

LOCAL CENTRAL COUNTERPARTY

Laurențiu Paul Barangă^{*1}

¹*The Bucharest University of Economic Studies, Bucharest*

Abstract

On the 29th of January 2019, the Extraordinary General Meeting of Shareholders of the company Bucharest Stock Exchange (BVB) decided to incorporate a joint-stock company in order to authorize and operate it as a central counterparty. The business scope of this company would be to carry out operations such as clearing, calculation of net liabilities, and ensuring the availability of financial instruments, money funds (or of both) to cover the resulting exposures.

The central counterparty will be able to provide guarantee services for transactions based on financial instruments carried out both on the spot trading venues currently managed by the BVB and on the derivative market, supposing that BVB developed such a market.

Seeing that the financial instruments listed on the trading venues managed by the BVB are heterogenous in terms of liquidity and volatility, the possibility for the local central counterparty to provide clearing services would be limited to certain financial instruments, at least during the first stage. If the clearing services are extended to all the securities listed on the BVB, the guarantee level will reach, in certain situations, up to 100% of the transaction value, which would actually entail a pre-validation activity.

Key words: central counterparty, financial instruments, net positions, market risk, credit risk

Introduction

The central counterparty (CCP) is that entity of the financial market infrastructure (FMI) that interposes between the parties of a transaction, becoming a purchaser for every seller and a seller for every purchaser, thus ensuring the proper carrying out of transactions in the process of settlement, or of obligations relevant to open positions. The CCP interposes between the parties of a transaction by novation.

The CCP reduces the transaction-related risks for participants by multilateral clearing¹ of transactions, as well as through risk/exposure-limiting mechanisms² for all participants. For

* Corresponding author: Paul BARANGĂ, barangalp@yahoo.com

¹ The clearing activity is the process of determining positions, including the calculation of net obligations, and of ensuring the availability of financial instruments, of the money funds, or of both of these in order to cover the exposures deriving from such positions.

² The risk-limiting mechanisms used by a CCP are understood as the maximum exposure limits it determined for each separate participant, depending on the level of guarantees it provides, on the

example, CCPs ask the participants to provide guarantees (contribute with financial resources to the guarantee systems) and, at the same time, to maintain these guarantees above certain minimum levels so as to be able to cover the net debt exposures/positions of participants in a case of default.

Due to these activities and operations carried out by a CCP, the risks relevant to financial transactions are reduced. That is why the efficacy of the risk-limiting mechanisms used by a CCP, as well as the suitability of its financial resources are essential for obtaining these benefits.

1. Financial risks managed by a CCP

In its current activity, a CCP must particularly manage the credit risk, the liquidity risk and the operational risk. Although these risks are distinct concepts, in a CCP's activity there is a significant interaction between these types of risks.

The credit risk is defined as the risk that a counterparty may not be able to fulfil its financial obligations when due or at any future time. The exposure to the credit risk may take the form of current exposures³ or of potential exposures⁴. The exposure to the credit risk consists of two sub-categories, namely: exposure to the risk relevant to the replacement cost⁵ (where the potential loss is represented by the price volatility) and exposure to the main risk⁶ (associated to the settlement risk). At the same time, a CCP could also be exposed to the residual risk of a participant if the market circumstances change more drastically than forecasted when determining the margin level. In such situations, losses may exceed the level of the guarantees deposited by the participant into the margin account.

The liquidity risk is defined as the risk that a counterparty may not own sufficient funds/assets to fulfil its financial obligations, although it could become capable of that in the future. Both parties of a transaction could be exposed to the liquidity risk on the settlement date.

The operational risk is the risk that deficiencies of computer systems or of internal processes, human errors and management failures due to external events may affect the services provided. Such operational risk events could entail delays, losses, liquidity issues, low efficiency in the exposure management activity and, in some cases, systemic risks.

In its risk management activity, a CCP has a set of instruments, such as: credit risk and liquidity risk management mechanisms and guarantee system pre-financing arrangements.

participant's creditworthiness, on the type of financial instruments subject to such exposure, as well as on the level of the market risks relevant to such instruments, etc.

³ The current exposure originates from the market value fluctuations of the positions opened between the CCP and its participants.

⁴ Potential exposure is understood as any potential credit exposure that a CCP could experience at any point in the future. It could originate from the potential fluctuations of the market value of the open positions of a defaulting participant until such positions are closed, entirely covered or transferred. The calculation of the future potential exposure requires shaping the potential motions of prices and of other relevant factors, as well as specifying the level of trust and the length of the close period.

⁵ The risk relevant to the replacement cost is the risk of losing unrealized gains in unsettled transactions with a counterparty. The exposure relevant to this risk is the cost of replacing the original transaction that ended in default at the current market prices.

⁶ The main risk is the risk that a counterparty loses the full value involved in a transaction.

