Derivatives Clearing: Exchanging New Risks for Old?

Craig Pirrong

Bauer College of Business

University of Houston
CCPs as *Deus ex Machina*

- In the aftermath of the financial crisis, legislators and regulators around the world cast about for a “solution” to systemic risk associated with OTC derivatives, especially credit default swaps.
- The answer?: “Clearing”, i.e., Central Counterparties (“CCPs”)
- CCPs are like the *Deus ex Machina* in a Greek drama that magically descends on stage to resolve all knotty problems.
What is Clearing?

• In traditional OTC markets, counterparty risk is bilateral: the buyer is at risk to the seller’s default, and vice versa.

• In a cleared market, risk is “mutualized”: default losses are shared among the members of a CCP, and sometimes with customers of CCP members.

• That is, clearing is a counterparty risk pooling—insurance—mechanism.
Risk Pricing and Management

• In bilateral markets, counterparty risk is priced and managed by (a) collateral and credit arrangements between counterparties, and (b) deal pricing
• In CCPs, counterparty risk is priced by collateral (margining)
• Importantly, in bilateral markets, terms vary by transactor and transaction, whereas in CCPs, terms are largely uniform and standardized
It’s (Now) the Law

• Dodd-Frank mandates the clearing of OTC transactions that meet criteria determined by regulators (CFTC and SEC)
• These agencies are currently beavering away at writing rules to implement the mandate, and to regulate CCPs
• The EU is also almost certain to mandate clearing as well
CCPs and Systemic Risk

• The standard argument for a clearing mandate is that it will reduce “systemic risk”, i.e., the risk that defaults against derivative transactions by a large financial institution will impose losses on its counterparties that threaten their liquidity and/or solvency.

• Regulators (notably Geithner and Gensler) argue that clearing eliminates systemically dangerous interconnections between financial firms.
Questions Begged

• Mandates presume that market participants routinely chose the wrong arrangements to manage counterparty risk: Why?
• How will the industry evolve over time?
• Will the new structure reduce systemic risk, or just displace it—or increase it?
• What are the other costs and benefits of the new, mandated arrangements?
Is Bilateral Risk Sharing a Market Failure?

• Why didn’t we see voluntary adoption of default “mutual insurance” in OTC markets?
• It is well known that insurance has costs that can exceed the benefits
• Moral hazard: insurance can give incentives to take on too much risk
• Adverse selection: traders with better information load up on risks that are underpriced and stint on risks that are overpriced
It’s All About the Information

• Default risk is like an option, with a payoff distribution that depends on the price risk of the underlying instrument, and the balance sheet risks of the counterparties

• Who has the better information to evaluate these risks?

• Who has the flexibility and incentive to price these risks in a discriminating way?
Dealer Information Advantages

- Dealers have stronger incentives to invest in accurate valuation, risk assessment, and risk management expertise for more complex products.
- Dealers have extensive private information about CP balance sheet risks: they are information intermediaries.
- Dealers can take this information into account when pricing, sizing, and structuring deals and credit terms.
- CCPs have less information about B-S risk and do not (and arguably cannot) utilize this information when pricing risks.
Implications

• The foregoing implies that bilateral mechanisms may make sense for complex instruments
• Moreover, bilateral mechanisms are less vulnerable to moral hazard (balance sheet risks can be priced bilaterally, but not in a CCP) and adverse selection
• The dominance of OTC bilateral trading was, therefore, arguably an efficient way of managing CP risks
But What About TBTF?

• It is certainly true that too-big-to-fail problems (themselves a type of moral hazard) likely induced excessive expansion of the scale and scope of OTC derivatives markets

• But if TBTF is the original sin, clearing mandates are not the right way to redeem it: why would TBTF firms who don’t individually have an incentive to take tail risk into account somehow take these risks into account properly when forced to act collectively?

• Color me skeptical
TBTF Can’t Explain the Non-Adoption of Clearing

• A historical example demonstrates that the non-adoption of CCPs can be due to fundamental economic factors, rather than exploitation of a TBTF subsidy

• CBT (worlds biggest derivatives exchange) refused to adopt clearing from 1891-1925

• Forced to clear by its regulator, USDA

• CBT mechanisms were very much like modern OTC bilateral trading system, but there was no prospect of bailout for CBT member firms
Interconnections

• Advocates of mandates argue that CCPs eliminate systemically dangerous interconnections between financial institutions

• In reality, clearing just alters the topology of the network of interconnections between financial institutions

• After all, clearing is a risk sharing mechanism, and sharing inherently entails an interconnection
Leverage

• Advocates also claim that greater and more rigid collateralization of derivatives via CCPs will reduce the amount of systemically dangerous leverage in the system.

