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Lessons from the History of Over-the-Counter Derivatives Regulation

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Abstract: "Standards-aligned self-regulation" has been the dominant mode of governance in markets for over-the-counter (OTC) derivatives products on both sides of the Atlantic, despite differences in the overarching regulatory architecture of the US, UK and Continental European countries. The term self-regulation covers many different circumstances but in finance, particularly due to the role of information and market flaws, effective self-regulatory regimes depend on what governments decide and do. A credible threat of government intervention and a credible system for discerning compliance/non-compliance, including limiting regulatory arbitrage, are critical. This contention both builds from institutionalist economics and is evident in the history of OTC derivatives regulation in the US since the 1990s. The history of OTC derivatives regulation in the US since the 1990s. The history of OTC derivatives regulation in the threat of government rules imposition. Financial regulation is almost an oxymoron but rather than ceding authority to the markets, perhaps the answer lies in independent, informed inquiry and political will to challenge the regulators and regulated.

The term derivative, used in finance, is a generic reference to a variety of financial instruments. The vast majority of financial products are, at heart, contracts. Some are more standardized than others. Stock shares and bonds are contracts related to ownership of physical assets and their legal form is widespread and standardized. At some level of standardization, financial contracts become known as financial assets. The research about legal systems and their impact on capital market development (La Porta et. al., 2003) stems from the basic premise that financial assets are subject to legal risk related to contract enforcement. In the case of derivatives the legal terms of the contract are varied and frequently considerably more flexible than in the case of stocks or bonds. Options are a common form of derivative and the Black-Sholes model of options pricing gave a huge boost to the market because it facilitated pricing of these contracts. A derivative is sometimes called a security derivative because its value is derived from the value of a "security", which is an "underlying" financial product. For many derivatives, such as credit derivatives, the underlying security is essentially another contract involving a bank loan, corporate debt, trade receivables, or other credit-related assets. The Bank for International Settlements divides derivatives into those linked to foreign exchange, interest rates, equity-lines, commodities and credit default swaps. Within each of these categories they have sub-categories for the form of the instrument such as whether it is a forward contract, an option or a swap.

Derivatives trade in two different ways. The first is over-the-counter and the second is on exchanges. Over-the-counter trading (OTC) is the result of bilateral negotiations between a potential seller and a potential buyer. The requirements for standardization of contracts are higher for derivatives that trade on exchanges compared with those that trade through bilateral exchange in an over-the-counter format. The buyers and sellers in OTC derivatives markets are mostly large financial institutions trading with one another. The fact that is it is so-called sophisticated players who participate in this market is a primary reason for exempting them from the general principle of "protect the consumer" that underpins regulation of trading in more traditional financial securities, i.e. stocks and bonds.

As Figure One shows, the vast majority of derivatives trading occurs in the OTC market. This data is for the value of net OTC derivatives contracts outstanding which involves "cancelling out" compensating contracts. The data for the gross value of OTC derivatives contracts outstanding yields the much larger numbers noted in the press. By these numbers, at its peak in 2007, the OTC derivatives market was worth 60 trillion dollars, more than four times US GDP in that same year. Geographically, roughly 90% of OTC derivatives trading takes place in the US and UK split on a relatively even basis, with the remaining portion mostly in Europe. China is a tiny, but growing player in this business.

This paper describes the characteristics of the self-regulatory regime governing OTC derivatives transactions in the US and Europe since the market value began to climb in the 1990s. Section two outlines the theoretical conditions for effective self-regulation according to institutional economics literature. Section three shows how these conditions help illuminate the successes and failures of the self-regulatory OTC derivatives regimes.

# "Standards-aligned self-regulation" of OTC derivatives

In the aftermath of the 2008 financial crisis, popular characterizations of government regulation of OTC derivatives suggest there was none and this partly explains the astonishing risk build-up that caused the crisis. This is not entirely accurate. In the US, Europe and the UK

government entities published directives and guidance to guide capital adequacy, disclosure and later, best execution, that covered institutions engaged in derivatives trading.

