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CLEARINGHOUSE HOPE OR HYPE? WHY MANDATORY CLEARING MAY FAIL TO CONTAIN SYSTEMIC RISK

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Introduction

The global financial crisis of 2007–2008 revealed faults in the ability of regulators worldwide to contain systemic risk. Blaming much of the crisis on derivatives, complex financial contracts that allow counterparties to trade positions on an underlying risk, world policy-makers called for increasing the regulation of finance generally and of derivatives in particular. A policy consensus quickly formed around mandatory central counterparty clearing as a solution to the problem of systemic risk posed by derivatives transactions.[1]

This Article briefly sketches how central counterparty clearing confronts the problem of systemic risk. It then focuses on weaknesses of mandatory clearing, offering two sets of criticisms. The first set of critiques is structural, articulating reasons why mandatory clearing may fail as a solution to the problem of systemic risk. The second set of critiques is based on the incentives of the parties most likely to be involved in clearinghouse governance and management, arguing that even if clearinghouses are not structurally deficient, they are likely to be plagued with incentive problems that prevent

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[1] A regulatory agenda advocating a clearinghouse solution to the problem of systemic risk was articulated during a G-20 summit in Pittsburgh in 2009:

> 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. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements.

G-20, Leaders' Statement: The Pittsburgh Summit (Sept. 24–25, 2009), *available at* http://www.g20.utoronto.ca/2009/2009communique0925.html.

them from operating optimally. All of this suggests that clearinghouses may not be the last and best solution to the problem of systemic risk and that further regulatory experimentation may be desirable.

I. The Clearinghouse Hope

Systemic risk refers to the linkages and interdependencies between participants in the financial market, such that a significant loss initially touching only a small number of participants can spread and threaten the entire system.[2] Systemic risk is an appropriate target for regulatory attention because private actors lack appropriate incentives to control it.[3]

Derivatives transactions create systemic risk generally by serving as a node of financial interconnection. More specifically, derivatives increase systemic risk through the creation of counterparty credit risk—the risk that the party with whom one is trading will be insolvent or otherwise unable to pay when an obligation comes due. The failure of a large derivative counterparty spreads loss throughout the financial system because other institutions hold unhedged positions precisely when they most need protection, potentially leading to further financial institution failures and a contraction in the real economy.

Central counterparty clearing addresses the problem of systemic risk by promising a means of minimizing counterparty credit risk. Rather than leaving derivatives counterparties to provide for risk and collateral management in their contractual arrangements, these functions are centralized by means of a "central counterparty" that interposes itself, through contractual novation, between the buyer and seller on a given contract. All transactions are thus run through the clearinghouse, which effectively becomes "the buyer to every seller and the seller to every buyer."[4] Through central counterparty clearing, the previously disorganized world of bilateral derivatives trading

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[2] This basic theme is captured with greater formality by a leading scholar in the area, who defines systemic risk as:

> [T]he risk that (i) an economic shock such as market or institutional failure triggers (through a panic or otherwise) either (X) the failure of a chain of markets or institutions or (Y) a chain of significant losses to financial institutions, (ii) resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial-market price volatility.

Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 204 (2008).

[3] *See generally* ROBERT O. KEOHANE, AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY 65–69 (1984) (discussing coordination failures as a justification for regulation). *See also* Mark J. Roe, The Dodd-Frank Act's Maginot Line: Clearinghouse Construction 36 (Mar. 5, 2013) (unpublished working paper), *available at* http://ssrn.com/abstract=2224305 (noting that "[w]hen guarding against their own failure, [financial institutions] do not account for the costs that their failure will inflict on the rest of the economy" and providing a numerical example).

[4] *See* Bank for Int'l Settlements, Comm. on Payment and Settlement Sys. & Int'l Org. of Sec. Comm'ns, Technical Comm., *Recommendations for Central Counterparties*, at 1 (Nov. 2004).

comes to resemble an orderly hub-and-spoke arrangement, with the clearinghouse at the center of every trade.

Several apparent advantages come with the creation of a central counterparty. First, the clearinghouse becomes a nexus for collecting information about the derivatives market and can facilitate access to that information for regulators or the public. Second, the clearinghouse becomes a central monitoring station of counterparty credit quality that may be more efficient than the duplicative monitoring efforts of diffuse counterparties. Finally, central counterparties provide an easy point of entry for regulators seeking to determine whether and how to intervene in the market.

