June 2019

ISDA

Implementation of Margin Requirements and Market Fragmentation

Jurisdictions across the globe have implemented margin requirements for non-cleared derivatives, largely in line with the standards agreed by the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO). Since implementation of the first phase of the requirements in 2016, the US, European Union (EU), Japan and others have extended the requirements in line with the phase-in schedule agreed by BCBS/IOSCO.

Consistency in requirements has enabled ISDA to develop and implement industry solutions to aid compliance, including standard initial margin (IM) and variation margin (VM) documentation, the ISDA Standard Initial Margin Model (ISDA SIMM™) and ISDA Create – IM, an online tool for negotiating and executing IM documents.

Nonetheless, differences in the implementation across jurisdictions still exist in certain key areas – for example, eligible collateral, settlement time frames and treatment of inter-affiliate transactions. These inconsistencies create unnecessary complexity and costs for derivatives users and contribute to market fragmentation.

This paper highlights the main areas of difference in the implementation of margin requirements for non-cleared derivatives across jurisdictions, and makes recommendations on how to resolve them.

INTRODUCTION

In November 2011, two years after the Pittsburgh summit, the Group-of-20 (G-20) leaders agreed to add margin requirements for non-centrally cleared derivatives to the G-20 commitments, stating:

"We call on the Basel Committee on Banking Supervision, the International Organization of Securities Commissions, together with other relevant organizations, to develop a consultation standard on margining for non-centrally cleared OTC derivatives by June 2012…"[1]

The Working Group on Margin Requirements (WGMR), a committee jointly run by the BCBS, IOSCO and other international organizations[2], subsequently established regulatory standards for implementing margin requirements[3]. As well as setting IM and VM requirements, the WGMR framework established standards for margin calculation methodologies, minimum scope, documentation and segregation.

Almost eight years later, a significant number of jurisdictions have implemented IM[4] and VM requirements[5] for their largest market participants. Consistent with the WGMR framework, those jurisdictions that have implemented IM and VM requirements have phased in compliance over time, initially capturing the largest market participants. Smaller market participants will come into scope of the margin requirements in 2020.

As a result of these reforms, firms now post more collateral to cover potential adverse changes in the value of derivatives transactions. The 20 largest market participants had collected around $158 billion in IM by the end of 2018[6]. VM collected by those same firms totaled $858.6 billion over the same time period.

However, despite the significant progress that has been made to implement global margin standards, inconsistent implementation of certain requirements by some jurisdictions stands in the way of efficiently addressing risk in the derivatives market. In order to maximize efficiency, minimize risk and reduce market fragmentation, national regulators must strive for harmonized margin requirements across the globe.

This paper identifies areas where significant progress has been made in implementing global margin requirements. It also highlights key areas where margin requirements have materially diverged among jurisdictions, negatively affecting global derivatives markets and contributing to market fragmentation. By means of illustration, the paper outlines the requirements of the US, EU, UK, Japan, Singapore, Hong Kong, Australia, Switzerland and Canada.

[1] Cannes Summit Final Declaration – Building Our Common Future: Renewed Collective Action for the Benefit of All (2011), available at http://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html

[2] Specifically, the Committee on Payment and Settlement Systems and the Committee on the Global Financial System

[3] The Basel Committee on Banking Supervision, Board of the International Organization of Securities Commissions, Margin Requirements for Non-Centrally Cleared Derivatives (March 2015), https://www.bis.org/bcbs/publ/d317.pdf

[4] Unlike VM, IM was not typically exchanged on a two-way basis prior to the G-20 reforms. Regulators view IM as protection against the estimated increase in counterparty credit risk during the period from default until the risk can be closed out

[5] VM refers to collateral that market participants are required to post or collect on a daily basis to cover any movements in the value of their derivatives transactions. IM refers to collateral that market participants are required to post and collect at the outset of a derivatives transactions (and under certain circumstances, at certain points during the lifecycle of such transactions)

[6] This figure excludes about $40 billion in inter-affiliate initial margin posted by the top 20 firms. More data can be found in the ISDA Margin Survey Year-End 2018

THE HEAVY LIFT OF MARGIN IMPLEMENTATION - INDUSTRY SOLUTIONS

In implementing the WGMR framework, BCBS/IOSCO strived to develop consistent standards to avoid potential conflicts, duplication and gaps across jurisdictions. This included a common framework for determining the thresholds at which IM and VM requirements would apply, as well as standards on the two-way exchange of IM, types of eligible collateral for IM, collateral segregation, the use of internal models and IM calculation.

