

# CLEARINGHOUSES AND THE RAPID RESOLUTION OF BANKRUPT FINANCIAL FIRMS

Richard Squire\*

March 19, 2013

Forthcoming, *Cornell Law Review*

## Abstract

This Article argues that the principal economic benefit of a financial clearinghouse is faster payouts to creditors when a trading firm fails. By expanding setoff opportunities, a clearinghouse provides immediate payouts to creditors who otherwise would have to wait for slower bankruptcy payouts. Quicker payouts reduce illiquidity and uncertainty, two sources of systemic risk. Through setoffs, a clearinghouse can reduce illiquidity and uncertainty even if the clearinghouse is itself insolvent. Unlike the benefits of clearinghouses asserted by other scholars, faster payouts are not zero-sum in their impact on creditors: besides accelerating payouts to members, a clearinghouse eases the administrative burden on the failed member's bankruptcy trustee or receiver, permitting quicker payouts to non-clearinghouse creditors as well. By identifying faster payouts as the main systemic benefit of clearinghouses, this Article shows that there is a high degree of complementarity between the Dodd-Frank Act's clearing mandate, which requires central clearing of swap contracts, and the statute's "orderly liquidation authority" for large financial firms. The clearing mandate will reduce the need for the liquidation authority to be invoked, and when the authority is invoked the mandate will simplify the FDIC's duties as receiver.

---

\* Professor of Law, Fordham University School of Law. I am grateful for useful comments and conversations to Henry Hansmann, Robert J. Jackson, Jr., Kathryn Judge, Joshua Mitts, Claire Priest, Mark Roe, Roberta Romano, and David Skeel, and to law school workshop participants at Yale and the University of Colorado.

# CLEARINGHOUSES AND THE RAPID RESOLUTION OF BANKRUPT FINANCIAL FIRMS

Richard Squire

## Contents

INTRODUCTION .....	2
I. THE MECHANICS OF CENTRAL CLEARING.....	5
A. <i>Multiparty Netting</i> .....	5
B. <i>Loss Mutualization (for Members and Customers)</i> .....	11
C. <i>Information Gathering and the “Locus for Regulation”</i> .....	14
II. SWAPS IN THE FINANCIAL CRISIS AND IN DODD-FRANK .....	14
A. <i>The Swap-Market Bailouts of 2008</i> .....	15
B. <i>The Clearing Mandate: Congress Tries to Make Bailouts Obsolete</i> .....	18
III. THE DISPUTED CASE FOR THE CLEARING MANDATE SO FAR.....	19
A. <i>Sources of Systemic Risk</i> .....	20
B. <i>Arguments from Netting</i> .....	25
C. <i>Arguments from Loss Mutualization</i> .....	27
D. <i>Arguments from Regulatory Intervention</i> .....	29
IV. CENTRAL CLEARING AS A SOURCE OF LIQUIDITY AND CERTAINTY .....	32
A. <i>Setoffs as Asset Partitioning</i> .....	32
B. <i>Clearinghouse Asset Partitioning and Faster Creditor Payouts</i> .....	35
C. <i>But What if the Clearinghouse Fails?</i> .....	40
D. <i>Clearinghouse Liquidity and Derivatives’ Bankruptcy Exemptions</i> .....	42
V. CLEARINGHOUSES AND THE FDIC AS CO-ORDERLY-LIQUIDATORS .....	44
VI. INITIAL IMPLICATIONS FOR REGULATORS.....	48
CONCLUSION .....	49

## INTRODUCTION

Credit default swaps bear much of the popular and political blame for the 2008 financial crisis. Before the crisis, these financial derivatives were traded bilaterally—that is, directly between buyers and sellers. The 2010 Dodd-Frank Act empowers regulators to require that swaps instead be cleared through central counterparties called clearinghouses. According to its proponents, this clearing mandate will reduce systemic risk. The proponents’ arguments tend to show, however, only that clearinghouses redistribute risk, not that they reduce it. Thus, the proponents argue that a clearinghouse reduces total losses to creditors when one clearinghouse member—that is, a firm that trades through the clearinghouse—defaults on its debts. Losses are allegedly avoided through netting, which occurs when a clearinghouse uses debts owed to a failed member to repay debts owed by that member. But because the division of a failed firm’s assets is zero-sum, netting increases recoveries for clearinghouse members only by reducing recoveries for creditors outside the clearinghouse. Losses have been shifted rather than avoided, making it unclear how the overall threat to the financial system has been reduced.

This Article identifies an economic benefit of clearinghouses that, unlike those asserted by the clearing mandate's proponents, is not zero-sum in its impact on creditors: faster payouts when a trading firm fails. A clearinghouse accelerates creditor payouts because it is an asset partitioning arrangement that cordons off a portion of the failed firm's assets and liabilities for immediate resolution outside bankruptcy. Besides providing quicker payouts to clearinghouse members, the clearinghouse reduces the scale and complexity of the failed firm's bankruptcy estate. The bankruptcy trustee therefore can complete her task more quickly, permitting faster payouts to non-clearinghouse creditors as well.

A clearinghouse achieves asset partitioning through its setoff right, which permits it to cancel its obligations to a failed member to the extent of that member's obligations to the clearinghouse. Although setoff is also available on bilateral contracts, central clearing greatly expands setoff opportunities by transforming a group of firms into a single counterparty for setoff purposes. While setoff is redistributive in terms of total creditor payouts, it also accelerates payouts, a result that is efficient generally and that has the specific advantage during a financial crisis of reducing systemic risk. Unsecured creditors who are unable to exercise setoff rights recover instead according to bankruptcy's pro rata rule, which pays each creditor based on the ratio between that creditor's claim and the debtor's total liabilities. Under the pro rata rule, no creditor can be paid until all of the debtor's liabilities have been identified and confirmed. The priority created by the setoff right overrides the pro rata rule, permitting a clearinghouse—and, by extension, its members—to recover immediately upon a member's default.

Faster payouts reduce illiquidity and uncertainty, two important sources of systemic risk. By setting off claims with a failed member, a clearinghouse diverts cash that would otherwise become trapped in the member's bankruptcy estate and uses it to pay debts owed to other members. As a result, counterparties are less likely to fail during a crisis for lack of liquidity. Quicker payouts also reduce uncertainty about the solvency of the failed firm's creditors, making them less likely to suffer runs that could force them into bankruptcy. This rerouting of cash away from a failed clearinghouse member to solvent members reduces systemic risk by keeping cash circulating in the financial system. Importantly, a clearinghouse can reduce illiquidity and uncertainty in a financial crisis even if the clearinghouse itself is insolvent. If the clearinghouse fails, solvent members can still exercise setoff rights to cancel debts that might otherwise require them to pay cash into the estates of insolvent members.

By identifying faster creditor payouts as the main systemic advantage of clearinghouses, the Article shows that there is a high degree of complementarity between Dodd-Frank's clearing mandate and another one of its controversial provisions: its "orderly liquidation authority" for systemically important firms. The statute empowers government officials to seize and liquidate a financial firm that they consider a systemic risk. The designated liquidator is the Federal Deposit Insurance Corporation (FDIC), which in theory can act more quickly than a bankruptcy trustee. Because clearinghouses can resolve creditor claims rapidly,

they are both substitutes for, and complements to, the FDIC in its role as orderly liquidator. When a firm is systemically important primarily because of its swap contracts, the clearing mandate may make FDIC receivership unnecessary. And when a clearinghouse member is seized by the FDIC, the clearinghouse will simplify the FDIC's task by carving out a portion of the member's affairs for separate, parallel resolution. In this way, clearinghouses and the FDIC will act as co-liquidators, and through specialization and division of labor will be able to resolve a failed firm's affairs more quickly than the FDIC could alone.

The idea that greater liquidity and certainty are the primary systemic benefits of central clearing also suggests a limited justification for a controversial set of special bankruptcy-law exemptions for derivatives counterparties. Before the 2008 crisis, Congress amended the Bankruptcy Code to exempt such counterparties from core provisions relating to the automatic stay and to preferential and fraudulent transfers. Scholars have roundly condemned these exemptions, arguing that they exacerbate financial crises by encouraging counterparties to demand collateral from a struggling firm in a manner analogous to a bank run. But the fear of run-like behavior is less warranted as applied to clearinghouses, which follow mechanical margin-posting rules that permit them to demand more collateral only when there is an actual decline in the market value of a trading firm's clearinghouse assets. In other words, clearinghouses do not react to counterparty risk in a manner that leads them to "run." Meanwhile, the special exemptions increase liquidity in a crisis by allowing a clearinghouse to keep cash acquired in hedging transactions during the 90 days before a member files for bankruptcy. As applied to clearinghouses in particular, the controversial bankruptcy exemptions for derivatives seem to make economic sense.

To be sure, central clearing's capacity to accelerate creditor payouts does not alone establish that the net impact of Dodd-Frank's clearing mandate will be positive. Clearinghouses also have costs: clearing-mandate skeptics such as Craig Pirrong and Mark Roe have shown that clearinghouses can, for example, encourage overinvestment in risky assets by weakening the link between a trading firm's insolvency risk and its cost of credit on its derivatives contracts. This Article, however, establishes that central clearing also offers an important set of economic benefits that prior scholarship has overlooked. And the Article further argues that regulators can improve the cost-benefit proposition by using clearinghouses to maximize netting opportunities.

Part I of this Article describes the mechanics of clearinghouses, focusing on their traditional netting and loss-mutualization functions. Part II describes how the 2008 bailouts of two major swap-market participants, Bear Stearns and AIG, prompted Congress to include the clearing mandate in Dodd-Frank. Part III reviews the main arguments by the clearing mandate's academic proponents, and it describes how these arguments have been rebutted by critics. Part IV presents the thesis that central clearing accelerates creditor payouts and thus reduces illiquidity and uncertainty during a financial crisis. Part V extends the thesis by arguing that clearinghouses can both complement and substitute for the FDIC in its role as

orderly liquidator of systemically important financial firms. Finally, Part VI identifies initial implications for regulators.

## I. THE MECHANICS OF CENTRAL CLEARING

A clearinghouse is an organization that acts as a central counterparty for a group of firms that regularly trade among themselves.<sup>1</sup> As an illustration, imagine that Buyer wishes to purchase a cattle future from Seller. The two firms could deal with each other directly, forming a “bilateral” contract. But if both firms are members of the Chicago Mercantile Exchange, they instead will contract through CME Clearing, the clearinghouse that backs that exchange.<sup>2</sup> The clearinghouse interposes itself between the firms, serving as the counterparty to each. Instead of selling the cattle future to Buyer, Seller sells the future to the clearinghouse, which sells an identical future to Buyer. In this way, the clearinghouse is, within the circle of its members, the “seller for every buyer and the buyer for every seller.”<sup>3</sup>

Clearinghouses traditionally were formed to achieve two results: netting and loss mutualization. Recently, lawmakers and commentators have emphasized clearinghouses’ additional capacity to serve also as regulatory focal points. This part considers each of these clearinghouse functions in turn.

### A. Multiparty Netting

Netting means that when a clearinghouse member fails, the in-house (that is, centrally cleared) debts owed *to* that member are applied to pay the in-house debts owed *by* that member.<sup>4</sup> In this way, the clearinghouse functions as an agreement in which each member pledges its in-house assets, which include the debts it is owed by other members, as collateral for its in-house liabilities.

Netting is redistributive: when one clearinghouse member fails, netting increases total recoveries for other members by the same amount that it decreases total recoveries for the failed member’s outside (non-clearinghouse) creditors.<sup>5</sup> To

---

<sup>1</sup> See Anupam Chander and Randall Costa, *Clearing Credit Default Swaps: A Case Study in Global Legal Convergence*, 10 CHI. J. INT’L L. 639, 53 (2010).

<sup>2</sup> See Chicago Mercantile Exchange, “An Introduction to Futures and Options” 7 (2006) (describing how CME Clearing backstops futures trading on the exchange), available at [http://www.cmegroup.com/files/intro\\_fut\\_opt.pdf](http://www.cmegroup.com/files/intro_fut_opt.pdf).

<sup>3</sup> Commission on Payment and Settlement Systems, Technical Commission of the International Organization of Securities Commissioners, Bank for International Settlements, *Recommendations for Central Counterparties 1* (2004), available at <http://www.bis.org/publ/cps61.pdf>.

<sup>4</sup> Craig Pirrong, *The Clearinghouse Cure*, REGULATION, Winter 2008-09, pg. 47.

<sup>5</sup> Craig Pirrong explains the impact of netting in a derivatives clearinghouse as follows:

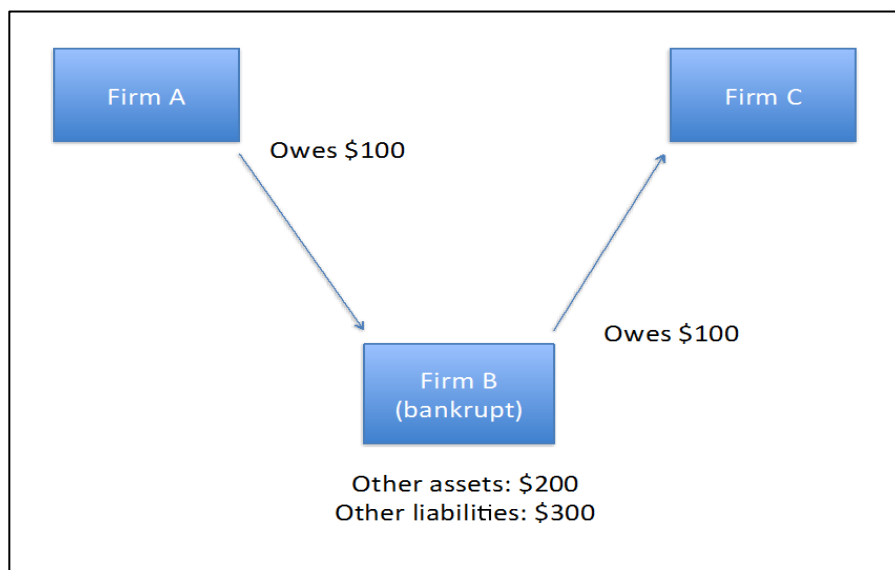
[N]etting effectively gives derivatives counterparties a priority claim on one of the dealer’s assets—its winning derivatives positions. This priority shifts wealth from other creditors to these counterparties, and hence is not a social benefit, but a transfer.

*Id.* at 47; see also Craig Pirrong, *Derivatives Clearing Mandates: Cure or Curse?*, 22 J. OF APPLIED CORP. FIN. 48, 50 (Summer 2010) (“[N]etting effectively changes priorities among creditors; netting improves the priority of derivatives counterparties in bankruptcy, and lowers the priority of a bankrupt’s other creditors”); Craig Pirrong, *The Inefficiency of Clearing Mandates*, POLICY ANALYSIS,

see why, imagine that Firm A owes Firm B \$100 and that Firm B owes Firm C \$100. Imagine further that Firm B has other assets worth \$200 and other unsecured liabilities of \$300. Firm B is thus insolvent, and we will assume it files for bankruptcy. Consider first what happens if the contracts among Firms A, B and C are bilateral. Bankruptcy law requires Firm A to pay the \$100 it owes into Firm B's bankruptcy estate.<sup>6</sup> And Firm C must submit a \$100 proof of claim to the bankruptcy trustee in order to recover on its debt from Firm B. Firm B's estate will thus have a total of \$300 in assets and \$400 in liabilities. Since all of the debts are unsecured, the trustee applies the pro rata rule,<sup>7</sup> paying each creditor 75 cents on the dollar. Firm C receives \$75, and Firm B's remaining creditors receive \$225.

**Figure One**

**Open Three-Firm Example, Bilateral Trading**



Now consider what happens if we assume instead that the trades among Firms A, B, and C are centrally cleared, but that the remainder of Firm B's debts are

---

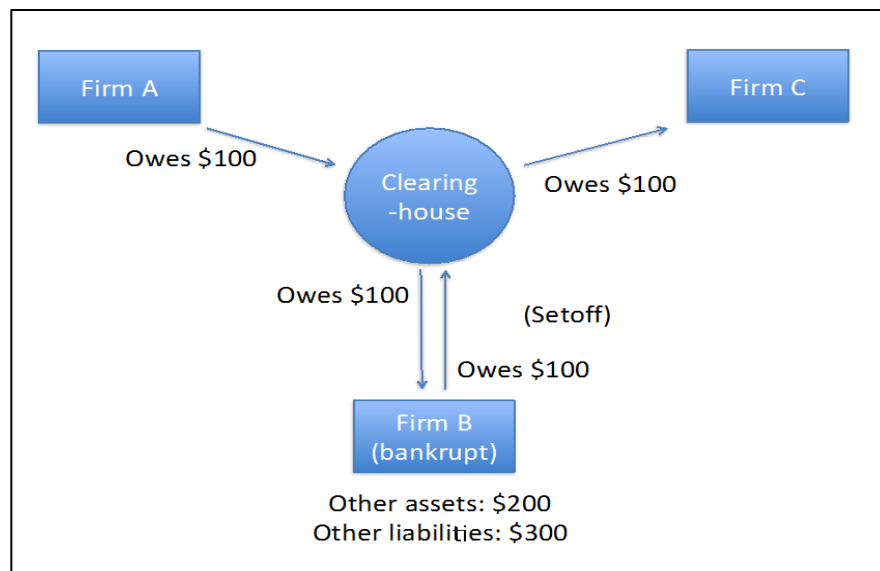
July 21, 2010, at 20 (“[N]etting reallocates wealth in the event of a default from the dealer’s non-derivative creditors to its derivatives counterparties”); Mark Roe, “Post-Crisis Clearinghouse Over-Confidence,” at 19-23 (working paper, July 9, 2012) (on file with author) (describing how netting transfers losses from clearinghouse members to non-clearinghouse creditors).

<sup>6</sup> 11 U.S.C. § 542(b). This would be true even if the contract between Firms A and B were a financial derivative that had not yet matured. Such contracts typically provide for immediate termination upon an event of default, with the out-of-the-money party obligated to make a termination payment based on the cost of replacing the contract at current market prices. Some derivatives contracts include “walkaway” clauses that purport to waive the termination payment when the event of default is the bankruptcy of the in-the-money counterparty. Bankruptcy courts, however, have deemed walkaways to be unenforceable *ipso facto* clauses, and they are expressly disallowed in the Dodd-Frank Act for purposes of the orderly liquidation authority. See *Lehman Bros. Special Fin. Inc. v. Ballyrock ABS CDO 2007-1 Ltd.* (In re *Lehman Bros. Holdings Inc.*), Adv. Pro. No. 09-01032, 2011 WL 1831779 (Bankr. S.D.N.Y. May 12, 2011) (addressing the enforceability of a walkaway-like clause under the Bankruptcy Code); Dodd-Frank § 210(c)(8)(F).

