

The Current Financial Crisis and Derivative Misuse

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Downloaded 28 October, 2012

Accepted 26 November, 2012

The paper aims to discuss the role played by derivatives in the financial crisis and to identify whether it is these instruments or other factors that were behind it. Moreover, it looks at literature on control systems within the firms throughout the aforementioned event, to identify and bring to light any flaws and gaps. Moreover, it highlights opinions of persons involved, testimonies, papers and reports drawn-up, the lessons learnt and their mitigating factors, in order to enable address of the issues and avoid replay. The article suggests that many factors contributed to the quick deterioration in credit markets and large losses. Although, this has sometimes been attributed to one single main factor (i.e. the massive interlocking web of Over the Counter derivatives exposures), to take down the entire financial system would have taken more than just this. There are arguments both in favour and against this opinion, however the fact may be that a mixture of the exploitation of the New Financial Architecture self regulatory model by unethical traders, compounded by the fact that the financial structure allowed the financial institutions to set inflated prices on derivatives with unknown values, such as Credit Default Swaps could have been the culprit. Therefore, to avoid replay, there is need for transparency and accountability as proposed by the European Commission and also an external regulatory framework that stops unethical traders.

Keywords: Credit default swaps (CDS), derivatives, financial crisis, international swaps and derivatives association (ISDA), over the counter (OTC) derivatives.

INTRODUCTION

Summers [1], singled out derivatives as being the cause of the "Great Financial Crisis". He argues that since 2007, although an extensive amount of research reports and articles have addressed the crisis, not much has been written about what caused it and on how the various efforts to stop it have failed to identify and address the main issue. He relates that in 2007, subprime mortgages were blamed, in 2008, investment banks, specifically the Lehman Brothers failure and AIG's credit default swaps and in 2009, poor accounting standards and bad bets made on Wall Street took the blame. The argument remains the same for 2010, with the blame put on bad bets made by Wall Street. He however explains that they fail to address the underlying issue that links all. He describes this as the "Black Hole of Finance: a bottomless pit that no official or regulator bothers mentioning in public, because acknowledging it would mean acknowledging that all of the efforts to stop the crisis are truly paltry".

The Role Played by Derivatives in The Financial Crisis

The global financial crisis, described by George Soros as the "worst financial crisis" since the Great Depression [2] resulted mainly due to large losses incurred in the derivatives markets by companies, especially because of over the counter derivatives (OTC), specifically credit default swaps (CDS). Internal Market and Services Commissioner Charlie McCreevy stated that derivatives markets have a significant function in the economy. However the current crisis has revealed the harm they may bring to financial stability [3].

Murphy [4] describes CDSs as the "poster child for the (alleged) failure of the deregulated financial sector". His worry is that since these are contracts that are traded OTC; no one will know their exact exposure, which he notes is suspected to be within the US\$50 trillion as at end 2007. In fact, an ISDA market survey, reported that,

Table 1. ISDA Market Survey Notional amounts outstanding at year-end, all surveyed contracts, 1987-present (Notional amounts in billions of US dollars) [6]

	Year-end outstanding: for interest rate swaps	Year-end outstandings currency swaps	Year-end outstandings for interest rate options	Total IR and currency outstanding	Total credit default swap outstandings	Total equity derivative outstandings
1987	682.80	182.80		865.60		
1988	1,010.20	316.80	327.30	1,654.30		
1989	1,502.60	434.90	537.30	2,474.70		
1990	2,311.54	577.53	561.30	3,450.30		
1991	3,065.10	807.67	577.20	4,449.50		
1992	3,850.81	860.39	634.50	5,345.70		
1993	6,177.35	899.62	1,397.60	8,474.50		
1994	8,815.56	914.85	1,572.80	11,303.20		
1995	12,810.74	1,197.39	3,704.50	17,712.60		
1996	19,170.91	1,059.64	4,722.60	25,453.10		
1997	22,291.33	1,823.63	4,920.10	29,035.00		
1998				50,997.00		
1999				58,265.00		
2000				63,009.00		
2001				69,207.30	918.87	
2002				101,318.49	2,191.57	2,455.29
2003				142,306.92	3,779.40	3,444.08
2004				183,583.27	8,422.26	4,151.29
2005				213,194.58	17,096.14	5,553.97
2006				285,728.14	34,422.80	7,178.48
2007				382,302.71	62,173.20	9,995.71
2008				403,072.81	38,563.82	8,733.03
2009				426,749.60	30,428.11	6,771.58

although CDSs have existed since the early 1990s, the market only increased tremendously starting in 2003. As noted in table 1, by the end of 2007, the outstanding amount was US\$62.2 trillion, falling to US\$38.6 trillion by the end of 2008 and US\$30.4 trillion in 2009.

Gilani [5], explains in an article in the Market Oracle - Money Morning, that these CDSs were devised by bankers - J. P. Morgan and Co. now JP Morgan Chase and Co. (JPM), in the early 1990s, in order to hedge their loan risks. He defines them as an "insurance contract between a protection buyer and a protection seller covering a corporation's, or sovereign's (the 'referenced entity'), specific bond or loan. The protection buyer then pays an upfront amount and yearly premiums to the protection seller to cover any loss on the face amount of the referenced bond or loan". In other words CDSs are supposed to work similar to a normal insurance taken out to protect against theft or fire. The buyer pays a premium over a period of time in order to receive "peace of mind,"

that any losses will be covered in case of default.

