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The Implications of credit derivatives regulations in the
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Abstract

Over the last two years, the international financial markets have experienced severe disruptions caused by different factors that have been already analysed by regulators worldwide. There has been however a factor of general discussion regarding the impact that credit derivatives have had in transferring and diversifying risk within the global financial market. As a consequence, regulators are now trying to reach a set of proposals that would help in avoiding any future disruptions caused by the use of these financial instruments.

The main focus of this paper is on the analysis of the new regulatory proposals on counterparty credit risk for credit derivatives in the EU and the main challenges that market participants will have to face after these regulations are implemented.

In order to better understand the role that credit derivatives have played in the current financial crisis, this paper will be divided in three main parts, all of them correlated. That is, the first part focuses on the definition of different credit derivatives, market size and market participants for these types of instruments.

The second part of the paper addresses the main proposals by Basel Committee that will affect counterparty risk on credit derivatives, subsequently and as a reflexion of these changes I will focus on how the Credit Requirements Directive will implement the Basel proposals as part of the EU legislative framework and its implications. Due to the extension of the topic, this paper will only cover Public Law issues.

Finally, the paper expresses a personal opinion on how the new regulatory framework could constitute a big challenge for market participants that for the last decade have been motivated on the use of credit derivatives to transfer risk, a less regulated market.

Part I:

1.1 Credit Derivatives and the Markets

Credit derivatives have played a very important role in the financial markets for the last twenty years. Since the first transactions made in the early 90's, the market has grown significantly and very rapidly on the use of these types of financial instruments¹. According to a survey made by the International Swaps and Derivatives Association, (ISDA) on the results of mid-year 2008 of privately negotiated derivatives, the notional amount outstanding of credit derivatives decreased by 12 percent in the first six months of the year to \$54.6 trillion from \$62.2 trillion. However, the annual growth for credit derivatives was 20 percent from \$45.5 trillion at mid-year 2007². With the introduction of credit derivatives into the financial markets, there has been a dramatic change in the process of credit intermediation as well as important improvements in the management of risk. Through these new instruments the distribution of risk out of the banking system was easier and allowed market players to spread risk more widely. The non sole participation of financial institutions but also the diversification to non financial institutions on the use of these securities as well as the

¹ The 2007 BIS survey points out that the rapid growth has been also due to the “newest of these instruments” the survey explains that “positions in credit derivatives stood at \$51 trillion at end-June 2007, compared to \$4.5 trillion in the 2004 survey”. *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007 Final results*, December 2007 <http://www.bis.org/publ/rpfx07t.htm>

² “This decrease primarily reflects the industry's efforts to reduce risk by tearing up economically offsetting transactions, and demonstrates the industry's ongoing commitment to reduce risk and enhance operational efficiency”. *ISDA Mid-Year 2008 Market Survey* <http://www.isda.org/press/press041608market.html>

facilities for buying and selling protection created a new concept on the way risk was being managed³.

Furthermore, the incredible high returns (the higher the risk, the higher the return) and the benefits of these securities created in the markets an enormous diversification of risk that ended up with the first signs of decline in 2007⁴. Unexpectedly, for many market players, credit derivatives were one of the causes of the major systemic risks occurred in the financial markets since the Great Depression. As Warren Buffett once called them, “credit derivatives are weapons of mass destruction”⁵.

As a consequence of the credit crisis, regulators are trying to find the appropriate regulatory framework for these types of securities and numerous possible changes are being discussed globally. In the US, it has been approved, the new financial reform bill by the US Congress in early July 2010⁶. In order to understand these changes, this paper briefly discusses the development of credit derivatives as new and more complex financial products and the use of

³ The innovation of these financial instruments permitted access to them by not only financial institutions but also private offerings, institutional investors such as insurance companies, pension’s funds, state and corporate investments funds etc. The range of market participants was therefore wider than with any other securities in the capital markets.

⁴ On a Speech made By the Vice president of the ECB Lucas Papademos in 2006 he pointed out the benefits of credit derivatives by saying “credit derivatives have effectively helped to enhance the efficiency of the financial system by (I) providing to both bank and non-bank financial institutions access to a broader range of risk-return combinations and a wider pool of underlying risks, and (ii) enhancing the liquidity of corporate bond markets. Finally, the rapid growth of CRT instruments in Europe also points to a more integrated market for credit risk, and may reflect the market response to the persistent segmentation of the underlying cash market due to national regulatory barriers, legal difficulties to transfer loads, etc. In other words, the CRT market is a good example of an effective private-sector impetus to deepen financial integration in Europe”. However, on the same speech the Vice President also refers to the “caution” on the creation of new risks as it could affect the financial markets stability. It was not however predicted at the time the serious consequences of the past years exceed on the use of these instruments. http://www.ecb.de/press/key/date/2006/html/sp060629_2.en.html

⁵ In 2003, on the annual letter to shareholders, Warren Buffet warned investors by saying that “The rapidly growing trade in derivatives poses a “mega-catastrophic risk” for the economy and most shares are still “too expensive”.

⁶ “The Dodd-Frank Wall Street Reform and Consumer Protection Act, named after Senate Banking Committee Chairman Christopher Dodd, D-Conn., and House Financial Services Committee Chairman Barney Frank, D-Mass., contains provisions requiring that many over-the-counter derivatives and swaps be traded and cleared on regulated exchanges, giving shareholders a non-binding say on the pay of high-ranking corporate executives, and restricting the proprietary trading of banks in derivatives with their own capital”. <http://www.opencongress.org/bill/111-h4173/show>

credit derivatives in structured finance. The main focus of the paper is however on the analysis of pre credit crisis regulations and the challenges of the proposed new regulatory framework in the European Union as well as the possible implications for the financial markets. This Paper will focus mainly on Public Law issues relating to credit derivatives, as being discussed by Basel Committee for Clearing Counterparty Houses (CCP), regulatory capital requirements and risk management techniques. However, in order to understand these new changes, the paper starts from a history and overview on the different credit derivatives.

1.2 History and development of credit derivatives

Definition of credit derivatives and the growth of credit derivatives market

There is no universally accepted definition for credit derivatives, however a possible definition as stated by Paul Harding would be: Credit derivatives are customized contracts between two parties under which one party agrees to make a payment to the other party if a credit event occurs or there is a change in a credit spread⁷. Thus, in a credit derivatives contract, the seller of protection agrees to pay the buyer of protection an amount if during the period agreed in the contract a credit event occurs that could affect either the obligation or the reference entity established in the contract. In return, the buyer pays periodically a fee to the buyer. As an attempt to standardise these events definitions for the market industry, the International Swaps and Derivatives Association first defined these possible “events” by including “six credit events” in 1999. The definitions include as a credit event: “Bankruptcy, obligation acceleration, obligation default, failure to pay, repudiation/moratorium and restructuring”⁸. The 1999 ISDA definitions are standard industry terms which are usually

⁷ Definition by Paul C Harding “Mastering the ISDA Master Agreements (1992 and 2002)”, FT Prentice Hall, Financial times, Great Britain 2004

⁸ Section 5 of ISDA Master agreements defines each individual “ event default”, currently amended by ISDA

incorporated by contracting parties in their swap agreements and these were later amended by the 2003 ISDA credit definitions⁹.

Therefore, if any of the mentioned credit event occurs, the seller of protection would either pay an amount equal to the loss in value of the reference obligation to the buyer so that the transaction will be cash settled or if the seller of protection pays instead the difference of the value but does not take over the obligation, then the transaction would be physically settled¹⁰.

As previously mentioned, since the first credit derivatives transaction made in New York in 1992 the market has grown very rapidly reaching approximately and outstanding notional of \$62 trillion in 2007 as the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity shows¹¹. The reason of the rapid increase was because of the benefits that this new instruments offered. Thus, credit derivatives allow investors to hedge the potential risk that borrowers might fail to repay their outstanding debts and it also allows banks to hedge their risk and without the need to transfer the underlying bond or loan. This feature was especially attractive to investors¹².

Credit derivatives have been used by different market players and its expansion has gone from financial institutions to non financial institutions. Some of the major market players

⁹ <http://www.isda.org/publications/intro/2003cdd-2.pdf>.

¹⁰ Section 2 of the ISDA Master agreements 2002 establishes different ways by which a non defaulting party could choose their payments obligations. However the ISDA Agreement is not just a simple set of general rules, thus, the agreement as defines in the preamble “deems that in each confirmation in a transaction, are part of a single agreement. Therefore, in an event of default (as defined by section 5) occurs, all the outstanding transactions are terminated and valued and a single amount will become payable by one party to the other that would be equal to the net value of the terminated transaction. (Section 14 of ISDA master agreements)

¹¹ Bank of international Settlement, December 2007: Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007. <http://www.bis.org/publ/rpfx07t.htm>

¹² ISDA on a report on for the “Proposals for the regulation of credit derivatives comments of the international swaps and derivatives association” already pointed out on the benefits of credit derivatives by stating “that the benefits of credit derivatives extend not only to the full range of exposures arising from commercial banking but also to exposures from trading activities. Credit derivatives may, for example, be used to hedge a concentrated position in an issuer's bonds or securities. Similarly, an institution could protect itself against default from a current net mark-to-market counterparty exposure in its swaps portfolio by entering into a credit derivative transaction”

include commercial and investment banks, manufacturing companies, investors in project finance deals, institutional investors and also employees worried about the safety of their bonuses.

The use of these instruments had therefore numerous benefits for a wide spectrum of different market players. Thus, some of these benefits that have contributed to the development of the credit derivatives market imply micro and macro economic benefits. Macroeconomic benefits include the fact that credit derivatives diffuse credit risks across markets and help to reduce risk concentration by transferring such risks to other market players that are capable of absorbing those risks. On the other hand, on a micro economic level, credit derivatives enable lenders and investors to better manage credit risks being able to take or to transfer the risks they do not want to hold. This use has also contributed not only to mitigate and to manage risk but also to be able to price and benchmark credit risk from other market's risks. They have also improved the market's intermediation by creating liquidity in the markets¹³.

In contrast with the mentioned benefits, there are also some risks that the uses of these instruments carry with them. Credit derivatives' availability to manage risk depends on markets staying relatively liquid even in periods of stress. As the markets become less illiquid, market participants are not able to absorb or even to transfer those risks. There is also a potential risk that credit derivatives could not be managed and understood appropriately due to the high complexity of these products. Furthermore, the diffusion of credit risk outside of traditional banking institutions makes it more difficult to oversee and supervise¹⁴.

