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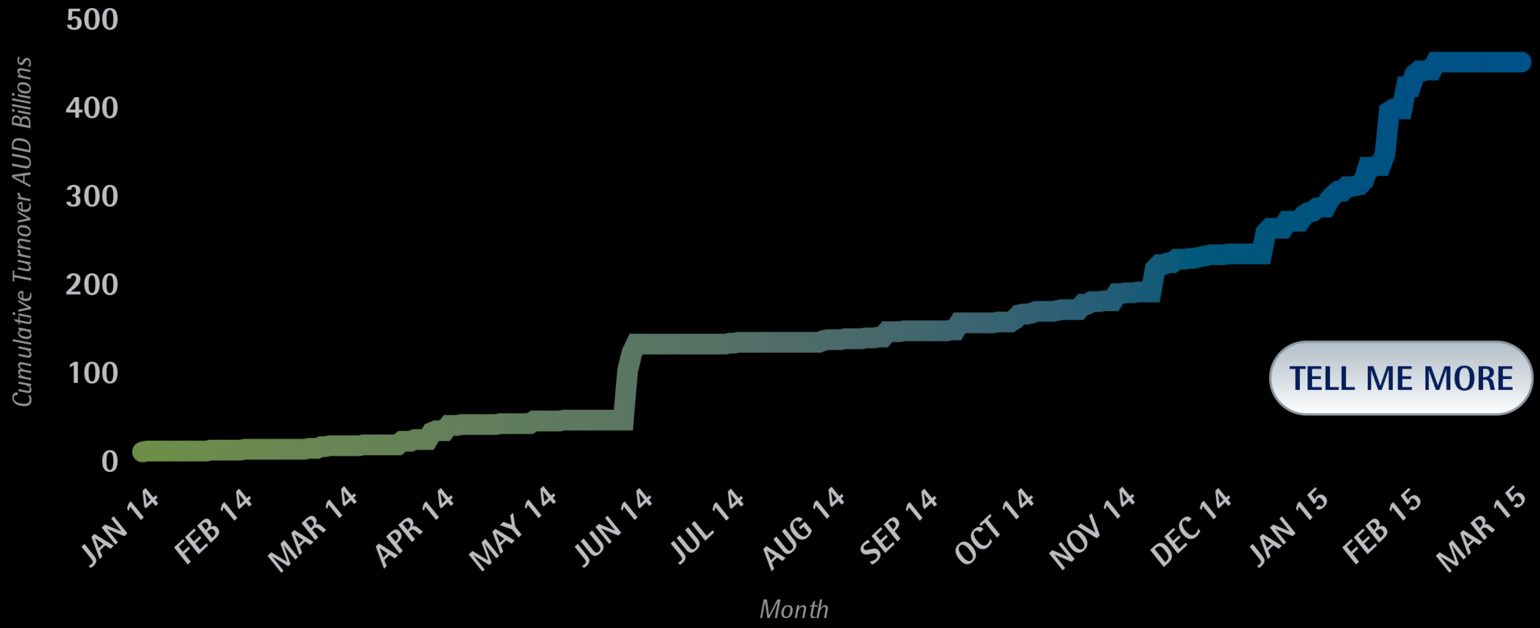

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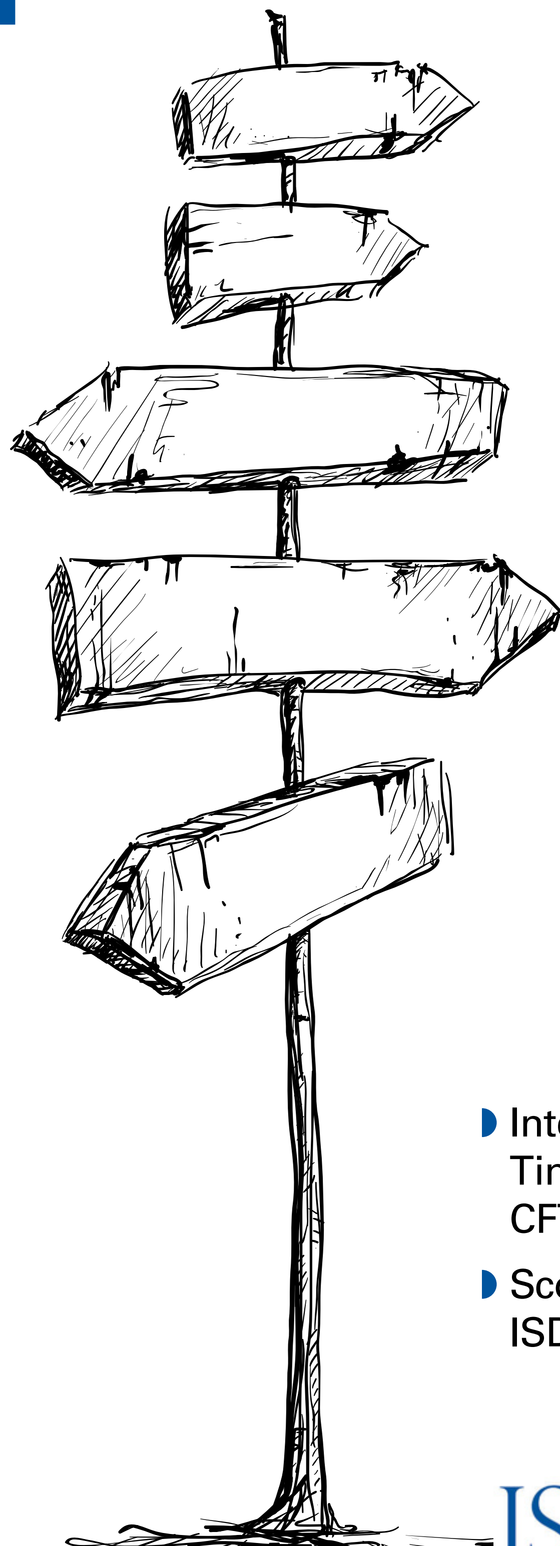

THE ROAD AHEAD FOR NON-CLEARED DERIVATIVES

- Interview: Timothy Massad, CFTC
- Scott O'Malia on ISDA's priorities

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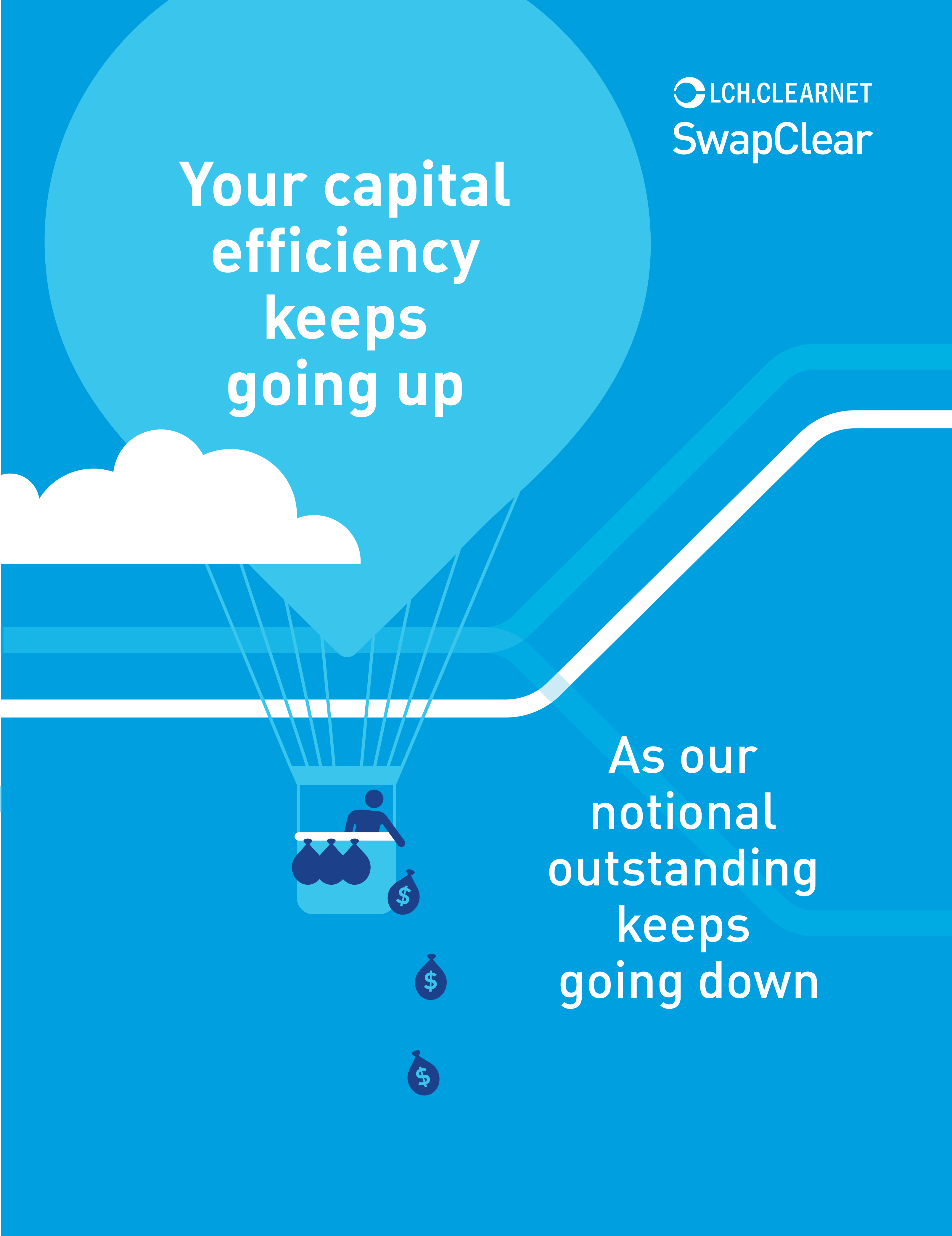
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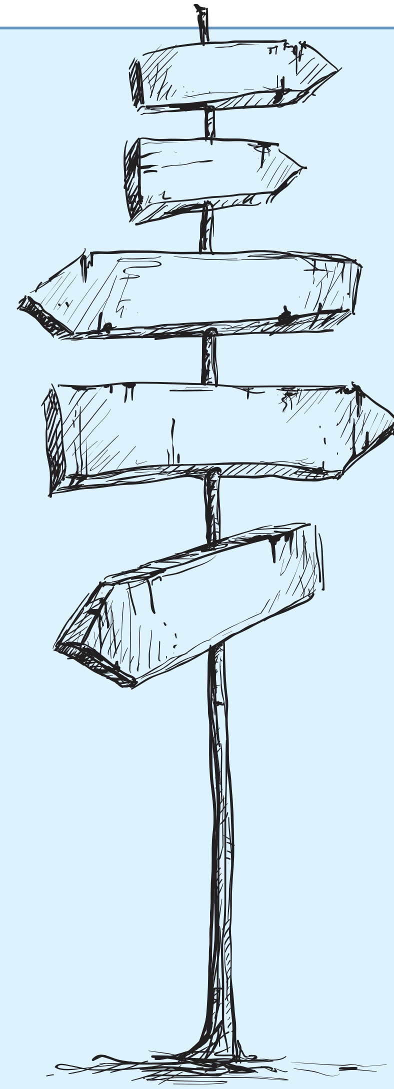

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There and Back Again

THIRTY YEARS AGO, 10 bankers got together, pooled their firms' funds, hired a lawyer, and set in motion one of the great stories of modern finance.

They formed ISDA, which, in turn, helped form an important new global financial market that forever changed how risk is measured, managed and mitigated.

It started with documentation that standardised contract terms and enabled firms to net (and thereby reduce) their exposures to each other. It spread to advocating for policies that ensured the enforceability of netting. It later included working to gain recognition of the risk-reducing benefits of netting in global capital requirements.

In these and many other ways, ISDA represented the growing needs of a growing market and a growing number of market participants. As a result, ISDA itself became one of the world's largest financial trade associations, with more than 800 member institutions in 67 countries, and with seven offices in six countries.

Today, the global derivatives market and ISDA are much changed compared to 1985. But in one important respect, 2015 seems eerily similar. There is a sense that we are at the beginning of something new. Yes, the view is still a bit blurry. We're not quite sure what is taking shape, but we can see the outline forming.

This much, however, we do know. Most importantly, firms around the world want and need derivatives to manage their risks. Corporates, sovereigns, asset managers, funds, large and small banks, energy companies, you name it—all of them depend on customised financial instruments to hedge their exposures.

We also know the market structure for derivatives has fundamentally changed – and that it will continue to evolve. Some 75% of the interest rates derivatives market is now cleared. Virtually every derivatives trade is reported to a repository. Margin requirements are coming on stream for non-cleared transactions.

Given this fundamental need for derivatives, as well as the fundamental changes in how they are treated and traded, we also know that ISDA's mission and work remain vitally important. There is critical work to be done in every area of the market—from capital requirements to collateral rules, from electronic trading to market education.

So we are pleased and proud to launch, in our 30th year, a new publication that will highlight the challenges and opportunities in the dynamic and global derivatives market. *IQ: ISDA Quarterly* will chronicle the never-ending story of this market and the work that ISDA does in representing it. You will find in every issue an interesting mix of features, interviews and research presented in what we hope is an attractive and accessible format.

Thanks for your interest in ISDA and *IQ: ISDA Quarterly*.

Steven Kennedy
Global Head of Public Policy
ISDA

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Nick Sawyer, Head of Communications, nsawyer@isda.org
Steven Kennedy, Global Head of Public Policy, skennedy@isda.org

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ISDA Outlines Key Principles for Trade Reporting

ISDA published a paper in February that outlines a number of key principles and initiatives for regulators, market participants and industry service providers in order to further improve regulatory transparency of derivatives activity.

Significant progress has been made in this area over the past several years, and virtually all derivatives transactions are now reported to trade repositories. But major challenges remain, primarily because of a lack of standardisation within and across jurisdictions in reporting requirements. Data requirements differ in different jurisdictions; some data requirements are not clearly defined; and standardised reporting formats have been not adopted quickly or broadly enough.

The end result is that regulators may lack a true picture of risk in individual jurisdictions because of incomplete and inconsistent trade data, and cannot aggregate data on a global basis.

"There has been significant progress in the reporting of swaps data, with reporting requirements coming into force in a number of jurisdictions," said Scott O'Malia, ISDA's chief executive officer. "Yet much more progress could and should be made. Solutions to major trade reporting challenges exist and market participants, regulators and service providers need to work together to agree and implement them on a cross-border basis to ensure safe, efficient global derivatives markets."

ISDA's paper outlines key principles for standardising, aggregating and sharing data across borders and action steps that all stakeholders should consider and align with in order to improve regulatory transparency. Regulatory reporting requirements for derivatives transactions should be harmonised within and across borders, and policy-makers should embrace and adopt the use of standards to drive improved quality and consistency in meeting reporting requirements. Where global standards do not yet exist, market participants and regulators should collaborate and secure agreement on common solutions to improve consistency and cross-border harmonisation.

> Regulators may lack a true picture of risk in individual jurisdictions because of incomplete and inconsistent trade data

In addition, laws or regulations that prevent policy-makers from appropriately accessing and sharing data across borders must be amended or repealed. Finally, ISDA recommends that reporting progress should be benchmarked. ■

Read an article on data reporting and the ISDA principles on pages 26-28.

Industry Meeting Clearing and Compression Goals

Two key policy goals of increased clearing and portfolio compression are being met by the derivatives industry, with a recent surge in compression volumes contributing to a decline in publicly reported interest rate derivatives notional outstanding figures, according to a research paper published in January by ISDA.

The Bank for International Settlements (BIS) reported that interest rate derivatives gross notional outstanding had fallen from $584.4 trillion in December 2013 to $563.3 trillion in June 2014, a decrease of 3.6%.

The decline in publicly reported figures can be explained by a recent jump in compression activity, with outstanding compressed notional volume (adjusted for double counting) increasing 37.9% between December 2013 and June 2014. In total, roughly 35.7% of the interest rate derivatives market has been reduced through portfolio compression. In addition, close to 70% of total interest rate derivatives national outstanding has been cleared.

After factoring out the impact of clearing and compression, ISDA's analysis shows that underlying interest rate derivatives market activity increased by 5.5% between December 2013 and June 2014.

The difference emerges because of how clearing and compression affect notional outstanding figures in publicly available data. Clearing can lead observers to overstate the size of the market, as a single bilateral trade is counted twice when it is cleared (one transaction between counterparty A and the clearing house and one between counterparty B and the CCP). Conversely, compression results in the cancelling out of offsetting trades, which can make it seem like the market is shrinking even if underlying trade activity has increased.

Over the longer term, publicly reported BIS notional outstanding volume and ISDA's adjusted figures have increased by similar amounts. BIS-reported notional outstanding rose by 11.7% between December 2011 and June 2014. This increases slightly to 13.3% once adjusted for clearing and compression.

While compression activity has jumped in recent months, the proportion of cleared trades has been climbing steadily over the past few years. An estimated 69.3% ($230.6 trillion) of interest rate derivatives notional outstanding is now cleared. ■

Read the full ISDA *OTC Derivatives Market Analysis: Interest Rate Derivatives* paper at: http://isda.link/datapaper.

ISDA Proposes CCP Recovery and Continuity Framework

ISDA published a position paper in January that sets out a proposed recovery and continuity framework for central counterparties (CCPs).

Clearing houses have become vital to financial market infrastructure following the implementation of new regulations that require standardised derivatives to be cleared. As a result of their systemic importance, CCPs are required to develop recovery plans to avert a threat to their viability and ensure they can maintain the continuity of critical services without requiring the intervention of resolution authorities or resorting to public money.

The ISDA *CCP Default Management, Recovery and Continuity* paper proposes a framework for recovery and sets out tools that can be used to re-establish a matched book following the default of one or more clearing members. The paper does not cover non-default losses and those relating to liquidity shortfalls.

The proposed recovery measures are consistent with the recommendations made by the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions in October 2014, and include a portfolio auction of the defaulted clearing member's portfolio, limited cash calls to solvent clearing members, loss-allocation mechanisms in the form of a pro-rata reduction of unpaid obligations of the CCP, and consideration of a partial tear-up of contracts to re-establish a matched book.

ISDA believes the recovery of a CCP is preferable to its closure. As a result, recovery efforts should continue so long as the CCP's default management process is effective, even if pre-funded resources have been exhausted. In the event the default management process hasn't been effective in re-establishing a matched book – signalled by a failed auction – the CCP may have to consider the closure of the clearing service. At this point, it is likely that resolution authorities will be considering whether this should trigger resolution.

ISDA also believes that recovery measures should be clearly defined in clearing service rule books to provide transparency and predictability over the maximum time frame for the default management process before recovery tools are deemed to have failed.

The proposed framework on CCP default management, recovery and continuity follows ISDA's publication of a set of high-level principles for CCP recovery in November 2014, which called for greater CCP transparency, use of standardised stress tests and significant CCP 'skin in the game'. ■

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

IRD Average Daily Trade Size Falls

Derivatives users are trading interest rate derivatives (IRD) more frequently but in smaller sizes, according to a review of 2014 trading volumes published in March by ISDA.

The *ISDA SwapsInfo 2014 Year in Review* shows a decrease in IRD average daily notional volume in 2014, falling from $588 billion in the first quarter of the year to $484.4 billion in the fourth quarter. Average daily trade counts increased from 3,622 to 3,800 over the same period. This translates into a drop in the average size per trade from $162.3 million in the first quarter to $127.5 million in the last three months of the year. This trend emerged in both off-venue and swap execution facility (SEF) trading.

However, IRD trading volumes over the whole of 2014 were significantly higher than the year before. Average daily notional volume more than doubled over the period, from $237.6 billion in 2013 to $519.4 billion last year. Trade counts also increased by 44.6%, from an average of 2,447 trades per day in 2013 to 3,539 in 2014.

