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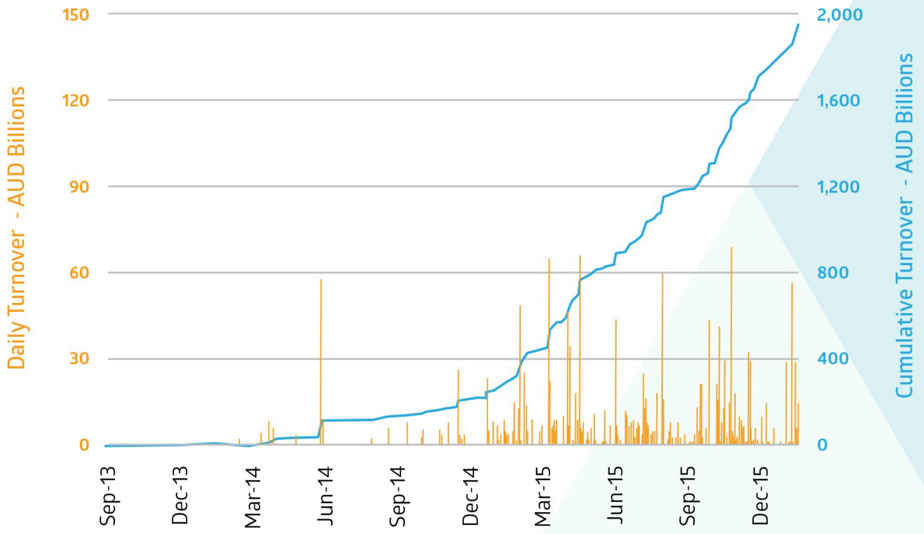

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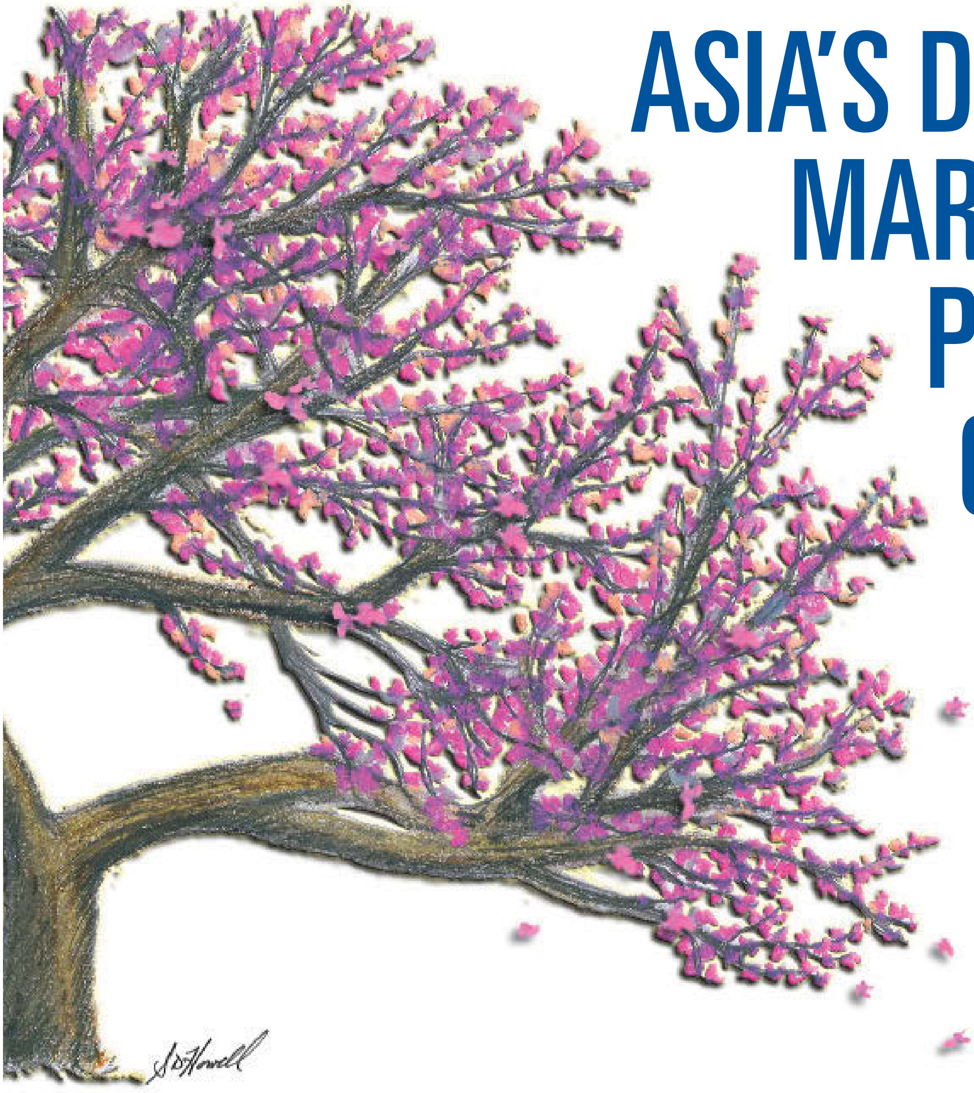

ASIA'S DERIVATIVES MARKETS: POISED FOR GROWTH?

- Interview: Masamichi Kono, JFSA
- ISDA Tokyo AGM Preview

ISDA. Safe, Efficient Markets

A Busy AGM Agenda

FOR 30 YEARS, ISDA's annual general meeting (AGM) has provided an opportunity for derivatives practitioners across the globe to get together in one place at one time, to discuss opportunities and challenges, and to highlight emerging areas of work where standards and best practices are needed.

Not surprisingly, the drawing up of new derivatives reforms and bank capital regulation has dominated proceedings over the past few years. But with the regulatory development phase now largely complete (the last, big pieces of the jigsaw will fall into place with the introduction of margin requirements for non-cleared derivatives from September and the rollout of the remaining capital rules), the focus at this year's AGM will shift further to implementation and impact.

Many strands of the new regulatory framework are already in force, particularly in the US – but many aren't, or are still being phased in. With evidence on the cumulative impact of the changes scarce, opinions differ on how best to adapt businesses to thrive in the new environment. One thing seems clear: capital and regulatory compliance costs are rising, which will likely push industry participants to consider ways of creating efficiencies through standardisation and automation. Development of standards is an area where ISDA and its members have worked together with great success over the past 30 years, and part of the discussion at this year's AGM will likely focus on how this work is being extended and applied in the current environment – whether it be in the margin and capital space, data, trading or clearing-house recovery and resolution.

The AGM returns to Tokyo this year for the first time since 2003. Recognising that, this issue of *IQ: ISDA Quarterly* contains a series of articles on the Asia-Pacific derivatives market. Those articles cover many of the themes and issues that will be discussed at this year's conference: implementation of regulatory reform and adapting to new market structures. We hope you enjoy both this issue of *IQ: ISDA Quarterly* and the AGM. ■

Nick Sawyer
Head of Communications & Strategy
ISDA

ISDA. Safe, Efficient Markets

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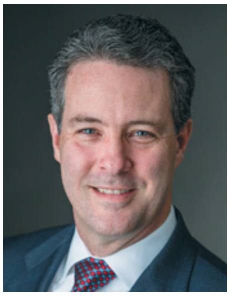

FOR MORE THAN three decades, ISDA has represented the derivatives markets and the firms that participate in them. Our mission to foster safe and efficient markets, and to facilitate effective risk management for all users of derivatives, is a cornerstone of everything we do. But we also have to recognise that markets are continually evolving, and we need to adapt with them to stay relevant to our members.

That was the thinking behind a change to our mission and strategy statement earlier this year[1]. The update ensures our strategic priorities mirror the evolving market structure, and tally with the main areas of interest for our members. Among the changes is an explicit commitment to enhance derivatives trading and reporting practices, which will sit alongside an existing focus on clearing to ensure ISDA retains a strong emphasis on safe, efficient market infrastructures. The mission statement also recognises the importance of a prudent and consistent regulatory capital and margin framework.

In addressing these changes in market structure, ISDA will build upon its strong legal and documentation expertise to develop industry operational standards. ISDA's work in this space stretches back to the development of the ISDA Master Agreement and the credit support annex, and includes publication of netting and clearing opinions – all highly valued by our members and critical to the efficient running of their businesses. Given this strong foundation, ISDA can be relied upon to develop future protocols that transition the market to new structures as a result of regulatory reform. We remain committed – now more than ever – to develop broad market solutions and standards to drive global consistency and cost efficiency.

As an example, industry participants are counting on ISDA to deliver a comprehensive solution ahead of the introduction of margining requirements for non-cleared derivatives. ISDA has been working feverishly over the past two years to deliver a consistent margin methodology, a transparent governance structure, and the necessary legal documentation. A critical part of this is the development of a standard initial margin model, known as the ISDA SIMM. ISDA is now sharing that methodology with market participants and regulatory authorities across the globe. Other initiatives are under way to ensure firms are able to make the necessary documentation, infrastructure and processing changes by the September 2016 start date.

ISDA also remains committed to the nuts and bolts of clearing. Nearly 80% of average daily interest rate derivatives notional volume was cleared in the fourth quarter of 2015, according to data reported to US trade repositories and compiled by ISDA SwapsInfo.org. As clearing volumes have grown and new clearing mandates have come into force, ISDA has provided research and analysis on central counterparty (CCP) resilience, and proposed a framework for CCP recovery. Attention is now turning to the important issue of CCP resolution as industry participants and authorities grapple with how to deal with these new systemically important entities.

This builds on our work on legal documentation, which includes publication of the ISDA/FIA Client Cleared OTC Derivatives Addendum, the launch of clearing classification tools via ISDA Amend in conjunction with Markit, and the release of ISDA's clearing opinions, which consider close-out netting and other issues from the perspective of the clearing member and client.

Capital is another area that is now prominently flagged in ISDA's strategic statement but has been an important focus for some time. In the past 12 months alone, ISDA has coordinated broad industry impact studies on the Fundamental Review of the Trading Book, the review of the credit valuation adjustment capital charge and the net stable funding ratio. Other initiatives include an assessment of the leverage ratio – specifically, whether a failure to recognise the exposure-reducing effect of client cash collateral will lead to a rise in the amount of capital required to support client clearing activities, and therefore encourage some firms to withdraw from the business.

ISDA is currently engaged in a wide variety of other projects – from implementation of the revised Markets in Financial Instruments Directive, to flagging similarities between US and European trading-platform rules to help facilitate equivalence decisions, to developing a common product identifier through an ISDA-led Symbology project. These issues conform with the areas identified in our new mission and strategic statement – and this statement will be a reference point for determining our priorities going forward. The ultimate aim is to ensure ISDA continues to tackle the issues that matter most to our members in a changing world.

Given the fact ISDA has already been focusing on these areas, it would be logical to ask why we decided to update the mission and strategy statement at all. The answer is simply that these issues are absolute priorities for our members now, and so we wanted to emphasise them as absolute priorities for ISDA.

All of these topics and more will be discussed at ISDA's annual general meeting (AGM) in Tokyo in April. We hope you enjoy this AGM issue of *IQ: ISDA Quarterly*, and we hope to see you in Tokyo! ■

Scott O'Malia
Chief Executive Officer
ISDA

[1] http://isda.link/missionstatement

ISDA Outlines Principles for US/ EU Trading Platform Equivalence

ISDA has published a set of principles for achieving comparability determinations between US and European Union (EU) trading platforms.

The paper, published in February, analyses the regulatory frameworks in the US and EU, with the aim of determining whether EU trading platforms should be deemed comparable with those in the US. Underpinning the analysis is the principle that regulators should focus on broad outcomes and similarities, rather than conduct a granular, rule-by-rule comparison of the two frameworks.

In the EU, the revised Markets in Financial Instruments Directive and associated regulation (MIFID II/MIFIR) will introduce a requirement for certain derivatives to be traded on EU trading venues. In comparison, trade execution rules are already in place in the US, following the introduction of the swap execution facility (SEF) regime in October 2013. Under current rules, US persons can only trade on platforms that have registered as SEFs, subject to Commodity Futures Trading Commission (CFTC) oversight.

"Both the US and the EU have developed comprehensive regulations on trade execution and trading platforms. Our analysis shows there are many similarities between the SEF rules in the US and MIFID II/MIFIR in the EU, which will hopefully pave the way for the recognition of EU platforms. However, a lack of recognition could lead to fragmentation between US and European markets," says Scott O'Malia, ISDA's chief executive.

> "Our analysis shows there are many similarities between the SEF rules in the US and MIFID II/ MIFIR in the EU, which will hopefully pave the way for the recognition of EU platforms"
>
> *— Scott O'Malia, ISDA*

The paper argues that the CFTC should follow the principles outlined in a cross-border report published by the International Organization of Securities Commissions, and focus on similarities when making comparability determinations. If EU trading venues are determined to achieve the same objectives and protections set out in core principles for SEFs established by the US Congress, then the CFTC should allow those venues to be exempt from SEF registration and compliance with the SEF rules. Once deemed to be comparable, swap counterparties should be able to trade products subject to the US trading mandate on an EU trading venue, regardless of their US-person status. ■

Read the full version of the paper here: http://isda.link/tradingplatforms.

Clearing and Compression Affect IRD Dynamics

Clearing and portfolio compression are having an increasingly significant effect on the interest rate derivatives (IRD) market, with more than two-thirds of IRD notional outstanding now cleared and compression reducing the size of the market by approximately 62%, according to a research paper published in January by ISDA.

An estimated 67.1% of total IRD notional outstanding was cleared at end-June 2015, reflecting a rise in the use of clearing houses in recent years – in response to clearing mandates for certain products in some jurisdictions, but also due to risk, capital and operational efficiency reasons. This compares to 21% at year-end 2008. According to ISDA estimates, 95% of IRD notional outstanding that can be cleared is now cleared.

Use of compression services has also increased rapidly, driven by the rollout of new capital requirements, such as the Basel III leverage ratio, and innovations in compression technology. The IRD market, as measured by notional and adjusted for the impact of clearing, would be 162% larger without any compression activity.

This growth in clearing and compression is having an impact on publicly reported IRD notional outstanding figures, such as those published by the Bank for International Settlements (BIS). Clearing acts to increase reported notional outstanding, as a single bilateral transaction is counted as two cleared trades once novated to a central counterparty (CCP). In contrast, compression reduces notional outstanding by cancelling offsetting trades, which can make it seem like fewer transactions are taking place. The BIS figures are reported after compression, but are not adjusted for the double counting of cleared trades.

After factoring out these effects, the research finds that underlying IRD market activity (before clearing and compression, measured as total notional outstanding) increased by 4.7% between December 2014 and June 2015. However, a strong increase in compression activity has resulted in a decline in publicly reported notional outstanding data over the same period. ■

Read a more detailed analysis of the IRD market on pages 45-49.

ISDA and FIA Set Out Options for MIFID II Transition

ISDA and the Futures Industry Association (FIA) sent a letter to European Union regulatory authorities in January proposing two options for the collection of liquidity data needed for the revised Markets in Financial Instruments Directive and associated regulation (MIFID II/MIFIR). The proposals are aimed at ensuring an orderly adoption of the new framework and avoiding a negative impact on the efficiency and liquidity of European derivatives markets.

> "The postponement of the MIFID II start date does not guarantee an orderly transition"
>
> *— Roger Cogan, ISDA*

The European Securities and Markets Authority (ESMA) last November called for a one-year delay to the MIFID II start date until January 1, 2018, a request that was endorsed by the European Commission on February 10. For many provisions of MIFID II to be effective, however, a great deal of work needs to be completed in the interim. In particular, the implementation of pre- and post-trade transparency rules relies on accurate judgements on the liquidity of underlying instruments – a process that depends on the collection of sound data before MIFID II/MIFIR comes into effect. Inaccurate liquidity estimations could damage trading volumes in particular instruments or asset classes, ISDA and the FIA argue.

"The postponement of the MIFID II start date does not guarantee an orderly transition. Many of the trade transparency related requirements taking effect in January 2018 depend on data that, as things stand, would only begin to be collected from the market in January 2018," says Roger Cogan, head of European public policy at ISDA.

MIFID II's transparency rules are broad in application. For instance, banks sufficiently active in a particular instrument will be designated as systemic internalisers (SIs), and will be required to make bids and offers public before a trade is completed, as well as the size and price of the trade after execution. Without comprehensive market data, it will be difficult to glean whether a bank has been appropriately tagged as an SI, the ISDA/FIA letter argues.

Transparency requirements will also be applied to certain types of instrument, depending on their liquidity characteristics. Market participants have expressed concern that the liquidity criteria laid out by ESMA are too broad, and may result in many infrequently traded instruments being inappropriately dropped into the transparency regime. This may, in turn, further reduce liquidity in those instruments and increase pricing for end users.

Both options presented by ISDA and the FIA set out a transition plan for data collection. Option A involves the collection of data by national regulators from those entities currently classified as regulated markets and multilateral trading facilities (MTFs). For this to work, regulators would have to collect data in the first half of 2017, which would reflect trading activity from the second half of 2016. The sections of MIFID II relating to MTFs and other trading venues will therefore have to be completed by the middle of this year. After implementation, ESMA would use 2018 to collect post-trade data for all instruments determined to have traded on an execution venue or over the counter from the effective date, with a further estimation of transparency parameters in early 2019.

Option B would see data collected after MIFID II's effective implementation date, rather than before as with Option A. Regulators would collect information from trading venues, approved publication arrangements and consolidated tape providers. To maintain the orderly functioning of the derivatives markets, all instruments would be deemed illiquid during this period, and all transparency thresholds would be set at zero. Once sufficient data is collected by the end of 2018, the transparency rules would be re-calibrated and applied in a comprehensive manner.

The letter sets out the pros and cons for both approaches. Option A requires regulators to stick to a tight timetable, and would result in ESMA using data that will be at least 12 months old by January 2018. However, unlike Option B, liquidity data collection can be up and running before firms have their own internal MIFID II implementation in place.

Option B gives more time for regulators and market participants to prepare for MIFID II and would be based on more up-to-date data, but it precludes a 'dry run' of the transparency parameters and their effect on the market, and would require MTFs and other platforms to seek waivers to the transparency requirements in advance of the data-collection phase. ■

ISDA Launches New Clearing Letter

ISDA has published a new classification letter that will enable counterparties to notify each other of their status for clearing requirements under Australia's mandatory central clearing regime for derivatives.

The ISDA Clearing Classification Letter (Australia - ASIC Clearing Classifications) contains two appendices that relate to the Australian Securities and Investments Commission's (ASIC) clearing rules. Together, the letter and appendices will enable counterparties to bilaterally communicate their clearing status by answering a series of questions.

The new letter and appendices follow the launch last year of the ISDA EMIR Classification Letter, which enabled counterparties to notify each other of their status for clearing and other regulatory requirements under the European Market Infrastructure Regulation (EMIR). Other jurisdiction-specific appendices may be launched in the future.

ISDA is working with Markit to make the classification letter available on ISDA Amend, an online service developed by the two organisations. ■

ISDA Testifies on Data Harmonisation

Global regulators should follow recommendations on data standards from the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO), and should leverage existing market standards where necessary, ISDA's co-head of data, reporting and FpML, Tara Kruse, told US legislators in February.

Testifying before the House of Representatives Committee on Agriculture Subcommittee on Commodity Exchanges, Energy, and Credit on February 25, Kruse told members that regulators are finding it challenging to aggregate reported data as a result of a lack of consistency in reporting requirements within and across jurisdictions.

"US regulators have struggled to fully understand and optimise the data being reported," she said. "Also, they are not in a position today to receive a complete picture of global risk exposures. This comprehension is impeded by a lack of regulatory endorsed, globally consistent standards that facilitate efficient, accurate data reporting that is suitable for aggregation and systemic risk analysis."

The challenge is exacerbated by the fact that each regulator has developed its own set of reporting requirements and its own list of reportable fields, without taking existing market standards and conventions into account. These differences even exist within jurisdictions, Kruse said, pointing to divergences in reporting rules between the US Commodity Futures Trading Commission (CFTC) and Securities and Exchange Commission (SEC).

"These differences are unnecessary and prevent regulators from meeting the Group-of-20 (G-20) objective of monitoring and mitigating systemic risk. They also run counter to regulators' commitment to implement consistent global standards," said Kruse.

The answer is not to require more data to be reported, she said. Instead, regulators should work together and with the industry to agree on globally consistent reporting requirements, as well as data and messaging standards.

Kruse set out several steps that could be taken by global regulators and legislators to improve data reporting and systemic risk monitoring, while at the same time reducing cost and complexity for reporting parties.

> "ISDA supports the intent of the G-20 and the Dodd-Frank Act to improve transparency in derivatives markets and to ensure regulators have the information they need to monitor systemic risk"
>
> *— Tara Kruse, ISDA*

First, agreement on common standards should be achieved in coordination with the recommendations of the CPMI-IOSCO data harmonisation group. The CFTC, SEC and other regulators should align with this global initiative and not engage in further overlapping and potentially contradictory data proposals, she said.

