Bracing for change

Is Asia Pacific ready for margin requirements for non-centrally cleared OTC derivatives?

Table of contents

Executive summary

In diagnosing triggers of the Global Financial Crisis (GFC), a myriad of causal factors have been debated and scrutinized. Although it is far too simple to identify one catalyst of the GFC, it is evident that one factor did stoke the contagion flame – perhaps more than any other – and that was the role of derivatives.

A number of high-profile over-the-counter (OTC) derivative dealers experienced runs on their derivate operations during the GFC. Colossal, unhedged positions – particularly through Credit Default Swaps (CDS) – combined with the globalization of business – detonated the world's financial foundation.

To prevent a repetition of such a scenario and reduce the risk stemming from the opaque dynamics of the OTC derivative industry, there has been extensive international dialogue between multi-lateral and national regulatory bodies. As a result, the financial sector is on the cusp of facing enforced rules pertaining to the Margining of Uncleared OTC derivatives. These rules and regulations will have huge ramifications for financial institutions globally.

In 2011, the Group of 20 (G20) agreed to add margin requirements on non-centrally cleared derivatives to the OTC reform program. The international forum called upon the Basel Committee on Banking Supervision (BCBS) and International Organization of Securities Commissions (IOSCO) to develop global standards to meet two core goals:

I. Reduction of Systemic Risk
II. Promotion of Central Clearing

Although far-reaching and more extensive in scope, imminent global financial regulation will ensure that all standardized OTC derivative contracts be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties.

The implications of such regulation will be vast: structurally, physically and financially. With less than a year before the regulation is imposed, banks need to brace themselves for widespread transformation. In particular, Asia Pacific (APAC) banks need to quickly prepare for adaptation to ensure they are not caught surprised by the forthcoming changes.

To support financial institutions in the APAC region, this paper examines three primary considerations:

I. Highlight the key components of the Uncleared Margin regulation.

II. Identify the subsequent challenges facing regional financial institutions.

III. Evaluate what is required to ensure compliance, and furthermore, to avoid the substantial impact that comes with failing to meet the global deadlines.

Motivation behind margining of uncleared OTC derivatives

In identifying causes of the GFC, a number of factors have been debated and dissected. One particular causal factor was the unmitigated and unregulated use of OTC derivatives.

A number of OTC derivative dealers suffered from runs on their derivative activities during the GFC. Vast, unhedged positions – particularly through CDS – combined with the globalization of business – detonated the world's financial foundation.

To prevent a repetition of such a scenario, multi-lateral and national regulatory bodies have come together to tackle and reduce the risk stemming from the opaque dynamics of the OTC derivative market. Indeed, in 2011, the G20 agreed to add margin requirements on non-centrally cleared derivatives to the OTC reform program. The international forum called upon the BCBS and IOSCO to develop global standards to 'Reduce Systemic Risk' and 'Promote Central Clearing'.

As a result, the financial sector is on the cusp of facing enforced rules pertaining to the margining of uncleared OTC derivatives. These rules and regulations will have huge ramifications for financial institutions globally. Indeed, the level of initial margin (IM) alone that is required under the BCBS-IOSCO proposal is considerable, ranging from US$1.7 trillion to US $10.2 trillion depending on whether internal models or standardized schedules are used.[1]

I. Reduction of Systemic Risk – Goals

- Reduce contagion and spillover effects by ensuring that collateral is available to offset losses caused by the default of a counterparty.
- Reduce the financial system's vulnerability to destabilizing procyclicality and limit the build-up of uncollateralized exposures.
- Help market participants better internalize the cost of their risk taking through greater reliance on margins.

II. Promotion of Central Clearing – Goals

- Central clearing imposes additional costs on market participants through the margins. This should deter riskier trading and improve risk management procedures.
- Highlight and explain the generally higher risk associated with OTC derivatives in order to promote the usage of central clearing.
- Provide improved efficiency and stability to financial markets through Central Clearing.

Three Potential Concerns: Factors to Consider

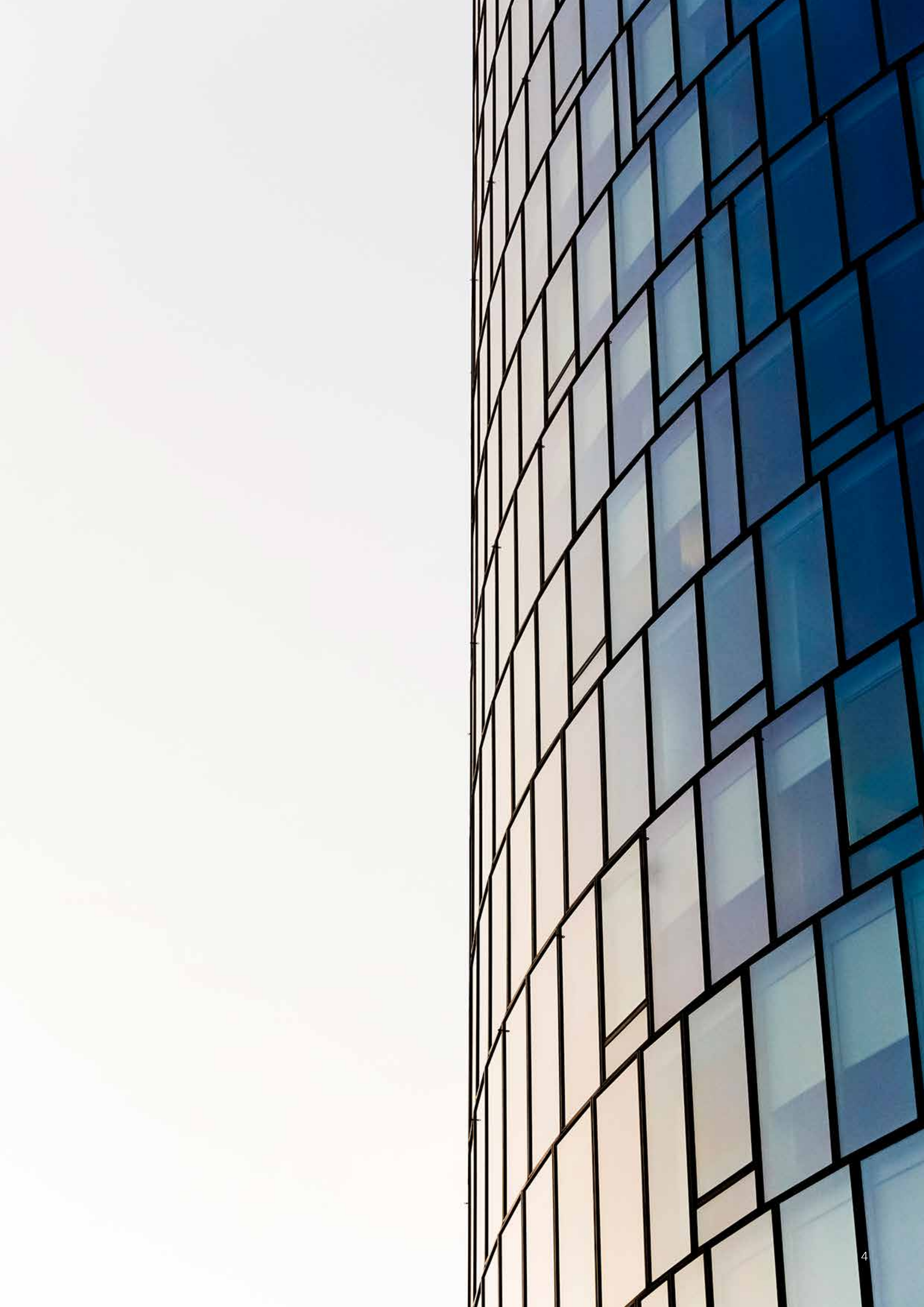
1. Liquidity Pressure: The impact of derivative counterparties having to provide liquid, high-quality collateral in order to meet margin requirements, must be considered against the potential benefits of the regulation. For instance, to meet IM and variation margin (VM) requirements, financial institutions are likely to face the burden of having to extract additional liquidity.