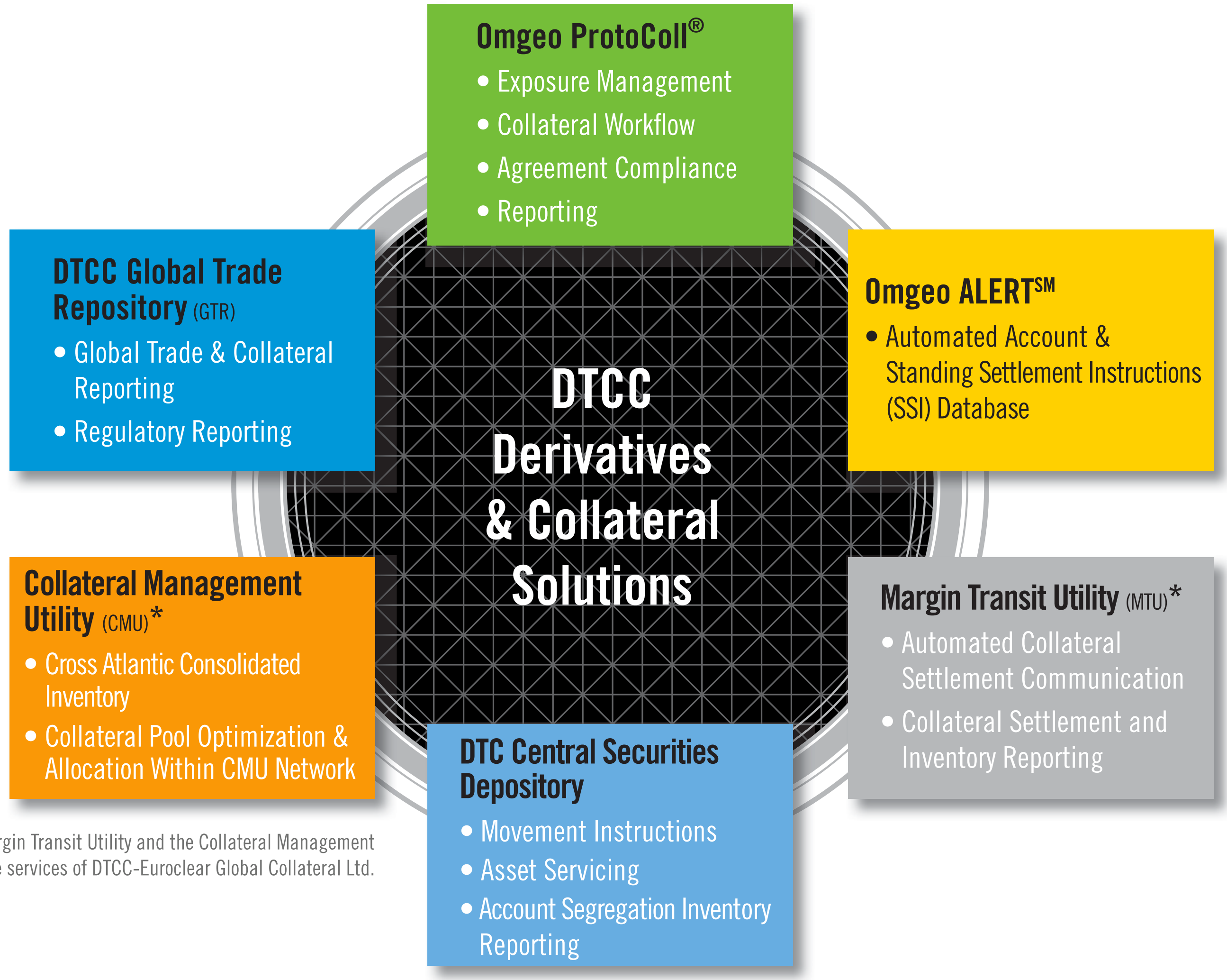
The proportion of cleared trades continued to grow over the course of last year, reaching 76.5% of average daily IRD notional in 2014 versus 71.7% in 2013. SEF trading has also grown, accounting for 52.4% of average daily notional volume versus 19% in 2013.

"Our research shows the impact of regulatory reforms on derivatives trading volumes. More than three quarters of interest rate derivatives average daily notional is now cleared. The number of trades conducted each day increased over the course of 2014, while trade sizes decreased," said Scott O'Malia, ISDA chief executive officer.

Credit default swap (CDS) index volumes also increased in 2014 compared with the year before. Average daily trade counts grew from 754 trades per day in 2013 to 846 trades last year. Average daily notional volume also increased, from $28.5 billion in 2013 to $30.5 billion in 2014. The daily average size of a CDS index transaction decreased slightly from $37.8 million in 2013 to $36.1 million in 2014.

Cleared CDS index transactions continued to grow as a percentage of total volume during 2014. Average daily cleared trade counts and cleared notional volume accounted for 76.2% and 74.7% of the total volume in 2014, versus 35.5% and 37.7% in 2013. Average daily SEF trade counts accounted for 67.8% of total CDS index trading in 2014, while SEF average daily notional volume comprised 62.4% of the total. ■

Read a more comprehensive analysis of interest rate derivatives volumes on pages 38-41.



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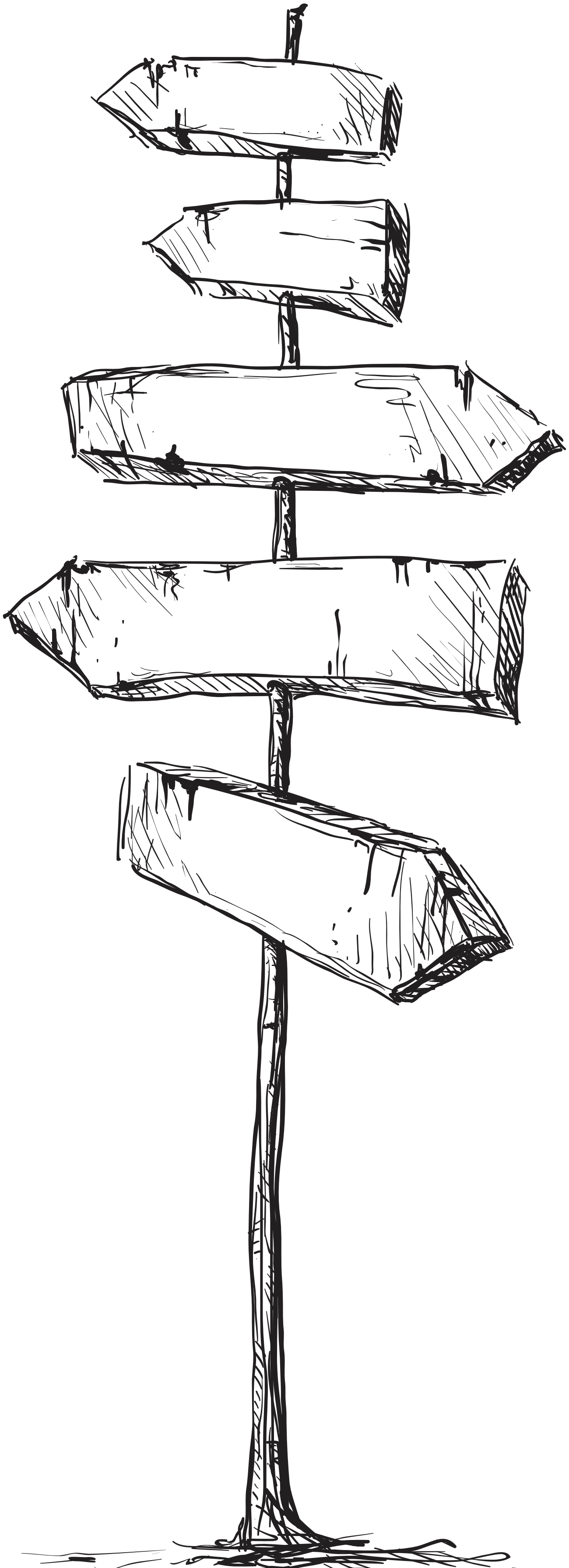


The Road Ahead

THE DERIVATIVES MARKET is about to undergo a change that, for most participants, could transform how they use and even think about derivatives. For the first time, most derivatives users will soon be required to post collateral against their non-cleared derivatives transactions. Variation margin may be familiar to some financial counterparties, but initial margin will be new to many—and it's something that will touch pretty much every aspect of their derivatives operations, from trading and treasury, to back office and legal.

In the run-up to the new requirements, firms will need to adapt the documentation they have in place, develop new technology to calculate margin requirements in real time, and establish processes to post and collect margin, among other things. Preparations have been under way since the margin framework was published by the Working Group on Margining Requirements (WGMR) in September 2013, but work has been hampered by the fact that national authorities had not published final rules by the time *IQ: ISDA Quarterly* went to press.

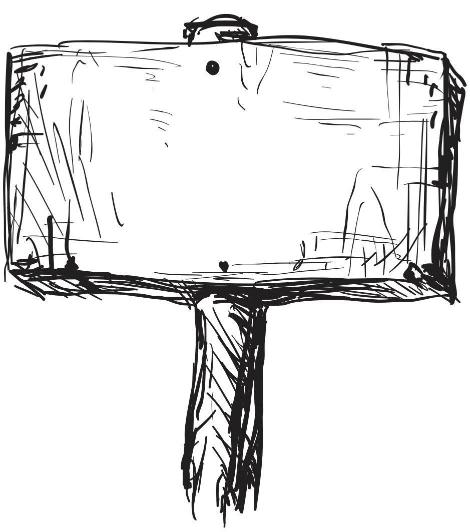
In this issue, we focus on the new margin regime in three feature articles. In the first (see pages 12-15), we consider just how much of the derivatives market will be affected by the non-cleared margin rules. In the second (see pages 16-18), we review the WGMR requirements and the efforts to translate those into binding national rules. The third article (see pages 19-21) outlines ISDA's WGMR implementation efforts and its work to develop a standard initial margin model.

The State of Play

A significant portion of the derivatives market is unsuitable for central clearing, but these products play a vital role in end-user risk management strategies. *IQ: ISDA Quarterly* looks at the size of the non-cleared segment

WITH SO MUCH focus from regulators and the industry as a whole on the move to central clearing, it's easy to forget there will continue to be a large share of the derivatives market that won't be cleared.

These non-cleared instruments are not necessarily more complex than cleared transactions, nor do they pose significantly more risk. It could be that the contracts have non-standard terms because they are customised for a particular client, or there are technical issues in developing a valuation model or enabling the settlement of deliverable currencies. In some cases, a lack of liquidity and the relatively small number of dealers active in trading a particular product might mean there are too few firms to participate in the central counterparty (CCP) default management process, making clearing houses reluctant to take on a particular instrument.



That doesn't mean non-cleared products aren't—or shouldn't be—used. These instruments are often vital elements in the risk management strategies of corporates, insurance companies, pension funds, sovereigns, smaller financial institutions and others. Without them, these entities may experience greater earnings volatility due to an inability to qualify for hedge accounting, or be unable to offset the interest rate, inflation and longevity risks posed by long-dated pension or insurance liabilities.

While global policy-makers have been keen to encourage all standardised contracts to clear through CCPs—part of the 2009 commitments made by the Group-of-20 nations—regulators have acknowledged there is a place for non-cleared instruments. But just how big is this segment?

Size of the non-cleared market

The interest rate derivatives market provides the most complete data. As of June 30, 2014, the total size of this market was between $572.4 trillion and $583.5 trillion in notional outstanding[1]. But these figures are after compression—where offsetting trades are cancelled out—which acts to reduce the overall notional size of the market. Total interest rate derivatives outstanding compressed volume was approximately $184.9 trillion as of June 30, 2014, according to figures from TriOptima. That means total notional

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- Many instruments are not cleared because they are less liquid or pose valuation challenges for CCPs—not because they are inherently more 'risky'.
- These products are widely used by end users to hedge risk.
- Approximately $111.2 trillion–$122.3 trillion in interest rate derivatives notional outstanding is not cleared – but most of that comprises instruments, currencies and maturities for which no clearing service exists.

1. According to semiannual figures published by the Bank for International Settlements (BIS), total interest rate derivatives notional outstanding was $563.3 trillion at the end of June 2014. For the purposes of this article, we use an enhanced measure to capture the differences between the BIS triennial and semiannual BIS data: data is collected from a larger number of firms in the triennial survey. This is achieved by adding the interest rate derivatives proportion of 'unallocated' derivatives in the semiannual survey. Notional outstanding of interest rate derivatives reported to the Depository Trust & Clearing Corporation (DTCC) was $572.4 trillion at the end of June 2014

outstanding would be closer to $757.3 trillion-$768.4 trillion had compression not occurred (see Figure 1).

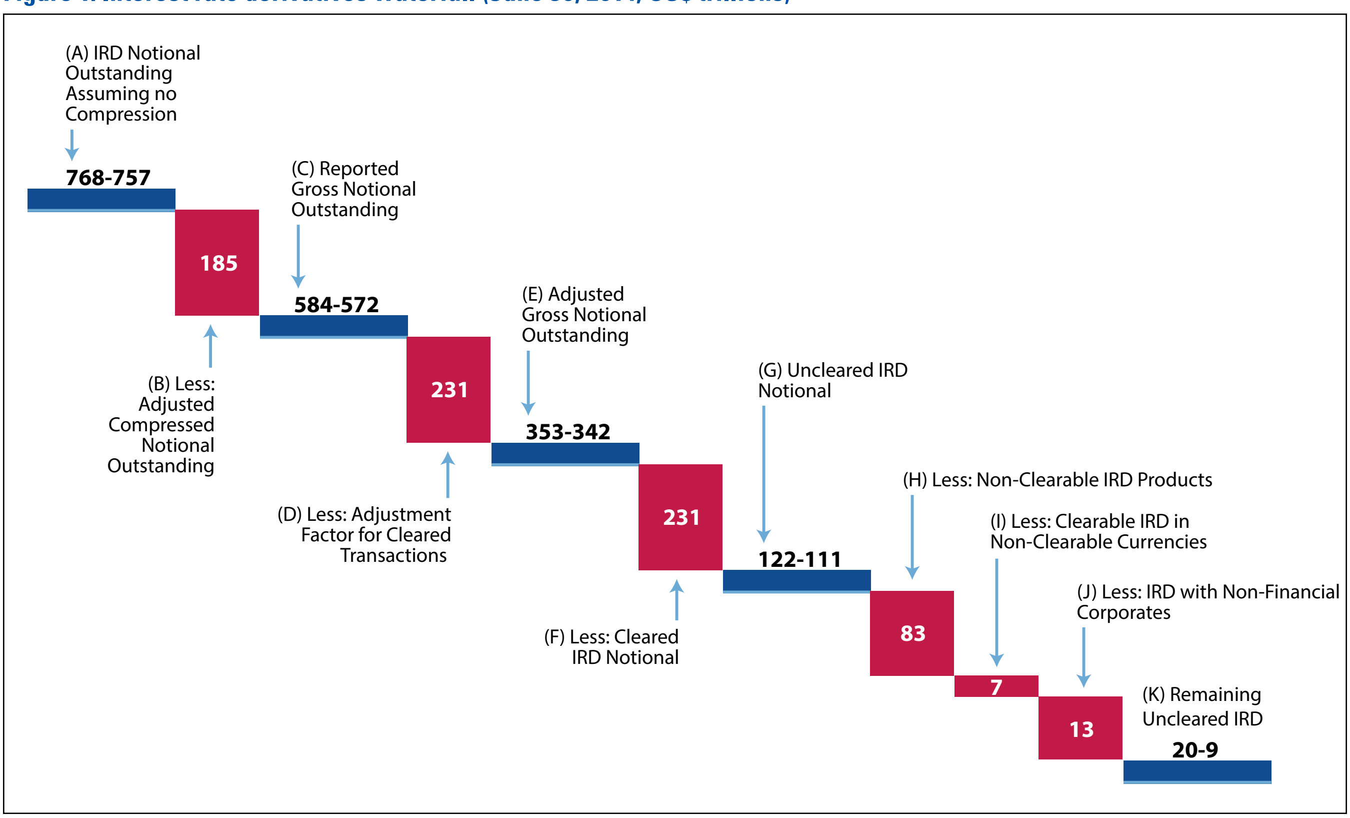
That doesn't tell the whole story either, though. Cleared trades currently appear twice in notional outstanding data: a single bilateral trade that is subsequently cleared is reported as one transaction between counterparty A and the clearing house and one between counterparty B and the CCP. With the proportion of cleared trades climbing steadily over recent years in response to new regulation, this has had the effect of inflating the size of the market. In order to adjust for this double counting, the total volume of cleared trades needs to be subtracted from the compression-adjusted notional figures. Approximately $230.6 trillion in interest rate derivatives notional had been cleared at LCH.Clearnet's SwapClear, CME Group and the Japan Securities Clearing Corporation as of June 30, 2014—meaning notional outstanding adjusted for double counting and after compression was $341.8 trillion–$352.9 trillion.

The $230.6 trillion in cleared interest rate derivatives notional then needs to be subtracted from the adjusted notional figure to arrive at the notional outstanding of non-cleared derivatives: $111.2 trillion–$122.3 trillion.

This non-cleared universe encompasses several key elements.

- $82.7 trillion comprises interest rate derivatives products that are not currently clearable. This includes swaptions ($31.9 trillion), cross-currency swaps ($30.9 trillion), options ($11.8 trillion) and inflation swaps ($3.7 trillion) (See Figure 2).
- Approximately $6.8 trillion of the interest rate derivatives market comprises transactions in products that are available for clearing, but in currencies that can't be cleared[2]. That includes Brazilian real and South Korea won, which together account for $2.7 trillion.
- Non-financial corporates and governments, most of which would qualify for clearing exemptions under existing and forthcoming rules, account for approximately $15.7 trillion. Some of this amount would include trades in non-clearable products or currencies that have already been counted. Using an approximate ratio of clearable to non-clearable products, we estimate roughly $12.6 trillion out of the $15.7 trillion in non-financial corporate notional is clearable.
- Totting up these non-clearable components and subtracting them from the total non-cleared notional figure

Figure 1. Interest rate derivatives waterfall (June 30, 2014, US$ trillions)



2. At June 30, 2014 non-clearable currencies included: AED, BRL, CLF, CLP, CNY, COP, ILS, INR, KRW, MYR, RUB, SAR, THB, TRY, and TWD. More recently, KRX began clearing KRW IRS on June 30, 2014 and Shanghai Clearing House began clearing onshore CNY IRS on July 2, 2014

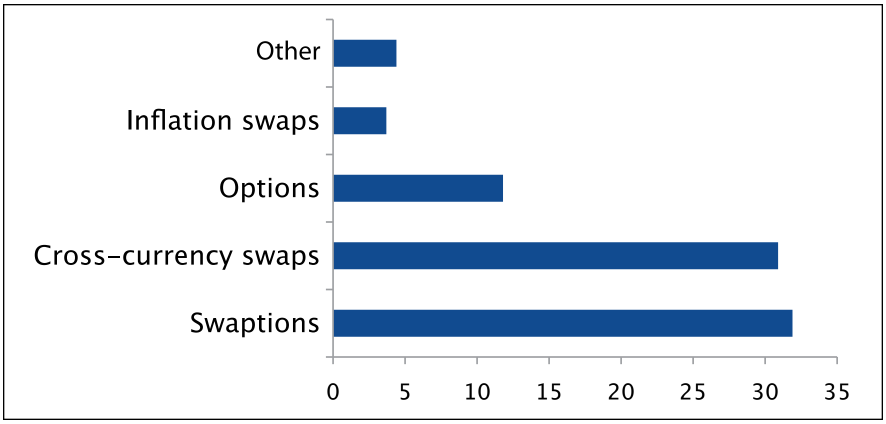
indicates that approximately \$9.1 trillion-\$20.2 trillion of interest rate derivatives notional outstanding comprises products that are clearable but not currently cleared. This would include transactions in jurisdictions where clearing mandates have not yet come into force.

Non-clearable products

There has been a significant regulatory and industry effort to develop the legislation and infrastructure to support central clearing in recent years. Clearing mandates for certain interest rate derivatives products are already in place in the US and Japan, while the first interest rate derivatives clearing obligations are expected to come into force in Europe for clearing members in 2015, with other financial institutions following in 2016. Clearing mandates now also exist in South Korea and China (since June and July 2014, respectively), and other countries are expected to follow suit in 2015.

The universe of instruments mandated for clearing is also likely to expand over time as CCPs further develop their clearing services. Nonetheless, a number of products are likely to remain outside of clearing. Non-linear products, in particular, have proved difficult to clear, largely because of the extra complexity in valuations, the customised nature of these instruments and a relative lack of liquidity in these markets compared to the interest rate swaps space. The smaller pool of dealers active in these instruments has also meant clearing houses have had to consider whether they might struggle to conduct an

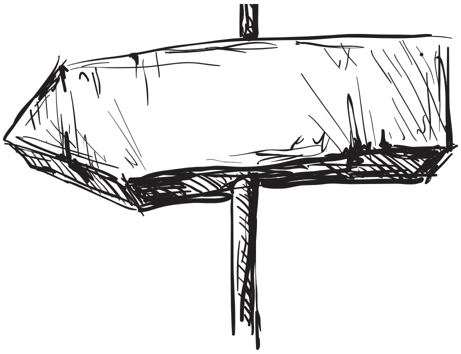
Figure 2. Non-clearable products (June 27, 2014, US\$ trillions)



Source: DTCC

Table A. Non-clearable products—risk management uses

INSTRUMENT	User type illustration	Possible objective
SWAPTIONS	Pension funds	To protect funding ratios against a decline in interest rates by buying a low-strike receiver swaption. The fund would exercise the option if rates fall below the strike, and would receive a higher fixed rate than it would otherwise be able to obtain in the market. If rates rise, the fund wouldn't exercise the option and would buy bonds or interest rate swaps at market levels.
CROSS-CURRENCY SWAPS	Corporates	A eurozone company has issued a euro-denominated bond, but has most of its business operations in the US. If the euro strengthens against the dollar, the firm will face financial-statement and cash-flow volatility. It will therefore need to allocate a larger amount of its dollar cash flow to service its euro-denominated debt. Instead, the firm could swap the loan into US dollars using a cross-currency swap, allowing it to better match the currency in which revenues are received and interest expense is paid.
OPTIONS	Mortgage providers	Mortgage providers need to hedge prepayment risk – the risk that mortgages will be repaid early. This is a function of interest rates, and mortgage providers typically employ interest rate options and swaptions to manage this risk and reduce their reliance on dynamic hedging.
INFLATION SWAPS	Electricity/ water utilities	Utility companies, particularly those in the UK, are bound by statute to only raise their prices by an amount linked to inflation. These companies are therefore keen to match the structure of their liabilities with that of their revenues. This can entail issuance of inflation-linked debt, but given the relatively small user base of index-linked bonds, utilities may opt to issue nominal fixed-rate debt and enter into an inflation swap where they pay inflation and receive fixed rate.



auction following a default, particularly in stressed markets.

