**Q&A**
Markus Ferber,
European Parliament

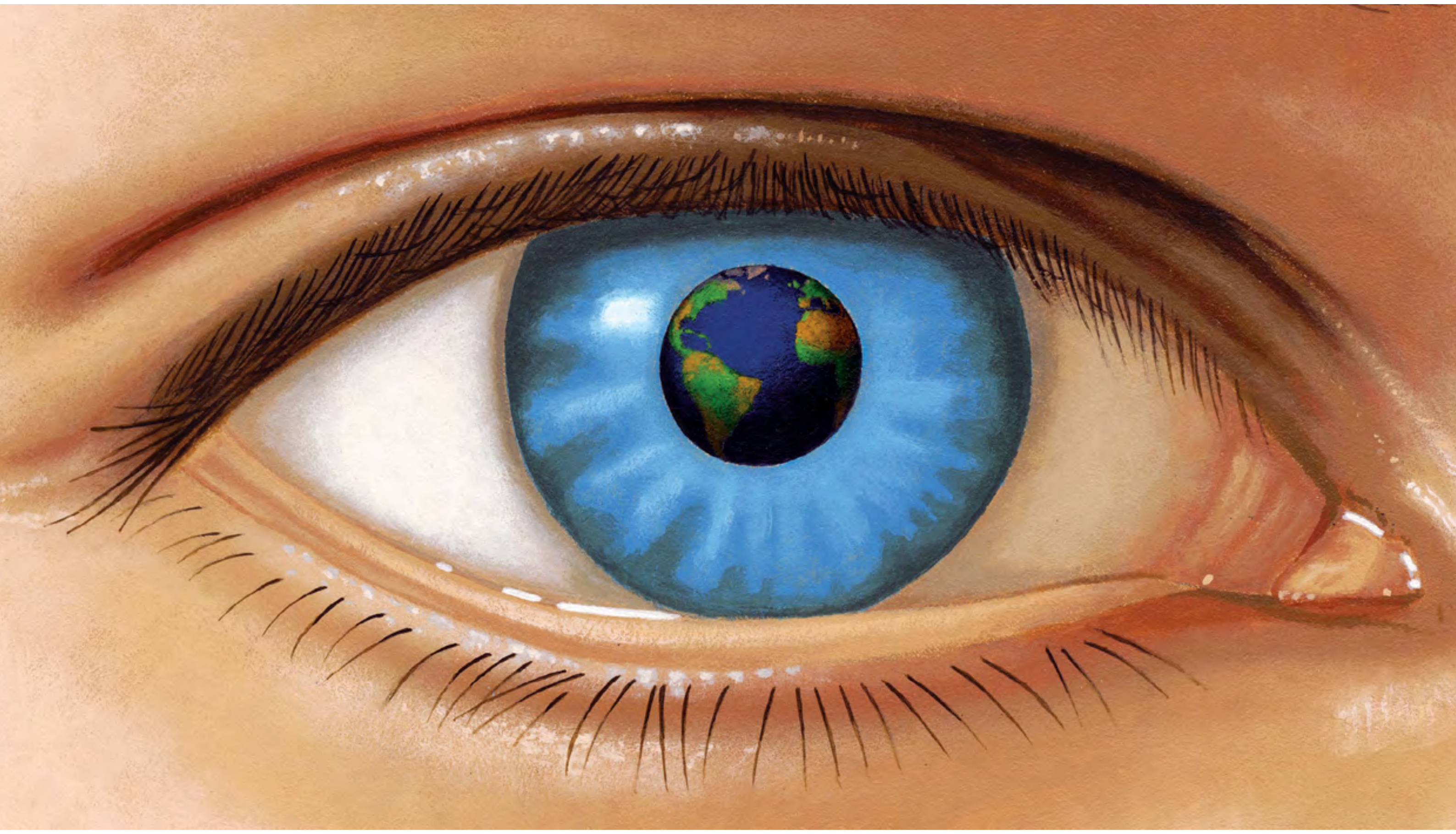
**BENCHMARKS**
Benchmark transition efforts
pick up pace

**CAPITAL**
End of the beginning
for Basel III

# IQ

## ISDA® Quarterly

Vol 4, Issue 1: April 2018 | www.isda.org

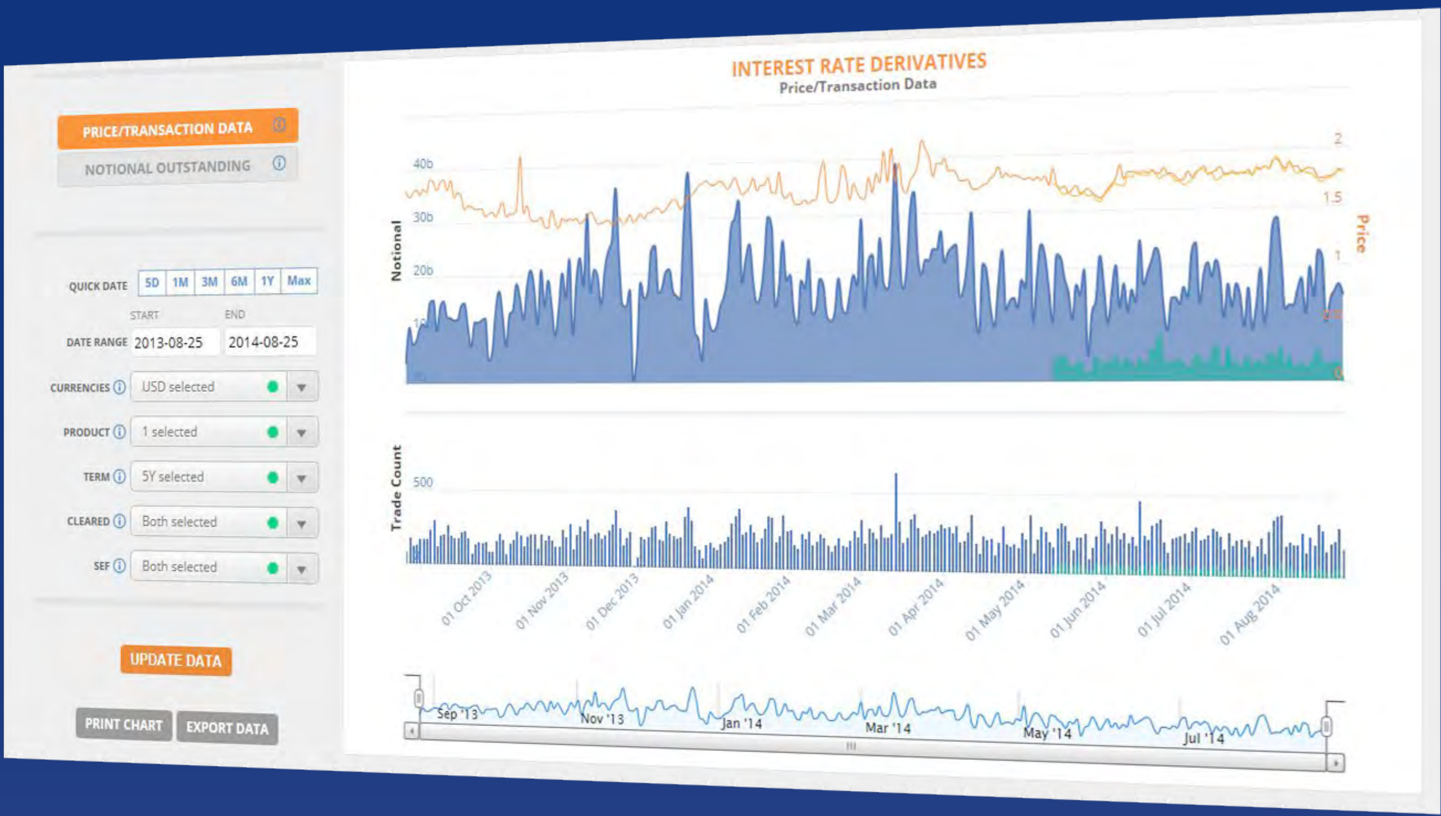


# *AN EYE TO THE FUTURE

*The derivatives market is preparing for potentially transformative changes, from the impact of new technologies to benchmark reforms*

# ISDA® SwapsInfo

ISDA SwapsInfo brings greater transparency to OTC derivatives markets. It transforms publicly available data on OTC derivatives trading volumes and exposures into information that is easy to chart, analyze and download.




ISDA SwapsInfo covers the interest rate derivatives and credit default swaps markets.

## Interest Rate Derivatives

### Price/Transaction Data

Daily IRD prices and trading volumes, measured by notionals and trade count.

### Notional Outstanding

Notional outstanding, and trade count, for a range of IRD products.

## Credit Default Swaps

### Price/Transaction Data

Daily CDS prices and trading volumes, measured by notionals and trade count.

### Market Risk Activity

CDS trading volume for single name and indices that results in a change in market risk position.

### Notional Outstanding

Gross and net notional outstanding, and trade count, for single names and indices.

SwapsInfo.org

ISDA® Safe, Efficient Markets

# Looking to the Future

**It's not possible to predict the** future with any certainty. In this ISDA annual general meeting (AGM) issue of **IQ**, which focuses on the future of the derivatives market, we don't even try. Instead, we explore some of the challenges market participants face, and the steps that are being taken now to prepare for possible future outcomes.

Technology is a case in point. Innovations are emerging at a fast pace, but we don't know whether the market will veer towards distributed ledger, artificial intelligence, cloud or something else. From ISDA's perspective, it doesn't really matter. What's important is that the foundations are in place to allow any of these technologies to propagate, thrive and interact. That's what ISDA's Common Domain Model is about: it's an effort to develop a standard digital representation of events and processes that can serve as a common framework for everyone.

The transition from interbank offered rates, or IBORs, to alternative risk-free rates represents another major transformation. The industry is working to an end-2021 deadline, and the process of transition planning is already under way. But firms need to marshal resources and fully engage with this process now in order to be prepared for the future state.

Brexit is a further example. No one knows what the final exit agreement will look like and therefore what the impact will be, but firms are looking at their options. This includes the documentation they use. Depending on the outcome, some firms may prefer to use an EU law Master Agreement post-Brexit to retain certain advantages when trading in the EU. To prepare for that possible scenario, ISDA is drafting French and Irish law Master Agreements as additional governing law options. The future is uncertain; this is about preparing for any eventuality and ensuring the industry has the tools it needs.

There are other uncertainties too – the future of the non-cleared derivatives market, the effect of new capital rules, the impact of margin rules and the outlook for cross-border trading. All of these topics will feature prominently in this year's ISDA AGM in Miami on April 24-26.

This issue of **IQ** also includes a survey, in which 900 market participants give their views on these areas of uncertainty. The results show that people are understandably tentative about the challenges ahead, but they remain upbeat about the derivatives market. That shouldn't come as a surprise. When the future is so uncertain, derivatives become even more important as an effective and efficient means of mitigating risk.

*Nick Sawyer*
Head of Communications & Strategy
ISDA

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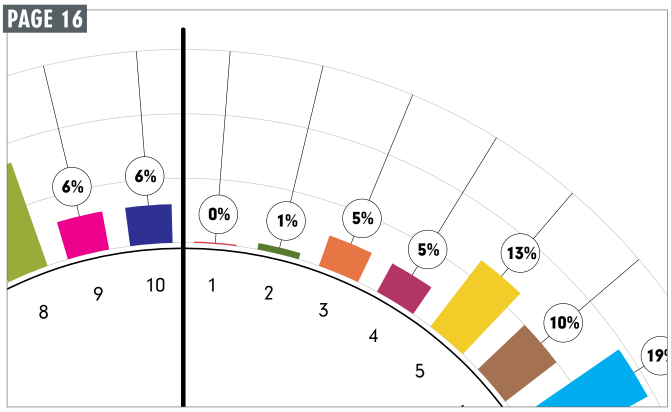


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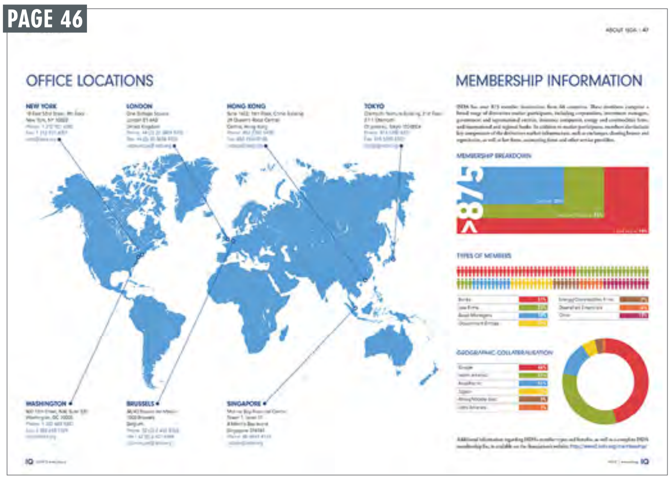


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# AN EYE TO THE FUTURE




"The implementation of alternative risk-free rates is going to require a major commitment from all market participants"

**Tom Wipf, Morgan Stanley**

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# Building on Our Past

*Derivatives markets continue to face big changes, but in preparing for the future, we need to build on what we've learned in the past, writes* ***Scott O'Malia***

**Whether it be Brexit, benchmark transition**, initial margin rules or the emergence of new technologies, change is coming to the derivatives markets. We need to be prepared for it – to stay nimble and keep pace with changing market and technology developments. But in transitioning to a future state, we also need to remember the lessons from the past. For us, that means making sure our 30 years of tried-and-tested industry standards, documentation and definitions continue to form the bedrock of the market. But it also means evolving and updating those documents where necessary.

Critically, we need to continually ensure our documents are fit for purpose and track market developments. The changes to benchmarks are a case in point. Both the European Union (EU) Benchmarks Regulation and ISDA's work to develop robust fallbacks to key interbank offered rates (IBORs) will require changes to the ISDA definitions.

In the case of the former, ISDA is working on a benchmark supplement to enhance the contractual robustness of derivatives contracts that reference benchmarks. This will help firms comply with a requirement in the EU Benchmarks Regulation to set out the steps they will take in the event a benchmark ceases to exist, materially changes or is not authorised for use.

In the latter case, the identified fallbacks for IBOR trades – once agreed – will be incorporated into the ISDA definitions, spelling out the alternative rates that would be used if a key IBOR is permanently discontinued.

That's on top of the work we're doing to help the market transition from the IBORs to alternative risk-free rates. We stand ready to make further changes to documentation or to develop protocols as necessary to help with this transition.

Another big change will be Brexit. While the ultimate scope of an exit agreement between the EU and the UK is still uncertain, we want to make sure we're ready for all eventualities. As a result, we're drafting French and Irish law Master Agreements as additional governing law options for those counterparties that want to retain specific benefits of EU legislation, as well as the automatic recognition of EU member-state court judgements across the EU 27.

The margin requirements for non-cleared derivatives are further area of focus. We're looking to make a number of changes to optimise the collateral process, which remains highly manual and resource-intensive. We're also exploring how we can optimise the delivery and use of our credit support annexes (CSAs) to drive efficiencies for users. A key initiative here will be the launch of an online tool for negotiating initial margin CSAs. With a much wider universe of firms coming into scope of the new non-cleared margin rules from September 2019, we think this tool will substantially reduce compliance burdens for buy- and sell-side participants, while preserving the capacity to deliver custom documentation.

"At ISDA, we're building on our legacy as a source of common standards to prepare for the future"

In fact, the initiative to digitise and automate our documentation will be a major theme for ISDA. For instance, our working groups are exploring the legal and governance issues regarding smart contracts. The lynchpin for this greater automation is our work on the ISDA Common Domain Model (CDM). Artificial intelligence, cloud and distributed ledger offer the potential to transform our industry, leading to greater efficiency and reduced costs. But it's critical we preserve the standards that have served the market so well. At ISDA, we're building on our legacy as a source of common standards to prepare for the future. We'll shortly be launching a digital version of the ISDA CDM, giving technology vendors and others what they need to try out the model and work on proofs of concept. We think the CDM is important: it will provide a standard digital representation of events and actions that occur during the life of a derivatives trade. Without it, it's difficult to see how these new technologies will be able to interact seamlessly with each other, limiting their potential.

These initiatives are all about transitioning to the future by building on the legacy of our past. We have an established suite of documents and definitions, which have brought 30 years of consistency and legal certainty to the derivatives market. We need to keep evolving, but we have to retain the certainty, legal know-how and precedent that is critical for the safe, efficient functioning of the derivatives market.

*Scott O'Malia*
ISDA Chief Executive Officer

# O'Malia Proposes 'Safe Harbour' Approach for CFTC/SEC Rules

**ISDA chief executive Scott O'Malia has** called for the US Commodity Futures Trading Commission (CFTC) and the Securities and Exchange Commission (SEC) to employ a 'safe harbour' approach to reduce unnecessary compliance burdens and costs for derivatives users.

Testifying before the House Financial Services Committee's Subcommittee on Capital Markets, Securities, and Investment on February 14, O'Malia explained that a safe harbour would effectively presume compliance with the equivalent rule set of the other agency. Under this approach, a firm would be able to register as a swap dealer with the CFTC or as a security based swap dealer with the SEC, and comply with the requirements of both regulators. This would avoid the need for firms to repeat implementation work and develop duplicative systems for CFTC and SEC rules that are similar but not necessarily identical.

"To be clear, in either case, the derivatives activity would still be properly and thoroughly regulated. However, there would be an opportunity for more effective and efficient oversight. This would eliminate the necessity to build out duplicative compliance systems for comparable but not identical rules, reduce market fragmentation and improve liquidity, while still ensuring regulators have the transparency and tools to oversee the markets," stated O'Malia's written testimony.

The safe harbour approach would create greater harmonisation in the US derivatives market, and ensure disparities between CFTC and SEC rule sets do not create unnecessary burdens for derivatives users.

However, O'Malia stressed a safe harbour would not lead to either the CFTC or SEC relinquishing jurisdiction. "Both the CFTC and SEC would retain general anti-fraud and anti-manipulation enforcement authority, and the respective Congressional committees would also retain their legislative and oversight authority," he told the hearing.

O'Malia noted that regulators in the US and European Union (EU) have made made notable progress on cross-border harmonisation, and have made substituted compliance/equivalence determinations on clearing and trade execution. "It would be quite remarkable if we were to achieve such a determination with a foreign government, but not within our own," O'Malia said.

## Improvements

The call for a safe harbour was one of a series of recommendations aimed at harmonising regulatory requirements, reducing operational complexity and cost, and providing relief for smaller market participants and end users.

An example is the treatment of inter-affiliate trades under new initial margin regulations. Inter-affiliate swaps are internal risk transfers between two subsidiaries, and are used to enable firms to centrally manage their risk and reduce overall credit exposure to third parties – a fact that has led to a CFTC exemption for inter-affiliate transactions under its initial margin requirements, in line with the treatment in the EU and Japan.