2. Comprehensive Compliance: The liquidity impact of margin requirements cannot be considered in isolation. Rather, it is important to recognize ongoing and parallel regulatory initiatives that will also have significant liquidity impacts; examples of such initiatives include the BCBS's Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR) and global mandates for central clearing of standardized derivatives.[2] Impacted companies must be aware and respond to the combined effects of various regulatory initiatives.

3. Regulatory Arbitrage: The international regulatory authorities must bear in mind that for margin requirements to be effective, there must be a unified, international effort for margin consistency. If these quantifiable metrics are not in place, financial institutions could exploit 'regulatory arbitrage' and be more inclined to move their transaction activity to the 'lowest' cost option.

Ultimately, all markets need a level playing field and globally synchronized approach for all rules, with consistency across jurisdictions together with a consistent implementation timeline. In relation to margin requirements for uncleared OTC derivatives, these concerns need to be tackled and mitigated in order to ensure the robustness of the regulatory initiatives and the subsequent success of their implementation.

[1] International Swaps and Derivatives Association (ISDA), Margin Requirements on Non-Centrally Cleared Swaps Could Increase Risk, November, 2012
[2] Basel Committee on Banking Supervision, Second Consultative Document, March 2013



Scope and scale: Who is affected and when?

A range of entities will be exposed to uncleared margin regulation and subsequently, many will require substantial transformation across their trading business. Ultimately, all financial institutions and systemically important non-financial institutions, globally, will need to comply with the uncleared margin principles **(Table 1).**

KPMG

Table 1. Key principles: Margin requirements for uncleared OTC derivatives (Source: BCBS-IOSCO, BCBS261 publication*)

Aligning Margining Practices	Appropriate margining practices should be in place with respect to **all derivative transactions** that are not cleared by Central Clearing Parties (CCPs).
Exchange Initial and Variation Margin	All **financial firms** and **systemically-important non-financial entities** ("covered entities") that engage in non-centrally cleared derivatives must exchange initial and VM as appropriate to the counterparty risks posed by such transactions.
Consistent Calculation of Margins	The methodologies for calculating initial and VM that must serve as the baseline for margin that is collected from a counterparty should: I. Be consistent across entities covered by the requirements and reflect the **potential future exposure** (IM) and **current exposure** (VM) associated with the portfolio of non-centrally cleared derivatives at issue II. Ensure that all counterparty risk exposures are covered fully with a high degree of confidence.
Collateral Collection Efficiency	It is important to ensure: I. That assets **collected as collateral for initial and VM** purposes can be **liquidated in a reasonable amount of time** to generate proceeds that could sufficiently protect collecting entities covered by the requirements from losses on non-centrally cleared derivatives in the event of a counterparty default. II. These assets **should be highly liquid** and should, after accounting for an appropriate haircut, be able to hold their value in a time of financial stress.
Initial Margin Exchanged by Both Parties	**IM should be exchanged by both parties, without netting of amounts collected by each party (i.e. on a gross basis),** and held in such a way as to ensure that: I. The margin collected is immediately available to the collecting party in the event of the counterparty's default; II. The collected margin must be subject to arrangements that fully protect the posting party in the event that the collecting party enters bankruptcy to the extent possible under applicable law.
Robust and Consistent Regulation	**Transactions** between a **firm** and its **affiliates** should be subject to appropriate regulation in a manner consistent with each jurisdiction's legal and regulatory framework.
Regulatory Regime Collaboration	**Regulatory regimes should interact** so as to result in sufficiently consistent and non-duplicative regulatory margin requirements for non-centrally cleared derivatives across jurisdictions.
Phasing in of Margin Requirements	It is important to ensure: I. Margin requirements should be **phased-in over an appropriate period of time** to ensure that the transition costs associated with the new framework can be appropriately managed. II. Regulators should undertake a coordinated review of the margin standards once the requirements are in place and functioning to assess the overall efficacy of the standards and to ensure harmonization across national jurisdictions as well as across related regulatory initiatives.

*http://www.bis.org/publ/bcbs261.htm

The implementation of uncleared margin regulation is nearing finalization across major financial centers. APAC banks, as well as non-bank financial institutions, who trade in OTC derivatives with global banks from Europe, the USA or Japan will need to ensure they have the capabilities to comply with the respective regional rules.

Implementation is expected to be a particular challenge in Asia where both awareness of the new requirements and the expertise needed to ensure a successful transition to the new requirements is less than in Europe or the United States.

Table 2. Key components of uncleared margin regulation (Source: KPMG in Singapore)

Covered Entities	Financial firms and systemically important non-financial entities must exchange gross IM and net VM on non-centrally cleared derivative transactions.
Covered Transactions	Physically settled FX swaps and forwards are exempt from IM requirements (however VM requirements will be applied to these products).
Applications	Only new contracts & trades entered in to on/after 1 Sep 2016 are in scope for these requirements.
Intragroup	Group Margin Requirements have been left to national regulator discretion.
Margin Computation	**Changes to margin computation:** I. VM requirement applicable to 'Covered Entities' with Aggregate Month-End Average Notional Amount (AMEANA) above EUR3 trillion as of 1 September 2016. All other 'Covered Entities' as of 1 March 2017. II. Introduction of an IM threshold of up to EUR50 million per consolidated group, above which IM is collected. III. Phased-in application – depending on whether entities exceed the regulatory threshold of Non-Cleared Derivatives IV. Calculation Methodology - IM will be calculated using either a standard or approved model-based methodology – chosen methodology to be applied consistently for each underlying asset class. IM will be calculated separately for each asset class.
Eligibility	An Eligible set of Collateral is provided, with requirements for Concentration Risk and Wrong Way Risk to be introduced in some jurisdictions.
Haircuts	Application of either a standard or approved model-based haircut schedule. Standard schedule includes 8 percent haircut where collateral currency is different to currency of settlement.
Segregation	Individual Segregation in some circumstances. Rehypothecation not permitted for IM in many jurisdictions.

Implementation timeline: Many jurisdictions in APAC have not yet finalized their requirements

The effectiveness of the impending rules and regulation hinges greatly upon the international commitment to align to its rules and policies. If the cross-border rules are poorly implemented and adhered to, regulators will be stretched, liquidity will be impeded and market participants will generally suffer. For instance, despite the BCBS and IOSCO issuie their final framework in late 2013, a number of APAC regulators are yet to align to the new regulation, leading to a condensed time-line for financial institutions to implement the required changes **(Figure 1).**

Figure 1: Uncleared margin timeline framework (Source: KPMG in Singapore)