Regulators should also work with industry initiatives, such as the ISDA Symbology project to develop common derivatives product identifiers, to ensure regulatory requirements match with industry defined terms and practices. Existing derivatives messaging standards, such as Financial products Markup Language (FpML), should be leveraged where possible.

In addition, the CFTC and SEC should avoid issuing their own proposals for data, and should work to ensure their respective rules are more consistent. Finally, regulators should agree on a meaningful set of globally consistent data fields that enables them to meet their regulatory objectives.

"ISDA supports the intent of the G-20 and the Dodd-Frank Act to improve transparency in derivatives markets and to ensure regulators have the information they need to monitor systemic risk," Kruse wrote in her submitted testimony. "ISDA has worked with its members to drive implementation of this objective in its work to develop common taxonomies and messaging standards. ISDA's work to drive implementation is also exemplified by the recent establishment of the ISDA Symbology project to develop a common product identifier for regulatory and reference data purposes." ■

Read a more detailed article on data on pages 40-44.

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MIFID II: Wait for CPMI-IOSCO on Product Identifiers

In early February, the Committee on Payments and Market Infrastructures (CPMI) and International Organization of Securities Commissions (IOSCO) ran a workshop in Washington, DC to discuss efforts to develop global, harmonised data standards for derivatives.

ISDA believes this is an important – and welcome – initiative. Existing regulatory reporting regimes have been hampered by differences in reporting rules between jurisdictions, variations in reporting formats and a lack of global standards, making it tough to aggregate data across trade repositories and across borders.

The workshop focused on three key topics, each covered by consultation papers issued last year: unique transaction identifiers, unique product identifiers and other data elements.

ISDA strongly supports this initiative. Agreement on common standards will be a major step on the path to harmonisation, and will improve the ability of supervisory authorities to aggregate data across trade repositories. It will also hopefully go some way towards reducing costs and complexity for reporting parties, particularly those that are subject to multiple reporting requirements.

ISDA has been contributing to this effort, and launched an industry wide Symbology project last year to develop a common product identifier for regulatory and reference data purposes. This initiative will incorporate the recommendations made by CPMI-IOSCO.

> Existing regulatory reporting regimes have been hampered by differences in reporting rules between jurisdictions, variations in reporting formats and a lack of global standards

Despite this progress, the risk of fragmentation remains. In Europe, for example, the European Securities and Markets Authority (ESMA) has chosen ISINs as the sole identification standard under the revised Markets in Financial Instruments Directive and regulation (MIFID II/MIFIR). The final draft regulatory technical standards were published in September last year – after CPMI-IOSCO had begun its harmonisation initiative – and was being reviewed by the European Commission (EC) as *IQ: ISDA Quarterly* went to press.

The risk is that the MIFID II/MIFIR requirements may end up not reflecting the final global recommendations by CPMI-IOSCO. Certainly, there are a number of challenges associated with using ISINs in their current form for derivatives. ISINs work well for bonds, where an issuer can apply for an identifier in advance of issuance. In contrast, there isn't an issuance process for derivatives: each contract is created through the act of trading and in response to client requests.

What's more, each derivative can differ to suit the needs of the counterparties, with variability in everything from maturity to day-count convention. While a single bond with a single ISIN can be bought and sold by multiple participants, each derivative trade could theoretically require a unique ISIN to reflect the variability in terms. This means the number of ISINs required each day could run into the millions, way in excess of what is currently issued.

As it stands, ISINs can only be created by a network of national numbering agencies that are sole providers of the identifier in their local markets. Putting aside the lack of competition this creates, current turnaround times for new ISINs would need to be dramatically sped up in order to satisfy derivatives market practices.

ISDA is working with regulatory authorities, the International Organization for Standardization and the Association of National Numbering Agencies to consider how the ISIN could be modified to cater for derivatives.

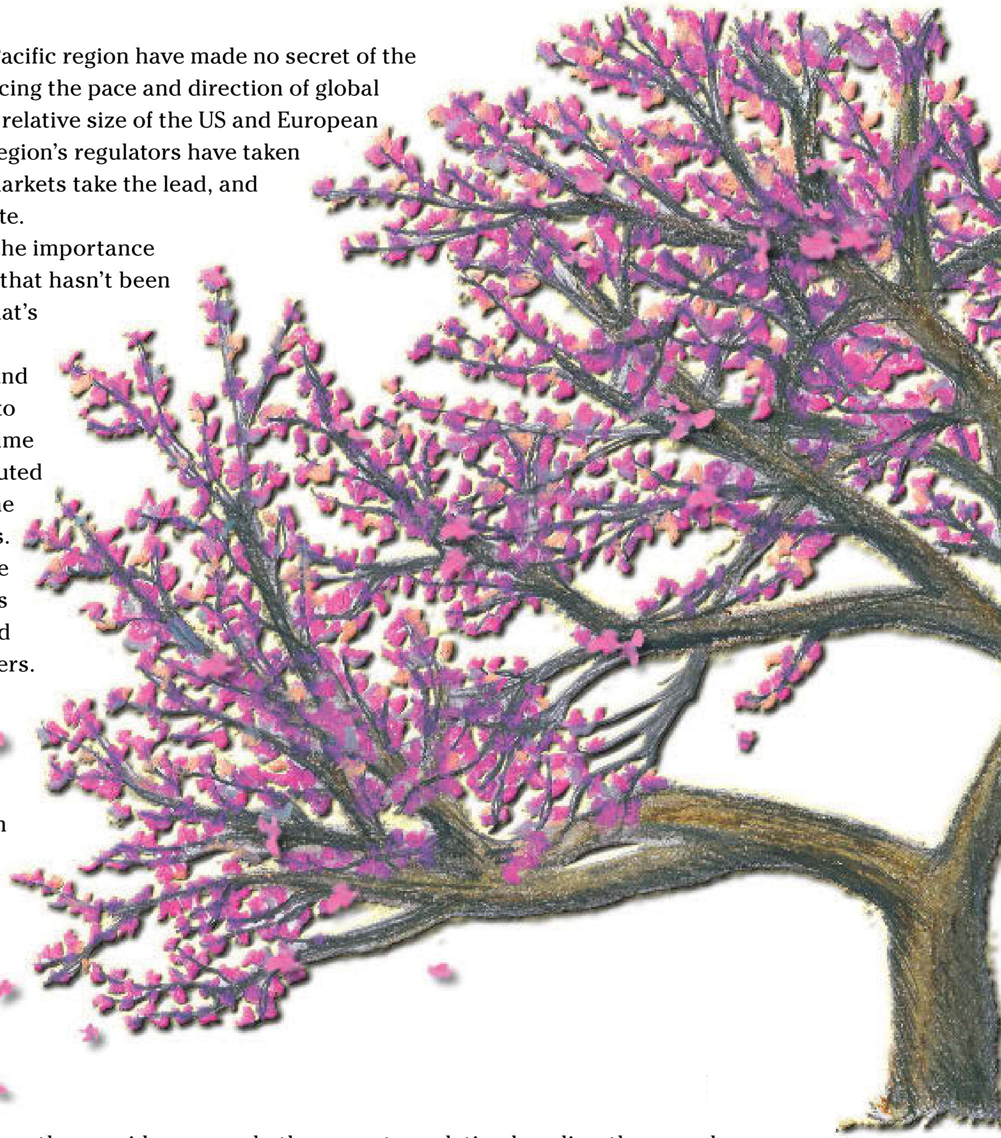
> Having different derivatives product identifiers for different purposes in different regions creates significant costs and complexity for users and market infrastructures, for little benefit

Nonetheless, we believe it is important that European authorities allow the flexibility to incorporate the recommendations from CPMI-IOSCO within MIFID II/MIFIR, rather than tying themselves to ISINs now. (ISDA and the Global Financial Markets Association wrote a letter to the EC in December 2015, which outlined these issues.) Having different derivatives product identifiers for different purposes in different regions creates significant costs and complexity for users and market infrastructures, for little benefit. The optimal solution would be to use a product identifier solution that is global in application and consistent across jurisdictions.

Both regulators and market participants agree on the importance of global harmonisation. Real progress is being made by both CPMI-IOSCO in agreeing global standards for data, and by the industry through ISDA's Symbology initiative. It would be unfortunate if individual regulators go their own way now, when we're so close to a common standard. ■

ISDA chief executive Scott O'Malia offers informal comments on important derivatives issues in *derivatiViews*, reflecting ISDA's long-held commitment to making the market safer and more efficient. Read additional *derivatiViews* at: http://isda.derivativiews.org/.

Poised for Growth?



A NUMBER OF REGULATORS in the Asia-Pacific region have made no secret of the fact that they have no intention of forcing the pace and direction of global derivatives reform. Recognising the relative size of the US and European derivatives markets, some of the region's regulators have taken the view that it would be better to let those markets take the lead, and then try to align with their rules once complete.

It's a pragmatic approach that recognises the importance of cross-border trading. But it's an approach that hasn't been entirely straightforward. To a large extent, that's down to the divergences that have emerged between European and US clearing, trading and reporting rules, which have made it difficult to decide which regulations to align with. The time and complexity involved in obtaining substituted compliance/equivalence determinations in the US and Europe have created other challenges. But divergences in timing and substance have also emerged in local implementations across the region, which have added to the costs and complexity faced by regional and global players.

This issue of *IQ: ISDA Quarterly* features a series of articles on the Asia-Pacific deri atives market to mark the 31st ISDA annual general meeting (AGM) in Tokyo. The first article charts the progress that has been made in implementing derivatives reforms across the region – and the cross-border challenges that have emerged (see pages 19-23). Our survey of Asia-Pacific derivatives users gives some flavour of the impact the reforms have had. Notably, a large propo tion of respondents say liquidity has been affected since new regulations came into force (see pages 12-16).

Despite observations like these, there's currently no evidence on whether or not regulation has directly caused any changes in market dynamics. Speaking to *IQ: ISDA Quarterly*, Masamichi Kono, vice-minister for international affairs at the Japanese Financial Services Agency, says the time is right to conduct a comprehensive impact study to try and determine the overall effect of regulatory change. And he says regulators should not be shy about mod ifying the rules if the evidence suggests it is needed (see pages 28-32).

Regulatory implementation and impact will be central themes at this year's AGM. Our final article previews some of the issues that will be discussed at the conference (see pages 24-27). ■

Snapshot of Asia-Pacific

Good progress has been made in implementing new regulatory reforms in Asia-Pacific, but the derivativesmarkets are braced for a newwave of clearing mandates,capital requirements and margining rules. *IQ: ISDA Quarterly* asks derivatives users in Asia-Pacific about the opportunities and challenges they face in the region

ASIA-PACIFIC'S DERIVATIVES USERS are concerned about an apparent decline in liquidity and a decrease in the willingness of US and European dealers to quote prices in the region. Capital and clearing rules have been the big regulatory focus over the past year, but margining requirements for non-cleared derivatives are expected to zip to the top of the agenda over the next 12 months.

These are the high-level findings from an ISDA survey of dealers and end users active in the Asia-Pacific derivatives markets. The results show that derivatives are seen as important risk management tools by participants in Asia's markets, but the survey suggests the market is undergoing some changes in terms of participants, pricing and availability of products. Adoption of new regulations is also having an effect, with clearing, reporting, capital and margin rules among those cited as having most impact.

The survey, conducted ahead of ISDA's 31st annual general meeting in Tokyo, was completed by 157 respondents, split between dealers, non-dealer financial institutions and asset managers. Firms across the region participated, with the biggest geographic concentrations in Singapore, Australia and Hong Kong.

A common theme from the survey is one of change. In particular, 50% of respondents said liquidity had declined for some or all of the derivatives products they trade compared with two years ago (see Chart 1). What's more, 43.4% identified a decline in the willingness of US and European dealers to offer prices to regional counterparties. Just under 30% of respondents thought bid/

AT A GLANCE

Half of Asia-Pacific derivatives users that responded to an ISDA survey said liquidity had deteriorated for some or all of the derivatives products they use over the past two years.

43.4% said US and European dealers were less willing to provide quotes to regional participants.

40.7% think these changes have affected their ability to manage risk, and 39.5% said there had been no impact.

Capital requirements and overseas clearing mandates were flagged as having had the biggest regulatory impact on Asia-Pacific derivatives markets so far.

Margining requirements for non-cleared derivatives are expected to have the biggest impact in the next 12 months.

CHART 1: HOW WOULD YOU CHARACTERISE LIQUIDITY IN THE ASIA-PACIFIC DERIVATIVES MARKETS AS A WHOLE AT THE MOMENT COMPARED WITH TWO YEARS AGO?

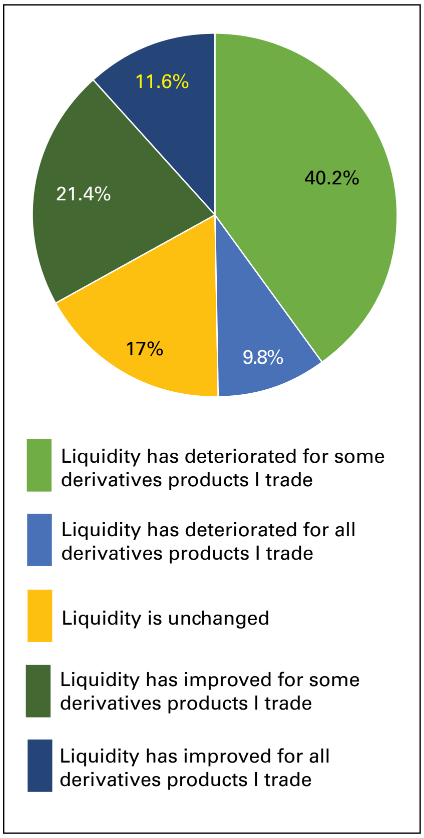
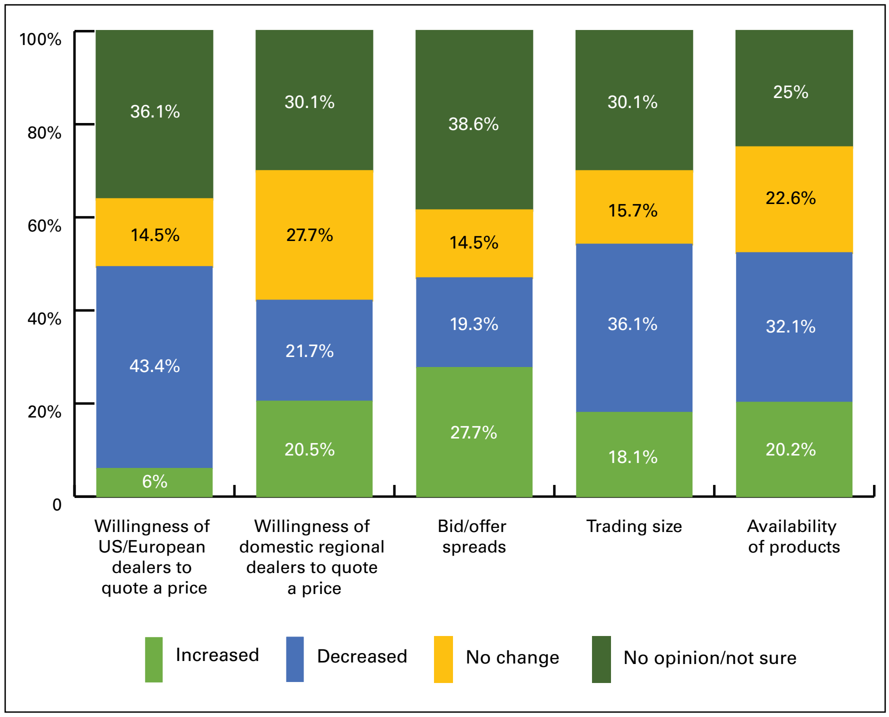


CHART 2: HAVE YOU OBSERVED CHANGES IN ANY OF THE FOLLOWING AREAS FOR ANY DERIVATIVES INSTRUMENT OVER THE PAST YEAR?

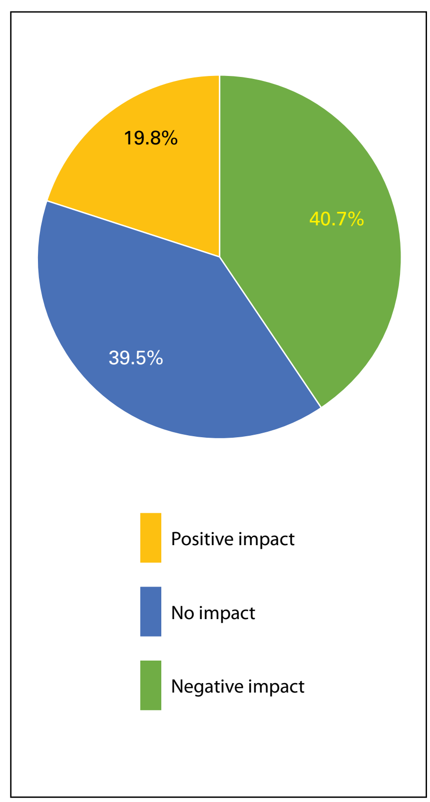


offer spreads had increased, and 36.1% highlighted a drop in trade size (see Chart 2).

These changes don't appear to have fed through to all derivatives users in the region, however. While 40.7% said altered market dynamics had had a negative impact on their ability to manage risk, a similar proportion – 39.5% – said they'd noticed no impact (see Chart 3). That could partly be due to the continued participation of domestic Asian dealers: 27.7% of respondents said they'd seen no change in the willingness of regional dealers to offer prices, versus 21.7% who said they had noticed a decline.

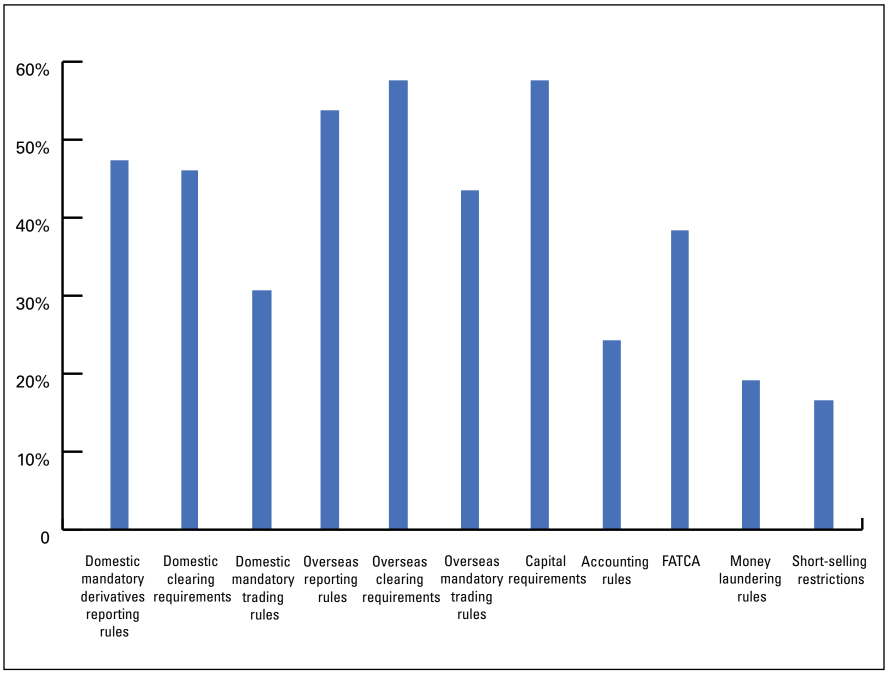
Concerns about changes in derivatives market liquidity have been a hot topic globally for more than a year, triggered by bouts of high volatility and dislocations in a range of cash and derivatives markets. Some observers have argued that changes in regulations have been the trigger for a decline in liquidity, with banks less willing to absorb risk as a result of tough new balance-sheet constraints. However, evidence proving cause and effect is patchy at best – prompting some participants to call for a comprehensive study to determine the impact of the full regulatory reform agenda (see pages 28-32).

CHART 3: WHAT IMPACT HAVE THESE CHANGES HAD ON YOUR FIRM'S ABILITY TO MANAGE RISK?



> A common theme from the survey is one of change. In particular, 50% of respondents said liquidity had declined for some or all of the derivatives products they trade compared with two years ago

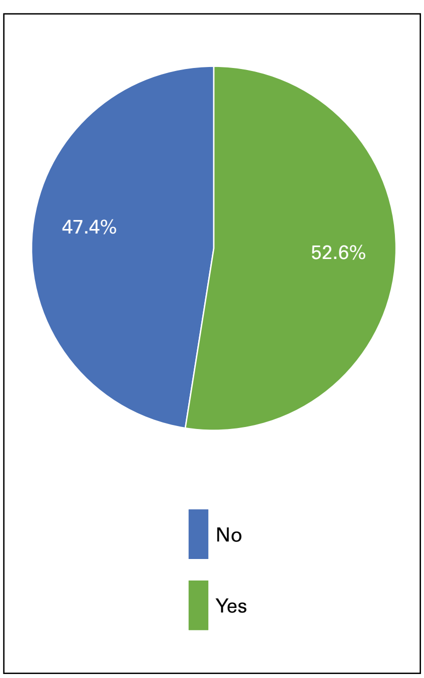
CHART 4: WHICH REGULATIONS HAVE HAD THE MOST EFFECT ON THE ASIA-PACIFIC REGION SO FAR?



