INTERVIEW
The CFTC's J. Christopher Giancarlo on SEF rules

ASIA
The HKMA's Arthur Yuen on proportionate rule-making

CROSS-BORDER
The JFSA's Ryozo Himino on tackling fragmentation

IQ

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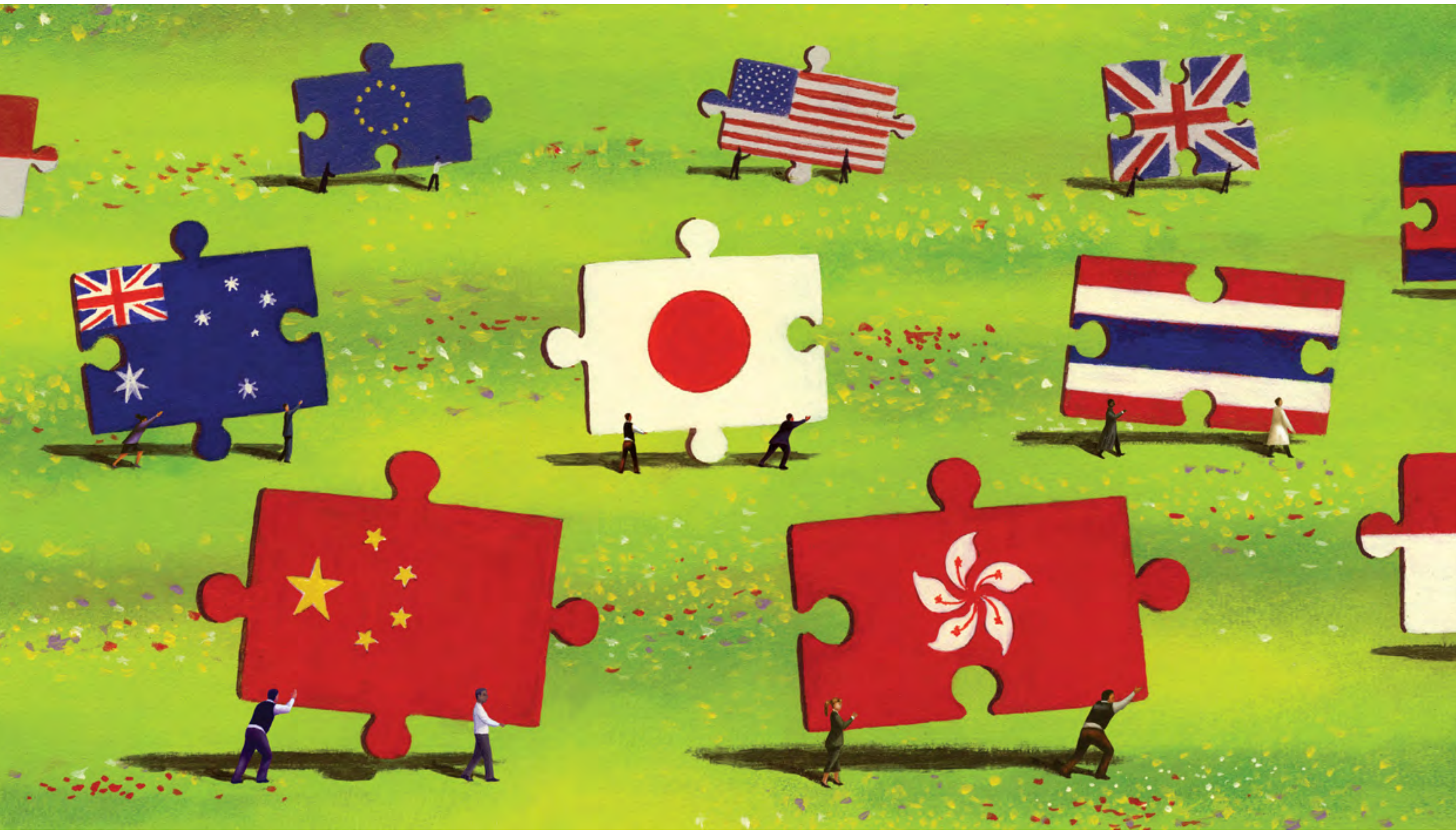

* BEARING EAST

Asia's derivatives markets are poised for further growth, but participants point to the need for certainty on close-out netting

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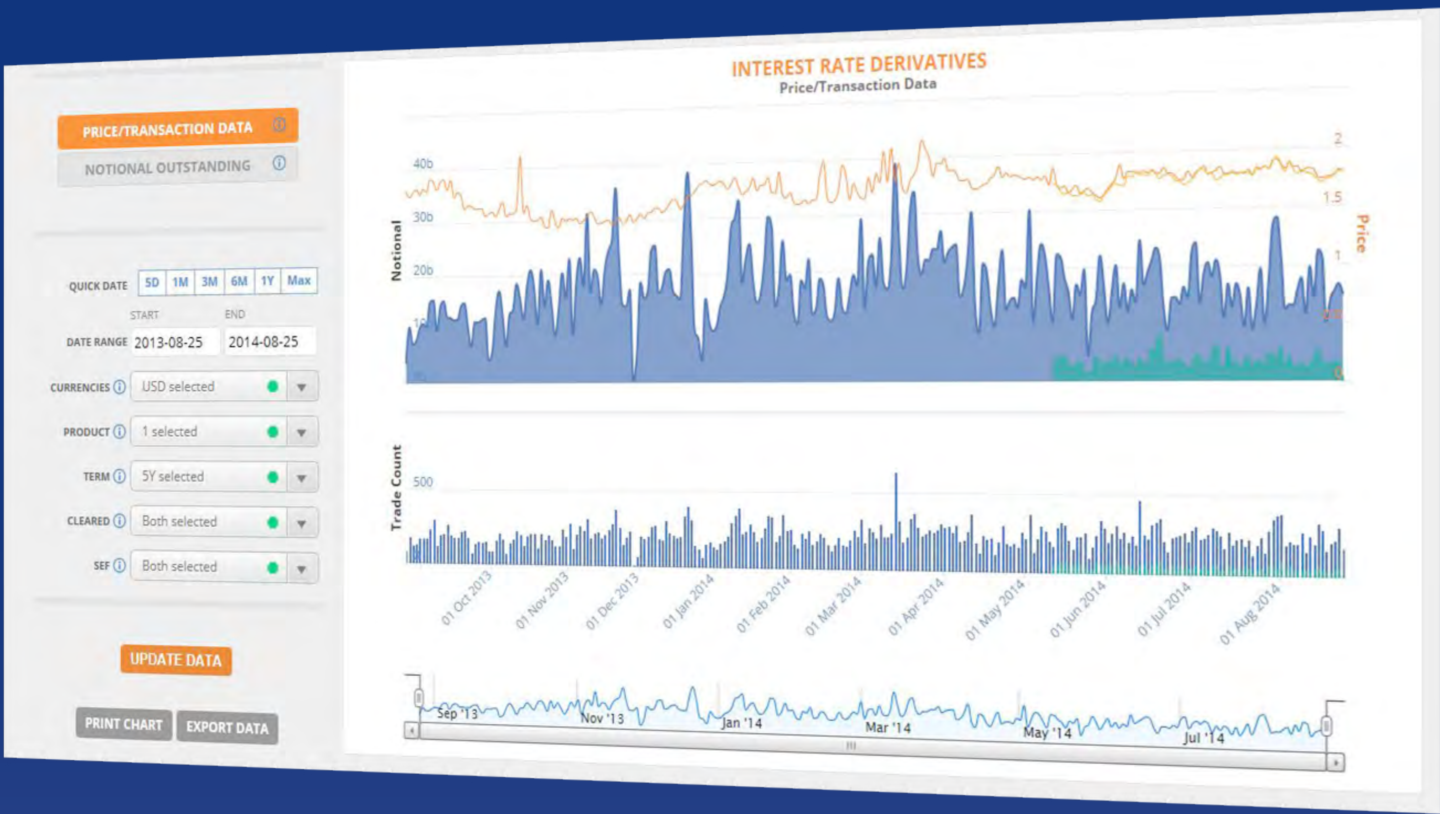

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All About Netting

It's difficult to talk in general terms about the derivatives market in Asia-Pacific. Looked at as a whole, derivatives turnover in the region has been growing, and that growth is expected to continue. But activity is concentrated in a few key trading hubs like Hong Kong – the venue for this year's ISDA Annual General Meeting. A number of other jurisdictions are at much earlier stages of development, and need to establish strong legal and regulatory foundations to encourage further growth in local derivatives markets.

That might sound obvious, but it's important. In a new ISDA survey of 480 derivatives market participants active in Asia-Pacific, published in this issue of **IQ**, the existence of a sound legal and regulatory framework was identified as one of the main factors in determining where to trade. In particular, certainty over the enforceability of close-out netting was highlighted as essential to the development of robust and efficient derivatives markets.

There has been recent progress towards achieving that in certain jurisdictions, but – as it stands – there is still ambiguity over how close-out netting will be treated in three of the region's biggest economies and Group-of-20 members: China, India and Indonesia. Given the importance of close-out netting as a risk mitigant, we believe resolving this issue is the single most important step policy-makers can take to ensure the development of safe, efficient and liquid derivatives markets in their jurisdictions.

The survey highlighted the importance of other regulatory issues, including the cross-border harmonisation of rule sets. This has long been a key strategic priority for ISDA, and we recently proposed a set of recommendations to help mitigate fragmentation in global derivatives markets. Central to this is the development of a risk-based framework for comparability evaluations, alongside a predictable and consistent equivalence and substituted compliance process that is focused on outcomes.

Greater consistency between national rule sets would also help, but that doesn't mean rules necessarily need to be identical in every market. For smaller jurisdictions or those with limited market activity, it may not be appropriate to implement the same rules as those applied in the US and Europe – at least, not at this stage. The most effective strategy for local regulators would be getting those legal foundations in place first.

Nick Sawyer
Head of Communications & Strategy
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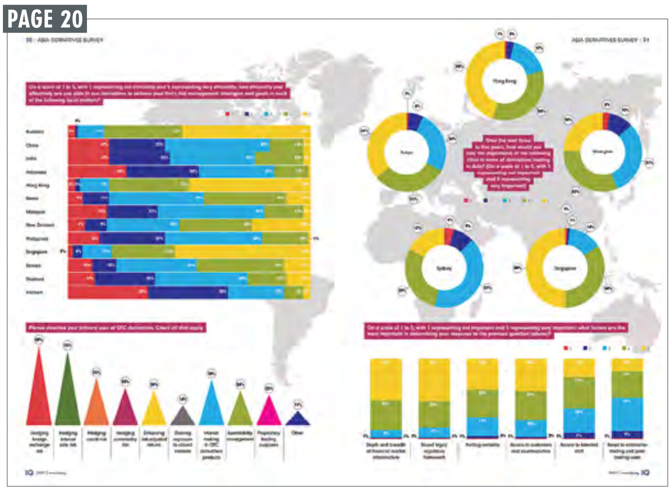
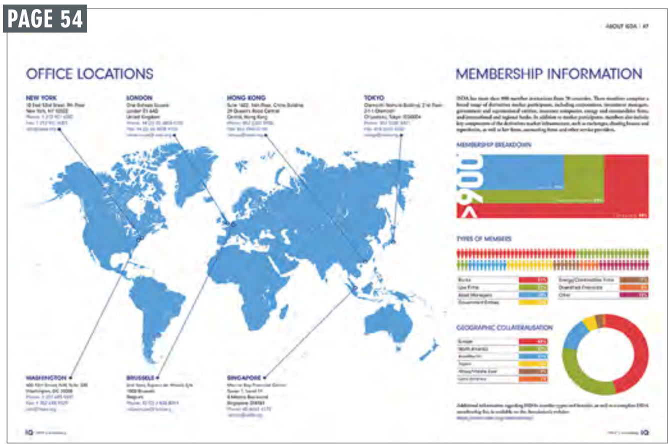
CONTENTS

REGULARS

PAGE 20



PAGE 54

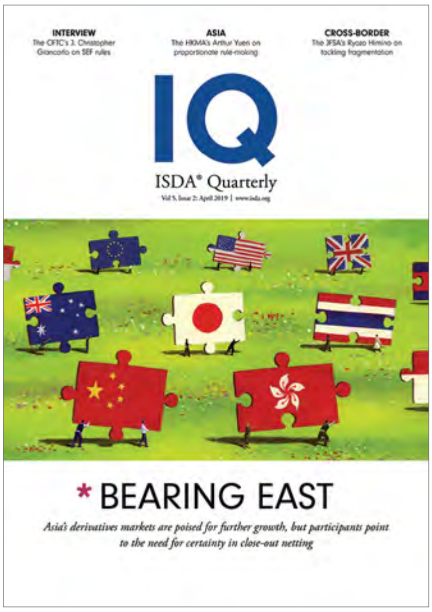


ALSO IN THIS ISSUE

Volume 5, Issue 2: April 2019

THE COVER PACKAGE

BEARING EAST



PAGE 24

PAGE 16

"For Hong Kong, it has always been our policy intent to avoid overly complex or burdensome requirements in our rules"

Arthur Yuen, HKMA

Firm Foundations

With China, India and Indonesia predicted to grow further, it's important strong foundations are in place to support robust derivatives markets, writes ***Scott O'Malia***

It's no coincidence that we're holding this year's ISDA Annual General Meeting (AGM) in Hong Kong. The growth potential of Asia-Pacific – and China in particular – remains significant. China is already the world's second largest economy, and is predicted to hit top spot before too long. In fact, a recent report by Standard Chartered predicts that seven of the top 10 economies in 2030 will be current emerging markets, with India and Indonesia joining China in the top five.

Several countries in the region are becoming increasingly outward looking in their perspective, and they have big plans. It's estimated that this growth and expansion will require $1.7 trillion in infrastructure investment across developing Asia each year.

In many cases, local jurisdictions are still too small to support this level of financing. Instead, companies, governments and others will likely have to turn to global markets to ensure they can access the financing they need at the best available price. The ability to borrow outside the domestic market, and then to hedge that risk efficiently, is critical for economic growth.

"Close-out netting is the single most important tool for reducing credit risk between counterparties"

Perhaps it should come as no surprise, then, that derivatives markets in the region have been growing. According to the latest triennial survey from the Bank for International Settlements, interest rate derivatives and FX average daily turnover in Asia grew at a faster rate than the global average between 2007 and 2016, with Hong Kong and Singapore cementing their positions as regional trading hubs.

Given the predictions of growth in the region, it's not unreasonable to assume this development will continue, combined with further advancement in domestic derivatives markets. But two key ingredients are needed to put this progress on firm footing.

First, a sound legal infrastructure is necessary – in particular, the enforceability of close-out netting. A new ISDA survey shows participants in Asia's derivatives markets value legal certainty on close-out netting above all else, and see it as critical to the development of robust and liquid derivatives markets.

This issue is very close to ISDA's heart. Close-out netting is the single most important tool for reducing credit risk between counterparties, and is vital for strong, liquid and robust derivatives markets. We believe achieving certainty on the enforceability of close-out netting in China, India and Indonesia will encourage more participation from globally active firms, adding to liquidity in these markets.

The second key ingredient is harmonisation and cooperation between regulators and rule sets. While the Group-of-20 (G-20) nations agreed a consistent set of reforms that have made derivatives markets safer and more robust, these rules have often differed in scope, substance and timing when implemented in different markets.

To be clear, this doesn't mean all rules must be identical in every jurisdiction – there may be legitimate reasons for regulators to deviate in some areas to suit local characteristics, particularly in smaller or less developed markets. But there are cases where divergences are self-defeating and contribute to fragmentation in global markets.

We believe the answer is to make the process for substituted compliance and equivalence determinations more efficient. In response, ISDA has proposed a risk-based framework for the evaluation and recognition of the comparability of derivatives regulatory regimes. That should be combined with a process established by international standard-setting bodies to enable national regulators to implement equivalence and substituted compliance determinations in a predictable, consistent and timely manner.

We welcome the focus on tackling market fragmentation by the Japanese presidency of the G-20. We must work together to ensure derivatives markets function efficiently on a global basis and are able to support economic growth.

Finally, a special thanks to all of you who have made the trip to Hong Kong for this year's AGM. We hope you enjoy the conference.

Scott O'Malia
ISDA Chief Executive Officer

Full Version of ISDA Create – IM Launched

ISDA and law firm Linklaters have launched the full version of ISDA Create – IM, a new online solution that automates the process of producing and agreeing initial margin (IM) documentation and facilitates the creation of valuable structured legal data.

By using ISDA Create – IM, which launched on January 31, users can deliver IM documentation to multiple counterparties simultaneously, and then negotiate and execute those documents online. The platform also enables firms to digitally capture, process and store the resulting data, which can be used for commercial, risk management and resource management purposes.

The launch of ISDA Create – IM comes as a large universe of firms is scheduled to fall into scope of IM requirements for non-cleared derivatives in September 2019 and September 2020.

"Meeting the September 2019 and 2020 IM regulatory deadlines will be a substantial challenge for the industry given the large number of entities set to fall into scope. Digitising legal negotiation and data will assist with this effort, and will open a broad range of efficiency and analytical opportunities for users," says Katherine Tew Darras, ISDA's general counsel.

The full rollout of ISDA Create – IM follows the launch of the beta version in September 2018. Following feedback from buy- and sell-side users, a number of new features have been added to the service, including umbrella agreements and bulk upload functionality.

"Since launching the beta version of ISDA Create – IM, we've received detailed input from the more than 70 firms that have engaged in the testing process, making this a true industry platform. This broad industry feedback has been invaluable as we've developed the service, and we will continue to gather input through our advisory group," says Doug Donahue, partner at Linklaters.

Other ISDA documentation will be added to ISDA Create over time, based on industry needs, creating an electronic negotiation and execution ecosystem for ISDA and related documentation. Initial areas of focus include variation margin documentation and the schedule to the ISDA Master Agreement. IQ

BCBS-IOSCO Relief Welcomed, but Questions Remain

On March 5, the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO) published a statement highlighting that counterparty relationships that fall below an initial margin (IM) exchange threshold aren't obliged to meet documentation, custodial or operational requirements.

Based on an extensive global data collection and analysis exercise conducted by ISDA, a drop in the IM compliance threshold in September 2020 from €750 billion to €8 billion in aggregate average notional amount (AANA) of non-cleared derivatives will capture over 1,100 smaller entities, representing more than 9,500 trading relationships. As it stood, new documentation would have needed to be negotiated with every counterparty, custodial relationships would need to be set up, and IM calculation systems would need to be implemented – requirements that would have stretched industry resources to the limit.

Critically, the vast majority of these entities pose no systemic risk. According to the ISDA data, a significant portion of phase-five relationships – between 69-78%, depending on the IM calculation method used – would end up not having to exchange any IM, because their exposures fall below a €50 million IM exchange threshold.

However, the BCBS-IOSCO statement is not a cure-all, and raises many questions about its global application and duration. Crucially, it doesn't entirely remove the burden placed on non-systemically important counterparties. Those firms that fall into scope of the rules (those above the €8 billion compliance threshold) but don't have to exchange margin (because their exposures with their counterparties fall below the €50 million IM exchange threshold) would still need to continually calculate IM and monitor their threshold levels – meaning they still face a significant compliance burden.

Unless specifically directed otherwise, those firms would need to run initial and ongoing AANA calculations, and would need to test, implement and possibly get regulatory approval for IM calculation systems to monitor whether their relationships are at risk of exceeding the allowable €50 million exchange threshold. Faced with this ongoing burden, phase-five firms may be incentivised to reduce their derivatives exposure well below the threshold level, limiting their ability to effectively hedge.

ISDA maintains that the most appropriate solution is to lift the phase-five compliance threshold above the €8 billion level. This will create certainty for smaller firms by pulling them out of scope entirely and is more aligned with the policy objective of reducing systemic risk. IQ

ISDA Publishes CDM 2.0 and Opens Access to Entire Market

ISDA has published the full version of the ISDA Common Domain Model (CDM) for interest rate and credit derivatives and opened access to all market participants, including ISDA members and non-members.

The ISDA CDM tackles the lack of standard conventions in how derivatives trade events and processes are represented. Developed in response to regulatory changes, high costs associated with current manual processes and a demand for greater automation across the industry, the ISDA CDM creates a common blueprint for events that occur throughout the derivatives lifecycle, paving the way for greater automation and efficiency at scale.

"The current derivatives infrastructure is hugely inefficient and costly, and there is virtually no way to implement scalable automated solutions across the industry. That's because each firm and platform uses its own unique set of representations for events and processes, which requires continual reconciliation of data to ensure the parties to a trade have the same information," says Scott O'Malia, ISDA's chief executive.

The ISDA CDM addresses this problem by creating a standard digital representation of events and products that can be used by all participants, infrastructures, platforms and regulators. This will enable users to develop automated solutions that are interoperable with other firms and platforms, and will help realise the full potential of new technologies like smart contracts, blockchain and cloud. It will also promote greater transparency and alignment between regulators and market participants, enabling the industry to reduce costs and inefficiencies.

> "This is a once-in-a-generation opportunity to restructure the foundations of the market, and we need to grasp this opportunity"
> **Scott O'Malia, ISDA**

The latest release follows publication of ISDA CDM 1.0 in June 2018, which included an initial representation of interest rate and credit derivatives products, along with a set of core business events. That version was open for ISDA members to access and test the model on various new technologies.

With the launch of the full, open-access version for interest rate and credit derivatives, ISDA expects to achieve a broader user community and further develop opportunities for deployment. Current projects involving the ISDA CDM include interest rates clearing and collateral management solutions.

As well as providing a full set of representations for interest rate and credit derivatives, the ISDA CDM 2.0 includes an initial representation of equity swaps products and the ISDA Credit Support Annex for initial margin. This work is due to be completed in the second quarter of 2019, alongside an expansion in product scope to cover forwards and the foreign exchange asset class.

In addition, to ensure consistent implementation by ISDA CDM users, the ISDA CDM 2.0 will incorporate changes being made as part of a project to update the 2006 ISDA Definitions, including a refreshed list of floating rate options and modifications responding to benchmark reform initiatives.

To oversee industry feedback and technical input and to set priorities for further development, ISDA will establish a governance framework. This will comprise an executive committee and two forums for technical and product/domain experts, which will be open to ISDA's entire membership. ISDA staff will continue to coordinate non-member feedback in the governance framework and through open calls and working groups for the ISDA CDM user community.

"There are always reasons to do nothing and maintain the status quo, but the challenges we face today will not get any easier, and we will never be able to fully harness the potential of new technologies across the industry. Regulatory requirements on trading, reporting and clearing have provided an important catalyst for change, coupled with a desire to reduce costs. This is a once-in-a-generation opportunity to restructure the foundations of the market, and we need to grasp this opportunity," says O'Malia. IQ

Version 2.0 of the ISDA CDM is available at: https://portal.cdm.rosetta-technology.io/#/

WHAT ARE THE DRIVERS FOR THE ISDA CDM?

Several drivers are working to encourage industry participants to rebuild the foundations of the market – new regulations, higher costs and the push to automation.