July 2012
First BCBS-IOSCO Consultation Paper

September 2013
Final BCBS-IOSCO Framework

April 2014
EU draft regulatory technical standards released for consultation

July 2014
Japan FSA issues draft margin requirements for non-cleared derivatives

September 2014
US Prudential Regulators and CFTC issue their proposals

June 2015
EU regulators amend original proposal & issue 2nd consultation paper

CFTC amends cross border application of their proposals

September 2015
MAS issues its draft requirements

December 2015
HKMA issues its draft requirements

2nd Japanese consultation paper

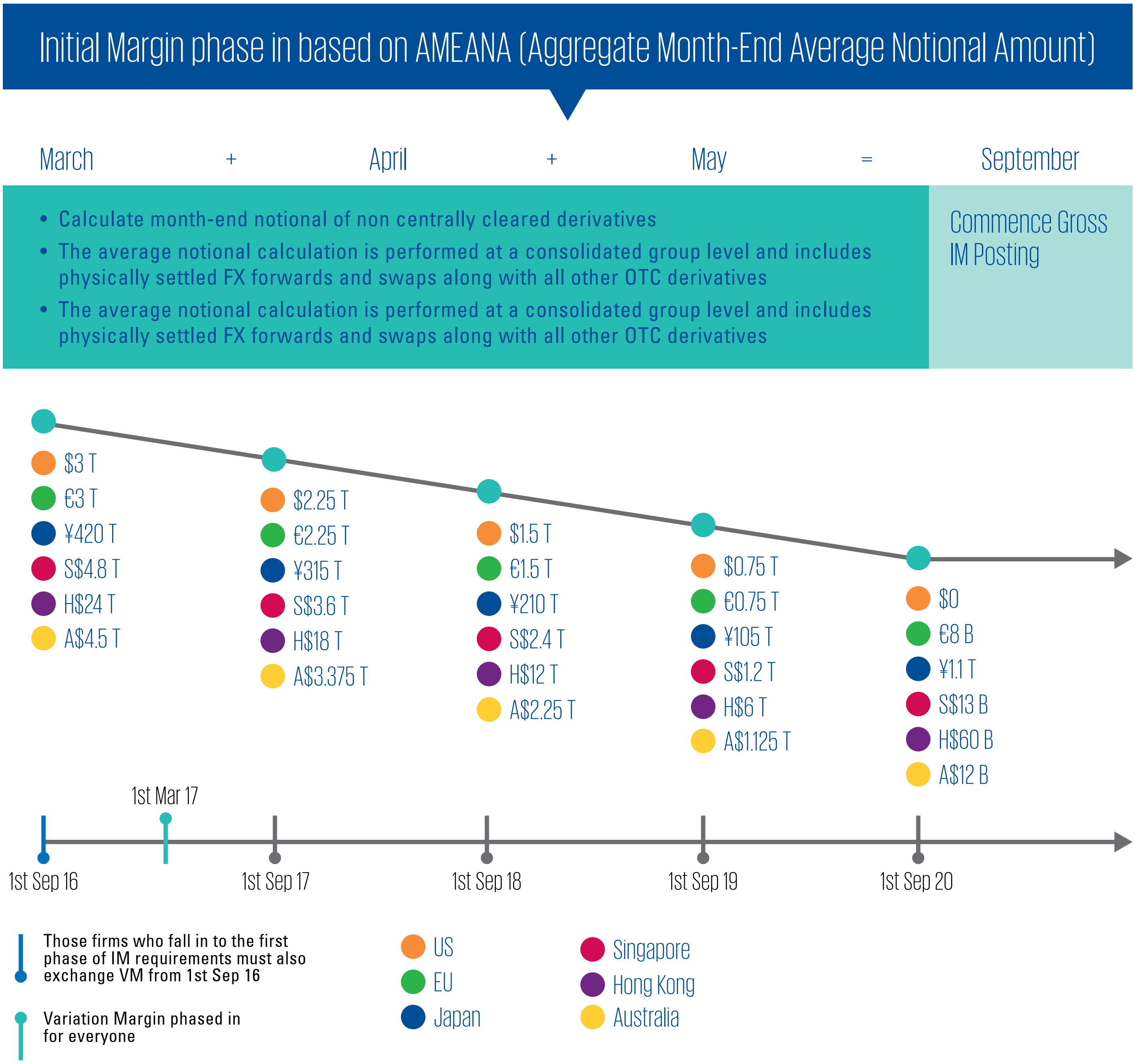
February 2016
APRA issues its draft requirements

India and Korea expected to issue consultation papers in the near future

01 September 2016
Introduction of initial and variation margin for covered entities where both are over the €3 trillion threshold

01 March 2017
Introduction of variation margin for covered entities where one or both fall below the €3 trillion threshold

Figure 2: Uncleared margin timeline framework (Source: KPMG in Singapore)



Implications for the financial sector: Immediate preparation is required

Uncleared Margin Rules: Business Impact

The new margin requirements are likely to markedly impact the economics of existing businesses. First, higher margin requirements will magnify the focus on whether counterparties have **sufficient collateral available,** which in turn has the potential to destabilize the current strategy and sustainability of some business models. Second, to determine how increasingly scarce collateral is mobilized, organizations will have to **improve the integration and collaboration of core functions:** trading operations and asset and liability management.

Whilst global regulators have taken time to figure out the appropriate way to implement the BCBS-IOSCO standards, this is proving to be additionally concerning across the Asia Pacific financial markets due to a lack of appreciation for the upcoming changes in the market. The lack of regional awareness, aligned with the unique range of Centrally Cleared tradable products in the region, means ASEAN states will need to grapple with change differently relative to other regions.

Indeed, **APAC as a whole is expected to bear disproportionate impact** in response to regulatory changes given the narrower range of products cleared on CCPs, fewer internal models approvals and the requirement for an additional 8 percent haircut on collateral denominated in a different currency to the exposure.

Uncleared Margin Rules: Operational Impact

The operational impact of forthcoming margin rules is likely to be huge and compounded by the intended timeframe of regulatory implementation.

Fundamentally, all the proposals will require the **complex calculation and monitoring of OTC derivative exposures** on a group-wide consolidated basis. Additionally, they require IM to be calculated and monitored on a counterparty by counterparty basis.

Counterparties will need to be classified under each of the various regulatory regimes, for example as either an FC, NFC+ or NFC- in Europe. Ultimately, this will be operationally challenging, particularly if they change status mid-way during an open contract.

Further operational challenges affected organizations will have to tackle:

- Dispute resolution will be challenging due to the **lack of an industry standard internal model for IM calculation.**
- New requirements will only apply to post 1 September 2016 contracts, meaning that banks will need to **track "old" and "new" portfolios.**
- The operational complexities surrounding the **individual segregation option in the EU proposal.**
- The **collateral concentration limits in the EU proposal** will require fundamental changes to existing collateral management systems resulting in increased operational costs.
- The EU requirement for **every counterparty to perform an annual review** on the enforceability of netting arrangements could operationally burdensome.
- Daily collection of VM and IM.

Uncleared Margin Rules: Cross-border Impact

For a number of businesses, the unique distinctions between global and local regulations, will add to the difficulty of adapting to new rules.

Regulatory differences between jurisdictions in scope and applicability of the new requirements make compliance and operations increasingly challenging. It is critical that counterparties consider, understand and align to the various rules and requirements issued by various jurisdictions.

As with other aspects of OTC derivative reform, the application of substituted compliance (US) or equivalency (EU) to the APAC region is complicated by the fact that implementation of **local (APAC wide) requirements is seemingly lagging the US/EU implementation.**

In certain jurisdictions, **satisfactory netting opinions cannot be obtained** and market participants typically do not post collateral given the risk that without enforceable netting, posted collateral may not be returned in the event of insolvency. Implementing the margin requirements for transactions with counterparties in these jurisdictions will be problematic.

Certain jurisdictions will likely to be impacted by a shortage of high quality eligible collateral, such as government bonds.

Upside for Asia?

Conversely, it may also **catalyze opportunities** by offering advantages to institutions which are established in certain jurisdictions. For instance, if they are implemented in their current form, the EU proposed rules are likely to provide further incentive for the movement of Asian business currently booked in European Entities to Asian booking vehicles.

Banks have to worry about global, not just local regulation

The Red Herring: Local to Global Alignment

Traditionally, the primary concern for banks has been identifying, understanding and complying with domestic regulation. This approach is not compatible with Uncleared Margin regulation. Considering margining is a two way process between bank and counterparty, both parties must have the required capabilities to operationally post and collect margin to cover OTC derivative positions. For instance, as **(Figure 3)** conveys, due to the bilateral nature of margining, for trading to continue between two organizations, both a bank in Europe and its global counterparty (who are themselves covered entities) should comply with EMIR by the required timeline. Such bi-lateral compliance often triggers 'equivalence challenge'.

