INTERVIEW

The RBA's Christopher Kent on benchmark reform

BENCHMARKS

Getting ready for benchmark fallbacks

CAPITAL

Approaching the next phase of Basel III





* STANDARDISE TO DIGITISE

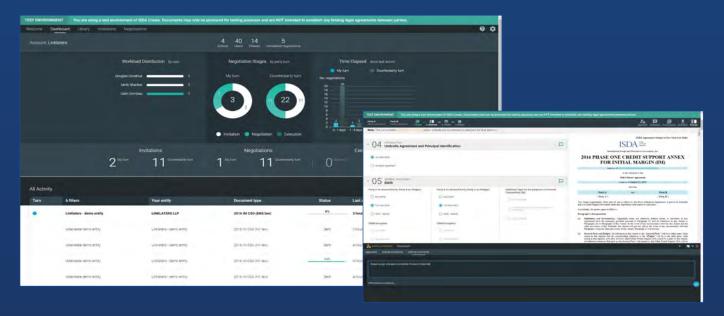
New technology could help the derivatives market increase efficiencies and reduce costs associated with post-trade processes, but standardisation is critical



What is ISDA Create?

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

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



WHY ISDA CREATE - IM?

- Compliance with the IM regulations requires market participants to put additional IM documentation in place.
- Negotiation of these IM documents takes time and resources, adding an enormous strain on the ability of firms to comply with the rules.
- A wide universe of buy- and sell-side firms will come into scope of the IM regulations in 2020/21, creating the need for an industry tool that will allow market participants to efficiently negotiate IM documentation with large numbers of counterparties.

BENEFITS OF ISDA CREATE - IM

- Provides easy access to ISDA standard forms to produce, deliver and negotiate IM documents with multiple counterparties simultaneously.
- Online functionality makes the negotiation process more efficient and less time consuming from start to finish.
- Allows firms to make standard elections, as well as customise on a party-by-party basis
- Automatically reconciles both standard elections and bespoke provisions exchanged, and flags differences in an efficient and easy-to-read way.
- Allows firms to digitally capture, process and store the resulting data.

- Flexibility to take one or more steps offline if required.
- Removes the need for a post-execution transfer of data from negotiated documentation into internal systems and eliminates the chance of error during such a data transfer.
- Provides powerful commercial, risk management and resource management functions, data and analytics.
- Offers interactive dashboards, providing business stakeholders with real-time transparency to check which relationships have regulatory compliant documentation in place.



Every year has its urgent to-do items and unmissable deadlines, but 2020 has them in spades. Among other issues, the next 12 months will be crucial for benchmark reform, Brexit and margin, and market participants can't afford to take their eyes off the ball on any of them.

On benchmarks, the UK Financial Conduct Authority (FCA) has set a deadline of end-2021, after which it will no longer expect banks to make LIBOR submissions. In reality, the scale of the task means 2020 will be the critical year for the transition to risk-free rates. The FCA and the Bank of England have made clear they expect UK-regulated banks and insurers to be proactive in taking action now, and have asked for tangible progress this year on product development, infrastructure capability, client communication and documentation updates.

The good news is that one of the vital elements of the benchmark reform initiative - robust fallbacks - is close to finalisation. This year, ISDA will publish amendments to the 2006 ISDA Definitions that will incorporate fallbacks into new derivatives referencing certain interbank offered rates (IBORs). A protocol will also be launched to enable firms to embed the new fallbacks into legacy trades as well. Both will take effect approximately three months after publication, significantly reducing the systemic risk posed by continued exposure to LIBOR and other key IBORs.

Meanwhile, it will be a crunch year for Brexit and initial margin regulation. At time of press, the UK was about to leave the European Union and enter into an 11-month transition period, during which the future relationship will be hashed out. From a derivatives perspective, reaching long-term equivalence and recognition of central counterparties and trading venues during this period will be vital to avoid potential market disruption after the transition.

This is also a crucial time for the rollout of initial margin requirements, with thousands of new counterparty relationships coming into scope of the rules from September. Last year saw an extension of the phase-in schedule for the smallest firms until 2021, which will help reduce a potential compliance bottleneck - but the September 2020 phase-in will still pose a huge challenge for the industry.

Each one of these issues would be difficult to deal with. Together, they present a monumental test for the industry. As ever, ISDA will work to support members via advocacy and the development of mutualised solutions. Our goal is to help the industry navigate this next, critical 12 months.