However, although at face value they might look like insurance contracts, they are not. Insurance companies and Banks, with the latter being the most active on this market, are regulated, while the CDSs markets are not. Therefore, there is no one to oversee and ensure that the buyer has enough resources to cover the losses if the security defaults. This makes it tougher for banks to value. At the end of the 3rd quarter of 2007, according to the Comptroller of the Currency, a federal banking regulator, the top 25 held more than US\$13 trillion in CDSs, acting as either the insurer or the insured. The top 4 most active where, JP Morgan Chase, Citibank, Bank of America and Wachovia [7].

In his testimony before the Financial Crisis Inquiry Commission, regarding "the role of OTC derivatives in the financial crisis", Masters [8], states that although the financial crisis was caused by various factors, unregulated derivatives played an important and

distinctive dangerous role. He explained that unregulated credit derivatives, were mostly responsible for creating, from isolated problems, a systemic risk that turned the crisis into one that became system-wide and that unregulated commodity derivatives created disproportionate volatility in commodities prices, which put more pressure on the economy, which was at the time still suffering from the effects of the financial crisis.

Masters [8] highlights the systemic risk that the OTC derivatives created because of the unclear “web of interconnections” between institutions and their markets, which lowered counterparty confidence, putting credit markets to a stall. He also noted that OTC derivatives facilitated and encouraged increased speculation in important commodities on which the economy runs, such as food and energy. This created volatility, which included the harmful type of speculation labelled “index speculation,” (speculate on the performance of a portfolio/basket – creating unrealistic prices) benefitted dealers (who placed bets on commodities) but harmed the rest of the economy.

He highlighted that the causes of the financial crisis (the fall in housing prices, the unsound lending practices, the securitisation of mortgages, the poor assessments of securities by ratings agencies and the very low interest rates while Alan Greenspan was chairman of the Federal Reserve) resulted in more cash available to invest than the fixed-income investments availability. However, he argued that even if all the above-mentioned failures happened together, they would not have been enough to “threaten” the whole financial system. Although systemic risk was created by complex, unclear inter-relationships, brought on by the mortgage market itself, OTC derivatives had to be present. These hidden connections existed between financial institutions, different financial markets and the latter and non-financial markets and were made possible by the presence of unregulated OTC derivatives [8].

What Led to the Financial Crisis

Masters [8] explained that the Commodity Exchange Act in 1936, which recognised the derivatives market for consumable commodities, enabled the futures market to function well for more than 50 years, since it allowed regulators to monitor and police the commodities futures markets to ensure that they are free from fraud, manipulation and excessive speculation. The fact that these derivatives were not allowed to trade off-exchange and had to be cleared centrally, was an additional safeguard against systemic risk. However, in 2000, the Commodities Futures Modernisation Act (CFMA) changed the previously stable system, allowing trading without limits on speculative position on the Exempt Commercial Markets (ECM) and the CFTC regulations of Designated Commercial Markets (DCM). This legislation was based on the erroneous conviction that a few consumable commodities, example crude oil, were not

prone to manipulation since they had large deliverable supplies.

Mortgage Backed Securities (MBS) and derivatives were each of enough size to cause major losses alone. Swaps grew by an estimated US\$590 trillion between June 2000 to June 2008. At this same time, total MBSs, another key player in this crisis, stood at around \$14 trillion. Masters [8] explained that deregulation encouraged the quick growth in leverage and interconnectedness. Thereby, the futures market post 1936 saw derivatives trading OTCs, with little transparency and controls and protected from any type of regulatory action or penalty for having committed fraud and/or manipulation. This lack of transparency in OTC derivatives enabled dealers to make large profits from wider bid-ask spreads, because they had an informational advantage over their customers. Moreover, since they have a privileged position, dealers could control the information into the futures exchanges and other regulated markets (which were used when dealers were unable to hedge transactions using other OTC customer). Thereby, timing their orders to maximise profits and consequentially “distorting the price discovery mechanism within the public markets” [8].

According to Masters [8], OTC derivatives before the crisis posed the risk of a potential domino effect on all dealers, if one dealer failed. This because of the “interlocking web” of extensive exposures among the key swaps dealers [8]. Moreover, for the first domino to fall, losses did not have to be very large since the market was characterised by a large leverage position (margin requirement). It was not possible for counterparties’ to assess risk and this resulted in systematic risk. The solvency of all counterparties are questioned when some negative news regarding one or more large counterparties comes out. Therefore, the perception of risk, alone could have been sufficient to put credit markets at a standstill and make the whole financial sector and real economy unstable. The danger as seen by Masters [8], was not only a function of the ability to disseminate losses around many markets and types of users, but one of lack of transparency created by deregulation and uncertainty (due to an opaque environment).

Mitigating Measures and Counterarguments

Masters [8] notes that the only way to eliminate this systematic risk is through a requirement to have all OTC derivatives cleared through a clearing system with a central counterparty (CCP) and novation, i.e. a “Designated Clearing Organisation (DCO).” He also notes that International Swaps and Derivatives Association (ISDA) have, years ago, published guidelines for standardisation of all derivatives agreements (ISDA agreements). It was difficult for a regulator to be alarmed with limited transparency and no position limits requirements.

If firms were required to go through a DCO, the regulator would not have been at the mercy of the

expertise of the regulated companies' risk management, who as Masters [8] notes in hindsight, were not as able in assessing risks as they alleged themselves to be. Such a clearing system, would have stopped the systemic risk "posed by the interlocking web of interconnected counterparties" [8], since all participants using derivatives would have had just one central counterparty. This according to Masters⁸ would also have removed the danger of excessive leverage, since margin requirements would have been imposed and transaction would be backed by sufficient collateral. That is, the risk to the economy of failure of a single holder of derivatives (regardless of the magnitude) will be very low, because of the appropriate margin requirements. The risk of a clearinghouse default would be the only risk to all participants and this would be easily ascertainable because of transparency.