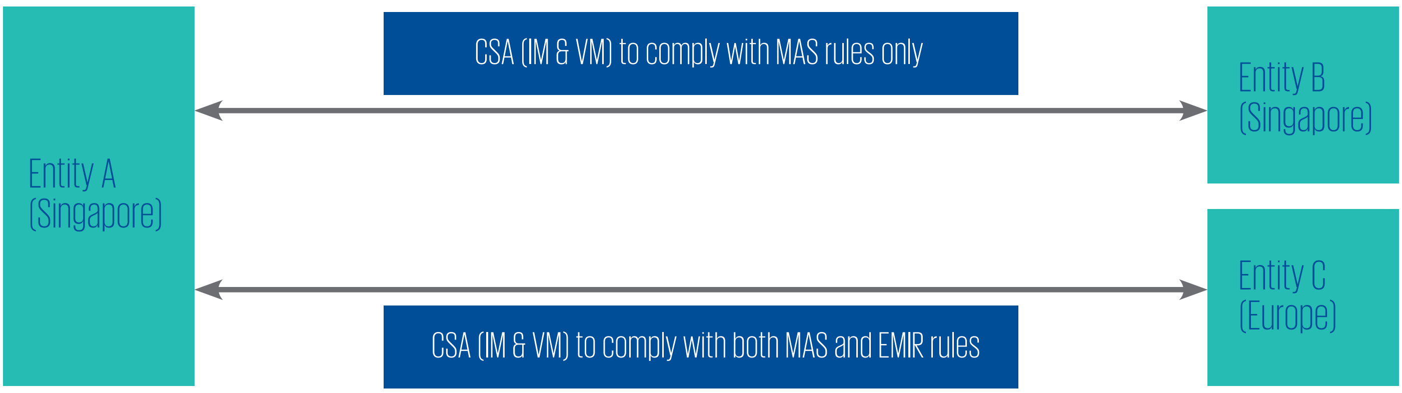
Equivalence Challenges

Those organizations impacted by the uncleared margin regulation, will face equivalence challenges. The capability for counterparties to meet contrasting sets of rules issued by regulators from various jurisdiction will likely be problematic. Not to mention their ability to ensure company alignment and compliance to new models, processes and trade documentation set forth by all relevant regulators. There are two core equivalence challenges:

Cross Currency FX Haircut

Whilst all regional regulatory text published to date includes some form of cross currency haircut, the application differs between jurisdictions. Recent revisions to the European and United States rules have sought to simplify the implementation of this FX haircut by introducing a pre-defined single currency that is agreed between counterparties at execution of the Credit Support Annex (CSA), and any non-cash collateral posted in an alternative currency is subject to an additional 8 percent FX haircut. For example, the Singapore rules, however, have not introduced the concept of the single currency and instead require all collateral posted in a currency different to that of the underlying exposure to attract the 8 percent haircut. Whilst there is a chance that the Monetary Authority of Singapore (MAS) will align its requirements with other regulators when issuing their second draft of the rules, if this does not occur then it will make execution of a single CSA between a Singaporean company with other market participants extremely difficult due to the conflicting approach.

Figure 3. Equivalence challenge (Source: KPMG in Singapore)



Concentration Limit Checks

Many institutions already monitor concentration in specific assets or currencies at a broad level; however, the European uncleared margin rules go a step further and define strict limits for concentration to specific asset types posted as collateral to meet uncleared derivative margin calls. If non-European firms trading with European covered entities do not also implement the EU-style concentration limit checks as part of their margin processing workflow, they risk operational challenges with rejection by their counterparty for collateral being proposed due to breaches of limits.

Figure 4. Factors triggering equivalency challenges (Source: KPMG in Singapore)

Factors leading to the uncertainty
- Different scope of products
- Different scope of entities
- Different eligible collateral assets
- Different treatment of inter-affiliate trades
- Different quantitative model of IM
- No or late mandatory clearing
- No legally effective netting arrangement
- No qualified CCPs
- Insufficient equivalency assessment
- Concentration limits on collateral assets
- Difficult to resolve dispute

Without equivalence or standardization across jurisdictions, financial institutions will need to ensure they have the required capability to manage not only the regulations imposed by their home regulatory body, but also the various global implementation of the rules to ensure they can continue to trade with counterparties based in all regions.

It is critical that those entities affected by uncleared margin policy, assemble a team of regulatory professionals familiar with the implications of the uncleared margin in order to brace the organizations for acute change with far-reaching impact. Indeed, effectively implementing compliance measures to align with imminent policy is not a straightforward operation and needs to be embedded carefully.

Implementation challenge: Case study

- Internal education – ensure the impact of the rules and key requirements are known across the organization.
- Identify an appropriate sponsor who can drive compliance with the rules. Ideally this will be someone with the authority to progress change across multiple business units.
- Mobilize a project team – ensure senior representation from all impacted departments (for instance Balance Sheet Management, Risk, Legal and Compliance, Operations and Technology).
- Perform qualitative and quantitative assessments to determine the impact across the firm.
- Review your operating model and assess what changes need to be made to meet the new regulatory environment.
- Execute new, or revised, regulatory CSAs with your counterparties, bearing in mind that this will also require education of your Relationship Management staff and their clients.
- Plan, design and deliver changes to technology platforms and operational procedures. Impacted parties need to keep in mind that this is much broader than just the Collateral Management function and need to look across the front-to-back trading business.

How prepared is APAC for uncleared margin?

Although a number of Asian banks have personnel that are aware of regulatory change and understand a major system upgrade is needed, mobilizing sufficient resources and expertise across the organization is likely to be a key challenge. Senior management focus is required to ensure successful implementation.

Collateral management: An organization-wide pursuit

The changing regulatory landscape will usher in profound structural change in the handling of collateral. Banks and financial institutions will need to fully address the pending capital and collateral management requirements if they are to maintain current levels of activity and returns. Effective and efficient collateral management will involve an organization-wide effort. Moreover, in light of such change, it is imperative that an organization's front office gets involved to ensure the most appropriate deployment of assets.

Not only will banks and financial institutions have to grapple and align with local and global regulatory measures, the evolving regulatory environment will likely apply significant pressure on their liquid assets. As a result, banks and financial institutions currently complying with liquidity requirements and collateral obligations, will be further stretched to meet these commitments. The combination of rising demand for collateral and anticipation that margin call activity will rise over 1,000 percent, will have a major impact on both liquidity and risk, posing great operational challenges.[3]

In addition, a number of organizations are not optimizing their collateral, which could produce a gap between supply and demand. By not viewing all available collateral, alongside limits on utilizing it in times of market stress, collateral shortfalls could be exacerbated, particularly as a prelude to or during a financial crisis.

Ultimately, regulatory transition in the financial markets is a fluid process. Consequently, it is remarkably challenging for industry participants to keep their internal systems, workflows and procedures responsive to regulatory change and the subsequent compliance. As uncleared margin rules draw closer to implementation, many organizations should take precautions to avoid being caught exposed. The inevitable increase in collateral requirements, alongside the rise in underlying margin activity, is likely to have an impact on cost and risk in a number of areas:

Funding Costs

- A significant hike in volumes and currency amounts will be required to fund bigger cash balances to meet expected margin calls.
- In the OTC derivatives market it is common practice to anticipate margin call currency amounts and attempt to offset these calls to reduce the capital that needs to be available to meet any given margin call throughout the day. With a greater number of margin calls and risks associated with not meeting a call, organizations will need to grow their liquidity cushion to ensure all calls can be met.

