

CCP Best Practices

Two central counterparties (CCPs) have experienced clearing member defaults over the past five years that have exceeded the defaulting member's contribution to default resources and required the use of mutualized resources in the default fund, spreading losses to other CCP participants. These defaults – which occurred in the futures segment of the Korea Exchange and, more recently, at Nasdaq Clearing in Europe – have highlighted weaknesses in some CCP risk management practices and underscore the importance of a more consistent implementation of risk management best practices by CCPs around the world.

This paper outlines ISDA's current thinking on clearing risk management best practices. Fundamental to these practices is the principle that CCP risk management decisions should be based on the risk profile of a given derivatives product. These best practices call for a holistic, multi-faceted and dynamic product-based approach. It is insufficient to rely on a single risk factor as the determinant for exposure – for example, whether it is classified as an exchange-traded or over-the-counter (OTC) derivative. As markets evolve, risk management must also adapt.

ISDA and its members call for broad-based implementation of these best practices to ensure that CCPs have:

- Risk controls and margin requirements that adapt to concentration, liquidity, member credit quality and wrong-way risk in a member's portfolio;
- Effective and transparent default management processes; and
- Robust membership criteria and greater assurances of continued adherence to them.

Most importantly, these practices will ensure that, outside of an extreme stress event, the default of a member will not be propagated to other members or the wider financial system.

INTRODUCTION

It is crucial to point out that ISDA and its members support clearing and believe that, for those products for which clearing is suitable, it is an effective tool to reduce counterparty risk.

As more and more derivatives transactions have been cleared over the past decade, policy-makers and market participants have worked with CCPs to deliver on that potential by developing and improving CCP risk management frameworks, principles and practices. This includes the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions' (CPMI-IOSCO) *Principles for Financial Market Infrastructures* (PFMIs)¹ and *Resilience of central counterparties (CCPs): Further guidance on the PFMI*, published by CPMI-IOSCO in 2017². Policy-makers in various jurisdictions have complemented and/or supplemented this work by encoding CCP regulations and mandating minimum requirements for risk management.

However, there is significant divergence in CCP risk management practices, based on differences in how the PFMIs have been implemented by CCPs and variations in clearing-related regulations in their jurisdictions. ISDA believes it is important for the safety and efficiency of derivatives markets for CCPs to more consistently adhere to and converge on global best practices. The purpose of this paper is to highlight those best practices, and identify areas where implementation has differed³.

The overriding principle guiding these recommendations is the importance of ensuring that CCP risk management for a given cleared product is appropriately aligned with its risk profile. This should be the primary factor driving how CCPs formulate and implement their risk management frameworks.

There are, of course, many facets to a CCP risk management framework. There are 24 principles in the PFMIs, most sub-divided into key considerations. The following sections identify areas where it would be beneficial to the financial system for these CCP risk management best practices to be employed more widely. The end of the paper also includes several recommendations for different aspects of clearing where best practices continue to evolve.

¹ <https://www.bis.org/cpmi/publ/d101a.pdf>

² <https://www.bis.org/cpmi/publ/d163.pdf>

³ This best practice guidance does not constitute legal, accounting or financial advice. ISDA assumes no responsibility for any use to which this guidance may be put. Any CCP (or other entity) following a recommendation in this guidance must satisfy itself that the recommendation is appropriate for its own business and risk management and has been properly applied in the context of its own risk management and business to reflect the factual basis of its own operations

CCP RISK MANAGEMENT BEST PRACTICES

Best Practice 1: Alignment of CCP Risk Management to Underlying Risk

Link CCP risk management to actual risk and not base it solely on a given product being an OTC or exchange-traded derivative.

Regulation currently distinguishes between the clearing of OTC derivatives and exchange-traded derivatives (ETDs). Requirements for clearing OTC derivatives are stricter, reflecting a perception that these products are riskier, more complex and less liquid in comparison to ETDs. That's largely because of the way they trade: many ETDs trade on a central limit order book (CLOB), where liquidity is relatively high, which means a defaulter portfolio can potentially be closed out quickly via the CLOB.