It is worth pointing out that a clearinghouse is not necessary to accomplish any of these things. Pricing transparency could be accomplished through a system of mandatory reporting of prices. Likewise, information about credit quality could be centrally collected and evaluated by other means, such as a third-party credit monitor similar to a credit-rating agency. Finally, regulators seeking access to the inner workings of the derivatives market could simply require prompt reporting of relevant information directly to them.

Clearinghouses, however, are critical in relieving contracting parties of counterparty credit risk. The clearinghouse effectively undertakes all counterparty credit risk through novation, leaving transacting parties with zero exposure to their original counterparties and, as long as the clearinghouse remains solvent, no exposure to counterparty credit risk. Whether clearinghouses will be able to remain solvent and thereby contain counterparty credit risk thus becomes the all-important question. The next Part offers several reasons to doubt the ability of clearinghouses to do so.

II. The Clearinghouse Hype

It is possible to level two different kinds of critiques at central counterparty clearing. The first kind of critique, what I will refer to here as "structural," offers reasons to believe that clearinghouses cannot possibly function as hoped to mitigate or eliminate systemic risk. The second, what I will refer to as "incentives-based," suggests that independently of whether clearinghouses are structurally sound, they are plagued with governance problems that may render them fundamentally unable to do the job regulators have delegated to them.

A. Structural Critiques

This section summarizes three structural critiques of central counterparty clearing as a solution to the problem of systemic risk: (1) the fragmentation of netting, (2) the amplification of asset bubbles, and (3) the externalization of systemic risk.

1. Clearinghouses Increase Systemic Risk by Fragmenting Netting

A core advantage claimed for central counterparty clearing is increased efficiency in netting. Netting mitigates the shock of a dealer default by providing counterparties

with a means of offsetting losses in some positions with gains in others. Its effect is most powerful in a system in which all major counterparties participate across all of their positions so that the greatest number of transactions is available to offset a dealer default. Netting would thus be at its most powerful if all trades were cleared through a single world clearinghouse.

This, unfortunately, is not the way central counterparty clearing has evolved. Instead, multiple clearinghouses have arisen in multiple jurisdictions, with each clearinghouse typically clearing only a subset of derivatives or only a single derivatives product.[5] The rise of multiple clearinghouses means fragmented netting. In a world of fragmented netting, the only trades available to a clearinghouse to offset losses from a dealer's default are positions cleared by that particular clearinghouse, a subset of all open positions with the defaulting dealer. Fewer open positions, of course, means greater residual loss for the clearinghouse to absorb, a problem that will be repeated for each clearinghouse in which the defaulting member participates.

2. Clearinghouse Segmentation Produces Destructive Coordination

Because clearinghouses specialize in specific asset classes—for example, foreign exchange, interest rate swaps, or credit default swaps (CDSs)—they are likely to be susceptible to asset bubbles in the underlying asset. This is a case of "destructive coordination" brought on by regulation.[6] Consider the situation of a clearinghouse specializing in CDSs whose member has suffered severe losses after the bubble in mortgage backed securities burst. Because of its investment loss, the member will face capital calls from the clearinghouse, forcing it to sell assets. This sale of assets will flood the market at a time when the value of the assets is low, thereby weakening other members of the clearinghouse exposed to the same asset class, who will themselves face capital calls from the clearinghouse, thereby raising the specter of further fire-sales and further sharp declines in asset value.

3. Clearinghouses Do Not Eliminate Systemic Risk—They Merely Shift It

The standard reasoning supporting central clearing is that clearinghouses mitigate systemic risk by controlling counterparty credit risk. But the control of counterparty credit risk, even when it is optimally effective, is not the same as the elimination of systemic risk. Fundamentally, central clearing guarantees that clearinghouse members will be paid when another member defaults. This works largely as a result of bankruptcy rules that protect margin collateral and more broadly provide derivatives counterparties with preferential treatment in bankruptcy.[7] This recreates the classic bankruptcy "setoff"

[5] *See, e.g.*, Jeremy Grant, *Singapore Warns on Clearing Houses*, FIN. TIMES (Mar. 15, 2013), http://www.ft.com/cms/s/0/48100a5c-8d34-11e2-82d2-00144feabdc0.html (describing regulator's warning that a "proliferation" of clearinghouses "may also increase risk and lead to higher costs").

