Phase II considerations for the implementation of uncleared margin requirements

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September 2016

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Introduction

The final margin policy framework for non-centrally cleared derivatives published by the BCBS-IOSCO[1] in September 2013, followed by 12 jurisdictional-level rules,[2] pose a significant change to financial institutions that have been undergoing front-to-back system and process redesign to enable operational readiness for compliance. Taking into account the operational and legal complexities of implementing the final framework, regulators have phased in the requirements, imposing earlier adoption of both the initial margin (IM) regime and variation margin (VM) regime on larger sell-side institutions beginning 1 September 2016 (phase I), followed by broader market adoption for the VM requirements for all financial institutions on 1 March 2017 (phase II), as depicted below: [3]

Table 1: Global regulator phase-in schedule for IM and VM

Country	IM and VM — phase I		VM — phase II	IM phase III +			
	1 Sep 16		1 Mar 17	1 Sep 17	1 Sep 18	1 Sep 19	1 Sep 20
US	IM: US$3t	VM: US$3t	US$8b	US$2.25t	US$1.5t	US$0.75t	US$8b
European Union (EU)	IM: €3t	VM: €3t	€8b	€1.5t	€1.5t	€0.75t	€8b
Japan	IM: ¥420t	VM: ¥420t	¥1.1t	¥315t	¥210t	¥105t	¥1.1t
Canada	IM: C$5t	VM: C$5t	C$12b	C$3.75t	C$2.5t	C$1.25t	C$12b
Switzerland	IM: CHF3t	VM: CHF3t	CHF8b	CHF2.25t	CHF1.5t	CHF.75t	CHF8b
Singapore	IM: S$4.8t	VM: S$4.8t	S$13b	S$3.6t	S$2.4t	S$1.2b	S$13b

Note: Please refer to footnote 3 for a description of the calculation method and amounts in table 1.

The industry has faced many obstacles in preparing for implementation of the margin rules due to the inconsistency of requirements across jurisdictions, regarding such issues as cross-border eligibility checks and inter-affiliate margin. Most recently, and despite active industry efforts to achieve global harmonization and implementation of these rules, regulators in Europe, Switzerland, Hong Kong, Australia and Singapore have announced delays to the implementation date, which will cause further bifurcation of processes and lead to a competitive disadvantage for phase I institutions for which rules have not been delayed (such as Canada, Japan and the US). The delay is inconsistent with the BCBS-IOSCO final framework, which seeks global harmonization, and will lead to critical problems, including disruption in markets and cross-border trading, concentration of counterparty risk and reduction of liquidity, as well as incentivize trading in regions in which the rules have been delayed.

On 15 August 2016, the International Swaps and Derivatives Association (ISDA) and Securities Industry and Financial Markets Association (SIFMA) jointly issued a letter to US regulators requesting 30-day relief from the margin requirements in which they highlighted key areas of work with respect to repapering legal agreements, firm-specific regulatory approval of the ISDA standard initial margin model (SIMM) and operational readiness. However, relief was not granted by the regulators for the 1 September 2016 compliance date, and firms went live with trading restrictions when the required system and process changes or necessary legal agreements were not in place.[4]

1 The final policy framework establishes minimum standards for margin requirements for non-centrally cleared derivatives as agreed by the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO). The framework was developed in consultation with the Committee on Payment and Settlement Systems (CPSS) and the Committee on the Global Financial System (CGFS).

2 Individual regulatory authorities across jurisdictions have developed margin rules consistent with the final framework. As of the date of this paper there are five final rules, U.S. Commodity Futures Trading Commission (CFTC) and the Office of the Comptroller of the Currency, Treasury, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Farm Credit Administration, and the Federal Housing Finance Agency, (collectively, the U.S. Prudential Regulators), Office of the Superintendent of Financial Institutions (OSFI Canada), Japan Financial Services Agency (JFSA) and European Securities and Markets Authority (ESMA), and seven proposed rules: Reserve Bank of India (RBI), South African Reserve Bank (SARB), Swiss Financial Market Supervisory Authority (FINMA), Hong Kong Monetary Authority (HKMA), Monetary Authority of Singapore (MAS), Financial Services Commission Korea (FSCK), and Australian Prudential Regulation Authority (APRA).

3 The amounts in table 1 are calculated based on average aggregate notional amounts of uncleared swaps, security-based swaps, foreign exchange forwards and foreign exchange swaps to be calculated in March, April and May of each calendar year by covered entities combined with all their margin affiliates.

