THE NEW WORLD OF DERIVATIVE REGULATION

Clearing Risk through Clearinghouses

By Jorge Toledo

Derivatives are financial instruments whose price is determined based on the value of another commodity, stock, currency, interest rate, or similar item. Most often, they are structured as swap contracts which amount to an exchange of cash flows: on a certain date, one party gives the other a fixed amount and the other is required to put forth an amount based on the current market price. The fixed payer has sold the risk of price movement and the fixed receiver has bought that risk. Derivatives have gained popularity in the past few decades given their exemption from certain provisions in the Bankruptcy Code and their over-the-counter (OTC) status that long freed them from any type of regulatory oversight.

After the 2008 financial crisis, the U.S. government enacted regulatory changes domestically via the Dodd-Frank Act, which put derivatives under the jurisdiction of the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC). Most major types of derivative transactions must now use clearinghouses as their middleman.[1] The goal of a clearinghouse is to measure the risk of loss on a default and require the clearing member to pre-fund it through margin deposits. The interplay between banks, regulatory agencies, and clearinghouses has developed a new norm for the drafting of derivative contracts and the clearing procedures involved in the modern exchange platform. My research suggests that although the contracts that have remained under the jurisdiction of the new reforms are becoming less hazardous, there exist new threats stemming from the transformation of swap agreements into less regulated futures contracts.

1 Skeel, D.A. The New Financial Deal: Understanding the Dodd-Frank Act and Its (unintended) Consequences. Wiley Press, 2011.

I. Introduction

The issue of securing the risk of default that the drafters of the Dodd-Frank Wall Street Reform Act hope clearinghouses can help resolve has traditionally been handled by the Bankruptcy Code of 1978. This was the first standardized attempt to provide guidelines and priorities that allowed troubled debtors to restructure their assets and settle their commitments with minimum disruption to the overall market. Since the enactment of the Code, contracts that derive value indirectly from the performance of an underlying asset have been granted a series of exemptions.[2] The exemptions received widespread usage from financial institutions since these instruments also lied outside the bounds of federal agencies that conventionally establish and monitor disclosure procedures in an exchange market for securities like bonds and stocks. Credit default swaps, a popular type of derivative, were particularly instrumental in the developments of the 2008 financial crisis. These swaps are essentially insurance agreements between two people, one of whom guarantees the other he will pay them if a financial instrument or institution fails.

Leading up to 2007, the sustained growth in the housing market gave economic actors deep confidence in the sustainability of the industry. Thus, investors began buying into large collections of varying types of mortgages called collateralized debt obligations. Financial institutions, like AIG, convinced these investors to buy insurance for these securities. If an investor was making 10% interest on a collection of mortgages, AIG drafted a credit default swap that guaranteed the investor his money back in the event of a default on those mortgages for a mere 1% or 2% slice of that interest. These tools liberated asset pools that had been previously restricted to the safest of investments[3]. Let's suppose a pension fund for the teachers of California had guidelines that limited investment to securities with a credit rating of AA or higher. The institution controlling that pension fund would traditionally be unable to loan that money to a company rated BB. Yet, with the rise of credit default swaps, those institutions could now loan the money as long as they insured it via a credit default swap with AIG, who (somehow) was rated AAA even minutes before their collapse. Since the credit default swap was classified as a derivative, and not a form of insurance, it bypassed any regulatory oversight that would traditionally require AIG to keep reserves to pay back insurance. As the housing market stagnated from bad loans and worse loan repackagings, too many swaps got called up for AIG to handle and they collapsed.[4]

The lack of regulations clearly gave credit agencies an excessive amount of power in shaping the decisions of investors. Since the exceptions and over-the-counter nature shielded swaps from disclosure regulations, credit ratings were the only tool that economic players had to gauge the risks involved with these derivative investments. Unfortunately, the three major credit rating agencies that controlled the market, Moody's, S&P, and Fitch, were paid by the very banks offering them securities to rate[5]. In addition to the benefits of having direct relationships with the agencies, the firms also consistently 'ratings shopped' by taking their security to another agency if they were unhappy with what the first one had given them. In the example above, given the combination of regulatory exemptions and rating agency corruption, pension funds (and other economic actors) were free to search for the riskiest investments with the highest returns

2 Skeel, D.A. (2011). *The New Financial Deal: Understanding the Dodd-Frank Act and Its (unintended) Consequences*. Wiley Press.

3 Ritholtz, B. (2012). *Credit Default Swaps Are Insurance Products. It's Time We Regulated Them as Such.* Washington Post. Retrieved: Nov. 13, 2014.

4 Greenberger, M. (2009). *Interview on C-Span.* https://www.youtube.com/watch?v=r66MMYyz9VI

5 The Economist. (2014). *Credit Where Credit's Due.* The Economist Newspaper, Retrieved: Nov. 13, 2014.

since the insurance of credit default swaps gave them protection from loss backed by what they perceived to be a meaningfully AAA-rated firm. When questioned in court following the crisis, the agencies proved to have legal protection since the ratings are mere opinions and do not "promise to represent any quantitative analysis of a firm's credit worthiness."[6]

Following the 2008 financial crisis, President Obama signed the Dodd-Frank Wall Street Reform and Consumer Act into federal law. The most relevant innovation to derivatives in the legislation was the new clearing requirement that gave regulatory authorities the power to require certain types of derivatives to be cleared.[7] When a derivative is cleared, a third party, or clearinghouse, agrees to stand behind both parties guaranteeing each party's commitment to the other. The most prominent types of derivatives, including interest rate swaps, credit default swaps, and options, currently fall under the clearing requirement. Even swaps deemed unclearable by clearinghouses are facing regulation by the CFTC and SEC for the first time in the form of minimal margin, transparency, and collateral requirements.[8]

The goal of a clearinghouse is to measure the risk of loss on a default and require the clearing member to pre-fund it through margin. Only clearing members, called Futures Commission Merchants, can transact directly with a clearinghouse. Clearing members execute back-to-back transactions with customers and clearinghouses so they retain no market price risk. Margining is central to the operations of a clearinghouse. It represents an amount of collateral that is supposed to cover the risks of the counterparties. Clearinghouses use advanced algorithms that assess the appropriate margin for a particular derivative transaction based on the risk assessment of financial products with similar profiles in the past.[9]

Let's look to an example to clarify the risks for which margins are aimed at accounting. Most of the time, derivatives are structured as swap contracts: on a certain date, one party is required to pay a fixed sum and the other party is required to pay the current price. The fixed payer has sold the risk of price movement and the fixed receiver has bought that risk. Assume Actor A and Actor B enter into a swap agreement at the current market price, which is $100. Suppose A is the fixed payer, meaning they will pay $100 regardless of whether the market price changes to $90 or to $110. On a day when the current market price is $110, A is at risk of receiving a net $10 from B at maturity. If B goes into default on that day when the price was $110, A needs to replace the lost derivative to get back to the same position. It may take A another day to find a replacement and, by then, the market price may be $120. This additional $10 represents the risk of illiquidity and volatility. The longer replacement takes (illiquidity) and the more prices move before replacement (volatility), the worse the consequences are for A.