¹³ Benefits and market players of credit derivatives as stated by Dominic O'Kane on "Credit derivatives Explained", Structured Credit research, March 2001, Lehman Brothers International

¹⁴ De Larosiere on his report to the European Commission relates to the risks associated with Credit derivatives structures. De Larosiere report, Brussels, 25 February 2009

These factors if not properly managed could indeed end up creating a systemic risk for the global financial markets and its stability¹⁵.

There are three main types of credit derivatives and these will include, credit default swaps, credit options and total return swaps.

1.3 Types and structures of credit derivatives¹⁶:

Credit Default Swaps

A credit default Swap is a financial contract in which the protection buyer pays a periodic fee, (normally paid on the notional amount in basis points per annum) in return of a contingent payment by the protection seller if a credit event occurs with respect to a reference entity¹⁷. As a bilateral contract, the definitions of a credit event, obligations and settlement that will determine the contingent payment are determined by the parties involved in the transaction. However, ISDA included in 1999 some definitions and standards in order to create these type of contracts¹⁸. The reason was to try to further standardise and also to provide more clarity to the terms to be included by the parties involved in these types of transactions. The 2003 ISDA Master agreements are now the common model being use by investors.

¹⁵ As Lord Turner stated “It is therefore possible that the growth of the securitised credit intermediation model has increased systemic risk in ways which are not just the result of poor execution – bad remuneration policies, inadequate risk management or disclosure, failures in the credit rating process – but inherent” The Turner Review: *A regulatory response to the global banking crisis*. March 2009

¹⁶ For further information see “Credit derivatives explained” by Dominic O’Kane March 2007, Structured credit research.

¹⁷ http://www.isdacdsmarketplace.com/about_cds_market

¹⁸ The 1999 ISDA agreement was later amended by the 2003 credit definitions by ISDA. “The new definitions include: A new test for identifying the Successor to a Reference Entity; Amendments to various Credit Events, including Bankruptcy, Repudiation/Moratorium and Restructuring; Alternative Procedures for non-deliverable bonds and loans: guarantees; and novation provisions”.

A CDS is often described as being similar to an investment policy in the sense that the protection seller receives a fee for agreeing to compensate the buyer if a post event occurs. However, the credit event is not dependant of any action from the buyer in this case and for this reason a credit derivative can be traded when they have been contractually established on standardised terms by the relevant counterparties¹⁹. The protection buyer can at the same time transfer the risk that might derive from a different exposure.

Most of the credit derivatives transactions are agreed over the counter (OTC) and in contrast with exchange traded securities, these contracts, will depend upon the agreement between the parties (bilateral agreement). This feature and the nature of the contracts between the parties is important as different regulatory requirements would apply to them. This paper will discuss later the new regulatory requirements being discussed by EU regulators for exchange traded and OTC derivatives.

In the vast majority of transactions, market participants follow the 1999 and post 2003 ISDA Credit derivatives definitions for OTC transactions. The following are the most common elements to be included in the contracts:

1. - The parties need to agree on the reference entity²⁰, notional value and maturity of the transaction and the premium to be paid. Credit default swaps and all the derivatives are mainly sophisticated and it does not retail transactions where the average notional value of the transaction is not below \$25. Reference entities normally include sovereign, financial

¹⁹ There have been many discussions in relation to the similarities on insurance contract and credit derivatives. However both contractual transactions are very different. On a paper issued by the Bank of England in November 1996 although mainly related to capital adequacy on these products, there was also time for discussion in the differences by insurance contracts and derivatives. "Developing a Supervisory approach to Credit Derivatives"

²⁰ As defined by Section 2.1 of the Credit Definitions

institutions and other investment grade institutions. The maturity parameters are normally between 5 to 10 years depending on liquidity and rating of the CDS²¹.

2. - The definition of a credit event: thus, the occurrence of one or more of the following events; Failure of payment of an obligation, bankruptcy, repudiation, obligation default, restructuring²².

3. - Settlement as to whether it will be physical or cash settlement²³.

4.- The parties should also establish which of the debt obligations of the reference entity may be delivered to the seller in case of physical settlement or value if cash settlement. The contingent payment is calculated as the fall in price of the reference obligation and its market value following the event. The parties can also agree a fixed cash settlement also known as a binary settlement²⁴.

CDS are by far the most common used credit derivatives and they are also the most common used to help building credit derivative structures such as CDO, collateral debt obligations²⁵.

²¹ Conditions for payment contained in Article III of the Credit Definitions

²²“Consolidation of the 2003 ISDA Credit Derivatives Definitions , the 2009 ISDA Credit Derivatives Determinations Committees, Auction Settlement and Restructuring Supplement to the 2003 ISDA Credit Derivatives Definitions, published on July 14, 2009 and the May 2003 Supplement to the 2003 ISDA Credit Derivatives Definitions available from www.isda.org

²³ Cash settlement is defined on Section 8.1 of the ISDA credit Definitions

²⁴ For further Cash or physical settlement the Credit definitions covers these features on Section 7.1 for cash settlement and sections 8.1 for physical settlement as well as Section 3.4 for Notice of Intended Physical settlement.

²⁵ On a survey conducted by Moody’s in May 2008 about CDS: Market, systemic and Individual risk in perspective, the agency concluded that “the main systemic risk posed by CDS market was not its large size but rather the consequences of a possible default by a major dealer”. Months later and very unexpectedly, there was a later publication after the aftermath of Lehman bankruptcy in September of the same year.

By analysing the most common features of CDS contracts will help us to later understand as well the capital requirements and central counterparty proposals in order to better manage the risk involved on these types of transactions.

Portfolio transactions (SPV or Special purpose vehicle)

Credit default swaps can also be used in a portfolio to create new instruments with risk and return features for specific market players. The use of CDS to construct a portfolio is part of the market in collateralised debt obligation or CDO. These types of transactions are structures and as such they do not have standardised features as CDS. However, CDOs can be distinguished for certain characteristics. CDO as a debt security issued by an SPV and backed by a diversified loan or bond differs from any other structured products because cashflows on a diversified portfolio have a lower variance than individual ones and therefore the lower the risk is the lower yield a portfolio can be issued²⁶.

The protection buyer can also enter into a portfolio CDS referenced to a portfolio of companies rather than a single name directly with the seller. This is called a credit linked note (CLN) by avoiding the use of the SPV²⁷. By entering directly into a portfolio of CDS's implies however a counterparty risk and if the protection buyer is a bank, it will obtain the lower capital requirements only if the protection seller is also a bank²⁸.

²⁶ Financial Stability review report: June 2001 "The credit derivative markets and its development and possible implications for financial stability". David Rule, G10 Financial Surveillance Division, Bank of England

²⁷The JP Morgan Guide to Credit Derivatives Also for further information of CDO and SPV see "Credit derivatives explained" by Dominic O'Kane March 2007, structured credit research.

²⁸ For further information and specific requirements for CLN as well as different types of repackaging please see Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000

On a CDO structure, the risk of the portfolio is normally divided into a minimum of three tranches. Current market practice tranches the risk in the way that a senior position is AAA rated and mezzanine and equity will be either BBB or below²⁹.

Commercial banks can also use CDO structures to transfer the credit risk on loans that they have originated. These structures are also known as collateralised loan obligations or CLOs. The aim of these transactions is to transfer the risk out of the bank's balance sheet.

CDOs can be also used for "arbitrage transactions"³⁰. The purpose of these types of transactions is to repackage portfolios of illiquid or high yield securities that have been bought in the secondary markets.

Total return Swaps

A total return swap is also a bilateral financial contract designed to transfer risk between the parties³¹. However, in contrast with credit default swaps, this contract exchanges the total economic performance of a specific asset for another cash flow. The payments between the parties are based on changes in market value of a specific credit instrument and it is irrespective whether a credit event has occurred or not. Therefore, the buyer of protection agrees with the seller of protection that during the prescribed period, he will pay amounts equal to the principal or interest on the bonds if and when received³². The real effect would be as if the seller was holding the bonds as he has the risks in the value of the bonds

²⁹ Rating of structure products by credit rating agencies become very popular as investors were relying on the ratings in order to assess the default risk associated to the individual tranches.

³⁰ A detailed definition for arbitrage transactions see JP Morgan research for credit derivatives in collaboration with risk metrics and also credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000

³¹For further discussion of Total return Swaps, see Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000, p10

³² The total return language was first included on the 1996 ISDA equity Derivatives definitions. Section 7.1 and it is equally possible to apply the same formula to Credit derivatives

(reference obligation). The total return of the reference obligation in this case comprises the sum of interest, fees and any changes on value³³. At the same time, the changes on value of payment will be equal to any appreciation or depreciation in the market value of the reference obligation. Payments on change in value are normally made at maturity or on a periodic interim basis in as an alternative of cash settlement. In return, the seller of protection or the receiver makes payments of LIBOR plus a spread³⁴.

Total return swaps allow the possibility of short selling. Thus, if a buyer of protection believes that the creditworthiness of an issuer will decline, the buyer can then buy a total return swap and therefore he would benefit for the change on value of the reference obligation. There exists another method of taking short position, that is, the possibility of borrowing securities from a dealer and sell them with the idea of buying them back later on at a cheaper price in order to repay to the lender of the securities. However, a total return swap does not involve these physical transactions.

Short selling has been one the main financial practices criticised in the current market's financial crisis. These practices have been prohibited and it has caused large debate between governments such as the current ban in Germany for short selling practices. Short selling can create speculations, disruption and instability on the financial markets.

Synthetic financing using total return swaps

A total return swap can also be seen as a balance sheet rental from the protection buyer to the seller of the protection. That is when the asset part of the total return swap contract resides in a portfolio the buyer removes the economic risk. This risk transfer is made effective without the need for a cash sale. In this case, the buyer of the protection will retain the voting rights

³³ Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000, p719

³⁴ <http://www.isda.org/educat/faqs.html#26>

and servicing to the underlying asset and the seller of the protection will have the exposure to the underlying asset without the requirement to purchase it. Furthermore, the pricing for the financing spread on the contract, will be also determined by the cost of the buyer of the protection of financing and servicing the reference obligation on its own balance sheet³⁵. The buyer of the protection will also benefit from being able to buy protection for a limited period without having to liquidate the asset. When maturity of the total return swap arrives, (normally the maturity term will be less than the one for the reference obligation) the buyer has the option to either reinvest in that asset or to sell it at market price.