"The rule promulgated by US prudential regulators, however, does not provide such an exemption. This disparate treatment disadvantages certain firms doing business in the US, both domestically and abroad," O'Malia told the hearing. A legislative proposal to exempt swap transactions

Scott O'Malia

between affiliated entities from SEC and CFTC initial margin rules would remedy the disparity, he added.

O'Malia also recommended action on the treatment of client cash collateral under the supplementary leverage ratio. Banks are currently required to count customer collateral held at central counterparties towards their leverage exposure and to ignore the exposure-reducing effect of initial margin. This has a negligible effect on overall bank capital, but significantly increases the amount needed to support client clearing activities.

"In its current form, the leverage ratio acts to disincentivise central clearing, making it more difficult for banks to provide this service. This perverse impact has been highlighted by numerous policy-makers over the past several years. This is not a partisan issue – CFTC chairmen under two administrations have raised these concerns. It runs counter to the objective set by the G-20, as implemented by Congress in Dodd-Frank, to encourage central clearing," said O'Malia. IQ

# ISDA Appoints REGnosys to Develop Digital CDM

**ISDA has taken an important step** in its effort to foster a common set of process and data standards to increase automation and efficiency in the derivatives markets by appointing regulatory fintech firm REGnosys in February to develop a digital version of the ISDA Common Domain Model (CDM).

"Effective automation can only be built on standardisation. That's where the ISDA CDM comes in"

**Scott O'Malia, ISDA**

REGnosys was selected following a request for quotations issued in the fourth quarter of 2017, and will assist ISDA in developing the framework to build a digital version of the ISDA CDM, based on a conceptual design published last October. The project is expected to take approximately three months.

The initial iteration of the digital CDM will enable technology vendors, market participants and others to try out the model and test it on a range of platforms and technologies. ISDA intends to work with firms on proof-of-concept initiatives in order to further evolve and validate the model during the second quarter of 2018.

When fully developed, the ISDA CDM is intended to provide an industry standard blueprint for how derivatives are traded and managed across the lifecycle, and how each step in the process can be represented in an efficient, standardised fashion. Establishing a common set of data and processing standards that all participants can access and deploy will enhance consistency and facilitate interoperability between firms and technology platforms.

"The infrastructure that supports the derivatives market is complex, manually intensive and costly to maintain – it just isn't scalable. New technologies such as distributed ledger and smart contracts offer the potential for greater automation and efficiency, reducing complexity and costs. But effective automation can only be built on standardisation. That's where the ISDA CDM comes in. We're delighted to work with REGnosys to take this ambitious project to the next stage," says Scott O'Malia, ISDA's chief executive.

The first iteration of the digital CDM will focus on the interest rates and credit asset classes. Eventual benefits include providing a common foundation for new technologies like cloud and distributed ledger to facilitate consistency and interoperability, reducing the need for continual reconciliations to address mismatches caused by variations in how each firm records trade lifecycle events, and enabling consistency in regulatory reporting and compliance. IQ

What is the ISDA CDM? Watch a short video to find out: https://www.isda.org/2017/11/30/what-is-the-isda-cdm/

## ISDA Further Expands Board with Insurance Expertise

**ISDA has appointed a senior executive** from the insurance sector to its board of directors. Jason Manske, senior managing director, chief hedging officer and head of the global derivatives and liquid markets group at MetLife Inc, joined the board in January.

The appointment is part of a commitment by ISDA's board to broaden its scope by incorporating members from diverse sectors of the derivatives market. The latest announcement follows the appointment of pension fund expertise in May 2017, a supranational in September 2016 and a central counterparty in June 2016.

"The ISDA board reflects a wide range of views from a variety of sectors and geographies. Insurance companies are an important part of the ISDA membership, and use derivatives for a number of essential risk management and investment purposes. Being able to draw on Jason's experience and expertise at board level will be hugely beneficial for ISDA and its members," says Eric Litvack, ISDA chairman.

"Having a voice from the insurance sector on the board means we are able to tap into an even broader array of experience and knowledge. This nicely complements the expertise we've already added in the pension fund, supranational and clearing space, and means our board has a unique view into the issues that matter to the whole derivatives market. This will greatly benefit our work at ISDA," says Scott O'Malia, ISDA's chief executive.

Mr. Manske is responsible for MetLife's global derivatives and currencies, government and short-term trading, structured solutions and capital markets businesses. He joined MetLife in 2008, having previously worked as co-head of rate sales at Credit Suisse and president of the firm's US derivatives dealer. Prior to that, he worked at JP Morgan for 12 years, most recently as head of financial institution derivatives marketing. IQ

# ISDA Plans Online Initial Margin Documentation Tool

**ISDA has started work on an** online tool that will allow firms to electronically negotiate initial margin documentation. The new platform is being built to help facilitate compliance with regulatory initial margin requirements as a wider universe of buy- and sell-side firms come into scope of the rules.

The ISDA IM Document Negotiator will provide an efficient means for firms to negotiate initial margin documentation with a large number of counterparties simultaneously, and to deliver and store the documentation electronically. The tool will also make commercial data contained in the initial margin documentation more easily accessible, along with the metadata associated with the negotiation process. This data can then be used for risk management, resource management and other applications.

The development of the negotiation platform will run in parallel with the drafting of new initial margin documents for phases four and five of the initial margin regulation phase-in, scheduled for September 2019 and September 2020, respectively.

> "The negotiation of initial margin documentation can be time consuming, and with a large number of entities potentially coming into scope of the margin rules in September 2019, this will create a significant compliance burden"
>
> **Katherine Tew Darras, ISDA**

"The negotiation of initial margin documentation can be time consuming, and with a large number of entities potentially coming into scope of the margin rules in September 2019, this will create a significant compliance burden. The ISDA IM Document Negotiator is intended to help with this process by enabling firms to negotiate their initial margin documentation completely online in a digital format, which can then be directly consumed by the collateral management, trade reporting and other systems of the firm," says Katherine Tew Darras, general counsel at ISDA.

The regulatory initial margin requirements began phasing in from September 2016, initially for the largest dealers only. Each September, the threshold for compliance – based on an aggregate average notional amount (AANA) of non-cleared derivatives – is reset at a lower level, capturing a broader spectrum of firms. Under the global framework established by the Basel Committee on Banking Supervision and the International Organization of Securities Commissions, the AANA will fall to €750 billion in September 2019 and €8 billion in September 2020.

The tool is being developed in conjunction with law firm Linklaters, and is scheduled for rollout in early 2019. IQ

# Industry Associations Launch Benchmark Transition Roadmap

**ISDA and other trade associations launched** a roadmap in February that highlights the issues involved in transitioning financial market contracts and practices from interbank offered rates (IBORs) to alternative risk-free rates (RFRs).

Published by ISDA, the Association of Financial Markets in Europe, International Capital Market Association and the Securities Industry and Financial Markets Association and its asset management group, the benchmark transition roadmap aggregates and summarises existing information published by regulators and various public-/private-sector RFR working groups in order to provide a single point of reference on the work conducted so far to select alternative RFRs and plan for transition.

The analysis focuses on key IBORs in five currencies: euro, sterling, Swiss franc, US dollar and yen. Based on publicly available data, the roadmap estimates total outstanding notional exposure to the IBORs at over $370 trillion. Derivatives, syndicated loans, securitisations, business and and retail loans, floating rate notes and deposits are all significantly exposed to LIBOR and other IBORs.

The roadmap is the first part of a comprehensive analysis of the issues and potential solutions related to RFR transitioning for a wide spectrum of financial instruments. The associations have also launched a global survey of buy- and sell-side firms and infrastructures, which will feed into an in-depth report aimed at supporting industry interest rate benchmark transition planning efforts.

"The task of transitioning from the IBORs to new RFRs is immense, so the industry needs to start thinking about this now. The roadmap is aimed at raising awareness of the work conducted to date, and creating a central resource for interest rate benchmark transitions across market sectors. We are also gathering feedback from all parts of the market through our global survey to identify all important issues and propose potential solutions for an orderly, efficient and harmonised transition," said Scott O'Malia, ISDA's chief executive.

The roadmap sets out a number of potential issues that would need to be addressed when transitioning to RFRs, including market adoption of the new RFRs, valuation and risk management complexities, documentation issues, infrastructure requirements, and regulatory, tax and accounting implications. It also outlines the steps taken by the various public-/private-sector RFR working groups to resolve these challenges. IQ

| See pages 32-35

# IRD Market Expands in 2017

**The interest rate derivatives (IRD) market** expanded sharply in 2017, with traded notional reaching $193.1 trillion over the 12-month period, a 16.1% increase compared to 2016 figures, according to ISDA SwapsInfo.

The analysis, based on data submitted to the Depository Trust & Clearing Corporation and Bloomberg US swap data repositories, also shows an increase in trade count: 1,166,532 IRD transactions occurred in 2017, a 5.7% rise compared with 2016. The average daily notional traded in 2017 was $742.7 billion versus $637.1 billion in 2016, while average trade size reached $157.8 million versus $143.8 million.

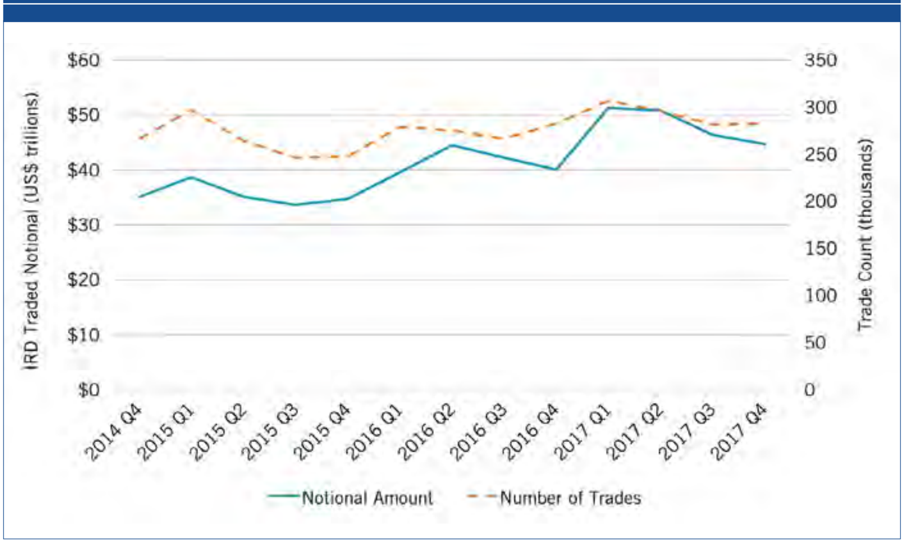
Clearing continues to play a key role in the IRD market, with 87.6% of the notional traded in 2017 cleared compared with 84% in 2016. Cleared IRD traded notional rose strongly in 2017, climbing 21.1% over the 12-month period to $169.2 trillion, while non-cleared traded notional fell by 10.2% to $23.9 trillion.

While growth in the IRD market in 2017 was overwhelmingly driven by cleared trades, the market is more evenly split between those transactions executed on a swap execution facility (SEF) and those traded off-venue. SEF-traded IRD represented 55% of notional traded in 2017, compared with 54.7% in 2016. Similar rates of growth also occurred on- and off-venue. Notional executed on SEFs increased by 16.7% in 2017 to $106.2 trillion, while notional traded off-SEF grew by 15.5% to $86.9 trillion.

In terms of specific products, single currency fixed-for-floating interest rate swaps accounted for 65% of IRD trade count, but represented only 30.1% of traded notional. Forward rate agreements and overnight indexed swaps represented 33.3% and 24.2% of traded notional and 14.7% and 5.1% of total trade count, respectively.

US dollar continued to be the dominant currency for IRD trades, comprising 65.3% of traded notional and 52.4% of trade count. Euro-denominated transactions formed the next biggest block, accounting for 15.3% of notional and 15.3% of trade count.

**IRD TRADED NOTIONAL AND TRADE COUNT**




**Source:** DTCC and Bloomberg SDRs

## Credit derivatives

The strong performance in IRD was not replicated in index credit default swap (CDS) trading, where notional fell by 6% and trade count declined by 17.5% versus 2016. CDS index notional traded over 2017 was $6.8 trillion, while the number of trades was 191,956.

Average daily notional for index CDS totalled $26.1 billion in 2017 versus $27.7 billion the previous year. Average daily trade count also fell, from 897 to 741, but average trade size increased from $30.3 million to $34.6 million.

The majority of index CDS trades continued to be cleared, but the proportion of cleared transactions fell slightly over 2017. Cleared transactions represented 79.7% of traded notional amount last year, compared with 80.8% in 2016. Cleared traded notional declined at a faster pace than non-cleared trades over 2017: a 7.2% decline to $5.4 trillion for cleared notional and a 0.8% fall to $1.4 trillion for non-cleared notional.

The proportion of CDS index transactions executed on a SEF also saw a slight decline, from 75.8% in 2016 to 74.9% in 2017. SEF-traded notional fell by 7.1% over the year to $5.1 trillion, while the notional executed off-venue declined by 2.5% to $1.7 trillion.

US dollar-denominated index CDS represented 63% of index CDS traded notional and 68.2% of trade count in 2017. However, US dollar-denominated index CDS traded notional declined by 5.5% to $4.3 trillion compared to 2016.

Euro-denominated index CDS traded notional also decreased by 6.3%, from $2.7 trillion in 2016 to $2.5 trillion in 2017. Trade count declined by 14.1% and 23.2% for US dollar- and euro-denominated transactions year-over-year, respectively. For other currencies, notional and trade count declined by 47.4% and 53.6%, respectively.

CDX indices continue to make up the bulk of CDS index trading. CDX HY and CDX IG represented 15.3% and 31.4% of traded index CDS notional and 27.3% and 20.8% of total trade count, respectively. iTraxx Europe accounted for 30.4% of total index CDS traded notional and 27.9% of total trade count. IQ


Read the full research report at: https://www.isda.org/a/IhhEE/SwapsInfo-Full-Year-and-Q4-2017-Review.pdf

THE COVER PACKAGE

# An Eye to the Future

*This issue of* **IQ** *explores some of the changes that could have the biggest impact on the future of the derivatives market, and the steps the industry is taking to prepare*

**First, the good news. Derivatives market** participants are generally optimistic about the future of the market, and think volumes will either increase or remain at current levels. The bad news? There are a wave of issues oncoming that could prove challenging, from regulatory compliance to Brexit.

These are the main findings of ISDA's future of derivatives survey, a collection of views from 900 industry professionals on the issues facing the market (see pages 16-21). One of those issues seen as most challenging is regulatory compliance – specifically, the further rollout of initial margin requirements on non-cleared derivatives. Respondents think the industry is behind schedule in its implementation efforts, but have highlighted several ways the compliance burden could be eased. Greater standardisation and automation are key, meaning forthcoming initiatives like ISDA's online initial margin documentation negotiation tool could be critical (see page 9).

Standardisation and updating documentation will play a part in two other transformational changes identified by survey respondents: Brexit and benchmarks. In the former, ISDA is working on French and Irish law Master Agreements to enable those who want to continue trading under European Union member state law after Brexit to do so (see pages 22-25). In the latter, ISDA's work to develop robust fallbacks to key interbank offered rates (IBORs) will require changes to the ISDA definitions. This initiative is in addition to the global effort to transition from the IBORs to alternative risk-free rates (see pages 32-35).

Whatever the future direction of the market, it seems likely that technology will play an important role. Survey participants think new technologies like artificial intelligence, distributed ledger and smart contracts will help drive efficiencies and reduce costs across the business, from trading to the back office. Work to develop the ISDA Common Domain Model, a standard digital representation of events and processes, is an important step in realising that potential (see pages 12-15). IQ

"New technologies like artificial intelligence, cloud, distributed ledger and smart contracts could reshape our markets"

**Scott O'Malia, ISDA chief executive**

# * Driving Automation

*Technologies such as smart contracts, distributed ledger and artificial intelligence could reshape the derivatives market and bring untold efficiencies, but industry standards and a robust legal infrastructure are needed to take full advantage of these advances*

**Email was only widely adopted as** a form of business and personal communication in the 1990s, but the concept dates back to the early 1970s, when the first electronic messages were exchanged between computers. Compared with this 25-year gestation period, the development of smart contracts, distributed ledger technology (DLT), cloud computing and artificial intelligence is occurring at lightening pace, but that doesn't mean change will be immediate and all-embracing.

"The internet itself didn't happen overnight and it took many years to redefine the way people communicate and share content, even though nowadays we can't remember life without it. Blockchain won't take 25 years, and we are already seeing the first commercial implementations, but the pace of change will be gradual," says Charley Cooper, head of external affairs at enterprise software firm R3.

Regardless of the time frame, there are signs that these technologies will play an increasingly important role in financial markets. When asked to rate the impact of smart contracts, DLT and cryptocurrencies over the next three to five years on a scale of one to 10, with 10 representing the greatest impact, about a third of respondents to a new ISDA survey voted for eight and above (see pages 16-21).

## Efficiencies

In the derivatives market, new technology could bring unprecedented operational efficiencies and cost savings to trade documentation and processing. Quantifying that impact is difficult, but many believe it could be substantial by reducing the need for operationally complex and manually intensive processes like reconciliation.

"Estimates vary but given the operational burden of

"The internet itself didn't happen overnight and it took many years to redefine the way people communicate and share content, even though nowadays we can't remember life without it"

**Charley Cooper, R3**

Illustration: James Fryer

reconciliation and matching today, billions of dollars stand to be saved. This could be the first step in the transition to a new market structure that is very difficult to imagine at this stage, just as Facebook and Google were in the 1990s," says Mas Nakachi, vice-president of strategy and business development at Axoni.

As the rollout of new technologies builds momentum, however, it's important that industry standards and legal infrastructure keep pace. In response, ISDA is working on a project to develop a standard digital representation of trade lifecycle events and processes. Called the ISDA Common Domain Model (CDM), the initiative is intended to enhance consistency and interoperability across platforms, facilitating efforts to implement new technologies on an industry wide scale (see box). Initiatives are also under way to digitise and automate industry documentation and definitions.

"New technologies like artificial intelligence, cloud, distributed ledger and smart contracts could reshape our markets, leading to much greater efficiency and lower costs. As we transition to these technologies, however, it's important we preserve the industry standards, definitions and documents that have been tried and tested over more than 30 years, while updating and digitising them where necessary. We need to build on the legacy of the past in order to transition to the future," says Scott O'Malia, chief executive of ISDA.

## Smart contracts

This focus on automating and digitising standard documentation has prompted market participants to explore the potential for smart contracts in the derivatives market. A whitepaper published by ISDA and Linklaters in August 2017 outlined some of the opportunities and challenges associated with smart contracts, and looked at how they might interact with existing legal standards and documentation.