The clearing of cross-currency swaps is also likely to be hampered by concern over the physical exchange and settlement of currencies—something that may require a payment-versus-payment solution, similar to CLS.

Even if a wider variety of products are eventually cleared, they may not be subject to mandatory clearing requirements. Regulators have said they will consider the depth of the market, availability of prices and number of clearing members when making clearing obligation determinations—criteria that may not be met for certain instruments, currencies and/or maturities.

Consequently, non-cleared derivatives instruments will continue make up a meaningful part of the overall derivatives market. In fact, these instruments are regularly used by financial and non-financial users to closely hedge risk, eliminate balance-sheet volatility and create certainty (see Table A).

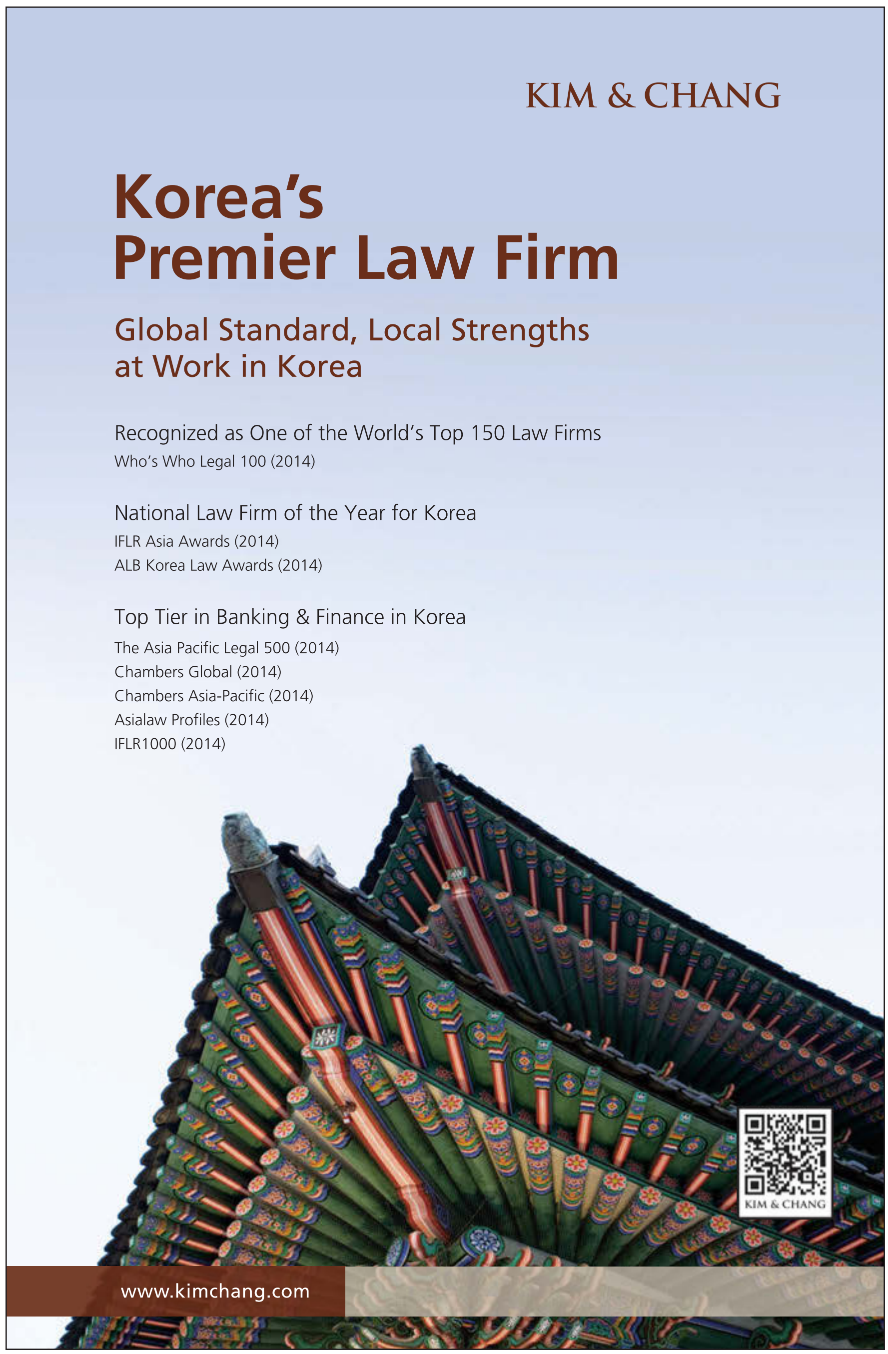
Conclusion

While there has been a push to develop clearing mandates and services, a large part of the interest rate derivatives market will remain non-cleared. These products do not necessarily pose significantly more risk than clearable products. In some cases, the market for those products is smaller and is traded by fewer dealers, raising concerns about whether enough clearing members would be able to participate in the default management process. In other cases, there are complexities in the valuation or risk management of certain products in a cleared environment.

Despite not being clearable, these products have an important social value. Pension funds, for instance, are able to put on flexible swaption hedges in an uncertain interest rate and inflation environment, reducing the volatility of their funding positions. Corporates, meanwhile, are able to tap into pockets of investor appetite outside their country—therefore diversifying their investor base, as well as benefiting from potentially favourable funding costs elsewhere—but without exposing them to mismatches in interest rates and currency. ■

FURTHER READING

- *OTC Derivatives Market Analysis: Interest Rate Derivatives*, January 2015, http://isda.link/marketanalysis
- *Dispelling Myths: End-User Activity in OTC Derivatives*, August 2014, http://isda.link/dispellingmyths
- *Size and Uses of the Non-Cleared Derivatives Market*, April 2014, http://isda.link/nonclearedderivatives



The Future for Non-Cleared Derivatives

Regulators are working to finalise margin rules for non-cleared derivatives, but variations between national proposals have posed challenges for industry implementation efforts

IN A RECENT survey of ISDA members, the introduction of margin requirements for non-cleared derivatives was flagged as one of the biggest issues facing the industry. That's not surprising. Once implemented, the majority of derivatives market participants will need to post initial and variation margin on their non-cleared trades. For many entities, it will be the first time they've had to post collateral on their derivatives transactions – and it comes with a whole host of infrastructure and documentation challenges.

This has got end users worried. An ISDA survey at the start of this year found that one-third of end-user respondents were unaware whether they would be subject to the rules. Of the 36% that knew they would, nearly two-thirds were worried about their ability to comply.

> "Margin requirements for non-cleared derivatives will dramatically change the landscape for these trades"
> — *Mary Johannes, Head of the ISDA WGMR Initiative*

"Margin requirements for non-cleared derivatives will dramatically change the landscape for these trades. Many firms will need to start posting both initial and variation margin when the rules are fully in effect, requiring significant changes to documentation and infrastructure. This will take some time to do properly," says Mary Johannes, senior director and head of the ISDA WGMR initiative.

The rules have their origins in the commitments made by leading nations in the aftermath of the financial crisis. The Group-of-20 leading economies in 2011 called on the Basel Committee on Banking Supervision and the International Organization of Securities Commissions (IOSCO) to develop international standards for bilateral margin requirements. Following two consultation papers and a quantitative impact study, the Working Group on Margining Requirements (WGMR) published its final policy framework in September 2013.

Since then, the baton has passed to individual jurisdictions to adapt the WGMR framework into binding national rules. The three European Supervisory Authorities (ESAs) were first out of the starting blocks, jointly issuing their draft regulatory technical standards on April 14, 2014, followed by the Japanese Financial Services Agency on July 3. US prudential regulators published their draft proposals on September 24, closely followed by the US Commodity Futures Trading Commission (CFTC) on October 3.

Timing concerns

The immediate concern for many market participants was the timing of implementation. The original WGMR framework set a phased-in implementation schedule for initial margin, starting from

AT A GLANCE

- Final margin requirements were published by the WGMR in September 2013, and national regulators have since been working to adopt those requirements into local rules.
- A number of important differences emerged in the various national proposals, including scope of coverage, collateral eligibility and treatment of FX risk.
- The rules initially set an effective date of December 2015 for variation margin posting and the phase-in of initial margin rules. This has been delayed until September 2016, and variation margin requirements will now also be phased in.

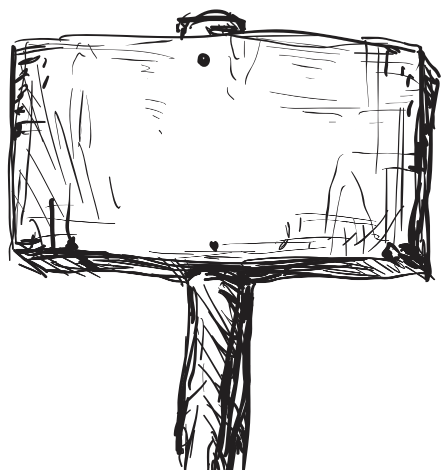
December 1, 2015 for covered entities with non-cleared derivatives notional outstanding above €3 trillion. That threshold would decline every year until December 1, 2019, when entities with non-cleared derivatives notional above €8 billion would need to comply. For variation margin, however, regulators decided to go for a 'big bang' approach: all covered counterparties would have to apply the rules from December 2015.

That left market participants with very little time to make the necessary operational changes, particularly as much of the detailed implementation couldn't begin until national rules are finalised. In response, ISDA sent a letter to the Basel Committee and IOSCO in August 2014, highlighting the industry's concerns and requesting two years from the point national rules are finalised to prepare for implementation. ISDA also requested a phased implementation for variation margin requirements, in recognition of the significant number of counterparties that do not currently post variation margin.

Regulators reacted to those concerns last month, publishing a revised phase-in schedule for initial margin and introducing phasing for variation margin. Initial margin requirements will now start from September 2016, extending through to September 2020. Covered entities with non-cleared derivatives notional outstanding above €3 trillion will need to start posting variation margin from September 2016, but other firms receive an extra six months, until March 2017, before the requirements come into force.

"ISDA very much welcomes the extension to the start date for non-cleared derivatives margin rules," said ISDA chief executive Scott O'Malia, following the announcement of the delay by the Basel Committee and IOSCO on March 18. "The new rules will require firms to make significant changes to their infrastructure, technology, processes and documentation. Firms have been working hard to prepare for the rules, but the changes would have been all but impossible to complete by the original December 2015 effective date, particularly as final rules have not yet been published by US, European and Japanese authorities."

Despite the extra nine months, the implementation challenges remain significant. Alongside complex modifications to documentation and collateral practices (see pages 19-21), firms need to decide how to calculate the initial margin that needs to be exchanged. The WGMR framework presented market participants with the choice of using a standard table set by regulators or an internal model to calculate initial margin. The former would lead to high levels of required margin, but the latter creates the risk that individual firms would develop their own margin models, leading to a situation where each set of counterparties would be unable to agree on the margin calculations for a trade.



In response, ISDA began an initiative in 2013 to develop a common model that could be used by all market participants (see pages 19-21). By using this standard initial margin model, or ISDA SIMM, variability in margin calculations would decrease, reducing the potential for disputes between counterparties. But this model needs to approved by national regulators, putting further pressure on the implementation timeline.

Regional differences

Alongside timing, market participants are also concerned about regional discrepancies that appeared in the various national proposals. One of the most widely voiced concerns is over scope of inclusion, both at the instrument level and the entity level.

In Europe, for instance, initial margin would need to be posted by those firms with more than €8 billion in non-cleared derivatives notional outstanding at the end of the phase-in, in line with the WGMR framework. But US regulators took a much tougher stance in their proposals, setting the threshold for financial end users at $3 billion (€2.8 billion), which could catch a much larger pool of participants. And while both US and European proposals would exempt non-financial counterparties, the European exemption for end users with notional outstanding below a given threshold did not extend to companies based outside the European Union (EU) that trade with European banks.

"Differences over product scope and exemptions for non-financials originate from the details of the Dodd-Frank Act and the European Market Infrastructure Regulation, but I am surprised by the difference in the threshold as it was part of the WGMR's recommendation. It's a fundamental issue because it would catch a much larger universe of firms in the US," says the deputy chief operating officer for global markets at a global bank in New York.

Beyond the scope of inclusion, another crucial element of the new framework is the type of assets that can be counted as eligible collateral for the posting of initial and variation margin. The WGMR stressed in its framework that assets should be highly liquid and able to hold their value during times of financial stress, recommending that national supervisors should consider assets such as cash, high-quality bonds, equities and gold.

But the proposed list of eligible collateral was more restrictive under US proposals than those from Europe. As an example, European regulators proposed cash as one option, while US regulators specified that cash should be held in a major currency. On the other hand, European authorities suggested the introduction of concentration limits to prevent counterparties from becoming excessively exposed to a small pool of assets or issuers. In a joint response to the European proposals submitted on July 14, ISDA and the Securities Industry and Financial Markets Association strongly opposed the introduction of specific percentage concentration limits, which did not appear in the original WGMR framework, nor in the proposals issued by other jurisdictions.

> Another crucial element of the new framework is the type of assets that can be counted as eligible collateral for the posting of initial and variation margin

"The concentration limits are another component that could make it harder for European firms to compete internationally, but they would also be quite damaging to some types of counterparty. Having to post several different types of collateral would be operationally difficult and very costly for pension funds, for example. Limits also wouldn't work in certain regions where the bond markets are less diversified and there is only a small selection of assets available to post as collateral," says Roger Cogan, head of European public policy at ISDA in Brussels.

FX haircut

The so-called FX haircut, part of a schedule of standardised haircuts drawn up by the WGMR to account for the risk posed by different types of collateral, was another source of concern. When the currency of the underlying derivative differs from that of the collateral, the WGMR ruled that an 8% surcharge should be applied to the market value of the collateral. This was meant to address the risk that a shift in FX markets could create a gap between the value of the derivatives and the collateral after a default.

The FX haircut was transposed into the regional proposals, but was only targeted at initial margin in the US proposals. Crucially, however, it applied to both initial and variation margin in Europe. In a letter to European supervisors on August 17, 2014, ISDA argued that this could actually introduce new risks: while the collateral receiver gains extra protection, the collateral poster is exposed to additional credit risk[1].

"We acknowledge that during the close-out, if the collateral is different from the currency of the trade, there is an FX risk. But by introducing a haircut, the rules force the poster to hold more collateral, which creates additional credit risk. We would prefer to take the currency risk into account in the initial margin calculation so that it can be segregated," says ISDA's Johannes.

The final rules from national authorities were expected as *IQ: ISDA Quarterly* went to press, but market participants hope many of the inconsistencies can be ironed out, ensuring the rules are harmonised across borders.

"As banks, we have to understand the potential liquidity demands that these rules will cause, so we have to model how much collateral our counterparties in other countries will require from us. Regulators really cannot think only about the standards for their own institutions. It should be in their interest to make sure the rules are harmonised across jurisdictions because they will affect the liquidity draws on the banks they supervise," says a New York-based counterparty risk management expert.

The WGMR itself is not blind to the need for harmonisation. In its 2013 policy framework, it explained that the Basel Committee and IOSCO would set up a monitoring group that would assess the consistency of implementation across products, jurisdictions and market participants.

"It is obvious that as the rules will have a global scope, alignment should be sought internationally," says a London-based policy expert at the European Banking Authority, one of the regulators represented on the WGMR. ■

FURTHER READING

- Listen to an ISDA webinar on the WGMR rules: http://isda.link/wgmrwebcast
- WGMR's final report on margin requirements for non-centrally cleared derivatives, September 2013, http://www.bis.org/publ/bcbs261.pdf
- Basel Committee/IOSCO delay to implementation date, March 2015, http://www.bis.org/bcbs/publ/d317_summarytable.pdf
- European proposals (ESMA, EBA, EIOPA), April 2014, https://www.eba.europa.eu/documents/10180/655149/JC+CP+2014+03+%28CP+on+risk+mitigation+for+OTC+derivatives%29.pdf
- Japan proposals (Japan FSA), July 2014, http://www.fsa.go.jp/en/newsletter/weekly2014/104.html
- US prudential regulators' proposals, September 2014, http://www.gpo.gov/fdsys/pkg/FR-2014-09-24/pdf/2014-22001.pdf
- CFTC proposals, October 2014, http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2014-22962a.pdf
- Read all ISDA's responses on the margin rules at http://www2.isda.org/functional-areas/wgmr-implementation/

1. See ISDA FX haircut analysis for more detail: http://isda.link/fxanalysis

ISDA's WGMR Project Explained

Implementation of new margin requirements for non-cleared derivatives will require significant changes to collateral practices, documentation and technology. ISDA has been leading industry efforts to prepare for the changes via a variety of working groups

A MARGINING REGIME for non-cleared derivatives might seem like it was an afterthought for global policy-makers. The 2009 Group-of-20 (G-20) summit resulted in several clear objectives for derivatives market reform, including clearing, electronic trading where appropriate, and higher capital requirements for non-cleared trades. It was another two years before the G-20 added the margining of non-cleared derivatives to that list.

But the implications of this late addition are vast. Derivatives contracts will need to be changed, third-party segregated accounts will need to be set up, systems and processes to oversee the exchange and settlement of collateral will need to be developed, and new models for calculating margin will need to be established, implemented, tested and approved.

This all has to be completed in a relatively short period of time, too. Under the original framework published in September 2013 by the Working Group on Margining Requirements (WGMR), a body jointly run by the Basel Committee on Banking Supervision and International Organization of Securities Commissions, initial margin requirements were due to be phased in from December 2015, starting with the largest derivatives users. Variation margin rules, meanwhile, were scheduled to come into force for all covered entities from the end of this year. Regulators recently published a revised implementation date of September 2016, and also introduced a six-month phase-in for variation margin requirements for those covered entities with non-cleared derivatives notional outstanding at or below €3 trillion. The delay has been welcomed by ISDA and its members, but there remains a lot to do in the time available.

ISDA has played a leading role in helping the industry prepare for these changes, and has set up six industry groups to address the major issues, overseen by an ISDA oversight committee (see box, *The ISDA WGMR Workstreams*). A major part of the initiative is the development of a model for calculating initial margin, which is being led by ISDA's WGMR risk classification and methodology workstream. That project has its roots in the 2013 WGMR requirements, which set out two options for the calculation of initial margin: a standard look-up table set by regulators, and a supervisor-approved internal value-at-risk model consistent with a one-tailed 99% confidence interval over a 10-day horizon, based on historical data that incorporates a period of significant financial stress.

The expectation is that most industry participants will opt to use an internal model – largely because the lack of recognition for offsetting positions in the standard look-up table would result in

AT A GLANCE

- ISDA has established six working groups to help the industry prepare for implementation of non-cleared margin rules, covering issues such as documentation, margin calculation, collateral exchange and settlement and dispute resolution.
- One of the key initiatives is to develop a standard initial margin model, or ISDA SIMM.
- By enabling all market participants to use the same model specifications, the potential for problematic initial margin disputes between counterparties will be greatly reduced.
- A proposed ISDA SIMM framework, based on the Basel Committee's sensitivity based approach, is being reviewed by regulators.

punitively high margin requirements. But this creates a real problem: each firm's internal VAR model might be built with varying specifications, resulting in different margin outputs. That could lead to a sharp rise in disputes, with counterparties unable to agree on the initial margin amounts that need to be exchanged at the start of a trade.

The solution was to establish a standard set of specifications that all market participants, including vendors, could use to develop a common margin model. Using a standard initial margin model, or ISDA SIMM, would avoid the problems created by each firm conducting its own 'black box' margin calculations, significantly reducing the potential for disputes. Equally as important, when differences do emerge, the widespread use of a common model would allow participants to delve down beyond the margin output to discover the causes of the divergence.