Consistent standards for IM and VM exchange have allowed the industry to develop standardized IM and VM documentation, as well as a standard model for calculating IM that can be used across jurisdictions – the ISDA SIMM. The industry's wide adoption of the ISDA SIMM has allowed market participants to use a common and transparent IM methodology globally.

As large numbers of smaller market participants come into scope of the margin requirements in September 2020[7], they will be required to put IM documentation in place, creating the need for an industry solution that will allow market participants to efficiently negotiate IM documentation with large numbers of counterparties. One example of an industry solution is ISDA Create – IM – an online tool that allows firms to electronically negotiate and execute documentation and consume the resulting legal data electronically after execution. The service is being developed in parallel with industry efforts to produce next-generation ISDA IM documentation.

REMAINING AREAS OF DIVERGENCE CONTRIBUTING TO MARKET FRAGMENTATION

Despite efforts by global regulators to harmonize margin standards, there are aspects of the requirements that are not being implemented in a consistent manner across all jurisdictions. A recently published IOSCO report notes that divergences in implementation of non-cleared margin rules "may have led to fragmentation in trading patterns in the absence of deference to the rules of the home jurisdiction"[8]. While divergences between individual jurisdictions' rule sets may appear minor or inconsequential, they can have significant impacts due to the global nature of the derivatives markets – particularly when building a compliance framework that can be used with counterparties across multiple jurisdictions.

The following sections describe examples of the main areas of divergence.

[7] ISDA analysis shows that the phase-five implementation of IM requirements in September 2020 will bring more than 1,100 entities into scope, representing over 9,500 counterparty relationships

[8] OICU-IOSCO Report, June 2019, p. 10

INCONSISTENCIES AMONG IM COLLATERAL ELIGIBILITY REQUIREMENTS

Some jurisdictions do not permit the full spectrum of collateral types for IM allowed by the WGMR framework. As a result, counterparties trading across borders can only use collateral types permitted in both jurisdictions. This increases costs and inefficiencies in cross-border trading as market participants have to build complex processing logic to account for the different eligibility requirements of individual jurisdictions.

In addition, concentration of collateral in a limited number of assets may be problematic in times of financial stress, when the value of collateral fluctuates and can be difficult to liquidate, creating systemic risk concerns for firms operating globally.

Table 1 details the differences in IM collateral eligibility requirements across jurisdictions.