There are varying definitions of the term 'smart contract', but it essentially refers to the representation and execution of contracts, or elements of contracts, using software and code. Given the rising complexity of the derivatives transaction lifecycle as a result of regulation, and the number of distinct processes that must be addressed in documentation, there is a clear

"New technologies like artificial intelligence, cloud, distributed ledger and smart contracts could reshape our markets, leading to much greater efficiency and lower costs"

**Scott O'Malia, ISDA**

# "There are some really big operational benefits that could be derived from the use of smart contracts and DLT in the derivatives industry"

**Paul Lewis, Linklaters**

case to be made for automating the execution of contract clauses where possible.

The evolution of blockchain in recent years is one possible means through which this vision might be realised. Blockchain allows a single representation of a trade to be hosted on a central ledger. Events and actions could then be executed automatically on that single representation through a smart contract, avoiding inconsistencies.

"There are some really big operational benefits that could be derived from the use of smart contracts and DLT in the derivatives industry," says Paul Lewis, finance partner and co-head of innovation at Linklaters. "In the market today, there are millions of payments, deliveries and other processes that have to be calculated, documented, reconciled and actuated. Everyone has built slightly different systems to do this, but if we could have a single system that would interpret legal documents and then automate the processes, the impact could be transformational."

In the context of possible efficiencies and cost savings, it is little surprise that the idea of using smart contracts based on a common set of representations has become popular. While progress in moving towards a framework for smart contracts is at an early stage, the ISDA/Linklaters whitepaper sets out a starting point from which to consider possible approaches.

## Models

Two distinct models are explored in the paper. In the first – an external model – the legal contract would remain as it is – a natural language document – but technologists

### FULL CDM AHEAD

It is now six months since the first conceptual version of the ISDA Common Domain Model (CDM) was unveiled, and the work to build this important industry resource has not stood still. Following the appointment of regulatory technology firm REGnosys earlier this year to develop a digital version of the ISDA CDM, the project is now reaching a critical stage.

"We are working closely with REGnosys on an intensive 12-week phase of agile development to build the model for rates and credit. The feedback from ISDA members was that if they are to rapidly exploit the potential of new technologies, they will need to resolve the problems they often encounter with inconsistent data and process standards – this gave rise to the ISDA CDM," says Ian Sloyan, director in the market infrastructure and technology team at ISDA.

The aim of the ISDA CDM is to develop a standard representation of events and actions that occur during the derivatives trade lifecycle alongside the accompanying product data. The development of common data and processing standards is intended to enhance consistency and interoperability between firms and platforms, which should ultimately make it possible to implement new technologies on an industry wide scale.

Following the publication of version 1.0 of the ISDA CDM in October 2017, which explored the key concepts and definitions, a request-for-quotations was issued for a firm to support the development of a digital version this year. The selection of London-based REGnosys marks the acceleration in the development of the ISDA CDM that should see the first digital iteration of the model being demonstrated in the coming months.

While the current phase of the work focuses only on rates and credit, it will extend to other asset classes in line with demand. "We will have the next version ready after 12 weeks and then we will assess whether this version is sufficiently stable, how many more iterations are needed and whether its broad coverage is sufficient. Members would like to see it adopted quickly," says Sloyan.

The extension of the model could become simpler over time, as the building blocks used to represent interest rate and credit markets are employed for other asset classes.

"The ISDA CDM attempts to define processes rather than products, which is a sensible way to frame a common language and syntax, and this will help to move the industry further towards shared processes and smart contracts," says Eric Litvack, chairman of ISDA.

would code certain elements separately, so that particular processes are automatically prompted when the relevant conditions are satisfied. In the other, an internal model approach, certain conditional logic elements of the contract would be rewritten so that a computer could execute the logic automatically.

"The internal model is a more radical approach, because it involves replacing parts of the contract wording with code, whereas with the external model, the legal contract is left alone and it is the actual operational processes triggered by the contract that are coded. Most of the work on smart contracts so far has centred on the external model as it is easier and more intuitive to implement," says Lewis.

As an initial step, the ISDA/Linklaters paper highlights the importance of a more formal representation of certain legal clauses and actions within the ISDA definitions to enable them to be represented and executed via smart contract code. In response, preparations are under way to update the 2006 definitions for interest rate and currency derivatives. ISDA also launched an industry working group last year to focus on the legal and governance issues related to smart contracts. This is in parallel with the work to develop the ISDA CDM.

"The real benefits of technology can only be achieved when people do things in a broadly harmonised way. The development of common legal and product standards is important, as it will help to drive development and adoption of technology by providing clear product and legal specifications for market participants and technology providers to build towards," says Ciarán McGonagle, assistant general counsel at ISDA.

In addition to the CDM, work is also in progress to gather legal opinions on the use of electronic signatures – an important component to the use of digital contracts that would legally allow parties to sign electronically.

## Collaboration

Any effective implementation of smart contracts will rely on industry collaboration. It is only with broad-based participation and industry standards that new technologies can work effectively, participants say.

"Unlike artificial intelligence or cloud computing where a firm can implement it and derive tremendous value in isolation, blockchain is a network technology and it adds no value unless there are enough firms involved to make up a minimum viable ecosystem. Once sufficient numbers are signed up, there could be tremendous benefits in migrating the post-trade lifecycle onto the blockchain," says Axoni's Nakachi.

Axoni is currently involved in two major blockchain projects in the derivatives market – the re-platforming of the Depository Trust & Clearing Corporation (DTCC) trade information warehouse, set for completion this year, and an industry effort to process equity swap lifecycle events on a blockchain network.

ISDA assisted with the equity swap pilot, which used firms' confirmation templates to create a standardised equity swap confirmation and trade template to facilitate electronic processing of equity derivatives. This is an example of where existing industry standards – the 2011 equity derivatives definitions – have been leveraged to implement new technology more effectively.

Bringing these technologies into production relies as much on non-technical work as it does on technical expertise. Not only do legal agreements have to be honoured and adapted, but market participants also often need to be sure they will clear certain return-on-investment hurdles over several years. "The challenge is to organise projects so that functionality goes live incrementally over time and sponsors can therefore set clear objectives and monitor success," says Nakachi.

## Technologies

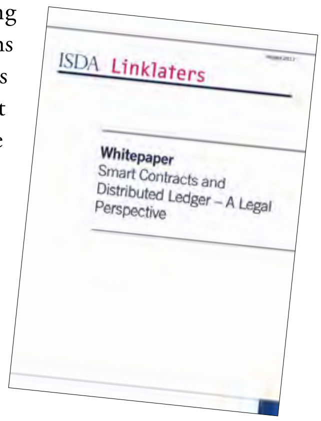
As well as smart contracts and DLT, artificial intelligence, machine learning and cloud computing, along with more conventional server technology, could be equally transformational.

"Blockchain is not necessarily the only technology that could be used to drive cost savings and efficiencies – it is simply a way of storing data on a distributed basis and making sure everyone agrees on one golden source of that data. This could also be achieved through more conventional technology, using centralised servers to store the data," says Lewis at Linklaters.

As the derivatives industry continues to explore the potential of these technologies, collaboration will remain a priority. While dealers have become accustomed to treating technology as their competitive edge – often building their own trading systems to offer the fastest, smartest service – the efficiencies that can be achieved at this point will be much more significant if they are pursued collectively rather than individually.

"The adoption of common industry standards will require broad-based collaboration among market participants, technology providers and regulators. Failure to collaborate effectively will likely lead to the development of piecemeal and bespoke technology solutions for each group of users, stifling innovation and perpetuating the existing fragmented and inefficient derivatives ecosystem. It is also important that the end-to-end process works seamlessly, irrespective of competing solutions at each part of the value chain. Firms are interested in picking the solution that works best for them, without reintroducing significant translations and reconciliations," says Clive Ansell, head of market infrastructure and technology at ISDA. IQ

**Read the ISDA/Linklaters paper on smart contracts and distributed ledger at:**
https://www.isda.org/a/6EKDE/smart-contracts-and-distributed-ledger-a-legal-perspective.pdf


ISDA Linklaters

Whitepaper
Smart Contracts and Distributed Ledger – A Legal Perspective

# * Primed for Change

*The derivatives market is facing a number of changes, with benchmark reform, the rollout of margin rules and new technologies all set to have an impact. A new ISDA survey looks at how industry participants think the market will develop, the challenges they face, and the preparations they are making*

**No one knows exactly what the** future will bring. But that doesn't mean people aren't thinking about the changes coming down the line, the possible outcomes that might result, and the preparations they need to make in response.

For derivatives market participants, the expected changes are significant and could involve modifications to derivatives infrastructure, standards and documentation resulting from margin rules, benchmark reform and the emergence of new technologies.

In a major new survey of market participants, ISDA has gathered views on the issues facing the industry in order to assess how the market is expected to develop and evolve. While the survey shows that participants are largely optimistic about the future of the derivatives market, several key challenges have been identified that may require standardised industry solutions.

## Initial margin

Among the biggest issues is regulatory compliance. On a scale of one to 10, with 10 being the greatest challenge, 66% of survey respondents rated regulatory compliance at seven or higher.

While much of the global derivatives reform agenda is now complete, regulatory initial margin requirements for non-cleared derivatives are in the process of being rolled out. The rules, which were introduced for the largest dealers in the US, Japan and Canada in September 2016, have already been expanded to other users and jurisdictions, and are scheduled to be phased in for a wider universe of firms each September until 2020.

As firms come into scope, they will be faced with a number of complex, time-consuming compliance challenges, including setting up custodial relationships, negotiating new initial margin credit support annexes (CSAs), and putting initial margin calculation systems and processes in place. This will be particularly challenging as smaller firms come into scope in September 2019 and 2020, and will require significant preparation time.

Many market participants believe they are already running behind in their preparations. According to the ISDA survey, 49% of participants think the industry has made some progress in preparing for the next phases of regulatory initial margin rollout, but remain behind schedule. About 8% feel that little to no progress has been made, and only 5% think preparations are well advanced.

As it stands, collateral practices are highly manual and resource intensive, and market participants believe a number of changes could be made to optimise the process. When asked to identify industry solutions that will help most in complying with forthcoming phases of the regulatory initial margin requirements, several options were highlighted, including further standardisation of initial margin CSA terms (19% of the vote), standardising custodian documentation and onboarding processes (18%), development of an online initial margin CSA negotiation tool (14%) and use of third-party initial margin calculation services (14%).

Several of these initiatives are already under way. That includes projects to develop a standard taxonomy of CSA terms and a standard for margin call issuance and response. In addition, ISDA is working to revise initial margin documentation to support phases four and five of the regulatory initial margin rollout, scheduled for September 2019 and 2020, respectively.

In an effort to reduce the time and resources needed to negotiate initial margin documentation, ISDA is also working with Linklaters to develop an online initial margin documentation negotiator. This tool is intended to provide a more efficient means for firms to negotiate the large number of documents that will be required for the later phases of implementation. It will also allow firms to store the data digitally, enabling that information to be used across the institution.

## Technology

Greater automation is not just a target for the collateral space. New technologies such as distributed ledger, smart contracts and artificial intelligence are emerging, which offer the potential for greater efficiencies throughout the derivatives lifecycle.

Market participants recognise the potential for these technologies. On a scale of one to 10, with one representing the greatest impact, 52% of respondents opted for between seven and 10. More than 50% believe the potential cost savings from technology will be felt in all areas of a firm's derivatives operations – from trading to the mid and back office.

In order to realise these benefits, however, a common set of data and process standards is required to enhance consistency and boost the potential for technologies to operate across platforms. In order to tackle this, ISDA is developing a Common Domain Model (CDM), which will provide a robust, digital blueprint for how derivatives are traded and managed across the lifecycle. The first digital iteration of the ISDA CDM will be available in the second quarter of this year.

## Benchmarks

While the emergence of new technologies is likely to be a key driver behind changes to infrastructure and standards, reforms to key benchmark rates could be more far reaching. Total outstanding notional exposure to interbank offered rates (IBORs) is estimated at more than $370 trillion, encompassing derivatives, bonds, loans, mortgages and deposits. The global effort to select and adopt alternative risk-free rates (RFRs) will therefore affect virtually all sectors of the financial market.

Driving this work is concern about the robustness and longevity of certain IBORs given a lack of underlying transactions in the unsecured funding market. In the case of LIBOR, the UK Financial Conduct Authority has also announced that it won't compel or persuade banks to make submissions from the end of 2021, raising concerns that LIBOR may not be available from that date.

A majority of respondents see the transition from IBORs to RFRs as a significant industry challenge, with 53% marking it between seven and 10. However, the largest single vote – 22% – was for five.

To help raise awareness of the issue, ISDA and other trade associations published a benchmark transition roadmap in roadmap in February, and are conducting a global survey to highlight areas of focus and possible solutions.

ISDA is also working on a separate initiative to identify robust fallbacks for derivatives contracts that reference key IBORs. Once finalised, these fallbacks will be written into the ISDA definitions and will apply if a relevant fallback is permanently discontinued.

**83%**

**Percentage of respondents who think overall derivatives volumes will increase or stay the same**

## Brexit

Brexit could also have implications for derivatives markets, from the treatment of third-country central counterparties by European authorities to the impact on outstanding contracts. In the latter case, it seems certain that existing cross-border derivatives contracts between European Union (EU) and UK counterparties will not become invalid after Brexit – firms will continue to be able to make payments, transfer collateral and settle existing contracts, whatever the outcome. However, carrying out certain lifecycle events on those trades, such as novations and some types of portfolio compression, may become more challenging.

Without some sort of fix, it could mean that firms decide to transfer outstanding contracts to a locally authorised subsidiary in the relevant jurisdiction in order for those activities to take place without interruption.

Some EU entities may also prefer to continue trading under an EU member state law post-Brexit, which has prompted ISDA to draft French and Irish law versions of the ISDA Master Agreement.

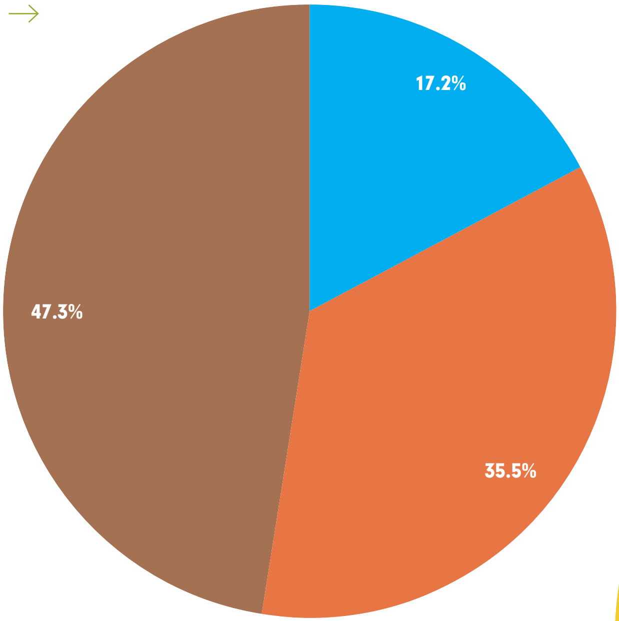
While market participants recognise Brexit as a challenge, it scored less highly than regulatory compliance and benchmarks, with 44% of respondents marking it between seven and 10.

## Optimism

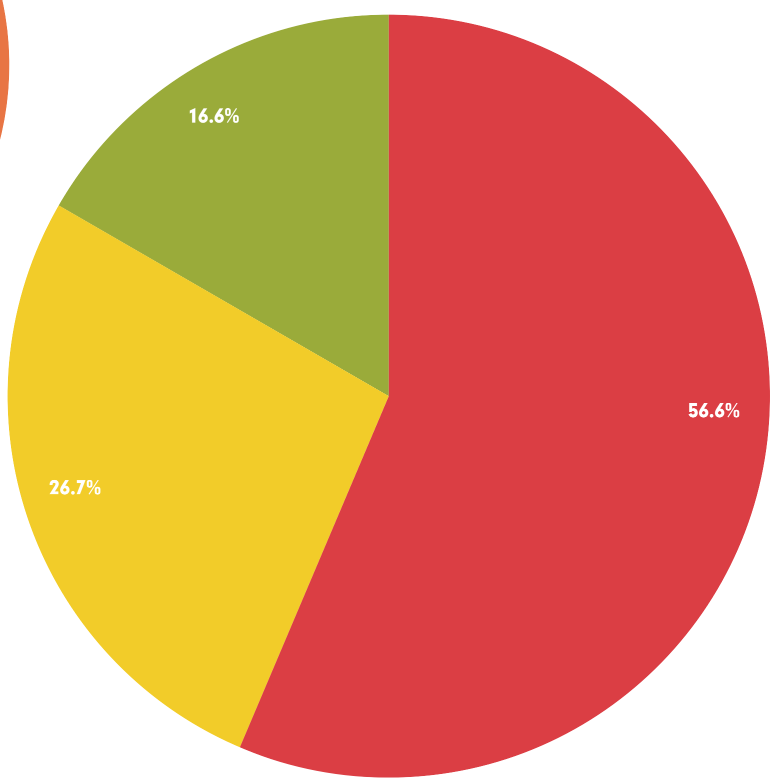
Despite the challenges, most participants are optimistic about the future of the derivatives market. On a scale of one to 10, with 10 being most optimistic, 65% opted for between seven and 10. The vast majority of respondents – 83% – also expect derivatives volumes to increase or stay the same over the next three to five years.