Government financial regulation tends to be organized according to "functions" or "products" (securities brokerage or deposit-taking, for example) or according to institutions (commercial banks, savings and loans, insurance companies). The US is famous for having a very decentralized system that tends to segment by function and institution, leading to a very complex structure that sometimes gives authority to more than one government body and allows financial businesses to choose their regulator. (Monkiewicz, 2007) In the case of OTC derivatives trading the main form of government oversight was similar across the US, UK and Europe and involved transposing general principles into specific guidance for industry participants. Beginning in the mid-1990s, for example, the Federal Reserve Board issued several supervisory letters about how banks in its jurisdiction should treat credit derivatives for capital adequacy regulation outlining risk modeling and noting required attention to counterparty credit risk, general market risk and specific market risk. (Federal Reserve 1997)

This mirrored the fairly continual updating of capital adequacy and risk management guidelines flowing down to the national level in Europe from the Basel Committee. Modifications in the mid-1990s increased capital set-aside against off-balance sheet exposure, allowed banks to use internal risk models and permitted netting of bilateral OTC trades. In the largest European market, London, the London Code of Conduct constituted an important regulatory framework. (Schwartz & Smith 1997: **206**) That Code was amended in 1995 to promote better standardization of derivatives contracts and tightening of trade procedures for OTC transactions covering deal price agreement and recording stipulations, including an area focused on counterparty risk called "Know Your Counterparty". EU Directives on Capital Adequacy have followed Basel Committee Reports and individual countries issued implementation guidelines for these EU Directives.<sup>1</sup>

In 2007 the European Commissions' Markets in Financial Instruments Directive (MiFID) replaced the Investment Services Directive as the main tool for harmonization of investment services industry regulations across Europe. It created common rules for trading activities including derivatives, but it included a significant loophole. One of the most important issues in MiFID was to enforce "best execution", ostensibly to protect consumers of investment services. The material issues underlying this issue were unrelated to the OTC markets; they concerned competition from electronic crossing networks and other virtual exchanges with face-to-face exchanges and between countries that sought to protect face-to-face exchanges or give consumers protection from harder-to-regulate virtual exchanges. (Quaglia 2006) A loophole exempting qualified counterparties from best execution was an important amendment protecting European financial services firms, including the vast majority of the European business, which took place in the UK, from what would have been a time-consuming and expensive endeavor to provide best execution for non-equity products including OTC derivatives. (Financial Services Authority, 2006)

These principles, transposed into guidance offered by central banks and regulatory authorities in the US and Europe, involved financial market participants in the design phase and relied extensively on their goodwill for compliance. Law and policy in the U.S. have long encouraged the public and private sector to "share" regulation of financial markets. But following the general wave of financial market deregulation in the US and UK starting in 1980, the

<sup>&</sup>lt;sup>1</sup> For an example for the UK case in 2000, see:

http://www.fsa.gov.uk/Pages/Library/Communication/Speeches/2002/sp106.shtml

following decade marked the beginning of what some participants termed "a new style of regulation" in the case of the OTC derivatives business. (Faerman, et. al., 2001, p. 373) This style is evident at the international level in the work of the Basel Committee and IOSCO, at the level of the EU and the Lamfulassy process and in evolution of US initiatives for the OTC derivatives business.

This form of self-regulation starts with standards/codes of best-practice/principles developed either by groups of technical experts taking their paychecks from industry participants, industry-wide trade associations and governments or under the guidance of government officials with extensive consultation of technical experts. The main difference is really whether or not the dialogue is hosted by a government entity or not. The 1993 G-30 Report (G-30 1993) which inspired the Derivatives Policy Group in the US offer examples of private sector origination while the MiFID (Quaglia 2006) and Consolidated Supervised Entities Program (detailed below) are examples of government-initiative, involving extensive private sector consultation.

Following initiation and development of recommended standards, the second step in the process is that these are transposed to varying degrees into government directives and statements of guidance for financial institutions. The third component is enforcement, which is critical, but a bit nebulous and variable. Financial economics certainly provided the basis, through scholarship on the role of information and disclosure in shaping the cost of capital, for a view that markets should be able to discipline themselves if disclosure is standardized and enforced. To some extent this amounts to shifting critical regulatory responsibility to the accounting standards authorities. This faith in disclosure and market self-regulation was clearly evident in direct guidance about risk management models and the critical role of credit ratings and the rating agencies in those models. In some instances, the premise was that market participants would punish their own, that they would hold one another accountable in a process of peer review.

