

# Insuring, Hedging and Trading Credit Risks in Financial Macroeconomics

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**Abstract.** The purpose of this paper is to explore how the tools we have available for facing credit risks respond to the necessity of the entities affected. We will review the classical way to face credit risks, preferred by the companies affected by the commercial credit risks – the credit insurance. As well, we will make an analysis of the newest way to encounter the credit risks, that fits better the financial entities needs – credit derivatives. Developments of the CDS market have played an important role in the credit risk markets before and during the current financial crisis, so we assign a generous space in the paper for analyzing the strengths of CDS derivatives, as hedging or trading instruments. The method used is that of analyzing in parallel the major macro-financial domains involving risks. Regarding the insurances, these ones are linked to international trade and evolution on the global markets and depending on the changeable conditions in different levels of real economy. More volatiles are the derivatives and represent one of the main features of the financial market. The results of our study show the fact that both instruments have to be taken into account by economic agents, in order to ensure their development and sustainability and, on the other hand, by a prudential financial and monetary policies, the economic welfare and global functioning of economies can be reached.

**Keywords:** credit risks, insurance, derivatives, credit default swaps

## 1. Introduction

Commercial activity, as well as financial, is subject to credit risks. Within an economy a broad variety of entities have a natural need to assume, reduce or manage credit exposures. These include corporate, banks, insurance companies, hedge funds, fund managers and government agencies. Each type of player will have different economic or regulatory motives for wishing to take positive or negative credit positions at particular times.

Every year, many companies worldwide fail, leaving the partners with many debts; often, the reason is represented by the insolvency of their buyers or borrowers, which makes impossible to recover these amounts and therefore it continues the series of problems overflows and upon others competitors or entities. In the current period, more then once, the financial crisis effects require the valences analysis of the tools we have available for facing the credit risks.

## 2. The Insurance of Credit Risks

We think that *financial insurances* represent a new and powerful type of insurance, appeared as a consequence of shrinking the distinction between financial and insurance institutions. Financial losses due to the risks are transferred to a specialized institution, an insurer. The financial insurances are different from the bank guarantees and other financial tools. These ones include the taking of risks under certain conditions, while unconditional bank guarantees involve taking into account of all obligations.

*Credit insurances*, an important category of financial insurances, protect traders and manufacturers facing the risk of default by their customers who buy or rent goods or similar credit facilities. It appeared as a necessity emerged from the fact that the majority trade agreements are concluded in circumstances in which payment is made partially or completely after delivery of goods or services subject to contract, thus in the form of *delayed payment*, respectively, *credit sale*.

Thus, credit insurance comes to eliminating the seller's fear regarding the buyer's payment of the amounts due to him, offering protection for the risk of default. Therefore, credit insurance is a direct seller

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protection against the risk of failures to receive and at the same time, as a guarantee to the bank, is also the possibility of access to finance.

Credit insurance goal is to protect against financial losses resulting from default, failure or insolvency of the buyers who have purchased goods on credit or insolvency of credit beneficiaries. Through credit insurance policies there are substantially protected commercial revenues from commercial businesses, in the terms of the transfer failures risks to the insurer. Commercial risks related to the buyer's financial situation concern the following aspects: the failure due to insolvency of the buyer; the temporary or permanent inability of the buyer to pay the goods or services; the buyer's refusal to accept goods contracted for reasons beyond the seller's will.

Credit insurance is an indemnity insurance, because it requires the compensation to be paid to the insured for a loss suffered because of insolvency or default of the insured' client and not for a "physically" event, as the other insurance. Therefore, it is a pecuniary insurance, for financial loss and not material. The differences between ordinary insurance and credit insurance come from the nature of risk and from the interests of stakeholders:

- credit insurance involves three parties, each being aware of others;
- the insurer has no interest in the contract, unless as the guarantor for the purchaser;
- the responsibility for repayment is of the debtor, while the insurer responsibility is on the second level, being liable only if the first one fails to fulfill its obligation to pay for the reasons included in the policy.

Credit insurance is considered a luxury one, being characteristic and optimal operating in markets with a stable and well developed credit system. Globally speaking, most credit insurances are practiced in the developed countries. Although insurance against these risks are available on domestic and international insurance markets, only a relatively small number of traders turn to them.

Along with the necessary protection for risks that may affect companies on the medium and long term, credit insurance policy facilitates the access to financing procedure, representing a guarantee for the financing bank and removing a substantial part of risks involved.

Credit insurances eliminate, in a substantially measure, the risk of financial loss, especially when it's about high-value transactions or number of partners is relatively small in business activities or market. However, credit insurance is not always profitable, especially if the individual loans are low and risks are dispersed over a large turnover.

### **3. Credit Derivatives**

Credit derivatives are a class of privately negotiated contracts designed with the express purpose of transferring credit risk from one party to another. They are financial instruments whose payoffs are linked in some way to a change in credit quality of an issuer or issuers.