Operational Capabilities and Settlement Exceptions Management

- A combination of unfolding complexity stemming from regulatory change and the potential ten-fold hike in margin call volumes, could overwhelm the current operational processes and system infrastructures within banks.
- In order to prepare for impending change, organizations need to invest in technology and revise the margin call workflow, settlement, exceptions management and dispute resolution processes.
- According to a 2014 study by OTCC, the investment in operations required to build and sustain advanced collateral capabilities is estimated at upwards of US$50 million annually for top-tier banks.[4]

Reporting and Recordkeeping

- The growth in margin call volumes will demand more comprehensive recordkeeping across a broad category of services. Tracking and identifying distinct collateral transactions is a very labor intensive and time consuming practice. The increase in margin call activity will deepen the challenge for the industry and increase credit, market and/or operational risk.
- Currently, there are many fragmented processes and solutions that address deal reconciliation, margin disputes, margin call reporting and settlement reporting. The increase in margin calls and the fragmentation of the environment will further inhibit tracking and reporting of collateral activity and collateral balances.

[3] Trends, Risks And Opportunities in Collateral Risk Management, Collateral Challenges Demand Collaborative Solutions, January 2014
[4] Ibid.

Oganizational impact: Major process change

Since the G20 pronouncements and the Dodd-Frank Act in the US in 2008, there has been growing regulatory pressure to clear as much OTC business as possible, aligned with the increased focus on increased amounts of capital and margin. This has contributed to a change in the management of collateral and heightened its importance within the organization. Crucially, with the impact being so vast and complex, the new regulatory measures are not just an operation but an organizational issue that requires coordination across the business **(Figure 5).**

Undoubtedly, the cost of collateral is now a critical cog in a firms' profitability and that means the traditional role of a collateral management team – managing a portfolio of CSAs – is increasingly redundant. Today, a team's mandate encompasses a much higher value-added function and it is progressively perceived that the ability of the front office to select assets to post as collateral better utilizes assets on the balance sheet and reduces funding costs. Indeed, a number of major global and regional banks have begun to move responsibility of collateral to the front office.

In the west, financial institutions are establishing collateral inventory systems which collate assets from across the organization. This enhances the capability of organizations in meeting margin requirements and represents a key enabler to building out a collateral optimization solution. This can be implemented in phases depending upon the needs of each bank and can provide substantial cost of fund savings in a short period of time.

There is growing interest across APAC in building out enterprise collateral management and collateral optimization capabilities. The increase in collateral required under uncleared margin rules will act as a driver for accelerating any collateral optimization initiatives.

Figure 5. Organizational impact (Source: KPMG in Singapore)

Front Office

Sales & Trading

- Educate counterparties on regulatory changes
- Counterparty query resolution during CSA re-papering
- Dispute management

Balance Sheet Management

- Decision making on assets to post as collateral
- Treasury, Liquidity and Capital Impact

Middle Office

Credit Risk

- Credit Quality Assessment on received collateral
- Wrong Way Risk monitoring
- Initial Margin computation

Market Risk

- Internal rating for counterparties for internal haircut model

Back Office

Collateral Management

- Ensuring counterparty hierarchy captured accurately in collateral system
- Identification of pre and post regulation agreements
- Construction of IM netting set
- Ability to map trades to correct legal agreement
- Application of regulatory haircuts
- Monitoring of group level thresholds for IM
- Daily margining of VM (with zero threshold)
- Monitoring of concentration on held assets
- Enhancements to margin call notices to reflect regulatory agreements
- Support for coupons if securities used as collateral

Clearing & Settlement

- Manage settlement of collateral with custodians

Custody Management

- Set up segregated custody accounts for IM

Client Static

- Updates to client onboarding process

Legal Documentation

- Updates to CSA parameters in Legal Doc system
- Management of CSA re-papering process

Support Functions

Legal

- Negotiating new CSAs, and re-papering of existing CSAs, with counterparties in scope of regulations

Finance

- Calculation of AMEANA to determine covered entity status

Technology

- Review of technology architecture to support required capabilities
- Enhancement or replacement of multiple applications

Variation margin is of immediate concern to Asia Pacific banks

Whilst firms with derivative trading operations would no doubt be familiar with VM, there are a number of fundamental changes that all impacted parties will need to comply with and understand in order to continue existing trading relationships after March 2017.

Mandated Daily Margining

For the first time in the industry, regulators are mandating the requirement for daily VM to be exchanged between firms under newly designed collateral documentation. This will require execution of CSAs with clients – an action that has not been previously required, and re-papering of existing agreements due to changes in margin terms (for example, VM thresholds being reduced to zero).

Multiple CSAs per Counterparty

As the regulations only apply to trades entered after the compliance date, counterparties will need to manage two distinct VM CSAs with different terms: one for the legacy portfolio and one for new derivative transactions. Many existing collateral, legal documentation and credit risk solutions do not currently support multiple CSAs per counterparty and will require enhancements. Moreover, the need to monitor which CSA a trade belongs to introduces additional complexity in the management of trade data across the organization.

Increased Volumes

With the mandated requirement for daily VM margining, the zeroing of VM threshold and the need to maintain old and new CSAs, some firms are expecting margin call volumes to increase up to as much as ten times current volumes. This will inevitably put pressure on existing operational teams and processes, and demand the investment in to automation of margin processes to avoid significant increase in both collateral management staff and operational risk.

Regulator Defined Haircuts

Where haircuts have traditionally been agreed bilaterally between firms based on risk appetite, regulators are introducing minimum numbers that will need to be factored in to new CSAs.

Standardized haircut schedule
(Source: BCBS-IOSCO, BCBS261 publication*)

Asset Class	Haircut (% of market value)
Cash in same currency	0
High-quality government and central bank securities: residual maturity less than one year	0.5
High-quality government and central bank securities: residual maturity between one and five years	2
High-quality government and central bank securities: residual maturity greater than five years	4
High-quality corporate/covered bonds: residual maturity less than one year	1
High-quality corporate/covered bonds: residual maturity greater than one year and less than five years	4
High-quality corporate/covered bonds: residual maturity greater than five years	8
Equities included in major stock indices	15
Gold	15
Additional (additive) haircut on asset in which the currency of the derivatives obligation differs from that of the collateral asset	8

*http://www.bis.org/publ/bcbs261.htm

Additionally, impacted parties will need to take the new 8 percent cross-currency haircut into account. Assuming that all national regulators move towards the pre-defined single currency model, firms will need to assess their most appropriate margin currency to eliminate the need to post more collateral than required to meet FX haircut rules.

Collateral Eligibility

Many organizations across the region currently limit collateral settlement to cash in major currencies. With regulators allowing a wide range of assets to be used to meet margin obligations and the squeeze on available assets driving companies to assess alternative options, impacted entities will need to ensure they have the procedures, governance model and operational capability in place to both pledge and receive a wider range of collateral.

Time Constraints

Whilst institutions across APAC are still assessing recent publications of rules, the timeline for global compliance remains set at **1 March 2017** for all covered entities. This means that even if a domestic regulator has not issued equivalent rules, if a bank currently trades in OTC Derivatives with any party that is captured under these rules, they will need to comply in order to continue trading with that firm.

BCBS/IOSCO eligible collateral list

- Cash
- High-quality government and central bank securities
- High-quality corporate bonds
- High-quality covered bonds
- Equities included in major stock indices
- Gold

Figure 6. Regional differences in collateral eligibility (Source: KPMG in Singapore)

	USA	EU	Singapore
Eligible Collateral	• IM: Cash and Securities • VM: Cash in USD or underlying ccy (PR), Securities dependent on entity type (CFTC)	• Broader set of eligible collateral than BCBS-IOSCO • Concentration Limits and Wrong Way Risk to be monitored	• VM & IM: Cash and Securities • Wrong Way Risk to be monitored • No Concentration Limits

	Hong Kong	Japan	Australia
Eligible Collateral	• VM & IM: Cash and Securities • Wrong Way Risk and Concentration to be monitored • Concentration limits required	• VM & IM: Cash and Securities • Wrong Way Risk to be monitored • Appropriate diversification, in particular illiquid assets, to be monitored	• VM & IM: Cash and Securities • Wrong Way Risk and Concentration to be monitored

Initial Margin is coming! It's huge, but do you know when it will arrive?

