

## CLEARINGHOUSES AND REGULATION BY PROXY

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## I. INTRODUCTION

The financial crisis has brought into relief the extraordinary risks created by the opaque over-the-counter (OTC)<sup>1</sup> derivatives markets.<sup>2</sup> Valued at over \$600 trillion dollars, this market has traditionally allowed sophisticated financial players to trade various kinds of swaps bilaterally with one another.<sup>3</sup> It is now widely accepted that OTC securities like credit default swaps (CDS) contributed to the exuberant credit markets seen pre-crisis, and brought about a deep misunderstanding of the risks permeating the financial system.<sup>4</sup> In the aftermath of the crisis, policymakers around the world have

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<sup>1</sup> As discussed below, over-the-counter markets refers to markets where trading takes place outside of regulated exchanges, allowing parties to transact bilaterally with one another without the usual transparency and risk management mechanisms that exchanges provide. Parties can also structure their transactions privately and according to their own specific risk preferences. This can lead to greater risk-taking, and parties fail to provision for the risks that they assume. See Bushan K. Jomadar, *The ISDA Master Agreement – The Rise and Fall of a Major Financial Instrument* (Working Paper, Aug. 24, 2007), available at <http://papers.ssrn.com/sol3/papers.cfm?abstractid=1326520> (analyzing the OTC market and the contractual framework governing transactions); Frank Partnoy, *ISDA, NASD, CFMA, and SDNY: The Four Horsemen of Derivatives Regulation?* (U. of San Diego School of Law, Pub. Law & Legal Theory Working Paper No. 39, 2007), available at <http://papers.ssrn.com/sol3/papers.cfm?abstractid=293085> (discussing the development of so-called “master agreements” in the OTC markets to help reduce the costs of private negotiation and the advantages and problems these pose in the OTC market). See, e.g., Yesha Yadav, *The Problematic Case of Clearinghouses in Complex Markets*, 101 GEO. L.J. 387 (2013) (detailed analysis on the risks to clearinghouses of clearing CDS).

<sup>2</sup> See, e.g., COMM. ON CAPITAL MKTS. REGULATION, *THE GLOBAL FINANCIAL CRISIS: A PLAN FOR REGULATORY REFORM* (2009), [http://capmktreg.org/app/uploads/2014/08/TGFC-CCMR\\_Executive\\_Summary\\_5-26-09.pdf](http://capmktreg.org/app/uploads/2014/08/TGFC-CCMR_Executive_Summary_5-26-09.pdf). For an early discussion of the phenomenon, see Lynn A. Stout, *Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives*, 48 DUKE L.J. 701 (1999); Lynn A. Stout, *The Legal Origin of the 2008 Financial Crisis* (Feb. 25, 2011) (unpublished research paper No. 11-05, UCLA School of Law, 2008), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1770082](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1770082); UBS, *SHAREHOLDER REPORT ON UBS'S WRITE-DOWNS 12–14*, available at <http://www.ubs.com/1/ShowMedia/investors/agm?contentId=140333name=080418ShareholderReport.pdf>.

<sup>3</sup> For a pre-crisis and post-crisis statistical comparison, see BANK OF INT'L SETTLEMENTS, *SEMIANNUAL OTC DERIVATIVES STATISTICS AT END-DECEMBER* (2009), <http://www.bis.org/statistics/derstats.htm>; see also ATLANTIC COUNCIL, *THE DANGER OF DIVERGENCE: TRANSATLANTIC FINANCIAL REFORM AND THE G20 AGENDA 29–30*, [http://www.atlanticcouncil.org/images/publications/Danger\\_of\\_Divergence\\_Transatlantic\\_Financial\\_Reform\\_1-22.pdf](http://www.atlanticcouncil.org/images/publications/Danger_of_Divergence_Transatlantic_Financial_Reform_1-22.pdf). For more recent statistics, see BANK FOR INT'L SETTLEMENTS, *SEMIANNUAL OTC DERIVATIVES STATISTICS AT END-DECEMBER 2011* (2012). The figures quoted are measured in “notional” value. This means, in general, the gross value of the obligations, rather than those that have been offset against one another.

<sup>4</sup> See, e.g., Stout, *supra* note 2; see also Margaret Blair, *Financial Innovation, Leverage, Bubbles and the Distribution of Income*, 30 REV. BANK. & FIN. L. 225 (2010). But see Rene M. Stulz, *Credit Default Swaps and the Credit Crisis*, 24 J. ECON. PERSP. 73 (2010) (arguing that CDS did not play a major role in causing the crisis). For an excellent overview of the key

converged on a solution to the risks created by OTC derivatives—the clearinghouse.<sup>5</sup> Rather than allowing financial firms to privately manage the dangers of trading derivatives, policymakers are looking instead to the clearinghouse to protect markets against the spread of risk.<sup>6</sup> The clearinghouse is designed to act as a strong protective buffer against risk by becoming a central contract party for all trades, well placed to manage risks for the market by virtue of this position.<sup>7</sup> As an institution specifically designed to monitor risks and provision for them as they arise, policymakers appear confident that the clearinghouse can stamp out any dangers and prevent a repeat of the 2008 debacle.

This Article provides a short analysis of the role of the clearinghouse post-Crisis. Without question, the clearinghouse now occupies an essential role as a risk-manager in international derivatives markets. Despite this centrality, however, the literature has underplayed the broader significance of this development. This Article argues that, in assuming its new responsibilities, the clearinghouse is increasingly looking like a new kind of regulator for the derivatives market. This elevation of the clearinghouse from private institution to a provider of an essential public service is far from a straight-forward proposition. The clearinghouse is not a risk-free institution, as policymakers have conventionally assumed. Rather, in sharing the risks of complex derivative contracts, the clearinghouse itself can come to represent a source of enormous danger to markets. But, as the frontline overseer of derivatives markets, the clearinghouse and other regulators can easily miss risks accumulating in the clearinghouse or underplay their significance until it is too late. For an institution that may be *the* too-big-to-fail firm in the market, the consequences of such a failure are likely to be catastrophic and costly for the financial system—not to mention taxpayers—as a whole.

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attributes of CDS and their risks and advantages see, Frank Partnoy & David A. Skeel, Jr., *The Promise and Perils of Credit Derivatives*, 75 U. CIN. L. REV. 1019 (2007).

<sup>5</sup> THE G-20 PITTSBURGH SUMMIT, LEADER'S STATEMENT 9 (2009), [http://ec.europa.eu/mission\\_2010-2014/president/pdf/statement\\_20090826\\_en\\_2.pdf](http://ec.europa.eu/mission_2010-2014/president/pdf/statement_20090826_en_2.pdf).

<sup>6</sup> Numerous scholars have expressed skepticism regarding this solution. See *infra* note 35.

<sup>7</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, 7 U.S.C.A. § 799 (West 2010), available at <http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf>. As described later in this Article, the clearinghouse becomes a central counterparty to trades in the market. This means that the clearinghouse enters into the middle of the trade between a buyer and seller of securities. It becomes the contract party to each side of the trade, becoming the seller to each buyer and the buyer to each seller. In this way, traders only ever transact with a clearinghouse rather than assume risks on one another. For discussion see discussion *infra* Part III.A.