Masters [8] however explains that there have been arguments on the fact that the many firms that failed, or were close to collapsing, would have failed just the same, even if derivatives were not present. Their argument was based on the fact that Mortgage Backed Securities (MBS) and not derivatives were behind the preliminary losses that started off the crisis. He highlighted that MBS are not "true derivatives" although their value is "derived from the value of the underlying mortgages" [8].

However, he also brings up one exception to Collateralised Debt Obligation (CDO) (which is a form of MBS and not a derivative), a "synthetic CDO", which is a kind of CDS and thereby is a derivative.

Moreover, Jensen [9] on his web-site comments that standardisation of OTC derivatives "would limit the ability of companies to fully manage their risks". He notes that the popularity of OTC derivatives is due to the fact that they allow traders to write customised hedging contracts to reflect exactly what is required. If the contracts are standardised it would be difficult or impossible to achieve a hedge that perfectly matches the needs of the trader.

Gibson [10] relates that "a synthetic CDO is a transaction that transfers the credit risk on a reference portfolio of assets." He states that this reference portfolio is made up of CDSs and like Masters⁸ classifies it as a credit derivative. In fact, he notes that "much of the risk transfer that occurs in the credit derivatives market is in the form of synthetic CDOs." Gibson [10] explains, that these instruments help to divide the risk of loss on a reference portfolio into tranches of increasing seniority. He explains that any losses will first affect the first loss tranche (equity), next the "mezzanine" tranche(s), and finally the "senior" and "super-senior" tranches. By selling credit protection to the CDO issuer, investors take on exposure to a specific tranche. On the other hand "the issuer hedges this risk by selling credit protection on the reference portfolio in the form of a single-name CDS. Parties on the other side of these hedging transactions are the ultimate sellers of credit risk to the CDO investor, with the CDO issuer acting as intermediary" [10].

Masters [8] suggests that one has to consider the impact of all these instruments distinctly when looking at the role derivatives played in the crisis. He notes that "between September 16th, 2008 and the end of 2008, AIG paid out \$22.4 billion of government bailout funds in collateral postings to CDS counterparties and \$36.7 billion to its securities lending counterparties, which partly acted to cover draw-downs from" AIG's MBS losses⁸. He also notes that "the Congressional Oversight Panel (COP)", reported that most of the "bailout funds, for fiscal year 2009 were channelled into AIGFP for collateral postings on CDS, GIA and other debt maturities (\$50.6 billion vs. a combined \$27.9 billion to make good on its own MBS related losses, as well as those of its insurance subsidiaries). AIG faced large losses on its MBS holdings and on its synthetic CDO portfolio (CDS on CDOs)" [8]. Later, as AIG's credit rating deteriorated because of its' poor performing MBS holdings, more collateral was demanded from its CDS counterparties. This brought AIG to a point which, together with the losses on MBSs, made it insolvent. Masters⁸ stated that he has no doubt that derivatives were involved in creating the danger to the economy and that this can't be attributed to MBS alone. With MBS alone, it would have been relatively easy to estimate the probable losses for major financial institutions. However, regulators and the counterparties were not in a position to trace the labyrinthine associations created by CDS and other unregulated OTC derivatives [8].

This opacity, made possible by unregulated OTC derivatives developed into an environment full of uncertainty over counterparty risk. This pushed towards the extreme total suspension of lending. Therefore, although Masters [8] agrees that that MBS alone could have caused several large institutions to fail, he argues that derivatives were needed to endanger the whole system.

Garrett [11] notes that most of the time, especially when the gossip falls on derivatives, opinion is mistaken for fact. Unfortunately, as Garrett [11] continues to explain, derivatives have been "demonised" by many who choose to disseminate myths about these products, instead of developing their knowledge and understanding of their mechanisms. According to Garrett [11] it is important to dismiss these myths and understand the impacts and reality of these instruments. Only in this way will justice be done with those taxpayers who have funded trillions of dollars in bailouts and the many businesses and investment managers that depend on derivatives to manage risk.

Garrett [11] argues that these myths are extended to the whole OTC derivatives markets and most of the time fail to account for the large variety of products available to firms within this market. He explains that more often than not, it is argued that one should use a "sledgehammer" instead of the "scalpel" that would satisfactorily do the job. In Garrett's [11] opinion, the role

derivatives played in the current financial crisis was minimal. He sees the proposed requirement to have a clearing mechanism for all derivatives products and the application of regulations similar to those of banks to market participants, which are non-banks, as a “knee-jerk” reaction that threatens to damage both the financial markets and non-financial companies that are needed to create economic growth.

Garrett [11] clarifies the persistent myth that the failure of Lehman Brothers had caused the “cardiac arrest” of AIG because of AIG’s exposure of CDSs to Lehman. He notes that Lehman’s derivatives contracts were settled within a month of its bankruptcy and AIG had to pay out only a comparatively small amount of US\$6.2 million on its Lehman exposure. Furthermore, he notes that “market fragility” was the reason highlighted by the Federal Reserve as its cause for intervention and rescuing AIG, and not derivatives. AIG’s health failure was attributed to incompetent risk assessment of its MBS and CDO portfolios.