Table 1: Eligible collateral for initial margin in key jurisdictions

US	EU/UK	Japan	Singapore
1. Cash **2.** Gold **3.** US Treasury or agency bonds **4.** Publicly traded debt securities issued or guaranteed by US government sponsored enterprises **5.** Securities issued by or fully guaranteed by the European Central Bank or certain other sovereigns[9] **6.** Certain publicly traded debt **7.** Publicly traded equity listed in certain indexes **8.** Securities issued by certain investment funds	**1.** Cash **2.** Gold **3.** Government debt securities **4.** Debt securities issued by credit institutions and investment firms **5.** Regional and local government debt securities and public sector entities **6.** Debt securities issued by certain multilateral development banks and international organizations **7.** Corporate bonds **8.** The most senior tranche of a securitization that is not a resecuritization **9.** Convertible bonds convertible into a main equity index **10.** Equities included in a main index **11.** Certain undertakings for collective investment in transferable securities (UCITS)	**1.** Cash **2.** Certain government debt securities, local government debt securities, multilateral development bank debt securities **3.** Certain other higher quality debt securities **4.** Investment trusts meeting certain conditions	**1.** Cash **2.** Gold **3.** Certain debt securities[10] **4.** Equity securities in a main stock index of a regulated exchange[11] **5.** Units in a collective investment scheme where: (a) a price for the units is publicly quoted daily; and (b) the collective investment scheme is limited to investing in the instruments in this list
Hong Kong	**Australia**	**Switzerland**	**Canada**
1. Cash **2.** Gold **3.** Debt securities of multilateral development banks **4.** Certain debt securities of sovereign, public-sector entities and other entities **5.** Equities in the Hang Seng index or main indices of certain futures and stock exchanges	**1.** Cash **2.** Gold **3.** Certain debt securities with conditions on issuer type and specified rating **4.** Covered bonds rated by an ECAI with a credit rating of three (or better) **5.** Certain senior securitization exposures **6.** Equities included in a major stock index	**1.** Cash **2.** Gold **3.** High-quality debt instruments issued by certain public-sector entities **4.** High-quality debt instruments of companies **5.** High-quality mortgage bonds and covered debt instruments **6.** Certain shares listed on a main index, including convertible bonds **7.** Certain units in securities funds	**1.** Cash **2.** Gold **3.** Certain debt securities with specified ratings **4.** Certain bank debt securities that are not rated by an external credit assessment institution **5.** Equities included[12] in a main index **6.** Equities[13] that are not included in a main index but are listed on a recognized exchange **7.** Certain UCITS/mutual funds

[9] Specifically, with a capital risk weighting of 20% or less, securities of the Bank for International Settlements, the International Monetary Fund or multilateral development banks

[10] Specifically, with an original maturity of one year or less (F-1 to F-3 for all issuers); debt securities with an original maturity of more than one year (AAA to BB- for central government or central bank issuers, AAA to BBB- for other issuers)

[11] Defined in relation to securities included in a stock main index to mean an exchange approved, licensed or otherwise regulated by the Monetary Authority of Singapore (MAS) or by a financial services regulatory authority other than the MAS

[12,13] Including convertible bonds

DIFFERENCES IN SETTLEMENT TIME FRAMES

The T+1 time frame[14] imposed by some regulators, including the US, is not operationally practicable for both VM and IM[15]. Proper calculation of the margin amount can only be made after the firm's branches and offices are closed worldwide. Since global firms operate in different time zones, firms find it difficult to transact in jurisdictions that require T+1 settlement. This is particularly problematic in the context of VM and for Asian counterparties transacting with entities located in the US.

This issue is exacerbated by the fact that the time necessary to settle collateral varies according to the normal settlement cycle for that instrument. The T+1 requirement prevents firms from using collateral types with longer settlement cycles.

In addition, once margin rules become effective for smaller market participants[16], they may not have the operational means to transfer eligible collateral within a T+1 time frame. This may prevent these entities from accessing liquidity provided by dealers in T+1 jurisdictions. These dealers will be placed at a competitive disadvantage when compared with those subject to more flexible settlement timing requirements.

Table 2 highlights the differences in IM settlement timing requirements across jurisdictions.

Table 2: Requirements for IM settlement timing in key jurisdictions

US	EU/UK	Japan	Singapore
IM must be settled on the business day following execution (T+1).	IM must be settled no later than two business days after execution (T+2). (IM must be calculated on T+1, then settled one business day after calculation.)	No specific business day requirements – IM must be called "immediately after" it is calculated and must be settled "without delay" after the call.	IM must be settled no later than three local business days from the transaction date (T+3).
Hong Kong	**Australia**	**Switzerland**	**Canada**
IM must be called within one business day following execution and settled within two business days from when IM is called (T+3).	Settlement of IM amounts must be "prompt".	IM must be paid on the business day following execution. Customary time frames apply for settlement (T+2).	IM must be calculated and called within two business days after execution, and IM must be settled on the second business day following each call for IM (T+4).