4 "Statement of Commissioner J. Christopher Giancarlo Regarding the Implementation Date for Margin for Uncleared Swaps," CFTC.gov, http://www.cftc.gov/PressRoom/SpeechesTestimony/giancarlostatement083116, 31 August 2016.

Objective

This paper is designed to provide a comprehensive overview of the VM implementation considerations for phase II institutions broadly consisting of:

- Buy-side entities (hedge funds, mutual funds, pension funds and endowments)
- Regional banks and insurance companies
- Fund administrators (collateral service providers, collateral asset managers)
- Prime brokers

The paper has been organized into the following four sections:

- Section I: Overview of variation margin requirements
- Section II: Implementation considerations for phase II firms
- Section III: Institutional applicability
- Section IV: Conclusion

As stated in the introduction, the effective dates in the remainder of this paper apply to institutions for which regulators have not announced delays to the 1 September 2016 compliance date in Canada, US and Japan.

The paper does not cover certain regulatory requirements associated with the following:

- IM requirements
- Five-year implementation phase-in for IM
- Cross-border application of the margin requirements
- Inter-affiliate exemption application
- Specific cross-jurisdictional requirements proposed by regulators outside the US
- Specific regulatory and legal definitions
- Regulatory interpretation and/or legal opinions

This paper does not constitute legal advice and should not be considered exhaustive.

Section I. Overview of variation margin requirements

Regulators in the US have adopted final rules establishing minimum VM requirements on all swaps that are not cleared by a registered derivatives clearing organization (DCO), with limited exclusions. In summary, the rules specify the products and market participants covered, the nature and timing of the margin obligations, the methods of calculating VM, permissible forms of margin, documentation requirements, the treatment of inter-affiliate swaps and the implementation schedule, as outlined below:

- **Prescribe scope of transactions and entities** for purposes of determining applicability of the requirements
  - Products: the rules apply to all swaps not cleared by a registered DCO, as defined by Dodd-Frank Act (DFA) Title VII, that are executed after the applicable compliance dates (therefore, it grandfathers legacy transactions).
  - Entities: the rules establish three types of counterparties based on varying levels of risk: swap dealers (SDs), financial end users and nonfinancial end users. The nature of an SD's obligations under the rules differs depending on the nature of the counterparty.
  - Exclusions: Requirements would not apply to a swap if the counterparty qualifies for an exception from clearing or satisfies the criteria for the affiliate exception from clearing.
- **Generally requires a covered swap entity to collect or post VM** for swaps with a swap entity or a financial end user (regardless of whether the financial end user has a material swaps exposure[5])[6]
- **Post and collect VM with each margin affiliate**[7] that is a swap entity or a financial end user, with certain exemptions[8]
- **A covered swap entity must collect or post VM** with swap entities and financial end user counterparties under the final rules on at least a daily basis. VM should be exchanged on each business day beginning on or following the day of execution of the swap and ending on the date the swap terminates or expires
- **Would not permit a covered swap entity to adopt a threshold amount** below which it need not collect or post VM
- **Enforces "day of execution"[9] requirements** based on timing and geographical location of counterparties for determining the calculation date for a swap
- **Permits VM netting**[10] in which a covered entity can calculate and comply with the VM requirements on an aggregate-net basis with respect to all uncleared swaps governed by an eligible master netting agreement (EMNA)

5 Material swaps exposure for an entity means that the entity and its margin affiliates have an average daily aggregate notional amount of uncleared swaps, uncleared security-based swaps, foreign exchange forwards and foreign exchange swaps with all counterparties for June, July and August of the previous calendar year that exceeds US$8b, where such amount is calculated only for business days.

6 The final rules would not apply to "Other Counterparties" including nonfinancial end users, sovereigns and multilateral development banks.

- If the EMNA covers swaps entered into on or after the applicable compliance date, all the swaps covered by the agreement are subject to the margin requirements and included in the aggregate netting portfolio for the purposes of calculating and complying with the margin requirements.
- An EMNA may identify one or more separate netting portfolios that independently meet the requirements. Any such netting portfolio that contains only swaps entered into before the applicable compliance date is not subject to the requirements.