The ISDA working group quickly established a set of criteria that should govern the development of the ISDA SIMM. Simplicity and speed were important factors. Participants would need to calculate margin requirements quickly in order to price each new trade – a highly complex model would dramatically slow this process. Cost was also important: the model would need to be affordable and accessible to a wide universe of market participants in order to minimise market disruption and

THE ISDA WGMR WORKSTREAMS

- **Portfolio integrity workstream:** Focuses on determining the in-scope population of covered entities and trades. Working on a self-disclosure template designed to identify the information needed to determine whether a counterparty or trade is covered.
- **Margin and collateral processing workstream:** Developing an operating framework for the processing of initial and variation margin, initial margin segregation and limited rehypothecation.
- **Risk classification and methodology workstream:** Charged with developing the standard initial margin model.
- **Data sources workstream:** Focuses on standardising the model's data elements, including creating standards for mapping trades and associated risk weights to model risk buckets.
- **Dispute resolution workstream:** Developing procedures for the resolution of initial margin disputes and a review of market polling procedures to resolve discrepancies in variation margin.
- **Legal and documentation workstream:** Formulating new documentation to comply with the margin requirements.

For more information, contact Mary Johannes, senior director and head of the ISDA WGMR initiative (email: mjohannes@isda.org).

THE DOCUMENTATION MAZE

The new non-cleared margining regime will require a number of fundamental changes to documentation. The ISDA WGMR legal and documentation workstream is leading industry efforts to overhaul existing practices and documentation so they comply with the rules.

With regulators in the US, Europe and Japan proposing their own national rules – which may contain a number of variations from the WGMR framework – market participants will need to know which rules apply to which counterparties and trades. This may require firms to obtain information about their counterparties to determine whether a particular trade is in scope, including whether the counterparty has breached thresholds for non-cleared derivatives notional on a group level. In response, the legal and documentation group has worked with the margin and collateral processing workstream to develop a self-disclosure form, enabling counterparties to provide this information either bilaterally on paper or via ISDA Amend, an online service jointly developed by ISDA and Markit.

That's just the start, though. Market participants will also need new collateral documentation that complies with the relevant regulatory requirements in each jurisdiction in which they are active. This will need to take into account the fact that variation margin posting will likely be implemented first, while initial margin will be phased in over a longer period. In other words, all but the largest derivatives users will need to adjust existing documentation to comply with variation margin requirements initially, and will need to make adjustments for initial margin later.

These adjustments will be significant and will require modifications to key terms, including collateral eligibility, collateral haircuts, calculation and collection timing, dispute resolution, and the procedure for exchanging initial margin. Linked to this, changes to existing custodial agreements or the setting up of new ones will be required to comply with initial margin segregation requirements. New or updated netting opinions may also be needed for some jurisdictions.

The intention is to publish these documents in time for participants to adopt them ahead of the new margin regime. But the devil is in the detail: many of the finer points cannot be nailed down until final rules are published by national authorities. That doesn't leave much time for the necessary changes to be made.

For more information, contact Katherine Darras, ISDA general counsel, Americas (email: kdarras@isda.org).

The proposed ISDA SIMM framework was submitted for regulatory review in September 2014, and ISDA is engaging constructively with regulators over the detail of the model specification

the potential for disputes. Other considerations were transparency, consistency and predictability – as well as ensuring the margin calculations are appropriate by recognising offsetting positions.

The working group ultimately settled on a framework based on the sensitivity based approach (SBA), a model proposed by the Basel Committee as part of its fundamental review of the trading book. The SBA was designed for market risk capital, but it was felt it could be modified to be suitable for margin purposes. Importantly, it met the criteria set by the working group: the SBA was developed to serve as a standardised market risk capital model so had to be relatively simple, but was also designed to be risk sensitive. Regulators are familiar with the model and banks will have to implement it as part of their compliance with market risk capital rules, therefore reducing duplication of effort.

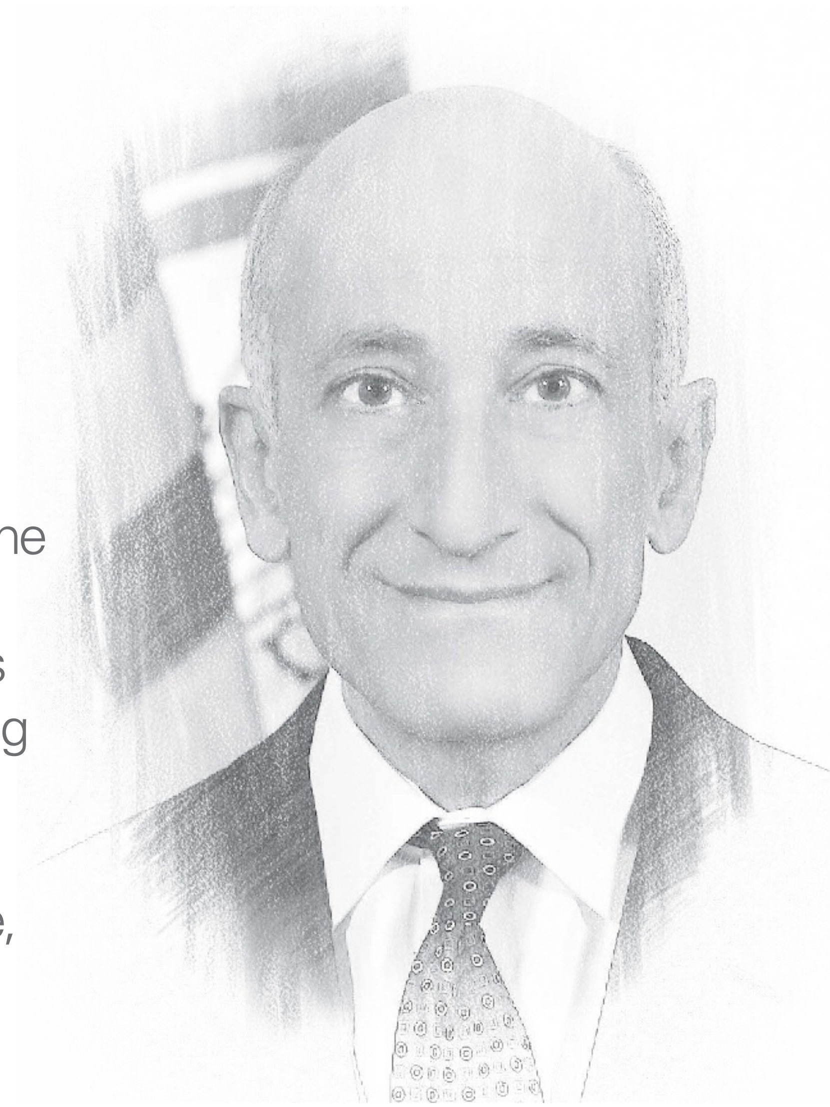
Some important modifications were needed to ensure the SBA would be suitable for margin purposes, however. For one thing, the model needed to be calibrated to meet the one-tailed 99% confidence interval over a 10-day horizon objective set by the WGMR. The working group is also discussing how to treat the more complex elements of the SBA capital model– for instance, sensitivities to vega and a risk charge for curvature.

As with the SBA for capital, the model is split into four asset classes (interest rates/foreign exchange, credit, equities and commodities). In order to calculate an initial margin figure, participants will need to have sensitivities on risk factors, and these risk factors will then be mapped to certain buckets. Risk weights will be pre-defined for each of the buckets and will be applied to the sensitivities. Correlation effects will also be taken into account, enabling users to realise hedging and diversification benefits within an asset class.

The proposed ISDA SIMM framework was submitted for regulatory review in September 2014, and ISDA is engaging constructively with regulators over the detail of the model specification. In the meantime, the ISDA working group is working to define the risk factors and how they should be calculated, outline how risk sensitivities should be mapped to the risk buckets and calculate appropriate risk weights. The group is also back-testing SIMM outputs against actual and model portfolios.

There's a lot of work to do: once finalised, the ISDA SIMM will need to be implemented and tested by market participants and approved by national authorities. But the initiative is vitally important in ensuring market participants can continue to use non-cleared derivatives in a safe and efficient way without being plagued by disputes. ■

After the Rollout



The Commodity Futures Trading Commission has made end-user hedging one of its top priorities in 2015. A number of modifications have been made to existing rules to ease the burden on hedgers, and further changes are in the pipeline, says CFTC chairman Timothy Massad

EVER SINCE BEING sworn in as chairman of the US Commodity Futures Trading Commission (CFTC) last June, Timothy Massad has made no secret of his wish to hone certain Dodd-Frank rule-makings to make it easier for end-users to hedge their risk. He wasted little time in putting that into practice. Within six months of taking the helm, a succession of rules, proposed rules and no-action letters had emerged, tackling a variety of end-user concerns – and more changes are in the pipeline. According to Massad, those adjustments are meant to "reduce or eliminate unintended consequences" and to lessen the burden on end users.

The changes made to date do just that. In September 2014, the CFTC approved a final rule that excludes swaps conducted with utility special entities from a $25 million special-entity de-minimis threshold – a rule that had caused many energy companies to stop providing hedges to utility firms in case they breach the low de-minimis level and have to register as swap dealers. This was followed by a package of proposed measures in November, aimed at easing certain record-keeping requirements for end users, addressing concerns about a deadline for futures commission merchants to post residual interest, and clarifying a CFTC interpretation on whether physically settled forwards with embedded volumetric optionality should be classified as swaps. The latter issue had been particularly problematic, with the previous interpretation causing widespread uncertainty over whether these types of transactions should be subject to Dodd-Frank transaction-level rules or not.

Other changes include no-action relief on a requirement for affiliated entities to clear trades with non-affiliate counterparties, which was aimed at giving foreign jurisdictions more time to put comparable clearing mandates in place. A further important development was the granting of relief from the clearing requirement for treasury affiliates that hedge on behalf of their non-financial parents. These treasury centres – used by many corporate entities to hedge risk in the most efficient and cost-effective way – may have previously fallen under the definition of financial entity, requiring them to meet certain Dodd-Frank requirements.

Each of these issues had been the subject of regular and consistent complaints since the original rules came into force, and the modifications were warmly welcomed by industry groups and individual end users. But further changes are in the works that may have potentially wider implications. Massad highlights the swap execution facility (SEF) rules and data reporting requirements as areas that may be relooked at – again, with the primary intention of reducing the burden on end users.

The CFTC isn't just focused on changes to existing rules, however. There is still plenty remaining on the to-do list, including the final rules on margin requirements for non-cleared swaps (see pages 11-21). The CFTC published its proposal in October, and was working to finalise its rules as *IQ: ISDA Quarterly* went to press. Massad stresses that international cooperation is important – both in terms of ensuring US margin rules closely mirror the requirements in other jurisdictions, and working with foreign regulators to determine a realistic global implementation date.

Regulatory cooperation is vital in other areas too – but Massad notes that national laws will never be completely harmonised. "We'll strive to harmonise as much as possible, but people have to remember that regulation is done by individual countries, which have their own traditions, their own legal regimes, their own political philosophies. So there are likely to be some differences," he says.

In this interview, Massad discusses the priorities for the CFTC during 2015, the need to ensure end users can hedge effectively, and his thoughts on cross-border regulatory cooperation.

IQ: What are the top priorities for the CFTC in 2015?

Timothy Massad (TM): One priority is continuing to focus on making sure commercial end users can use the markets effectively. We've made a lot of changes in that area, where we've looked at our rules and made some adjustments to either reduce or eliminate unintended consequences, and we will continue to do that. We did that with the utilities special-entity rule, we did that with the treasury affiliates issue, and we're doing that with the margin rules for swaps to make clear they don't cover end users. We'll continue to look at those sorts of things.

A second area is finishing the rules that we're required to do. So the margin for non-cleared swaps rules are important there. A third area is enforcement and surveillance. It's the basic work of the commission and it's extremely important. One of the things we want to do with the budget requests that we've made is to further enhance our surveillance and enforcement techniques and capabilities. That is really important given the growth in the markets, both in terms of the size of the swaps markets but also the growth and complexity of the futures markets, and the fact they're increasingly driven by electronic high-speed trading.

Another continuing area of focus will be on critical infrastructure, and clearing houses in particular, to make sure they have the financial, operational and managerial resources. Related to that is the cyber security concern, so making sure our critical infrastructures are adequately prepared with cyber security. There's also the cross-border issue, so continuing to work on harmonisation. So there's a lot going on here.

IQ: Looking at some of these issues in more detail, you mentioned some of the changes made to the rules affecting end users in recent months. Are further changes in the pipeline?

TM: There are a few issues in terms of the reporting rules, where we're looking at ways we can make sure the balance between the value of the information and the cost of producing it are set at the right level. The SEF rules are relevant to end users too. So we're trying to make sure that, where we can, we fine-tune the SEF rules so we continue to bring transparency to the market at the same time as we enhance the attractiveness of trading on SEFs, particularly for end users. I want to make sure they're not burdened. The burdens of reporting, compliance and so forth should fall on SEFs and on swap dealers, but not on end users.

IQ: Commissioner Christopher Giancarlo recently published a white paper that made a number of recommendations on changes to the SEF rules. Are you looking at some of those recommendations?

TM: I welcome his white paper – I think it's a very constructive contribution. He raised a number of ideas that I think are worth considering. I don't support throwing out the rules and starting all over again, but I think there may be some areas where we can look at improving them. We've had the best financial markets in the world for decades in a number of areas: we've attracted participants to our markets, and we've achieved that depth and innovation through a good regulatory framework. And I think he and I are in agreement that should be our goal with SEF trading as well. We'll find areas of agreement and we'll find some areas of disagreement, but we're working together in good faith on this thing.

IQ: ISDA released research last year that shows markets are fragmented along geographic lines, particularly for euro interest rate swaps. This fragmentation coincided with the introduction of the SEF rules in October 2013. How important is cross-border harmonisation? How can the differences that currently exist between national regulations best be addressed?

TM: I would make a couple of points. It's important to remember that the situation we have with the swaps industry is quite unlike any other in the history of financial regulation, in that we have an industry that grew to be global without any regulation. And now we're coming along to regulate it. So, in the case of swap trading in particular, since this was a global market that was highly mobile and unregulated, any rule set we wrote as the first mover, in a situation where no one else was implementing rules at the same time, was likely to lead people to perhaps relocate where they could.

It's important to try to harmonise as much as we can, and we're making good progress in that regard. But people have to remember that there are very few areas – if any – in financial regulation where the national laws are harmonised completely. In most areas, the national laws vary. So, we'll strive to harmonise as much as possible, but people have to remember that regulation is done by individual countries, which have their own traditions, their own legal regimes, their own political philosophies. So there are likely to be some differences.

IQ: One of the big issues with regards to cross-border harmonisation is the central counterparty (CCP) equivalence issue. The US has a system of dual registration in place for CCPs. What are the advantages of this approach? What are your views on the concept of deferring to overseas rules and foreign supervision?

TM: We've had a system of dual registration and cooperative supervision under our legal framework for many years, and European clearing houses have been registered with us for some time. One has been the largest clearing house for swaps, and has been registered with us for almost 15 years. So the market grew to be global under this framework.

We've had, and continue to have, a very good dialogue with our European counterparts on how we work together and how we harmonise rules. And a lot of what we're talking about is really formalising some things that have basically operated in practice for some time. While we have had European clearing houses registered with us, we've worked very closely with their European regulators to make sure the different requirements did not create conflicts. We're continuing to make progress on this, and I'm very encouraged by where we are.

IQ: Can we expect something in the near term?

TM: Well, I'm not going to predict when it's going to happen. All I'll say is we're working in good faith. The Europeans have made it clear they're not going to impose capital charges [on European credit institutions that clear through overseas CCPs that aren't deemed equivalent to European rules], so everyone recognises we should work these things out without creating market disruptions. And that's what we're doing.

> "We're trying to make sure that, where we can, we fine-tune the SEF rules so we continue to bring transparency to the market at the same time as we enhance the attractiveness of trading on SEFs"

IQ: National regulators are working to finalise margin requirements for non-cleared swaps, but the initial proposals from US, European and Japanese regulators contained a number of variations. Will these differences be resolved in the final rules?

TM: There has been very good cooperation on the margin swaps rules. I'm very committed to try to reach agreement so we harmonise those rules as much as possible and I'm flexible on some of the issues that have come up in that regard so that we do that. You're never going to get the rules exactly the same, but I think they're reasonably similar since they largely follow the international standards. There are some differences we're talking about – in terms of the threshold, in terms of what types of collateral you can use for variation margin – and I'm hopeful we can reach agreement on those things.

IQ: Turning to data, reporting requirements have dramatically improved transparency in the derivatives market, but a lack of harmonisation in data standards has made it challenging to make sense of that data. The CFTC last year surveyed the market for its feedback on the data rules and how to improve both the quality of the data being reported and the efficiency in reporting. What are the CFTC's plans to address the issue?

TM: There are some that we're looking at, and I hope to have more to say about this in the near future, maybe by the time of the ISDA AGM conference. But there's actually activity on a number of things from this survey. We are looking at ways we can improve our rules to address some of these problems. We're working very hard to try and harmonise data standards. We're leading the international effort to do that. We're working with the swap data repositories domestically to do that. It's a big project – it takes a lot of time and effort, but I think we're making progress there. Another important issue is that we need to have industry participants give us good data in the first place and we're very focused on that.

Data and technology generally are priorities for us. In fact, in our latest budget request, approximately 40% is devoted to data and technology when you look at all the aspects of it. We've come a long way since 2008, when we had no visibility in this market-place. We have a lot more today. But there is a lot more we need to do in terms of enhancing our own capabilities. Just the volume of data we get in now is staggering, and we need to make sure we have the capacity to receive it, load it, analyse it and draw conclusions from it. So this is a big priority for us.

IQ: To what extent is that data useable at the moment?

TM: It depends what you're looking at. There is now real-time price and volume reporting, so market participants and the public have much greater visibility into what's going on. Now that we're clearing a lot more of the market, we have very good data on cleared swap positions and where the risks are. One of the things we're focusing on is non-cleared swap reporting, and that ties into the margin rules we discussed earlier. This is a big infrastructure build, like building a tunnel or building a major train line. There is just a lot involved, and it's not something that you can expect to be accomplished overnight. But there's activity on all fronts. We're making progress.

IQ: The derivatives market is still often described as opaque and murky. Is that a fair description now?

TM: Well, I think it's a lot less opaque than it was. As I say, we have a lot more insight into it. Simply mandating clearing gives us a much better ability to monitor risk and mitigate risk. And, in our markets at least, approximately 75% measured by notional amount of transactions are now cleared. That's an enormous step forward, so the market is far less opaque than it was.

IQ: You mentioned the budget request and the amount that will be spent on technology. You also highlighted surveillance and enforcement. How will that budget allocation be broken down?

TM: We're asking for a significant increase in our enforcement and surveillance resources. We need to increase the staff there, and part of the information technology spend is related to those fields. Surveillance is to me a perfect illustration of the importance of the budget increase and what's happening in markets overall. Over the past several years, the futures and options markets have become a lot more electronic. Not only is a lot of the trading being conducted electronically, but there is an increasing amount of high-speed trading. So if you really want to engage in surveillance today, you can't do it by watching whether some guy pulls his earlobe in a trading pit. You've got to look at huge numbers of transactions.

There might be 750,000 transactions in one contract in the course of a day. But it's not just transactions. It's also bids and orders and cancellations and changes in orders. So if you really want to understand what's going on, you've got to have incredibly sophisticated computing capability to take in huge amounts of data and analyse that, and you've got to have very skilled professionals who then can analyse it. You've got to write your own programs, which we've done – we've developed our own tools to analyse data.

So a lot of our budget is focused on enhancing surveillance and enforcement. It's focused on enhancing our ability to do examinations of critical infrastructure. With the fact these markets are now electronic comes the fact that the risk of a cyber attack is very grave and serious.

> "One priority is continuing to focus on making sure commercial end users can use the markets effectively"

We need to make sure that institutions are ready for that.

We're also simply focused on having the resources to be as responsive as possible to market participants. We want to be able to review requests for product innovations or other types of rule changes or other issues that come up as quickly as possible. That's the way to make sure our markets continue to be dynamic and continue to grow and grow.

IQ: Just one final question. What role can ISDA play in achieving some of the priorities you mentioned? Data standards seem to be a particular area where ISDA can make an important contribution.

TM: Yes, that's very important. Any help ISDA can bring to harmonising data standards is very helpful. But ISDA can be very helpful in other areas too – the margin model issue, I know ISDA's working on that. It's important, so we welcome ISDA's input on all the issues we're facing. ■

Responding to the Data Reporting Problem

Regulatory reporting requirements have significantly improved transparency in the derivatives market, but challenges remain in aggregating and interpreting the data that is reported. ISDA has developed a set of principles to further improve regulatory transparency

GREATER REGULATORY TRANSPARENCY was one of the key objectives set by the Group-of-20 nations at their Pittsburgh summit in 2009. Plenty of work has gone into achieving this goal over the past six years. Laws have been passed, regulations have been issued and trade repositories have been set up. Today, the vast majority of derivatives trades are reported, and additional jurisdictions are still going live.

As a result, transparency is unquestionably better now than before the crisis. But a number of key factors continue to stymie the progress that could potentially be made. Data requirements differ across jurisdictions, and some requirements are not clearly defined. Standardised reporting formats have not been adopted quickly or broadly enough, and there is a lack of agreement over how some data reporting requirements should be harmonised across jurisdictions.