[14] T+1 time frame refers to regulatory requirements that margin must be settled on the business day following the execution of a non-cleared derivatives transaction

[15] We note that while settling IM on a T+1 time frame may be less challenging for market participants that utilize triparty same-day settlement mechanisms, settling IM on T+1 may be more challenging for phase-five counterparties because use of a third-party custodian will likely be prevalent

[16] Margin rules provide for a phased compliance schedule stretching from 2016 through to 2020. The compliance dates are determined by calculating the aggregate average notional amount (AANA) of non-cleared swaps for a particular firm. In the US, firms with the largest AANA (exceeding $3 trillion) began compliance in 2016. Firms with an AANA below $750 billion are expected to begin compliance in September 2019. The threshold falls to $8 billion in September 2020

INCONSISTENT IM TREATMENT FOR INTER-AFFILIATE TRANSACTIONS

Inter-affiliate trades enable firms to centralize their risk management activities. A European firm, for example, might prefer to enter into a swap with a local, European-based subsidiary of a US financial institution. However, that institution might choose to consolidate its exposure in a centralized, global risk management function. Its subsidiary would therefore enter into an off-setting transaction with that risk management function. That internal, offsetting trade is known as an inter-affiliate or internal risk management transaction.

Critically, inter-affiliate transactions do not raise systemic risk concerns because they do not create additional counterparty exposure outside of the corporate group and do not increase interconnectedness between third parties. Instead, inter-affiliate transactions allow firms to manage their risk in a centralized way that ultimately limits overall credit exposure to third parties.

Requiring the exchange and segregation of IM for inter-affiliate transactions diverts capital away from more efficient uses in the market, makes it more difficult for firms to manage their risks, and puts firms subject to inter-affiliate margin requirements at a competitive disadvantage. At year-end 2018, the top 20 derivatives dealers had posted approximately $40 billion in inter-affiliate IM.

Table 3 details the IM treatment of inter-affiliate trades[17] across jurisdictions. The US is the only jurisdiction that currently requires banks to exchange inter-affiliate IM, although the EU will impose IM requirements on inter-affiliate trades in 2020.

Table 3: IM treatment for inter-affiliate trades in key jurisdictions

US	EU/UK	Japan	Singapore
Banks are required to exchange inter-affiliate initial margin. There is an exception to exchange IM for inter-affiliate trades of swap dealers that are not banks.	No IM is required to be exchanged until January 2020[18].	No IM is required to be exchanged.	No IM is required to be exchanged.
Hong Kong	**Australia**	**Switzerland**	**Canada**
No IM is required to be exchanged.	No IM is required to be exchanged.	No IM is required to be exchanged.	No IM is required to be exchanged.

[17] Inter-affiliate trades refer to derivatives transactions between affiliated counterparties. Counterparties are considered 'affiliated' where one counterparty, directly or indirectly, holds a majority ownership interest in the other counterparty, or a third party, directly or indirectly, holds a majority ownership interest in both counterparties

[18] The European supervisory authorities are expected to run a consultation in mid-2019 to consider extension of the current exemption for the exchange of intragroup IM

INCONSISTENT IM MODEL GOVERNANCE OBLIGATIONS

For calculating IM amounts, all jurisdictions permit the use of either a standard schedule (provided in the rules) or a quantitative model, such as the ISDA SIMM. Certain jurisdictions require firms that elect to use quantitative models to obtain pre-approval prior to model use[19]. That is true even if the model is used broadly across the industry and is subject to robust governance, like the ISDA SIMM.

In addition, prudential-style model governance obligations apply to IM model users in many jurisdictions, including requirements to regularly back-test the model on a periodic basis and establish an internal governance process. In the US, these requirements only apply to dealers[20], but they apply in other jurisdictions to both dealing and non-dealing counterparties.

Smaller firms in jurisdictions that impose back-testing and model governance requirements (eg, the EU) may not have the resources or expertise to establish internal governance processes and conduct ongoing monitoring of model performance. They will therefore have to use the standard schedule that provides a less risk-sensitive IM calculation methodology and could lead to higher IM costs[21]. As a result, non-dealer entities in certain jurisdictions will be disadvantaged versus non-dealers in the US.