<sup>7</sup> See *id.* at § 726(b) (specifying that unsecured claims of equal rank are paid pro rata).

not. When Firm B files for bankruptcy, Firm A does not pay the \$100 it owes Firm B into the bankruptcy estate; rather, it pays that amount to the clearinghouse, which in turn pays the same amount to Firm C. Firm C therefore recovers \$100, or \$25 more than it would have recovered without the clearinghouse. Meanwhile, Firm B's bankruptcy estate consists solely of its outside assets (\$200) and liabilities (\$300). The outside creditors recover 67 cents on the dollar, or \$200 total, which is \$25 less than they would have recovered without the clearinghouse. Relative to bilateral trading, netting through the clearinghouse has transferred \$25 from the outside creditors to Firm C, the in-house creditor.

**Figure Two**  
**Open Three-Firm Example with Clearinghouse**



The legal basis for netting is the Bankruptcy Code's allowance for setoffs. As noted above, when a debtor files for bankruptcy, parties who owe it money must pay what they owe into the bankruptcy estate for the benefit of the debtor's general creditors.<sup>8</sup> An exception applies, however, if the party who owes money *to* the debtor is also owed money *by* the debtor. In that case, the party may exercise any contractual rights to "set off" the amount he owes against the amount he is owed and then hand over (or, if he is owed more than he owes, put in a claim for) the difference.<sup>9</sup> In this way, a debt owed to the debtor by one of its creditors effectively serves as collateral for that creditor's own claim against the debtor.<sup>10</sup> This means that the creditor has a prior claim to one of the debtor's assets, namely the debt the creditor himself owes. This creditor therefore recovers more than he would if he had to share that asset on a pro rata basis with the rest of the debtor's unsecured

<sup>8</sup> *Id.* at § 542(b).

<sup>9</sup> *Id.* at §§ 542(b), 553(a).

<sup>10</sup> See John C. McCoid II, *Setoff: Why Bankruptcy Priority?*, 75 VA. L. REV. 15, 32 (1989) (comparing setoff to a security interest).

creditors.<sup>11</sup> And because the division of a debtor's assets among creditors is zero-sum, the larger recovery for the creditor who is allowed to set off necessarily means smaller recoveries for the rest.

Importantly, the Bankruptcy Code's allowance for setoffs applies only to debts that are "mutual,"<sup>12</sup> meaning setoff is not allowed to the extent that the debtor's debits and credits are with different parties. Consider again the three-firm example with bilateral trading, depicted in Figure One. When Firm B fails and defaults on its debt to Firm C, Firm A is not permitted to use that debt to cancel its own obligation to pay \$100 into Firm B's bankruptcy estate. The party whom the debtor owes (Firm C) is not the same party who owes the debtor (Firm A).<sup>13</sup>

A clearinghouse makes multiparty netting possible because it transforms its members into a single counterparty for setoff purposes. Thus, if the claims among Firms A, B and C are centrally cleared (as depicted in Figure Two), then Firm A does not owe \$100 to Firm B; rather, Firm A owes \$100 to the clearinghouse, which in turn owes \$100 to Firm B. And Firm B does not owe Firm C \$100 either; rather, Firm B owes \$100 to the clearinghouse, which owes \$100 to Firm C. Therefore, when Firm B enters bankruptcy, it has a pair of offsetting \$100 obligations with a single counterparty: the clearinghouse. Because the obligations are "mutual," the Bankruptcy Code permits them to be set off and hence cancelled. What is left is Firm A's \$100 debt to the clearinghouse and the clearinghouse's \$100 debt to Firm C, and the first can be used to pay the second. Firm C recovers 100 cents on the dollar, to the detriment of Firm's B outside creditors.

The higher payout that clearinghouse members receive through netting could also be achieved through more traditional forms of collateral. To see this, consider again the three-firm example in which Firm A owes Firm B \$100 and Firm B owes Firm C \$100. To close the loop among the firms, we now will assume that Firm C also owes Firm A \$100. (For future reference, this will be called the "closed" three-firm example, as contrasted with the earlier example, which, as labeled in Figures One and Two, is "open.")

---

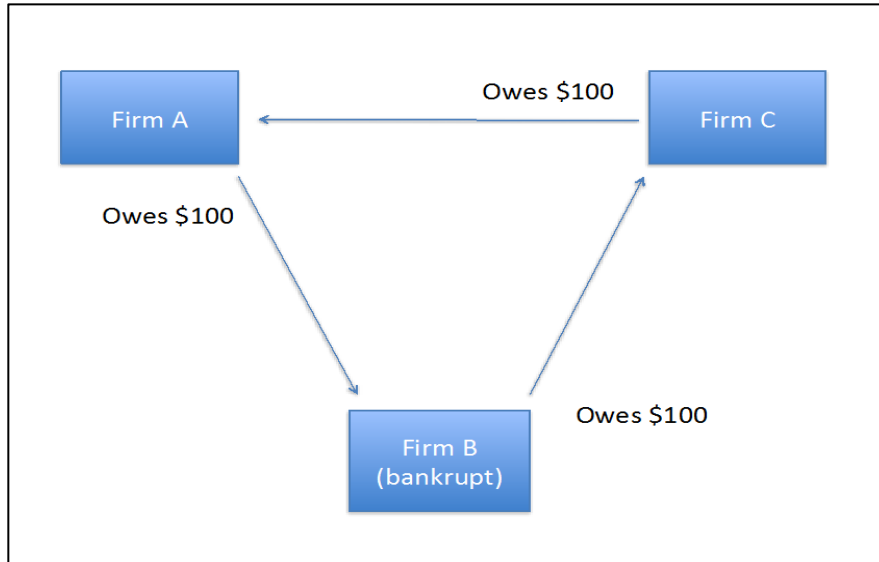
<sup>11</sup> See *In re Elcona Homes Corp.*, 863 F.2d 483, 485 (7th Cir. 1988) (Posner, J.) (describing how setoff increases the recovery of the creditor who sets off).

<sup>12</sup> 11 U.S.C. 553(a); *Westinghouse Credit Corp. v. D'Urso*, 278 F.3d 138, 149 (2d Cir. 2002) (ruling that mutuality requirement is satisfied only when debts are "owed to and from the same persons in the same capacity") (citation and internal quotation marks omitted).

<sup>13</sup> See, e.g., *In re SemCrude*, 399 B.R. 388, 393-94 (2009) (refusing to enforce a multiparty setoff agreement because "[a]llowing a creditor to offset a debt it owes to one corporation against funds owed to it by another corporation—even a wholly-owned subsidiary—would...constitute an improper triangular setoff under the [Bankruptcy] Code").

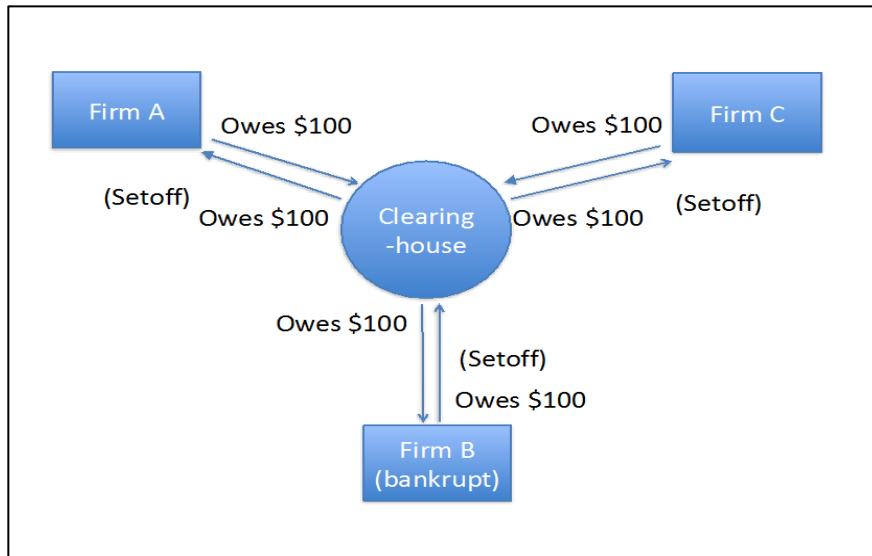


**Figure Three**  
**Closed Three-Firm Example, Bilateral Trading**



To ensure that each party will recover in full in case of default, Firm A could post a \$100 Treasury bond to secure its debt to Firm B, Firm B could post a \$100 Treasury bond to secure its debt to Firm C, and Firm C could post a \$100 Treasury bond as security for Firm A. In this way, three \$100 bonds are needed to secure the three transactions. If we add a clearinghouse, however, the bonds become unnecessary. Firm A no longer needs to post a \$100 bond to reassure Firm B of repayment, because Firm B knows that, if Firm A fails, then Firm C's \$100 debt to Firm A will become payable to Firm B instead. Thus, when Firm A fails, Firm C's \$100 debt to Firm A will be set off against Firm B's original \$100 debt to Firm C. Firm B therefore has no net liability, just as was true when Firm A's \$100 obligation to it was fully secured by a bond. The same logic applies to Firms A and C as well. The obligations within the clearinghouse—which, again, are assets from the perspective of the parties to whom they are owed—serve as substitute collateral, making it unnecessary for the members to tie up capital in Treasury bonds or other traditional types of collateral.

**Figure Four**  
**Closed Three-Firm Example with Clearinghouse**



The fact that clearinghouse netting “frees up” traditional collateral does not mean that it thereby increases recoveries for a failed member’s outside creditors. Netting reduces the need for traditional collateral only to the extent that it denies a failed member’s outside creditors access to a different asset, namely, a debt owed to that member. As an illustration, consider the perspective of the outside creditors of Firm B. In the case without the clearinghouse (depicted in Figure Three), Firm B posts a \$100 Treasury bond to assure Firm C of recovery. That bond will be unavailable to Firm B’s outside creditors if Firm B fails, because then Firm C will seize the bond and apply it in satisfaction of its \$100 claim against Firm B. On the other hand, what is available to Firm B’s outside creditors is the \$100 debt owed by Firm A, a debt that is fully secured by a different Treasury bond. So the net effect on Firm B’s outside creditors of the firm’s transactions with Firms A and C is a wash. If instead we have a clearinghouse (Figure Four), the \$100 in assets that otherwise would be tied up in a Treasury pledged to Firm C will now simply be a part of Firm B’s estate. But the \$100 owed by Firm A will no longer be available to Firm B’s outside creditors if Firm B fails, as Firm A will set this off against the \$100 it is owed, via the clearinghouse, by Firm C. So, again, the net effect of the two transactions on Firm B’s outside creditors is a wash.

These examples show that netting through clearinghouses does not increase the sum of creditor recoveries. Rather, netting makes it cheaper for a debtor to give priority to select creditors. Without netting, a debtor’s main option for privileging selected creditors is to pledge assets as security, which may require it to tie up capital in traditional forms of collateral such as Treasury bonds. But this mechanism for granting priority entails two costs: an opportunity cost to the extent that the risk-adjusted returns on the collateral are lower than those the debtor could earn elsewhere; and the administrative costs of posting the collateral. By

reducing the need for traditional collateral, netting avoids these costs.<sup>14</sup> Netting is secured lending on the cheap.

The fact that netting makes priority-granting cheaper might seem to imply that it is efficient from a social perspective—i.e., that it *creates* social wealth. But netting has other consequences that must be considered. As observed above, netting transfers value from outside creditors to in-house creditors. In other words, netting redistributes wealth, and so efforts to promote it could fairly be described as a type of rent-seeking. And, per standard economic theory, rent-seeking destroys social wealth to the extent that would-be transferees expend resources trying to exact a transfer and would-be transferors expend resources trying to thwart it.<sup>15</sup> By making rent-seeking cheaper for the transferees, netting might increase defensive spending by transferors by a greater amount, leading to a loss of social wealth. To be more confident that netting is socially efficient, we need a reason to believe that it does more than just make it easier for a debtor to favor one creditor over others.

Multi-party netting is an essential function of clearinghouses in the sense that parties cannot accomplish it by contract alone, at least as long as the Bankruptcy Code's allowance for setoffs requires mutuality. And that requirement serves an important purpose, as it establishes which creditor has the first claim to a particular debt owed to the debtor. In this way, mutuality is like the rule whereby a secured creditor can perfect his lien by taking possession of his collateral. Without the mutuality requirement, we would need some other mechanism for resolving priority disputes when the same debt had been pledged to multiple creditors.<sup>16</sup> One option would be a public filing system, but in that case there would be little practical difference between setoffs and conventional secured lending, and it is not obvious that the administrative expenses of complying with a filing requirement in the multiparty context are lower than the costs of running a clearinghouse.

#### B. *Loss Mutualization (for Members and Customers)*

The second traditional function of central clearing is to mutualize counterparty risk.<sup>17</sup> Consider again the example in which Seller sells a cattle future to Buyer and the trade is cleared through the Chicago Mercantile Exchange. Formally, the futures contract means that Seller has agreed to deliver cattle on a specified date, and Buyer has agreed to pay on that date the price specified in the

---

<sup>14</sup> See Craig Pirrong, *The Economics of Clearing in Derivatives Markets: Netting, Asymmetric Information, and the Sharing of Default Risks Through a Central Counterparty* (working paper, January 8, 2009), at 26, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1340660](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1340660).

<sup>15</sup> See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 45 n.4 (8<sup>th</sup> ed.) (2011).

<sup>16</sup> Imagine that Firms A, B, and C mutually agree that, if Firm B files for bankruptcy, any amounts owed it by Firm A will go to repaying any debts that Firm B owes to Firm C. Imagine further that Firms A and B then enter into an identical three-way contract with Firm D. If Firm B then files for bankruptcy, who gets to collect from Firm A in satisfaction of its claim on Firm B: Firm C or Firm D? To avoid such a priority conflict, either Firms A, B, and C would have to clear their contracts through a central counterparty or Firm C would have to take a security interest in Firm A's debt to Firm B.

<sup>17</sup> See Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 8.

contract. Most futures, however, are cash settled: rather than exchanging cattle on the maturity date, the parties settle based on the difference between the contract price and the current market price.<sup>18</sup> If the market price is higher than the contract price, Seller pays Buyer the difference; otherwise, vice-versa. Without central clearing, each party bears the risk that the other will fail to make the required settlement payment on the maturity date. With central clearing, this counterparty risk is transferred to the clearinghouse. And since most clearinghouses are owned by their members,<sup>19</sup> what the typical clearinghouse really does is spread among all of its members the counterparty risk that each would otherwise bear individually on its in-house trades.

We have already seen one way that clearinghouses reduce their exposure to counterparty risk: netting. By seizing debts owed to a failed member, a clearinghouse reduces its potential losses on debts owed by that member. At times, however, a member's out-of-the-money (losing) positions exceed its in-the-money (winning) positions, leaving the clearinghouse exposed by the difference. To buffer this risk, clearinghouses collect assets from members, through two different mechanisms.

First, clearinghouses require members to post collateral, or "margin," on their in-house contracts.<sup>20</sup> Margin typically consists of high-grade securities.<sup>21</sup> So, in the cattle future example, when Seller sells the future to Buyer, the clearinghouse may require both firms to post "initial" margin.<sup>22</sup> Subsequently, the price of cattle may rise above the contract price, putting Seller out-of-the-money and exposing the clearinghouse to the risk that Seller will fail and the clearinghouse will have to step in and fulfill Seller's obligations to Buyer (who is now in-the-money). If this exposure exceeds the value of Seller's initial margin, the clearinghouse may require Seller to post additional, "variance" margin.<sup>23</sup> Conversely, if the price of cattle falls back to the contract price, Seller may be allowed to take back some of its collateral, as the risk to the clearinghouse will then have abated. If the price falls further, Buyer may be required to post variance margin. Clearinghouse positions are typically "marked to market" in this way at least daily, subjecting members to margin calls that they must fulfill to continue trading.<sup>24</sup> If a member cannot make a margin call or files for bankruptcy, its unexpired contracts with the clearinghouse

---

<sup>18</sup> See Chicago Mercantile Exchange, "An Introduction to Futures and Options," 7 (2006) (explaining the difference between physical-delivery and cash-settled futures, and noting that only about 3% of futures result in physical delivery).

<sup>19</sup> CME Clearing is an exception; it is owed by CME Group, Inc., which is publicly traded. See *id.* at 7-8.

<sup>20</sup> See CME Group, "CME Clearing Financial Standards" 7 (2012), available at <http://www.cmegroup.com/clearing/files/financialsafeguards.pdf>.

<sup>21</sup> *Id.* at 9 (describing acceptable collateral as including cash, U.S. Treasury bonds, foreign sovereign debt instruments, and stocks).

<sup>22</sup> Sean Griffith, *Governing Systemic Risk: Towards a Governance Structure for Derivatives Clearinghouses*, 61 EMORY L.J. 1153, 1182 (2012).

<sup>23</sup> *Id.*

<sup>24</sup> Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 9.

immediately terminate, and the member is indebted to the clearinghouse to the extent of the member's out-of-the-money positions. The clearinghouse will set these positions off against the member's in-the-money positions, and it will liquidate the member's posted collateral to the extent of any shortfall.

Besides providing collateral on their in-house positions, clearinghouse members also make capital contributions to a guaranty fund that is tapped if a member fails and the collateral it has posted is insufficient to cover its net in-house debts.<sup>25</sup> All clearinghouse members, regardless of trading volume, must make a minimum contribution to the guaranty fund,<sup>26</sup> and the clearinghouse can call for additional contributions if the fund is depleted.<sup>27</sup>

The guaranty fund is the mechanism by which clearinghouse members mutualize counterparty risk. To the extent of the fund, the members collectively guarantee their in-house debts. Such a system of mutual guarantees is especially useful when a clearinghouse backs an exchange, as the first clearinghouses did.<sup>28</sup> The guarantees permit exchange rules requiring that all trades be executed at the best offered price regardless of the creditworthiness of the trader making the offer.<sup>29</sup> And the guaranty fund prevents members from free riding on the system of mutual guarantees without keeping sufficient liquidity to permit them to honor their own obligations as guarantors.

Not only do clearinghouse members guarantee each other's in-house debts, but they also collectively guarantee their debts to their various customers.<sup>30</sup> Thus, besides trading on their own accounts, clearinghouse members—most of which are banks and brokerages—typically execute trades on behalf of third parties.<sup>31</sup> Consider again the previous example in which Seller sold a cattle future to Buyer, but assume now that Buyer purchased the future on behalf of its customer, McDonald. Assume further that the price of cattle rises—yielding a profit for McDonald—but Buyer fails before turning over the money McDonald is owed. Without the clearinghouse, McDonald's only recourse would be to submit a proof of claim in Buyer's bankruptcy proceeding and wait to be paid with the rest of the firm's unsecured creditors. But since Buyer is part of a clearinghouse, when it fails

---

<sup>25</sup> See, e.g., CME Group, "CME Clearing Financial Standards," *supra* note 20, at 8. At LCH.Clearnet, the reserve fund is called the "clearing fund." LCH.Clearnet: A General Introduction to Risk Mitigation," *supra* note 22, at 10.