Capital

Irrespective of this debate, regulatory implementation is being felt across the region. When asked which regulatory changes had made the biggest impression

CHART 6: DO YOU CURRENTLY CLEAR DERIVATIVES THROUGH A CCP?



on Asia-Pacific markets so far, 57.7% pointed to bank capital requirements (see Chart 4). This follows the rollout of a variety of new capital, liquidity and leverage requirements as part of Basel III, including a capital charge for credit valuation adjustment and the introduction of a liquidity coverage ratio.

While elements of the new capital framework are already in place across the region, including the phased implementation of higher and better-quality capital, other components of the reform package are still to emerge. This is something Asia's derivatives users are very much aware of: 54.1% of respondents identified capital requirements as likely to have a big impact on Asia-Pacific derivatives markets in the next 12 months (see Chart 5).

One of the most important outstanding elements is the Fundamental Review of the Trading Book (FRTB). The Basel Committee on Banking Supervision published its final rules in January 2016, bringing to a conclusion a four-year project to make the trading book rules more coherent and consistent and to introduce a new, more risk-sensitive standardised approach in an attempt to narrow the gap between internal and standard model outputs. It's not yet clear what impact these rules will have, but, based on earlier impact-study results adapted to take account of calibration changes in the final rules, the Basel Committee estimates the revised standards will result in a weighted mean increase of approximately 40% in total market risk capital requirements. ISDA and other trade associations are currently running a comprehensive industry impact study on the final text.

Other components still to be fully felt include the net stable funding ratio, which is meant to ensure banks fund their activities with sufficiently stable sources of funding to avoid liquidity mismatches. The leverage ratio, meanwhile, introduces a non-risk measure based on overall balance-sheet exposure, with strict limits on netting. Under the Basel III implementation schedule, both measures are due to be fully implemented in 2018.

However, the Basel Committee is expected to revisit elements of the leverage ratio – in particular, the impact on client-clearing businesses. As it stands,

CHART 7: DO YOU EXPECT TO CLEAR DERIVATIVES THROUGH A CCP IN THE NEXT 12 MONTHS?

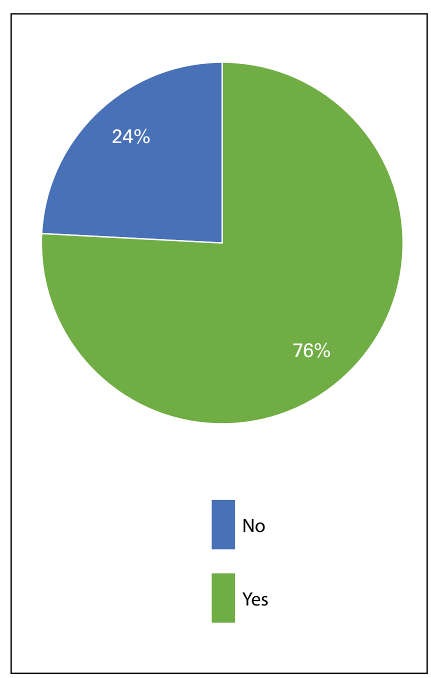
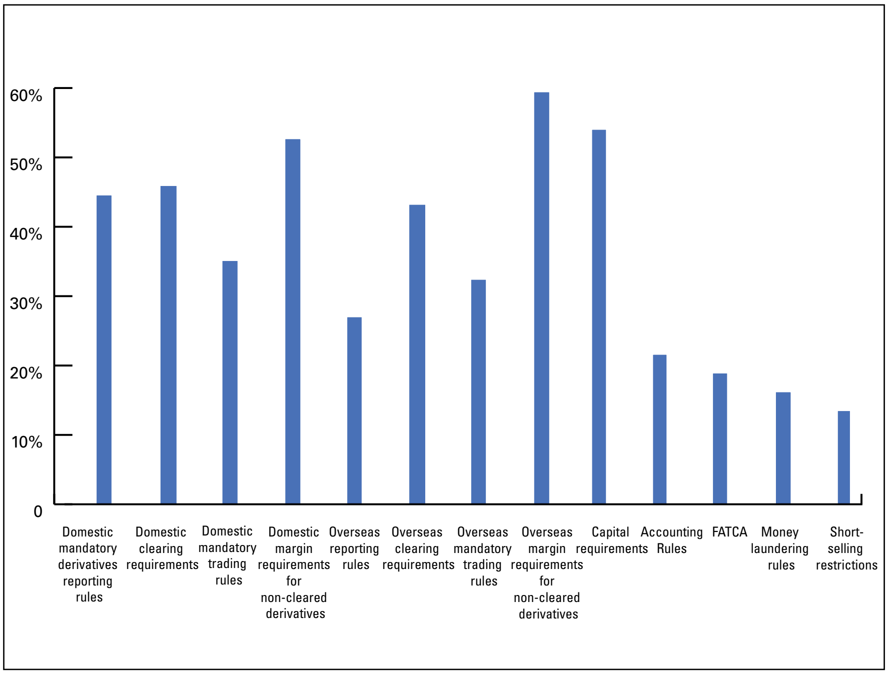


CHART 5: WHICH REGULATIONS DO YOU EXPECT TO HAVE THE MOST EFFECT ON THE ASIA-PACIFIC REGION OVER THE NEXT 12 MONTHS?



the leverage ratio doesn't recognise the exposure-reducing effect of properly segregated client cash collateral, which would increase the amount of capital needed to support client clearing activities. This could discourage banks from participating in this business, reducing access to clearing services for end users, market participants argue.

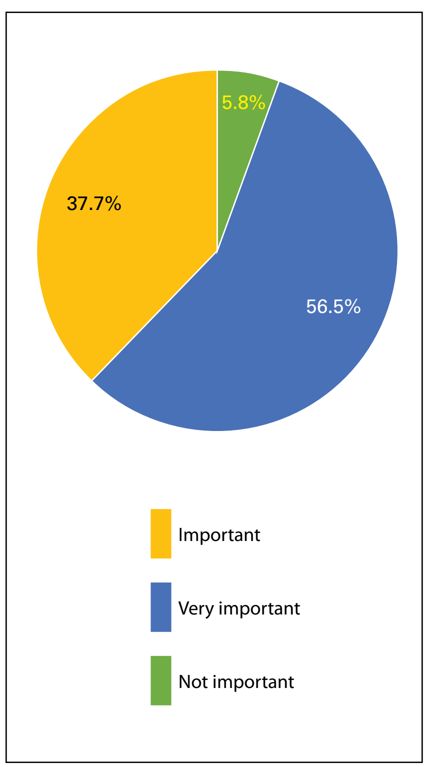
Clearing

Central clearing has been another important area of focus for Asia's derivatives users. Mandatory clearing obligations for certain yen-denominated interest rate swaps and Japanese credit default swap (CDS) index products have been in place in Japan since November 2012. The US rolled out its own mandates for some interest rate and CDS index products in 2013, and China, India and South Korea have also introduced limited clearing obligations.

With the introduction of clearing mandates in Asia at a relatively early stage, most respondents to the survey pointed to overseas clearing requirements as having had the bigger effect on Asia-Pacific derivatives markets so far. In fact, this was highlighted as the joint-top regulatory factor affecting the region, with 57.7% of the vote.

That focus looks set to change in the year ahead, with several new clearing mandates expected to emerge. Europe, Hong Kong and Singapore are all scheduled to implement clearing mandates in the next 12-18 months, while Australia is targeting April 2016 for its first clearing obligation. As a result, more respondents flagged domestic clearing requirements (45.9%) as likely to have most impact over the next 12 months, compared with 43.2% for overseas clearing rules.

CHART 8: HOW IMPORTANT ARE DERIVATIVES (WHETHER CLEARED OR NON-CLEARED) TO YOUR FIRM'S RISK MANAGEMENT?



> Central clearing has been another important area of focus for Asia's derivatives users

As more clearing mandates are implemented, it will become increasingly important that cross-border issues that restrict the choice of clearing venues are resolved. Recent progress has been made by US and European Union (EU) authorities to pave the way for substituted compliance/equivalence determinations for US and EU central counterparties (CCPs), but challenges remain. While several third-country CCPs in Asia have received recognition from the European Securities and Markets Authority, including clearing houses in Australia, Hong Kong, Japan and Singapore, others have not. The impact could be significant: any product cleared through a non-recognised CCP by European banks or their affiliates would eventually be subject to significantly higher capital requirements under European rules, potentially acting as a brake on participation in those markets by European firms.

Similar issues exist under US rules. So far, only Singapore's SGX has registered as a derivatives clearing organisation (DCO) under Commodity Futures Trading Commission (CFTC) regulations. Several others, including CCPs in Australia, Hong Kong, Japan and South Korea, have received CFTC exemptions from DCO registration. This allows them to clear the proprietary swaps of US clearing members but not the trades of their US clients (see pages 19-23).

These issues are likely to come to the fore as more Asian participants begin clearing their derivatives trades. According to the survey, 52.6% of respondents currently clear through a CCP (see Chart 6). When asked whether they expect to clear within the next 12 months, that number shoots up to 76% (see Chart 7).

Margin

While clearing rules will continue to be a focus, the regulatory issue expected to have most impact over the next 12 months is the rollout of margining requirements for non-cleared derivatives. These rules, which will require covered entities to exchange initial and variation margin on non-cleared trades, will begin for the largest phase-one firms from September 2016.

Significant work remains to be completed before the rules come into effect.

CHART 9: DO YOU EXPECT YOUR FIRM'S USE OF DERIVATIVES IN 2016 TO INCREASE, DECREASE OR STAY THE SAME COMPARED WITH 2015?

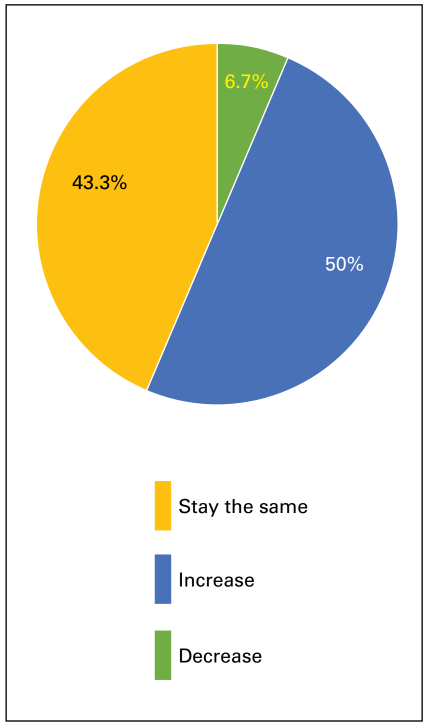
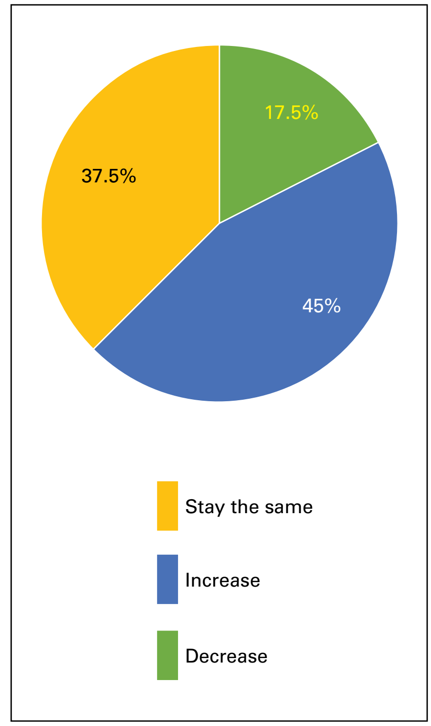


CHART 10: DO YOU EXPECT YOUR FIRM'S DERIVATIVES TRADING VOLUMES IN ASIA-PACIFIC IN 2016 TO INCREASE, DECREASE OR STAY THE SAME COMPARED WITH 2015?



> The regulatory issue expected to have the most impact over the next 12 months is the rollout of margining requirements for non-cleared derivatives

Outstanding collateral agreements will need to be revised to incorporate new regulatory requirements, and systems and infrastructure will need to be adapted to manage the exchange of collateral between counterparties. Much of this work cannot be completed until final rules are published by national regulators. The US prudential regulators and the CFTC published their rules at the end of last year. The European supervisory authorities published their version as *IQ: ISDA Quarterly* went to press, and Japanese authorities are expected to finalise their requirements imminently.

ISDA has worked with industry participants to prepare for implementation, with numerous initiatives under way in the legal and documentation space and in dispute resolution. A key part of the implementation initiative is the development of a standard initial margin model (ISDA SIMM), which will establish a consistent methodology for counterparties to calculate how much initial margin needs to be exchanged.

Given the scale of these changes, 59.5% of respondents pointed to overseas margin rules as likely to have a big impact on Asia-Pacific markets over the next 12 months. A little over 50% flagged the implementation of domestic non-cleared margin rules.

Despite these pressures on the market, Asia-Pacific participants seem optimistic about their use of derivatives in the year ahead. Nearly 95% of end-user respondents said derivatives were important or very important to their risk management strategies (see Chart 8), while 93.3% of end users thought their use of derivatives would increase or stay the same in 2016 versus 2015 levels (see Chart 9). In comparison, 82.5% of dealer respondents thought their firm's trading volumes in Asia-Pacific would increase or stay the same in 2016 (see Chart 10).

Further Reading

In addition to the ISDA survey of dealers and end users active in the Asia-Pacific derivatives markets, ISDA has published other surveys on the issues and trends for the derivatives end-user community:

- ISDA Insight, April 2015, http://isda.link/insightapril2015
- ISDA Insight, January 2015, http://isda.link/insightjan2015
- ISDA Insight, September 2014, http://isda.link/insightsep2014 ■

Further survey research is available on ISDA's website: www.isda.org/functional-areas/research/surveys.

A Pragmatic Approach

Regulators across Asia have taken a cautious and practical approach to derivatives reform, but with each market pursuing its own objectives, further coordination may be needed to preserve cross-border integrity

Of the Group-of-20 (G-20) nations that committed in 2009 to reform the derivatives market, no less than six – Australia, China, India, Indonesia, Japan and South Korea – were based in the Asia-Pacific region. Add in Hong Kong and Singapore, which as international financial centres voluntarily opted into the regime, and derivatives regulation in the region has the makings of a cross-border quagmire of conflicting rules.

In 2016, with implementation of central clearing and trade reporting well advanced across Asia, and non-cleared margin rules due to take effect in September, there are reasons for both optimism and pessimism. Regulators have, for the most part, been conscious of the need to tread carefully, aligning with other jurisdictions and preserving cross-border trading where possible. But Asian markets have not been immune to the extraterritorial reach of other regulators, and a number of pressure points have emerged.

Eric Litvack, ISDA

"In Asia, there has not been anything like the fervour for a backlash against financial markets and banks that we saw in the US and Europe, and regulators have been generally pragmatic about the G-20 requirements, with the primary objective of not destabilising their own markets. In some cases, however, there has been a move to impose a degree of locality to clearing and reporting obligations, which is a concern from the perspective of preserving a global market," says Eric Litvack, chairman of ISDA.

AT A GLANCE

Six of the G-20 nations are based in Asia-Pacific, while Hong Kong and Singapore have voluntarily agreed to meet the G-20 commitments.

Regulators have made good progress in implementing clearing and reporting commitments, often taking their lead from the US and Europe.

Many Asian jurisdictions have opted to delay implementation of trade execution rules.

Only Australia, Hong Kong, Japan and Singapore have issued consultations for the margining of non-cleared derivatives.

Despite the pragmatic approach to implementation in Asia, cross-border challenges have emerged, particularly with regards to CCP recognition and reporting.

Given the many different jurisdictions, regulators and market infrastructures that exist in Asia, implementation of the G-20 commitments poses very different challenges to those in the US and Europe. The current status of clearing, central counterparty (CCP) recognition, trade reporting, electronic platform trading and non-cleared margin rules across the region highlights the diversity that exists in different markets (see Table 1 on page 21).

Some of the differences between jurisdictions, such as scattered timelines for introducing products to mandatory clearing and trade reporting, may turn out to have little impact in the long term. But other issues, such as domestic and international treatment of CCPs and trade repositories, could require more dialogue between practitioners and regulators to ensure the smooth functioning of the global derivatives market is not compromised.

Clearing

While most regulators in Asia have opted to follow rather than lead other jurisdictions in implementing derivatives reforms, Japan was in fact the only G-20 nation to meet the original commitment to clear over-the-counter (OTC) derivatives through CCPs by the end of 2012. Its clearing mandate, introduced in November 2012, preceded those of both the US and Europe.

A phased approach to the entities required to clear under Japan's Financial Instruments and Exchange Act began with domestic dealers clearing yen-denominated interest rate swaps and Japanese index credit default swaps from November 2012. That was followed in December 2014 by financial institutions with derivatives notional outstanding volume of more than ¥1 trillion ($8.9 billion), and subsequently by those with more than ¥300 billion in December 2015. In December 2016, insurance companies and trust accounts will also be expected to clear.

The Japan Securities Clearing Corporation (JSCC) was the country's only registered CCP as *IQ: ISDA Quarterly* went to press, and it also secured recognition as a third-country CCP under the European Market Infrastructure Regulation (EMIR) last year.

"Japan has made good progress on clearing so far, with yen-denominated interest rate swaps successfully clearing through JSCC for several years. The European recognition of the JSCC is significant because it means Japanese banks will be able to continue to use the JSCC when they trade with European counterparties under EMIR," says Koji Sakurai, senior vice-president and head of the business planning team in the derivative products division at Mizuho Bank, and an ISDA board member.

While trading links between Japan and Europe may be preserved by the European Securities and Markets Authority's (ESMA) decision to recognise the JSCC, not all CCP recognition procedures have been quite as straightforward. Following Japan's lead, clearing mandates have now been implemented in China, India and South Korea, and are due to come into force in Australia, Hong Kong and Singapore over the next year or so. Each of those markets has its own nationally recognised CCP, but not all are yet recognised in other key jurisdictions.

> "Japan has made good progress on clearing so far, with yen-denominated interest rate swaps successfully clearing through JSCC for several years"
> *— Koji Sakurai, Mizuho Bank*

In addition to the JSCC, third-country CCPs now recognised by ESMA include those operated by Australia's ASX, Hong Kong Exchanges and Clearing (HKEx) and Singapore Exchange (SGX). Neither South Korea nor India had obtained clearing-house recognition at press time, although CCPs in both countries had applied to ESMA. China's Shanghai Clearing House has not applied to ESMA for recognition, however.

Gaining recognition under EMIR may not be an obvious priority for a CCP based in the Asia-Pacific region, but the consequences of not being recognised could be fairly serious for a market's international status. It would not only mean that European banks would be unable to use that CCP for products mandated for clearing under EMIR, but any products cleared through the CCP by European banks or their affiliates would eventually attract higher capital charges under the European Union's capital requirements regulations.

"The global banks are all looking for a prescribed list of globally recognised CCPs that they can join to meet local clearing mandates, but the process of gaining approval has been lengthy and complex in a number of countries. This is an issue of mounting importance because the costs of booking trades at non-qualifying CCPs will rise as Basel III and Europe's capital requirements regulations are implemented," says Keith Noyes, regional director for Asia-Pacific at ISDA.

Recognition of Asian CCPs has been even more challenging when it comes to the US Dodd-Frank Act, which requires US persons to clear mandated products through derivatives clearing organisations (DCOs) registered with the Commodity Futures Trading Commission (CFTC). This would require overseas CCPs to meet CFTC requirements for DCOs, as well as the rules in their own jurisdictions, potentially exposing them to duplicative obligations.

An alternative is to apply for a DCO exemption, which allows the exempt clearing house to clear the proprietary swaps of US clearing members but not their US client trades. So far, only SGX has registered with the CFTC as a DCO, while ASX, HKEx, JSCC and Korea Exchange have all gained DCO exemptions.

In the case of JSCC, the decision to seek an exemption was made in 2014, after it initially applied for full DCO registration. Differences between US and Japanese rules over asset segregation are understood to have played a part in the JSCC's decision, as Japanese law doesn't allow for client assets to be segregated, while the CFTC requires DCOs to segregate.

For market practitioners, the fragmented nature of CCP recognition in Asia makes the trading of interest rate and credit derivatives much more challenging. Business must now be evaluated on a trade-by-trade basis to determine which CCPs can legally be used, as well as the cost implications of using non-recognised CCPs.

"The industry has adapted well to clearing ahead of mandates being introduced, but we are watching CCP recognition very carefully because it will inevitably impact what services we can offer to clients. For CCPs that don't get equivalence, there will be an additional capital charge to bear," says Natalia Watkins, head of regulatory change for Asia-Pacific at HSBC.

> "The industry has adapted well to clearing ahead of mandates being introduced, but we are watching CCP recognition very carefully because it will inevitably impact what services we can offer to clients"
>
> *— Natalia Watkins, HSBC*

Reporting

At face value, the reporting of OTC derivative contracts to trade repositories would appear to be the most straightforward of the G-20 commitments, requiring only the submission of information rather than the physical exchange of assets or the use of multiple new infrastructures. But reporting has been riddled with challenges, not least the difficulty of reconciling trades and entities with the necessary numerical identifiers and submitting them to repositories in the required format.