In other instances, government authorities portrayed guidance more firmly and asserted intention to sanction non-compliance. In the UK, with more centralized regulatory authority than the US, the legal interpretation was that the FSA would enforce violations of its guidance, although lawyers and other industry participants were quick to point out that the information challenge of proving compliance/non-compliance were high. (Marsh 2005)

#### **Requirements for Successful Corporate Self-Regulation**

Corporate self-regulation refers to firms creating and voluntarily abiding by a set of governing rules that comprise a self-regulatory institution. Literature drawing on institutionalist economics to examine corporate self-regulation (Lenox and Nash, 2003; Ashby, Chuah and Hoffman, 2004; Heyes, 2005; Barnett and King, 2008) lays out important conditions for its success. This literature points to the shadow of coercion, the ability of stakeholders/regulators to impose sanctions on particular firms, and third-party verification of compliance.

These self-regulatory institutions effectively provide either "public goods" or "club goods" in the language of economics. A club good is like a public good because one person's consumption of the good does not detract from anyone else's consumption. This is the condition of non-rivalry. But in contrast to public goods, only members may enjoy the good/service of a club good. In the case of club goods, the club can exclude others from consumption, which is not feasible with public goods such as air, national defense, radio, etc. Some researchers (Maitland, 1985; Baron, 1995) have argued that self-regulatory institutions provide a public good because they forestall industry-wide sanctions by stakeholders, including official regulators.

In this view of self-regulation as a public good, self-regulation is only valuable to participants if there is a shadow of coercion. In other words, if there is no credible threat of stakeholders (industry participants or the government, representing other stakeholders) imposing sanctions, there is little motive for successful self-regulation. Some scholars take a firm stance that the strong threat of negative sanctions (DeMarzo, et. al., 2000; Maxwell, et. al., 2000) securely binding members' behavior to the good of the whole is a necessary and sufficient condition.

Other students of corporate social responsibility (Gupta, 1983; Stefanadis, 2003; Ruhnka and Boerstler, 1998; Barnett and King, 2008) argue that to be effective, self-regulatory institutions must also offer up positive incentives. One such positive incentive is the provision of a club good. (Barnett and King, 2008) In this view, the structure of the self-regulatory organization is different from self-regulatory bodies that provide public goods.

Barnett and King (2008) posit that successful self-regulatory institutions differentiate their effectiveness for club members through coordinated communication about member firms. By providing information about the "propensity for error" among its member firms before any accidents occur, accidents are less likely to generate stakeholder sanction against the member firms. Participation in the self-regulatory institution, conceived as providing a club good to its members, also has a signaling function. For stakeholders, the cost of obtaining information about firms' responsibility in any given issue area can be very high, if not completely infeasible. By joining a self-regulatory institution, firms are trying to short cut this information disclosure and interpretation process by signaling that they exhibit superior responsibility. But for the club good logic to hold there must still be a way to independently and credibly assess and report on compliance and to differentially sanction/reward individual firms for their performance.

In short, the information requirements for successful self-regulation are high. In the case of finance and financial derivatives in particular there are powerful incentives to hide information inculcated by the broader regulatory environment of the financial services sector. Two traditional practices, regulatory arbitrage and jurisdictional arbitrage, contribute to the information challenge.

Viewed from the perspective of institutionalist economics, whether self-regulation is seen as a public good or a club good, the shadow of coercion (the threat of stakeholder sanctions) and credible information disclosure are critical success factors. In the club goods model requirements for information disclosure and sanctioning are more nuanced, involving the ability to disclose credible information about individual firms and to differentially sanction and reward based on that information. The current push in OTC derivatives reform for trading on formal exchanges is based loosely on the club goods model. The exchange is a club and the club good is permission to participate in the exchange and benefit from the standards, practices and reputation of the exchange.

