Initial Margin For Non-Centrally Cleared Swaps

Understanding the Systemic Implications

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Introduction

Current regulatory proposals call for the posting of initial margin (IM) for swaps that are not centrally cleared. This document discusses the economic and systemic consequences of current regulatory proposals.

This is a new analysis, enabled by recently available data from member responses to the Quantitative Impact Study (QIS) that was coordinated by the Working Group on Margin Requirements.[1]

The analysis shows that the proposed IM framework could have dangerous pro-cyclical risks.

ISDA believes that a three pillar framework is appropriate for ensuring systemic resiliency:

- Robust variation margin framework
- Mandatory clearing for liquid, standardized products
- Appropriate capital standards

Adding mandatory IM to this framework could harm the economy and potentially threaten, rather than strengthen, the global financial system.

Non-Cleared OTC Products are Important to the Global Economy

The non-cleared OTC markets play a vital role in the global economy. Some examples of activities that need these markets include:

- Many international corporations rely on the currency swap market to be able to finance their operations
- Interest rate options are needed for the proper functioning of the housing markets, particularly in the US, where the GSEs need them to hedge their mortgage risks and to maintain the availability of home mortgages
- Banks and investors use CDS to hedge their exposures in the corporate loan and corporate bond markets; CDS facilitates activity in this important sector of the economy
- Treasurers and risk managers globally use specific solutions tailored to the asset and liability management needs of their institutions, which include pension funds, insurance companies, banks and corporations
- Sovereigns and supranational organizations (IBRD, EBRD, EIB, etc.) use unclearable swaps in their financing and funding activities

Large sectors of the OTC derivatives markets – including interest rate options, many single-name CDS and currency swaps – are not currently clearable and some might never be appropriate for central clearing.

Initial Margin Estimate Based on BCBS/IOSCO Proposal

Using member responses, and based on ISDA's analysis of OTC derivatives outstanding that are unclearable ($127tn[2]), the Association estimates the following impact:

- Total IM, without thresholds, in the global system would range from $1.7tn to $10.2tn depending on usage of approved internal IM models

- With a €50mm per counterparty threshold, IM requirements could be reduced to $800bn (assuming all firms use approved internal IM models)

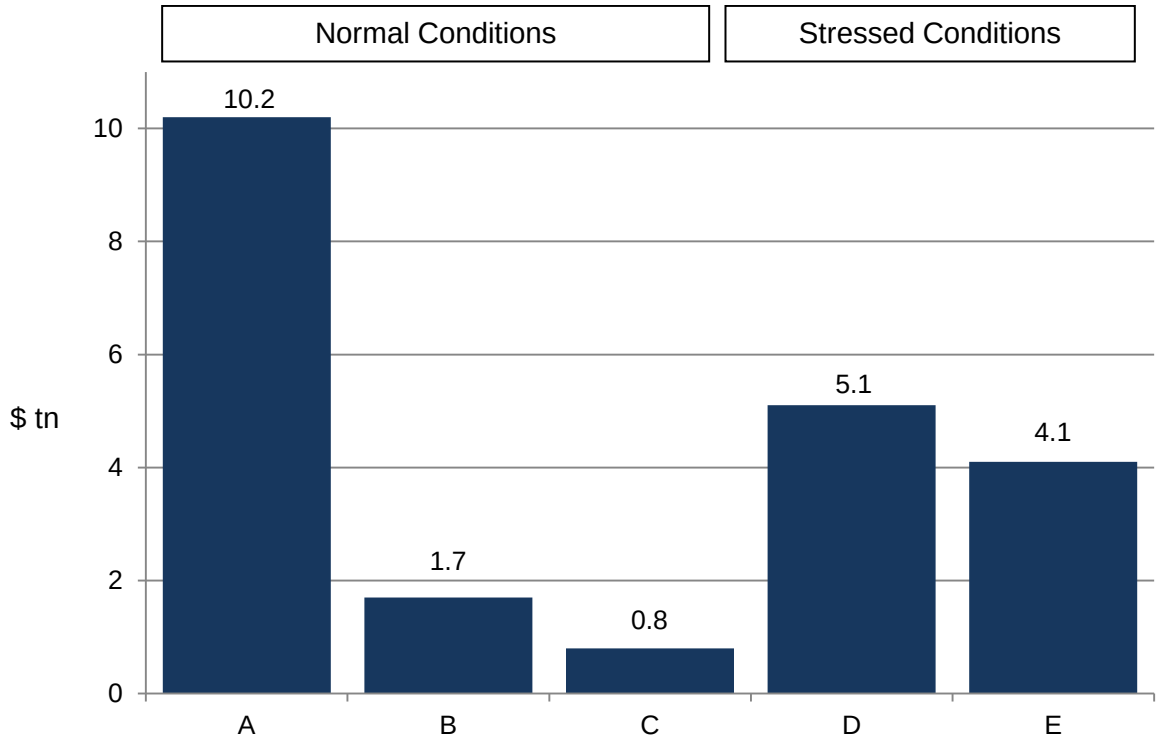
The analysis highlights three concerns for the industry:

