

POST-GRADUATE STUDENT RESEARCH PROJECT

Central Clearing of Credit Default Swaps: A Quick Fix to Systemic Risk?

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Abstract

While some extol the virtues of credit default swaps (CDS) as the best way to guard against risk, the 2008 financial crisis showed that the interconnectedness of big financial institutions, enhanced by CDS, is a source of systemic risk. The US and EU have resorted to the mandatory use of a central clearing party as a mechanism to deal with the systemic risk posed by CDS. However, centralised clearing only wins the battle against counterparty risk, while losing the war against systemic risk. India, in an effort to enhance liquidity in the corporate bond market, has introduced CDS. In this paper, the author argues that mandatory clearing does not address systemic risk, but instead ends up consolidating it in one entity and therefore, the possible introduction of centralised clearing in India must be reconsidered.

¹ The author would like to thank Prof. Umakanth Varottil for his comments and guidance while writing this paper. The views expressed in the paper are those of the author only and do not necessarily reflect those of the National Stock Exchange of India Ltd. The author can be contacted at shrutivh@gmail.com.

CENTRAL CLEARING OF CREDIT DEFAULT SWAPS: A QUICK FIX TO SYSTEMIC RISK?

I. Introduction

“[T]here is low correlation between insurance triggering events. My death doesn't, generally, hasten your death. My house burning down doesn't increase the likelihood of your house burning down.

Not so with bonds. Once some bonds start defaulting, other bonds are more likely to default. The risk increases exponentially.”²

These words used to describe the systemic effects of Credit Default Swaps (CDS) in the context of the collapse of AIG, Bear Stearns, and Lehman Brothers. Few understand the exact functions of CDS and the implications they may have on the economy. The credit crisis left no doubt that these instruments pose systemic risk. A working definition of systemic risk would be that it is an economic shock, such as market or institutional failure that triggers—either the failure of a chain of markets or institutions or a chain of significant losses to financial institutions—resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial market price volatility.³ A solution, often suggested to counter the systemic risk posed by CDS, is to provide for central clearing (as has been done in the US and proposed in the EU). However, while *prima facie* this suggestion seems like a solution to the problem, this ‘solution’ might aggravate the systemic risk posed by CDS, by concentrating all risks in one entity. Central Counterparties (CCPs), entities meant to counter the risk of failure of large financial institutions, might themselves become ‘too big to fail’, and therefore create moral hazard. CDS is a recent introduction in India. While a lot has been written about CDS and its effects internationally, there is very little

² How AIG Fell Apart, Reuters (September 18, 2008), available at <http://www.reuters.com/article/2008/09/18/us-how-aig-fell-apart-idUSMAR85972720080918> (Last visited: 25/11/2012).

³ Steven L. Schwarcz, Systemic Risk, 97: 193 Georgetown Law J. 193, 204 (2008). Other commonly used definitions of systemic risk include:

- (a) *“the probability that cumulative losses will occur from an event that ignites a series of successive losses along a chain of [financial] institutions or markets comprising . . . a system.”* George G. Kaufman, Bank Failures, Systemic Risk, and Bank Regulation, 16 Cato J. 17, 21 (1996); and
- (b) *“the potential for a modest economic shock to induce substantial volatility in asset prices, significant reductions in corporate liquidity, potential bankruptcies and efficiency losses.”* Paul Kupiec & David Nickerson, Assessing Systemic Risk Exposure from Banks and GSEs Under Alternative Approaches to Capital Regulation, 48 J. Real Est. Fin. & Econ. 123, 123 (2004).

literature regarding its introduction in India. Further, the existing literature does not study the future direction of CDS in India with specific reference to CCPs. An analysis of the RBI Guidelines and the Reports leading up to the issue of the Guidelines suggests that the introduction of a CCP may be considered to deal with systemic risk as the market grows. In this paper, adding to the ongoing debate about the efficacy of CCPs, I shall study US and EU regulations and demonstrate why this might not be the right path to walk down, in order to manage systemic risk. I shall first provide a conceptual explanation of CDS and the uses they are put to. Next, I shall delve into the sources of risks in using these instruments and evaluate whether by providing for a mandatory clearing, the Dodd-Frank Act⁴ and the European Market Infrastructure Regulations⁵ sufficiently address the issue of systemic risk. Lastly, I shall deal with the introduction of CDS in India and how the Reserve Bank of India (RBI) guidelines on CDS⁶ have dealt with centralised clearing.

II. CDS – A Primer

In legal terms, a CDS is a bilateral contract, where the rights and obligations of the parties arise from the credit risk of a reference entity or asset.⁷ It is a promise by one party, the protection seller, to pay another party, the protection buyer, in case of the occurrence of a credit event (as defined in the contract). Common credit events include default and declaration of bankruptcy by the reference entity, debt restructuring, and downgrade of credit rating.⁸ Thus, the risk of third party default is shifted from the protection buyer to the protection seller. In return for this shift, the protection buyer makes periodic payments to the protection seller – the premium being directly proportional to the perceived risk of default. The protection seller, on his part, must pay the protection buyer in case the underlying reference entity experiences a credit event.⁹ Often, CDS also require the protection seller to

⁴ Dodd–Frank Wall Street Reform and Consumer Protection Act, 2010 (Pub. L. No. 111-203).

⁵ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32012R0648:EN:NOT> (last visited: 25/11/2012).

⁶ Guidelines on Credit Default Swaps for Corporate Bonds, 2011, RBI/2010-11/542, available at <http://rbidocs.rbi.org.in/rdocs/content/PDFs/FGCD240511A.pdf> (Last visited: 25/11/2012)(the Guidelines).

⁷ Joanne, P. Braithwaite, The Inherent Limits of “Legal Devices”: Lessons for the Public Sector’s Central Counterparty Prescription for the OTC Derivatives Markets, 12(1) European Business Organization Law Review 87, 92 (2011).

⁸ Stefano Giglio, Credit Default Swap Spreads and Systemic Financial Risk, available at http://www.greta.it/credit/credit2011/PAPERS/Speakers/Friday_30/1_Giglio.pdf (Last visited: 25/11/2012).

⁹ Giglio, *supra* note 8.

provide collateral for its obligation under the contract.¹⁰ It must be noted that CDS are synthetically created in that there is no actual transfer of assets, unlike in a securitisation.¹¹

In case of a default, there can be either a physical settlement or a cash settlement of CDS. In a physical settlement, the reference assets are transferred to the protection seller by the protection buyer, who in turn makes a payment equivalent to the par value of the reference asset to the protection buyer. In case of a cash settlement, the amount payable by the protection seller to the protection buyer will be equivalent to the notional amount of the CDS after deducting the market value of the reference assets after default.¹²

Applications of CDS:

The most obvious use of CDS is as a tool to hedge against the credit risk of on-balance sheet assets. Protection buyers use CDS to insure themselves against any default or downgrade on the bonds they own.¹³ By allowing for this, CDS redistribute risk of loss that a creditor is faced with on entry into a debt investment among the creditor and the CDS counterparty. Therefore, if a borrower defaults and a creditor has entered into a CDS, the creditor is not as susceptible to the risk of loss as he was without the CDS.¹⁴ For this reason, CDS were praised by many as an efficient way to manage risk. Alan Greenspan, the Former Chairman of the Federal Reserve, expressed that financial institutions became more resilient and less vulnerable to systemic risk when credit risk is disaggregated from a single borrower-lender model.¹⁵

Another use of CDS has been as a risk barometer, with the cash flow between the buyer and seller of credit protection representing the price of protection against the default of the

¹⁰ Robert S. Bloink, Does the Wall Street Reform Act Rein in Credit Default Swaps? An EU Comparative Analysis, 89 Neb. L. Rev. 587, 595 (2011).