- New regulations have introduced requirements for trade execution, clearing and data reporting. These processes are data-driven and require a high level of automation to meet the new regulatory mandates.
- Derivatives market participants are under pressure to reduce costs and improve the efficiency of back-office processes. But a lack of common standards in how trade events and processes are represented, and the need for continual reconciliation, has made it challenging to achieve these efficiencies.
- New technologies like blockchain, cloud, smart contracts and artificial intelligence offer the potential to transform the derivatives market, but industry wide deployment has been limited by a lack of interoperability.

Review of Rules Appropriate, Says O'Malia

Considerable progress has been made in transforming derivatives markets and improving resilience, but regulators should not shrink from reviewing the rules to ensure they are appropriate, according to Scott O'Malia, ISDA's chief executive.

Speaking at the DerivCon event in New York in February, O'Malia argued that with the reforms agreed by the Group-of-20 nations – clearing, trade execution, reporting, margining of non-cleared derivatives and amendments to capital rules – now largely in place, regulators should consider how the rules can be made to work better. As an example, he pointed to the work by Commodity Futures Trading Commission (CFTC) chairman J. Christopher Giancarlo to review the agency's swap execution facility (SEF) rules and its cross-border guidance.

"The industry has worked very hard over the past 10 years to implement the regulatory reforms, and we believe the derivatives market is stronger and more resilient as a result. We also believe, however, that we should not shy away from sensible changes when change is shown to be needed. For instance, when certain requirements have led to unnecessary complexity, duplication and costs," said O'Malia.

"That's why we at ISDA welcome CFTC chairman Giancarlo's commitment to review existing CFTC requirements, including the SEF rules and the cross-border guidance, and to propose alterations that make the framework simpler and more efficient."

The CFTC published its revised SEF rules in November 2018, following publication of a cross-border whitepaper by the CFTC chairman the previous month. Speaking at DerivCon, Giancarlo argued that the SEF framework needed to be reviewed because the current rules are too reliant on no-action relief, staff guidance and temporary regulatory forbearance.

One of the central elements of the SEF proposal is to broaden the permitted methods of execution beyond request-for-quote-to-three (RFQ-to-three) and central limit order book (CLOB) – a change Giancarlo argued would result in an increase in average daily notional volume traded on SEFs.

Commenting on the proposals, O'Malia – who, as a former CFTC commissioner, voted on the original SEF rules in 2013 – said he had argued at the time that the requirement to trade on a CLOB or RFQ-to-three was more prescriptive and limiting than what was required by statute. ISDA has also advocated for more flexibility, pointing out that less liquid swaps may be better suited to other methods of execution.

"We have long argued that trading venues must offer flexible execution mechanisms that take into account the trading liquidity and unique characteristics of a particular category of swap," said O'Malia. "We believe that permitting flexible methods of execution will encourage more trading on SEFs, and will help participants execute trades in more volatile periods, when liquidity falls in response to changing market conditions."

> "We have long argued that trading venues must offer flexible execution mechanisms that take into account the trading liquidity and unique characteristics of a particular category of swap"
>
> **Scott O'Malia, ISDA**

Beyond the mechanics of SEF trading, O'Malia raised another point: whether the proposed changes will impact an existing agreement between the CFTC and European Commission (EC) on trading venue equivalence.

Tackling this same question, Giancarlo said the CFTC had remained in close contact with the EC throughout the process so far.

"Of course, the EC has the opportunity to provide formal comments on the rule proposal and I remain in correspondence with EC vice president Dombrovskis. CFTC staff briefed the EC staff about the proposal at the US-EU joint financial regulatory forum. By all accounts, the process we have followed in presenting the rule proposal is a model of transparency and dialogue with foreign counterparts," he said.

Given trading rules are not focused on mitigating systemic risk, O'Malia argued that the proposed changes shouldn't affect existing equivalence determinations.

"Personally, I believe we have to recognise that there are a range of trading facilities across jurisdictions, with different trading requirements and a different range of products. As this rule isn't focused on risk reduction, regulators should focus on outcomes when making comparability determinations, not a line-by-line analysis of the rules," he said.

ISDA earlier this year published a set of recommendations aimed at tackling market fragmentation. This includes employing a risk-based framework for the evaluation and recognition of the comparability of derivatives regulatory regimes, plus development by global standard-setting bodies of a process to address equivalence in a predictable, consistent and timely manner.

'We think this approach strikes an appropriate balance by focusing on risk and its cross-border implications, rather than attempting to align each and every regulatory requirement between jurisdictions. It will also allow for outcomes-based substituted compliance determinations, while reducing the chances of lengthy negotiations that could lead to reduced liquidity and market fragmentation," said O'Malia. IQ

ISDA Sets Out Best Practice Recommendations for CCPs

ISDA has published a set of best practice recommendations aimed at promoting global consistency in how central counterparties (CCPs) manage risk. The 10 recommendations were published in January, and range from membership and governance to default management and margin calculation.

The publication of the recommendations comes as greater volumes of derivatives move to central clearing, and market participants recognise the importance of robust and consistent risk management of cleared positions. ISDA worked with members to draft the recommendations, which seek to ensure risk management decisions are based on the risk profile of every product, rather than simply the way in which it is traded.

The importance of CCP risk management practices was highlighted by a default at Nasdaq Clearing in September 2018, which exceeded the defaulting member's margin and default fund contribution and required the use of mutualised resources – the second such event in five years. The best practices are designed so the default of a member will not be propagated to other members or the wider financial system, outside of an extreme stress event.

"ISDA and its members support clearing as an effective tool for mitigating counterparty credit risk, and this is reflected in the fact that 88% of US interest rate derivatives trading volume was cleared in 2018. As clearing volumes continue to grow, it is more important than ever that CCPs adhere to a consistent set of robust risk management practices," says Scott O'Malia, ISDA's chief executive.

Policy-makers and market participants have developed various sets of risk management principles and practices for CCPs, but there has been divergence in how these standards have been implemented in different jurisdictions.

ISDA and its members have called for broad-based implementation of the best practices to ensure all CCPs have risk controls and margin requirements that adapt to concentration, liquidity, member credit quality and wrong-way risk in a member's portfolio. These best practices should also engender effective and transparent default management processes, and robust membership criteria.

Regulations currently distinguish between the clearing of over-the-counter (OTC) and exchange-traded derivatives, and requirements for clearing OTC derivatives are often stricter, reflecting a perception that these products are riskier, more complex and less liquid. However, the two recent clearing member defaults that forced the CCPs to draw on their member default fund resources both involved exchange-traded derivatives.

The recommendations therefore make clear that CCP risk management practices must be aligned with the actual risk of the product being cleared, rather than simply whether it is exchange-traded or OTC. This means CCPs should employ a transparent margin period of risk that considers market liquidity, open interest, position size, concentration, the default management process and any other factors that may impact the timeliness of liquidation.

The paper recommends that CCPs should apply a transparent default management process that aligns the incentives of all participants and ensures sufficient participation in auctions. Regular fire drills should also be conducted to test the ability of CCPs and members to hedge and liquidate a defaulter's portfolio in a timely manner, the paper adds.

When it comes to the calculation of margin requirements, ISDA recognises there is no single correct method and model combination, and the choice will depend on the products cleared – in fact, it would make the financial system less safe if all CCPs were to use the same model. However, it remains critical that CCPs perform extensive analysis to support every modelling choice, and for models to be regularly reviewed.

While the best practices are intended for CCPs, the paper stresses the importance for market participants to perform sufficient due diligence on every CCP they join, to make sure they comply with global best practices. IQ

To read the full paper, visit bit.ly/2tULfUB

CCP BEST PRACTICES – IN BRIEF

1. Risk management must be aligned with the underlying risk of a given product.
2. CCPs must have robust membership requirements that are regularly reviewed.
3. Products cleared by a CCP must be sufficiently standardised and liquid.
4. CCPs must ensure they have a sufficient number of members to mutualise risk.
5. Margin must be calculated consistently across all products, taking account of concentration, liquidity and wrong-way risk.
6. Controls should be used to protect against erroneous trades and the build-up of concentrated positions.
7. Key documentation must be disclosed, including margin and stress-testing models and default management procedures.
8. The size of the default fund should be aligned with key best practices, with limits on the portion of the default fund that can be consumed by any one member.
9. The default management process should use a well-defined and transparent auction design including key elements – for instance, ensuring sufficient participation in auctions – and should be tested regularly.
10. Parties underwriting the counterparty risk of a CCP should be part of its governance.

THE COVER PACKAGE

Bearing East

Asia's derivatives markets are expected to continue to grow, but the pace will depend on the recognition of close-out netting in key jurisdictions

The most recent triennial survey from the Bank for International Settlements would have made cheery reading for derivatives market professionals in Asia-Pacific. The survey showed that daily average turnover in FX and interest rate derivatives in the region had grown at a faster rate than the global market between 2007 and 2016.

According to a new survey from ISDA, derivatives market participants active in Asia-Pacific expect that growth to continue. Nearly three quarters of respondents expect the volume of foreign exchange derivatives executed in Asia ex-Japan to increase over the next three to five years, while 63% of respondents forecast the same for interest rate derivatives. Singapore and Hong Kong remain the most important centres for derivatives trading, according to respondents (see pages 16-23).

However, further growth of derivatives across the region will depend to some extent on the pace of market development – in particular, the recognition and enforceability of close-out netting. Without netting, market participants are exposed to much greater credit risk and have to hold higher amounts of margin and capital. There has been some recent progress and cause for optimism, but further work on the enforceability of close-out netting is needed, particularly in key growth markets such as China, India and Indonesia (see pages 28-29).

For market participants, the focus is not only on local market developments, but also on global regulations. In January 2019, the final piece of Basel III fell into place with the publication of the revised framework for market risk capital, known as the Fundamental Review of the Trading Book (FRTB). For some banks, the FRTB may offer an opportunity to move to using internal models to calculate market risk capital for the first time. But there are still uncertainties over how the rules will be transposed in the region ahead of the Basel Committee on Banking Supervision's 2022 implementation target (see pages 12-15). IQ

"It is important to implement international regulatory standards consistently across different jurisdictions to avoid regulatory arbitrage, maintain a level playing field, and minimise compliance burdens for banks"

Arthur Yuen, deputy chief executive, HKMA

Asia Specific

The Basel Committee's recent completion of the Fundamental Review of the Trading Book represents a milestone in its long-running overhaul of market risk capital, but banks in Asia face some specific challenges when it comes to implementation

The release of final regulatory standards might well provoke mixed reactions among market participants. On the one hand, it ends months, sometimes years, of uncertainty and provides a clear set of rules and a firm deadline so that implementation planning can begin. On the other hand, it closes the door on possible amendments and may lead to further uncertainties over how national and regional legislators will transpose global standards.

The revisions to the market risk capital framework – known as the Fundamental Review of the Trading Book (FRTB) – are a case in point. The Basel Committee on Banking Supervision published its final standards on January 14, marking a turning point in the long-running initiative to overhaul global market risk capital requirements. But the road to January 2022, when the Basel Committee expects the FRTB to be implemented, will not be straightforward.

In particular, market participants in the Asia-Pacific region face a unique set of challenges when it comes to FRTB implementation. The framework may present an opportunity to begin using internal models to calculate capital requirements for some trading desks, which in itself will bring a host of new internal requirements. But concerns exist over the treatment of emerging market sovereign debt and the extent to which key jurisdictions will meet the 2022 deadline.

"While recognising that global markets have borders and some jurisdictions may sometimes need to take a particular approach to certain components of FRTB, we should aim for consistency as much as is reasonable and avoid fragmentation in implementation. Historically capital requirements have not always been applied in a consistent manner, which can make it more difficult for institutions to compete globally on equal terms," says Eric Litvack, chairman of ISDA.

Lengthy gestation

The FRTB has been a long time coming. Following the financial crisis and the immediate changes that were made to the market risk capital framework – dubbed Basel 2.5 – the first consultation paper on the FRTB was published as far back as 2012. Final standards were released four years later in January 2016 – although implementation was subsequently delayed, and the framework was further revised in the January 2019 release.

Following many rounds of consultation, the final framework includes a revised distinction between the trading book and the banking book, an overhaul of both the standardised approach (SA) and the internal models approach (IMA) for the calculation of market risk capital, and the addition of a simplified standardised approach designed for banks with small or non-complex trading portfolios.

According to the Basel Committee's own estimates, the 2016 standards would have resulted in a weighted average increase of around 40% in total market risk capital requirements relative to current rules, while the revised standards would reduce this impact to 22%. The industry has not yet undertaken its own impact assessment, but the revisions in the final framework have been broadly welcomed.

"The final rules represent a material improvement on previous versions. The overall impact still needs to be fully assessed, with a specific focus on areas where no changes

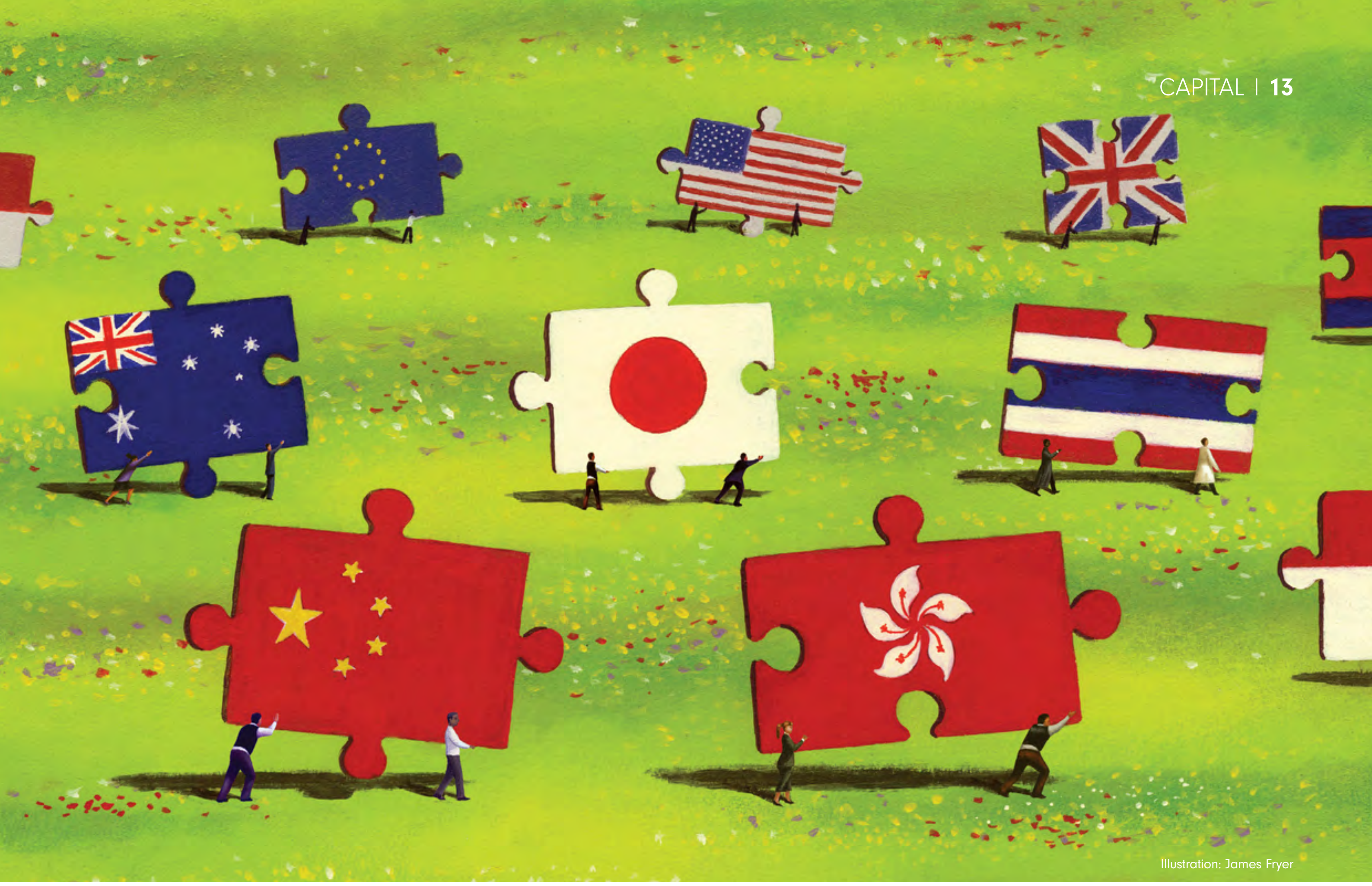


Illustration: James Fryer

were made in the final package, but the amendments addressed many of the previous shortcomings that would have disadvantaged banks' trading book activities," says Panayiotis Dionysopoulos, head of capital at ISDA.

Implementation focus

Now that the final standards have been published, the focus of banks around the world is turning to implementation. It will be up to national regulators to determine exactly how and when they plan to implement, but a key question for many banks at this stage, regardless of their size or location, will be whether they plan to use the IMA or SA to calculate market risk capital.

At the broadest level, improvements to the SA have made the approach simpler and more risk sensitive, but may result in higher capital requirements. Meanwhile, the IMA could reduce capital requirements but is more sophisticated and may be costly and challenging to implement and maintain, particularly for smaller banks.

Basel 2.5 only allowed internal models to be approved and removed on a bank-wide basis by risk category, which provided little flexibility for regulators. The FRTB addresses this issue by allowing IMA approval and removal at the trading desk level rather than the entity level. Many banks now have a more complex assessment of their business to undertake, with the aim of determining which trading desks, if any, might be suited to the use of internal models and what the impact on capital requirements would be.

"Given the level of granularity that the new framework brings, we may see more institutions taking the view that the IMA represents an appropriate way to better capture risk on certain desks. Smaller banks are still more likely to stick with the SA given the resources required for internal models. Large global banks will probably want to retain the IMA, but there may be mid-sized banks exploring the IMA for the first time under the FRTB," says Gregg Jones, director of risk and capital at ISDA.

Across Asia-Pacific, there has historically been widespread use of the SA under Basel 2.5, although some Australian and Japanese banks have used internal models. It is still early days, and banks will want to see exactly how their regulators transpose the global standards, but some are already considering seeking IMA approval if it makes sense for individual trading desks.

"Like most banks in Singapore, we currently use the standardised approach across the board, but the FRTB will give us the opportunity to reduce market risk capital by applying the IMA selectively to certain desks. Basel III and the FRTB market risk reform is an ongoing journey, even just to implement the revised standardised approach, but our risk and trading platforms are exactly aligned, which should make it more feasible to get IMA approval," says Frederick Shen, head of global treasury business management at OCBC Bank in Singapore.

IMA requirements

A decision to consider the use of internal models is only the very beginning of the process, as the FRTB raises the bar that firms must clear to be allowed to use the IMA. Among other requirements, banks must pass a risk factor eligibility test (RFET), which requires the identification of a sufficient number of real prices that are representative of a risk factor, if that risk factor is to be classified as modellable.

Under the final framework, there must be either at least

FINAL FRTB FRAMEWORK PUBLISHED ON JANUARY 14, 2019

The standards are available at: www.bis.org/bcbs/publ/d457.pdf

24 real price observations per year and four observations within a 90-day period during the past 12 months, or 100 real price observations over the previous 12 months. Risk factors that fail the RFET are classified as non-modellable and therefore subject to an additional capital charge, which could make the IMA prohibitively expensive in terms of capital.

For banks operating in emerging markets that have previously used the IMA, or would consider doing so under the FRTB, the RFET could represent a stumbling block – the number of non-modellable risk factors (NMRFs) may be higher in emerging markets due to lower trading volumes and liquidity.

"It is now critically important that regulators continue to talk to one another to agree expectations and ensure consistency"

Shearin Cao, Standard Chartered Bank

"The IMA is likely to be much more challenging in Asia-Pacific and across emerging markets, both for local banks and emerging markets desks of global banks. NMRFs will be more prevalent because there are simply less real price observations and transactions to substantiate the modellability criteria. This is fairly well understood but hasn't yet been quantified by either the industry or regulators," says a senior market risk expert at a large global bank.

Satisfying the RFET requirements will involve collecting extensive price data on individual risk factors. For those banks without sufficient proprietary data, they will have to rely on external data services, which are likely to be available from third-party vendors. These data pooling services are still in the early stages of development, which could make it difficult for banks to fully assess the feasibility of the IMA at this stage.

For those banks of a size and scale that will take them beyond the simplified standardised approach, there is still some way to go before they can be certain whether to use the SA or IMA, or a hybrid model in which IMA approval is sought for some desks but not others. For banks active in emerging markets, however, a greater number of NMRFs is likely to make capital requirements more punitive, raising questions over incentives for banks to apply for the IMA.

"The IMA is not just about modelling expertise – it's about the end-to-end process, including governance, data and transparency. When a regulator approves the use of the IMA, the bank needs to have demonstrated that it has the appropriate controls, data, governance and validation in place. Like many local banks, the FX business is a core market activity for us. With the FRTB SA quite punitive for FX, we would consider seeking IMA approval for our FX desks if a cost-benefit analysis suggests this would be appropriate and realistic," says OCBC's Shen.

Weighting sovereign risk

Meanwhile, concerns have been raised over emerging market sovereign debt, which could become punitively expensive under the rating-based approach set out in the FRTB. The need for banks to hold sovereign debt extends across multiple functions. It serves as collateral for central clearing and margin for non-cleared derivatives, and also likely makes up a substantial portion of their liquidity buffers.

But some banks are concerned that the FRTB could lead to a disproportionate increase in market risk capital for sovereign exposures. In the SA, sovereign exposures attract capital in both the default risk charge (DRC) and the sensitivity based method (SBM) calculation. For example, the risk weight for the SA DRC would range from 2% for an AA-rated sovereign, such as South Korea, to 15% for a BB-rated sovereign, such as Vietnam.

The inclusion of national discretion for the treatment of sovereign bonds issued in domestic currencies for the purposes of the SA DRC recognises that this type of debt is generally considered safer. However, the principle is not reflected in the SA's SBM, in which sovereign bonds are subjected to the same risk weights regardless of the issuance currency. Emerging market practitioners have suggested there should be greater consistency and recognition of the lower risk attached to domestic currency sovereign debt.

"We have encountered concerns over the inconsistency in the categorisation of sovereign bonds, which leads to different treatment for the same exposure under different parts of the framework. Sovereign bonds play a pivotal role in financing the economy and ensuring the smooth functioning of financial markets, so national regulators will need to take a flexible approach to make sure that holding sovereign debt does not become prohibitively expensive under the FRTB," says Dionysopoulos.

Timing misalignment

As the dust begins to settle on the final FRTB framework, the baton now passes to national and regional legislators to transpose the Basel standards into their own laws. While the US and Europe are largely governed by a small number of agencies that will take responsibility for this stage of the process, the Asia-Pacific region is much more fragmented.

While there may be certain areas – such as the treatment of sovereign debt – where some flexibility in transposing the standards might be warranted, market participants are generally keen to see the FRTB implemented consistently across the globe. This applies as much to the timing of implementation as it does to the actual content of the rules. The historical record on simultaneous implementation of Basel standards has not always been positive, and many participants are keen to see greater coordination this time.