1. The outright quantum of margin required even in "normal" market conditions is very significant

2. Increased IM requirements in stressed conditions will result in greatly increased demand for new funds at the worst possible time for market participants

3. Thresholds, while helpful from an initial quantum perspective, add to this pro-cyclicality in stressed markets

Initial Margin Estimate Based on BCBS/IOSCO Proposal



A All firms using standard margin schedule, no threshold
B All firms use internal models; no threshold
C All firms use internal models; €50mm threshold
D All firms use internal models; no threshold; stressed conditions
E All firms use internal models; €50mm threshold; stressed conditions

BCBS/IOSCO includes mandatory universal two-way IM posting; estimates based on $127tn of unclearable OTC derivatives.

ISDA's Concerns about the IM Proposals:

1) Quantum

Even with all firms using internal IM models, the amount of margin needed in normal market conditions presents a very significant challenge for the industry.

- Banks do not have unencumbered assets available for delivery as margin
- Similarly, banks do not hold cash liquidity in excess of targets specifically designed to meet future funding needs through a cycle

To meet new margin requirements, banks will either need to:

- Generate incremental funding through the capital markets, or
- Divert funding from other activities (such as lending or market making), or
- Decrease or cease activity in non-cleared OTC markets

Each of these routes has serious implications for the global economy.

ISDA's Concerns about the IM Proposals: Quantum (continued)

Individual banks and the global system would be challenged to generate incremental financing through the capital markets of IM funding requirement.

- The average amount of IM required to be posted by each bank in the ISDA QIS analysis is in the range of $23bn (with €50mm thresholds) to $49bn (with no thresholds)
- Financing requirements of this scale would present significant challenges to the industry

Diverting funding from other activities to finance IM will be harmful to those activities and harmful to the broader economy.

- At the individual bank level, the IM would be segregated and could not be used for any other purpose; funds used for IM could otherwise have been put to use by the bank in the economy, through lending and other activities
- At the global macroeconomic level, segregation of cash of the order of $800bn to $1.7tn is a form of extreme quantitative tightening at a time when monetary policy is generally oriented in the opposite direction

Reduction or cessation of trading activity in non-cleared OTC markets could have an adverse effect on critical economic sectors, including housing and corporate funding.

ISDA's Concerns about the IM Proposals:

2) Pro-cyclicality

An increase in IM requirements in stressed market conditions will result in increased demand for new funds at the worst possible time for market participants. Risk-sensitive IM, contemplated by the VaR approach in the proposals, could have major adverse systemic implications.

- IM requirements can increase in stressed market conditions, perhaps by a factor of three[3]
- This is pro-cyclical for the banking system:
  - There is a real possibility some banks might fail to raise sufficient funds. In 2008 raising single-digit billions of USD was very challenging. Raising multiple tens of billions of USD might not be possible.
- This is also pro-cyclical for markets:
  - Forced selling of assets by sell-side and/or buy-side to generate more cash to fund IM calls during market disruptions adds to economic and market stresses. A loop effect may result. Asset price declines caused by asset sellers could further increase volatility, resulting in increased IM calls, more asset sales, and so on.

ISDA's Concerns about the IM Proposals:

3) Pro-cyclicality Compounded by Thresholds

The pro-cyclical nature of risk sensitive IM is further amplified by use of thresholds

Consider a single margin relationship:

- IM requirement without threshold: $100mm
- IM requirement in market stressed condition, due to increased market volatility: $300mm
- This is the 3X multiplier as contemplated on the previous slide

Now consider the effect of a $50mm IM threshold:

- The net margin call would grow from $50mm to $250mm
- This is a 5X multiplier

At the industry level this effect could drive total margin from $800bn to $4.1tn.