[6] *See* Charles K. Whitehead, *Destructive Coordination*, 96 CORNELL L. REV. 323 (2011).

[7] *See, e.g.*, Franklin R. Edwards & Edward R. Morrison, *Derivatives and the Bankruptcy Code: Why the Special Treatment?*, 22 YALE J. ON REG. 91 (2005).

problem, where transfers outside of the bankruptcy estate result in less recovery to creditors, who are forced to seek recovery through the estate.[8] The clear parallel is that clearinghouses mitigate counterparty credit risk among clearinghouse members by imposing that risk on prospective creditors outside of the clearinghouse.[9]

The imposition of credit risk outside the clearinghouse might be defensible from a policy standpoint if all systemically important institutions transact all systemically important business through the clearinghouse. This, however, is clearly not the case. Derivatives dealers are typically part of massive and deeply interconnected financial institutions, many of whose dealings do not involve transactions that are cleared by central counterparties.[10] Because systemically important institutions engage in important transactions that are not centrally cleared, the imposition of risk outside of the clearinghouse may have dangerous systemic effects.

B. Incentive Problems

The fundamental purpose of the clearinghouse is to amass risk in hopes of containing it. In doing so, of course, the clearinghouse itself is likely to become an important node of systemic risk, the failure of which would immediately spread contagion throughout the economy. Clearinghouses have failed before and, if mismanaged, could fail again.[11] Clearinghouse governance thus becomes a core concern. Getting clearinghouse governance wrong seems likely to lead to future crises and future bailouts because of clearinghouses' "too-big-to-fail" status. The question thus becomes: who will have a hand in clearinghouse governance? Are these parties likely to manage the clearinghouse in a way that successfully mitigates systemic risk? Unfortunately, as I have explored in greater deal elsewhere, there is much to be concerned about in clearinghouse governance.[12]

1. Dealer Incentives

Derivatives trading volume is in the hands of a relatively small number of banks acting as "dealers." Two frequently cited statistics from a report by the Office of the Comptroller of the Currency reveal that five banks—JPMorgan Chase, Bank of America, CitiGroup, Goldman Sachs, and HSBC—account for 96% of the notional amounts and

[8] *See* Roe, *supra* note 3, at 15–24.

[9] *See id*. at 29–31.

[10] *See id*.

[11] Financial clearinghouses have failed in France (the Caisse de Liquidation, in 1974), Kuala Lumpur (the Commodities Clearing House, in 1983), and in Hong Kong (the Futures Exchange, in 1987). *See* Tracy Alloway, *A Glimpse at Failed Central Counterparties*, FT ALPHAVILLE (June 2, 2011, 2:14 PM), http://ftalphaville.ft.com/2011/06/02/583116/a-glimpse-at-failed-central-counterparties/.

[12] *See* Sean J. Griffith, *Governing Systemic Risk: Towards a Governance Structure for Derivatives Clearinghouses,* 61 EMORY L.J. 1153, 1189–1226 (2012). *See also* Yesha Yadav, *The Problematic Case of Clearinghouses in Complex Markets*, 101 GEO. L.J. 387 (2013) (questioning the clearinghouse paradigm).

83% of the net credit exposure of the U.S. banking industry.[13] The market, in other words, is highly concentrated.[14]

Volume, from the dealers' perspective, means profitability—first, because many trades, even at slim margins, translate into large profits, and second, because clearinghouses and other market-infrastructure providers prize liquidity and are willing to offer large dealers significant discounts to bring trading volume to their platforms. In addition to their command of volume, dealers profit by designing customized, or "bespoke," instruments that they can offer at significantly higher profit margins.

Dealers are problematic managers of systemic risk for at least three reasons. First, dealers are likely to understand that, regardless of what politicians might say to the contrary, the federal government will not be able to resist bailing out a failing clearinghouse. Knowing that they are thus the implicit beneficiaries of a federal guarantee, dealers may seek to impose excess risk on the clearinghouse in order to reap the benefits of higher fees through trading volume. This is a classic case of moral hazard, and it has the predictable effect of inducing dealers to take excessive risk through the clearinghouse.[15]

