As the CCP market continues to expand, with clearing houses offering an increasing number of clearable securities and netting efficiencies, there is an increased focus on the fate of over-the-counter (OTC) derivatives that are as yet unclearable. These bilateral trades will be subject to the BCBS-IOSCO Initial Margin (IM) requirements, scheduled to phase-in from September 2016. This will result in higher IM costs, primarily as a result of the increased Margin Period of Risk (MPOR). The baseline MPOR for a netting set (i.e., a portfolio with a counterparty under a legal netting agreement) is 10 days, but under certain conditions the MPOR can be doubled, or even quadrupled. However, it appears that a number of circumstances that can bring about MPOR increases are self-fulfilled by the BCBS-IOSCO and the regional regulators themselves, particularly with respect to collateral disputes and illiquid trades. In this article, Ben Larah discusses BCBS-IOSCO, the impact of the rules concerning MPOR and the strategies that banks can take to address it.

INTRODUCTION

Prior to 2008/2009, a relatively minimal margin had to be set aside for bilateral OTC derivatives portfolios. Although the transfer of Variation Margin (VM) from the counterparty to the dealer was commonplace, IM (also known as independent amount) was typically set as a small percentage of the absolute portfolio notional, with the percentage amount varying according to counterparty credit quality. Therefore, the independent amount was usually low.

As a result of the 2008 financial crisis, the situation has changed. In an effort to reduce systemic risk, regulators are incentivizing the central clearing of derivatives. Two methods by which they are doing this have attracted significant attention. Firstly, regulators have mandated the central clearing of vanilla swaps in some jurisdictions, most notably the United States. Secondly, BCBS-IOSCO has introduced stricter IM requirements, set to phase-in commencing September 2016 (moved back from December 2015), on bilateral derivatives portfolios. According to the BCBS-IOSCO guidelines, the IM for bilateral derivatives portfolios will be calculated using a Value at Risk (VaR) method with 99% confidence, using 5 years’ worth of historical scenarios (including a period of “financial stress”), with a minimum 10-day MPOR. The 10-day MPOR serves as a baseline (or “supervisory floor”) for small, liquid portfolios where counterparties do not frequently dispute collateral (or resolve disputes in a timely manner). However, there are several conditions under which the 10-day supervisory floor can be raised.
RAISING OF THE MPOR
According to a 2010 BCBS consultative paper, which was followed up with an FAQ paper in 2012, the three conditions under which the 10-day supervisory floor MPOR for uncleared derivatives can be raised are as follows:

1. If the netting sets contain “illiquid” collateral, or OTC derivatives “that cannot be easily replaced.” In such cases, the MPOR is increased to 20 days for the netting set.

2. If the netting set exceeds 5,000 individual trade positions during a quarter. In such cases, the MPOR floor for the following quarter will be increased to 20 days.

3. If a bank has experienced two or more collateral disputes on a netting set over the past quarter. If such disputes have gone unresolved for a number of days longer than the MPOR currently in place, then the MPOR supervisory floor is doubled from its current value over the next six months.

Note that the third condition could mean a doubling-of-a-doubling. For example, if the netting set contains illiquid OTC positions, and two collateral disputes exceeding 20 days occur over three months, then the MPOR will be doubled again to 40 days for the next six months, as long as the netting set still contains the illiquid positions. (See Figure 1) As the MPOR is supposed to reflect the time it takes to close out a portfolio of trades, many market participants feel that a 40-day MPOR is rather excessive, given the close out periods that have been observed in the market thus far.

The additional IM that results from the increased MPORs depends on both the composition of the bilateral portfolio and the details of the IM calculation method applied. However, as an approximation, the IM calculated under a 20-day MPOR is roughly 1.4 times higher than the IM calculated under a 10-day MPOR, and the IM calculated under a 40-day MPOR is around twice the amount calculated under a 10-day MPOR.

While the rationale for the regulators taking such a conservative approach should be appreciated, conditions one and three may have the potential to be exacerbated by the regulatory framework created by BCBS-IOSCO and regional regulators, unless additional steps are taken to standardize market practices.