Garrett [11] sees that the main contributors to the economic chaos in the financial crisis were the meagre housing finance, ill-advised regulatory policy and lax supervision. In his opinion, whether the losses resulted from mortgage loans, mortgage-backed securities, or CDSs that guaranteed mortgage-backed securities, the real problem was that numerous mortgage loans were made to persons who could not afford to make their payments. Also, regulators failed to identify and manage the risk of these loose lending standards. Garrett¹¹ expresses his concern that the regulatory policies and “distorted” incentives that in his opinion produced this crisis are sadly still there. He notes that to fix them will upset established constituencies and some politicians’ long-time supporters. Garrett¹¹ strongly argues that developing a new regulatory structure for derivatives would not address the real problem. In his opinion, this issue will not be resolved by attacking derivatives. He notes further, the importance of derivative products for managing a diversification of risks and hedging a diversity of exposures. They allow for the transformation from an illiquid risk to a traded one and give firms the ability to trade risks that they do not require, so as to concentrate on their core business. Derivatives are used by a multiple of industries spanning from manufacturing, exporting, agribusiness and energy to protect consumers against for example energy and food price spikes. Therefore, good risk management involving derivatives, reduces the consumers’ costs, increases economic growth and creates additional jobs. Over-spilling on regulation or poor regulation that might look good politically could have negative consequences for both the financial markets and the global economy. It could aggravate risks further, rather than reduce them. As noted above, the requirement to have a clearing system in place for all derivatives contracts and to insist on applying regulations similar to the ones for banks, to

derivatives dealers are the two most frequently mentioned options for derivatives regulation [11] Requiring derivatives contracts to be carried out through a central clearinghouse, in Garrett’s [11] opinion has the potential to restrict market liquidity and reduces the firms’ hedging ability. The plan advocated by the Obama administration for regulatory reform, which is supported by House Democrats extends greatly the faulty banking-style regulations to businesses. It requires the application of capital requirements, business conduct rules, and margin requirements to users of derivatives. This will tie up firm’s capital, which could be used to promote business development¹¹. It is senseless to require a regulatory framework that did not work and was not able to ensure stability and soundness for banks, for derivatives users.

According to Garrett [11], the deficiencies of these regulations should be determined and not just be overwhelmed by the bad investment decisions of some high-profile institutions that used derivatives. He notes the fact that these happened while under the supervision of their regulators. Therefore, he calls for an examination of derivatives and their uses and the reasons why things went sour, to come to a conclusion on the best way to fix this financial market without damaging the derivatives business. Garrett [11] concludes by noting this fact: “no doubt greater expertise among regulators is required, a notion reinforced by the fact that AIG was a regulated entity.”

OTC Derivatives and Lack of Transparency

Master [8] explains that the lack of transparency lead to rumours that large investment banks and other institutions were facing difficulties. This, as he continues explaining generated fear in lenders of counterparty default. Reliable information to enable the assessment of individual firms’ creditworthiness was also lacking since most of their risks in derivatives were held off-balance sheet. This resulted in a “universal freezing of lending”. Therefore, perception played a large part in the financial crisis. Although brought on by the lack of transparency existing in the market, there was a spill-over into other markets and onto other asset classes where transparency and regulation was required.

Also, as Masters [8] explains further, speculation in OTC derivatives effected the price-discovery mechanism underlying physical commodities. This was unrealistically subjected to the activities of financial market participants, rather than the actual producers and consumers of commodities’ underlying supply and demand. These derivatives facilitated disproportionate speculation (including index speculation), which brought on increased volatility in prices. A distortion in real commodity prices was created by OTC derivatives speculation. This burdened households and businesses further, at a time when they were already feeling the effects of a financial

crisis on credit and their balance sheets.

Moreover, Masters [8] continues in his testimony to explain that the bid-ask spreads were widened because of the lack of transparency. This, in turn increases the costs of hedging for the end users. Dealers are at a huge informational advantage. Therefore customers who see only the quoted prices offered by their dealer are at a disadvantaged position, or as Masters⁸ puts it a 'dangerous position', in particular when dealing with products which are highly customised.

Masters [8] argues in favour of regulation to increase transparency and liquidity, although he says that various OTC derivative dealers (which he describes as ironic) have argued against this, claiming that this would have the opposite effect. He notes that experience shows, that some of the largest profits are made from customers pressured to exit their positions. Since, these are faced only by a black box with the only source of information being that provided by the dealer. Masters [8], compares this OTC derivatives' market to a game of poker where the player is made to play with his cards exposed in full view for his opponent and all to see, the derivatives dealer, having a full view of all his cards. Therefore, he is able to take advantage of this information to the maximum degree possible. This advantage would not exist on a transparent exchange and therefore the price spreads would become thinner.

According to Masters [8], experts in the field have noted that the extra costs paid by end users for posting a margin would be offset by the savings on this narrowing effect and having a transparent exchange for all derivatives would make sure that there is a liquid market for traders at whatever side of the market they are representing.

OTC Derivatives and Hidden Risks

Masters [8] notes that a further danger posed by OTC derivatives, is that they hide risks from counterparties, regulators, and at times the institution holding the derivatives themselves. He further notes, that among the leading buyers of CDS agreements known as "regulatory capital swaps," (or "balance sheet rentals") were European banks. These agreements were suppose to have hedged the risks and therefore allowed buyers to take increased leverage. The truth was that these risks were really moved off-balance sheet and formed part of the swaps' counterparty risk. European banks purchased around \$426 billion of these CDSs from AIG in 2007 and a lot of these were used to avoid regulatory capital requirements. This helped in spreading the crisis around the world when the financial crisis hit [8].