Clearinghouses are not new to the market. Rather, they are deeply embedded into its architecture and have functioned behind-the-scenes throughout its recent history to process trades and ensure they settle and complete. Clearinghouses like the Depository Trust and Clearing Corporation (DTCC) have become indispensable to modern finance. The DTCC, for example, functions as the clearinghouse to fifty exchanges and exchange-type platforms in the U.S., and processes around \$1.6 quadrillion in trades annually.<sup>8</sup> The clearinghouse for the Chicago Mercantile Exchange (CME)—a major exchange for trading derivatives like futures and options—similarly processes around \$1 quadrillion worth of trades annually.<sup>9</sup> Following the enactment of the Dodd-Frank Act, clearinghouses have begun to open their doors to clearing new products like the infamous CDS. For example, through September 5, 2014, the Intercontinental Clear Credit, part of the Atlanta-based Intercontinental Exchange (ICE) Group that owns the New York Stock Exchange, reported clearing CDS worth more than \$53 trillion since its establishment in 2009.<sup>10</sup> This figure is probably just the beginning. Most likely, it will grow over time as CDS start to migrate more toward clearinghouses and away from the OTC space.<sup>11</sup>

Clearinghouses are designed to reduce a single, basic risk in the market: a party to trade reneging on its side of the bargain-by ensuring that the two parties perform. The rationale underpinning the clearinghouse's function is straightforward: when the risk of default is low, traders will not have to pay additional money to guard against the other party's nonperformance. Without a clearinghouse, individual traders must invest resources into understanding their counterparties by procuring information on their counterparties' solvency and their ongoing ability to perform in the trades. As a result, markets become inefficient when securities prices reflect large transactional costs rather than the real value of securities.<sup>12</sup>

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<sup>8</sup> Securing Today – Shaping Tomorrow, Depository Trust & Clearing Corporation, 3–4 (2013), [http://www.dtcc.com/~media/Files/Downloads/About/DTCC\\_Capabilities.ashx](http://www.dtcc.com/~media/Files/Downloads/About/DTCC_Capabilities.ashx).

<sup>9</sup> Clearing, CME GROUP, <http://www.cmegroup.com/clearing/> (last visited Oct. 24, 2014).

<sup>10</sup> *ICE Clear Credit*, ICE (Sept. 5, 2014), <https://www.theice.com/clear-credit> (measuring gross notional value of CDS, excluding set-offs, where exposures between two parties would be offsetting).

<sup>11</sup> THE BD. OF THE INT'L ORG. OF SEC. COMM'R, THE CREDIT DEFAULT SWAP MARKET REPORT 1 (June 2012), available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD385.pdf> (showing increasing volumes of CDS trading and factors like standardization and better information flows that may contribute to increasing volumes of trades).

<sup>12</sup> Darrell Duffie & Haoxiang Zhu, *Does a Central Clearing Counterparty Reduce Counterparty Risk?*, 1 REV. ASSET PRICING STUD. 74, 74–75 (2011) (noting the demand for clearinghouse functions in the wake of the collapse of Bear Stearns).

However, the simplicity of this goal belies the complex machinations that clearinghouses must perform to fulfill it. For one, they must combine the resources of the largest financial institutions, who become members of the clearinghouse and provide capital to finance clearinghouse operations. To reduce their risks, clearinghouses must: (i) ensure that they match trades correctly; (ii) agree on the standard terms and conditions on which they will clear and settle securities; (iii) maintain capital to support the ongoing risk of trading; (iv) gather information on counterparties; and (v) establish procedures in case counterparties default and trades fail to settle.<sup>13</sup> To make this investment worthwhile, clearinghouses charge fees as well as offer a range of other side services to traders.<sup>14</sup>

Certainly, clearinghouses can bring great gains to the OTC derivatives market. Counterparty risks should diminish and OTC derivatives trades should become less complex. Traders will be asked to provision systematically for the risks they assume and, if they fail, clearinghouses will absorb the costs of the fallout and prevent further contagion.

However, clearinghouses are also assuming a central role in overseeing the derivatives market and in “regulating” the behavior and bargains of traders. In setting the terms of contracts, capital and reporting requirements, and procedures for how failing firms are wound down, clearinghouses assume a key position of authority and control over the market. Given the risky history of OTC derivatives and the challenges in understanding their complexity and costs, regulators are placing considerable trust in clearinghouses to meet their mandates successfully.

On the one hand, this institutional delegation of labor to the clearinghouse shows considerable promise. Clearinghouses have a direct line of sight over the market as a whole and considerable historical expertise in risk management. On the other hand, there are reasons for caution. Importantly, today’s leading clearinghouses are private, for-profit institutions, comprised of the largest financial firms—the kind that constitutes key players in OTC

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<sup>13</sup> Craig Pirrong, *The Economics of Clearing in Derivatives Markets Netting, Asymmetric Information, and the Sharing of Default Risks Through a Central Counterparty*, 14–20 (Working Paper, Jan. 8, 2009), available at [http://www.bauer.uh.edu/spirrong/clearing\\_disclosure.pdf](http://www.bauer.uh.edu/spirrong/clearing_disclosure.pdf); see, e.g., *CME Clearing: Principles for Financial Markets Infrastructure Disclosure*, CME GROUP 5–8 (Dec. 31, 2013), <http://www.cmegroup.com/clearing/risk-management/files/cme-clearing-principles-for-financial-market-infrastructures-disclosure.pdf>.

<sup>14</sup> See, e.g., *Clearing Services*, DTCC, <http://www.dtcc.com/clearing-services.aspx> (last visited Sept. 14, 2014) (showing the variety of services provided by the clearinghouse in a variety of different types of security).

derivatives.<sup>15</sup> Arguably, this dual role for the clearinghouse—as both overseer and market participant—is problematic for a number of reasons. For one, clearinghouses must balance the trade-off between generating high fees for their institution—by clearing high volumes of trades and providing a range of related services for fees—and investing in costly risk management.<sup>16</sup> If clearinghouses make overly strict demands of their members and counterparties or charge high fees for their services, traders might take their business elsewhere.<sup>17</sup> Additionally, the high reliance placed on clearinghouses to manage market risk by regulators—and their increasing indispensability for risk management—creates the risk that clearinghouses might face a lower intensity of regulatory scrutiny. With their considerable power and influence within the structure of derivatives markets, clearinghouses garner influence on how to implement the G-20 clearing mandate.<sup>18</sup>

This conference reflects on the complex relationship between corporations and the state.<sup>19</sup> As other contributions to this symposium show, today's multinational corporations are repositories of tremendous technical expertise and know-how. With such attributes comes influence, particularly the ability to shape the content of rules and regulations and their implementation in the real world. The clearinghouse offers an example of just such an institution, and regulators must analyze both its risks and rewards to repair damaged financial markets.

This Article is structured as follows: Part II provides an overview of the clearinghouse and a brief introduction to OTC derivatives markets; Part III discusses the benefits of clearinghouses and the risks of their central derivatives operation; Part IV briefly discusses some implications.

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<sup>15</sup> Sean J. Griffith, *Governing Systemic Risk: Towards a Governance Structure for Derivatives Clearinghouses*, 61 EMORY L.J. 1153, 1218–20 (2012).

<sup>16</sup> Yadav, *supra* note 1, at 416–17, 432–33 (illustrating the problematic incentives that encourage clearinghouse members to take risks at the expense of the clearinghouse). *See also* Pirrong, *supra* note 13.