Nick Sawyer Global Head of Communications & Strategy **ISDA**



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REGULARS

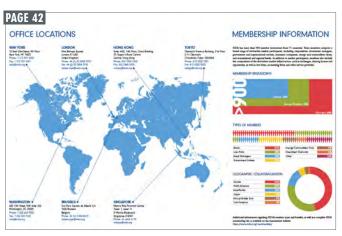
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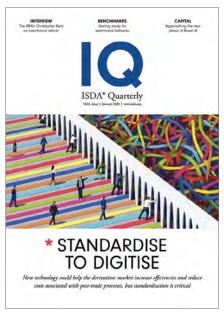
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"Wherever you look, ISDA has been preparing the derivatives market for the future, to ensure that safe, efficient risk management tools continue to be available to all users"

Eric Litvack, ISDA



The Path to Digital Definitions

ISDA is working to update its standard definitions for interest rate derivatives, with the aim of making them available in digital form, writes Scott O'Malia

"The 2020

Definitions will be a

first big step towards

our ambition of making

all our definitions and

legal documents digital

Fourteen years is a long time by any measure. When it comes to derivatives, it might as well be a lifetime ago. Just think about the changes that have occurred since 2006, from new market conventions to changes in infrastructure to ongoing benchmark reform and the emergence of new fallbacks.

That's why we've begun a root-and-branch reassessment of the 2006 ISDA Definitions - the standard framework for interest rate derivatives - with the aim of developing an updated document that integrates the roughly 60 supplements published since 2006, including a forthcoming supplement incorporating new benchmark fallbacks.

The new 2020 Interest Rate Derivatives Definitions will be available later this year, bringing the market right up to date. But we also want to be up to date in terms of format, which is why we plan to make the new definitions available on a webbased platform that will allow users to view a consolidated version, and in digital form with the mechanics of the document accessible in code.

where possible" The 2020 Definitions will be a first big step towards our ambition of making all our definitions and legal documents digital where possible. At ISDA, we've long set ourselves the task of helping the industry achieve greater efficiency through standardisation, automation and the development of mutualised solutions. But to enable soup to nuts automation and realise the efficiencies that would entail, we need greater alignment between our legal documentation and definitions and the operational standards used for derivatives trading and processing.

The ISDA documentation and definitions are the starting point for every trade and every counterparty relationship. However, that documentation has always been largely paper based or, at best, published as PDFs. This means users have to review multiple documents to establish the terms of a trade. It also means the key information and clauses need to be captured manually to process in internal systems.

That's not easy. Mistakes can creep in, and there's no standard way of representing this information, leading to inconsistencies.

That, in turn, makes it incredibly difficult to track trades in real time and determine which transactions and relationships are affected by particular market events. This slows down response times and ultimately results in risk. It also creates a disconnect between the legal documentation and the implementation of trading and posttrade processes.

Shifting to digital definitions and documentation will enable firms to easily capture legal information in a structured way and feed

> it downstream to other trading, operational and risk management systems, ensuring a consistent, joinedup approach to managing transactions through

the lifecycle and encouraging automation.

To support our digital build, work is already under way to develop a taxonomy and clause library related to the ISDA Master Agreement and variation margin credit support annexes (CSAs). This essentially provides standard wording for commonly negotiated clauses within these documents, increasing standardisation and making it easier to capture, analyse and report data within legal documentation.

This is intended to align with our regulatory compliant initial margin CSA, which has also been developed to allow for digitisation.

The Common Domain Model (CDM) is an important ingredient in this effort. The CDM establishes a standard set of digital representations for events and processes that occur throughout the lifecycle of a trade. Aligning our documentation and definitions with these standards is critical to enable scalable automation. Combined with the Financial products Markup Language (FpML) standard, we have all we need to make our documents digital.

The 2006 ISDA Definitions have served the market well for 14 years. By publishing the 2020 Definitions and other ISDA documents in digital form, we hope to have a suite of documentation fit for the 21st century.

Scott O'Malia ISDA Chief Executive Officer

ISDA Calls for Certainty on Close-out Netting

Certainty on close-out netting is an important step in the further liberalisation of China, and will help support robust, efficient and liquid domestic capital markets, according to Scott O'Malia, ISDA's chief executive.

Speaking at an event organised by ISDA and the Asia Securities Industry and Financial Markets Association (ASIFMA) in Singapore in January, O'Malia welcomed the progress China has made so far to liberalise its currency and domestic market. However, he stressed the importance of strong legal foundations to support further growth in derivatives, repo and other markets.