Derivatives have a vital role in the economy but also expose it to some risks. The financial crisis and the events surrounding Bear Sterns, Lehman Brothers and AIG, to mention a few large events, have brought to light the fact that these risks are not adequately mitigated in that part of the market for OTCs, which includes CDS. Although, the US, the EU and the G20 countries have

agreed that regulation is necessary, there are many arguments to the contrary and to whether such will deliver an "efficient, safe and sound derivatives market"³. Some have argued that this regulation is essential, because the OTC derivatives market has proven to be unethical and bloodsucking speculators exploited the lack of regulation and "raked in hundreds of billions in excessive profits, juicy fees and obscenely high year-end bonuses" [12].

However, the European Commission [3], after taking into account the wide diversity of OTC derivatives markets, has in a communication listed the requirements it deemed necessary to ensure that they (derivatives) do not harm financial stability while enabling them to complete their economic role. To ensure this the European Commission [3] considered that actions should be undertaken so as to ensure that:

- a) Regulators and supervisors are fully aware and knowledgeable of the OTC derivatives markets transactions and the exposures being built in those markets
- b) Superior information about prices and volumes should be more readily available (more transparency)
- c) The operational efficiency of the derivatives markets is strengthened and
- d) Enable mitigation of counterparty risks and promotes centralised structures.

The Commission [3], noted that the core tools for reaching these goals are:

- (i) promotion of more standardisation,
- (ii) the use of central data repositories,
- (iii) changing to CCP clearing, and
- (iv) steering trading towards more public trading venues

CDS – A Political as well as a Financial Problem

Tremblay [12] blames human greed and political corruption as being the primary driver behind the crisis. He notes that the global crisis has been based upon "an unstable, unsustainable pyramid of artificial debt", built to the advantage of unregulated financial operators who made a lot of money. The problem is both a political one and a financial one. It is a mixture of "political corruption" and "racketeering financial and banking practices" that provide the right ingredients for a major crisis to develop¹². The Financial Crisis as Tremblay [12] recalls was supported by Politicians supported in order to create a booming economy. The political support can be seen with the increased deregulation in the derivatives markets, allowing high risk trading and resulting in booming economies. However, this boom relied on increased lending and the increase of bad debts, which were then sold through the use of short selling of any derivative creating an "artificial pyramid of debt" because the value of the sold debts were not really known [12].

Therefore the result was that it was not just the selling of derivatives that caused the financial crisis, but the removal of regulations by governments in order to create the illusion of a booming economy. In removing the regulations politicians became permissible in allowing the financial crisis and the high returns that the traders received [13]. Altman [14], argues that trading in CDS was not in respect of credit risk management; rather it was trading and “betting on markets” in order to reap in large profits, which meant large bonuses. The best illustration of this is the ‘meteoric’ increase of CDSs “from \$5,000bn of CDS insurance outstanding in mid-2005 to \$50,000bn two years later. This amount was 10 times greater than the total value of all bonds that could be insured.” Therefore, the growth did not result from the need to protect against defaults. This is supported by the 2007 Fitch Ratings special report, “Market Volumes Continue While New Concerns Emerge”, where it was found that 58% trade in CDS as another trading asset class and not as a hedging vehicle (10%) [15]. Therefore, one can identify with the argument of [12,13] that there was political and financial self interest at work, because the result of deregulation in the derivatives market definitely contributed to a bust that was inevitable for such a large boom.

Oak [16], confirms the above in an article in the ‘economic populist’, which discusses the role derivatives played in the making of Greece’s debt. He notes that Goldman Sachs, JPMorgan Chase and a number of other banks helped the Greek and Italian politicians hide their borrowings by developing new instruments for this purpose. Furthermore, he argues that this is the reason why the reform on derivatives legislation has not happened. Oak [16] continues by noting that Goldman Sachs helped the government of Greece in 2001 borrow billions without exposing this fact to public view. This was since the transaction was not treated as a loan but as a currency trade. The country was able to meet Europe’s monetary union minimum criteria and spend beyond what it could. In fact Weisenthal [17] in his report, condemns the Greek government who put the blame for the hike in interest rates that the country has to offer on the issue of debt on “traders and speculators,” calling for regulation on CDSs. He argues, that the CDSs market was not to blame for the Greek debt crisis and that it was merely the long term spending by the Greek government, which he describes by the ancient Greek term “akrasia” meaning “out of control.” Oak¹⁶ notes that derivatives are being used to keep debt off the books allowing countries to sell off/mortgage public property to raise the required capital (called sales and not loans) and questions the real value of the countries’ debts.

How influential was CDS Trading to the Financial Crisis?

According to Orlowski [18], CDSs played a significant role

in the financial crisis, because they were being exchanged and sold creating a false profit. He notes, however, that in reality the value of these CDS and the returns on them were unknown and indicate that the elevated markets and credit risks were translating into liquidity and counterparty risks. The severe effects of this transmission were mostly felt by those institutions having a large exposure to the subprime mortgage market; in particular those that did not raise enough capital to reduce this excessive leverage. The increase in credit risk, meant the expansion of these unfunded derivatives (CDSs), while CDOs (the funded derivatives) decreased. Moreover, as counterparty risk increased, extensive losses by large dealers of derivatives resulted (most notably, Bear Stearns) [18]. These CDS sales were based on the belief that they were risk free and liquid. This optimistic outlook, originated from the positive assessments made in the IMF Global Financial Stability Reports (2004 until April 2007) and the many other positive reports by various credit rating and supervisory agencies.