¹¹ Bloink, *supra* note 10.

¹² Bloink, *supra* note 10 at p.595

¹³ Jeremy C. Kress, Credit Default Swaps, Clearinghouses, and Systemic Risk: Why Centralized Counterparties Must Have Access to central Bank Liquidity, 48 Harv. J. on Legis. 49, 53 (2011).

¹⁴ Kristin N. Johnson, Things Fall Apart: Regulating the Credit Default Swaps Commons, 82 U. Col. L. Rev. 167, 201(2011).

¹⁵ Alan Greenspan, Chairman, Fed. Reserve Bd., Risk Transfer and Financial Stability, Remarks Before the Federal Reserve Bank of Chicago's Forty-First Annual Conference on Bank Structure (May 5, 2005), available at <http://www.federalreserve.gov/boarddocs/speeches/2005/20050505/default.htm> (last visited: 24/11/2012).

reference entity or asset. CDS spreads¹⁶, therefore, reflect the perceptions of the market participants about the potential for default by the reference entity or asset.¹⁷

Unfortunately, this useful hedging instrument can also be used for speculation and has frequently been used as such.¹⁸ This was because prior to the financial crisis and for some time afterwards, there was no pre-requisite, in the US or EU, that the protection buyer owns the underlying assets on which a CDS is purchased. Such CDS that allow buyers to bet on the credit quality of assets they do not own are known as ‘naked CDS’. In the US, loose regulation was the result of CDS not being considered insurance but a derivative. The Commodity Futures Modernization Act 2000¹⁹ (CFMA) heavily deregulated the derivatives market. Prior to the enactment of the CFMA, federal regulators imposed capital requirements on banks dealing in derivatives. However, the CFMA amended the Commodity Exchange Act 1936 (CEA) to exclude derivative transactions from any and all regulations by classifying them either as ‘futures’ under the CEA or ‘securities’ under federal securities laws.²⁰ Furthermore, the CFMA specifically exempted CDS from regulation by any state insurance regulator. In this way, as columnist Barry Ritholtz stated, *“the law created a unique class of financial instruments that was neither fish nor fowl: It trades like a financial product but is not a security; it is designed to hedge future prices but is not a futures contract; it pays off in the event of a specific loss-causing event but is not an insurance policy.”*²¹

Protection sellers deal in such instruments because of the higher returns they provide as compared to the scenario where they would have to purchase the underlying assets.²² Further, it offered a way around the capital requirements for banks under Basel regulations. These regulations impose higher capital requirements for riskier loans. However, by using CDS banks were able to avoid the need for greater reserves. The way this worked was that, in case

¹⁶ The price of premium paid by the protection buyer.

¹⁷ European Central Bank, Credit Default Swaps and Counterparty Risk (August 2009), available at <http://www.ecb.int/pub/pdf/other/creditdefaultswapsandcounterpartyrisk2009en.pdf> (Last visited: 24/11/2012).

¹⁸ Eric Dinallo, former Superintendent of Insurance for New York State, estimates that approximately 80% of CDS in the United States are ‘naked’, Dawn Kopecki & Shannon D. Harrington, Banning “Naked” Default Swaps May Raise Corporate Funding Costs, Bloomberg (July 24, 2009), available at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a0W1VTiv9q2A> (Last visited: 18/10/2011)

¹⁹ Commodity Futures Modernization Act of 2000 (CFMA), 7 U.S.C.A. §§ 1-25 (West Supp. 2004).

²⁰ Commodity Futures Modernization Act of 2000 (CFMA), 7 U.S.C.A. §§ 1-25 (West Supp. 2004).

²¹ Barry Ritholtz, Credit Default Swaps are insurance products. It’s time we regulated them as such, available online at <http://www.ritholtz.com/blog/2012/03/credit-default-swaps-are-insurance-products-it%E2%80%99s-time-we-regulated-them-as-such/> (Last visited: 15/03/2013).

²² Blook, *supra* notes 9; Kress, *supra* note 12.

a bank was taking a risky loan, it would buy a credit default swap, say from AIG, for the risk of default on the loan. Since CDS are not insurance contracts, they were not heavily regulated. AIG would therefore not have to put up capital as collateral for the CDS for as long as it maintained its triple A credit rating. Thus, there was no capital cost involved in selling CDS. From the banks' perspective, they were able to convince regulators that they were holding triple A credits and not a risky loan and were therefore able to leverage themselves as far as Basel II would permit without having to increase their reserves.²³

III. Risks associated with CDS

Certain risks associated with CDS undermine the strength of the global financial system. First, the potential default by protection sellers *i.e.*, the risk that the protection seller will not pay out the notional amount completely and in a timely manner on the occurrence of a credit event, involves counterparty risk to market participants.²⁴ This might be because the protection seller is itself facing bankruptcy or illiquidity.

However, counterparty risks are present in all derivatives markets. The risk unique to CDS is the jump-to-default risk. Such risk arises from the fact that credit events, such as bankruptcy filings, occur suddenly, and reference entities “jump” to default. These credit events affect a large section of CDS contracts, such as in the case of AIG (discussed below)²⁵, and therefore payouts to be made under CDS contracts spiral swiftly. Non-performance by counterparty thus becomes more likely, as protection sellers may not in fact be liquid enough to make all the due payments, more so in a down market which is when credit events are most likely to occur.²⁶

Some take precautions against counterparty risk by having collateralisation requirements. However, the possibility of finding collateral that will be adequate enough to account for

²³ David Henry, et al, How AIG's Credit Loophole Squeezed Europe's Banks, available online at <http://www.businessweek.com/stories/2008-10-15/how-aigs-credit-loophole-squeezed-europes-banks> (Last visited: 15/03/2013); Stansberry Porter, How AIG's Collapse Began a Global Run on the Banks, available online at <http://www.stansberryresearch.com/dailywealth/506/how-aig-s-collapse-began-a-global-run-on-the-banks> (Last visited: 15/03/2013).

²⁴ Miguel A. Segoviano and Manmohan Singh, Counterparty Risk in the Over –The-Counter Derivatives Market, IMF Working Paper (2008), available at <http://www.imf.org/external/pubs/ft/wp/2008/wp08258.pdf> (Last visited:25/11/2012).

²⁵ See Part III.

²⁶ Manmohan Singh and James Aitken, Counterparty Risk, Impact on Collateral Flows, and Role for Central Counterparties, IMF Working Paper (2009), available at <http://www.imf.org/external/pubs/ft/wp/2009/wp09173.pdf> (Last visited: 24/11/2012).

jump-to-default risk is very low, and even if found, may make CDS uneconomical.²⁷ In fact, as the Turner Review in the UK pointed out, collateralisation requirements of CDS contracts may themselves contribute to the insolvency risk of counterparties. While the provision of collateral is used as a way to mitigate risks, this in itself may ‘produce disruptive pro-cyclical effects’.²⁸ In particular, linking margin requirements to downgrades in credit ratings can result in extraordinary demand for collateral.²⁹ For instance, if party, A, is asked to post collateral on the downgrading of its credit rating, the posting of this collateral may itself be further detrimental to A’s position, thereby again triggering the requirement to post more collateral, and so on. Therefore, the very requirement that is intended to guard against credit risk might result in pushing a party into insolvency. This is what happened to AIG when the US government had to step in to prevent collateral calls from resulting in the collapse of AIG, an institution too big and systemically important to be allowed to fail.