Another reason for entering into these types of contracts is that include new asset classes and these practices have been welcome by some investors such as insurance companies to access into some markets where they had traditionally some barriers for accessing to them as stated in the 2001 report by the Bank of England on credit derivatives³⁶.

Credit spread options

These types of contracts are less common and more sophisticated transactions. Credit options determine the creditworthiness of an instrument such as a bond, as the increase of the credit spread of the binds over a risk free security³⁷. In this case, the buyer of the protection may agree with the seller that during the agreed period in the contract, he has the option to put the bonds to the seller if the credit spread goes up or he can call for the seller to transfer the bonds to the buyer if the credit spread decreases by indicating that the issuers' credit is improving.

³⁵ David Rule, June 2001: The Credit Derivatives Market: its development and possible implications for financial stability. G10 Financial Surveillance Division, Bank of England, Financial Stability review

³⁶ Idem (35)

³⁷ Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000

Credit options are put or call options on the price of a floating note, bond or loan, asset swap that are normally credit risky instruments that exchanges the cash flows of that instrument for a floating rate. The buyer of the protection has if a credit put option the right but not the obligation to sell or buy from the option seller a reference asset by specified floating rate at a previously specified price (known as the strike price)³⁸.

Settlement on these types of transactions can be either agreed on a cash or physical basis.

Contrary to the other types of credit derivatives, CDS and total return swaps, credit options only transfers credit risk and not market risk³⁹. The seller of the protection should therefore have high credit ratings.

Credit spread downgrade protection⁴⁰

Buyers of credit options are normally banks and financial institutions that are interested in hedging (that is to protect themselves against a loss but also losses the chance to make a profit), their market exposure to fluctuations in credit spreads, that is they would normally hedge long term positions with put options and short positions with call options. As such, credit options result very attractive to large banks with leveraged balance sheets. These instruments are also used to hedge exposure to downgrade risk. Investors holding portfolios with deteriorated assets and forced to sell can also use structured derivatives in order to get protection for a possible downgrade. In this particular case scenario the portfolio manager is

³⁸ Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000, p717

³⁹ This is because the yield on the bonds should move in the same way as if there has been no change on the credit of the issuer. Therefore, market risk would be excluded

⁴⁰ For detailed information about credit spreads options concept, risk and valuation please see Annex on glossary terms and detailed information on *credit derivatives and credit Linked Notes*, 2nd Edition, Satyajit Das, John Wiley & Sons 2000

not forced to sell at distressed prices and allows them to own assets of marginal credit quality at lower risk. The risk of the portfolio can then be readjusted.

Credit options can also be used for certain borrowers that want to make fixed any future borrowing costs. Thus, a borrower can hedge exposure to interest rates using interest rate derivatives. They can therefore enter into a credit option contract in their own name and lock future borrowing costs.

The different types of credit derivatives are mainly used by institutional investors for hedging purposes, that is, to protect themselves against any losses arising from an asset, in order to provide liquidity to the markets, also for arbitrage purposes such as the use of different markets to make a profit, reduce cost and risks. By using credit derivatives, investors can also reduce transactional costs such as custody charges and documentary taxes among others⁴¹.

Part II:

2.1 Regulatory Approach

Having discussed the main types of credit derivatives and its different structures, part II of the paper, will now focus on the capital regulatory treatment for credit derivatives.

As already argued one of the main reasons for using credit derivatives is the transfer of credit risk. This transfer of risk can be considered either as economic capital relief or regulatory capital relief. The main difference between both is that “economic capital implies the reduction to be held against a position where the credit derivatives transaction provides

⁴¹ JP Morgan research for credit derivatives in collaboration with risk metrics
www.investinginbonds.com/assets/.../Intro_to_Credit_Derivatives.pdf -

effective hedge against the risk of loss”⁴². On the other side, regulatory capital is the capital required to be held against the risk. Regulatory capital is determined by the Basel II Accord and the Capital Requirements Directive, (CRD)⁴³.

In this section, I will therefore discuss the proposals by Basel Committee and the European Commission⁴⁴ on regulatory capital to be held against counterparty credit risk and the impact of the new proposals for market participants. The idea is to have a more in depth analysis of the current proposals and the challenges that market participants will face once these new regulations have been implemented. In order to better understand the extent of the regulations it would be useful to clarify few concepts relating to counterparty risk and the methods previously used to measure it.

Counterparty Risk

As defined by BIPRU 13⁴⁵, Counterparty risk is “the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows”, that is the risk that an obligor would not be able to meet his contractual obligations. Counterparty risk is part of credit risk and constitutes a feature for derivative contracts. The assessment of counterparty risk is sometimes uncertain as it will depend on the future market’s conditions.

The fact that the exposure arising from a derivative can vary over the life of the transaction, makes important to know not only the current market to market risk exposure but also the

⁴² Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000, Section 19

⁴³ Amendments to Directives 2006/48/EC and 2006/49/EC “The Capital Requirements Directive (CRD) came into force on 1 January 2007. It introduced a supervisory framework in the EU designed to ensure the financial soundness of credit institutions (banks, building societies and certain investment firms) and reflects the Basel II rules on capital measurement and capital standards”

⁴⁴ As agreed on the Pittsburgh Summit in Implementing the G20 Recommendations for Strengthening Financial Stability.

⁴⁵ Prudential Sourcebook for Banks, Building Societies and Investment Firms <http://www.fsa.gov.uk/pubs/international/bipru13.pdf>

potential future exposures of a particular financial asset⁴⁶. These projections can help financial institutions to identify the credit risk involved on a specific financial instrument and therefore to hold a cushion for any possible future losses.

During the credit crisis, it has been proved that counterparty risk measures were not accurate leading to the biggest problems that the financial markets have faced since the great depression. Pre crisis, firms could use three different methods in calculating the exposure of their over the counter (OTC) derivatives⁴⁷. In contrast there are however some other derivatives that are traded in regulated exchanges. Most derivatives contracts are nowadays negotiated following the ISDA master Agreements standards⁴⁸.

As mentioned, the treatment of counterparty risk measurement for OTC derivatives until now has been determined by three different methods:

The market to market (MTM) method is calculated as the MTM plus the potential future exposure (PFE)⁴⁹ that is determined by a percentage of the notional value of the contract⁵⁰.

The Standardised method⁵¹ on the other side provides a more risk sensitive method allowing a more accurate calculation not simply based on the notional value of the transaction. Finally,

⁴⁶ Market risk's factors would be equity prices, interest rate risk, currency risk and commodity risk and their volatilities as to how the markets behave. Therefore, market to market risk is the risk of a portfolio losing value due to any of these factors.

⁴⁷ Paul C Harding "*Mastering the ISDA Master Agreements (1992 and 2002)*", FT Prentice Hall, Financial times, Great Britain 2004. OTC Derivatives, refer to those bilateral contracts that are negotiated privately between the parties without an exchange as an intermediary.

⁴⁸ Since 1991 ISDA has published eleven different sets of definitions. However, it was in 2000 when all the definitions were consolidated and it was in 2003 and due to the rapid market's growth when ISDA included the first credit derivatives definitions. By this incorporation, ISDA established the most common use documents for OTC transactions to be use by market participants.

⁴⁹ The counterparty credit risk charge for single name credit derivative transactions in the trading book will be calculated using the following potential future exposure add-on factors as by Section 707 of the Basel II Accord. <http://www.bis.org/publ/bcbs107.pdf?noframes=1>

⁵⁰ Prudential Sourcebook for Banks, Building Societies and Investment Firms. <http://www.fsa.gov.uk/pubs/international/bipru13.pdf>

⁵¹ Trading book capital treatment for specific risk under the standardised methodology can be found on section 709-718 if Basel II Accord. <http://www.bis.org/publ/bcbs107.pdf?noframes=1>

the internal model method if used, would give firms a more effective PFE as its calculation would be correlative to the internal risk management of a particular firm⁵².

As already discussed the credit crisis has shown that market participants did not price counterparty risk correctly. There have been some proposals by the regulators that we will discuss later in this paper where they proposed central clearing⁵³ as the best method to mitigate risk.⁵⁴ Clearing at the same time, can occur either bilaterally, between the counterparties involved in a bilateral agreement (OTC) or by central counterparty (CCP) at a central market level⁵⁵.

In July 2009, The European Commission published a Communication paper aimed at *ensuring efficient safe and sound derivatives markets*⁵⁶. In this paper the Commission's main focus was to identify the main problems implied on the over the counter (OTC) markets during the crisis and to address possible solutions for these problems. The Consultation paper was followed by a public hearing in September, where all G20 leaders agreed the following: All standardised OTC derivatives contracts should be traded on exchanges or electronic platforms where appropriate, and cleared through central counterparties by the end of 2012. OTC derivatives should be reported to trade repositories, and non-centrally cleared contracts should be subject to higher capital requirements⁵⁷. Following the G20 Pittsburgh Summit, The Basel Committee on Banking Supervision (BCBS) met in October 2009 and made

⁵² These methods will be later further explained in this paper

⁵³ Clearing can be defined as the procedure by which an organisation acts as an intermediary and assumes the role of both buyer and seller for transactions in order to reconcile orders between transacting parties.

⁵⁴ "While the use of CRM techniques reduces or transfers credit risk, it simultaneously may increase other risks to the bank, such as legal, operational, liquidity and market risks. Therefore, it is imperative that banks employ robust procedures and processes to control these risks, including strategy; consideration of the underlying credit; valuation; policies and procedures; systems; control of roll-off risks; and management of concentration risk arising from the bank's use of CRM techniques and its interaction with the bank's overall credit risk profile" Basel II Accord. <http://www.bis.org/publ/bcbs107.pdf?noframes=1>

⁵⁵ COM (2009) 563/4 Ensuring efficient, safe and sound derivatives markets.

⁵⁶ COM(2009) 332 final, http://ec.europa.eu/internal_market/financial-markets/docs/derivatives/report_en.pdf

⁵⁷ <http://www.pittsburghsummit.gov/mediacenter/129639.htm>

progress on the main elements of the Basel II reforms. The Committee developed concrete proposals for capturing counterparty credit risk, especially with regard to OTC derivatives exposures⁵⁸. By the end of July 2010, the BSBC has agreed further amendments to the called Basel III proposals for capital and liquidity standards that will affect credit and counterparty risk for the treatment of credit derivatives.