Over the past five years, however, there have been two events – both involving ETDs – where a CCP has been forced to use its member default fund. This highlights that, while products traded via a CLOB may be closed out quickly for more liquid portfolios, ETDs are not always straightforward, liquid and easy to risk manage. In stressed markets, many listed contracts may be volatile and illiquid, compromising the CCP's ability to rebalance its books in the event of a member default.

ISDA therefore recommends that CCP risk management requirements should not be solely dependent on whether a product is an OTC derivative or ETD⁴, but should be based on the risk that each product exhibits and the complexity of the default management process (DMP).

More specifically, ISDA believes that a risk management framework designed for liquid contracts is not suitable for contracts that are only traded by a subsection of the clearing membership, are less liquid, and where the underlying risk potentially exhibits kurtosis (fat tails) in its distribution.

Currently, the prescriptive minimum requirements are often binary⁵, depending on whether the CCP clears exchange-traded or OTC derivatives – for instance, in terms of the required margin period of risk (MPOR) used in risk calculations or, in many cases, the confidence interval for initial margin calculations. ISDA believes that systemic risk would be better mitigated if these requirements were driven by the actual risk of the products being cleared.

This would mean CCPs employ a dynamic and transparent MPOR determination for both exchange-traded and OTC derivatives that considers market liquidity, open interest, position size, concentration, the DMP and other drivers that may impact the timeliness of liquidation⁶. Such an approach might increase the MPOR for some ETDs above the regulatory minimum, as is already best practice at many CCPs. For the most liquid OTC derivatives where portfolio hedges can be executed rapidly, the MPOR might be reduced to below the current minimum five-day period.

Some ETDs are concentrated in such a small market that these products may not be suitable for clearing, or it may be inappropriate for them to be cleared in a commingled default fund. If a product set is only viable for clearing because it shares default resources with other products, then clearing members that do not clear the product are effectively subsidizing the small group of clearing members that do.

⁴ Some products cleared by ETD CCPs are actually traded OTC

⁵ The PFMI and local regulation take into account other factors, like market liquidity

⁶ There are instances where CCPs elect to use an MPOR that is longer than the regulatory defined minimums because of the risk profile of the product being cleared

Although many CCPs embrace the practice of sharing default resources across products, it is expected that a CCP would appropriately margin a product based on its risk profile, while meeting defined margin coverage practices, and would not clear a product only because the risk could be mutualized. Beyond a CCP's margining practices, it could also establish a segregated or segmented default fund for illiquid products that are traded on an anonymous exchange and then cleared (*see Best Practice 3: Products to be Cleared*). This could ensure that a defaulter's portfolio could be rebalanced without imposing risk on non-defaulting clearing members that might not trade such products⁷.

CCPs provide an important role as central risk managers in the market. However, it should not be forgotten that CCPs manage clearing members' collective risk, especially with regard to counterparty risk. While the layer of mutualized resources makes clearing more efficient, mutualized risk sharing necessitates an extra conservative risk management framework and culture. The CCP should also demonstrate its management's confidence in its chosen risk management framework by exposing a significant part of its capital in the default management waterfall (*see Evolving Best Practices: Skin-in-the-game*).

⁷New products might be less liquid, especially at the time of their introduction. In such cases, it may not make sense to set up a new default fund or default fund segment at the outset. Such products should, in turn, be margined conservatively to cover their liquidity risk. It is important for new products to have a clear definition and good governance including the risk committee for the introduction of new products

Best Practice 2: CCP Membership Requirements

CCPs need to have robust membership requirements. For instance, members should have:

- *Sufficient operational capacity and back-up sources of liquidity in place to settle trades in a timely fashion;*
- *The ability to independently risk manage their own and their clients' positions;*
- *The financial resources – capital base as well as liquidity buffers – to pay extra margin, assessments for additional guarantee fund contributions and other payments to support their positions in periods of market stress and to participate in the DMP.*

CCPs need to review membership requirements and the creditworthiness of their members on a regular basis and take necessary action if a member fails to meet those requirements – for instance, through increasing margin, limiting positions, and suspending or terminating membership.

ISDA members support fair and open access to CCPs. A model where smaller firms are allowed to participate as members of a CCP can work if two conditions are met. First, the CCP must monitor adherence to membership requirements and the credit quality of each of those smaller members at least as closely as it monitors large members (and as closely as large members monitor their clients). Second, the CCP must allow each member to only clear transactions that the member can risk manage and fund under different market scenarios.