# **Vignettes of OTC Derivatives Regulation**

The shadow of coercion helps make sense of different episodes of OTC derivatives regulation in the US and Europe in the past twenty years. Political economists' stylized interpretation of this history is that the Europeans never quite got their act together to go beyond general hand waving in the direction of OTC derivatives regulation, but the US actively exempted those markets from de-regulation. (Pagliari date) In fact, in the 1990s, US congressmen made a concerted effort to overcome jurisdictional politics and impose more centralized regulation of the US OTC markets. This threat spurred self-regulation by the Derivatives Policy Group and later

the Counterparty Risk Management Group. As political winds shifted, the energy and impact of that self-regulatory regime waned. History suggests that the combination of long-standing jurisdictional battles between decentralized regulators (the SEC and the CFTC) and horribly miscalculated bargaining led to the remarkable legislation prohibiting increased regulation of the OTC market in the US. Certainly the ideological winds pushed in this direction, but it was not inevitable. The SEC finally gained a toehold in OTC derivatives trading in 2004 thanks, indirectly, to pressure from European government regulators. As unconfirmed credit derivatives trades piled up, the NY Federal Reserve convened regulators and industry participants in a high-pressure, focused effort to induce self-improvement.

# Congressional Investigation and Legislative Proposals: 1992-1994

In 1992, Congressman Ed Markey (D-Massachusetts), as chair of the House Subcommittee on Telecommunications and Finance, asked the General Accounting Office (<u>GAO</u>) to investigate the growing use of derivatives. In late 1993, before the GAO report was released, the House Committee on Banking, Finance and Urban Affairs, chaired by Representative Henry Gonzalez, a liberal Democrat from Texas, held the first of two sets of hearings leading up to HR 4503, The Derivatives Safety and Soundness Supervision Act of 1994. The GAO report was released in May 1994 and contended that the "the sudden failure or abrupt withdrawal from trading of any of these large dealers could cause liquidity problems in the markets and could also pose risks to the others, including federally insured banks and the financial system as a whole." (GAO, 1994)

Proving Markey and the GAO prescient, a series of highly visible crises related to OTC derivatives hit the newspaper headlines involving Bankers Trust and Merrill Lynch and some of their clients including Procter and Gamble and Orange County. In a coordinated legislative push, the House Committee on Energy and Commerce submitted legislation to Committee, the Derivative Dealers Act, which proposed legislating regulation of the OTC derivatives under the explicit jurisdiction of the SEC. And from the Senate side, Senator Riegle (D-MI) of the Banking Committee, submitted the Derivatives Supervision Act.

Many who testified in the 1993 and 1994 hearings were industry participants who argued for standards-based self-regulation as did representatives from several government agencies including the Office of the Comptroller of the Currency, the FDIC and the Office of Thrift Supervision and Tsingou (2003) attributes defeat of this Bill to that testimony. But this interpretation overlooks the reality that Democrats were on the political defensive and scared to move any controversial legislation. They suffered a historically resounding electoral defeat in mid-term elections in November 1994, second in history only to the 2010 losses. They lost 54 seats in the House and Jim Leach (R-Iowa) replaced Henry Gonzalez as Chair of the House Committee on Banking, Finance and Urban Affairs. The House Energy and Commerce Committee was stripped of most of its jurisdiction as part of the Republican strategy to slowly build capacity to repeal Glass-Steagall.

# Self-Regulation in the Shadow of Coercion: The Derivatives Policy Group

In the face of the threat of "disruptive direct regulation" in 1994 (Roig-Franzia, 2009; vanden Heuvel, 2008; Goodman, 2008) SEC Chair Arthur Levitt convened the five firms who accounted for the most derivatives business to form the DPG. (Faerman, et. al., 2001: 378) Lehman Brothers' Chief Legal Officer Thomas Russo outlined the collaboration process in a speech. Levitt pulled in very senior officers from the investment banks and acted as a buffer between the industry and Congress, using the SEC's prestige for leverage. (Krause, 1997) The

group produced a voluntary regulatory framework which mirrored the G-30 Report, that had been produced in a similar way, and published in 1993.