Guarantees formed at CCP level are used for managing losses caused by a participant's default, in a certain resource sequence, called "cascade" default. The "cascade" system of covering the resource requirement includes contributions to the margin system, the contribution to the Guarantee Fund, and the CCP's own funds.

2. Risk management system

The risk management system of a FMI is organized on the following pillars: a system of guarantees collected from every participant, a system of exposure/settlement limits, as well as risk management mechanisms.

a. The guarantee system is organized in two structures, namely: a margin system and a collective guarantee fund. The guarantees formed by participants must be active, with a low credit risk, liquidity risk, and market risk. Depending on the aggregated risk level of an asset, the CCP establishes certain adjustments of their value. These adjustments show the decreasing potential of the asset value between the moment of their last reassessment and the moment they can be sold/converted into cash. Also, in establishing the structure of guarantees, the following rules are also taken into account: limitation of pro-cyclicality, avoidance of concentrations of guarantees, and capacity to reuse the guarantee.

The *margin system* consists of the guarantees deposited by participants depending on the transactions they make or intend to make. The CCP collects contributions to the margin system⁷ in view of reducing the exposures in the event of a default. The margin system consists of the original margin and the variation margin. The original margin is collected at the beginning in order to cover potential future exposures. The variation margin is collected in order to cover the current exposures deriving from the actual modifications of the market prices. To calculate the additional margin requirement, open positions are marked-to-market and funds are collected from or paid to a counterparty in order to settle any losses (or gains) from those positions.

For every participant, depending on the exposures they experience, the CCP calculates a level of the required margin and, if higher than the previously created one, that particular participant will receive a request to supplement the margin (margin call). The level of the margin call requirement is established as a result of marking-to-market⁸ the positions held by the participant and is adapted depending on the risk characteristics of the product (volatility, price equalization situations, bankruptcy risk, market liquidity, implications of volatility on the risk management operations and their capacity to reduce the net debt exposure/position experienced by that particular participant, the procedure and periods of forced closing⁹, etc.). At the same time, in calculating the margin requirements, the CCP may allow clearings or

⁷ The margin is a security deposit in the form of money, movable assets or other financial instruments.

⁸ Through the marking-to-market activity, open positions held by a participant on its own account or on the clients' account are assessed based on the reference prices of the financial instruments or of the financial assets the prices of which serve as support for other financial instruments.

⁹ In determining the forced closing period of a position, the CCP contemplates the impact of a participant's failure to observe the existing market conditions, the expected closing periods under extreme market conditions, the liquidity level of products, the potential concentrations of positions at a participant's level, as well as the volatility of prices during closings.

reductions of the margins required for a product if it is significantly correlated with the another product.

The *Guarantee Fund* consists of the fixed (original) contribution¹⁰ and of additional (subsequent) contributions. Depending on the intended level of financial operations, the participant may increase the level of potential exposures by depositing additional contributions to the Guarantee Fund. Thus, in establishing contributions to the Guarantee Fund, the CCP contemplates the impact of a potential defaulting participant, the dynamics of this impact, as well as the participant's financial creditworthiness (its solvency risk).

Also, the participant's financial capacity to release the funds needed for covering any net debt positions within a short period of time with resources other than its contributions to the Guarantee Fund, the history of its behaviour in terms of how often it resorted to the risk management measures, and/or the sanctions it received, etc. may also be taken into account in establishing the level of guarantees.

b. The limit system. Depending on the contributions of the guarantee system, the participant gets the right to experience exposure up to a certain level. The purpose of these exposure limits is to prevent the acquisition of dominant market positions by a single participant. Also, the CCP will permanently maintain a certain weight of the guarantees created in the Guarantee Fund in the total amount of guarantees created by a participant for a certain exposure level it may experience.

The exposures of a participant could be represented by an absolute value of the transactions relevant to a certain financial instrument or to a certain class of financial instruments, or they could represent a maximum weight of the open positions of a certain type (long/short) and for a certain maturity date of a derivative. These maximum holding limits can be adjusted depending on the size of the guarantees deposited by that particular participant, on the market liquidity level (traded volumes and value of the transactions relevant to that particular financial instrument), as well as on the microstructure of the relevant market (number of participants).

Depending on how the risk management system is organized, the FMI may limit the exposures of a participant to the level of exposures that can be materialized according to the deposited guarantees (a settlement limit is established) or may allow exposures that exceed the exposures that can be materialized according to the deposited guarantees (a situation that leads to margin call).

c. Risk management mechanisms. In case of a settlement failure or if the exposure limit is exceeded, the participant's lack of reaction to the margin call, the FMI resorts to a set of operations intended to reduce exposure or the size of the debt position.

To manage a case of default relevant to a transaction involving securities, the FMI may resort to loans of financial instruments, to special transactions (buy-in/sell out), or to the restoration of that particular transaction.