The traditional two-tier model pursuant to which a firm would clear through a larger clearing member (rather than as a member of the CCP itself) has the advantage that the clearing member shields the CCP from the risk of its clients, providing a financial resource buffer, and takes over monitoring and risk management of the portfolio of these smaller clients. Without a clearing member shielding the CCP from the risk of smaller firms, the risk is shared by all of the CCP's clearing members.

A CCP needs to have a transparent set of membership requirements. These membership requirements need to be designed to protect the CCP and clearing members from the risk other members pose to them. CCPs have a responsibility to monitor compliance with their membership requirements on an ongoing basis. Should a member stop complying with the membership requirements, the CCP needs to take steps to ensure it resumes compliance or else take action to protect the CCP and other clearing participants.

Best practices related to membership requirements prescribe a minimum risk management framework for members, which includes requirements for the member to:

- Settle trades and margin calls in a timely fashion;
- Provide financial disclosures, ideally through the member's regulator;
- Be appropriately capitalized and maintain a satisfactory credit and liquidity profile;
- Segregate trading and control functions;
- Set and control limits;

- Independently risk-manage their positions and those of their clients;
- Demonstrate operational capabilities to react to market changes and manage positions;
- Manage key person dependencies;
- Conduct stress testing on their own portfolios and those of their clients and be able to pay margin and other obligations during stressed periods;
- Participate in the DMP as required; and
- Support CCP risk management by notifying the CCP of all changes regarding membership requirements.

A CCP should also tailor its tolerance to adapt the risk management of a member and its transactions based on the member's risk and resources. A review should occur at the beginning of the clearing membership and on a regular basis to ensure these conditions are satisfied.

Given their central role in managing risk for members, CCPs should have the same or better processes in place as the most sophisticated members. These processes include regular reviews of the financial soundness of all clearing members, early warning indicators for clearing members that experience stress, and steps to reduce the exposure of such clearing members.

Where appropriate, regulators should consider whether market efficiency and safety would be enhanced by a requirement for CCPs to restrict clearing members to regulated entities. In general, CCPs should disclose the full list of their members on their websites.

Best Practice 3: Products to be Cleared

Products cleared by a CCP need to be sufficiently standardized and liquid. Where these products contain very specific characteristics or market dynamics, they should be cleared in a separate or segmented silo, or be subject to prospectively increased margin requirements.

For a product to be suitable for clearing, it needs to be standardized and liquid, and prices need to be observable on a regular – at least daily – basis. If prices cannot be observed on a regular basis, the CCP should set up a scheme of price provision by members (or by clients in markets where clients are more active than members). The CCP should consider volume and open interest of a product. There also needs to be a suitable number of members that clear the product and commit to participating in its default management (*see Best Practice 9: Default Management*).

CCPs should have standardized criteria for products they clear, and processes to review the products against these criteria. CCPs should have the discretion to discontinue clearing products that no longer satisfy the relevant criteria. If any material risk management implications arise from these decisions, they should be governed by the risk committee that has representation from member firms serving as independent experts.

Clearing members believe products that consist of idiosyncratic and unusual risks compared to the rest of the cleared portfolio should be cleared in a separate silo⁸, with separate default resources and CCP capital – so-called skin-in-the-game (SITG). The margin model should take into account any potential difficulties that might arise upon the default of a member clearing the products⁹. These difficulties could include trouble executing hedges to de-risk the defaulting member's portfolio and any idiosyncrasies in rebalancing the CCP's portfolio. Instead of a separate silo, the CCP could also consider segmenting the default fund for these products, or prospectively raising margin requirements¹⁰.

Decisions on product suitability and whether to segregate those products, either in a separate default fund segment or a fully segregated default fund, should be made on a dynamic basis and should be periodically reviewed and discussed with members.