Following the outbreak of the crisis, this belief of low credit risk and safe global financial markets, instruments and institutions, proved to be misleading [17]. The primary problem as Tremblay [12] argues, is that their value was manufactured. Therefore there was no liquidity. In fact the result was the creation of a false boom, based on a false credit bubble that popped when credit went unpaid, because risky lending continued in order to fund this high risk, by high return trading. Orlowski [18], refers to this as the wandering asset bubble, which consisted of “uncontrolled and unwarranted upward movement in the prices or over-valuation” of varying asset classes including CDS [18]. Therefore, according to him CDS and derivatives played a very influential part of the global financial crisis, because this area was deregulated and open to be taken advantage of.

Deregulation – A Key factor in the abuse of CDS Trading

As Trembley, Crotty and Orlowski [12,13,18] argue, the deregulation of the derivatives market is a primary factor in the global financial crisis. Hence to stop a re-play, there needs to be the introduction of strong regulation and monitoring. Crotty [13], argues that the reason that CDS along with other unregulated derivative trading played a primary role in the global financial crisis, was to be found in the imperfect institutions and practices of the New Financial Architecture (NFA). He refers to this term (NFA) as the integration of modern day financial firms and markets with its associated regime of light government regulation. Crotty [13] argues that, as he puts it “the perfect calm” from 2003 to mid 2007, i.e. low interest rates, loan default rates, risk spreads and security price volatility, along with high profits and rising

stock prices, combined with NFA's structures and practices, led to the excesses that caused this crisis. They (NFA) encouraged aggressive risk taking (although not perceived as being risky), pushed some of the prices of securities to levels which were unsustainable, raised systemic leverage and created financial market complexity and opaqueness¹³. He also notes, that regulators did not only fail to prevent these excesses, but, assured investors that the high yields and low risk spreads of the period were permanent, making the risk of a crisis minimal [13]. Crotty [13], continued by arguing that it was not the sale of CDS and other derivatives that caused the financial crisis, but the lack of regulation in a sector, where it became standard practice to inflate high risk assets and sell them in order to create an illusion of financial growth to receive high returns [13].

Is the Proposed Regulation Enough?

This leads to the question whether the proposed regulation will be sufficient. Governments across the globe are calling for regulation of the derivatives market. However will this regulation be enough. For example, the European Commission as noted above is calling for; global standardisation; central data repositories; central counter party clearing; and trade execution on public trading venues [3]. The proposals by the EC are to create transparency and accountability, as well as to ensure that derivatives transactions such as the CDS are properly priced, can be traced in a public forum and there is no fictionalisation of these transactions. The commission's approach is however, that of incentivising the use of this framework; rather than strict regulation. In fact the European Commission report suggests that whenever it is possible, incentives should be drawn-up to ensure the wider use of CCPs in other OTC derivative markets [3]. This as Crotty¹³ argues, begs the question "if a particular framework or infrastructure would result in staving off unethical trading, then should it not be a prerequisite to trading, rather than an incentivised choice." In fact, if one considers Crotty's arguments [13], it is evident that the problems were caused by allowing the derivatives traders to set their own regulation; rather than the trading in derivatives such as CDS. Therefore there needs to be a revamp of the regulatory regime in order "to restrain the risk-seeking behaviour of financial institutions." This because the belief that self-regulation creates "efficient capital markets" is "seriously misleading" and "has generated excessive risk-taking through financial markets" where the "derivative products central to the boom were ticking time bombs as they could not be priced correctly" creating liquidity problems [13].

Stulz [18], argues that the subprime mess, as he calls it, was not created by derivatives. However, he notes that the uncertainty about the derivatives risks created by the positions of some financial institutions worsened the panic that took place in 2008. Hence, in his opinion,

important financial institutions' derivatives activities that might increase systemic risk should be regulated more effectively. Investors and regulators should have access to information on the counterparty risks incurred by these institutions. Moreover, regulators should be in a position to determine whether these financial institutions could survive the collapse of a major derivatives dealer.

Stulz [19] is of the view that there has been an overstatement of the role of derivatives in bringing down Wall Street. He states that derivatives markets have for most part, worked well during the subprime crisis and allowed hedgers to sell off risks they were not well equipped to accept. He believes that rapid financial innovation was partly responsible for the growth in the global economy of the last three decades and notes that regulation that "obstructs innovation in the name of saving investors from the real and imagined danger of risk-taking would yield a high price" [19].

Moreover, Stultz [19] notes that "derivatives markets are liquid because speculators and dealers are willing to take one side of the transaction." If the market permits only hedging, then market prices cannot reflect all available information, since opportunities cannot be exploited by investors who look for profit and only little hedging can actually take place. In the long run, what would suffer is economic growth because of poorer allocation of capital.

Internal Controls and the Financial Crisis

Kirkpatrick [20] in his report 'The Corporate Governance Lessons from the Financial Crisis', concludes that weaknesses in corporate governance arrangements can be one of the factors contributing to the financial crisis. He notes that corporate governance processes in many financial services companies did not manage to serve their purpose of safeguarding against unwarranted risk taking and several weaknesses have been highlighted.