2.2 The Basel Committee of Banking Supervision⁵⁹

To understand the regulatory approach to credit derivatives, it is essential to review the existing framework under which capital is held against credit risk, that is the risk arising from any party of the contract defaulting. Capital requirements are determined under the Basel capital adequacy Accords, the first one released in 1988⁶⁰ and subsequently amended by Basel II Accord in 2004, currently under review⁶¹. Prior to Basel II Accord, bank regulators did not have a common international agreement on how credit derivatives could affect bank capital requirements. Since the first Basel Accord in 1988 the markets were growing fast and national regulators were applying the framework of the Accord very freely specially for off-

⁵⁸ These measures complement the improved capture of trading book risks and securitization exposures. Due to the large extent of measures adopted by Basel will mainly focus on counterparty risk measures, CCP and trading repositories as to improve market's transparency.

⁵⁹ The Basel Committee of Banking Supervision "is a committee of banking supervisory authorities that was established by the central bank governors in 1975. It usually meets at the Bank of International Settlements based in Basel". The Committee "provides a forum for regular cooperation on banking supervisory matters and its main objective is to enhance understanding of key supervisory issues and improve the quality of banking supervision worldwide". Since Basel Committee was established there have been three main Accords and subsequent amendments for Banks Capital Adequacy. The Committee is about to enhance the new Basel III Accord as a consequence of the credit crisis. For further information about formation and history please visit [www._www.bis.org/bcbs/](http://www.bis.org/bcbs/)

⁶⁰ Bank of International Settlement "proposals for international convergence of capital measurement and capital standards 1988"

⁶¹ "The scope of application of the Framework will include: "any holding company that is the parent entity within a banking group to ensure that it captures the risk of the whole banking group. Banking groups are groups that engage predominantly in banking activities and, in some countries, a banking group may be registered as a bank. The Framework will also apply to all internationally active banks at every tier within a banking group, also on a fully consolidated basis" As contemplated in the Basel II Accord

balance sheet transactions⁶². The guidelines recommended for regulated banks to hold a minimum level of capital of 8% against credit risk. Credit risk was determined in accordance with the conversion of all the transactions into risk asset equivalent. The measure was based on a system of risk weighting determined by the type of transaction, maturity and the quality of the counterparty⁶³. However, the Accord did not have special mention to credit derivatives. As mentioned, off balance sheet derivative transactions' calculation was based on a market to market (MTM) on the transaction plus and add on factor based as a percentage of the notional principal of the transaction for future exposure based on volatile of prices⁶⁴.

Credit derivatives become very attractive for commercial banks as it allowed them to transfer risk without the need to sell the underlying asset until any credit event occurred. In addition, banks had also a regulatory motivation in investing on these transactions. The 8% minimum capital requirement was higher on corporate exposures than in investment grade exposures⁶⁵. This helped banks to transfer the risk to other entities that were not necessary subject to the same capital requirement. Furthermore, the treatment of regulatory capital was different in some jurisdictions. In the UK, for instance the treatment of the Financial Services Authority, (FSA), for funded and unfunded transactions was different. Thus, for banks wanting to buy protection from another bank, the 8% capital ratio could be reduced; however, it was kept the

⁶² In April 1995 the Basel Committee published an amendment for off balance sheet items by "recognising the effects of netting in the add-ons and to expand the matrix of add-on factors" Basel Capital Accord: treatment of potential exposure for off-balance-sheet items Basle April 1995, <http://www.bis.org/publ/bcbs18.pdf>

⁶³ Bank of International Settlement "proposals for international convergence of capital measurement and capital standards" 1988 Under the accord, basic regulatory capital position in respect of credit risk on risk weighting calculations were of 100% risk weighting on terms loans and funded components and for unfunded commitments calculations were of 50% risk weighting.

⁶⁴ Later amended by recognising the effects of netting in the add-ons and to expand the matrix of add-on factors" Basel Capital Accord: treatment of potential exposure for off-balance-sheet items Basle April 1995, <http://www.bis.org/publ/bcbs18.pdf>.

⁶⁵ The Basel Committee realised a new Basel Accord in 1996 amending the previous one by incorporating market risks to the capital Accord.

same if the unfunded protection were to be bought from a non bank⁶⁶. On the other hand, under the Basel I Accord, Credit Linked Notes (CLN) did not have any capital requirement linked to them⁶⁷. Previous regulations stated as well that where banks were instead selling protection, they had to hold capital as if the CDS had been settled and the underlying asset was in their balance sheet⁶⁸.

In 2001, Basel committee for banking supervision (BCBS), proposed some changes to Basel 1988 Accord. In July of the same year, a survey by the Bank of International settlements showed the rapid growth of the credit derivatives markets. As shown in the report, positions on these types of instruments were from \$108 billion in billion at end-June 1998 to \$695 billion at end-June 2001. Market participants noted that the market for credit derivatives was diversifying beyond transactions aimed at the restructuring of banks' balance sheets with the entry of new market participants such as insurance companies⁶⁹.

The intention of Basel II was to try to harmonise the treatment of credit derivatives as the market was growing very rapidly. Regulators tried also to reflect the fact that new market participants were now been part of these transactions.

In June 2004, the Basel Committee on Banking Supervision issued the long awaited *International Convergence of Capital Measurement and Capital Standards: a Revised Framework*, describing changes to the regulatory capital requirements for banks⁷⁰. The new

⁶⁶ Credit risk mitigation (CRM) – techniques used to reduce the credit risk associated with an exposure or exposures that a firm holds. <http://www.fsa.gov.uk/pubs/international/bipru5.pdf>

⁶⁷ Further information please see Credit derivatives and credit Linked Notes, 2nd Edition, Satyajit Das, John Wiley & Sons 2000 p 835 on regulatory framework for Credit linked Notes

⁶⁸ When referring to previous regulations under Basel Accord section, it does refer to regulatory framework pre credit crisis and pre Basel II implementations.

⁶⁹ BIS Derivatives survey 2001. <http://www.bis.org/publ/rpfx02t.pdf>

⁷⁰ These changes are known as the New Basel Capital Accord, “Basel II.” The new Accord, was under discussion since June 1999, is designed to replace the 1988 Basel Accord with a more risk-sensitive set of regulations. A key element of the new Accord is greater reliance on banks' internal rating systems in the calculation of regulatory capital charges. Basel II was fully adopted by most banking regulators by 2007.

proposals had important consequences for the financial markets. However, after the consultation paper the reforms on credit derivatives were welcomed for most of the parties on the consultation process. There was however, some criticism by ISDA on the proposed residual risk for credit derivatives regarding the size⁷¹. The main intention of the new Accord was to align more closely the capital requirements with economic risk as well as the establishment for credit risk modelling in order to further recognise default correlations with bank capital requirements.

The proposal included two different approaches for banks to calculate their capital required for market, operational and credit risk. The idea behind was to be able to retain a minimum against bank's unexpected losses. Under the new Accord, the elements for calculating the minimum required was based on: a definition of regulatory capital, risk weighted assets and the minimum ratio of capital to risk weighted assets. Thus, the minimum capital requirement on risk weighted assets would be an 8% based on the above mentioned measurement⁷². As with regard to credit risk the Basel II Accord leaves banks with the option to decide between two different approaches; banks can either use the standardised approach, that is, external credit rating provided but credit rating agencies or they can also use their own internal credit risk measurement method even if subject to stricter supervisory control. Banks have been encouraged to use their own methodologies for risk. However, they have also been obliged to use the external approach. This recommendation has created certain criticism as a consequence of the credit crisis. The idea of banks being able to use the standardised approach has caused many market's disruptions as there was a culture of shopping around amongst the main credit rating agencies to obtain the best ratings. Furthermore, it seems that

⁷¹ Comments on a consultative paper issued by the Basel Committee on banking supervision in June 1999 <http://www.isda.org/press/pdf/baselcaf.pdf>.

⁷² Basel II: Revised international capital framework. <http://www.bis.org/publ/bcbsca.htm>

the risk of the new securities being rated was not as accurate as markets expected not as liquid as they thought either.

Under the advanced approach, banks are able to develop and apply their own internal capital measurement methods. It should be approved by the correspondent financial authorities and it is also subject to certain eligibility criteria. Even if the Basel II Accord tried to minimise the risks exposure for banks by creating global standards, the Accord has shown some of its weaknesses during the credit crisis.

Basel II is now under discussion and the BCBS is trying to achieve a better approach for banks to be able to absorb future losses.

Current Basel approach: consequence of the crisis (Basel III)

The financial crisis raised some concerns on the use of credit derivatives instruments and there have been many discussions on the way these types of financial instruments should be regulated. On the 26th of July of this year, the Basel Committee agreed several amendments to the called “Basel III” proposals for capital requirements⁷³. The agreed measures although constitute a significant improvement for the financial regulatory framework is still seen as a big challenge for some financial institutions.

The agreement makes material amendments to the main consultations papers already proposed by the Committee in December 2009⁷⁴. In Particular, the paper includes proposals for the treatment on deductions in capital calculations, requirements for counterparty risk (CCR)⁷⁵ and definitions for leverage ratio and liquidity ratio. Some of the key amendments

⁷³ The Group of Governors and Heads of Supervision reach broad agreement on Basel Committee capital and liquidity reform package. 26 July 2010. <http://www.bis.org/press/p100726.htm>

⁷⁴ Strengthening the resilience of the banking sector - consultative document, December 2009. <http://www.bis.org/publ/bcbs164.pdf>

⁷⁵ “In its review of the treatment of counterparty credit risk (CCR), the Committee engaged in a wide-ranging effort to ascertain areas where capital requirements for CCR need to be strengthened. In conducting this review, the Committee carefully considered:

include changes to measurement of counterparty risk and netting of derivatives⁷⁶. Modifications have been made to the calculation of the additional capital charges for CCR arising out of derivatives where CCP would be subject to a modest risk weight so that these types of exposures are not free risk⁷⁷. The Annex has also included broader recognition of hedging and elimination of a multiplier in calculating the credit valuation adjustment (CVA).