⁸ A silo can be either a separate legal entity or a contractually segregated segment

⁹ New products might be less liquid, especially at the time of their introduction. In such cases, it may not make sense to set up a new default fund or default fund segment at the outset. Such products should be margined conservatively. It is also important to have fair and transparent definitions of what constitutes a new product and good governance over introduction of new products

¹⁰ Certain CCP members of ISDA are concerned with this recommendation about segmenting certain products in their own silos. They believe that, unless the idiosyncratic or unusual risk of the segmented products threatens the financial stability of the cleared markets in question, such a siloed approach may make these products unnecessarily costly to clear, could challenge access to clearing for client risk management purposes, and could undermine the viability of the CCP itself

Best Practice 4: Membership Size

CCPs need to make sure there are sufficient participants in an auction. For some products, this will be clients rather than members.

Mutualization of risk in a CCP works best if that risk is mutualized across many members. If the membership of a CCP is too concentrated, liquidation via an auction is less likely to yield a good price. This is the case particularly if other clearing members have positions in the same direction as the defaulter.

The ultimate driver for auction success will be the number of bidders that are able to absorb the risk of the defaulting member's portfolio. In contrast to OTC derivatives CCPs, the most active participants (eg, market makers) at many ETD CCPs are often not clearing members but end-user clients of those clearing members. For those CCPs, it is important to find ways to allow clients to bid in the auction with suitable incentives in place¹¹.

To address these issues, CCPs could allow clients to bid, or allow or even mandate other members to bid. Even if other members don't have positions in a given product, they might be incentivized to bid to improve the outcome of the auction and to minimize the likelihood of their default fund contribution being used.

Another way to mitigate against a smaller number of firms clearing a certain product is concentration margin, which should automatically apply to a concentrated membership in respect of a given product.

There might be other mitigating circumstances, like clearing new products. When a new product is listed, there might initially be a small number of firms supporting it. Such products should be margined conservatively.

¹¹ There are other considerations: see *Default Management*

Best Practice 5: Margin Calculation

Best practices for margin calculations should be implemented across all products, based on applicable risk factors and not limited to trading venue. This includes:

- *A conservative, standardized minimum confidence level should be established and used consistently;*
- *Margin and haircut models should include stressed periods;*
- *The MPOR should be linked to the expected duration of the DMP until the risk of the defaulter's portfolio is fully neutralized, considering factors such as market volumes, open interest, capability and number of active market participants, and should not be solely dependent on the derivatives product being an OTC or ETD;*
- *Correlation benefits should be carefully considered, based on a clear economic rationale, and use an appropriate number of historical and stressed scenarios, taking into account that correlation will exhibit fat tails and is prone to breaking down in stressed periods;*
- *Concentration, liquidity and wrong-way risk should be included in the margin calculation;*
- *CCPs should seek to limit the reactivity of margin to volatility changes (pro-cyclicality), while ensuring it is always sufficient to cover cleared risk;*
- *The CCP should call for intraday margin to make sure it is not extending more credit than planned;*
- *CCPs should implement transparent back-testing of margin and collateral models.*

CCPs use a wide variety of methods to calculate margin:

- Different calculation methods, such as standardized portfolio analysis of risk, historical simulation (filtered or unfiltered), Monte Carlo simulation or stressed-based methods;
- Underlying models can be value-at-risk or expected shortfall, with a variety of confidence intervals and lookback periods.

There is no single correct method and model combination, and the choice will depend on the products cleared. It would also make the financial system less safe if all CCPs had to use the same models. However, it is important that the CCP performs extensive analysis to support every modelling choice it makes as part of its risk management practices, and that models are reviewed on a regular basis to address weaknesses.

ISDA believes there is no reason why the confidence interval should be different for exchange-traded and OTC derivatives CCPs. We propose the use of a conservative, standardized confidence interval, which would be higher than the current minimum prescribed by CPMI-IOSCO. This would strike the appropriate risk balance between 'survivors pay' and 'defaulter pays' for both OTC and ETD CCPs. The essential role of a CCP is to rebalance its books without placing mutualized resources at risk in all but the most extreme situations. In effect, 'survivors pay' will greatly affect the CCP's reputation and should almost never happen at a CCP.

Many CCP margin models provide correlation benefits between economically linked contracts. Such correlation benefits should only be provided if the economic relationship is strong enough so price relationships persist during times of crisis. To calibrate these correlation benefits, CCPs need to look back for a suitably long time period and recognize that correlations can break down in times of stress. CCPs should also acknowledge that correlation benefits are even less likely than directional risk factors to be normally distributed and are more likely to exhibit fatter tails. CCPs should fully document the rationale for allowing offsets and disclose the documentation to members¹².