<sup>26</sup> See CME Clearing Financial Standards," *supra* note 20, at 8-9 (describing how members that trade in credit default swaps must contribute at least \$50 million to the guaranty fund).

<sup>27</sup> *Id.* at 9 (describing how new members are subject to potential contribution requirements at least monthly).

<sup>28</sup> See Pirrong, Clearinghouse Cure, *supra* note 5, at 46 ("The Minneapolis Grain Exchange established the first modern clearinghouse for futures in 1891, and other futures exchanges in the United States adopted clearing in the years between 1891 and 1925.").

<sup>29</sup> *Id.*

<sup>30</sup> Pirrong, Inefficiency of Clearing Mandates, *supra* note 5, at 9 ("[Clearinghouse] members effectively insure the customers against default.").

<sup>31</sup> Pirrong, *supra* note 14, at 15.

the clearinghouse will assume responsibility for all of its clearinghouse contracts and hence will pay McDonald his full claim.<sup>32</sup> Or, if McDonald's contract is not yet due, the clearinghouse will arrange for another clearinghouse member to serve as McDonald's broker and take responsibility for his contract. By immediately reassigning failed members' customer contracts,<sup>33</sup> clearinghouses build public confidence in trading markets, to the common benefit of firms that serve as market intermediaries.

### C. Information Gathering and the "Locus for Regulation"

Another oft-cited function of clearinghouses is their capacity to encourage competitive trading by collecting and publishing data on market prices and trading volumes.<sup>34</sup> In a similar way, a clearinghouse's role as a trading intersection makes it a convenient "locus for regulation."<sup>35</sup> For example, regulators may wish to place minimum collateral rules on derivatives, and monitoring for compliance may be easier if all trades go through a central counterparty. As described by Sean Griffith, clearinghouses can serve as "an easy point of entry" for regulators.<sup>36</sup>

Information-gathering is not a benefit of central clearing per se, as the same can be achieved if market participants register with an over-the-counter data hub that aggregates and publishes trading information.<sup>37</sup> Before the 2008 crisis, the Depository Trust and Clearing Corporation's Trade Information Warehouse served this function in the market for credit default swaps.<sup>38</sup> While participation in that data hub is voluntary,<sup>39</sup> Congress could require it by statute, thereby accomplishing the same information-gathering benefit attributed to clearing mandates. Similarly, regulators could use data hubs to monitor compliance with trading rules. Nonetheless, clearinghouses' capacity to serve as regulatory loci was the main justification for the clearing mandate cited in Dodd-Frank's legislative history, as described next.

## II. SWAPS IN THE FINANCIAL CRISIS AND IN DODD-FRANK

According to legislative history, the impetus for Dodd-Frank's clearing mandate was the bailouts of two major players in the market for credit default

---

<sup>32</sup> *Id.* at 17.

<sup>33</sup> See, e.g., CME Clearing Financial Standards," *supra* note 20, at 15 (describing how customer accounts are handled upon a member's default).

<sup>34</sup> See, e.g., Jeremy K. Kress, *Credit Default Swaps, Clearinghouses, and Systemic Risk: Why Centralized Counterparties Must Have Access to Central Bank Liquidity*, 48 HARV. J. ON LEGIS. 49, 69 (2011).

<sup>35</sup> Chander & Costa, *supra* note 1, at 38.

<sup>36</sup> Sean J. Griffith, "Uniformity versus Diversity: Making a Global Market in Derivatives Regulation" 19 (working paper, September 9, 2012) (on file with author).

<sup>37</sup> See Pirrong, *supra* note 14, at 62.

<sup>38</sup> See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-09-397T, SYSTEMIC RISK: REGULATORY OVERSIGHT AND RECENT INITIATIVES TO ADDRESS RISK POSTED BY CREDIT DEFAULT SWAPS 20 (2009), <http://www.gao.gov/assets/130/121774.pdf>.

<sup>39</sup> *Id.*

swaps: Bear Stearns and AIG. During the 2008 crisis, government officials used taxpayer funds to keep these firms out of bankruptcy and thereby to protect their swaps counterparties. But the bailouts were politically unpopular, leading Congress to enact a statute that aims to protect swaps markets through other means.

#### A. *The Swap-Market Bailouts of 2008*

Although the first clearinghouses backstopped trading in commodities futures,<sup>40</sup> clearinghouses are now used in the trading of more complex financial derivatives as well.<sup>41</sup> An example is SwapClear, a clearinghouse that handles over 50% of the trading in interest rate swaps.<sup>42</sup> During the 2008 financial crisis, however, trading in one important type of financial derivative remained entirely bilateral: the credit default swap.<sup>43</sup>

A credit default swap is a financial derivative used to hedge or speculate on the risk that one or more debt securities will default.<sup>44</sup> The contract is between a protection buyer and a protection seller. The buyer makes quarterly payments analogous to insurance premiums.<sup>45</sup> The seller agrees in return that, if a debt security named in the contract defaults, the seller will pay the buyer the difference between the security's face value and its post-default market value.<sup>46</sup> While credit default swaps initially were written to protect against default risk on corporate bonds, by 2008 large markets also existed for swaps referencing government bonds and mortgage-backed securities.<sup>47</sup>

Credit default swaps are traded, with the position of the protection buyer often changing hands before the contract expires. Several large Wall Street firms serve as credit default swap dealers, matching buyers with sellers and often serving as the counterparties to each.<sup>48</sup> At the beginning of 2008, one of Wall Street's

---

<sup>40</sup> See note 28, *supra*.

<sup>41</sup> *Id.* at 5.

<sup>42</sup> See LCH.Clearnet.com, [http://www.lchclearnet.com/swaps/swapclear\\_for\\_clearing\\_members/](http://www.lchclearnet.com/swaps/swapclear_for_clearing_members/) (last visited Nov. 15, 2012). An interest rate swap is a derivative in which one party makes periodic payments based on a fixed interest rate and the other party makes return payments based on a variable interest rate such as LIBOR. The swap is cash-settled each period for the rate difference. John D. Finnerty & Kishlaya Pathak, *A Review of Recent Derivatives Litigation*, 16 FORDHAM J. CORP. & FIN. L. 73, 82 (2011).

<sup>43</sup> See Chander & Costa, *supra* note 1, at 654.

<sup>44</sup> *Id.* at 649, 668.

<sup>45</sup> Housman Shadab, *Guilty By Association: Regulating Credit Default Swaps*, 4 ENTREP. BUS. L.J. 407, 431 (2010). The analogy between credit default swaps and insurance is imperfect because the protection buyer need not own the debt whose default the contract protects against. See M. Todd Henderson, *Credit Derivatives are not "Insurance,"* 16 CONN. INS. L.J. 1, 18-19 (2009).

<sup>46</sup> This describes a cash-settled credit default swap. Another settlement option is physical delivery, in which the protection buyer delivers the defaulted debt security to the protection seller in exchange for a payment equal to the security's face value. *Id.* at 432.

<sup>47</sup> See Chander & Costa, *supra* note 1, at 655.

<sup>48</sup> See Shadab, *supra* 45 note, at 432-434 (describing participants in the market for credit default swaps before the 2008 crisis).

biggest dealers in credit default swaps was the investment bank Bear Stearns.<sup>49</sup> Bear had also invested heavily during the housing bubble in mortgage-backed securities.<sup>50</sup> Prices for these securities fell throughout 2007, causing Bear to announce at the end of that year the first quarterly loss in its 80-year history.<sup>51</sup> A few months later, creditors lost confidence in the firm, and it suffered a severe cash shortage. To avoid bankruptcy, on March 15, 2008, Bear agreed to sell itself to JP Morgan Chase.<sup>52</sup> The deal was partly funded by the Federal Reserve (Fed), which extended a \$29 billion non-recourse loan through which it accepted most of the risk on certain Bear assets that JP Morgan was unwilling to buy outright.<sup>53</sup> In exchange, the Fed insisted that JP Morgan assume responsibility for all of Bear's derivatives counterparties and customers.<sup>54</sup>

Even though Bear had a large number of outstanding swap positions when it was acquired by JP Morgan, it had little *net* exposure on these contracts. This was because Bear was mostly a dealer in the swaps market, with its sell-side positions offset by buy-side positions.<sup>55</sup> In other words, Bear was acting very much like a clearinghouse, assuming counterparty risk on the swaps it sold but not much of the default risk on the debt instruments those swaps referenced. But while credit default swaps were not the reason Bear suffered a liquidity shortage, they were the reason that government officials deemed the bank "too big to fail." As Fed Chairman Ben Bernanke explained to Congress in April 2008, Fed officials feared that the firm's bankruptcy could bring about a "chaotic unwinding of positions" that would threaten the solvency of the firm's "thousands of counterparties."<sup>56</sup> This explains

---

<sup>49</sup> See Rene M. Stulz, *Credit Default Swaps and the Credit Crisis*, 24 J. ECON. PERSPECTIVES 73, 82 (Winter 2010) (stating that Bear held credit default swaps whose notional value was \$2.25 trillion).

<sup>50</sup> *Bear Stearns Reports First-Ever Quarterly Loss*, DEALBOOK (Dec. 20, 2007, 8:19AM) (describing heavy investments by two internal Bear hedge funds in home mortgages), <http://dealbook.nytimes.com/2007/12/20/bear-reports-steep-but-expected-4th-quarter-loss/>.

<sup>51</sup> *Id.*

<sup>52</sup> David Ellis and Tami Luhby, *JPMorgan scoops up troubled Bear*, CNN Money (March 17, 2008, 3:07 PM) (describing how JP Morgan acquired Bear after Bear suffered a "classic" run on the bank), available at <http://money.cnn.com>; Federal Reserve Chairman Ben S. Bernanke, *The Economic Outlook, Testimony Before the Joint Economic Committee, U.S. Congress* (April 2, 2008) (stating that on March 13, 2008, Bear advised government officials that it would have to file for protection under Chapter 11 the next day), at <http://www.federalreserve.gov/newsevents/testimony/bernanke20080402a.htm>.

<sup>53</sup> The Federal Reserve lent \$29 billion to a special purpose entity that used these funds plus \$1 billion lent by JP Morgan to buy a pool of risky Bear Stearns assets. If the assets had proved to be worth less than their purchase price, the losses after the first billion would have been borne by the Federal Reserve. See *Federal Reserve Bank of New York: Maiden Lane Transactions*, available at <http://www.newyorkfed.org/markets/maidenlane.html>.

<sup>54</sup> *Bear Stearns: No Picnic*, THE ECONOMIST, Mar. 29, 2008, at 40.

<sup>55</sup> Stulz, *supra* note 49, at 83.

<sup>56</sup> Testimony of Chairman Bernanke, *supra* note 52. The Fed did not know the precise scope of Bear's derivatives positions, but it was unwilling to run the risk that private parties would fail to unwind those positions in an orderly fashion. Simon Boughey, *After Bear Stearns Scare, Fed Pushes Banks to Form Central Clearing House for CDS Market*, EUROWEEK 64 (June 13, 2008); Yalman Onaran, *Fed Aided Bear Stearns as Firm Faced Chapter 11, Bernanke Says*, BLOOMBERG (Apr 2, 2008).



why the Fed insisted that JP Morgan assume responsibility for all of Bear's derivatives positions. Put another way, the Fed's goal was to protect the derivatives markets, but by choosing a bailout method that kept Bear out of bankruptcy it ended up rescuing Bear's other creditors—such as its bondholders—as well.

Two months after it helped save Bear Stearns, the Fed adopted a policy of encouraging the creation of a clearinghouse for credit default swaps,<sup>57</sup> implying that rescuing Bear might have been unnecessary if a clearinghouse had then been in place. A clearinghouse would have automatically assumed Bear's liabilities to its swaps counterparties and customers, making it unnecessary for the Fed to use government funds to induce JP Morgan to play that role. And a clearinghouse would have given the Fed a more accurate picture of Bear's positions, perhaps permitting a more targeted intervention that would have protected the derivatives markets while allowing Bear to file for bankruptcy.

Before, however, the Fed's efforts to bring about central clearing of credit default swaps could bear fruit, another firm heavily involved in the swaps market—insurance giant AIG—ran out of cash and came to the brink of bankruptcy. In contrast to Bear Stearns, AIG was mostly a protection seller rather than a dealer. In the years leading up to the financial crisis, AIG was the primary seller of credit protection on debt securities backed by subprime mortgages.<sup>58</sup> For many years AIG had enjoyed a Triple-A credit rating, making protection buyers willing to excuse AIG from posting initial margin on its contracts.<sup>59</sup> When, however, both AIG and the securities referenced in its outstanding swaps suffered ratings downgrades, the protection buyers made large collateral calls.<sup>60</sup> AIG could not come up with the cash, primarily because it, like Bear Stearns, had invested heavily in mortgage-backed securities, the market for which remained distressed as home prices continued to fall.<sup>61</sup> To keep AIG afloat, in September 2008 the Fed extended an \$85 billion line of credit,<sup>62</sup> and subsequent measures raised the total government funds available to AIG and its counterparties to \$182 billion.<sup>63</sup> These efforts kept AIG and its protection buyers out of bankruptcy: by early 2009, AIG had paid out \$62 billion to protection buyers to collateralize or unwind their positions.<sup>64</sup> As in the case of

---

<sup>57</sup> Chandler and Costa, *supra* note 1, at 25.

<sup>58</sup> See Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1184-85 (2010).

<sup>59</sup> *Id.* at 1184.

<sup>60</sup> *Id.* at 1187.

<sup>61</sup> See Bullard et al., *Systemic Risk and the Financial Crisis: A Primer*, FED. RES. BANK OF ST. LOUIS REV. 404, 404 (Sept.-Oct. 2009) (describing the drop in house prices and rise in foreclosures through 2008).

<sup>62</sup> Tami Luhby, *Fed in AIG rescue - \$85 billion loan*, CNNMONEY (Sept. 17, 2008), available at <http://money.cnn.com/2008/09/16/news/companies/AIG/>.

<sup>63</sup> Michal Darila, *US Treasury Makes Billions on AIG's Bailout*, WBP ONLINE (Sept. 11, 2012), available at <http://wbponline.com/Articles/View/8011>.

<sup>64</sup> Cyrus Sanati, *Inspector to Audit A.I.G.'s Counterparty Bailouts*, N.Y. TIMES DEALBOOK (April 7, 2009), <http://dealbook.nytimes.com>.

Bear Stearns, the AIG bailout also served as a bailout of the market for credit default swaps.

*B. The Clearing Mandate: Congress Tries to Make Bailouts Obsolete*

The bailouts of Bear Stearns, AIG, and other big firms proved deeply unpopular with the American public.<sup>65</sup> Unsurprisingly, Congress's main regulatory response to the crisis, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, contains several provisions that purportedly make bailouts obsolete. One such provision is the clearing mandate, under which the Commodities Futures Trading Commission (CFTC) and Securities and Exchange Commission (SEC) are empowered to designate categories of swaps for required central clearing.<sup>66</sup> Given their infamous role in the financial crisis, credit default swaps are almost certainly the mandate's main target, and indeed the CFTC's first proposed rules on the mandate's scope would require clearing of two categories of credit default swaps, with the designation of other categories likely to follow.<sup>67</sup>

Dodd-Frank's Senate report quotes Fed Chairman Bernanke for the proposition that "[m]aking derivatives safer is a very important part of solving too-big-to-fail."<sup>68</sup> And the way that mandatory clearing will make derivatives safer is, according to the same report, by ensuring that swaps are secured with sufficient collateral.<sup>69</sup> The report quotes a *Wall Street Journal* editorial which argued that "[p]utting nearly all derivatives through clearinghouses, with tough margin rules, could do away with most of the under-collateralization."<sup>70</sup> The report then mentions AIG in particular and reasons that, "[h]ad market participants or regulators demanded more capital, the company would have had less incentive to enter into such large positions[,] as the projected return on investment would have

---

<sup>65</sup> Among the most unpopular aspects of the government's bailout measures was the Troubled Asset Relief Program (TARP), under which the Treasury Department could spend up to \$700 billion to rescue the financial system. One journalist called TARP as "unpopular as a screaming toddler." Steve Chiotakis, *How Did TARP Become So Unpopular?*, MARKETPLACE (Oct. 1, 2010). Even the Treasury's website admits that "TARP remains deeply unpopular—for understandable reasons." See <http://www.treasury.gov/initiatives/financial-stability/about/pages/plan.aspx>. The AIG bailout a few weeks before TARP was enacted also was "heavily criticized from both the left and right." Michal Darila, *US Treasury Makes Billions on AIG's Bailout*, WBP ONLINE (Sept. 11, 2012), <http://wbponline.com/Articles/View/8011>.

<sup>66</sup> Dodd-Frank §§ 723(a)(2), 763(a). An exception applies to swaps used by non-financial firms "to hedge or mitigate commercial risk." *Id.*

<sup>67</sup> See Commodity Futures Trading Commission, "Clearing Requirement Determination Under Section 2(h) of the CEA; Proposed Rule," 77 Fed. Reg. 47170, 47177 (Aug. 7, 2012) (to be codified at 17 C.F.R. pt. 50) ("CFTC Proposed Rule") (proposing that two classes of credit default swaps referencing corporate debt indices be subject to the clearing mandate).

<sup>68</sup> S. Rep. 111-176 (April 30, 2010).

<sup>69</sup> *Id.* at 30-31.

<sup>70</sup> *Id.* at 31.

been lower.”<sup>71</sup> Finally, the report argues that under-capitalization at Bear Stearns also caused systemic risk by enabling Bear to use derivatives to “hide leverage.”<sup>72</sup>

As these quotations indicate, the Senate report justifies the clearing mandate in terms of clearinghouses’ capacity to serve as regulatory loci. Clearinghouses will serve as points of market entry through which regulatory agencies will enforce stricter margin requirements, which the report characterize as “the main tool for regulating contagion and systemic risk.”<sup>73</sup> In this way, the clearing mandate is intended to work in conjunction with other provisions of Dodd-Frank that increase regulatory control over clearinghouse risk-management practices. For example, the statute directs the Fed to issue “risk management standards” for clearinghouses to address matters such as margin and capital-reserve requirements.<sup>74</sup> And it empowers the SEC and CFTC to issue rules consistent with the Fed’s regulatory guidelines.<sup>75</sup>

While legislative history focuses on the ostensible role of under-collateralization in the 2008 crisis, academic proponents have not limited their defense of the clearing mandate to that historical claim. Rather, they have advanced arguments relating to each of the basic functions of clearinghouses described in Part I. The next part reviews the academic arguments for and against the clearing mandate, focusing in particular on how scholars have analyzed the relationship between central clearing and systemic risk.

### **III. THE DISPUTED CASE FOR THE CLEARING MANDATE SO FAR**

Ever since the Bear Stearns bailout, the notion that clearinghouses can prevent or ameliorate a financial crisis has been the subject of broad scholarly debate. Most participants have supported Dodd-Frank’s clearing mandate, arguing that centralized swap clearing can provide important systemic benefits through both netting and loss mutualization. Those arguments have elicited forceful rebuttals from scholars which have cast doubt on the alleged benefits of mandatory clearing while identifying costs that the proponents overlooked.