When it comes to specific asset classes, more than 50% expect liquidity to increase in interest rates and FX over the same period. There is more uncertainty about the future for credit, commodities and equities markets, but over half of respondents in each case think those markets will increase or stay the same. Close to 56% also believe end-user activity will increase over the period. Only time will tell if these expectations prove correct. IQ

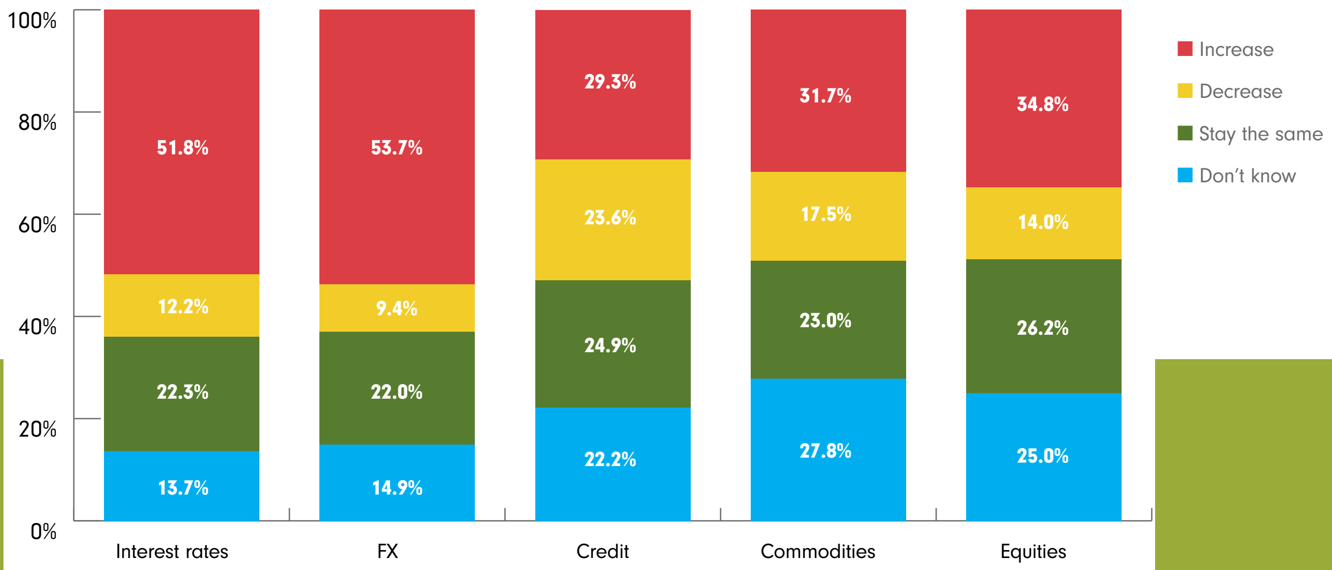
Do you think the number of derivatives dealers/market-makers will increase, decrease or stay the same over the next three to five years?




Do you expect overall derivatives volumes in the market to increase, decrease or stay the same over the next three to five years?

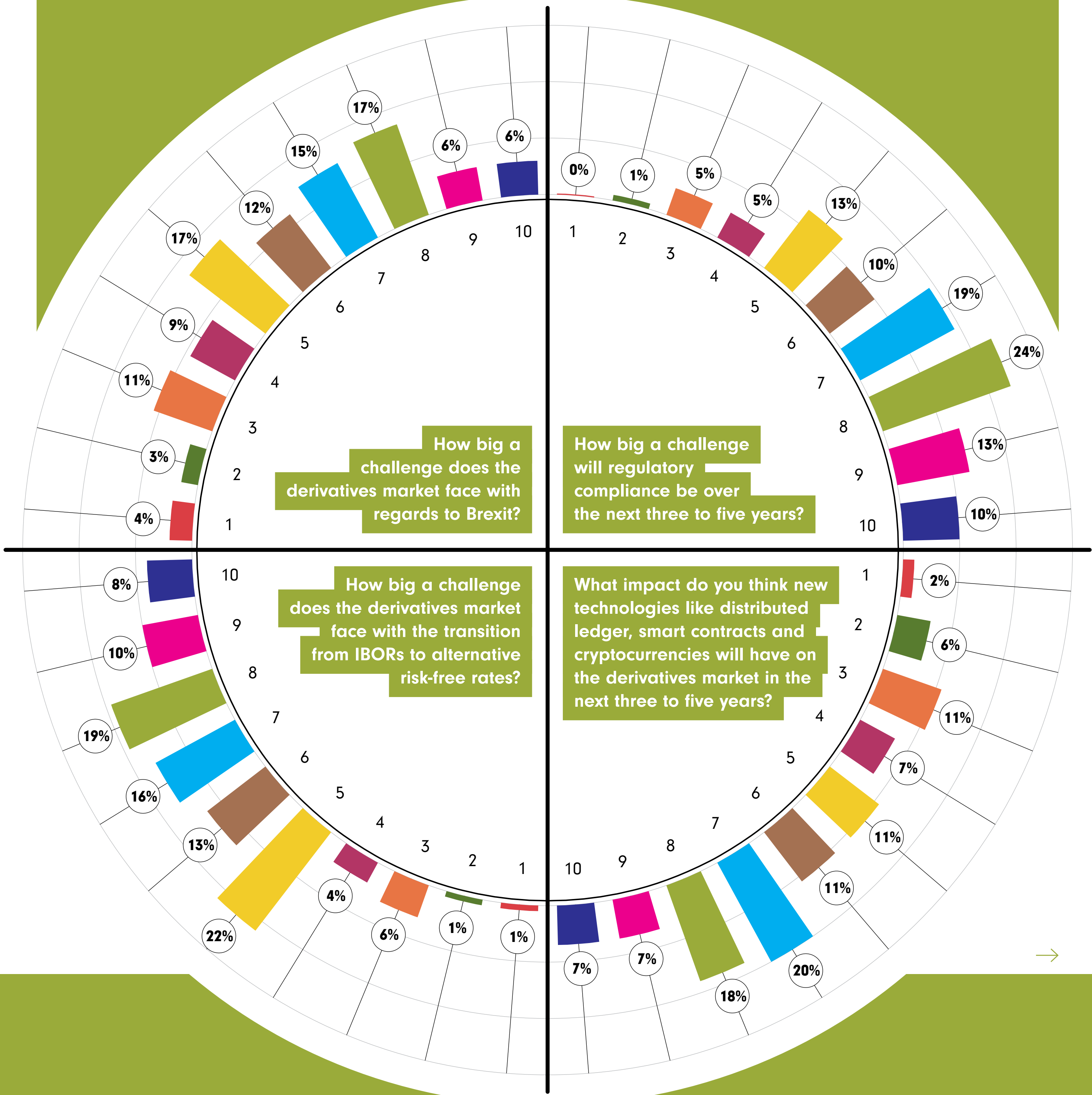


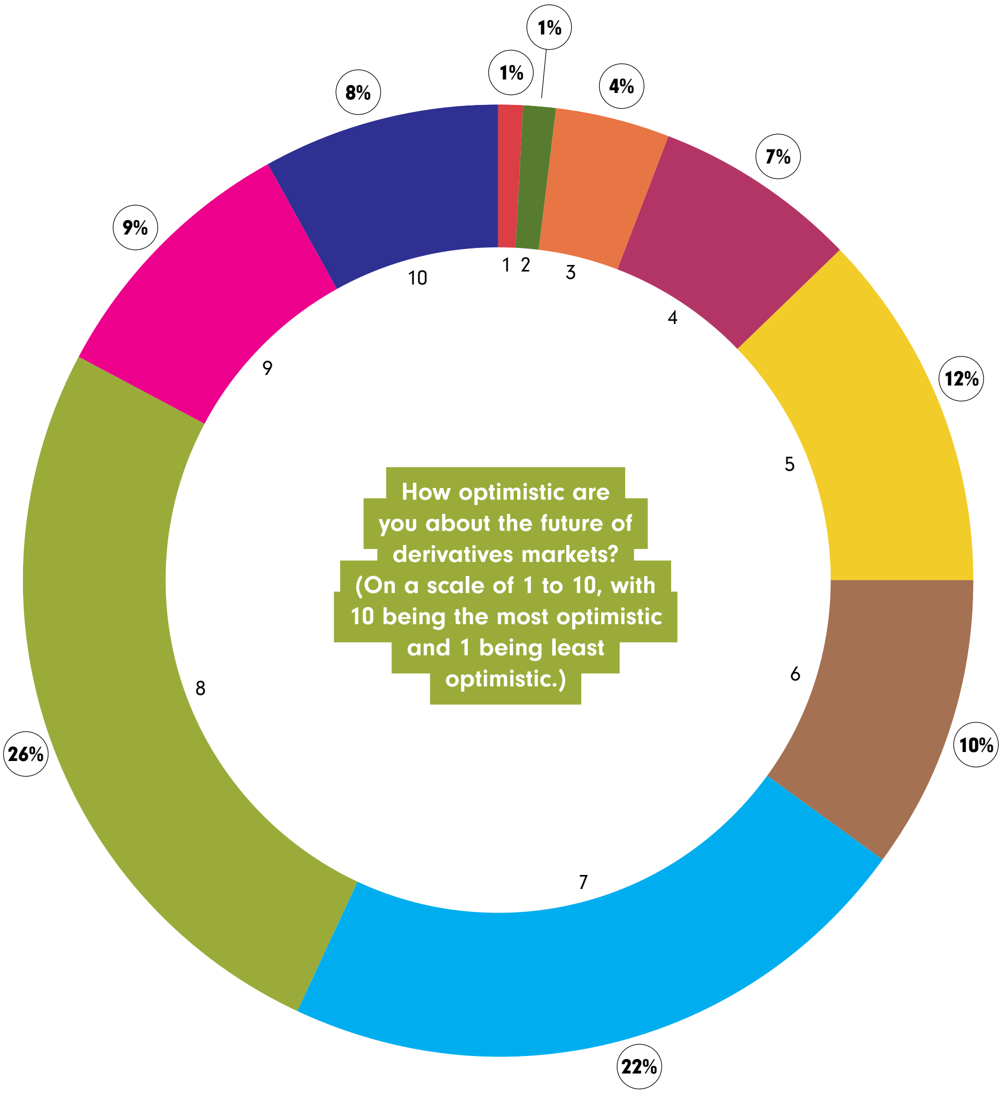

Do you expect derivatives market liquidity in the following asset classes to increase, decrease or stay the same over the next three to five years?



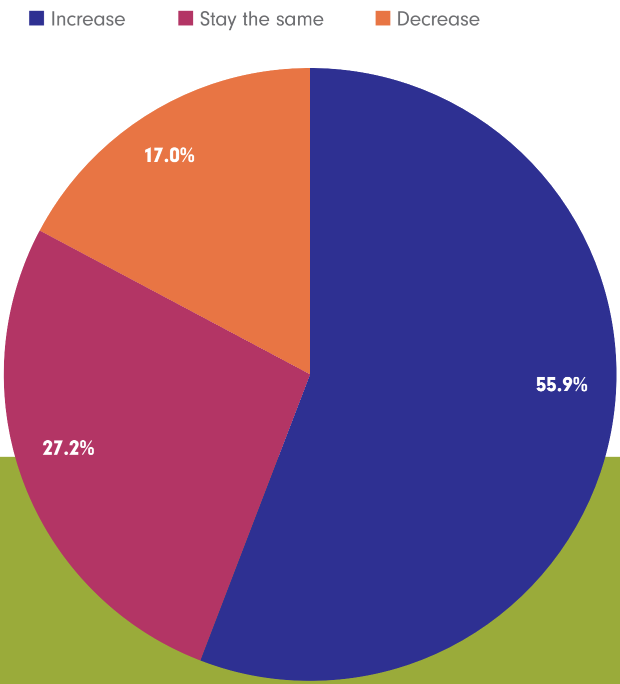
# On a scale of 1 to 10,

with 10 representing the greatest impact or challenge and 1 representing little impact or challenge

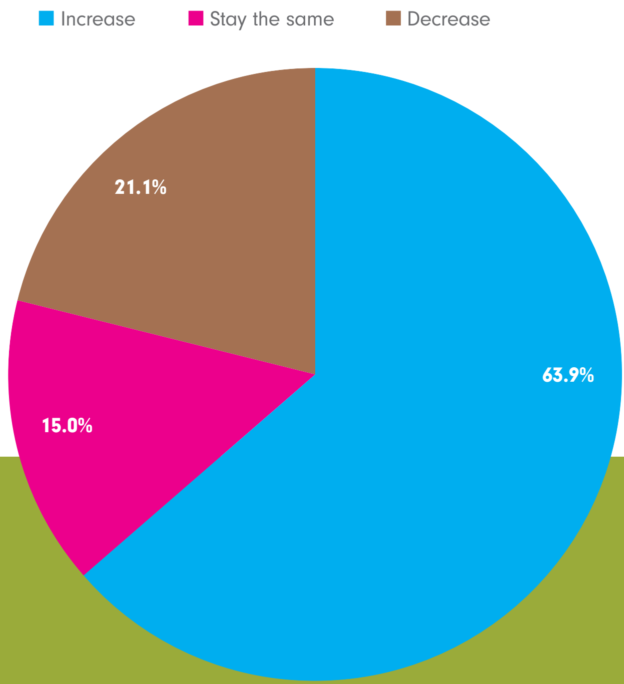





Do you think derivatives end-user activity (hedging, trading) in the industry will increase, decrease or stay the same over the next three to five years?

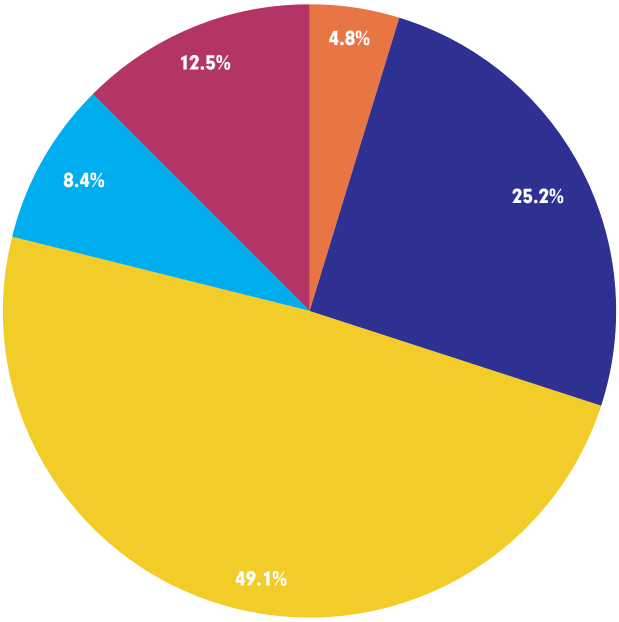



Do you expect the cost of using derivatives to increase, decrease or stay the same over the next three to five years?



**How would you characterise the industry's readiness for the next phases of regulatory initial margin rollout?**

- Well progressed
- Some, but on track
- Some, but behind schedule
- Little to none
- Don't know

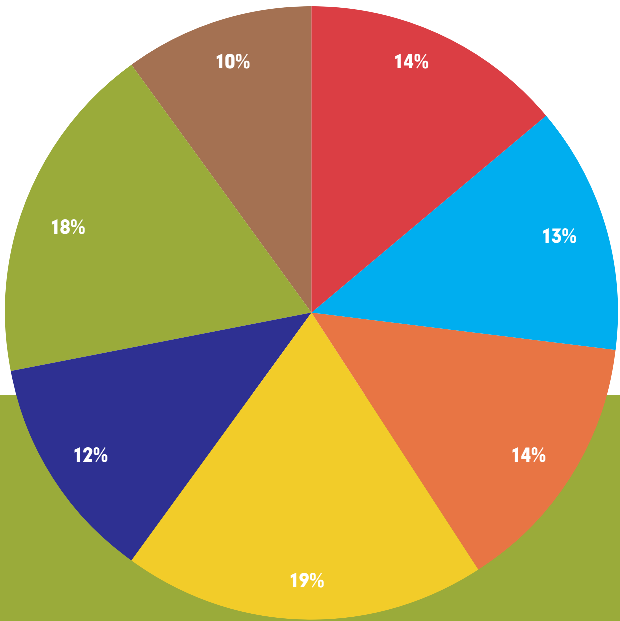



## SURVEY METHODOLOGY

The ISDA Future of Derivatives Survey was conducted in February and March, and attracted more than 900 responses. Approximately a third of the responses came from dealers, and 43% comprised buy-side firms (including bank end users, pension funds, energy companies, asset managers, insurance firms, non-financial corporates and governmental/supranational entities). The remainder of responses came from infrastructure providers, fintech companies and law firms.

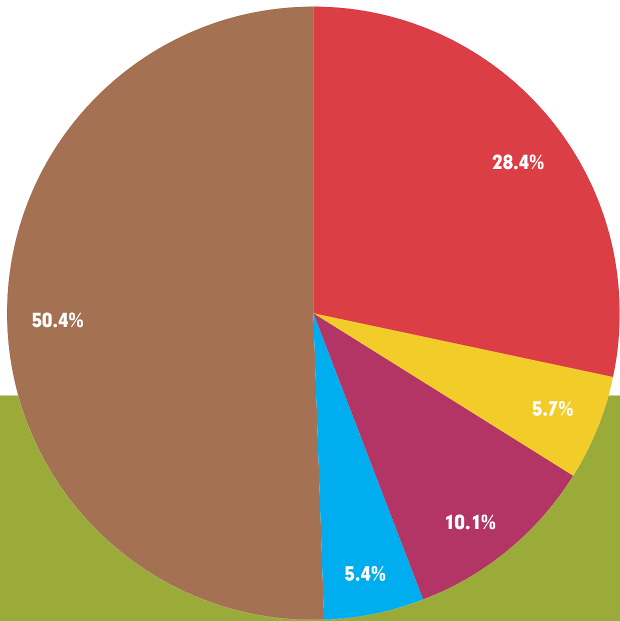
**Which of the following industry solutions will help most in complying with forthcoming phases of the regulatory initial margin requirements (please choose all that apply)?**

- Online IM CSA negotiation tool
- Mechanism for identifying collateral eligibility for specific regulatory requirements
- Third-party IM calculation services for both single and multiple applicable IM regimes
- Further standardisation of IM CSA terms
- Central trade valuation for the purpose of margin calculations
- Standardising the custodian documentation and onboarding process
- Don't know




**In what areas of the derivatives process are there the greatest potential for cost savings from new technologies like distributed ledger, cloud and smart contracts over the next three to five years?**

- Transformation of mid- and back-office operations
- Greater automation of trading
- Tools to support regulatory compliance and reporting
- Replacing legacy systems
- All of the above



# * Preparing for a Post-Brexit World

*The UK's exit from the European Union next year has prompted questions about what this means for new and existing derivatives contracts, and the impact on the English law Master Agreement. ISDA is drafting new EU law Master Agreements in response*

**ISDA MASTER AGREEMENT**

**French and Irish law versions being prepared**

**Of the 17.4 million people in** the UK who entered the ballot box in June 2016 to vote to leave the European Union (EU), very few, if any, can have been thinking about the ISDA Master Agreement. Even the most active of derivatives practitioners might not have given significant thought to the impact Brexit would have on derivatives contracts, old and new.

Nearly two years on, and with little indication of what the final exit agreement will look like, there are no definite answers on what the impact will be. But the industry is working through the possible scenarios and thinking about options. Among the issues being considered is the treatment of existing trades between EU and UK counterparties and whether they will continue without interruption after Brexit (see box). The other focus is what the UK's exit from the EU will mean for use of the English law Master Agreement and whether other governing law options are necessary.

The exact outcome is difficult to predict, but on one thing there appears to be clarity. "Existing derivatives contracts between EU and UK parties will not suddenly become void. Likewise, trades based on an English law Master Agreement won't suddenly become any less valid in the EU post-Brexit. There are a number of uncertainties, though. When it comes to the English law Master Agreement, a key issue relates to the enforceability of English court judgements across the EU, and that has prompted an ISDA initiative to draft alternatives," says Katherine Tew Darras, general counsel at ISDA.