Second, it is important to remember that dealers are not cohesive, monolithic entities but are far-flung institutions suffering from agency costs in the same way as any other large business. Agency costs harm organizations as a result of the disconnect between the incentives of the actors and the interests of those for whom they are acting. In this case, the trading activity of major dealers is likely to be undertaken by a relatively small group of individuals who, because they have a history of producing large profits for the institution, are likely to be well-regarded and highly compensated. In fact, these traders are customarily paid through incentive compensation arrangements that award them for their productivity—the more trading profits they generate, the more highly they are paid. It does not take much effort to see that these traders may not have the same incentives as the organization as a whole because they may be able to maximize their personal compensation by taking on excessive trading risk that will be borne by the

[13] *See* OFFICE OF THE COMPTROLLER OF THE CURRENCY, OCC'S QUARTERLY REPORT ON BANK TRADING AND DERIVATIVES ACTIVITIES FIRST QUARTER 2011 1, *available at* http://www.occ.gov/topics/capital-markets/financial-markets/trading/derivatives/dq111.pdf. A competing study measuring the market from a global perspective not limited to banking companies puts the market share of the five largest U.S.-based dealers at 37%, rather than 96%, reflecting the fact that a significant portion of the derivatives business is offshore. *See* Int'l Swaps & Derivatives Ass'n, *2010 Mid-Year Market Survey*, http://www.isda.org/statistics/recent.html#2010mid (last visited Apr. 16, 2013) (reporting results of a survey of seventy-one participants).

[14] Even considering the market from a global perspective, trading volume remains highly concentrated, with 82% of the total notional amount outstanding ($354.6 trillion of $466.8 trillion) in the hands of 14 dealers. *See* Int'l Swaps & Derivatives Ass'n, *supra* note 13.

[15] *See* Griffith, *supra* note 12, at 1201–02.

institution, not themselves personally.[16]

Third, and quite apart from accounts suggesting that excessive risk taking is a mistake that dealers would like to avoid, but are somehow unable to side-step, there is the possibility that dealers act in their shareholders' interests by taking on excessive risk, which in the new regulatory environment, they will impose on clearinghouses. This is the theory of "correlation-seeking," in which firms may seek to correlate their firm's contingent debt obligations with insolvency risk in order to maximize shareholders' upside return while imposing the downside return on creditors.[17] If dealers were to engage in correlation-seeking, they would not mistakenly underestimate risk but intentionally undertake large amounts of contingent risk correlated to other events likely to lead to their insolvency. Although such a strategy might perversely benefit a dealer's shareholders, it would also have the clear effect of imposing excessive risk on the dealer's contractual counterparties—in this case, the clearinghouse—and thereby increasing systemic risk.[18]

2. End Users

End users are dealers' customers. They are the parties who buy and sell derivatives instruments in order to hold the risk for a period of time. End users may thus be corporations or financial institutions seeking to hedge various exposures—to currencies or interest rates, for example. However, in terms of trading volume, they are more likely to be hedge funds and other financial investors seeking to speculate on a particular risk. Moreover, because commercial firms engaging in hedging transactions will likely be exempt from the clearing requirement, the real end-user with a stake in clearinghouse governance is the financial end user, often, a hedge fund.[19]

End users are likely to push clearinghouses to reduce their trading costs. A TIAA-CREF comment letter makes the point explicitly, arguing that "the primary function of the [c]learinghouse is to provide fair, open and transparent access to *reasonably priced* swap contracts."[20] Reducing customer costs, of course, means reducing producer (in this

[16] *See id*. at 1202.

[17] Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1184–90 (2010).

[18] *See* Griffith, *supra* note 12, at 1203–04.

[19] On the exemption of non-financial end-users from clearing, see Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 723(a)(3), 124 Stat. 1376, 1679 (2010) (providing exceptions to the clearing requirement for swaps); *id*. § 763(a) (providing exceptions to the clearing requirement for security-based swaps); End-User Exception to Mandatory Clearing of Swaps, 75 Fed. Reg. 80,747 (proposed Dec. 23, 2010) (to be codified at 17 C.F.R. pt. 39); End-User Exception to Mandatory Clearing of Security-Based Swaps, 75 Fed. Reg. 79,992 (proposed Dec. 21, 2010) (to be codified at 17 C.F.R. pt. 240).

[20] Letter from Jon Feigelson, Senior Vice President, Gen. Counsel & Head of Corporate Governance, TIAA-CREF, to Elizabeth M. Murphy, Sec'y, SEC, and David A. Stawick, Sec'y, Commodity Futures Trading Comm'n 4 (Mar. 7, 2011) (emphasis added), http://www.sec.gov/comments/s7-27-10/s72710-110.pdf.

case, dealer) revenue, at least on a per-trade basis. Insofar as this is a zero-sum game, the more success end users have in reducing fees, the greater the dealers' needs will be to seek revenue elsewhere.

