have insufficient money to pay their creditors—with the chain of defaults spreading. A similar type of funding mismatch—in this case, driven by maturity transformation in the securitization and “repo” markets—was at the core of the recent financial crisis.⁶³ The systemically relevant problem with maturity transformation is, therefore, that it creates liquidity risk, and thus, the risk of default.

The safe harbor’s unrestricted close-out netting effectively creates this type of liquidity risk. Although the PWG Report’s central recommendation was that close-out netting should be exempted from the Bankruptcy Code’s automatic stay and other restrictions to help to mitigate counterparty losses (and thus reduce the likelihood of instability in financial markets),⁶⁴ it appears that unrestricted close-out netting can in fact trigger the equivalent of a bank run.

For example, Professors Franklin Edwards and Edward Morrison contend that unrestricted close-out netting would have motivated LTCM’s creditors to rush to net and close out their positions.⁶⁵ That, in turn, could have caused or exacerbated “liquidity shortages, resulting in systemic illiquidity with the potential to cause widespread contagion.”⁶⁶ They also argue that such a rush “could have resulted in the immediate

61. See, e.g., Huberto M. Ennis & Todd Keister, *Bank Runs and Institutions: The Perils of Intervention*, 99 AM. ECON. REV. 1588, 1590 (2009) (“Money market funds and other arrangements perform maturity transformation by investing in long-term assets while offering investors the ability to withdraw funds on demand.”).

62. See generally RICHARD SCOTT CARNELL ET AL., *THE LAW OF BANKING AND FINANCIAL INSTITUTIONS* (4th ed. 2009).

63. See, e.g., Gary Gorton & Andrew Metrick, *Regulating the Shadow Banking System* (Oct. 18, 2010), available at <http://ssrn.com/abstract=1676947> (discussing sale and repurchase (repo) agreements in the context of the financial crisis of 2007–2009); Daniel Covitz et al., *The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market 1* (Fed. Reserve Bd. Fin. & Discussion Series, Working Paper No. 2009-36, 2009), available at <http://www.federalreserve.gov/pubs/feds/2009/200936/200936pap.pdf> (arguing that maturity transformation “played a central role in transforming concerns about the credit quality of mortgage-related assets into a global financial crisis”).

64. PWG, *supra* note 55, at 40.

65. Cf. *Exploring Chapter 11 Reform: Corporate and Financial Institution Insolvencies: Hearing Before the Subcomm. on Regulatory Reform, Commercial and Antitrust Law, of the H. Comm. on the Judiciary*, 113th Cong. 8 (2014) (statement of Thomas H. Jackson, Distinguished University Professor & President Emeritus, University of Rochester) [hereinafter Statement of Thomas H. Jackson] (observing that because of the safe harbor, “there is no effective mechanism in the current Bankruptcy Code to preclude counterparties on [derivatives] contracts from running upon the commencement of a bankruptcy case”).

66. Edwards & Morrison, *supra* note 16, at 101.

and widespread liquidation of assets at firesale prices.”⁶⁷ Absent unrestricted close-out netting, however, Edwards and Morrison believe that

LTCM’s major creditors almost certainly would have opted to facilitate a bankruptcy-supervised creditor “work-out” by putting in more capital and reorganizing the ownership structure of LTCM, just as they did under the Federal Reserve arranged work-out. Indeed, as subsequent events showed, it was clearly in the collective interest of LTCM’s counterparties and creditors to avoid a “run” on LTCM and the accompanying firesale of its assets. Thus, in the absence of the Bankruptcy Code’s special treatment of derivatives, Fed intervention may have been unnecessary.⁶⁸

David Mingle, ISDA’s Head of Research, has responded to this analysis in a somewhat *ad hominem* manner. He begins by observing that a handful of academics and bankruptcy lawyers in the United States [have] suggest[ed] that the [close-out netting] safe harbor[] be abolished altogether[,] cit[ing] a variety of justifications: one commentator argues that the ability to terminate can lead to systemic crisis; others suggest that close-out netting and other risk mitigation mechanisms reduce incentives to monitor credit quality; and still others argue that close-out netting works at cross-purposes to the objectives of bankruptcy by redistributing risk from derivatives participants to other parties.⁶⁹

Rather than substantively engaging those criticisms, however, Mingle argues that the international legal harmonization towards allowing unrestricted close-out netting is occurring because it is desirable.⁷⁰ The fact that something occurs does not necessarily mean, however, that it is de-