The main objective of these measures is to contribute to the consolidation of the proposed Basel III reform as well as to allow market participants to make a better assessment to counterparty risk⁷⁸. We will therefore now focus on the amendments that will affect counterparty risk under the new Basel proposals (Basel III) and its implementation under the Capital Requirements Directive. The new changes are in the area of: calculations of the capital charge valuation adjustment (CVA), the multiplier for the asset value correlation for exposures to large financial institutions and the risk for the market to market and collateral exposures to central counterparties. As stated by the Committee in the 2009 consultative paper, Banks also will be subject to a capital charge for mark-to-market losses. This will be associated with deterioration in the credit worthiness of counterparty. While the current Basel

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- Areas where the current treatment did not adequately capitalise for the risks during the crisis;
 - The provision of incentives to move bi-lateral OTC derivative contracts to multilateral clearing through central counterparties;
 - The provision of incentives to reduce operational risk arising from inadequate margining practices, back-testing and stress testing; and
 - Whether the changes would contribute to reducing procyclicality”.
- Strengthening the resilience of the banking sector - consultative document, December 2009. <http://www.bis.org/publ/bcbs164.pdf>

⁷⁶ ISDA defines close out netting as “If a counterparty to an ISDA Master Agreement defaults, the close-out netting provisions of the ISDA Master Agreement provide that offsetting credit exposures between the two parties will be combined into a single net payment from one party to the other”

⁷⁷ CCP refers to Counterparty Clearing, the concept, implications and new regulatory changes will be further discussed on this paper.

⁷⁸ Although the Basel committee refer to the main proposed changes on capital definition, leverage ratio, and risk weighted assets calculations, we will be focus mainly in this paper in those amendments that directly will have an effect on Credit derivatives. For further information on the amendments please see: <http://www.bis.org/press/p100726.htm>. Further analysis of the specific new regime for counterparty credit risk will also be seen in more detail on the CRD chapter as affecting specifically the EU which is the focus of this paper.

II standards cover the risk of a counterparty default, it does not address such the credit valuation risk, which has been a greater source of losses than those arising from outright defaults⁷⁹.

The following are therefore the final changes that will affect counterparty risk⁸⁰:

The modification of the bond equivalent approach to address hedging, risk capture, effective maturity and double counting. The elimination of the excessive calibration of the CVA as proposed in December 2009. Furthermore, by modifying the bond equivalent, the Committee has agreed that single CDSs should be included⁸¹.

The asset value correlation adjustment has been maintained at 25% but the size of the financial institutions has been increased from \$25 billion to \$100 billion. This new approach will help firms identifying the interconnection between firms as well as to reflect the inherent higher risk of exposures to other financial entities. As confirmed in the December consultation, financial institutions' credit quality has deteriorated during the crisis and they proved to be relatively more sensitive to systemic risk than nonfinancial firms. The work

⁷⁹ Strengthening the resilience of the banking sector - consultative document, December 2009. <http://www.bis.org/publ/bcbs164.pdf>

⁸⁰ The information contained on this section is based on the main changes proposed by the Basel Committee with regard to counterparty credit risk in the following consultation Papers: Strengthening the resilience of the banking sector - consultative document, December 2009. <http://www.bis.org/publ/bcbs164.pdf> and The Group of Governors and Heads of Supervision reach broad agreement on Basel Committee capital and liquidity reform package, 26 July 2010. <http://www.bis.org/press/p100726.htm>.

⁸¹ "Under the bond equivalent approach, single-name credit default swap (CDS) hedges that reference the counterparty to which the bank is exposed will be recognised. This should provide an incentive for banks to hedge the CVA risk, which many failed to do prior to the crisis". The Group of Governors and Heads of supervision reach broad agreement on Basel Committee capital and liquidity reform package, 26 July 2010. <http://www.bis.org/press/p100726.htm>.

conducted by the Committee indicates that asset value correlations for financial firms were, in relative terms, 25% or higher than for non-financial firms⁸².

Banks' mark-to-market and collateral exposures to a central counterparty (CCP) will now be subject to a modest risk weight that goes from 1 percent to 3 percent. This is an improvement as it would reflect that Bank's activities should not be risk free⁸³.

On a later report by Moody's on the effect of the new proposals, it has been addressed the positive aspects that these requirements will imply for market participants. The new changes would allow risk to be measure more effectively without penalising market related activities. Furthermore, the amendments to CVA will benefit banks with large exposures as it will impact bank's profitability while maintaining an appropriate level of capital charge for these activities. Similarly, they think that the increase in the threshold for banks subject to the multiplier will prevent small banks becoming subject to an increase in their borrowing costs. Importantly the report also points out that the "removal of the zero risk for central counterparties acknowledges that this type of exposure carries some risk and limits risk of regulatory arbitrage⁸⁴". The BSBC is still discussing on further regulations. The following are the next steps⁸⁵

- September 2010: deadline for comments consultative paper on countercyclical capital buffers

⁸² Strengthening the resilience of the banking sector - consultative document, December 2009. <http://www.bis.org/publ/bcbs164.pdf>

⁸³ In the December Consultation paper the Committee explained "Banks' collateral and mark-to-market exposures to central counterparties meeting these strict criteria will qualify for a zero percent risk weight. These criteria, together with strengthened capital requirements for bilateral OTC derivative exposures, will create strong incentives for banks to move exposures to such central counterparties". Strengthening the resilience of the banking sector - consultative document, December 2009. <http://www.bis.org/publ/bcbs164.pdf>

⁸⁴ July 26 Basel III Agreement on Capital and liquidity positive for creditors. Moody's investors services, end August 2010

⁸⁵ <http://www.bis.org/>

- September 2010: meeting of the Governors and Heads of Supervision of the Basel Committee, with decisions on finalised calibration and phase-in arrangements
- November 2010: G20 meeting in Seoul to discuss finalised Basel III proposals
- December 2010: publication of finalised Basel III proposals, including calibration of proposals and determination of new minimum capital ratios.

There are nonetheless some challenges that market participants will face with the implementation of the new Basel II reform. The new set of rules is to be implemented within a period of at least five years and therefore investors should not expect changes anytime soon. It does however, create further certainty about the future of banking regulation as proposals are materialising after many consultation papers being published. Once the implementation of the reform has been completed, it will be phased until 2012 over a multi year period. We will now analyse how Basel proposals will become law in the European Union through the Capital Requirements Directive.

2.3 The EU regulations: Capital Requirement Directive

Following Basel III new requirements it is important to further analyse the EU Capital requirements Directive. The CRD reflects the Basel II rules on capital measurement and capital standards. Therefore, in order to respond to the needs of the financial system and following the new proposals by the Basel Committee, the European Commission has proposed a series of amendments to the current Capital Requirements Directive⁸⁶. This part will discuss the main changes under the CRD that will affect counterparty credit risk (most of these changes are in accordance with Basel II new reforms).

The Commission proposals for holding higher capital requirement on bilateral clearing transactions not able to be cleared through the central houses became a principal after the

⁸⁶ Commission services staff working document on possible further changes to the capital requirements directive on CRD IV. ec.europa.eu/internal_market/consultations/.../consultation_paper_en.pdf.

G20 meeting in Pittsburgh⁸⁷. The Commission confirmed that the best way to do it would be by widening the difference of capital charges between centrally cleared and bilaterally cleared contracts⁸⁸. These changes should be consistent with the approach outlined by the Basel Committee on Banking Supervision as already explained in this paper.

However, even though the approach of the EU on the new regulatory capital requirements is in line with the new proposals on Basel II, there are aspects where these would not be exactly the same. Thus, since Basel II new approach does not include a 5 percent originators risk-retention requirement, the new CRD has include this new requirement. Furthermore, Basel II reforms have now been almost finalised while the implementation of the CRD will take some more time for each member state to adopt it. This also means that although member states should adopt the Directive they can also adopt some domestic law measures. In Germany for instance the 5 per cent retention risk will be increased up to a 10 per cent from 2013. The reason is that they believe that the 5 percent risk retention would not be sufficient for some asset classes in securitised products. Similarly, in the UK the FSA, is now reviewing the new CRD changes on the FSA's consultation paper, CP09/29⁸⁹. The paper sets out the proposals required following the first major amendments to the CRD by following some of the aspects discussed on the Turner Review⁹⁰.

⁸⁷ "Higher capital requirements would reflect the higher risk that such contracts pose to the financial system". The G20 the Pittsburgh summit Leaders' statement 24 – 25 2009 http://g20.org/Documents/pittsburgh_summit_leaders_statement_250909.pdf

⁸⁸ Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions

⁸⁹ http://www.fsa.gov.uk/pages/Library/Policy/CP/2009/09_29.shtml ON Directive of the European Parliament and of the council amending directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for re-securitisations, and the supervisory review of remuneration policies sec(2009) 974 final.

⁹⁰ The Turner Review: *A regulatory response to the global banking crisis*. March 2009. The UK Proposals include: "Improving the quality of firms' capital by establishing clear EU-wide criteria for assessing the eligibility of hybrid capital to be counted as part of a firm's overall capital. The proposals specify the features that hybrid capital must have regarding permanence, flexibility of payments and loss absorbency to be eligible

The CRD reforms introduce new requirement for securitisation products. The main changes have been approved under CRD 2 and some of them will directly affect credit derivatives exposures as with regard to the improvement in risk management of securitization, “including a requirement to ensure that a firm does not invest in a securitization unless the originator retains an economic interest.”⁹¹ This is known as the originators risk retention:

Originators risk-retention

The new CRD requires under Section 7, article 122a that originators should hold at least a 5 per cent net income interest. The retention risk measure also implies that the burden of proof would be for the originators, that is, they have to make sure that they disclose this information to the credit institutions they are negotiating with⁹². The idea of placing the burden of proof into them will prevent some third party credit institutions entering into some types of transactions as originators will have to disclose that they are retaining a 5 per cent of net economic income but banks negotiating with third parties should prove this. This makes it difficult for some securitised products that have been transferred between different parties⁹³.

as tier one capital; Enhancing the management of large exposures by restricting a firm’s lending beyond a certain limit to any one party; Improving the risk management of securitization, including a requirement to ensure that a firm does not invest in a securitization unless the originator retains an economic interest; Strengthening the capital requirements for the trading book to ensure that a firm’s assessment of the risks connected with its trading book better reflects the potential losses from adverse market movements in stressed conditions; Imposing higher capital requirements for re-securitizations to make sure that firms take proper account of the risks of investing in such complex financial products; and upgrading disclosure standards to increase market confidence”.

⁹¹ FSA consultation paper CP09/29

⁹² Article 122a of the CRD II , Directive 2009/111/EC of the European parliament and of the council of 16 September 2009 amending Directives 2006/48/EC, 2006/49/EC and 2007/64/EC as regards banks affiliated to central institutions, certain own funds items, large exposures, supervisory arrangements, and crisis management. “A credit institution, other than when acting as an originator, a sponsor or original lender, shall be exposed to the credit risk of a securitisation position in its trading book or non-trading book only if the originator, sponsor or original lender has explicitly disclosed to the credit institution that it will retain, on an ongoing basis, a material net economic interest which, in any event, shall not be less than 5 %”.