Mandatory trade reporting is now in place in some form in most jurisdictions in Asia with the exception of Indonesia, which, despite being a G-20 member state, has a very small derivatives market and has not yet implemented any of the reform commitments. For the countries that do have reporting regimes in place, there

TABLE 1: ASIA-PACIFIC REGULATORY IMPLEMENTATION SUMMARY

Jurisdiction	Mandatory Clearing	CCP Recognition Status	Mandatory Reporting	Electronic Platform	Non-cleared Derivatives Margining
Australia	Yes, **Apr 4, 2016**	ESMA - Yes CFTC - DCO exempt	Yes, **Oct 2013**	N/A	Consult closes in **May 2016**
China	Yes, **Jul 1, 2014**	ESMA - No CFTC - No	Yes	N/A	No announced plans
Hong Kong	Consult **Oct 2015** Expected **Jul 1, 2017**	ESMA - Yes CFTC - DCO exempt	Yes, **Jul 10, 2015**	N/A	Consult concluded **Jan 2016**
India	Yes, **Jun 2, 2014**	ESMA - Expected CFTC - Application for DCO exempt status	Yes	N/A	No announced plans
Indonesia	No announced plans	N/A	No announced plans	N/A	No announced plans
Japan	Yes, **Nov 1, 2012**	ESMA - Yes CFTC - DCO exempt	Yes, **Apr 1, 2013**	Yes, **Sep 1, 2015**	2nd consult **Dec 11, 2015** To be effective on **Sep 1, 2016**
Malaysia	No announced plans	N/A	No announced plans	N/A	No announced plans
Singapore	Consult **Jul 2015** Expected **Q2 2016**	ESMA - Yes CFTC - DCO registered	Yes, **Apr 2014**	N/A	Consult concluded **Oct 2015**
South Korea	Yes, **Jun 30, 2014**	ESMA - Expected CFTC - DCO exempt	Consult phase	N/A	No announced plans
Taiwan	No announced plans	N/A	Yes	N/A	Bespoke rules announced **Dec 29, 2015**
Thailand	No announced plans	N/A	Early consult phase	N/A	No announced plans

are nuanced differences between what information is required by repositories, which has ramped up the costs and resources required for compliance.

> "Anyone involved in trade reporting in this region has become very frustrated by the fact that the costs have always exceeded estimates, largely because of the unique requirements of many markets"
>
> *— Keith Noyes, ISDA*

"Regulators are all looking to achieve the same objective with trade reporting, but they may do it in slightly different ways. Unlike in the US and Europe, a high proportion of our trades in this region cross multiple jurisdictions, so small differences can result in a big increase in the technology required on our side and there is a need for common reporting platforms and data standards," says Watkins of HSBC.

One example is the Hong Kong Monetary Authority's (HKMA) own trade repository. Under Hong Kong rules, certain information is required to be captured that is not currently supported by most globally active repositories. That includes the reporting of so-called nexus trades, which are conducted in Hong Kong but may be booked offshore, as well as 'lifecycle adjustments', whereby a reporting mistake must be corrected in every historical report rather than just a snapshot correction.

The requirement to report nexus trades is particularly problematic if both counterparties happen to have a trade priced in a separate jurisdiction from where it is booked. This could lead to a single transaction being reported to as many as four separate trade repositories under four separate reporting regimes, resulting in the duplication of data.

"Hong Kong's reporting requirements have been fairly challenging for the market because they are different from what is required in other countries. The globally active repositories typically do not have the capability to make data amendments for the full lifecycle of the trade, for example, but that is something the HKMA considers very important. We have ended up with a situation in which banks are having to manually correct historical trade records, which is very cumbersome," says Noyes.

Beyond Hong Kong's reporting requirements, further challenges have arisen in jurisdictions such as Taiwan and India, which have implemented their own, unique domestic reporting regimes. That means banks that want to operate in those jurisdictions need to invest in additional technology to generate reports in the required format.

"Anyone involved in trade reporting in this region has become very frustrated by the fact that the costs have always exceeded estimates, largely because of the unique requirements of many markets," says Noyes. "This makes the goal of cross-border harmonisation of trade reporting requirements tremendously difficult, and undermines the purported regulatory benefits of a global set of data. In countries that do have local reporting infrastructure, we are advocating for banks to be allowed to do agency reporting through global

A QUESTION OF TIME

The local time in Tokyo is currently eight hours ahead of London and 13 hours ahead of New York. That's a time difference that regulators have been asked to consider more carefully, as it could introduce some major operational challenges for practitioners in Japanese and other Asian markets.

The point of concern is the time frame in which collateral must be calculated, called and settled under the non-cleared derivatives margin regime that will be phased in from September 2016. The original Working Group on Margining Requirements (WGMR) framework, led by the Basel Committee on Banking Supervision and International Organization of Securities Commissions, was not explicit on timing, and national regulators have taken different approaches in their proposals, ranging from the day after a trade is executed (T+1) to several days after.

In an example set out by ISDA and the Japan Financial Markets Council in a letter to the WGMR in December 2015, a European or US counterparty makes a margin call to a Japanese counterparty on T+1. Given timezone differences, the Japanese party can only revert on the following day, which is already T+2. It would then be difficult for the firm to post Japanese government bonds as collateral, as they settle on a T+2 basis, so it would have to either pre-fund margin or post cash or other collateral available on the same day. Both options would result in significantly increased costs.

"This is a big challenge for Japanese banks because our day starts and finishes so much earlier. For cleared trades, the initial margin figure is calculated by the central counterparty. But for bilateral trades, we will have to calculate and agree the margin figure and then post the collateral very quickly to the counterparty, in spite of timezone differences," says a senior official at one Japanese bank.

While ISDA and industry participants have recognised that a shorter settlement cycle would be the ideal outcome, the WGMR has been asked to recognise the impact of time differences and agree on a calibrated framework that could see the time between trade execution and margin settlement vary between T+1 and several days later.

repositories if possible, but this requires the adoption of global reporting fields and conventions."

Electronic Trading Platforms

Just two words in the original G-20 commitments – "where appropriate" – means many Asian regulators have determined the objective for OTC derivatives to be traded on exchanges or electronic platforms is not necessary in their jurisdictions. On the basis that trading volume and liquidity in Asia is much lower than in the US and Europe, all Asia-Pacific regulators except Japan have refrained from implementing a platform trading mandate for the time being.

In Japan, rules for trading on a new breed of electronic trading platforms (ETPs) came into effect in September 2015 for financial institutions with derivatives notional outstanding of more than ¥6 trillion. Initially, only yen-denominated interest rate swaps with a maturity of five, seven or 10 years are required to trade on ETPs. Given those thresholds for both entity and product, it was inevitable that trading volume on the seven registered ETPs should still be very modest at this stage, with only a handful of trades reported each day.

"At this stage, the threshold is set very high and only a limited set of products is mandated to trade on ETPs – I would estimate roughly 10% of volume is traded on ETPs. It is not yet clear when the mandate will be extended, but until that happens and as long as yen-denominated interest rate swaps are not mandated to trade on platforms in other countries, the regime is having a very limited impact," says Sakurai of Mizuho.

Non-cleared Margin Rules

On September 1, 2016, requirements for the collection and posting of initial margin on non-centrally cleared derivatives will begin for phase-one firms, marking the culmination of more than five years of work that began behind the closed doors of regulatory working groups and has more recently consumed the attention and resources of the industry.

But with just months to go until implementation, regulators across Asia are at varying stages of readiness. In Japan, Hong Kong and Singapore, consultations have been concluded, and final rules were expected from the Japanese Financial Services Agency (JFSA) as *IQ: ISDA Quarterly* was going to press. Australia launched a consultation in February, but China, India, Indonesia and South Korea have not as yet made any moves forward on margin requirements.

> "The non-cleared margin rules that have been proposed in Japan are very reasonable, but the big concern for Japanese banks is over cross-border conflicts that may arise when they trade with US or European counterparties"
>
> *— Tomoko Morita, ISDA*

"The timing of the margin rules is clearly a big concern, and while the initial timetable was delayed by nine months, we are still awaiting final rules in a number of jurisdictions. Our position has always been that we need a year's lead time from publication of final rules to implementation, because we can't rewrite contracts and complete the build without the exact wording in hand. Clearly, that is now not going to happen, which makes a smooth implementation more challenging," says ISDA's Litvack.

It's a view shared by Watkins of HSBC. "The delay in issuing final rules means the first phase of counterparties, which have to comply on September 1, will have less time for implementation. As these rules involve the physical transfer of assets, they need to be implemented very precisely and we will need to re-document all of our in-scope accounts, as well as set up new accounts with custodians. None of this can be finalised until we have the final rules," she says.

Of all jurisdictions in Asia, Japan has advanced furthest towards a final set of standards on non-cleared margin. While the JFSA proposals have been broadly welcomed by the industry as a fair reflection of international standards, a number of concerns have arisen over areas where Japanese rules may not square with those of other countries.

One example is in the Japanese proposal that margin must be exchanged as soon as practically possible after the trade. US final rules allow for T+1 settlement, while Singapore and Hong Kong have proposed T+2 and T+3, respectively. In a letter to the international Working Group on Margining Requirements in December 2015, ISDA called for adjustments to be made to facilitate the collection of margin from entities trading across time zones (see box, *A Question of Time*).

Further complications are posed by jurisdictions such as China that don't have netting laws in place. While Japan's proposed rules would exempt banks from posting collateral with a counterparty in a non-netting jurisdiction, given the difficulty of accessing it in a default scenario, other countries may impose a stricter threshold for the amount of business that can be done without posting collateral.

"The non-cleared margin rules that have been proposed in Japan are very reasonable, but the big concern for Japanese banks is over cross-border conflicts that may arise when they trade with US or European counterparties. We hope there will be further dialogue on both the settlement cycles and the treatment of non-netting jurisdictions, because both issues could create an unlevel playing field," says Tomoko Morita, senior director and head of the Tokyo office at ISDA. ■

Countdown to the AGM

As ISDA prepares to host its 31st annual general meeting in Tokyo, *IQ: ISDA Quarterly* considers a selection of the key issues that will be discussed. Implementation of forthcoming margin and capital requirements, and how to adapt to changes in market structure, feature prominently in the 2016 agenda

IT IS NEARLY seven years since the Group-of-20 (G-20) leaders met in Pittsburgh and sketched out, in broad strokes, the framework for derivatives regulatory reform. Since then, a huge amount of work has gone into adding vital intricate detail to this picture, as well as gearing up for implementation. Much of that work has now been completed.

Clearing mandates have been rolled out in several jurisdictions and are close to being introduced in others. According to US trade repository data compiled by ISDA SwapsInfo.org[1], 79.9% of interest rate derivatives (IRD) and 78.4% of credit default swap (CDS) index average daily notional volume was cleared in the fourth quarter of 2015. Trade execution rules are also in place in the US and Japan, and are expected in Europe from 2018. According to SwapsInfo.org, 57.7% of IRD and 75.2% of CDS index average daily notional volume was traded on a US swap execution facility in the last three months of 2015. Reporting requirements are now in force in many G-20 countries, giving regulators access to granular detail on each derivatives trade. And capital rules have been reformed to ensure non-cleared derivatives are subject to higher capital requirements.

But despite the progress, there's still much to do. And questions remain as to what the overall impact of the rules will be – as well as how derivatives users can best adapt to changes in market structure. These topics will be discussed in detail during ISDA's 31st annual general meeting (AGM) in Tokyo between April 12 and April 14.

> "Market participants have made a lot of progress in implementing the G-20 derivatives reforms, but questions remain about what the cumulative impact of these various changes will be"
>
> *— Scott O'Malia, ISDA*

"Market participants have made a lot of progress in implementing the G-20 derivatives reforms, but questions remain about what the cumulative impact of these various changes will be. Alongside regulatory

[1] ISDA SwapsInfo.org compiles swap data reported to the Bloomberg and Depository Trust & Clearing Corporation swap data repositories

amendments, market participants are also getting to grips with changes to market structure, and this year's AGM will focus on how derivatives participants are adapting as a result of challenges and in response to new opportunities," says Scott O'Malia, ISDA's chief executive.

Margin

Arguably one of the biggest outstanding issues is the implementation of non-cleared margin requirements. The initial groundwork was laid down in 2013 by the Working Group on Margining Requirements (WGMR), led by the Basel Committee on Banking Supervision and the International Organization of Securities Commissions (IOSCO). Since then, national regulators have been busy writing margining rules for their own jurisdictions. US prudential regulators finalised their rules in October 2015, followed by the Commodity Futures Trading Commission two months later. European supervisory authorities published their final requirements as *IQ: ISDA Quarterly* went to press, and Japanese regulators are expected to follow imminently. A handful of other jurisdictions, including Australia, Hong Kong and Singapore, have also issued consultations on the rules.

But with the requirements scheduled for phase in from September 2016, this leaves little time for market participants to complete the significant work necessary for implementation. Firms will need to revise thousands of their legal documents so they comply with the final rules. They will also need to ensure they have suitable technology to calculate margin, as well as set up systems and processes to govern the exchange and settlement of collateral in the relevant time frame. Some smaller firms will likely have to develop much of this from scratch. And while these smaller entities will have a longer phase-in for initial margin requirements, they will have to meet the March 2017 deadline for variation margin exchange.

ISDA has been working with the industry to prepare for implementation of the rules. At the centre of this initiative is the development of a standard initial margin model (ISDA SIMM), which is intended to reduce the potential for disputes over the amount of collateral that needs to be exchanged. ISDA has also been drawing up the necessary changes to collateral documentation in each jurisdiction, as well as looking at how these modifications can be applied in the most efficient way. Additional initiatives include the development of a common dispute resolution mechanism.

AGM Speaker Profile: Nobuchika Mori, commissioner, Financial Services Agency, Government of Japan

See him on: April 13, 9am[2]

Nobuchika Mori joined the Japanese Financial Services Agency (JFSA) in 2006, and has held various executive posts, including director-general for the supervisory bureau, director-general for the inspection bureau and vice-commissioner for policy coordination. He was appointed commissioner of the JFSA in July 2015. Prior to his posting to the JFSA, Mr Mori was chief representative for the Japanese Ministry of Finance (MOF) in New York for three years, and was director of the Industrial Revitalization Corporation of Japan Taskforce in the cabinet office from 2002 to 2003. Mr Mori joined the MOF in 1980, and held numerous senior roles there. From 1996 to 1999, he was seconded to the Inter-American Development Bank in Washington, DC, where he worked as deputy treasurer.

[2] All times are subject to change

"Significant work has already been done by ISDA and the industry in anticipation of the rules, but completion of these efforts is dependent upon the final text of the domestic regulations. While some national regulators have recently finalised their margin frameworks, it leaves little time for market participants to complete the many detailed documentation and infrastructure changes ahead of implementation," says Mary Johannes, head of the WGMR initiative at ISDA, who will moderate a discussion on the topic on the second day of ISDA's AGM on April 14.

> "Significant work has already been done by ISDA and the industry in anticipation of the rules, but completion of these efforts is dependent upon the final text of the domestic regulations"
>
> *— Mary Johannes, ISDA*

Trading Book

Another important issue is the implementation of capital rules for bank trading books. The Basel Committee's Fundamental Review of the Trading Book (FRTB) was finalised at the start of this year, following several consultations and quantitative impact studies (QISs) stretching back to 2012. Among other things, the new framework introduces a more risk-sensitive standardised model, desk-level approvals for internal models, and consideration of market liquidity. A primary motivation of the rules was to replace the batch of changes introduced via Basel 2.5 with a more coherent and consistent framework, and

AGM Speaker Profile: Yasuhiro Sato, president and group chief executive, Mizuho Financial Group

See him on: April 13, 9.30am

Yasuhiro Sato was appointed president and group chief executive for Mizuho Financial Group in June 2011. He has been a director since June 2009. Mr Sato has also served as chairman of the Japanese Bankers Association from April 2012 to March 2013 and from April 2015 to March 2016. From April 2009 to March 2014, he was president and chief executive officer of Mizuho Corporate Bank, which merged with Mizuho Bank in July 2013. From April 2007 to March 2009, he was deputy president of Mizuho Corporate Bank. Prior to that, Mr Sato served as managing director and head of corporate banking. Earlier positions include senior corporate officer of international banking. He joined the Industrial Bank of Japan in 1976, which merged with Dai-Ichi Kangyo Bank and Fuji Bank to create Mizuho Financial Group in 2000.

to bridge the gap between standardised and internal models

ISDA has coordinated a series of industry QISs to determine the impact of the new rules, most recently in October 2015. With the final rules now published, another industry QIS is currently under way.

> "The final rules on the FRTB represent a significant change from earlier versions. We have identified numerous alterations from the previous text"
>
> — *Mark Gheerbrant, ISDA*

"The final rules on the FRTB represent a significant change from earlier versions. We have identified numerous alterations from the previous text, and many of these have been made in highly significant areas," says Mark Gheerbrant, head of risk and capital at ISDA. "In partnership with our members and the wider industry, we have launched a new QIS to assess how these changes will affect bank balance sheets and we hope the results will be available at the conference in Tokyo."

A specialist session on the FRTB will run on the second afternoon of the AGM, on April 14.

Liquidity

The FRTB is not the only bank capital issue that will be debated at the AGM. Other issues include the net stable funding ratio, the review of the credit valuation adjustment capital charge and the leverage ratio. However, it is not clear what the cumulative impact of these various capital, liquidity and leverage requirements will be. Already, some firms have opted to scale back their investment banking operations or pull out of certain business lines, citing high capital and regulatory compliance costs.

The question is whether these changes have had an impact on liquidity and market efficiency. Those who think they have point to bouts of heightened volatility over the past year or so, and claim these events have been exacerbated by a reduced capacity by market intermediaries to absorb risk. But empirical evidence supporting these claims has proved elusive, prompting growing calls from both market participants and some regulators for a comprehensive impact study covering all areas of regulatory change.

A panel of market and regulatory experts will discuss whether capital reforms have affected bank risk-taking on the first afternoon of the AGM, on April 13.

Clearing

While some outstanding issues remain with regards to capital, liquidity and non-cleared margining, other areas have seen

AGM Speaker Profile: Masayoshi Amamiya, executive director, Bank of Japan

See him on April 14, 9am

Masayoshi Amamiya was appointed to one of the six executive director positions at the Bank of Japan (BoJ) in June 2010, and was reappointed to a second four-year term in 2014. In this capacity, he is in charge of the Monetary Affairs Department, the Financial Markets Department, and the Institute for Monetary and Economic Studies at the BoJ. Prior to his executive director role, he held various policy related positions at the BoJ, including associate director-general of the Policy Planning Office, associate director-general of the Bank Examination and Surveillance Department, and director-general of the Monetary Affairs Department.

more progress. The mandatory clearing of standardised over-the-counter derivatives was a key plank of the post-crisis reform agenda, and clearing mandates have been introduced in China, the US, India, Japan and South Korea. Even before other jurisdictions, including the European Union, follow with their own mandates this year, much of the derivatives market now passes through the doors of CCPs.

> "Progress on CCP recovery and resolution is less advanced than in other areas of reform, but getting the right solution is of huge importance to regulators and industry participants across the globe"
>
> — *George Handjinicolaou, ISDA*

However, the development of global resilience, recovery and resolution plans for CCPs has not kept pace with these efforts. It's a key question for the safety of derivatives markets in the future, and the industry is currently engaging with regulators to produce a viable solution. The Financial Stability Board, Committee on Payments and Market Infrastructures (CPMI) and IOSCO are leading the supervisory work on this project, and ISDA has made a number of recommendations, in particular toward the development of a CCP recovery framework. This will be discussed at the AGM during a panel on the afternoon of April 13.

"Progress on CCP recovery and resolution is less advanced than in other areas of reform, but getting the right solution is of huge importance to regulators and industry participants across the globe. A key question to answer is what tools and powers authorities can equip themselves with if a CCP cannot meet clearing-member claims with resources contained in the default waterfall and further supplemented by their recovery tools," says George Handjinicolaou, ISDA deputy chief executive and head of Europe, Middle East and Africa.

AGM Speaker Profile: Nobuyuki Hirano, president and group chief executive, Mitsubishi UFJ Financial Group

See him on April 14, 9.30am

Nobuyuki Hirano joined Mitsubishi Bank in 1974. After working at domestic branch banking offices, he developed his career in Europe and New York, where he held a variety of positions within corporate banking and global strategy planning. Following his return to Japan, he was appointed managing director for the corporate function in conjunction with the establishment of Bank of Tokyo-Mitsubishi UFJ (BTMU) in January 2006. In October 2008, he was named chief credit officer at the bank, and became a director at Morgan Stanley in March 2009. He was appointed president of BTMU in April 2012, and began concurrently serving as president and chief executive of Mitsubishi UFJ Financial Group (MUFG) in April 2013. In June 2015, he was appointed director, representative corporate executive officer and president and group chief executive of MUFG. In April 2016, he was installed as chairman of BTMU.

