Whitepaper series "Incentives to Clear"
Quantitative Impact Study Multilateral Netting

The whitepaper series

This whitepaper is part of a series of papers developed by ISDA members to complement the work of the FSB Derivatives Assessment Team and their post-implementation evaluation of the effects of the G20 financial regulatory reforms[1].

Summary

This study aims to provide an estimate of the impact of multilateral netting and the role that multilateral netting plays in providing incentives to clear.

We simulate that all non-cleared transactions currently in scope of ISDA SIMM of participating banks are novated to one counterparty, leaving the initial margin model and other parameters unchanged. In our sample a saving of 62% was achieved.

This result highlights that the impact of multilateral netting already provides a significant incentive to clear transactions that are not currently cleared, and hence it is not sufficient to only compare initial margin models between cleared and uncleared portfolios when assessing incentives to clear.

Incentives to Clear

One of the goals of the G20 derivative reforms was to incentivize the clearing of OTC derivative transactions. These incentives have been embedded through a number of new rules, from regulatory capital requirements, the leverage ratio, Credit Valuation Adjustment (CVA) and CVA capital charge, margining of uncleared transactions to the outright clearing mandates. Please find below a table that compares these charges for cleared and uncleared transactions:

[1] http://www.fsb.org/2018/08/fsb-and-standard-setting-bodies-consult-on-effects-of-reforms-on-incentives-to-centrally-clear-over-the-counter-derivatives/

Tools in Regulation	Uncleared	Cleared
Risk weight	Full bilateral risk weight	2% flat risk weight for qualifying CCPs (QCCP), zero risk weight for client transactions if the clearing member does not guarantee the CCP performance to the client
EAD	CEM, SA-CCR and IMM	CEM, SA-CCR and IMM
Default fund contribution	n/a	There is a capital requirement for default fund contributions, based on a pro-rata allocation of the CCP's "hypothetical capital"
CVA	CVA accounting and capital charge	Usually no CVA accounting charge or CVA capital charge
Leverage Ratio	No exemption	Exposures from client cleared transactions to the CCP are exempt
Margining	Both counterparties provide initial margin, margin period of risk (MPOR 10) days at a 99% confidence level; in some jurisdictions it is required to demonstrate that bilateral initial margin is higher than cleared initial margin for a similar product	Clearing members post to the CCP, MPOR 1-5 days (can be higher for clients and illiquid positions)

These incentives are mostly independent of the product, and therefore indiscriminately incentivise all products to be cleared, regardless whether these products can be cleared safely.

Incentivising clearing by means of higher capital requirements, as mandated by G20 commitments, and longer margin periods of risk for bilateral initial margin have been widely discussed and analysed, mostly in the context of comparing initial margin requirements trade-by-trade between cleared and uncleared transactions.

Multilateral netting

Multilateral netting is a strong incentive to clear that does not stem from regulation but is inherent in structure of central clearing itself. The fact that all transactions that are cleared at a particular CCP are legally novated to this CCP enables the clearing member to net all exposures to this CCP for the purpose of calculating exposures, and the CCP to net all transactions when calculating the initial margin and variation margin. We believe that the impact of multilateral netting so far has not been widely discussed or quantified.

An ideal quantification would be to look at currently cleared portfolios and compare the actual initial margin requirements with the equivalent assuming that these transactions were not centrally cleared. However, with the widespread use of compression the link between the original transaction with another counterparty and cleared transactions has been lost, hence making such a comparison challenging[2].

The Quantitative Study

As a result of the challenges noted above, we have approached the analysis from another perspective: We look at the uncleared portfolios that are currently subject to bilateral margin requirements and, while holding other factors constant (for example the initial margin model), we estimate the initial margin saving by netting these transactions between counterparties, using the ISDA SIMM model. This has been done with the same portfolios as used by the ISDA SIMM backtesting 2018.

Regulation for uncleared margin requires firms to calculate initial margin amounts for four asset classes separately, without netting between those asset classes:

1. Rates/FX
2. Equities
3. Commodities
4. Credit

We kept within these requirements for bilateral margining and did not net between the four asset classes for which firms have to calculate separate initial margin. This is in line with the fact that CCPs usually clear transactions in different asset classes separately too.

As this analysis is meant to isolate the impact of multilateral netting, we did not address the following:

- A CCP would use different models to calculate IM requirements with a shorter MPOR, but with potentially higher confidence intervals.
- A CCP could use add-ons to the initial margin models, for instance for concentrated or illiquid positions.
- Differences in scope between bilateral margin rules and cleared margin. As an example, for cross currency swaps the fixed principal exchanges do not have to be margined, a CCP would however have to margin those principal exchanges.
- Many of the products that are not currently cleared cannot be cleared.
- Clearing offerings will not cover the full portfolios.
- Any other incentives, like capital requirements, leverage ratio or CVA.

[2] Compression is a technique used to reduce notional exposures by terminating transactions between two or more counterparties and replacing them with another derivative while keeping market risks unchanged in each participant. Being able to efficiently compress portfolios is a positive attribute of clearing, taking full advantage of multilateral netting.

Results

We have collected feedback from 19 firms, who together collect the majority of bilateral IM. Based on this sample, the exercise demonstrates that on average firms would pay 62% less initial margin by netting their uncleared transactions within an asset class across their counterparties.

Conclusions

While we recognise that in reality this benefit could not be crystallised fully, mainly as many of the products in these portfolios cannot be safely cleared, the results highlight two important points:

1. Holding all other factors constant, the initial margin reduction by multilateral netting alone provides a strong incentive to clear transactions that are not currently cleared.
2. Incentives to clear have been calibrated by focusing on standalone consideration of the different components, but not with the aggregated effect in mind. When the bilateral margin rules were in development, there was an argument that MPOR must be high to incentivize clearing. In some jurisdictions the initial margin requirements for uncleared transactions have to be shown to be higher than those of cleared transactions. Such approaches do not take into account the other incentives to clear, and in particular that, even if cleared initial margin would be the same or slightly lower, multilateral netting will reduce the initial margin requirements for the whole portfolio if the portfolio is cleared.

It should be recognized that there will always be a segment of the market which cannot be cleared or cannot be safely cleared, which often represents bespoke hedging solutions. Over-calibrating incentives to clear unfairly penalises such important hedging activity and hence the importance of considering the impact of multilateral netting in the overall package of incentives to clear.