- This will place great stress on the system in a down cycle
- Banks would not have the capacity to generate this incremental funding

Potential Solutions to Pro-Cyclical Risks: Maintain Fixed Levels of IM

Pro-cyclicality can be cured by moving to a regime where margin amounts are fixed at the time of transaction and not changed as markets move to a stressed condition.

Two possible approaches include:

- Set a very high IM at the time of transaction, even in normal market conditions. The amount of margin would be large enough to cover margin needs even in a stressed market. Such an approach would remove pro-cyclicality.

  The effect of such a measure, however, would be to severely impair liquidity in the uncleared markets. The funding costs of IM would be so high that many of these critical markets would be effectively shut down. Significant adverse economic consequences would result.

- Set a fixed low or zero IM. This is the current situation. Potential future exposure would not be completely covered by margin. This is an acceptable outcome, however, since risks not covered would be covered by capital. Parties would negotiate commercial arrangements with regard to IM margin as they do today. Variation margin would be exchanged daily.

IM Estimate Based on US Prudential Regulators Proposals

For comparison, US prudential regulators made proposals in 2011 that are in many respects similar to WGMR proposals.

- One major difference under the US proposal was that while swap dealers must post IM to each other, they would not post IM to non-dealer counterparties

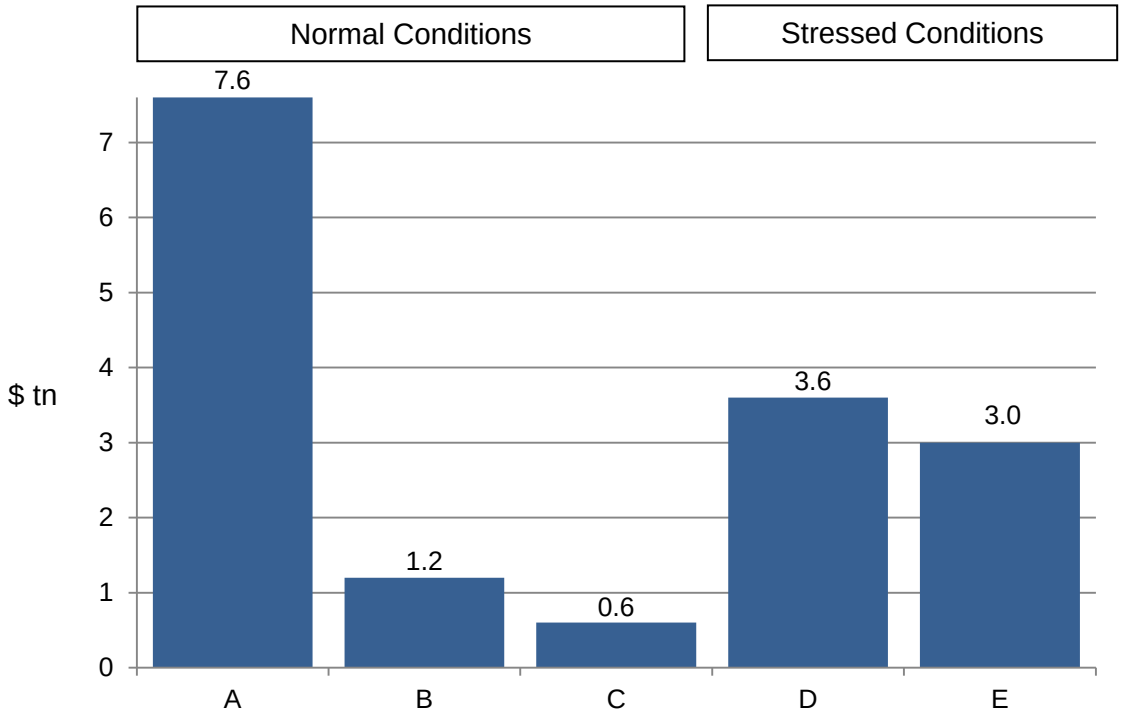
Adjusting solely for one-way posting of margin between dealers, the range of outcomes generated by ISDA QIS studies under US rules is shown on the following page.