<sup>17</sup> Yadav, *supra* note 1.

<sup>18</sup> *See infra* note 63.

<sup>19</sup> Conference, *The New Roles of Corporations in Global Governance*, University of Georgia School of Law, Athens, Georgia, April 18, 2014.

## II. BACKGROUND ON THE ROLE OF CLEARINGHOUSES

### A. Key Functions

Clearinghouses have deep roots in today's securities markets. They developed in the 1880s to support the then-burgeoning securities exchanges.<sup>20</sup> As traders began to come together to trade stocks, bonds and commodity derivatives, they faced a problem: could they trust one another to keep to the terms of their bargain?<sup>21</sup> The agreement between two traders to buy and sell stocks to one another did not mean that they would actually follow through with the trade. In the time it might take for the seller to complete the paperwork, she could find another buyer for her securities. Similarly, a buyer could find another seller willing to sell the shares more cheaply. Worse, in the time it took to complete the trade, one of the traders could go bust, leaving her assets to be resolved through the bankruptcy process. Where a buyer defaulted on her obligations, the failure to complete a trade could set off a chain reaction of failures. For example, a seller may have ended up with insufficient money to make good on another contract. These uncertainties impose costs. Where parties cannot rely on the certainty of their bargain, they can choose either to not proceed with the deal or to discount the price of securities to reflect the likelihood of the counterparty's default.<sup>22</sup> Additionally, in deciding whether to trade or not trade, and on what terms, traders must invest in gathering information on the other party and putting terms and conditions in place to incentivize performance. Seen from the welfare perspective, the aggregate economic costs of this default risk can be enormous due to mispriced capital, failed deals, and high transaction costs.

Clearinghouses have arisen as a response by private firms to overcome this problem of counterparty risk.<sup>23</sup> Clearinghouses fulfill a number of key

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<sup>20</sup> Franklin R. Edwards, *The Clearing Association in Futures Markets: Guarantor and Regulator*, in *THE INDUSTRIAL ORGANIZATION OF FUTURES MARKETS* 225 (Ronald W. Anderson ed., 1984); Craig Pirrong, *If It's So Great . . .*, *STREETWISE PROFESSOR* (Nov. 22, 2008, 5:03 PM), <http://streetwiseprofessor.com/?p=984>.

<sup>21</sup> For a detailed account see Yadav, *supra* note 1, at 408.

<sup>22</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, 598–604 (1999); James T. Moser, *Contracting Innovations and the Evolution of Clearing and Settlement Methods at Futures Exchanges* (Fed. Reserve Bank of Chi., Working Paper No. WP-98-26, 1998).

<sup>23</sup> Yadav, *supra* note 1, at 391. See also Pirrong, *supra* note 20 (arguing that the industry faced regulatory pressure to create clearinghouses).

market functions: (i) they aim to ensure that trades are settled, meaning that a buyer receives her shares and a seller receives her money; (ii) they seek to ensure that traders understand and pay for the risks that they assume; (iii) they collect information on trades and report it to markets and regulators; and (iv) they establish procedures to control the spread of risks in cases where a firm fails to complete trades, or otherwise collapses altogether.

Broadly speaking, clearinghouses and exchanges work together to enable securities trading in today's markets. Exchanges bring buyers and sellers together to help them arrive at a bargain. Through listing rules, exchanges control which securities are traded and which institutions are eligible to enter the marketplace. Exchanges also provide continuous information on prices to encourage efficient trading.<sup>24</sup> Once traders strike a bargain on the exchange, the trade moves forward and settles through the clearinghouse. When the clearinghouse takes over, it promises the buyer and seller that the trade will settle, reducing their uncertainty costs and the risks of failure that each side faces.

The clearinghouse achieves these goals through two core innovations. First, the clearinghouse novates all contracts to itself. Second, the clearinghouse mutualizes losses between members.

*Novation*: Novation describes the major way through which clearinghouses reduce counterparty risks: the central counterparty becomes the contract party to the trades that they process.<sup>25</sup> This means that clearinghouses break the contract between the buyer and seller and create two new contracts from this single bargain: (i) one contract between itself and the seller to purchase securities, and (ii) another contract between itself and the buyer to sell the securities. This act of novation of contracts achieves a singular purpose. Rather than take a risk on individual traders, buyers and sellers of securities instead take a risk on the clearinghouse. In theory, this should be a much safer bet.<sup>26</sup> This model is known as the central

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<sup>24</sup> Henry Crosby Emery, *Speculation on the Stock and Produce Exchanges of the United States*, in 7 *STUD. IN HIST., ECON. & PUB. L.* 289 (1896); Andreas M. Fleckner, *Stock Exchanges at the Crossroads*, 74 *FORDHAM L. REV.* 2541, 2546–50 (2006) (discussing the key functions of exchanges); Jonathan R. Macey & Hideki Kanda, *The Stock Exchange as a Firm: The Emergence of Close Substitutes for the New York and Tokyo Stock Exchanges*, 75 *CORNELL L. REV.* 1007 (1990) (discussing international competition for exchanges).

<sup>25</sup> COMM. ON PAYMENT & SETTLEMENT SYS., BANK FOR INT'L SETTLEMENTS, *RECOMMENDATIONS FOR CENTRAL COUNTERPARTIES 1* (2004).

<sup>26</sup> For more detail, see JOHN MCPARTLAND, FED. RESERVE BANK OF CHI., *CLEARING AND SETTLEMENT DEMYSTIFIED 3* (2005), available at [http://www.chicagofed.org/digital\\_assets/publications/chicago\\_fed\\_letter/2005/cfljanuary2005\\_210.pdf](http://www.chicagofed.org/digital_assets/publications/chicago_fed_letter/2005/cfljanuary2005_210.pdf); Darrell Duffie & Haoxiang Zhu, *Does a Central Clearing Counterparty Reduce Counterparty Risk?*, 1 *REV. ASSET PRICES*

counterparty model, or CCP, for a clearinghouse.<sup>27</sup> Owing to its perceived utility in reducing trading risks, the CCP has come to be regarded as a gold standard for international markets, one that national regulators should aim to adopt where feasible.<sup>28</sup>

*Mutualization:* Mutualization describes the capacity of clearinghouses to share losses between members. When members come together to form a clearinghouse they undertake to cover the losses of other members where necessary. In other words, clearinghouse members work to insure one another. Where one member collapses, leaving open trades still requiring completion, mutualization ensures that the clearinghouse completes any open trades, even if these come at a cost to the clearinghouse and its remaining members.<sup>29</sup>

### B. Clearinghouses as Risk Managers

Clearinghouses take on direct risks in the securities markets. By becoming a contract party to trades, clearinghouses promise to complete trades even if this comes at a private cost to the clearinghouse. This risk requires CCPs to take protective measures that safeguard the institution from excessive accumulations of danger. Key measures include: (i) provisions for trades to be supported by security or collateral; (ii) a default fund to act as first-absorber for losses; and (iii) default measures that seek to wind down a member's positions through set-off and netting.<sup>30</sup>

*Collateral:* Clearinghouses require traders to provide collateral to the clearinghouses to reflect the ongoing risk of a trade. Parties generally provide capital at the start of a trade and as the trade progresses, calibrating the amount of collateral to reflect the risk of the trade. Collateral serves two basic purposes. In the first case, it helps parties internalize the costs of their

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STUD. 74, 74–75 & n.1 (2011) (noting that clearinghouses only reduce risks when there are sufficient members within the clearinghouse).