II. History of Derivative Regulation

6 The Economist. (2014). *Credit Where Credit's Due.* The Economist Newspaper, Retrieved: Nov. 13, 2014.

7 Stulz, R.M. (2009). *Credit Default Swaps and the Credit Crisis*. National Bureau of Economic Research. Retrieved: Nov. 13, 2014.

8 Turbeville, W. (2014) *Derivatives Clearinghouses in an Era of Financial Reform.* Roosevelt Institute. Retrieved: Nov. 14, 2014

9 Turbeville, W. (2014) *Derivatives Clearinghouses in an Era of Financial Reform.* Roosevelt Institute. Retrieved: Nov. 14, 2014

A. Overview

The progression and evolution of financial instruments since the dawn of the 20th century has been motivated by the maximization of profits through the development of complex strategies that either ideally organize and manage risk and leverage, or obscure them. Most relevant to the interactions between debtors and creditors, in particular, is the treatment of those financial instruments in bankruptcy proceedings for when debtors become insolvent. The current federal Bankruptcy Code, enacted by the Bankruptcy Reform Act of 1978, has aimed to provide guidelines and priorities that allow troubled debtors to restructure their assets and settle their commitments in a way that maintains stability in the market.[10] Derivatives, contracts that derive their value from an underlying entity, have been granted certain exceptions from the Bankruptcy Code, which allow them to require minimal disclosure while still providing large risk exposure with marginal levels of up-front capital required. The excess amount of hidden risk that resulted, in part, from these exemptions catalyzed the Dodd-Frank Wall Street Reform Act. The Act mandated that the popular types of derivative go through a clearinghouse that ensures margin deposits are set aside to cover the risk of default.[11]

B. The Bankruptcy Code

The original Bankruptcy Reform Act of 1978 included exemptions that were pushed by a derivatives-industry representative, Stuart D. Root, who was invited to testify before a U.S. Senate subcommittee. Root argued that commodities brokers needed the ability to close out an insolvent customer's account in order to prevent "a potential domino effect." He suggested that the commodities futures market "is a delicate, if not fragile, system depending for its success on capital adequacy of the many participants." Root cited *Geldermann v. Lane*, in which a broker's decision to liquidate a short position on a trader's account then sue for the remaining balance when the trader failed to meet margin calls was upheld because the continued trading with insufficient financial resources was a threat to the commission merchant[12]. Yet, there was no explanation of why the requirement to seek court permission before closing the account would cause the "potential domino effect." Still, Congress included several narrow exemptions following the suggestions. These included: (1) an exemption from the power of a trustee-in-bankruptcy to avoid margin payments made by or to a commodity broker and liquidations of commodity contracts (2) a limited exemption from automatic stay which prevents secured creditor from seizing and liquidating the underlying collateral to recoup his investment.[12]

In 1984, Congress broadened the range of parties entitled to the exemptions beyond derivatives-market actors. In contrast to the 1982 restrictive definition of "contractual right to liquidate," the 1984 amendment introduced a flexible meaning to the term, referring not only to a rule or bylaw but also to "a right, whether or not evidenced in writing, arising under common law, under law merchant or by reason of normal business practice.[7] In addition, the authorization to liquidate a repurchase agreement notwithstanding the automatic stay included permission to

10 Allen, J.L. (2012). *Derivatives Clearinghouses and Systemic Risk: A Bankruptcy and Dodd-Frank Analysis.* Stanford Law Review. 64(4), 1079.

11 Simkovic, M. (2009). *Secret Liens and the Financial Crisis of 2008.* American Bankruptcy Law Journal. Vol. 83, 253-296.

12 Hirsh, M. (2010). *Capital Offense: How Washington's Wise Men Turned America's Future over to Wall Street*. John Wiley & Sons. Print.

foreclose on the underlying collateral. The ability to go against underlying collateral exceeded previous contractual rights of liquidation that involved the writing off of an offsetting position.[13] In 1990, Senators DeConcini and Grassley introduced a bill to amend the Bankruptcy Code regarding swap agreements. They urged Congress to eliminate the risk that market liquidity would be restricted due to application of the Bankruptcy Code to swap transactions in periods of volatility.[14] The justifications, in this case, originated from the perceived success of previous expansions on exceptions. These changes were said to mirror the 1982 and 1984 amendment that had "worked well in practice and provided needed certainty." The amendment was unique, however, in that it explicitly exempted the process of consolidating the value of multiple transactions, payments, and/or positions into a singular value.[15] Supporters feared that the automatic stay provision would prevent this process, known as netting, in certain cases. At this point, changes to the Bankruptcy Code had been made to expand the number of exemptions, the number of financial tools to which those exemptions applied, the parties that were allowed to utilize the exemptions, and, now, what procedures could access those exemptions regardless of the financial product.[15]

In 1999, Congress enacted the Gramm-Leach-Bliley Act, also known as the Financial Services Modernization Act of 1999. The act prohibited the regulation of OTC derivatives. Alan Greenspan lobbied Congress sufficiently to pass the bill with a supermajority. This prevented President Bill Clinton from being able to successfully veto the regulation as he had promised to do.[9] This represented the culmination of efforts to rid derivatives of all regulatory oversight.

C. The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005

The Bankruptcy Abuse Prevention and Consumer Act (BAPCA) was the most significant and expansive modification of derivatives regulation up until Dodd-Frank. The Act came, in part, as a result of the near failure of the Long-Term Capital Management hedge fund (LTCM) in 1998. LTCM focused on derivative markets and after just four years of operation, LTCM's aggregate value of derivative contracts exceeded $1.4 trillion. Yet, this rapid growth came with a gradual thinning of its capital and asset bases, resulting in a leverage ratio of more than 25-to-1. Due to volatilities in the global market, LTCM suffered equity losses of over 50 percent and their collapse seemed imminent. In response, the New York Federal Reserve organized a creditor's bailout, grouping together 14 of the most invested counterparties. The NY Fed designed an out-of-court recapitalization scheme that allowed those 14 parties to inject $3.6 billion in new equity in return for 90% ownership interest in the firm. Afterwards, the President's Working Group on Financial Markets issued a report praising the exemptions. The absolute netting rights by derivative counterparties, exempted from the automatic stay, mitigated the counterparty losses and minimized the ability for this to affect other markets.[16]

BAPCA gave free rein to derivatives counterparties to completely circumscribe the Bankruptcy Code's automatic stay and preference rules. It expanded the definition of contracts

13 Edwards, F.R. & Morrison, E.R. (2005). *Derivatives and the Bankruptcy Code: Why the Special Treatment? Yale Journal on Regulation. 91, 99–100.*

14 Hirsh, M. (2010). *Capital Offense: How Washington's Wise Men Turned America's Future over to Wall Street*. John Wiley & Sons. Print.