67. *Id.* Other scholars suggest that these systemic illiquidity and liquidation concerns could be muted, however, by steps such as allowing regulators a limited period of time (e.g., 24 hours) to transfer derivatives of a failed counterparty to third parties. See VIRAL V. ACHARYA ET AL., REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE 27–28 (2011). *But cf.* Mingle, *supra* note 57, at 6 (cautioning that delays longer than 24 hours “might unnecessarily expose market participants to market risks”). Some of these suggestions were incorporated into the Dodd-Frank Act’s Orderly Liquidation Authority, but Stephen Adams has argued that the passage of the OLA may increase the need to address the bankruptcy safe harbor both by undermining its primary justification and by the threat of interference with the OLA’s effectiveness. See Adams, *supra* note 4, at 24–27.

68. Edwards & Morrison, *supra* note 16, at 103.

69. Mingle, *supra* note 60, at 5.

70. Mingle also argues that harmonization itself is a good thing, and that “changing the treatment of derivatives and other financial contracts would represent a major departure by the United States from the trend toward cross-border convergence of the treatment of derivatives in insolvency and from the widespread acknowledgement by policy makers of the contribution of netting to financial stability.” *Id.* Cf. William J. Bergman et al., *Netting, Financial Contracts, and Banks: The Economic Implications* 12 (Fed. Reserve Bank of Chi., Working Paper No. 2004-02, 2004), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=505965 (observing that the safe harbor types of exemptions “represent[] one of the few successes in international legal harmonization”). A related argument for preserving the trend toward legal harmonization in this area is that maintaining the derivatives safe harbor would help U.S. financial markets remain competitive with foreign financial markets, because financial institutions may prefer regulatory regimes that protect derivatives contracts from the purview of the automatic stay (or its international equivalent). Whether eliminating the safe harbor would cause such a loss of competitiveness would ultimately be an empirical question.

sirable or should be occurring⁷¹—especially when it results from lobbying.⁷²

Perhaps a more substantive response to the criticisms would be that sophisticated derivatives parties should know that rushing to net and close out their positions might trigger a firesale, which could be counterproductive. They, therefore, should not exercise their unrestricted close-out netting rights in that case. By analogy, sophisticated secured creditors do not, in my experience, generally rush into a foreclosure if that creates a significant risk that the debtor will file for bankruptcy, triggering the automatic stay as a defense to the foreclosure.⁷³

There is, however, a significant difference between these scenarios. A secured creditor contemplating foreclosure assesses the costs and benefits to itself only.⁷⁴ But a derivatives counterparty contemplating netting and closing out its position will not necessarily take all costs and benefits into account; that party is likely to omit or discount the systemic costs—that a possible result of its action might be to trigger a chain of defaults that ultimately could harm the real economy.⁷⁵ This self-interested, but individually rational, behavior parallels the observation that market participants individually may decide to engage in profitable transactions even though doing so could increase systemic risk because much of the harm from a possible systemic collapse would be externalized—onto other market participants, as well as onto ordinary citizens impacted by an economic collapse.⁷⁶

The safe harbor, therefore, does not appear to protect in a meaningful way against systemic risk resulting from interconnectedness. And by increasing the concentration of interconnected derivatives counterparties and increasing liquidity risk, the safe harbor may actually amplify systemic risk.

B. Size

Size is the second most significant determinant of systemic risk. Professors Edwards and Morrison thus observe that the fear of derivatives-induced systemic risk is warranted only in the case of an insolvency of a major financial market participant holding a massive derivatives portfolio.⁷⁷

71. GEORGE EDWARD MOORE, *PRINCIPIA ETHICA* 10–14 (1971).

72. Cf. Enrico Perotti, *Systemic Liquidity Risk and Bankruptcy Exceptions* 4–5 (DSF Policy Paper Series No. 8, 2010), available at <http://hdl.handle.net/11245/2.114634> (observing that the safe harbor provisions were “heavily lobbied by the financial industry,” including ISDA).

73. See generally, Schwarcz, *supra* note 5.

74. See generally *id.*

75. *Id.* at 206.

76. See *id.* (explaining this concept and describing it as a type of “tragedy of the commons”). It is a tragedy of the commons insofar as market participants suffer from the actions of other market participants; it is a more standard externality insofar as nonmarket participants suffer from the actions of market participants.