<sup>27</sup> It should be noted that not all clearinghouses operate using a CCP, but may use another format, notably, a principal-to-principal model. See Pirrong, *supra* note 13 (discussing the Tin Crisis and the organization of the London Metal Exchange).

<sup>28</sup> See, e.g., COMM. ON PAYMENT & SETTLEMENT SYS., *supra* note 25, at 1–3.

<sup>29</sup> MCPARTLAND, *supra* note 26; Pirrong, *supra* note 13; Yadav, *supra* note 1. For an excellent European perspective, see DERMOT TURING, CLEARING AND SETTLEMENT IN EUROPE (2012).

<sup>30</sup> See, e.g., CME Group, CME Rulebook, rr. 8H04(2)–(3), 8H10, available at <http://www.cmegroup.com/rulebook/CME/I/8H/8H.pdf> (last visited Oct. 12, 2014); LCH.Clearnet Group, General Regulations of LCH.CLEARNET Limited, Regs. 20, 45 (2014), available at <http://www.lchclearnet.com/documents/731485/762691/General+Regulations.pdf/076a0e06-ddf3-41db-99a2-90d5a8a2968a> (reciting necessary coverage for collateral requirements).

risk-taking. Second, capital also ensures that the clearinghouse has assets that it can liquidate to offset any losses that it faces in case of a default. As a result, clearinghouses generally require that their counterparties provide sufficient collateral to support their trades.<sup>31</sup>

A “default fund” comprises a pool of cash or high-quality assets that are provided by clearinghouse members to support its functions. This default fund allows a clearinghouse to enjoy a first buffer to absorb losses before it must start calling on members to pay for the losses of others. Clearinghouse rules generally require contributions to default funds as a condition of their participation.<sup>32</sup>

Clearinghouses also stipulate clear “default processes” to account for and contain the default of a member. These processes give clearinghouses the power to suspend the trading privileges of troubled members and to stipulate how such a removal is undertaken.<sup>33</sup> Upon insolvency, clearinghouses immediately “net off” any open positions, converting gross exposures to net exposures between members. Such netting can be very useful and potentially reduce the chances of risk spreading to other clearinghouse members.

Ordinarily, if insolvency takes place outside of a clearinghouse, creditor claims can become stuck in a lengthy and uncertain bankruptcy process. A creditor must present its claim alongside those of other creditors and wait to be paid out of any available assets in the debtor’s estate. However, if a member becomes insolvent with central clearing in place, the situation is quite different. If insolvent bank *A* is owed money from bank *B*, but bank *A* itself owes money to banks *C* and *D*, its claims against bank *B* are used to pay off its claims to banks *C* and *D*. Banks *C* and *D* do not wait in line with bank *A*’s various other creditors. Rather, they are repaid immediately. Take a simple example, when bank *A* becomes insolvent, it expects to receive \$100 from bank *B*. However, bank *A* also owes bank *C* \$25 and bank *D* \$50 for outstanding contracts that are centrally cleared. In this simple case, bank *B* pays the clearinghouse the \$100 that are owed to bank *A*. The clearinghouse then has this money to repay banks *C* and *D* \$25 and \$50 respectively.

Multilateral netting can be very helpful to reducing the spread of risk through the clearinghouse and the financial system. Bank *C* and bank *D* do not have to stand in line to wait for creditor claims to be resolved in a

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<sup>31</sup> See, e.g., ICE CLEAR CREDIT, *Clearing Rules*, available at [https://www.theice.com/publicdocs/clear\\_credit/ICE\\_Clear\\_Credit\\_Rules.pdf](https://www.theice.com/publicdocs/clear_credit/ICE_Clear_Credit_Rules.pdf) (last visited Oct. 12, 2014).

<sup>32</sup> See, e.g., *id.* at 88 (discussing required contributions into the default fund).

<sup>33</sup> See, e.g., *id.* at 20 (explaining suspension of trading privileges upon default).

bankruptcy process. They are immediately paid through the clearinghouse. In theory, then, after being repaid quickly on their claims, bank *C* and bank *D* should have a chance of surviving the insolvency of bank *A*. For the clearinghouse, multilateral netting can help stave off the spread of risk from one bank to another and prevent the default of one bank causing cash shortages and defaults for others. Where the number of member defaults can be contained and controlled, clearinghouses shield themselves from excessive losses and the financial system from contagion.<sup>34</sup> Default processes help build greater resilience into the system. By providing rules for default processes, the clearinghouse can better absorb the shock and prevent its worst effects from cascading through the market as a whole.<sup>35</sup>

In general, the clearinghouse has enjoyed a strong record as a risk manager in the market. For example, clearinghouses appeared to have weathered the 2008 financial crisis with considerable confidence. In handling the fallout from the collapse of Lehman Brothers, LCH.Clearnet, the London-based clearinghouse, reported that it had closed out almost nine trillion dollars in interest rate swaps exposures without having to dip into its default fund.<sup>36</sup> Mutualization was unnecessary in that instance. However, while rare, clearinghouses have come under stress from time to time. A notable example was the aftermath of Black Friday in 1987, when the Dow Jones Industrial Average crashed unexpectedly, resulting in the Chicago Mercantile Exchange and the Options Clearing Corporation teetering on the verge of collapse. In that case, the Federal Reserve provided emergency liquidity to banks with a view of coaxing these banks to provide bridge liquidity to the two clearinghouses.<sup>37</sup> More recently, in March 2014, a South Korean broker trading in Seoul—HanMag Securities—entered into a number

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<sup>34</sup> See Richard Squire, *Clearinghouses as Liquidity Partitioning*, 99 CORNELL L. REV. 857, 863–67 (2014). For an excellent analysis of multilateral netting and the shock absorbance of the clearinghouse see also Mark J. Roe, *Clearinghouse Overconfidence*, 101 CALIF. L. REV. 1641, 1661–62 (2013) (explaining how clearinghouses can prevent runs on the derivatives market).

<sup>35</sup> But see Mark Roe, *Clearinghouse Over-confidence*, PROJECT SYNDICATE (Oct. 26, 2011), <http://www.project-syndicate.org/commentary/roe6/English> (showing how clearinghouse defaults can carry risk from the clearinghouse and out into the market); Roe, *supra* note 34; Craig Pirrong, *The Clearinghouse Cure*, REGULATION, Winter 2008–09, at 46–47; Craig Pirrong, *Derivatives Clearing Mandates: Cure or Curse?*, 22 J. APPLIED CORP. FIN. 48, 50 (2010).

<sup>36</sup> Julia Lees Allen, Note, *Derivatives Clearinghouses and Systemic Risk: A Bankruptcy and Dodd–Frank Analysis*, 64 STAN. L. REV. 1079, 1089–90 (2012).

<sup>37</sup> Ben S. Bernanke, *Clearing and Settlement During the Crash*, 3 REV. FIN. STUD. 133, 148 (1990); Jeremy C. Kress, *Credit Default Swaps, Clearinghouses, and Systemic Risk: Why Central Counterparties Must Have Access to Central Bank Liquidity*, 48 HARV. J. ON LEG. 49, 50 (2011).

of erroneous trades and ended up taking on more liabilities than the value of its assets. A computer error caused the broker to enter into a number of unwanted trades. In this case, default procedures were triggered by the clearinghouse and members were asked to contribute to ensure that the clearinghouse made good on its trades.<sup>38</sup>

In other words, clearinghouse risk mitigation processes have worked well most of the time. However, the risks are ever-present, as demonstrated by the potential for catastrophic collapses to occur in cases of extreme and unexpected events like the 1987 Black Friday Crash where losses are hard to predict and difficult to provision for *ex ante*.