"Most regulators in Asia implemented Basel II quite religiously, but US and European regulators weren't as committed to timely implementation, so they are now reluctant to front-run the global process with Basel III and the FRTB. At the same time, lead Asian regulators will want to meet the 2022 deadline, which could create an unlevel playing field if there are delays elsewhere in the world," says Keith Noyes, regional director for Asia-Pacific at ISDA.

At this stage, there is not much detail on exactly how and when the FRTB will be implemented in key jurisdictions, but a gap between east and west does look possible. The European Union has indicated that FRTB reporting requirements will be implemented first, followed by capital requirements, as part of the next round of changes to the bloc's capital requirements regulation. This means European implementation of the FRTB may extend beyond January 2022.

There has not yet been any formal indication on timing from US legislators, while some Asian regulators, including the Monetary Authority of Singapore, have begun informal dialogue with the industry. Market participants remain anxious that the 2022 deadline may not be universally met.

"Regulators in Hong Kong, Singapore and Australia are usually aligned with Basel on scope and timing, but it appears many other regulators in Asia ex-Japan will not be issuing consultation papers on the FRTB imminently. This will create fragmentation and operational challenges if we have to comply with the new framework in some jurisdictions but not others in 2022," says OCBC's Shen.

The final FRTB framework has been generally well received, and the Basel Committee has been commended for listening to industry feedback and making constructive changes to the rules, despite the many years of drafting and consultation that it took to get to this point. But market participants recognise that the completion of the global standards represents only the start of the process.

"It is positive that the Basel Committee listened to industry advocacy in developing the FRTB, but it remains a much more complex, sophisticated and prescriptive framework than today's regime. It will require significant investment to either enhance or entirely rebuild market risk capital calculations, and it is now critically important that global regulators continue to talk to one another to agree expectations and ensure consistency," says Shearin Cao, technical specialist in traded risk management at Standard Chartered Bank. IQ

ONWARDS TO CVA RECALIBRATION

With the completion of the Fundamental Review of the Trading Book (FRTB) this year – acknowledged to be among the most complex and challenging components of Basel III – members of the Basel Committee on Banking Supervision and its market risk group must have breathed a heavy sigh of relief after many years of painstaking work.

But with less than three years to go until both the FRTB and the latest revisions to Basel III are due to be implemented in 2022, there is very little time to make any final adjustments that may be needed. One area of immediate focus is the credit valuation adjustment (CVA) risk capital framework, which was changed in December 2017 to remove the internal models approach and introduce a revised standardised approach.

The industry has expressed concern over the poor recognition of hedges and the large gap between methodologies and assumptions used in best practice calculation of CVA for profit and loss purposes (accounting CVA) and those prescribed in the framework for CVA risk capital (regulatory CVA).

In the absence of a liquid single-name credit default swap (CDS) market, banks typically hedge their CVA risk by buying CDS indices as the best proxy for the risk. However, in the current calibration of the CVA risk capital framework, there is only limited recognition of these hedges under the standardised approach, which could lead to disproportionately high capital requirements.

"With the FRTB finalised, some further consideration of the CVA calibration is warranted. The limited recognition of hedges could lead to a situation where by adding more hedges to a portfolio, banks actually end up increasing the capital they have to hold. Clearly, this would not be a good outcome and there is a need to consider alternative approaches," says Panayiotis Dionysopoulos, head of capital at ISDA.

The need for recognition of CDS indices as hedging instruments for CVA risk is particularly acute in emerging markets, where the single-name CDS market is even less liquid and viable than in developed markets. But the issue is widely recognised, particularly among those banks that, following the removal of internal models, will opt to use the standardised approach rather than the basic approach to calculate CVA capital.

"We have yet to see the cumulative impact of the Basel rules, and it is very important that they are appropriately calibrated and coherently implemented. The lack of hedge recognition is the biggest issue for CVA, and if it isn't properly addressed to ensure a risk-appropriate level of capital is held, banks may have to make difficult decisions about their business mix, to the detriment of certain markets," says Debbie Toennies, global head of regulatory affairs at JP Morgan.

* Growth Ahead

Market participants expect Asia's derivatives markets will continue to grow, but the pace of growth will depend partly on the progress that is made on close-out netting. A new ISDA survey assesses the opportunities and challenges that lie ahead

The steady growth of derivatives markets in the Asia-Pacific region over the past decade has outstripped that of global markets and provided valuable opportunities for regional and global market participants. But further growth may depend on the pace of market development – in particular, the introduction of close-out netting legislation in key jurisdictions.

In a new survey of 480 market participants representing entities active in Asia-Pacific, ISDA has gathered a wide range of views on growth expectations, the impact of regulatory change and what is needed to promote robust, liquid and efficient derivatives markets in the region.

Continued growth

According to data collected by the Bank for International Settlements (BIS) in its triennial survey, average daily turnover in interest rate derivatives in Asia-Pacific markets rose from $187.4 billion in April 2007 to $298.3 billion in April 2016. Daily FX turnover increased from $1 trillion to $1.7 trillion over the same period.

That equates to a compound annual growth rate of 5% for interest rate derivatives and 6% for FX, while globally those markets expanded at a rate of 4% and 5%, respectively. The development in derivatives reflects broader economic trends since the financial crisis, as the pace of Asia-Pacific growth has edged ahead of global levels.

With China, India and Indonesia anticipated to be among the world's largest economies over the next decade, market participants expect to see further expansion in derivatives markets. The BIS estimates 6-8% of global interest rate derivatives trading and 18-22% of global FX activity takes place on trading desks in Asia ex-Japan. According to the ISDA survey, 63% of respondents expect this percentage to grow for interest rate derivatives and 74% expect it to grow for FX over the next three to five years.

Certain financial centres will inevitably play a bigger role in this growth than others. Respondents were asked how efficiently they are able to use derivatives to execute their risk management strategies and goals in 13 local markets across Asia. The highest scoring markets were Singapore, Australia and Hong Kong, while Philippines, Indonesia and Vietnam were considered less efficient.

Asked to rate the importance of five cities in derivatives trading over the next three to five years, respondents rated Singapore the highest, followed by Hong Kong, Tokyo, Shanghai and Sydney. Among the most important factors dictating the growth of these centres, respondents pointed to the depth and breadth of market infrastructure, a sound legal and regulatory framework, access to customers and counterparties, and netting certainty.

With growth comes further opportunity, and as capital continues to flow into Asia-Pacific economies, fuelling expansion of the region's derivatives markets, participation in the sector is likely to change. Nearly 74% of respondents expect the trading activity of Asian banks to increase over the next three to five years, while increased activity is also expected among Asian corporates and non-bank financial institutions.

As it stands, hedging FX risk is the most common reason to use derivatives in the region, with 59% of respondents highlighting this as a primary use. This was followed closely by hedging interest rate risk (55%), hedging credit risk (35%), market-making in over-the-counter (OTC) derivatives (34%) and hedging commodity risk (28%).

Netting in focus

Despite the expectations for further growth in Asia's derivatives markets, its pace will be contingent upon multiple factors, including the liberalisation of local

SURVEY METHODOLOGY

The ISDA Asia Derivatives Survey was conducted in January and February of this year, and attracted 480 responses. Approximately 47% of responses came from dealers and securities firms, and 28% from end-user firms, including non-dealer banks, pension funds, asset managers, insurance firms, hedge funds and non-financial corporates. The remainder of responses came from other market participants.

markets, the depth of liquidity and the support of regulators and policy-makers in addressing key industry issues such as close-out netting.

Of all the factors that will drive the development of robust, liquid and efficient derivatives markets in Asia, participants recognise close-out netting as a critical means of reducing credit exposure between parties, creating more certainty for financial institutions and encouraging greater participation (see pages 28-29). Asked to pick critical factors for derivatives market development, 47% ranked achieving legal certainty for netting in non-netting jurisdictions as very important.

While some countries such as Malaysia and Australia have made progress on this front, enforceability of close-out netting is uncertain in several Asian jurisdictions, including China, India and Indonesia. There are reasons to be optimistic about the future, with recent developments in China, India and elsewhere suggesting positive momentum. Nonetheless, survey participants remain cautious. Just 11% consider it very likely that legal certainty on close-out netting is achievable in China over the next three years, and 12% think it is very likely in India. Expectations for Indonesia and Vietnam remain lower, with just 3% thinking it very likely in both cases.

Clearing evolution

Key jurisdictions in Asia Pacific have made good progress in implementing Group-of-20 commitments on trade reporting and the central clearing of derivatives since the financial crisis. Given the large volume of FX trading in Asia and the low level of clearing in FX relative to interest rates and credit, a sizeable chunk of Asia's derivatives market remains non-cleared.

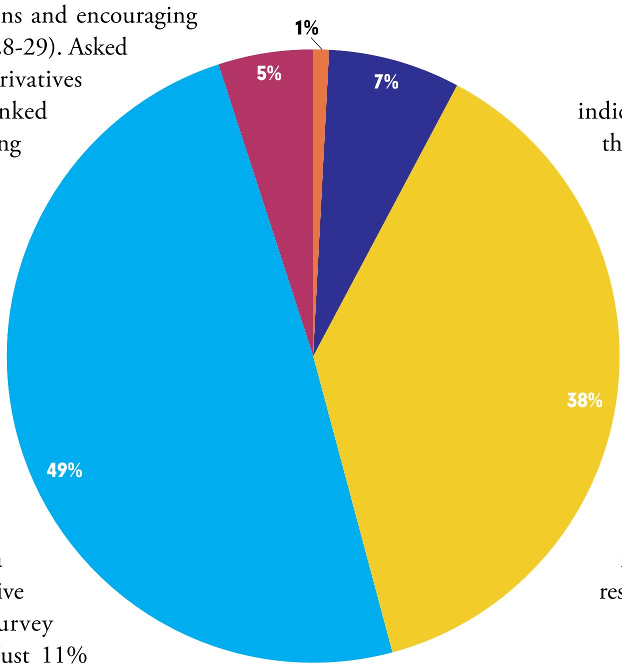
As it stands, 31% of respondents are clearing 50% or more of their new derivatives transactions executed in Asia. Roughly 25% of respondents indicated they clear more than none but less than 20% of their new derivatives transactions executed in Asia.

The rollout of new margin requirements for non-cleared derivatives could push that total up, however. Around two thirds of respondents think it likely the implementation of margin rules will shift more trades to clearing.

Market participants have different preferences when it comes to using local or global central counterparties (CCPs) to clear different asset classes, but as more Asian jurisdictions introduce clearing mandates in the coming years, 54% of respondents expect the number of local CCPs to increase. Only time will tell. IQ

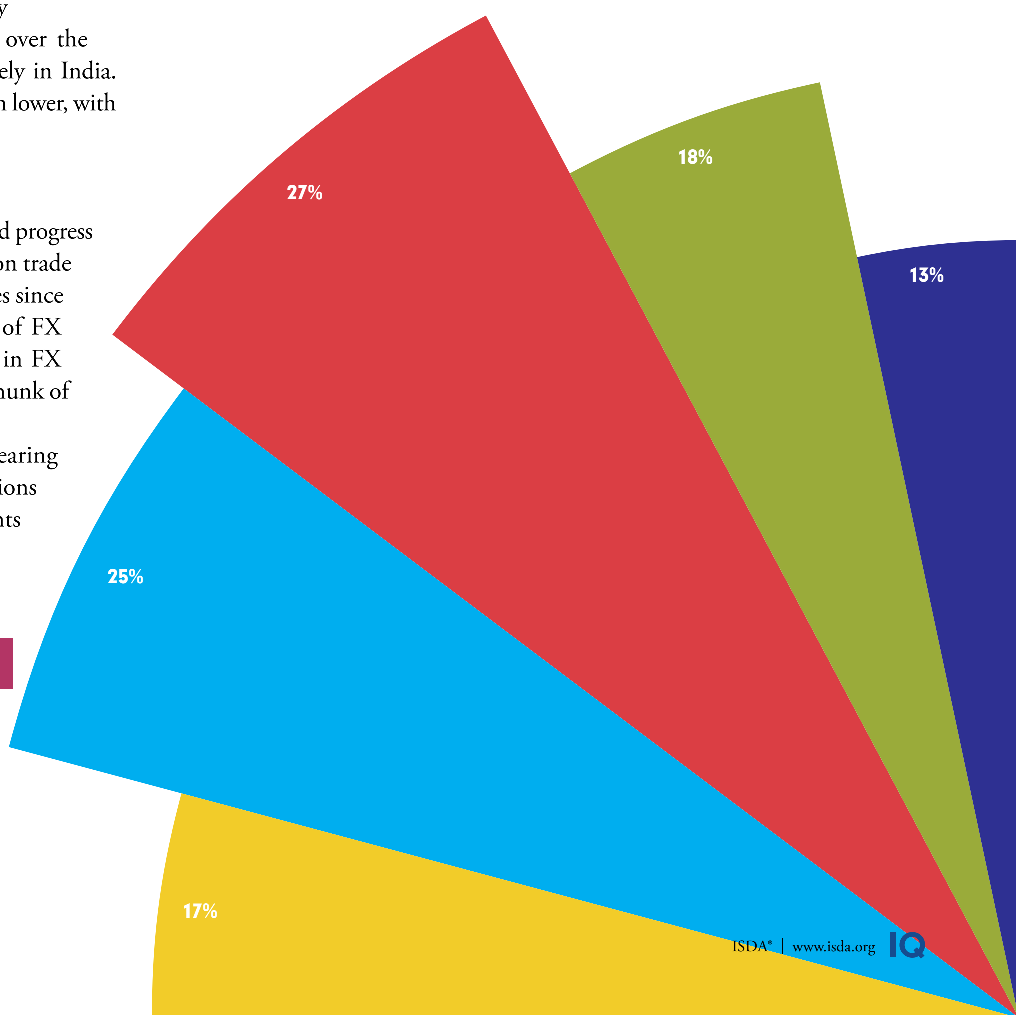
As more Asian jurisdictions establish clearing mandates, do you think the number of local CCPs will increase, decrease or stay the same?

Decrease significantly | Decrease moderately | Stay the same | Increase moderately | Increase significantly

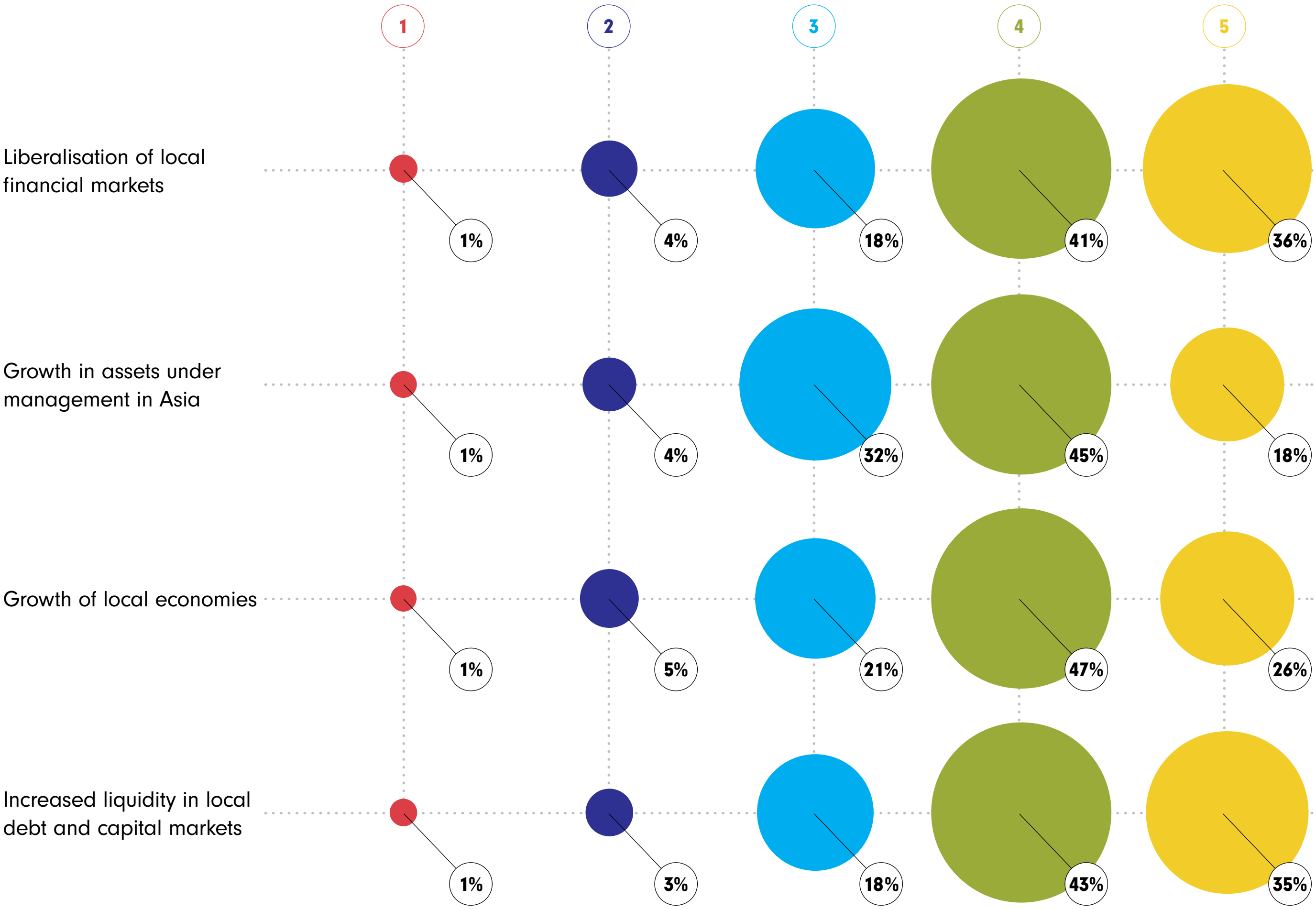


Approximately what percentage of your new OTC derivatives transactions that are executed/booked in Asia are being centrally cleared?

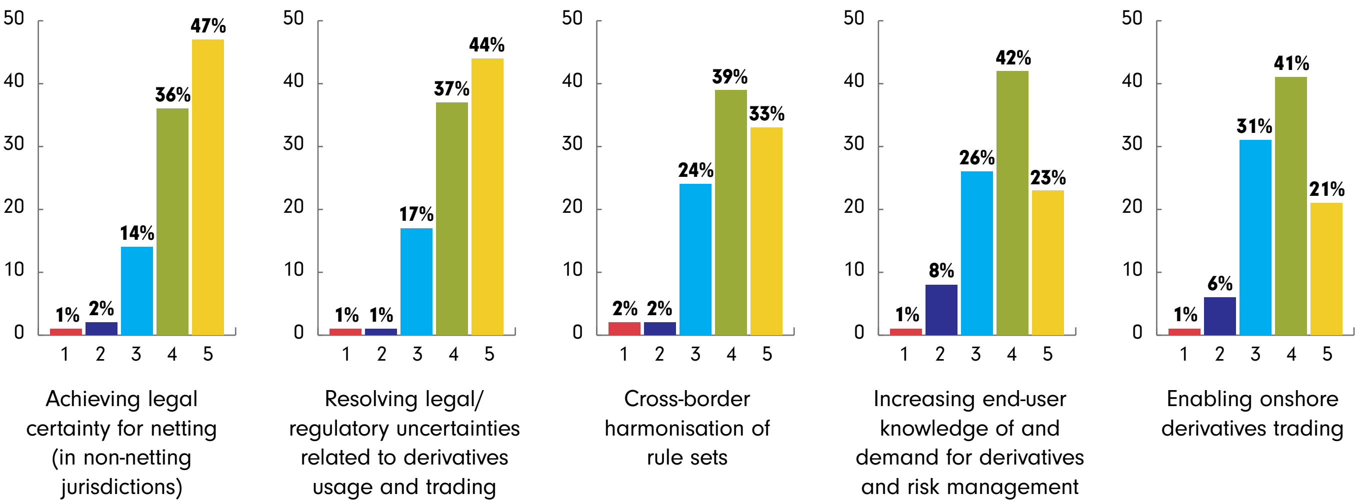
None | Less than 20% | Less than 50% | 50% - 70% | More than 70%



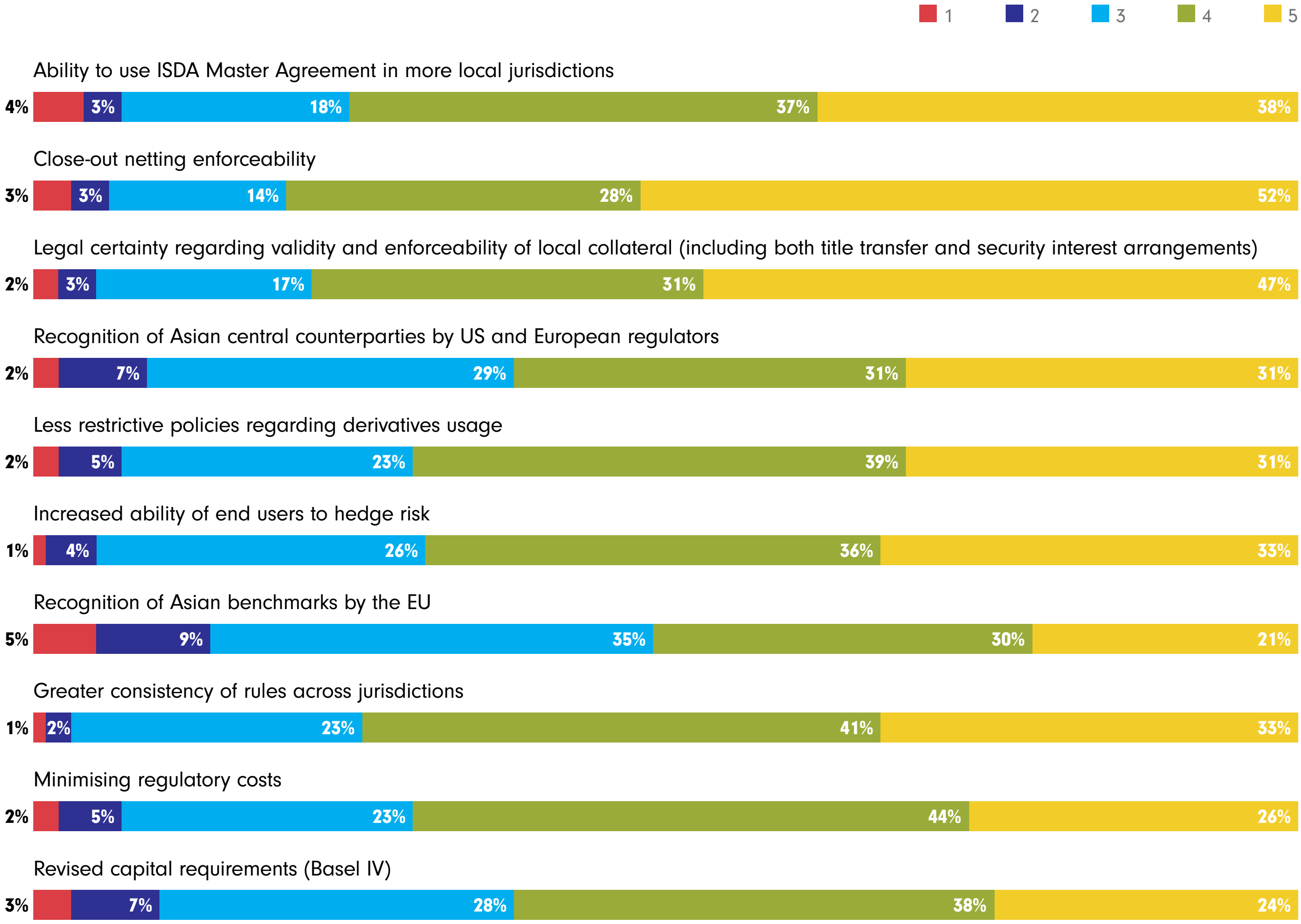
On a scale of 1 to 5, with 1 representing not important and 5 representing very important, how important are the following macro factors to the further development of robust, liquid and efficient derivatives markets in Asia?