Eventually (and in the case of CDS, very quickly, due to jump-to-default risk), the aggregation of such counterparty risk leads to the spread of financial contagion causing systemic risk—the risk that the financial system as a whole will collapse.³⁰ Such financial contagion arises due to the interconnectedness of market participants through overlapping CDS exposures. Thus, it becomes difficult to detach the credit risk of the reference entity from counterparty risk.³¹ The failure of a significantly large counterparty to make its payouts can lead to a ‘domino effect’, by which institutions previously perceived to be fully hedged suffer huge losses and face a liquidity crisis, and the resultant repeated counterparty non-performance leads to a financial contagion.³² For instance, through a CDS arrangement, X pays Y periodic premiums in return for the promise that Y will pay X the notional amount if Z experiences a credit event. Now, X decides to be a protection seller and writes protection on Z for A. In this scenario, if Z experiences a credit event, but Y fails to pay, X will be left unable to recoup the notional amount from Y. Additionally, X’s potential illiquidity caused by Y’s failure to make the payout also means that A will not be able to collect from X. Thus,

²⁷ European Central Bank, *supra* note 16.

²⁸ A. Turner, *The Turner Review: A Regulatory Response to the Global Banking Crisis* (London, March 2009) at p. 82.

²⁹ Committee on Payment and Settlement Systems, *New Developments in Clearing and Settlement Arrangements for OTC Derivatives* (Bank for International Settlements, March 2007) at p.21.

³⁰ Noah L. Wynkoop, *The Unregulables? The Perilous Confluence of Hedge Funds and Credit Derivatives*, 76 *Fordham L. Rev.* 3095, 3104 (2008).

³¹ Kress, *supra* notes 13; European Central Bank, *supra* note 16.

³² The Committee on Capital Markets Regulation, *The Global Financial Crisis: A Plan for Regulatory reform* (May 2009), available at [http://www.capmksreg.org/pdfs/TGFC-CCMR_Report_\(5-26-09\).pdf](http://www.capmksreg.org/pdfs/TGFC-CCMR_Report_(5-26-09).pdf) (Last visited: 25/11/2012).

default by one party poses a risk not just to its own counterparty, but also its counterparty's counterparties, and so on.³³ This problem is amplified by the fact that the CDS market is highly concentrated with only a few dealers.³⁴ So, in addition to the danger of not making payouts to counterparties, the failure of a financial institution also triggers payments on CDS where it is a reference entity.³⁵ Thus, “[t]here is grave concern that if a number of [reference entities] simultaneously experienced credit events, the [entire] system would grind to a halt.”³⁶

IV. AIG: How CDS and the Interconnectedness of Financial Institutions can cause Systemic Risk

The AIG crisis is an example of the risks discussed above. AIG's downfall was the result of its CDS exposure. It is also an example of the problem of 'too big to fail', something CCPs can end up becoming.

AIG's problems stemmed from the activities of its subsidiary, AIG Financial Products. This subsidiary acted as a net seller of CDS for AAA-rated tranches of collateralised debt obligations. Problems arose due to two reasons. Firstly, not only were its exposures large, they were primarily in one direction, as protection sellers. Secondly, many exposures were not even collateralised initially. AIG's commitments were backed solely by AIG's AAA credit rating, with the CDS contracts providing for the requirement of posting of collateral in the event AIG's credit rating was downgraded.³⁷

In late 2007, AIG reported large losses due to write-downs related to its exposures to the US sub-prime mortgage market. In September, 2008, S&P downgraded AIG's long-term debt rating by three notches. Moody's and Fitch downgraded AIG's credit rating by two notches. These downgrades triggered collateral posting requirements under various CDS. An estimated USD20 billion was required to meet demands for collateral, in addition to the USD17 billion already posted.³⁸ However, AIG did not have the liquidity required to meet these demands as AIG had invested the cash collateral in mortgage-backed securities which

³³ Kress, *supra* note 13 at p.58.

³⁴ Johnson, *supra* note 13.

³⁵ Johnson, *supra* note 13.

³⁶ Tim Weithers, Credit Derivatives, Macro Risks, and Systemic Risks, Fed. Res. Bank of Atlanta Econ. Rev., Fourth Quarter 43, 64 (2007).

³⁷ European Central Bank, Credit Default Swaps and Counterparty Risk (August 2009), available at <http://www.ecb.int/pub/pdf/other/creditdefaultswapsandcounterpartyrisk2009en.pdf> (Last visited: 25/11/2012).

³⁸ European Central Bank, *supra* note 33.

were proving hard to sell. At this point, the Federal Reserve stepped in with a USD85 billion credit facility because AIG's failure to meet its collateral calls “*would have posed unacceptable risks for the global financial system and for our economy.*”³⁹ Globally, institutional investors would have had to re-evaluate their securities, which would in turn have reduced their own capital.⁴⁰ AIG's counterparties included cities, states, public and private pension funds, retirement funds, and other significant financial institutions.⁴¹ Were AIG to become insolvent, its counterparties would be adversely affected by its inability to satisfy its obligations under other business agreements. AIG as an institution was too big to fail, and to avoid the disastrous effects of AIG’s bankruptcy on the heels of that of Lehman Brothers’, the decision to extend an emergency loan to AIG was made. The extension of aid to ‘too big to fail’ institutions has subsequently triggered public debate about the moral hazard posed by such extension of aid.

V. Are Central Counterparties the Solution to Systemic Risk?

In the aftermath of the financial crisis, and the AIG experience that highlighted the systemic risk posed by CDS, the G20 issued a communiqué, requesting formulation of recommendations for “*strengthening the resilience and transparency of credit derivatives markets and reducing their systemic risks, including by improving the infrastructure of over-the-counter markets*”.⁴² Within a year, this call for recommendations had taken a more concrete form in a clear mandate to adopt clearing through CCPs, where appropriate, by end - 2012⁴³ as a result of a push from regulators, stressing the need to discipline the market to ensure its stability. The concept of central clearing and the EU and US legislations pursuant to the G20 communiqué, are discussed below.

³⁹Oversight of the Federal Government's Intervention at American International Group: Hearing Before the H. Comm. on Fin. Services, 111th Cong. 11 (2009) (statement of Hon. Ben S. Bernanke, Chairman, Bd. of Governors of the Fed. Reserve System).

⁴⁰ Edmund L. Andrews et al., Fed in an \$85 Billion Rescue of an Insurer Near Failure, N.Y. Times, Sept. 17, 2008, available at <http://www.nytimes.com/2008/09/17/business/17insure.html?pagewanted=all& r=0> (last visited: 25/11/2012).

⁴¹ Federal Bailout of AIG: Hearings Before the H. Comm. on Oversight and Gov't Reform, 111th Cong. (Jan. 27, 2010) (written testimony of Timothy F. Geithner, Treasury Secretary), available at <http://www.ft.com/cms/78c5a070-0b56-11df-9109-00144feabdc0.pdf> (last visited: 24/11/2012).