Best practice for margin takes into account concentration, market liquidity, wrong-way risk and other factors. A clearing member that clears either a large portion of a given asset or a portion that is large compared to daily trading volumes should have to pay additional margin. This additional margin should be sized to cover the cost of closing out a concentrated or illiquid position to reinforce the ‘defaulter pays’ paradigm in cases where clearing members introduce outsized risk to the CCP.

There are other best practices in the market in relation to margin calculation:

- Margin and haircut models should include stressed periods, either by having a suitably long lookback period or by including dedicated stress scenarios, where appropriate. The length of the minimum lookback periods should be standardized¹³.
- A key driver of margin size is the MPOR, which should be closely linked to the process and duration it takes to detect a default, commence the DMP and fully neutralize the risk in a portfolio (*see Best Practice 9: Default Management*). The MPOR should depend on the market liquidity of the product, including the number of active participants, which can change over time, and the complexity of unwinding portfolios of a product. The MPOR should therefore be dynamically adapted to market liquidity, ideally using stressed periods for calibration to avoid volatile MPOR or initial margin levels. The main point is for the CCP to have a suitable level of initial margin. Therefore, a CCP does not necessarily have to adapt the MPOR, but, as an alternative, can also increase total initial margin by using other tools like liquidity margin. In any case, the CCP should document both the MPOR and its rationale, and the interplay with other margin components for every product, and provide documentation to members.
- If a CCP applies a short MPOR of one day, the onus is on the CCP to demonstrate that a one-day MPOR is appropriate and sufficient. This case should also be supported by a suitable amount of SITG.
- The margin model should:
 - Be based on a risk model that is appropriate for the cleared products (such as simulation for products with optionality);
 - Capture all of the factors relevant for evaluating the risk of the cleared products;
 - Cover risk in changing market conditions; and
 - Use valuation models that are market standard and are able to accurately price products in the extreme market scenarios that may exist following a member default.

¹² If a CCP has the ability to allocate losses beyond clearing members (for example, to end investors), then the information should be made available to all potentially impacted parties

¹³ Standardized lookback periods should take product specifics such as seasonality into account

- Concentration limits (position limits) at the exchange and the CCP, margin components for concentration and liquidity and MPOR all reflect market factors and need to be managed holistically and dynamically.
- Margin components for concentration should also consider concentration on the other side of a member's position. If there are very few members on the other side, there is an elevated risk to any one of this small set not bidding in an auction. Extra margin would be needed to cover this scenario.
- Margin requirements should be increased for members whose positions are large compared to their capital or compared to risk brought in by other market participants, based on a percentage of the size of the default fund.
- The CCP should periodically call for intraday margin, both covering initial margin and variation margin shortfalls, to make sure the CCP never extends more credit than planned.
- Some CCPs require pre-margining of transactions. Pre-margining portfolios will mitigate the risk of a new position that could be uncovered until the first margin payment is made.

CCPs should seek to limit the reactivity of margin to volatility changes (pro-cyclicality), while ensuring they are designed to cover cleared risk in accordance with the applicable confidence interval.

It is extremely important for the CCP to demonstrate margin adequacy by back-testing margin and haircut models on a regular and frequent basis, using a transparent methodology and sufficiently long time series, both at the product and portfolio level¹⁴.

¹⁴ How to perform back-testing so that the results are comparable and meaningful could be the subject of a separate paper

Best Practice 6: Controls and Limits at the Exchange

Controls and limits that protect against erroneous trades and build-up of concentrated positions should be implemented at the exchange level.

Margin models that take account of concentration and liquidity play an important role in determining the amount of collateral required to cover a certain position, and to incentivize members to reduce concentrated positions.

Where a CCP is linked to an exchange, there should also be controls at the exchange level.

- The exchange needs to ensure that erroneous transactions don't get executed and presented to the CCP in the first place. This is particularly important for high-frequency trading.
- Exchange rules should also not allow a single participant to build positions where the size could affect the market, either by restricting supply (cornering) or by fire sales if the participant defaults. Such limits have to be dependent on size and liquidity in the particular market, and need to be reviewed on a regular basis.