⁹³ This aspect has been discussed by Leonard Ng on Changes to Basel and EU capital requirements Directive: Implications for securitisation, Journal of International Banking Law and regulation, 2010

In the US, the recently approved Dodd-Frank Wall Street Reform and Consumer Protection Act has adopted a very similar approach by requiring as well five percent retention for the originator. Section 941 of the act specifies that there should be: (I) not less than 5 percent of the credit risk for any asset⁹⁴. However, in difference with the EU proposals, the Act does not require investors not to invest unless they can be sure that the originator is holding a five per cent.

The intention of the regulators by applying this new requirement is to try to avoid for the originators the possibility to transfer all the risk as in doing so it has been proved during the crisis that originators securitised instruments were not as diligent as if they would have been obliged to retain a certain percentage.

Article 122a (1) defines in more detailed “retention of net economic interest⁹⁵”. The article establishes that this retention should not be use for hedging or risk mitigation purposes⁹⁶.

This is important as credit institutions were previously using retention if any to hedge their risks and therefore when the problems came there was not enough cushions to support all the losses. The article includes also an exception for credit default swaps that are not use to hedge a securitisation⁹⁷. This new measure is important for securitisation however as seen in

⁹⁴Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act).

⁹⁵ For the purpose of this Article, “retention of net economic interest” means:(a) retention of no less than 5 % of the nominal value of each of the tranches sold or transferred to the investors; (b) in the case of securitisations of revolving exposures, retention of the originator’s interest of no less than 5 % of the nominal value of the securitised exposures; (c) retention of randomly selected exposures, equivalent to no less than 5 % of the nominal amount of the securitised exposures, where such exposures would otherwise have been securitised in the securitisation, provided that the number of potentially securitised exposures is no less than 100 at origination; or (d) retention of the first loss tranche and, if necessary, other tranches having the same or a more severe risk profile than those transferred or sold to investors and not maturing any earlier than those transferred or sold to investors, so that the retention equals in total no less than 5 % of the nominal value of the securitised exposures

⁹⁶ “Net economic interest is measured at the origination and shall be maintained on an ongoing basis. It shall not be subject to any credit risk mitigation or any short positions or another hedge. The net economic interest shall be determined by the notional value for off-balance sheet items”. Article 122a (1)

⁹⁷ credit default swaps where these instruments are not used to package and/or hedge a securitisation that is covered by paragraph

the German example, in their opinion a 5 per cent should not be enough for some securitisation, although it has not been detailed yet the extent of the increase.

However, the Directive does not include any specific sanctions for non compliance with this article, and it would be at the discretion of the EU regulator to decide on this.

It seems therefore, that market participants will be facing some challenges with regard to the 5 percent risk retention measure. On one side, it seems that the idea of the EU to try to reach common risks retention standards is creating a rather more challenging position for market participants across Europe as they will be subject to different standards in different jurisdictions. This could lead with market participants trying to find other forms to avoid restrictive requirements by looking into less regulated jurisdictions. It is however still difficult to ascertain how market participants will behave, but if the new proposals limit their business nature, they could end up finding other ways in order to obtain higher returns. The new requirements are expected to take effect from 1 January 2011.

The CRD2 and CRD3 amendments will be supplemented by the latest consultation paper published by the Commission working paper staff on possible further changes to the capital requirements directive (CRD IV)⁹⁸.

In this latest paper, the Commission had identified five main changes that should be addressed to better manage counterparty risk. That is, an improved measurement to better address counterparty credit risk, a multiplier for the asset correlation for large financial institutions, the introduction of further standards for collateral management and the establishment of central counterparties that could help to reduce systemic risk that arises from derivatives products hold by financial institutions. The main reason for these changes is “to raise the capital buffers backing these exposures (derivatives, repos and securities financing

⁹⁸ Commission services staff working document, possible further changes to the capital requirements Directive. http://ec.europa.eu/internal_market/consultations/docs/2010/crd4/consultation_paper_en.pdf

activities), as well as to reduce the procyclicality and to provide additional help reducing systemic risk⁹⁹”.

The Commission has tried to include some new methods of measurement that would help market participants to better address counterparty risk. The new proposals would have to be adapted to the standardised approach to credit risk¹⁰⁰.

The reform mentions the inclusion of a more effective potential exposure by including a new metric that will also reflect “a period of stress to address general wrong way risk¹⁰¹”. Under the counterparty credit risk, mark-to-market method, a firm must also calculate potential future exposure arising out of its over-the-counter (OTC) derivative contracts. For credit derivatives, the potential future exposure would be either 5% or 10% of the notional value of the derivative, depending on whether a direct exposure to the underlying reference name would meet the definition of a qualifying debt security¹⁰². The CRD amendments, limit the PFE for written credit default swaps. In this case, the PFE will be limited to the present value of the future premiums owed by the swap counterparty¹⁰³.

The intention of the regulators is to include a metric based on markets volatility and periods of stress as this would contemplate a more realistic exposure. Furthermore, the new approach

⁹⁹ Commission services staff working document, possible further changes to the capital requirements Directive. http://ec.europa.eu/internal_market/consultations/docs/2010/crd4/consultation_paper_en.pdf

¹⁰⁰ Commission services staff working paper on possible further changes to the capital requirements directive.

¹⁰¹ General wrong way risk arises when the PD of counterparties is positively correlated with general market risk factors. Directive 2006/48/EC of the European parliament and of the council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast) <http://eur-lex.europa.eu/lexuriserv/lexuriserv.do?uri=consleg:2006l0048:20100330:en:pdf>

¹⁰² 2006/49/EC Annex II, point 7

¹⁰³ The present value of the unpaid premium effectively represents a cap on the market value of the position, i.e. if the spread on the reference name fell to zero, the positive value to the option seller would equal the discounted value of the unpaid premium.

should be also in consistency with the recent revisions market to market risk stress value at risk¹⁰⁴.

The Committee, as with Basel, has also proposed the incorporation of a credit valuation adjustment (CVA) associated with the deterioration of counterparty that will be determined by using the specific market capital charge required already for a hypothetical bond equivalent position. Under this approach single CDS hedges that reference to the counterparty to which the institution is exposed will also be recognised¹⁰⁵.

Similarly, The CRD¹⁰⁶ also gives firms the option of including all credit derivatives when calculating counterparty credit risk requirements. That is “an institution may want to include for the purposes of calculating capital requirements for counterparty credit risk all the credit derivatives in the trading book forming part of the internal hedges¹⁰⁷”. However, non trading book exposures “shall not be deemed to be hedged for the purposes of calculating capital requirements unless purchased from a third party protection provided that meets the credit risk mitigation requirements¹⁰⁸”. Financial institutions will be required to do this either by including all credit derivatives in the counterparty risk calculation or by assigning a zero value to derivatives used for hedging.¹⁰⁹

¹⁰⁴ A technique used to estimate the probability of portfolio losses based on the statistical analysis of historical price trends and volatilities. Directive 2006/48/EC of the European parliament and of the council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast).<http://eur-lex.europa.eu/lexuriserv/lexuriserv.do?uri=consleg:2006l0048:20100330:en:pdf> Calculation of risk weighted exposure amounts for equity exposures under the internal models approach. Capital requirement and risk quantification.

¹⁰⁵ Commission services staff working document, possible further changes to the capital requirements Directive. http://ec.europa.eu/internal_market/consultations/docs/2010/crd4/consultation_paper_en.pdf

¹⁰⁶ 2006/48/EC Annex III, Part 2, point 3; and 2006/49/EC Annex II, point 1

¹⁰⁷ Commission Directive 2009/27/EC of 7 April 2009 amending certain annexes to directive 2006/49/EC of the European parliament and of the council as regards technical provisions concerning risk management.

¹⁰⁸ point 19 of Part 2 of Annex VIII to Directive 2006/48/EC

¹⁰⁹ FSA consultation paper CP09/29

The Committee has also included some new charges to correlation trading exposures. Correlation trading is used by financial institutions to hedge concentration of risk and corporate portfolio risk¹¹⁰. Banks in general act as market makers by providing customers with credit protection based on tranches of either bespoke portfolios or indices. They also made the structure and price tranches required by their customers using tranching credit derivatives. The CRD new approach is that for instruments in the trading book that are securitisation positions, banks shall weight with the following its net positions as if the securitisation positions would be subject to the Standardised Approach for credit risk in the same institution's non-trading book. Thus, at 8% of the risk weight will apply¹¹¹. The new regulation does replace however the market making exemption¹¹².

Furthermore, the paper also addresses the need to implement an express Pillar 1 capital charge for specific wrong way risk. If there is a legal connection between the counterparty and the underlying issuer, single CDS would be used as the exposure at default of the counterparty¹¹³. The aim is to tackle some of the deficiencies in identifying the quality of some counterparties that contributed with many losses during the crisis. However, the fact

¹¹⁰ The CRD amendments define the correlation trading portfolio as securitisation and nth-to-default credit derivatives that meet the following criteria:

- Positions are neither: re-securitisation positions; options on a securitisation tranche; or any other derivatives of securitisation exposures that do not provide a pro-rata share in the proceeds of a securitisation tranche.
- All reference instruments are single-name instruments, including single-name credit derivatives, for which a liquid two-way market exists.

The new amendments also specifically exclude positions where the underlying reference assets are: retail exposures; residential and commercial mortgages; or claims on special purpose entities

¹¹¹ as set out in Part 4 of Annex IX to Directive 2006/48/EC

¹¹² Proposal for a Directive of the European Parliament and of the Council amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for resecuritisations, and the supervisory review of remuneration policies.

¹¹³ Exposure at default is used as the notional amount of the bond and it is based on future exposure, the EAD will factor in upfront some potential adverse future variations in exposure. Commission services staff working document, possible further changes to the capital requirements Directive.

http://ec.europa.eu/internal_market/consultations/docs/2010/crd4/consultation_paper_en.pdf

that there is none established method for this will become a new challenge for market participants as to how to apply this new requirements.

The Committee also proposes a higher risk weight requirement for exposures of financial institutions with non financial institutions and the idea would be to apply a multiplier to the asset value correlation to all exposures to unregulated firms in accordance with Basel.