⁴² Declaration of the Summit on Financial Markets and the World Economy (issued on 15 November 2008), available at <http://www.g20.utoronto.ca/2008/2008declaration1115.html> (Last visited 05/01/2013).

⁴³ G20 Leaders Statement: The Pittsburgh Summit (September 24-15, 2009), available at <http://www.g20.utoronto.ca/2009/2009communiqué0925.html> (Last visited 05/01/2013).

What is Clearing, and What does a Central Counterparty do?

Clearing is a post-trade operation involving trade-matching, confirmation, and risk management. Trade matching and confirmation involves the parties matching and reconciling the terms of trade as existing on each party's records. Risk management involves the posting of maintenance or variation margin in order to secure performance of the transaction.⁴⁴

A CCP interposes itself between transacting parties, such that it becomes the buyer to every seller, and seller to every buyer, by a process of counterparty substitution or novation, and the two original parties no longer have credit exposure to each other.⁴⁵ To deal with credit risk from counterparties, the CCP undertakes risk management through capital adequacy norms and collateral requirements. When any counterparty defaults, the CCP mutualises such losses among all its members through the CCP's default fund, to which all members contribute.⁴⁶ Thus, the introduction of a CCP does away with the need for each participant in the swap market to monitor risk posed by their swap counterparty. This is replaced by the single concern about creditworthiness of the CCP.⁴⁷

Legislation on Central Clearing

There are three ways to deal with counterparty risk: using a central clearing counterparty; enhancing bilateral collateral management processes; and ensuring presence of adequate capital to cover residual counterparty risk.⁴⁸ Globally, post-financial crisis regulation has focussed on CCPs as the way forward. This is because CCPs are said to be immune to market risk. As the buyer to every seller and the seller to every buyer, a CCP is 'flat' to the market. It is, therefore, claimed that CCPs diminish the risk of a 'domino effect' and bring stability to the derivatives market.⁴⁹

In the US, in March, 2008, the President's Working Group on Financial Markets made recommendations to improve US and global financial markets. This included development of

⁴⁴ Adam W. Glass, The Regulatory Drive Towards Central Counterparty Clearing of OTC Derivatives and the Necessary Limits on This, 4 Capital Markets Law Journal 79, 82 (2009).

⁴⁵ Bloink, *supra* note 10.

⁴⁶ Bloink, *supra* note 10.

⁴⁷ Glass, *supra* note 44 at p.89.

⁴⁸ European Central Bank, *supra* note 37 at p.50.

⁴⁹ Glass, *supra* note 44 at p.89.

a CCP for CDS.⁵⁰ The European Commission in November, 2008, formed a working group to identify the steps needed to facilitate creation of a CCP for CDS. The Commission also asked dealers to commit to using a European CCP for CDS that refer to a European reference entity or indices.⁵¹ Discussed below are some of the legislations regarding CCPs with the scope of discussion limited to clearing and CCPs.

US:

In the aftermath of the 2008 financial crisis, the US implemented the Dodd-Frank Act⁵² (henceforward, the Act). A detailed review of the provisions of the Act is beyond the scope of this paper, however, among other reforms, the Act deals with CDS. It grants the Securities and Exchange Commission (SEC) regulatory authority over CDS⁵³, requires registration of swap dealers and major swap participants,⁵⁴ increasing transparency in the market which was lacking in the pre-financial crisis period, and mandates clearing of CDS, where so determined as required by the SEC or Commodity Futures Trading Commission (CFTC), as a mechanism of counterparty risk management.⁵⁵

The Act lays down the factors that need to be taken into account in determining which swaps need to be cleared: first, the existence of notional exposures, trading liquidity, and pricing data; second, the availability of operational expertise and relevant infrastructure for clearing; third, the effect on mitigation of systemic risk and on competition; and fourth, the existence of reasonable legal certainty in the treatment of customer and swap counterparty positions, funds, and property in the event of insolvency of the clearinghouse.⁵⁶ The authorities will need to conduct an ongoing review of products for which central clearing is required. Authorities cannot force clearinghouses to clear a product that would pose a threat to the financial integrity of the CCP.⁵⁷ These guidelines are important because many CDS are

⁵⁰ President's Working Group, Policy statement on financial market developments (March 2008), available at http://www.treasury.gov/resource-center/fin-mkts/Documents/pwgpolicystatemktturmoil_03122008.pdf (last visited on 26/11/2012).

⁵¹ European Central Bank, *supra* note 37 at 76.

⁵² Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

⁵³ *Ibid*, § 762(a).

⁵⁴ *Ibid*, § 731.

⁵⁵ *Ibid*, § 763(a).

⁵⁶ Seema G. Sharma, Over-the Counter Derivatives: A New Era of Financial Regulation 17 L. & Bus. Rev. Am. 279, 301 (2011).

⁵⁷ §§723, 763, the Act.

bespoke, and being bespoke are not suited for clearing. Thus, a general requirement that all CDS be cleared would not address the issue of counterparty risk management effectively.

The Act also provides for exemptions to the mandatory clearing requirement, including an ‘end-user’ exemption for parties that are not a ‘financial entity’ and are using CDS to hedge against their commercial risk. Such parties must, however, notify the CFTC or SEC about how they propose to meet the financial obligations under the CDS.⁵⁸ The rationale for this probably lies in not hindering the development of the CDS market by increasing the cost burden of CDS for small users to such an extent that it is not outweighed by its benefits.

The Act also provides a regulatory framework for the CCP to manage counterparty risk. It provides three broad principles: first, the CCP must have in place risk measurement systems so that it may accurately measure counterparty exposure; second, it must dispose of financial resources adequately in order to allow it to perform its functions of counterparty risk prevention; and third, it must have adequate default handling procedures. These principles are included under the ‘core principles for derivatives clearing organisations’.⁵⁹ These principles are required to ensure that the CCPs do not end up being in a position where they cannot meet their obligations. The CCPs have flexibility in deciding how they will comply with the core principles. CCPs are also required to have in place sound models to calculate margin requirements and regularly review these models.⁶⁰

EU:

In June, 2008, the Economic and Financial Affairs Council of the European Union (ECOFIN Council) invited the European System of Central Banks (ESCB) and the Committee of European Securities Regulators (CESR) to adapt the ESCB-CESR ‘recommendations for securities clearing and settlement in the European Union’. The ECOFIN Council emphasised the need to support initiatives to decrease risks posed by credit derivative exposures, by developing one or more European CCPs to serve the over-the-counter (OTC) derivatives markets. In December, 2008, the ECOFIN Council mandated the ESCB and the CESR to adapt the recommendations for CCPs to explicitly address risks of OTC derivatives, including CDS. These recommendations were approved by the governing council in May,

⁵⁸ §§723, 763, the Act.

⁵⁹ §725 (c), the Act.

⁶⁰ §725(c), the Act.