15 Vasser, S. (2005). *Derivatives in Bankruptcy*, 60 BUS. LAW. 1507, 1508. (citing Johnson, P.M. (1999). *Derivatives: A Manager's Guide to the World's Most Powerful Financial Instruments*. Ix.

16 Edwards, F.R. & Morrison, E.R. (2005). *Derivatives and the Bankruptcy Code: Why the Special Treatment? Yale Journal on Regulation. 91, 99–100.*

that gained exemption to explicitly include every type of known derivative in addition to any agreement that was "similar" to derivative transactions. The idea behind this startling broad definition was to encompass any future version of existing derivatives. The agreement also created new parties eligible for the protections that had previously been excluded. The new classification of "financial participant" was particularly meaningful since it included any entity that holds a total of $1 billion in principal amount of derivative transactions or gross market-to-market positions of more than $100 million.[17] This aimed to include any very large institutions whose collapse would pose imminent threat to the sustainability of the market.

D. Regulatory Bodies

In the United States, the Commodity Futures Trading Commission (CFTC) and the Securities Exchange Commission (SEC) are in charge of overseeing the derivatives market. In 1999, Brooksley Born, chairwoman of the CFTC, began to get worried because of the sheer size of the market in derivatives that were sold "over the counter." These OTC derivatives are organized directly between two parties, off any exchange and out of public sight. OTC derivatives, at the time, amounted to multiple trillions of dollars in unmonitored trading. This absolute form of laissez faire capitalism meant the bankers only had to answer to the demands of investors based mostly on rating agencies. Since Wall Street investment banks structure the derivatives, they can easily induce the agencies to look the other way at a low-rated portion of a hybrid bond, for example, as long as it had a dollop or two of U.S. Treasuries as part of its makeup. The new derivative bond might be based largely on high-yielding Thai bonds, but if U.S. Treasury yields were also thrown into the mix then people felt better about it. Thus, Born drafted a concept release suggesting that the CFTC should be granted the authority to regulate the derivative market. However, Alan Greenspan and Robert Rubin, the chairman of the Federal Reserve and Secretary of the Treasury at the time, rejected her proposal claiming that the preferential treatment of this financial sector helped minimize risk rather than amplify it. In response, Born retired.[18]

E. The 2008 Recession: The Derivative Industry in Action

Historically, when banks made loans to individuals, they were assuming the risk themselves. Therefore, they were particularly careful about making sure that the debtor would have the ability to pay them back. As the financial sector has matured, banks have chosen to bundle these loans and sell stocks of the bundle to third-party investors. This ownership of the loan is not a derivative because the investor legally possesses a part of the asset. Yet, given the increased attention that this opportunity gained, banks began lacking a sufficient supply of loan bundles to meet the demand of investors. Thus, they chose to create bets on whether mortgages would be paid off.[19] These are derivatives because they gain their value from the result of an underlying financial product: a mortgage. Certain financial institutions decided to begin insuring these financial instruments, whether they represented real or synthetic ownership, for the value and returns they provided. Yet, unlike home and life insurance, the insurance markets for these derivatives

17 Edwards, F.R. & Morrison, E.R. (2005). *Derivatives and the Bankruptcy Code: Why the Special Treatment? Yale Journal on Regulation. 91, 99–100.*

18 Hirsh, M. (2010). *Capital Offense: How Washington's Wise Men Turned America's Future over to Wall Street*. John Wiley & Sons. Print.

19 Greenberger, M. (2009). *Interview on C-Span.* https://www.youtube.com/watch?v=r66MMYyz9VI

operated without regulation. The financial institutions believed that, since the housing market always transitioned upward, even sub-prime mortgage loans would grow to become less risky as the value of the property increased.[20]

Unfortunately, at one point, the housing market began stagnating and the mortgages stopped being paid, so the insurance policies were triggered. The unregulated nature of the industry, combined with excessive confidence, prevented these institutions from keeping sufficient reserves to meet these payouts. Thus, it eventually fell on the taxpayers to pay back these financial instruments that were truly insurance on bets. Derivatives are considered synthetic because the party coming into the agreement does not own anything; rather, they are betting that the borrower will pay, or not pay, off the mortgage. This means that they lack an "insurable interest." In the case of traditional insurance agencies, regulators require property owners to have insurable interest to keep them from destroying their own homes simply to get the insurance money. In most cases leading up to the 2008 crisis, the major players buying the derivative contracts assuming the loans would not get paid back were the very same banks that structured the loan themselves. As they sold investment packages to investors purporting low risk and high returns, they were simultaneously betting that those underlying financial products would fail.[21]

The central problem with these derivative products before the crisis was that they lacked a mechanism for assuring that sellers of default protection had the financial means to pay up. The bilateral nature of the contracts, usually between major banking institutions, meant that the collapse of one major counterparty, like AIG, threatened the stability of the rest of the industry. Also, the enormous size and elevated credit rating of these institutions meant that buyers of these contracts did not insist that they offer sufficient collateral to back up their promises to pay in the event of a default. By the time the housing market began slowing down and people started defaulting on their loans, counterparties did not have the immediate funds to pay back all the contracts. Therefore, the Federal Reserve had to bail out these institutions to save the financial system.[22]

F. History of Clearinghouses

The first major clearinghouse in the United States, the New York Clearing House, was founded by New York City's commercial banks in 1853 to streamline the clearing and settling of checks for a profitable fee. By the late 19th century, check clearinghouses had spread across the United States. Large segments of the financial system came to rely on clearinghouses for daily settlements, given their reliability and security. In the years prior to the creation of the Federal Reserve, clearing firms took on quasi-governmental supervisory functions by examining financial conditions of members and acting as lenders of last resort. The industry expanded into securities markets in 1892 when the New York Stock Exchange created a clearinghouse for limited types of broker's trades. In 1925, the Board of Trade Clearing Corporation began providing guarantee and settlement functions for derivatives traded on an exchange. This was the first time that risk-management tools like margining deposits and default funds were adopted for traded derivatives.[23]

The evolution of clearinghouses in their ability to manage liquidity and ensure the validity

20 Simkovic, M. (2009). *Secret Liens and the Financial Crisis of 2008.* American Bankruptcy Law Journal. Vol. 83, 253-296.