77. Edwards & Morrison, *supra* note 16, at 98.

Incongruously, the safe harbor operates independently of the size of the counterparty or its portfolio.⁷⁸ Furthermore, it applies not only to financial firms, but to any firm that holds a derivative.⁷⁹ Thus, a large bank that makes a secured loan cannot enforce its collateral against a bankrupt borrower, whereas a small business firm can enforce its collateral against a bankrupt derivatives counterparty.⁸⁰ If the safe harbor were truly designed to protect against systemic risk, it would enable the large bank to foreclose on its collateral, especially if the borrower were not a financial institution; and it would not allow the small business firm to foreclose on collateral provided by a derivatives counterparty that is a large financial institution. By failing to take systemic importance into account, the safe harbor extends well beyond its purported rationale of reducing systemic risk.⁸¹

I understand that a possible rationale for the breadth of the safe harbor might be practicality—it could be politically, if not otherwise, difficult to base the application of laws on the size or nature of the parties affected.⁸² An “approach that applied the automatic stay to [only] some derivatives, [for example,] would complicate the treatment of derivatives in bankruptcy”⁸³

Nonetheless, a “more nuanced approach is preferable to adopting a blanket rule that invites strategic termination by non-debtors.”⁸⁴ To that end, the safe harbor’s scope could be tied to Congress’s recent determination—implemented through the designation and prudential regulation of systemically important financial institutions (“SIFIs”) pursuant to the Dodd-Frank Act—that controlling systemic risk may well require an approach that takes into account the size and nature of the firm.⁸⁵ Using this approach, the safe harbor’s application should be limited to remedies pursued by SIFIs against non-SIFIs, either directly or through securities intermediaries such as derivatives clearinghouses.⁸⁶ That would bypass the practicality objection by piggybacking on the government’s own de-

78. *Id.*

79. Lubben, *supra* note 51, at 328. Lubben observes, for example, that “the argument for the safe harbors is quite simple: the safe harbors reduce systemic risk by giving large financial institutions special treatment. This argument only holds, if at all, with regard to derivative transactions among financial institutions, and thus supports only a much narrower version of the existing safe harbors.” *Id.* at 331.

80. *See id.*

81. Jonathon Keath Hance, *Derivatives in Bankruptcy: Lifesaving Knowledge for the Small Firm*, 65 WASH. & LEE L. REV. 711, 759–61 (2008); Stephen J. Lubben, *Derivatives and Bankruptcy: The Flawed Case for Special Treatment*, 12 U. PA. J. BUS. L. 61, 75 (2009); *see* Vasser, *supra* note 6, at 1542.

82. Bliss & Kaufman, *supra* note 52, at 58.

83. Frank Partnoy & David A. Skeel, Jr., *The Promise and Perils of Credit Derivatives*, 75 U. CIN. L. REV. 1019, 1050 (2007).

84. *Id.*

85. *See* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376, 1803 (2010) (codified at 12 U.S.C. §§ 5323, 5365 (2012)) (subjecting “systemically important” financial institutions to more rigorous oversight).

86. Standardized derivatives are required by the Dodd-Frank Act to be traded through clearinghouses. Anabtawi & Schwarcz, *supra* note 38, at 1394–95; *see also supra* note 38, (discussing central counterparties).

termination as to which firms are actually systemically significant. It would also reduce the risk of a “run” on a SIFI.⁸⁷ Moreover, it would help to address, de facto, the post-Lehman Brothers concern that the “immediate liquidation of [derivatives] contracts and collateral following the failure of a major financial institution can negatively affect markets for less liquid assets,” increasing losses.⁸⁸

Even a SIFI-based application of the safe harbor could be imperfect, however. For example, granting special rights to large financial institutions favors those institutions compared to their competitors.⁸⁹ It also could have unintended consequences, not only driving derivatives trading into SIFIs, but also sparking moral hazard concerns. For example, a SIFI might devote less resources to monitoring its derivatives contracts/counterparties if it knows it will be exempt from the automatic stay, thereby externalizing the costs of suboptimal monitoring. Moreover, a SIFI-based application implicitly assumes that the only source of systemic risk in the derivatives context lies in the potential failure of large (and potentially interconnected) derivatives counterparties.⁹⁰

I next examine whether another significant source of systemic risk in the derivatives context lies in the potential failure of the derivatives market itself. That analysis is one of substitutability.