- Global IM impact is somewhat smaller than the WGMR impact:
  - $10.2tn (standardized) becomes $7.6tn
  - $1.7tn (full model usage) becomes $1.2tn
  - $800bn (full model usage with threshold) becomes $600bn

- The initial margin requirements for dealers is reduced:
  - Amount per bank falls to a range of $15bn (with thresholds) to $20bn (no thresholds)

- Pro-cyclical effects remain:
  - Margin in stressed conditions rises to $3tn or more

IM Estimate Based on US Prudential Regulators Proposals[4]



A All firms use margin schedule, no threshold
B All firms use internal models, no threshold
C All firms use internal models, €50mm threshold
D All firms use internal models, no threshold, stressed conditions
E All firms use internal models, €50mm threshold, stressed conditions

The IM proposals from US prudential regulators include mandatory one-way posting of margin between swap dealers. The estimates are based on $127tn of unclearable OTC derivatives as per the ISDA analysis of member QIS data. For comparative purposes only with the BCBS/IOSCO estimates, this chart also estimates IM requirements with a €50mm threshold.

Summary & Conclusion

The unclearable OTC derivative market plays an important role in the global economy. Application of mandatory risk-sensitive IM to this market would increase, rather than decrease, systemic risk.

IM is pro-cyclical; it would dramatically impact liquidity, reduce the availability and liquidity of vital risk management tools and could potentially lead to a funding shock that could severely damage the banking system and the real economy.

The value of IM is that it makes each node in the system less vulnerable to defaults at adjacent nodes; but this comes at a cost, IM posted out makes each node weaker, since it consumes liquidity resources at the node:

- Market stress potentially exposes this weakness to a critical degree
- IM introduces institutions to potentially dangerous obligations under the guise of protecting those institutions

Somewhat counter-intuitively, thresholds, while making the IM challenge more affordable in normal conditions, cause a dangerous leveraging effect in stressed markets, greatly increasing pro-cyclicality.

Summary & Conclusion (continued)

We believe that a three-pillar approach is appropriate for ensuring systemic resiliency:

- Robust variation margin framework
- Mandatory clearing for liquid, standardized products
- Appropriate capital standards

APPENDIX

- **ISDA: Committed to Safe, Efficient, OTC Derivatives Markets**
- **Why Can't All OTC Derivatives Be Cleared?**
- **ISDA's Analysis of the WGMR's QIS Responses**
- **Are the QIS IM Estimates Already Stressed?**
- **Why do IM Estimates Vary?**

ISDA: Committed to Safe, Efficient, OTC Derivatives Markets

ISDA strongly supports G20 goals to reduce systemic risk and is committed to working aggressively with industry and regulators toward this end.

- ISDA has led the way in standardizing OTC derivatives to enable clearing
- Trading activity in standardized, liquid OTC derivatives between systemically important parties is now almost entirely centrally cleared
- Trades that are reported to central Trade Repositories give regulators transparency into global OTC markets on a scale and with an international comprehensiveness never before seen in the financial markets. The vast majority of transactions between systemically important parties have now been reported to a repository (and in the future all will be reported).

As a result of these efforts, the OTC derivatives markets and the financial system are now safer, more transparent and more robust than ever before.

Why Can't All OTC Derivatives Be Cleared?

While greater use of central clearing is a key goal of policymakers and market participants, it's important to recognize that only certain liquid, standardized products can be cleared.

- Clearinghouses are the hubs at the center of the new market structure. Over half of all interest rate and credit derivatives currently outstanding are now cleared.
- In addition, estimates today indicate that approximately 80% of the current OTC derivatives notional outstanding can be cleared
- Given this, a default by a clearinghouse would be catastrophic to markets
- In times of crisis, clearinghouses need to respond rapidly to member defaults. Positions held by defaulting members must be hedged or liquidated in a very short time frame; otherwise clearinghouses could sustain damaging losses in deteriorating markets.
- The product set offered by a clearinghouse must therefore be of the highest quality from a liquidity perspective
- Requiring clearinghouses to accept products that are not sufficiently liquid or are not suitable for clearing for other reasons would put them at risk, and increase rather than decrease risk in the system
- Products suitable for clearing are few in number – primarily IRS and the most liquid CDS

So, while a high proportion of the OTC derivatives market in *notional terms* can be cleared, the vast majority of *transaction types* cannot be cleared.

ISDA's Analysis of the WGMR's QIS Responses

The Group of Twenty (G20) initiated a reform program in 2009 to reduce the systemic risk in markets.

In 2011, the G20 agreed to add margin requirements on non-centrally-cleared derivatives to the reform program.

The Working Group on Margin Requirements (WGMR) was formed in October 2011 to develop, for consultation, consistent global standards for these margin requirements.