21 Greenberger, M. (2009). *Interview on C-Span.* https://www.youtube.com/watch?v=r66MMYyz9VI

22 Duffie, D. (2013). *Futurization of Swaps.* BGOV Analysis: Counterpoint. Bloomberg Government Press.

23 Bernanke, B. (2011). *At the 2011 Financial Markets Conference, Stone Mountain, Georgia*. Board of Governors of the Federal Reserve System. Transcribed Speech.

of transactions has been tested by financial disturbances in the past. While the clearing firms survived the crises, they also revealed potential vulnerabilities that necessitated reform. In the financial panic of 1907, check clearinghouses struggled to obtain liquidity for settlements since too many depositors withdrew their savings from banks at once. As a result, members of the clearinghouses issued loan certificates to those members that were short of liquidity. Although the measures succeeded at the time as private-sector lenders of last resort, demands on the government led to the formation of the Federal Reserve in 1913.[23] The central banking system was meant to strengthen the supervision of state-chartered banks and provide liquidity when necessary.

The stock market crash in 1987 tried every aspect of the clearinghouse market. Surging trades and price volatility created errors that made financial actors want to pull out once again. There were multiple margin calls in the same days at the height of the crisis on clearinghouse members to meet the increased demand of their fellow frightened clearinghouse participants. The clearinghouses were able to gather sufficient excess margin calls from members that did not require immediate liquidity to both serve the requests and stabilize the unpredictable prices in the market that had risen from the concentration of capital.[23] Many argue that the resilience of the equity markets throughout the 2008 crisis can be partly attributed to the dispersal of counterparty risk that characterizes their clearing-focused exchange.[24] Still, the introduction of derivatives that have historically remained over the counter to the clearing world presents new obstacles.

III. Dodd-Frank and the New Regulatory System

A. Goals and Design

After the crisis, the G20 countries agreed that they needed to set up a new regulatory framework for OTC derivatives. Up until the global recession in 2008, swaps were negotiated and executed by a few of the biggest banks through private telephone conversations. This secretive bilateral trading environment was blamed for exacerbating the effects of the initial meltdown, which galvanized international support for new rules in this market. As agreed in 2009, the G20 reform comprised of four elements: (1) all standardized OTC derivatives should be traded on electronic exchanges, (2) all standardized OTC derivatives should be cleared through central counterparties, (3) OTC derivative contracts should be reported to trade repositories, and (4) non-centrally cleared derivative contracts should be subject to higher capital requirements.[25] In the United States, these rules were brought to life through an entirely new system. Dodd-Frank was the American personification of the G20 agreement to deal with transparency and risk in the world of OTC derivatives. The new regime is designed to increase transparency through swap data reporting, electronic execution, and business conduct rules, while addressing systemic risk by mandating centralized clearing.

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24 Bollenbacher, G. (2011). *The Role of Clearinghouses in OTC Derivatives.* Tabb Forum. Retrieved: January 12, 2015.

25 Basel Committee on Banking Supervision (2013). *Margin requirements for non-centrally cleared derivatives.* International Organization of Securities Commissions.

The Dodd-Frank Act repealed the provision under the Financial Services Modernization Act of 1999, which prohibited regulation of OTC derivatives. For the first time, the CFTC and SEC have jurisdiction over the unregulated OTC market. Moreover, it established a clearing requirement for the major types of derivatives.[26] A clearinghouse, or central counterparty (CCP), is an entity that stands between the two original counterparties of a derivatives trade and assumes the rights and obligations of both parties. Dodd-Frank mandates that, for these products, the clearinghouses will serve as a backstop in case one party defaults, reflecting an effort to reduce the risk of contagion among financial firms and markets.[27]

Though the rules are being implemented in phases, the basic policies have been set. Swap execution facilities (SEF) have been designated to be the platform through which these derivatives are to be traded. SEFs are required to establish an electronic system that provides all market participants with the ability to post and view prices for these contracts, in addition to being able to make or accept offers on those contracts. SEFs are also required to disclose trade data to swap data repositories that publish the information publically. There are two methods of trading allowed outside of the formal auction platform described above, known as "request for quote" (RFQ) and block trades. Under RFQ, a participant selects a minimum of five potential counterparties in the system and directly sends a quote request to each. Block trades are swaps with a principal amount ("block size") that surpasses the minimum size set by the CFTC so as to allow for them to be negotiated privately.[27]

Once any single SEF deems a swap to be "made available to trade" (MAT), it instantly falls under the clearing mandate. Derivative Clearing Organizations, DCO or clearinghouses, are financial institutions that provide clearing and settlement services. When a derivative is cleared, the DCO agrees to stand behind both parties, guaranteeing each party's performance to the other. Instead of having a single bilateral contract, there now have be two: one between a clearinghouse and the original seller, and the other between the clearinghouse and the original buyer. If the clearing member defaults on its obligation to answer margin calls, the clearinghouse contributes any part that exceeds the resources of that clearing member.[28] The clearinghouse has the ability to cover these losses because of the initial collateral deposit and the daily variation margins that they require from each member. If the defaulted amount exceeds the money available from that fund, the DCO reserves the right to call upon members for additional contributions.[28]

Both SEFs and DCOs require membership. In order to access an SEF, an individual can become a member directly by submitting to their rules and paying the requisite fees. Though most individuals or organizations transacting for others will likely choose this route, end-users are expected to engage the market through registered dealers or brokers. Swap dealers simply act as an intermediary, taking swap orders from clients and facilitating the execution on the SEF of which they are members. Swap brokers, known as Futures Commission Merchants (FCM), are the only ones eligible to become members of clearinghouses. FCMs accept swap trades on behalf of end-users and submit them to the clearinghouses for clearing.[28] While most SEFs are integrated with a DCO, clearinghouse membership is a separate status from membership of an SEF. Clearinghouses tend to have much higher financial requirements because of the margin requirements and guarantor fund. The new regulations allow for much variation in the way

26 Allen, J.L. (2012). *Derivatives Clearinghouses and Systemic Risk: A Bankruptcy and Dodd-Frank Analysis.* Stanford Law Review. 64(4), 1079.

27 Bollenbacher, G. (2011). *The Role of Clearinghouses in OTC Derivatives.* Tabb Forum. Retrieved: January 12, 2015.

28 Felsenthal, D. (2011). *An Introduction to the US Cleared Swap Infrastructure*. Harvard Law School Forum on Corporate Governance and Financial Regulation.

people engage the market based on their choice of trading platform, clearinghouse and dealer.

