Re: BCBS CPMI IOSCO Consultation on Transparency and responsiveness of initial margin in centrally cleared markets

General Comments

I welcome the opportunity to respond to the BCBS CPMI IOSCO (together, the 'Committees') consultation on *Transparency and responsiveness of initial margin in centrally cleared markets* (the 'CP'). This is an important topic which profoundly affects the ability of centrally cleared markets and their competitors to serve the real economy. The Committees' evidence-based approach is most welcome, and the proposals being consulted upon evidence a thoughtful, measured approach to the issues.

Background

I have been working on the procyclicality of margin, CCP risk management, and the design of CCPs for more than ten years. The Committees were kind enough to mention some of my joint papers with Michaelis Vasios and Nick Vause, such as [MVV14], in the CP. Therefore, I am particularly happy to be able to respond to these proposals.

Answers To Specific Questions

This section responds to the three specific questions raised in the CP.

1. Collectively, if adopted, would the set of proposals likely result in increased transparency and a mitigation of destabilising changes in margin requirements in centrally cleared markets? Please identify within the set of proposals any which would be particularly beneficial and others which may be less beneficial (eg where the costs may substantially exceed the benefits). Please provide an explanation to your answer.

> I support policy proposals 1 and 2 (on simulation tools), 3 (on margin model documentation), 4 (on APC tool disclosure), 5 (on disclosing the breakdown of margin), 8 (on discretionary over-rides) and 10 (on clearing member disclosure) unequivocally and believe that these proposals will further the Committees' objectives. Proposals 1 to 4 are particularly beneficial because, if enacted, they would provide market participants with greater clarify on the size of likely model-driven margin changes after APC mitigation in different market conditions.
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> Proposals 6 (on measures of reactiveness and their disclosure), 7 (on governance) and 9 (on client preparedness and understanding) are all well-motivated but deserve further comment and modification. Please see below for more details.

2. Are there any aspects of margining practices in centrally cleared markets that have not been adequately covered by the set of proposals and which could positively contribute to achieving the Margin Group's objectives?

> One key issue that deserves further attention is the balance between mutualised resources (such as the default fund), CCP-provided resources (so-called 'skin in the game') and defaulter-pays resources such as margin; and the governance around the determination of that balance. The extent of mutualisation profoundly affects the impact of procyclicality, as the default fund is both a more efficient and a less procyclical loss-absorbing resource than margin. These issues are considered further in the discussion over proposal 7 below.

3. Many of the proposals recommend that a market participant group (eg all CCPs, all CMs etc) be required to provide enhanced disclosure or adopt a new practice. Should the principle of proportionality, with requirements dependent on participant size or type, be used in determining how different firms apply the proposals? If so, in what ways? Please specify the proposal(s) in your response.

The demonstration of proportionality is important for the legitimacy of regulation. Furthermore, it is a legal requirement in a number of important jurisdictions.[1] The Committees' focus on this issue is therefore important. However, it is vital that proportionality is judged not in terms of CCP, clearing member or client size, but in terms of the risk that initial margin model reactiveness places on participants. This does not just relate to the size of the burdens imposed but also to the ability of participants to meet those burdens. Thus, detailed regulation of initial margin model reactiveness might be a proportional response to the risks that a small commodity derivatives CCP places on its participants, if the majority of the risk falls on non-banks without easy access to emergency borrowing; whereas it might not be a proportionate response for a large interest rate swap or credit default swap clearing house where the vast majority of the risk is borne by large banks who are naturally highly liquid, who are subject to liquidity regulation, and who have access to central bank lending. See [MV22], section 5 for a further discussion of this issue.

Proposal 6 – Measures of Reactiveness

The Committees are right to recommend disclosure of initial margin model reactiveness. However, the suggested measure[2] is problematic because it provides limited and potentially confusing information. This is because it is based on a single path in risk factors, and the model's response to that. A single path is not entirely characterised by the changes in volatility along it, even for a fixed measure of volatility. There are different paths of returns with the same time series of volatilities, $\sigma(t)$. Moreover, the response of the margin model depends on the precise path of returns. To see the issue, consider two initial margin models m_1 and m_2. Along one path of returns consistent with $\sigma(t)$, m_1 could appear to be more reactive than m_2. However, along a different path also consistent with $\sigma(t)$, we could find that m_2 appears to be more reactive than m_1. See [Gur22] for examples of this situation and a further discussion.

The issue arises here due to the use of a single path of returns. Broadly, the answer is to average over all paths of returns consistent with a given time series of volatility $\sigma(t)$. This provides a robust measure of initial margin model reactiveness, and I recommend that the Committees consider its use instead of their proposed measure. Pedro Gurrola-Perez and I discuss this averaging-across-paths approach to the measurement of reactiveness further in [GM24].

If this approach is not deemed to be possible, the Committees could enhance the proposed measure by specifying the details of the path of returns used. For example, one possibility would be to require that CCPs disclose the response of their models to a step-function path where returns are sampled from a long period of white noise of constant volatility σ_0 up to time t, followed by a period of white noise of constant volatility $2\sigma_0$ up to time $2t$ with, e.g., t = 500 days. This would be less robust than an average-across-paths approach, but it would provide more reliable information that the proposed measure where CCPs have complete freedom to choose the path of returns used.