Corporate governance procedures and not the inadequacy of computer models alone were seen as the major player behind the failure of risk management systems. It was found that information about exposures in a number of cases was not communicated appropriately to the board and even senior levels of management and risk management's focus was mainly on activity, rather than on the enterprise as a whole [20]

Kirkpatrick [20] notes that although in some cases boards had an approved strategy, suitable measures to monitor its implementation had not been determined. When put to test, it was determined that even though this was a key principle in internal control, disclosures by companies about identified risk factors and about how they monitored and managed risk, left a lot to be desired. Accounting standards and as we have already discussed above, regulatory requirements, have also proved to be insufficient. Moreover, it was also seen that the remuneration systems in many of the cases "was not

closely related to the strategy, risk appetite of the company and its longer term interests" [20].

In this report, Kirkpatrick [20] talks about the important role played by lower prestige and status of risk management staff vis-à-vis traders, highlighting that Société Générale [20], noted that there was a no standard process to centralise and escalate warning signs to the appropriate persons within the organisation. Moreover, he pointed out that the development of a responsible strong control function, to ensure transaction security and operational risk management, was not encouraged by the general environment. For the front office it was more important to increase its activities and did not bother with the need for controls. This created an imbalance between these activities and the control functions. Controllers were not able to create an independent critical scrutiny, which is necessary for their role. One of the goals of their action programme was to change this approach into one where responsibility is shared and there is a mutual respect between the users/managers and controllers [20]. "This inability of risk management staff to impose effective controls was also noted at Credit Suisse" [20].

Kirkpatrick [20] notes that testimony by the HBOS's (that was rescued and taken over by Lloyds TSB) ex-head of risk, illustrates this, by showing that bank management had little regard or care for risk management and was only interested in expanding its mortgage business. A SEC report about Bear Stearns, also noted that this closeness/mutual respect between risk managers and traders would imply a lack of independence [20]. Moreover, the Institute of International Finance study, cited in Kirkpatrick's report [20] concluded that the risk officer should have a mandate to attract to the attention of all management or the board, when there is a situation that could materially violate the risk guidelines/parameters set. This will ensure a strong and independent voice [20].

Kirkpatrick's report [20] cites the Guerra and Thal-Larsen's report which highlights the fact that bank boards' lack banking and financial experience. This can be considered as a reason why immediate attention to foreseeable risk was not given. In fact, in one of the studies it was "estimated that at eight US major financial institutions, two thirds of the directors had no banking experience" and many of them sat on committees covering audit and risk. However, Kirkpatrick [20] noted that banking experience is clearly not enough and relates that Northern Rock had two board members with banking experience; while at Bear Stearns seven out of thirteen directors had a banking background. In his opinion this might be caused by the idea that boards are a "retirement home for the great and the good" [20].

Another problem noted in Kirkpatrick's report [20] was that many times risk managers were being involved in advising on how to structure the instrument so as to obtain a required rating; this posed serious conflicts of

interest. Similarly, to auditors they should not be controlling or reporting on their own work, or in this case rating an instrument that they had themselves advised on how to structure.

On the other hand Jenkins [21] explains that the processes of corporate governance worked as expected and refutes claims that it might have caused the financial crisis. He notes that the core problem was the belief that government will intervene and bail them out no matter what the bank's did or their pay-off was. This belief, in his opinion incentivised bank creditors to oversupply leverage and not as should have, incentivised managements to produce competitive returns. He continues to argue that the core problem was the guarantees given by government; like the insurances on deposits and implied guarantees, like the reasoning that the government would intervene, not allowing any one of the Fannie or Freddie to collapse and like the belief that some banks were "too big to be allowed to fail," which meant that the main actors could pass on this risk to the taxpayer²¹. Therefore, as he sees it, the fact that top management and the boards did this, evidenced that corporate governance worked. Jenkins [21] continues using an analogy of a gun used to commit murder and compares it to the corporate governance tool. The gun did not fail but was improperly used and it (the gun) does not need fixing, but people should be given incentives to use it properly.

Further Thoughts

As noted in this article, the financial crisis has exposed the failures in business procedures and models. However, the world is still speculating on whether or not the financial sector will actually regain its position in the economy and whether the world will survive this crisis. Proposals have come forth, from countries such as the US and the UK, entities such as the EU, BIS, G20 and the IMF and institutions such as ISDA and IOSCO. These have put forward thoughts, arguments and opinions which need to be discussed further. This since the financial crisis is much too complex and cannot possibly be oversimplified and reduced to a single cause or a few factors. Moreover, it would be naive to hope to solve this crisis or prevent future ones by some simple remedy [22].

A survey carried out in 2010 by the International Association of Financial Engineers (IAFE) together with SunGard Adaptiv, gathered some of the thoughts, arguments and opinions of market experts which included senior fellows, academics, practitioners and members of the board of directors of IAFE about the crisis, what brought it on and what safeguards are best to prevent another similar fall [22].

The experts were not convinced by the claim that the system was not able to cope with the complexity of the financially engineered products (OTC derivatives). Several of them held the view that the inability of systems

and management to deal with the large losses in a short span of time was the main problem. They noted that this resulted because firms lost more capital than they expected too and at the same time needed to reduce leverage. Many of the participants to the survey commented that “Knee-jerk” responses by the regulators to limit the use of complex derivatives can be damaging. In fact, one of the participants in the survey, John Hull a finance academic and author of financial books echoed this argument by noting that regulating OTC markets would not prevent similar future crises since “it was caused by a mixture of macroeconomic events, government policies, the relaxation of mortgage lending standards in the US, and a failure of regulation” [22].