Together, it means the current trade reporting process is costly, inefficient and unproductive—and it makes meaningful data monitoring, analysis and aggregation on a global and a national basis more difficult than it should be. The end result is that regulators continue to lack a true picture of risk in individual jurisdictions because of incomplete and inconsistent trade data, while the ability to aggregate data on a global level is little more than a dream. Market participants, meanwhile, face costly, duplicative and conflicting trade reporting rules, and trade repositories have the unenviable task of collecting and standardising data from multiple sources within various jurisdictions.

Fortunately, all of these issues have solutions. Some solutions will be easier to implement than others. And the active support and cooperation of a range of stakeholders—regulators, market participants and infrastructure providers—is vitally important to making these solutions a reality.

> Regulators continue to lack a true picture of risk in individual jurisdictions because of incomplete and inconsistent trade data

To help navigate the obstacles that are delaying further progress, ISDA has developed key principles and action steps that all stakeholders should consider and align with in order to improve regulatory transparency.

1. Regulatory reporting requirements for derivatives transactions should be harmonised within and across borders

At the most basic level, efforts to improve regulatory transparency of derivatives markets depend on the ability to consistently compile, aggregate and analyse a portfolio of data related to derivatives transactions within and across jurisdictions.

Toward this end, regulators around the world need to identify and agree on the trade data they require to fulfil their supervisory responsibilities, and then issue consistent reporting requirements across jurisdictions.

In the US, for example, there are over 40 separate fields of information required by the Commodity Futures Trading Commission (CFTC) for each trade. But

there are insufficient instructions as to how each of those fields should be populated in all cases.

This lack of consistency is magnified on an international level. Regulators differ in their approaches as to whether one or both counterparties to a transaction are required to report. Individual regulators may also require different types of data to be reported and may diverge in the levels of specificity and granularity required. Just as importantly, though, regulators may differ in how they define a particular field, so that an appropriate answer in one jurisdiction may be wrong in another. For these reasons, it is important for regulators to agree on the data they require of market participants, and then to ensure their data definitions are consistent.

2. Policy-makers should embrace and adopt the use of standards—such as legal entity identifiers (LEIs), unique trade identifiers (UTIs), unique product identifiers (UPIs) and Financial products Markup Language (FpML)—to drive improved quality and consistency in meeting reporting requirements

Unique global identifiers for legal entities conducting a trade, for product types and for trades have been developed. Electronic representations of trade and workflows for the confirmation and reporting processes are also well advanced, as evidenced by the FpML product and process representations.

This work is vital to ensuring regulators have access to the information they need. As a result, it should be expanded as necessary and these standards should be adopted across reporting regimes. The governance of such standards should be transparent, internationally coordinated and allow for input and review by market participants, infrastructure providers and regulators.

Areas where standards could be more broadly adopted include:

- LEIs unambiguously identify a party to a trade at the legal entity level, and are used in many regimes to identify the parties in trade reporting. But there are still industry participants that have not yet obtained an LEI and are reluctant to do so, either because they are not compelled to acquire an LEI by their primary regulator or because they are not convinced of their obligation to do so.

- UPIs are accepted or required for reporting in most jurisdictions in order to provide a product classification mechanism for data analysis. Unlike LEIs, UPIs have not benefitted from an advanced global regulatory initiative; rather, most regulators have either established their own interim standards or deferred to trade repositories to create or apply an existing industry standard.

  In the absence of a global regulatory standard for product identification, ISDA developed the ISDA OTC Taxonomy, which is widely used as the basis for UPIs. Regulators need to work together with trade organisations and the industry to adopt and develop existing product classification standards like the ISDA OTC Taxonomy[1] or collectively develop and transition to a variant or alternative approach.
- UTIs, including the CFTC's unique swap identifiers, allow parties to identify and report a transaction via the same reference ID. UTIs are essential to trade repository administration of the data, but their greater potential is as a tool for global data aggregation. Unfortunately, UTIs have also suffered from a lack of global regulatory coordination. Regulators should forego individual UTI approaches and consider endorsing existing industry specifications for a global UTI that have developed in the absence of a global regulatory standard (such as ISDA's best practice[2] regarding the generation and communication of UTIs).
- FpML is the open source standard for electronic dealing and processing of derivatives. It establishes a protocol for sharing information electronically and dealing in derivatives and structured products. Market participants and ISDA should ensure that standardised trade representations and reference data are reflected in the FpML architecture and continue the expansion of FpML to cover all derivatives products. The FpML standard should be tightened and documentation further enhanced to allow for a consistent implementation by all participants.

3. Where global standards do not yet exist, market participants and regulators can collaborate and secure agreement on common solutions to improve consistency and cross-border harmonisation

Even where regulators require the same trade data, common standards do not yet exist for the format and the content of trade data to be provided. This leads to variability that hinders transparency.

To address this issue, market participants can, in an open and transparent process, establish a central source (a data dictionary for harmonised global repository standards) that defines and clarifies derivatives trade and reference data and workflow requirements for each reporting field that is required by each regulator. Direction and support from regulators on this initiative is critical. Regulators should be clear about their priorities and set timetables for reform. They should also regularly review this work and facilitate its adoption on a cross- border basis.

The use of reference data, which refers to those elements of a transaction based on a reference source, is a case in point. Sources of reference data are not defined centrally and not used consistently. Some firms, for example, use internal reference data for their trades. A data dictionary that includes and centrally defines reference sources and related terms would therefore be an improvement on current practices.

Establishing a central source that defines and documents the trade data, reference data and reporting workflow requirements, which can be used by all reporting parties and infrastructures, will improve data consistency. This central dictionary could be a powerful tool for the industry and regulators to improve data quality and understand and clarify discrepancies in the data reported in different jurisdictions. The central source will be a key element to facilitate data aggregation across jurisdictions.

4. Laws or regulations that prevent policy-makers from appropriately sharing and disclosing data with each other across borders must be amended or repealed

Many regulators across the globe have taken swift action to implement trade reporting rules. However, the sharing of this data between regulators has not occurred in any meaningful way.

Data sharing has been significantly undermined by the swap data repository indemnification requirements under the US Dodd-Frank Act. Regulators have been unwilling or unable to provide repositories with indemnification, restricting the ability to share US data across or within jurisdictions. In addition, laws prohibiting counterparty identification disclosure to regulators unnecessarily restrict regulatory transparency and should be changed.

Regulators need to continue to work collaboratively to develop a framework that enables appropriate sharing of derivatives trade data across geographic boundaries. Roadblocks to the appropriate sharing of data should be removed either by regulatory or legislative action.

5. Reporting progress should be benchmarked

The quality and completeness of data provided to repositories should be tracked, measured and shared with market participants and regulators in order to benchmark, monitor and incentivise progress in reporting.

The ideal end point for the benchmarking process is the ability to demonstrate the advancement in data quality that results from industry and regulatory commitments to standardisation. For these reasons, the quality and completeness of data provided to repositories should be tracked, measured and shared with market participants and regulators. Benchmarking can be a tool for regulators to drive the data quality and standardisation priorities. The investment in standardisation is motivated and ultimately justified and rewarded by the positive results of the benchmarking. ■

Read the complete ISDA principles paper at: http://isda.link/datapaper.

1. ISDA OTC Derivatives Products Taxonomies, http://isda.link/taxonomies
2. Unique Trade Identifier (UTI): Generation, Communication and Matching, ISDA Study, http://isda.link/utistudy

Setting Priorities

Scott O'Malia joined ISDA as its new chief executive last August, having previously been a commissioner at the CFTC. In this interview, he sets out some of the priorities for ISDA in 2015, as well as identifying some of the challenges

IQ: What are the priorities for ISDA in 2015?

Scott O'Malia (SOM): ISDA is working on an enormous number of initiatives and developments, but I would highlight three key priorities for this year: cross-border challenges, the implementation of new margin rules for non-cleared derivatives, and bank capital. All three are of vital importance to the derivatives industry. The rollout of non-cleared margin rules, for instance, will require significant changes to processes and systems for many participants, and ISDA is playing a leading role in that.

IQ: How is ISDA approaching these big, global issues?

SOM: A big priority is to ensure ISDA is appropriately positioned to effectively respond and to advocate on behalf of our members. One thing is very clear: the derivatives markets are changing. Many of the objectives identified by Group-of-20 (G-20) leaders in 2009—central clearing, electronic trading and reporting—are either implemented or are close to being implemented in a number of jurisdictions. Whereas in the past, the focus was very much on responding to and preparing for the rollout of national regulation—whether it be the US Dodd-Frank Act, the European Market Infrastructure Regulation or Japan's Financial Instruments and Exchange Act—the focus is now on ensuring these various regulations work effectively on a cross-border basis. This has meant ISDA has needed to adapt its organisational structure. Rather than have our public policy teams split by geography, we need to take a more joined-up approach to ensure we're providing coordinated and consistent responses on key cross-border issues. As a result, we created a new global head of policy role earlier this year to coordinate and manage regional advocacy efforts and to develop a global policy strategy.

We've also created a new regulatory and legal practice group. This is important. ISDA needs the very best technical and legal expertise in order to ensure we're providing relevant, useful and practical feedback to policy-makers. It's crucial that we have that expertise in-house at our fingertips.

IQ: Does this mean a change of focus for ISDA?

SOM: ISDA has always been extremely strong on the documentation side, on providing vital netting opinions to our members and on developing market standards and protocols. That will continue to be a core part of ISDA's role. But we also need to make sure we're set up to respond more effectively and in a coordinated way on global regulatory and policy issues. That's what these changes are all about. It's about making sure our advocacy efforts are efficient and effective. ISDA's mission is to foster safe and efficient markets. That's still very much the case.

> "Fragmented markets mean less liquidity, and that's not a good thing for anyone"

IQ: What are the implications if the cross-border issue isn't addressed?

SOM: This is currently one of the biggest challenges for the derivatives market. Our member firms face duplicative and even contradictory rules because regulators did not fully consider how their domestic regimes would align with other jurisdictions. That's perhaps understandable: in the wake of the financial crisis, the priority for most policy-makers was to shore-up their own financial systems and protect their own tax payers. How their rules might compare with those in other countries was probably a little further down the agenda. But the lack of a transparent and effective process for recognising and deferring to comparable regulatory regimes is now posing significant challenges to derivatives users and causing markets to fragment.

IQ: What role can ISDA play?

SOM: ISDA has published several pieces of research over the past year or so that have shown markets have been fragmenting along geographic lines as a result of extraterritoriality in national rules. For instance, nearly all European interdealer volume in the euro interest rate swap market was being traded with European dealers for most of last year, up from roughly three quarters in 2013. The change almost exactly coincided with the introduction of US swap execution facility (SEF) rules in October 2013—a rule that made it impossible for US persons to trade certain mandated products away from SEF-registered trading venues.

We need to make sure regulators are fully aware of disconnects like these and the problems they cause. Fragmented markets mean less liquidity, and that's not a good thing for anyone. One thing we can do is to take advantage of our global footprint and provide research and analysis to regulators that highlight these issues.

IQ: How should a cross-border equivalence regime work in practice?

SOM: There's no magic formula here. It takes coordination, cooperation and trust between regulators in different jurisdictions. Regulators need to feel they can defer to the rules in another country, without requiring those rules to be exactly the same as their own. Regulators know this, and they've discussing how best to tackle it. But there really needs to be action on this point.

IQ: Trade reporting is an area where regulatory cooperation would appear to be vital. And this was an issue on which you were particularly vocal as a CFTC commissioner. What is ISDA's view now?

SOM: In some respects, the reporting of swaps data is probably the G-20 commitment where there's been most progress. A number of countries now have reporting rules in place, and the vast majority of derivatives trades are being reported. But big problems remain in making sense of that data and aggregating it on a global basis. The data that needs to be reported is different in different countries. Standardised reporting formats have either not been agreed or have not been adopted in all cases. And laws and regulations in certain countries prevent the sharing of data across borders. In theory, all of these things are resolvable, but it will take a concerted effort to repeal or change existing laws, agree on a common data set that needs to be reported in every country, and develop and apply common standards. This is an example of an area where ISDA can play a central role—particularly in the development of reporting standards.

IQ: What role is ISDA playing in the non-cleared margining space?

SOM: These rules will require most market participants to post initial and variation margin on their non-cleared trades. For many firms, it will be the first time they have had to post initial margin on non-cleared trades; it'll also be the first time some non-bank users have had to post variation margin. That will mean these firms will have to make big changes to their infrastructure, processes and documentation.

As a result, we've been working to revamp standard collateral documentation so it is compliant with the new margin rules. We've also been developing and defining standard business and technology practices for margin calculations, notifications and settlement, collateral eligibility and segregation. This is all completely new, but is critical for the smooth functioning of the market under the new regime.

ISDA has also been working on a standard initial margin model (ISDA SIMM) that will be available to all market participants. Again, this is an extremely important initiative. The rules give market participants the choice of using a standard table set by regulators or an internal model to calculate initial margin. The

former is likely to lead to punitive margin requirements, but the latter creates the risk that each firm will develop its own margin model, leading to a situation where no two counterparties are able to agree on the initial margin amounts that need to be exchanged. The ISDA SIMM will create a framework that all counterparties can use to calculate initial margin, reducing the potential for disputes.

IQ: What progress has been made in coming up with a framework for the ISDA SIMM?

SOM: We developed a proposed methodology at the end of last year based on a standardised capital calculation described by the Basel Committee on Banking Supervision in its fundamental review of the trading book (FRTB), known as the sensitivity based approach. We've submitted our proposal to regulators and they are continuing to review it. Fortunately, the industry has been given more time to make the necessary changes. Regulators had initially set December 2015 as the start date for variation margin exchange for all covered counterparties, and the start of a phase-in for initial margin requirements. ISDA had asked for a longer implementation period in light of the scale of the work needed to prepare for it, and regulators agreed in March to delay the start of the phase-in for initial margin until September 2016. Variation margin will also phased in, starting from September 2016.

IQ: You referred to the Basel Committee's FRTB, which is in the process of being finalised. What is ISDA advocating with regards to capital requirements?

SOM: Obviously, there are a number of very specific issues related to the review of the trading book. For instance, we believe targeting the end of this year for the final FRTB policy framework will be challenging given the number of important issues that still need to be fleshed out. It would be prudent to check the impact of these changes once they are finalised via a firm-wide or targeted quantitative impact study. This will add a few months onto the timeline, but we feel these changes should be tested now to check they are appropriate and don't lead to unintended consequences, rather than trying to adjust mistakes later on through calibration. More broadly, we believe capital requirements should be globally consistent, risk sensitive and applied consistently across risk types and asset classes. The cumulative impact of the rules should also be carefully considered to ensure capital levels are appropriate and there are no contradictions between the various requirements.

IQ: This year's ISDA AGM in Montreal will be your first as chief executive. What are the themes?

SOM: A couple of things. Most importantly, we want to let members know we've listened to their feedback and have re-positioned our policy and advocacy efforts to respond to current regulatory issues. We conducted an extensive survey of members last year (see box), and many of the changes are in response to that survey. We want to use the conference sessions to set out our priorities and to outline our objectives in the key areas identified by members. And, of course, we want people to enjoy themselves. ■

ISDA'S MEMBER SURVEY

ISDA conducted an in-depth survey of members in the fourth quarter of 2014, which has helped inform ISDA's current strategic priorities. Some of the main highlights are:

- Documentation and advocacy are seen as the two most important ISDA initiatives. Risk and clearing and infrastructure management were joint third.
- Netting, standardisation, margining for non-cleared derivatives, cross-border issues and clearing were considered the five most important issues currently facing ISDA.
- ISDA is generally seen as being most effective on netting, standardisation and cross-border issues.
- The issues most likely to affect the derivatives market over the next three years are: margining of non-cleared derivatives; market fragmentation/cross-border issues; mandatory trade execution requirements; bank capital rules; and clearing mandates.

Charting Market Fragmentation

Derivatives markets have fragmented along geographic lines since new US trading rules were implemented in October 2013. The split in liquidity pools continued throughout 2014, with the market for euro interest rate swaps now largely Europe-centred

REGULATORS ACROSS THE globe have looked to implement new rules on derivatives since the Group-of-20 nations agreed a blueprint for reform in September 2009. In putting high-level principles on clearing, reporting, trading and capital into practice, however, a number of important differences have emerged between regulatory regimes.

There is evidence these differences have caused changes to cross-border pools of liquidity, particularly since the implementation of the swap execution facility (SEF) regime in the US. Under these rules, electronic trading platforms that provide access to US persons were required to register with the US Commodity Futures Trading Commission (CFTC) and comply with SEF rules from October 2, 2013. The first derivatives products were mandated to trade on these platforms—a process known as made-available-to-trade (MAT)—from February 15, 2014. All US persons are now legally required to trade MAT instruments on SEFs or designated contract markets, but similar rules are not yet in place elsewhere, meaning the same requirements do not exist for non-US participants.

There are clear signs a split in liquidity has emerged as a result, particularly in certain interest rate swaps (IRS). European dealers are choosing to trade euro IRS with other European dealers, meaning the broadest, deepest liquidity pool for this instrument has developed away from SEFs, potentially creating access problems for US firms. Conversely, most of the US dollar liquidity is centred on SEFs—and European firms are increasingly having to trade on these venues to access this liquidity pool.

This article charts how cross-border relationships have changed since the start of the SEF regime and first MAT determinations, focusing on euro- and US dollar-denominated IRS.

Euro IRS

An analysis of euro IRS[1] regional and cross-border trading behaviour on a monthly basis highlights some obvious trends (see Table 1). It is clear European

AT A GLANCE

- A split in global liquidity pools has emerged since the introduction of the US SEF regime in October 2013.
- The split in liquidity reached its peak in August 2014, when 95.7% of regional European interdealer volume in euro IRS was traded between European dealers. That had fallen to 84.5% by December 2014.
- Prior to the implementation of US SEF rules, approximately 25% of euro IRS activity by European dealers was traded with US counterparties.
- The market for US dollar IRS has increasingly centred on SEFs, with European counterparties opting to trade on these venues to access US bank liquidity.

1. For the purposes of this paper, the market for euro IRS is defined as plain vanilla transactions being cleared from one dealer to another. The dealer-to-dealer (interdealer) market is chosen as it is the broadest measure in terms of liquidity.

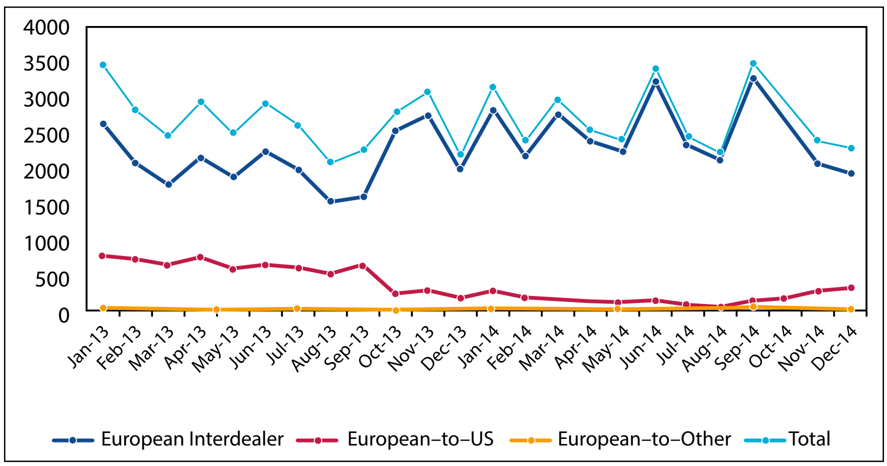
European dealers are choosing to trade euro IRS with other European dealers, meaning the broadest, deepest liquidity pool for this instrument has developed away from SEFs

Table 1. Cleared euro IRS activity by European dealers with European, US and other dealers (%): 1/1/2013 – 31/12/2014

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
European Interdealer	76.4	73.4	72.4	73.4	75.3	77.0	75.6	74.0	70.7	90.7	89.8	90.5
European to US	22.5	25.6	26.6	25.9	23.9	22.1	23.4	25.5	28.7	8.6	9.6	8.7
European to other	1.2	0.9	1.1	0.7	0.8	1.0	1.0	0.5	0.6	0.7	0.7	0.9
2014	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
European Interdealer	89.9	90.7	93.2	93.6	93.5	94.5	95.4	95.7	94.2	91.8	86.7	84.5
European to US	9.0	8.0	5.6	5.3	5.5	4.4	3.8	2.9	4.4	6.6	11.8	14.0
European to other	1.1	1.3	1.2	1.1	1.0	0.8	0.9	1.4	1.4	1.6	1.5	1.5

Source: LCH.Clearnet SwapClear Note: 'Other' represents Canadian and Asian dealers

Chart 1. The European market for euro IRS (€ billions)



Source: LCH.Clearnet SwapClear Note: 'Other' represents Canadian and Asian dealers

dealers in the region's interdealer market have tended to trade euro IRS with other European dealers, but this practice accelerated in the months following the SEF rule.