C. Substitutability

Substitutability refers to the ability of “other components of [a] system to provide the same or similar services in the event of a failure.”⁹¹ It is what the Financial Stability Board (“FSB”) has referred to as the “supply side” part of the broader systemic risk analysis.⁹² From a systemic risk perspective, the danger is that a component of the financial system—in this case, the derivatives market—performs a critical function that, if it

87. Cf. *supra* notes 65–67 and accompanying text (discussing the “run” risk).

88. Statement of Seth Grosshandler, *supra* note 38, at 4–5; see also FIN. STABILITY OVERSIGHT COUNCIL, 2012 ANNUAL REPORT 133 (2012), available at <http://www.treasury.gov/initiatives/fsoc/Pages/annual-report.aspx> (identifying the absence of a bankruptcy mechanism to facilitate the orderly liquidation of a defaulted dealer’s collateral as one of “ongoing vulnerabilities” in the repo market, creating a systemic risk of market collapse caused by the “firesale” of a defaulting dealer’s collateral).

89. That might occur, for example, if limiting application of the safe harbor to SIFIs would grant SIFIs cheaper access to credit vis-à-vis smaller firms, putting the latter at a competitive disadvantage. It also would give SIFIs a favored position in the grab-race for the debtor’s assets. See *supra* note 16 and accompanying text.

90. Another possible imperfection of a SIFI-based application of the safe harbor is that it would not address the argument that systemic risk would be better regulated through directed legislation, not indirectly through the Bankruptcy Code. My Article is agnostic as to whether an integrated regulatory approach might provide some advantages. At least one prominent bankruptcy scholar believes “that both bankruptcy law and the Dodd-Frank Act can be made more effective as a result” of their co-regulation of SIFIs. Statement of Thomas H. Jackson, *supra* note 65, at 1.

91. See INITIAL CONSIDERATIONS, *supra* note 9, at 9.

92. See FIN. STABILITY BOARD, RECOVERY AND RESOLUTION PLANNING OR SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS: GUIDANCE ON IDENTIFICATION OF CRITICAL FUNCTIONS AND CRITICAL SHARED SERVICES 9 (2013) [hereinafter GUIDANCE ON IDENTIFICATION].

fails, could not be replaced in a timely manner.⁹³ The financial system should be less systemically risky, all other things being equal, if, in “general, the market [is] able to substitute failing providers [of that critical function] quickly.”⁹⁴

In the derivatives context, a substitutability analysis therefore entails two issues: whether derivatives are a component of the financial system that provides a critical function; and if so, whether financial firms or markets can quickly provide a substitute for that critical function if the derivatives market fails.

Derivatives roughly have two functions: to hedge against risk, and to speculate.⁹⁵ The first function is arguably critical to the financial system.⁹⁶ The substitutability analysis, therefore, next engages the second issue: whether, if the derivatives market fails, financial firms or markets could quickly provide a hedging substitute against risk.

The answer appears to be affirmative. Insurance companies, which operate outside of the traditional derivatives market, and thus should not be significantly impacted by that market’s collapse, can and often do provide hedging protection couched as insurance.⁹⁷ A whole insurance

93. The concept of a “critical function” implicitly incorporates the other systemic risk criteria of interconnectedness and size. *See, e.g.*, INITIAL CONSIDERATIONS, *supra* note 9, at 10 (observing that “[l]imited substitutability is likely to be much more of a concern when the services provided are large in volume, or where they provide a key link in connections among financial institutions”). Although the derivatives market involves both of these factors (high volume and key linkage), those factors are only relevant if the function for which substitutability is required is critical to the larger financial system.