Cross-border Harmonisation

Cross-border compatibility is the thread that runs through all these topics. Without agreement on standards from regulators in different jurisdictions, the derivatives market will become geographically fragmented, with knock-on effects on liquidity and pricing.

ISDA has advocated for consistent, global solutions on a whole range of issues. In February, ISDA published a paper aimed at facilitating comparability determinations between US and EU trading platforms. A principles-based approach from regulators in all major trading jurisdictions should result in the mutual recognition of trading platforms, piecing a fragmented market back together.

Data

Industry participants have their part to play, too. On issues such as data reporting, cooperation between the industry and regulators will be vital in producing a workable, consistent process across multiple jurisdictions.

Reporting standards have been in place in the US, Europe and various Asian countries for some years now. But, in many cases, regulators have not been able to get their hands on useful trade data due to a lack of harmonisation in reporting requirements, differences in reporting formats and a lack of data standards. To smooth these out, CPMI-IOSCO has launched a data harmonisation project aimed at building consistent standards for the generation of unique trade and product identifiers. Meanwhile, ISDA is leading an industry initiative for derivatives product identification aimed at producing broader symbology standards for reporting and data reference purposes. This project, and wider data reporting issues, will be discussed during a specialist session on the afternoon of Thursday April 14. ■

The Next Stage of Regulatory Reform

A variety of new regulations has been rolled out since the financial crisis, covering derivatives reform and bank capital. Seven years on from the G-20 commitments, regulators should consider conducting a cumulative impact study on the whole raft of measures, argues Masamichi Kono of the Japanese Financial Services Agency

THIS SEPTEMBER MARKS an important milestone. With the rollout of new margin requirements for non-cleared derivatives, regulators will essentially tick off the last to-do item on the derivatives reform agenda set by the Group-of-20 (G-20) nations in 2009 and 2011. The other four commitments are already in place or are close to being implemented. Reporting requirements have been rolled out in most financial centres. Mandatory clearing has begun in some countries, and is close to being introduced in others. Trade execution rules are in place in the US and Japan, and are in the process of being finalised in Europe. And the Basel framework has been overhauled, ensuring non-cleared trades are subject to higher capital requirements. Alongside the changes to capital, regulators have also introduced an ambitious set of requirements for liquidity and leverage.

The question is how these rules will interact once fully implemented. Evidence has already emerged that derivatives markets are fragmenting along geographic lines in response to a lack of global harmonisation of rule sets [1]. Meanwhile, recent bouts of extreme volatility in certain markets have been blamed on a lack of market-making and balance-sheet capacity by dealers, under pressure from new capital and market regulations.

> "If there is a problem, and that problem is caused by rules that have been introduced, then we should not be shy about revisiting or amending them where necessary"

The problem comes in determining whether these changes are directly the result of new regulations, or whether other factors are at work. At the moment, the evidence doesn't exist to provide a clear picture either way. While focused impact studies have been conducted on certain rules, which have analysed the effect on specific market participants, a broader, more comprehensive investigation hasn't been attempted.

There are good reasons for that – not least, the fact that the rules were developed on a piecemeal basis and have not

[1] *Cross-border Fragmentation of Global Interest Rate Derivatives: The New Normal?*, ISDA, October 2015, http://isda.link/marketfragoct

been fully rolled out. But with the development of the regulatory framework now largely complete, regulators should start thinking about the overall impact – and should not be afraid to alter the rules if the evidence suggests changes are necessary, says Masamichi Kono, vice-minister for international affairs at the Japanese Financial Services Agency (JFSA).

This analysis should fulfil certain criteria, he adds: it should be comprehensive, take changes of behaviour into account, consider the impact on the entire cross-section of participants, and be dynamic enough to reflect market shifts. The big question is how to do it. Kono acknowledges a lack of data may hamper the ability of regulators to conduct a full analysis, at least initially.

"That means maybe we should start with a relatively simple analytical framework – in some cases, relying on qualitative rather than quantitative analysis. In the future, as we have more and better data, we can perform the analysis on a more quantitative basis," he says.

In certain areas, cause and effect should be easier to spot than others. For instance, ISDA analysis has already shown that the euro interest rate swaps market has split along geographic lines, with European dealers typically opting to trade with other European entities where possible. This fragmentation coincided almost exactly with the introduction of the US swap execution facility (SEF) regime, which required any platform that provides access to US persons to register as a SEF. Many non-US platforms opted not to, which meant US persons couldn't access liquidity on those venues.

Kono acknowledges the challenges caused by differences in the timing and substance of national rules, and believes greater international harmonisation is necessary. This is an area where he has direct experience, having chaired the International Organization of Securities Commissions (IOSCO) board and the IOSCO Technical Committee when the Principles for Financial Market Infrastructures (PFMIs) were published, which provided a framework for the regulation of central counterparties (CCPs).

"I believe in the value of having a set of agreed international standards at the outset," he says. "Maybe we should improve on those PFMIs in areas in which we can find a consensus and, where possible, make them more granular and have countries actually implement them and not go in their own direction."

In this interview, Kono – who is also co-chair of the Financial Stability Board (FSB) Regional Consultative Group for Asia – discusses his ideas for a cumulative impact study, and the need to eliminate cross-border differences in regulation.

> "These impact studies shouldn't be done on a measure-by-measure basis, but should aggregate the cumulative impact of the various rules that have been implemented or are going to be implemented"

IQ: It's been seven years since the G-20 Pittsburgh commitments, and many of the objectives have been achieved. What are your main priorities for global financial regulatory reform in 2016?

Masamichi Kono (MK): As you've just mentioned, we've been working hard for the past seven years on post-crisis reform efforts. The core elements of that reform agenda have largely been completed, so the focus will be more on implementation. Of course, we need to assess the effectiveness of those reforms and determine whether there could be unintended consequences. If there is a problem, and that problem is caused by rules that have been introduced, then we should not be shy about revisiting or amending them where necessary. On the other hand, we need to be mindful of the need for consistency and not give the wrong signals to the market. This is a challenging task. It may even be more difficult than the design phase where there was a certain objective in mind. Implementation can be complicated and is often time-consuming. Achieving consistency across jurisdictions, sectors and market participants can be challenging when the situation in each market and for each market participant is different.

IQ: You say the effectiveness of the reforms needs to be assessed. What form will that take?

MK: The FSB has now started to report to the G-20 on the impact of regulatory reform and there is an annual report that contains a section on impact assessment. At the JFSA, we've been advocating for a comprehensive impact assessment. This should consider four elements: A, B, C and D. A is for aggregate. These impact studies shouldn't be done on a measure-by-measure basis, but should aggregate the cumulative impact of the various rules that have been implemented or are going to be implemented. B is for behavioural. In the past, impact studies have not considered behavioural changes. They have assumed all things will be equal except for the particular measure that is being implemented. This is not enough. In this implementation phase, we need to look at behavioural changes and try to have a view of what will happen in the markets. This may not even be directly related to the rules: it could be a natural behavioural change on the part of market participants, but we need to take account of those changes as much as possible. C is for cross-sector, or different parts of the market. Past impact studies on changes in capital rules, for instance, have considered the effect on a certain cohort of banks and haven't gone beyond that by looking at the broader market. We have to have a cross-sector view of the impact

these reform measures will have or are having. Finally, D is dynamic. Previous impact studies have been performed under severe time and data constraints, and therefore had to reflect a point in time. Now that we have more or less completed the core elements of the reform effort, we should look at this in a more dynamic way. As many of the reform measures have a transition period or a phase in, we should look at how markets adjust dynamically to these measures over time.

Having said that in abstract, we do have something in mind. There is an issue that has concerned many participants in the derivatives space: how bank capital rules will affect the behaviour and the financial condition of market participants. In many cases, those market participants are predominately the globally systemically important banks (G-SIBs). If you look at how those G-SIBs behaved after bank capital rules were tightened and the liquidity rules were introduced, it's quite obvious there have been some marked and observed changes in their behaviour. Of course, this was on top of several other measures that were not necessarily taken by bank regulators, but which concern derivatives market reform. That includes margin rules and the introduction of central clearing, data reporting and trade execution. There are other measures that also affect the derivatives markets. At some point, we'll have to take them together and consider the impact.

IQ: By 'changing behaviour', do you mean banks pulling out of certain markets or reducing their capacity and appetite for market-making?

MK: Well, not limited to that, but there have been observations and allegations made to that effect, and we would like to know exactly what is happening. If we don't have evidence, then it is hard to say that regulation did or didn't cause that. There is an argument that liquidity has been affected, but even in cases where liquidity in a stressed situation has become scarce, you still need to collect evidence that this is predominantly because of new rules imposed on those players. That kind of exercise has not been done by regulators consistently in the past, and now we are proposing such an exercise should take place.

IQ: Is this something that is gaining traction elsewhere in the regulatory community?

MK: I think there is a general understanding of the need to take account of these issues. The main difficulty is how to do it. Of course, when we embark on such an exercise, we need to be very mindful of the resource constraints, data scarcity and the fact that many of the reform measures have not been fully implemented and so the full effect will not be felt for a few years. That means maybe we should start with a relatively simple analytical framework – in some cases, relying on qualitative rather than quantitative analysis. In the future, as we have more and better data, we can perform the analysis on a more quantitative basis. At the FSB, there is a standing committee that conducts peer reviews of implementation, and the impact analysis is also taken forward by that group, called the Standing Committee on Standards Implementation. So I think we will be working on this, and we will probably have a workshop or roundtable discussion in the near future with participants from academia and from the private sector to share ideas about how we should look at the cumulative impact of reform, the interactions, the dynamics, the behavioural changes and so on.

IQ: What would you say have been the main achievements of the global financial regulatory reform effort so far?

MK: We usually talk about the four main pillars: making banks more resilient; dealing with too big to fail; analysing what we should do with shadow banking; and over-the-counter (OTC) derivatives reform. For each of those pillars,

> "There is an argument that liquidity has been affected, but even in cases where liquidity in a stressed situation has become scarce, you still need to collect evidence that this is predominantly because of new rules"

several measures have been agreed and are now in the implementation phase. For the first pillar, Basel III is now being completed and we've come a long way in strengthening bank capital and liquidity. On the second, a series of measures have been agreed for G-SIBs that will make them stronger, including agreement on total loss-absorbing capacity (TLAC). There are also other elements to this strand of work, including bank resolution frameworks and recovery and resolution plans. Regulators are also working on shadow banking. But for those involved in markets, the OTC derivatives reforms are probably the most important. There, we had three objectives: reduce systemic risk; improve transparency; and prevent market abuse.

The measures to achieve those objectives have been introduced and are now being implemented. So, overall, we shouldn't really lose sight of those major achievements. The original objectives have been achieved to a very large extent. But I'm quite aware of the problems that initially arose as a result of different implementation timelines and differences in the detail of the reform measures taken by individual jurisdictions, which caused a lot of concern on the part of market participants. These are grouped together as cross-border implementation issues, which are still being discussed and probably have taken too much time to sort out.

IQ: ISDA has published research that shows markets are fragmenting in response to a lack of cross-border harmonisation of derivatives regulations. Are you seeing evidence of this fragmentation in Japan?

MK: In Japan, roughly 90% of interest rate swaps are yen-denominated and the credit default swap market is very small. So, in our case, we have not observed clear signs of fragmentation. It is more an issue for Japanese financial institutions and Japanese financial market infrastructure operators. They have found it difficult to extend their business to other jurisdictions or be competitive with their counterparts in the US or Europe. The equivalence test and the determination of comparability with Europe and the US have been so time-consuming and onerous that it could be working as a disincentive to their expansion or their activities with foreign players or in foreign markets. As this activity has been fairly marginal or, in the case of one of our CCPs, it has started from zero, it means there's not a fragmentation of something that was previously integral, but it does create difficulties in becoming a more active global market player. In the longer term, that would be a concern for us on the regulatory side too.

> "We could have done better with respect to international coordination to encourage more alignment in the design and implementation of those reforms"

In any case, we wish to prove ourselves to be equivalent and comparable with our US and European counterparts. This has been very time-consuming, but we have seen some progress there, particularly with the European Union. On that basis, Japanese market participants and financial market infrastructures probably won't find it too difficult to conduct cross-border transactions with European players or become players in the European markets. With the US, there have been no-action letters and exemptions provided, which will be of great help. But, at the same time, more progress can be made, and continuing regulatory uncertainty could act as a disincentive for Japanese market participants.

IQ: On that issue, the Japan Securities Clearing Corporation originally applied for registration as a derivatives clearing organisation under US Commodity Futures Trading Commission rules, but subsequently opted to file for an exemption. Does this indicate dual registration – the need to comply with two sets of rules – is a problem for CCPs?

MK: Well, this is not limited to Japanese CCPs, of course. We are in very close touch with our colleagues in Asia and Oceania and, in some cases, we've issued joint letters to our US and European counterparts. While we look forward to continued progress on those fronts, we would like to make sure that our market regulation and our supervision are completely equivalent to what has been or will be implemented in the US and Europe. Maybe there is a need to have stronger international coordination among regulators in that respect. While there have been efforts made by the Committee on Payments and Market Infrastructures, IOSCO, the OTC Derivatives Regulators Group and the FSB, my personal view is that these were not sufficiently timely or effective in preventing inconsistencies or the extraterritorial application of national rules. We could have done better with respect to international coordination to encourage more alignment in the design and implementation of those reforms. I've been saying this for many years, by the way. I am somewhat discouraged by the fact that, even between the US and Europe, it took so much time to agree on how to calculate margin requirements.

That is not to say I am not appreciative of the efforts of my colleagues. I know our colleagues in Europe and the US put in a huge effort. I think it has a lot to do with the constraints on national or individual regulators in taking implementation forward. For example, once we have an agreed reform measure and an agreed timeline, we would ideally want everyone to stick to that. Unfortunately, legislation or other constraints in certain jurisdictions may force regulators to move ahead or put measures in place that are not in perfect alignment with the international standards we collectively agreed upon. I think this is a real issue. There is no easy answer to that. But we can certainly raise our voices to call for some of these issues to be addressed because, in some cases, they can really make it extremely difficult for markets to operate normally.

IQ: Is the answer then to make substituted compliance or equivalence work by focusing on outcomes

rather than the detail of the rules, or do regulators have to consider going back to the drawing board to agree on a global framework for certain issues?

MK: Well, having chaired the IOSCO board and the IOSCO Technical Committee when the PFMIs were published, I believe in the value of having a set of agreed international standards at the outset. Maybe we should improve on those PFMIs in areas in which we can find a consensus and, where possible, make them more granular and have countries actually implement them and not go in their own direction. In the case of Japan, we knew we could not lead the reform effort as we could well find ourselves in between Europe and the US and having to cope with two sets of rules. We provided a lot of flexibility in our own rules so that, whatever happened during the course of those US/Europe negotiations, we could adjust if necessary. Of course, it is very hard for a regulator to go back to the drawing board and revamp something that was only implemented recently. It would be harder if we had to change something before implementation. But where there is room for having internationally consistent rules, I wouldn't rule out doing that. Maybe we should even encourage it.

> "It's hard to act just on the basis of anecdotal reports or partial analysis. But if we do a more comprehensive impact assessment, then we may look at the rules again on that basis"

In margin requirements for non-centrally cleared derivatives, we've been doing slightly better than in other areas. We agreed on the set of measures and the timeline. This was extended by nine months last year, but this was in agreement with the major jurisdictions. So this shows we can do something like that. At the moment, we're still looking at the fine-print of our rules and may make a few technical changes. The US rules have been finalised, and we found them more aligned with what we had been calling for and some flexibility in the details, which we welcome. So I'm not pessimistic about the ability of regulators to do this over time – it's only that it does take time to forge an agreement and then decide that we implement this together. In the case of some measures, unfortunately there wasn't any international agreement upfront. But even in these cases, we can probably work to have more convergence in the rules down the road, and we shouldn't stay away from doing this work.

Coming back to the idea of having more comprehensive impact assessments, this could actually be the trigger for making those changes. It's hard to act just on the basis of anecdotal reports or partial analysis. But if we do a more comprehensive impact assessment, then we may look at the rules again on that basis. This is normal for something as dynamic and changeable as financial markets. If this is something that is meant to stay in place for 100 years, 200 years, then it could be different. But with financial markets, something could be made irrelevant all of a sudden, so we need to be able to adapt.

IQ: You mentioned the margin rules for non-cleared derivatives. Seen from Japan, do you think the September 2016 effective date will give market participants enough time to prepare for implementation?

MK: We have been discussing with both our US and European counterparts about the fine details. We had a draft, but we needed to compare that with the

rules that were finalised in the US and in Europe. Before we actually had the full discussion, we refrained from moving first. This is because we tend to think of ourselves as not the predominant player or the largest market, but rather a market that will need to work with US and European markets and so it makes sense for our rules to be consistent with the US and Europe.

We have an agreed implementation date in September, and we will issue our rules and be ready to implement ahead of that date. We've had two rounds of consultations and the second consultation was published in December 2015, so we are in a position to finalise those rules. Following those two consultations, we made some changes that put our rules more in line with other jurisdictions. All this has to proceed in parallel with preparations of the ISDA SIMM model and documentation changes. Unlike some other major markets, it was not normal practice to exchange initial margin, so all this will have to be prepared in time. It's a challenge, but, so far as I understand, we don't have serious obstacles or impediments to achieving that.

ISDA SwapsInfo Q4 Update: CDS Index Trading Takes a Hit

Trading activity in CDS indices tumbled in the fourth quarter of 2015, with average notional volume roughly $5 billion a day less than the same period a year before. Despite the decline, the proportion of cleared and electronically executed trades remained relatively constant, according to the latest ISDA SwapsInfo analysis

CREDIT DEFAULT SWAP (CDS) index volume fell sharply at the end of last year, with the total average daily notional volume reported to US swap data repositories dropping by more than a quarter versus the fourth quarter of 2014, and by over 12% compared with the third quarter of 2015. Average daily trade counts also plunged, falling by nearly 20% over the year and almost 7% versus the third quarter of 2015. In comparison, interest rate derivatives (IRD) activity held relatively steady, with average daily notional volume falling by less than 1% over the year and rising by approximately 4% versus the third quarter of 2015.

The decline in CDS index activity meant total average daily notional volume was at its lowest level since the second quarter of 2014, at $26.2 billion. That's some way below the high watermark of $35.1 billion per day in the fourth quarter of 2014 – although that was an exceptionally busy quarter. The fourth-quarter decline hit both swap execution facility (SEF) and bilateral trading, but the bilateral market was hit harder: average daily CDS index notional volume fell by 34% over the year and 20% over the quarter in the bilateral market, versus 21.9% and 9.8%, respectively, for SEF-traded CDS index notional volume.

Despite the decline in trading activity, the proportion of SEF-traded and cleared CDS index trades remained relatively steady compared with the previous few quarters. According to trade information reported to US data

AT A GLANCE

Clearing accounted for 79.9% of IRD average daily notional volume in the fourth quarter of 2015.

More than half of average daily IRD trading activity was executed on a SEF during the fourth quarter: 57.7% by notional volume.

Total average daily IRD notional volume decreased by 0.8% compared with the fourth quarter of 2014, but increased by 4.3% versus the third quarter of 2015.

In the CDS index market, 78.4% of average daily notional volume was cleared in the fourth quarter of 2015.

SEF trading accounted for 75.2% of average daily notional volume in the fourth quarter.

Total average daily CDS index notional volume dropped by 25.3% compared with the fourth quarter of 2014, and fell by 12.6% versus the third quarter of 2015.

repositories and compiled by ISDA SwapsInfo.org[1], SEF trading accounted for 75.2% of average daily CDS index notional volume in the fourth quarter, versus 71.9% a year before and 72.9% in the third quarter of 2015. Clearing accounted for 78.4% of average daily CDS index notional volume in the fourth quarter of 2015, versus 82.5% the previous year and 80% in the previous quarter.

Similarly, the proportion of IRD transactions traded on a SEF and cleared through a central counterparty has also remained stable over the three-month period. SEF trading comprised 57.7% of average daily IRD notional volume in the fourth quarter of 2015, versus 49.7% the previous year and 58.6% in the third quarter of 2015. Clearing accounted for 79.9% of average daily notional volume in the fourth quarter, compared with 72.9% a year before and 80.6% in the third quarter of 2015.

The stability in the proportion of cleared and SEF-traded volume likely reflects the absence of new mandates in the US over the past two years. The first – and so far only – US clearing mandates were introduced for certain IRD and CDS index products in 2013. Trading mandates for a small universe of IRD and CDS index products followed in February 2014, following the rollout of the US SEF regime the previous October.

The following analysis provides a high-level summary of trends in the fourth quarter of 2015. More detailed analysis can be found at ISDA SwapsInfo.org.