Proposal 7 – The Design of CCP Financial Resources and CCP Governance

The Committees are right to focus on the governance framework around margin coverage and cost in proposal 7. However, the issues are broad and should be placed in the appropriate frame.

The base cause of tension here is that CCPs make choices in the design of their financial resources sizing which affect other parties and allocate risk to them. Initial margin is a defaulter-pays resource; CCP equity in the default waterfall (i.e., skin in the game) is an infrastructure-pays resources; while the default fund is a mutualised (or 'all clearing members pay') resource. These resources have different levels of efficiency, and different degrees of responsiveness to changes in market conditions.

[1] See, e.g., Articles 5(4) of the Treaty of the EU, or the US Administrative Procedures Act, 5 USC § 706(a)(2).
[2] Section 4.1.4 of the CP.

One unit of initial margin covers one unit of risk from the poster but – by design – nothing else. Therefore, margin is required on each cleared account separately, and increases in margin affect all participants. In contrast, one unit of mutualised resources covers more than one unit of risk in each cleared account, as the assumption is that no more than one or two clearing members default at once. Thus, the total requirement for CCP financial resources is lower when more risk is covered by mutualised resources.[3]

Initial margin tends to be more reactive to changes in market conditions; the total cover 1 or 2 stressed loss, which determines the size of the default fund needed, tends to be less reactive; and skin in the game, often being a fixed amount, tends not to be reactive at all. Thus, CCPs which set a lower target confidence interval for margin will tend to place lower burdens on their users than those that set a higher target, and their margin requirements will vary less as market conditions change.

The problem here (as discussed further in [LM22]) is that interests are not aligned. CCPs tend to prefer higher levels of margin and lower levels of skin in the games to minimise the risk they bear. Clearing members also tend to prefer higher levels of margin, as margin is the first defence against the counterparty credit risk of their clients. Moreover, mutualised resources, which usually come from clearing members, are safer the higher margin is. Clearing members also tend to have lower funding costs, so the burden of higher targets for margin on their house portfolios tends to be lower than the burden on client portfolios.

It is therefore vital that clients have significant influence in the discussion over the sizing of CCP financial resources, and that CCPs are required to consider the balance of stakeholder views here. Hence, I recommend adding the following to proposal 7 after the first sentence:

> *This framework should incorporate effective measures to balance the views of all stakeholders on the relative and absolute sizing of CCP financial resources based on the risks each stakeholder bears and the benefits they receive from their participation in clearing.*

Proposal 9 – Client Understanding and Preparedness

The Committees, rightly, focus on clearing members ensuring that their clients have sufficient understanding of their margin requirements. However, this proposal is in certain senses too narrow.

The first issue is that cleared markets are only suitable for market participants who have sufficient access to contingent liquidity to ensure that they can maintain their positions for as long as desired, despite margin calls, and sufficient understanding of the risks of clearing, including funding liquidity risk. Therefore, on one level, the Committees' suggestion is simply an element of the more general requirement that products are suitable for the clients that they are sold to.[4] It might be helpful to frame it in these terms.

Broader issues arise when considering what action clearing members should take if clients, or potential clients, fail the proposed test. One obvious answer is that clients without sufficient access to the liquidity needed to meet margin calls and the understanding of when those calls might occur, should trade 'lookalike' OTC derivatives with the same risk profile as cleared transactions but different, less variable margin requirements. The Committees should acknowledge this possibility and thereby highlight the important role the OTC market has in facilitating risk transfer for clients who should not clear.

[3] See [Mur17] for more details. The 'cover 1' and 'cover 2' assumptions come from the CPMI IOSCO *Principles for Financial Market Infrastructures*, Principle 4.

[4] See, e.g., UK Financial Conduct Authority, *Handbook*, Section COBS 9A.2.

References

[Gur22] P. Gurrola-Perez, *How confident can we be about procyclicality measurements?* WFE Research Paper Series, 2022.

[GM24] P. Gurrola-Perez and D. Murphy, *An impulsive approach to procyclicality*. WFE Clear 2024 and available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4727725

[LM23] R. Lewis and D. Murphy, *What Kind of Thing Is a Central Counterparty? The Role of Clearing Houses as a Source of Policy Controversy*, in B. Zebregs et al. (eds.), Clearing OTC Derivatives in Europe, Oxford University Press, 2023

[Mur17] D. Murphy, *I've got you under my skin: large central counterparty financial resources and the incentives they create*, Journal of Financial Market Infrastructures, Vol. 5, No. 3, pp. 1–18, 2017

[MV22] D. Murphy and N. Vause, *A cost–benefit analysis of anti-procyclicality: analyzing approaches to procyclicality reduction in central counterparty initial margin models*, Journal of Financial Market Infrastructures, Vol. 9, No. 4, pp. 27–50, 2022

[MVV14] D. Murphy, M. Vasios and N. Vause, *An investigation into the procyclicality of risk-based initial margin models*, Bank of England Financial Stability Paper No. 29, 2014