- **Prescribes a combined minimum transfer amount** (MTA) for IM and VM of US$500k to be allocated based on agreement between counterparties
- **Restricts eligible types of collateral** for VM, as follows:
  - *Swap entities*: immediately available cash denominated in US dollars, another major currency,[11] or the currency of settlement of the swap
  - *Financial end users*: cash (as explained above for swap entities) and a broad set of noncash securities, such as sovereign securities, covered bonds, specific securitizations, corporate bonds, gold and equities
- **Prescribes methods to derive collateral haircuts** to satisfy VM requirements:
  - An 8% discount for collateral denominated in a currency that is not the currency of settlement for the uncleared swap except for immediately available cash funds denominated in US cash funds or another major currency
  - The discounts set forth in the standardized haircut schedule
- **Allows for rehypothecation and does not require segregation** — collateral collected or posted as VM is not required to be held by a third-party custodian and is not subject to collateral restrictions on rehypothecation, pledging or reuse
- **Requires legal agreement documentation** with each counterparty, providing the covered swap entity with the contractual right and obligation to exchange VM as prescribed by the rules, including:
  - Methods, procedures, rules, inputs and data sources to be used for determining the value of uncleared swaps for purposes of calculating VM
  - Procedures by which any disputes concerning the valuation of swaps or the valuation of assets collected or posted as VM may be resolved
- **Requires documentation for VM** calculations, resolution of valuation disputes and resolution of disputes concerning the value of assets for collateral or posted as VM
- **Establishes compliance date for VM**, which is 1 March 2017, for any other covered swap entity entering into uncleared swaps with any other counterparty

Section II. Implementation considerations for phase II firms

Table 2: Key regulatory consideration by client type

Client type	Key implementation considerations for phase II firms									
	Scoping of transactions and clients	Execute legal agreements	Exchange daily VM	Haircut calculations	Eligibility checks	Settlement	Reconciliation and dispute resolution	Policies and procedures	Counterparty reporting	Governance/internal controls
Buy-side:										
a. Collateral management in-house		✓	✓	✓	✓	✓	✓	✓	✓	✓
b. Collateral management outsourced	✓	✓						✓		✓
Regional banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Insurance companies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fund administrators	✓		✓	✓	✓	✓	✓	✓	✓	✓

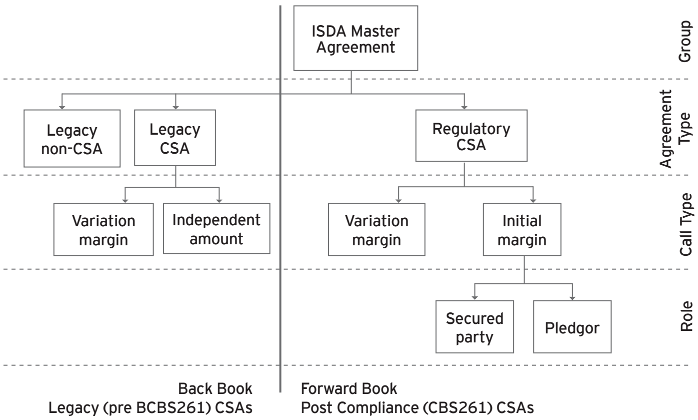
A. Scoping of transactions

Collateralization of previously uncollateralized foreign exchange (FX) transactions: Under the new margin rules, FX forwards and swaps (excluding physically settled FX swaps and forwards) must be collateralized and margined daily. It is very unlikely that all impacted FX trading relationships are collateralized and margined currently; therefore, implementing this requirement could significantly increase the volume of margin calls and increase collateral funding requirements and collateral payments necessary to offset VM obligations.

Daily exchange of VM between inter-affiliates: Another requirement that would directly increase the volume of margin calls and collateral funding is the new margin regime with the affiliate requirements in the US final rules. Covered entities are required to post and collect VM with each margin affiliate that is a swap entity or a financial end user. In addition, the rules require that inter-affiliate swaps be subject to a centralized risk management program that is reasonably designed to monitor and manage the risks associated with such transactions. Despite concerns raised by the industry regarding the incremental costs associated with funding VM under the final rules, the regulators believe these inter-affiliate trades are typically designed to move risk to the most liquid market (in terms of breath and depth), and the requirements will permit covered entities to efficiently manage that risk. The rule also provides current exposure (mark-to-market) protection, and prevents the potential buildup of a liability owed by one affiliate to another. Affected entities will need to update their current operational infrastructure to comply with the provisions of the final rules, including changes to internal risk management and monitoring framework, netting agreements, trading documentation and collateral arrangements.

B. Execute legal agreements

Diagram 1: Operational implications of executing and maintaining multiple CSAs under an existing ISDA Master Agreement



One of the most onerous requirements for compliance on 1 March 2017 is the repapering of legal agreements to govern the newly required collateral terms for VM, including restricted forms of eligible collateral, regulatory-specified MTAs, and T+1 settlement of collateral. As the new rules only apply to transactions executed after the compliance date firms will have to make several business decisions regarding their repapering approach and strategy. When deciding which implementation alternative is most suitable, firms should consider the estimated number of Credit Support Annexes (CSAs) impacted, the operational complexity of implementation (most imminently for the bifurcated CSA approach), the treatment of legacy transactions, and the preference for preservation of existing terms and legal certainty concerns.