CHART 1: IRD AVERAGE DAILY TRADE COUNT: TOTAL, SEF, BILATERAL

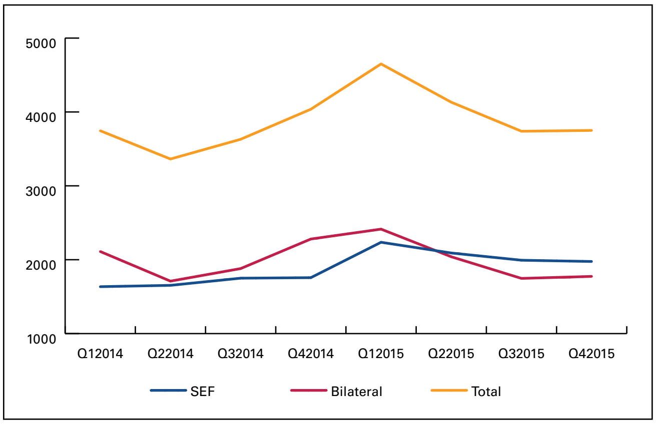
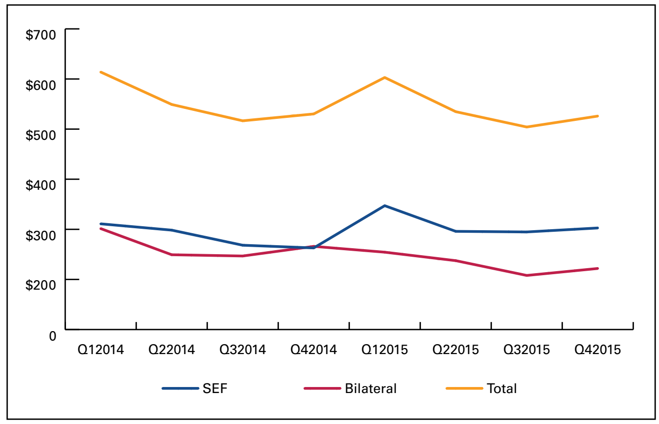


CHART 2: IRD AVERAGE DAILY NOTIONAL VOLUME (US$ BILLIONS): TOTAL, SEF, BILATERAL



IRD Trade Count (Chart 1)

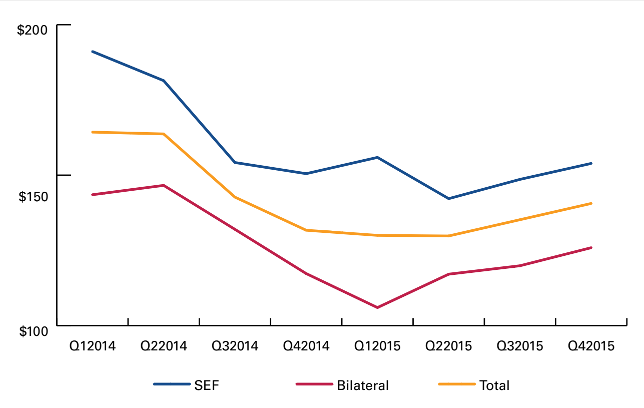
- Average daily IRD trade counts in the fourth quarter of 2015 fell by 7.1% compared to the same period a year before, but rose by 0.3% versus the third quarter of 2015.
- SEF trading accounted for 52.7% of the total average daily trade count in the fourth quarter of 2015, compared to 43.5% in the same period a year earlier and 53.3% in the third quarter of 2015.
- SEF average daily trade counts rose by 12.5% in the fourth quarter of 2015 compared with the same period a year earlier, but declined by 0.8% compared to the third quarter of 2015.
- Bilateral average daily trade counts decreased by 22.2% versus the fourth quarter of 2014, but rose by 1.6% compared with the third quarter of 2015.

IRD Notional Volume (Chart 2)

- Average daily IRD notional volume declined by 0.8% in the fourth quarter of 2015 compared with the same quarter a year earlier, but rose by 4.3% versus the third quarter of 2015.
- SEF average daily notional volume represented 57.7% of total volume in the fourth quarter of 2015, compared with 49.7% in the fourth quarter of 2014 and 58.6% in the third quarter of 2015.
- SEF average daily notional volume increased by 15.0% in the fourth quarter of 2015 compared with the same period a year prior, and rose by 2.7% compared with the third quarter of 2015.
- Bilateral volumes declined by 16.5% compared with the fourth quarter of 2014, but climbed by 6.7% versus the third quarter of 2015.

[1] ISDA SwapsInfo is available at www.swapsinfo.org. The site compiles data reported to the Bloomberg and Depository Trust & Clearing Corporation swap data repositories

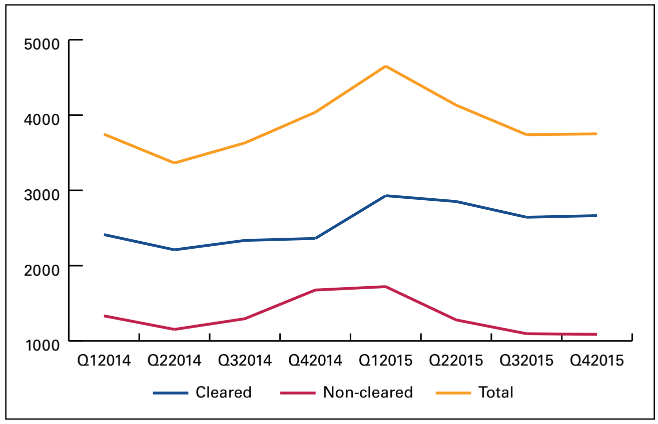
CHART 3: IRD AVERAGE TRADE SIZE (US$ MILLIONS): TOTAL, SEF, BILATERAL



IRD Trade Size (Chart 3)

- Average IRD trade size increased by 6.8% in the fourth quarter of 2015 compared to the same period a year earlier, and rose by 4.0% from the third quarter of 2015.
- SEF trade size increased by 2.3% in the fourth quarter of 2015 compared with the same period a year before, and rose by 3.5% compared with the third quarter of 2015.
- Bilateral trade size increased by 7.4% in the fourth quarter of 2015 compared with the fourth quarter of 2014, and rose by 5.0% versus the third quarter of 2015.

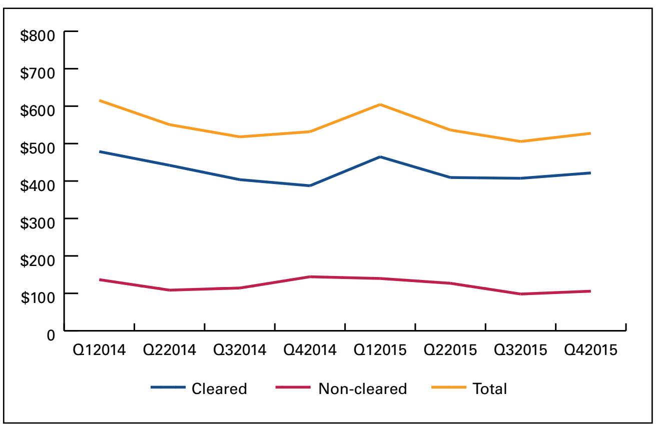
CHART 4: IRD AVERAGE DAILY TRADE COUNT: TOTAL, CLEARED, NON-CLEARED



IRD Cleared Trade Count (Chart 4)

- Cleared IRD trade counts represented 71.0% of total average daily trading activity in the fourth quarter of 2015, compared with 58.5% in the same period a year before and 70.7% in the third quarter of 2015.
- Average daily cleared trade counts increased by 12.8% in the fourth quarter of 2015 versus the same period a year earlier, and rose by 0.8% compared with the third quarter of 2015.
- Non-cleared trade counts decreased by 35.1% in the fourth quarter of 2015 compared to the corresponding period a year before, and fell by 0.9% compared with the third quarter of 2015.

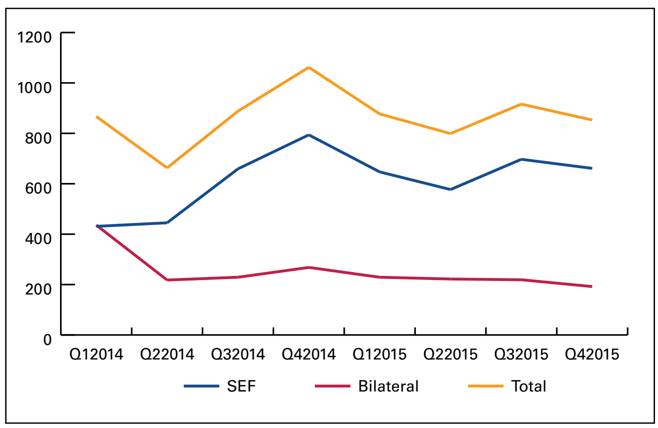
CHART 5: IRD AVERAGE DAILY NOTIONAL VOLUME (US$ BILLIONS): TOTAL, CLEARED, NON-CLEARED



IRD Cleared Notional Volume (Chart 5)

- Cleared average daily IRD notional volume represented 79.9% of total notional in the fourth quarter of 2015, compared to 72.9% during the corresponding period in 2014 and 80.6% in the third quarter of 2015.
- Average daily cleared notional volume rose by 8.8% in the fourth quarter of 2015 compared with the same period in 2014, and increased by 3.5% compared with the third quarter of 2015.
- Non-cleared notional volume decreased by 26.7% during the fourth quarter of 2015 compared with the corresponding period a year earlier, but rose by 7.7% versus the third quarter of 2015.

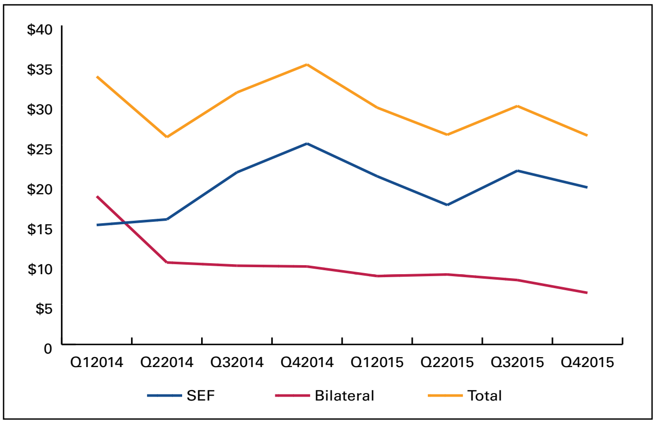
CHART 6: CDS INDEX AVERAGE DAILY TRADE COUNT: TOTAL, SEF, BILATERAL



CDS Index Trade Count (Chart 6)

- Average daily CDS index trade counts fell by 19.7% in the fourth quarter of 2015 compared with the same period in 2014, and decreased by 6.9% versus the third quarter of 2015.
- SEF trades represented 77.5% of the total CDS index average daily trade count in the fourth quarter of 2015, compared with 74.7% in the fourth quarter of 2014 and 76.1% in the third quarter of 2015.
- SEF average daily trade counts fell by 16.7% during the fourth quarter of 2015 compared with the same period a year earlier, and decreased by 5.2% compared with the third quarter of 2015.

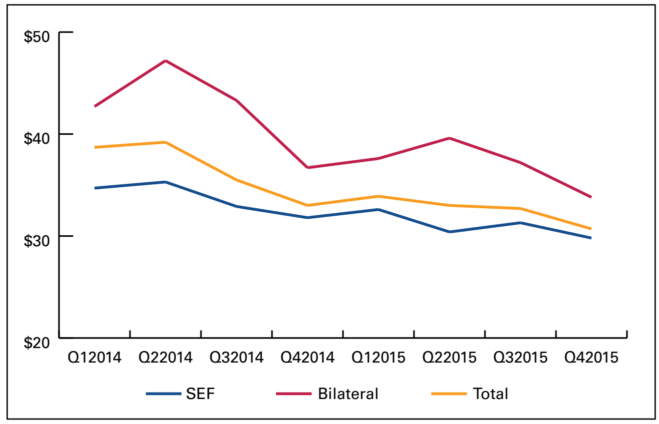
CHART 7: CDS INDEX AVERAGE DAILY NOTIONAL VOLUME (US$ BILLIONS): TOTAL, SEF, BILATERAL



CDS Index Notional Volume (Chart 7)

- Average daily CDS index notional volume decreased by 25.3% in the fourth quarter of 2015 compared to the same period a year earlier, and fell by 12.6% compared with the third quarter of 2015.
- SEF notional volumes comprised 75.2% of the total average daily CDS index notional in the fourth quarter of 2015, compared with 71.9% in the fourth quarter of 2014 and 72.9% in the third quarter of 2015.
- SEF average daily notional volume decreased by 21.9% in the fourth quarter of 2015 compared with the same period a year earlier, and fell by 9.8% compared with the third quarter of 2015.

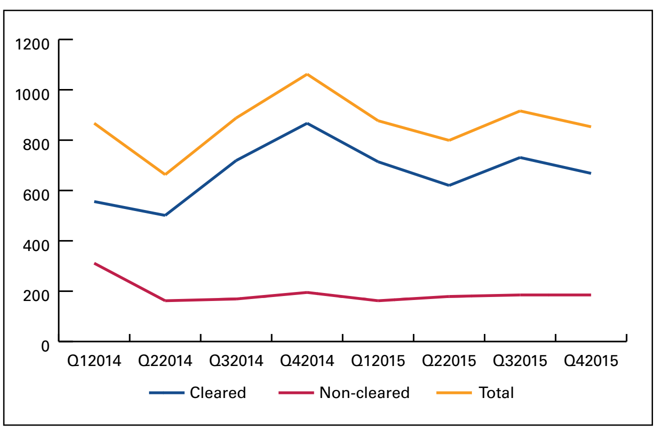
CHART 8: CDS INDEX AVERAGE TRADE SIZE (US$ MILLIONS): TOTAL, SEF, BILATERAL



CDS Index Trade Size (Chart 8)

- Average CDS index trade size fell by 7.0% in the fourth quarter of 2015 compared with the fourth quarter of 2014, and decreased by 6.1% versus the third quarter of 2015.
- SEF trade size fell by 6.3% during the fourth quarter of 2015 compared with the same period in 2014, and decreased by 4.8% versus the third quarter of 2015.
- Bilateral trade size declined by 7.8% in the fourth quarter of 2015 compared with the same period a year earlier, and fell by 9.0% compared with the third quarter of 2015.

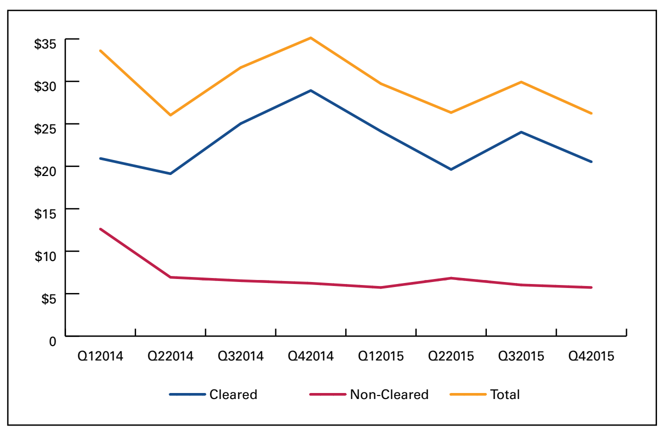
CHART 9: CDS INDEX AVERAGE DAILY TRADE COUNT: TOTAL, CLEARED, NON-CLEARED



CDS Index Cleared Trade Count (Chart 9)

- Cleared trades represented 78.3% of the total average daily CDS index trade count in the fourth quarter of 2015, compared to 81.7% in the same period in 2014 and 79.8% during the third quarter of 2015.
- Average daily cleared trade counts decreased by 23.0% during the fourth quarter of 2015 compared to the same period in 2014, and fell by 8.6% versus the third quarter of 2015.
- Non-cleared trade counts decreased by 4.9% in the fourth quarter of 2015 compared to the same period a year earlier, and were flat compared with the third quarter of 2015.

CHART 10: CDS INDEX AVERAGE DAILY NOTIONAL VOLUME (US$ BILLIONS): TOTAL, CLEARED, NON-CLEARED



CDS Index Cleared Notional Volume (Chart 10)

- Cleared CDS index trades represented 78.4% of total average daily notional volume in the fourth quarter of 2015, compared to 82.5% in the fourth quarter of 2014 and 80.0% in the third quarter of 2015.
- Cleared average daily notional volume fell by 29.0% in the fourth quarter of 2015 compared with the fourth quarter of 2014, and decreased by 14.3% compared with the third quarter of 2015.
- Non-cleared notional volume declined by 8.1% in the fourth quarter of 2015 compared with the same period in 2014, and fell by 5.7% versus the third quarter of 2015.

INTERVIEW

10 QUESTIONS WITH...

Yasunobu Arima and Koji Sakurai

Two ISDA board members, Yasunobu Arima, general manager in the global markets planning division at Bank of Tokyo-Mitsubishi UFJ, and Koji Sakurai, senior vice-president and head of the business planning team in the derivative products division at Mizuho Bank, discuss the changes that have occurred in the Japanese derivatives market since the last Tokyo AGM in 2003

1 ***IQ:* What do you expect to be the main areas of focus for derivatives market participants in Japan in 2016?**

Yasunobu Arima (YA): The main priorities are the implementation of margin requirements for non-cleared derivatives and the finalisation of Basel III. The latter will hopefully include some adjustments and easing based on an analysis of the overall impact of newly introduced and revised regulations, including capital requirements, the leverage ratio, liquidity requirements and total loss-absorbing capacity. We also have to be careful about the trend of market fragmentation and changes in liquidity. If we find any signs of real concern, then we must inform the relevant regulators.

Koji Sakurai (KS): The main focus will probably be the new margin rules that are set to come into effect from September. While mandatory clearing has been in place in Japan since 2012, the new margin rules will require firms to make changes across a wide range of areas, including revisions to credit support annexes (CSAs), operations, systems and trust agreements. Initial margin requirements will be phased in, but variation margin will become mandatory for all covered entities from March 2017, so those firms that have not yet signed CSAs will have to implement them all at once. This will also increase the burden on these institutions.

2 ***IQ:* What is the biggest challenge facing the derivatives industry globally at moment?**

YA: The effort to comply with regulatory change is still the biggest challenge. It may result in changes to the main players in each market, and possibly the line-up of products. Some dealers have already altered their business models due to changes in regulation, including the Volcker rule and newly implemented derivatives reform. Other changes may occur due to increasing costs related to technology, compliance and risk management and limited capital resources. An effort to develop and implement more effective straight-through processing (STP) could help here.

KS: Market participants have to respond to different regulations in each jurisdiction. Margin rules pose the greatest challenge in this respect. The rules and proposals differ slightly in the US, Europe and Japan – for example, in settlement time frames, currency types, initial-margin calculation methods and model approvals. When other jurisdictions are included, working across all these differences will become an almost insurmountable task. Some institutions may deem it temporarily necessary or advantageous to avoid those transactions subject to the strictest rules or those transactions with customers from certain jurisdictions. This could lead to a growing problem of market fragmentation.

3

IQ: In what way will derivatives markets change over the next five years?

YA: I am perhaps a little bit pessimistic, but I would expect the number of major players to reduce, with a shift more to the buy side. I would expect a reduction in liquidity as well. On the other hand, market participants will move towards more sophisticated STP, and more transactions will be cleared. As a result of greater use of technology, some participants, including providers of market infrastructures, will possibly face more serious cyber-security risks.

KS: Derivatives have become important tools for companies to manage their risks, and this will continue to be the case. However, costs are clearly rising for providers of derivatives, and they will probably need to pass these costs onto end users. Firms could evolve by specialising in narrow business segments. Examples include the emerging powers in the swap execution facility sector, financial institutions that specialise in clearable transactions, and new participants from sectors not covered by regulations.

4

IQ: How long have you served on the ISDA board?

YA: Since April 2015. Just one year, but it's gone by very quickly.

KS: I was elected at the annual general meeting (AGM) in Munich two years ago. At that time, I didn't realise we'd be holding an AGM in Tokyo in 2016. The past two years have been very busy. We've made a lot of progress in the area of regulatory compliance over that time, which has helped contribute to the derivatives sector.

5

IQ: What role does ISDA play in Japan?

YA: The ISDA Tokyo office plays a key role in supporting market development in Japan. It represents market participants, cooperates with regulators, and provides a forum for participants to discuss issues in order to ensure a fair, safe and effective derivatives market in Japan. Although the ISDA Tokyo office is very small with few staff, it covers a wide range of issues and achieves outstanding results with the help of ISDA members.

KS: ISDA covers a wide-ranging and diverse group of market participants in its capacity as a derivatives industry group. We represent industry opinion and mediate between the authorities and the market on issues like the recent expansion of mandatory central clearing, the introduction of mandatory trading on Japanese electronic trading platforms, and the introduction of margin rules. ISDA is the only industry group in Tokyo performing these roles.

> "While mandatory clearing has been in place in Japan since 2012, the new margin rules will require firms to make changes across a wide range of areas"
>
> *— Koji Sakurai, Mizuho Bank*

6

IQ: ISDA's AGM is returning to Tokyo for the first time since 2003. How have Japanese derivatives markets changed since then?

YA: This isn't limited to Japan, but CSAs have become popular, especially between professionals, and there has been an improvement and computerisation of processing. In the 1990s and early 2000s, traders still loved to use the HP-12c or HP-17B II calculators, and wrote blotters and paper tickets. Focusing more on Japan, the use of structured products expanded in the 1990s, with even small- and medium-sized enterprises using them. That market then shrunk after know-your-customer rules became stricter in the 2000s. Enthusiasm for developing new exotic products or those based on new underlyings also decreased.