Best Practice 7: Enhanced Transparency

CCPs should disclose margin and stress testing models, DMP procedures and other important documentation to enable participants to fully replicate margin and stress models and to perform meaningful due diligence on the risk management framework. CCPs should also disclose the two largest amounts of margin offsets for products with non-fungible or non-convertible underlyings.

ISDA has long advocated for greater transparency from CCPs on margin models and stress testing frameworks in general. Clearing participants should have enough information from the CCP to replicate the CCP's risk management and stress testing models, enabling them to conduct meaningful due diligence on the CCP.

Ideally, a CCP should be able to share its own documentation on models, stress testing, back-testing and the DMP. In particular, margin models should be fully documented and that documentation should be shared with members. The documentation should be sufficient to allow members to fully replicate and attribute drivers of margin.

ISDA believes that transparency on correlation benefits could be enhanced by providing information about the two largest amounts of margin offsets where the CCP applies portfolio margining for products with correlated but not convertible underlyings. For example, two different commodities would fall into this category whereas futures on the same equity index with different contract sizes would not. By being transparent on the most sizeable margin offsets, members could estimate how much the default waterfall would be hit by a sudden breakdown of correlations. Similar transparency could be provided on concentration.

ISDA also recommends that all CCPs complete a standardized comprehensive risk management questionnaire. Identical or highly similar analysis would free resources both at CCPs and member firms, therefore giving firms capacity to review more and smaller CCPs.

Best Practice 8: Default Fund and Financial Safeguard Coverage

Default fund sizing should be aligned with best practices, such as:

- *Universally employing the ‘cover 2’ minimum standard¹⁵;*
- *Using a large number of scenarios and stressing every significant risk factor using market data that reaches back a long period;*
- *Having tools to limit the portion of the default fund that could be consumed by any one member and requiring additional margin or default fund contributions to cover stress losses above that targeted by the default fund;*
- *Implementing meaningful minimum default fund contributions that incentivize active participation in the default management process and limiting the number of assessments as they can be pro-cyclical;*
- *Limiting the liability of clearing members to a CCP.*

While regulation in certain cases allows a ‘cover 1’ model – ie, a default fund that covers the default of the largest clearing member in extreme but plausible situations – it should be best practice for all CCPs to at least apply the ‘cover 2’ model (a default fund that covers the default of the two largest clearing members in extreme but plausible situations).

Other best practices observed in the market include:

- When sizing the default fund, CCPs should look back on a long period of market data, ideally as long as data is available.
- Using a large number of scenarios that include historical, hypothetical and theoretical scenarios, stressing every risk factor, including spreads and using an unsynchronized set of stress scenarios. The CCP should disclose its stress scenarios at least to its clearing members¹⁶ and ideally publicly.
- Limiting the proportion of mutualized default resources that can be consumed by an individual member, and ensuring that the default fund always meets the targeted coverage level by requiring members to post additional resources to reduce the size of a given member’s stress loss in excess of the amount covered by margin. For example, a member whose stress loss exceeds 50% of a ‘cover 2’ default fund could post the difference in supplementary margin or additional default fund contributions. Additionally, CCPs should consider extra stress loss margin for other members that have outsized risk beyond the two largest clearing members.
- A minimum level of default fund contributions that are risk-based to incentivize active participation in the DMP, and limiting the liability of clearing members, allowing each clearing member to determine the risk they take on with a CCP.

¹⁵ As mentioned before, this is a minimum standard, and the CCP needs to demonstrate why the standard chosen is suitable for its particular risk distribution

¹⁶ If a CCP has the ability to allocate losses beyond clearing members (for example, to end investors), then the information should be made available to all potentially affected parties

ISDA also proposes the CCP provides:

- Reverse stress test results that show what shocks are needed to breach each level of protection in the waterfall; and
- The distribution of uncollateralized stress loss as a way of demonstrating appropriateness of coverage model.

