

Briefing paper on non-default loss

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Introduction

Central counterparty clearinghouses (CCPs) serve derivatives and securities markets by mitigating counterparty credit risk, increasing transparency, and reducing the operational risk that arises from bilateral transactions. The current global health and economic crisis has demonstrated again the resilience of exchanges and centrally cleared markets under extreme stress scenarios.

Institutions that become clearing members of CCPs do so with full knowledge of the rights and responsibilities that come with membership. A CCP's procedures for managing a clearing member default, as well as the related financial obligations inherent to the risk mutualisation that could take place within a CCP's framework, are transparent to members through the CCP rulebook.

The default of a fellow clearing member is the most pertinent and impactful risk facing the members of a CCP. There is also, however, the possibility of a so-called 'non-default loss' (NDL) arising, which in certain limited circumstances may have implications for clearing members. These are set out in the CCP's rulebook and recovery plan. Alongside the WFE's continuing work on default-related matters, this paper details the approach which CCPs have undertaken for addressing NDLs, as they play their part in protecting the wider financial ecosystem.

Industry discussions appropriately have continued to focus on CCP resilience and in part, this has led to discussions on the operational resilience of financial market infrastructures, as well as their enterprise risk management, which forms an important part of a CCP's framework for mitigating the risk of NDLs occurring in the first place. Focus has been given to information technology and cyber security, where vulnerability assessments, enhanced software testing, comprehensive monitoring, and benchmarking and board-reporting are best practices.

Types of NDLs

NDLs refer to losses that may arise from any risk event that is not a clearing member default, including operational, custody and investment risks. **These risks are separate from the risk of a clearing member default**, which is managed through the provisions of the 'default waterfall.' These categories of risk (such as operational, custody and investment risk events) would not necessarily lead to a loss, given the operational resilience of CCPs and risk mitigation practices they utilise. For example, at the ten largest CCPs, no CCP has ever allocated a loss to a clearing member related to custody or collateral investment through its rulebook. However, such an extreme scenario may arise in rare circumstances.

A CCP's rulebook and recovery plan governs the allocation of different types of NDLs. This allocation should depend on the type of risk causing the loss and more granularly, the facts and circumstances surrounding a given NDL. A CCP may not be (or solely be) responsible for all types of NDLs; these may include losses deriving from activities where other stakeholders benefit from (or control) the antecedent rewards and risks (as negotiated and agreed in the CCP's rulebook). NDLs resulting from the general business operations within a CCP's control are normally borne by the CCP. Furthermore, third-party custodial and banking losses are an example of a loss type where, throughout the financial system, liability is disclaimed; the same is appropriate where a CCP holds collateral on behalf of its clearing members and their clients. Investment losses may also be disclaimed in certain scenarios and to varying extents dependent on CCP's risk management practices and the regulatory framework under which the CCP operates.

CCPs manage operational, custody and investment risks using multiple lines of defence, within the risk tolerance parameters set by the CCP's board. Enterprise risk management disciplines may be used, with Key Risk Indicators (KRIs), and other metric reporting, to monitor changes to risk levels and exposure. The CPMI-IOSCO *Principles for Financial Market Infrastructures* (PFMIs) set out a framework for the appropriate management of operational, custody and investment risks, and individual jurisdictions may also specify further requirements.

CCPs assess **operational risks** from a variety of angles—e.g. vendor risk and cyber risk. PFMI Principle 17 states that:

“An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI’s obligations, including in the event of a wide-scale or major disruption.”¹

Besides putting in place robust procedures to minimise operational risk, under the PFMI, CCPs are required to hold capital against losses associated with operational risks to be able to continue operating as a going concern.

In the context of collateral of a CCP’s clearing members and their clients, **custodial and banking risk** may arise from the failure of a custodian for non-cash collateral assets or a bank or depository for cash collateral. To minimise such risk, collateral is generally held either at central banks or at some of the largest global financial institutions, and regular due diligence and stringent regulations are applied to these institutions. These institutions are likely to be Global Systemically Important Banks (G-SIBs), which are subject to high degrees of regulatory scrutiny and enhanced capital requirements, and have resolution plans describing how they will continue to provide their systemically important services in the event of their resolution, including custodial and depository services. CCPs may well disclaim or limit the liability associated with the failure or non-performance of a custodian, sub-custodian, correspondent bank or depository in respect of clearing member and client collateral. This approach is consistent throughout the financial system, including for custodian and banks, which disclaim liability for sub-custodians and correspondent banks, respectively, and client clearing service providers, which also disclaim liability to their clients for the failure of third-party custodians and banks.

Investment risk refers to market risk losses that may occur based on the poor performance of invested assets (or investment counterparty default)—invested assets may include clearing member and client cash collateral. Many CCPs allocate losses associated with investment risk in line with the extent to which the CCP and its clearing members benefit from investment income—i.e. aligning risk-taking with reward. Others may decide to align risk-taking with control, and assume all losses associated with investment risk where investment decisions are taken solely by the CCP. Still other CCPs may choose to assume a certain amount of ‘first loss’ liability for investments, even when certain investment decisions have been directed by the clearing member.