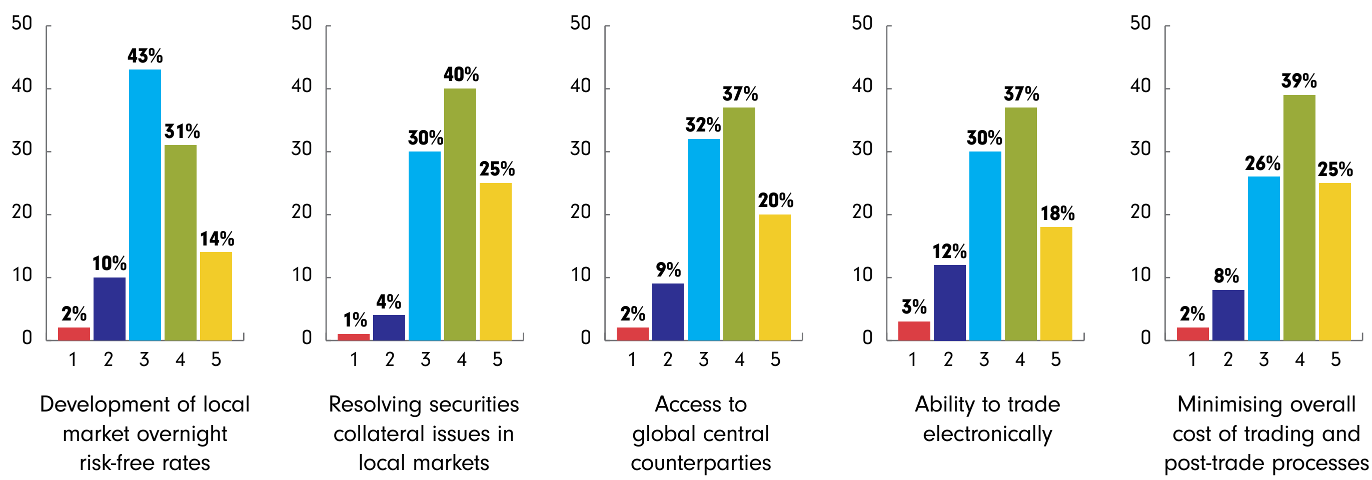


On a scale of 1 to 5, with 1 representing not important and 5 representing very important, how important are the following derivatives-specific factors to the further development of robust, liquid and efficient derivatives markets in Asia?

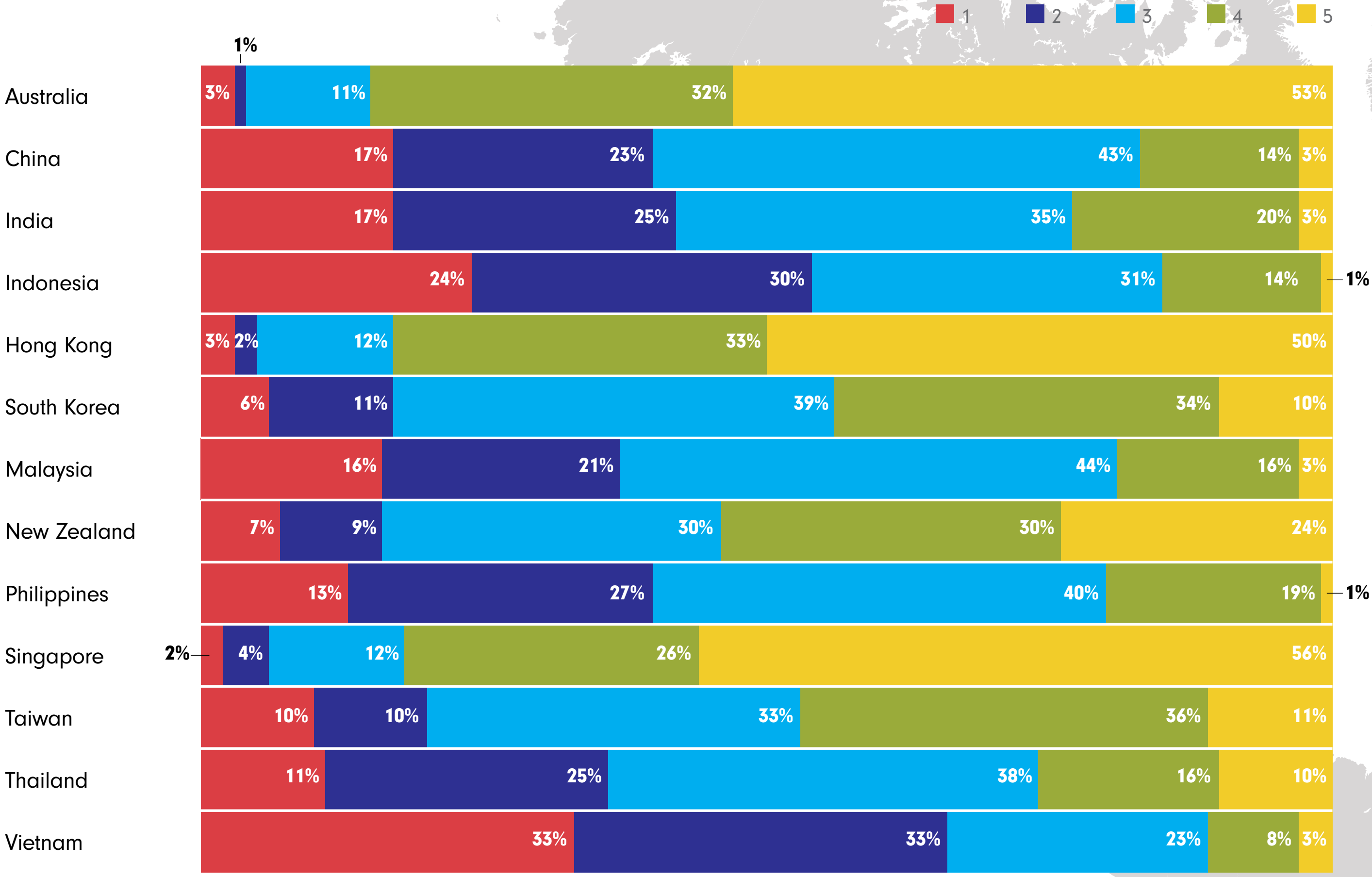


On a scale of 1 to 5, with 1 representing little impact and 5 representing the greatest impact, what impact do you think changes in the following legal/regulatory areas will have on your firm's derivatives and risk management activities in Asia?

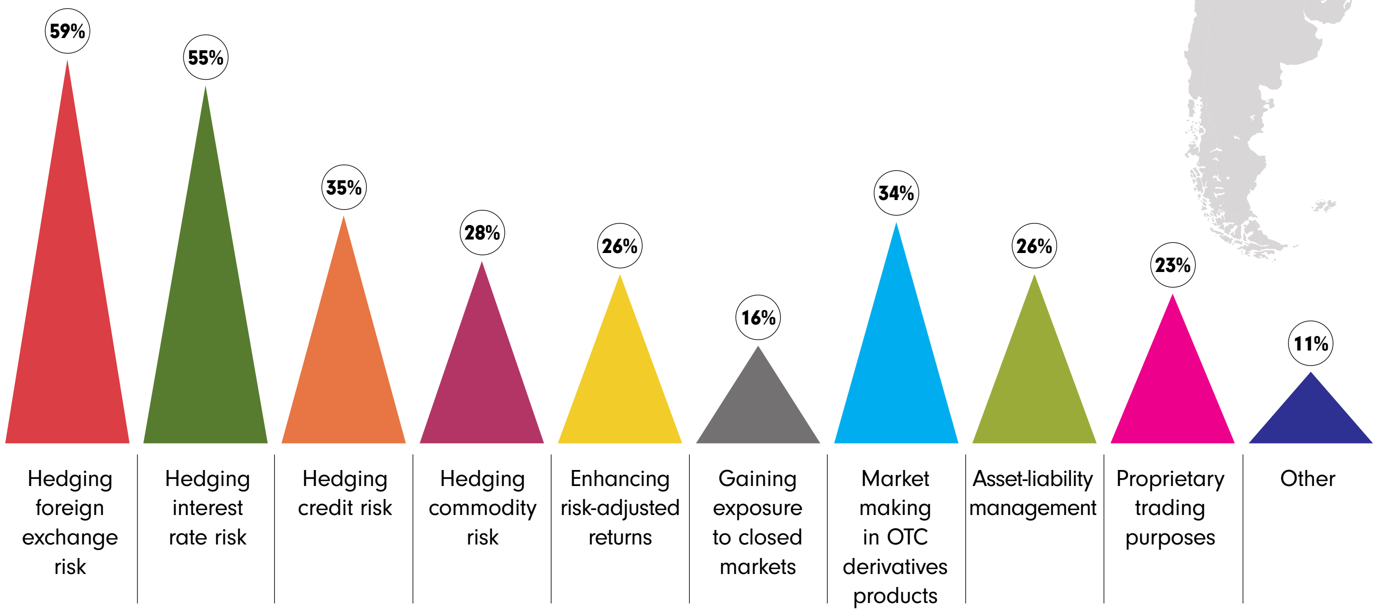




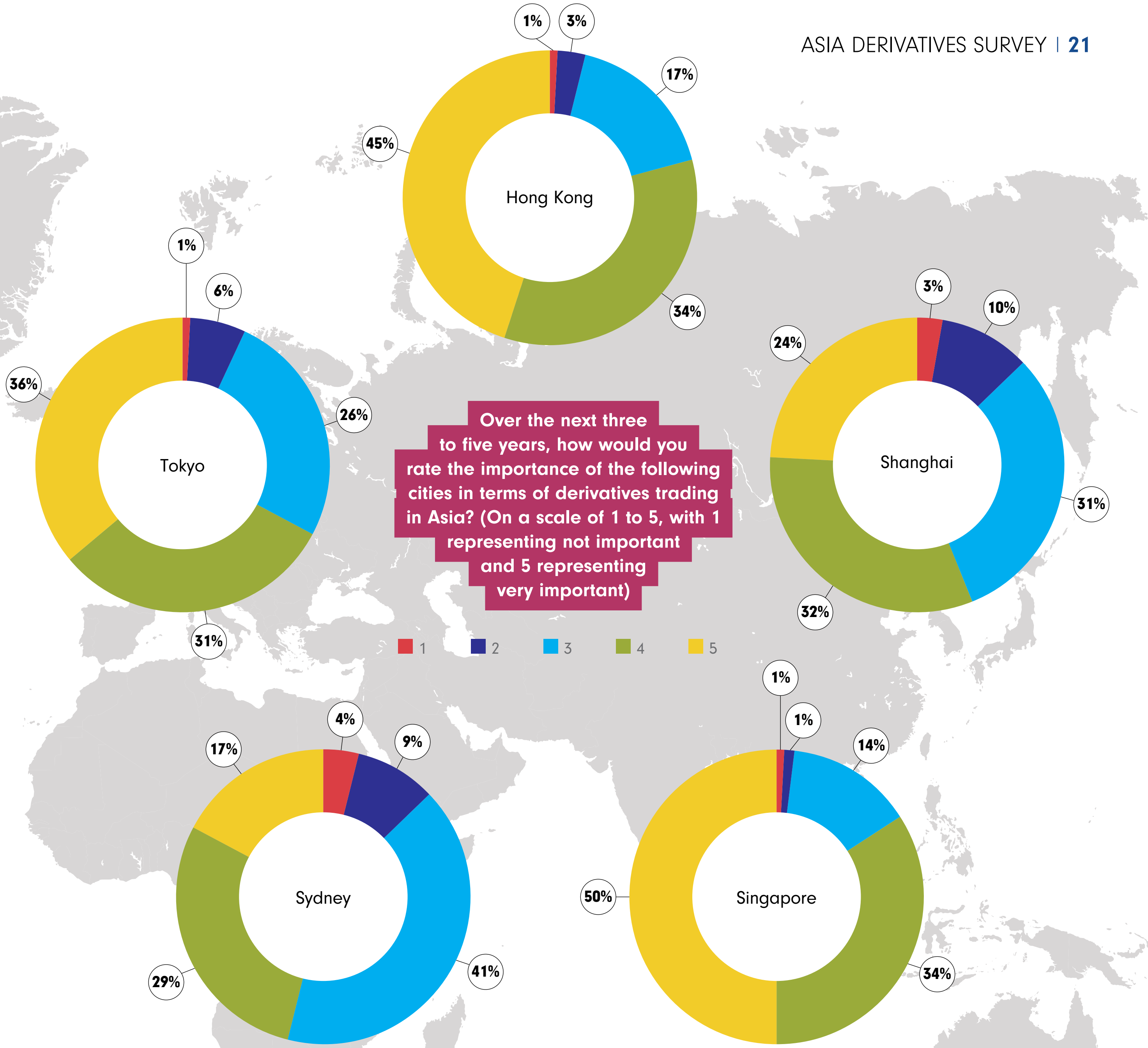
On a scale of 1 to 5, with 1 representing not efficiently and 5 representing very efficiently, how efficiently and effectively are you able to use derivatives to achieve your firm's risk management strategies and goals in each of the following local markets?



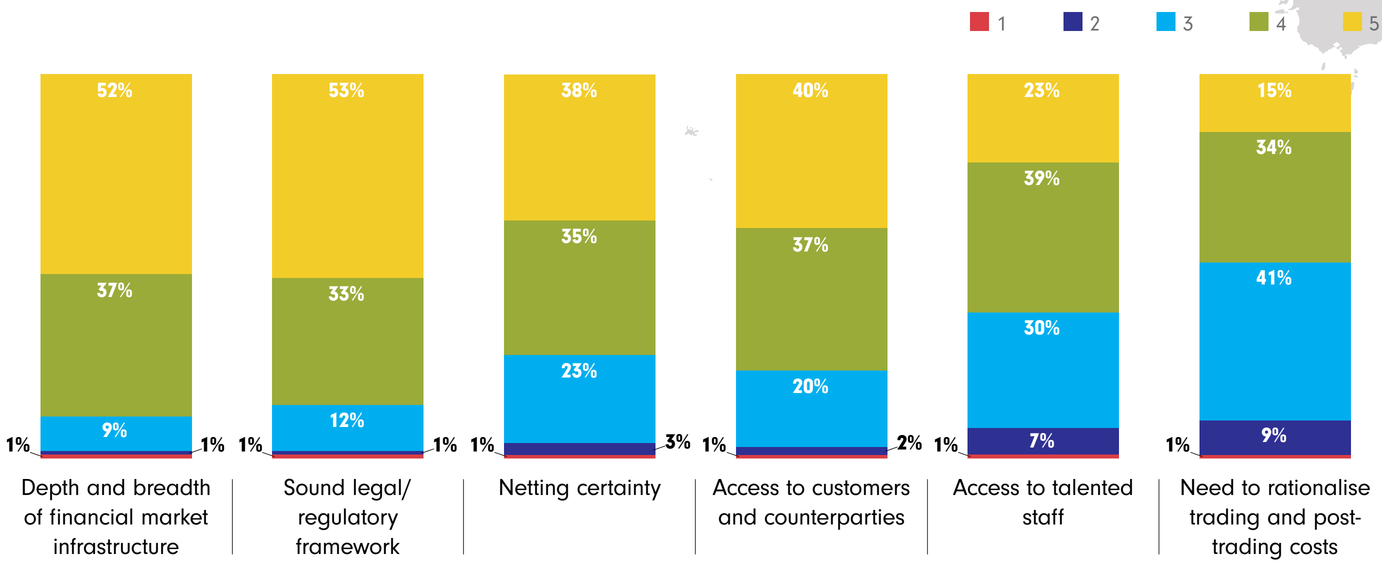
Please describe your primary uses of OTC derivatives. Check all that apply



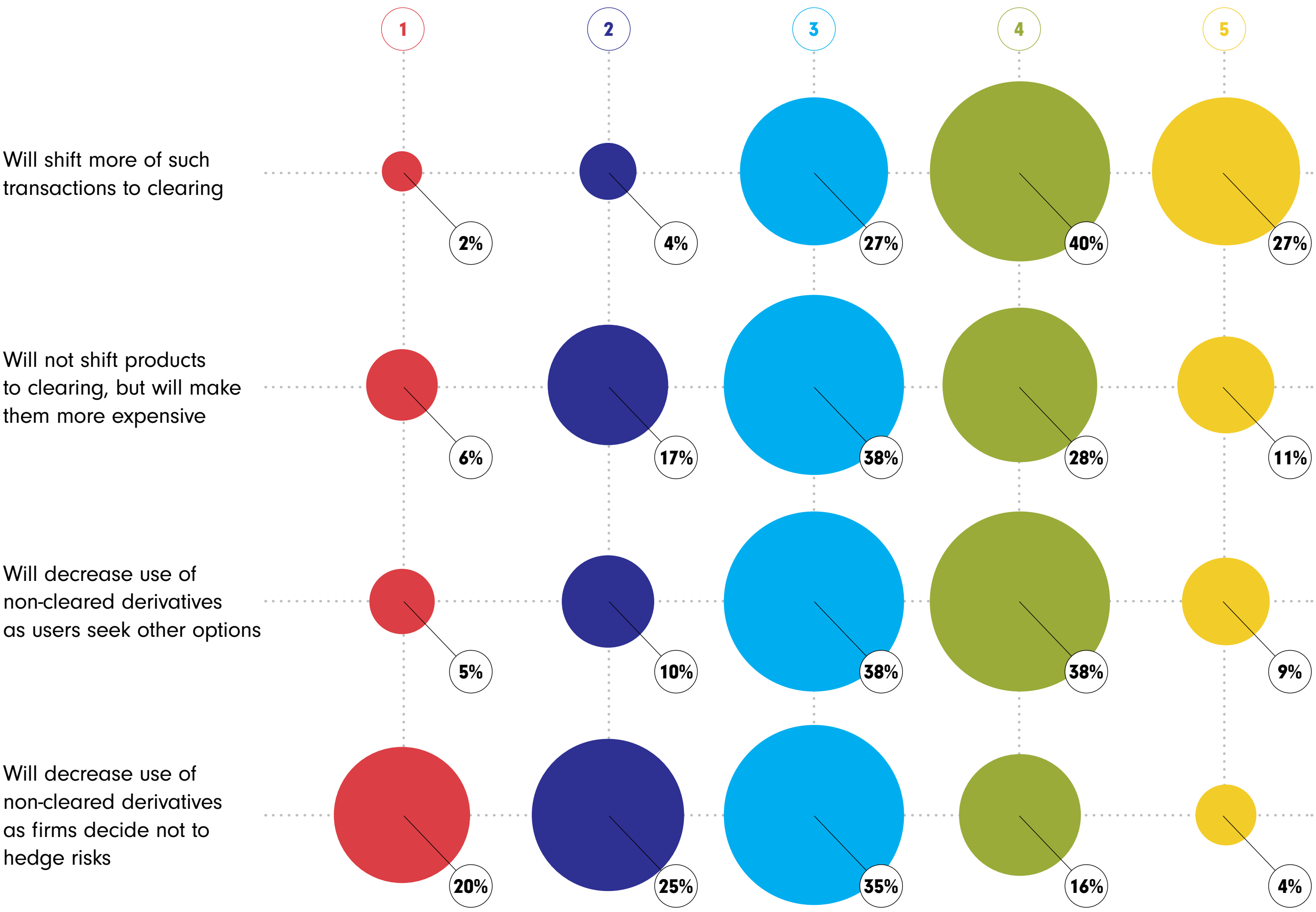
Over the next three to five years, how would you rate the importance of the following cities in terms of derivatives trading in Asia? (On a scale of 1 to 5, with 1 representing not important and 5 representing very important)



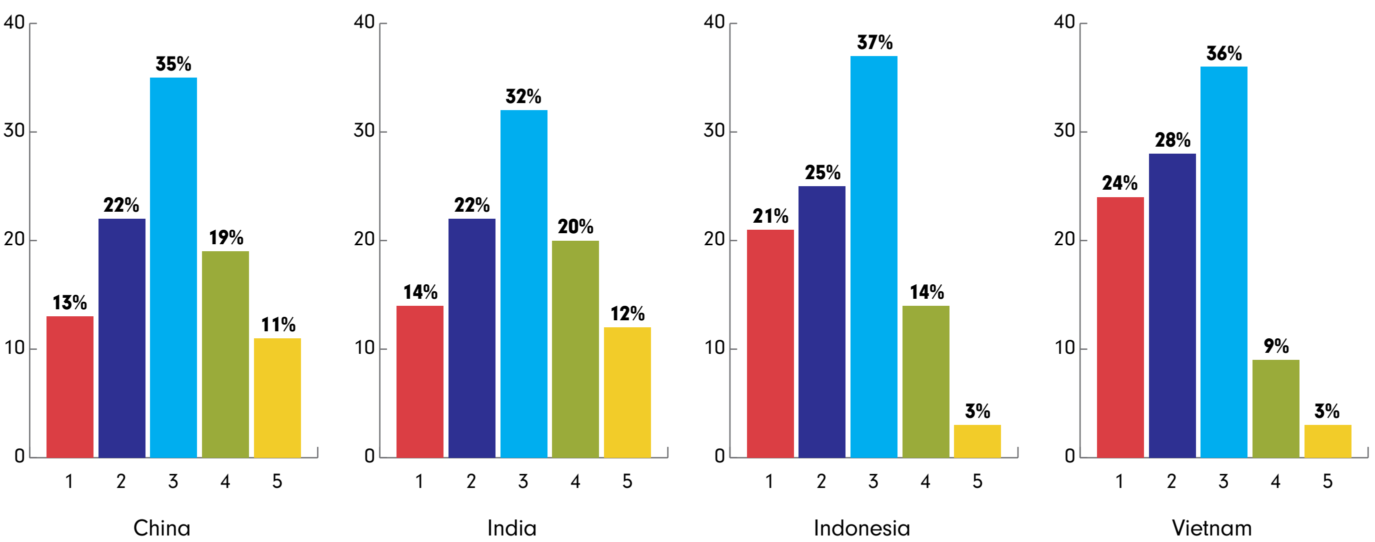
On a scale of 1 to 5, with 1 representing not important and 5 representing very important, what factors are the most important in determining your response to the previous question (above)?