94. *See* GUIDANCE ON IDENTIFICATION, *supra* note 92, at 9. A substitutability analysis therefore can involve a complex assessment of market structure, including “the number and concentration of providers, availability of potential new market entrants, availability of readily substitutable products, the speed, costs and hurdles of substitution, and the willingness of other firms to provide the activities of a failing firm.” *Id.*

95. *See, e.g.*, Lynn A. Stout, *Derivatives and the Legal Origin of the 2008 Credit Crisis*, 1 HARV. BUS. L. REV. 1, 7 (2011). Professor Stout attempts to differentiate these functions by observing that if a party is seeking to reduce risk, that party is hedging; but if a party is merely looking to make trading profits, that party is speculating. *Id.* at 4, 24–25 (distinguishing between “risk-reducing hedging” and “risk-increasing speculative transactions”). My Article qualifies that by defining hedging as seeking to reduce *existing* risk. *See infra* notes 100–102 and accompanying text. The Dodd-Frank Act delegated to the CFTC the task of differentiating hedging from speculation. *See* 17 C.F.R. § 1.3(kkk) (2012) (defining hedging along the lines of the traditional speculation vs. existing risk-reduction distinction).

96. *See, e.g.*, Schwarcz, *supra* note 5, at 219 (observing that “[d]erivatives used for hedging . . . may—although it is not free from doubt—actually reduce the potential for systemic risk.”) (citation omitted); *see generally* J. David Cummins et al., *Derivatives and Corporate Risk Management: Participation and Volume Decisions in the Insurance Industry*, 68 J. RISK & INS. 51, 68 (2001) (explaining why and how value-maximizing firms choose to hedge). *Cf.* Rangarajan K. Sundaram, *Derivatives in Financial Market Development* 15 (International Growth Centre, Working Paper, Feb. 2013), available at <http://www.theigc.org/wp-content/uploads/2014/09/Sundaram-2013-Working-Paper.pdf> (observing that in a small sampling of famous derivative-related corporate crises, “[a]ll but one . . . involved speculative trading,” as opposed to hedging). Derivatives can theoretically provide other functions that are important to the financial system, such as providing liquidity and reducing the cost of financing. *See, e.g.*, Statement of Seth Grosshandler, *supra* note 38, at 3. But the practical merits of those functions are at least somewhat contested. *Compare id.* at 10 (arguing that extending the safe harbor to the repurchase-agreement market increased the liquidity and thus reduced the cost of those transactions), *with* Statement of Christopher Sontchi, *supra* note 37, at 3–4 (arguing that extending the safe harbor to the repurchase-agreement market for mortgage loans was unjustified and counterproductive).

97. Daniel Schwarcz & Steven L. Schwarcz, *Regulating Systemic Risk in Insurance*, 81 U. CHI. L. REV. 1569, 1584 (2014).

industry—comprising the so-called monoline insurance companies—has even built up around insuring financial risk.⁹⁸ Insurers, therefore, may be able to quickly step in and insure, or hedge, against financial risk.⁹⁹

Insurers would be legally restricted, however, from hedging against financial risks in which the insured does not have a preexisting stake, or “insurable interest.”¹⁰⁰ But that should not significantly undermine substitutability. “Naked” hedges are effectively used more for speculation, which is not critical to the financial system (and indeed might be destabilizing¹⁰¹), than for legitimate hedging of risk.¹⁰²

Additionally, if the traditional derivatives market fails, even noninsurance financial firms and markets may be able to quickly provide a hedging substitute. The author’s experience is that derivatives contracts can often be replicated by standard forms of financial contracting. A credit-default swap, for example, is in essence a guarantee agreement.

The analysis so far indicates that the safe harbor may be unnecessary to protect against, and may even amplify, systemic risk. Next, consider how the lessons of Lehman Brothers might inform that analysis.

D. *The Lessons of Lehman Brothers*

From an analytical standpoint, the bankruptcy of Lehman Brothers could inform the safe harbor debate by answering two questions: How does Lehman’s being forced into bankruptcy inform the safe harbor de-

98. DETERIORATION OF MONOLINE INSURANCE COMPANIES AND THE REPERCUSSIONS FOR MUNICIPAL BONDS, WELLS FARGO (2008), available at https://www.wellsfargoadvantagefunds.com/pdf/whitepapers/monoline_insurance_muni_bonds.pdf.

99. Similarly, banks traditionally have issued standby letters of credit that protect investors against financial risk. See, e.g., Douglas G. Baird, *Standby Letters of Credit in Bankruptcy*, 49 U. CHI. L. REV. 130 (1982).