Dealers may seek to make up this lost revenue either by increasing volume or by innovating new products that are sufficiently customized to trade bilaterally where spreads are higher.[21] As noted above, either of these responses is problematic from the perspective of systemic risk. Thus, although end-users do not themselves have incentives that are adverse to the containment of systemic risk, the accomplishment of their principal interest—the reduction of trading costs—may push dealers to take steps that are inconsistent with the reduction of systemic risk.

3. Governance Incentives Generally: Collective Action and Systemic Risk

Another, perhaps simpler way of analyzing the incentive problems infecting clearinghouse governance is to view protection from systemic risk as a public good. All citizens would suffer if the systemic risk inherent in derivatives transactions breached the confines of the clearinghouse—either as a result of the havoc such an outbreak would wreak upon the financial system or as the ultimate payers in taxpayer-funded bailout aimed at keeping the clearinghouse afloat. The parties with commercial interests in derivatives trading—dealers and end users—would suffer, too. But because some of their suffering would be borne by third parties (and because they stand to benefit from transactions in derivatives instruments), they are not induced to internalize the entire burden of controlling systemic risk. The management of systemic risk thus has the character of a public good, the basic consequence of which, economic theory teaches, is a pervasive free-rider problem.[22] Leaving governance largely to private actors, as the current clearinghouse architecture does, is necessarily problematic.[23]

Conclusion

What then are we to do? Elsewhere I have outlined a governance structure to respond to the unique incentive problems clearinghouses face.[24] However, even if

[21] *See* Griffith, *supra* note 12, at 1208.

[22] Public goods are goods that are either non-excludable (i.e., non-payors cannot be denied access), non-rival (i.e., one person's consumption does not diminish the amount of the good available for others), or both. *See* Tyler Cowen, *Introduction to* PUBLIC GOODS & MARKET FAILURES: A CRITICAL EXAMINATION 1, 3–4 (Tyler Cowen ed., 1999). Paradigmatic examples are lighthouses and national defense. *See* R.H. Coase, *The Lighthouse in Economics*, 17 J.L. & ECON. 357, 358 (1974).

[23] For current rulemaking on these points, see Risk Management Requirements for Derivatives Clearing Organizations, 76 Fed. Reg. 3698, 3701 (proposed Jan. 20, 2011) (to be codified at 17 C.F.R. pt. 39); Ownership Limitations and Governance Requirements for Security-Based Swap Clearing Agencies, Security-Based Swap Execution Facilities, and National Securities Exchanges with Respect to Security-Based Swaps Under Regulation MC, 75 Fed. Reg. 65,882, 65,886 (proposed Oct. 26, 2010) (to be codified at 17 C.F.R. pt. 242). For a critique of these proposals, see Griffith, *supra* note 12, at 1218–26.

[24] *See* Griffith, *supra* note 12, 1226–39.

clearinghouse governance were optimized and dealer incentives perfectly constrained, central counterparty clearing would remain subject to the structural critiques outlined above. All of this suggests that the clearinghouse is likely not the last and best solution to the problem of systemic risk inherent in derivatives transactions.

Perhaps the best that we can hope for is a regulatory structure that remains flexible and open to experimentation and change as other potential solutions come into view. Unfortunately, the top-down worldwide imposition of mandatory clearing suggests the regulatory architecture is moving in the other direction—towards uniformity and inflexibility built around the principle of mandatory central counter-party clearing.[25] Even if central counterparty clearing is the best idea we currently have to manage the systemic risk inherent in derivatives transactions, its apparent flaws should stop us from allowing it to become entrenched. Policy-makers should strive instead for a regulatory structure that fosters diversity and experimentation in containing systemic risk.[26] We should not wait for the next crisis.

[25] *See, e.g.*, David Felsenthal & Lily Chu, *Regulation of Cross-Border Swaps*, 3 HARV. BUS. L. REV. ONLINE 142 (2013), http://www.hblr.org/?p=3232.

[26] *See* Sean J. Griffith, *Substituted Compliance and Systemic Risk: How to Make a Global Market in Derivatives Regulation*, 98 MINN. L. REV. (forthcoming 2013) (further developing a paradigm for regulatory experimentation aimed at containing systemic risk).