Best Practice 9: Default Management

CCP default management processes should include the following elements:

- *If an exchange-traded product is not liquid enough to be closed out at an exchange and requires an auction to close out the defaulter's portfolio, the CCP should apply a transparent DMP that aligns the incentives of all participants – for instance via juniorization of default fund contributions;*
- *Ensure sufficient participation in auctions – for some products, this will be clients rather than members;*
- *Regular 'fire drills', testing the CCP and members' ability to hedge and liquidate the defaulter's portfolio in a timely manner, ideally synchronized among CCPs globally;*
- *No minimum price should be set for an auction;*
- *Generally, the outcome of the auction should be accepted as the current market price, unless there are clear indications that the auction has been run badly or was poorly attended.*

As there was historically no CLOB to liquidate OTC derivatives, CCPs clearing such products had to develop DMPs that used a well-defined and transparent auction process. ISDA believes the principles surrounding these best practices for the DMP should be universally used. These DMPs are transparent, use clearing member knowhow by assembling a default management group (DMG) comprising members' traders, involve the whole clearing membership in mandatory bidding, and provide the right incentives to bid aggressively in an auction by juniorizing the default fund contribution of bad bidders.

For OTC derivatives CCPs, the MPOR is five days or longer, taking into account the time taken to assemble the DMG and fully neutralize the risk in the portfolio. Regardless of the type of product, the MPOR should be adapted to the time it takes for a portfolio containing such a product to be closed out.

This might be only one or two days for products traded on a liquid exchange in high volumes, or could be longer – say, five days, in line with the MPOR of OTC derivatives – for less liquid or difficult to hedge products that may take longer to close out. For the most liquid OTC derivatives where portfolio hedges can be executed rapidly, the MPOR might be reduced to lower than the current minimum five-day level.

A CCP clearing ETDs may be able to close out a portfolio consisting of liquid products on the exchange. For such CCPs, using auctions can be an additional tool to deal with less liquid portfolios. Should such a CCP use auctions, it should apply the best practices described above, while targeting auction participants that are well-suited to manage the risk of the portfolio. The CCP might decide on a voluntary auction. It is important for the auction to involve a sufficient number of bidders to have a high likelihood of good bids, and that the chosen liquidation method is clear and transparent to participants.

A CCP should manage a member default without participant input only if the estimated close-out costs do not impact the mutualized default fund and waterfall, and only rely on the available defaulted member resources and the CCP SITG. If mutualized resources are expected to be drained, then participants should be consulted and appropriately incentivized to actively take part in the DMP.

Especially in ETD markets, the most active participants (for example, market makers) are often not clearing members, and clients instead trade a large share of the market. Clearing members might also be restricted by regulation or risk appetite. Some client types (for example, those with discretionary money) could have a significantly larger risk appetite than a bank in stressed conditions.

In such markets, clients should be able to bid (subject to certain requirements) to increase the number of bids and therefore the likelihood of good bids. Allowing clients to bid in the auction requires measures to make sure the shape of the defaulter's portfolio is not known by the whole market, which would make it more expensive for the auction winner to hedge the new position (winner's curse)¹⁷. CCPs will also need to make sure the bidder is suitable for the portfolios they bid on¹⁸.

Members believe that CCPs should consider establishing a DMG, at least if the auction is mandatory. If an auction is just one tool to liquidate a defaulter's portfolio, member participation in such DMGs could be voluntary¹⁹. When running an auction, there should not be any minimum price, especially not a minimum price based on available resources – for instance, the amount of initial margin.

Generally, the outcome of the auction should be accepted as the current market price and result of the auction. Otherwise, the market might move more during the time it takes for a second auction. CCPs do feel a fiduciary obligation to the clearing members that have contributed to the guarantee fund, protecting those clearing members from losses that are not reasonably based upon market/ commercially reasonable prices.

There are two exceptions to the above statement:

- The DMG and the CCP determine that the auction was not designed properly – for instance, in terms of auction portfolio cuts; and
- The DMG and the CCP believe clearing members were not bidding 'in earnest', or many members were unable or unwilling to bid.

Default management processes should be tested on a regular basis (fire drills), ideally globally synchronized among CCPs. These fire drills should be run at least annually and have broad participation and demonstration of the CCP's and participants' readiness.