B. The New Market

Clear, updated information on the derivatives trade, in general, has been a rarity throughout most of its existence. A few years ago, the Bank for International Settlements began compiling semiannual data on the size and composition of the international OTC derivatives market. In the first half of 2014, the total nominal amounts outstanding of OTC derivative contracts, which determines contractual payments and is an indicator of activity, fell by 3%, from $711 trillion to $691 trillion. A different indicator known as the gross market value, which calculates the cost of replacing all outstanding contracts at market prices, shows an even larger drop. From December 2013 to June 2014, the gross market value dropped from $19 trillion to $17 trillion. This amounts to the lowest value since 2007, a clear representation of the slowing trend we have seen since the recession.[29]

The great majority of OTC derivative contracts are interest rate swaps. This exchange of payment that allows one party to sell off the risk of increasing variable interest rates to a willing counterparty amounts to $421 trillion, or 61%, of the entire OTC derivative market. The numbers for these products also show a decline. From December 2013 to June 2014, the gross market value of interest rate derivatives declined from $14 trillion to $13 trillion, further distancing itself from its peak in 2011 of $20 trillion.[29] There has also been a shift in the structure of these contracts. Recent activity in these types of swaps has focused on short-term maturity. From 2013-2014, notional amounts of contracts with a remaining maturity of one year or less increased from $199 trillion to $229 trillion. As a share of all agreements, short-term contracts rose from 34% to 41% in that same time period. Lastly, we also see a shift in the interest rate market away from swap dealers and towards clearinghouses. The notional amount of interest rate contracts between derivatives dealers has been falling steadily since 2008. From June 2008 to June 2014, notional amount of contracts strictly between derivatives dealers dropped from $189 trillion to $85 trillion. The share of all contracts handled by other financial institutions, like clearinghouses, rose from 49% in 82% over that period. For the purposes of this data gathering, derivatives dealers included "mainly commercial and investment banks, and securities houses." The "other financial institutions" category was made up of clearinghouses, smaller commercial banks and financial end-users like mutual funds, pension funds, and money market accounts.[30]

In this data, certain trends become clear: the derivatives market is shrinking, contracts within the market are being rewritten for shorter-term deals, and there has been an increase in the diversity of actors in the market, most notably the entry of more clearinghouses, small banks and end-users. The shrinking derivatives market can mostly be explained by the futurization of swaps that will be discussed at length later in this paper. The shorter deals signal uncertainty about the future of regulation, since Dodd-Frank is being phased out, and there is not going to be lengthy contracts written until banks and investors understand the implications of the actual enactment of the reforms. The increase in participation of end-users and clearinghouses though, is indeed, a sign of success. At first, it seemed as though new regulations could further monopolize the industry. Being a party to several derivatives spread out over several clearinghouses requires posting margins at each clearinghouse. Thus, many expected that the market would narrow down to a few firms that would dominate clearing. Also, clearinghouses generate a new risk by limiting

29 Bank for International Settlements (2014). *OTC derivatives statistics at end-June 2014.* Statistical Release.

30 Bank for International Settlements (2014). *OTC derivatives statistics at end-June 2014.* Statistical Release.

offsetting obligations. If numerous derivatives involving the same parties are cleared at the same clearinghouse, the clearinghouse can match the various parties' gains on some contracts against their losses of others. But, if contracts are cleared at different places, no single exchange can take advantage of the risk reduction.[31] Nevertheless, the data above shows that even if there are forces pushing towards the success of only a few clearing organizations, in the long run, their increased participation facilitates access for smaller banks compared to the previous regime. This can be explained by the equalizing effect that the new requirements have on credit. Prior to the change in regulation, larger banks like Goldman Sachs and JP Morgan, would be the only ones capable of having the balance sheet and credit to deal large amounts of swaps to various parties. Yet, the central clearing system provides for an equal playing field, which increases new parties and liquidity. Clearing has been known to homogenize the credit standing of clearing members. In effect, all other members are freeriding on the creditworthiness of the banks with the highest credit standing.

The interest rate market is the only category of OTC financial products in which a significant proportion of the contracts are currently centrally cleared. The International Swaps and Derivatives Association, Inc. reports that 56% of the current OTC interest rate market between major dealers is centrally cleared. The data suggests that this figure could increase to 80% if all eligible transactions were cleared.[32] Most of the interest rate products that remain free of clearing are swap options, cross-currency swaps, and transactions denominated in non-clearable currencies. So, a significant fraction of the interest rate market that is eligible is already cleared, but around a quarter is not currently clearable. In order to clear the remaining fraction, two developments are necessary: the expansion of product coverage from global clearing organizations, and an increased recognition by local clearinghouses of other currencies. Nevertheless, given the need for historical comparison in order to establish margins, it is hard to envision exotic, illiquid, or highly structured OTC derivatives being centrally cleared in the near future, or even ever.

IV. The Economic Effects of Clearinghouses

The construction of a regulatory platform around clearinghouses holds certain advantages. In *Central Counterparties,* Jon Gregory outlines the main economic considerations that helped justify the new market design. In bilateral negotiations for derivatives, banks have proven to have a bargaining position over their counterparties since it is beneficial for any user to issue more swaps with a certain financial institution once they control a few contracts.[33] The reason is, in bilateral negotiations, the only way to offset various positions is by ensuring that each of those contracts is with the same counterparty. Contracts that are traded between different counterparties but cleared through a clearinghouse can be offset, or netted. This multilateral netting grants investors increased flexibility to enter new transactions and terminate existing ones, while also reducing margin costs. The equalizing credit effect explained in the previous section that has led to an increased ability for new participants in the market, and combined with

31 Menkveld, A. (2015). *Crowded Trades: An Overlooked Systemic Risk for Central Clearing Counterparties*. Tinbergen Institute Amsterdam, VU University Amsterdam Press.

32 Gregory, J. (2014). *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*. John Wiley & Sons Ltd.

33 Gregory, J. (2014). *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*. John Wiley & Sons Ltd.

the netting effects of a centralized institution has improved market liquidity in the new system.

Another relevant economic advantage of clearinghouses is their ability to reduce the need for credit risk assessment of multiple counterparties. When a default creates losses that exceed the financial commitments from the defaulting member, the clearinghouses' fund that is used to recoup distributes the losses across all of its members, thus reducing its effect on any one party.[33] Additionally, the market-to-market prices rules for clearinghouses force the assessment of profit and losses by demanding asset values of each contract based on market comparisons on a daily basis. This stabilizes financial conditions and reduces disputes about margin requirements. Meanwhile, the price reporting and public data repositories ensure transparency of these values as the trading occurs. Most importantly, clearing organizations can monitor clearing members' aggregate activity across all products in order to evaluate the totality of risks faced by market participants. This prevents situations like AIG prior to the 2008 recession, in which a high credit rating combined with the secrecy of bilateral negotiations allowed them to process an overwhelming number of credit default swaps that they did not have the funds to cover.

The centralized auction system, in general, makes the process of hedging, offsetting and replacing contracts more efficient. A crisis period can be controlled through coordinated replacements of positions that minimize price disruptions. Clearinghouses are structured to provide stability by homogenizing the market.[34] The main factors that lead to price differentials in bilateral markets like credit quality, margin terms, and funding cost, are all neutralized by making the clearing institution the counterparty, and the other user, functionally, interchangeable. Whether the opposing position on my swap is owned by Bank of America or a university professor going through a futures commission merchant, the economic considerations influencing my decision are analogous given their membership with the clearinghouse. Still, with any new financial institution comes some risk of duplication. Many functions done by clearinghouses are already done by large banks. Within these larger financial conglomerates, the procedures for settlements, risk management, margining, and legal support have been institutionalized. Yet, these redundancies do not necessarily diminish the efficiency advantages outlined above from increased liquidity and multilateral netting. And regardless, renovating the practices of a market to make it safer, more transparent, and more accessible to diverse participants is beneficial to the stability of the economy even if it decelerates the volume of transactions as the parties adjust.