100. An “insurable interest” is simply a propriety interest in an insured asset. In traditional insurance law, the insurable interest requirement ensures that an insurance policy protects the insured against loss rather than creates an opportunity for speculative gain. The classic example of the insurable interest principle is the widely recognized truism that one cannot purchase fire insurance on a house owned by one’s neighbor. See KENNETH S. ABRAHAM, *INSURANCE LAW AND REGULATION* 83–87 (5th ed. 2010) (“The predominant justification now given for the requirement of an insurable interest is that it combats moral hazard . . .”). But compare Robert S. Bloink, *Does the Dodd-Frank Wall Street Reform Act Rein in Credit Default Swaps? An EU Comparative Analysis*, 89 NEB. L. REV. 587, 630 (2011) (“While credit default swaps may precipitate crisis, such as the collapse of AIG, it is not because they present a significant moral hazard.”).

101. Cf. Schwarcz, *supra* note 5, at 219 (observing that “[d]erivatives used for speculation are thought to increase the potential for systemic risk”).

102. Cf. Stout, *supra* note 95, at 8 (arguing that “betting for speculation is not a mutually beneficial exchange of the sort praised by Adam Smith. To the contrary, speculative betting reduces risk-averse speculators’ welfare by exposing them to new risks without any compensating increase in returns.”) (citing Rene M. Stulz, *Should We Fear Derivatives?*, 18 J. ECON. PERSPS. 173, 190 (2004) (“Derivatives . . . can create risk at the firm level.”); see also Gina-Gail Fletcher, *Hazardous Hedging: The (Unacknowledged) Risks of Hedging with Credit Derivatives*, 839 (Cornell Law Sch. Research Paper No. 13-88, 2013), available at <http://ssrn.com/abstract=2309102> (“[A] transaction should be recognized as a hedge if it is established to mitigate risk exposure and does not introduce new, significant risks that outweigh the benefits of the transaction. Such a definition of a hedge moves away from questions of primary and secondary sources of risk and from issues regarding the intent of the hedger. This definition provides a more nuanced view that recognizes that hedges may pose risks and acknowledges that these risks should be taken into account when categorizing a transaction as a hedge.”).

bate? How does Lehman's resolution in bankruptcy inform the safe harbor debate? Consider them in turn.

How does Lehman's being forced into bankruptcy inform the safe harbor debate? This question has already effectively been answered. Recall that when a derivatives dealer is a defaulting counterparty, "the safe harbor enables the dealer's other counterparties to enforce their remedies, thereby hastening the dealer's collapse."¹⁰³ This appears to, at least partly, explain the run on Lehman Brothers, which triggered its bankruptcy filing.¹⁰⁴ More generally, the safe harbor—including its unrestricted close-out netting—motivates counterparties to engage in this type of run on a derivatives dealer, which has parallels to a run on a bank.¹⁰⁵ Thus, the answer to this question informs the safe harbor debate by confirming that the safe harbor can sometimes amplify systemic risk.

How does Lehman's resolution in bankruptcy inform the safe harbor debate? The answer to this question is less certain. A recent study by officers of the Federal Reserve Bank of New York attempts to provide an answer:

[Although] derivatives receive special treatment under the U.S. Bankruptcy Code through exemptions or 'safe harbor' . . . questions have been raised regarding the desirability of providing these exceptions By providing a detailed description of the use of safe harbor provisions . . . in the Lehman bankruptcy, our study may help inform the discussion on the role of derivatives in bankruptcy.¹⁰⁶

Even given the safe harbor, the authors find that "most counterparties of Lehman's OTC derivatives suffered substantial losses."¹⁰⁷ Because the Lehman bankruptcy involved so many competing variables, their study does not ultimately resolve how the safe harbor contributed to counterparty recovery or systemic risk.¹⁰⁸ For example, it is unclear whether counterparties would have recovered more had judicial decisions regarding certain aspects of the safe harbor been more predictable.¹⁰⁹ It also appears that at least "some of the losses associated with the failure of Lehman Brothers may have been avoided in a more orderly liquidation process," the problem being the poor planning that went into Lehman's bankruptcy.¹¹⁰ Moreover, even "more substantial" creditor losses were averted by the Federal Reserve providing emergency liquidity to Lehman.¹¹¹ (Ironically, the Dodd-Frank Act "has circumscribed the abil-

103. See *supra* note 50 and accompanying text.

104. See *id.*

105. See *supra* notes 63–68 and accompanying text.

106. Michael Fleming & Asani Sarkar, *The Failure Resolution of Lehman Brothers*, 20 ECON. POLICY REV. (forthcoming) (manuscript at 3) available at <http://ssrn.com/abstract=2422433>.