Table 4 describes IM model testing requirements across jurisdictions

Table 4: IM model testing requirements in key jurisdictions

US	EU/UK	Japan	Singapore
Imposes certain testing requirements on covered swap entities (but not their counterparties).	Requires counterparties to monitor their IM model's performance on a continuous basis (including by back-testing the model at least every three months).	Requires firms to prepare documents to set out procedures for conducting and reviewing results of appropriate back testing.	Requires continual validation of the applicability of the model to the portfolio and internal review of the model's compliance with model requirements, including back testing and validation of the model.
Hong Kong	**Australia**	**Switzerland**	**Canada**
Requires post-implementation reviews of the model and its implementation against model criteria.	Model use subject to independent governance process, including monitoring and assessing the model's risk assessments, back testing and portfolio applicability validation.	No firm-level model governance requirements.	No firm-level model governance requirements.

[19] In the EU, the European Market Infrastructure Regulation (EMIR) Refit introduces an IM model pre-approval requirement. The European Securities and Markets Authority, the European Banking Authority and the European Insurance and Occupational Pensions Authority will draft a regulatory technical standard to specify how this requirement will apply. Japan similarly requires prior approval for IM models, and Hong Kong has consulted on the issue. See consultation paper on the over-the-counter (OTC) derivatives regime for Hong Kong – proposed margin requirements for non-centrally cleared OTC derivative transactions (June 19, 2018), https://www.sfc.hk/edistributionWeb/gateway/EN/consultation/openFile?refNo=18CP5

[20] In the US, only registered swap dealers and major swap participants are directly subject to the non-cleared margin requirements, including model governance

[21] Analysis by ISDA shows that IM amounts for firms coming into scope of the requirements on September 1, 2020 will be at least 2.3 times higher when calculated using the regulatory grid instead of the ISDA SIMM

MISALIGNED IM PRODUCT SCOPE

IM calculations are based on a specific product set defined by each jurisdiction. Parties subject to the margin rules of multiple jurisdictions may perform separate calculations and use the highest amount for their margin call to ensure compliance with all applicable regulations.

To reduce the costs and resource constraints associated with IM calculations, regulators should allow firms to use a broad product set (ie, products that are out-of-scope or exempt in their jurisdiction) for the purposes of calculating IM. This would allow all trades under a netting agreement to be included in the portfolio on which IM is calculated and eliminate the need to perform numerous calculations.

The ability to perform a single global calculation reduces operational complexity, implementation costs, and the potential for disputes to arise from disparate treatment of product sets, further facilitating cross-border trading.

Table 5 outlines the differences in IM product scope requirements across jurisdictions[22].

Table 5: IM product scope requirements in key jurisdictions

US	EU/UK	Japan	Singapore
All non-cleared swaps and security based swaps, except: (1) physically settled FX forwards and swaps; (2) exchange of principal on cross-currency swaps; (3) equity options; (4) equity forwards; and (5) physically settled forwards.	All non-cleared derivatives, except: (1) physically settled FX forwards and swaps; and (2) exchange of principal on cross-currency swaps. Requirements are deferred for single-stock equity and index options until 2020. Note: **Broad Product Set**. If a third-country counterparty's jurisdiction uses a definition of OTC derivatives that is different from that under EMIR, margin may be calculated for all contracts that meet either definition, provided the third-country counterparty is subject to OTC derivatives margin requirements under its own regulatory regime.	All non-cleared derivatives, except: (1) exchange of principal on cross-currency swaps; (2) physically settled FX forwards and swaps; (3) physically settled forwards; and (4) commodity trade options. Note: allows for a **Broad Product Set**, including out-of-scope instruments and exempted in-scope instruments that were not subject to margin requirements at the time when the relevant transaction was executed.	All non-cleared derivatives except: (1) physically settled FX forwards and swaps, including a fixed physically settled FX transaction associated with the exchange of principal of a cross-currency swap; (2) commodity derivatives entered into for commercial purposes; and (3) a non-cleared contract without a legally enforceable netting agreement or collateral arrangement.
Hong Kong	**Australia**	**Switzerland**	**Canada**
All non-cleared swaps except: (1) physically settled FX forwards and swaps; (2) exchange of principal on cross-currency swaps; (3) physically settled commodity forwards; (4) single-stock options, equity basket options and equity index options (until March 2020); and (5) physically settled forwards.	All non-cleared derivatives except: (1) physically settled FX forwards and swaps; and (2) exchange of principal on cross-currency swaps.	All non-cleared derivatives, except: (1) physically settled foreign exchange swaps and forwards; (2) certain physically settled electricity and gas derivatives; (3) certain derivatives linked to freight, climate or economic statistics; and (4) the currency component (as opposed to interest rate component) of certain cross-currency swaps.	All non-cleared derivatives, except: (1) physically settled FX forwards and swaps; (2) exchange of principal on cross-currency swaps; and (3) physically settled forwards.