2009.⁶¹ In September, 2010, the Commission put forward a legislative proposal for ‘a regulation on OTC derivatives, central counterparties, and trade repositories’, more commonly referred to as the European Market Infrastructure Regulation (EMIR). However, the legislative procedure is still ongoing, and the EMIR still stands to be adopted by the European Parliament and European Council.⁶²

EMIR applies to OTC derivatives including CDS. It only sets out broad principles, and confers the authority to create implementing rules and technical standards on the European Commission. However, the regulation and supervision of OTC derivative markets has been left to regulators at the national level who have been identified in the Markets in Financial Instruments Directive.⁶³

Article 3, section 1 of the EMIR provides for central clearing. Like the Act, EMIR too mandates clearing only for ‘eligible’ derivative contracts. Eligibility for clearing is decided by the European Securities and Markets Authority (ESMA).⁶⁴ The decision for eligibility is based on five criteria: systemic risk reduction, contract liquidity, availability of price information, the CCP’s ability to handle volume, and the level of protection provided by the CCP to clients. EMIR distinguishes between financial⁶⁵ and non-financial counterparties. Central clearing is mandated only where a financial counterparty is dealing with another financial counterparty.⁶⁶ However, non-financial counterparties are also required to clear eligible OTC derivatives where they exceed a clearing threshold.⁶⁷ The rationale for this probably lies in not raising cost disincentives that central clearing may bring to the development of the CDS market.

EMIR provides a regulatory framework for the CCP to manage counterparty risk under title IV, ‘Requirements for CCPs’. It provides that CCPs must have in place ‘effective processes

⁶¹ European Central Bank, *supra* note 17 at p.78.

⁶² Stan Cerulus, Central Clearing for Credit Default Swaps: A Legal Analysis of the New Central Clearing Regulations in Europe and the US, 20(2) J.F.R. & C. 212, 218 (2012).

⁶³ Cerulus, *supra* note 62 at p.220.

⁶⁴ Article 4, ESMA,

⁶⁵ Article 2(6), EMIR defines financial counterparties as including investment firms, credit institutions, (re)insurance undertakings, undertakings of collective investment in transferable securities, institutions for occupational retirement provision and alternative investment fund managers.

⁶⁶ Article 3 section 1(1), EMIR.

⁶⁷ Article 7 section 2, EMIR.

to identify, manage, monitor, and report the risks to which it is or might be exposed'.⁶⁸ CCPs must also have in place sound models to calculate margin requirements and regularly review these models.⁶⁹ These provisions seek to address risk management issues for the CCP itself to avoid a situation where in trying to address counterparty risk, the CCP itself becomes a source of risk due to lax risk management mechanisms. Lastly, the EMIR contains a 'default waterfall' provision⁷⁰, which lays down the order in which financial resources of a CCP must be employed to cover default losses: the margins posted by the defaulting member itself; the contributions of the defaulting member to the default fund; additional financial resources⁷¹; and lastly, the contributions of the non-defaulting members to the default fund.

Broad conclusions from EU and US laws and regulations on central clearing:

A study of US and EU laws on central clearing shows that the two, while similar, are not identical. Both regulations adopt common broad principles but differ on details. For instance, both introduce mandatory central clearing and counterparty risk management mechanisms for CCPs, but the details regarding how these are to be achieved differ. Further, both countries have adopted principle-based legislation – providing broad principles, and leaving decisions on details to their respective executive branches (ESMA in the EU and SEC in the US). Furthermore, both the US and EU have given CCPs discretion in certain matters while laying down the broad objective, such as the details of risk measurement requirement.⁷² Overall, the regulations represent a shift from self-regulation, as existed before the financial crisis, to stronger public regulation.⁷³ Now, not only is the behaviour of market participants regulated, the regulations have also introduced CCPs into the market, which in turn are also tightly regulated.

⁶⁸ Article 24 section 1, EMIR.

⁶⁹ Article 39 section 2, EMIR.

⁷⁰ Article 42, EMIR.

⁷¹ Article 41 section 1, EMIR.

⁷² Cerulus, *supra* note 62 at p.227.

⁷³ Cerulus, *supra* note 62 at p.227.

Table comparing US and EU regulations on clearing[#]

	EU	US
<u>Scope</u>		
Parties:	EMIR applies to both financial counterparties and non-financial counterparties. Financial counterparties include banks, investment firms, insurance companies, registered funds, pension funds and private funds which are authorised as such under the relevant EU Directives. Non-financial counterparties cover all other undertakings established in the EU.	The Dodd-Frank Act regulates swap dealers and major swap participants. Financial users of swaps are subject to clearing, trade execution and reporting requirements. Where the counterparty is a swap dealer or major swap participant, financial users of swaps may also be subject to margin and documentation requirements.
Products:	EMIR is applicable to a wide range of OTC derivatives that relate to specified underlyings. Spot Foreign Exchange transactions and some types of physically settled commodity transactions.	Dodd Frank Act applies to swaps and security-based swaps which broadly include options, contingent forwards, and exchanges linked to economic interests of any kind
Exemptions:	EU central banks, some EU public bodies and the Bank for International Settlements are exempt.	End users are exempt from clearing requirements for swaps used for hedging. Central banks are also exempt from clearing requirements.
Derivatives subject to mandatory clearing	OTC derivatives must be cleared where a CCP is authorised to clear them and ESMA has made a determination that they should be cleared.	Swaps must be cleared where the SEC or CFTC determines that they must be cleared. Determination as to whether a swap must be cleared maybe initiated by the CFTC or SEC or by a clearing organisation.
Application of mandatory clearing	The clearing obligation applies to contracts entered into between: <ul style="list-style-type: none"> - two financial counterparties; - two non-financial counterparties over the clearing threshold; or - a financial counterparty and non-financial counterparty over the clearing threshold. <p>It also applies to some non-EU entities.</p> <p>An intra-group exemption to clearing exists for certain entities within a group subject to certain conditions.</p>	The clearing obligation applies to everyone except central banks and end-users who are hedging risks. <p>A rule exempting transactions between affiliates from clearing subject to certain conditions has been proposed.</p>
Reporting	EMIR mandates that conclusion of any	Dodd-Frank Act mandates that all swaps,

	EU	US
	<p>derivative contract must be reported by counterparties and CCPs to a registered trade repository. Any subsequent modification or termination of the contract must also be reported.</p> <p>Information to be reported must include the parties to the contract, the beneficiary of the rights and obligations arising from the contract and the main terms of the contract such as the notional value, price and settlement date.</p>	<p>whether cleared or uncleared must be reported to a swap data repository or where such depository is not available, to the relevant regulator.</p> <p>Information to be reported must include the economic terms such as price and continuation data <i>i.e.</i>, any changes to the economic terms.</p>
Supervision of CCPs	<p>To provide services in the EU, a CCP established in the EU must first apply for authorisation to the competent authority in the member state in which it is wstablished. On grant of authorisation, the CCP may provide its services throughout the EU. However, member states have the flexibility to adopt additional requirements for CCPs in their jurisdiction.</p>	<p>Regulators are responsible for developing organisational and business conduct standards for CCPs.</p> <p>CCPs must be registered with:</p> <ul style="list-style-type: none"> - the CFTC as a derivatives clearing organisation (DCO) in order to be eligible to clear futures or swaps; or - the SEC as a clearing agency in order to be eligible to clear security-based swaps.
Segregation of accounts	<p>CCPs must maintain records and accounts which enable it to distinguish the assets and positions held for the account of one clearing member, from those held for another or from its own assets, at any time and without delay.</p>	<ul style="list-style-type: none"> - A DCO must segregate funds of customers in order minimise the risk of loss or delay in access to funds. - A clearing agency must also hold assets in a manner such that the risk of loss or delay in access to funds is minimised. - Collateral for cleared swaps must be held with a futures commission merchant or a broker-dealer or securities swap dealer.