Whilst the exchange of VM is a common practice across the derivative trading industry, IM is a relatively new concept for many organizations. Those that are required to clear derivatives through a CCP will have been exposed to the process of posting IM and gathered experience; however, very few firms have implemented solutions to compute these numbers themselves internally and rely on the figures provided by the clearing house instead.

IM protects the transacting parties from the potential future exposure that could arise from future changes in the mark-to-market value of the contract during the time it takes to close out the position in the event that one or more counterparties default.

Initial Margin Calculation

IM reflects potential future exposure that is consistent with a one-tailed 99 percent confidence interval over a 10-day horizon, based on historical data that incorporates a period of significant financial stress.

The required amount of IM may be calculated by reference to either:

i. a quantitative portfolio model or,

ii. a standardized margin schedule.

A certain threshold (EUR50 million) is established. And for the amount above the threshold, IM must be exchanged.

It is worth noting that whilst VM can be netted between counterparties, IM is treated on a gross basis where both parties will need to both post and collect appropriate amounts of collateral to reflect the future exposure of the derivative portfolio.

Standardized vs Internal Models

Regulators have provided two methods for implementing the IM calculations, both with their respective pros and cons that will need to be closely examined before firms make a decision on investing in solutions.

Standardized Margin Method

The required amount of IM is calculated in the following method (Gross IM for the trade is based on the following table:

Net Standardized IM = 0.4 x Gross IM + 0.6 x Net Gross Ratio x Gross IM

Asset Class	Initial Margin requirement (% of notional exposure)
Credit: 0–2 year duration	2
Credit: 2–5 year duration	5
Credit 5+ year duration	10
Commodity	15
Equity	15
Foreign exchange	6
Interest rate: 0–2 year duration	1
Interest rate: 2–5 year duration	2
Interest rate: 5+ year duration	4
Other	15

Internal Model Method

Impacted firms may choose to implement an internal quantitative IM model however this introduces a number of challenges that need to be considered. The analytic model used for calculating IM is similar to the Sensitivity-Based Approach (SBA) that institutions will need to implement to comply with upcoming market risk regulations.[5]

Implementing an internal model for the calculation of IM is likely to cause significant operational issues due to the need for reconciliation with counterparties as part of the margin process, and the fact that each individual firm is likely to use different internal models. This will be the first time regulators have asked firms to take complex calculations that are usually only used internally to determine capital requirements, and expecting market participants to ensure these numbers reconcile. Without some form of standardization it will become near impossible for firms to agree on margin calls.

Whilst there are likely to be significant challenges in implementing an internal methodology, it is expected that firms using this approach will benefit from a significantly reduced amount of collateral required to be posted to meet IM obligations.

Figure 7. Quantitative impact assessment performed across the industry (Source: KPMG in Singapore)

8% of total unencumbered assets

€0.5 trillion — BCBS IOSCO estimate of amount of initial margin required if internal models are used by impacted participants

86% of total unencumbered assets

€6.1 trillion — BCBS IOSCO estimate of amount of initial margin required if standardised calculation method is used by impacted participants

€15+ trillion — ISDA estimate of amount of initial margin required assuming big global banks use internal models and others use standardised calculation method

"Bilateral margining requirements would increase significantly if the standardized schedule is used by a significant number of firms. The IM amounts required under a standardized schedule are roughly between 6 to 11 times higher than that observed under a model-based IM regime".[6]

[5] BCBS – Minimum capital requirements for market risk, https://www.bis.org/bcbs/publ/d352.pdf
[6] International Swaps and Derivatives Association (ISDA). Second Consultative Document. Margin requirements for non-centrally cleared derivatives. February 2013.

ISDA Standard Initial Margin Model (SIMM)™

In response to some of the issues highlighted above, ISDA has worked closely with the industry to design an internal model that different firms can implement to avoid the dispute concerns raised to regulators. The ISDA SIMM™ provides a transparent methodology that firms can implement to allow the benefits of an internal model to be realized whilst reducing as much of the reconciliation concern as possible.[7]

IM Implementation Challenges

Below are some of the key considerations impacted entities will need to make to ensure they comply with the regulations by the compliance date.

IM CSA

A new regulatory IM CSA has been drafted and firms will need to execute this with their counterparties in order to continue trading in derivatives post the phase in date. Firms will need to ensure their systems and processes are capable of supporting multiple VM and IM CSAs for a single counterparty, and will require a mechanism to identify the appropriate covered transactions.

IM Calculator

Due to the less risk sensitive nature of the schedule based IM methodology, it is expected that the majority of firms will endeavor to implement an internal model. This will require investment in technology to implement a market risk type analytic solution and integration in to the collateral management workflow.

Internal Model Approval

Any internal model to be used for IM calculation will require regulatory approval. Regional regulators are likely to face challenges in approving all of the assessments in time for the phase in dates as a large volume of firms all cross the various thresholds and look to implement solutions at the same time. Any organization looking to embark on this model approval process will need to allow sufficient time in light of this.

Generation of Trade Sensitivities

The computation of IM using internal models will require trade sensitivities to be provided for all derivative products. Exercises conducted across the industry to test the proposed IM computation process have demonstrated that this has proven difficult for a lot of firms, especially when pricing equity and commodity derivatives. These trade sensitivities will need to be fed in to both the IM calculation solution as well as any bilateral reconciliation process.

[7] ISDA WGMR Implementation Initiative, https://www2.isda.org/functional-areas/wgmr-implementation/

Reconciliation and Dispute Management Procedures

Existing reconciliation and dispute management processes generally sit within the collateral management function due to the lack of complexity in the underlying calculation of VM. With the introduction of IM this is going to require quantitative experts in specific derivative products to get involved in the dispute resolution process when IM numbers do not reconcile between firms.

Whilst the ISDA SIMM™ aims to reduce the number of disputes by standardizing the internal model used to compute IM, the fact that firms will still use internal pricing models to generate the trade sensitivities is likely to cause issues that will be beyond the capability of the majority of collateral management departments.

Lastly, organizations will need to ensure reconciliation tools and processes provide sufficient functionality to allow staff to quickly identify what is causing reconciliation breaks as these could be due to missing trades, stale data, incorrectly booked trade economics or even differences sensitivity calculation on a specific risk factor.

Segregated Custody Accounts

IM must be segregated in an individual account, generally with a third-party custodian and available immediately to the receiver in the case that their counterparty defaults. This is going to require a large volume of additional custody agreements to be established and a greater burden on settlement operation teams in transferring the required assets around to meet all IM obligations.

Phase in Timing

The new regulations for uncleared margin are being phased in over the next five years based on the size of the institution's portfolio of uncleared derivatives. AMEANA is the calculated month-end notional of non-

centrally cleared derivatives at a consolidated group level and includes physically settled FX forwards and swaps along with all other OTC derivatives.

Where month-end average notional for the three months (March, April and May) exceeds the threshold, regulatory IM obligations between covered entities will commence as per the table below.

Group-level Application

A final point to flag on the phase in timing of the IM is that the AMEANA calculation is performed at a consolidated group level. This is likely to cause significant challenges for financial institutions that are subsidiaries of banks that only have minor derivative portfolios. For instance, an insurance company incorporated in Singapore and fully owned by a Singapore commercial bank would be treated as a single group for the purposes of determining when both firms needs to comply with the uncleared margin rules. This is of potentially significant concern to non-bank financial institutions who are less likely to have the infrastructure or operational capability to be able to easily comply with the rules.