One common concern brought up by lobby groups against the reform is that competition can lead to clearinghouses watering down standards in order to gain more contracts with potentially greater profits. Prior to the financial crisis, the ability to move from one credit rating agency to another caused each agency to give generous treatment to repeat players to prevent losing business.[35] Similarly, clearinghouses could compete for business by lowering standards. This could mean accepting substandard derivatives for clearing or setting inadequately low margin requirements. Yet, this does not seem like an inherent reason why clearinghouses are comparatively worse than the alternative of no regulation. In the previous world of bilateral negotiations, there was a powerful incentive to hide risk and overestimate collateral between each party in a transaction in order to get the best price. Even if there is an incentive for clearinghouses to minimize the effect of regulatory oversight, the fact that reporting and margin requirements exist, at all, make the current environment necessarily less susceptible to the disadvantages of competition than the alternative we have seen. The mandatory collection of price data by swap

34 Gregory, J. (2014). *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*. John Wiley & Sons Ltd.

35 Rajan, R.G. (2005). *Has Financial Development Made the World Riskier?* National Bureau of Economic Research.

data repositories also ensures that consistent circumvention of the requirements can at the very least be revealed to the public and regulators, alike.

Another worry is that the new landscape induces a concentration of risk at these clearinghouses. The movement of derivative trades to clearinghouses mitigates the overall effects of a default by one clearing member, by allowing the organization's fund to provide support. Yet, proponents of this objection believe that this process makes the impact of a clearinghouse itself going down much more devastating. More specifically, this concern can be divided into two elements: the increase in importance of clearinghouses as central nodes within financial markets can make their failure capable of *initiating* a major disturbance, and the interconnectedness and size could *amplify* systemic shocks and facilitate the propagation of disruptions.

Hong Kong's futures clearinghouse failure in 1987 is often used as the main empirical example to validate the idea that clearinghouses consolidate risk. The collapse forced a government bailout and the complete closure of the central stock market for a while to prevent a total financial meltdown. At the time, three separate entities were involved with the central clearing of the Hong Kong futures market:

> *1. Hong Kong Futures Exchange (HKFE); the platform executing the futures trades*
>
> *2. International Commodities Clearing House, Hong Kong (ICCH); the clearing organization*
>
> *3. Hong Kong Futures Guarantee Corporation (HKFGC); the default fund that guaranteed trades.*

On Monday, October 19, 1987, the Hong Kong stock market dropped by almost 50%. The market was immediately closed for the rest of the week and was expected to fall again on opening. This led to fears that margin calls would not be met and that the total losses would exceed the financial resources of the clearing organization, ICCH. Of the HK$2 billion that HKFE needed to borrow, the default fund, HKFGC, only had HK$22.5 million.[36] So, after major contributions from shareholders, large brokers, and individual members of the HKFE, the government had to step in and provide HK$1 billion to prevent their collapse.

An investigation into the specific causes of HKFE's meltdown can help elucidate whether this is a proper example of clearinghouse failure that applies to the new market for swaps. One of the causes of the breakdown was the fact that initial margin requirements for futures had not been increased even though the underlying market had risen significantly in the preceding period.[37] The separation between the clearinghouse and the entity holding the default fund also created new coordination and transparency risks. Exchange members could not participate in the management of the default fund, whatsoever. And, although the clearinghouse was responsible for monitoring position, they were not exposed to the losses in the event of default. The default fund, the only entity exposed to losses, had no say in risk monitoring or setting standards for clearing members because those obligations belonged to the clearinghouse. Overall, these failures can be attributed to a combination of large market volatility from price shocks, and inadequate margins and default funds.

Since the crisis, the culture and structure of clearinghouses has changed to better deal

36 *note* amount was split between HK$15 million in capital and HK$7.5 million in reserves

37 Gregory, J. (2014). *Central Counterparties: Mandatory Clearing and Bilateral Margin Requirements for OTC Derivatives*. John Wiley & Sons Ltd.

with the risks of 1987. Immediately after the Hong Kong crisis, electronic reporting of trades was introduced so that these different actors could integrate accurate trade information into each of their roles. Dodd-Frank specifically mandates the public reporting of trades, in real time, by the swap execution facilities and the public display of the records by data repositories. The internalized default fund structure also allows the clearinghouse to measure profit and losses risks across contracts in a way that was made impossible by the institutional divisions in Hong Kong, at the time. The new reporting requirements should make this sort of crisis less likely and more predictable, while advanced margin methodologies and default fund arrangements should make them easier to deal with.

V. Regulatory Arbitrage and the Futurization of Swaps

The most potent response to the new regulations has been the futurization of swaps. This term does not intend to refer to the swap market as modernizing, in a general sense, but rather, serves to describe the transformation of swap contracts into futures contracts in order to avoid certain requirements. Instead of structuring a deal as an interest rate swap, futures dealers can construct a futures contract on an interest rate swap and get interest rate protection that is, supposedly, economically equivalent and conveniently harmonizes with their existing futures accounts with clients. The Federal Reserve has designated large futures clearinghouses as *systematically important*. This means that the government reserves the right to rescue them in the event of a financial meltdown. By using futures as the vehicles to shift interest rate risk, these financial institutions fall outside the scope of the new regulatory umbrella. This means cheaper costs for exchanges and traders in addition to the avoidance of the new procedure of trading swaps at execution facilities, then clearing them at a clearinghouse, and then engaging with a swap dealer.

The movement towards futurization gained momentum as regulatory uncertainty clouded the financial system. The Intercontinental Exchange (ICE) has been one of the early drivers of the futurization of swaps. ICE's innovation originated from the belief that swap and futures contracts are functionally equivalent. Based on their understanding, swaps are contracts that commit each party to exchange cash flows at a set date, which is no different from futures involving an obligation to make a payment at a future date. So, in 2012, after the passage of Dodd-Frank but in the midst of its phased out implementation, ICE converted all of its energy swaps into future contracts. Later that same year, ICE's main rival, the Chicago Mercantile Exchange,[38] began offering Deliverable Swap Futures. Together, these two entities make up an overwhelming majority of the derivatives exchange. Marketing efforts for these products have focused on their ability to mimic the economic benefits and cash flows of an OTC interest rate swap, while requiring lower margins and providing flexible block treatment. The supply of swap future products seems set to accelerate. In late 2014, ICE struck a licensing agreement with Eris Exchange to list derivatives using their patented methodology for constructing swap futures in order to upgrade their process for conversion.[39] Under the deal, ICE has the right to list European and U.S. credit default indexes and European interest rate swap futures based on the Eris methodology. Throughout 2015, ICE has plans to launch swap futures on the European and U.S. credit default swap (CDS) markets and interest rate swap markets. The largest European

38 owned by CME Group

39 Schmerken, I. (2014). *ICE Licenses Swap Futures Methodology From Eris Exchange.* Information Week: Wall Street & Technology.

derivative exchange, Eurex, has also followed suit offering swap futures. It seems as though the momentum in the industry has been geared towards developing ways to bypass the new reforms rather than adjust to them.