## English law

As it stands, virtually all of the ISDA Master Agreements entered into between counterparties based in the EU or European economic area (EEA) are governed by English law. Counterparties typically also submit to the jurisdiction of the English courts. Because the UK is part of the EU and EEA, it means any English court judgement is automatically recognised and enforced across those member states, and vice versa.

Without some type of deal that replicates the effects of EU/EEA membership, English law would become a third-country law after Brexit. One of the consequences is that English court judgements would not be automatically recognised in EU/EEA countries. Any English court judgement would therefore need to be recognised by a local EU court before it could be enforced in that country.

That doesn't mean EU/EEA counterparties won't be able to continue to use English law Master Agreements, but it does potentially mean more expense, more uncertainty and more red tape.

"When automatic recognition falls away, European courts could choose to reopen cases that had already been judged in English courts to re-examine their merits, which would result in significant expense and inconvenience for market participants," explains Peter Werner, senior counsel at ISDA.

## Recognition

Disputes on derivatives contracts are relatively few and far between, so such cases of court judgements not being automatically recognised outside the UK may not be a major issue for some participants. Getting local courts to recognise and enforce English court judgements may also not be an insurmountable hurdle – after all, UK and EU counterparties trade with entities outside of the EU, where automatic recognition is not an option.

> "Existing derivatives contracts between EU and UK parties will not suddenly become void. Likewise, trades based on an English law Master Agreement won't suddenly become any less valid in the EU post-Brexit"
>
> **Katherine Tew Darras, ISDA**

Nonetheless, the volume of contracts in question, and the potential costs and resources involved, mean market participants have been considering options. One such option might be to insert new jurisdiction clauses that designate another court qualified to rule on English law contract disputes. In fact, courts have already been established in several EU countries to adjudicate on English law commercial contracts.

This option would have the advantage of allowing firms to continue using the existing English law agreement, while also giving reassurance that an EU court could deal with any dispute that arises. That judgement would then be automatically recognised across the EU/EEA.

"If we don't address this issue, then counterparties trading under the English law Master Agreement could find themselves having to go to a local lawyer and judge in an EU member state to ensure the applicability of an English court judgment. A possible solution would be to change the choice of court so that the judgment would be obtained in an EU member state, removing this problem of enforceability," says Eric Litvack, chairman of ISDA.

Another solution is the development of EU governing law Master Agreements. The advantages of this option extend beyond mere recognition of court judgments, as it would address other issues arising out of Brexit.

For instance, some EU national insolvency laws require contracts to be subject to an EU member state law in order to qualify for certain protections, or safe harbours, following a bankruptcy. That means firms using an English law ISDA Master Agreement after Brexit might find they are unable to benefit from netting protection under English law if a counterparty enters into insolvency in that jurisdiction.

There are other reasons why entities may want to carry on trading under EU law agreements. Under Article 55 of the EU Bank Recovery and Resolution Directive (BRRD), EU credit institutions are required to insert contractual recognition of bail-in into third-country law governed contracts. Without some type of deal, this would include English law governed ISDA Master Agreements after Brexit. This wouldn't be an issue for agreements governed by the law of an EU member state.

"Whereas firms have been able to comply with that BRRD obligation by inserting appropriate language in relevant contracts, current EU proposals to amend BRRD have focused minds on the vulnerability of such contractual fixes to legal change," says Judith Lawless, partner at McCann FitzGerald, a Dublin-based law firm.

"There is growing recognition that issues such as this and the comparative ease of enforcement within the EU of judgments obtained in rather than outside the EU may, after Brexit, result in some market participants preferring their documentation to be governed by the laws of an EU member state," she adds.

## New governing laws

ISDA has been considering these issues for some time, and initiated a major project last year to add EU governing law choices to the existing suite of English, New York and Japanese law options. After due consideration, French and Irish law were selected in order to represent both civil law and common law systems. The legal frameworks in both →

### BACK TO BASICS: WHAT IS THE ISDA MASTER AGREEMENT?

The ISDA Master Agreement is an industry standard template that enables counterparties to set out the terms of their trading relationship across asset classes. It does not include the economic terms of specific transactions. The ISDA Master Agreement is currently available under English, New York and Japanese law.

→ countries also support the feasibility of ISDA protocols, which allow multiple agreements between adhering parties to be modified in an efficient and scalable way.

As a result, working groups were set up in Ireland and France to lead the work.

"The outcome of the Brexit negotiations is still uncertain, but for English law to be anything other than a third-country law seems very unlikely, so while we are not encouraging a proliferation of versions of the ISDA Master Agreement, this seems the most prudent approach. We have looked carefully at Irish and French law, and they are both well-suited to the adjudication of derivatives transactions," says ISDA's Tew Darras.

In Ireland, two law firms – McCann FitzGerald and Matheson – have been leading the work to draft an Irish law version of the ISDA Master Agreement. In consultation with ISDA members, local Irish regulators, lawyers and other stakeholders, the two firms gathered broad input into the process as they began to adjust existing documentation.

Drafts of the Irish law Master Agreement and supporting collateral documentation were presented for review and consultation earlier this year. Once finalised, the next step will be for ISDA to update its netting and collateral opinions to support the new documentation, so market participants can begin using the Irish law agreement whenever they are ready to do so.

"The great advantage of Irish law is that only fairly minor changes are required to the English law versions of the ISDA Master Agreement and related collateral documents to create Irish law versions, so those Irish law versions will look, feel and operate very much like the existing documentation with which the market is familiar," says Lawless of McCann FitzGerald.

Christian Donagh, partner at Matheson, shares the view that Irish law was a natural fit given its similarity to English law. "Irish law was the clear and obvious choice from a common law perspective. As Ireland will remain in the EU, Irish law offers access to all of the relevant treaties and regulations on enforceability of court judgments," he says.

## Civil law

Along with Irish law, ISDA and its members also opted to pursue a French law version as representative of the civil law system prevalent across the EU. Law firm Jones Day

> "The great advantage of Irish law is that only fairly minor changes are required to the English law versions of the ISDA Master Agreement and related collateral documents to create Irish law versions"
>
> **Judith Lawless, McCann FitzGerald**

### LIFECYCLE CONCERNS

In the context of daily derivatives trading, the extensive work on Irish and French law versions of the ISDA Master Agreement might seem somewhat obscure. After all, it is at least in part driven by the need to ensure future automatic recognition of court judgments that are made in the event of a contract dispute – and disputes are a fairly rare occurrence, or at least they should be.

But Brexit could have a more immediate impact on the derivatives market when it comes to completing all of the standard activities and processes bound up in the trade lifecycle. These lifecycle events could become more challenging for trades between UK and European Union (EU) counterparties after Brexit, and could require action by counterparties.

#### Analysis

In order to determine the impact, ISDA conducted legal analysis on six EU jurisdictions – France, Germany, Italy, the Netherlands, Spain and the UK. Importantly, the analysis indicated that cross-border trades between UK and EU counterparties will not become void after Brexit. Parties should be able to continue to perform on their contractual obligations, including payments, settlements and transfers, regardless of the form of the UK's withdrawal from the EU.

However, it gets more complicated for those processes that are not contractual obligations but are nonetheless important events in the trade lifecycle, such as novation, some types of portfolio compression, the rolling of open positions and material amendments. Although the precise impact differs from country to country, these actions could be classed as regulated activity, requiring has been leading this work, and initial drafts of the French law contract and supporting documents have also been presented in recent months. Like the Irish version, the changes have deliberately been kept to a minimum.

"My main concern was to preserve the ability of all the big teams at the big dealers to use the Master Agreement without having to change their daily habits, and I think we have achieved that. The changes are very limited, and there is strong support in the French dealer community to use it. I hope both new versions will be ready by mid-year," says Alban Caillemer du Ferrage, partner at Jones Day in Paris.

It remains to be seen to what extent and at what pace the new agreements will be adopted by market participants, and much will depend on the exact nature of the exit agreement. Some lawyers see the move as an essential step to minimise legal risk post-Brexit, while others see it as a safety net that may not be needed. Whatever the reality turns out to be, having the new EU law Master Agreements in place before the UK's exit from the EU will provide members with the tools they need to cope with various outcomes.

"We don't yet see market participants lining up to use the new contracts as soon as they become available, but developing them early on was a very responsible measure for ISDA to take that should provide comfort to the market. If the English law documents suddenly become non-optimal in certain contexts, then it will be possible for dealers to switch over to the Irish law or French law versions and retain the legal certainty they currently enjoy," says Donagh. IQ

local permissions.

Assuming passporting between the UK and the EU ceases to be available after Brexit, and absent an agreement, exemption or equivalence decision, firms may need to obtain a local licence in order to perform these lifecycle events.

"While most lifecycle events inherent to the transaction, such as coupon payments or resets, would probably not be problematic, it seems likely that cross-border post-trade services such as a contract increase, decrease or compression could become problematic in the event of a hard Brexit"

**Eric Litvack, ISDA**

"When we get to the exit date, firms will no longer be able to rely on passporting arrangements between the UK and the EU 27, so many UK entities are already planning to run their European business out of subsidiaries or affiliates in the EU 27. That should solve the problem for new business entered into after Brexit, but for trades entered into before Brexit, it is more complicated," says Deepak Sitlani, partner at Linklaters.

## Transfer

This could mean that firms choose to transfer outstanding contracts to a locally authorised subsidiary in the relevant jurisdiction in order for those activities to continue. There are several possible mechanisms to transfer business, including novations, but these are seen as operationally complex and time-consuming.

"While most lifecycle events inherent to the transaction, such as coupon payments or resets, would probably not be problematic, it seems likely that cross-border post-trade services such as a contract increase, decrease or compression could become problematic in the event of a hard Brexit. This can be addressed by UK firms obtaining authorisation to provide those services in the EU and vice versa, but such private sector remedies take time and may be operationally burdensome, so a public sector solution as part of the exit agreement may be preferable," says Litvack.

The simplest way to resolve the issue would be to include language in the withdrawal agreement that allows EU and UK counterparties to manage their transactions after Brexit. An alternative would be coordinated legislative action by the EU 27 and the UK that allows all activities on existing contracts to continue. Without an agreement, both sides would be equally affected.

"This issue is high on the regulatory agenda as a point to cover in the exit agreement, and it would clearly be beneficial to both the EU 27 and the UK to do so. However, there are many different issues on the negotiating table, so firms should also be considering how they will set themselves up after Brexit and what business may need to pass through subsidiaries in future," says Sitlani.

# WELCOME TO MIAMI

## ISDA 33RD AGM: April 24-26, 2018
## JW Marriott Marquis Miami

*This year's ISDA annual general meeting will take place in Miami, bringing together hundreds of derivatives professionals and regulators to debate market-critical trends and developments*

**This year's annual general meeting (AGM)** will focus on the future of derivatives markets – specifically, how firms are preparing for Brexit, benchmark reform, the emergence of new technologies, the future of non-cleared derivatives and changes to capital rules.

Featuring keynote addresses from ***Bill Coen***, secretary general of the Basel Committee on Banking Supervision, and ***Craig S. Phillips***, counsellor to the secretary at the US Treasury, as well as a fireside chat with ***J. Christopher Giancarlo***, chairman of the US Commodity Futures Trading Commission, the ISDA AGM will offer unprecedented insight on the issues that matter.


### Sessions include:

- **Benchmarks:** How will the industry respond to the task of transitioning from LIBOR and other interbank offered rates to risk-free rates?
- **Technology:** How will new technologies like distributed ledger, smart contracts and cryptocurrencies affect the derivatives market?
- **Non-cleared derivatives:** Will there continue to be a viable market for non-cleared derivatives in the future?

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# MIFID Maker

***Markus Ferber**, a member of the European Parliament and vice-chair of its Committee on Economic and Monetary Affairs, played a critical role in guiding MIFID II/MIFIR through parliament in his role as rapporteur. In this interview with* IQ*, he gives his thoughts on MIFID II implementation and other issues like Brexit*

**IQ:** What are the priorities for the European Parliament's Committee on Economic and Monetary Affairs (ECON) in the coming year?

**Markus Ferber (MF):** The priorities are threefold. As this is the last full year before the end of the mandate, there is a lot of ongoing work to be completed. Right now, most work will probably be done on the completion of the banking union and, most notably, on the revision of the Capital Requirements Directive and Regulation (CRD V/CRR II) and the bank resolution framework. Other than that, the European Commission (EC) has recently launched some proposals on completing the economic and monetary union, which will certainly be hotly debated in ECON. And there is one other piece of unfinished business: the capital markets union. We will be working on the investment firm review proposal, on improving small- and medium-sized enterprise listing, as well as on some smaller fintech-related files that are due to be proposed by the EC in the spring.

**IQ:** What is your impression of how the revised Markets in Financial Instruments Directive and Regulation (MIFID II/ MIFIR) are bedding down? Have they been a success in your view?

**MF:** Overall, MIFID II has been off to a decent start. Unlike some pessimists have predicted, trading did not come to a standstill on January 3, 2018. On the contrary, things went smoothly. Of course, with such a big file, there is the occasional hiccup too. For example, I am not happy that the European Securities and Markets Authority (ESMA) was not able to perform the calculations for the double volume cap in time, and the legal entity identifier regime is still a transitional one. Moreover, apparently some third-country fund managers have failed to provide a target market assessment in time, which caused certain products to be temporarily unavailable. However, I am certain those things will smooth out over time.

> "Overall, MIFID II has been off to a decent start. Unlike some pessimists have predicted, trading did not come to a standstill on January 3, 2018"

**IQ:** If you could change anything about the MIFID II/MIFIR legislative process, what would it be?

**MF:** If I have to pick one thing, it would be to extend the tick-size regime towards systematic internalisers (SIs). On the first days of trading in 2018, we saw SIs picking up an unusually large chunk of trading. One of the reasons for that is that they are not subject to the tick-size regime, and therefore can offer intra-tick quotes. This diverts liquidity away from lit venues. However, if we want MIFID II to become a success, we need a level playing field across venues. So this issue needs to be fixed. ESMA has already suggested adapting the relevant regulatory technical standards, but the EC insists on a change to the level-one text. Either way, we need to find a fix for that problem, and we need to find it fast. The parliament has already signalled that it stands ready to pass such a fix quickly.

**IQ:** What impact do you think Brexit will have on Europe's derivatives market?

**MF:** Right now, this is very hard to judge, as there is still a lot of uncertainty when it comes to the future relationship between the European Union (EU) and the UK. While everyone has an interest to not have too harsh

"Brexit will certainly require a recalibration of certain elements of MIFID II, but I doubt that it is going to be a big overhaul"

a cut-off, the UK government is behaving in a way that makes such a scenario more likely.

**IQ:** Will Brexit require a fundamental recalibration of MIFID II?

**MF:** Brexit will certainly require a recalibration of certain elements of MIFID II, but I doubt that it is going to be a big overhaul. There will be a lot of little screws that will have to be adjusted – in particular, everything that involves calibrations based on actual market data. However, almost all of this can be done with minor fixes of regulatory technical standards. So, there is no need for MIFID III just because of Brexit.

**IQ:** The EC has proposed a requirement to establish systemically significant third-country central counterparties (CCPs) that present a threat to financial stability in the EU, as last resort. What are the advantages and disadvantages of such a policy in your opinion?

**MF:** Eventually, the question of whether a relocation policy might become necessary boils down to liability. As long as the European Central Bank stands ready to intervene with emergency liquidity assistance for CCPs that offer clearing and settlement services in euro-denominated derivatives, European supervisors →

→ must be in charge. Otherwise we have a mismatch between decision-making and liability, and that is always problematic. If such a situation can only be solved by relocation, so be it. However, this should only be the last resort. And there are other models conceivable that avoid such an outcome. For example, the Commodity Futures Trading Commission model of supervising dollar clearing in London might serve as a blueprint.

**IQ:** How important is it to achieve global consistency on a CCP recovery and resolution framework?

**MF:** We live in a globalised world, and financial markets are perhaps the most globalised markets out there. The financial crisis of 2008/2009, which started as a subprime mortgage crisis in the US and culminated in a debt crisis in the EU, is proof of the fact that financial crises do not stop at national borders. Therefore, international coordination and global consistency are key considerations in financial services. However, sometimes progress in international bodies is slow or certain players block meaningful progress. Therefore, sometimes there can be a good reason for the EU to go it alone, but international coordination and global consistency should be the goal.

**IQ:** The European Market Infrastructure Regulation (EMIR) refit is a big focus for 2018. What are the priorities? What aspects of EMIR most need to be reviewed?

**MF:** Fundamentally, the EMIR rules have proven to work well. Hence, there is no need for a big overhaul, and you can see that with the EMIR refit. It is more about reducing operational costs and tweaking certain elements that have proven to be slightly burdensome or costly. So the priority is clearly to make EMIR run more smoothly and reduce costs for the real economy without touching upon the essence of the legislation.

**IQ:** A review of European Supervisory Authority (ESA) powers is under way. As part of the consultation, the industry has called for the ESAs to have the power to grant regulatory forbearance in certain circumstances and for a limited time (similar to the concept of no-action relief in the US). Do you agree that it is important for the ESAs to have this capability?