Intended Benefits of Clearing through CCPs

CCPs have been chosen to deal with systemic risk because of the many advantages its proponents claim it has. First, and most importantly, they mutualise losses among all clearing members by spreading loss among non-defaulting members of the CCP where collateral posted and the capital contribution of an insolvent party are insufficient to compensate for the losses suffered by its counterparty. Such spreading of risk means that rather than a small

number of interconnected parties suffering large losses, the losses are distributed in small amounts among CCP members. In this manner participants in a centrally cleared derivatives market pose less systemic risk than those in a bilateral market.⁷⁴ Related to this is the homogenisation of counterparty credit risk. The process of novation in a CCP system means that, instead of having to deal with the credit risks of different counterparties, counterparties are exposed to a single risk –creditworthiness of the CCP. This reduces costs associated with monitoring of credit risks of different counterparties.⁷⁵ Second, CCPs allow for multilateral netting of derivative exposures more easily than in the case of bilateral contracts, thereby reducing the interconnectedness of market players and lowering collateral demands.⁷⁶ Third, CCPs gather information in an otherwise opaque market which in turn helps market participants and regulators to identify risk and take appropriate remedial measures.⁷⁷ This benefit is less important in CDS markets, where most participants already submit trades to an electronic trade repository.

Limits of Clearing through CCPs as a solution

Mandatory centralised clearing does promise certain benefits. However, on a balance, all these benefits together may not be sufficient to overcome the drawback of the concentration of risk in a single entity through the use of CCPs. When CCPs function well, counterparty risk is managed efficiently. However, any malfunctioning may pose a grave danger to the financial system. CCPs can fail for a number of reasons, including ‘operational risk’. While a CCP might have risk management procedures in place as mandated by the law, the effectiveness of such procedures is largely dependent on the competent implementation of those procedures by the CCP management. The ramifications of incompetent management not taking the required risk management precautions are greater where operational risk is concentrated in a central counterparty than many individual participants.⁷⁸

[#]Clifford Chance & ISDA, Regulation of OTC Derivative Markets – A comparison of US and EU initiatives, available at <http://blogs.law.harvard.edu/corpgov/2012/09/23/regulation-of-otc-derivatives-markets-eu-vs-us-initiatives/> (last visited on: 1/04/2013).

⁷⁴ Robert R. Bliss & Chryssa Papathanassiou, Derivatives Clearing, Central Counterparties and Novation: The Economic Implications 19-24 (Mar. 8, 2006) (unpublished manuscript), available at http://www.ecb.int/events/pdf/conferences/ccp/BlissPapathanassiou_final.pdf (last visited on: 24/11/2012).

⁷⁵ Bliss, *supra* note 74.

⁷⁶ Bob Hills et al., Central Counterparty Clearing Houses and Financial Stability, *Fin. Stability Rev.* 122, 129-30 (June 1990).

⁷⁷ Stephen G. Cecchetti et al., Central Counterparties for Over-the-Counter Derivatives, *BIS Q. Rev.* 45, 51 (September 2009).

⁷⁸ Hills, *supra* note 76 at pp.131-132.

CCPs tend to concentrate systemic risk in a universal counterparty rather than overcome it. The systemic risk is further enhanced by the jump-to-default risk peculiar to CDS (as discussed above), which may create liquidity problems for CCPs.⁷⁹ Such jump-to-default risk may also lead to solvency issues for CCPs. This is because CCPs never set margin requirements sufficient to cater to jump-to-default risk. This would make CCPs uneconomic. Thus, they are likely to be undercapitalised always, and their ability to survive strain on liquidity by resorting to their default funds is questionable.⁸⁰ Insolvency of a CCP caused by default of one member could, therefore, lead to problems for all members.

An undercapitalised CCP has a systemic impact on all its members, as opposed to a bilateral market where only counterparties of the defaulter would have faced losses. This might make them ‘too big to fail’.⁸¹ In the words of Kress, “*while the failure of a bilateral dealer may have a domino effect, the failure of a CCP⁸² would have a bulldozer effect*”⁸³. Therefore, if a CCP were to be on the verge of default, regulators would not have any choice but to make good on the obligations of the CCP, or experience a collapse of the financial system. This implicit assurance might in itself lead CCPs to be lax in the implementation of robust risk management procedures and, thereby, create moral hazard. For instance, in a bid to attract more members, CCPs might lower collateral requirements. They may also neglect to ensure that adequate capitalisation is maintained at all times.⁸⁴ A vicious circle is created where, in a bid to address systemic risk, CCPs result in concentrating risk in one entity which then becomes too big to fail and creates a moral hazard, causing systemic risk.

While one might suggest establishment of multiple CCPs to distribute risk and mitigate the ‘too big to fail’ problem, this entails its own problems. First, opportunities to net offsetting CDS may be reduced if clearing is spread across several CCPs. This would increase counterparty risk, and consequently, systemic risk. Secondly, given that the current EU and US regulations give the CCPs considerable discretion in setting up their risk management

⁷⁹ As margin requirements that account for jump-to-default risk make CCPs uneconomic. Hills, *supra* note 72 at pp.131-132.

⁸⁰ Yves Smith, The Fantasy of the Clearinghouse Magic Bullet, Naked Capitalism (Nov. 6, 2009), <http://www.nakedcapitalism.com/2009/11/the-fantasy-of-the-clearing-house-magic-bullet.html> (Last visited on: 26/11/2012).

⁸¹ Giglio, *supra* note 8.

⁸² CCPs may fail for a number of reasons including operational failure, technical malfunction or human error. Giglio, *supra* note 8.

⁸³ Kress, *supra* note 13 at p.73.

⁸⁴ Gary H. Stern & Ron J. Feldman, Too Big to Fail: The Hazards of Bank Bailouts 11-28 (The Brookings Institution, 2004).

mechanisms within the broad confines of the law, the robustness of such risk management mechanisms may be affected by a ‘race to the bottom’ in a competitive CCP market.⁸⁵

VI. CDS in India: The Way Forward

The Government of India, in its Eleventh Five Year Plan (2007-12), sought to invest Rs.20,54,000 crores into developing infrastructure projects.⁸⁶ Today, the funds available for ambitious, yet much required infrastructure projects, fall short of this figure despite impressive gross domestic savings of 33.7%.⁸⁷ This is primarily due to the lack of long-term debt. The largest source of funding is commercial banks that prefer lending medium-term because of their asset-liability mismatches.⁸⁸ Ideally, the invisible hand should have led to a reallocation of the sizable savings to investment in infrastructure projects through corporate bonds, thereby satisfying the demand for funds, and awarding investors with a higher rate of return than bank deposits. However, several factors such as regulated interest rates, high stamp duties, government ownership of banks, and government intervention in capital markets have stunted growth of the corporate bond market in India.⁸⁹ The long and expensive issuance process for corporate bonds has been a major disincentive from the corporate perspective.⁹⁰

Further, a bond-related derivate market, vital to manage risk exposure, does not exist.⁹¹ From the perspective of retail investors, fairly high rates offered on risk-free, small savings schemes have acted as a disincentive to investment in relatively risky corporate bonds, thereby leading to illiquidity of corporate bonds in the secondary market.⁹² The High Level Expert Committee on Corporate Bonds and Securitisation made recommendations to remedy

⁸⁵ Siyi Zhu, Is there a “race to the bottom” in central counterparties competition?, available at <http://www.dnb.nl/binaries/DNB_OS_0906_WEB_tcm46-266141.pdf. (Last visited:13/03/2013).