Figure 1. MPOR Increase Conditions
COLLATERAL DISPUTES
The concern over collateral disputes (condition 3) lies in the BCBS-IOSCO guidelines for the calculation of IM. Although the BCBS-IOSCO 2013 consultative paper provides details on some aspects of the 2016 IM, it leaves several key details open to interpretation. VaR is a complex method of calculating risk that exhibits many degrees of freedom. There are many VaR parameters for which the BCBS-IOSCO paper provides little guidance. Such parameters include (and are not limited to):

› The calculation method for the VaR scenarios
› The historical data-sets to use, and the determination of, the “financial stress” period
› The risk factors to be stressed

If there is no universal agreement on such parameters, then banks may develop non-uniform VaR calculation engines whose outputs disagree when run on the same trade positions. This has the potential to result in significant collateral disputes, which will raise the MPOR supervisory floor for uncleared derivatives.

The BCBS-IOSCO paper itself acknowledges this dispute possibility over IM calculations. Paragraph 3.12 of the September 2013 paper states:

“The specific method and parameters that will be used by each party to calculate initial margin should be agreed and recorded at the onset of the transaction to reduce potential disputes. Moreover, parties may agree to use a single model for the purposes of such margin model calculations subject to bilateral agreement and appropriate regulatory approval. In the event that a margin dispute arises, both parties should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and exchange the required amount of initial margin in a timely fashion.”

Though this paragraph mandates transparency of the IM model and inputs between two counterparties, it stops short of mandating a common IM model across the industry. The prevalence of regulator-approved internal IM models that lack commonality may have the unintended effect of intensifying collateral disputes between counterparties. For example, if Bank A and Bank B have each developed a regulator-approved, internal IM calculation model, any resulting difference in the calculated IM will be strongly disputed—given that neither Bank A nor Bank B have issues with their models from a regulatory standpoint.

In addition, a “single model” approach (suggested by BCBS-IOSCO) between two counterparties, in the absence of a common industry standard, may result in an increased burden on operations, technology and model governance unless the single model is shared by all market participants. For example; if Bank A and Bank B have a single IM model between them, and Bank B and Bank C have a different single IM model between them, then Bank B will have to document, maintain and govern two separate sets of bilateral IM calculation models.

These issues could be mitigated by an initiative to homogenize the IM calculation models according to a universally agreed standard. ISDA proposed such an initiative—called the Standard Initial Margin Model (SIMM)—in December 2013. Highlight of the ISDA SIMM paper are as follows:

› It recommends that regulators within a jurisdiction agree upon a common set of historical scenarios that include a period of “financial stress”

› To avoid procyclicality, the paper recommends that the set of historical scenarios used within an IM calculation should not change from one day to the next. Local regulators should perform an annual review of the scenarios to decide whether changes are necessary
The paper recommends that regulators agree on the set of risk factors that should be stressed within the IM model.

The paper recommends that a common “portfolio Greeks” implementation method should be used to calculate IM, rather than a “full revaluation” method, with the risk-point deltas calculated by the model made transparent to allow any potential dispute resolutions to be minimized as much as possible.

If the proposals of the ISDA SIMM are backed and enforced by the industry, then the likelihood of the MPOR being doubled due to collateral disputes will be decreased significantly.

ILLIQUID DERIVATIVES
The concern over the provision for OTC derivatives that are “not easily replaced” (condition 1) is that this may eventually cover most OTC derivatives that remain bilateral, given the momentum of clearing mandates going into effect.

At the time the BCBS-IOSCO paper was published, the size of the bilateral vanilla IR swaps market was trillions of dollars of outstanding notional, and the CFTC had not yet announced its plans to mandate the central clearing of vanilla swaps. As clearing mandates are extended to include additional OTC derivatives, the most eligible targets for the mandates will be those products that are liquid enough to be cleared. If this trend continues, then the OTC derivatives that will remain uncleared will be those that are inherently difficult to clear, primarily due to a lack of standardization (which regulators often associate with a lack of liquidity). Therefore non-standard derivatives, which previously accounted for a minority of the bilateral portfolios, will eventually account for a majority of bilateral portfolios.