That report and the DPG emphasized setting standards for peer review arguing "that responsible and efficient self-regulation is key to the use of derivatives, and that intrusive rulesbased regulation would render these instruments rigid and hamper financial innovation." (Tisingou 2003) The G-30 emphasizes independent risk management and disclosure. Improved information technology systems, the report recommended, would add safety and efficiency to the back office aspect of OTC derivatives trading.

The DPG gave way to a successor entity, the Counterparty Risk Management Group (CPRMG I) formed in the aftermath of hedge fund Long Term Capital Management's collapse in 1997. (Faerman, et. al., 2001) Unlike the joint leadership of the DPG by the SEC Chairman and a senior banker, the CPRMG represented strictly private sector actors who established voluntary frameworks and reported to Congress on request. The first report and suggested guidelines were presented to the Congressional Subcommittee on Capital Markets in 1999. After the question and answer session, Subcommittee Chair Congressman Baker concluded, "I do appreciate the effort the group has put forward. I think your recommendations are constructive, and I know that the subcommittee will work closely with those knowledgeable individuals to try to even perhaps assist further on the public policy side as well." (U.S. House of Representatives Subcommittee on Capital Markets, Securities and Government Sponsored Entities, 1999) This was a far cry form the "disruptive regulation" feared by financial firms just a few years earlier before Congressional democrats suffered such a sound electoral defeat.

# Brooksley Born and the second fight for OTC derivatives regulation

In the waning days of his Presidency, Bush (senior) quietly signed into law a concise bill passed quickly earlier the year on recommendation of the House and Senate Agriculture Committees that granted the Commodity Futures Trading Commission, "the authority to exempt over-the-counter (OTC) derivative and other transactions for CFTC regulation." Using that authority shortly thereafter, on her last day as Chair of the Commission (and two days after Bill Clinton's inauguration) Wendy Gramm exempted certain OTC derivatives from regulation. Gramm is the wife of Senator Phil Gramm of Texas both of whom had close ties to Enron, which had long lobbied for reduced regulation of derivatives.

This maneuvering was not lost on Gramm's successor at the CFTC, Brooksley Born, a Stanford Law graduate and the first woman to serve on the Stanford Law Review.<sup>2</sup> She proposed revisiting the approach to OTC derivatives regulation. She expressed concern about risks and called for greater disclosure and higher capital reserves against losses. Alan Greenspan, Chair of the Federal Reserve argued that sophisticated institutional traders dominated the market and that they were capable of self-regulation. Clinton's Secretary of the Treasury, Robert Rubin, and Deputy Secretary of the Treasury, Lawrence Summers, were sympathetic to both views. In the face a almost certain voting majority to support the repeal of Glass-Steagall, Rubin and Summers hoped to lobby Senators Gramm and Leach to accept increased, but light-handed OTC derivatives

<sup>&</sup>lt;sup>2</sup> Born was awarded the John F. Kennedy Profiles in Courage Award in recognition of the "political courage she demonstrated in sounding early warnings about conditions that contributed to the current global financial crisis". The interpretation of events here is based on public sources, including an in-depth interview, available at: <u>http://www.pbs.org/wgbh/pages/frontline/warning/interviews/born.html</u> and several confidential interviews. These align with assertions on economist Bradford deLong's website, available at: <u>http://delong.typepad.com/sdj/2010/05/more-on-clinton-era-regulation-of-derivatives.html</u>

regulation. Rubin proposed to Born that the President's Working Group on Financial Markets investigate and make some recommendations.

But Born held fast to her push for increased CFTC authority during a year in which she testified multiple times in contentious congressional hearings. Rubin and Summers decided that no regulation was better than the aggressive approach they feared Born would take if CFTC authority were restored. In January of 1999, Brooksley Born announced she would not seek a second term as CFTC chair and in November, the new chair of the CFTC, along with the Treasury Secretary, Federal Reserve Chairman Greenspan and SEC Chair recommended in their joint OTC Derivatives Report to Congress that the CFTC be permanently barred from regulating most swaps. Congress eventually did so in the Commodity Futures Modernization Act of 2000.