The fact that trading in credit default swaps remained bilateral even after trading in most other financial derivatives had moved to clearinghouses is an awkward point for the clearing mandate’s proponents. If central clearing’s benefits to buyers and sellers of credit default swaps really exceeded the costs, then such clearing seemingly would have come about through private initiative, without the need for a government directive.<sup>76</sup> Perhaps for this reason, both the Senate report

---

<sup>71</sup> *Id.* at 30.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.* at 33, quoting Rama Conti, Columbia University, *Credit Derivatives: Systemic Risk and Policy Options*, 2009.

<sup>74</sup> Dodd-Frank § 805(a)(2)(A).

<sup>75</sup> *Id.* at § 805(c).

<sup>76</sup> See Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 2 (arguing that mandatory clearing can be justified only by market failure).

and the mandate’s academic proponents have focused not on general economic benefits of clearinghouses but rather on their particular alleged capacity to reduce systemic risk. Systemic risk is widely conceived as entailing large negative externalities, with the economic damage from a financial crisis radiating well beyond the financial sector. Hence, the reasoning goes, financial firms lack sufficient private incentive to reduce systemic risk, making government intervention necessary. Meanwhile, scholars such as Craig Pirrong and Mark Roe have argued that—regardless of whether systemic risk justifies financial-sector regulation as a general matter—mandatory clearing of swaps is more likely to *increase* systemic risk than reduce it.

To frame the debate over the clearing mandate, this part begins by describing the main current theories of systemic risk. It then reviews the arguments from commentators for and against the clearing mandate, with the discussion organized in terms of the clearinghouse functions identified in Part I.

### A. Sources of Systemic Risk

The concept of systemic risk is based on two observations about the financial sector: the sector is prone to crises that involve the nearly simultaneous failures of multiple financial firms<sup>77</sup>; and these crises often damage the broader economy, often causing deep recessions.<sup>78</sup> The idea that *systemic* failures (within the financial system) often cause *systematic* damage (to the general economy) suggests that systemic risk entails large negative externalities, and it is commonly cited to justify government regulation of the financial sector.<sup>79</sup>

There are at least three factors that seem to explain why the financial sector is prone to sudden, multi-firm failures. One is the sector’s particular vulnerability to

---

<sup>77</sup> See, e.g., Franklin Edwards and Edward Morrison, *Derivatives and the Bankruptcy Code: Why the Special Treatment?*, 22 YALE J. ON REG. 91, 91 (2005) (defining systemic risk as “the risk that multiple major financial market participants will fail at the same time”); George G. Kaufman & Kenneth E. Scott, *What is Systemic Risk, and Do Bank Regulators Retard or Contribute to It?*, 7 IND. REV. 371 (Winter 2003) (“[S]ystemic risk in banking is evidenced by high correlation and clustering of bank failures[.]”).

<sup>78</sup> As Judge Richard Posner has written:

It is because the banking industry is inherently risky that it can collapse without careful macroeconomic management by government, and it is because it is critical to a modern economy that, if it does collapse, it can bring the rest of the economy down with it, as September 2008 proved.

RICHARD POSNER, *THE CRISIS OF CAPITALIST DEMOCRACY* 251 (2010); see also Carmen M. Reinhart and Kenneth S. Rogoff, *THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY* 165 (2009) (showing that banking crises are associated with sharp reductions in economic output); Kathryn Judge, *Fragmentation Nodes: A Study in Financial Innovation, Complexity and Systemic Risk*, 64 STAN. L. REV. 657, 663 (2012) (“It has long been recognized that a failure in the functioning of the financial system imposes significant externalities, adversely affecting persons far removed from the financial institutions at the core of the crisis.”) (citation omitted).

<sup>79</sup> See, e.g., Judge, *supra* note 78, at 107 (“The long and deep recession that arose out of the 2007-2009 financial crisis served as a powerful reminder of these externalities and hence the value of regulations that reduce systemic risk.”).

“macroshocks” such as the bursting of asset bubbles.<sup>80</sup> Economists Carmen Reinhart and Kenneth Rogoff have observed that banking crises in developed economies are especially likely to follow drops in real estate prices, a connection that makes sense given banks’ central role in mortgage lending.<sup>81</sup> When systemic risk arises from financial sector-wide investments in overpriced assets, the failures of financial firms are correlated but do not cause each other; rather, they share a common external cause: the collapse in asset values. Financial firms are particularly vulnerable to the popping of an asset bubble because they tend to have high ratios of debt to equity.<sup>82</sup> This high leverage means that even a small decline in the value of a firm’s assets may be sufficient to render it balance-sheet insolvent—that is, with its liabilities exceeding the value of its assets.

A second factor that contributes to systemic risk is the tendency for financial firms to be among each other’s largest creditors.<sup>83</sup> This type of “interconnectedness” means that one financial firm’s liability is another’s firm’s asset, and therefore that the first firm’s failure could render the second firm insolvent.<sup>84</sup> Interconnectedness is imagined to be a source of financial sector “contagion,” whereby one firm’s failure causes the failures of others rather than merely correlating with them in time.<sup>85</sup>

The third important factor in systemic risk is the special vulnerability of financial firms to shortages of liquidity. A liquidity shortage results from a loss of willingness among lenders to extend credit, depriving businesses of the cash they need to buy supplies and pay debts as they come due. This shortage can be understood in terms of competition between two basic functions of money. Money’s *medium of exchange* function refers to its use in the sale of goods and services and in issuing and repaying debt.<sup>86</sup> But money can also function as a *store of value*, meaning as a form in which wealth is held when its owner does not yet wish to spend it.<sup>87</sup> Unlike money serving as a medium of exchange, money used as a store of value does not circulate. Normally, money is not an attractive store of value because

---

<sup>80</sup> Kaufman & Scott, *supra* note 78, at 372, 381; *see also* Judge, *supra* note 78, at 699 (“Financial crises are often preceded by a bubble in which one or more classes of assets are traded at prices in excess of their fundamental values.”) (citation omitted).

<sup>81</sup> *See* Reinhardt & Rogoff, *supra* note 78, at 142.

<sup>82</sup> *See* Bullard et al., *supra* note 61, at 409.

<sup>83</sup> *See* Kaufman & Scott, *supra* note 78, at 372 (describing “chain reaction” credit failures); Judge, *InterBank Discipline*, 60 U.C.L.A. L. REV. \_\_ (2012-13) (forthcoming), at 20 (describing how large fractions of the loan portfolios of major investment banks consist of credit extended to other financial institutions), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2147899](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2147899).

<sup>84</sup> *Id.* at 373.

<sup>85</sup> *See* Roe, *supra* note 5, at 6 (describing “risk contagion” as resulting from financial firm interconnectedness).

<sup>86</sup> *See* N. GREGORY MANKIW, *MACROECONOMICS* 75-77 (5<sup>th</sup> ed. 2003). Alternatively, some economists identify *standard of deferred payment* as a distinct function of money.

<sup>87</sup> Money’s third basic function is to serve as a unit of account. *Id.*

cash held under a mattress or in a bank vault pays no return.<sup>88</sup> A financial crisis, however, often undermines confidence in stores of value that do pay returns, such as stocks and loans. Therefore, securities are sold and debts are called as investors and lenders try to convert their wealth back into cash. Because of this spike in the relative perceived value of money as a store of value, it stops circulating—hence, liquidity becomes scarce.

Loss of creditor confidence in a financial firm often triggers a “run,” which occurs when many short-term lenders and demand depositors try to withdraw their funds at the same time.<sup>89</sup> The logic of a run is that creditors of a firm that seems headed for bankruptcy would rather receive a full payout immediately than take the risk of a delayed, pro rata bankruptcy payout.<sup>90</sup> Runs are especially pernicious because they can shutter a firm even if it is balance-sheet solvent.<sup>91</sup> Many financial firms invest most of their capital in assets for which buyers are hard to find on short notice. If such a firm experiences a run, it may be forced to raise cash by selling its illiquid assets at “fire sale” prices that reflect a deep discount to fundamental values.<sup>92</sup> Because of this discount, the sales proceeds may be insufficient to repay the firm’s transient creditors while leaving enough cash to cover daily operations. Notably, a solvent firm could not be broken by a run if it could use assets other than cash to repay creditors. Therefore, the failure of such a firm is ultimately due to a lack of liquidity, even if the initial cause is a loss of creditor confidence.

Why would transient creditors lose confidence in a solvent firm? One scenario is that the failure of one financial firm causes creditors to fear, accurately or otherwise, that other financial firms invested heavily in the same overpriced assets or lent heavily to the firm that failed.<sup>93</sup> In this way, fears relating to the first two sources of systemic risk—financial sector-wide bad bets on overpriced assets, and interconnectedness—contribute to the third source, illiquidity. The tendency during crises for creditors to lose confidence even in solvent firms illustrates the

---

<sup>88</sup> Alternatively, money in a vault earns a nominal return when the central bank pays a low interest rate on bank reserves stored there. Currently the Fed pays 25 basis points on reserves stored at Federal Reserve Banks. See <http://www.federalreserve.gov/monetarypolicy/reqresbalances.htm>.

<sup>89</sup> Posner, *supra* note 78, at 43; Judge, *supra* note 78, at 664.

<sup>90</sup> The prospect of a delayed bankruptcy payout makes it rational for a transient creditor to join in a run even if the creditor is confident that the borrower is balance-sheet solvent, as long as there is a meaningful risk that the borrower will fail for lack of cash. See Douglas W. Diamond & Phillip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POL. ECON. 401, 401-02 (1983)

<sup>91</sup> See Steven L. Schwarcz, *Systemic Risk*, GEORG. L.J. 97, 199 (2008) (noting how bank runs during the Great Depression “caused many otherwise solvent banks to default”); Diamond & Dybvig, *supra* note 90, at 402 (describing how even a solvent bank can be shuttered by a run).

<sup>92</sup> “Fundamental value” can be defined to mean the value of an asset to a fully-informed investor who is under no compulsion to buy or sell and who can hold the asset for a long period or, in the case of a debt claim, to maturity. See Kaufman & Scott, *supra* note 78, at 374 (“[D]uring the sorting-out period, the fire sale-driven changes in both financial quantities (flows) and prices (interest rates) are likely to overshoot the ultimate equilibrium levels[.]”).

<sup>93</sup> See Kaufman & Scott, *supra* note 78, at 374 (“in period of great uncertainty and stress...[creditors,] at least temporarily...will not lend at any rate”).

role of uncertainty in systemic risk.<sup>94</sup> Uncertainty can be understood as an aspect of the illiquidity factor, as a firm with sufficient cash need not fear a temporary loss of creditor confidence.<sup>95</sup> The combination of illiquidity and uncertainty in a financial crisis is, like interconnectedness, a mechanism of contagion, with the failure of one firm triggering runs that bring down others.<sup>96</sup>

Not only do runs force firms to sell assets at fire-sale prices, but the causation also goes the other way, with distress-induced asset sales causing runs. This type of contagion can occur if firms being run upon raise cash by selling a type of security that is widely used as collateral.<sup>97</sup> If the forced selling occurs on a large enough scale, the influx of supply may push the security's market price below its fundamental value, triggering margin calls on the contracts that the security is used to collateralize. And if counterparties cannot meet those margin calls, perhaps because of a general liquidity shortage, then the contracts will be terminated and the previously-posted collateral will be sold, suppressing market prices further.<sup>98</sup> In addition, firms that hold the depressed securities as investments will suffer declines in the market values of their balance sheets, possibly touching off runs by transient creditors that, in turn, lead to more fire sales.<sup>99</sup> We might call this succession of forced asset sales the "fire-sale price spiral" dynamic. Like uncertainty, this dynamic is tied to illiquidity as a source of systemic risk, as cash shortages set the spiral in motion by forcing firms to sell assets on a distressed basis.

Illiquidity is perhaps the most pernicious source of systemic risk because it is the primary mechanism by which a financial crisis damages the real (non-financial-sector) economy. The mere threat of a run may cause financial firms to engage in defensive hoarding—curtailing lending and calling loans—in order to build up a war chest of cash.<sup>100</sup> As a result, businesses may be unable to borrow on a short-term basis to meet payrolls and buy inventory. The greater the degree of uncertainty in the economy, the greater the relative attractiveness of cash as a store of value, and hence the more severe the liquidity shortage. It follows that reducing uncertainty

---

<sup>94</sup> *Accord* Judge, *supra* note 78, at 696-97 (describing how "lack of information" contributes to systemic risk by making investors more cautious after "underappreciated risks" manifest).

<sup>95</sup> *Id.* (noting how during a crisis an "uncertainty discount" contributes to "liquidity problems").

<sup>96</sup> Kathryn Judge has described how a combination of illiquidity and uncertainty was a source of distress for many firms during the 2008 crisis:

Without investment banks' excessive reliance on...short-term financing, for example, the reverberations of the systematic loss of information about the value of the assets underlying the [mortgage-backed securities] would likely not have been as severe. At the same time, without information loss, investment banks' reliance on short-term financing might not have been so problematic, and the magnitude of the 2007-09 financial crisis might have been much smaller.

Judge, *supra* note 78, at 701.

<sup>97</sup> Roe, *supra* note 85, at 6.

<sup>98</sup> See Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 28.

<sup>99</sup> See Roe, *supra* note 85, at 6.

<sup>100</sup> Jose Berrospide, "Liquidity Hoarding and the Financial Crisis: An Empirical Evaluation," April 2012, at <http://www.bis.org/bcbs/events/bhbibe/berrospide.pdf>.

and keeping cash in circulation may be among the most important regulatory objectives in a financial crisis.

Each of these sources of systemic risk seems to have played a role in the crisis of 2008. Thus, the connection between financial crises and asset bubbles is illustrated by the fact that 2008 saw the failures or bailouts of five large financial firms that had invested heavily in mortgage-backed securities: AIG, Bear Stearns, Lehman Brothers, Fannie Mae and Freddie Mac.<sup>101</sup> The value of the securities was connected to residential housing prices, which peaked in mid-2006 and had dropped more than 20% by October 2008.<sup>102</sup> The interconnectedness factor, in turn, is illustrated by the collapse of Reserve Primary, a money-market fund that failed after lending heavily to Lehman Brothers. Reserve Primary's failure, in turn, triggered runs on other money market funds, many of which were balance-sheet solvent—thereby illustrating how a combination of illiquidity and uncertainty can cause contagion.<sup>103</sup> Illiquidity due to fear of insolvency is further illustrated by the cash shortage that pushed Bear Stearns into the arms of JP Morgan Chase. And the fire-sale price spiral dynamic is illustrated by the collapse in prices of residential mortgage-backed securities during 2007 and 2008,<sup>104</sup> which contributed to the crisis at AIG by triggering collateral calls on the firm's credit default swaps while at the same time depriving the firm of the ability to sell assets to raise cash.<sup>105</sup> Illiquidity more generally is illustrated by the large increase during the crisis in excess cash reserves held by banks nationwide.<sup>106</sup>

---

<sup>101</sup> See Bullard et al., *supra* note 61, at 404; “Lehman Brothers Files for Bankruptcy, Scrambles to Sell Key Business,” CNBC.com (Sept. 15, 2008), available at <http://www.cnbc.com>.

<sup>102</sup> See S&P/Case-Shiller Home Prices Index, 20-City Composite (showing the drop in housing prices), available at <http://www.standardandpoors.com/indices/sp-case-shiller-home-price-indices>; Bullard et al., *supra* note 61, at 403 (“The financial crisis of 2008-09—the most severe since the 1930s—had its origins in the housing market.”).

<sup>103</sup> As described by James Bullard, Christopher J. Neely and David C. Wheelock:

[W]hen the Reserve Primary Fund, a large money market mutual fund, halted investor redemptions after the net asset value of its shares fell below \$1 in September 2008, share redemptions rose sharply at other money market mutual funds. Although most money market mutual funds had ample reserves and good assets, investors interpreted the troubles of the Reserve Primary Fund (which held large amounts of Lehman Brothers debt) as a possible indicator of problems at other mutual funds.

Bullard et al., *supra* note 61, at 408.

<sup>104</sup> *Id.*

<sup>105</sup> See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-11-46, THIRD QUARTER 2010 UPDATE OF GOVERNMENT ASSISTANCE PROVIDED TO AIG AND DESCRIPTION OF RECENT EXECUTION OF RECAPITALIZATION PLAN 7 (2011), <http://www.gao.gov/assets/320/315070.pdf> (“The company was experiencing declines in the value and market liquidity of the RMBS assets that served as collateral for its securities lending operation...”); Bullard et al., *supra* note 102, at 408 (noting that AIG collapsed in the midst of an “amplification mechanism” whereby “[f]alling asset prices caused lenders to demand more collateral, which caused borrowers to dump risky assets, thereby exacerbating declines in their market values and leading to further demands for more collateral”).

<sup>106</sup> See Berrospide, *supra* note 100, at 32 (documenting a large increase in bank holdings of cash and other liquid assets held in 2008 and 2009).



In evaluating each of the mechanisms through which, according to commentators, clearinghouses reduce systemic risk, it is important to specify which of these sources of systemic risk a mechanism purportedly targets. By describing clearinghouses as devices for enforcing stricter collateralization rules,<sup>107</sup> Dodd-Frank's legislative history essentially argues that clearinghouses target interconnectedness by reducing counterparty risk. The clearing mandate's academic proponents also focus on interconnectedness, although unlike the Senate report they mostly argue that clearinghouses reduce contagion risk through their traditional netting and loss-mutualization functions. The clearing mandate's skeptics, meanwhile, have cast significant doubt on such arguments, and they have identified ways in which clearinghouse's netting and loss-mutualization functions may actually increase systemic risk.

### B. *Arguments from Netting*

With respect to netting, the main argument by the clearing mandate's proponents is that netting mitigates systemic risk by reducing the losses that creditors suffer when a clearinghouse member fails. This argument is advanced most prominently in a 2010 report issued by fifteen financial economists called the Squam Lake Group.<sup>108</sup> This report argues that when a clearinghouse uses netting to cancel a group of counterparties' offsetting positions, each counterparty "poses no risk to anyone, including the clearinghouse."<sup>109</sup> Other scholars have made similar claims, asserting that netting reduces overall losses from counterparty failure.<sup>110</sup>

The numerical examples in Part I show why the argument that netting reduces counterparty losses is incomplete: netting does not reduce total losses but rather shifts them from firms within the clearinghouse to those outside it.<sup>111</sup> As Craig Pirrong has argued, netting is best conceptualized as a device that changes creditor priorities without reducing total losses when a debtor fails.<sup>112</sup> Similarly, Mark Roe has observed that clearinghouse netting builds upon the bankruptcy allowance for setoffs, and that scholars have long recognized that setoffs redistribute losses rather than reducing them.<sup>113</sup>

---

<sup>107</sup> See text at notes 69-75, *supra*.

<sup>108</sup> KENNETH R. FRENCH ET AL., THE SQUAM LAKE REPORT: FIXING THE FINANCIAL SYSTEM (2010).