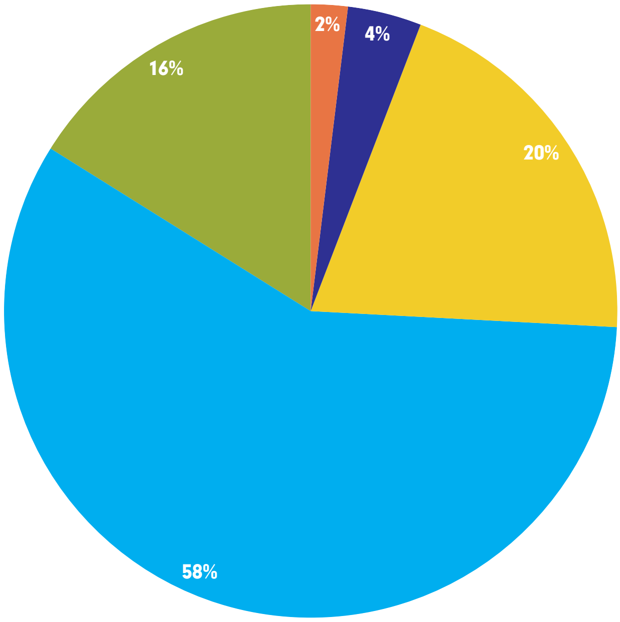


On a scale of 1 to 5, with 1 representing not likely and 5 representing very likely, what impact, if any, do you think the margin rules for non-cleared derivatives will have on the demand for and trading of non-cleared products?



On a scale of 1 to 5, with 1 representing not likely and 5 representing very likely, how likely are the following jurisdictions to achieve legal certainty of netting in the next three years?



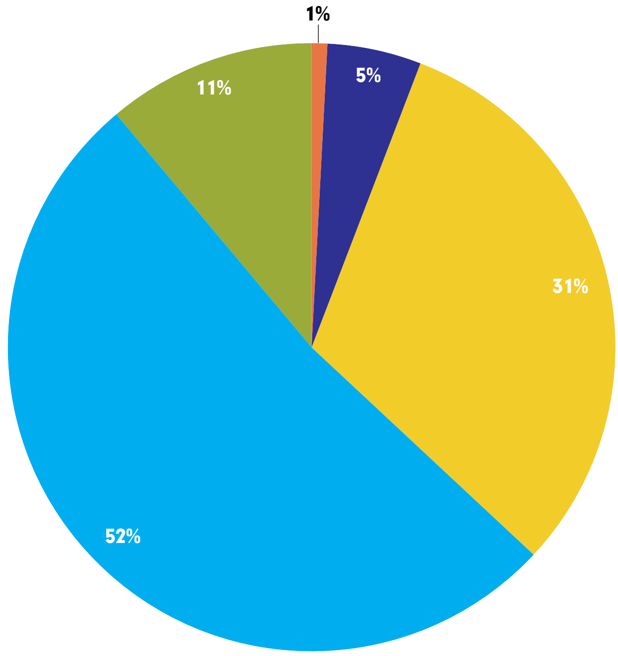


According to the Bank for International Settlements, about 18-22% of global foreign exchange derivatives trading takes place on trading desks in Asia ex-Japan. Looking at the next three to five years, how do you expect the percentage of FX derivatives executed on Asia ex-Japan trading desks to change?

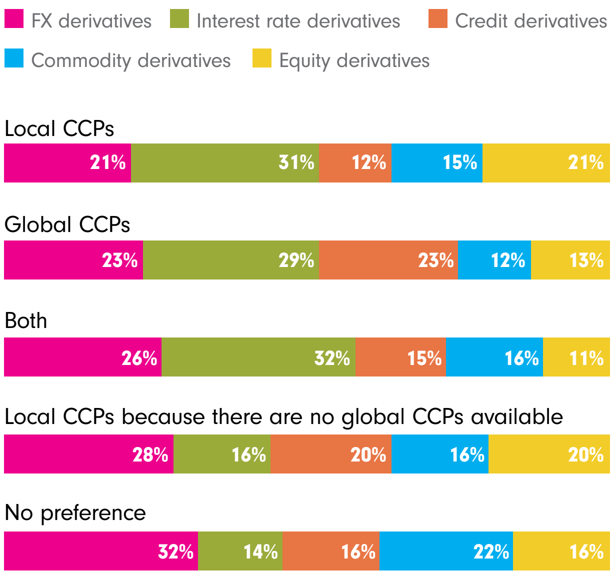
Decline substantially | Decline moderately | Stay the same | Increase moderately | Increase substantially

According to the Bank for International Settlements, about 6-8% of global interest rate derivaties (IRD) trading takes place on trading desks in Asia ex-Japan. Looking at the next three to five years, how do you expect the percentage of IRD executed on Asian trading desks ex-Japan to change?

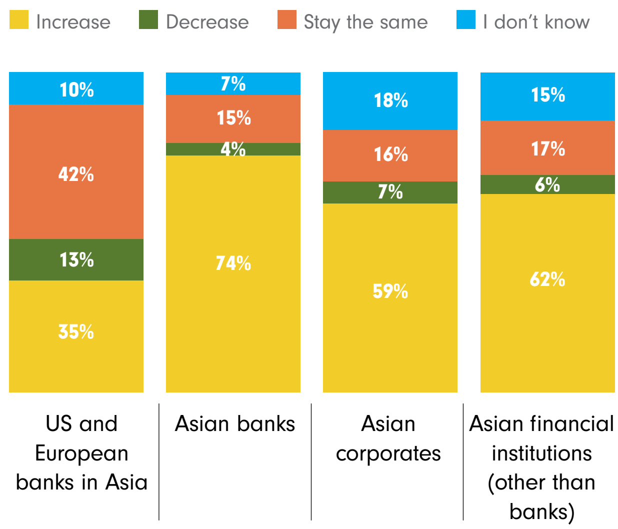
Decline substantially | Decline moderately | Stay the same | Increase moderately | Increase substantially



Which CCPs does your firm prefer to use to clear transactions?



Do you expect derivatives trading activity by the following market participants to increase, decrease or stay the same over the next three to five years?



* Think Global, Act Local

Consistent implementation of global regulatory standards is important, but a proportionate approach may also be needed in some cases for smaller, less complex local banks and markets, says ***Arthur Yuen****, deputy chief executive of the Hong Kong Monetary Authority*

IQ: What are the focus areas for the Hong Kong Monetary Authority (HKMA) in 2019?

Arthur Yuen (AY): Every year, we prioritise our supervisory efforts on banks based on the relative magnitude of different types of risks. We focus more on risks that are at high or medium levels.

This year, operational and technology risk is still high. Cyberattacks and technology crimes continue to increase. At the same time, banks are increasingly exposed to risks from their own rapid adoption of technology and from potential competition from virtual banks. Against this background, the HKMA will continue to closely monitor and review banks' implementations of their cyber-resilience assessment frameworks, and make supervision of virtual banks one of our key supervisory priorities. We are also exploring the use of regtech in different areas, and will monitor banks' risk management measures for open application programming interface implementation.

Money laundering and terrorist financing risk is also high, as you can see from a number of high-profile cases around the world. This year, the HKMA will focus on priority threats by conducting thematic review of banks. We will also support the government's effort in enhancing information and intelligence sharing. At the same time, we will follow up on a mutual evaluation conducted by the Financial Action Task Force to further refine our anti-money laundering/combatting the financing of terrorism regime.

Misconduct risk arising from the mis-selling of complex investment or insurance products is at high to medium levels, for a number of reasons. First, market volatility has increased due to trade conflicts and geopolitical events, which increases risks of substantial losses in complex investment products. Second, banks are issuing more complex loss-absorption instruments internationally to satisfy resolution regime requirements. Third, more online financial services platforms are available for selling investment products, including more risky ones. Given these developments, we will sharpen our focus on bank selling practices and controls on investment and insurance products this year. We will also try to streamline investor

"After setting the necessary standards, the next step is execution. Regulators should now pay more attention to the quality of implementation and supervision"

protection measures to ensure consumer protection is adequate given the digitalisation of financial services platforms, and implement supervisory measures in respect of banks' corporate culture.

Credit, liquidity and market risk is at medium levels, as we are approaching the late stage of a credit cycle with heightened default risk, and uncertainties over the movements of the US dollar and US interest rates may increase financial market volatility and capital outflow pressures in emerging markets including Hong Kong. This year, we will direct our efforts to: ensure that small- and medium-sized enterprise lending is available to the extent permitted under prudent risk management; ensure there are sound systems and controls in respect of credit risk management, loan classification and provisioning; conduct examinations on banks' capabilities to cope with possible liquidity shocks; and conduct thematic reviews of banks' risk management practices and governance of their algorithmic trading activities.

IQ: What element of the post-crisis financial reforms has been most important, in your opinion?

AY: Banks, regulators and national governments were ill-prepared to deal with the global financial crisis. Global banks had not built up adequate capital and liquidity buffers to absorb shocks when the crisis struck. They had also become too big to fail and unresolvable, forcing governments to step in and bail them out with huge amounts of taxpayers' money.

After the crisis, numerous international standards have been issued to address such capital, liquidity and resolvability problems. In respect of capital, the new Basel III capital standards have improved the quality and availability of capital substantially. This is achieved by putting more emphasis on common equity Tier 1 capital, introducing the leverage ratio and strengthening the output floor requirements. In respect of liquidity, the Basel Committee on Banking Supervision has introduced the liquidity coverage ratio to ensure banks can better withstand short-term liquidity shocks, and the net stable funding ratio to ensure their longer-term funding stability.

For the resolvability problem, the Financial Stability Board (FSB) has developed a set of key attributes for resolution regimes. The FSB has also set standards and principles for banks to become more resolvable, including requirements on minimum total loss-absorption capacity (TLAC), resolution funding and operational continuity arrangements needed to deal with bank failures in an orderly manner.

While the relative importance of different types of reforms varies across jurisdictions due to individual circumstances, I would say that reforms in the three areas are all essential to avoid repeating the mistakes identified during the crisis. After setting the necessary standards, the next step is execution. Regulators should now pay more attention to the quality of implementation and supervision.

IQ: Reforms to regulatory capital requirements are well progressed, but divergences have emerged in implementation. How important is it to implement Basel standards consistently?

AY: It is important to implement international regulatory standards consistently across different jurisdictions to avoid regulatory arbitrage, maintain a level playing field, and minimise compliance burdens for banks. The HKMA shares this belief and is committed to implementing →

→ international standards consistently, both in terms of the content and the time line of implementation.

Having said that, we are mindful that the Basel Committee only requires its standards to be applied to internationally active banks. While the HKMA and many other supervisory authorities have been voluntarily extending many Basel standards to all banks under their supervision, it is justified and pragmatic that, for some regulations, a proportionate approach is adopted for smaller and less complex local banks based on local circumstances. Local adaptation may also be needed if a jurisdiction has macro-prudential concerns or market features that are specific to its economy or banking sector, and where these concerns or features are not adequately addressed by international standards.

IQ: More broadly, how would you describe the state of cross-border regulatory cooperation? What more can be done to enhance supervisory cooperation between jurisdictions?

AY: The international banking regulator community has established two mechanisms for home and host cooperation and coordination – namely, through supervisory colleges for regular, day-to-day supervisory work, and through crisis management groups for recovery and resolution planning.

Coordination through supervisory colleges has improved substantially compared to the pre-crisis period. The Basel Committee has published two sets of guidelines on this topic since the crisis (in 2010 and 2014). Emphasis is now on collaboration and information sharing among college members on an ongoing basis, rather than just occasionally through physical meetings. Regulators also need to put in place sufficient resources and appropriate mechanisms to make such ongoing communication possible.

For bank resolution, crisis management groups were virtually non-existent before the crisis. They have since been formed pursuant to standards set by the FSB to address firm-specific issues related to recovery and resolution planning of global systemically important banks (G-SIBs). Emphasis is now on crisis preparedness, and a lot of work has been done on cross-border recovery and resolution planning – for example, including the setting of internal TLAC requirements for material sub-groups and the pre-positioning of resources for meeting such requirements.

So, overall, we now have the necessary mechanisms for home-host coordination, both on the supervision of G-SIBs and for recovery and resolution planning of G-SIBs. The Basel Committee and the FSB will continue to develop guidance in these areas when the need arises.

"For Hong Kong, it has always been our policy intent to avoid overly complex or burdensome requirements in our rules"

IQ: The Basel Committee recently published its final Fundamental Review of the Trading Book (FRTB) rules. How important are the changes for Asian banks? Will Hong Kong implement the FRTB in line with the Basel time line, irrespective of what other jurisdictions do?

AY: In our view, the revised FRTB represents a balanced package, addressing issues that have been raised by a wide spectrum of stakeholders since publication of the original 2016 version. We consider most of the changes useful. Some issues, such as the recognition of liquid currency pairs via FX triangulation and the recalibration of risk weights for high-yield sovereign positions, seem to be particularly relevant to Asian banks and banks in emerging markets in general.

Although market risk components in general account for a lower amount of risk-weighted assets for Asian banks than for US or European banks, the revised FRTB rules still represent fundamental changes to the methodology for capturing market risk. It is the intention of the HKMA to implement the revised market risk capital framework in accordance with the Basel Committee's timetable – in other words, January 1, 2022 – as it is, in general, the obligation of members to follow the agreement reached in the Basel Committee. We plan to issue a consultation paper in the second quarter of this year. Given the size and complexity of the standard, we have already urged banks in Hong Kong to start preparing their firm-specific FRTB implementation this year.

IQ: September 2019 and 2020 will see a much broader universe of entities subject to regulatory initial margin (IM) requirements, but most will not actually be required to post IM because their exposures with each counterparty fall below a minimum threshold. Is this a concern?

AY: We understand that under the current margin framework, two thresholds are applicable to IM requirements – the threshold for the aggregate notional amount of derivatives and the threshold for IM exchange. The industry has questions about the documentation and operational requirements for entities with aggregate derivatives exposures exceeding the notional threshold but where their IM amounts for exposures with respective counterparties are below the IM exchange threshold.

We know this issue is now receiving attention from the Basel Committee and International Organization of Securities Commissions, and are waiting for the international community to agree on a consistent approach to address this issue.

IQ: Regulators in the US and European Union (EU) are undertaking reviews of their derivatives regulations to ensure calibrations are appropriate and do not pose unnecessary compliance burdens for end users. Is Hong Kong considering a similar review?

AY: We are aware of the US and EU regulators' reviews of their derivatives-related rules and their attempt to streamline, consolidate and clarify the rules, as well as to reduce the compliance burden on end users.

For Hong Kong, it has always been our policy intent to avoid overly complex or burdensome requirements in our rules. For instance, when we designed our regulatory regime for over-the-counter (OTC) derivatives, we incorporated a number of measures, such as exempting entities with small OTC derivatives positions from the reporting obligation in the first place and setting the scope of our clearing regime to only include dealers, to ensure our rules are proportionate and avoid undue burden on small entities.

We have been in close contact with major banks to share their experience in the implementation of OTC derivatives reform. We will consider conducting a similar review as has occurred in the US and EU if this is warranted by implementation experience and feedback from regulated entities.

IQ: What impact will the shift from interbank offered rates (IBORs) to alternative risk-free rates (RFRs) have in Hong Kong? How is the HKMA responding?

AY: The FSB established the Official Sector Steering Group (OSSG) to guide the development of alternative RFRs in different currency areas. As an OSSG member, Hong Kong fully supports the development of RFRs as alternatives to IBORs.

In our view, the key concerns of the local industry on the transition from IBORs to RFR are, first, how to handle legacy contracts referencing the IBORs and, second, whether the alternative RFRs could become effective reference rates given the lack of a term structure and credit spread. The first concern is particularly important for LIBOR, which may be discontinued after end-2021. We are keeping a close eye on global developments.

To facilitate a smooth transition, we believe more effort is needed to promote general market awareness of the issue. Against this background, we are working closely with the Treasury Markets Association (TMA) to raise the awareness of Hong Kong banks of the possible transition ahead. The TMA has recently set up a working group composed of various stakeholders to prepare for the transition.

Even though LIBOR may be discontinued after end-2021, there was general consensus among OSSG members that non-LIBOR currency areas would have the flexibility to maintain their respective IBORs if they are regarded as credible and reliable by market participants and relevant regulators. This was reflected in an FSB statement in July 2018.

As with several other non-LIBOR currency areas, Hong Kong intends to adopt a multiple-rate approach – in other words, maintaining the Hong Kong Interbank Offered Rate (HIBOR) while developing an RFR. The Hong Kong Dollar Overnight Index Average (HONIA) has been identified as our RFR, and the TMA plans to conduct a market consultation in the first quarter of 2019. To enhance the credibility of HIBOR, the HKMA will continue to work closely with the TMA, which is the administrator of HIBOR, to strengthen the characteristics of HIBOR as a benchmark and bring it more in line with international standards, while having regard to local market conditions.

IQ: How important is the emergence of new technologies like artificial intelligence (AI) in the derivatives market, and what does this mean for the HKMA?

AY: New technologies like AI have become increasingly important to the finance industry. High-frequency trading activities driven by AI algorithms have become more prevalent. For example, the Bank of England estimates that high-frequency trading firms accounted for more than 70% of total trading volume for US equities, 40% for US futures, and 30-40% of volumes in equities and futures in Europe in 2010, and believes this will continue to increase. It is natural that such technology will increasingly be applied to derivatives markets as well.

While AI-driven algorithmic trading programs improve execution speed substantially, they can also amplify small errors into extreme market events if systems or controls fail, as we have seen in previous instances of flash crashes.

The HKMA has been closely monitoring the developments in technologies and assessing the implications for banking stability. For example, the HKMA conducted a survey in June 2018 to understand banks' participation and plans on algorithmic trading, and will follow up with a round of thematic reviews in 2019 to evaluate banks' risk management practices and governance for their algorithmic trading activities.

* Net Positive

Progress has been made to ensure netting enforceability across Asia, but further movement is needed in some key markets

WATCH

A new whiteboard animation on close-out netting at: https://www.isda.org/category/news/webcasts-videos/

Close-out netting is the single most important tool for reducing credit risk between counterparties in the derivatives markets. It involves the termination of obligations under a contract with a defaulting party and the subsequent combining of positive and negative replacement values into a single net payable or receivable. Managing counterparty credit risk on a net basis results in more efficient use of credit lines, lower margin and regulatory capital requirements, and reduced systemic risk.

According to the Bank for International Settlements, global derivatives gross market value falls from approximately $10 trillion to $2.6 trillion when netting is taken into account.

Significant progress has been made in ensuring the enforceability of close-out netting in Asia-Pacific, particularly in Australia and Malaysia. However, market participants still lack certainty in several key jurisdictions, including China, India and Indonesia.

China

Close-out netting is not a recognised legal concept under Chinese law, but developments in 2017 have given some cause for optimism.

In March 2017, a netting legislation proposal was tabled before the Financial and Economic Affairs Committee of the National People's Congress (NPC). In its reply to the NPC, the China Banking and Insurance Regulatory Commission (CBIRC) stated that the Enterprise Bankruptcy Law does not, in principle, conflict with close-out netting. It explained that the court ultimately has the power to determine the validity of close-out netting provisions, and can set aside such termination where the right to close-out netting has been exercised in bad faith. However, the CBIRC believes these rights of the judiciary do not conflict with the relevant provisions of the ISDA Master Agreement.

The CBIRC also stated it is drafting rules to enable the orderly resolution of banks, in accordance with principles set out by the Financial Stability Board, and will give consideration to the suspension of termination rights during a resolution procedure. The CBIRC added that it would further coordinate with legislators to promote the support and protection of close-out netting.

While the CBIRC reply doesn't represent a legal change that would confirm the enforceability of close-out netting, the comment is significant.

As part of the effort to establish the enforceability of close-out netting under Chinese law, a UK-China Netting Working Group led by the CIBRC and the China Banking Association, along with ISDA and the Asia Securities Industry and Financial Markets Association, was established in February 2018. ISDA has also prepared a draft judicial interpretation on the Enterprise Bankruptcy Law based on ISDA's Model Netting Act for the CBIRC and the Supreme People's Court to consider. The ISDA Model Netting Act was updated in 2018, and is designed to provide a template that can be used by jurisdictions considering close-out netting legislation.

Ultimately, legislative, judiciary or regulatory clarification is required for China to achieve a clean netting status.

India

Right of mutual dealings and set off is a common law principle that is recognised under Indian law. Legal experts in India generally agree that enforceability of close-out netting is not an issue for entities incorporated under the Indian Companies

Close-out netting is the single most important tool for reducing credit risk between counterparties in the derivatives markets

Act, 2013, which includes private sector banks.

However, there is concern about inconsistent netting treatment under insolvency proceedings for nationalised banks such as the State Bank of India and its subsidiaries. This is because the legislation under which these nationalised banks are incorporated states that no provisions relating to the winding-up of companies shall apply to nationalised banks. These entities can only be liquidated as the government directs.

Due to this inconsistent netting treatment, the Reserve Bank of India (RBI) does not allow Indian-incorporated banks and Indian branches of foreign banks to net their exposures for regulatory capital purposes. The RBI also stated in 2010 that "since the legal position regarding bilateral netting is not unambiguously clear, it has been decided that bilateral netting of mark-to-market values arising on account of such derivative contracts cannot be permitted". This position has been reiterated regularly by the RBI, most recently in a discussion paper on margin requirements for non-cleared derivatives, where it referred to a "lack of legal unambiguity on reckoning exposures based on net basis" as the reason for applying variation and initial margin on a contract-by-contract basis, and not on a net basis.

$2.6 trillion

Gross market value of derivatives after netting, versus $10 billion before netting

This is a cause for concern for multiple reasons. The Basel Committee on Banking Supervision requires a bank to satisfy its national supervisor that the legal basis for netting is certain in order to net exposures for capital purposes. Additionally, calculating margin on a gross (and not net) basis would result in significantly higher costs and would compound counterparty credit exposure.

Nonetheless, there has been progress on this front. In 2017, the Ministry of Finance (MoF) introduced the Financial Resolution and Deposit Insurance (FRDI) bill in parliament. While the main aim of the bill was to provide a framework for the resolution of financial institutions, it also included proposed amendments to the Reserve Bank of India Act, 1934 (RBI Act) in relation to the netting of mutual transactions in resolution, insolvency, winding up or liquidation.

Unfortunately, the FRDI bill was withdrawn from parliament in 2018 due to opposition to certain provisions not related to netting or the RBI Act.

However, there are indications the MoF will introduce a standalone netting bill in parliament or amend existing legislation to address netting concerns. ISDA is working with the MoF to ensure that a standalone netting bill is consistent with the 2018 ISDA Model Netting Act.

Indonesia

Indonesian law is largely based on the old Dutch civil and commercial code, and modern practices in the fields of trade and finance are often not addressed. As a result, there is a large degree of uncertainty with respect to the material content of a legal rule and its validity or enforceability in many cases. There is also a lack of precedent over how certain issues should be resolved, as well as inconsistent case law, which complicates close-out netting analysis for Indonesia.

Legal experts in Indonesia generally agree that enforceability of close-out netting is not an issue, and there does not appear to be anything in the bankruptcy and insolvency framework that should impede it. However, there are concerns about judicial interpretation. It is not uncommon for legal practitioners to refer to old Dutch law, commercial codes or legal doctrine when Indonesian law fails to address a certain legal issue, and this complicates the netting analysis.