From January 2013 to September 2013, an average of 75% of cleared euro IRS was traded exclusively in European liquidity pools. Transactions occurring between European dealers and dealers in other regions, primarily the US, accounted for 25% of activity, on average, over the same period.

Following the implementation of the SEF rules on October 2, 2013, clear shifts in trading behaviour emerged. The percentage of European-to-European interdealer volume increased from an average of 75% to 90% by January 2014 (yellow area). This trend accelerated further after the first MAT determinations came into force on February 15, 2014 (orange area), jumping to 93.2% in March 2014 and reaching a peak of 95.7% in August 2014. European dealers traded only 2.9% of their euro IRS trades with US dealers that month versus 28.7% in September 2013, just before the SEF rules came into effect.

The last quarter of 2014 saw a slight reversal of this trend, with the proportion of trades between European dealers falling to 84.5% in December. Euro IRS trades between European and US dealers rose to 14% in that month. There are various possible explanations for this change. For one thing, there was a general decline in activity in the European interdealer market for euro interest rate swaps in the fourth quarter of the year (see Chart 1), with average monthly notional falling approximately 6% versus the average for the last three months of 2013, from €2,684 billion to €2,523 billion. Most of that decline occurred between European institutions, with a modest uplift in the notional between European and US institutions failing to offset the drop.

Conversely, US dealers in the US interdealer market trade the majority of euro IRS with European dealers (see Table 2). While there wasn't a noticeable change following the introduction of the SEF regime in October 2013, market share has become more volatile since the MAT determinations in February 2014. The proportion of euro IRS trades conducted between US dealers in the US market dipped to 24.2% in April 2014 before reaching a peak of 48% in August. More recently, the exclusive US liquidity pool for euro IRS has all but disappeared, with 93.8% traded between US and European dealers.

Digging a little deeper, there has been a sharp decline in the volume of euro IRS traded in the US market since the SEF rules came into force, with average monthly volume dropping from €848 billion in 2013 to €263 billion in 2014 (see Chart 2). Volume increased slightly over the last quarter of 2014, rising from €127 billion in August to €341 billion by December. Most of that activity centred on the cross-border US dealer-European dealer market.

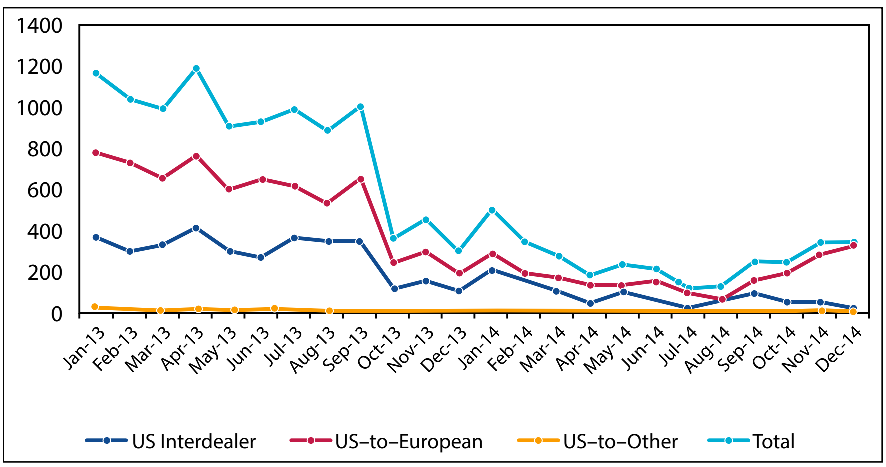
This suggests some increased participation on SEFs by European dealers.

Table 2. Cleared euro IRS activity by US dealers with European, US and other dealers (%): 1/1/2013 – 31/12/2014

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
US Interdealer	31.3	28.6	33.2	34.7	33.1	28.9	36.9	39.7	34.5	32.0	34.1	35.1
US to European	67.0	70.3	66.0	64.2	65.8	69.8	62.1	60.0	65.1	67.3	65.1	64.1
US to other	1.7	1.1	0.8	1.1	1.1	1.4	1.0	0.3	0.4	0.7	0.8	0.7
2014	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
US Interdealer	41.9	44.2	37.7	24.2	42.0	28.2	18.9	48.0	36.7	20.6	15.2	6.1
US to European	57.3	55.4	61.1	74.2	57.5	71.6	79.0	50.4	61.7	78.6	82.7	93.8
US to other	0.7	0.5	1.2	1.6	0.5	0.3	2.1	1.6	1.6	0.8	2.1	0.1

Source: LCH.Clearnet SwapClear **Note: 'Other' represents Canadian and Asian dealers**

Chart 2. The US market for euro IRS (€ billions)



Source: LCH.Clearnet SwapClear **Note: 'Other' represents Canadian and Asian dealers**

> There has been a sharp decline in the volume of euro IRS traded in the US market since the SEF rules came into force, with average monthly volume dropping from €848 billion in 2013 to €263 billion in 2014

Nonetheless, the most liquid pool for euro swaps remains in Europe, potentially creating issues for those US participants restricted to trading on SEFs and so unable to access this European liquidity.

US dollar IRS

Similar themes can be identified in an analysis of US dollar IRS[2]. Until recently, European dealers in the region's interdealer market primarily traded US dollar IRS with other European dealers (see Table 3). From January 2013 to September 2013, an average of 52% of cleared US dollar IRS was traded exclusively in Europe. Transactions occurring between European dealers and US dealers accounted for an average of 43% of activity during this time.

Following the October 2, 2013 SEF rule implementation date (yellow area), there was a jump in the proportion of business transacted between European dealers. During the months of October, November and December 2013, average European-to-European interdealer activity increased from 52% to 58%, coupled with a decrease in average European-to-US interdealer activity from 43% to 38%.

Since January 2014, however, relationship trends appear to have normalised to the period preceding the SEF rule. More recently, the proportion of trades between European and US dealers has increased, surpassing the share of trades conducted between European dealers (see Chart 3). This could reflect the fact that the US IRS market is US-centric, and is primarily traded on SEFs.

Table 4 describes the percentage of US interdealer activity from January 1, 2013 to December 31, 2014. The analysis shows that US dealers appear to trade US dollar IRS consistently with other US counterparties and European dealers. This pattern remains intact even after the October 2, 2013 SEF rule implementation date. But the cross-border pool has more recently seen most market share, reaching a high of 60.5% in December 2014. This change most likely reflects the shifting character of the US IRS market, with European dealers increasingly opting to trade US dollar swaps on SEFs to access US liquidity.

Conclusion

The October 2 effective date for SEF compliance has clearly had an impact on trading relationships in the derivatives markets. This analysis demonstrates that liquidity in the interest rate swaps market fragmented following the start of the SEF regime, and split further since the first MAT determinations came into force in February 2014. Most notably, fragmentation is disrupting the market for euro interest rate swaps as liquidity pools have become more exclusive among European dealers. However,

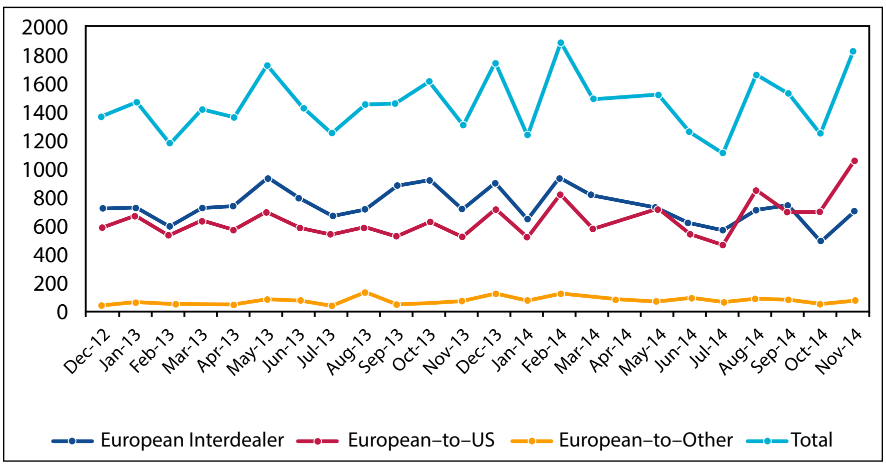
2. The market for US dollar IRS is defined as plain vanilla transactions between dealers that are cleared.

Table 3. Cleared US dollar IRS activity by European dealers with European, US and other dealers (%): 1/1/2013 – 31/12/2014

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
European Interdealer	52.8	50.0	50.4	51.1	54.4	54.5	54.5	53.4	49.7	60.5	57.4	54.7
European to US	43.6	45.9	45.1	45.0	42.2	40.5	40.5	43.0	40.8	35.9	39.1	40.1
European to other	3.6	4.2	4.5	3.8	3.4	4.9	5.1	3.6	9.4	3.6	3.5	5.2
2014	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
European Interdealer	51.9	51.9	49.9	54.1	51.0	48.0	49.1	51.7	43.3	48.9	39.3	38.5
European to US	41.0	41.9	43.5	39.0	43.6	47.3	43.2	42.1	51.4	45.5	56.3	57.6
European to other	7.1	6.2	6.6	6.9	5.4	4.7	7.8	6.2	5.3	5.6	4.4	4.0

Source: LCH.Clearnet SwapClear **Note: 'Other' represents Canadian and Asian dealers**

Chart 3. The European market for US dollar IRS ($ billions)



Source: LCH.Clearnet SwapClear **Note: 'Other' represents Canadian and Asian dealers**

Table 4. Cleared US dollar IRS activity by US dealers with European, US and other dealers (%): 1/1/2013 – 31/12/2014

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
US Interdealer	45.2	46.1	42.7	48.8	49.2	47.0	46.6	49.6	43.7	48.0	47.4	46.6
US to European	51.1	51.1	53.4	48.0	47.3	48.7	48.8	46.8	51.2	46.9	49.2	47.2
US to other	3.8	2.8	3.9	3.2	3.5	4.3	4.6	3.5	5.1	5.1	3.5	6.2
2014	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
US Interdealer	48.0	50.9	38.7	47.9	49.5	52.4	51.1	47.9	42.7	47.9	37.4	36.5
US to European	47.6	44.2	55.6	46.6	46.1	43.8	44.0	46.5	53.3	47.5	59.3	60.5
US to other	4.4	4.9	5.7	5.4	4.4	3.8	4.9	5.6	4.0	4.6	3.3	3.0

Source: LCH.Clearnet SwapClear **Note: 'Other' represents Canadian and Asian dealers**

there are signs the cross-border liquidity pools are growing, particularly for US dollar interest rate swaps. That likely reflects the fact that non-US firms are increasingly deciding to access US dollar liquidity via SEFs. Continued cross-border growth will depend on the harmonisation of rules in various regions. ■

Liquidity in the interest rate swaps market fragmented following the start of the SEF regime, and split further since the first MAT determinations came into force in February 2014. Most notably, fragmentation is disrupting the market for euro interest rate swaps as liquidity pools have become more exclusive among European dealers

FURTHER READING

ISDA has published several research papers on the fragmentation of liquidity pools:

- *Cross-Border Fragmentation of Global OTC Derivatives: An Empirical Analysis*, January 2014: http://isda.link/crossborderanalysis
- *Made-Available-to-Trade (MAT): Evidence of Further Market Fragmentation*, April 2014: http://isda.link/matstudy
- *Revisiting Cross-Border Fragmentation of Global OTC Derivatives: Mid-year 2014 Update*, July 2014: http://isda.link/revisitingcrossborder

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

10 QUESTIONS WITH…

Eric Litvack

1 **IQ: What have you spent most of your time on at work over the past month?**

Eric Litvack (EL): Both ISDA chief executive Scott O'Malia and I are relatively new in our positions, but we are very much in synch in terms of executing on ISDA's core missions and delivering value to our members. We've devoted a lot of energy to positioning ISDA to be nimble, reactive and productive, at the staff level and at the board level. ISDA is at its best when it is delivering solutions to the derivatives market, and we want to see ISDA excel as an agent of change.

2 **IQ: What are the three biggest challenges facing the derivatives market at the moment?**

EL: Cross-border conflict of law is one. The derivatives market is a global market serving global clients, but regulations are by definition local. Conflicting, confusing or overlapping rules can incite derivatives users to stay local and lose the benefit of competitive pricing and service.

The scarcity of resources is another. Constraints on capital, on liquidity and on operational resources through the implementation of regulatory reform create an environment of rising costs and diminishing revenues. The sell side will need to constantly reassess its business models in search of cost-efficiencies and revenue synergies.

Media and popular distrust are also important issues. Derivatives continue to suffer from a reputation of complexity and opacity. That, unfortunately, carries a tremendous political cost, which is damaging to end users of the product. It's unfortunately a very tall mountain to overcome, but we need to do better.

3 **IQ: Will the derivatives markets look different in five years' time? How?**

EL: In five years' time, the Basel III requirements will be fully phased in, as will the margin rules for non-cleared derivatives. The clearing and trading obligations will have applied for some time to all classes of affected parties in all major regions. If we're optimistic, progress will have been made in resolving cross-border concerns so that some of the fragmentation we're observing will have worked its way through. I also expect that market participants will have found new sources of efficiency and optimisation, so best use is made of scarce balance-sheet and liquidity resources. Volumes will concentrate on standardised and clearable contracts, where maximum netting efficiencies can be obtained. Bespoke transactions will continue to exist, but higher costs linked to capital and liquidity considerations will test demand elasticity. Resource efficiency will be the driver of success.

Eric Litvack, managing director at Société Générale and ISDA chairman since January 1, talks about the challenges facing the derivatives market, his experiences on the ISDA board, and how he would spend time trapped on a desert island

4 **IQ: How long have you served on the ISDA board?**
EL: Since October 2006. I think that works out to about 50 dog years.

5 **IQ: What is ISDA's biggest achievement since you've been involved with the association?**
EL: Managing continuity and progress in the face of unprecedented regulatory reform. ISDA has delivered solutions to facilitate standardisation, contractual certainty and evolution towards the complex new environment. It's been exhilarating.

6 **IQ: What was your favourite ISDA AGM and why?**
EL: The Beijing AGM in 2009. Talk about timing! At the very depths of the financial crisis, we were committed to hosting an AGM in what was not the easiest place to draw delegates from around the world. In the end, we managed to get just over 500 delegates, which gave the AGM a more intimate feel, and a sense that participants were showing a strong commitment and really cared about being there.

7 **IQ: If you didn't work in derivatives, what do you think you'd be doing?**
EL: That's a difficult one, because I'm lucky enough to really enjoy what I'm doing. But when I'm not doing it, I like to cook. And if I had the talent for it, I'd like to sculpt.

8 **IQ: Explain what a cross-currency swap is in no more than 10 words.**
EL: Agreement to exchange interest and principal denominated in different currencies. That's an even 10. If I have to go lower, I'd struggle.

9 **IQ: If you had to choose someone involved in derivatives, past or present, to be trapped on a desert island with, who would you choose and why?**
EL: Raquel Welch in *The Three Musketeers*. Okay, so she probably didn't know all that much about derivatives, but I could teach her maybe.

10 **IQ: Tell us three interesting things about yourself.**
EL: When I get a chance to unwind, I like to read 19th century literature, go hiking in the mountains and teach my kids to cook. On a good day, I get to do all three. Okay, not so interesting except maybe to me, but you did ask. ■

Year in Review: Interest Rate Derivatives

It's more than a year since the first trading mandates came into force in the US. How has this affected interest rate derivatives trading on execution venues and in the bilateral market? ISDA makes sense of the data, using information reported to US swap data repositories

THE ROLLOUT OF trade reporting requirements in the US, Europe and elsewhere means there's now more derivatives trade data available than ever before. Making sense of that data remains a challenge, however. The regulations that have come into force contain a number of differences and inconsistencies. Standard identifiers for entities, trades and products have not been adopted globally, which prevents easy and accurate aggregation. And the exact data format required by the various trade repositories can differ, causing further difficulties (see pages 26-28).

ISDA has worked to decipher and combine the data reported to US swap data repositories (SDRs), launching a swap data analysis site last year called SwapsInfo.org. The site displays price and trade volume data on interest rate derivatives and credit default swaps, using publicly reported information from the Depository Trust & Clearing Corporation's SDR service and the Bloomberg Swap Data Repository. These firms are required by US regulators to publicly disclose certain trade data.

Last year included some big changes to derivatives markets. Following the implementation of the Commodity Futures Trading Commission's swap execution facility (SEF) rules in October 2013, the first made-available-to-trade mandates came into force in February 2014, capturing a variety of interest rate swap and credit default swap index instruments. The analysis looks into the impact on electronic and bilateral trading volumes,

Chart 1A: IRD Average Daily Trade Count: SEF, Bilateral, Total

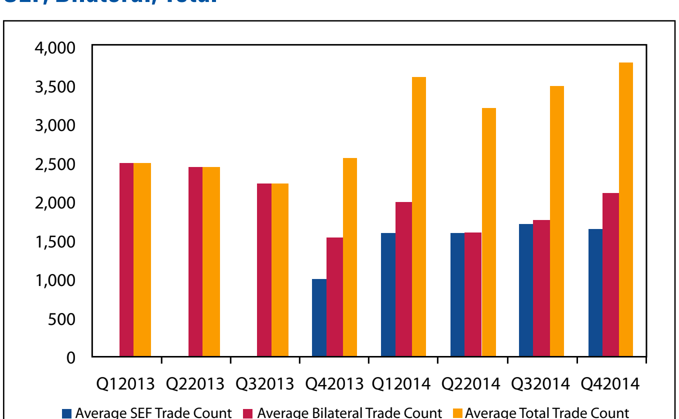


Chart 1B: IRD Average Daily Notional Volume: SEF, Bilateral, Total

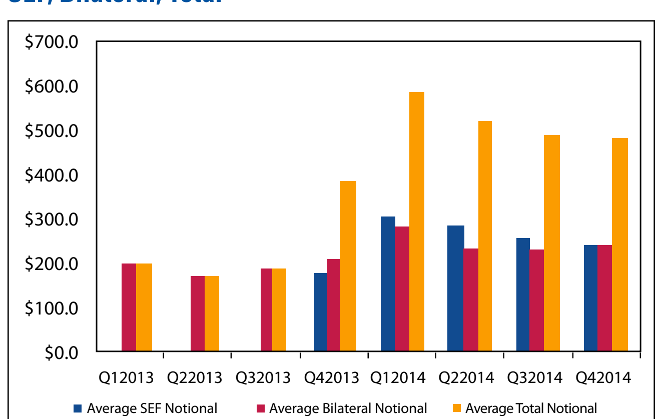


Table 1: IRD Daily Average SEF/Bilateral Trade Count and Notional Volume (US$ billions)

	Average SEF Trade Count	Average Bilateral Trade Count	Average Total Trade Count	Average SEF Notional	Average Bilateral Notional	Average Total Notional
Q12013	4	2,509	2,513	$0.2	$197.8	$198.0
Q22013	3	2,457	2,459	$0.1	$172.0	$172.2
Q32013	0	2,249	2,249	$0.0	$189.7	$189.7
Q42013	1,020	1,552	2,572	$177.7	$209.9	$387.6
Q12014	1,609	2,012	3,622	$304.8	$283.2	$588.0
Q22014	1,614	1,611	3,225	$285.0	$234.0	$519.0
Q32014	1,723	1,784	3,507	$259.0	$230.3	$489.2
Q42014	1,672	2,128	3,800	$242.5	$241.9	$484.4
Y2013	261	2,187	2,447	$45.2	$192.4	$237.6
Y2014	1,655	1,883	3,539	$272.4	$247.0	$519.4

as well as cleared versus non-cleared volumes for the overall interest rate derivatives market.

Interest rate derivatives summary (Charts 1A and 1B)

SDR-reported average daily trade counts increased while notional volumes decreased over the course of 2014, suggesting more frequent trading of smaller sizes is taking place. This inverse relationship was observed in both SEF and bilateral trading.

Compared with 2013, however, average daily volume increased on all counts. Average daily trade counts grew by 44.6%, from 2,447 trades per day during 2013 to 3,539 during 2014. Average daily notional volume also increased from $237.6 billion to $519.4 billion. Consequently, the average trade size of an interest rate derivatives (IRD) transaction climbed from roughly $97.1 million in 2013 to $146.8 million in 2014.

Meanwhile, cleared IRD transactions continued to grow as a percentage of total volume in 2014. Average daily cleared trade counts and notional volume accounted for 62.7% and 76.5% of the total in 2014, versus 58.1% and 71.7% in 2013.

SDR-reported SEF trading volume also increased, comprising roughly half of the total volume in 2014. Average daily SEF trade counts accounted for 46.8% of total trading, while average daily notional volume made up 52.4% of the total. Average SEF trade counts increased by 3.9% from the first quarter of 2014 to the fourth quarter, but average daily notional volume decreased 20.4% during that time.