• But requiring the reduction of the use of credit capacity for one purpose (derivatives trades) opens up credit capacity for other uses: by no means clear that total leverage, or the brittleness of this leverage, will decline.
CCP Failure

• CCPs can fail
• Hong Kong (1987), with near failures at the CME, CBT, and OCC at the same time
• COMEX (“Silver Tuesday”, 1980)
• New York Gold Clearing Bank (1869)
• Given the interconnections between CCPs and the broader financial markets, CCP failure is a systemic risk
• Dramatic expansion of clearing expands these risks
Arguendo ad AIG

- The name “AIG” is almost always invoked to bolster the case for clearing: this is highly misleading
- AIG instruments not suitable for clearing
- Even if they had been cleared, who would have borne the risks from an AIG default? CCP members who would have been the same firms who were its OTC counterparties
- No netting economies
- Hindsight bias (“if I knew then what I know now”): conventional wisdom at the time was that (a) these instruments were low risk, and (b) AIG was a great credit. Would a CCP have been any different? You wouldn’t have known then what you know now. Don’t pretend otherwise.
Managing Defaults

• Arguably one weakness of bilateral arrangements relates to managing replacement and hedging of defaulted positions.
• CCPs coordinate this (e.g., auctions of defaulted positions).
• Desirable to explore the possibility of devising a mechanism to deal with this specific problem.
• Generally, feasible to “unbundle” CCP functions (e.g., position reporting, default management, CP risk pricing): bundled, one-size fits all approach is problematic.
Bottom Line

• The economic case for clearing mandates is weak, and arguably non-existent
• There are economic factors that make it efficient to manage some CP risks bilaterally
• Clearing mandates presume otherwise, and constrain the ability to choose the way to manage CP risks: if my argument is correct, this constraint reduces efficiency
• Clearing changes contagion scenarios: it does not eliminate them
The Sorcerer’s Apprentices

• Regardless, clearing will perforce play a outsized role in the financial markets of the future (and perhaps not just derivatives, but things like repo too)
• The Sorcerer’s Apprentices on Capitol Hill have brought the broomsticks to life: can they control them?
• Given the immense complexity involved, the potential for unintended consequences—including scary ones—is great
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Where We Are

• CFTC (especially), SEC, and Fed are currently involved in the daunting task of implementing D-F mandates

• CFTC has to write upwards of 60 rules before August, 2011

• This is a sobering prospect, given that the agency’s own Chairmen very recently argued it was under-resourced to perform even its traditional tasks

• Now its responsibilities have metastasized, and it does not have the expertise or head count to handle these vastly expanded duties
Where are We Going?

- Who knows?
- This is a grand experiment with huge stakes and highly unpredictable prospects
Some Open Issues

• How will this industry evolve?
• Large economies of scale and scope—concentrated industry likely, which will make regulation challenging
• Strategic and jurisdictional considerations will influence evolution, often in ways contrary to goal of reducing systemic risk
• Many Morton’s Forks: e.g., a few big CCPs increase netting and diversification efficiencies, but increase systemic vulnerabilities; many smaller CCPs sacrifice efficiencies and create systemically problematic linkages
Political Economy Considerations

• This industry will be a regulatory creature, and political economy considerations will inevitably shape its evolution—and likely in a way that conflicts with the stated purpose of the mandates

• Example: Regulation of CCP ownership, governance, and access
Ownership Regulation

• Congress and regulators obsessed with fear that big banks will attempt to protect their profitable OTC business by exerting control over CCPs and limiting the scope of products cleared: CFTC has proposed rules that would limit control of CCPs by large financial institutions.

• But a bigger concern is that there needs to be an alignment of incentives between those bearing the risk and those making the decisions. Ownership mandates that interfere with this alignment will reduce the amount of capital committed to backup trades.

• Where will the capital come from?
Access Regulation

• Smaller banks and other financial institutions (FCMs) are pressuring regulators to require CCPs to set admission policies that allow them to be members.

• Again, a dilemma: membership requirements can be set to constrain competition, but weakening requirements can undermine financial strength of CCP.

• Heterogeneity is especially problematic consequence: heterogeneous institutions harder to govern, and it is harder to price risks efficiently when members are heterogeneous.

• Will regulators subject to political pressure make the right trade-off?
Competition

• Given the strong economies of scale and scope, it is likely that CCP markets will not be highly competitive

• Nonetheless, it is worthwhile to consider how competition will work in these markets

• Race to the bottom?

• I’m skeptical, but competitive interactions are very complex, with novel “anti-complementarities” and externalities
Final Thought

• The imposition of a standard on all market participants for the vast bulk of its transactions is inherently systemic in its effects. Any failure or flaw in that structure will have systemic consequences.

• Congress (and soon, the EU) have put all their eggs in the clearing basket.

• Given the lack of a convincing case for it, the clearing mandate could be the biggest systemic risk of all.

• You never hear the bullet that kills you.