It is therefore likely that, in the longer term, any newly-traded derivatives in a bilateral portfolio will inherently be subjected to a 20-day MPOR. As a result of these increased costs, market participants are likely to switch their investment and hedging strategies away from these products, which will further reduce liquidity and reinforce the higher MPOR.

To mitigate the illiquid trade-related MPOR doubling, banks can transfer the offending trade positions into separate netting set, so long as they are able to identify what these trades are, and as long as local regulations permit them to do so. This is advantageous because the BCBS-IOSCO guidelines state that if a single position within a netting set is illiquid, then all trades within that netting set, regardless of liquidity, are subject to a 20-day MPOR. Therefore by separating out the illiquid trades, banks are able to reduce their IM overheads.

CHOICES FOR MARKET PARTICIPANTS
Faced with the likelihood of increased MPORs for bilateral derivatives portfolios, banks have several additional strategies at their disposal, in addition to those mentioned previously.

To mitigate the collateral dispute-related MPOR doubling, banks may simply choose not to dispute collateral calls. If a bank is capable of modeling the projected IM costs for their portfolio over the next six months with a doubled MPOR (with appropriate assumptions the future composition of their portfolio), then they can compare the amount of collateral under dispute with the projected increase in IM demands due to the doubled MPOR, and use this information to determine whether or not to engage in a collateral dispute.

Banks can also look to reduce their total number of outstanding trade positions in order to avoid the MPOR increase triggered by having more than 5,000 outstanding positions within a netting set. Banks can engage in portfolio compression by using vendor services, such as TriOptima, to tear up derivatives positions that offset one another.
CONCLUSION

The main complaint that market participants have with the doubling (and potential quadrupling) of the 10-day MPOR is that it results in an onerous increase in margin, which may introduce collateral scarcity and threaten the liquidity of unclearable derivatives. However, market participants face additional challenges with the implementation of the MPOR-increase rules, such as ensuring that their systems are capable of applying the rules in an automated manner. Some rules should be relatively simple to implement (e.g., the 5,000-plus-position rule), but others will be more challenging (e.g., identifying illiquid collateral and hard-to-replace derivatives).

Another significant concern is the potential for changes in market infrastructure to have an economic impact on the MPOR. In October-November 2014, 18 Global Systemically Important Banks (G-SIBs) voluntarily agreed to waive their rights to close out swaps positions with counterparties that run into financial difficulty. This measure, known as a “stay on early termination rights,” came into effect in January 2015. It is intended to give regulators time to step in and transfer the positions to non-distressed financial counterparties. The G-SIBs must wait for up to 48 hours before they can terminate their positions with insolvent counterparties. In theory, the limitations on early termination rights should result in an MPOR increase, as dealers must wait an extra two days before they can close out their positions with distressed counterparties. However, the proposed rules do not account for this set of circumstances.

As the final versions of the bilateral IM rules in regional jurisdictions have not yet been published, there is a chance that some of the aforementioned concerns regarding MPOR rules will be addressed before they are finalized. BCBS-IOSCO has already shown its willingness to respond to the concerns of market participants by pushing back the phase-in of the IM requirements from December 2015 to September 2016, and they may be similarly flexible in addressing issues concerning MPOR.

![Figure 2. MPOR Amounts for IM Calculations. The Red-Line Shows Approximately How the Calculated IM for a Given Portfolio Changes as the MPOR Changes, Assuming a Base-case IM of $10m under a 1-Day MPOR](image-url)
Resources
3. ISDA, Standard Initial Margin Model for Non-Cleared Derivatives, December 2013
5. Approximations are as follows: (1) Portfolio contains instrument(s) whose payoffs are linear with respect to the risk factors that are shifted within the VaR model (2) Risk factors within the VaR scenarios are distributed lognormally (3) VaR varies parametrically with the square root of time

THE AUTHOR
Ben Larah is a NY-based Senior Manager in the Valuations & Risk Analytics practice. In addition to his extensive derivatives pricing and risk management experience, Ben is an industry thought-leader on the impact of risk models on collateral and clearing. Ben’s recent engagements at Sapient have included leading a data-governance program for a major bank, performing a model validation for an investment manager and advising an insurance company on its funding strategy.
blarah@sapient.com