This brought a definitive end to legislative efforts begun in 1993 to subject to OTC derivatives trading to rules-based supervision. Arthur Levitt, co-chair of the DPG, says in retrospect he wished he and Congress had been more probing. "I always felt that the titans of our legislature didn't want to reveal their own inability to understand some of the concepts that Mr. Greenspan was setting forth." (Goodman, 2008: A1)

#### SEC tries to gain a toehold: the Consolidated Supervised Entities Program

On a gentle spring afternoon in April 2004, just after the peak Cherry blossom bloom along Pennsylvania Avenue in Washington, D.C., the SEC's five commissioners and staff from the Market Regulation Division met in a basement room for a brief discussion and vote. SEC Chairman William Donaldson ran the meeting. For less than an hour the group reviewed, and then unanimously approved a landmark proposal under which the SEC would establish a new oversight system for the largely unregulated derivatives businesses of major investment banks, also called consolidated financial holding companies. It was called the Consolidated Supervised Entities program.<sup>3</sup>

The original impetus was the rapid growth of financial conglomerates in Europe spurring the European parliament to pass the Financial Conglomerates Directive in 2002. This legislation subjected European financial conglomerates to "consolidated" supervision and risk-weighted assessment of capital adequacy across all sub-units of the conglomerates. The Directive required subsidiaries of non-EU financial conglomerates operating in the EU to be subject to consolidated supervision. It stipulated that this supervision could be implemented by a regulator in the conglomerate's home country, if the home country regulation was "equivalent" (Vangel, 2005) to the supervision that would be carried out by the EU supervisors. If equivalent supervision of financial holding companies was not in place, the EU would require non-EU subsidiaries operating in EU countries to be "ring-fenced" (Meyers and Ballegeer, 2004) and subject to the EU government's supervision. This would increase the cost of regulatory compliance for these companies.

The UK's Financial Services Authority added to the threat of new disclosure requirements with a "Consultation Paper" stating that unless equivalent home-country supervision could be established the UK "may well require the establishment of a European holding company and restriction of exposures between the European sub-group and the worldwide group ('ring-

<sup>&</sup>lt;sup>3</sup> In addition to cited sources, this case vignette is based on confidential interviews with former SEC officials conducted in 2008. The interpretation offered here was widely corroborated in the media.

fencing')...This step," warned the UK authority, "is likely to have significant cost implications for some groups". (U.K. Financial Services Authority, 2003; Meyers and Ballegeer, 2004)

To avoid the burden of greater disclosure and the attendant regulatory "tax", U.S. financial groups argued strenuously for the SEC to come up with a supervisory regime that would meet the European equivalency requirement. They lobbied the U.S. Treasury Department. SEC officials noted "heavy pressure from the U.S. government" to devise a supervisory regime for financial groups to comply with the equivalency criteria. When the European parliament signed into law the Financial Conglomerates Directive a little over a year after it was proposed, EU Internal Market Commissioner Frits Bolkestein paid tribute to the "rapid adoption of this key Directive [which]....shows that EU law can keep pace with market developments" (U.K. Financial Services Authority, 2003) The Europeans had moved very quickly and didn't believe US authorities could be as nimble. Any foot-dragging by US authorities would put US firms' European operations at a competitive disadvantage against European firms operating in Europe. SEC officials said the clear message coming from Europe was that "they didn't think we could get it done!" While this episode illustrates the power of a coercive threat in spurring self-regulation, it also highlights how the complex game of jurisdictional arbitrage involving national governments and "their" financial firms, can overwhelm other regulatory considerations.

By establishing the CSE, the SEC won a decades-long battle for jurisdiction over the OTC derivatives business, even if it was not formally vetted in national legislation and relied to a large extent on the principle of market discipline. This principle was problematic because the information requirements for its effectiveness were very high. Shifting from a rule-based leverage system for capital adequacy to risk-weighting seemed like a good idea, especially given the European's threat of double supervision.