The first decision necessary for firms to define their repapering and negotiation strategy is whether to harmonize or keep separate pre- and post-compliance date VM CSAs for a single counterparty. Firms may choose to:

- **Harmonize legacy and non-legacy transactions into one regulatory-compliant VM CSA:** Although the margin rules apply only to post-compliance-date swaps, covered entities can chose to include pre-compliance-date swaps into their regulatory-compliant agreements. Doing so would solve significant operational and architectural complexities associated with managing bifurcated workflows; however, there may be significant financial implications to realize, depending on how divergent the legacy VM CSA terms are from the one regulatory-compliant VM CSA.
- Maintain separate CSAs for legacy vs. non-legacy transactions: Impacted firms may choose to maintain their existing CSAs to avoid the economic impact of repapering terms that may be more favorable than those prescribed by the margin regime. This option would lead firms to build system capabilities to manage two CSA workflows under a single International Swaps and Derivatives Association (ISDA) Master Agreement.
- The left-hand side of diagram 1 represents existing legacy agreements that would generally be in place today: non-regulatory VM CSAs and non-regulatory independent amount (IA) CSAs, in certain cases. As pre-compliance-date swaps are excluded from the new margin requirements, counterparties can chose to keep margining these agreements with no changes.
- The right-hand side of diagram 1 represents an example of the post-compliance-date agreements that would be necessary to satisfy the margin regime: regulatory VM CSA and regulatory universal two-way IM CSA.

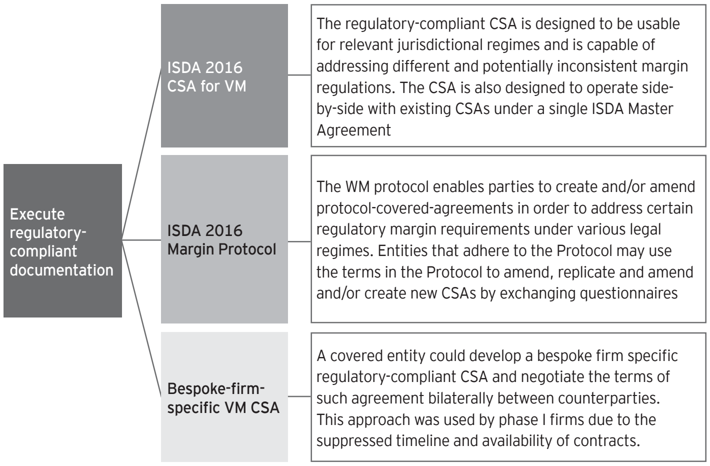
The vast majority of in-house collateral management systems currently do not provide the technical capabilities necessary for margining multiple CSAs under a single ISDA master agreement. While vendor systems may or may not support multiple CSAs, it is clear that the technology required to "map" or "assign" trades to different CSAs based on predefined characteristics (such as trade date, asset class and product type, counterparty, margin type and regulatory jurisdiction) can be onerous to build and only likely available via costly system upgrades. In addition to the necessary technology changes, processes upstream and cross-functionally from collateral operations will need to be redesigned to capture and identify swaps impacted by the new margin requirements. It will be necessary for a firm to set up control processes to prohibit trading if a counterparty trading in-scope transactions have not renegotiated a regulatory-compliant CSA.

7 The final rule definition for affiliate uses financial accounting standards as the trigger for affiliation. Covered entities would be required to determine affiliate status based on whether a company is or would be consolidated with another company on financial statements prepared in accordance with US generally accepted accounting principles (US GAAP), the International Financial Reporting Standards (IFRS) or other similar standards.

8 The treatment of inter-affiliate trades vary according to the final rules adopted by the CFTC and Prudential Regulator.

9 Day of execution means the calendar day at the time the parties enter into an uncleared swap provided: (1) if each party is in a different calendar day at the time the parties enter into the uncleared swap, the day of execution is deemed the latter of the two dates; and (2) if an uncleared swap is (i) entered into after 4:00 p.m. in the location of a party or (ii) entered into on a day that is not a business day in the location of a party, then the uncleared swap is deemed to have been entered into on the immediately succeeding day that is a business day for both parties, and both parties shall determine the day of execution with reference to that business day.