### C. Clearinghouse Ownership

Historically, clearinghouses have been owned and run by their members for their members.<sup>39</sup> This reflects the history of clearinghouses as an industry initiative to control risks and the costs of trading. However, clearinghouses are also for-profit institutions and provide valuable services to the market.<sup>40</sup> As clearinghouses grow to provide services for the \$600 trillion derivatives market, they are becoming major sources of revenue.

Indeed, the paradigmatic structure of clearinghouse ownership has undergone a fundamental change and moved towards a more “corporate” model.<sup>41</sup> Clearinghouses have increasingly come to be owned by large international exchange groups that include multiple exchanges and clearinghouses within their structure. The CME Group, for example, owns and operates several derivatives exchanges, including the Chicago Mercantile Exchange, the Chicago Board of Trade, and the New York Metal Exchange (NYMEX) amongst others. These group-member exchanges clear their trades through CME Clearing. More recently, the CME Group began operating a derivatives exchange in Europe, CME Clearing Europe, to

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<sup>38</sup> Jeremy Grant, Jung-a Sung & Philip Stafford, *Banks Launch Clearing Review After Korean Default*, FIN. TIMES, Mar. 7, 2014, <http://www.ft.com/intl/cms/s/0/14b59838-a4d6-11e3-931300144feab7de.html>.

<sup>39</sup> Kroszner, *supra* note 22, at 7–9. See also Sean J. Griffith, *Governing Systemic Risk: Towards a Governance Structure for Derivatives Clearinghouses*, 61 EMORY L.J. 1153, 1177 (2012) (discussing the changing norms of clearinghouse governance and the risks these can generate for financial markets); Yadav, *supra* note 1, at 413–14 (discussing traditional clearinghouse governance and noting the DTCC continues to follow this kind of model).

<sup>40</sup> THE DEPOSITORY TRUST COMPANY, RESPONSE TO THE DISCLOSURE FRAMEWORK FOR SECURITIES SETTLEMENT SYSTEMS 8–9 (2002), available at <http://www.bis.org/publ/cpss20r3.pdf>.

<sup>41</sup> Yadav, *supra* note 1, at 413–14.

accommodate the demand for clearing in OTC markets.<sup>42</sup> Importantly, it should be noted that CME's stock is publically traded and is listed on NASDAQ.<sup>43</sup> The ICE Group, similarly, reflects an expansive, international structure comprising of numerous exchanges and clearinghouses. ICE, which began life as a dedicated exchange for energy markets, has grown rapidly, culminating in its acquisition of the New York Stock Exchange. The ICE Network includes eleven exchanges and five clearinghouses worldwide.<sup>44</sup> As with the CME Group, ICE's shares are listed and traded on NASDAQ.<sup>45</sup>

The evolving ownership structure of exchanges and clearinghouses is noteworthy. As commentators have noted, clearinghouses and exchanges can face conflicts of interest between their duty to shareholders and their role as providers of risk management services.<sup>46</sup> Exchanges and clearinghouses generate revenue by attracting traders to their platforms and by developing active markets that can foster efficiencies for those that use the market.<sup>47</sup> Revenues also help generate returns for shareholders. However, risk management can increase costs for traders and market participants to use exchange and clearinghouse services. This can happen through collateral requirements, high eligibility conditions as well as mandatory contributions to default funds for market participants. In such cases, clearinghouses and exchanges must contend with a basic trade-off: they balance lower participation costs for traders, potentially placing their own institutions at higher risks, or they can impose more stringent conditions for the use of exchange and clearinghouse services to protect their institutions, but at a cost to business and revenue from traders. Certainly, this problem can also exist for member-owned and managed institutions. In such cases, member-users have incentives to keep compliance costs low for themselves.<sup>48</sup> However, the larger point remains. The status of clearinghouses as private, for-profit

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<sup>42</sup> *CME Clearing Europe*, CME GROUP, <http://www.cmegroup.com/europe/clearing-europe/about-cmece.html> (last visited Sept. 21, 2014) (providing information regarding CME Clearing Europe).

<sup>43</sup> *CME Group Inc. Institutional Ownership*, NASDAQ, <http://www.nasdaq.com/symbol/cme/institutional-holdings> (last visited Sept. 21, 2014) (noting CME's stock is publically traded and listed on NASDAQ).

<sup>44</sup> *ICE at a Glance*, INTERCONTINENTAL EXCHANGE, available at [https://www.theice.com/publicdocs/ICE\\_at\\_a\\_glance.pdf](https://www.theice.com/publicdocs/ICE_at_a_glance.pdf) (last visited Sept. 21, 2014).

<sup>45</sup> *Intercontinental Exchange Inc. Institutional Ownership*, NASDAQ, <http://www.nasdaq.com/symbol/ice/institutional-holdings> (last visited Sept. 21, 2014) (noting ICE shares are listed and traded on NASDAQ).

<sup>46</sup> See, e.g., Fleckner, *supra* note 24.

<sup>47</sup> *Id.* at 2592.

<sup>48</sup> Yadav, *supra* note 1.

providers of a public good can be a source of risk in its own right. Owners may underestimate long-term risks, favoring near-term gains in revenue and reputation over improbable but extreme risk events.

#### *D. Clearinghouses after the Crisis*

Given their long history in maintaining the orderly functioning of securities markets, it is unsurprising that policymakers are looking to clearinghouses as a key means of controlling risks post-Crisis. Around the globe, commentators and lawmakers agree that derivatives trading on OTC markets must move to regulated and well-lit exchanges and that trades should be settled using clearinghouses.<sup>49</sup> In light of this mandate, national regulators have moved forward with implementing rules that require OTC derivative instruments to migrate to exchanges for trading, and to clearinghouses for central clearing.<sup>50</sup>

The rationale underpinning this consensus is easy to understand. First, clearinghouses—as CCPs—will guarantee that trades settle, maintaining the bargain even if one of the parties to that transaction defaults. With a CCP in place, financial markets should not see a repeat of the failure of the American International Group—the insurer that failed in September 2008 having taken on excessive risks in the CDS market.<sup>51</sup> Reducing counterparty

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<sup>49</sup> Leader's Statement: The Pittsburgh Summit, G-20 Pittsburgh Summit (2009), available at [http://ec.europa.eu/commission\\_2010-2014/president/pdf/statement\\_20090826\\_en\\_2.pdf](http://ec.europa.eu/commission_2010-2014/president/pdf/statement_20090826_en_2.pdf) ("All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest.").