107. *Id.* (manuscript at 24).

108. See *id.* (manuscript at 27).

109. See *id.* (manuscript at 18–19) (discussing litigation over the legal validity of flip clauses). The author was a consultant and potential expert witness for Lehman Brothers in connection with this litigation.

110. *Id.* (manuscript at 26).

111. *Id.*

ity of the Federal Reserve to act as lender of last resort [in that way] to the same extent that it did during the financial crisis,”¹¹² virtually assuring that the future bankruptcy of another large derivatives counterparty will result in even higher creditor losses.¹¹³)

The safe harbor also facilitated the “cherry-picking” of derivatives contracts, which had a mixed impact on recoveries. In-the-money counterparties of Lehman generally used the safe harbor to terminate their contracts early.¹¹⁴ In contrast, “out-of-the-money counterparties, which owed money to Lehman [under their derivatives contracts], typically chose not to terminate their contracts.”¹¹⁵ As a result, “the settlement of Lehman’s OTC derivatives claims may have resulted in significant losses to Lehman [because] Lehman’s counterparties used the safe harbor provisions to terminate contracts when they stood to gain and to keep alive contracts when they were out-of-the-money.”¹¹⁶ That, in turn, significantly reduced the recovery of other Lehman creditors,¹¹⁷ some of whom may have been systemically significant.

In short, in the context of OTC derivatives, the extent to which Lehman’s resolution in bankruptcy informs the safe harbor debate is not yet clear.

It is also unclear whether Lehman’s resolution in bankruptcy informs the safe harbor debate regarding centrally cleared derivatives contracts.¹¹⁸ Fleming and Sarkar observe that central counterparties settled “most of” their contracts involving Lehman “with no large losses” to themselves.¹¹⁹ But they do not suggest that some or all of this success resulted from the safe harbor; instead, they say that it resulted from “a variety of strategies,” such as requiring “margins and other member contributions, and capital and insurance for use in the event of default.”¹²⁰ None of these strategies directly involves the safe harbor.

IV. CONCLUSION

The stated policy justification of the safe harbor is to protect against systemic risk in the financial system.¹²¹ The development of the safe har-

112. *Id.* (manuscript at 4).

113. *Cf.* Iman Anabtawi & Steven L. Schwarcz, *Regulating Ex Post: How Law Can Address the Inevitability of Financial Failure*, 92 TEX. L. REV. 75, 130 (2013) (observing that by circumscribing that ability, the Dodd-Frank Act incorrectly “conflate[s] *ex post* regulation with indiscriminate bailouts and taxpayer expropriation . . . [, thereby] increasing the risk that a systemically important financial firm or market will collapse, with systemic consequences”).

114. Fleming & Sarkar, *supra* note 106, (manuscript at 11).

115. *Id.*

116. *Id.* (manuscript at 25) (citation omitted).

117. *Id.* (manuscript at 12–13).

118. *Cf. supra* note 38 (examining centrally cleared derivatives in the context of the safe harbor).

119. Fleming & Sarkar, *supra* note 106, (manuscript at 41).

120. *Id.* (manuscript at 42). *Cf. supra* note 38 (observing, among other things, that central counterparties “rely on a variety of risk-management strategies, including margin requirements and the maintenance of a loss-sharing pool funded by members to cover losses arising from any clearing member defaults” (quoting Anabtawi & Schwarcz, *supra* note 38, at 1394–95)).

121. *See supra* note 4 and accompanying text.

bor, however, has been largely path dependent, resulting from a sequence of incremental industry-lobbied legislative steps without full vetting at each stage of systemic (or other) consequences. This path-dependency, if nothing else, should evoke skepticism about that stated justification.

This Article examines whether the safe harbor in fact protects against systemic risk. To that end, the Article systematically analyzes the safe harbor, focusing on the primary determinants of systemic risk: interconnectedness, size, and substitutability.

From the standpoint of interconnectedness, the safe harbor does not appear to protect in a meaningful way against systemic risk. To the contrary, by increasing the concentration of interconnected derivatives counterparties and increasing liquidity risk, the safe harbor may actually amplify systemic risk. From the standpoint of size, the safe harbor does not even attempt to calibrate its application. Incongruously, it applies independently of the size of the counterparty or its portfolio. Moreover, it applies not only to financial firms, but to any firm that holds a derivative. From the standpoint of substitutability, the only arguably critical function of derivatives to the financial system is to hedge against risk; and if the traditional derivatives market were to fail, financial firms (including insurance companies) and markets may be able to substitute for that function.