⁸⁶ Report on India Infrastructure Debt Fund (June 1, 2010), available at <http://infrastructure.gov.in/pdf/INDIA%20INFRASTRUCTURE%20DEBT%20FUND%20010610%20CLEAN.pdf> (Last visited: 26/11/2012).

⁸⁷ For 2009-10. Reserve Bank of India, Handbook of statistics on the Indian economy, available at http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/223T_HBS120911.pdf (Last visited:26/11/2012).

⁸⁸ Report on India Infrastructure Debt Fund, *supra* note 80.

⁸⁹ Sahana Rajaram & Payal Ghose, Indian Corporate Bond Market, available at <http://www.ccilindia.com/Research/CCILPublications/Lists/1stRakshitraArticles/Attachments/69/Article.pdf> (Last visited: 25/11/2012).

⁹⁰ Rajaram, *supra* note 89.

⁹¹ Anupama Mitra, Why Corporate Bond Market in India is in Nelson’s Low Level Equilibrium Trap for so Long, available at http://www.nse-india.com/content/press/NS_mar2009_2.pdf (Last visited: 25/11/2012).

⁹² Pronab Sen *et al.*, Developing the Indian Debt Capital Markets: Small Investor Perspectives (July 2003), available at http://planningcommission.nic.in/reports/wrkpapers/wkpr_debt.pdf (Last visited: 25/11/2012).

this situation including the introduction of derivatives to manage risk exposure.⁹³ It is in this context that CDS have been introduced in India.⁹⁴ The objective behind the introduction of CDS on corporate bonds is to provide market participants a tool to transfer and manage credit risk in an effective manner through redistribution of risk.⁹⁵ By acting as a risk management device, CDS encourages participants to take risks they otherwise may have been hesitant to take. By introducing CDS for corporate bonds, some investor concerns regarding risk associated with investment in corporate bonds may be alleviated and consequently, it is hoped, will result in enhanced investment in corporate bonds.

CDS were introduced in the Indian market on 1st December, 2011.⁹⁶ While regulators had been toying with the idea of introducing CDS since 2007⁹⁷, their entry was delayed by the cautionary bells sounded by the criticisms of this product in the aftermath of the 2008 financial crisis. It was maintained, however, that ‘Plain Vanilla’ CDS were in themselves a useful hedging tool, and would not create havoc in the market unless left unregulated.⁹⁸ The RBI formed an internal Working Group to formulate the operational framework for introduction of CDS for corporate bonds in India. The Group submitted its final report in February, 2011. Subsequently, the RBI prepared draft guidelines for CDS in India based on recommendations of the Working Group and placed it on the RBI website for public comments. The guidelines were finalised on 24th May, 2011, after taking into account suggestions received from the various stakeholders.⁹⁹ The guidelines were supposed to be effective from 24th October, 2011, however, its implementation was postponed to ensure that adequate infrastructure was in place prior to the introduction of CDS.¹⁰⁰ The reporting infrastructure being put into place, the Guidelines were finally made effective on 1st

⁹³ Report of High Level Expert Committee on Corporate Bonds and Securitisation (December 23, 2005), available at <http://finmin.nic.in/reports/Report-Expert.pdf>. (Last visited: 25/11/2012).

⁹⁴ Shyamala Gopinath, Over-the Counter Derivatives Market in India – Issues and Perspectives, available at http://www.banque-france.fr/fileadmin/user_upload/banque_de_france/publications/Revue_de_la_stabilite_financiere/etude08_rsf_1007.pdf (last visited: 26/11/2012); See *supra* note 4 for the Guidelines.

⁹⁵ Rule 1, Guidelines.

⁹⁶ Reserve Bank of India, Introduction of Credit Default Swaps for Corporate Bonds, Press Release 2011-12/858, available at <http://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/IEPR858IC1111.pdf>

⁹⁷ Reserve Bank of India, Press Release (October 24, 2007), RBI Places Revised Draft Guidelines on CDS on Website, available at <http://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/80877.pdf> (Last visited: 25/11/2012).

⁹⁸ Credit Default Swaps by This Year: Gopinath (May 2, 2010), available at <http://www.livemint.com/2010/05/02205729/Credit-default-swaps-by-this-y.html> (Last visited: 26/11/2012).

⁹⁹ Reserve Bank of India, RBI Releases Guidelines on Introduction of CDS for Corporate Bonds, available at http://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=24450 (Last visited: 05/01/2013)

¹⁰⁰ Reserve Bank of India, Introduction of Credit Default Swaps (CDS) for Corporate Bonds, available at http://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=25511 (Last visited 05/01/2013).

December, 2011.¹⁰¹ The financial crisis revealed deficiencies in the derivatives markets globally, including inadequate management of counterparty risk, lack of transparency regarding transactions, and complexity of instruments, making it difficult to determine actual risk exposures.¹⁰² The RBI took all of these into account and made attempts to address each of these concerns before making the Guidelines effective. To deal with counterparty risk, the Guidelines provide for collateralisation and margining requirements,¹⁰³ to avoid problems arising from lack of transparency, RBI held back introduction of the Guidelines until the reporting platform was in place, and the introduction of plain vanilla single-name CDS only ensures clarity as to the amount of risk exposure.

The efforts of the RBI in coming out with these Guidelines¹⁰⁴ are indeed commendable. There is no doubt that there is a pressing need for risk management mechanisms if liquidity in India's nascent corporate bond market is to be enhanced, and liquidity in the corporate bond market is crucial to fund the shortfall in infrastructure financing.¹⁰⁵ However, the Guidelines must be examined to study whether in trying to solve one problem, they are creating another. A perusal of the Guidelines makes it evident that the RBI has taken several precautionary measures to deal with risks from CDS, including capital adequacy requirements, exposure norms, risk management practices, and so on.¹⁰⁶ Most importantly, RBI has curtailed speculation by banning 'users'¹⁰⁷ from buying CDS unless they have exposure to the underlying risk.¹⁰⁸ Moreover, users cannot buy CDS for amounts higher than the face value of corporate bonds held by them, nor can they hold CDS for a period longer than the tenor of underlying bonds.¹⁰⁹ This goes a long way in curbing speculation through naked CDS which is what shook the foundations of AIG. However, what is peculiar in an otherwise extremely cautious set of guidelines is that market-makers are permitted to both buy and sell CDS

¹⁰¹ Reserve Bank of India, Credit Default Swaps (CDS) for Corporate Bonds – Reporting Platform, available at <http://rbi.org.in/scripts/NotificationUser.aspx?Id=6853&Mode=0> (Last visited: 05/01/2013).

¹⁰² ¶1.3.2, RBI Draft Report of the Internal Group on Introduction of Credit Default Swaps for Corporate Bonds, available at <http://www.rbi.org.in/scripts/PublicationDraftReports.aspx?ID=592#C5> (last visited 05/01/2013).

¹⁰³ Rule 3.3, Guidelines.

¹⁰⁴ Guidelines, *supra* note 5.

¹⁰⁵ Sahana Rajaram & Payal Ghose, Indian Corporate Bond Market, available at <http://www.ccilindia.com/Research/CCILPublications/Lists/1stRakshitraArticles/Attachments/69/Article.pdf> (Last visited: 25/11/2012).