The Commission will propose legislation for market participants that are not able to clear through central houses because of the nature of the structure, to be able to hold enough collateral in order to avoid any further risks. There is consideration to strengthen the margins for collateral management in bilateral clearing proposing an increase in the margin period of risk for certain netting sets. That is, regarding the variation margin requirement, it has been recommended for non institutional parties that these “should be tailored in such a way that they do not undermine the corporate sector's ability to use derivatives for transferring risk, especially in the case of companies whose use of derivatives is below a given threshold¹¹⁴”.

There are also some changes to the standard rules for securitisation positions and nth-to-default credit derivatives that will affect the calculation of counterparty risk¹¹⁵.

The CRD amendments establishes that institutions with positions in a first-to-default credit derivative will be permitted to off-set the specific risk of the reference entity, to which the lowest specific risk percentage charge applies¹¹⁶.

¹¹⁴ Commission services staff working document, possible further changes to the capital requirements Directive. http://ec.europa.eu/internal_market/consultations/docs/2010/crd4/consultation_paper_en.pdf

¹¹⁵ On an answer from Calyon to the Basel Committee with regard to these types of products they stated ““Yet nth to Default are a type of CDO and a CDO tranche is roughly equivalent to a combination of nth to Default. In fact, both products (CDO and nth to Default) are options on a basket of CDS, and should be treated as such rather than as securitized”. Comments on the consultative documents “Guidelines for Computing Capital for Incremental Risk in the Trading Book” (bcbs149) and “Revisions to the Basel II market risk framework” March 11th, 2009, <http://www.bis.org/publ/bcbs14849/ca/calyon.pdf>

¹¹⁶ First-to-default credit derivatives “Where an institution obtains credit protection for a number of reference entities underlying a credit derivative under the terms that the first default among the assets shall trigger payment and that this credit event shall terminate the contract, the institution may offset specific risk for the reference entity to which the lowest specific risk percentage charge among the underlying reference entities

As stated in the Commission Directive 2009/27/EC of 7 April 2009, “a firm with a long position in a basket of underlying reference entities and a short position in an nth-to-default credit derivative on the same basket will only be permitted to off-set specific risk if protection has also been obtained for defaults 1 to n-1, or when n-1 defaults have already occurred. If n-1 defaults have already occurred then the protection buyer may off-set the specific risk of the reference entity to which the lowest specific risk percentage charge applies”.¹¹⁷ The idea under these new regulations is to avoid that by transferring risk some entities could be left risk free. The use of credit derivatives as we have seen helped in transferring the risk and especially by the use of structured products diversification and risk transfer was easier for investors. By restricting their positions on these instruments there will be as well a better analysis of their risk taken.

Having now analysed the new capital requirements for trading and non trading book credit derivatives, this paper describes now the main reason for proposing central counterparty clearing by the G20 leaders as well as the challenges that market participants will face in this respect.

applies according to Table 1 of this Annex”. Commission Directive 2009/27/EC of 7 April 2009 amending certain annexes to directive 2006/49/EC of the European parliament and of the council as regards technical provisions concerning risk management

¹¹⁷ The FSA for instance currently require firms that hold securitisation credit derivatives in their trading book to hold capital against their market risk using either the standard rules in BIPRU 7.11 or an approved VaR model. When the CRD amendments are implemented firms will not be allowed to calculate their capital requirements for any securitisation positions, including securitisation credit derivatives, using their regulatory VaR model”. With the exception of positions that meet the correlation trading carve-out firms that hold securitisation credit derivatives in their trading book will be required to use the standard rules to calculate their market risk capital requirements. The new amendments also require the seller of protection on nth-to-default credit derivatives held in the trading book to calculate the specific risk capital charge using the rating of the derivative and applying this relevant securitisation framework risk weighting.

Central Counterparties

The following section analyses the proposals by the European Commission on Derivatives and Market Infrastructures¹¹⁸ and the latest Commission Services staff working document on possible further changes to the capital requirement Directive (CRD IV).

A central counterparty (CCP) as defined by the Committee is an entity that interposes itself between counterparties to a contract traded within one or more financial markets, becoming the buyer to every seller and the seller to every buyer¹¹⁹. A CCP can play an important role to reduce the systemic risk arising from exposures formed by holdings of derivatives products by banks and other financial institutions. However, a CCP also concentrates risk. Therefore, if it lacks of insufficient risk management processes could increase systemic risk. In order to avoid such situations, supervisors need to ensure that a CCP has in place strong risk management procedures with strict rules/standards governing all aspects of its operations.

The Commission is about to terminate drafting legislation on clearing of standardised OTC contracts. As agreed by the G20 all *standardised OTC contracts should be centrally cleared by the end of 2012*. The aim is to make mandatory for standardised contracts to be centrally cleared through clearing houses and it intends to establish higher supervision to non standardised contract as well. The idea shared the G20 “is to propose legislation governing their activities so as to eliminate any discrepancies among national legislations and ensure

¹¹⁸ This Paper follows the EU Communication on “ensuring efficient, safe and sound derivatives markets”, Published in July 2009.

¹¹⁹ Commission services staff working document, possible further changes to the capital requirements Directive. http://ec.europa.eu/internal_market/consultations/docs/2010/crd4/consultation_paper_en.pdf.

safety, soundness and proper governance”. The following legislation for clearing houses has been proposed¹²⁰:

1. Conduct of business and governance which will include measures for transparency of risks.
2. CCP participants will benefit from the lowest possible regulatory capital charge for counterparty credit risk of centrally-cleared contracts, following the regime currently being finalised by the Basel Committee. In view of their key role in managing risks, CCPs should be subject to adequate capital requirements.
3. Legal protection to collateral and positions provided by clearing members’ customers.
4. Authorisation by the European Securities and Markets Authority (ESMA) to operate in the EU.
5. Cooperation of ESMA with the Commission in order to be able to raise further issues.

The Commission has suggested two different approaches currently under discussion. They propose on one side to have a central counterparty (CCP) that would decide to clear certain contracts and then pass it to the competent authorities (ESMA) that will take the last decisions. The other approach would be to rather have ESMA to determine which contract should be subject to the clearing obligation. However, in order to be subject to the clearing obligation there are certain requirements that have to be met. That is, financial counterparties should clear all eligible contracts in the relevant CCPs listed in the register. Furthermore, the obligation also applies for financial counterparties entering into derivatives contract with third parties entities. Finally, in order to be eligible for clearing, the parties should actively become a member or a client. The Commission have also addressed the fact that in order to

¹²⁰ Public consultation on derivatives and market infrastructures, 14 June 2010. ec.europa.eu/...market/consultations/docs/.../derivatives/100614_derivatives.pdf

be eligible for clearing there should be in place a procedure which will be implemented by Law. CCPs should therefore be authorised by a competent authority to clear specific class of derivatives. Once approved, market participants should be able to have access to clearing. This authority would then inform ESMA. Subsequently, ESMA will decide whether that class would be eligible for clearing and if so it would then be registered.

In order to avoid any further systemic risk, the Commission would be adopting threshold for large exposures. Is a non financial institution were to pass the proposed threshold would be subject to the clearing obligation.

However, for a CCP to succeed there are some other areas that should be also harmonised. The challenges where described in Annex III, Part 2, Point 6 of Directive 2006/48/EC.

Thus, a CCP should have a separate initial capital that would cover against either operational or residual risks. It should also try to assess its exposure to each clearing member.

In order to cover some exposures until liquidation would occur, a CCP should be able to collect “margins to limit its credit exposures”. It should also adopt the relevant models that would help in capturing risks. A CCP should also be able to segregate and ensure protection of the margins posted against default of other clearing members.

As with regard to default it becomes important to address that a CCP should maintain a default fund to cover losses arising from default of one or more members. The contributions should of course be proportional to the exposures.

Furthermore, the Commission has also pointed out that a CCP should be able to have enough available capital for unexpected losses. This capital should be in addition to the initial capital. As required with financial institutions it has been proposed that CCPs run stress test scenarios to avoid any liquidity problems. Furthermore, CCPs should be able to request funds from non

defaulting members in the event of an existing member defaulting. The Commission has also pointed out that to cover losses it should first use the margin of a defaulting member, if these were not enough it should then use the fund's contributions of the default member but it should never use margin from non defaulting members to cover losses resulting from the default of another clearing member.

The Consultation paper, also establishes that a CCP would be able to accept also as collateral. It should however accept only highly liquid collateral with minimal market and risk. Financial instruments posted as margins should be deposited with operators of securities settlement system. Furthermore when investing, a CCP should consider the overall credit risk exposures for individual obligors as well¹²¹.

In case of default of any clearing member, a CCP should also have in place a procedure. That is, a CCP should ensure that the closing out of any clearing member's positions does not disrupt its operations or expose the non defaulting clearing members to any losses. Default procedures should be enforceable by taking into account national insolvency laws applicable to defaulting member.

It seems that the creation of a central counterparty although would benefit the clearing of derivatives contracts, it can also create some further disruptions as concentration of risks if not well managed could have severe consequences. Furthermore, as we have seen no all OTC contracts are centrally cleared and there would be still a gap even if higher capital requirements are required for those contracts not being centrally cleared. Additionally, the different approaches that solvency laws have in different jurisdictions could also cause big

¹²¹ European Commission, 14 June, 2010, Public consultation on derivatives and market infrastructures. ec.europa.eu/...market/consultations/docs/.../derivatives/100614_derivatives.pdf

challenges for market participants that would try to look for the one that would benefit them the most.

Part III:

3.1 Conclusions

The main focus of this paper has been the new regulatory requirements that will affect in some way market participants dealing with credit derivatives in the European Union. Specially, I have focussed my discussion in those changes with regard to counterparty credit risk that the use of credit derivatives involves.

The credit crisis has shown a series of weaknesses in the current regulatory framework for counterparty credit risk exposure arising from derivatives. Financial institutions were not properly prepared against the risk they were assuming during the crisis. Capital Markets before the collapse of Lehman were already distinguished by their volatility; there was nonetheless continuity on the security markets although the credit derivatives market was already less active. Volatile prices in securitisations have played also an important role during the crisis as it has served to measure potential future market risks with the use of CDS spreads, equity and bond prices.

Furthermore, the existing regulatory framework did not include the already discussed credit valuation adjustments or wrong way risk that could help in the capture for future counterparty credit risk. Securitisation bonds when used as collateral were being rated in the same way as corporate bonds without assuming the intrinsic risk of the assets as stated by the Commission working paper staff on new capital requirements (CRD IV). Securitisation was supposed to spread risks however its complexity and mispricing made financial institutions more vulnerable to the risks that they were taking when increasing their leverage.