¹⁷ This could be achieved by asking bidding clients to pay into the default fund ('no free look') or cut auction portfolios in a way that no auction bidder has sight of the whole portfolio. The latter might require asking for two-way prices

¹⁸ There are also other considerations to allowing clients to participate, including non-disclosure agreements, time to respond, clearing member willingness to underwrite risk, and so on

¹⁹ For OTC derivatives where an auction is the only way to liquidate a portfolio, participation in a DMG must be mandatory. For ETD CCPs, where an auction is one of several tools to liquidate a portfolio, participation in the DMG could be voluntary. However, once a clearing member has joined the DMG, traders must be available in case of a default. Further work on this topic will be conducted as part of the industry response to the IOSCO auction design work

Best Practice 10: Governance

The parties underwriting the counterparty risk of a CCP need to be part of the governance of the CCP, especially in the area of risk management. Clearing members should receive sufficient information so they can scrutinize the risk management framework in detail.

As the CCP manages the counterparty risk of its clearing members, and has to rely on those clearing members in case of a default, recovery or resolution, the CCP needs to include its members in its governance.

Most CCPs have independent risk committees consisting of clearing member representatives (as independent experts) and outside experts. This risk committee should be part of all decisions that affect the risk management framework. It should also be included in decisions during default management and allow clearing members a sufficient avenue to provide input to the CCP in terms of risk sharing.

While not market standard yet, clearing members have proposed to establish committees that represent the view of clearing members as underwriters of CCP risk²⁰. As members of the risk committee act as independent risk experts and not as representatives of their employer, responsibilities would be clearer if there was a separate committee/working group where clearing members could represent their own interests and opine on risk issues that impact them. Such committees are aimed at better calibration of risk sharing and should not supersede the regular risk committee²¹.

In addition, all clearing members should receive sufficient information so they can scrutinize the risk management framework in detail, and be able to feed their findings back to the CCP in a well-defined process. Participants should have enough information to replicate models and stress testing frameworks.

²⁰ https://fia.org/sites/default/files/content_attachments/FIAGLOBAL_CCP_RISK_POSITION_PAPER.pdf

²¹ Certain CCP members of ISDA are concerned with this recommendation because market participant feedback that is informing a CCP's risk management practices based on their own interests (particularly commercial interests), rather than those of overall market stability, could have negative systemic risk implications

EVOLVING BEST PRACTICES

Skin-in-the-Game

A CCP should expose a significant and dynamic part of its capital as part of the default management waterfall so the incentives of the CCP and its clearing members are aligned.

A CCP should expose a significant and dynamic part of its capital as part of the default management waterfall so the incentives of the CCP and its clearing members and clients are aligned. The level of SITG is ultimately a judgement call and is still debated between many CCPs and clearing members. As an ultimate step, some CCPs also include management deferred compensation within SITG.

For CCPs in a vertical silo, the exchange should be incentivized by providing parts of the SITG resources. The optimum level of SITG is difficult to agree between CCPs and clearing participants, so ISDA recommends that regulators develop standards that are appropriate for the individual CCPs regulated by them.

Provision for Non-Default Losses

A CCP must maintain sufficient capital and/or insurance to cover non-default losses and provide clear guidance in its rulebook on which operational risks they do absorb and which they do not.

In order to avoid CCP insolvency, CCPs must maintain sufficient capital and/or insurance to cover non-default losses. CCPs should maintain policies and procedures as part of their operational risk framework to aid in risk managing a non-default loss event. The CCP should also provide clear guidance about what basic operational risk event losses they will absorb (for example, those triggered by cyber attack, fraud or damage to physical assets).

Potential moral hazard issues arise for CCP risk management if clearing participants are expected to bear responsibility for losses that the CCP should be responsible for managing. Clearing member contributions to a CCP's pre-funded financial resources designed to manage member default risk must not be available to absorb a CCP's non-default losses.

Operational Efficiency

Reliability of CCP processes is important for CCPs' and their members' risk management. CCPs should routinely report statistics on their operational efficiency (for example, delayed reports or failed messages) in a standardized format.

CONCLUSION

Best practices have emerged in international CCPs. To make the financial system more resilient, all CCPs globally should not only ensure they are compliant with all components of the PFMI and relevant regulatory requirements, but also embrace implementation of global best practices not covered in either of these two areas. Importantly, CCP risk management should be driven by the actual risk and not by how the products are traded.

While there are divergences in risk practices, it is important that CCP users ensure they have performed sufficient due diligence and understand all elements of each CCP they join, relative to what is outlined as the best practice standards.

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