<sup>109</sup> *Id.* at 113.

<sup>110</sup> See, e.g., Julia Lees Allen, *Derivatives Clearinghouses and Systemic Risk: A Bankruptcy and Dodd-Frank Analysis*, 64 STAN. L. REV. 1079, 1086 (2012) ("[M]ultilateral netting reduces the overall gross exposure of the clearinghouse relative to the total of the bilateral gross exposures of the parties to each other in the absence of a clearinghouse"); Kress, *supra* note 34, at 68 (claiming that netting causes a drop in "the aggregate level of exposure[,] thereby mitigating counterparty and systemic risks"); Chander & Costa, *supra* note 1, at 639, 667 ("Netting of positions would lead to commensurate reduction of overall exposure[.]").

<sup>111</sup> See text *supra* at notes 5-7.

<sup>112</sup> See Pirrong, *supra* note 4, at 47.

<sup>113</sup> Roe, *supra* note 85, at 18, citing McCoid, *supra* note 10, at 32 et. seq.; see also *In re Elcona Homes Corp.*, 863 F.2d 483, 485 (7<sup>th</sup> Cir. 1988) (Posner, J.) (noting that setoff "advances[s] one unsecured creditor over another merely because the first happens also to owe money to their common debtor").

A more sophisticated pro-mandate argument based on netting would acknowledge netting's redistributive nature but conclude that netting nonetheless reduces systemic risk on the assumption that clearinghouse members are, on average, more systemically important than their outside creditors. This assumption is not implausible, as clearinghouse members are typically financial institutions,<sup>114</sup> while their outside creditors include non-financial claimants such as employees, trade creditors, and industrial firms that use derivatives to hedge business risks. Pirrong anticipated this revised version of the netting argument but rejected it, observing that many non-clearinghouse creditors that netting harms are also financial firms, including repo counterparties, traders of non-cleared derivatives, and general lenders.<sup>115</sup> Roe further observed that trading firms' non-clearinghouse creditors typically include money market funds, which—as the 2008 crisis illustrated—are vulnerable to runs and thus are likely to fail in a crisis.<sup>116</sup> For these reasons, Pirrong and Roe both argue, the purely redistributive effect of netting may be unlikely to provide a meaningful reduction in the overall level of systemic risk.<sup>117</sup>

Besides casting doubt on the systemic benefits that the clearing mandate's proponents attribute to netting, Pirrong has argued that netting actually increases systemic risk by reducing collateralization costs.<sup>118</sup> As described in Part I, netting makes it cheaper for a debtor to give priority to select creditors by avoiding the costs of holding and posting traditional collateral. The priority that netting accords swaps counterparties acts like a subsidy, encouraging more swaps to be issued.<sup>119</sup> The consequence could be higher levels of systemic risk due to increased interconnectedness among financial firms and higher leverage through the type of short-term contingent liabilities that swaps create. To counterbalance this subsidy, lawmakers could impose a tax on cleared trades, or regulators could require more collateral than is strictly necessary to protect the clearinghouse against counterparty risk. It is notable in this regard that, notwithstanding increased opportunities for netting, Dodd-Frank's legislative history touted *higher* collateral levels as the main benefit of the clearing mandate, leaving open the question whether the clearing mandate will increase or decrease the overall level of swap trading.

---

<sup>114</sup> Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 9 (“Clearinghouses almost always have members who are trading firms, and often large ones, including brokerages and banks.”).

<sup>115</sup> Pirrong, *supra* note 4, at 54.

<sup>116</sup> Roe, *supra* note 85, at 29-30.

<sup>117</sup> Pirrong, *supra* note 4, at 49 (noting that netting redistributes losses rather than reducing them and that “[t]he systemic effect of this redistribution is ambiguous”); Roe, *supra* note 5, at 23.

<sup>118</sup> Pirrong, *supra* note 14, at 59.

<sup>119</sup> Pirrong, *supra* note 4, at 50 (“[R]eductions in collateral that would likely accompany the formation of a clearinghouse would actually tend to encourage firms to trade more, as with a clearinghouse the netting of positions saves collateral, allowing a larger scale of trading activity for a given amount of liquid capital.”).

### C. Arguments from Loss Mutualization

Turning to loss mutualization, the main argument from the clearing mandate's proponents has been that sharing losses among clearinghouse members when one member fails "prevents an insolvent party's trading partners from absorbing acute, potentially catastrophic risks."<sup>120</sup> Under this account, loss-spreading reduces systemic risk by decreasing the likelihood that the failure of one clearinghouse member will cause, through financial interconnections, a second member to become balance-sheet insolvent.<sup>121</sup>

Once again, the case for the clearing mandate has been subject to strong rebuttals. As Craig Pirrong observes:

If interconnectedness among big financial institutions is the source of a systemic risk problem, creating a central counterparty is an odd way to "solve" it. After all, a [clearinghouse] is a formalized interconnection among big financial institutions.<sup>122</sup>

Described concretely, loss mutualization means that a clearinghouse takes the total in-house counterparty losses occasioned by one member's failure and divides them pro rata among the surviving members. The result is that some members lose more, and others lose less, than they would have lost if they had traded with the failed firm bilaterally. Pirrong's argument is, in effect, that there is no general reason to assume that the members whose losses are thereby reduced will be both systemically more important and closer to insolvency than the members whose losses are thereby increased. As was true of netting, loss mutualization redistributes losses rather than preventing them, making it difficult to see how systemic risk is reliably reduced.

Another argument for clearinghouses based on loss mutualization has been advanced by Adam Levitin, who theorizes that clearinghouses' primary systemic virtue is their capacity to prevent contagion by absorbing losses when a trading firm fails.<sup>123</sup> Levitin emphasizes the clearinghouse's guaranty fund, which if properly designed makes the clearinghouse a "fortress of capital."<sup>124</sup> To the extent, however, that a clearinghouse holds member capital that the members would otherwise hold individually, the impact on the members' creditors is again zero-sum: more assets are available for in-house creditors but fewer are available for each member's outside creditors. Levitin might be implying, however, that the guaranty fund effectively acts like (or on behalf of) a prudential regulator, forcing members to hold

---

<sup>120</sup> Kress, *supra* note 34, at 65; see also Adam J. Levitin, *The Tenuous Case for Derivatives Clearinghouses*, 101 GEORGETOWN L.J. (forthcoming 2013), at 20 (arguing that a clearinghouse "disperses excess losses among...members, thereby lessening the impact on any one of them").

<sup>121</sup> See Kress, *supra* note 34, at 65 ("From a systemic perspective, it is generally preferable for a large number of parties to experience small losses than for a small number of interconnected parties to experience large losses.").

<sup>122</sup> Pirrong, *supra* note 4, at 49.

<sup>123</sup> Levitin, *supra* note 120, at 20.

<sup>124</sup> *Id.* at 5.

more of their total assets in liquid form than they are inclined to do otherwise. By analogy, bank regulators seek to reduce systemic risk by requiring banks to hold minimum cash reserves. There is a limit, however, to how much of its capital a firm can tie up in an unproductive cash buffer and still turn a profit.<sup>125</sup> It is not clear how this constraint is alleviated if the cash is held not by the firm itself but rather by a clearinghouse on its behalf.

Pirrong and Roe also note that the clearing mandate's proponents ignore the other way that clearinghouses spread losses: by guaranteeing customer trades. Because a clearinghouse reassigns a failed member's customer contracts to other members, the customers recover more than they would if their only recourse were against the failed member's bankruptcy estate. As contrasted with clearinghouse members, who often are large banks, many swap customers are non-financial "end users" that employ swaps to hedge business risk. For this reason, mutualization of customer losses probably increases systemic risk by shifting losses up rather than down the systemic-risk gradient.<sup>126</sup>

Finally, the clearing mandate's critics argue that loss mutualization could contribute to systemic risk by weakening the link between members' insolvency risk and their trading costs. In theory, firms in a bilateral trading market will monitor counterparty default risk and require riskier counterparties to pay higher prices or post more collateral.<sup>127</sup> This market discipline means that counterparties can reduce their trading costs by lowering their real or perceived default risk.<sup>128</sup> And a firm that has reduced its insolvency risk, for example by avoiding concentrated investments in risky assets, is less likely to be a source of contagion in a financial crisis.<sup>129</sup> But loss mutualization weakens the incentive for individual counterparties to discipline each other because it causes each clearinghouse member to bear only a fraction of the counterparty risk on its own positions.<sup>130</sup>

---

<sup>125</sup> See Jonathan Macey, *Reducing Systemic Risk: The Role of Money Market Mutual Funds as Substitutes for Federally Insured Bank Deposits*, 17 STAN. J. OF LAW, BUS. & FIN. 131, 165 (2011) ("Reserve requirements constitute a significant tax on the operation of depository incomes because they do not generate income.").

<sup>126</sup> See Pirrong, *supra* note 14, at 57 (noting that the practice whereby "members provide performance guarantees to non-members" can increase systemic risk if "dealer-members are systemically more important than the non-members").

<sup>127</sup> See Roe, *supra* note 142, at 560-64 (describing methods for bilateral derivatives counterparties to manage default risk); Pirrong, *supra* note 14, at 17-18 (noting how counterparties in bilateral markets can vary collateral demands based on firm-specific default risk, thereby avoiding the type of moral hazard created by clearinghouse collateralization rules); *accord* Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 15 (noting how private firms specialize in developing risk models that increase trading profits).

<sup>128</sup> Recall how protection buyers excused AIG from posting initial margin on the swaps it sold so long as it retained its AAA credit rating. See text *supra* at note 59.

<sup>129</sup> Of course, to the extent of a sector-wide misapprehension of asset values—the paradigm of systemic risk from an asset bubble—financial firms are unlikely to discipline each other even in their bilateral contracts.

<sup>130</sup> See Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 17.

In theory, the clearinghouse could step into the monitoring gap and provide the type of discipline that firms in a bilateral market should impose on each other directly.<sup>131</sup> But clearinghouse employees may lack the incentive and the expertise to analyze counterparty credit risk effectively. A clearinghouse does not trade on its own account and hence has less opportunity than a trading firm to recoup the cost of developing sophisticated risk models.<sup>132</sup> And individual members will naturally be reluctant to share their best risk models with clearinghouse employees for fear that the models will be passed on to other members, which often include their biggest competitors.<sup>133</sup>

Clearinghouses' relative inferiority at credit-risk analysis helps explain why they typically follow highly mechanical margin-posting rules.<sup>134</sup> For example, clearinghouses require that variation margin be adjusted daily based on formulas that consider the market values of each member's cleared positions but generally ignore the members' "balance sheet" risk—that is, the risks from members' non-clearinghouse investments.<sup>135</sup> At first blush such an approach seems blinkered, as losses suffered outside the clearinghouse can cause a member to default on its in-house obligations. But this mechanical approach minimizes the discretion of clearinghouse employees, who presumably lack the knowledge and the motivation to exercise discretion effectively.

#### D. *Arguments from Regulatory Intervention*

While Dodd-Frank's legislative history suggests that the primary systemic virtue of clearinghouses is their capacity to enforce collateralization rules, this argument has not been taken up by the clearing mandate's academic proponents. And their lack of enthusiasm is understandable, as the notion that inadequate collateral justifies the clearing mandate is subject to criticism on several grounds, starting with the fact that regulators do not need a central counterparty to set minimum collateral requirements. Indeed, while Dodd-Frank exempts some types of swaps from the clearing mandate, it still subjects them to collateralization rules enforced directly by regulatory agencies.<sup>136</sup> Uncleared swaps are also subject to reporting requirements,<sup>137</sup> calling into question the importance of clearinghouses'

---

<sup>131</sup> *Accord* Roe, *supra* note 85, at 35 (“Whether the clearinghouse reduces systemic risk in this setting depends largely on whether the clearinghouse employees are better than [member] management at understanding the market moves in the relevant trades.”).

<sup>132</sup> See Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 15.

<sup>133</sup> *Id.* at 14-15.

<sup>134</sup> See Craig Pirrong, *Clearing and Collateral Mandates: A New Liquidity Trap?*, 24 J. OF APPLIED CORP. FIN. 67, 70 (Winter 2012) (describing the “more mechanical nature of [clearinghouse] margining methodologies”).

<sup>135</sup> See *id.* (“[W]ith clearing, the variation margining process is substantially more rigid than is typical in bilateral transactions”); Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 17 (noting that traditional clearinghouses “do not vary risk pricing (i.e., collateral levels) to reflect the balance-sheet risks specific to each member”).

<sup>136</sup> See Dodd-Frank §§ 731, 764(a).

<sup>137</sup> *Id.*

information-gathering function, which the Senate report also mentions.<sup>138</sup> It is possible that compliance with collateral requirements is easier to verify if contracts go through a clearinghouse, but the Senate report does not claim such a marginal benefit for central clearing or estimate its magnitude.

A second problem with the clearing mandate's legislative history is its failure to recognize how earlier changes to the Bankruptcy Code encouraged the type of under-collateralization that the mandate is supposed to prevent. Before the 2008 crisis, Congress amended the Code to exempt swap counterparties from the Code's rules against preferential and fraudulent transfers.<sup>139</sup> These exemptions encouraged the run by swap counterparties that destabilized AIG. Counterparties were willing to buy credit default swaps from AIG without asking for initial collateral because they assumed that they could demand collateral later if AIG's credit rating deteriorated.<sup>140</sup> Normally, collateral posted by a struggling firm is unreliable because, if the firm soon thereafter files for bankruptcy, the collateral can be recalled as a preferential transfer.<sup>141</sup> Therefore, by exempting swaps counterparties from this restriction on eve-of-bankruptcy transfers, Congress encouraged protection buyers to rely on variation margin rather than initial margin, leading to the type of under-capitalization that the Senate report laments.<sup>142</sup> But Dodd-Frank does not repeal derivatives' special exemptions; to the contrary, it extends them to counterparties of firms that are unwound through the FDIC's new orderly liquidation authority. If undersecured swaps really contribute to systemic risk, repealing these exemptions would have been a simpler and less intrusive solution than mandatory use of clearinghouses.

A final criticism of the under-collateralization justification for the clearing mandate is that greater reliance on posted collateral can actually contribute to systemic risk by increasing the likelihood of a fire-sale price spiral when a firm's failure forces its counterparties to liquidate positions.<sup>143</sup> Thus, when one of its members fails, a clearinghouse sells collateral posted on the member's own out-of-the-money positions, as well as on any of the member's matured out-of-the-money customer positions. These sales could drive securities prices below fundamental values, triggering additional collateral calls on positions both within and outside the

---

<sup>138</sup> S. Rep. 111-176, at 33-34.

<sup>139</sup> See Edwards and Morrison, *supra* note 77, at 97 (2005).

<sup>140</sup> See *infra* note 59 and accompanying text.

<sup>141</sup> Transfers to creditors made no more than 90 days before the bankruptcy filing can be recalled as preferences. 11 U.S.C. §§ 547, 550.

<sup>142</sup> Accord Mark J. Roe, *The Derivatives Market's Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 566 (2011) (arguing that AIG's derivatives counterparties would have been "better incentivized to have a strong credit structure early on" had they not been able to "grab and keep eve-of-bankruptcy preferences").

<sup>143</sup> See Pirrong, *Inefficiency of Clearing Mandates*, *supra* note 5, at 23 (noting how multilateral netting can avoid margin "collateral/margin calls," thereby avoiding "asset fire sales," which in turn "reduces the stress on market liquidity resulting from a default").

clearinghouse and thereby causing other firms to fail for lack of liquidity.<sup>144</sup> Clearinghouses may be particularly likely to exacerbate a fire-sale price spiral because their mechanical collateral-posting rules do not permit restraint when a member's failure to meet a margin call appears attributable to temporary market conditions.<sup>145</sup>

Not only can a clearinghouse contribute to a fire-sale price spiral, but it also can fall victim to one. A clearinghouse that relies heavily on posted collateral for protection against counterparty risk may find that collateral difficult to convert to cash in a crisis. In theory, clearinghouses could be required to accept only the most liquid forms of collateral, such as U.S. Treasury debt, the price of which actually rose during the 2008 crisis.<sup>146</sup> But there is only so much super-safe collateral to go around, and requirements that clearinghouses be especially picky about acceptable collateral may only exacerbate a shortage of safe collateral in the rest of the economy.<sup>147</sup>

These observations suggest that, contrary to Dodd-Frank's legislative history, clearinghouses should attempt to maximize the degree to which they rely on netting rather than posted collateral as their primary safeguard against counterparty risk. Netting is more reliable in a crisis because it does not require the clearinghouse to raise cash by selling assets into a distressed market. A clearinghouse that relies heavily on netting rather than posted collateral is less likely to contribute to a fire-sale price spiral or to fall victim to one.

\* \* \* \* \*

This part has shown how concerns raised by clearing-mandate skeptics such as Craig Pirrong and Mark Roe have cast doubt on certain arguments that the mandate will reduce systemic risk. Particular aspects of the proponents' case may survive: for example, it may be true that, on average, clearinghouse members are more systemically important than their non-customer creditors, and therefore that the redistributive impact of netting may somewhat reduce contagion risk attributable to financial-sector interconnectedness. But even if that is correct, there are countervailing ways in which clearinghouses can increase systemic risk: loss mutualization may undermine monitoring discipline and thereby help inflate asset bubbles, and the use of clearinghouses as regulatory foci could exacerbate fire-sale price spirals if regulators impose heavy collateral requirements. After reviewing the

---

<sup>144</sup> See Pirrong, *supra* note 134, at 70 (noting how "margin increases during periods of heightened market volatility...can create destabilizing feedback effects").

<sup>145</sup> *Id.*

<sup>146</sup> See U.S. DEP'T OF THE TREASURY, Treasury Yield Curve, <http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/Historic-Yield-Data-Visualization.aspx> (compare, for example, yields on November 3, 2008, with those one year earlier).

<sup>147</sup> Economist Gary Gorton has persuasively argued that it was the need for new types of AAA-rated collateral that spurred the market for market-backed securities and collateralized debt obligations backed by subprime loans, the financial instruments at the center of the 2008 crisis. See GARY GORTON, *SLAPPED BY THE INVISIBLE HAND: THE CRASH OF 2007* (2010). The clearing mandate coupled with aggressive collateral rules would again encourage financial alchemists to synthesize new securities.

arguments for and against the clearing mandate so far, it would be easy to conclude that, contrary to Congress's intent, the overall effect of the clearing mandate will be to increase systemic risk rather than reduce it.

#### **IV. CENTRAL CLEARING AS A SOURCE OF LIQUIDITY AND CERTAINTY**

This part seeks to move the debate over clearinghouses beyond their purely redistributive consequences by identifying an economic benefit of central clearing that is not zero-sum in its impact on creditors. That benefit is faster creditor payouts, which occur because clearinghouses use the setoff right to cordon off a portion of a failed firm's assets and liabilities for rapid resolution outside bankruptcy. Not only are faster payouts efficient as a general matter, but in a financial crisis they have the added advantage of reducing illiquidity and uncertainty.