The principle was based on the Bank for International Settlement's Basel Committee concept of using capital adequacy relative to risk rather than fixed leverage ratios. <sup>i</sup> Risk weighting meant that capital adequacy requirements would be customized to individual institutions rather than being "one-size-fits-all". The US had previously used the fixed leverage ratio, a measure of debt to equity that applied across-the-board to firms regardless of risk. Ironically, the main argument against leverage ratios was that they did not account for off-balance-sheet activity and therefore created incentives for financial enterprises to hide risky assets off balance sheet. This was common practice in the "originate-to-distribute" banking model in which banks could securitize mortgage and other consumer loan products for sale to other entities instead of holding them as assets. While the CSE program required participants to maintain a minimum \$1 billion "tentative net capital" and to notify the SEC if that fell below \$5 billion, it exempted them from a form of fixed leverage ratio dating to 1975, the "net capital rule". (Coffee, 2008; Satow, 2008) The threat of sanctions from the Europeans spurred adoption of a new regulatory principle that, due to its high information requirements, is not well suited to a self-regulatory framework.

Risk-weighted capital adequacy, as applied under the CSE program, required that banks accurately self-report risk. The framework called for supervisors to assess the banks' capital adequacy in proportion to the risk they reported. Under the terms of the CSE, the banks presented their risk assessment models to the SEC for approval upon joining the program and committed to ongoing self-reporting of risk based on those models. While centralized unified European regulatory authorities may have had the resources and capability to access and assess information required to effectively monitor banks' risk-weighted capital, the US's institutional architecture severely inhibited meeting the information requirements for effective regulation under the new capital adequacy principle.

A major sign of trouble was the accumulation of unconfirmed or disputed OTC trades piling up for review by the banks senior management committees. A Congressional report investigating the CSE discovered instances of unresolved "mark disputes" where traders on two sides of a deal disagreed on the settlement price of the trade and each reported to their company that the trade was settled in their favor. (Office of Inspector General, U.S. Securities and Exchange Commission, 2008) This meant that both institutions involved in a bilateral trade reported the trade in a way that improved the firms' financial situation. A post-mortem by the GAO indicated that in September 2005 the 14 largest credit derivatives dealers, including the five in the CSE program, had accumulated total backlogs of over 150,000 trades. (GAO, date)

By September 26, 2008 the CSE no longer had any consolidated financial holding companies to oversee under this program. JP Morgan had bought Bear Stearns at a fire sale price; Lehman Brothers had filed for Chapter 11 bankruptcy; Bank of America had bought Merrill Lynch after spurning Lehman; and Citigroup had bought Morgan Stanley. Only Goldman Sachs survived as an independent holding company. However, Goldman Sachs and Morgan Stanley gave up their status as financial holding companies to become (commercial) bank holding companies so they could accept cash deposits and enjoy lender of last resort protection offered under the statutory authority provided by the Bank Holding Company Act to the Federal Reserve Bank (FRB). SEC Chairman Christopher Cox terminated the CSE program, saying:

Because of the lack of explicit statutory authority for the Commission to require these investment bank holding companies to report their capital, maintain liquidity, or submit to leverage requirements, the Commission in 2004 created a voluntary program, the Consolidated Supervised Entities program, in an effort to fill this regulatory gap.....The last six months have made it abundantly clear that voluntary regulation does not work. As we learned from the CSE experience, it is critical that Congress ensure there are no similar major gaps in our regulatory framework. Unfortunately, as I reported to Congress this week, a massive hole remains: the approximately \$60 trillion credit default swap (CDS) market, which is regulated by no agency of government. (SEC, 2008)

#### The Fed and the Major Dealers Initiative

The problem of unconfirmed or disputed trades that some fault the SEC for failing to confront, was highlighted by the successor to CPRMG I, the CPRMG II. (Lynch 2008) In their July 2005 report the CPRMG (2005) highlighted critical deficiencies in the credit derivatives market infrastructure, including the backlog of trade confirmations, netting (settling by accounting for off-setting obligations regardless of the number of transactions), practice of assigning trades/trade values without mutual consent, failures to address counterparty risk, the possibility of unknown correlations in the market and legal risks due to poor standardization of documents. The Report called for immediate action. The NY Fed responded quickly convening an industry-wide roundtable, which occurred at the offices of the NY Federal Reserve between fourteen industry representatives of the major dealers and fifteen supervisory/regulatory entities represented. (NY Federal Reserve Bank 2005)