<sup>50</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, Title VII (codified in 7 U.S.C. and 15 U.S.C.); Council & Parliament Regulation 648/2012, OTC Derivatives, Central Counterparties and Trade Repositories, 2012 O.J. (L 201) 17, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:201:0001:0059:EN:PDF>; European Securities and Markets Authority, Final Report: Draft Technical Standards Under the Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC Derivatives, CCPs, and Trade Repositories (2012), at 15–20, [www.esma.europa.eu/system/files/2012-600\\_0.pdf](http://www.esma.europa.eu/system/files/2012-600_0.pdf). For EU-US cooperation, see Press Release, Commodity Futures Trading Commission, The European Commission and the CFTC Reach a Common Path Forward on Derivatives (July 11, 2013), <http://www.cftc.gov/PressRoom/PressReleases/pr6640-13>. For details, see Commodity Futures Trading Commission, Cross-Border Regulation of Swaps/ Derivatives Discussions Between the Commodity Futures Trading Commission and the European Union—A Path Forward (July 11, 2013), [http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/jointdiscussioncftc\\_europeanu.pdf](http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/jointdiscussioncftc_europeanu.pdf).

<sup>51</sup> Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1182–91 (2010); Gretchen Morgenson, *Behind Insurer's Crisis, Blind Eye to a Web of Risk*, N.Y. TIMES, Sept. 27, 2008, [http://www.nytimes.com/2008/09/28/business/28melt.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2008/09/28/business/28melt.html?pagewanted=all&_r=0).

risks should better contain systemic contagion in the marketplace. Second, clearinghouses can help to encourage better reporting of trades and information flows in the market. Under new regulations, clearinghouses and exchanges must collect information and report this data to regulators.<sup>52</sup> With lower information costs, market participants can better understand the risks they assume, and thus how to price those risks. Third, rather than leave individual traders to decide amongst each other how much capital to keep for each trade, clearinghouses can harness their past experience to fulfill this task more systematically. With better collateral, complex derivatives trading can be undertaken on a sounder footing, limiting their potential to trigger systemic risks. Fourth, exchanges and clearinghouses should standardize derivatives contracts, allowing them to be traded more easily. With greater standardization, risks may be simpler and easier to understand. Finally, clearinghouses and exchanges—with vast international networks—can monitor global derivatives markets. Such cross-border operations can overcome the challenges faced by national regulators seeking to monitor transactions beyond their own jurisdictions.

### III. THE NEW REGULATORY LANDSCAPE

#### *A. Clearinghouses as Regulators*

Clearinghouses find themselves in a unique position in post-Dodd-Frank derivatives markets. They are at once central to the operation of these markets and, at the same time, a key part of the transactional dynamics of the marketplace. In other words, clearinghouses are responsible for assuring the safety and soundness of derivatives trades, while acting as counterparties to OTC derivatives trading. This presents a puzzle for regulators. Policymakers increasingly rely on clearinghouses to monitor markets and to ensure they remain risk-free, while, at the same time, clearinghouses are also an interested party in the trades they oversee.

Arguably, the extensive role that clearinghouses play in post-Dodd Frank derivative markets suggests that they are taking a leading role in monitoring markets. Not only are they regulating the behavior of market participants, but they are also forging the design of new derivatives markets. With these

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<sup>52</sup> 17 C.F.R. § 43.3 (2012).

responsibilities, it is at least debatable that clearinghouses are exercising significant regulatory power in today's derivative markets.<sup>53</sup>

Broadly speaking, post-Dodd Frank clearinghouses have considerable authority to: (i) make rules regarding how OTC derivatives should trade; (ii) oversee the implementation of these rules; and; (iii) determine who can participate in today's derivatives markets and at what cost through their eligibility standards.

*Rulemaking:* As discussed, clearinghouses set rules for their members with respect to derivatives trading. If members do not comply with these rules, they are unlikely to be able to utilize the services of the clearinghouse. These rules include key stipulations for the transaction itself, including contract requirements, capital provisioning, reporting rules as well as mandatory procedures for terminating a trader's positions and netting out any outstanding obligations upon default. As CCP, the clearinghouse can monitor compliance with these stipulations as a contract party to trades. Where parties fail to comply, for example, where they are unable to provide capital, or where they fail to report trades in a timely fashion, they can face sanctions from the clearinghouse.<sup>54</sup> These sanctions might result in higher costs of participation for a trader, more limited rights to use the clearinghouse's services, and as a last resort, an outright bar. This regulatory power also implies the power to shape the market. Where the clearinghouse makes decisions as to who can use its services, it also takes a position on who cannot do so.

This regulatory power matters. In the first instance, the determinations and decisions that clearinghouses make hold considerable economic significance for market participants. For example, rules as to capital impact the costs attaching to trades. Reporting rules require traders to disclose sensitive trading data, and clearinghouse stipulations as to what kinds of contracts traders can use affect the structures of trades and the types of deals that market participants can undertake. Importantly, from the public policy perspective, clearinghouse determinations have real significance for maintaining order in public markets. Where these determinations are based on faulty assumptions—for example, if capital calculations are made using incomplete data and bad models—the public purse is potentially at risk.<sup>55</sup>

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<sup>53</sup> Paul G. Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 1453, 1454 (1997) (highlighting the important benefits that may be achieved by exchanges acting as regulators in the market).

<sup>54</sup> See, e.g., ICE CLEAR CREDIT, *supra* note 31.

<sup>55</sup> For example, credit rating agencies may be instructive in this regard, where ratings given on incorrect models were seen as contributing to the financial crisis. For discussion on credit

Moreover, where clearinghouses operate on a cross-border basis and where their stipulations reach multiple jurisdictions, this influence can be expansive and extend across many markets.

*B. The Benefits of Clearinghouse Control*

The exercise of rule-making and supervisory authority by clearinghouses can bring numerous benefits for derivatives markets. Most importantly, as discussed earlier, clearinghouses have long been deployed in securities markets.<sup>56</sup> As a result, clearinghouses bring an obvious advantage of age and experience to the task of risk management. On account of their ever-present role in securities markets, clearinghouses have had to invest in understanding markets, developing infrastructure, modeling techniques and risk management skills to be able to act as CCP in equities, bonds, and in certain exchange-traded derivative markets. This might suggest that clearinghouses are well-positioned to harness past experience to oversee OTC derivatives markets.

Indeed, clearinghouses arguably have powerful incentives to invest resources in developing in-depth expertise to discharge their risk management and oversight responsibilities post-Dodd-Frank. For one, as CCPs, clearinghouses are on the hook to ensure that trades settle safely. They face direct economic consequences should they fail to invest resources in fully understanding OTC derivatives markets. The fact that this market is notoriously complex, as shown by the 2008 Financial Crisis, and where risks are often difficult to understand, should spur investment in developing high-quality risk management systems. After all, if clearinghouses fail to make the proper judgments about the risks that they assume, their members may be in line to face extensive, unquantifiable losses. And where member firms cannot predict their likely liabilities with a reasonable degree of certainty *ex ante*, there is a chance that they may not agree to participate in the clearinghouse at all.

But, in addition to the economic liability risks that clearinghouses face, they are also under scrutiny from the reputational perspective. Clearinghouses are under the spotlight like never before—an institution generally likened to a provider of the market’s “plumbing” has in recent

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rating agencies, see, e.g., John Patrick Hunt, *Credit Rating Agencies and the “Worldwide Credit Crisis”: The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, 2009 COLUM. BUS. L. REV. 109.

<sup>56</sup> Kroszner, *supra* note 22; Mahoney, *supra* note 53.

years emerged into the public domain.<sup>57</sup> In this context, clearinghouses face reputational pressures where they are unable to perform to successfully discharge their obligations under the Dodd-Frank Act. These pressures should, in theory at least, result in motivation to understand the risks of OTC markets and to ensure that the clearinghouse is institutionally equipped to deal with the complexities inherent in managing them.