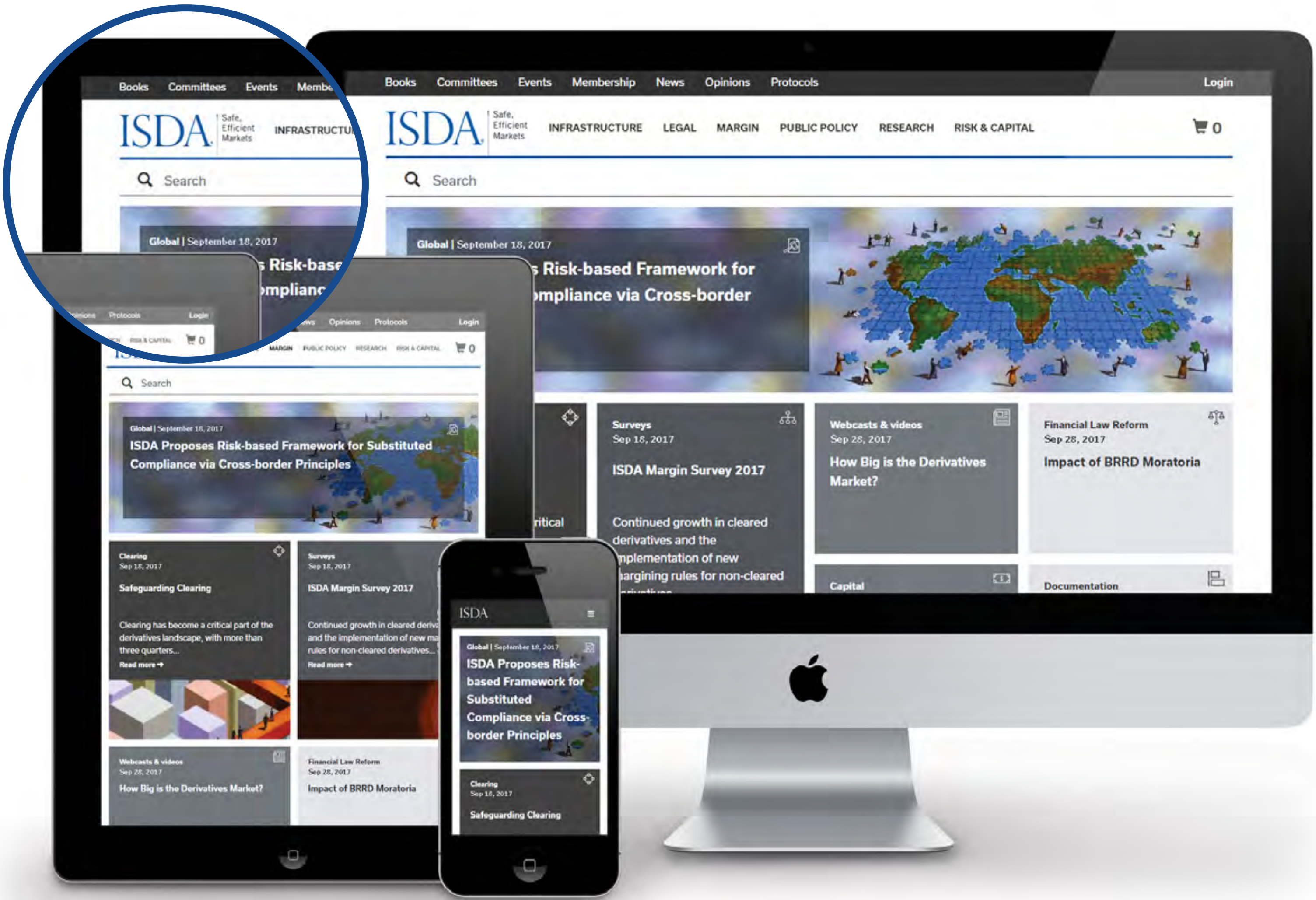
**MF:** Supervisory authorities need a certain degree of discretion to do their job well. There will always be instances when rules that have just entered into force can, for some reason, not be applied directly on day one. In such instances, a decision not to act might be prudent. We have seen this with European regulators a couple of times in the past. However, by and large, we should expect supervisors to do the job they have been tasked with. Therefore, I am sceptical to write the notion of regulatory forbearance explicitly into the ESA regulation, as this might give supervisors a little too much power for my taste.

**IQ: The EC proposed CRR II/CRD V before the final Basel measures were published in December 2017. How important is it to achieve global consistency in capital rules?**

**MF:** The CRD/CRR review we are currently dealing with in the legislative process is indeed only an interim solution and, once we finish it, we can already prepare for the implementation of the next set of Basel rules. However, we have to start somewhere. Once again, achieving a degree of international convergence is important. But looking at the implementation record of previous Basel packages, the picture is mixed. I sometimes have the impression that the EU tries too hard to be the model student of the Basel Committee and forgets its own interest in the process. While the EU is busy doing the CRD/CRR review, the US is considering which of the elements agreed by the Basel Committee serve them well and will be implemented and which do not and will be dropped. In this sense, the EU is sometimes a bit too naive. Before implementing the next package to the letter, we should check two things. Firstly, what does the rest of the world do and secondly, how can we make the new set of rules a good fit for the EU financial services sector?

**IQ: How important is it to achieve international harmonisation on trading and margin rules? Do you think this has been achieved?**

**MF:** The closer the alignment, the easier things will go for market participants. I feel in most areas covering trading and margining, there is broadly an alignment between the EU and the US, which is arguably the most important jurisdiction. In this sense, there is already a healthy deal of harmonisation and this is something we should build on in the future. IQ



# Path to Benchmark Transition

*The industry and regulators are working on a plan to transition contracts that reference certain IBORs to alternative risk-free rates. How much of the market is affected, and what issues will market participants need to address?*

**For many, Andrew Bailey's July 2017** speech came like a bolt from the blue. The chief executive of the UK's Financial Conduct Authority (FCA) told delegates at a Bloomberg event in London that the regulator would no longer compel or persuade banks to make LIBOR submissions from the end of 2021, raising the prospect that LIBOR may no longer be available from that date. With hundreds of trillions of dollars in outstanding notional exposure to LIBOR and other interbank offered rates (IBORs) across financial markets, it served as an effective wake-up call to many market participants about the need to find alternative reference rates.

**Over $370 trillion**
Estimated total notional exposure to the IBORs

In fact, initiatives have been under way for some time to reduce the reliance on certain key IBORs and to select risk-free rates (RFRs) that could take their place. Following a succession of regulatory reports in 2012, 2013 and 2014, a number of public-/private-sector working groups were set up in the US, UK, Japan, Switzerland and, latterly, the European Union to identify alternative RFRs and plan for their adoption.

Driving this work was concern about the long-term viability of certain IBORs given a lack of underlying transactions in the unsecured bank funding market. Faced with having to make submissions based on judgement, and shouldering the potential liabilities this could pose, the number of panel banks has been in decline – the EURIBOR panel of submitting banks, for example, has fallen from 43 in 2013 to 20 today. With an estimated $370 trillion in total notional exposure to the IBORs, spread over derivatives, bonds, loans, deposits and mortgages, this posed a very real systemic risk, regulators and RFR working group members believed.

"The absence of active underlying markets raises a serious question about the sustainability of the LIBOR benchmarks that are based upon these markets. If an active market does not exist, how can even the best run benchmark measure it? Moreover, panel banks feel understandable discomfort about providing submissions based on judgements with so little actual borrowing activity against which to validate those judgements," the FCA's Bailey said in his July 2017 speech.

"We could not – and cannot – countenance the market disruption that would be caused by an unexpected and unplanned disappearance of LIBOR," he added.

## Progress

Significant progress has been made by the public-/private sector working groups to identify alternative RFRs, with TONA selected for yen in December 2016, reformed SONIA for sterling in April 2017, SOFR for US dollar in June 2017 and SARON for Swiss franc in October 2017 (see Table A). But much of the initial work focused on derivatives markets, reflecting the fact that derivatives represent approximately 80% of IBOR exposures.

"Transition planning in the derivatives market is reasonably well advanced. RFRs are already well accepted in swap markets, and participants appreciate the advantages of RFRs. But in cash markets – bond markets, loan markets – there's much less familiarity with RFRs," said one regulator, speaking at an event subject to the Chatham House rule.

However, Bailey's July 2017 speech has pushed the issue up the agenda for a broader range of market participants, and set a potential deadline of end-2021 to get alternatives up and running. This has coincided with initiatives by the various public-/private-sector working groups to flesh out their transition planning and expand their outreach to include participants in the bond, loan and other cash markets.

"For this next phase of work, we are going to need engagement from a much broader cross-section of market participants," the regulator said.

## Roadmap

To help raise awareness of the issue, ISDA

**TABLE A: PROGRESS IN SELECTION OF RISK-FREE RATES**

| Jurisdiction | Working Group | Alternative RFR | Administration Rate | Characteristics | | |
|---|---|---|---|---|---|---|
| | | | | Secured vs. Unsecured | Anticipated Publication Date | Description |
| UK | Working Group on Sterling Risk-Free Reference Rates | Reformed Sterling Overnight Index Average (SONIA) | Bank of England | Unsecured | April 23, 2018 | • Fully transaction-based<br>• Encompasses a robust underlying market<br>• Overnight, nearly risk-free reference rate<br>• Includes an expanded scope of transactions to incorporate overnight unsecured transactions negotiated bilaterally and those arranged with brokers<br>• Includes a volume-weighted trimmed mean |
| US | Alternative Reference Rates Committee | Secured Overnight Financing Rate (SOFR) | Federal Reserve Bank of New York | Secured | First half of 2018 | • Fully transaction-based<br>• Encompasses a robust underlying market<br>• Overnight, nearly risk-free reference rate that correlates closely with other money market rates<br>• Covers multiple repo market segments, allowing for future market evolution |
| Europe | Working Group on Euro Risk-free Rates | Not yet selected | TBC | TBC | TBC | • The Working Group on Euro Risk-free Rates is aiming to select an alternative risk-free rate during the course of 2018. The new repo benchmark and a new unsecured overnight interest rate could be among the possible alternatives |
| Switzerland | The National Working Group on Swiss Franc Reference Rates | Swiss Average Rate Overnight (SARON) | SIX Swiss Exchange | Secured | Already being published | • Became the reference interbank overnight repo on August 25, 2009<br>• Secured rate that reflects interest paid on interbank overnight repo |
| Japan | Study Group on Risk-Free Reference Rates | Tokyo Overnight Average Rate (TONA) | Bank of Japan | Unsecured | Already being published | • Fully transaction-based benchmark for the robust uncollateralised overnight call rate market<br>• The Bank of Japan calculates and publishes the rate on a daily basis, using information provided by money market brokers known as Tanshi<br>• As an average, weighted by the volume of transactions corresponding to the rate |

and other trade associations (the Association of Financial Markets in Europe, International Capital Market Association and the Securities Industry and Financial Markets Association and its asset management group) published a benchmark transition roadmap in February. The roadmap aggregates and summarises publicly available information on the work conducted up to the point of publication to select RFRs and prepare for adoption and transition, in order to provide a central resource on the topic.

As well as providing a single point of reference for the work conducted up to the point of publication, the roadmap also sets out a number of potential issues that firms might have to address as they transition to RFRs.

"The roadmap is just the first part of a comprehensive effort by ISDA and the other trade associations to assist the market in transitioning to RFRs. We've also conducted a survey of global buy- and sell-side firms and infrastructure providers to look at how they use the IBORs, the extent of their readiness to transition across products, the challenges they expect to encounter, and the possible solutions they're considering," says Scott O'Malia, ISDA's chief executive.

## Steps

An important step will be to develop liquidity in derivatives markets referencing the RFRs – particularly where the RFRs themselves are new. Clearing services for futures and other derivatives referencing those rates will also need to be up and running, and some initiatives have already been announced.

"Futures are the bedrock of liquidity in the interest rates markets at the short-end of the curve," says one rates trader.

Consideration is also being given to the fact that RFRs do not include a bank credit risk component, unlike the IBORs. This feature may make the RFRs more appropriate as a reference rate for products and transactions that don't need to incorporate a credit risk premium, →

# "By working together, we can help ensure a successful transition, which will result in a safer, more efficient global financial market"

**Scott O'Malia, ISDA**

→ but market participants will need to address the implications of this difference, particularly if they choose to amend legacy contracts to reference RFRs.

Meanwhile, there is recognition that any transition would need to be coordinated across cash and derivatives instruments. If different markets move at a different pace, it could result in hedges moving to the new RFRs before the hedged instrument.

"Derivatives markets can't transition on their own. Cash and derivatives markets are fundamentally connected, and transition needs to proceed in concert," said the regulator.

## End users

Another consideration is the absence of a forward term fixing. The IBORs are currently available in multiple tenors – one, three, six and 12 months – but RFRs are only available on an overnight basis. This could pose particular complications for floating rate notes, because they are traded on the basis of known interest payments at the next interest payment date.

Following responses from buy-side firms and other end users, it looks likely

## OPINION: GET ENGAGED ON BENCHMARK REFORM

When it comes to benchmark reform, our message is simple: get engaged and mobilise your organisation. The work to adopt risk-free rates (RFRs) as an alternative to interbank offered rates (IBORs) is progressing quickly. Time is short, and it's important no one gets left behind.

ISDA is working to raise awareness of the issue, facilitate adoption of the alternative RFRs and help the industry address the risk that an IBOR may be permanently discontinued. In February, ISDA and other trade associations published a benchmark transition roadmap that aggregates and summarises the work conducted up until publication in order to provide a central resource on the topic. We've also conducted a global survey of buy- and sell-side firms and infrastructures to gauge opinion on the issues they face with any transition to alternative RFRs and on possible consensus solutions.

ISDA is also working on a separate initiative at the request of the Financial Stability Board's Official Sector Steering Group to identify robust fallbacks for derivatives contracts that reference certain key IBORs. Once finalised and implemented, those fallbacks will apply if a relevant IBOR is permanently discontinued.

These projects are meant to complement the work being done by various public-/private-sector RFR working groups, and to support industry benchmark reform efforts. It coincides with initiatives by the public-/private-sector working groups to promote adoption of the alternative RFRs, address the risks of legacy IBOR contracts and expand their outreach to include participants in the bond, loan and other cash markets. We strongly encourage market participants to engage with these groups and to read the benchmark roadmap.

The effort to reduce the reliance on certain key IBORs and to adopt RFRs in their place has become a major priority for the derivatives industry and for policy-makers. Driving this work is concern about the robustness and viability of certain IBORs amid a lack of underlying transactions in the unsecured bank funding market. The revelation that the UK Financial Conduct Authority will not compel or persuade banks to make LIBOR submissions from the end of 2021 has further electrified the issue, and set a deadline to get alternatives up and running.

With over $370 trillion in total notional exposure to the IBORs, missing this deadline is not an option.

In tackling this issue, it's critical we ensure an orderly transition to RFRs. The process of identifying and addressing possible transition challenges is already in train at the various public-/private-sector working groups, and our global survey will help feed into those efforts.

The IBORs play a critical role across the financial industry – from derivatives to mortgages. We all have an interest in making sure the transition occurs smoothly. That's why everyone needs to participate, share ideas and develop solutions that work for all – the efficient functioning of our market could depend upon it.

***Scott O'Malia***
ISDA chief executive

that a forward-looking term fixing will be developed for the various RFRs. "Feedback from bond and loan market participants has indicated a strong interest in forward term fixing," said the regulator. "If there are well-founded use cases for term RFRs, particularly in cash markets, then that needs to be addressed."

That means fostering deep liquidity in traded cash and derivatives products referencing the new RFRs is critical in order to develop a curve that can be used for term fixings.

## Protocol

Regulators and industry participants are also considering other issues. For instance, any amendments of contractual terms in existing trades would pose a significant operational exercise. In derivatives markets, use of a protocol may provide an efficient and scalable means of adapting contracts with multiple parties that also adhere. However, no such mechanism currently exists in other markets.

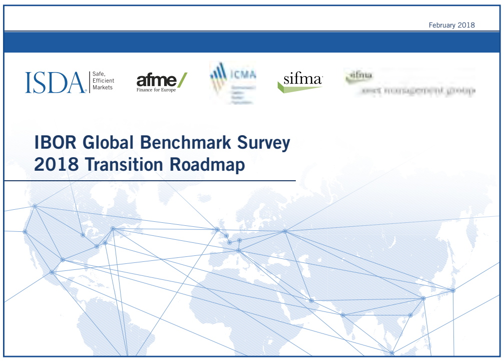
"An issue in bond markets is the challenge with respect to the legacy population. Fortunately, it is a lot smaller in notional terms than in the derivatives space. But amending contracts can be a lot more torturous. There isn't a common practice of things like protocols. Contracts typically are amended one by one," said the regulator.

Other areas of focus include infrastructure, tax, accounting and regulatory issues. If not addressed, transitioning to new rates may affect hedge accounting or accelerate tax payments, for example. Infrastructure implications will need to be addressed – for instance, those relating to data, systems and operational procedures, trading and clearing. From a regulatory perspective, there are also questions over whether amended contracts would be classified as new agreements that would then trigger non-cleared margin or other regulatory requirements in various jurisdictions.

The process of developing solutions to the challenges is already under way in the various public-/private-sector working groups. The global survey conducted by ISDA and other trade associations will also contribute to this process. Nonetheless, financial market participants – whether active in derivatives, bonds, loans or other instruments that use the IBORs as a reference rate – will need to start their preparations as soon as possible, if they have not done so already.

"The task of transitioning from the IBORs to new RFRs is immense, and the industry can't afford to kick the can down the road. Everyone needs to start thinking about what this means for them now," says ISDA's O'Malia. "Everyone involved in benchmarks should be engaging with the RFR working groups and participating in our survey to help identify issues and develop solutions. By working together, we can help ensure a successful transition, which will result in a safer, more efficient global financial market." IQ

Read the IBOR Global Benchmark 2018 Transition Roadmap at: https://www.isda.org/a/g2hEE/IBOR-Global-Transition-Roadmap-2018.pdf




## FALLBACKS WORK CONTINUES

While the public-/private-sector working groups develop their plans to transition to new risk-free rates (RFRs), ISDA is leading a separate initiative at the request of the Financial Stability Board's Official Sector Steering Group to develop robust fallbacks for certain key IBORs. The intention is for the selected fallbacks to be written into derivatives contracts that reference those IBORs.

The transition and fallback projects are often confused, as the issues and challenges are similar. While the RFR initiatives are about encouraging a managed, orderly transition to RFRs with a possible deadline of end-2021, ISDA's fallback work is meant to address what would happen to trades that have not transitioned to an RFR if a key IBOR permanently ceases to exist. The determination that an IBOR has been permanently discontinued would be based on objective pre-defined triggers – for instance, a public statement by an IBOR administrator that it will cease publishing the relevant IBOR permanently or indefinitely, and there is no successor administrator. Having a clearly defined fallback written into contracts will help minimise any disruption this might cause.

The fallback rates are expected to be the RFRs selected by the public-/private-sector working groups. That means many of the issues related to fallbacks are similar to those faced by the groups working on RFR transition – namely, how to approach term fixings, how to deal with the fact that IBORs reflect bank credit risk while RFRs do not, and how to include the fallbacks in existing transactions.

However, the two initiatives are working to different timelines and are attempting to tackle different issues – an orderly transition with a target date of end-2021, versus the need to develop a fallback mechanism as soon as possible to deal with a permanent discontinuation of a key IBOR. That could mean the solutions developed to address the challenges for fallbacks may differ from the solutions established for transition.

The current thinking is that the fallbacks will be incorporated into the ISDA definitions for the relevant IBORs for new trades. ISDA is also considering mechanisms that would allow market participants to efficiently incorporate the fallbacks into existing contracts that reference IBORs. ISDA intends to conduct broad market outreach before any implementation.

# End of the Beginning for Basel III

*The completion of the Basel III reforms in December ushered in a new era in the life of the framework, but achieving international consistency across all jurisdictions remains challenging*

**"Now this is not the end.** It is not even the beginning of the end. But it is, perhaps, the end of the beginning," said British Prime Minister Winston Churchill in 1942, at a crucial juncture of World War II. The famous declaration seems to appropriately describe the current stage of Basel III implementation, as attention turns from development of the global framework to local application.