In 2017, Bank Indonesia (BI) formed a working group tasked with looking at the feasibility of establishing a central counterparty (CCP) as a first step to meeting its Group-of-20 commitments and promoting the development of the derivatives market onshore.

In its engagement, ISDA stated that clearing may not be suitable given the size and level of development of the onshore market. ISDA also questioned the effectiveness of clearing without clarity on the enforceability of close-out netting, and suggested that netting legislation would be far more beneficial and effective in promoting the development of a derivatives market onshore.

In early 2018, BI initiated efforts to review the existing bankruptcy framework and improve the close-out netting position for Indonesia. It also issued a press release to reiterate its support for strengthening the legal basis for financial market development and clarifying the netting position in Indonesia.

Most recently, ISDA commissioned a Bahasa Indonesia translation of the 2018 Model Netting Act, which was distributed to BI and other onshore stakeholders.

With economies in these markets predicted to continue growing, demand for the use of derivatives will also increase. The enforceability of close-out netting is a key ingredient in helping local derivatives markets develop and become more liquid. IQ

READ

ISDA's updated Model Netting Act at: bit.ly/2UeMLMS

Tackling Fragmentation

Japanese officials have pledged to address market fragmentation during the country's presidency of the G-20 this year. ***Ryozo Himino****, vice minister for international affairs at the Japanese Financial Services Agency, sets out his vision for reducing fragmentation*

"Reforms implemented with cross-border discrepancies, overlaps, desynchronisation or competition can have unintended consequences for financial stability by fragmenting markets"

IQ: When you spoke at ISDA's annual Japan conference in October 2018, you explained the need to address the risks of market fragmentation and to take action. Has there been any progress since then?

Ryozo Himino (RH): There has been significant progress at the Group-of-20 (G-20), the Financial Stability Board (FSB) and the International Organization of Securities Commissions (IOSCO).

On December 1, 2018, G-20 leaders declared at the conclusion of the Buenos Aires summit that they would address fragmentation through regulatory and supervisory cooperation. On the same day, Japanese finance minister Taro Aso announced that addressing market fragmentation is a priority for the Japanese G-20 presidency in 2019. At their meeting in Tokyo in January, G-20 finance and central bank deputies supported Mr. Aso's plan. Addressing market fragmentation is back on the G-20 agenda.

In its 2019 work programme, the FSB states that it will "explore issues around market fragmentation, including what it is, under what conditions it can emerge, and its potential impact". It will also "identify tools that national authorities and standard setters can use to address the risk of market fragmentation arising from regulatory or other causes – in particular, when such fragmentation could adversely affect financial stability".

On January 28, the FSB hosted a workshop in Basel in collaboration with IOSCO. Many ISDA members were invited, along with leading academics, exchanges, central counterparties, asset managers, regulators, central bankers and senior officials of finance ministries. We had a very good discussion. ISDA chief executive Scott O'Malia participated actively in the workshop.

IOSCO is following up with its 2015 toolkit for cross-border regulation, which includes discussions on the processes and issues in assessing foreign regulatory regimes. The follow-up work is jointly chaired by Commodity Futures Trading Commission chairman J. Christopher Giancarlo and Japanese Financial Services Agency (JFSA) deputy commissioner Jun Mizuguchi.

I would say that the progress so far has exceeded my expectations last October.

IQ: Why do you think the G-20, the FSB and IOSCO have decided to address market fragmentation?

RH: Attaining an open and resilient global financial system has always been the common goal of the global regulatory community. Addressing market fragmentation is consistent with that objective.

Reforms to enhance resilience are now largely in place, and, as Randal Quarles, newly appointed chairman of the FSB, said in Hong Kong in February, we now need to ask ourselves three key questions. First, to what extent are those reforms having the intended effects in building a more resilient financial system? Second, have those reforms had any unintended, adverse effects that we can address? Third, can we achieve a strong level of financial resilience with reforms that are more efficient, simple, transparent and tailored?

Reforms implemented with cross-border discrepancies, overlaps, desynchronisation or competition can have unintended consequences for financial stability by fragmenting markets, reducing market liquidity and trapping pools of capital and liquidity resources. They could make problems worse, particularly during systemic stress.

They can also make reforms less efficient and more complicated. Excessive fragmentation can harm the G-20 objective of sustainable, balanced and inclusive growth by hindering the efficient allocation of capital globally, limiting services available to consumers and entrepreneurs, and unduly increasing compliance costs.

IQ: A recent ISDA paper lists 21 examples of derivatives market fragmentation caused by regulatory discrepancies, overlaps, desynchronisation and competition. Can we expect to see specific proposals to eliminate at least some of them?

RH: I do not intend to reopen already agreed standards or roll back regulatory reforms. Rather, I want to find ways to implement the agreed reforms without causing unintended market fragmentation.

I do not aim to eliminate jurisdictional differences or gold plating. Regulators and supervisors are accountable primarily to their own national depositors, investors and consumers. Their actions should reflect national policy priorities, cultural differences and their stage of development. After all, the last global crisis has shown that the buck still largely stops with national governments.

So what should we do? In trying to address fragmentation, one tends to focus on convergence in regulations. It is indeed encouraging that some authorities have recently indicated their willingness to review national regulations.

However, amending regulation that has already been set is not the only way to address fragmentation. Sometimes it is easier to do so by having discussions earlier in the process of setting regulation. This could help focus on preventing future inconsistencies.

Even if regulatory gaps remain, we can try to enhance supervisory cooperation and improve the interface between different frameworks. We can look at various phases in regulation and supervision: the development of international standards, national rule-making, processes to recognise foreign regulatory regimes, and daily supervisory activities. We may want to design processes and approaches fitted to each of the phases.

Sometimes, small, practical steps can make a difference. A lighter, simpler process tends to work better than one that is bigger and more cumbersome. National authorities may not be able to promise to solve problems, but they may be able to commit to listening.

Addressing market fragmentation is not an easy task, as it involves bridging between globalised financial markets and national regulatory and supervisory governance. But if we are flexible and innovative, we →

"Excessive fragmentation can harm the G-20 objective of sustainable, balanced and inclusive growth by hindering the efficient allocation of capital globally, limiting services available to consumers and entrepreneurs, and unduly increasing compliance costs"

→ can make a difference. And starting to take specific steps in the right direction is particularly meaningful in today's world.

IQ: What do you expect to see?

RH: All the elements listed in the FSB work programme are important, but I would particularly like to see improvements in processes and approaches for regulators, supervisors and international standard-setting bodies, which can help prevent future proliferation of market fragmentation.

IQ: Can you be more specific about processes and approaches?

RH: At this brainstorming stage, we should try to explore as many potential ideas as possible. Let me try to set out some ideas, just as illustrations.

For example, the Fundamental Review of the Trading Book was recently finalised by the Basel Committee on Banking Supervision. I suppose national authorities will produce domestic regulations for their banks and develop data reporting requirements to monitor their implementation. Global banks will then start to fill in multiple reporting templates that are almost the same but not exactly, and submit them to authorities in the jurisdictions in which they operate. Meanwhile, the Basel Committee uses quantitative impact study templates to collect data from member authorities during the standard development phase, and supervisory reporting system templates during the post-implementation phase.

I wonder if interested Basel Committee members could work together to develop a non-binding model of a supervisory reporting template that could be used by multiple national authorities. These national authorities should be free to modify the model template, but we might be able to reduce unnecessary unintended differences.

Improvements could also be made to increase the efficiency and efficacy of cross-border interaction during the domestic rule-making process. Let me take the case of Japan. When introducing a new regulatory framework, the JFSA typically first sets up an advisory group composed of various stakeholders and experts. After many rounds of discussion, the group gives recommendations to the JFSA. The JFSA drafts a bill and the cabinet submits it to the parliament. If the law is passed by the parliament, then the JFSA drafts the implementing regulation, publishes the draft for public comments and finalises it, reflecting comments received.

"Addressing market fragmentation is not an easy task, as it involves bridging between globalised financial markets and national regulatory and supervisory governance. But if we are flexible and innovative, we can make a difference"

It would be best if concerns on the cross-border consequences of these regulations are put on the table at the point at which the advisory group is formed. But typically, we are made aware of concerns after the implementing regulations are finalised. I suppose similar things are happening across the world – for instance, people start submitting letters after the European Commission has submitted its proposal to the European Parliament and the Council of the European Union.

I wonder if standard-setting bodies could operate as fora through which national authorities could share stylised domestic rule-making processes so that efforts to coordinate can be made more efficient. If information could be shared on projects and plans in the pipeline that might have cross-border implications, then that would be even better.

Maybe the recognition process could also be streamlined and made more efficient. The JFSA has been responding to many questionnaires to have our regulatory framework recognised by overseas authorities. Usually, the questionnaires are based on the overseas authorities' own domestic regulations. Then the International Monetary Fund's financial sector assessment programme team or the standard-setting bodies' peer review team give us long questionnaires based on the international standards.

There has been a case where the regulators of Australia, Hong Kong, Japan and Singapore developed a common questionnaire based on the relevant international standards to help each national authority's decision on bilateral recognition. I wonder if we can go one step further. After a new international standard is agreed, the standard-setting body in charge could produce a basic questionnaire that national and international reviewers could use as a basis for their own questionnaires, subject to necessary additions or modifications. It would be desirable if the questionnaire could be designed to focus more on the outcome of regulation, rather than as a paragraph-by-paragraph checklist.

IQ: So you hope to see ideas like these agreed by the G-20, the FSB or IOSCO?

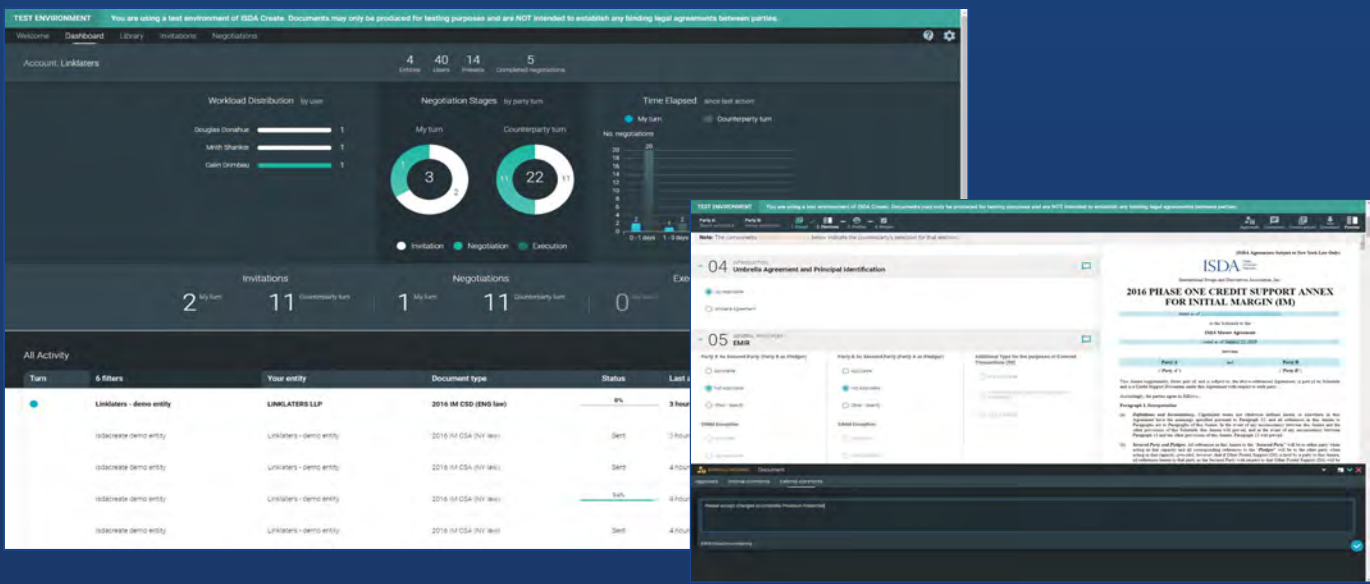
RH: I would prefer to see many other good ideas put on the table by my regulatory colleagues and other stakeholders. I particularly look forward to ISDA's further contributions. IQ

ISDA Safe, Efficient Markets

What is ISDA Create?

ISDA Create is a new platform that allows firms to produce, deliver, negotiate and execute derivatives documents completely online. The system captures, processes and stores data from these documents, providing users with a complete digital record.

ISDA Create – IM is ISDA's first offering under ISDA Create, and allows firms to electronically negotiate and execute initial margin (IM) documentation. ISDA Create will be extended to other ISDA documents over time.



WHY ISDA CREATE – IM?

- Compliance with the IM regulations requires market participants to put additional IM documentation in place.
- Negotiation of these IM documents takes time and resources, adding an enormous strain on the ability of firms to comply with the rules.
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BENEFITS OF ISDA CREATE – IM

- Provides easy access to ISDA standard forms to produce, deliver, negotiate and execute IM documents with multiple counterparties simultaneously.
- Online functionality makes the negotiation process more efficient and less time consuming from start to finish.
- Allows firms to make standard elections, as well as customize on a party-by-party basis.
- Automatically reconciles both standard elections and bespoke provisions exchanged, and flags differences in an efficient and easy-to-read way.
- Allows firms to digitally capture, process and store the resulting data.
- Flexibility to take one or more steps offline if required.
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Want more information on ISDA Create or to arrange a platform demonstration?
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Calling Time

*As Commodity Futures Trading Commission chairman **J. Christopher Giancarlo** comes to the end of his term, **IQ** asks whether the agency has achieved everything he intended, and whether proposed changes to the swap execution facility rules will address shortcomings he has identified*

IQ: IQ published an interview with you in May 2017, shortly after you were appointed acting chairman in January 2017, and before you were confirmed as chairman in August 2017. What have been the highlights for you between then and now?

J. Christopher Giancarlo (CG): In **IQ's** May 2017 issue, I promised to transition the Commodity Futures Trading Commission (CFTC) from having a backward-looking focus on the last financial crisis to a forward vision of derivatives markets as essential to economic growth and broad-based prosperity. I set out a three-part agenda: foster economic growth, enhance financial markets and right size the CFTC's regulatory footprint.

To foster economic growth, I announced Project KISS to make existing CFTC rules simpler, less burdensome and less costly. I created the market intelligence branch and hired a top chief economist to make the CFTC a smarter, more quantitative regulator. I also launched LabCFTC, one of the first fintech innovation initiatives by a US market regulator.

To enhance financial markets, I worked through the Financial Stability Oversight Council (FSOC) and directly with other US and overseas market and prudential regulators to call for bank capital requirements and leverage ratios that better balance systemic risk concerns with healthy economic growth. I proposed a better regulatory framework for swaps trading and execution. I worked with international regulatory colleagues to pursue cross-border regulatory deference, while resisting global regulatory overreach. It enabled the CFTC to lead the way in early 2017 to stagger global implementation of variation margin requirements for non-cleared swaps.

To right size the CFTC's regulatory footprint, I conducted agency affairs with regular order and procedure, thorough economic analysis and a reduced docket of new rules and regulations to be absorbed by market participants. I directed the agency to eschew regulatory empire building, refocus on its core mission, and partner more effectively with other regulatory agencies, including the Securities and Exchange Commission (SEC), the Federal Deposit Insurance Corporation and the Federal Reserve Board. Finally, I worked to run a professional operation keenly responsible to the American taxpayer, our ultimate shareholder.

Looking back, I feel I have stayed true to this agenda.

IQ: You have frequently drawn attention to shortcomings in the swap execution facility (SEF) rules since you joined the CFTC, and shepherded through the release of proposed changes for comment in November 2018. Why are changes to the rules necessary, in your view?

CG: There are two reasons to improve the SEF rules: risk and opportunity.

The current SEF rule framework is highly subjective and poses risk for market participants. It relies on a series of no-action letters, staff interpretations and temporary regulatory forbearance not intended to provide permanent relief. Staff in this administration, or in a future administration, may well change the various interpretations, guidance and compliance expectations that underpin the current framework.

Moreover, the current restrictions on methods of execution may turn out to be, by themselves, a source of trading risk during a liquidity crisis – when swaps counterparties need to be found off the screen and through negotiation.

On the other hand, improving the SEF rules presents opportunity – opportunity for service innovation by existing and new market entrants that has waned under the current framework. Third-party research estimates the new proposal will accelerate market innovation, leading to an increase of as much as 20% in average daily notional volume on SEFs. We estimate there will be dozens of new SEF registrants. It is the opportunity to create a regulatory framework that actually fosters innovation, entrepreneurship, competition and increased market vibrancy rather than stifles it.

Improving the SEF rules also increases the chance that the SEC will draw on the new framework in whole or in part for its security based SEF regime. It would create a common US regulatory approach for all swaps products, reducing operational and compliance costs and risks.

Perhaps most importantly, improving the CFTC's SEF rules to make them more compatible with the inherent trading dynamics and episodic liquidity of swaps trading will enhance markets as mechanisms for price discovery and risk mitigation. We should seek neither the most restrictive regulatory framework nor the most lenient – we should build a framework that is the best. That is what we are trying to do with the SEF proposal: to create a better and more durable regulatory framework for swaps execution that will support vibrant markets and broad-based prosperity for a generation or more.

IQ: Some participants have expressed concerns that moving to flexible execution methods may reduce the benefits of pre-trade price transparency. How do you respond to these concerns?

CG: Both the existing rules and the proposed rules seek to increase pre-trade transparency, but in different ways. The existing rules attempt to do so by restricting the methods of trade execution for the most liquid swaps instruments. The proposed rules seek to do so by increasing the number and range of transactions executed on SEFs through flexible methods of execution consistent with the Dodd-Frank Act.

Electronic execution of futures products with continuous liquidity is almost ubiquitous today. Yet it came about through a five-decade long evolution of incremental commercial developments and technology innovations that transformed yesterday's trading pits into today's electronic futures exchanges. At all times, the impetus was the demand of market participants and the response of market operators to reduce trading costs and transaction friction. At no time did the government step in and say, "Henceforth, all futures trading shall be on electronic exchanges". Instead, market evolution happened because a good idea was coupled with capable technology and mutual commercial interest, with enough time to catch on and gain traction.

And yet other derivatives asset classes with more episodic liquidity, like exchange-traded options and many swaps, continue to trade by voice despite the availability of modern electronic trading technology. That is why the design of trading platforms and the evolution of market structure is best done by platform operators through trial and error, customer demand, commercial response and technological innovation. Regulators will never be close enough to the heartbeat of the markets, the spark of technology or the cost of development to prescribe the optimal design of trading platforms or business methods. →

"Improving the CFTC's SEF rules to make them more compatible with the inherent trading dynamics and episodic liquidity of swaps trading will enhance markets as mechanisms for price discovery and risk mitigation"

→ Congress understood this. That is why Dodd-Frank permits SEFs to conduct their activities through "any means of interstate commerce", and not "any means chosen by regulators". Once regulators step in and dictate who serves who with what type of service, they are picking winners and losers. Regulators are simply not authorised, nor are they competent, to act in this way.

Congress knew that swaps are not traded by retail participants, but by sophisticated, institutional traders that can demand the transaction services they need without regulators holding their hands. And the platform operators are not public utilities, but seasoned competitors. If there is money to be made, trading efficiencies to be achieved, customers to be served or costs to be saved, then they will do it.

Our proposal will allow SEFs to innovate to meet customer demand and operate trading environments that are more salutatory to the episodic nature of swaps liquidity. At the same time, it will permit a broader range of liquidity formation, price discovery and trade execution on SEFs for a greater amount of swaps products. If adopted, the proposal will bring daylight to the marketplace by subjecting a greater number of swaps to SEF record-keeping, regulatory supervision and oversight, just as Congress intended.

IQ: The proposal would limit the scope of pre-execution communications. Notwithstanding flexible execution methods, this would be a big change in how market participants communicate before execution. Would you be open to solutions to make this requirement more workable, but still achieve the policy goal?

CG: I am aware of concerns with the proposed restrictions on off-SEF pre-trade communications. Our goal was to address the separation of liquidity formation and price discovery from trade execution on existing SEF platforms that took place upon the implementation of the current rules. The new proposal utilises a carrot and stick approach by, on the one hand, making the SEF environment more salutary to all such activities and, on the other, prohibiting off-platform pre-trade communications for the purposes of SEF liquidity formation and price discovery.

In attempting to bring pre-trade communications onto registered SEFs, the proposal may appear to disintermediate essential client relationships and communications between buy- and sell-side market participants in current non-made-available-to-trade (MAT) products. This was not intended. I will consider comment letters that address whether the objective of encouraging the full process of liquidity formation, price discovery and trade execution to take place on SEF platforms is sufficiently furthered by the proposal's efforts to make the SEF environment more salutary to all such activities without needing to prohibit off-platform pre-trade communications.

"Once regulators step in and dictate who serves who with what type of service, they are picking winners and losers. Regulators are simply not authorised, nor are they competent, to act in this way"

IQ: The proposal revises the impartial access requirement to give SEFs more discretion. Why do you think this approach is more consistent with the Dodd-Frank Act?

CG: The Dodd-Frank Act required SEFs to have rules to provide market participants with impartial access to the market but also to establish rules regarding any limitation on access (CEA section 5h(f)(2); 7 U.S.C. 7b-3(f)(2)). The statutory reference to limitation on access is meaningless if SEFs are required to serve every type of market participant or operate all-to-all marketplaces. It is plain that Congress meant for SEFs to determine their own business model and service offering, so long as they treat potential customers in an impartial manner.

Our proposed rules would allow SEFs to structure participation criteria and trading practices in a manner that aligns with their own business models and service capabilities. However, such criteria must be transparent, fair and non-discriminatory and applied to all or 'similarly situated' market participants in a fair and non-discriminatory manner, which means that such criteria should be non-arbitrary and based on objective, pre-established requirements or limitations.

I am aware of views that the standards for impartial access would benefit from greater specificity. Some have suggested that permissible SEF membership criteria should relate to a member's actual market activity in particular swap asset classes and not to the member's broader commercial activities, such as banking services or direct clearing membership. I will consider public comments on whether the revisions to 'impartial access' would benefit from minimum standards for SEF membership criteria that are consistent with a SEF's right to establish such criteria under Dodd-Frank.

IQ: What has been the general feedback you have received so far on the proposal? Is there room to address participants' concerns in any final rule?

CG: I have had many meetings with major participants in global swaps markets, including most of the leading SEF platforms, major bank and non-bank swaps dealers and market makers, and major asset managers and other buy-side institutions. Everyone I

met with expressed a desire to address the SEF proposal in good faith and a positive spirit. Almost all agreed that the current framework is flawed and would benefit from substantial revision. Many agreed that the current framework is too dependent upon no-action relief, staff guidance and temporary regulatory forbearance to be sustainable.

There was also broad acceptance of the benefit of making SEF execution methods more flexible and SEFs themselves more attractive to swaps market participants. There was strong interest in addressing the most burdensome and unworkable aspects of SEF compliance. And there was considerable interest in bringing more cleared swaps products into scope, if done gradually with broad market consensus.

That does not mean the proposed rules were without constructive criticism. Many expressed concern with the process and timing of bringing new products under the trade execution requirement. Many are concerned about proposed restrictions on off-SEF pre-trade communications, as I mentioned earlier. There were questions about how the proposal dovetails with reforming our current cross-border rule implementation. Some raised concerns with revisions to the standards for impartial access. And some discussed various technical standards and provisions like error trade policy and financial resources. These are all valid concerns. They, along with all of the comment letters, will receive thoughtful attention and consideration.