It is quite clear that Congress did not intend for the futurization of swaps. The elaborate sets of rules for swap transactions would not have been established with the expectation that mere re-categorization would be able to circumvent them. And although futures are transacted on an exchange, and centrally cleared, they do hold unique risks that threaten the success of the regulatory reform. There are six elements of the reform that futurization aims to bypass: dealer registration, margin treatment, block thresholds, clearing competition, execution competition, and open reporting. This next section will investigate the implications of futurization on each one of these categories that shaped both Dodd-Frank and the G-20 commitment, at large.

Table 1: Regulatory Disharmony between Swap Futures and Swaps

	Registration	Margin	Blocks	Clearing	Flexibility	Execution	Reporting
Swaps	**Yes**	**5-Day**	**High Threshold set by CFTC**	**Horizontal**	**Custom**	**Membership required or must go through Futures Commission Merchant**	**Free and public**
Swap Futures	**No**	**1-Day**	**Low Threshold set by each exchange**	**Vertical**	**Standard**	**Open Access**	**Fee-based**

TABB Group, a financial research institution, conducted hundreds of interviews with swap users regarding the Dodd-Frank reform, and the bulk of conversations are said to have centered on the new, frictional costs associated with swaps trading.[40] What was previously a cheap and flexible financial market instrument is becoming a more expensive, rigid one. The rise in expense can be attributed to the difference in margin requirements. A comparative analysis was conducted comparing an OTC swap trade to a similar Eurodollar (ED) strip trade with different initial margins of 1.5% for the OTC swap, and .014% for ED margins. The total cost of the OTC swap ended up being five times more than the strip trade, mostly because of the opportunity cost associated with the high margin. More precisely, swap users lose potential profits from having to set a comparatively higher proportion of their money aside as collateral, rather than investing it elsewhere.

The difference lies in varying risk calculation methodologies. Swaps are subject to a 5-day hold on margins, while futures only require a 1-day hold. The historical progression of the two markets helps provide reason for the discrepancy. Margins on futures are lower than those for swaps, because they are intended to cover a different set of risks.[41] OTC swaps, with their history of bilateral secret negotiations, value positions less frequently, and deal with more diverse agreements so they use a more conservative risk calculation. According to Tab Group, the reduced margin balances amount to a 73% reduction in funds available to secure financial soundness for

40 Rhode, W. (2013). *Swap Futures: Innovation, or Avoidance?* Tabb Group.
41 Rhode, W. (2013). *Swap Futures: Innovation, or Avoidance?* Tabb Group.

each contract cleared as a future, rather than a swap. The chief executive of LCH.Clearnet, one of the few firms resisting futurization, labeled one of its competitor's slender margins charged on swap futures as "bordering on reckless."[42] He argued that the standards in the futures market were "nowhere near adequate to survive the stresses and the default of a large clearing member."[43]

The argument by futurization opponents challenging the economic equivalence of futures and swaps was brought to the New York Supreme Court in *Jefferies & Co. v. Nasdaq OMX Group Inc.* In this 2011 case, an investment bank by the name of Jefferies & Co. accused the International Derivatives Clearinghouse of fraud and breach of contract in connection with interest rate swap future contracts. Jefferies & Co. claimed that the organization induced them to enter into contract by saying the investment would be "economically equivalent" to transactions in similar instruments in the OTC market.[44] After structuring swap future contracts worth an aggregate nominal value of $175 million, Jefferies & Co. lost tens of millions of dollars as a result of the treatment of the instruments and improper pricing. DRW Trading Group, a co-owner of Eris Exchange, was able to take advantage of the discrepancy and profit from the losses of Jefferies & Co. The two sides have since agreed to resolve the case through arbitration.[45]

Another increasingly important issue is the different way of categorizing block trades. This unique method of trading allows for private negotiations to take place and bypass any exchange or clearing mandate as long as a minimum notional amount is reached. In the case of swaps, that minimal amount is set by the CFTC. Yet, for futures, the exchanges control the size necessary to be considered a block trade. Therefore, exchanges have altered the threshold for block trades to make them so low that every swap future classifies as such and can, consequently, be conducted over the phone instead of over their trading platform. Both Eris Exchange and the CME Group offer swap futures with lower block thresholds than the CFTC's proposed rules for equivalent interest rate swaps. In the case of CME's products, the block threshold is between 24% and 40% of the CFTC's proposed size for equivalent contracts, while the Eris future is just 7% to 11%.[46] Swap futures risk the continuation of the opaque pricing that was an impediment to transparency and proper risk assessment during the 2008 financial crisis.

The vertical nature of futures clearing and licensing rights appear contrary to the open choice clearing execution structure. There are concerns that a lack of futures fungibility will inhibit clearing competition, and licensing rights will prevent competition in execution. While swap markets involve SEFs that can clear on any clearinghouse, the futures market is composed of exchanges and clearinghouses that are commonly owned. Vertically aligned platforms have the power to adjust costs to lock in trading, clearing, and/or reporting, making it harder for other trading venues and clearinghouses to compete. They also retain the ability to alter those cost structures in the future.

Differences in reporting also allow for a new stream of revenue for exchanges willing to make the switch to futures. Swap transactions are required to be reported in real-time, while futures price reporting operates on a ten-minute delay. These short minutes can have serious implications on financial markets that have seen profits increase from speed improvements of

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42 International Derivatives Clearinghouse (IDCH) was competing with LCH.Clearnet for huge portfolios of Fannie and Freddie Mac, circa 2010

43 Wood, D. (2010). *LCH.Clearnet CEO calls rival 'reckless' as Fannie, Freddie clearing battle heats up.* Risk Magazine. Retrieved: April 3, 2015.

44 Dolmetsch, C. & Leising, M. (2011). *Jefferies Sues Nasdaq Unit Over Rate Swap Futures Contracts.* Bloomberg Business.