#### **3.1. The Credit Default Swaps (CDSs)**

The credit default swaps (CDSs) are the most common category of credit derivatives in the last ten years. CDSs are defined as private contracts in which parties „bet“ on a debt issuer's default. As an insurance policy, the credit default swaps contracts must clearly specify the insured events or the credit events hedged which may vary from bankruptcy, relevant only for corporate entities, to obligation default or technical default, such as breaking of a bond pledge, failure to pay, even debts restructuring in order to improve or restore liquidity of the borrower. Therefore, the stake for the contracting partners is the underlying entity defaults, entity which may be a corporate borrower, a bond issuer or even a sovereign entity.

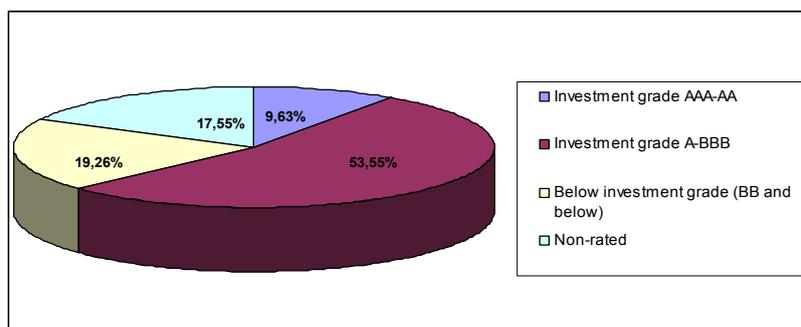
CDS acts as a protection against losses incurred by the holder of the debt in case of the default of the reference entity. The two sides opposed into the contract are the protection buyer, usually a creditor, interested in covering the credit risk, and the protection seller, the party which assumes the financial loss in case the underlying entity defaults or becomes insolvent. The CDS buyer let oneself in for the benefits he gets in the period extends from contracting until the credit event occurs or until the contract maturity. He pays for the right to collect from the other counterparty a stipulated notional amount, in case of default of the

reference entity. This payment compensates the seller for bearing the risk of a default. It is like a premium, making CDS contract similar to an insurance policy, where one side assumes the risk and the other pays an (insurance) premium. The CDS premium is calculated to cover the expected loss of the reference entity as follows [1]:

$$CDS\ premium = PD * (1-RR)$$

There are two main parameters that determine the expected loss and hence the CDS premium: PD - the probability of default and RR - the recovery rate.

The probability of default is closely related by the quality of the debts hedged with these financial instruments. (Fig. 1)



Source of data: Bank for International Settlements, [www.bis.org](http://www.bis.org)

Fig. 1: Structure of CDS market by the debts quality in June 2011

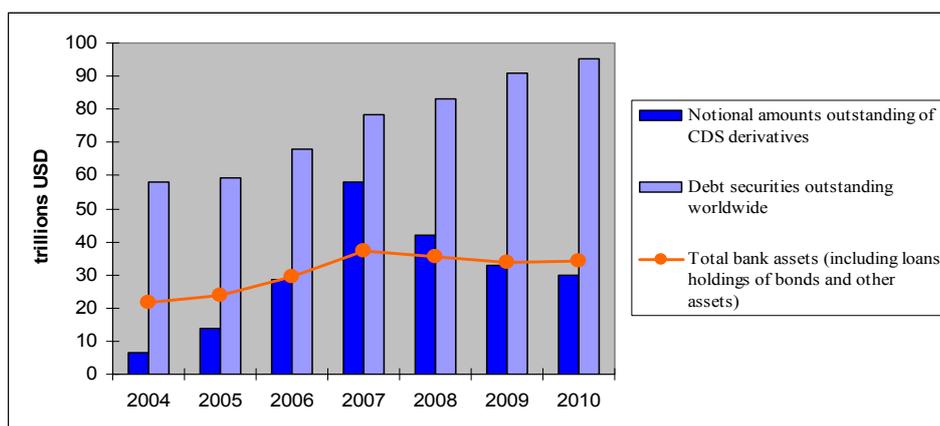
As we can observe in the Bank for International Settlements survey for June 2011, the high rated (AAA to AA) underlying debts represented only 9.63% from the CDS market, while an almost double share (17.55%) is owned by the non-rated debts, the riskiest ones, which may attract important troubles for the market participants. The quality of the underlying debts and the excessive volumes traded before the crisis by some dealers caused some notoriously defaults among participants in CDS markets recently.

### 3.2. Volumes of CDSs Market

CDS was launched by JP Morgan in 1997 and became the most widely used type of credit derivative, being considered by Alan Greenspan, the Federal Reserve chairman at the time, the most important instruments he has seen in decades [2]. There is only three years distance from the speech of George Soros, when he named CDS as „truly toxic” securities [3].