The key question, however, is whether private clearinghouses are in the best position to take on the job of overseeing the risks and monitoring of derivatives markets—or whether another institution may be better suited to the task. For example, might a public CCP work more optimally to give regulators direct insights into the derivative markets in real time? This question is, of course, a difficult one and one that merits a nuanced and detailed response. However, from the perspective of private clearinghouses, there exist some arguments for the status quo. For a start, industry insiders—like those that comprise the membership of the clearinghouse—may be better placed to understand market innovations and the pace of their evolution. Also, those within the industry may be more familiar with new financial products, how they work, and the risks associated with them. Additionally, the for-profit model may work to encourage investment in understanding industry innovations and emerging risks. To attract business, private clearinghouses may be motivated to develop risk management practices that match and adapt to new products and markets. Finally, from a normative perspective, there exists an argument for market participants to internalize the costs of their own risk-taking. Put another way, private clearinghouses ought to invest their own resources in risk management to the fullest extent in order to meet industry demands for their services. If a public CCP becomes the main risk manager, the operation of the derivatives market ends up subsidized to a considerable extent by the public purse. Where the hypothetical public CCP enjoys access to unlimited taxpayer funds for its operation, there is also a chance it may not use this capital optimally. A private clearinghouse, by contrast, is likely to be accountable to its members, users and the shareholders that ultimately own the clearinghouse and related exchanges.

That the clearinghouse is gaining a position of high authority in derivatives markets may thus be a benefit for markets and regulators. Historical expertise and resources to invest in research, combined with the

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<sup>57</sup> Roe, *supra* note 34; *see also All Clear?*, *ECONOMIST* (Apr. 7, 2012), <http://www.economist.com/node/21552209>; *Clear and Present Danger*, *ECONOMIST* (Apr. 7, 2012), <http://www.economist.com/node/21552217>; Gillian Tett, *The Clearing House Rules*, *FIN. TIMES* (Nov. 5, 2009), <http://www.ft.com/cms/s/0/5874e922-cald-11de-a5b5-00144feabdc0.html>.

normative goal of encouraging the industry to pay for its own risk-taking arguably reinforce the post-Dodd-Frank consensus that clearinghouses play a central role in risk management.

### *C. The Risks of Clearinghouse Control*

Still, there are reasons for caution. First, as discussed earlier, clearinghouses and exchanges are for-profit institutions that are driven to attract revenues and users to their platforms. Unsurprisingly, the Dodd-Frank Act came as welcome news for clearinghouses—representing an enormous opportunity for expansion and growth into the formerly closed OTC markets.<sup>58</sup> This proximity between clearinghouses and the traders they are required to monitor, represents a source of risk for markets.

For one, clearinghouses may fail to properly charge their users for the risks they take on through the clearinghouse. It can benefit clearinghouses to impose lower compliance costs in order to attract business to their platforms. Viewed another way, there are at least disincentives against charging high costs for participation—such as those that represent a strict emphasis on safety and soundness, or an attempt by the clearinghouse to over-insure itself against the likelihood of default. Where participation charges are high, traders have incentives to stay outside of the clearinghouse, or to find ways in which to structure their trades that—while economically similar to a regulated trade—may be cleared at lower cost under an alternative regime. The creativity of market participants, in this regard, is far from a theoretical possibility. Commentators, for example, have noted an increased tendency for traders to structure their swaps contracts as futures. While swaps are subject to extensive regulation and reporting treatment under the Dodd-Frank Act, futures—that have long traded on exchanges and cleared centrally—can potentially be traded at lower cost.<sup>59</sup> Put simply, the dependence of clearinghouses on revenue from their users may lead to less-than-optimal monitoring and are rule-making by clearinghouses.

Certainly, clearinghouses have incentives to police risk diligently. This helps save the clearinghouse and its members from harm—both economic and reputational. But, there are also competing incentives that may push in favor of less stringent regulation of traders. In particular, clearinghouses and

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<sup>58</sup> Jeremy Grant, *Traders Seek Answers on US Derivative Reform*, FIN. TIMES (Mar. 16, 2011, 6:43 PM), <http://www.ft.com/intl/cms/s/0/072d7264-4ff5-11e0-9ad1-00144feab49a.html#axzz3675n7H8n>.

<sup>59</sup> Gabriel Rosenberg & Jai Massari, *Regulation Through Substitution as Policy Tool: Swap Futurization Under Dodd-Frank*, 2013 COLUM. BUS. L. REV. 667, 669–73.

users can benefit from a system of lower compliance costs in the short-term. In this way, the clearinghouse earns revenue, while users are able to trade derivatives at lower cost. Additionally, the ultimate risks that a member defaults—particularly in a market where players are known to one another—are fairly remote. With risks unlikely to materialize in the short-term, there may be incentives to regulate more lightly. Importantly, if risks do materialize and if members start to look shaky, there may be a good chance that the clearinghouse itself will go into distress. If the clearinghouse has insufficiently provisioned for risks, and if these risks materialize, its chances of raising money in such an environment and surviving a crisis may be slim. Where the clearinghouse also falls into distress in the long-term, then short-term incentives may be driven towards making gains. When it fails, the clearinghouse's shareholders or members will be either wiped out or bailed out, but, in the meantime, they can make gains through the functions of the clearinghouse.<sup>60</sup>

The risks may be augmented where regulators place too heavy a reliance on the clearinghouse to fulfill its mandate successfully and fail to exercise effective oversight. Given the obvious advantages that clearinghouses possess—experience, expertise, resources, and proximity to industry—regulators may end up becoming too reliant on clearinghouses, and they may not invest fully in policing the market. This is a separate issue from that of regulatory capture. Rather, where clearinghouses assume the lion's share of everyday policing and monitoring of derivatives markets, there may be little benefit to regulators expanding public money to develop technology and expertise to match or exceeds industry efforts. Regulators relying on industry gatekeepers to fulfill key regulatory functions—sometimes with costly results—is not new to markets. Most recently, the high reliance placed by regulators and the industry on credit rating agencies, underscored the risk of regulators failing to exercise full scrutiny, where the industry itself agrees to take on a prominent regulatory role.<sup>61</sup>

Then, there is the ever-present issue of regulatory capture. The public choice literature in this area is vast and well-known. In this context, it is arguable that the regulatory power of clearinghouses may stand as an impediment to their regulation. On the one hand, the relatively small number of clearinghouses in the market makes them indispensable to traders as well as to regulators. As has become clear throughout this discussion,

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<sup>60</sup> Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1182–91 (2010).

<sup>61</sup> Yair Listokin & Benjamin Taibleson, *If You Misrate, Then You Lose: Improving Credit Rating Accuracy Through Incentive Compensation*, 27 YALE J. ON REG. 91, 92–95 (2010).

clearinghouses perform a specialized role—one that is risky. Only a small number of institutions are eligible to perform such a function.<sup>62</sup> On the other hand, this stature can give clearinghouses considerable influence, not only in terms of impacting how regulation is crafted, but also how it is enforced. In particular, regulators may end up facing disciplinary constraints when taking actions against clearinghouses. Small in number and highly specialized in function, their position is likely to limit the kinds of actions that regulators can take in cases of misconduct, allowing clearinghouses—as key providers of a public good—some measure of regulatory deference. In this context, clearinghouses may not end up fully internalizing the costs of their conduct in markets.