After many years of intense negotiation and technical rule writing to construct and amend the Basel III framework, the Basel Committee on Banking Supervision has largely switched into evaluation and monitoring mode in 2018. Following publication of the final package of reforms on December 7, it is now up to national regulators to transpose the framework into local rules and see Basel III through to implementation.

The question is whether the various national regulations will be consistent, both in terms of timing and content. Already, signs are emerging that the approach in the European Union (EU) and US may differ from the Basel framework in certain key areas, raising the prospect of an unlevel playing field.

"We believe the capital framework should be appropriate, risk sensitive and – importantly – consistent. A widescale divergence in specific areas should prompt a review at the global level. Regardless, it is crucial that the Basel Committee continues to monitor the impact of the rules during the implementation phase to ensure the calibrations are appropriate, and makes adjustments where necessary," says Mark Gheerbrant, head of risk and capital at ISDA.

## Revisions

A number of important revisions were made to Basel III in December, including changes to the leverage ratio and the credit valuation adjustment (CVA) framework. Implementation of the Fundamental Review of the Trading Book (FRTB) was also delayed by three years, giving the Basel Committee time to address certain technical issues, including a review of the calibrations of the standard and internal model approaches (see box). The revised standards will now come into effect simultaneously on January 1, 2022.

The Basel III revisions were intended to address specific weaknesses in the framework, with a particular focus on reducing variability of risk-weighted assets across different banks and tightening up the use of internal models. But differences have emerged in how major jurisdictions intend to implement the measures. While some variability may be tolerated, market participants would prefer for the standards to be as consistent as possible.

"The way in which the economy is financed, and the role and nature of the banking sector within that, varies significantly from one country to another, so we accept that a one-size-fits-all regime for capital won't work and national regulators need some discretion when implementing global standards. But on the core elements of Basel III, we must continue to seek global consistency as it is the best way to achieve open and competitive markets," says Eric Litvack, chairman of ISDA.

One of the main complications is that the European Commission (EC) unveiled its own package of legislation to strengthen EU banks as far back as November 2016 – more than a year before the Basel reforms were finalised. The proposed amendments to the Capital Requirements Regulation (CRR II) and the Capital Requirements Directive (CRD V) therefore don't contain the changes made in the December 7 Basel III package – for instance, the extension of the FRTB timeline. Even taking those into account, however, there are some notable discrepancies in the EU proposals.

## Leverage ratio

The leverage ratio is one example. The concept of a non-risk-based backstop to standard capital requirements is an integral component of Basel III, but the fact that the Basel calibration does not recognise the risk-reducing effects of initial margin for cleared trades has become a point of contention, increasing exposures and making client clearing less economically viable.

Given the importance of clearing in the post-crisis derivatives market, the industry has repeatedly raised the impact the leverage ratio might have without recognition of initial margin. In a submission to the Basel Committee in July 2016, ISDA and several other industry bodies explained that non-recognition of initial margin "unnecessarily and significantly overstates leverage ratio exposure, acting against client clearing businesses, and contradicting the G-20 mandate by creating an economic disincentive for clearing brokers to offer clearing services".

This point has also been made by a number of regulators. Speaking at the ISDA annual general meeting in Lisbon in 2017, chairman of the Commodity Futures Trading Commission, J. Christopher Giancarlo, said the supplemental leverage ratio (SLR) "is causing many of the largest banking institutions to reduce their willingness" to act as clearing members.

"The SLR is a bank-based capital charge. It was designed to reduce the risk of bank balance sheet activity (namely lending). Yet it is being applied to an entirely different activity – swaps clearing – designed itself to steer risk away from bank balance sheets," he said.

In the final framework, however, the Basel Committee conceded only that it would continue to monitor the impact of the leverage ratio on banks' provision of clearing services and complete a review within two years. In contrast, the EC has proposed that initial margin should be recognised for the purposes of the leverage ratio. A similar approach was also recommended in a report published by the US Treasury in June 2017, as part of a review of US financial regulations.

**Jan 1, 2022**

Date that the Basel III measures are due to come into effect

"We have seen positive attitudes towards the recognition of initial margin in both Europe and the US. Given the additional cost that a lack of recognition of initial margin would introduce at the clearing-business-unit level, this remains a live issue. There will be further analysis by the Basel Committee, and we hope the European and US position will ultimately prevail," says Panayiotis Dionysopoulos, head of capital at ISDA.

One of the changes that was made to the leverage ratio at the Basel level was the introduction of a surcharge for global systemically important banks (G-SIBs).

The Basel Committee set the leverage ratio buffer at 50% of a bank's higher-loss absorbency requirements, which means G-SIBs would add this surcharge to the standard 3% leverage ratio. However, US regulators have made the leverage ratio requirements more stringent than the international standards – a practice known as gold-plating. The EC's 2016 proposals, meanwhile, did not include a leverage ratio buffer at all.

"For most US banks, the leverage ratio is not the binding constraint, but it is not ideal to have this level of inconsistency with the international standards. A failure to recognise initial margin could also lead banks to downsize their clearing activities," says Debbie Toennies, head of regulatory affairs for the corporate and investment bank at JP Morgan.

## NSFR

Meanwhile, the net stable funding ratio (NSFR), one of Basel III's two core liquidity risk metrics, is also subject to international debate following an announcement by the Basel Committee in October 2017 that it would give national regulators the →

"On the core elements of Basel III, we must continue to seek global consistency as it is the best way to achieve open and competitive markets"

**Eric Litvack, ISDA**

discretion to reduce the required stable funding factor for derivatives liabilities from 20% to 5%.

The NSFR's punitive treatment of derivatives had been a serious issue, with the industry estimating that the original 20% add-on in the denominator for derivatives liabilities could result in €340 billion in additional funding requirements. Reducing the add-on to 5% would allow this to fall to roughly €85 billion. As such, the Basel Committee's decision has been welcomed, but giving national supervisors discretion on where it is set may lead to further inconsistency.

"It is very positive that the Basel Committee recognised the calibration of the NSFR for derivatives was not correct, and everything we have seen in Europe suggests they will go in the direction of a 5% add-on. But allowing national discretion on the upper and lower limit means there is still significant uncertainty on a global basis," says Katherine Wolicki, head of regulatory strategy and liaison in global risk analytics at HSBC.

"Estimating contingent funding risk for derivatives with a simple metric like the NSFR is actually very challenging," adds ISDA's Dionysopoulos. "Since October, we have seen proposals ranging anywhere between 5% and 20% globally, but a fragmented approach could be very detrimental, so we would like to see all jurisdictions adopt 5%."

## CVA

Of all the changes made in the 2017 reforms, the alterations to the CVA capital framework were among the most drastic. In particular, the revised package removes the ability for banks to use internal models to calculate CVA capital, leaving only the standardised and basic approaches.

Internationally, one of the most significant sticking points is the long-held commitment in the EU to exempt trades with corporates from the CVA charge, which puts the region at odds with international standards. While there has been discussion among European agencies of removing the exemption if the CVA capital requirements became less punitive, the impact of the new CVA framework has yet to be tested.

"There is a lot of bank-intermediated finance for corporates in Europe and they rely on banks to hedge. The calibration of the new Basel CVA standard is more penal than the current framework. In particular, the CVA charge could be very punitive for corporates," says Wolicki.

"There is huge uncertainty around national discretion over the exemption and whether it will be maintained. The UK was not a big proponent of an exemption, so it remains to be seen whether it will be honoured after Brexit, and what this will mean for the cost and ability of corporates to hedge out market risk exposure," she adds.

## REOPENING THE FRTB

"The PLA as previously calibrated didn't test what it's meant to test, and the metric that was used had a high type-one error rate, so it ultimately failed models that were not underperforming"

**Mark Gheerbrant, ISDA**

Among the most welcome revisions that were made on December 7 was the decision to delay implementation of the revised market risk capital framework – the Fundamental Review of the Trading Book (FRTB) – from January 2019 to January 2022. Given the number of outstanding issues, the timeline for implementation had become a growing concern for market participants.

The Basel Committee on Banking Supervision undertook to address certain issues relating to the framework, including a review of the calibration of the standardised and internal model approaches, and followed up with a consultation paper on March 22 that proposed several specific technical amendments.

"The proposed changes by the Basel Committee are welcome and show the value of the Basel monitoring process, as the requirements as they stood would have had a negative impact on banks' trading book activities and their ability to provide financing and hedging solutions to end users," says Mark Gheerbrant, head of risk and capital at ISDA.

According to analysis led by ISDA in association with the Global Financial Markets Association and the Institute of International Finance, the FRTB would have led to an increase in market risk capital of between 1.6 and 2.5 times, depending on whether all desks currently using internal models continue to do so.

"The FRTB framework has been problematic for the industry in several different ways, and the difference in capital requirements from using internal models versus a standardised approach is far too big. It is positive that the Basel Committee has recognised the need to revisit and recalibrate, and we must now focus on ensuring it is done correctly," says Eric Litvack, chairman of ISDA.

### PLA

The new consultation paper looks to address a number of outstanding issues. First, changes have been proposed to the P&L attribution test (PLA), which determines whether banks can use internal models for a particular desk.

Inconsistencies in the way in which the PLA test was originally described in the 2016 version of the FRTB made it difficult for banks to begin testing, but market participants felt the methodology did not accurately test the competence of banks and trading desks to use internal models for the calculation of market risk capital.

The new proposal extends the test frequency and

> "For most US banks, the leverage ratio is not the binding constraint, but it is not ideal to have this level of inconsistency with the international standards"
>
> **Debbie Toennies, JP Morgan**

## SA-CCR

There were no changes to the standardised approach for counterparty credit risk (SA-CCR), but it has become increasingly clear that SA-CCR will be used in large swaths of the Basel capital framework.

Few national regulators have transposed SA-CCR to local regulations so far, but it does form part of the proposed EU CRD/CRR revisions, with a commitment to review calibration after implementation.

"Given the broad reach of SA-CCR in the Basel framework, and the likely increase in capital it would cause, it is imperative that the calibration of the methodology is reviewed and a full impact analysis is conducted before the rules are transposed into national regulations," says ISDA's Dionysopoulos.

All these issues will now be thrashed out at the local level. But with the CRD/CRD revisions at the early stage in the EU, and with the US yet to issue any notices of proposed rule-making, it could be some time before the industry reaches the beginning of the end and the level of global consistency becomes clear. IQ

observation window, and revises the test metrics. A new 'traffic light' approach has also been introduced to smooth transition to the standardised approach for those trading desks that fail the test.

"The PLA as previously calibrated didn't test what it's meant to test, and the metric that was used had a high type-one error rate, so it ultimately failed models that were not underperforming. Along with changes to the design and frequency of the test, the new proposals allow for a much smoother transition towards the standardised approach to avoid the cliff effect of a sudden and sharp overnight increase in capital requirements," says Gheerbrant.

## NMRFs

Beyond the PLA, market participants have also struggled to get to grips with the FRTB requirement that internally modelled risk factors must have at least 24 observable prices per year, with a maximum of 30 days between two consecutive observations. This requirement has given rise to a number of challenges, including the 30-day interval, which becomes very difficult during holiday periods.

"Our analysis shows that every single failure is due to the requirement for a maximum 30-day interval, not the 24 observations. If you have quiet markets every August, for example, you will always lose model approval at that time and it will then run for a full year, so seasonality is clearly an issue that needs to be addressed," Gheerbrant explains.

The consultation paper sets out options for bucketing and acknowledges the potential for data pooling schemes, but does not propose any changes to address seasonality. There is also no significant change in the capital calculation, particularly for equity idiosyncratic risk. "The Basel Committee has said it requires concrete evidence and data to consider further revisions to the non-modellable risk factor (NMRF) framework. We will support the committee with the necessary data during the consultation process," says Panayiotis Dionysopoulos, head of capital at ISDA.

## SBA

Other important changes have been proposed to the calibration of the standard rules. As it stood, banks would have been required to hold significantly more capital if internal models were not approved on specific trading desks. Capital increases varied from 1.6 times for credit spread risk to 5.3 times for foreign exchange risk, suggesting that the sensitivity based approach (SBA) would not have served as a credible fallback to internal models.

Under the proposals, changes have been made to the calibration of risk weights for rates, equity and foreign exchange, alongside amendments to the correlation structure and curvature calculation. Triangulation of currency pairs is also introduced, which allows a currency pair comprising liquid underlying currencies to also be deemed liquid.

"These changes all seem to go in the right direction, but we now need to fully assess the overall calibration," says Dionysopoulos. The consultation is open until June 20.

# 10 Questions with...
# Tom Wipf

*Tom Wipf, vice-chairman of institutional securities at Morgan Stanley, talks about the importance of the transition to alternative risk-free rates, and the need to start work on this critical initiative now*

**IQ:** Can you tell us about your role at Morgan Stanley?

**Tom Wipf (TW):** I serve as vice-chairman of institutional securities. In that role, I focus on the regulatory, industry and other strategic and day-to-day priorities of the president of the firm. I am also responsible for the firm's business continuity management, focused on resiliency and recovery in the event of disruptions.

**IQ:** What do you see as the current main priorities for derivatives market participants?

**TW:** The work to select and transition to alternative risk-free rates globally is clearly the top priority. When we think about that from an ISDA perspective, it involves dealing with the documentation issues and how it affects legacy trades, and working closely with market participants on the implementation timeline. Just behind that is the focus on regulation and the potential to review some of the requirements based on market and regulatory experience since implementation. Another focus is the application of new technologies in the derivatives market and how to approach that in a thoughtful and cohesive manner.

**IQ:** The shift from interbank offered rates (IBORs) to new risk-free rates is clearly an important area of focus, but why should firms start working on this now?

**TW:** The implementation of alternative risk-free rates is going to require a major commitment from all market

participants. To stay on the timelines for implementation, firms need to commit now, they need to budget, they need to execute. They need to work across their technology, legal, operational and trading platforms. Sell-side firms in particular also need to take up the role of educating and communicating to their clients.

This work has been under way for some time through the official sector and the various public-/private-sector risk-free rates working groups. There has been a lot of pre-work done, but there are lots of steps that need to occur along the way that are dependent on the completion of other parts of the workstream, so it is important that all the deliverables are met on time. Firms need to spend the time today working with their clients and working internally across their technology, legal, operations and trading functions. These are all critical workstreams, and it's really important firms start focusing on this now.

**IQ:** What are the most significant changes to have occurred to derivatives markets in recent years?

**TW:** A vast majority of the changes in recent years have been driven primarily by post-crisis regulation. The clearing mandate, margining for non-cleared derivatives and trade reporting have all come out of Dodd-Frank and the global regulatory derivatives reforms, and they demonstrate that the market can accomplish major change when everyone puts their minds to it. The challenge is whether the market has the ability to respond to major initiatives like the transition to risk-free rates, which are in the best interests of the market but where regulation isn't necessarily the overriding driver. If the industry can build on the sense of urgency and shared goals that enabled us to meet the demands of new regulation, then we can accomplish more strategic challenges in a far more proactive manner. We need to take the momentum we've had and direct it towards the issues we see coming down the road. I think ISDA can play a critical role in providing the framework to keep that momentum going and accomplish the tasks we see coming on the horizon.

**IQ:** This year's ISDA AGM is all about the future of the derivatives markets. What are your predictions?

**TW:** With the benefit of seeing the impact of regulation, I think there is an opportunity to identify issues that could potentially be reviewed; areas where we preserve the core principles of post-crisis regulation, but where there are efficiencies to be gained through review and assessment. With all of this behind us, and with some meaty issues ahead of us, we now have some good data points to enable an informed dialogue with regulators to assess whether the requirements have achieved their desired goals, and whether there are particular adjustments that could be made to those requirements that may not be achieving what they set out to do.

**IQ: You've been on the ISDA board for a year now. What are your impressions? Any surprises?**

**TW:** I've been around ISDA and its work for many years, so there haven't been any big surprises. It's been more a validation of some original impressions I had. It's always operated as a top-shelf organisation, and my expectations on that have been met and even exceeded. There's a strong, committed management team, and there's exceptional subject matter expertise across the organisation. The strategy and planning is thoughtful, timely and very clear. The board is really engaged and is willing to go after challenging issues. A lot of different opinions hit the table, and there's a lot of passion in the discussion of the issues. In the end, we get some really good and thoughtful outcomes.

**IQ: What ISDA initiatives are most important from your perspective?**

**TW:** Taking the leadership position on the IBOR replacement work has enabled the organisation to be at the centre of this critical workstream. The protocols are really important, particularly how they will apply to the risk-free rates transition. I also think the technology initiatives that have been undertaken are really important too, as is the continuing productive dialogue between market participants and regulators. Some of these are core competencies, and some are new things that have hit. But I think the organisation is built to handle things that are ongoing, as well as issues that are situational in nature.

**IQ: How would you describe the role that derivatives play if explaining to a child?**

**TW:** I think I would play one of the whiteboard animations ISDA has produced[1], because I think they've crystallised the fundamental use of derivatives. The primary driver of derivatives is to enable corporations and others to hedge their activities.

**IQ: What are your hobbies?**

**TW:** I'm a guitar player and I play in a band. We play rock and roll, and the band is called the Hell or High Water Band.

**IQ: What advice would you give to someone starting work in derivatives markets today?**

**TW:** I'd say focus on clients, listen to them and pay attention. Have a deep understanding of the public trust that is put in our industry, and do the right thing. IQ

## "The implementation of alternative risk-free rates is going to require a major commitment from all market participants"

**1.** Note: Watch the ISDA whiteboard animation 'How do Derivatives Benefit the Global Economy' here: goo.gl/ZxjA56

# Clear Benefits?

*The non-cleared derivatives market has shrunk as clearing volumes have increased, but what does this mean for the non-cleared sector?*

**The non-cleared derivatives market has** faced a barrage of changes, from clearing mandates to margining requirements and stricter capital rules. While non-cleared volumes have shrunk, the sector remains a significant chunk of the derivatives market, reflecting its enduring importance as a risk management tool.

With clearing volumes on the rise, the size of the non-cleared sector has naturally fallen in recent years. According to the Bank for International Settlements, 77% of the $415.9 trillion in interest rate derivatives notional outstanding was cleared at the end of June 2017. That compares with about 50% at the end of 2012 and an estimated 30% at the end of 2009, when the Group of 20 identified the clearing of standardised derivatives as a key reform objective.

## Non-cleared

The non-cleared market is therefore now a much smaller portion of the overall interest rate derivatives market, reflecting the industry's commitment to meet the regulatory reform objective to increase clearing. The proportion of non-cleared derivatives could shrink further as central counterparties (CCPs) extend the range of instruments they clear and participants look to take advantage of the capital, margin and operational efficiencies of clearing.

Nonetheless, it was never envisaged that all derivatives products should be cleared. Certain end users are exempt from clearing mandates – for instance, non-financial corporates. Some products are also not yet accepted for clearing, particularly outside the interest rate and credit derivatives markets. That includes those products with non-standard terms or features, or where there are insufficient dealers active in a market to participate in the CCP default management process.

