Managing the Risks that Appear throughout the Pursuit of Clearing

Lucean Mihalcea
lucean.mihalcea@ugal.ro
Dunarea de Jos University of Galati, Romania

Abstract: This paper proposes to deal with some aspects of clearing houses and the significant changes in European legislation in this field. It will also embark upon discussing the risks incurred in clearing houses in the current context of the international economic crisis-driven and how clearing houses in Romania can manage these risks mainly related to the market risk, credit risk and liquidity risk. This study will conclude with an econometric model of credit risk management that affects clearing houses.

Jel: M21-Business Economics
Keywords: clearing house, credit risk management, the European legislation

1. Introduction
Clearing or compensation is a settlement between two or more parties, the debtor and the creditor some compared to others, which allows you to limit the use of the means of payment of the balance of the net settlement of these relationships. In the light of the provisions of Directive 2006/48/EC has been completed and updated by Directive 2009/65/EC "CPC" means a legal entity which is interposed between the counterparts contracts traded on one or more financial markets, becoming the buyer to every seller and seller to every buyer. "Finance counterpart" means:

The legislative framework governing the functioning of the clearing houses in Romania is given by:

Figure 1: Definition of a financial counterpart

The legislative framework governing the functioning of the clearing houses in Romania is given by:
2. The legislative provisions of the European

On September 23, 2009, the European Commission adopted three proposals for regulations establishing a European system of financial supervisors, comprising three European supervisory authorities (ESAs) in order to contribute to the coherent application of the legislation of the Union, and the establishment of standards and regulatory and supervisory practices and of high quality. AES include the European Supervisory Authority (European banking authority) (ABE), established by Council Regulation (EU) No. 1093/2010 of the European Parliament and of the Council, the European Supervisory Authority (European insurance and occupational pensions supervisors) (EIOPA), established by Council Regulation (EU) No. 1094/2010 of the European Parliament and of the Council, and the European Supervisory Authority (European Securities and markets authority) (ESMA), established by Council Regulation (EU) No. 1095/2010 of the European Parliament and of the Council. AES has a crucial role in maintaining the stability of the financial sector. The CCP must have an initial capital and available at least 7.5 million EUROS to be authorised in accordance with article 14. The capital of the CCP, including the result carried forward and reserves, is proportional to the risk posed by the activities of the CCP. The capital is at any time insufficient to ensure the orderly liquidation or restructuring activities in a suitable time and adequate protection against the risks of the CCP, counterparty, credit, market, operational, legal and trade that are not already covered by specific financial resources.

The CCP has always access to an adequate level of liquidity in order to carry out the services and activities. To this end, the CCP achieve the necessary credit lines or other similar means to cover cash needs and where the financial resources placed at its disposal cannot be accessed directly. A clearing member, a parent undertaking or a subsidiary of such clearing member shall provide together not more than 25% of the credit lines needed by CPC. The CCP valued potential liquidity needs on a daily basis. CCP takes into account liquidity risk generated by the event of default of payment obligations of at least two members from that compensatory has the highest exposures.

In order to ensure the consistent application of this article, after consultation with the relevant authorities and members of the ESCB, ESMA draft technical standards that specify the regulatory framework for the management of liquidity risk to which the CCP are laid down in accordance with paragraph (1). ESMA forwarded to the Commission those projects of technical regulations standards until September 30, 2012.

3. Intra-group transactions - sources of financial risks

A transaction intra-group is a transaction between two companies that are included in full in the same consolidation and are subject to centralized procedures and appropriate evaluation, measurement and control of risks.

They belong to the same institutional protection scheme as referred to in article 80, paragraph (8) of Directive 2006/48/EC, or, in the case of credit institutions affiliated to the same central body, as referred to in article 3 (1) of that directive, both of which are credit institutions or the credit institution and the other is the central body.
OTC derivative contracts are recognized in the financial or non-financial groups and within groups of undertakings, both financial and non-financial, and if such a contract is considered a intra-group transaction in relation to a counterparty, then it should be considered a transaction intra-group and in relation to the other counterparty to the contract.

Intra-group transactions may be necessary for the aggregation of risks within the group structures and intra-group are specific risks. Since the efficiency of intra-group processes of risk management could be limited if these transactions are subject to the obligation of compensation, the exemption of transactions intra-group the obligation of compensation could be beneficial, provided that this exemption not increase systemic risk.

In consequence, offset by a CCP of these transactions should be replaced with a proper exchange of collateral, where this is appropriate to mitigate counterparty risk intra-group.

Some intergroup transactions could be exempted, in some cases by decision of the competent authorities, from the requirement of guarantees, provided that the procedures for risk management to be judicious and solid enough to be suitable for the level of complexity of the transaction and there are no impediments to the prompt transfer of own funds or repayment of liabilities between counterparts.

These criteria and procedures which should be followed by the counterparts and the relevant competent authorities when they apply the exemptions should be specified in the technical regulations standards adopted in accordance with the relevant Council regulations establishing the AES. Prior to the development of draft technical standards regulations, AES should prepare an analysis of the potential impact of the internal market, as well as to the participants on the financial markets, in particular on the operations and structure of the groups in question.