The notion that central clearing can speed up creditor payouts derives from the observation that a clearinghouse is an asset partitioning arrangement. This part therefore begins by summarizing previous academic commentary on asset partitioning before turning to a description of the particular mechanism by which clearinghouse asset partitioning accelerates creditor payouts.

##### *A. Setoffs as Asset Partitioning*

In modern bankruptcy systems, the default rule for dividing debtor assets among creditors is the pro rata rule.<sup>148</sup> That rule pays each creditor the same percentage on his claim, equal to the total value of the debtor's assets divided by the debtor's total liabilities. The main alternative to the pro rata rule is asset partitioning, under which one or more creditors receive the first claim to a designated portion of the debtor's property.<sup>149</sup>

An example of an asset partitioning arrangement is the business corporation, which gives business creditors the first claim to the corporation's assets, and shareholders' personal creditors the first claim to the shareholders' personal assets.<sup>150</sup> In an influential 1975 article, Richard Posner argued that the division of assets by the corporate form can create economic wealth by making it cheaper for creditors to monitor debtors.<sup>151</sup> Posner was concerned with the costs that creditors incur in evaluating credit risk and in supervising a debtor to prevent her from

---

<sup>148</sup> See, e.g., 11 U.S.C. § 726(b) (providing for pro rata distribution among unsecured creditors of the same bankruptcy rank).

<sup>149</sup> See Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387, 393-95 (2000) (providing the first systematic analysis of asset partitioning).

<sup>150</sup> The business creditors' first claim to the business assets derives from the legal convention of treating a corporation as a distinct legal person that owns assets and owes debts distinct from those of its equity investors. And the personal creditors' exclusive claim to shareholders' personal assets arises by negative implication of the corporate rule of limited shareholder liability, which confines the business creditors' recoveries to the business assets.

<sup>151</sup> Richard A. Posner, *The Rights of Creditors of Affiliated Corporations*, 43 U. CHI. L. REV. 499, 516-17 (1975).



converting her assets to riskier form. He theorized that asset partitioning (though he did not use that term<sup>152</sup>) can simplify these monitoring efforts by reducing the factors that are relevant to each creditor's recovery. Posner used the example of an incorporated firm that owns a radio station and that wishes to diversify by acquiring a mining venture.<sup>153</sup> By assigning the mining venture to a separate, wholly-owned subsidiary, the firm ties the bankruptcy recoveries of the mining venture's creditors to the mining assets while leaving the recoveries of the radio station's creditors linked to the radio station assets.<sup>154</sup> This example illustrates how asset partitioning not only simplifies creditor monitoring efforts but also promotes specialization, allowing creditors to lend against those asset bundles they understand best and hence can monitor most cheaply.<sup>155</sup>

Building on Posner's thesis, scholars have attributed similar monitoring efficiencies to other legal arrangements that partition assets, such as the partnership and secured loan.<sup>156</sup> However, as I have argued elsewhere, there are important structural differences between corporations and these other arrangements that call into question whether Posner's theory of the former should be extended to the latter. Thus, business corporations display "symmetrical" asset partitioning,<sup>157</sup> meaning that they give each creditor or creditor group a prior claim to a distinct asset pool.<sup>158</sup> The secured loan, by contrast, displays "asymmetrical" partitioning, as it gives only one creditor a prior claim.<sup>159</sup> The secured creditor enjoys the first claim to his collateral, but the unsecured creditors do not have a corresponding first claim to the debtor's unsecured assets; rather, they share those assets ratably with the secured creditor to the extent of his deficiency claim.<sup>160</sup> The

---

<sup>152</sup> The use of "asset partitioning" to refer to legal arrangements that give designated creditors the first claim to designated assets began with the work of Henry Hansmann and Reinier Kraakman. See Hansmann & Kraakman, *supra* note 149, at 393.

<sup>153</sup> Posner, *supra* note 151, at 512-13

<sup>154</sup> *Id.* at 516-17 (describing how the segregation of assets through limited liability within a corporate group can help creditors economize on information costs).

<sup>155</sup> See Hansmann & Kraakman, *supra* note 149, at 399-400 (observing how asset partitioning can both promote and reward creditor specialization).

<sup>156</sup> See, e.g., Hansmann & Kraakman, *supra* note 149, at 427-428 (discussing monitoring in the context of the general partnership); F.H. Buckley, *The Bankruptcy Priority Puzzle*, 72 VA. L. REV. 1393, 1424-25 (1986) (discussing monitoring efficiencies in the context of the secured loan); see also Avery Wiener Katz, *An Economic Analysis of the Guaranty Contract*, 66 U. CHI. L. REV. 47, 85 (1999) (discussing monitoring in the context of the guarantee).

<sup>157</sup> Richard Squire, *The Case for Symmetry in Creditors' Rights*, 118 YALE L.J. 806, 810 (2009).

<sup>158</sup> Other symmetrical partitioning arrangements include the limited liability company (LLC), the business trust, and the common law's "jingle rule" partnership. *Id.* at 812.

<sup>159</sup> *Id.* at 811-13. Another asymmetrical arrangement is the modern business partnership under federal bankruptcy law and under the laws of most states. *Id.* at 813; see 11 U.S.C. § 723(c), UNIF. P'SHIP ACT § 807(a) (amended 1997), 6 U.L.A. 206 (2001).

<sup>160</sup> Not all secured loans partition assets: the secured creditor could be given a blanket lien that covers all the debtor's property. Also, a secured loan can be made symmetrical by having the secured creditor waive his deficiency claim—i.e., by making the loan nonrecourse. Squire, *supra* note 157, at 813-14.

secured loan's asymmetry ensures that, when the debtor becomes insolvent and enters bankruptcy, the secured creditor always recovers a larger percentage on his claim than the unsecured creditors do.

Instead of dividing up risk as symmetrical arrangements do, asymmetrical arrangements primarily shift risk. In a secured loan, not only is the secured creditor guaranteed a higher percentage recovery in case of bankruptcy, but a decline in the value of the secured collateral often harms him less than it harms the unsecured creditors.<sup>161</sup> Shifting credit risk to the unsecured creditors could be efficient if they are better at evaluating risk and monitoring for debtor risk-taking, but in practice the opposite is usually the case. Debtors typically give security to their most sophisticated creditors, such as banks; left unsecured are claimants such as trade creditors.<sup>162</sup>

Another example of asymmetrical asset partitioning is the setoff right. A creditor who sets off gets the first claim to a particular debtor asset, namely the creditor's own unpaid debt to the debtor. And, to the extent of any deficiency in this asset, the creditor has a claim against the debtor's estate payable pro rata with the claims of the debtor's general creditors. The asymmetry of this arrangement ensures that the setoff creditor receives a higher percentage recovery than do the debtor's general unsecured creditors. The redistributive nature of the setoff right is well-understood among scholars.<sup>163</sup> But scholars have found it difficult to justify this favorable treatment of the setoff creditor,<sup>164</sup> at least on efficiency grounds.<sup>165</sup> With respect to monitoring incentives in particular, the privilege seems unjustified, as there is no general reason to think that creditors who do not set off are in a better position to bear the debtor's default risk.

---

<sup>161</sup> *Id.* at 827.

<sup>162</sup> *Id.* at 850. This is not to deny that other features of the secured loan may provide monitoring efficiencies. For example, the secured creditor's property right in the collateral reduces the risk that the debtor will try to enrich herself at the expense of her creditors by selling that collateral and consuming the proceeds or investing them in riskier assets. But this benefit has nothing to do with the secured loan's asymmetry, as it would arise even if the loan were non-recourse and hence symmetrical. *See id.* at 847.

<sup>163</sup> See, e.g., McCoid, *supra* note 10, at 15 ("It is hardly news that setoff...is preferential in effect.")

<sup>164</sup> In his seminal work on the setoff right, John McCoid raised the intriguing possibility that the right might be justified in terms of fairness between creditor and debtor in the particular context of a bankruptcy proceeding that does not discharge a debtor from her obligations, leaving creditors who are not allowed to set off facing "uncertainty about whether and when payment might be made." McCoid further notes that this consideration does not justify the setoff right in terms of fairness among creditors, as the creditors without the setoff right do not receive this benefit. *Id.* at 23. Part III below argues that the setoff right reduces uncertainty for *all* creditors, even when bankruptcy does discharge the debtor, because it speeds up creditor payments relative to the pro rata rule and hence reduces the time that creditors must wait to learn the amounts of their recoveries.

<sup>165</sup> See, e.g., *id.* at 39-41 (raising but ultimately dismissing as inadequate various potential "functional" justifications for setoff); *accord* *In re Elcona Homes Corp.*, 863 F.2d 483, 486 (7<sup>th</sup> Cir. 1988) (Posner, J.) (noting that setoffs are recognized under state law for their "procedural convenience—the consolidation of offsetting claims in the same suit," but that this consideration may have little relevance for federal bankruptcy law).

Through its reliance on both setoffs and secured lending, a clearinghouse is an asymmetrical asset partitioning arrangement. Clearinghouse members enjoy the first claim to each other's in-house assets, which include in-house debts owed to each member (claimed via the setoff right through netting) as well as posted collateral. And if a deficit remains after the failed member's in-house assets are seized, the clearinghouse has a claim against the bankrupt member's estate payable pro rata with the claims of the member's general creditors. Because of this asymmetrical partitioning, clearinghouse creditors are guaranteed that the percentage recoveries on their claims will be higher than those of the bankrupt member's general creditors (except the member's clearinghouse customers, who as noted above receive guarantees from the other clearinghouse members).

By giving its members the privileged position in an asymmetrical partitioning arrangement, a clearinghouse transfers counterparty credit risk from its members to their outside creditors. This transfer is almost certainly inefficient in terms of monitoring incentives. Clearinghouse members tend to be large financial institutions with both the means and the incentives to develop sophisticated credit-analysis methods. They are generally better positioned to bear each other's credit risk than are their outside creditors, a motley group that typically includes public bondholders, suppliers, landlords and employees. To be sure, the marginal impact of clearinghouse asset partitioning on members' monitoring incentives may be slight given that those incentives are already weakened by loss mutualization. But in any event, we can be confident that, unlike the asset partitioning created by the business corporation, the partitioning created by a clearinghouse is unlikely to be a source of monitoring efficiencies.

While creditor monitoring efficiencies have been the focus of most scholarly analysis of asset partitioning, more recent scholarship has identified a second potentially important asset partitioning benefit.<sup>166</sup> And, unlike monitoring efficiencies, this benefit arises even if, as in the case of a clearinghouse, the partitioning is asymmetrical.<sup>167</sup> That benefit is faster creditor payouts, discussed next.

#### *B. Clearinghouse Asset Partitioning and Faster Creditor Payouts*

To distribute assets among creditors, a bankruptcy trustee must do two things. She must determine what the assets are worth, which can mean applying financial modeling techniques or using an auction to convert the assets to cash. And she must determine the amount of the debtor's liabilities, which requires her to collect all creditor proofs of claim and resolve any challenges to their enforceability and amounts.<sup>168</sup> Given these requirements, it is difficult to think of a slower rule for

---

<sup>166</sup> *Id.* at 835; Henry Hansmann, Reinier Kraakman & Richard Squire, *Law and the Rise of the Firm*, 119 HARV. L. REV. 133, 1346 (2006).

<sup>167</sup> Squire, *supra* note 157, at 836.

<sup>168</sup> Grounds for challenging a creditor's claim include that it is duplicative, unenforceable because the creditor breached the loan agreement, untimely, or resulted from a fraudulent transfer. See, e.g., Sara Randazzo, *Dewey Estate Moves to Shed Dozens of Creditors' Claims*, THE AM LAW DAILY (Oct. 31, 2012)

distributing debtor assets than the pro rata rule. That rule pays each creditor based on the ratio between his claim and the debtor's total liabilities. It follows that *all* liabilities must be confirmed and valued before *any* creditor can be paid.<sup>169</sup>

Asset partitioning speeds things up.<sup>170</sup> If a creditor has the first claim to specified assets, then those assets or their cash equivalent can be distributed to him once his claim is confirmed, regardless of the amount of the debtor's other liabilities. So, for example, once a secured creditor's claim is validated, the value of his collateral can be distributed to him, up to the amount of his claim, even while the debtor's other liabilities remain in dispute. Making the secured loan non-recourse and hence symmetrical could accelerate matters further because then the trustee could pay out unsecured creditors without first valuing the secured creditor's deficiency claim.<sup>171</sup>

Faster creditor payouts are economically efficient as a general matter. They can reduce administrative costs by shortening insolvency proceedings, and they create value whenever a bankrupt firm's capital can earn higher returns if reinvested elsewhere, a safe general assumption given that the firm has failed.<sup>172</sup> And beyond their general efficiencies, faster payouts are particularly valuable in a financial crisis. Faster payouts reduce the risk that the creditors of a failed firm will themselves fail for lack of liquidity. And they decrease uncertainty by shortening the period investors must wait to learn how losses will be distributed among a failed firm's creditors.

Because it is a form of asset partitioning, netting within a clearinghouse speeds up payments to members when a member fails. Consider again the "open" three-firm example from Part I, in which Firm A owes \$100 to Firm B, Firm B owes \$100 to Firm C, and Firm B files for bankruptcy.<sup>173</sup> In the case without a clearinghouse (Figure One), Firm A must pay \$100 in cash into Firm B's bankruptcy estate, and Firm C must submit a \$100 proof of claim to the bankruptcy trustee and wait for repayment with Firm B's other general creditors. Thus, the cash paid by Firm A is tied up in Firm B's bankruptcy proceeding, and Firm C's payout is delayed. But if the contracts among Firms A, B and C are centrally cleared (Figure Two), then the \$100 owed by Firm A is intercepted on its way to Firm B's bankruptcy estate and can be used for immediate payment to Firm C. If Firm C is running low on cash, perhaps because a financial panic has frozen credit markets and the firm is suffering a run by its transient creditors, this immediate infusion of \$100 reduces the risk that it will fail for lack of liquidity. Indeed, prompt payment reduces the likelihood that

---

(describing attempts by a debtor in possession to invalidate "several dozen" claims on numerous grounds).

<sup>169</sup> Squire, *supra* note 157, at 836.

<sup>170</sup> *Id.*

<sup>171</sup> *Id.* at 853.

<sup>172</sup> *Id.* at 835.

<sup>173</sup> The assumption here is that these debts represent money owed either on trades on the firms' own account, or on customer trades that have matured, and thus are immediately due and payable if either party files for bankruptcy.

Firm C's transient creditors will run in the first place, as they will not have to wait to learn the impact of Firm B's failure on Firm C's solvency.<sup>174</sup>

An example of how bankruptcy can trap cash for long periods is provided by the case of Lehman Brothers. Four years after Lehman filed for protection under Chapter 11, the Lehman estate still held \$14.3 billion in restricted cash, including \$10.9 billion in a fund reserved for paying out unsecured claims.<sup>175</sup> Netting diverts cash from such restricted funds, and by discharging some of a debtor's unsecured debts immediately also reduces the cash reserve that the bankruptcy estate needs to maintain.

Besides illustrating how a bankruptcy proceeding can exacerbate a financial crisis by taking cash out of circulation, the Lehman case also illustrates how a clearinghouse does a better job keeping cash flowing. When it filed for bankruptcy, Lehman was a major trader in options, futures contracts, and interest-rate swaps, all of which were centrally cleared, and in credit default swaps, which were not.<sup>176</sup> Clearinghouses resolved Lehman's cleared positions promptly upon the firm's collapse without suffering disruptions attributable to illiquidity or forced asset sales.<sup>177</sup> By contrast, collateral posted to Lehman by the firm's credit default swap counterparties was still trapped in the estate years after the bankruptcy filing, while other swap counterparties still waited to be paid.<sup>178</sup> And the credit default swap market suffered disruptive price volatility immediately after the bankruptcy filing due to uncertainty about the identity of Lehman's counterparties and how much each would lose.<sup>179</sup>

Unlike netting's purely redistributive consequences, its payout-acceleration benefit is not zero-sum in its impact on creditors. Thus, faster payouts for clearinghouse members are not the result of slower payouts for their outside creditors. To the contrary, netting simplifies the work of the failed member's bankruptcy trustee, which might permit outside creditors to be paid more quickly as well. Continuing with the open three-firm example, netting means that Firm B's bankruptcy trustee does not have to enforce the estate's claim against Firm A, nor does she have to confirm and process Firm C's proof of claim. In a division of administrative labor, these tasks are handled by the clearinghouse instead. With fewer assets and creditors to sort out, the trustee may be able to complete her work

---

<sup>174</sup> Firm C may also have non-cleared contracts with Firm B, but nothing about its prompt recovery on its cleared contract reduces certainty regarding its payouts on those other contracts.

<sup>175</sup> Linda Sandler, *Lehman, Affiliates Had \$14.3 Billion in Restricted Cash*, Bloomberg (Oct. 31, 2012, 9:52 AM), at <http://www.bloomberg.com/>.

<sup>176</sup> Chander & Costa, *supra* note 1, at 17.

<sup>177</sup> *Id.* at 18 (noting that clearinghouses resolved Lehman's futures and options positions within one week); Will Aceworth, *The Lessons of Lehman: Reassessing Customer Protections*, FUTURES INDUSTRY 36 (Jan.-Feb. 2009) (noting that the clearinghouse LCH.Clearnet "was able to wind down more 66,000 Lehman swap transactions in less than one month").

<sup>178</sup> *Id.* at 19.

<sup>179</sup> *Id.*, citing Mathew Goldstein and David Henry, *Lehman: One Big Derivatives Mess*, BLOOMBERG BUSINESSWEEK (Oct. 8, 2008), at <http://www.businessweek.com>.

more quickly, permitting faster payouts for Firm B's general creditors. And while these outside creditors' total recoveries will be reduced by netting's redistributive effect, the loss may be partly neutralized because of the time value of money and reduced administrative costs. Netting therefore is clearly a source of value creation: its impact on total payout amounts is at worst zero-sum, but it causes at least some creditors to be paid more quickly, and none to be paid more slowly, than they would be paid otherwise.

To argue that clearinghouses improve liquidity by diverting cash away from their bankrupt members is not to deny that the bankrupt members may themselves be cash-strapped when they fail. Indeed, a run that depletes a member's cash reserves may be the immediate cause of its bankruptcy filing. But any cash that is paid into the failed firm's estate will not be used, at least in the short run, to pay its systemically important financial creditors. The bankruptcy trustee (or the managers serving as debtor in possession) has no incentive to pay those creditors promptly because they are disabled in their collection efforts by bankruptcy's automatic stay.<sup>180</sup> Rather, the trustee will pay any cash on hand either to a restricted fund or to suppliers—such as utilities, employees, trade creditors, lawyers and accountants—whose inputs are needed to keep the lights on and to advise the trustee while the firm winds down. Therefore, by diverting cash that would be paid into the firm and using it to pay other financial firms that might be in financial distress, the clearinghouse reallocates the cash to a systemically more important use.