Diagram 2: Repapering alternatives available to impacted entities



The second decision necessary for firms to define their repapering and negotiation strategy is whether to execute VM CSAs bilaterally between counterparties or adopt the VM protocol. Firms may choose to:

Execute ISDA 2016 CSA for VM and bespoke-firm-specific CSA: Based on recent surveys and available market data, we estimate that impacted firms will have to repaper and/or negotiate tens of thousands of agreements come March 2017 in comparison to phase I firms, which only had to repaper a few thousand agreements in September 2016. Historically, negotiating legal agreements bilaterally with counterparties has taken up to three months for one entity pair alone. With less than six months left until the 1 March 2017 compliance date, lack of clarity regarding the implementation dates for international rules and with limited to no substituted compliance determinations available, phase II firms will face many challenges given the volume of impacted relationships and system limitations, including reliance on fund administrators/service providers for firms whose collateral function is outsourced. It will be critical for firms to make the necessary timely business phase-in decisions, revamp their legal teams and explore external vendor solutions to develop the necessary capabilities for compliance.

Adopt ISDA's protocol: This approach is likely to be adopted widely by industry participants. Similar to other protocols designed for compliance with DFA Title VII and European Market Infrastructure Regulation (EMIR), the VM protocol will standardize and suppress the timelines for negotiating counterparty documentation requirements at scale.

Use vendor documentation solutions: Given the intense pressure to conform documentation to new standards within tight timelines defined by regulation, it is anticipated that vendors will also provide automated solutions to speed up and simplify document modifications and negotiations.

Understand the dealer preference: There does not seem to be a universal solution fit for all dealers on the documentation front. Dealers will likely prioritize relationships and look to agree on the most favorable terms while limiting levels of bespoke/bilateral negotiations given the compressed timelines. It is also uncertain whether all counterparties will agree to adopt the VM protocol, which enables standardization but may have certain limitations.

It will become imperative for firms' front office/sales, legal and compliance groups to collaborate in reviewing existing documentation to determine how close their current collateral terms are to the new regulatory standards. Existing collateral terms that are closer to the new regulatory standards could mean that the price to combine legacy trades with new post-compliance-date trades in a single CSA may not be prohibitive. Conversely, collateral terms that are bespoke and are not close to the regulatory standards could mean a larger financial impact. Front office trading and business decisions will have a direct and significant impact on the structure and operational model of the compliance solution.

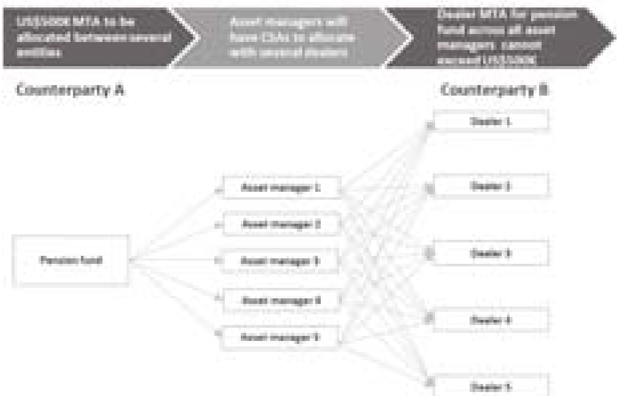
C. Combined MTA for VM and IM

Currently, when dealers negotiate the MTA with buy-side firms as part of the CSA negotiation process, they specify a single fixed amount for a VM CSA and a separate fixed amount for an IA CSA, if applicable, but there are no limitations on the total amount of the MTA to which the two parties might agree. However, the new rules prescribe a combined MTA maximum amount for both IM and VM (US$500k), with the allocation to be agreed to between counterparties. This maximum amount presents an operational and documentary challenge in that asset managers do not have the means to determine when their client (such as a pension fund) adds a new asset manager with another dealer that falls under the same maximum amount of MTA that the buy-side fund is permitted under the rules. This topic has been highly analyzed and debated as phase I and phase II firms approach compliance. Some firms may want to set a small amount (e.g., US$100k for each VM CSA with each asset manager), while others have considered setting zero MTAs (although that would lead to an increase of payments of immaterial value).

10 IM and VM amounts may not be netted against each other under the final rule.

11 The CFTC and Prudential Regulator define major currencies as: (1) US dollar (USD); (2) Canadian dollar (CAD); (3) Euro (EUR); (4) UK pound (GBP); (5) Japanese yen (JPY); (6) Swiss franc (CHF); (7) New Zealand dollar (NZD); (8) Australian dollar (AUD); (9) Swedish krona (SEK); (10) Danish krone (DKK); (11) Norwegian krone (NOK); and (12) any other currency designated by the CFTC or the Federal Deposit Insurance Corporation.