4. Risk management the clearing houses

Due to the nature of the activity, clearing societies are subject to risks: the risk of the market; credit risk; liquidity risk; the interest rate risk cash flow.

a) Market risk comprises three type of risk:

<table>
<thead>
<tr>
<th>Currency risk</th>
<th>Interest rate risk fair value</th>
<th>Price risk is the risk that the value</th>
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<tr>
<td>• The risk that the value of a financial instrument will fluctuate because of changes in currency exchange rates.</td>
<td>• Is the risk that the value of a financial instrument will fluctuate because of changes in market interest rates.</td>
<td>• A financial instrument will fluctuate as a result of changes in market prices, whether those changes are caused by factors specific to the individual instrument or issuer, or factors affecting all instruments traded in the market.</td>
</tr>
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</table>

![Figure 3: Types of market risk](image)

The term “market risk” embodies not only the potential loss, but also the gain.

b) Credit risk is the risk that one of the parties of the financial instrument does not perform the obligation assumed, causing a financial loss to the other party.

c) Liquidity risk (also called the risk of funding), is the risk that an entity may meet difficulties in procuring the required funds to meet commitments associated with financial instruments.

Liquidity risk may result in the inability to sell a financial asset quickly at close to its fair value.

d) Interest rate risk cash flow, is the risk that future cash flows will fluctuate because of changes in market interest rates. For example, in the case of a floating rate loan, such fluctuations are changing the effective interest rate of the financial instrument, without a corresponding change to its fair value.

Clearing houses operate the main categories of risks through the use of appropriate protective mechanisms, as follows:

◊ First level is assured by the quality of participants admitted to the clearing settlement, being imposed on a number of eligibility criteria with regard to the integrity and financial stability, making the development of an operational risk management in the market of derivative financial instruments, the quality of services, etc.;

◊ Electronic clearing and settlement system for assessing the risk of your portfolio in real time;

◊ Financial resources available to the clearing houses consisting of: margins deposited by members of the compensatory, guarantee funds constitute, respectively, the own funds of clearing houses.

As well as concrete measures to counter the risk of market clearing houses carries out regular tests to check the margin accounts in case of high volatility and has the authority to request immediate supplementation of up to 50% of the level of margins deposited by compensatory members.
In order to avoid acquiring a dominant position, by accumulating open positions on the sales or purchase that can manipulate the market, clearing houses may establish limits and absolute limits on the number of open positions that we can aggregate a customer or participant, according to the specific nature of the securities market.

In terms of liquidity risk, one of the main mechanisms of prevention is the imposition of the obligation to hold an extra level of total funding.

Proposal of a model of credit risk management

As described above, a CCP assumes the credit risk on behalf of the original counterparties, aimed at mitigating risk by using multilateral clearing and marking to market of open positions.

With respect to credit risk, the management measures include the establishment of efficient and prompt response to the call in the margin, clearing houses and thoroughly mastering-sometimes the right to liquidate forced positions held up to cover it.

The model of credit risk management with the aim of minimizing its effect is a complicated procedure.

Choose a function \( d \in (D) \) to achieve the objective, regardless of the state of nature. We estimate a real parameter with a function of \( \Delta \) loss square shaped \( (\Delta, a) = (\Delta)^2 \)

We have the function \( F \) is defined on the \( \Delta \) xd:

- \( \) For \( X \)-continue we have \( f(\Delta,d) = \int L(\Delta,d(x))f(x|\Delta) \) dx
- \( \) For \( X \)-discrete we have \( f(\Delta,d) = \sum L(\Delta,d(x))f(x|\Delta) \)

\( F \) - name of function of the credit risk of \( d \).

The function \( F \) is evaluated for \( \Delta \).

The risk \( F(\Delta,d) \) measured the mean value in respect of loss, for the state of nature \( \Delta \) but also with specified distribution \( f(x|\Delta) \).

The average value is denoted as follows: \( Nx|\Delta \)

Thus rewrote the formula:

\[
F(\Delta,d) = Nx|\Delta[L(\Delta,d(x))];
\]

The \( Nx|\Delta \) may be applied to any function \( j(x,\Delta) \), so we have the following relationship:

\[
Nx|\Delta[j(x,\Delta)] = \int j(x,\Delta) f(x|\Delta) \) dx
\]

The operator for the \( VX \) variant \( \Delta \) and is defined as:

\[
Vx|\Delta[j(x,\Delta)] = N\Delta[j(x,\Delta)]^2 - (N\Delta[j(x,\Delta)])^2
\]

5. Conclusions

The economic crisis pointed out the fact that the level of the credit risk of the counterpart referring to the OTC derivative financial instruments was much higher than it was initially thought both by the market participants and the authorities. Thus, the central counterpart compensation of the financial instruments on the OTC market is one of the most prominent regulations and policies of the present financial market, this new reality being imposed by the G-20 group. In this new context in which the compensation market is found in a transition period, the counterpart risk management discipline will be fundamentally amplified by the growth of the clearing societies’ role, the main motivation being that of reducing the bilateral counterpart risk, the growth of the transparency and avoiding the contagion in case of default of a big financial institution.

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