"With regulators making this push toward greater openness, we now need to consider the infrastructure and legal framework that is required to support further growth and liberalisation. In particular, the legal enforceability of close-out netting will be critical in the next stage of this journey," he said

According to an ISDA survey of Asia-Pacific derivatives market participants published last year, achieving legal certainty for close-out netting is the most important factor influencing the further development of robust, liquid and efficient derivatives markets in Asia.

"We agree with that," said O'Malia. "In fact, we think close-out netting is the single most important risk mitigation tool in derivatives markets and other markets like repo. By allowing parties to combine their obligations into a single payment, netting mitigates the credit risk associated with derivatives, repo and other transactions and promotes financial stability. It also encourages active participation by both foreign and domestic participants, supporting more liquid and efficient capital markets."

There are currently no specific provisions addressing close-out netting in China's Enterprise Bankruptcy Law and no clear judicial recognition of the concept. This



China netting event speakers, from left: Guan Li, Supreme People's Court of the People's Republic of China; Cai Jiangting, CBIRC; Scott O'Malia, ISDA; Jing Gu, ISDA

acts as a brake on liquidity and foreign participation in China's market, but it has the biggest impact on Chinese counterparties, said O'Malia.

"They face higher capital and transaction costs and a reduced pool of international counterparties to trade with. Importantly, they would also be required to post margin on a gross basis under the global margin framework for non-cleared derivatives, requiring those entities located in jurisdictions without netting to pay significantly more to hedge their risk. Ultimately, it creates an unnecessary build-up of credit risk in the financial system," he said.

There have been some developments on close-out netting in China in recent years. In a 2017 response to the National People's Congress, the China Banking and Insurance Regulatory Commission (CBIRC) expressed its view that the Enterprise Bankruptcy Law does not conflict with close-out netting in principle. While the CBIRC statement doesn't represent a legal change that would confirm the enforceability of close-out netting, the comment was viewed positively by market participants.

More recently, the CBIRC has been working with the Legislative Affairs Commission of the Standing Committee of the National People's Congress, the Supreme People's Court and other policymakers in China to clarify the position of netting enforceability under the Enterprise Bankruptcy Law for CBIRC-regulated entities.

Chinese authorities are also working on bank resolution rules that could help to deliver greater certainty for trades involving systemically important financial institutions.

In a recent letter to Chinese policy-makers, ISDA, ASIFMA and the International Capital Market Association set out recommendations to ensure that close-out netting and financial collateral arrangements are safeguarded in resolution proceedings, in line with recommendations by the Financial Stability Board (FSB).

Among other things, the letter recommended that any stay on creditors' termination rights imposed by a resolution authority should comply with the safeguards set out in the FSB's Key Attributes of Effective Resolution Regimes for Financial Institutions. If the resolution is unsuccessful, a public announcement should be made before regulatory consent is given to start bankruptcy proceedings, and there should be sufficient time for counterparties to close out and net their outstanding transactions outside of bankruptcy proceedings.

The letter also stated that it is important to make clear that close-out nettina and enforcement of related collateral arrangements would not subsequently be made void under the Enterprise Bankruptcy Law if a systemically important entity is put into bankruptcy proceedings once a resolution fails.

"Ultimately, we would like to see greater clarity on close-out netting enforceability across the entire market. The most effective solution is to develop comprehensive legislation to provide netting certainty for all types of Chinese counterparties," said O'Malia. 🔯

Get Set for a Critical Year in Derivatives, Says ISDA's Tew Darras

This will be a critically important year for the derivatives industry, with several big issues on the agenda that will keep legal, regulatory and compliance professionals on their toes, according to Katherine Tew Darras, ISDA's general counsel.

Speaking at ISDA's Annual Legal Forum in London on January 30, Tew Darras explored upcoming challenges relating to Brexit, benchmark reform, initial margin implementation and the rollout of new technologies. "These are all big issues and, in each case, 2020 is the critical year," she said.

As the UK begins an 11-month Brexit transition period during which the future relationship between the European Union and the UK will be thrashed out, a crucial issue for the derivatives market will be the treatment of clearing and trading after the transition. While the European Commission granted temporary equivalence for UK central counterparties (CCPs) in the event of a no-deal Brexit, longer-term equivalence and recognition is now needed.

"There is a financial stability dimension to this. Failure to recognise CCPs would require a large volume of existing cleared positions to be closed out after the transition period, which could disrupt markets," said Tew Darras.