If the liquidity of a security is highly reduced, the CCP will no longer be able to resort to operations like loans of financial instruments or to special transactions/restoration of the transaction in order to manage the default of a seller of securities. In such situations, the

¹⁰ The fixed (original) contribution deposited by a participant to the clearing and settlement system, based on which it receives for the first time the right to get exposed up to a certain level.

transaction will eventually be terminated and the buyer acting in good faith will be compensated in cash by the CCP, attempting to buy the securities at a later time, when it will be possible.

To manage a case of default regarding positions opened on derivatives, the CCP resorts to forced closing operations¹¹ regarding the opened positions. If the CCP provides services to a derivative market where physical settlement derivatives are traded, in a case of default it will resort to risk management operations that are specific to the spot market.

If the liquidity of a derivative is highly reduced, the CCP will no longer be able to close the position affected by default under optimum conditions, which would lead to an increase of the debt level, increase which, in certain situations, may lead to systemic risks.

3. Derivatives market

An efficient derivatives market cannot exist without a functional CCP that ensures the services of clearing, of calculating the net liabilities, and of ensuring the proper fulfilment of obligations devolving on each participant depending on the type, number and value of the opened positions.

But the mere incorporation of a company carrying out the specific activity of a CCP is not the absolute guarantee that the CCP would also be functional. For a CCP to be functional, the risk-limiting mechanisms used must be efficient, the financial guarantees must be at a suitable level, and the operational costs should be covered by the current revenues (originating from commissions).

These conditions can be met only if the derivatives market has a certain liquidity level and will implicitly be able to provide financial institutions with the necessary means and instruments, at reasonable costs, in order to achieve their own or their clients' investment objectives. Hence, once this derivatives market is more attractive to the financial institutions, the level of guarantees will be more suitable and more robust, both in terms of size and structure, and in terms of the participants' weights¹².

But since the attractiveness of a derivatives market can only be ensured by a certain liquidity level, the manager of that trading venue must also take into account the financial instruments competing against the derivatives listed on a regulated market.

Currently, a series of financial institutions provide their clients with the possibility to initiate positions and implicitly to benefit from exposures related to various assets or asset mixes. Thus, by means of structured products, CFDs or currency pairs, financial institutions can easily adapt their offer of financial products dedicated to their clients in order to meet their needs and to benefit from exposures related to various assets, with a multiplier and leverage effect level similar to that of standardized financial instruments traded on a regulated derivatives market (e.g.: futures, options).

¹¹ Through the forced closing operation with regard to a position, the CCP initiates a position of opposite direction and of the same value as the position affected by default by achieving a new transaction on the derivatives market.

¹² The lower the weight of contributions deposited by the most exposed participant in the total amount of guarantees existing in the guarantee system, the more robust that guarantee system is.

Also, for their interbanking activity, credit institutions have developed contractual relationships with various liquidity providers in view of closing potential net exposures through the derivatives they provide (e.g.: swap, forward).

Conclusions

Having regard to the above, the conclusion is that the efficiency of the risk management operations achieved by a CCP depends on the liquidity and volatility level of the traded financial instrument or of the financial instrument that is provided as collateral to guarantee other financial transactions.

If a movable asset is characterized by very low liquidity, a counterparty could be impossible to find in the event of a special operation or in case of transaction restoration, which will affect the CCP's capacity of ensuring the proper fulfilment of a defaulting seller's obligations towards the buyer acting in good faith. In these situations, the FMI can only achieve cash clearing for the buyer acting in good faith in order to cover the latter's losses as a result of the failure to settle the transaction.

Also, the low liquidity of a derivative affects the CCP's capacity to reduce the exposure of a participant not responding to a margin call and, implicitly, could affect the sustainability of the guarantee systems because the obligations of the defaulting participant are also covered from the collective guarantees created at CCP level until completing the forced closing operations.

In the case of derivatives, besides their liquidity and volatility level, another factor of major impact is the derivative's price sensitivity to the dynamics of the underlying asset's price. The higher the volatility and sensitivity, the higher the margin level, which could lead to situations in which the high level of the necessary margin significantly reduces the leverage effect and, implicitly, the economic reason for initiating such exposures again.

Considering that the securities listed on the trading venues managed by the BVB are heterogenous in terms of liquidity and volatility, to ensure a solid transaction guarantee system the local Central Counterparty will provide clearing services only for certain securities, at least during the first stage.

If the clearing services are extended to all the securities listed on the BVB, the guarantee level will reach, in the case of non-liquid securities, up to 100% of the transaction value, which would actually entail a pre-validation situation regarding that particular transaction.

As regards the movable assets that can be pledged to guarantee other financial transactions, their number will be reduced only to movable assets characterized by a low level of the credit risk, liquidity risk, and market risk. Depending on the level of risk associated to movable assets pledged as collateral, the CCP will adjust their value. Thus, movable assets characterized by a high level of the risk may not be pledged as collateral for other financial transactions because the value adjustment applied to them by the CCP could trend towards 100%.

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