KS: The biggest change has been the fact that interest rates have fallen. Furthermore, centrally cleared transactions have now become par for the course, especially in the interbank market. This is totally different to how it was back then.

7

IQ: What were you doing in 2003?

YA: Mitsubishi Securities was created in September 2002 following the merger of Kokusai Securities, Tokyo-Mitsubishi Securities, Tokyo-Mitsubishi Personal Securities and Issei Securities. In 2003, I worked in the planning section for wholesale equity secondary business for Mitsubishi Securities, and tackled various merger-related issues.

KS: I was working as a cross-currency interest rate swaps trader at a swap company in London, Mizuho Capital Markets

Corporation. I also traded foreign exchange forwards, and I was in charge of planning for the introduction of CLS.

> "The effort to comply with regulatory change is still the biggest challenge. It may result in changes to the main players in each market"
>
> *— Yasunobu Arima, Bank of Tokyo-Mitsubishi UFJ*

8 *IQ:* Do you think Japan's derivatives markets function differently from those in US or Europe? What is the single biggest difference?

YA: Japan is not leading the financial markets in terms of technology or trading strategies. It might even be called inactive or dull. But that's fine. After the experience of the financial crisis, it is understood that moderation in market participants' thoughts and activities is important.

KS: There is a shortage of products that can be used for hedging over here. Interest rate futures contracts (appropriate for hedging interest rate swaps) are not used that much in Japan compared to the US and Europe, so Japanese government bond futures are commonly used as hedging tools – but that creates basis risk. Products like euro/dollar futures or euro/euro futures are not commonly used, so it is impossible to totally hedge interest rate risks.

9 Q: If you didn't work in the financial markets, what do you think you would be doing?

YA: It's hard to imagine. Although not considered seriously, I was interested in being a specialist in glassware or pottery, or a manager of a Japanese-style coffee house.

KS: Maybe I would be a teacher at a preparatory school. I have always enjoyed teaching others, and I have recently become less averse to speaking in front of people. I suspect I lack the confidence to become a proper teacher, though.

10 IQ: What do you like to do in your spare time?

YA: I love to walk around in the neighbourhood or during short trips or overseas visits. I'm also a lover of hot springs.

KS: I play golf. However, it takes over three hours to get to a golf course in Japan, so I only go a few times a year. I would like to play at the Links course in Ireland and the PGA course in Florida one more time. ■

Pushing for Harmonisation

A lack of harmonised data reporting rules has hampered the ability of regulators to aggregate trade data to monitor and assess systemic risk. *IQ: ISDA Quarterly* outlines the problems, and proposes some solutions

IT'S NOW MORE than six years since the Group-of-20 (G-20) nations gathered in Pittsburgh and agreed on a set of commitments to reform the derivatives market. A central component of those commitments was the reporting of derivatives to trade repositories in order to increase transparency and enable regulators to spot risk concentrations. Recognising derivatives markets are global, the G-20 committed to implement consistent standards on a global basis in order to avoid fragmentation and regulatory arbitrage[1].

Over the past few years, substantial efforts have been made toward realising this commitment. Today, virtually all derivatives trades in the US and Europe are reported to a trade repository. An increasing number of jurisdictions around the world have also imposed similar requirements.

However, while the letter of the commitment is being realised, the spirit is not. Regulators have struggled to fully understand and optimise the data being reported, and are not in a position to receive a complete picture of global risk exposures. This understanding is impeded by a lack of regulatory endorsed, globally consistent standards that facilitate efficient, accurate data reporting that is suitable for aggregation and systemic-risk analysis.

Contributing to the challenge is the fact that each regulator has developed a unique set of reporting requirements and devised its own list of reportable fields. This not only makes reporting complex and costly for derivatives users, but it means the data cannot be aggregated to obtain a clear view of global derivatives trading activity.

This is not just a case of divergent reporting rules between different countries. There are also differences in reporting requirements within the same jurisdiction. For instance, the US

AT A GLANCE

Inconsistency in reporting rules within and across jurisdictions, along with a lack of commonality in data standards and reporting formats, have stymied attempts to aggregate data for systemic risk monitoring purposes.

CPMI-IOSCO will issue recommendations on key data standards, and these should be adopted by national regulators.

Regulators should adopt and leverage existing industry data and reporting standards where available.

The reporting rules issued by the US CFTC and SEC differ in several key areas, and should be more closely aligned.

Reporting requirements should be streamlined – more data isn't necessarily better data.

[1] This article is an edited version of testimony provided to the US House Committee on Agriculture's Subcommittee on Commodity Exchanges, Energy, and Credit on February 25, 2016. For the full testimony, visit http://isda.link/houseagdatatestimony

Commodity Futures Trading Commission (CFTC) and Securities and Exchange Commission (SEC) require different data to be reported, and have set different parameters to determine which trades should be subject to reporting. These differences are unnecessary and prevent regulators from meeting the G-20 objective of monitoring and mitigating systemic risk. They also run counter to a regulatory commitment to implement consistent global standards.

This problem can be illustrated with a simple analogy. Imagine if every car dealership around the world is required to report basic facts about each and every car sold, including the car's size. Due to differences in regulatory oversight of all of these dealerships, some dealers report size as the car's weight. Others report it as the number of passengers it holds, and others as its length or its horsepower.

> Contributing to the challenge is the fact that each regulator has developed a unique set of reporting requirements and devised its own list of reportable fields

As the example makes clear, the answer is not to require more data to be reported. Instead, regulators should work together and with the industry to agree on globally consistent reporting requirements, as well as data and messaging standards.

ISDA and its members would suggest several concrete steps that could be taken to improve data reporting and systemic risk monitoring, while at the same time reducing cost and complexity for reporting parties (see box *Steps to Data Harmonisation*).

STEPS TO DATA HARMONISATION

CPMI-IOSCO should lead global data harmonisation: Agreement on common standards should be achieved in coordination with the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO). CPMI-IOSCO has already issued consultations on standard transaction and product identifiers, as well as other data elements. Consistency on these standards is paramount to achieving greater harmonisation. It's important the Commodity Futures Trading Commission (CFTC) and Securities and Exchange Commission (SEC) are aligned with this global initiative and do not engage in further overlapping and potentially contradictory data proposals.

Data fields should be specified and based on existing market standards: Regulators should work with industry initiatives, such as ISDA's Symbology project, to ensure regulatory requirements closely align with prevailing industry defined terms and practices. All data elements required by regulators to meet their objectives should be explicitly defined in the regulations. Existing derivatives messaging standards, such as Financial products Markup Language (FpML), should be leveraged where possible.

Domestic regulators should align on data rules: The CFTC and SEC rules should be aligned. Given both agencies developed reporting rules in response to the same piece of legislation, the rationale for issuing different requirements is difficult to comprehend. The split between swaps and security based swaps is a creation of the US regulatory system, which undermines the ability of the CFTC and SEC to aggregate their data and provide Congress with a holistic view of risk in the US derivatives market.

Reporting requirements should be rationalised and streamlined: Regulators should determine what data they need to monitor systemic risk and simplify reporting requirements accordingly. Certain data fields are currently required to be reported that offer little insight into risk. This increases the volume of data that needs to be analysed, to little benefit, and increases the cost and complexity of reporting, which undermines data quality. Regulators should agree on a meaningful set of globally consistent data fields that enables them to meet their regulatory objectives. Furthermore, regulators should assign sole responsibility for the reporting of accurate data for a transaction to a single party that is best situated to provide timely, complete data.

CPMI-IOSCO Should Lead Global Data Harmonisation

The implementation of trade reporting was intended to improve transparency in the derivatives markets and mitigate systemic risk. G-20 leaders also committed to take action at the national and international level to implement global standards consistently in a way that ensures a level playing field and avoids fragmentation of markets, protectionism and regulatory arbitrage. Progress has been made on the former objective, but full realisation of this goal cannot be achieved without significant advancement on the latter.

Under the CFTC's Parts 43, 45 and 46 regulations, reporting to trade repositories was rolled out from December 31, 2012, and reporting across asset classes and by all US counterparties has been in place since April 2013. Data for swaps that were live on or after the enactment of the Dodd-Frank Act, or that have been transacted since, have to be reported to trade repositories. But despite the availability of swap data, questions remain about whether the CFTC is collecting the most useful data set and whether this data is consistent and accurate enough to monitor market risk.

The successful implementation and oversight of legal entity identifiers (LEIs) to uniquely identify parties to a transaction is proof that global regulatory collaboration can result in standards that are extremely valuable to market risk analysis. With the LEI as a precedent, ISDA strongly supports the ongoing efforts of the Committee on Payments and Market Infrastructures (CPMI) and International Organization of Securities Commissions (IOSCO) harmonisation group to develop recommendations for global standards on unique trade identifiers (UTI), unique product identifiers (UPI) and other reportable data elements.

ISDA has worked with its members to develop industry standards for trade identifiers and product identifiers in the absence of global regulatory standards, and has established best practices to improve the consistency of reporting. Although these have been used successfully by a majority of market participants for reporting across the globe, comprehensive use can only be achieved through regulatory endorsement and mandates.

CPMI-IOSCO has issued three derivatives data consultations, including one on an initial batch of other data elements (ODE), such as notional and clearing status. The CFTC, meanwhile, recently accepted comments on draft technical specifications for certain swap data elements. While ISDA commends the CFTC for considering the necessary corrections to its data rules, the process is not being conducted in concert with other regulatory reforms. Despite the CFTC's role as co-chair of the CPMI-IOSCO harmonisation group, its draft technical specifications differ from the CPMI-IOSCO ODE consultation in several areas.

Any further consultation or proposed rule-making by the CFTC on reporting should align with the efforts of the CPMI-IOSCO harmonisation group, with the goal of a single industry transition to globally recommended data standards.

Data Fields Should be Specified and Based on Existing Market Standards

Limitations on the usefulness of the collected data to analyse systemic risk are less attributable to missing data and more to the quality and consistency of the data that is collected. Each relevant national regulator has issued its own version of reporting requirements and its own list of reportable data fields, which are not always based on existing industry standard terms, definitions and messaging standards for derivatives. In some cases, the trade terms required to be reported are not explicitly stated in the regulations, but are instead left to trade repositories (TRs) and market participants to determine. These approaches complicate the task of reporting and undermine data quality, as parties are obliged to interpret the data required by the regulator or transform the information in a way that may not align with how the economics of the trade were agreed and represented in the legal confirmation.

> Despite the availability of swap data, questions remain about whether the CFTC is collecting the most useful data set and whether this data is consistent and accurate enough to monitor market risk

Reporting requirements could be improved if regulators follow three principles:

1) Use of industry standards where possible;
2) Provide appropriate oversight and commitment to market participants so they can develop industry based solutions; and
3) Be specific when developing data requirements.

1) Regulators should use industry standards where possible

The industry has already developed data and trading conventions that can be readily applied on a global basis to support data harmonisation efforts. The following standards already exist for (i) the name, definition and values of the key economic terms of derivatives transactions; and (ii) messaging representations of these data elements for reporting. Global standards for trade reporting should be aligned with these existing industry standards.

i) Product Definitions

ISDA product definitions are incorporated by reference into confirmations for derivatives transactions. The terms they define are the market standard references, providing legal certainty to counterparties on the economic terms of their transactions. Global regulators should align with these terms for the sake of specificity, accuracy and efficiency. There is no value in redefining the framework for legal agreement of derivatives transactions for the purposes of reported data. Rather, the reported data should seek to mirror the terms and values as they are agreed and confirmed between parties to ensure harmonisation between the execution confirmation and reporting processes.

Using alternative terms, definitions and values for reported transactional data requires parties to transform their trade data solely for the purposes of reporting. This greatly increases the challenge of reconciling TR data back to a reporting counterparty's source systems or the confirmation.

These challenges are further exacerbated when the parties are obliged to report to multiple jurisdictions, each with different requirements. It is not practical for parties to create, report and maintain several different data representations of the same trade without impinging on the clarity and certainty of the transactions terms. Aligning reporting regulations with the applicable established product definitions is the more accurate and appropriate baseline for representing reported data.

ii) Messaging Standards

The other key to leveraging existing trade representation is through the use of established reporting standards that align with the ISDA product definitions. Financial products Markup Language (FpML)[2] is the predominant messaging standard for over-the-counter (OTC) derivatives, facilitating both the electronic confirmation and electronic reporting of transactions. Significant enhancements have been made to FpML to support both global and jurisdictional reporting regulations.

Although there are obvious benefits in doing so, reported data does not have to be submitted electronically via FpML for the reporting regulations to benefit from the standards it has established for uniformly identifying certain trade terms and values. For instance, FpML has developed the only industry standard values for 'business days', which are the geographical and non-geographical calendars by which payment and settlement dates are adjusted. The CFTC has recognised this, referring to FpML for these values in its technical specifications for its redefined 'holiday calendars', but it does not fully embrace the standard by aligning with the FpML data elements and scheme for all supported data fields.

Rather than inventing its own methods, the CFTC and global regulators should align with both the ISDA product definitions and FpML. There is no need to reinvent the terminology, definitions or representations of swap data. Instead, efforts to develop new standards will reduce rather than improve the quality of the data available to meet regulatory mandates. The CFTC and global regulators should use these existing standards to their benefit, allowing them to increase the clarity, accuracy and usefulness of the collected data.

2) Regulators should provide appropriate oversight and commitment to market participants so they can develop industry based solutions

ISDA continues its efforts to drive data standardisation, including through its Symbology project[3] to create an open-source standard for derivatives product identification that works for pre-trade, trading and post-trade workflows. The participation of regulators in industry initiatives and an open and regular dialogue between regulators, industry associations like ISDA and market participants will expedite the development and implementation of global data standards.

> The reported data should seek to mirror the terms and values as they are agreed and confirmed between parties to ensure harmonisation between the execution confirmation and reporting processes

3) Regulators must be specific when developing data standards

Both the CFTC and SEC include requirements in their trade reporting rules to provide certain data, but the trade terms required for reporting are not explicitly specified. As data cannot be reported electronically to a trade repository if the set of data fields are not supported, these catch-all buckets leave trade repositories and the industry to assess what data must be reported to comply with the requirements. These include "any other term(s) of the trade matched or affirmed by the counterparties in verifying the trade"[4] and "any other data elements…that are necessary for a person to determine the market value of the transaction"[5].

Some derivatives products are highly standardised, and it may be possible to determine a uniform set of data fields that could apply in these cases. But others are customised, and a finite list of potential data elements and values cannot be determined. Either way, differences in interpretations between trade repositories and reporting entities regarding these unspecified requirements will reduce the quality of the data. ISDA has urged the CFTC and SEC to explicitly define their data requirements by determining the way in which they intend to assess the data, rather than allocate these decisions to trade repositories and market participants.

Domestic Regulators Should Align on Data Rules

The reporting regulations of the CFTC and SEC differ in the data that is reportable and the parameters that determine which trades are subject to reporting. Considering the commissions have issued these rules in response to the same piece of legislation – the Dodd-Frank Act – the rationale for the divergence in their rules is difficult to comprehend.

For instance, it is illogical that each agency should have a different definition of a 'US person' and, therefore, a divergent position on which transactions pose risk to US markets and should be reported. Based on their divergent definitions, it is possible that a particular counterparty may be required to report only its swaps or its security based swaps. The agencies should be expected to agree on a single definition for US person, and a uniform approach to the reporting requirements for cross-border swaps and security based swaps that considers whether the derivatives transactions of non-US-domiciled parties pose a genuine risk to US markets

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[2] http://www.fpml.org/

[3] The ISDA Symbology project is focused on developing a common product identifier for regulatory and reference data purposes. This initiative will incorporate the recommendations made by CPMI-IOSCO (http://www2.isda.org/functional-areas/symbology/)

[4] Appendix 1 to CFTC Part 45 regulations

[5] §242.901(d)(5) of SEC's Regulation SBSR – Reporting and Dissemination of Security-Based Swap Information

that cannot be mitigated by the oversight of the relevant foreign regulator(s).

The artificial line between swaps and security based swaps is unique to the US, and undermines the ability of the CFTC and SEC to aggregate their data and provide Congress with a holistic view of risk in the US derivatives market. Other regimes look at the derivatives market holistically and have not issued different trade reporting regulations for segments of the derivatives market (aside from those that are appropriate to a particular asset class). For example, there are 13 securities regulators in Canada, each with its own securities legislation and with independent oversight of the trading activity in its province or territory. Despite having separate trade reporting regulations, these authorities managed to agree to a defined, uniform list of data fields.

In contrast, the SEC and CFTC recently issued concurrent but separate consultations on data standards and took different approaches to addressing the matter. In accordance with suggestions from ISDA and the industry, the SEC has proposed a rule requiring security based swap data repositories to provide data to them using existing data standards, such as FpML. Meanwhile, the CFTC has created its own trade terminology, definitions and allowable values that are not fully harmonised with either existing industry standards or the SEC proposals.

Reporting Requirements Should be Rationalised and Streamlined

There is a regulatory misconception that collecting more data will better inform an understanding of market risk. However, requiring dozens of data fields for a single transaction significantly complicates the ability to analyse trade data and meaningfully assess market risk by overloading databases with transaction terms that are not pertinent to a distinction of risk. For instance, knowing whether payments are calculated taking into account New York business days versus London business days or which version of an ISDA Master Agreement was used between the parties will not lead to any opportunities to mitigate risk. Rather, reporting of non-essential data fields makes it harder for regulators to focus on the key economics of transactions that are relevant to price transparency and/or an understanding of risk. Instead, regulators should consider their desired end-state and work backward to ensure the right data is collected that meets a well-considered approach to global risk analysis.

Requiring dozens of data fields for a single transaction significantly complicates the ability to analyse trade data and meaningfully assess market risk

In order to focus on meeting their primary objective of mitigating market risk, regulators should concentrate on obtaining a restrained, defined set of globally consistent core economic data fields that allow them to analyse the concentration of risk in certain products, against certain underliers or by certain market participants.

The US was the first to implement a single-sided reporting model under which one party is responsible for reporting, placing the bulk of the cost, burden and liability for reporting on the party with the most robust existing reporting infrastructure and most timely access to complete data. However, despite the obvious benefits, the US is not a truly single-sided reporting regime. Due to a requirement placed on swap data repositories (SDRs) by the Dodd-Frank Act to confirm the accuracy of reported data with both counterparties, SDRs are required to build functionality for non-reporting parties to supplement or verify the reported data.

This requirement in the Dodd-Frank Act replicates the bilateral confirmation process and places an indirect obligation on all parties to reportable derivatives transactions in the US to on-board to all SDRs used by their counterparties and build the associated functionality required by each SDR. This is dual-sided reporting in disguise, placing an enormous and costly burden on end users to build functionality that does not actually improve the quality of the data. Dual-sided reporting in the European Union has not resulted in better data quality, and neither will these variations of duplicative reporting obligations in the US. Instead, the reporting party should be solely accountable for the accuracy of the data it reports to an SDR.

Summary

The goal of improved regulatory transparency in the derivatives market is an important one, and it is one that ISDA fully supports. In order to improve the quality of the data available to the regulators to meet their G-20 commitments for transparency and risk mitigation, global regulators should improve data quality by adopting a defined set of core economic data fields that are relevant to the primary objectives of trade reporting, are domestically and globally harmonised in accordance with the recommendations of CPMI-IOSCO, align with existing industry defined terminology and leverage existing derivatives messaging standards like FpML. Regulators should also allow a single reporting counterparty to be solely responsible for the accuracy of the reported data.

Rather than issuing their own proposals for changes and the expansion of their data reporting regulations, regulators should focus on improving data under their existing regulations by providing the clarity and improvements requested and suggested by the industry. Significant changes to the data fields should only be implemented in accordance with the recommendations of the CPMI-IOSCO data harmonisation group. The recommendations of that forum are expected to be completed in 2017. National regulators should contribute to the expedition of those efforts and not engage in further overlapping and potentially contradictory data proposals. ■

The Shape of the IRD Market

Clearing and compression are playing an increasingly important role in derivatives markets, with more than two thirds of interest rate derivatives notional outstanding cleared and compression reducing IRD notional by approximately 62%. ISDA analyses the impact of these two dynamics on market activity

DERIVATIVES NOTIONAL OUTSTANDING figures can be a useful, broad indicator of derivatives positions, but do not reflect the amount of risk being transferred, the payments that are exchanged between parties, or the maximum loss that would be incurred should every derivatives contract be closed out (see box, *What is Notional Outstanding?*).

They do shed light on changes in derivatives trends – for instance, the increasing shift to clearing, an important regulatory goal. However, publicly reported figures, such as those published by the Bank for International Settlements (BIS), do not necessarily reflect detailed variations in derivatives market activity. That's because these notional outstanding numbers do not fully take account of the opposing influence of clearing and compression.

Clearing acts to increase reported notional outstanding, as a single bilateral transaction is counted as two cleared trades once novated to a central counterparty (CCP). In contrast, compression reduces notional outstanding, which can make it seem like fewer trades are taking place.

According to the BIS, total outstanding notional volume was $552.9 trillion at the end of June 2015, a decrease of 12.1% compared with six months earlier. Interest rate derivatives (IRD), which account for the majority (roughly 79%) of derivatives activity, totalled $434.7 trillion, a decrease of 14% over the same period.