Diagram 3: Illustrative example of MTA application (among a pension fund, its asset managers and dealers)



As shown in diagram 3, the MTA will be negotiated between the pension fund (which is in- scope for regulatory VM on 1 March 2017) and each of its dealer counterparties. In this example, the pension fund has five asset managers transacting with five dealers. The sum of the MTA across all of the funds at the individual asset manager level with each individual dealer cannot exceed $500,000. If the pension fund splits the MTA equally across the five asset managers, as part of the regulatory VM CSA negotiation process for 1 March 2017, and subsequently adds an additional asset manager to its portfolio, the pension fund would be required to reallocate the MTA among the six asset managers and make a corresponding amendment to the CSAs. In practice, it is likely that the dealer will set the MTA at a low value to avoid having to reallocate and renegotiate MTAs.

SIFMA and other trade organizations have argued that the regulatory imposed MTA requirement does not address systemic risk and will result in an increase in operational risk and complexity (arising from the added burden of incremental collateral movements of immaterial value). The industry also raised significant concerns about the combined application of the MTA and urged the regulators to prescribe separate regulatory MTAs for IM and VM. Lobbying efforts on this point have proven unsuccessful, as the regulators believe the MTA is appropriately sized to mitigate some of the administrative burdens and countercyclical effects associated with the daily exchange of VM, without resulting in an unacceptable level of uncollateralized counterparty credit risk.

D. Exchange daily VM calls

VM calculation: The final rules require VM to be posted or collected no less than once per business day, beginning on the business day following the day of execution (commonly referred to as the T+1 time frame). In calculating VM amounts, the final rules permit netting across a portfolio of uncleared swaps between counterparties, subject to a number of conditions. It is important to note that all transactions with financial end user counterparties are subject to the VM requirements (while only financial end user counterparties with material swaps exposure[12] are subject to IM requirements). Regulators believe it is appropriate to apply the minimum VM requirements to nonexempt transactions with all counterparties, not just those with a material swaps exposure, because the daily exchange of VM is an important risk mitigant that (i) reduces the buildup of bilateral risk that may ultimately pose systemic risk; (ii) does not, in aggregate, reduce the amount of liquid assets readily available to posting and collecting entities because it simply transfers resources from one entity to another; and (iii) reflects both current market practice and a risk management best practice.

Additionally, the final rules require certain control and validation mechanisms for the calculation of VM to establish that the VM calculated would be adequate to cover the current exposure of the uncleared swaps, including the requirement to create and maintain documentation setting forth the calculation methodology with sufficient specificity to allow the counterparty and the applicable regulator to calculate a reasonable approximation of the margin requirement independently and evaluate the reliability of its data sources at least annually, and make adjustments, as appropriate.

VM call processing: In most cases, the margin call processing for VM will remain consistent with current practices. There may be agreements that are not collateralized or not margined daily that would have to be revised to comply with the rules. The key issue for implementation as described above is bifurcating trades into two separate workflows, one for regulatory VM CSAs and one for non-regulatory VM CSAs, when counterparties choose to grandfather legacy transactions.

Zero threshold for VM: Under the new regime, there is a zero threshold for VM. It is likely that the implementation of this requirement will not have a significant impact to margin call volumes as it is assumed many CSAs are currently aligned with this requirement.

E. Day of execution

To accommodate scenarios in which two parties are trading with each other and it is a different calendar day based on where each party resides (e.g., one firm is domiciled in the US and the other in Japan), regulators have expanded the definition of "day of execution" deeming it to be the latter of the two calendar days in this circumstance.

In practice, this accommodation for "day of execution" is still unworkable as the timing for the issuance and response to both

12 Regulators make reference to the enactment of TRIPRA, which exempts certain nonfinancial counterparties from the scope of this rulemaking for uncleared swaps that hedge or mitigate commercial risk. The CFTC is not requiring that covered entities exchange VM with respect to the swaps that are exempted from the margin final rule by TRIPRA. In addition, the rules would not apply to certain transactions of specified counterparties that would qualify for an exemption or exception from clearing as prescribed in the rule.

parties' margin calls is largely tied to the geographical location of the counterparty's operational process. The reality is that firms already have sufficient motivation from a risk management perspective to establish that all trades are booked and margined on a timely basis. When this does not happen, firms rely on their existing reconciliation process as a mitigating control.