A second reason that a failed member's short-term need for cash is less systemically vital is that, once the firm files for bankruptcy, its borrowing prospects significantly improve. The Bankruptcy Code provides that a creditor who lends to a bankrupt debtor has priority over creditors who lent before the bankruptcy petition was filed.<sup>181</sup> The Code also empowers the bankruptcy judge to give a post-petition lender a "priming" lien that is senior to the liens of pre-petition secured creditors.<sup>182</sup> Finally, once a firm files for bankruptcy, the automatic stay drops a barricade around its assets that reassures new lenders that their loan proceeds will not be siphoned off by transient creditors in a run. For these reasons, in a financial crisis there is much less uncertainty about the short-term creditworthiness of a financial firm that has entered bankruptcy's safe haven than there is about financial firms that remain on the outside. Bankruptcy's capacity to increase a firm's creditworthiness is the reason that Lehman Brothers, despite being brought to its knees by a lack of liquidity, was able to obtain a \$450 million superpriority loan within days of its bankruptcy filing.<sup>183</sup> Similar borrowing advantages will accrue to

---

<sup>180</sup> The automatic stay blocks creditor collection efforts. 11 U.S.C. § 362(b). Dodd-Frank also empowers the FDIC to impose a 90-day stay on collection actions against firms seized under the orderly liquidation authority. Dodd-Frank §210(a)(8).

<sup>181</sup> 11 U.S.C. § 364(b)(allowing post-petition borrowing classified as an administrative expense); *id.* at § 507(a)(prioritizing administrative expenses over pre-petition unsecured claims).

<sup>182</sup> *Id.* at § 364(d).

<sup>183</sup> [http://www.implu.com/releases/2008/20080922/14063/implu\\_viewer](http://www.implu.com/releases/2008/20080922/14063/implu_viewer)

firms designated for orderly liquidation with the FDIC, which can borrow from the Treasury Department on a seized firm's behalf.<sup>184</sup>

The protections provided by the Bankruptcy Code and Dodd-Frank mean that a failed financial firm which is deprived of cash due to clearinghouse netting will usually be able to replace some or all of that cash through post-petition or receivership borrowing. Therefore, by taking cash away from a financial firm that is newly capable of borrowing, and redirecting it to financial firms that remain subject to runs and hence may be temporarily uncreditworthy, clearinghouse netting increases liquidity during a crisis.

Clearinghouses' capacity to increase liquidity is consistent with the Senate report's assertion that the clearing mandate will reduce the need for bailouts, although the mechanism is different than the one the report identifies. In its simplest form, a bailout is a government loan when private credit is scarce. A loan cannot save a firm that is balance-sheet insolvent, as it increases the borrower's assets and liabilities by equal amounts. But it can save a firm that is illiquid, assuming the loan's term is long enough. Clearinghouses provide cash by alternative means: rather than injecting cash that was not previously in circulation (as a government loan does), a clearinghouse prevents cash that is already in circulation from becoming trapped in a bankruptcy estate, where it will either stop circulating or be paid to systemically unimportant claimants.

As this discussion suggests, the systemic benefits of clearinghouse netting are greatest when the financial creditors of a failed clearinghouse member are balance-sheet solvent but face a liquidity shortage. Consider again Firm C, which in the absence of the clearinghouse is owed \$100 by bankrupt Firm B. The very fact that Firm C is a creditor of a failed firm will make other firms reluctant to lend to it, increasing its reliance on its \$100 claim against Firm B as a source of short-term funding. Netting through a clearinghouse makes the cash available to Firm C notwithstanding Firm B's bankruptcy. In this way, netting counteracts the illiquidity and uncertainty sources of systemic risk. On the other hand, if Firm C is also balance-sheet insolvent, perhaps because both it and Firm B invested heavily in overpriced assets, the faster payout provided by netting is unlikely to keep it afloat.

While the discussion to this point has focused on netting, clearinghouses can also achieve faster creditor payouts to the extent that they protect themselves against counterparty risk through posted collateral. Because the secured loan is, like the setoff right, an asymmetrical partitioning arrangement, it also can speed up the distribution of assets to creditors relative to the pro rata rule. Thus, by seizing and selling posted collateral immediately upon a member's default, a clearinghouse can provide cash to a failed member's counterparties more quickly than it could if it had to submit an unsecured claim to the member's bankruptcy trustee for the full amount owed. This potential benefit of collateral is, however, subject to the important condition that there is not a significant delay between when a member firm defaults and when the clearinghouse finds buyers for its collateral. This

---

<sup>184</sup> Dodd-Frank § 210(n).

condition may not hold in a financial crisis if a fire-sale price spiral is underway and creditors economy-wide are trying to liquidate the same type of collateral. Netting, by contrast, is not subject to such delay, suggesting another reason that regulators should encourage clearinghouses to rely on netting rather than posted collateral.

### C. *But What if the Clearinghouse Fails?*

The argument that a clearinghouse can speed up creditor payouts may seem vulnerable to the objection that the clearinghouse itself could fail during a financial crisis, tying up cash in its own insolvency proceeding. But clearinghouses are much more stable than their members, primarily because they cannot be run upon while solvent. And even when a clearinghouse does fail, it still expands setoff opportunities that increase liquidity and reduce systemic uncertainty.

While not unprecedented, clearinghouse failures are rare.<sup>185</sup> No clearinghouse in the United States has ever defaulted, despite financial crises that have seen failures of large clearinghouse members.<sup>186</sup> The 2008 crisis is no exception: all clearinghouses avoided financial distress, including those that cleared Lehman Brothers' options, futures, and interest rate swaps.<sup>187</sup> Clearinghouses are relatively stable partly because large members like Lehman tend to be dealers rather than end users, and dealers generally try to maintain neutral net positions. When a dealer fails, its post-netting liability to the clearinghouse tends to be relatively small. Indeed, not only did Lehman's failure impose no net losses on clearinghouses, but they were able to return some of the collateral that Lehman had posted.<sup>188</sup>

Another reason for their relative stability is that clearinghouses lack transient creditors: members cannot withdraw capital from the clearinghouse's guaranty fund, nor can they pull back collateral in contravention of the clearinghouse's margin-posting rules. Members may have contractual rights to cancel their trades, but this poses no threat to the clearinghouse's solvency because it entails cancelling both sides of the contract. Depending on the clearinghouse, counterparties' cancellation rights may change if the clearinghouse is already solvent and has defaulted on its obligations,<sup>189</sup> but the point remains that a solvent clearinghouse, unlike a solvent firm, cannot fail for lack of liquidity caused by a run.

---

<sup>185</sup> Randall S. Kroszner, *Can the Financial Markets Privately Regulate Risk? The Development of Derivatives Clearinghouses and Recent Over-the-Counter Innovations*, 31 J. MONEY, CREDIT & BANKING 596, 603 (1999) ("Derivatives clearinghouses have weathered the Great Depression, the Second World War, failures of major players such as Barings, and high levels of volatility...without a collapse"). One clearinghouse that did collapse was based in Hong Kong; it succumbed after the Black Monday stock market collapse of 1987. See Kress, *supra* note 34, at 50.

<sup>186</sup> *Id.* at 65.

<sup>187</sup> See *supra* note 177.

<sup>188</sup> See Chander & Costa, *supra* note 1, at 18; Acworth, *supra* note 177, at 36.

<sup>189</sup> See Allen, *supra* note 110, at 1094 (describing how clearinghouses such as LCH.Clearnet "permit clearing members to elect to terminate and liquidate their portfolios upon the insolvency of the clearinghouse").



Even if, contrary to precedent, a clearinghouse did fail in a crisis, it still would be able to speed up creditor payouts and thus mitigate systemic risk attributable to illiquidity and uncertainty. To see why, consider again the closed three-firm example. If trading is bilateral (Figure Three), Firm A must pay \$100 into Firm B's bankruptcy estate, and Firm C must submit a \$100 proof of claim. At this point Firm C may or may not pay the \$100 it owes to Firm A, but in either case \$100 in liquidity is tied up in a bankruptcy proceeding. If, however, the three trades are centrally cleared (Figure Four), then they net out, and Firm A does not pay any cash into B's bankruptcy estate. And, importantly, this is true regardless of whether the clearinghouse is itself bankrupt. In this example, all three firms have mutual \$100 obligations with the failed clearinghouse that they can cancel pursuant to their setoff rights. Therefore, neither Firm A nor Firm C (the two solvent members) must pay cash into the estate of the failed member (Firm B) or into that of the clearinghouse.<sup>190</sup>

What has happened in this example is that netting within the clearinghouse has effectively transformed a normally illiquid asset—an obligation to repay debt—into a type of currency. Although creditors normally must be paid in cash, they are generally happy to accept cancellation of their own debts as payment for their claims. And netting within a clearinghouse increases opportunities for this to occur. Consider again the closed three-firm example, and imagine that the \$100 owed by Firm C is represented by an IOU that Firm C has issued and that, in a bilateral market, would be in the hands of Firm A. Because of netting, Firm A is, in effect, able to take the IOU and force Firm B to accept it in satisfaction of Firm A's debt to Firm B. And Firm B, in turn, can take the IOU and use it to repay its \$100 debt to Firm C. Since the IOU is now back in the hands of its issuer, it is cancelled. No cash has changed hands and therefore none has been paid into a bankruptcy estate. And because each transfer of the IOU occurs through setoff rights, the transfers can occur even if the clearinghouse itself is bankrupt. This capacity for a clearinghouse to transform a debt obligation into a medium of exchange is of obvious social value during a liquidity shortage.

On the other hand, there will be situations when a clearinghouse's bankruptcy will impair its ability to reduce illiquidity in a crisis. This situation is shown by the *open* three-firm example, depicted in Figure Two. Normally, the presence of the clearinghouse prevents the \$100 payment by Firm A from becoming trapped in Firm B's bankruptcy estate, keeping the cash available for immediate payment to Firm C. But the cash will be trapped in the clearinghouse instead if the clearinghouse is also bankrupt; in that case, Firm A will have to pay \$100 into the clearinghouse's bankruptcy or receivership estate, and Firm C will have to submit a

---

<sup>190</sup> The notion that a clearinghouse would ever be allowed to enter an insolvency proceeding is at best controversial: several commentators have argued that the clearinghouse would be deemed "too big to fail" by government officials and hence bailed out. See Roe, *supra* note 5, at 32 n. 92 (collecting sources); accord Allen, *supra* note 110, at 1103 (arguing that resolution of a clearinghouse by the FDIC under its orderly liquidation authority would be a "logistical impossibility"). The point argued here is not that these commentators are incorrect but rather that a failed clearinghouse can be a source of liquidity beyond any bailout cash it receives.

\$100 proof claim. In this example, the failed clearinghouse provides no evident advantage over a bilateral market.

To generalize, an insolvent clearinghouse's impact on liquidity has two components. The clearinghouse increases liquidity, notwithstanding its insolvency, to the extent it allows the netting of obligations from solvent members that in a bilateral market would require cash payments to insolvent members. And the failed clearinghouse *decreases* liquidity to the extent that it does not allow netting of obligations from solvent members that in a bilateral market would require cash payments to other solvent members. Either way, netting is the driver: the more the clearinghouse permits netting, the greater its capacity to reduce illiquidity and uncertainty in a crisis despite its own insolvency.

#### D. Clearinghouse Liquidity and Derivatives' Bankruptcy Exemptions

Clearinghouses' capacity to reduce illiquidity and uncertainty during a financial crisis suggests a limited justification for a set of special exemptions that derivatives counterparties enjoy under the Bankruptcy Code. These exemptions suspend bankruptcy's automatic stay to permit a debtor's derivatives counterparties to terminate contracts, exercise setoff rights, and liquidate collateral.<sup>191</sup> And they immunize counterparties from the Code's rules against preferential and (constructive) fraudulent transfers.<sup>192</sup> Legislative history suggests that these exemptions reduce systemic risk,<sup>193</sup> but many academic commentators, including this one,<sup>194</sup> have expressed skepticism.<sup>195</sup> The most powerful scholarly critique has been aimed at the exemptions from fraudulent and preferential transfer rules in particular.<sup>196</sup> The essence of that critique was stated in Part III.D: by

---

<sup>191</sup> See 11 U.S.C. §§ 556 (commodities and forward contracts); 559 (repurchase agreements); 560 (swaps); see also §362(a)(17)(specifying that the automatic-stay exemption applies to swap contract setoff rights).

<sup>192</sup> *Id.* at §§ 546(f),(g).

<sup>193</sup> See Edwards and Morrison, *supra* note 77, at 93, citing H.R. Rep. No. 97-420, at 3 (1982).

<sup>194</sup> See David A. Skeel, Jr. & Thomas H. Jackson, *Transaction Consistency and the New Finance in Bankruptcy*, 112 COLUM. L. REV. 152, 189 (2012); Roe, *supra* note 142, at 541; Squire, *supra* note 58, at 1200-01; Stephen J. Lubben, *Repeal the Safe Harbors*, 18 AM. BANKR. INST. L. REV. 319 (2010); Michael Simkovic, *Secret Liens and the Financial Crisis of 2008*, 83 AM. BANKR. L.J. 253 (2009).

<sup>195</sup> Besides encouraging runs, the exemptions effectively subsidize derivatives, causing them to proliferate and potentially increasing systemic risk through interconnectedness. See Edwards and Morrison, *supra* note 77, at 116-18. This observation parallels the one mentioned earlier in the context of netting. See *supra* note 119 and accompanying text. Edwards and Morrison characterize this subsidy as creating more "liquidity" in the derivatives markets, by which they mean greater trading volume. This Article instead uses that term to refer to the availability of cash to creditors when a debtor defaults. These two meanings of liquidity have opposite implications for systemic risk, with the first suggesting increased risk through interconnectedness, and the second suggesting reduced risk through greater cash availability. The two are nonetheless linked in the sense that a market with higher trading volumes allows for more netting.

<sup>196</sup> As contrasted with the preferential and fraudulent transfer exemptions, the automatic-stay exemptions have been analyzed more favorably. For example, Edwards and Morrison argue that the securities typically used as collateral for derivatives contracts generally lack firm-specific value, and

permitting counterparties to hold onto collateral that a debtor posted shortly before filing for bankruptcy, the exemptions encourage runs like the one suffered by AIG.<sup>197</sup>

While this critique is forceful as applied to bilateral counterparties, it does not seem relevant to clearinghouses, which do not “run.” As noted in Part III.C, clearinghouses are blinkered monitors whose mechanical margin-posting rules disregard members’ non-clearinghouse affairs and collect variation margin based solely on changes in the market values of in-house positions. If a rumor spread that a member was about to file for bankruptcy, the clearinghouse would be much less likely than the typical creditor to react by aggressively demanding collateral. It follows that a clearinghouse would neither occasion nor be a major participant in the type of run that AIG suffered in 2008, both because the clearinghouse would have demanded more initial collateral (leaving it less undersecured once the market turned against the member), and because it would have been less likely to act based on rumors as contrasted with price movements (though admittedly the former can drive the latter).

Meanwhile, the special derivatives exemptions increase liquidity and certainty by expanding a clearinghouse’s setoff opportunities. Without the special exemptions, a clearinghouse would be subject to two Bankruptcy Code restrictions on setoffs. The first disallows setoff if, during the 90 days before the debtor’s bankruptcy petition, the creditor’s claim against the debtor was “transferred to” the creditor.<sup>198</sup> This restriction would seemingly apply to any centrally cleared claim given that the clearinghouse does not enter into contracts itself but rather accepts them on behalf of members. Without the special exemptions, this restriction would increase the likelihood that a clearinghouse would have to pay cash back into a bankrupt member’s estate.

The second restriction disallows setoff if, again within the 90-day look-back period, the creditor’s own debt to the debtor was incurred “for the purpose of obtaining a setoff right.”<sup>199</sup> This restriction would interfere with the ability of a clearinghouse or its member to enter into hedging positions with a member that is severely out-of-the-money. Since the hedging position is, from that member’s perspective, in-the-money, the hedge requires the member to make an immediate cash payment to the clearinghouse. Without the special derivatives exemptions, the clearinghouse would have to return this cash if the member soon thereafter failed,

---

therefore that their immediate seizure upon a debtor’s does not threaten going-concern value, which the automatic stay ostensibly exists to protect. The authors treat this argument as an “independent justification” for the exemptions, unrelated to Congress’s concern about systemic risk. *See* Edwards and Morrison, *supra* note 77, at 106; *see also* Nathan Goralnik, *Bankruptcy-Proof Finance and the Supply of Liquidity*, 122 *YALE L.J.* 460, 497-500 (2012) (noting that, by allowing parties to liquidate collateral upon a counterparty’s failure, the special exemptions could facilitate the shifting of bankruptcy risk to those creditors who are best able to bear it).

<sup>197</sup> *See* text *supra* at notes 139 to 142. For the best-developed version of critique, *see* Roe, *supra* note 142, at 564-66.

<sup>198</sup> 11 U.S.C. § 553(a)(2).

<sup>199</sup> *Id.* at § 553(a)(3).

which again in a financial crisis would mean more cash tied up in a bankruptcy estate.

These observations suggest that clearinghouses' eligibility for the special derivatives' exemptions will bolster the clearing mandate's effectiveness in reducing systemic risk attributable to illiquidity and uncertainty.<sup>200</sup> A similar complementarity exists between the clearing mandate and Dodd-Frank's orderly liquidation authority, as described next.

## V. CLEARINGHOUSES AND THE FDIC AS CO-ORDERLY-LIQUIDATORS

Clearinghouses' capacity to speed up payouts to creditors of failed financial firms suggests that the clearing mandate is congruous with another one of Dodd-Frank's controversial provisions: its orderly liquidation authority, the express purpose of which is to unwind or reorganize systemically important firms rapidly. The clearing mandate will reduce the need for government officials to seize firms and assign them for orderly liquidation, and when a firm is seized the mandate will lighten the administrative burden on the FDIC in its role as receiver, allowing it to unwind the failed firm more quickly.

Dodd-Frank empowers the Treasury Secretary to designate a financial firm for orderly liquidation if, after receiving a recommendation from the Fed and the FDIC,<sup>201</sup> the Secretary determines that the firm has defaulted on its debts or is in danger of doing so, that it presents a systemic risk, and that other options for unwinding it would be unavailing.<sup>202</sup> The FDIC is then required to manage the firm while liquidating it, firing its managers in the process.<sup>203</sup> The general goal of orderly liquidation is the same as that of the clearing mandate: to reduce the need for government bailouts of systemically important firms.<sup>204</sup> While testifying before Congress in 2009, Fed Chairman Bernanke lamented that officials lacked a mechanism during the financial crisis for putting AIG into receivership.<sup>205</sup> A receiver, he argued, could have "impose[d] haircuts on creditors and counterparties as appropriate," producing an outcome "far preferable to the situation we find ourselves in now." Consistent with this view, Dodd-Frank states that the purpose of

---

<sup>200</sup> Darrell Duffie has also argued for the special exemptions as applied to cleared derivatives, although his analysis addresses the automatic stay and the liquidation of collateral rather than setoffs. Darrell Duffie and David Skeel, *A Dialogue on the Costs and Benefits of Automatic Stays for Derivatives and Repurchase Agreements*, in *BANKRUPTCY NOT BAILOUT: A SPECIAL CHAPTER 14* (Kenneth E. Scott and John B. Taylor, eds.) (2012).