Concerning custody and investment risks, PFMI Principle 16 states:

“An FMI should safeguard its own and its participants’ assets and minimise the risk of loss on and delay in access to these assets. An FMI’s investments should be in instruments with minimal credit, market, and liquidity risks.”²

Discussion of NDLs

Given their importance to the financial system, global regulators and stakeholders have carefully scrutinised CCP risk management, alongside recovery and resolution planning.³ In doing so, both default losses and NDLs have been extensively discussed and international standards and local legislation have been adopted in these areas.⁴ In recent

¹ CPMI-IOSCO, [Principles for financial market infrastructures](#), April 2012.

² [Ibid.](#)

³ FSB 2019 Resolution Report: <https://www.fsb.org/wp-content/uploads/P141119-3.pdf>

⁴ FSB, [2019 Resolution Report](#). November 2019.

years, NDIs have been given increased attention, including in areas such as loss allocation provisions in CCPs' rulebooks and identification of operational loss scenarios.

This document aims to contribute to this discussion and explores three key areas relevant to the consideration of CCP NDIs:

- *CCP operational risk management*
- *Custodial and banking losses*
- *Investment policy and losses*

CCP operational risk management

Given CCPs' role in the financial system to support financial stability, CCPs prioritise the continuity of their services and operational risk management. Regulators also pay close attention to the risk management of CCP operations. Both regulators and CCPs approach operational risk with an ecosystem-wide view, planning appropriately for scenarios impacting not just individual institutions but the broader financial system.

Core risk management capabilities—including operational risk—are a strategic priority for CCPs.⁵ CCPs have identified granular scenarios that could crystallise an operational risk including (but not limited to):

- IT software / hardware flaws
- Inadequate information security
- Cyber-crime
- Insufficient data protections
- Damage to physical assets
- Third-party operational failure (e.g. vendor risk)
- Fraud

To manage operational risk, CCPs generally adopt a 'three lines of defence' approach, common to many financial institutions:

- 1) Operational management control—i.e. functions that own and manage risk day-to-day
- 2) Risk management and compliance—i.e. functions that exercise oversight over risk
- 3) Internal audit—i.e. functions that provide independent assurance

Increasingly, exchanges and CCPs are structuring their risk management functions to include an Enterprise Risk Management (ERM) team. This team is responsible for establishing and maintaining risk management processes, with responsibilities that include risk monitoring, measurement and evaluation (e.g. through KRIs). It provides the organisation with an enterprise-wide risk management framework and appropriate training programmes aimed at improving the risk management culture and promoting common risk terminology and concepts applicable to the whole organisation. CCPs also use scenario planning to mitigate risks and to support operational risk management; this includes business continuity planning (BCP), such as redundant systems, and cyber security programmes.⁶ CCPs are also required to disclose operational failure incidents as part of the CPMI-IOSCO quantitative disclosures.⁷

A CCP's rulebook may be used to set out the allocation of NDIs relating to operational risk. While the allocation of NDIs relating to operational risk is dependent on the facts and circumstances, many CCPs that are owned by private,

⁵ WFE & Oliver Wyman, [The Future of Clearing](#), April 2019.

⁶ Principle 17, CPMI-IOSCO, [Principles for financial market infrastructures](#), April 2012.

⁷ CPMI-IOSCO, [Public quantitative disclosure standards for central counterparties](#), February 2015.

independent shareholders absorb operational losses and account for them as general business risk losses. Nevertheless, certain exceptional scenarios may pertain—e.g. if a clearing member’s employee were to introduce the risk factor leading to a CCP’s operational loss as part of a conspiracy to commit fraud. Other CCPs, owned and controlled by their clearing members, adopt other loss allocation and accounting treatments, given their ownership structure.⁸

Further, regulators require CCPs to continue to provide critical services in the highly extreme and unlikely event that the CCP must be wound-down. Principle 15 of the PFMI provides that an FMI “should hold sufficient liquid net assets funded by equity to implement” an orderly wind-down plan and that “at a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses.”⁹ Key jurisdictions have incorporated this as a requirement for CCPs.

Custodial and banking losses

Central banks and large, highly stable global financial institutions provide custodial and banking services in respect of clearing member and client collateral. Clearing member and client assets, both cash and non-cash, are deposited by a CCP and then typically held in segregated accounts: one for clearing members and one for their clients.

The arrangements governing these assets and institutions are highly secure. Financial institutions providing custodial and banking services for non-cash and cash collateral are subject to rigorous capital requirements and liquidity rules, as well resolution planning. Furthermore, non-cash collateral held with a custodian is typically bankruptcy remote from the custodian’s insolvency. A number of major CCPs have also obtained legal opinions that both non-cash and cash collateral of non-defaulting clearing members and their clients will not be part of the CCP’s estate in the event of its bankruptcy; the level and form of protection may depend on the prevailing regulatory framework.¹⁰

Custodial and banking risk is present throughout the financial system. Notwithstanding the limited likelihood of a custodian or bank upon which a CCP relies failing, the risk of such a failure does not arise specifically in the context of central clearing. Throughout the financial system, institutions rely on third-party custodians and banks to protect the collateral assets they receive, and disclaim liability for the failure of those third-party entities. For example, clearing members disclaim liability to their clients for losses arising from the failure of these third-party entities, and counterparties to an OTC derivatives contract involving the bilateral exchange of margin adopt a similar practice. Custodians even disclaim liability for their use of third-party sub-custodians and similarly, banks disclaim liability for their use of third-party correspondent banks.