The WGMR issued its consultative document, with preliminary proposals on margin requirements, in July 2012.

The WGMR coordinated a quantitative impact study (QIS) of "primarily internationally active institutions" to gauge the impact of its margin proposals. In particular, the QIS would assess the amount of margin required on non-centrally cleared derivatives.

While results of the official QIS study are not in the public domain, ISDA members also submitted QIS responses to ISDA anonymously through an independent third-party.

Are the QIS IM Estimates Already Stressed?

The QIS IM estimates based on internal models were, according to the WGMR's Consultation Paper, to reflect a 99 percent confidence interval over a 10-day horizon, based on historical data that incorporates a period of significant financial stress.

An analysis of the QIS estimates indicates they are relatively low when compared to IM for cleared OTC derivatives.[5]

- The QIS IM estimate for non-cleared IRS is 18bps of non-cleared IRS notional. This compares to an IM estimate for cleared IRS that is 21bp of cleared IRS notional calculated using a 5-day horizon. Using a 10-day horizon and allowing for stressed conditions (a 2x multiplier), the IM estimate for cleared IRS increases to 60bp of cleared IRS notional.

- The QIS IM estimate for CDS is 94bps of non-cleared CDS notional. This compares to IM for cleared CDS that is 153bp of cleared CDS notional at the ICE clearinghouse. Using a 10-day horizon and allowing for stressed conditions (a 2x multiplier), the IM estimate for cleared CDS increases to 510bp of cleared CDS notional.

As a result, IM estimates in the QIS will not cover exposures in more volatile times.

Why do IM Estimates Vary?

Various public policy proposals differ in their assumptions and IM estimates. This variability is due to several principal factors:

- ***The extent to which netting is allowed***. Netting is a powerful risk reduction concept and the industry has devoted very significant efforts to perfect its market practice. Margin proposals do not allow for firms to realize the maximum benefits of netting where it is legally enforceable.

- Use of ***approved internal models vs. standardized models.*** Internal models calculate credit exposure on a net basis for transactions within a particular asset class and their usage lowers IM estimates. The proposed standardized schedule is to be applied on gross activity (gross notional amounts), leading to a vast overestimation of margin requirements. Diversification (and thus netting) across products is not possible.

- ***Data assumptions*** regarding populations as well as percentages of cleared vs. uncleared, asset classes, geographic scope, BIS "unallocated" swaps. Less cleared / broader scope increases IM.

- ***Calculation methodologies,*** such as allowing netting across asset classes (which reduces IM estimate), one-way or two-way posting (two-way posting increases the estimate)

- ***Threshold*** levels regarding the level of counterparty exposure at which IM would begin to be required. A higher threshold means a lower IM estimate.

Footnotes

[1]The ISDA analysis is based on data submitted by member firms to the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO) joint Working Group on Margining Requirements (WGMR), as part of the WGMR's Quantitative Impact Study (QIS). Members submitted their QIS responses to ISDA for analysis anonymously through an independent third-party. These firms represent 45% to 50% of the global OTC derivatives market.

[2] The $127tn of unclearable OTC derivatives is an ISDA estimate based on data provided by the QIS respondents as to the current portion of their uncleared OTC derivatives portfolios that can not be cleared.

[3] Source: BIS Working Paper 373, "Collateral requirements for mandatory central clearing of over-the-counter derivatives," page 20. The paper notes that for cleared portfolios, "Across the G14 dealers, initial margin requirements on IRS portfolios total $15 billion in an environment of low market volatility, rising to $29 billion if market volatility increased to medium and $43 billion if it increased to high. For CDS, total initial margin requirements jump from $10 billion in an environment of low market volatility to $51 billion and $107 billion as volatility rises to medium and high." For this analysis, ISDA applied the estimate that IM could rise 3x in stressed conditions across the portfolio of unclearable swaps.

[4] The analyses contained in this presentation were derived from member QIS responses that were developed prior to the issuance of the exemption for FX forwards and swaps by the US Treasury on November 16, 2012. We estimate the Treasury exemption would reduce IM requirements under the US prudential regulators proposals by 15% to 20%. If FX forwards and swaps are excluded globally as per the US Treasury exemption, we estimate that adjustments of a similar magnitude would need to be made to the estimated IM requirements under the BCBS/IOSCO proposal.

[5] Sources: ISDA Response to BCBS-IOSCO Study on Margin, September 28, 2012, page 6, at www.isda.org; ISDA analysis