<sup>201</sup> Dodd-Frank § 203(a)(1)(A).

<sup>202</sup> *Id.* at § 203(b).

<sup>203</sup> *Id.* at § 210((a)(1)(B),(D)); see also *id.* at §204(a) (directing the FDIC to make sure not only that creditors and shareholders bear any losses but also that "management responsible for the condition of the financial company will not be retained").

<sup>204</sup> *Id.* at § 201 et seq.

<sup>205</sup> Federal Reserve Chairman Ben S. Bernanke, American International Group, Testimony Before the Committee on Financial Services, U.S. House of Representatives (March 24, 2009) at <http://www.federalreserve.gov/newsevents/testimony/bernanke20090324a.htm>.

the orderly liquidation authority is to permit the unwinding of financial firms that “pose a significant risk to the financial stability of the United States” through a process that “mitigates such risk” while at the same time “minimizes moral hazard.”<sup>206</sup> The reference to moral hazard means that investors rather than taxpayers are supposed to bear the losses, an objective the statute elsewhere makes explicit.<sup>207</sup>

If Congress’s only goal had been to force shareholders and creditors to suffer losses when a financial firm fails, it could have required that all such firms liquidate through the Bankruptcy Code. So why instead use Dodd-Frank to supplant bankruptcy with a new liquidation process? The apparent answer is found in a Senate-report citation to congressional testimony in which FDIC Chairman Sheila Bair argued that bankruptcy is unacceptable for “systemic financial institutions” because its “timing is uncertain” and its process “can be complex and protracted.”<sup>208</sup> Bair contrasted bankruptcy with the FDIC’s traditional statutory power to liquidate FDIC-insured banks, stating that the FDIC can “resolve financial entities much more rapidly than under bankruptcy.”<sup>209</sup>

The liquidation process established by Dodd-Frank reflects Bair’s emphases on speed and certainty. While the resolution powers that the statute grants the FDIC generally parallel those of a Chapter 7 bankruptcy trustee,<sup>210</sup> the procedures are more streamlined. Thus, the FDIC is automatically appointed as receiver once the Treasury Secretary designates a firm for liquidation.<sup>211</sup> Chapter 7, by contrast, calls for the creation of a creditors’ committee that then elects a trustee.<sup>212</sup> A firm assigned for orderly liquidation has only 24 hours to obtain a court-issued stay<sup>213</sup>; the Bankruptcy Code, by contrast, places no time limit on a bankruptcy court’s power to review a claim that a petition was improperly filed and should be dismissed.<sup>214</sup> Finally, the FDIC must confirm or disallow all creditor proofs of claim no more than 180 days after they are filed,<sup>215</sup> a time limit that, again, has no parallel

---

<sup>206</sup> *Id.* at § 204(a).

<sup>207</sup> *Id.* at § 204(a)(1) (“[C]reditors and shareholders will bear the losses of the financial company.”).

<sup>208</sup> Sen. Rep. 111-176, at n. 10; Chairman Sheila C. Bair, Establishing a Framework for Systemic Regulation, Statement before the Committee on Banking, Housing and Urban Affairs, U.S. Senate (July 23, 2009), at <http://www.fdic.gov/news/news/speeches/archives/2009/spjuly2309.html>.

<sup>209</sup> *Id.*

<sup>210</sup> Compare Dodd-Frank § 210(a) (enumerating the FDIC’s receivership powers) with 11 U.S.C. § 704 (describing the duties of a Chapter 7 trustee).

<sup>211</sup> Dodd Frank § 202(b).

<sup>212</sup> 11 U.S.C. § 702(a).

<sup>213</sup> Dodd Frank § 202(a)(1)(A)(v). An expedited appeal of limited scope is permitted from the district court’s decision. *Id.* at § 202(a)(2).

<sup>214</sup> See 11 U.S.C. § 707(a).

<sup>215</sup> Dodd Frank § 210(a)(3)(a)(i).

in the Bankruptcy Code.<sup>216</sup> Compared to a Chapter 7 trustee, the FDIC has both the power and the duty to act with greater dispatch.

A further indication that Congress considered speed to be of the essence in a financial crisis is the power that Dodd-Frank gives the FDIC to create “bridge financial companies” and to transfer to them whichever of a seized firm’s assets and liabilities the FDIC selects.<sup>217</sup> A rough analogy can be drawn between these FDIC powers and a bankruptcy trustee’s authority under the Code’s section 363 to sell a debtor as a going concern.<sup>218</sup> But the FDIC’s powers are broader. The FDIC can create the bridge company,<sup>219</sup> appoint its directors,<sup>220</sup> and fund it by tapping an “orderly liquidation fund” that Dodd-Frank establishes within the Treasury Department.<sup>221</sup> By contrast, a bankruptcy trustee cannot summon a buyer into existence; it only can negotiate with any bidders who emerge, and the bidders must bring their own funding. The FDIC has virtually unlimited discretion to assign assets and liabilities to the bridge company<sup>222</sup>; a bankruptcy trustee must negotiate a purchase agreement with a bidder who is free to walk away. And while transfers by the FDIC to a bridge company are immediately effective,<sup>223</sup> a trustee can sell an intact debtor only after a hearing and with the approval of the bankruptcy court.<sup>224</sup> Again, we see that the FDIC is empowered to act at a pace that is not available to trustees in standard bankruptcy liquidations.

The broad powers and minimal judicial oversight of government actors under the orderly liquidation authority have led both scholars and state officials to question the authority’s constitutionality. According to Kenneth Scott, that authority “squeezes pre-seizure due process down to the vanishing point,” giving “unprecedented power and discretion to an administrative official” in a manner that goes “far beyond banking law to the point of posing serious constitutional problems.”<sup>225</sup> On September 21, 2012, the attorneys general of Michigan, Oklahoma

---

<sup>216</sup> See 11 U.S.C. § 502(b) (providing for judicial determination of the value of challenged claims, but imposing no time limit).

<sup>217</sup> Dodd-Frank § 210(h)(1),(5).

<sup>218</sup> See 11 U.S.C. § 363(b). Perhaps the most important development in corporate bankruptcies in the last twenty-five years has been the increased use of going-concern sales under this section in lieu of traditional, negotiated reorganizations. See Douglas K. Baird & Robert K. Rasmussen, *Chapter 11 at Twilight*, 56 STAN. L. REV. 673 (2003).

<sup>219</sup> Dodd-Frank §§ 210(h)(1)(A), 210(h)(2)(A).

<sup>220</sup> *Id.* at § 210(h)(2)(B).

<sup>221</sup> *Id.* at § 210(n).

<sup>222</sup> *Id.* at § 210(h)(5)(A),(B).

<sup>223</sup> *Id.* at § 210(h)(5)(D).

<sup>224</sup> 11 U.S.C. § 363(b).

<sup>225</sup> Kenneth Scott, *Dodd-Frank: Resolution or Expropriation* (Feb. 29, 2012), at 1 (unpublished manuscript), at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1673849](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1673849); but see Douglas G. Baird & Edward R. Morrison, *Dodd-Frank for Bankruptcy Lawyers*, 19 AM. BANKR. INST. L. REV. 287, 296-98 (2011) (acknowledging that the authority raises due process concerns but concluding that it ultimately passes constitutional muster).

and South Carolina joined a lawsuit challenging the constitutionality of the orderly liquidation authority based on arguments similar to those raised by Scott.<sup>226</sup>

By accelerating payouts to derivatives counterparties, a clearinghouse can both complement and substitute for the FDIC in its role as orderly liquidator. Thus, in many cases the central clearing of derivatives may make FDIC receivership unnecessary. When evaluating a recommendation to place a financial firm in receivership, the Treasury Secretary is required to consider not only whether the firm is a systemic risk but also whether alternative means for resolving it would be effective.<sup>227</sup> And there may be many firms whose derivatives contracts are the only systemically important aspect of their business. Their non-derivatives operations, even if extensive, may not deal with vulnerable financial counterparties. An example from the 2008 crisis is Bear Stearns, which the Federal Reserve seems to have considered “too big to fail” solely because of its role as a dealer in bilateral derivatives markets. Mandatory clearing will allow the systemically relevant operations of such a firm to be resolved quickly, making it unnecessary to throw the entire firm into receivership. In this way, mandatory clearing is a surgical alternative to orderly liquidation.

In cases in which the Treasury Secretary deems it necessary to place a clearinghouse member in receivership, the rapid resolution of the member’s in-house positions through multiparty netting will both simplify and expedite the FDIC’s discharge of its receivership duties. Clearinghouse netting carves out a portion of a firm’s assets and liabilities for immediate resolution, reducing the scope of the failed member’s estate. Even though the FDIC is empowered to move quickly, it still may need weeks or months to evaluate all claims against a seized firm, form a bridge company, pay out creditors, and so on. Dodd-Frank recognizes this possibility by giving the FDIC up to 180 days to process proofs of claim.<sup>228</sup> Thus, while orderly liquidation may be quicker than standard bankruptcy, it almost certainly will be slower than netting through a central counterparty, which can be accomplished more or less instantly when a clearinghouse member defaults. The implication is that clearinghouse members will be paid more quickly than they would if their contracts were bilateral, even if the failed counterparty is resolved by the FDIC. And by reducing the assets and liabilities that the FDIC must administer, the clearinghouse permits the FDIC to complete the receivership process more quickly, speeding up payouts for non-clearinghouse creditors as well.

A parallel can be drawn between this division of administrative labor and a similar division of responsibilities among bankruptcy commissions that was made possible by one of the earliest examples of commercial asset partitioning: the “jingle-rule” partnership. Under the jingle rule, the bankruptcy of a partnership

---

<sup>226</sup> Emily Stephenson, *Three states join lawsuit challenging Dodd-Frank law*, REUTERS (Sept. 21, 2012, 5:14 PM), at <http://www.reuters.com/article/2012/09/21/us-financial-regulation-lawsuit-idUSBRE88K0WA20120921>.

<sup>227</sup> See Dodd-Frank § 203(a),(b).

<sup>228</sup> See *supra* note 215.

means that the partnership's creditors get the first claim to the partnership's assets, and each individual partner's creditors get the first claim to that partner's personal assets.<sup>229</sup> English Courts of Chancery created this rule not long after Parliament established a procedure whereby a partnership's failure resulted in the appointments of separate bankruptcy commissions for the partnership and for each individual partner.<sup>230</sup> The jingle rule simplified and sped up proceedings by allowing each commission to distribute assets to creditors without having to wait for the other commissions to determine the value of creditor claims under their purview.<sup>231</sup> Similarly, netting would allow a clearinghouse to distribute value immediately, without having to wait for the FDIC to determine the total value of the claims against the firm in receivership.<sup>232</sup>

## VI. INITIAL IMPLICATIONS FOR REGULATORS

Regulators are still implementing Dodd-Frank by translating its general directives into specific rules. One implication of this Article's thesis is that, contrary to the emphasis in the statute's legislative history, the regulatory function of a clearinghouse should not be to increase collateral postings on swap contracts. Collateral can become illiquid in a crisis and, through forced selling, can exacerbate a fire-sale price spiral, increasing systemic damage. Regulators instead should seek to maximize netting opportunities within clearinghouses, thereby reducing clearinghouses' need to rely on collateral as protection against counterparty risk.

As a general rule, opportunities for clearinghouse netting increase with the ratio of the number of contracts cleared to the number of clearinghouses. Although regulators could increase this ratio by shrinking its denominator, in the extreme case by forcing trading in all derivatives through a single clearinghouse, this approach has clear disadvantages. Competition among clearinghouses can generate valuable innovations that reduce operating costs.<sup>233</sup> In addition, as Roberta Romano has described, international variation in financial regulation can provide systemic benefits by reducing insolvency-risk correlations across borders.<sup>234</sup> But this benefit

---

<sup>229</sup> See Hansmann, Kraakman & Squire, *supra* note 170, at 1382.

<sup>230</sup> *Id.*

<sup>231</sup> *Id.*

<sup>232</sup> The analogy is imprecise because, unlike with the jingle rule, the setoff asset partitioning is not symmetrical. Therefore, the FDIC might not be able to distribute assets to unsecured creditors until after the valuation of the clearinghouse's deficiency claim against the failed member, as that claim would be payable pro rata with the member's general unsecured debtors. In practice, this asymmetry is unlikely to be a cause delay, as a clearinghouse will typically resolve creditor claims much more quickly than the FDIC will.

<sup>233</sup> French et al., *supra* note 108, at 117.

<sup>234</sup> Roberta Romano, *For Diversity in the International Regulation of Financial Institutions: Redesigning the Basel Architecture*, Yale Law & Economics Research Paper #452 (Aug. 10, 2012), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2127749](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2127749).



of international regulatory competition would be lost if all trading went through a single clearinghouse subject to a single regulatory regime.<sup>235</sup>

These observations suggest that the better regulatory goal is to raise the contracts-to-clearinghouses ratio by increasing the numerator. In the United States, this would mean subjecting more categories of swaps to the clearing mandate. To date, the CFTC has proposed only two categories of credit default swaps for central clearing, with both categories referencing pools of corporate bonds.<sup>236</sup> A clearing mandate of such limited scope could actually reduce liquidity, undermining opportunities for firms to engage in bilateral netting without providing a corresponding increase in netting within clearinghouses.<sup>237</sup> Therefore, the right approach to the clearing mandate may be suggested by the aphorism “in for a dime, in for a dollar”: regardless of whether the mandate was a good idea as an initial matter, now that the legislative commitment has been made, regulators should create a robust mandate that permits widespread netting and hence exploits what is likely to be clearinghouses’ most important systemic benefit. Regulators could widen netting opportunities not only by adding more categories of swaps to the mandate, but also by discouraging the formation of specialist clearinghouses that clear only particular contract types and thus that preclude cross-category netting.

An under-explored question is whether clearinghouses should further seek to reduce reliance on collateral postings by restricting the degree to which individual members are permitted to maintain either in-the-money or out-of-the-money net positions, regardless of whether the position is fully collateralized. For example, a member might be required to close out or reassign contracts whenever the net value of its positions, disregarding collateral, deviates too far from the ideal of directional neutrality under which setoff opportunities are maximized.<sup>238</sup>

## CONCLUSION

This Article has argued that the primary economic benefit of central clearing is faster creditor payouts when a member firm fails. Faster payouts are generally efficient, and they also lower the risk of contagion during a financial crisis by reducing illiquidity and uncertainty. Faster payouts result from expanded setoff opportunities through multiparty netting, which can reduce illiquidity and uncertainty even when the clearinghouse itself is insolvent. Without the clearinghouse to act as a central counterparty, cash owed to a failed firm would

---

<sup>235</sup> See Griffith, *supra* note 36, at 37 (describing dangers of uniformity in international regulation of swap clearinghouses).

<sup>236</sup> See Commodity Futures Trading Organization, Clearing Requirement Determination Under Section 2(h) of the CEA, 17 C.F.R. Part 50 (Aug. 7, 2012).

<sup>237</sup> French et al., *supra* note 108, at 116-17 (noting that many parties now rely on bilateral “master netting agreements” that permit netting of mutual exposures across multiple contract types); Darrell Duffie & Haoxiang Zhu, *Does a Central Clearing Counterparty Reduce Counterparty Risk*, 1 REV. ASSET PRICING STUD. 74 (2011), available at [www.ssrn.com/abstract=1348343](http://www.ssrn.com/abstract=1348343) (MS at 4-5) (describing how the clearing mandate could undermine bilateral cross-contract netting).

<sup>238</sup> See the discussion at note 199, above, of how clearinghouses can hedge the positions of out-of-the-money members.

become trapped in the firm's bankruptcy or receivership estate during a crisis, exacerbating liquidity shortages among the firm's creditors and increasing uncertainty about how much the creditors will recover. Unlike other ostensible benefits of clearinghouses cited by supporters of Dodd-Frank's clearing mandate, faster payouts are not zero-sum in their impact on creditors: at least some creditors are paid more quickly, and no creditors are paid more slowly, than they would be without the clearinghouse.

This Article has also shown that there is a high degree of complementarity between Dodd-Frank's clearing mandate and another one of its controversial provisions: the orderly liquidation authority for systemically risky firms. Legislative history indicates that the function of the orderly liquidation authority is to resolve failed firms quickly during a financial crisis. But the authority has been criticized because of the vast and largely unreviewable powers it gives officials to seize and liquidate a firm and fire its managers, even before the firm has defaulted on its debts. Critics of the liquidation authority should support a broad clearing mandate, as clearinghouses also are rapid, orderly liquidators but they follow predictable rules for resolving claims that leave little discretion either to officials or to clearinghouse managers. In other words, clearinghouses are both substitutes for, and complements to, the FDIC in its role as liquidator: they can obviate seizure by the FDIC, and, if a firm *is* seized, they can reduce the FDIC's workload in resolving it.

The capacity for central clearing to reduce systemic risk attributable to illiquidity and uncertainty does not alone establish that Dodd-Frank's clearing mandate will, on net, be socially beneficial. As other scholars have argued, central clearing can also increase systemic risk, primarily because it mutualizes losses among trading firms and thereby weakens those firms' incentives to use contractual terms to punish excessive risk-taking by counterparties. Whether such costs are outweighed by the benefits of central clearing identified in this Article is not a question that the Article has tried to answer. But the Article has argued that regulators can improve the cost-benefit proposition by seeking to maximize netting opportunities within clearinghouses rather than adhering to the legislative history's view that the clearing mandate's primary function is to increase collateral postings.

As part of a broader trend, regulatory reliance on clearinghouse netting to speed up insolvency proceedings would be consistent with the ongoing search among both market participants and policymakers for alternatives to the traditional model of business bankruptcy as a grand bargain negotiated among managers and investors. For example, the trend among market participants in the last twenty-five years has been to favor quick asset sales over drawn-out, negotiated Chapter 11 reorganizations.<sup>239</sup> Among government officials, dissatisfaction with traditional bankruptcy was evident even before the 2008 crisis in Congress's decision to exempt derivatives from key Bankruptcy Code provisions.<sup>240</sup> And of course the 2008 bailouts reflected a perception among officials of the inadequacies of

---

<sup>239</sup> See note 218 *supra*.

<sup>240</sup> See *supra* Part IV.D.

traditional bankruptcy, as does the inclusion of the orderly liquidation authority in Dodd-Frank.<sup>241</sup> The clearing mandate is consistent with this trend, as central clearing partitions a failed firm's assets in a manner that keeps them outside the bankruptcy proceeding and under the control of a separate entity, the clearinghouse, that can distribute them to creditors much more quickly.

---

<sup>241</sup> See notes 208-209 *supra* and accompanying text.