It is no different for a CCP to disclaim liability for its use of third-party custodians and banks in respect of clearing member and client collateral. Indeed, a CCP’s use of third-party custodians and banks to hold collateral deposited by clearing members mirrors a clearing member’s use of such entities for holding the client collateral they receive.

⁸ See: Federal Reserve Bank of Chicago publication, [Non-default loss allocation at CCPs](#), wherein Rebecca Lewis and John McPartland write:

“Requiring a mutualized CCP to bear losses resulting from a business or operational failure requires all clearing members to bear the loss. Since the members as a whole have a responsibility to ensure that the CCP is run well, assigning losses to the CCP, and so to all clearing members, preserves their incentives to monitor the CCP’s management. Clearing members should share losses in a manner that reflects each clearing member’s interest in the CCP: either in proportion to each clearing member’s ownership stake or in proportion to their initial margin requirement.”

⁹ CPMI-IOSCO, [Principles for financial market infrastructures](#), April 2012.

¹⁰ See, for example: [CME Clearing Risk Management and Financial Safeguards](#). A defaulting clearing member’s collateral is exposed to losses.

The market practice of disclaiming custodial and banking liability has arisen because the requirement would pose an inappropriate impediment to the provision of financial services. Even if the assets deployed as collateral were not so deployed, they would still be subject to custodial and banking risk, which is ubiquitous across the financial system.

Therefore, forcing CCPs to accept responsibility for third-party custodial and banking risk would be highly irregular in terms of market convention and inappropriate in its implication that CCPs guarantee ancillary parts of the financial system. In significantly altering the economics of clearing, this could potentially undermine the efficiency of the CCP operating model. Such a requirement would effectively transform CCPs into insurers with unlimited, or at a minimum, significant liability for third-party entities providing custodial and banking services—despite the fact that the entities providing these services do not accept a similar level of liability for their core service offering.

Investment policy and losses

Clearing member and client collateral is invested in a secure and conservative manner with the main objective of minimising credit, market, and liquidity risks. A CCP may invest the cash collateral it receives in assets that are creditworthy and liquid (e.g. investment-grade sovereign debt). In doing so, a CCP may purchase the asset outright or enter into a reverse repurchase agreement for the asset. In the case of a reverse repo transaction, the collateralisation inherent in a repurchase agreement is a risk mitigant.

Where a CCP chooses to deposit rather than invest cash collateral, it may do this at a combination of central banks and commercial banks, as discussed above—however, a CCP may typically only deposit cash collateral at the given central bank of issue. It is preferable that CCPs have the option to access central bank facilities, as this can assist them in effectively and efficiently managing overall risk, particularly custodial and investment risks. CCPs without such access seek to diversify the commercial banks they utilize.

CCPs have different means of determining their investment policies, and there may be a role for clearing member representatives. Further, the regulatory framework under which a given CCP operates can have a direct bearing on these policies. Within narrow bounds, there may be decisions to be made about balancing risk and reward.

In the context of these varying investment policies, CCPs also have different policies regarding how the returns generated by invested collateral are distributed. Likewise, CCPs have different ways of allocating potential market value investment losses, driven by how they determine the appropriate alignment of risk, control and reward. While the allocation of market value investment losses must be made consistent with a CCP's regulatory requirements, it is a risk management decision of the CCP and set out in the contracts governing the CCP-clearing member relationship.

Conclusion

CCPs are highly secure market infrastructures that prioritise service continuity and operational risk management. In the case of an NDL occurring, CCPs allocate the losses in ways that preserve the incentive structure of central clearing for market participants to appropriately manage their risks. Due to the different facts and circumstances underpinning different types of NDLs, CCPs treat specific types of NDLs differently. A CCP's rulebook may be used to govern the allocation of different types of NDLs; many CCPs that are owned by private, independent shareholders absorb operational losses and account for them as general business risk losses when appropriate to the facts and circumstances.

Loss allocation is reflective of prevailing market practices and the regulatory framework under which the CCP operates, while bearing in mind factors such as the CCP's governance arrangements and ownership structure. It

would be inappropriate to transform CCPs into insurers with unlimited, or at a minimum, significant liability for third-party entities providing custodial and banking services.

While the impact of NDIs on a CCP's operations and the allocation of such losses are clearly legitimate policy considerations, the focus should continue to be on the avoidance and mitigation of risks resulting in NDIs in the first place. We welcome the opportunity to work with authorities and clearing members in supporting the ongoing resilience of CCPs.