[22] Notably, there is significant divergence in the implementation timeline of the margin requirements as applied to equity options across jurisdictions. The EU deferred implementation for three years until 2020, and some Asian jurisdictions have followed suit (equity options become subject to the margin requirements for Hong Kong on March 1, 2020 and for Korea on March 1, 2020). Singapore goes live on September 1, 2019. Japan and Australia already have equity options in the scope of their rules, while they remain out of scope in the US

POTENTIAL FOR MORE DIVERGENCE – MARGIN DOCUMENTATION REQUIREMENTS

Market participants that trade in excess of a certain IM threshold[23] are presented with serious implementation and operational challenges, including re-documentation of every bilateral relationship in line with the regulatory requirements of each jurisdiction in which they trade. This re-documentation requirement will force smaller firms that pose no systemic risk and will exchange very little or no IM to still take on the full panoply of implementation and compliance burdens. Such an outcome is not necessary and, more importantly, is not consistent with global policy objectives to curtail systemic risk associated with trading non-cleared derivatives.

To address this concern, BCBS/IOSCO issued a statement in March 2019 noting that the WGMR framework "does not specify documentation, custodial or operational requirements if the bilateral initial margin amount does not exceed the framework's €50 million initial margin threshold"[24]. Following this announcement, the Hong Kong Monetary Authority (HKMA) made a similar clarification with respect to its margin requirements[25]. Other regulators have yet to make similar statements.

ISDA supports the BCBS/IOSCO efforts to reduce the compliance burden for smaller firms that do not pose systemic risk, and appreciates the HKMA following in its footsteps. It is critically important, however, that other global regulators implement the BCBS/IOSCO statement in a consistent manner to minimize any potential divergences across jurisdictions and reduce the potential for competitive disadvantages.

[23] Under IM requirements, market participants are only required to exchange IM with a counterparty if their exposures exceed €50 million

[24] BCBS/IOSCO statement on the final implementation phases of the margin requirements for non-centrally cleared derivatives (March 5, 2019), https://www.bis.org/press/p190305a.htm

[25] HKMA Updates Supervisory Policy Module on OTC Derivatives Transactions (March 18, 2019), https://www.moodysanalytics.com/regulatory-news/mar-18-19-hkma-updates-supervisory-policy-module-on-otc-derivatives-transactions

CONCLUSION

ISDA strongly supports the implementation of robust margin requirements. However, industry experience with implementation has shown that the effectiveness of the requirements depends on whether and to what extent global margin standards are consistently implemented by local jurisdictions. Consistency enables the industry to build effective tools for implementation, such as IM and VM documentation, the ISDA SIMM and ISDA Create-IM.

While IM and VM reduces counterparty credit risk and has the potential to mitigate systemic risk, divergence in the implementation of IM and VM requirements across jurisdictions contributes to market fragmentation, increases the cost and complexity of cross-border trading and decreases access to global liquidity pools. Aligning margin requirements in the key areas discussed above would significantly reduce these negative market impacts without compromising overall policy objectives.

ABOUT ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has more than 900 member institutions from 71 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: www.isda.org. Follow us on Twitter @ISDA.