The combination of proximity to those actors it regulates as well as the likelihood that regulators rely excessively on the clearinghouse post-Crisis presents a variety of risks for markets. While these risks may be hard to gauge in the short-term—particularly where markets are buoyant—they may be powerful in their long-term impact.

#### IV. SOME CONCLUSIONS

The centrality of clearinghouses in today's markets merits a deeper understanding of their functions and influence on market design. With an extensive portfolio of responsibilities, clearinghouses have emerged as essential to the success of the G-20 agenda.<sup>63</sup> Their role in assuring that derivatives market function safely and without posing system-wide risks, is one that is as challenging as it is demanding. This role requires clearinghouses to craft detailed rules on contract design, safety and soundness, and default. The scope of these duties points to the conclusion that clearinghouses occupy a position of authority in derivatives markets, making rules for market participants as well as ensuring that these rules are followed. These responsibilities—combined with the coercive authority to set conditions on which firms can access the clearinghouse's infrastructure—shows that clearinghouses possess a privileged position as a new kind of regulator for the market.

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<sup>62</sup> FINANCIAL STABILITY OVERSIGHT COUNCIL, ANNUAL REPORT (2012), *available at* <http://www.treasury.gov/initiatives/fsoc/Documents/2012%20Annual%20Report.pdf>.

<sup>63</sup> The G-20 represents a cooperation and coordination forum for twenty leading economies, comprised of nineteen countries and the European Union. Following the financial crisis in 2008, the G-20 has emerged as the central agenda setter for coordinated, global financial reform. *See About G20*, G20 (2014), <https://g20.org/about-g20>.

Certainly, there is much to commend clearinghouses for this role—most particularly, historical experience in providing CCP services for equity, bond and some derivative markets. This experience should offer infrastructure, deep reservoirs of knowledge, and an understanding of market dynamics and industry players. At the same time, there are also serious risks generated by the closeness of clearinghouses to those whom they oversee, and the underlying incentive to generate fees from these firms. With an interest in promoting further business, clearinghouses face trade-offs between imposing costly compliance costs on traders and securing volume and fees for their business. Importantly, the high reliance on clearinghouses can encourage regulators to take their eyes off the ball, and fail to invest in overseeing clearinghouses and the quality of oversight that clearinghouses provide. Needless to say, as the \$600 trillion derivatives market shifts into clearinghouses, the consequences of regulatory failure on this matter would invariably be catastrophic.

As a result, it seems clear that it is necessary to develop strategies to better control the risks that may be created by clearinghouses and the deep reliance on their oversight capabilities. While a full analysis is outside of the scope of this Article, some avenues for future research are briefly set out below.

*Peer Review:* Clearinghouses create risks for one another. Where one clearinghouse fails to discharge its responsibilities, these risks can spiral and affect the operations of other clearinghouses in the market. For example, if one member takes on too many risks and fails, its failure is likely to impact several clearinghouses—especially, if the firm is also a member of several clearinghouses in the market. As a result, clearinghouses exhibit mutual dependencies that may be harnessed in the interest of better regulation. In this context, peer review may be a useful tool. Regulators may develop a framework for clearinghouses to engage in a form of peer review to systematically analyze each other's risk management systems. Competitive clearinghouses have an interest in ensuring that each other's systems are effective and unlikely to cause spirals of risk. This might also point to the utility of clearinghouses utilizing their own expertise to also monitor the functioning of their peer institutions. Competitive incentives may work to motivate clearinghouses to install higher-quality systems where there is concern about peer review and worry about reputational damage.

Of course, one might argue that peer review between private clearinghouses is unlikely to be particularly useful. Clearinghouses have an interest in keeping costs low and business running. Also, where clearinghouses specialize in different types of product their expertise may be

less useful for improving the quality of other systems. Still, while there are likely to be drawbacks to such a system—and concerns about the standards by which competitors monitor each other—it provides one option in the regulatory arsenal to better scrutinize clearinghouses and to ensure that clearinghouses internalize the costs of their behavior.

*International Regulatory Scrutiny:* Clearinghouses are also international institutions. Failures in one jurisdiction are likely to reverberate in others, not only because clearinghouses form part of large international conglomerates, but also because member firms often have operations in different countries. This interdependence generates opportunities for developing coordination and cooperation mechanisms between international regulators. In other words, international regulators can benefit from working more closely with one another to oversee clearinghouses. This kind of scrutiny seeks to create a form of regulatory peer review between national regulators. Regulators from one jurisdiction may bring expertise from their home states to exercise scrutiny over clearinghouses in other jurisdictions. One might also consider formulating committees of national regulators to take a role in assessing the operations of an international clearinghouse. The goal of such oversight is straight-forward: where international regulators are likely to be impacted by clearinghouse failure, they have incentives to ensure its effective function. By bringing regulators together to exercise scrutiny of clearinghouse risk management functions, there may be fewer vulnerabilities to regulatory capture—the risk that a regulator of a single jurisdiction becomes overly reliant on a clearinghouse for oversight and fails to invest in supervision.

However, such cooperative mechanisms can have their own problems. For one, regulators from diverse jurisdictions can have varying preferences as to what constitutes optimal regulation.<sup>64</sup> These divergences may reflect national preferences and past practice, rather than a “correct” or “best” model for scrutinizing a large and important financial institution. In such cases, assessments may have limited utility and may end up exposing institutions to a hodge-podge of regulatory regimes and ideas. Still, in the event of clearinghouse failure, regulators from major developed jurisdictions may well have to coordinate and provide emergency liquidity to a large clearinghouse. If this happens, ensuring that regulators are closely monitoring clearinghouses *ex ante* can arguably facilitate buy-in from a

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<sup>64</sup> Chris Brummer, *How International Financial Law Works (and How It Doesn't)*, 99 GEO. L.J. 257, 273 (2011) (commenting on diverging perspectives of international regulators).

variety of national regulators and provide a holistic understanding of clearinghouse operations globally.

*Regulatory Dialogue:* The essential role of the clearinghouse and the authority it implies suggests the necessity for regulators to engage in active dialogue with clearinghouses as derivatives move to be centrally cleared. In particular, the new regulatory role of the clearinghouse highlights the importance of public authorities catching problems early. By careful and regular monitoring, regulators can understand where risks are developing and ensure that contingencies are in place in case clearinghouses fall into distress. This interaction between regulators and clearinghouses implies a kind of bargain between them with agreement as to the role that each side plays in markets. In particular, attention may be given to ensuring that clearinghouses are clear as to the quality of oversight that is expected from them and how best it may be achieved. For example, regulators may wish to have input into how large a clearinghouse can become in financial markets. Where clearinghouses are likely to grow large and clear a host of products, there may be a risk that they may be both too big to fail and far too big for any single country to save by itself. Further, regulators may wish to have advance notice in case a member looks like it might fall into distress. In such circumstances, clearinghouses may be reluctant to provide information on members or other traders, or fear that it reflects badly on their own operations. With some kind of agreement in place between public regulators and clearinghouses, there may be more open information flow and greater sensitivity to the potential for even small risks spiral into systemic collapse.

Without fuller attention on clearinghouses and a deeper understanding of their functions, we may fail to acknowledge the tremendous power—and the corresponding risks—of a key player in today's financial markets.