The importance of retaining a healthy market for these more bespoke products has been recognised by regulators throughout the regulatory reform process. Speaking in March 2010, former chair of the Commodity Futures Trading Commission (CFTC), Gary Gensler, said: "Though standardised derivatives should be moved into central clearing, it is important that reform allow for companies, municipalities, non-profits and other derivatives users to customise or tailor their hedging transactions to meet particular needs."

> The importance of these instruments as risk management tools has prompted market participants, academics and some regulators to probe whether the incentives to clear are set at an appropriate level

In a statement made when the CFTC's non-cleared derivatives margin rules were finalised in December 2015, current CFTC chair J. Christopher Giancarlo also highlighted the importance of the non-cleared market.

"As regulators, we must be intellectually honest and acknowledge that there are legitimate and vital needs for both cleared and uncleared swaps markets in a modern, complex economy," he said.

## End users

A variety of derivatives users employ a mixture of standardised, cleared derivatives and bespoke, non-cleared products. For instance, pension funds typically use a combination of interest rate swaps, swaptions, inflation swaps, caps and floors to reduce the uncertainty and volatility in funding levels and ensure they can meet future liabilities. Insurance companies also use derivatives to ensure they can meet future liabilities. Depending on the specific business, this can include interest rate swaps, caps, floors, swaptions, inflation swaps, equity options, equity swaps and variance swaps. Meanwhile, mortgage providers use swaptions, caps and floors to manage the interest rate and prepayment risk on their mortgage portfolios.

The importance of these instruments as risk management tools has prompted market participants, academics and some regulators to probe whether the incentives to clear are set at an appropriate level – and whether the capital and margin treatment of cleared versus non-cleared transactions is pushing even those end users that aren't subject to clearing mandates to clear.

Under the non-cleared margin framework, initial margin is required to be calculated using a 99% confidence interval and a 10-day liquidity horizon. That is double the five days set for cleared trades, resulting in higher margin requirements for non-cleared transactions, even if they are similar in risk profile to cleared contracts.

Academic research is now under way that aims to analyse the rationale for the five-day/10-day levels, and to assess whether the 10-day liquidity horizon for non-cleared trades reflects the time it takes to close out or hedge an exposure following the default of a counterparty.

In the following two pages, Rama Cont, chair of mathematical finance at Imperial College London, discusses a new paper in which he attempts to explore these issues.

# Margin Matters

*Rama Cont, chair of mathematical finance at Imperial College London, speaks to **IQ** about his new paper on the margining of non-cleared derivatives, which examines the rationale for the 10-day margin period of risk for non-cleared derivatives*

### IQ: Can you outline the scope of your paper and the issues it is examining?

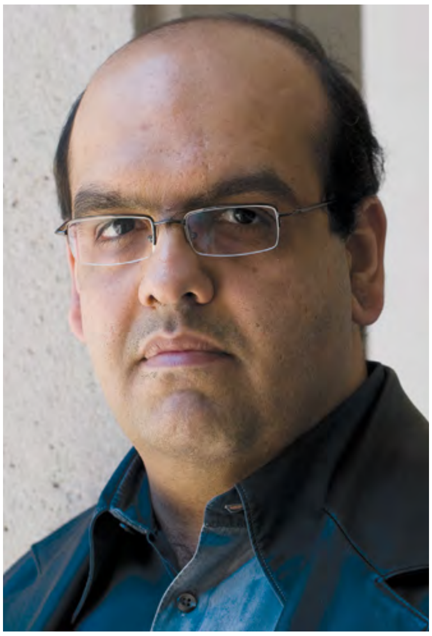
**Rama Cont (RC):** The paper examines some aspects of the new regulatory framework that has introduced margin requirements for non-cleared derivatives transactions.

Some of the rules that have been set for calculating initial margin (IM) requirements have been imported from the cleared derivatives market, except that regulators have increased the corresponding margin periods of risk, presumably because there is a perception that non-cleared derivatives transactions are intrinsically harder to close out or unwind if one counterparty defaults. So, the liquidity horizon for non-cleared trades has been set at 10 days, compared to the two- or five-day period set by central counterparties (CCPs) for cleared trades. That means IM requirements will typically be higher for non-cleared derivatives.

This has raised many questions. Is this five-day horizon for cleared derivatives actually the correct starting point? If not, why are we using it? Is a 10-day horizon appropriate for non-cleared derivatives? Is IM used for the same purpose in the cleared and non-cleared case? How should IM be computed for bilateral trades? These are some issues we try to address.

### IQ: What are the implications of the fixed liquidation periods set by CCPs and regulators?

**RC:** In principle, the liquidation period is the time you need to unwind a position if your counterparty defaults. The idea being that if you cannot unwind it immediately,



then by the time you do, you might have taken a loss. The margin should cover that potential loss.

The time needed to unwind usually depends on the size and complexity of the position. If the position is tiny compared to the daily traded volume in that asset, then it's reasonable to assume you can unwind it in a day, with an extra day to make sure the credit event has occurred. So, two days would be an appropriate liquidity horizon in many cases.

If the position is very complex or large in size, then it's not reasonable to assume you can unwind it in a day. We have seen examples in the recent past where trading desks have accumulated large positions in some assets that represent several weeks' worth of trading volume in that particular market. Obviously, there is no way to close that out in 10 days, whether or not the instrument is cleared. You need to account for a longer period.

In most cases, though, positions will be small enough to unwind in one or two days. I interviewed many people involved in default management at large financial institutions, and what you hear is that it's really a question of size and complexity of the position with the counterparty. It is not a uniform period for all trades.

This nuance is not reflected in current CCP practices, nor in the proposed rules for non-cleared derivatives. The liquidity horizons are insensitive to all these factors, and are set at two or five days for cleared and 10 days for non-cleared. We think that's not justified by any analysis of actual close-out costs, nor does it relate to the default management process.

### IQ: Is there a more appropriate approach that could be considered?

**RC:** A more appropriate response would be to try to gauge the liquidation period as a function of the size and complexity of the trade. Is it easy to liquidate or not? This could be applied both by CCPs and participants in non-cleared derivatives transactions.

If the position size is below a certain threshold, then a two- or three-day horizon may be appropriate. If the position is large or complex, then the margin level should correspond to the cost of liquidation. How long would it take to unwind? Is it unwound through the market or through an auction process among CCP members?

By doing this, we are trying to match the level of the margin with the loss it is supposed to cover. The purpose of margin is to hedge the loss of the CCP when a member defaults.

Let's align it with a realistic estimation of the cost of default management.

**IQ:** How could this approach be applied?

**RC:** I think regulators should set an appropriate liquidity horizon floor that can be scaled up accordingly, depending on the size and complexity of a position. Some, but not all, CCPs already do this indirectly with a liquidity charge, which is effectively an IM top-up for very large or illiquid positions.

**IQ:** Would the same work for the non-cleared derivatives space?

**RC:** For non-cleared transactions, the question is not whether the liquidity horizon is five or 10 days. It is whether fixed horizons are appropriate at all. Going from five to 10 days isn't based on any statistical analysis. It's based on an intuition– 'We think non-cleared trades are more risky, so let's double the liquidity horizon'.

To arrive at the right approach for non-cleared derivatives trades, we need to examine the default management process and the risk it implies. What happens when a non-cleared derivatives counterparty defaults? Is the chain of events similar to when a CCP member defaults? When a clearing member defaults, the CCP cannot hold onto its portfolio. It auctions it or liquidates it in the market. For a CCP, the correct question is: what will the liquidation cost be? That's what IM should cover for cleared trades.

This is not the case for participants in non-cleared transactions. When the counterparty defaults, the best solution is often to hold on and hedge, rather than to liquidate. When they are notified of a default, the first thing counterparties do is set up a hedge to cover the open position. This hedge might not be perfect, so the counterparty will continue to be exposed to the profit and loss of any unhedged portion of portfolio.

So, the correct way to account for the loss incurred at default is to look at the cost of the hedge, the time it takes to set it up and the risk contribution of the unhedged portion over the liquidation period. This is different from the liquidation cost, or the market risk, of the entire position, because once the participant is hedged, they are no longer exposed to that. A way of aligning the margin calculation with the actual risk is to start by describing the procedure followed by a counterparty in the event of a default. At what point do you hedge? How long does it take to hedge and what is the cost? An assessment of the exposure of the counterparty along this timeline is the only realistic basis to measure appropriate margin levels. That will produce a realistic horizon, which may obviously be different for different products, and again, regulators could impose a minimum floor. There should be a minimum amount of time allocated for reacting to a default – getting the information, setting up the hedge, and so on. This floor should not be 10 days: it doesn't take a bank or a buy-side firm that long to realise default has occurred or set up a hedge.

> "If the position size is below a certain threshold, then a two- or three-day horizon may be appropriate. If the position is large or complex, then the margin level should correspond to the cost of liquidation"

**IQ:** Is there any evidence that the differing regulatory treatment between cleared and non-cleared products is affecting trading activity and liquidity?

**RC:** There has been no study yet of the impact of bilateral IM requirements on liquidity in the non-cleared derivatives market. But participants in the non-cleared market are assessing the impact of collateral requirements and that will clearly affect their decision whether to enter into a transaction of this type.

Collateral requirements for non-cleared products will also affect their valuation, something that market participants will need to understand and model. Some institutions may reduce their trading because margin payments put too much pressure on their liquidity. I think that's a likely outcome in some cases.

Margin requirements were introduced to prevent a contagion of counterparty risk in the market. In a market stress scenario, when the value of a derivative changes, one side takes a loss and the other a profit. When there is no margin being exchanged, this corresponds to an accounting loss or profit, but no cashflow occurs. If the loss is large, it can threaten the solvency of one of the counterparties.

However, if this transaction is subject to a margin requirement, this loss is immediately transferred into a margin call, one that must be paid in cash overnight. This leads to default if the counterparty does not have the cash on hand. So, in addition to solvency risk, we now have liquidity risk.

As margin requirements are extended to a broader universe of assets in the coming years, we are transforming counterparty risk to liquidity risk, rather than eliminating it. To stamp out counterparty risk, we are increasing liquidity risk. Which brings me back to the origin of all this: 2008, which was in large part a liquidity crisis. Margin calls brought down AIG, Bear Stearns and Lehman. Do we want to increase the risk of this happening again? IQ

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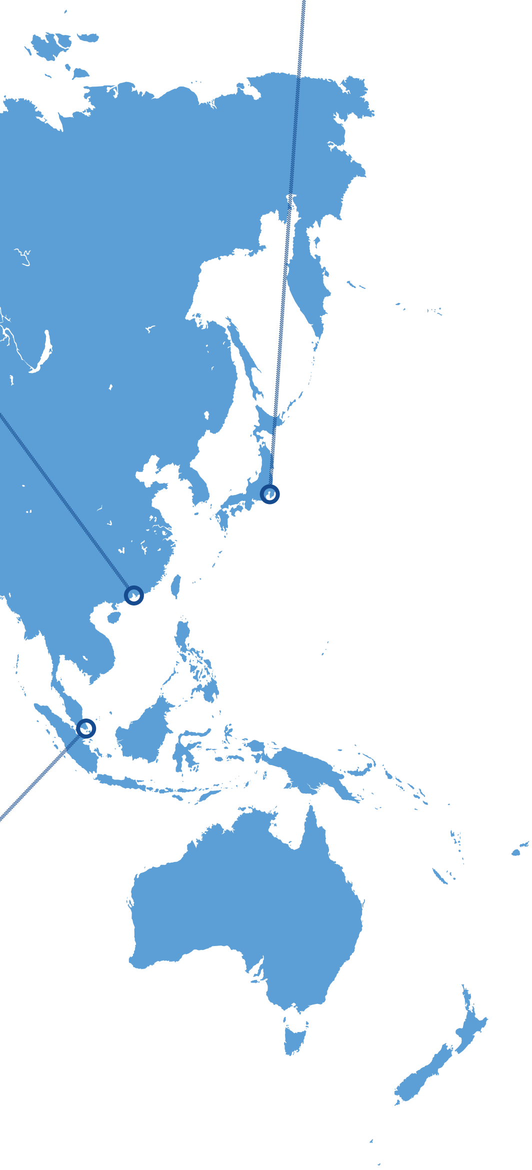
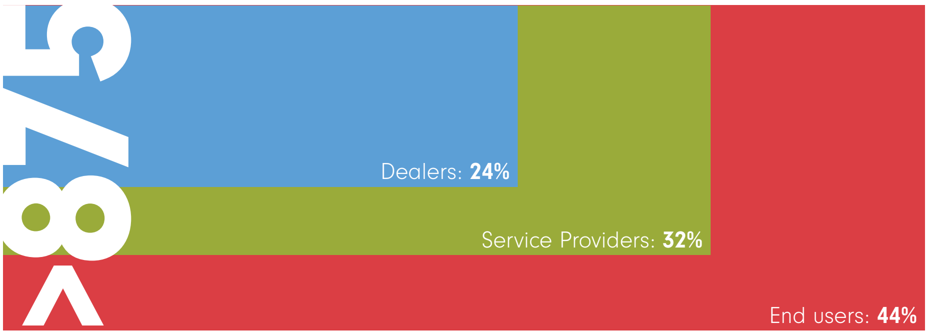


ISDA has over 875 member institutions from 68 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, clearing houses and repositories, as well as law firms, accounting firms and other service providers.

## MEMBERSHIP BREAKDOWN

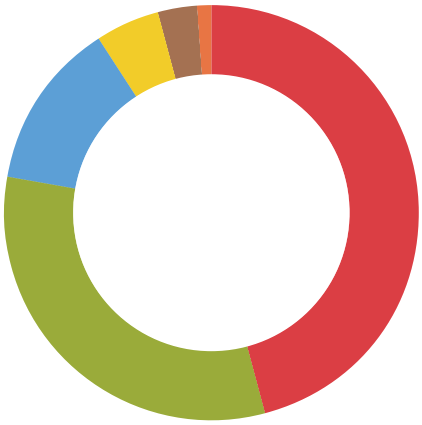



## TYPES OF MEMBERS

| | |
|---|---|
| Banks | 31% |
| Law Firms | 23% |
| Asset Managers | 9% |
| Government Entities | 12% |
| Energy/Commodities Firms | 7% |
| Diversified Financials | 6% |
| Other | 12% |

## GEOGRAPHIC COLLATERALISATION

| | |
|---|---|
| Europe | 46% |
| North America | 32% |
| Asia-Pacific | 13% |
| Japan | 5% |
| Africa/Middle East | 3% |
| Latin America | 1% |



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

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ISDA

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# ISDA Conferences

@ISDAConferences linkedin.com/company/isda @ISDA.org

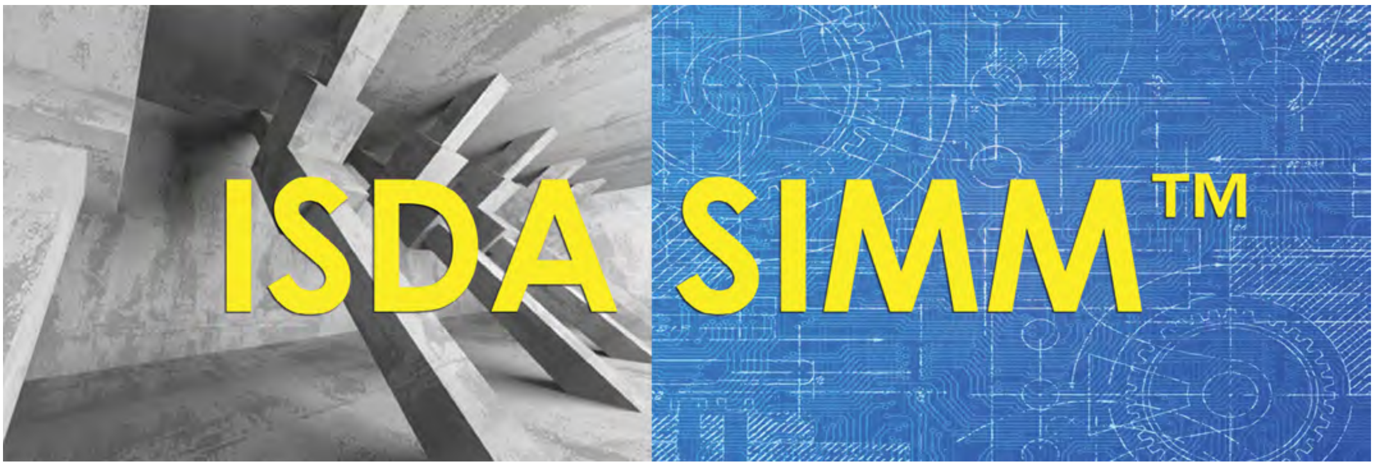
*Education has been part of ISDA's mission since the Association's inception. With several training courses and symposia held each year, ISDA's highly qualified instructors continue to educate members and non-members globally on topics including legal and documentation, collateral, trading, margin, reporting, risk and capital management, regulation and other related issues. Follow us on Twitter* ***@ISDAConferences*** *to be the first to hear about new conference offerings.*


**LONDON NEW YORK TORONTO SYDNEY TOKYO**

ISDA leads the industry in working groups on trading book capital and in 2018 we will be running conferences focused on the trading / banking book, revised credit valuation adjustment (CVA) framework, internal models and non-modellable risk factors. Our expert practitioners, who have been directly involved in the development and evolution of the financial regulation, will guide attendees through the amendments, implications, impact on capital and the transposition into local regulations.

## Visit isda.org/events

For complete conference listings including upcoming events on **Benchmarks**




As more firms prepare to comply with regulatory initial margin (IM) requirements, ISDA will be running conferences on the ISDA Standard Initial Margin Model (SIMM), which is used to calculate IM in accordance with non-cleared derivatives margining rules. There will be workshops tailored to those new to the ISDA SIMM on the development, usage and transition of the model, as well as more advanced workshops that will dive deeper into the methodology, calculation and the evolution of the SIMM from version 1.0 to 2.0 and beyond.

# MISSION STATEMENT

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

## STRATEGY STATEMENT

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

### THE PREEMINENT VOICE OF THE GLOBAL DERIVATIVES MARKETPLACE

Representing the industry through public policy engagement, education and communication

### AN ADVOCATE FOR EFFECTIVE RISK AND CAPITAL MANAGEMENT

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

### THE SOURCE FOR GLOBAL INDUSTRY STANDARDS IN DOCUMENTATION

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

### A STRONG PROPONENT FOR A SAFE, EFFICIENT MARKET INFRASTRUCTURE FOR DERIVATIVES TRADING, CLEARING AND REPORTING

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

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"The priority is clearly to make EMIR run more smoothly and reduce costs for the real economy without touching upon the essence of the legislation"

**Markus Ferber, European Parliament**