¹⁰⁶ Rule 2.2, Guidelines.

¹⁰⁷ There are two categories of participants – 'users' and 'market-makers'.

¹⁰⁸ Rule 2.1 read with Rule 2.5.2, Guidelines.

¹⁰⁹ Rule 2.5.1, Guidelines.

without an underlying bond¹¹⁰, thereby still leaving scope for speculation. This provision must be rectified if the sanctity of CDS as a hedging tool is to be maintained.

While the Guidelines do not mandate a system of centralised clearing, requisites such as reporting on the trade reporting platform¹¹¹ and standardisation¹¹² indicate the possible introduction of such a system once there is sufficient volume. Such an inclination is clear from the Draft Report of the Internal Group on Introduction of Credit Default Swaps for Corporate Bonds (henceforward, the Draft Report).¹¹³ Paragraph 5.1 of the Draft Report acknowledges the adoption of CCPs as a risk management mechanism globally. The reason for non-introduction of CCPs at present in India seems to be the lack of liquidity and volumes in single-name CDS at the moment.¹¹⁴ The first CDS deal in India was between ICICI and IDBI, made on 7th December, 2011, and was worth \$1.9 million.¹¹⁵ There have only been a couple of other CDS transactions and therefore the reporting values everyday has been zero.¹¹⁶

In light of the heightened systemic risk posed by CCPs, as previously discussed, RBI should reconsider the potential introduction of CCPs for CDS. The risks with introduction of CCPs have also been acknowledged in the Draft Report. Specifically, provision of liquidity to CCPs by the central bank or from the public sector in the event of failure of one or more members of the CCP has been identified as a point of debate.¹¹⁷ Additionally, the Draft Report acknowledges the problem of determining margin requirements that will provide sufficient liquidity, in case of a jump-to-default scenario.¹¹⁸ Lastly, the Draft Report also addresses the issue of adequate capitalisation. It states that while CCPs facilitate multilateral netting and thereby, reduces counterparty risk, this requires adequate capitalisation of CCPs through margins sufficient to absorb potential losses.¹¹⁹

¹¹⁰ Rule 2.1, Guidelines.

¹¹¹ Rule 4.1, Guidelines.

¹¹² Rule 2.10, Guidelines.

¹¹³ RBI Draft Report, *supra* note 96.

¹¹⁴ *Ibid.*, ¶5.2.

¹¹⁵ David Keohane, India's CDS Market Kicks Off, available at <http://blogs.ft.com/beyond-brics/2011/12/07/indias-cds-market-kicks-off/#axzz2H8kar8fn> (Last visited: 05/12/2013).

¹¹⁶ Available online at https://www.ccilindia.com/CDS_HOME.aspx. (Last Visited: 15/03/2013).

¹¹⁷ RBI Draft Report, *supra* note 96 at ¶5.2.1.

¹¹⁸ RBI Draft Report, *supra* note 96 at ¶5.2.2.

¹¹⁹ RBI Draft Report, *supra* note 96 at ¶5.2.3.

It must also be noted, that the Guidelines permit the introduction only of single-name CDS *i.e.*, CDS that offers protection for a single corporate or sovereign reference entity.¹²⁰ It is widely recognised that single-name CDS are not suitable to centralised clearing. This is because the CDS would contain provisions unique to the specific transaction it is hedging and will therefore not be capable of being standardised in a way CCP clearing requires.¹²¹ The counterparty risk associated with a single-name CDS being higher than in case of index CDS, higher margin, collateral, and default fund contributions could be called for. This could make clearing uneconomical for a user of a CCP for single-name CDS.¹²²

The Indian regulatory approach compared to that of the US and EU

In India, the Guidelines being formulated by the regulator itself, as against a legislative body in the US and EU, are more detailed in respect to what is expected of market participants. However, they still do leave considerable discretion to the market participants (as against the regulators in the US and EU) in deciding how they will meet their obligations under the Guidelines. For instance, in relation to managing risk from counterparty credit exposures, the Guidelines provide that the protection sellers shall have in place *internal* limits (based on capital funds) on the gross amount of protection sold by them on a single entity, as well as the aggregate of such individual gross positions.¹²³

At this stage, CCPs have not yet been introduced in India. It is, therefore, not possible to compare legislation on this front. The non-introduction of CCPs is due to the fact that the nascent CDS market in India does not yet have sufficient volumes to support the functioning of a CCP.¹²⁴ The introduction of a CCP has, however, been discussed, and given the aforementioned commitment of the G20 (of which India is a part) it is likely that India will have to follow suit and introduce CCPs in the near future.

VII. Conclusion

CDS have always elicited opposing opinions from market commentators. While some extol its virtues as the best way to guard against risk, the financial crisis showed that the

¹²⁰ Rules 2.3, 2.8, Guidelines; See also RBI Draft Report, *supra* note 96.

¹²¹ Glass, *supra* note 44 at p.97.

¹²² Alastair Marsh, Single-Name Credit Default Swap Clearing Under Scrutiny (1 February 2009), available at <http://www.risk.net/risk-magazine/news/1506269/single-credit-default-swap-clearing-scrutiny> (Last visited: 25/11/2012).

¹²³ Rule 3.2.1, Guidelines.

¹²⁴ RBI Draft Report, *supra* note 96 at ¶5.2.1.

interconnectedness of big financial institutions, enhanced by CDS, is a source of systemic risk. It is, therefore, odd that the Dodd-Frank Act and EMIR chose centralised clearing through CCPs, which are nothing but a formalised interconnection among big financial institutions, as a means to avoid systemic risk.¹²⁵ Centralised clearing only wins the battle against counterparty risk, while losing the war against systemic risk. Moreover, concentration of risk in CCPs means that CCPs are unlikely to be allowed to fail, and the possibility of a bail-out means that CCPs might get lax in managing risks, consequently creating a moral hazard.¹²⁶ Thus, relevance of CCPs as a mechanism to deal with systemic risk is questionable.

India has introduced CDS to enhance liquidity in the corporate bond market. The RBI's regulatory precautions are commendable for the most part. However, in light of the risks associated with centralised clearing as highlighted in this paper, the RBI would be wise to continue to be on guard with its precautionary measures in the Guidelines.

The benefits of CDS in encouraging India's nascent corporate bond market are unquestionable. Furthermore, the fact that the EU and the US have continued to allow CDS despite the deep impact it has had on their financial markets, goes to show that the perceived benefits of CDS outweigh its disastrous effects. However, in light of past experiences, the RBI must find a way to solve the problem that CCPs may pose with regard to systemic risk without introducing another one. The obvious solution to address the systemic risk that CCPs may pose is to allow resorting to the RBI as a lender of last resort. However, this may raise concerns about moral hazard and 'too big to fail', as were raised in AIG. The RBI has two options going forward: (i) to not introduce CCPs and introduce safeguards to deal with counterparty risk at the level of the parties; or (ii) to introduce CCPs, but find a way to deal with the moral hazard posed by allowing the RBI to act as a lender of last resort to CCPs (which for now seems to be the only solution if a CCP were to end up in a position where it posed systemic risk), or find another way to make CCPs systemic risk-proof.

¹²⁵ RBI Draft Report, *supra* note 96 at ¶5.2.1.

¹²⁶ RBI Draft Report, *supra* note 96 at ¶5.2.1.

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