Unless the market adopts new technologies and processes that enable the seamless movement of collateral without being bound by the limitations of geography and current settlement cycles, this requirement is likely to remain challenging to implement.

F. Haircut calculations for VM

The value of any collateral collected or posted to satisfy VM requirements is subject to haircuts based on a standardized haircut schedule[13] generally consistent with margin practices today with one exception: cross-currency haircuts. Under the new margin rules, there is an add-on haircut of 8% for VM collateral posted/collected denominated in a currency that is not the currency of settlement[14] of the uncleared swap. This requirement would not extend to collateral posted/collected as immediately available cash funds denominated in US cash funds or another major currency. Consistent with business practices today, eligibility criteria will be negotiated and agreed to between counterparties as part of the repapering negotiations.

Table 3: Example of cross-jurisdictional difference with treatment of haircuts

Regulator	VM	
	Cash	Noncash
U.S. Prudential Regulator and CFTC final rules	Not applicable: cash needs to be in major currency	8% applies for VM collateral denominated in a currency that is not the currency of settlement for the non-cleared swap or non-cleared security-based swap
Final draft RTS[15]	Not applicable	8% applies to all noncash collaterals posted in a currency other than those agreed in an individual derivative contract, the relevant governing master netting agreement or the relevant credit support annex

G. Settlement

Under the final rules, phase II firms would be required to collect or pay VM on or before the business day after the date of execution of an uncleared swap. VM would be required for all financial end users, regardless of whether the entity has material swaps exposure. The exchange of VM would result in additional costs to impacted firms that currently are not exchanging VM or exchanging VM less frequently than daily. These financial entities may also need to adjust their portfolio to establish the availability of eligible collateral for exchanging VM.

The starting point to assess the impact of implementation of the margin requirements is to confirm what percentage of a firm's existing collateral movements currently settle on a daily T+1 basis. This percentage is likely directly correlated to the firm's use of cash to meet its margin obligations. If not already settling in cash, firms should meet the settlement timelines required and avoid any additional haircuts associated with noncash collateral. Where possible, firms should also consider switching from other collateral types to cash and then look to substitute other noncash collateral the following day.

Other questions that may arise as firms plan for change:

- How quickly does the firm value swaps post trade execution? What options are available from a technology or processing perspective to conduct valuations more quickly?
- How effectively is the firm capturing new trades and including them in the margin call on the following business day?
- What is the average timeline to process current margin calls? Is the firm taking advantage of the straight through processing (STP) capabilities available for electronic issuance of calls?
- If the firm is using a third-party custodian to pledge or receive VM collateral, what is its cutoff time for moving securities the same day?
- Has the firm conducted estimates to quantify the number of incremental margin calls that will be issued and received as a result of the margin rules?
- Has the firm considered an outsourcing model to avoid in-house build and incremental run-the-bank operating costs associated with implementing the rules?
- If outsourcing is not a viable option, will the firm's processing groups require additional resources to support any manual bespoke processes that could not be supported by automation?

13 European regulators prescribe two other options for calculation of haircuts including the internal rating-based (IRB) approach in order to assess the credit quality of the collateral collected and "counterparty own volatility estimates" for calculating the haircuts to be applied to collateral.

14 The U.S. Prudential Regulators have defined "currency of settlement" to mean a currency in which a party has agreed to discharge payment obligations related to a non-cleared swap, a non-cleared security-based swap, a group of non-cleared swaps, or a group of non-cleared security-based swaps subject to a master agreement at the regularly occurring dates on which such payments are due in the ordinary course of business.

15 Final Draft Regulatory Technical Standards, on risk-mitigation techniques for OTC-derivative contracts not cleared by a CCP under Article 11(15) of Regulation (EU) No 648/2012, published by The European Supervisory Authorities (ESAs), 3 August 2016.

H. Reconciliation and dispute resolution for VM

Consistent with currently implemented DFA Title VII and EMIR portfolio reconciliation and dispute resolution requirements, the new margin rules require firms to demonstrate how they satisfy the requirement to collect and post VM by design of their reconciliation and dispute escalation procedures, which would include:

- Timely initiation and continued pursuit of formal dispute resolution mechanisms

  or

- The ability to demonstrate, upon request by the applicable regulator, that they have made appropriate efforts to collect or to post the required VM or commenced termination of the uncleared swap with the covered counterparty, promptly following the applicable cure period and notification requirements

This requirement is not expected to have a significant implementation impact as there are fairly robust reconciliation tools available internally and externally via widely adopted industry reconciliation platforms (such as TriOptima).