I therefore conclude that the derivatives safe harbor—or at least the part of the safe harbor on which this Article focuses: allowing derivatives counterparties to exercise their contractual enforcement remedies against a debtor or its property, including closing out, netting, and setting off their derivatives positions and liquidating collateral in their possession, notwithstanding the Bankruptcy Code's automatic stay of enforcement actions¹²²—is not necessary to protect against systemic risk in the financial system. Moreover, it potentially amplifies systemic risk. At the very least, therefore, Congress should consider narrowing the safe harbor to better limit systemic harm¹²³—such as limiting the safe harbor's application to remedies pursued by SIFIs against non-SIFIs¹²⁴ in derivatives transactions that are used for hedging, not for speculation.¹²⁵

122. See *supra* notes 7–9 and accompanying text.

123. Any changes to the safe harbor might be made more politically palatable by grandfathering existing derivatives contracts.

124. See *supra* notes 84–90 and accompanying text.

125. See *supra* notes 93–98 and accompanying text. I am not claiming, however, that it is easy or even always feasible to distinguish derivatives transactions used for hedging from those used for speculation. See *supra* note 95 and accompanying text. Another option for narrowing the safe harbor would be to impose only a temporary stay for derivatives contracts. The European Commission, for example, has proposed granting resolution authorities the power to impose a one-day (or less) stay on derivatives counterparties. See COMMISSION PROPOSAL, *supra* note 11, arts. 61–63 (“The temporary suspension is viewed as an essential tool to providing the resolution authority with ‘a period of time to identify and value those contracts that need to be transferred to a solvent third party’ and avoids the risk of rapidly changing values resulting from a run on the assets of a failing financial institution.”); see also Henkel, *supra* note 11, at 109 (discussing this temporary stay option).

A final caution: To the extent this Article's conclusions are correct, the safe harbor's potential to amplify systemic risk would not be limited to the traditional derivatives market. The language of the safe harbor has become so inclusive—using broad definitions of derivatives, and no longer requiring that they be traded on financial markets or physically settled—that virtually any ordinary financial transaction can be documented to fall within it.¹²⁶ To gain the enforcement advantages provided by the safe harbor, ordinary financial transactions, including secured loans, increasingly are being couched as derivatives transactions.¹²⁷ As a result, the safe harbor inadvertently may be causing the legal framework governing financial transactions generally to amplify systemic risk.

126. See, e.g., *In re MBS Mgmt. Servs., Inc.*, 690 F.3d 352 (5th Cir. 2012) (finding that an ordinary electricity supply contract was a derivatives contract and thus exempt from the automatic stay, and implicitly adopting a presumption in favor of construing contracts as derivatives contracts); *In re Nat'l Gas Distributors, LLC*, 556 F.3d 247, 252 (4th Cir. 2009) (finding that ordinary agreements to purchase commodities should be treated as derivatives and summarizing bankruptcy courts' findings that they should be exempt from bankruptcy law). During the deliberations preceding the 1990 amendment to the safe harbor, Professor Picker warned Congress that "[t]he expansion of these provisions would take us farther down the path of allowing sophisticated parties to opt out of bankruptcy." Statement of Randal Picker, *supra* note 31, at 369.

127. Statement of Kenneth N. Klee, Professor of Law, UCLA School of Law, and Senior Partner, Klee, Tuchin, Bogdanoff, & Stern LLP, Statement at International Insolvency Institute, Seventh Annual Conference, panel on "Understanding Derivatives: Dissecting Complex Financial Instruments" (June 12, 2007). Others have made similar observations. See, e.g., Rhett G. Campbell, *Financial Markets Contracts and BAPCPA*, 79 AM. BANKR. L.J. 697, 712 (2005) ("A cynic might argue that the financial safe harbor are indeed a 'bankruptcy opt-out clause' for a certain class of capitalists because their money is more important than everyone else's."); Morrison & Riegel, *supra* note 6, at 642, 647, 660, & 663; Christopher J. Redd, *Treatment of Securities and Derivatives Transactions in Bankruptcy, Part I*, AM. BANKR. INST. J., July/Aug. 2005.