IQ: Do you expect the proposed approach to have any impact on existing equivalence determinations – specifically, the agreement reached with the European Commission (EC) on trading rule equivalence?

CG: I do not believe the EC will change its 2017 equivalence decision regarding the CFTC's regulation of SEFs.

Since becoming chairman, I told the EC about my intention to implement the ideas laid out in my SEF whitepaper in January 2015, and extended numerous opportunities to discuss any concerns during the course of the EC-CFTC agreement on trading venue equivalence. Of course, the EC has the opportunity to provide formal comments on the rule proposal, and I remain in correspondence with EC vice-president Valdis Dombrovskis. CFTC staff briefed EC staff about the proposal at the US-EU joint financial regulatory forum. By all accounts, the process we have followed in presenting the rule proposal is a model of transparency and dialogue with foreign counterparts.

I would further note that the proposal only applies to CFTC-regulated SEFs. It does not extend CFTC oversight to European multilateral trading facilities or organised trading facilities. As will be further explored in forthcoming cross-border rules, we seek to continue to be deferential to the EU trading venue regime.

IQ: Turning to cross-border issues more broadly, the presidency of the Group of 20 (G-20) has highlighted the reduction of market fragmentation as a key issue. How can this best be achieved?

CG: Numerous ISDA surveys have shown that global swaps trading liquidity has been fragmented between on-SEF US person markets and off-SEF non-US person →

> "Fragmentation leads to smaller, disconnected liquidity pools and less efficient and more volatile pricing. Divided markets are more brittle with shallower liquidity, posing a risk of failure in times of economic stress or crisis"

→ markets. This exacerbates the already inherent challenge in swaps trading – adequate liquidity – and increases market fragility as a result. Fragmentation leads to smaller, disconnected liquidity pools and less efficient and more volatile pricing. Divided markets are more brittle with shallower liquidity, posing a risk of failure in times of economic stress or crisis.

Fragmentation increases operational risks and inefficiency as firms structure their business to avoid the rules of one jurisdiction and be subject to the rules of another, while managing multiple liquidity pools in different jurisdictions through different affiliates.

That is why the CFTC and EC worked so hard in 2017 to reduce market fragmentation by achieving a landmark comparability determination on trading venues. It is why Japan has rightly added the issue of market fragmentation to the list of G-20 priorities. It is why the International Organization of Securities Commissions (IOSCO) has formed a follow-up group to its cross-border task force, which I co-chair with Jun Mizuguchi of the Japanese Financial Services Agency, to look at cross-border regulation and market fragmentation in wholesale securities and derivatives markets. IOSCO's work will dovetail with the proposed work of the Financial Stability Board on other aspects of fragmentation.

IQ: Your recent whitepaper on cross-border regulation sets out a number of proposed changes to ensure the framework is calibrated to address systemic risk and allows regulatory deference for overseas rules that achieve comparable outcomes. How have overseas regulators responded to this proposal?

CG: My cross-border whitepaper in October 2018 contends that the antidote to global trading market fragmentation is a broad regulatory programme of deference to third-country regulatory jurisdictions. It generally proposes replacing the CFTC's current entity based approach to the cross-border application of its swaps regime with a territorial framework based on regulatory deference to third-country regulatory jurisdictions that have adopted the G-20 swaps reforms. It advocates moving away from numerous separate entity based liquidity pools in each of the world's major trading jurisdictions. Instead, it encourages the development of unified territorial-based trading liquidity pools under the jurisdiction of the competent local regulator. It seeks to achieve in each global trading centre a unified marketplace, under one set of comparable trading rules and under one competent regulator.

Of course, the cross-border whitepaper did not purport to specifically address every cross-border issue, but to lay out a high-level framework for approaching the matter. It offered enough detail to give readers a good sense of direction, yet acknowledged that details and substance must be worked out properly through agency rule-making.

It is clear that the cross-border whitepaper did not get everything right. Its approach to 'arranged, negotiated or executed' transactions, for example, may need further thought and refinement. Yet that was exactly the purpose of the whitepaper – to serve as a conceptual framework to generate more focused discussion, so that resulting rule proposals would be closer to the mark when brought before the CFTC and the public.

Still, I believe the cross-border whitepaper got the big things right. Since its release, numerous conversations with other regulators and most major participants in swaps markets have confirmed that the CFTC's current approach of applying its regulations to each and every overseas swap transaction by a US person, whether or not such activity actually has a direct and significant impact on the US, is a flawed and over-expansive assertion of jurisdiction. For an agency with perennially restrained funding, the overreach is untenable. Worse, the impact of this overreach has contributed to fragmenting global markets into a complex series of ever more shallow pools of trading liquidity that, in a market crisis, may present significant global systemic risk.

I have directed CFTC staff to prepare as soon as possible various new rule proposals addressing a range of cross-border issues in swaps reform – from the registration and regulation of swap dealers to the registration of non-US central counterparties (CCPs) and swaps trading venues. The intention is to replace the cross-border guidance issued by the CFTC in 2013 and the cross-border rules proposed in 2016, as well as address certain positions taken in CFTC staff advisories and no-action letters. The aim is to adopt a new cross-border framework that is risk-based and deferential to third-country regulatory jurisdictions that have adopted the G-20 swaps reforms. It is my sincere hope that my fellow commissioners and regulators of the world's swaps markets will support us on this path.

IQ: Is the CFTC prepared for Brexit? What impact could it have on US markets and US participants?

CG: The CFTC carefully monitors global market developments – especially in London, the key institutional service centre for cross-border derivatives transactions. The CFTC is concerned about the specific impact of a hard Brexit on derivatives markets and the US financial institutions that account for a large portion of their global trading activity and liquidity provision.

The CFTC formed an internal Brexit task force in the first half of 2018. In late 2018, we advised the FSOC of possible sources of significant market disruption that could result from a hard Brexit. This included the prospect of UK institutions losing authorisation to service non-cleared over-the-counter derivatives and insurance contracts with EU 27 counterparts, EU 27 firms losing the ability to use UK exchanges for a range of existing derivatives products without suitable alternatives, and the prospect that amendments to existing swaps contracts undertaken in the wake of Brexit may be considered new swaps, subject to a panoply of new regulations.

Fortunately, as of early February 2019, the risk of London-based derivatives CCPs being forced to disassociate with EU 27 clearing members in a short period of time has been successfully addressed. Yet the possibility of a no-deal Brexit continues to be real. Uncertainty remains after Brexit on the issue of contract continuity for non-cleared derivatives. The EC and the European Securities and Markets Authority have stepped in to provide a 12-month exemption from EU margining and clearing requirements when a contract is novated to replace a UK counterparty with an EU counterparty. But clear action is needed by EU member states to ensure UK firms can continue to service contracts for a period of time to allow for an orderly transition.

IQ: What is your focus for your remaining time as CFTC chairman?

CG: I will maintain a steady but brisk course focusing on initiatives like Project KISS, LabCFTC and the market intelligence branch; advancing policy proposals on cross-border regulation, SEFs and position limits; making progress on SEC/CFTC rule harmonisation; and further advocating for adjustments in bank capital requirements and leverage ratios that are less biased against derivatives transactions.

I will be vigilant about threats to US and global derivatives markets, whether through market evolution, cyber maliciousness or as a result of geopolitical events, such as Brexit. I will also remain engaged in several initiatives of concern to ISDA, such as global benchmark reform and the move away from LIBOR, addressing manufactured credit events, and phase-five initial margin implementation. I intend to provide a smooth transition to the new chairman later this year.

If I have been consistent in anything in my almost five years at the CFTC, it is in voicing the value proposition of derivatives markets as foundational to economic growth and broad-based prosperity. I have often said that the use of commodity futures, swaps and other derivatives is one of the reasons citizens find plenty of food at stable prices in grocery stores, affordable energy to warm homes and drive cars, and steady rates to pay home mortgages and invest retirement savings. In short, derivatives provide stability and predictability to all of our lives.

As I end my five-year term at the CFTC, I remain a champion and defender of free market capitalism and the disciplined and independent financial regulation that safeguards it. It remains foundational to a thriving future of human advancement and potential – a future where creativity and economic expression is a social good all by itself. IQ

"I have often said that the use of commodity futures, swaps and other derivatives is one of the reasons citizens find plenty of food at stable prices in grocery stores, affordable energy to warm homes and drive cars, and steady rates to pay home mortgages and invest retirement savings. In short, derivatives provide stability and predictability to all of our lives"

Facing Up To Fragmentation

Significant progress has been made in implementing the G-20 commitments over the past 10 years, but the reforms often differ in scope across jurisdictions. Standard-setting bodies must aim for a predictable and consistent substituted compliance framework to resolve this

It has been 10 years since global policy-makers came together through the Group-of-20 (G-20) nations to agree a globally consistent regulatory agenda for derivatives. Since then, substantial progress has been made at the national level to implement rules on clearing, margining, trading and capital, in line with G-20 commitments. Derivatives markets are safer, more transparent and more resilient as a result.

But while the progress has been unmistakable, these regulatory reform efforts often differ across jurisdictions. This has led to inefficiencies and higher costs for derivatives users, and ultimately results in increased risk.

> Regulatory reform efforts often differ across jurisdictions. This has led to inefficiencies and higher costs for derivatives users, and ultimately results in increased risk

Fragmentation of financial markets, including derivatives, is now a key area of focus for global policy-makers and market participants, and the issue has been identified as a priority for the Japanese G-20 presidency.

"Fragmentation can impair financial stability by reducing market liquidity and trapping scarce resources. It can drag efficiency and economic growth. Combatting market fragmentation should be our common goal," said Ryozo Himino, vice minister for international affairs at the Japanese Financial Services Agency (JFSA), speaking at the ISDA annual Japan conference in October 2018.

This view is widely shared. The European Central Bank has expressed concerns that the risk of global regulatory fragmentation imposes an additional vulnerability on the euro area banking system. The chief executive of the UK Financial Conduct Authority has noted that "fragmented markets reduce diversification and transparency, thereby increasing risk". In addition, a senior official at the International Monetary Fund has commented that fragmentation of banking and capital markets "would prove costly".

Focus on fragmentation

Nowhere is the potential adverse impact of regulatory driven market fragmentation of more concern than in the global derivatives markets. These markets play an important role in enabling corporations, governments, asset managers, financial institutions and other entities around the world to transfer and better manage the currency, interest rate, credit, commodity and equity risks to which they are exposed in the normal course of business.

Regulatory driven market fragmentation is defined as disparities in the implementation of global reform initiatives by individual jurisdictions that raise the cost and reduce the availability of derivatives. There are several ways in which policy-makers and market participants can reduce this fragmentation (see box, *Potential Solutions to Fragmentation*). These include recognising the important role that global markets play in generating sustainable economic growth, and reducing the gap between global standards and national regulations to ensure greater consistency across borders.

Policy-makers should also implement a risk-based framework for the evaluation and recognition of the comparability of derivatives regulatory regimes, while international standard-setting bodies should establish a process that would enable national regulators to implement equivalence and substituted compliance determinations in a predictable, consistent and timely manner. On top of this, the reform initiatives should be regularly reviewed to ensure they remain relevant and appropriate, and are efficiently and effectively achieving policy goals.

Fragmentation can occur when firms are forced to develop and implement different systems and solutions in different jurisdictions because of varying regulatory requirements

Sources of fragmentation

Derivatives markets are global. They are global from a demand perspective: thousands of firms on six continents need and use these instruments to manage the common business and financial risks they face. They are also global from a supply perspective: firms that deal in derivatives manage their books and related risks on a centralised, global basis.

Recognising the global nature of the markets, policy-makers over the decade since the financial crisis have worked to establish and implement a consistent regulatory framework for derivatives across jurisdictions. The G-20's derivatives market reform initiative centres on five key areas: central clearing, capital, margin, trade execution and trade reporting. The success of these efforts is clear. Significant progress has been made – and continues to be made – in strengthening financial markets.

However, these and other regulatory reform efforts too often differ in scope, substance and timing across jurisdictions. This regulatory fragmentation results in added cost, complexity and inefficiency, contributes to market fragmentation, and ultimately increases risk for market participants and the financial markets.

Policy-makers are aware of the need to review and potentially recalibrate their rule sets. For example, Federal Reserve Board of Governors vice chairman Randal Quarles has stated that "we are now at a point – with 10 years of experience in setting up and living with the body of post-crisis regulation – where it is both relevant and timely to examine the post-crisis reforms and identify what is working well and what can be improved".

More specifically on fragmentation, the US Treasury recommended in a recent report on capital markets that policy-makers should focus on "improving cross-border regulatory cooperation…to minimise market fragmentation, redundancies, undue complexity and conflicts of law".

The JFSA has voiced similar concerns, identifying four types of harmful regulatory fragmentation that unduly increase the risk of market fragmentation.

These include discrepancies caused by incompatible requirements imposed on the same financial institution by different authorities, overlap caused by two or more regulatory regimes applying to the same market or transaction, desynchronisation caused by differences in implementation timing, and attempts by jurisdictions to gain competitive advantage.

Policy-makers have pointed out that it is not possible, or even desirable, to completely eliminate any and all national differences in regulation. Jurisdictions with different ⟶

→ market structures, those that are in different stages of development or those that have different levels of financial activity may choose different regulatory approaches.

However, fragmentation can occur when firms are forced to develop and implement different systems and solutions in different jurisdictions because of varying regulatory requirements – even though those requirements are being implemented to meet a global standard.

Data and reporting is one example. If all jurisdictions require market participants to report generally the same information to trade repositories, but each requires different data forms and formats in which the information should be reported as part of its rule set, then firms incur significant expense in complying with myriad rules. Discrepancies such as those related to data standards will also impact the ability of regulators to monitor risk on a global basis.

Fragmentation may also occur when very burdensome rules are applied in jurisdictions with small trading volumes that pose little risk. The imposition of such rules increases the cost of doing business and makes access to derivatives risk management more difficult.

Examples

Significant jurisdictional differences in derivatives-related regulations are evident in virtually every aspect of the markets, from capital, margin and clearing to data and reporting (see box, *Examples of Regulatory Driven Fragmentation*).

Extraterritoriality – or the scope of the application of a jurisdiction's rules – also plays a part. In a global market, a firm based in the US that needs to trade in Asia with an Asian counterparty, or a bank based in Europe that transacts with a Brazilian end user, should know and be able to comply with the relevant regulatory framework.

However, it is often unclear what the relevant regulatory framework is – the location where the dealer is based, the country where the trade is executed, or both? Where the rules of one jurisdiction have an extraterritorial reach, a trade conducted outside that jurisdiction's borders could fall into scope, as well as being subject to the rules of the other country.

This points to another issue: the process of equivalence and substituted compliance, or determining whether the regulations of one jurisdiction are comparable with those of another and therefore can be used to comply with the other jurisdiction's regulations. Substituted compliance has an obvious and important role to play in providing regulatory certainty and clarity, and in mitigating market fragmentation. While there have been successes in achieving substituted compliance determinations, decisions have in practice been slow to arrive and are too often made on a granular, rule-by-rule basis.

Potential solutions

Solutions do exist to address regulatory driven market fragmentation. Most importantly, policy-makers and market participants should continue to affirm the value and benefits of global markets in generating sustainable economic growth. The appropriate balance can and should be struck between support for global markets and the need for appropriate regulation in individual jurisdictions.

It is also important that the Financial Stability Board (FSB), the International Organization of Securities Commissions, the Committee on Payments and Market Infrastructures and the Basel Committee

EXAMPLES OF REGULATORY DRIVEN FRAGMENTATION

The Japanese Financial Services Agency has noted four particular sources of fragmentation: discrepancies, overlap, desynchronisation and competition. The impact of these factors can be seen in numerous examples of fragmentation in the derivatives market.

On capital requirements, the Basel Committee on Banking Supervision has given national jurisdictions the ability to impose a gross derivatives liability add-on (GDLA) within the range of 5% and 20%, as part of the net stable funding ratio. Inconsistent application of the GDLA by individual jurisdictions could adversely affect the ability of banks to provide market services that facilitate client financing, investing and hedging.

On non-cleared margin, jurisdictions differ on the time frame they impose for the calculation and settlement of both initial margin and variation margin, with some requiring it in T+1 and others requiring T+2 or later. This inhibits timely settlement when two counterparties to a trade are not located in the same time zone. In particular, counterparties in Asian time zones find it difficult to transact with US counterparties for which T+1 settlement is required.

Divergence also emerges in the clearing space. For example, some jurisdictions require certain trades executed within their borders to be cleared at domestic central counterparties. Clearing location policies adversely impact liquidity and force firms to split netting sets, which can significantly increase capital and margin requirements and related costs. Competition is therefore stifled and global systemic risk increases.

Likewise, location-based requirements under trade execution rules fragment liquidity across platform and cross-border lines, and result in separate liquidity pools and prices for similar transactions.

Jurisdictions also differ in whether they require one or both counterparties to a trade to report the transaction to a trade repository. This has put buy-side firms and end users that require dual-sided reporting at a disadvantage, burdening them with onerous obligations that duplicate the data reported by their counterparty.

These examples refer to instances where rules are currently in place and have been or will be implemented, but there are a number of potential areas of concern stemming from regulatory driven fragmentation that may arise in future. Brexit is the most obvious and important example, with significant uncertainties over the terms of the UK's withdrawal raising concerns about possible fragmentation, increased costs and reduced availability of risk hedging instruments.

on Banking Supervision develop rules that can be implemented consistently and appropriately across jurisdictions. For example, there are often gaps between the principles espoused by the G-20 and the standards set by global policy-making bodies and the national regulations implemented by various jurisdictions.

As some regulators have noted, there must be room for national authorities to adapt global standards when implementing them in their own jurisdictions. Too often, however, the space between the regulations and the standards is too wide, leading to significant differences in the resulting rule sets.

This does not mean that the G-20 initiatives need to be more prescriptive. However, it would be helpful for global standard-setters to ensure there is sufficient consensus among all sets of policy-makers (finance ministries, central banks, prudential supervisors and market regulators) for implementing consistent standards prior to their being published.

It is also important that policy-makers clarify the roles and responsibilities of individual jurisdictions in implementing the reforms. Several jurisdictions have indicated their desire to implement some reforms in response to what they see as regulatory pressure to conform, even though their markets are too small or too closed to support such reforms.

Smaller and developing markets have important risk management needs, and barriers to effective derivatives usage can result in fragmentation for them as a result of the increased costs of doing business. Until such time as these reforms are implemented, market participants from larger jurisdictions should be allowed to engage in de minimis derivatives activities in smaller jurisdictions.

Another key solution to regulatory driven market fragmentation is cross-border recognition. ISDA has suggested a risk-based framework for the evaluation and recognition of the comparability of derivatives regulatory regimes of foreign jurisdictions[1]. The framework establishes a set of risk-based principles that may be used as a tool in the assessment of foreign derivatives regulatory regimes.

The proposed framework strikes a balance by focusing on risk and its cross-border implications, rather than attempting to align each and every regulatory requirement between jurisdictions. This approach will allow for outcomes-based substituted compliance determinations, while reducing the chances of protracted negotiations that could lead to diminished liquidity and market fragmentation.

Global standard-setting bodies should also establish a process that would enable national regulators to implement equivalence and substituted compliance determinations in a predictable, consistent and timely manner. Such a uniform process would ensure that decisions are reached using an outcomes-based approach, rather than being conducted on a granular, rule-by-rule basis.

Finally, policy-makers should consider establishing regular, periodic reviews of regulatory reform initiatives to ensure related standards and regulations remain relevant and appropriate. This would include analysing and determining whether they continue to support policy goals, or if alternatives have arisen that are more efficient and effective.

One example is the clearing mandate. In the US, for example, the percentage of interest rate derivatives that is cleared now exceeds that which is required to be cleared. This calls into question the need for a clearing mandate. Recent actions by the FSB, such as its study on clearing incentives, show that standard-setters are willing to review the impact and consequences of reforms.

Global derivatives markets enable firms to efficiently and cost-effectively raise financing and manage their risk. For this to work properly, regulatory consistency, trust, cooperation and recognition is required. Failure to achieve this will ultimately serve no one – not the firms looking to raise the capital and investment needed for economic growth, nor the entities that need to manage their risk. IQ


ISDA
Regulatory Driven Market Fragmentation

This is an edited version of an ISDA whitepaper, Regulatory Driven Market Fragmentation. The full version of the whitepaper is available here: bit.ly/2SrCBe5

POTENTIAL SOLUTIONS TO FRAGMENTATION

Policy-makers can reduce regulatory driven fragmentation in the following ways:

- Recognise the important role that global markets play in generating sustainable economic growth, while developing regulations that address jurisdictional concerns.
- Reduce the gap between global standards and national regulations to ensure greater consistency in implementation.
- For smaller jurisdictions or those with limited market activity, implement the global standards when and where appropriate. In the meantime, market participants from larger jurisdictions should be allowed to engage in de minimis derivatives activity in these smaller jurisdictions.
- Implement a risk-based framework for the evaluation and recognition of the comparability of derivatives regulatory regimes.
- International standard-setting bodies should establish a process that would enable national regulators to implement equivalence and substituted compliance determinations in a predictable, consistent and timely manner.
- International standard-setting bodies should also regularly review reform initiatives to ensure they remain relevant and appropriate, and are efficiently and effectively achieving policy goals.

[1] bit.ly/2TyO4G7

Seatbelts Fastened

Industry efforts to strengthen contractual fallbacks for interest rate benchmarks have gathered pace, with work under way to consult on the technical aspects of outstanding benchmarks

Derivatives market participants have been spending lots of time planning for 2022, which might seem odd, given it is nearly three years away. Such is the systemic importance and widespread reliance on LIBOR, which may cease publication sometime in 2022 or beyond, that preparations for its termination are already well advanced.

The difficulty is that no one can be entirely sure when LIBOR will end. The 20 panel banks have committed to sustaining the rate until the end of 2021, but how quickly it declines thereafter is far from clear.

This uncertainty underscores the importance of a comprehensive industry work programme that has been ongoing since 2016 to strengthen fallback language so that contracts referencing LIBOR and other interbank offered rates (IBORs) can survive a sudden discontinuation of the underlying benchmark without disruption. This work has gathered considerable pace over the past year and is now reaching a critical phase.

"Benchmark reform has been a priority for ISDA for some time, and we have increased our outreach and education efforts to make sure the issues are fully understood by the broad community of benchmark users rather than just the benchmark specialists. As we have started to shape fallback language and options, there has been a long period of fairly technical, intensive work, but we are encouraged by the level of convergence over a common approach," says Eric Litvack, chairman of ISDA.

Growing importance

When ISDA first began to work on fallbacks in 2016, at the behest of the Financial Stability Board's Official Sector Steering Group (FSB OSSG), the sudden cessation of a critical benchmark was generally seen as a tail event – highly unlikely ever to come to pass, but a risk that should be mitigated nonetheless.