I. Policies and procedures

Given the overarching changes introduced by the uncleared margin rules across functional groups and applications, phase II institutions will need to establish and enhance their global collateral policy, supporting procedures and internal control framework to satisfy the requirements under applicable regulations. As collateral management has continued to be impacted by a broad set of regulations, forcing changes to a firm's operating model, infrastructure and overarching governance structure, it is critical to establish a robust set of documentation to deliver consistent processes across the firm. In general, the collateral management policy, procedure and control documents (for collateral management under the new uncleared margin regime) should consist of:

- Methods for calculating and timely collection of VM
- Controls related to application of MTAs, eligibility and exchange of VM once agreed in the CSAs
- Application of collateral haircuts
- Dispute resolution mechanisms, escalation management and reporting material differences (internally to senior management and externally to regulators, as required)
- Internal audit function and annual compliance review of procedures to provide adequacy

Section III. Institutional applicability

Are firms required to make changes under the new margin rules?

How does a firm determine if the uncleared margin rules apply without attending a training class, participating in an industry panel, conducting extensive legal analysis or investing in current-to-future-state gap assessments? Despite the extensive amount of publications and press releases, firms may still not be clear about the rules' applicability. They are certainly not alone. Below is a basic list of questions that can help firms assess the impact of the margin rules in their simplest form:

Table 4: Illustrative basic set of questions to assess applicability of the margin rules

Preliminary scoping questions	Y/N	Impact
Does the firm trade bilateral over-the-counter (OTC) derivatives with counterparties (any swap not cleared by a Central Clearing Counterparty (CCP) as defined by DFA Title VII and EMIR?MiFid II)?	Y	
Are those transactions governed by an ISDA CSA and therefore, collateralized today?	Y	
Does the firm post and settle VM in highly liquid securities or cash on a daily basis?	Y	
Does the firm trade FX with dealers that are not collateralized? Under the new rules, all FX trades (excluding FX spot and physically settled FX swaps) must now be collateralized and margined daily. The EU rules, on the other hand, consider FX spots to be swaps under the MiFid II definition and therefore would not be excluded	Y	

Impact legend

Limited to no impact	Moderate complexity	High Complexity

Section IV. Conclusion

As covered in this paper, the evolving regulatory environment will continue to pose a significant burden on financial institutions trading bilateral OTC derivatives. In their quantitative impact studies, US regulators[16] address the potential funding and overall administrative costs[17] associated with transacting in new uncleared swaps after the compliance dates:

Incremental cost of funding: the U.S. Treasury collateral ranges from 24 basis points to 130 basis points for the large banks included in the analysis from 2004 through 2015.

- The estimated annual costs of the IM requirements range from US$672m to roughly US$46b, depending on the specific IM estimate and incremental funding cost that is used to compute the estimate.
- The cost of implementing VM in the aggregate is low because regular exchange of VM is already a well-established market practice among a large number of market participants, and exchange of VM simply redistributes resources from one entity to another in a manner that imposes no aggregate liquidity costs.

It is likely that many firms will increase compression activity and promote clearing to avoid the infrastructure build associated with trading bilaterally. Moreover, firms that decide to remain in the business will aim to adopt industry protocols/best practices to benefit from standardization and increase timeliness of execution of regulatory-compliant collateral agreements. Firms will also take advantage of external market utilities to enable STP margin workflow and reconciliation capabilities. Where firms are unable to sufficiently offset costs, they may ultimately decide to exit the business.

In the coming months and years, collateral management will become increasingly complex and expensive to operationalize. These challenges will also present an opportunity for leading institutions to strategically transform their processes in line with the new regulatory regime and gain competitive benefits.

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16 Final Draft Regulatory Technical Standards, on risk-mitigation techniques for OTC-derivative contracts not cleared by a CCP under Article 11(15) of Regulation (EU) No 648/2012, published by The European Supervisory Authorities (ESAs), 3 August 2016

17 There were a number of challenges presented in conducting a quantitative analysis of the costs associated with the final rule. In this exercise, US regulators looked to data sources that were representative of the current swaps market and scaled the data to limit its estimate to impacted firms. Given the complexity of this final rule and its interrelationship to other rulemaking, the estimates are subject to considerable uncertainty. The estimates are based on available data and assumptions. The regulators understand that the precise impact of the requirements will depend on a number of factors, such as the size of the market for uncleared swaps, that are difficult to forecast and will evolve over time as market participants respond to the new requirements. As such, it is not possible to specify in advance the precise impact of the final rule's requirements.

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1609-2050564

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