IRD on- versus off-venue (Table 1)

Average total trade counts grew from 3,622 trades per day in the first quarter of 2014 to 3,800 in the last three months of the year, an increase of 4.9%. However, average daily notional volume decreased substantially over the same period, falling 17.6% from $588.0 billion to $484.4 billion per day[1]. This translates into a drop in the average size per trade from $162.3 million in the first quarter to $127.5 million in the last three months of 2014.

> SDR-reported average daily trade counts increased while notional volumes decreased over the course of 2014, suggesting more frequent trading of smaller sizes

Looking over the entire year, both average daily total trade counts and notional volumes were higher in 2014 compared with 2013. Trade counts increased by 44.6%, from 2,447 trades per day in 2013 to 3,539 in 2014. Average daily notional volume, meanwhile, increased by 118.6%, from $237.6 billion per day in 2013 to $519.4 billion in 2014.

Drilling down to a more granular level, average daily SEF trade counts increased from 1,609 trades per day during the first quarter to 1,672 during the fourth

1. SDR data is masked, which results in understated notional volumes. Total capped notional volume increased YoY, rising 33.6% for IRD reported to DTCC and Bloomberg SDRs

Table 2: IRD Daily Average Cleared/Non-cleared Trade Count and Notional Volume (US$ billions)

	Average Cleared Trade Count	Average Non-cleared Trade Count	Average Total Trade Count	Average Cleared Notional	Average Non-cleared Notional	Average Total Notional
Q12013	1,162	1,351	2,513	$114.7	$83.3	$198.0
Q22013	1,376	1,083	2,459	$114.3	$57.9	$172.2
Q32013	1,421	828	2,249	$140.9	$48.8	$189.7
Q42013	1,720	852	2,572	$308.0	$79.6	$387.6
Q12014	2,326	1,296	3,622	$454.2	$133.8	$588.0
Q22014	2,111	1,114	3,225	$412.9	$106.1	$519.0
Q32014	2,250	1,257	3,507	$378.0	$111.2	$489.2
Q42014	2,186	1,614	3,800	$346.6	$137.8	$484.4
Y2013	1,423	1,025	2,447	$170.3	$67.2	$237.6
Y2014	2,217	1,321	3,539	$397.2	$122.2	$519.4

quarter of 2014, a rise of 3.9%. Volume was highest during the third quarter, at 1,723 trades per day. However, average daily SEF notionals volumes decreased 20.4%, from $304.8 billion to $242.5 billion during the same period. Average daily notional volume was highest during the first quarter, at $304.8 billion.

Bilateral trade counts rose slightly more in the year versus SEF trade counts, while notional volumes declined by a smaller percentage amount. Average daily trade counts increased by 5.7%, from 2,012 per day during the first quarter to 2,128 during the last three months of the year. Trade counts were highest in the first and fourth quarters. Average daily notional volume fell by 14.6%, from $283.2 billion to $241.9 billion per day during the same period. Volumes were highest during the first quarter of the year.

IRD cleared versus non-cleared (Charts 2A and 2B; Table 2)

Average daily cleared trade counts decreased 6%, from 2,326 trades per day during the first quarter of 2014 to 2,186 during the last three months of the year. At first glance, it may appear that less is being cleared. However, cleared trade counts made up 58.1% of total daily trade counts in 2013. By 2014, this figure had increased to 62.7%.

Average daily cleared notional volume also decreased over the course of the year, falling 23.7% from $454.2 billion during the first quarter to $346.6 billion during the fourth quarter of 2014. Again, the proportion of cleared trades

Chart 2A: IRD Average Daily Trade Count: Cleared, Non-cleared, Total

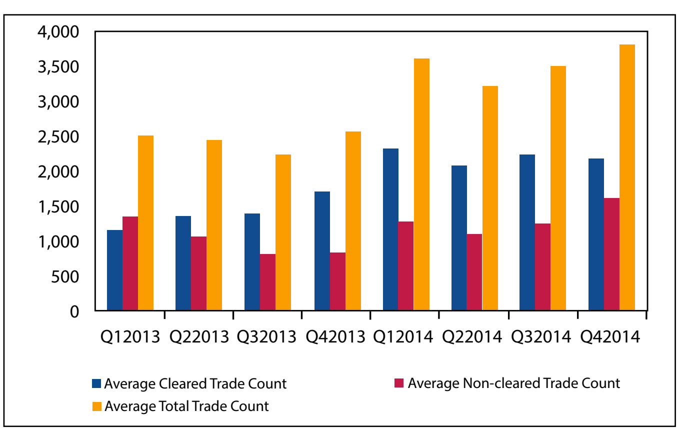


Chart 2B: IRD Average Daily Notional Volume: Cleared, Non-cleared, Total

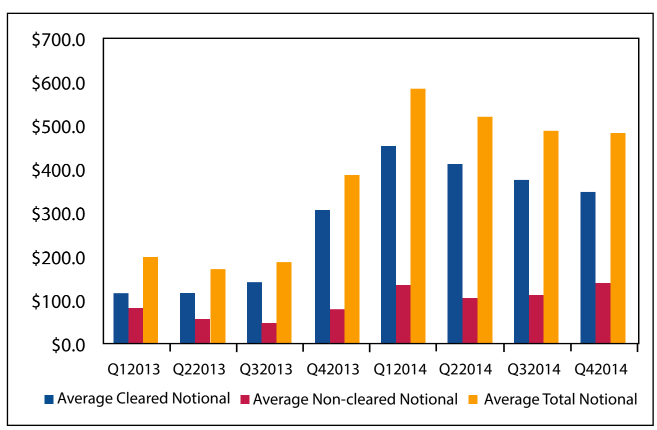
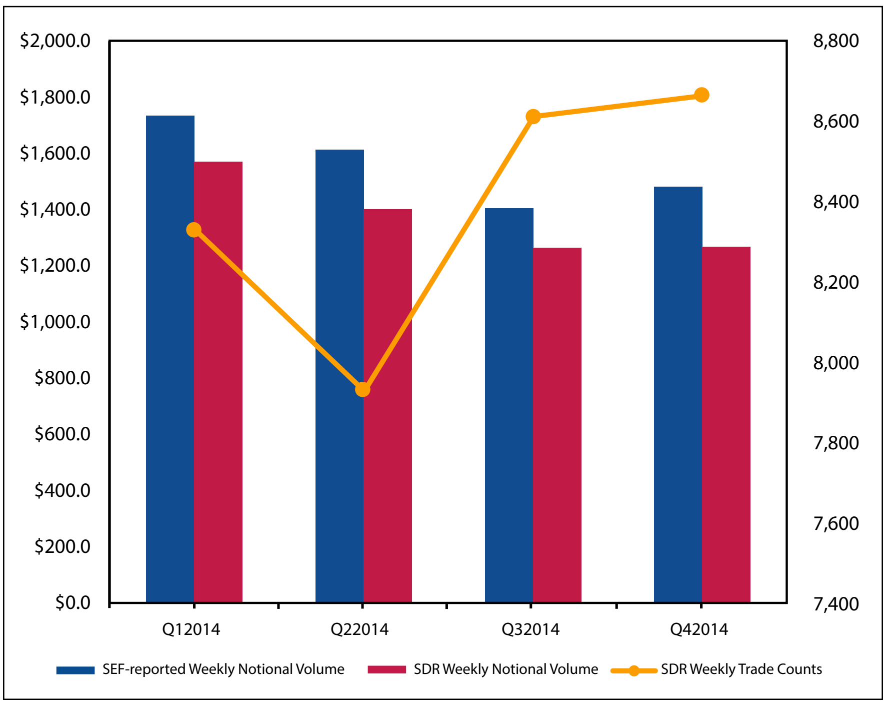


Table 3: SEF IRD Average Daily/Weekly Trade Counts and Notional Volume (US$ billions)

	SEF-reported Weekly Notional Volume	SDR Weekly Notional Volume	SEF-reported Daily Notional Volume	SDR Daily Notional Volume	SDR Weekly Trade Counts	SDR Daily Trade Counts
Q12014	$1,732.3	$1,571.9	$346.5	$304.8	8,328	1,609
Q22014	$1,614.4	$1,398.8	$322.9	$285.0	7,928	1,614
Q32014	$1,401.0	$1,267.4	$280.2	$259.0	8,610	1,723
Q42014	$1,478.9	$1,271.7	$295.8	$242.5	8,661	1,672
Y2014	$1,558.2	$1,379.5	$311.6	$272.4	8,376	1,655

Chart 3: IRD Average Weekly SEF Trade Counts/Notional Volume (US$ billions)



Cleared IRD transactions continued to grow as a percentage of total volume in 2014. Average daily cleared trade counts and notional volume accounted for 62.7% and 76.5% of the total in 2014, versus 58.1% and 71.7% in 2013

increased when compared to the year before, with 76.5% of average daily notional volume centrally cleared in 2013 versus 71.7% in 2013.

In comparison, average daily non-cleared trade counts and notionals increased during 2014. The most significant volume was observed during the first and fourth quarters of the year for both metrics. Average daily non-cleared trade counts increased by 24.5%, from 1,296 trades per day during the first three months of the year to 1,614 during the fourth quarter. Average daily non-cleared notional volume increased by 3.0%, from $133.8 billion to $137.8 billion during this time.

In 2013, non-cleared trade counts comprised 41.9% of total daily trade counts. During 2014, this figure decreased to 37.3%. Similarly, non-cleared notional volume decreased from 28.3% to 23.5%.

SEF-reported weekly volume trends: IRD (Chart 3 and Table 3)

Average weekly SEF trade counts displayed an upward trend in 2014, increasing by 4%, from 8,328 in the first three months of the year to 8,661 in the fourth quarter[2].

However, average weekly SEF-reported notional volumes have drifted lower throughout the year, falling 14.6% from $1,732.3 billion during the first quarter to $1,478.9 billion in the fourth quarter. Although the trend was generally lower, the fourth quarter showed some resilience after a quiet previous three-month period, which can likely be attributed to December interest rate swap roll volumes.

SEF-reported trading patterns suggest more frequent trading in smaller notional size is occurring on electronic venues. ■

Read the full version of this research paper on the ISDA website: http://isda.link/swapsinforeview

2. SEF trade counts were taken from the DTCC and Bloomberg SDRs

Defining Liquidity

Europe's revised Markets in Financial Instruments Directive will impose strict pre- and post-trade transparency requirements on all classes of derivatives deemed to be liquid. Establishing the definition for liquid instruments is therefore critical, but ISDA believes the thresholds currently proposed by ESMA are too low

THERE WOULD APPEAR to be very few parallels between defining obscenity and classifying liquidity. But having been asked to rule on the threshold for obscenity in 1964, US Supreme Court Justice Potter Stewart used a phrase that could equally be applied when defining liquid markets: I know it when I see it. The European Securities and Markets Authority (ESMA) has been asked to go much further than that, however.

As part of the process to put meat on the bones of the revised Markets in Financial Instruments Directive (MIFID II) and Markets in Financial Instruments Regulation (MIFIR), ESMA is required to set quantitative thresholds for determining whether a financial instrument is liquid. It's an important job: liquid instruments will be compelled to meet pre- and post-trade liquidity requirements, as well as potentially being subject to an obligation to trade on a regulated market, organised trading facility, multilateral trading facility or recognised third-party venue.

Transparency regime

The pre-trade transparency regime requires the publication of bid and offer prices before a trade takes place, while further information—including price and volume—is required to be reported soon after the transaction is executed. Waivers do exist in certain circumstances. The pre-trade reporting requirements won't apply if the trade is large compared to 'normal' market size (a block trade in US parlance). The reporting of post-trade information would also be deferred by 48 hours. An additional 'size-specific-to-the-instrument' waiver also exists for request-for-quote and voice-trading systems, meant to ensure liquidity providers are not exposed to undue risk.

Despite these waivers, there are risks in setting the initial 'is it liquid?' hurdle too low. Dealers take on risk to facilitate client orders and then look to hedge their exposures. In less liquid markets, that can take time—and if details of the trade are published before the executing dealer can hedge, then other participants may attempt to take advantage of that information. This could deter dealers from facilitating client trades in less liquid products, causing a further decline in liquidity and ultimately leading to higher costs being passed on to end users.

How regulators determine what is and what isn't liquid is therefore crucial. And ESMA's December 19, 2014 consultation paper contains the blueprint of how it proposes to do this.

ESMA proposal

To some extent, its hands are tied by the level-one MIFID II/MIFIR text agreed by the European Parliament, Council of the European Union and European Commission. An overriding criterion is that a liquid market is one where there are "ready and willing buyers and sellers on a continuous basis". The level-one text also sets out a list of variables that should

AT A GLANCE

- Under ESMA proposals, an interest rate derivatives instrument could be classed as liquid if it trades just once a day, with an average daily notional of as little as €10 million.
- ISDA believes the thresholds should be set at 15 trades a day with an average daily notional of €500 million.
- This is more in line with the MIFID level-one text requirement that a liquid instrument is one with "continuous" buying and selling activity.
- Liquid instruments are subject to pre- and post-trade transparency requirements, as well as potentially being required to trade on regulated venues.
- Applying pre- and post-trade liquidity too broadly could discourage market-makers from participating in less liquid markets.
- The end result will be less liquidity and higher costs for end users.

Table 1. ESMA analysis results—interest rate derivatives

SINGLE CCY SWAPS	Criterion to define sub-classes #1	Criterion to define sub-classes #2	Criterion to define sub-classes #3	Total number of sub-classes	Number of liquid sub-classes	Trades per day threshold	Notional per day (€mm) threshold	Percentage of trades captured	Percentage of notional amount captured
FIXED-FLOATING	Currency	Tenor		829	247	2.0	100	90%	97%
FLOAT-FLOAT	Currency	Tenor		290	48	1.0	50	72%	80%
OIS	Currency	Tenor		282	32	1.0	100	69%	89%
INFLATION	Currency	Tenor		165	6	1.0	50	19%	26%

MULTI CCY SWAPS	Criterion to define sub-classes #1	Criterion to define sub-classes #2	Criterion to define sub-classes #3	Total number of sub-classes	Number of liquid sub-classes	Trades per day	Notional per day (€mm)	Percentage of trades captured	Percentage of notional amount captured
FIXED-FLOATING	Currency pair	Tenor		597	22	1.0	10	74%	65%
FLOAT-FLOAT	Currency pair	Tenor		711	39	1.0	100	55%	69%

FRA	Criterion to define sub-classes #1	Criterion to define sub-classes #2	Criterion to define sub-classes #3	Total number of sub-classes	Number of liquid sub-classes	Trades per day	Notional per day (€mm)	Percentage of trades captured	Percentage of notional amount captured
FRA	Currency	Tenor	Underlying rate	108	28	5.0	500	92%	95%

SWAPTION	Criterion to define sub-classes #1	Criterion to define sub-classes #2	Criterion to define sub-classes #3	Total number of sub-classes	Number of liquid sub-classes	Trades per day	Notional per day (€mm)	Percentage of trades captured	Percentage of notional amount captured
SWAPTION	Currency			24	5	10.0	2,000	96%	98%

Source: ESMA

be considered: the average frequency and size of transactions over a range of market conditions, the number and type of market participants, and the average size of spreads where available.

ESMA suggests focusing primarily on the first two—frequency and size—when assessing liquidity. The other variables will only be taken into account in specific cases or for certain asset classes. When considering frequency, ESMA proposes to set both a minimum number of transactions over a given period and a minimum number of days on which trading occurs over that time.

Taking the interest rate derivatives market, ESMA proposes to first identify which broad classes of derivatives are liquid at a high level—for instance, whether interest rate swaps as an entire product class are liquid. It then plans to drill down to the sub-class level, looking at tenor, underlying and/or currency. These sub-classes would then be assessed for liquidity based on asset-class-specific thresholds.

Table 1 summarises ESMA's proposed thresholds for certain interest rate derivatives, along with the results of its analysis. For instance, ESMA suggests that a floating-to-floating interest rate swap only needs to trade once a day to be considered liquid. Combined with a notional threshold of €50 million, it has determined there are 48 liquid sub-classes, covering 72% of trades and 80% of the notional traded.

ISDA response

This analysis has triggered counter proposals from the industry. In its response to ESMA's paper, published on March 2, 2015, ISDA argues that one trade a day does not satisfy the "continuous" buying and selling requirement set by the MIFID legislation, and proposes using a higher threshold of 15 trades a day with an average daily notional of €500 million. These levels better reflect the concept of continuous buying and selling activity, ISDA argues.

> ISDA argues that one trade a day does not satisfy the "continuous" buying and selling requirement set by the MIFID legislation

The response also draws attention to concerns about how ESMA calculates tenor in the consultation paper. Swaps that don't have whole year tenors appear to have been mis-classified in some circumstances because ESMA didn't take leap years into account and failed to recognise that some swaps have effective dates of T+2. This means that, in some cases, liquid 10-year swaps are classified by ESMA as 11-year instruments, skewing the results for the less liquid 11-year tenor.

Table 2. Combining ISDA thresholds with corrected tenors: Fixed-to-floating interest rate swaps

ESMA & DTCC liquidity calibration Single corrency fixed-floating under various scenarios								
Swap Type	Class	Calculation basis	1. Total number of sub-classes with at least one trade	2. Liquid sub-classes	3. Trades per day	4. Notional per day (€mm)	5. % of trades captured	6. % of notional captured
Single Currency	Fixed-Float	ESMA data	829	247	2	100	90.4%	96.6%
Single Currency	Fixed-Float	ESMA data with ISDA threshold 2	829	114	15	500	78.9%	89.4%
Single Currency	Fixed-Float	ESMA data with ISDA threshold 3	829	56	40	1000	65.7%	78.5%
Single Currency	Fixed-Float	CFTC data with market standard year fraction & ISDA threshold 2	616	27	15	500	58.2%	72.0%

Source: ISDA, DTCC

Table 3. Combining ISDA thresholds, corrected tenors and more granularity of sub-class: Swaptions

Single currency swaptions and the impact of introducing granularity							
Criteria	Calculation basis	1. Total number of sub-classes with at least one trade	2. Liquid sub-classes	3. Trades per day	4. Notional per day (€mm)	5. % of trades captured	6. % of notional captured
Currency	ESMA data	24	5	10	2000	90.40%	96.60%
Currency Swap tenor Option tenor	CFTC data with ESMA year fraction	486	1	10	2000	14.29%	7.98%
Currency Swap tenor Option tenor	CFTC data with market standard year fraction	398	0	10	2000	0.00%	0.00%
Currency Swap tenor Option tenor	CFTC data with market standard year fraction	398	1	15	500	12.13%	7.73%

Source: ISDA, DTCC

ISDA corrected this in the analysis conducted as part of its March 2 response. Changing the methodology for tenor alone doesn't alter the coverage ratio of the trades captured, but it does reduce the number of liquid sub-classes. For instance, it means some six-year, 11-year or 31-year sub-classes are no longer classed as liquid under the new methodology.

In fact, using the corrected approach for tenor combined with the higher thresholds recommended by ISDA doesn't dramatically affect the percentage coverage in terms of notional captured for some instruments. Using the ISDA year fraction for fixed-to-floating interest rate swaps and applying the higher threshold of 15 trades a day and €500 million in notional reduces the number of liquid sub-classes from 247 under the ESMA approach to just 27 (see Table 2). However, the coverage ratio does not fall by an equivalent amount—notional captured, for instance, falls from 97% to 72%.

In some cases, there is a more significant impact. For multi-currency floating-to-floating swaps, for example, the number of liquid sub-classes falls from 39 to 0, meaning the coverage ratio falls from approximately 65% of notional to zero. ISDA argues this is appropriate: multi-currency floating-to-floating swaps are less liquid than single-currency swaps.

There are some caveats to these results, however. Importantly, ESMA based its analysis on three months of European trade repository data, while ISDA used publicly available information from the Depository Trust & Clearing Corporation's US swap data repository. Using different underlying data likely leads to anomalies in the number of liquid sub-classes and coverage ratios between the ESMA and ISDA analysis. But rather than focus on the absolute numbers in its response, ISDA recommends ESMA re-run its analysis of European data using the revised approach for tenor and higher thresholds.

Granularity

The granularity of ESMA's sub-class definitions is another issue highlighted by ISDA. This is a particular problem for swaptions, where ESMA has used only currency to determine the sub-classes. As a result, it has declared that all swaptions in US dollar, euro, sterling, yen and Australian dollar are liquid. This leads to an unrealistic situation where an option on a 50-year euro swap would be classed as liquid, but the underlying 50-year euro-denominated interest rate swap would be classed as illiquid. ISDA strongly recommends that ESMA further breaks down the sub-classes of swaption, using currency, underlying index, tenor of underlying and tenor of option.

When using a more granular sub-class determination and higher thresholds of 15 trades a day and €500 million in notional, the number of liquid classes falls from five to one, and the coverage ratio drops from approximately 97% of notional to 8% (see Table 3).