45 McLaughlin, D. (2011). *Jefferies, Nasdaq Agree to Resolve Lawsuit in Arbitration.* Bloomberg Business.

46 Rhode, W. (2013). *Swap Futures: Innovation, or Avoidance?* Tabb Group.

milliseconds on the execution of trades. Swap prices are supposed to be made available publicly via swap data repositories where any individual can access them at no cost. In contrast, futures exchanges claim ownership over the prices they report and charge for their release. ICE, for example, has been granted a license from Markit, the leading provider of pricing information on credit default swaps (CDS), to be the provider of CDS futures contracts that refer to indexes owned by Markit.[47] Thus, if the trading of CDS futures gains traction, ICE will make huge profits on the sale of those prices, which would have been public information under a different name.

Also, there are special registration requirements as dealers or FCMs in the new world of swaps that come with elevated reporting and compliance obligations. ICE, along with other financial organizations planning on making the switch, already have pre-existing exchanges with rules and processes for hosting futures that have been established much more efficiently than the primitive swap structure. The high capital requirements for operating swaps clearinghouses has directed ICE towards earning money from fees on future exchanges.

Futurization also threatens the mechanisms in Dodd-Frank tailored to increase end-user protection. Credit default and interest rate swaps were given business-conduct protections applying to special entities such as schools and municipalities, which in the past have been victimized by interest rate swaps that were ill-suited for customers. Yet, the standardized nature of the futures market makes achieving protection more difficult. Rather than benefiting from the sheer volume of the derivative trade, like large banks, end-users often use swaps to cover their risks by hedging other investments. For example, the standardized futures contracts often have strict liquidity periods, like 30 or 60 days. So, an individual trying to hedge their exposure in the foreign currency market of a foreign currency payment they will receive in 45 days, has to choose between covering their risk with a future for only 30 of those days, or purchase a 60 day future that will put them solely on the opposing position for the last 15 days after they receive their foreign payment. According to the estimates of one US chemical producer, these variances meant that a risk necessitating 150 trades to cover via swaps demanded 144,000 swap futures trades in order to protect against the same risk.[48]

Swap futurization is the biggest threat to the success of Dodd-Frank's reforms for the OTC derivatives market. The lowered margins that are motivating demand for swap futures diminish the effect that new regulations can have on increasing security in the trade. By removing the need for heavy users of swaps to register as dealers and lowering block thresholds so that bilateral off-exchange trading may be facilitated, swap futures appear to undermine the G20's transparency goals. Whether a contract is labeled a swap or a future will determine the transparency of its pricing, and whether institutions can make money from that pricing information.

Aside from futurization, there remain other strategies for regulatory arbitrage. The most obvious problem would be that an OTC transaction could be made non-standard to circumvent the mandatory clearing requirement. This is the fundamental reason for margin requirements for non-cleared bilateral trades. There are also clearing and margining exemptions for end-users or non-financial institutions. It is conceivable, maybe even likely, that certain companies will establish subsidiaries that they will classify as exempt. Still, it is unlikely that this can threaten a large proportion of the market without becoming visible to the regulators. Even though there seems to be general agreement on regulatory rules regarding clearing and margining in the major regions, any differences can potentially lead to problems as an institution may clear through a

47 Duffie, D. (2013). *Futurization of Swaps.* BGOV Analysis: Counterpoint. Bloomberg Government Press.

48 Euromoney. (2013). *Swap futurization could spell imperfect hedging.* Royal Bank of Scotland. Retrieved: April 1, 2015.

particular geographical entity or domicile to obtain the most favorable regulatory treatment.

VI. Conclusion

The derivatives market is an ever evolving, complex, and ambiguous economic system that has continued to show augmenting pervasiveness in recent decades. The history of derivative regulation is defined by ever expanding exemptions to the Bankruptcy Code guidelines designed to manage the risks associated with these investments. Towards the end of the 20th century, derivative deregulation flooded the Bankruptcy Code to expand the number of exemptions, the number of financial tools those exemptions applied to, the parties that were allowed to utilize the exemptions, and what procedures could access those exemptions regardless of the financial product. The CFTC chairwoman tasked with overseeing the derivatives market warned policymakers of the dangers of this culture of betting trillions of dollars worth of complex deals in the shadows of corruption and profit incentive. Unfortunately, the ideological commitment of these powerful institutions could not be fractured without material proof of these threats that could only come from a near breakdown of the entire economic system.

The 2008 financial crisis was the evidence regulators needed to act. The major players buying the derivative contracts, assuming mortgage loans would not get paid back, were the very same banks that structured the loan themselves. As they sold investment packages to investors purporting low risk and high returns, they were simultaneously betting that those underlying financial products would fail. Since the companies, like AIG, selling these bets were not required to hold sufficient liquid capital to cover potential losses, the unexpected decline of the housing market proved to be too much for them to handle. This resulted in one of the biggest government bailouts in the history of the United States. And, ironically, most of the taxpayer funds went to the shady banks that had deceived their clients into buying risky positions since they had insured the default after packaging the agreements and recognizing the hidden threats.

The Dodd-Frank reform bill was meant to represent an acknowledgement of past failures in adapting to regulatory arbitrage. Clearinghouses were deemed the saviors of the instability inherent in this market. The new system and its intricate requirements were specifically designed to deal with the gaps in transparency and collateralization, which generated the previous financial bubbles and their ensuing detonation. And, for the contracts that have remained within the jurisdiction of new reforms, the outcome seems positive. The most recent statistics show that there has been an increase in the diversity of actors in the market. This means larger banks have less power since all entities capable of accessing a clearinghouse, either directly or through a dealer, possess equal levels of creditworthiness in the eyes of counterparties to their agreement. And, given the reporting requirements and public data repositories, large banks do not even have a comparative advantage in terms of information since absolute transparency is mandatory and monitored.

Unfortunately, the figures also reveal a frightening response by powerful financial institutions attempting to bypass the new rules in order to maximize their profit potentials. Since the financial lobbies were unable to neutralize the formidable momentum for regulation after the 2008 crisis, the banks have decided to recategorize their agreements in a way that positions their trade outside of the scope of the requirements of Dodd-Frank. The futurization of swaps threatens to erode the principles of the new system, thus reproducing all of the risks that have triggered complications in recent decades.

The propensity of financial actors to engage in regulatory arbitrage in order to make more money has come to characterize the monetary system, at large, and the derivatives market, in particular. Although the contracts that have remained under the jurisdiction of the new reforms have become less hazardous, there exist new threats stemming from the futurization of swaps. Regulators must realize that the reactionary nature of policymaking in this domain that considers tangible large-scale failure a prerequisite to new protocols has proven to be ineffective. As long as legislators await a crisis in order to treat the risks in the system, they will always be a step behind. The more complicated and intricate the rules get, the easier it becomes for financial actors to find a way around the technicalities that limit their earnings. Unless the regulatory approach to the financial system modernizes, by engaging the corrupt and dishonest culture that has flourished in complicated markets, the profiteering institutions will ensure that the bubbles of instability grow to become larger and more intense until the entire system collapses once and for all.

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