In 1997, the notional open interest in CDS was on the order of 200 billion USD. In the next decade, the notional amounts outstanding in the credit default swap (CDS) market increased moderately, so in June of 2001, the first time the International Swaps and Derivatives Association (ISDA) conducted surveys of credit derivatives, the outstanding notional amount of credit derivatives was just over 631 billion USD [4]. In the next 6 years, the rhythm of growth was very high, almost doubled in value every year. The peak of 58 trillion USD notional amounts outstanding of CDS was register at the end of 2007. After the financial crisis started, CDS market record a continuous downward trend till the 30 trillions USD at the end of 2010. Even so, the value did not drop below the 2006 level.

If the figures alone do not say much, comparing with the notional value of debt securities outstanding worldwide could make the complete picture. (Fig. 2)



Source of data: Bank for International Settlements, [www.bis.org](http://www.bis.org)

Fig. 2: CDS derivatives market comparing with debts securities outstanding worldwide and total bank assets

Thus, in 2007, the outstanding notional amount of CDS represented 74% of the 78.4 trillion USD notional value of debt securities outstanding worldwide at the time. The CDS notional amounts outstanding exceeded in 2007 and 2008 the market value of banks loans, bonds stakes and other types of fixed income securities from the banking sector.

### 3.3. Hedgers and Traders on CDS Market

The CDS market is an over-the-counter (OTC) market, with trades done almost exclusively bilaterally, through a network of (private) dealers. Contrarily to the credit insurances field, there is no significant “retail” component in the CDS market. Almost all participants, sellers or buyers, are institutional. Institutions which are allowed to participate in the market must satisfy significant capital requirements which rule out retail investors. The number of major dealers is small and many trade sizes are large. [5]

Banks use CDSs mainly for managing their own loan portfolios. In banking, CDSs are the result of banking regulations such as Basel Agreement, which states that banks must hold capital based on risk assets they hold. For example, for an asset AAA-rated, bank capital requirement that must hold is significantly lower than for a regular mortgage. Consequently, the CDS became increasingly searching by banks have realized that they needed to sell traditional assets and buy massive securities such as mortgage-based securities (MBS) which, together with the related CDS, receiving ratings the maximum. Besides banks and security houses, hedge funds constitute a major force in the CDS market. Most banks and hedge funds would buy CDS protection on the one hand and then sell CDS protection to someone else at the same time.

Other important actors on the CDS market are the insurers which provide credit protection, constituting portfolios of credit risks. They would not act on the other side, as protection buyers. The old insurance principle which stipulates that losses produced by one contract would be compensated by premiums earned with other contracts appeared vulnerable for this category in the course of the current crisis. The insurance companies which had became big providers of credit protection above, during the crisis, when default risk increased simultaneously for a large number of entities, faced with highly correlated exposures. It is notoriously AIG insurance company case, which accumulated CDS exposure of more than 440 billion USD and has benefited by the public authorities intervention in order to save it when their customers - banks and hedge funds buying CDSs - started getting nervous at the beginning of the latest meltdown.

A fundamental structural characteristic of this product is that they de-couple credit risk from funding. Thus players can radically alter their credit risk exposures without actually buying or selling bonds or loans in the primary or secondary markets. [6] This feature gave way, among the users of CDS in protective purposes, to the speculative ones, as CDS offers the possibility to speculate on credit quality of certain entities issuing. Speculators bet about the credit quality of a particular reference entity. More the risk covered by insurance increases, more these titles is expensive. More specifically, if the borrower is showing signs that could not meet maturing debts in the future, then investors will be more interested to get hold of such insurance policies. How CDS are traded continuously, demand for them will increase, which will make them more expensive. At this point, the CDS owners, that are not bonds holders and therefore not interested in the

fact itself that issuer go bankrupt, but have anticipated this event and bought CDS, can sell those and obtain gain. With certain limits, speculators add liquidity to the market.

The course of events beginning from 2007, give legitimate reasons to be concerned about potential problems that can be created because of exposures to credit derivatives and because of the trading of derivatives. [7] That is why the regulatory authorities have imposed a paradigm shift policy in order to achieve an increased transparency in CDS markets and to place market participants in the position to assess risks properly.

#### 4. Conclusions

For the moment, we consider that the risk of the global economic depression is not overwhelmed. The resumption of economic growth depends on risks and uncertainty on different markets, or domains of the economic and social activities. Therefore, for the moment, the revenues in insurance are not of a high level and investments on the financial markets are still going, but based on prudential principle in the benefit of all parties involved.

The credit derivatives played a major role in increasing economic welfare prior to the crisis and could do the same during recovery, with the condition of a better regulation of the market, which should bring an improved balance of derivatives exposures. They did facilitate risk-sharing among investors and allow financial institutions to better manage their exposures. CDSs help complete markets, providing an effective means to hedge and trade credit risks. CDSs are important tools for managing the credit risk profile of a loan portfolio, consists of corporate bonds or asset-backed securities for example, by acquiring protection on them. Thereby, CDSs hedging provides capital relief and insures the acquirer of protection against credit losses. The problems highlighted by the financial crisis should not distract from the potential benefits of these instruments.

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