(Source: KPMG in Singapore)

	1 September 2016	1 September 2017	1 September 2018	1 September 2019	1 September 2020
Europe	€3 T	€2.25 T	€1.5 T	€0.75 T	€8 B
United States	$3 T	$2.25 T	$1.5 T	$0.75 T	$0
Japan	¥420 T	¥315 T	¥210 T	¥105 T	¥1.1 T
Singapore	SGD $4.8 T	SGD $3.6 T	SGD $2.4 T	SGD $1.2 T	SGD $13 B
Hong Kong	HKD $24 T	HKD $18 T	HKD $12 T	HKD $6 T	HKD $60 B
Australia	AUD $4.5 T	AUD $3.375 T	AUD $2.25 T	AUD $1.125 T	AUD $12 B

The impact of doing nothing

Be Prepared: Organizational Cooperation and Importance of Executive Sponsorship

Clearly, the potential impact of the uncleared margin rules are broad and profound. A range of financial institutions, especially banks, need to react immediately to brace themselves appropriately for impending change. This will require cross-department involvement and dialogue.

With real change on the horizon, which will have real implications, banks cannot afford to spend months deliberating who should lead the initiative to ensure their compliance is water-tight. They need to react to changes immediately as non-compliance will result in trading failure with specific counterparties, cut of liquidity sources and limit access to foreign markets. Moreover, failing to comply will mean that institutions will no longer be able to trade OTC derivatives with other regulated entities.

A number of Tier 1 banks in Europe and North America are monitoring at Executive Committee level due to impact of failing to comply. The well prepared banks realize there is no plan B and that therefore there is no alternative but to comply with the global regulations and therefore act accordingly. APAC banks on the other hand need to ensure that they are equally well positioned and prepared. Effectively adhering and complying with regulatory changes will require the sponsorship and oversight from someone with the right level of seniority and authority to mobilize a large number of people across business units.

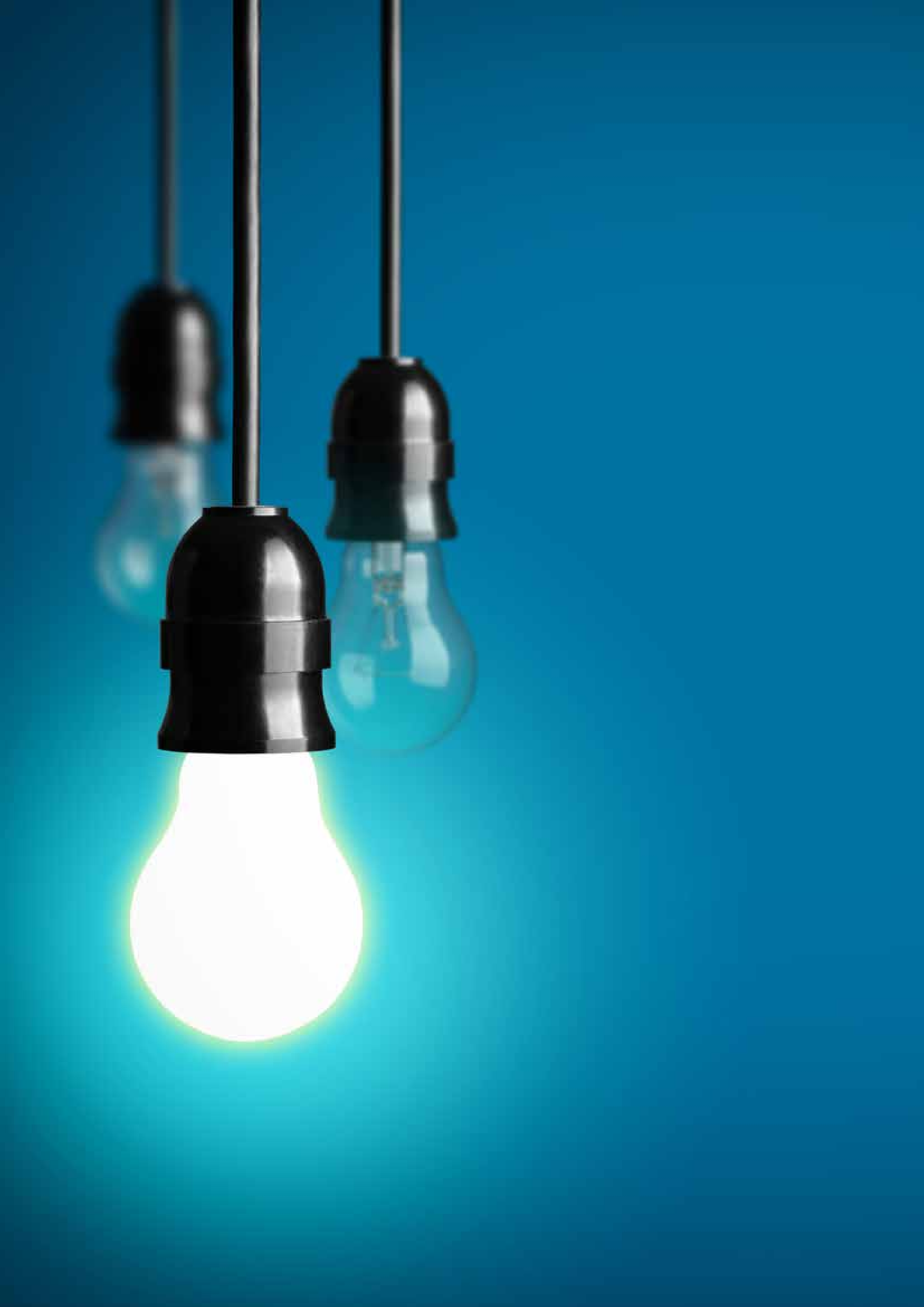
Checklist: Getting Your House in Order - Three Initial Steps to Enact

1. **Form Working Group:** Organizations that are yet to take compliance steps to forthcoming regulation, can begin to move in the right direction by forming a Working Group immediately.
2. **Perform Impact Assessment:** After formation of the Working Group, it is important to perform an impact assessment to determine which regulations are most pertinent to the organization and which ones the companies must be compliant with.
3. **Highlight Existing Gaps:** Analyze existing operational and technical capabilities. On evaluation, assess what gaps exist and what are their quantitative impact on funding and liquidity.

"Have you completed these three steps?"

With real change on the horizon, which will have real implications, banks cannot afford to spend months deliberating who should lead the initiative to ensure their compliance is water-tight.