That changed in July 2017, when UK Financial Conduct Authority (FCA) chief executive Andrew Bailey made it clear the regulator would no longer compel or persuade banks to submit to LIBOR after the end of 2021. Not only did his speech give renewed momentum to benchmark transition efforts in key jurisdictions, but it also underscored the importance of strengthening fallbacks.

In a subsequent speech in July 2018, Bailey likened fallbacks to the wearing of seatbelts. "Fallback language to support contract continuity or enable conversion of contracts if LIBOR ceases is an essential safety net – a 'seat belt' in case of a crash when LIBOR reaches the end of the road. But fallbacks are not designed, and should not be relied upon, as the primary

"Fallbacks should not be considered the primary transition vehicle for derivatives to move to the new benchmarks, and there are clearly other steps that must be taken to ensure a smooth transition"

Ann Battle, ISDA

> "It's important that the results of the consultation revealed a clear preference for both the term adjustment and the spread adjustment – and the exercise reflected the views of a very diverse group of market participants"

Emilio Jiménez, JP Morgan

mechanism for transition. The wise driver steers a course to avoid a crash rather than relying on a seatbelt."

It's a compelling analogy, which has been repeated several times since Bailey first coined it. Just as a driver avoids a crash but must still wear a seatbelt, participants have been encouraged to adopt the new risk-free rates (RFRs) well in advance of IBOR cessation, but also to strengthen contractual fallbacks as a safety measure. The reality is that the 2006 ISDA definitions do not include a sufficiently robust back-up if a benchmark ceases to exist, so there was a clear need to develop this mechanism.

"Fallbacks should not be considered the primary transition vehicle for derivatives to move to the new benchmarks, and there are clearly other steps that must be taken to ensure a smooth transition. The perfect scenario would be for fallbacks to be implemented globally and market wide but – just like the seatbelt – never tested because market participants voluntarily move to the alternative rates before a cessation," says Ann Battle, assistant general counsel at ISDA.

ESTER

The fallback rate for euro LIBOR and EURIBOR which may not be available until October 2019

Developing fallbacks

If the fallbacks that ISDA is implementing for derivatives take effect upon an IBOR cessation, contracts would switch to the identified alternative RFRs for the relevant currency. For example, sterling LIBOR contracts would fall back to SONIA, US dollar LIBOR to SOFR, yen LIBOR to TONA and Swiss franc LIBOR to SARON.

Switching an IBOR contract to reference a new RFR is not straightforward, however. IBORs come in multiple tenors – for example, one, three, six and 12 months – while RFRs are only available on an overnight basis. IBORs also include a premium for bank credit risk and other factors, whereas RFRs do not. Recognising these key differences, ISDA launched a consultation in July 2018 to determine what adjustments would be needed to the RFRs if used as a fallback in a contract that currently references an IBOR.

The consultation covered sterling LIBOR, Swiss franc LIBOR, yen LIBOR, TIBOR, euroyen TIBOR and the Australian Bank Bill Swap Rate. It set out four approaches to account for the move from a term rate to an overnight rate, and three approaches to calculating a spread adjustment. Following three months of consultation, responses were received from 164 entities and the full results were published in December 2018.

Consensus

The majority of respondents opted for the compounded setting-in-arrears rate for the adjusted RFR, which would replicate the term element of the IBORs by compounding observed overnight rates at the end of the relevant term. For the spread adjustment, a significant majority chose the historical mean/median approach, which is based on historical differences between the IBOR and the RFR over a static look-back period. The FSB OSSG has welcomed both choices, and the work on fallbacks can now progress to the next stage.

"It's important that the results of the consultation revealed a clear preference for both the term adjustment and the spread adjustment – and the exercise reflected the views of a very diverse group of market participants. That clarity allows us to move ahead with further developing the fallback language," says Emilio Jiménez, managing director and associate general counsel in the corporate and investment bank at JP Morgan.

While there has been some industry feedback requesting a forward-looking term rate as a fallback, this is particularly problematic for RFRs that are very new or not yet published, such as SOFR, which was launched in the US in April 2018, →

"Fallbacks are a good example of the forward planning we do for low-frequency events with a high market impact – and everyone needs to be positioned for IBOR cessation"

Philip Whitehurst, LCH

→ or ESTER, which is expected to be launched by the European Central Bank by October 2019.

"An administrator cannot produce a forward-looking term rate until there is a sufficient level of derivatives trading based on the relevant RFR. For new rates such as SOFR and ESTER, reaching this level of trading will take time and will require derivatives market participants to focus primarily on trading compounded or other variations of the overnight RFRs themselves," says Battle.

"We expect that some market participants will be able to use derivatives based on a compounded-in-arrears rate to hedge cash products based on a forward-looking term rate that may be published in the future, and we will continue to work with market participants that may need different solutions for their individual hedging," she adds.

Next steps

With last year's consultation complete, work is now well under way to determine the final parameters and mechanics for the fallbacks for the six benchmarks covered. ISDA continues to coordinate this work, which ranges from amending contractual language to ensuring the necessary infrastructure is in place to facilitate the use of fallbacks if they are ever needed.

On February 4, ISDA issued a request for proposal for an independent service provider to calculate and publish the relevant spread adjustments and the adjusted RFR. Having the rates centrally published by a vendor was identified as a necessity by market participants and should ensure greater transparency and efficiency, reducing the potential for disputes between counterparties over the calculations.

"The vendor's role will be to ensure that, just as market participants currently use screens to obtain an existing IBOR benchmark on a certain date, they will be able to pull up the adjusted RFR and the spread adjustment in much the same way. The methodologies for those adjustments will be public and the vendor will disclose its data inputs so market participants can replicate the calculations, but we have heard clearly that they want to be able to obtain the adjusted rates from a screen," says Battle.

Interested vendors were required to submit their applications to ISDA by early March, and the selection was ongoing as **IQ** went to press, with the aim of completing the process during the second quarter of 2019. Once the chosen vendor has started publishing the adjustments and the contractual language has been finalised, ISDA expects to go live with the new fallbacks by the end of 2019.

"Fallbacks are a good example of the forward planning we do for low-frequency events with a high market impact – and everyone needs to be positioned for IBOR cessation. The consultation has generated clear momentum, so finalising the parameters of the adjustments and integrating them into the definitions is now really important," says Philip Whitehurst, head of service development for rates at LCH.

Further consultation

While there has been substantial progress on fallbacks in recent months, the consultation phase is not yet entirely complete. Further consultation on technical aspects of fallbacks for three more benchmarks – US dollar LIBOR, Hong Kong's HIBOR and Canada's CDOR – must now be undertaken.

This consultation is likely to be shorter and simpler than last year's – but no less important given the critical nature of these three benchmarks. Some feedback was already gathered on US dollar LIBOR during the first consultation, and it is possible there will ultimately be no difference in the adjustments that would be applied to these three rates.

"One of the questions that was asked in the initial consultation was whether market participants felt the same methodology should be applied to the benchmarks that weren't included, and the feedback was that it should. That view now needs to be properly validated to determine whether the same adjustments can be applied to all the IBOR benchmarks," says Maria Douvas-Orme, managing director in the legal and compliance division at Morgan Stanley.

In Europe, the fallback rate for euro LIBOR and EURIBOR will be ESTER, which may not be available until October 2019. ISDA expects to conduct a consultation on technical aspects of fallbacks for euro LIBOR and EURIBOR after trading in ESTER commences, and to implement the fallbacks some time after that.

In the meantime, additional work on fallbacks is proceeding in line with the European Union Benchmarks Regulation (BMR). Article 28 of the BMR demands that supervised entities using a benchmark must produce and maintain "robust written plans setting out the actions that they would take in the event that a benchmark materially changes or ceases to be provided".

In response, ISDA published the ISDA Benchmarks Supplement in September 2018, enabling firms to specify fallback arrangements that would apply if these events occur. The ISDA Benchmark Supplement applies much more broadly than ISDA's work to implement fallbacks for the IBORs, covering interest rates, FX, equity and commodities benchmarks.

While a separate initiative to the IBOR fallbacks work, the ISDA Benchmarks Supplement complements it by allowing counterparties to agree interim fallback arrangements should an IBOR cease to exist before the IBOR fallbacks are published. The IBOR fallbacks will take precedence for specified IBORs once implemented, but the ISDA Benchmarks Supplement will provide an additional layer of protection with respect to index cessation in the event an IBOR fallback fails.

"The ISDA Benchmarks Supplement is voluntary, but Article 28 (2) has been live since January 2018, and does not benefit from any transitional period. With penalties of up to 10% of global annual turnover for non-compliance, European firms, including in-scope buy-side and end-user institutions, need to make sure they are compliant. The supplement provides an important tool in that respect," says Rick Sandilands, senior counsel for Europe at ISDA.

Triggers

Beyond the technical adjustments covered in the recent consultation, another component of any fallback is the trigger event that forces the new rate to become effective. The most obvious trigger would be the permanent discontinuation of an IBOR. Once documentation has been amended to incorporate the agreed language, a public announcement by an administrator, its supervisor or another entity with authority over the administrator would trigger the fallback. If the announcement precedes the actual discontinuation, the fallback would take effect on the future discontinuation date.

However, some have made a case for additional trigger events. Speaking at the ISDA Annual Legal Forum in London on January 28, FCA director of markets and wholesale policy Edwin Schooling Latter pointed out that it may not be possible for administrators to simply announce the cessation of widely used benchmarks when some market participants are still working on transition.

"It is entirely plausible that the end game for LIBOR will include an assessment by the FCA that one or more panels have shrunk so significantly in terms of number of banks or the market share of the banks remaining that it no longer considers the relevant rate capable of being representative," said Schooling Latter. "It seems sensible, then, to consider this scenario when choosing the design of fallback triggers."

Schooling Latter highlighted the strong support that exists for a representativeness trigger among cash market participants, adding that central counterparties would have serious concerns about having large books of contracts resting on an unrepresentative rate.

Nonetheless, there are complexities associated with the use of standard pre-cessation triggers for derivatives, including the question of exactly what would constitute a benchmark becoming unrepresentative, whether an unrepresentative benchmark would actually continue to be published, and how to ensure complete uniformity with fallbacks in cash products, given many cash products will not have pre-cessation triggers.

"Market participants have said repeatedly that to avoid basis risks, we should aim for triggers in non-cleared derivatives that align with triggers in cleared derivatives, and with triggers in cash markets too. This is because, of course, of the hedging relationships between these contracts," said Schooling Latter.

It is also expected that derivatives market participants will negotiate changes to their contracts before a permanent cessation, or even before any statements on representativeness like the one contemplated by Schooling-Latter. The FCA has actively encouraged such changes, publicly calling on market participants to transition hedges and positions to SONIA before LIBOR disappears and before liquidity in LIBOR derivatives declines.

Given the complexities associated with the use of pre-cessation triggers for fallbacks in the derivatives markets, ISDA will issue an additional consultation with the aim of educating the market on the key issues related to pre-cessation events and gathering feedback.

"There have been calls to have derivatives include pre-cessation triggers along the lines of those included in the Alternative Reference Rate Committee model language consultations for cash instruments. If that becomes something for which there is market consensus, the critical next step will be developing consistent contractual language that can be applied to all of the IBORs. The key should be to avoid the fragmentation and basis risk that would result from different products triggering from different events – the consultation will be an important part of this," says JP Morgan's Jiménez.

The challenge with a pre-cessation trigger, adds Litvack, is that while cessation of a benchmark leaves market participants with no choice but to fall back to the alternative rate, a pre-cessation scenario is more nuanced and may, as Jiménez suggests, lead to fragmentation and basis risk.

"There are all sorts of reasons why parties might choose to adopt a new rate or remain on the existing one in the event it becomes unrepresentative, and that may mean the choice is delayed until the last possible moment, which means less widespread take-up of the fallbacks. Pre-cessation triggers could certainly increase the potential for basis risk," Litvack explains.

Keeping focus

At this stage in the process of developing fallbacks, there are clear reasons to be positive following the progress made, but an equal need to maintain momentum and ensure the requirement for robust fallback rates is fully understood across the market. As the next round of consultations is completed, it will be incumbent on industry participants to remain focused on ensuring contractual certainty as soon as possible.

"This is a huge, complex project, and there will inevitably be some challenging moments, particularly when we have to balance the need for action in an individual market with the need for harmonisation across multiple benchmarks. Progress so far has been really positive and it is critical that we now maintain focus to complete the job," says LCH's Whitehurst. IQ

Read the results of the ISDA fallbacks consultation at bit.ly/2R0ljEW

10 Questions with...
Dixit Joshi

Dixit Joshi, an ISDA board member and group treasurer at Deutsche Bank, talks about the transformation of derivatives markets since the Group-of-20 commitments in 2009, and the importance of tackling fragmentation

IQ: How would you describe what you do to someone at a dinner party?

Dixit Joshi (DJ): I'd say that, together with my team, I help to manage the balance sheet of a large, global bank in a way that serves the interests of our clients and safeguards the bank. I would add that any large bank has a duty to help financial markets run smoothly and safely as this contributes to the wider economy, and it's my job to help ensure that Deutsche Bank does that.

IQ: What do you enjoy most about your job?

DJ: I'm privileged to work with an exceptionally talented, smart and diverse group of colleagues and I find that immensely stimulating. I work on issues that are challenging but give me a view over our bank and the wider financial industry, which only a few people are lucky enough to see. I am particularly grateful that I can harness the work I do as a force for good in our industry and the communities we serve. And, quite simply, I get a kick out of getting stuff done, both for clients and for Deutsche Bank.

IQ: When it comes to derivatives, what issues are you currently most focused on?

DJ: Over the past three decades, the marketplace has evolved beyond all recognition. The market has become more centralised, more transparent, more standardised – in a word, safer and more robust. Regulators and market participants have collaborated more closely than ever to develop the marketplace, and it feels like a long time since Warren Buffett called derivatives "financial weapons of mass destruction". I'm very focused on the transformative impact of technology, which I think will be profound. In addition, LIBOR transformation will have major implications for the system as a whole.

IQ: This year marks the 10th anniversary of the Pittsburgh Group-of-20 (G-20) commitments. Have these reforms been a success, in your view?

DJ: The G-20 committed itself to reform of the over-the-counter derivatives market, improving transparency, preventing abuse, transitioning to central clearing and strengthening resilience and recovery processes. If we look across the landscape today, transformation is not too strong a word. From many points of view – trade reporting, reduced operational risk, the transparency that enables better supervision, and reduced systemic risk – it's clear we have a stronger and more stable derivatives market. Prudential requirements are far more developed in respect of capital, liquidity and resolution planning. We've seen important milestones on this road – for example, the Financial Stability Board's framework for global, systemically important banks, and the definition of the minimum requirement for own funds and eligible liabilities and total loss-absorbing capacity requirements.

IQ: The current G-20 presidency has identified fragmentation as a key area of focus. How important is it to resolve this issue?

DJ: In a highly interconnected global economy and financial system, it's very important that we are able to set consistent standards and apply these standards in a uniform manner. If we are to benefit from a level playing field, regulatory harmonisation is key.

IQ: How important are new technologies like distributed ledger, and what role can they play in derivatives markets?

DJ: I'm excited by the potential of new technologies, such as distributed ledger technology. One potential benefit is to provide a 'single version of the truth' for all system participants – supervisors, regulators, clearing houses, and banks and their clients. If this technology can be harnessed to provide a robust shared ecosystem, we may be able to make a step-change in safety, speed, transparency and cost-efficiency. Of course, further work is needed, but the possibilities are considerable.

IQ: What are ISDA's most important initiatives, in your opinion?

DJ: ISDA plays a key role in setting standards across the industry. The ISDA Common Domain Model offers us a consistent view of what contracts should look like, and offers rich potential for greater interoperability and exchange of information. ISDA can also play a vital role in respect of benchmarks, by working with global regulators to help prepare for the transition to a successor for LIBOR.

IQ: You've had three stints on the ISDA board. Has ISDA changed over that time?

DJ: Over that time, I've seen ever closer collaboration between different actors in the system – buy side, sell side, clearing house infrastructure and regulatory authorities. That gives me confidence in our ability to work through issues together.

IQ: Where did you start your career and what did you do?

DJ: I joined Standard Merchant Bank on graduating from the University of Witwatersrand in South Africa. They put me in a glass office, right next to the trading room. I was captivated by the energy I could see in that room, and in the evenings I used to try to find out as much as possible about what went on there. Very soon, I got my first taste of trading currency and interest rate derivatives. That was a time when the derivatives market was evolving at a tremendous pace. It was an exhilarating period and that's where my lifelong interest in derivatives was kindled.

IQ: What do you do to relax?

DJ: First and foremost, I spend time with my family. However, as a dad to three teenage daughters, I'm not sure 'relaxing' is always the word I'd use! I get plenty of '360-degree feedback' from my children, and that's a great way to keep you grounded. In addition, I've been passionate about Indian and African art since my youth, and that's an interest I try to keep up with. IQ

"If we look across the landscape today, transformation is not too strong a word. From many points of view – trade reporting, reduced operational risk, the transparency that enables better supervision, and reduced systemic risk – it's clear we have a stronger and more stable derivatives market"

ISDA® Safe, Efficient Markets

What is the ISDA® CDM?

The ISDA Common Domain Model (ISDA CDM™) is a blueprint for how derivatives are traded and managed across the trade lifecycle. Having a single, common digital representation of derivatives trade events and actions will enhance consistency and facilitate interoperability across firms and platforms, providing a bedrock upon which new technologies can be applied.

WHY THE ISDA CDM?

Catalyst

- Over time, each firm has established its own systems and its own unique set of representations for events and processes that occur during the life of a derivatives trade.
- There is no commercial advantage to organizations maintaining their own representations. It results in firms having to continually reconcile their trades to make sure they have the same information – a big drain on resources. It also curtails the potential for greater automation, and results in increased operational risk.
- New technologies offer the potential for greater automation and efficiency, reducing complexity and costs. But effective automation can only be built on standardization.

Opportunity

- Derivatives market participants are looking at ways to reduce costs and improve the efficiency of back-office processes.
- An opportunity exists to create standards that support innovation and promote the adoption of new technologies.
- ISDA has a 30-year track record in developing industry standards.

BENEFITS OF THE ISDA CDM

- Towards a shared golden source of trade data: The ISDA CDM enables a consistent hierarchical representation across trades, portfolios and events, providing enhanced risk management and trade processing capabilities.
- Creating an environment for innovation in financial markets: The ISDA CDM creates a foundation for long-term process transformation using emerging technologies like cloud, distributed ledger and artificial intelligence. The ISDA CDM is available in machine-readable and machine-executable formats and languages that can be consumed by those technologies.
- Delivering better regulatory oversight: The ISDA CDM promotes transparency and alignment between regulators and market participants, ensuring regulatory goals can be met more efficiently.

Want more information? Contact Us: ISDA Market Infrastructure & Technology - **MarketInfrastructureandTechnology@isda.org**

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ISDA fosters safe and efficient derivatives markets to facilitate effective risk management for all users of derivative products

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Representing the industry through public policy engagement, education and communication

AN ADVOCATE FOR EFFECTIVE RISK AND CAPITAL MANAGEMENT

Enhancing counterparty and market risk practices and ensuring a prudent and consistent regulatory capital and margin framework

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Developing standardized documentation globally to promote legal certainty and maximize risk reduction

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Advancing practices related to trading, clearing, reporting and processing of transactions in order to enhance the safety, liquidity and transparency of global derivatives markets

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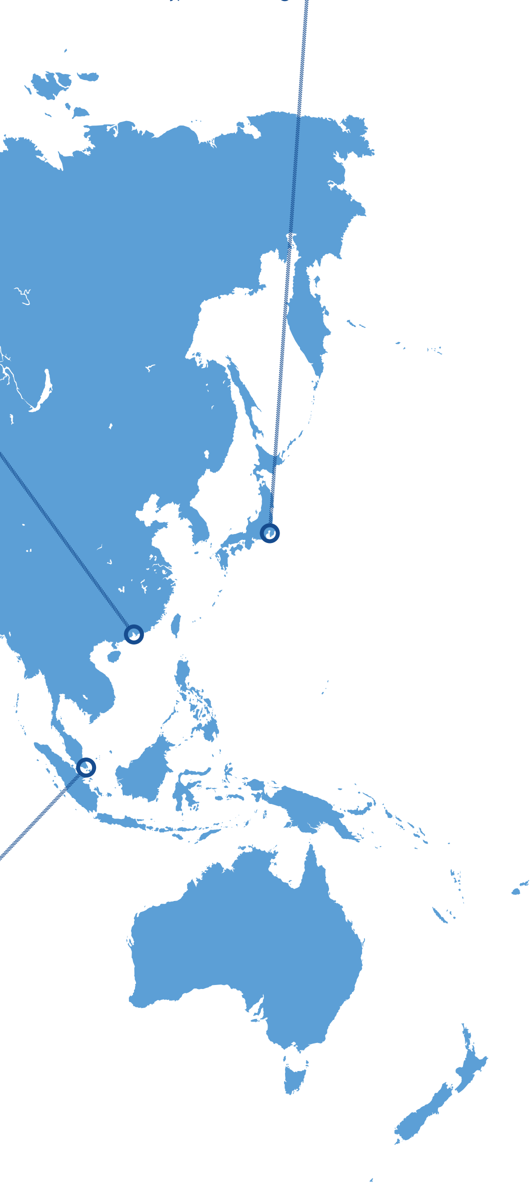

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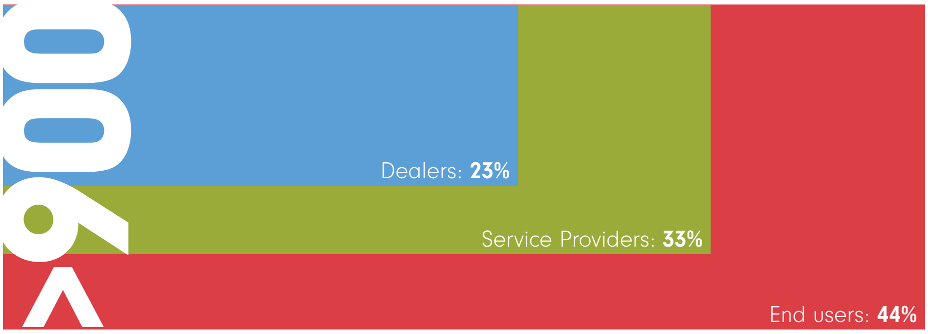

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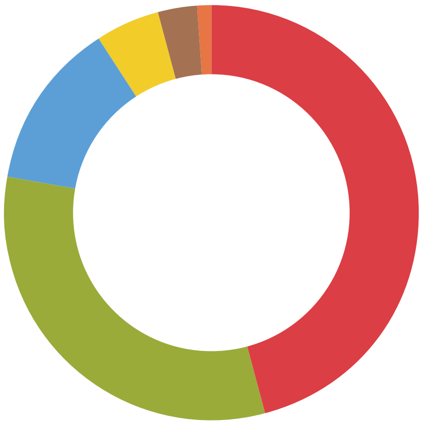

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"Fragmentation leads to smaller, disconnected liquidity pools and less efficient and more volatile pricing. Divided markets are more brittle with shallower liquidity, posing a risk of failure in times of economic stress or crisis"

J. Christopher Giancarlo, chairman, Commodity Futures Trading Commission