Participants were generally in favour of particular technical improvements, which were well thought. Many of the surveyed risk panel supported the call to move towards central clearing parties (CCPs) and standardised OTC transactions. However, they doubted that it could be the cure to the problems. Some others commented that complexity cannot be looked at in isolation, but one has to look at the ability of the systems and processes in place to deal with it. Often it is found that different areas within a system have not developed at the same speed. For example, the front office vs the controllers. The responsibility to ensure this has to be taken by management [22].

The infrastructure, supervisory oversight and governance within firms lagged the market (without excuse on the part of firms themselves, regulators should be allowed some lag due to staffing and resource constraints). In my opinion it is the responsibility of senior management and boards to ensure that firms engage in activities that are in accord with their abilities, capabilities and infrastructure [22].

Leslie Rahl, an IAEF Board Member and Practitioner, argued that this complexity should be taken into consideration when calculating risk (i.e. incorporating this into the capital calculations and other risk metrics used) and unless strictly necessary should be avoided. However, Andrew Weisman, also a Board member of IAEF and a Practitioner, viewed “better pricing” and “improved risk controls” to be the better solution to complexity [22].

Stephen Figlewski an academic and a board member of IAEF, noted that “outlawing” complexity was not possible and the move should be towards changing the organizational and technological aspects. In fact, Tanya Beder commented that the cost to the economies would be higher if the “financial engineering genie is put back in the bottle,” than if the requirements for firms using complex products are increased and penalties are set for management who claim to be ignorant of the firms’ doings. She continues to argue that regulators should ask more from senior management and their boards and highlights the need for “risk-weighted capital” measures to be set on risk taking [22].

Most of the participants noted that proper training and

incentives to senior management could be the main defence to the creation of systemic risk by complexity of products. This in their opinion would do more than additional restrictions or capital charges would do to control the problem. In fact, Andrew Weisman notes that senior management, who may be involved in taking risks by using complex securities, should be required to have the necessary training or knowledge to understand the risks taken by the firms they are managing. Moreover, Tanya Beder noted that risk taking is effected by whether or not senior management and/or the board of directors understand what is going on in the firms they are managing [22].

Andrew Weisman agreed to most of the participants that “too big to be allowed to fail” was a problem, but he continued that a larger problem was “too connected to fail”. According to participants, it seems that size is making the measurement of risk imperfect, since these firms are perceived to be guaranteed bailout by the government. This gives firms the incentive to take on more risk [22].

John Hull criticised the regulators who put political pressure on accountants between 2008 and 2009 to allow exceptions on accounting standards of FAS 157 and IAS 39. He felt that this enabled further risk taking. John Hull continued to argue against those who describe OTC markets as “dark markets” with little transparency. He noted that there are various on-line services such as Bloomberg and Reuters, which do a good job to disseminate information about trade prices to the markets and although it is correct to say that quoted prices of these products vary widely, it is not something that regulators should worry about. However, most participants on the panel surveyed, agreed to the opinion that supervisors/regulators need to have access to data from firms that could trigger-off systemic risk. However, they were sceptical about the ability of the users of this data, to use it appropriately and achieve the required results [22].

Not many of the respondents showed confidence that a future financial crisis can be avoided with regulations and new systems. However, they noted that techniques and understanding could be improved by for example the use of “stress testing” in risk management. John Hull noted that the problem with the use of certain techniques such as VaR, although a very useful tool, was that it replaced experience and judgement to form an opinion on worst case scenarios. Here gaps in culture and experience were brought to light. In fact, it was noted that in many organizations there are gaps in the level of quantitative insight of senior managers, the board, the quants and product structuring staff and their risk culture [22]. As noted by Stephen Figlewski an IAFE Member and Academic, “improving a risk culture could only happen when institutions realise that not losing \$1 million is just as valuable to a firm as making \$1 million” [22].

In conclusion all respondents agreed that a global approach to tackle the issue of systemic risk was needed and that this had to be harmonised in order to have a

level playing field and avoid regulatory arbitrage.

CONCLUSION

Many factors contributed to the quick deterioration in credit markets and large losses and this has been attributed to one single main factor that put the whole global financial system on a danger list to collapse. This was the massive interlocking web of OTC derivatives exposures amongst the largest swaps users. The world during the crisis has seen a number of financial institutions going bankrupt and suffering large losses, but to take down the entire financial system would have taken more than just this. Moreover, some suggest that there would not have been any threatening effect if it were not for the completely unregulated OTC complex markets and their lack of transparency.

Some, have stressed the argument, that derivatives were in fact responsible for hitting the economy while it was down, with the extreme instability and synthetic price hikes they helped generate in the vital commodities markets, which included food and energy.

They argued that both of these problems could have been noted and mitigated if derivatives were appropriately regulated. In their opinion a centralised clearing system with novation, for credit derivatives would have removed the systemic risk factor, since they would have provided a central counterparty to all transactions and increased transparency. In combination with aggregate speculative position limits, this would have discouraged manipulation and excessive speculation that propagated excessive volatility in commodities markets.

However, as others argue, unless the regulation is properly incorporated into the derivatives market through a new infrastructure, then this new regulation will have little effect. Therefore, others are implying that it was not necessarily the derivatives that caused the financial global crisis; rather a mixture of the exploitation of the NFA self regulatory model by unethical traders. This was compounded by the fact that the financial structure allowed the financial institutions to set inflated prices on derivatives with unknown values, such as CDS. Thus, what is being said is that in order for the proposed regulation to have any effect, there needs to be transparency and accountability as proposed by the European Commission and also an external regulatory framework that stops unethical traders. The reason for this is that traders have shown that they cannot be self-regulated, because the result was exploitation, wrong perceptions and greed, which destabilises the global financial markets.

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