In 2007 when sub-prime mortgages started to disrupt the credit markets and losses were spread globally through the credit derivative markets problems started to arise for banks. They had to write down from their own balance-sheets; there was at the same time a downgrade of credit ratings on their debt by the credit rating agencies. At this time banks were not able to support their loss as they did not have in place an appropriate capital cushion. Market's uncertainty kept therefore, investors aside from riskier positions. As a consequence, governments took action trying to avoid further disastrous economic global effects by injecting money into the financial markets. However, it was not only counterparty risk implied on the use of derivatives and especially in credit derivatives and structured products, the problem as many regulators have already explained was also a failure by financial institutions to properly manage counterparty credit risk exposures.

It seems however, that for the last ten years, due to the actions of market participants regulators have been trying to further regulate and standardise unregulated financial instruments that were playing a major role in the distribution and transfer of credit risk.

We have seen in the recent credit crisis cases scenarios such as the collapse of Lehman or AIG (although helped by the government), that credit derivatives did imply transfer of higher risk than expected. Also that the interconnection between financial institutions was of a great extent and that by spreading risk, this have caused a major systemic risk across the international financial markets. As a result, there have been as already explained in this paper numerous proposals by regulators on how to correct these problems. However, market's practices seems to be the answer as to whether regulators would be or not successful on their new regulatory approaches for the future years.

Greater regulation of counterparty credit risk would imply a higher likelihood to better capture risk of future exposures by market participants. However, there are yet some new challenges that market participants will have to face as well.

As discussed along this paper if there is a new regulatory framework it has to be implemented first. Some of the Basel and Capital requirements Directive proposals will take at least until the end of 2012 to be implemented. Therefore, changes will not come anytime soon.

Furthermore, the CRD will have to be implemented by the EU member states in order to become part of their national laws. Member states as we have seen in the case of Germany, can also apply additional legislation to their current regulatory framework. If this were the case, instead of reaching a harmonised framework, market participants could face more challenges while dealing within different regimes. The consequences could be that market participants move towards less regulated jurisdictions or to those where regulations will benefit them the most. Discrepancy in the financial regulatory framework by the major market drivers economies such as the US and EU, could contribute to change the focus of market participants towards jurisdictions where the regulatory framework could be less restrictive.

Banks as corporations have also responsibility towards their shareholders on profit maximisation. As such, the capital requirements established in the use of some financial instruments could move financial institutions towards different market practices. Greater regulation although we have seen that it has positive aspects can also restrain financial innovation.

The establishment of higher capital requirements will help to mitigate future counterparty risk to market participants. However, the success of the new regulatory framework will depend on how market participants will implement these and also on their practices.

Furthermore, the creation of a central counterparty for clearing implies as well further challenges. As discussed, not all OTC contracts will necessarily be cleared through CCP as there will be still be a number of bespoke contracts in place to able to respond to some investor's needs.

The aim of regulators to move all OTC contracts to central clearing and imposing higher capital requirements for OTC contracts not being cleared through CCP could be read for some market participants as a rather penalising measure to move to central clearing.

Furthermore, the idea of concentrating all the risk in a sole body could lead to future market disruptions and even systemic risk if not efficiently managed. If a central counterparty were to default the consequences could be disastrous not to say the criticism that a potential bailout of the central body could face in the event of being necessary.

I believe that the attitude of market participants with regard to the new regulatory approach would be essential in order to succeed. This means that market players have to be aware of the new regulatory framework and new practices. Furthermore, greater supervision in order to make sure that regulations are indeed implemented and subsequently complied would be an important factor. Therefore, although counterparty risk could be measure, OTC derivatives centrally cleared and further disclosure could be required, market participants should be aware and knowledgeable about the new regulatory framework to be able to succeed.

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GLOSSARY OF TERMS

Affirmation (of a trade confirmation)

A procedure in a confirmation process, whereby a single record of the trade is created by one party evidencing the full terms of the trade and the counterparty verifies and agrees to that record. Affirmation of trade confirmations is different from trade verification (also known as economic affirmation), which is limited to principal economic terms.

Allocation (of trades)

The decomposition of a block of trades by an investment manager into component sets of trades for individual clients of the manager.

Amendment

A change or addition to the terms of a trade which may require an amended confirmation. Also, a change or addition to the legal documentation of a trade which, when properly signed and therefore executed, has the same legal power as the original agreement.

Arbitrage CDO

A collateralized bond obligation that exploits spread differences between high yield sub-investment grade bonds and less risky investment-grade securities. Can be either cash flow coupons are paid from cash flows of the bonds or market value the principal is paid by selling the underlying bond assets.

Asset Swap

A combination of purchase of a fixed coupon asset and entry into an off-market interest rate swap that has the effect of transforming the asset into an almost pure credit play

Asset Swap Spread

The spread over the LIBOR rate received by the asset swap buyer in an asset swap it reflects the price and credit quality of the asset.

Basel Capital Accord

The framework of rules within which banks calculate their regulatory capital requirement. These rules were produced by the Basel Committee on Bank Supervision in 1988, known as the Basel Capital Accord. The current rules are under review and will be superseded by a new framework in 2004.

Cash Flow CLO

A collateralised loan obligation that is used by banks to obtain regulatory capital relief on a pool of loans held on balance sheet. The loans are moved off the balance sheet into an SPV, and the credit risk is transferred to the purchasers of the issued notes.

Credit Event

A legal definition that is used to characterise the nature of the event that triggers the payout on a credit derivative it may include such events as bankruptcy, default, and restructuring.

Credit Spread Option

A derivative contract in which the option buyer has the right but not the obligation to enter into a credit spread position at a predetermined credit spread. The credit position may be a default swap, par floater, or an asset swap.

Cash flow/payments generation

The process of determining rate and spot price values on which payments are based and then calculating payment obligations.

Cash flow/payments matching

The process of matching or confirming upcoming payment obligations with counterparties prior to settlement date

Cash flow/payments reconciliation

The process of reviewing accounts to determine if cash movements have been executed correctly and funds have been paid out or received on correct value date Also known as nostro reconciliation.

Cash flow/payments settlement

The actual execution of cash movement for payments due

Central counterparty (CCP)

An entity that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and seller to every buyer

Closeout

Acceleration and termination of a contract prior to its maturity

Closeout netting

An arrangement to settle all contracted but not yet due obligations to and claims on a counterparty by one single net payment, immediately upon the occurrence of one of the events of default defined in the relevant documentation.

Collateral

An asset that is delivered by the collateral provider to secure an obligation to the collateral taker. Collateral arrangements may take different legal forms; securities collateral may be obtained using the method of title transfer or pledge.

Counterparty credit risk

The risk that a counterparty will not settle an obligation in full value, either when due or at any time thereafter.

Default

Failure to satisfy an obligation when due, or the occurrence of a defined event of default agreed by the parties to a contract.

Default Swap

A bilateral contract in which one party (the protection buyer) makes periodic payments to the protection seller. In return, the protection seller compensates the protection buyer for any loss on a par amount of a reference asset following a credit event.

Equity

The lowest (usually unrated) tranche of a portfolio trade, which is exposed to the first losses in the portfolio. Due to the high level of risk, the equity tranche is often retained by the sponsor and for banks, resulting in a one-for-one capital charge.

First-to-Default Basket

A bilateral contract in which one party (the protection buyer) makes periodic payments to the protection seller. In return, the protection seller compensates the protection buyer for any loss on a par amount of the first asset in a group of assets to default. It is also possible to trade second, third, etc..., to-default baskets.

Floating-Rate Note

A bond that makes periodic coupon payments linked to a variable interest rate index. Typically, the bond pays an additional "spread" that is intended to bring the price of the bond to (or close to) par on the issue date of the bond. It can be shown that this "par floater spread" reflects the credit quality of the note issuer.

Interest Rate Swap

A bilateral derivative contract involving the exchange of fixed-rate payments for floating rate payments typically linked to the LIBOR interest rate index. Typically used to hedge interest rate risk.

LIBOR

The London Inter-Bank Offered Rate. This is an interest rate at which highly rated (typically AA-rated) banks can borrow. It is calculated by polling 16 banks daily (through their London branches) to determine the rate at which they can borrow for various terms and in various currencies. For each term and currency, the received rates are ranked in ascending order, the top and bottom four are rejected, and an average of the remaining eight is taken.

Mezzanine

The intermediate tranche of a portfolio trade that is protected from losses by having a subordinate equity piece below it

Netting

An offsetting of positions or obligations by counterparties. See closeout netting, multilateral netting and payments netting.

Novation

The replacement of a contract between two initial counterparties to a contract (the transferor, who steps out of the deal and the remaining party) with a new contract between the remaining party and a third party (the transferee). Also referred to as assignment.

Over-the-counter (OTC)

A method of trading that does not involve an exchange. In over the-counter markets, participants trade directly with each other, typically by telephone or computer links.

Portfolio Default Swap

A default swap that hedges some portion of the credit risk of a portfolio of credits, typically consisting of 40-100 names. The credit risk is tranching up and sold to investors. Each tranche is exposed to losses on the portfolio between two bands. For example, a senior tranche may be exposed to all of the losses occurring between 20%-100% of the portfolio. A riskier mezzanine tranche may be exposed to the losses in the portfolio beginning at 5% of the portfolio and ending at 20%. The riskiest equity tranche is the exposed to the first loss, say the first 5%.

Prime brokerage

The provision by firms (eg large securities firms) of credit, clearing, securities lending and other services to clients (typically hedge funds). In OTC derivatives transactions, prime brokerage refers to an arrangement that permits a customer (typically a hedge fund) to use multiple dealers to execute OTC derivatives trades while clearing and settling those trades through a single prime broker. For each trade, the prime broker becomes the counterparty to a deal with the customer and the counterparty to a deal with the executing dealer.

Principal Protected Note

A security that guarantees to return all of the investor's principal at maturity. This feature is often attached to credit-linked notes where the spread paid by the asset is very high and the investor wishes to protect his/her downside. For a credit linked note, the cost of the protection is usually a loss or reduction in the coupon on the note following the credit event. The only principal exposure that the investor has is to the issuer of the note.

Synthetic CLO

Similar to a cash flow CLO except that the loans are not moved into an SPV. Instead, the credit risk is transferred by the sponsoring bank purchasing credit protection on the underlying collateral using a portfolio default swap.