– Jordan Windebank, Director, KPMG in Singapore

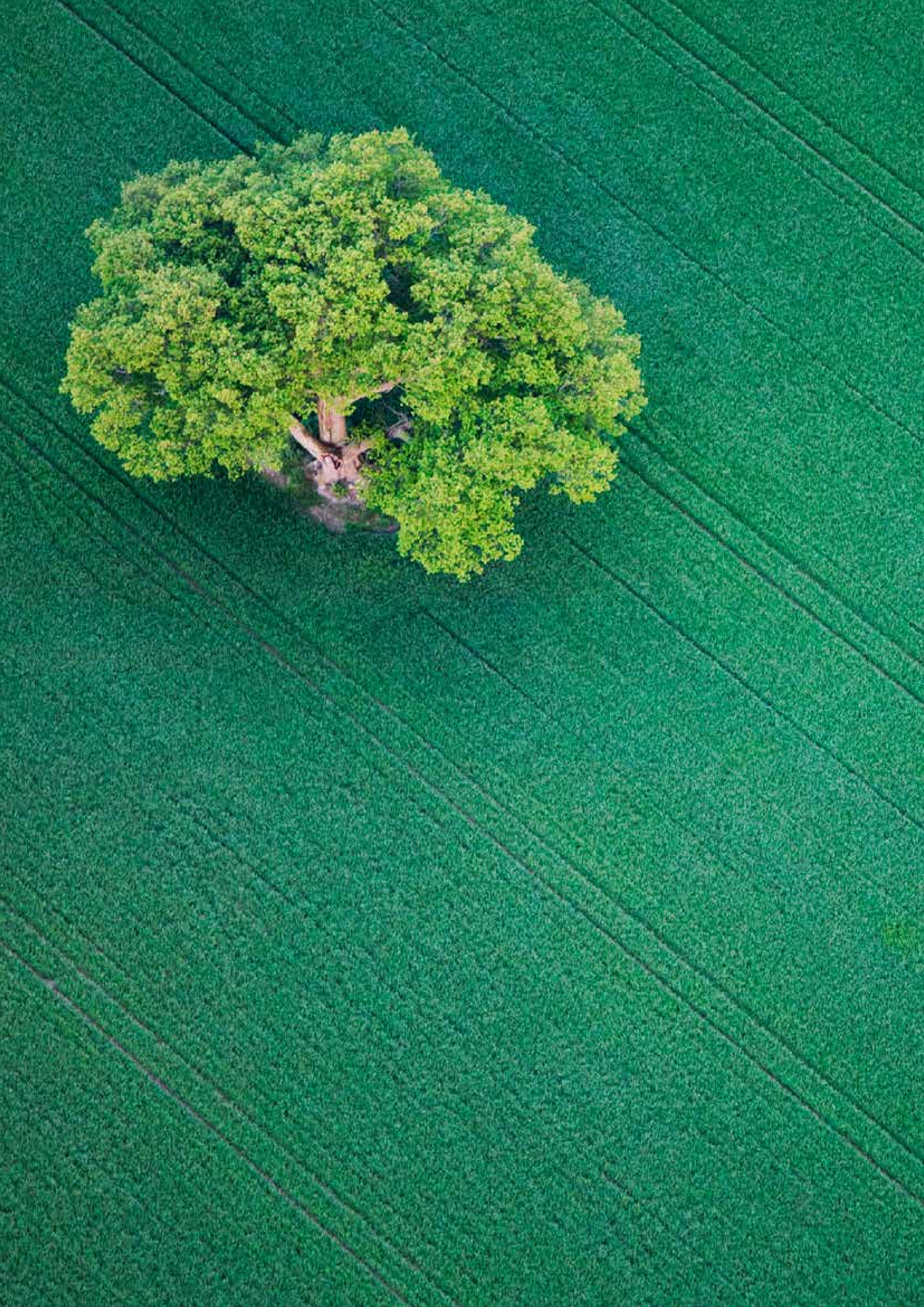


How KPMG can help

KPMG member firms have has subject matter experts with detailed understanding of the regulations and can help clients understand the impact they will have on an organization. Specifically, member firm professionals can assist with the following:

- **Impact Assessment** – KPMG has developed a methodology, and a number of accelerators, to help clients quickly assess the qualitative and quantitative impact of the uncleared margin rules.
  - **Coverage & Timing Assessment** – firm professionals can help to assess a client's current trading relationships to determine which jurisdictional rules they must comply with, and by what date.
  - **Capability Gap Analysis** – KPMG has developed a complete catalogue of required capabilities to meet the uncleared margin rules and can help clients identify where gaps exist, and can also provide a clear recommendation on the steps required to close them before the rules come in to effect.
  - **Funding and Liquidity Impact** – Due to the introduction of the rules, clients are going to need to post more high-quality assets to meet their margin requirements. Member firm's risk management specialists can assist in determining your future requirements under a range of regulatory scenarios.

- **Operating Model Review** – KPMG firm professionals can bring our deep understanding of the regulations and our leading approach to operating model design to help clients design their future collateral management business across all areas of the organization. With an unprecedented amount of change in the regulatory landscape over recent years, it is institutions with adaptive operating models that will be set apart from their peers. We believe that with a model that is not just reactive but proactive in forecasting and pre-empting change in the industry, companies will gain a competitive edge.
- **System Selection** – In order to for clients to comply with the regulations it is likely that they will need to either upgrade or replace their existing collateral management infrastructure. KPMG member firms have subject matter specialists with a thorough understanding of all collateral management, margin calculation and industry utility platforms in the market and can assist clients in making an informed decision on the most appropriate system for their needs.
- **Project Implementation** – KPMG firm professionals can support throughout the life of a client's project to comply with global regulations. With experienced resources across project implementation disciplines and a vast range of leading tools and methodologies, they can provide the help needed to plan, design, deliver and test the changes needed to ensure regulatory compliance.



Conclusion

The international community's united push to enforce rules pertaining to the margining of uncleared derivatives represents a powerful movement to prevent a repeat of the destruction caused by OTC derivatives during the GFC. The imminent rules and regulations will have real meaning and real implications (structurally, physically and financially) for banks. Those financial institutions that fail to react and adapt to top-down changes, will face economically bruising repercussions and lose a competitive first-mover advantage.

With less than a year before the uncleared margin rules are imposed, banks need to adequately brace themselves. APAC banks – who appear incredibly vulnerable to being blindsided by global measures – must educate themselves on the looming change and ensure they are fully compliant to change and timelines.

Glossary

Aggregate Month-End Average Notional Amount	AMEANA
Asia Pacific	APAC
Basel Committee on Banking Supervision	BCBS
Credit Default Swaps	CDS
Credit Support Annex	CSA
Euro (€)	EUR
European Union	EU
Financial Counterparty	FC
Foreign Exchange	FX
Global Financial Crisis	GFC
Group of 20	G20
Initial Margin	IM
International Organization of Securities Commissions	IOSCO
Liquidity Coverage Ratio	LCR
Monetary Authority of Singapore	MAS
Non-Financial Counterparty	NFC
Net Stable Funding Ratio	NSFR
Over the Counter	OTC
Sensitivity-Based Approach	SBA
Standard Initial Margin Model	SIMM
United States	US
Variation Margin	VM

Author biographies

Craig Davis

Partner,
Asia Pacific Head of Financial Risk Management
KPMG in Singapore

Craig Davis is a Partner and leads KPMG's Financial Risk Management practice across ASPAC. He is also the ASEAN lead for the Financial Services sector and is the Global lead for Risk and Capital Markets technology. Craig joined KPMG from APRA where he was a member of the balance sheet and market risk oversight team responsible for the review of trading and balance sheet management at a range of financial institutions. His market experience spans risk management, operations and the sales/trading functions of major institutions in both Australia and London. He has had significant experience in leading Corporate Treasury related engagements with a specialty in risk and liquidity management.

Jordan Windebank

Director, KPMG in Singapore

Jordan Windebank is a Director within the Financial Risk Management practice in KPMG in Singapore with a strong understanding of financial markets, specializing in counterparty credit risk, collateral management and clearing and with specific focus on OTC regulatory reform. Prior to joining KPMG, Jordan led a large transformational program for a major global bank ensuring compliance with global Uncleared Margin regulations.

kpmg.com

Contact us

Craig Davis
Partner,
Asia Pacific Head of Financial Risk Management
KPMG in Singapore
T : +65 6411 8533
M : +65 9384 4273
E : craigdavis1@kpmg.com.sg

Jordan Windebank
Director, KPMG in Singapore
T : +65 6411 8892
M : +65 8722 6397
E : jwindebank@kpmg.com.sg

Country contacts

Michael Cunningham
Partner, KPMG in Australia
T : +61 2 9335 8949
E : mcunningham@kpmg.com.au

Tom Jenkins
Partner, KPMG in China
T : +852 2143 8570
E : tom.jenkins@kpmg.com

Kenji Hoki
Senior Manager, KPMG AZSA LLC
T : +81 3 3548 5555 (Ext. 3217)
E : kenji.hoki@jp.kpmg.com

kpmg.com/socialmedia

kpmg.com/app

Download on the App Store