In order to understand underlying market activity, however, these publicly reported figures need to be adjusted for the effects of clearing and compression.

Clearing

A rise in the use of clearing houses – in response to clearing mandates for certain products in some jurisdictions, but also due to risk, capital and operational efficiency reasons – has pushed publicly reported notional outstanding higher than it otherwise would have been. That's because each bilateral transaction is subsequently reported as two trades once novated to a CCP.

AT A GLANCE

Approximately 67.1% of total IRD notional outstanding was cleared at end-June 2015. This proportion has fallen slightly from a high of 72% six months earlier due to an increase in CCP portfolio compression activity.

Roughly 95% of clearable IRD notional outstanding is already being cleared.

The BIS reported a decrease of 14% in IRD notional outstanding in the six months to June 30, 2015, from $505.4 trillion to $434.7 trillion.

Adjusting for the effects of clearing and compression, underlying IRD notional outstanding increased by 4.7% over the same period.

Overall IRD notional has been reduced by roughly 62% as a result of portfolio compression.

WHAT IS NOTIONAL OUTSTANDING?

Any analysis of derivatives market activity should consider that notional outstanding does not reflect the amount of risk that is being transferred between counterparties or the maximum loss that would occur should all outstanding derivatives contracts be terminated. Instead, the notional amount is a reference point for the calculation of contractual payments (not the amount that is actually paid from one counterparty to another).

A more appropriate measure for assessing risk is gross market value, defined as the maximum loss that counterparties would incur if they all fail to meet their contractual payments and the contracts are replaced at current market prices. According to the Bank for International Settlements (BIS), the total gross market value of all over-the-counter (OTC) derivatives fell from $20.9 trillion at the end of 2014 to reach $15.5 trillion by June 30, 2015 – just 2.8% of outstanding notional. The gross market value of interest rate derivatives also fell, from $15.6 trillion at the end of December 2014 to $11.1 trillion six months later, representing 2.6% of interest rate derivatives notional outstanding.

This risk can be reduced by netting, which allows two counterparties to consolidate the payments under various swaps into a single net payment from one to the other. This is recognised by the BIS in its gross credit exposure figures, which fell from $3.4 trillion for all OTC derivatives in December 2014 to $2.9 trillion six months later. That represents just 0.5% of notional outstanding. Taking the collateral that counterparties have posted to each other into account would reduce that exposure even further.

In order to remove the double counting of cleared trades, an adjustment needs to be made to the BIS-reported IRD notional outstanding figures, based on CCP cleared volume data. This adjustment factor for cleared transactions totalled $174.6 trillion on June 30, 2015[1].

To determine an adjusted IRD notional outstanding figure – that is, one where the double-counted cleared trades have been removed – the clearing adjustment factor is subtracted from the BIS-reported figure. The resulting notional is $260.1 trillion as of June 30, 2015 (see Table 1). In other words, adjusting for double counting reduces IRD notional outstanding by roughly 40%.

Compression

After adjusting for the double counting of cleared transactions, the size of the IRD market shrinks. However, compression has the opposite effect – offsetting trades are torn up, meaning underlying market activity is understated.

TABLE 1: IRD NOTIONAL OUTSTANDING VOLUME (US$ TRILLIONS)

Notional Outstanding – US$ trillion	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15
BIS Reported Notional Outstanding	393.1	432.1	449.9	465.3	504.1	494.4	489.7	561.3	584.4	563.3	505.4	434.7
Adjustment Factor for Cleared Transactions	54.4	75.8	107.7	124.2	141.9	152.8	170.7	201.9	227.7	230.5	211.5	174.6
LCH.Clearnet (Single-counted) Gross Notional Outstanding	54.4	75.8	107.7	124.2	141.9	152.8	170.7	195.5	213.0	206.8	179.6	141.2
CME Gross Notional Outstanding	N/A	N/A	N/A	N/A	0.1	0.3	0.6	3.0	9.1	15.6	22.8	24.0
JSCC Gross Notional Outstanding	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.4	5.6	8.1	9.1	9.4
Adjusted Notional Outstanding	338.7	356.3	342.2	341.1	362.2	341.6	319.0	359.4	356.7	332.8	293.9	260.1
Pct (%) Cleared Notional Outstanding	16.1%	21.3%	31.5%	36.4%	39.2%	44.7%	53.5%	56.2%	63.8%	69.3%	72.0%	67.1%

Source: BIS, CME Group, JSCC, LCH.Clearnet, TriOptima

[1] ISDA used clearing data from LCH.Clearnet's SwapClear, CME Group and Japan Securities Clearing Corporation (JSCC). The following CCPs also clear IRD, but are excluded from this analysis: Eurex, Nasdaq OMX, OTC Clearing Hong Kong, Singapore Exchange, Shanghai Clearing House and Korea Exchange

While the BIS data is not adjusted for clearing, it does reflect trade compression activity (the BIS figures depict outstanding volume after compression has taken place).

Use of compression services has increased markedly over the past year as market participants seek to reduce the size of their balance sheets. This is in response to regulatory changes, such as the leverage ratio under Basel III, which is based on gross notional exposures.

> Use of compression services has increased markedly over the past year as market participants seek to reduce the size of their balance sheets

In order to better understand the underlying IRD market, compressed volume must be added back to the adjusted notional outstanding figure (ie, the one amended for the double counting of cleared trades).

TriOptima's triReduce data[2] is used as a proxy to evaluate the level of IRD portfolio compression. CCP compressed figures have been adjusted for double counting and are combined with non-CCP compressions.

Two types of compression are typically used to reduce notional outstanding: solo and multilateral. TriOptima's triReduce CCP data represents only multilateral compression volume conducted within a clearing house. In the absence of solo compression data, CCP triReduce volumes are doubled to account for both types of compression. The resulting figure is used to arrive at an adjusted compressed notional estimate[3].

The analysis shows that total outstanding IRD compressed volume more than tripled between December 2011 and June 2015, growing from $136.4 trillion to $420.1 trillion.

Results

Adding total compressed notional volume (see Table 2) to the clearing-adjusted notional outstanding figure (see Table 1) gives a total derived IRD notional number before clearing and compression occurs: $680.2 trillion.

Comparing this derived pre-clearing/pre-compression number (orange line) with the figure reported by the BIS (red line) reveals an interesting dynamic (see Chart 1). The BIS reported a 14% decrease in IRD notional outstanding in the six months to June 30, 2015, from $505.4 trillion to $434.7 trillion. After factoring out the effect of clearing and compression, however, IRD notional volume increased by 4.7%, from $650.0 trillion to $680.2 trillion, over the same period.

Over a longer period (December 2011 to June 2015), IRD notional outstanding as reported by the BIS decreased by 13.8%. After factoring out the impact of clearing and compression, IRD notional has increased by 33.5%.

TABLE 2: IRD ADJUSTED COMPRESSED NOTIONAL VOLUME (US$ TRILLIONS)

Notional Outstanding – US$ trillion	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15
Adjusted Compressed Notional Outstanding	N/A	N/A	N/A	N/A	136.4	173.9	197.8	212.7	218.0	319.1	356.1	420.1
Solo Compression Proxy*	N/A	N/A	N/A	N/A	41.7	60.1	72.6	80.9	83.9	134.2	153.4	188.6
triReduce Compression Volumes	N/A	N/A	N/A	N/A	94.7	113.8	125.2	131.8	134.1	184.9	202.6	231.4
Adjusted CCP Compression	N/A	N/A	N/A	N/A	41.7	60.1	72.6	80.9	83.9	134.2	153.4	188.6
Non-CCP Compression	N/A	N/A	N/A	N/A	52.9	53.7	52.6	50.9	50.3	50.7	49.2	42.8

* Solo compression proxy equals the triReduce CCP figure in a given period

Source: BIS, CME Group, JSCC, LCH.Clearnet, TriOptima

[2] www.trioptima.com

[3] TriOptima triReduce outstanding compressed volume statistics are adjusted for trades otherwise maturing in order to arrive at an adjusted compressed notional metric that can be compared to the notional figure adjusted for the double counting of cleared trades. Similarly adjusted CCP data was not available for this study

IRD Clearing Snapshot

Publicly reported derivatives notional outstanding figures can be used to arrive an estimate of clearing volumes (see Chart 2).

The starting point is the notional amount outstanding for IRD on June 30, 2015 (item A), as reported by the BIS. This figure is $435 trillion[4]. This amount is then adjusted for the double counting of cleared trades. This is achieved by calculating total IRD cleared volume on June 30, 2015 (item B), and subtracting that from the BIS-reported notional outstanding number. The resulting figure of $260 trillion is the clearing-adjusted IRD notional outstanding figure (item C).

Comparing total cleared notional of $175 trillion with the adjusted IRD notional figure of $260 trillion gives the proportion of the market that is currently cleared: approximately 67.1% of IRD notional outstanding.

The remaining sections of the waterfall analysis focus on the non-cleared segments of the IRD market. Subtracting total cleared notional volume from the adjusted notional figure results in the size of the non-cleared portion of the IRD market. This totals $86 trillion (item E).

> Approximately 95% or more of clearable IRD notional outstanding is currently cleared

Of the $86 trillion in non-cleared IRD, about $65 trillion[5] (item F) consists of swaptions, cross-currency swaps, options, and 'other' derivatives, which currently cannot be cleared.

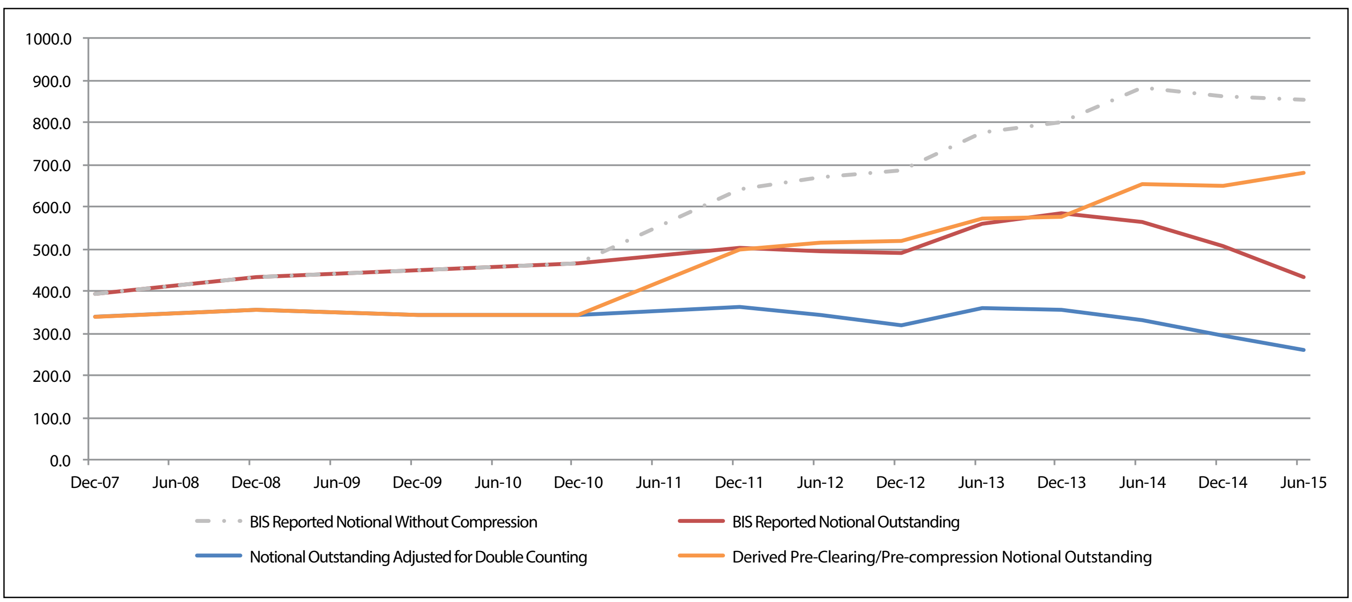
Swaps denominated in major currencies, as well as those denominated in many emerging currencies, are clearable. But there are still a handful of currencies that are non-clearable. According to DTCC statistics, about $2 trillion in notional outstanding fell into this category (item G)[6].

Another non-cleared market segment includes IRD transactions with non-financial counterparties that are not required to clear. This is estimated to be approximately $9 trillion at mid-year 2015 (item H)[7].

Removing these market segments provides an estimate of the amount of IRD transactions that are in largely clearable product categories but are not cleared: about $9 trillion (item I).

Therefore, approximately 95% or more of clearable IRD notional outstanding is currently cleared.

CHART 1: IRD NOTIONAL OUTSTANDING VOLUME (US$ TRILLIONS)



Source: BIS, CME Group, JSCC, LCH.Clearnet, TriOptima

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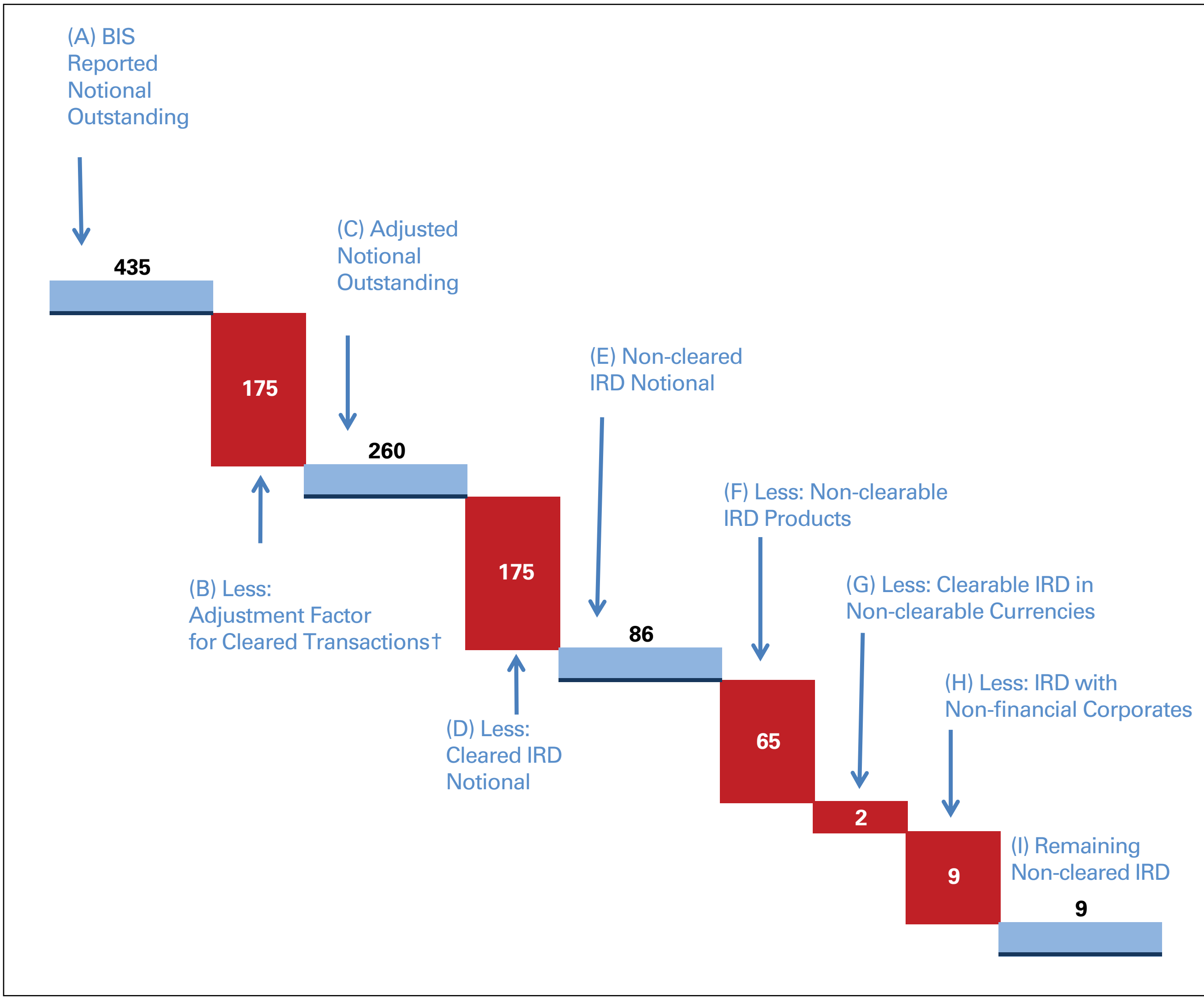
4 The figures are rounded to whole numbers for the purposes of the waterfall analysis

5 The $65 trillion consists of swaptions ($26.5 trillion), cross-currency swaps ($25.9 trillion), options ($8.9 trillion), and 'other' swaps ($3.5 trillion)

6 The Depository Trust & Clearing Corporation's (DTCC) database provides volume statistics for IRD denominated in: USD, EUR, JPY, GBP, AUD, CAD, CHF, NZD, SEK, ZAR, MXN, SGD, KRW, PLN, HKD, BRL, NOK, HUF, CZK and CNY. All other currencies are aggregated as 'other' ($2.3 trillion) and are mostly non-clearable. It should be noted, however, that the DTCC's 'other' category contains DKK, which is clearable

7 According to BIS end-June 2015 data, the notional value of IRD with non-financial corporates was $13.9 trillion. Assuming this figure breaks down into the same percentage between clearable and non-clearable (roughly 33%, or 86/260), about $9.3 trillion would consist of clearable products that are exempt from the clearing mandate, and $4.6 trillion would comprise non-clearable products

CHART 2: IRD WATERFALL: JUNE 30, 2015 (US$ TRILLIONS)



Source: BIS, CME Group, DTCC, JSCC, LCH.Clearnet, TriOptima

† The adjustment factor for cleared transactions metric includes $141 trillion from LCH.Clearnet, $24 trillion from CME Group, and $9 trillion from JSCC

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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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ISDA achieves its mission by representing all market participants globally, promoting high standards of commercial conduct that enhance market integrity, and leading industry action on derivatives issues.

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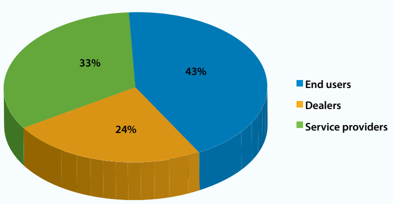
ISDA has over 850 member institutions from 67 countries. These members comprise of a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. Members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers.

Membership breakdown



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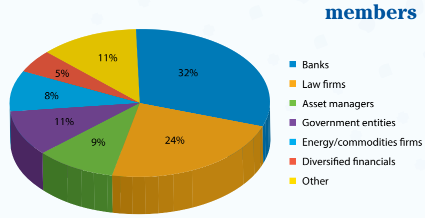
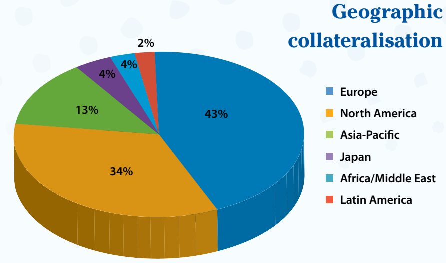


Geographic collateralisation



Additional information regarding ISDA's member types and benefits, as well as a complete ISDA membership list, is available on the Association's website: http://www2.isda.org/membership/

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ISDA Safe, Efficient Markets

ISDA Conferences

Education has been part of ISDA's mission since the Association's inception. With over 100 conferences, seminars, training courses and symposia held each year, ISDA's highly qualified instructors continue to educate members and non-members globally on topics including legal and documentation, clearing, trading, margin, reporting, risk and capital management, regulation and other related issues.

In February 2015, ISDA held its first full-day legal forum in London, which focused on key current legal issues. The forum included plenary sessions on clearing, regulatory updates on compliance and legal impact, as well as in depth breakout sessions on bank recovery, resolution, ISDA's Working Group on Margining Requirements (WGMR), law reform, and netting and legal opinions. ISDA will hold a legal forum in New York in the second quarter of 2016 that will cover notable derivatives legal issues for US attorneys.

An additional bonus in most of these courses is the availability of continuing education credits. ISDA's educational efforts have been accredited by the New York Continuing Legal Education Board, the National Association of State Boards of Accountancy (NASBA) and other regional continuing educational organisations.

In addition to ISDA's regular courses, the Association also offers regional updates during the third and fourth quarters in New York, London, Sydney, Asia-Pacific and Tokyo. These one-day conferences are intended to inform both members and non-members, regulators and the press of ISDA's regional work.

The ISDA Annual General Meeting (AGM) is ISDA's premier, members-only event. Every year, the ISDA AGM takes place in different financial centers around the world, rotating among the major economically developed countries. ISDA's 31st AGM is being held on April 12-14, 2016 in Tokyo.

The current conference schedule that is updated weekly is posted on the ISDA website at www2.isda.org/conference. For additional updates on ISDA's conferences, please follow us on Twitter at @ISDAConferences.

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- Getting Ready for Margining
- International Developments - Reporting
- ISDA Master Agreement and Credit Support Annex: Negotiation Strategies
- Markets in Financial Instruments Directive II/Regulation
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