Aside from interest rate derivatives, ISDA also raises concerns with the approach taken for equity and commodity derivatives. In equity derivatives, no attempt has been made to distinguish between exchange-traded and over-the-counter (OTC) equity derivatives. The ESMA analysis is based purely on exchange data, but an exchange-traded option is very different to an OTC equity option—they are not fungible nor economically equivalent in many cases. Unless an attempt is made to distinguish between the two, OTC products could be caught by inappropriate transparency requirements, ISDA argues.

ESMA's own data also shows that most exchange-traded equity derivatives are illiquid. Yet it proposes to mandate pre- and post-trade transparency requirements to all equity derivatives traded on a trading venue.

Similar points can be made about commodity derivatives. ISDA argues that ESMA's proposed sub-classes should be subject to a more granular determination, alongside higher thresholds, preferably based on open interest rather than notional. Thresholds should also be set in US dollars rather than euro. The vast majority of commodities are dollar-denominated, and using euro would mean contracts could become liquid or illiquid based on the movement of exchange rates.

Conclusions

MIFID defines a liquid instrument as one with continuous buying and selling activity. What does 'continuous' mean? It's clearly up for interpretation, but ISDA argues that it's more than one trade a day on average. In fact, ISDA believes that a more appropriate threshold for interest rate derivatives is 15 trades a day, alongside a notional threshold of €500 million. A higher threshold would reduce the coverage ratio slightly for some instrument classes, and more significantly for others. But less-liquid sub-classes would be removed from the liquidity determination. ■

FURTHER READING

- Read ISDA's response to the MIFID II/MIFIR consultation paper at: http://isda.link/mifidresponse
- Read ESMA's December 19, 2014 consultation paper at: http://www.esma.europa.eu/system/files/2014-1570_cp_mifid_ii.pdf

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Spotlight on CCPs

What stress scenarios are central counterparties most worried about? What tools should clearing houses use to re-establish a matched book in the event of a clearing member default? And what are the main outstanding issues to be addressed? *IQ: ISDA Quarterly* asked three leading CCP operators for their thoughts

THE PARTICIPANTS

Sunil Cutinho, president, CME Clearing

Michael Davie, chief operating officer, LCH.Clearnet Group

Paul Swann, president and managing director, ICE Clear Europe

IQ: What stress scenario keeps you awake at night and what have you done to mitigate the impact?

Sunil Cutinho, CME Clearing: The same thing has always kept us up at night: the chance that stress will affect markets or products where risk management discipline is not routinely applied. The bedrock of a strong risk management philosophy is to help prevent and mitigate a crisis through applying consistent practices such as margin and mark-to-market valuation to every single market participant as a matter of course. The absence of those practices—in any market—can create situations where participants can establish positions they cannot support if or when the market turns against them. Such a situation would start a domino effect that can cause systemic damage.

Michael Davie, LCH.Clearnet Group: This issue goes to the heart of a CCP's responsibility: to keep functioning normally at all times and to safeguard the interests of the markets we clear.

It starts with strict membership criteria and how our independent risk committee decides which products we'll clear, and on what terms. We benefit from members', clients' and venues' input in establishing and challenging risk policies and practices. In a default, initial margin (IM) is our first line of defence. LCH.Clearnet calibrates IM to a 99.7% confidence interval across 10 years of data. Beyond IM, each service has a fully segregated mutualised default fund, each based on over 50 historical and potential extreme stress scenarios.

Paul Swann, ICE Clear Europe: Core to the operations of a central clearing counterparty is the management of risk, and ICE clearing houses undertake rigorous stress-testing scenarios as part of their regular risk controls. Stress testing is applied to ensure the robustness of ICE's loss-absorbency arrangements and its liquidity arrangements.

ICE Clear Europe, for example, regularly tests its ability to withstand the default of its largest two clearing members under a wide range of stress scenarios. Such scenarios include a full range of historical scenarios experienced over the past 30 years, or as long as reliable data have been available, as well as a wide range of theoretical stress tests that reflect possible future scenarios, including changes in price correlations between related products. The full range of stress tests are subject to independent validation. Risk profiles and distributions are always vulnerable to change and models for risk need to be adapted. For this reason, stress scenarios and assumptions are kept under review by ICE Clear Europe's risk department and by the relevant risk committee.

IQ: Briefly outline the pre-funded loss-absorbing resources you have at your disposal to address a default by one or more participants.

Sunil Cutinho, CME Clearing: If losses exceed the defaulter's initial margin, concentration margin and guarantee fund contribution, CME Clearing bears the first loss from our $380 million contribution across all of our default waterfalls. Following our contribution, the mutualised pool of non-defaulting clearing firms absorbs the loss, and that pool is sized to cover the simultaneous default of two clearing members with the largest stress shortfalls at all times.

What I think we all need to consider is a question of incentives. CCPs bring no risk to the system that we exist to manage—instead, we manage the risk that other participants bring to the system and ensure they have sufficient skin in the game to cover the risk of their exposures and incentivise them to behave in the best interests of the system. Ultimately, our capital base will be at risk to cover the last loss or we will be exiting our sole business if we can't cover it, which is an extremely strong incentive for us as a CCP to have prudent risk management.

Michael Davie, LCH.Clearnet Group: To minimise the impact on our surviving members in the event of a default, we follow the 'defaulter pays' principle. Our initial margin confidence interval is set considerably higher than the regulatory minimum. For the SwapClear service alone, this means we have some $9 billion more from the potential defaulters than would be the case if we ran to the US regulatory minimum.

After initial margin, we maintain a fully funded CCP skin-in-the-game layer of capital ahead of mutualised default funds, which are fully segregated for each service. These resources are pre-funded, and the default fund is calibrated to cover the simultaneous default of our two largest members and their clients.

Paul Swann, ICE Clear Europe: First, default management arrangements are designed to cover losses arising from a clearing member default, and restore a balanced CCP position, without recourse to resources other than those of the defaulting clearing member. Second, loss-absorption resources are designed to protect against losses that exceed the resources of the defaulting participant. Such resources include the following layers: a) ICE Clear Europe's own contribution to the default fund, which is used prior to non-defaulting members' contributions to the mutualised default fund; b) non-defaulting members' contributions to the mutualised default fund (which include additional pari-passu contributions from ICE Clear Europe); and c) powers to assess members for a limited number of additional contributions to default funds.

ICE Clear Europe contributes a total of $100 million in capital to the futures and options guarantee fund and approximately $28 million to the European credit default swaps guarantee fund, which could be drawn upon in the event of a default. Known as skin in the game, this is something that was first introduced at ICE Clear Europe when the clearing house was established in 2007.

> "We'd support initiatives that encourage transparency so members and regulators can fairly compare risk and operations across different CCPs"
> *— Michael Davie, LCH.Clearnet Group*

IQ: The Committee on Payments and Market Infrastructures (CPMI) and International Organization of Securities Commissions (IOSCO) recommend a variety of tools to allocate uncovered losses and re-establish a matched book in the event of a participant default. Which do you favour?

Sunil Cutinho, CME Clearing: We strongly support CPMI-IOSCO's assertion that the uniqueness of each default event must be taken into account when a CCP is determining the appropriate response. As such, a CCP's measured, customised approach cannot be fully defined in advance without knowing the facts of the event at the time. That said, CME supports and has implemented CPMI-IOSCO's proposal that members be incentivised to participate in the default auction, and help the CCP establish a matched book, by juniorising default fund contributions of 'poor' participants.

Michael Davie, LCH.Clearnet Group: If the pre-funded resources are exhausted in a default, our rules allow LCH.Clearnet to request additional contributions from surviving members to close out the defaulter's positions. Some of our services can also use variation margin gains haircutting as a recovery tool. As a final step, we can seek voluntary member contributions to re-establish a matched book. If these efforts were to fail, the affected clearing service would close. Importantly, our segregated default funds make it possible for the clearing service of one asset class to invoke a resolution procedure while other services continue.

Paul Swann, ICE Clear Europe: ICE is fully supportive of the CPMI-IOSCO standards relating to CCP recovery, and is currently implementing recovery plans comprising a range of tools, including powers of assessment, variation margin haircutting, powers to call a clearing moratorium, and ultimately a controlled process of contract tear-up. Such plans have been implemented at ICE Clear Europe for futures and options clearing and we are awaiting regulatory approval for credit default swaps clearing.

IQ: Several reports have argued that greater transparency over CCP risk policies and procedures is needed. Do you agree?

Sunil Cutinho, CME Clearing: Transparency has always been a focus at CME. Our public rule books, procedures and operating manuals, as well as our many client forums and working groups, have made us one of the most transparent clearing houses in the industry. We are the first CCP to provide clearing members with Payments Risk Committee reports and were among the first to publish our PFMI disclosures on our website. We welcome and encourage this transparency.

Michael Davie, LCH.Clearnet Group: More risk than ever is being cleared as a result of member demand and regulation. We've invested heavily in consultation and education to meet the needs of our members in a safe and responsible way. We are committed to providing comprehensive disclosure of our risk management policies and procedures. We'd support initiatives that encourage transparency so members and regulators can fairly compare risk and operations across different CCPs.

> "The issues of cross-border regulation and equivalence continue to be a concern for all CCPs"
> *— Sunil Cutinho, CME Clearing*

Paul Swann, ICE Clear Europe: ICE Clear Europe is supportive of transparency over CCP risk policies and procedures, while at the same time ensuring the protection of sensitive and confidential information of both the CCP and clearing participants.

ICE Clear Europe has an independent board of directors and separate product risk committees comprising up to 15 participants who operate on delegated powers from the board in order to ensure that the clearing house maintains and implements procedures, processes and controls to protect the integrity of the guarantee fund, as well as manage and mitigate credit and market risks. In addition, ICE Clear Europe has a Board Risk Committee, which comprises a non-executive chairman and equal numbers of clearing participants (CP) and non-CP users, who advise the board on key clearing participation and other risk issues.

IQ: What are the primary CCP-related issues still to be resolved by regulators, industry participants or CCPs?

Sunil Cutinho, CME Clearing: The issues of cross-border regulation and equivalence continue to be a concern for all CCPs, as ours is truly a global industry. Artificial regulatory arbitrage situations will only hurt industry participants, which will find themselves unable to secure comparable risk management and regulatory solutions across the globe, and therefore unable to support their global business. In addition, the issues of stress testing, resolution and recovery are areas where CCPs have a lot to bring to the table in developing standards. One-size-fits-all solutions will likely be ineffective for CCP risk management in the event of a default.

Michael Davie, LCH.Clearnet Group: We'd encourage greater transparency by disclosing margin methodologies to boost confidence in CCPs and enable regulators and clearing members to identify best practices. We would also welcome global coordination to harmonise standards on topics such as the requirements for CCP skin in the game.

> "There remain a number of different and conflicting views on the most appropriate structure and details relating to CCP loss-absorbency mechanisms, recovery plans and resolution arrangements"
> *— Paul Swann, ICE Clear Europe*

Paul Swann, ICE Clear Europe: In Europe, some issues remain to be resolved such as determining the equivalence of third-country clearing regimes. We fundamentally support efforts to ensure continued stability and coherent regulation at a global level, and believe that equivalence and the harmonisation of rules are of paramount importance to ensure the implementation of robust financial reform and to avoid regulatory arbitrage across jurisdictions.

In addition, in relation to clearing mandates for the buy side, while these have been in place in the US for some time, there has been a delay in Europe. As a result, we are continuing to see ongoing disparity across the differing regulatory jurisdictions.

Finally, despite broad international consensus relating to CCP recovery and resolution arrangements, there remain a number of different and conflicting views on the most appropriate structure and details relating to CCP loss-absorbency mechanisms, recovery plans and resolution arrangements. These differences have in certain cases prevented international agreement on CCP recovery and resolution arrangements. Given the cross-border coverage of a number of global CCPs and their users, international agreement and harmonisation is paramount. ■

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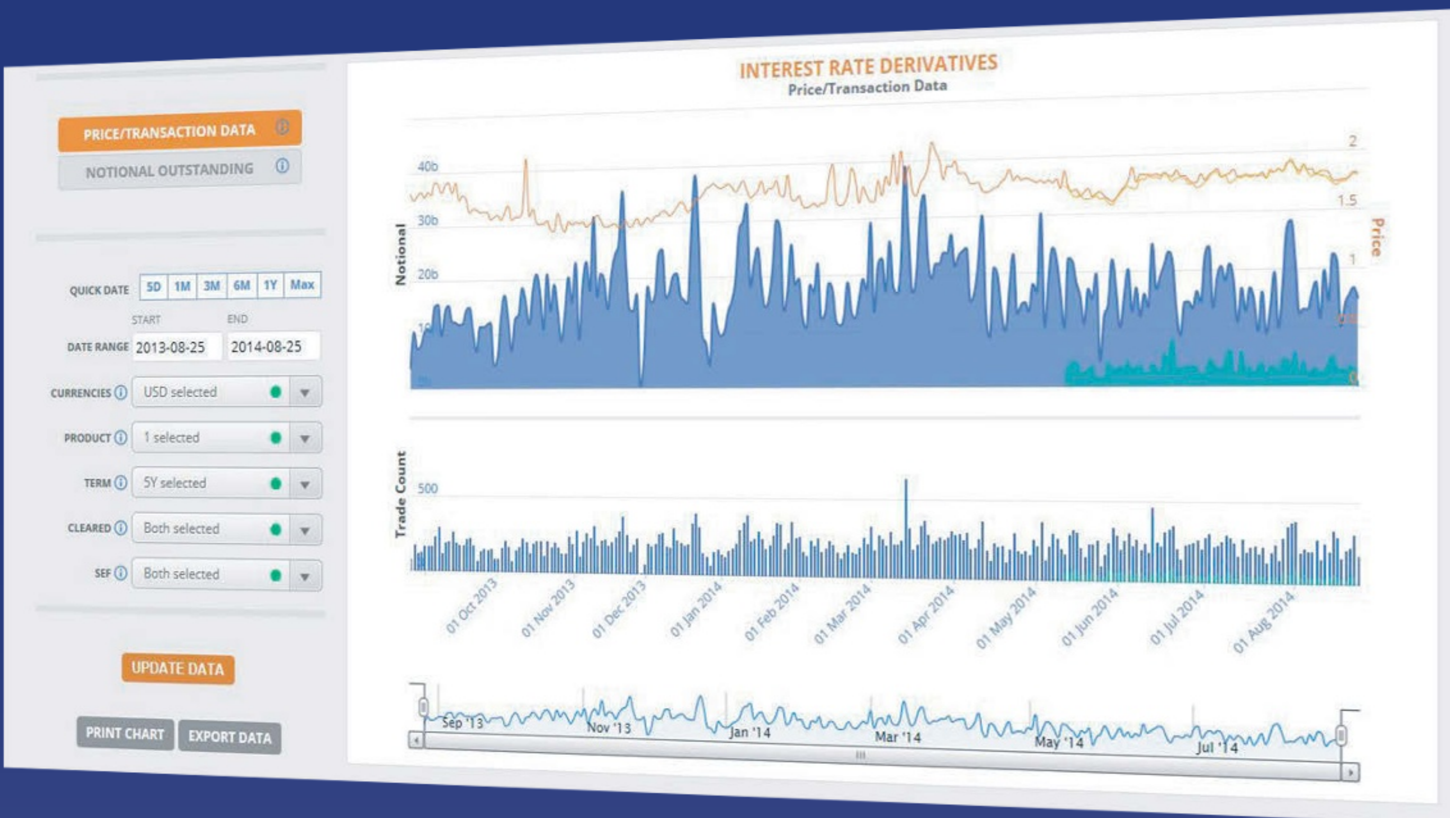

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The source for robust and trusted documentation

Providing standardised documentation globally to ensure legal certainty and maximum risk reduction through netting and collateralisation

An advocate for effective risk management and clearing

Enhancing counterparty and market risk practices and advancing the effective use of central clearing facilities and trade repositories

The architect of a secure and efficient infrastructure

Promoting infrastructure that supports an orderly and reliable market-place, as well as transparency to regulators

The voice for the global derivatives market-place

Representing the derivatives industry through public policy, ISDA governance, ISDA services, education and communication

MEMBERSHIP

ISDA has over 800 member institutions from 67 countries. These members include 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 including exchanges, clearing houses and repositories, as well as law firms, accounting firms and other service providers.

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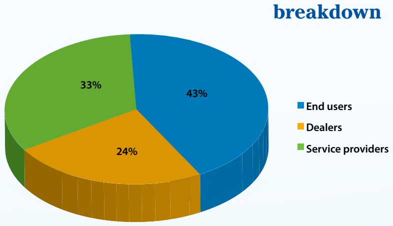

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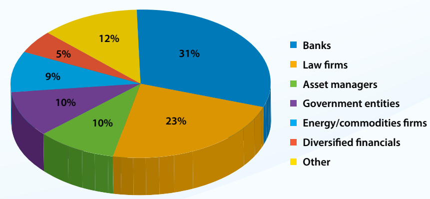

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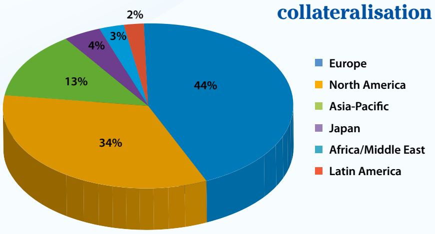

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OFFICE LOCATIONS

NEW YORK
360 Madison Avenue
16th Floor
New York, NY 10017
Phone: 212 901 6000
Fax: 212 901 6001
isda@isda.org

WASHINGTON
1101 Pennsylvania Avenue
Suite 600
Washington, DC 20004
Phone: 202 756 2980
Fax: 202 756 0271
isda@isda.org

LONDON
One Bishops Square
London E1 6AD
United Kingdom
Phone: 44 (0) 20 3088 3550
Fax: 44 (0) 20 3088 3555
isdaeurope@isda.org

BRUSSELS
ISDA c/o NCI Park Leopold
Business Centre
4th Floor
38/40 Square de Meeûs
Brussels 1000
Phone: 32 (0) 2 401 8758
Fax : 32 (0) 2 401 8762
isdaeurope@isda.org

HONG KONG
Suite 1502 Wheelock House
20 Pedder Street
Central, Hong Kong
Phone: 852 2200 5900
Fax: 852 2840 0105
isdaap@isda.org

SINGAPORE
50 Collyer Quay
#09-01 OUE Bayfront
Singapore 049321
Phone: 65 6538 3879
isdaap@isda.org

TOKYO
Otemachi Nomura Building
21st Floor
2-1-1 Otemachi
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Fax: 813 5200 3302
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Education has been part of ISDA's mission since the Association's inception. With now over 150 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, collateral, data and reporting, risk management, regulation and other related issues. Conferences in 2015 will focus on margin rules for non-cleared swaps, the ISDA Resolution Stay Protocol, regulatory developments for the buy side, and the commodity derivatives markets.

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, Hong Kong or Singapore (these rotate every year) 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 centres around the world, rotating among the major economically developed countries. The 2014 AGM took place in Munich and featured panels of academics, end users and market leaders discussing the value and uses of derivatives. ISDA's 30th AGM takes place on April 21-23, 2015 in Montreal.

The current conference schedule 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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UPCOMING ISDA 2015 CONFERENCES AND EVENTS

- May 6, 2015: The Fundamentals of Capital, London
- May 7, 2015: Advanced Capital Regulations, London
- May 7, 2015: EMIR Compliance Update, New York
- May 8, 2015: ISDA Symposium – 2006 ISDA Definitions, including Supplements & Matrices, New York
- May 12, 2015: Global Reporting Requirements Conference Implementation in the EU and Internationally, London
- May 13, 2015: FpML Training Course, London
- May 14, 2015: Extending FpML An Advanced FpML Training Course, London
- May 15, 2015: Processing FpML An Advanced FpML Training Course, London
- May 19, 2015: Regulatory Developments for the Buy-side: Current Issues, London
- May 19, 2015: Overview of the Capital Regulations, Sydney
- May 20, 2015: Cross-Border Debate—Issues to Watch in 2015 and beyond, New York
- May 20, 2015: Regulatory Update for Canada Including Margin Requirements, Toronto
- May 20, 2015: Client Clearing Legal Opinions, Sydney
- May 20, 2015: ISDA Resolution Stay Protocol, Sydney
- May 22, 2015: Overview of the Capital Regulations, Hong Kong
- May 25, 2015: Overview of the Capital Regulations, Singapore
- June 2, 2015: Understanding the ISDA Master Agreements Conference Including the Buy-side Perspective, London
- June 3, 2015: Understanding Collateral Arrangements and the ISDA Credit Support Documents Conference, London
- June 3, 2015: Understanding the ISDA Master Agreements Conference Including an Overview of the Regulatory Changes to ISDA Documentation, New York
- June 4, 2015: Understanding the 1994 ISDA Credit Support Annex (Security Interest - New York Law) and Updates in Collateral Issues Conference, New York
- June 16, 2015: Fundamental Review of the Trading Book

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