The group sent several successive letters to the Fed outlining their plans, including metrics and target dates, for mitigating the unconfirmed trade problem in the marketplace. The NY Federal Reserve responded with formal letters providing their assessment of industry progress. In a little over a year, the industry achieved an 80% reduction in unconfirmed trades. (Lynch 2008)

This episode of self-regulation tackled a specific problem in the credit derivatives business at the instigation of the NY Federal Reserve. Industry participants suggest it was the weight of the Fed which impelled focus and results from what was, in practice, a relatively successful exercise in self-monitoring. It was, however, a relatively limited problem and as the industry engaged in collective self-review and corrective action, other, much graver problems associated with other aspects of risk were rapidly mounting under the ill-trained and ill-equipped eye of the SEC.

# Implications for the future of credit derivatives regulation

These episodes illustrate the power of the threat of government rules that might partially replace standards-aligned self-regulation. The impact of this threat is evident in the impetus for the DPG and the Major Dealers Initiative. The CSE program also illustrates the power of government to spur initiation of regulatory change. All of these examples illustrate the impact of the threat of government rules in giving impetus, or failing to spur standards-aligned self-regulatory regimes, but none of them illustrates definitively how such a regime can sustain momentum. The Major Dealers Initiative involved explicit metrics and target dates and a clear indication that government regulators were monitoring self-disclosure with the threat of government action if progress flagged. This initiative targeted a bounded problem with relatively low information requirements for credible disclosure, especially compared to the problem of assessing risk-weighted capital adequacy at the center of the CSE program.

While the threat of government rule making can spur self-regulation, the intense information asymmetry problems in financial services render the disclosure requirements for effective self-regulation a significant challenge in the financial sector generally. The problem is even more severe in the case of credit derivatives due to the technical complexity and information-intensity of valuation. Current regulatory reforms on both sides of the Atlantic, MiFId II in Europe and the Dodd-Frank Bill in the US, call for subjecting transactions to clearing requirements, although there are exemptions in both cases. This is designed to improve information through standardization required for clearing. However, US regulatory jurisdiction continues the history of decentralization by differentiating regulatory scope for swaps and security-based swaps, which leaves scope for regulatory arbitrage and opacity. In contrast, MiFId II is extended to reach across asset classes and trading styles and the EU is consolidating authority in Brussels where the European Securities Markets Authority will define regulatory mandates. This is a departure from using EC Directives as recommendations subject to national implementation guidelines.

The US's primary move to improve disclosure comes from mandatory requirement for derivatives to trade on formal exchanges, something the EU may consider in the future but has not embraced at this point in time. The differential sanctioning requirement for self-regulation in a club good model suggests one particular regulatory solution for the post-2008 world. If derivatives trading were forced onto private member-owned exchanges which were required to self-insure it would be in each member's self-interest to force information disclosure necessary to determine if an exchange member should be allowed to continue in good standing. In this system the penalty of keeping "bad" banks in the club is paid by the other members who are risk of having to bail out that member or risk the exchange's license to operate. In this way the exchange is a self-regulating institution in which there is a shadow of coercion (membership revoked) and differential sanctioning is possible because exchange members enforce information disclosure. It would be in the exchanges' collective self-interest to subject some disclosure to third-party verification to maintain credibility of the differential sanctioning capability.

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Some of the reform measures will help with information and disclosure, but the ability of financial markets to innovate suggests that sufficiency is a moving target. Financial regulation, whether based in firm government rules or standards-aligned self-regulation, whether conducted in a centralized or decentralized architecture, needs informed, independent observers possessing the political will to continuously ask the right questions about what is happening in financial markets and to nudge policy makers toward answers. That is the secret sauce of financial stability.



Figure One: Net Value of OTC Derivatives Contracts

(US billion dollars, notional value outstanding, December)

Figure Two: Gross Value of OTC Derivatives Contracts

(US trillion dollars, notional value outstanding, December)



Source: Bank for International Settlements.

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