Beyond Brexit, Tew Darras highlighted the importance of benchmark reform in advance of end-2021, the date at which the UK Financial Conduct Authority has said it will no longer compel or persuade banks to submit to LIBOR.

As part of that, ISDA will this year publish amendments to the 2006 ISDA Definitions to incorporate robust fallbacks into new derivatives trades, alongside a protocol to include fallbacks in legacy

transactions. Both will take effect approximately three months after publication.

"Implementation of fallbacks will go a long way towards reducing the systemic risk posed by continued exposure to LIBOR and other IBORs, and will minimise market disruption following an IBOR's demise," said Tew Darras.

Meanwhile, the challenge of initial margin requirements will step up a gear in 2020, as an estimated 3,616 counterparty relationships will come into scope of the rules in September. That number is well in excess of previous implementation phases, and will put a big strain on the industry.

ISDA has developed several industry tools to help firms prepare, including the Standard Initial Margin Model and ISDA Create, an online platform for the negotiation of documentation. Launched in 2019 to support compliance with the initial margin rules, ISDA Create will extend to other types of documentation, including the schedule to the ISDA Master Agreement.

"ISDA Create is just one area where we're working to bring our legal documentation into the 21st century. We're also looking to digitise our documents and definitions where appropriate," said Tew

For example, ISDA plans to make the forthcoming 2020 Interest Rate Derivatives Definitions available on a web-based platform, and with certain elements accessible in code.

"Moving to a digital set of documents will enable firms to capture key information in a structured way and share that data consistently across the institution, bringing massive efficiencies to the process," said Tew Darras. <a>I

ISDA AGM to Cover Transformation of Derivatives

The transformation of derivatives markets

will be the central topic of discussion at this year's ISDA Annual General Meeting (AGM) in Madrid on May 5-7, as market participants prepare for benchmark reform, initial margin implementation and Brexit.

In all three cases, 2020 will be a critical year, with benchmark reform in particular involving significant changes to legal documentation, processes and systems. Attendees will debate the steps needed to accelerate transition from interbank offered rates, progress in developing liquidity in alternative risk-free rates, and adoption of new fallbacks for derivatives.

Following the UK's exit from the European Union, the future relationship between the two jurisdictions and the need for long-term equivalence determinations will feature strongly. The steps firms will need to take in order to meet the phasefive initial margin deadline will also be discussed, as thousands of newly inscope firms look to meet the necessary documentation and custody requirements in advance of September 2020.

The event will feature senior market participants and policy-makers, including

Commodity Futures Trading Commission chair Heath P. Tarbert.

"The ISDA AGM is the premier event in the global derivatives industry and it promises to be a great few days of discussion, education and networking. With some of the world's top regulators and market professionals speaking, delegates will get vital insight and analysis on the issues that matter," says Scott O'Malia, chief executive of ISDA.

For more information about ISDA's 35th AGM, visit agm.isda.org

New Legal Paper on Smart Contracts Published

ISDA, Clifford Chance, R3 and the Singapore Academy of Law have published a new whitepaper that provides analysis on the legal issues relating to the use of smart derivatives contracts on distributed ledger technology (DLT).

"DLT offers a great opportunity to reduce inefficiencies and increase automation in the derivatives market, but a number of legal issues need to be addressed to fully realise this potential"

Scott O'Malia, ISDA

DLT and smart contracts have the potential to significantly increase efficiency and automation in the derivatives market. However, the perceived lack of legal certainty when trading derivatives on a DLT platform could hamper broad-scale adoption.

While certain jurisdictions have published or are developing their own legal analysis on some of these issues, the use of DLT in a global, cross-border context raises a number of questions from a private international law perspective that are important to the derivatives industry.

Given the inherent uncertainty about where data, assets and even counterparties are located in a DLT environment, a key question is how to determine which law applies to these relationships and assets, and what should happen when there are conflicts of governing law.

The whitepaper provides an introduction to some of the critical issues, including choice of law and enforceability. For example, the paper explores whether the introduction of DLT or the involvement of a platform provider in a typical trading relationship affects the parties' choice of law or how contractual disputes are resolved.

This is critically important to derivatives market participants, as an unexpected change in applicable law could undermine certainty and the legal enforceability of netting and collateral arrangements.

The analysis concludes it is unlikely an English or Singaporean court would disapply an express choice of law by the contracting parties, whether under ISDA documentation or in any other agreement between the parties and a platform provider.

The paper also considers use of digital assets for payments or exchanging collateral on certain DLT platforms. The analysis recognises challenges in identifying the precise location of digital assets, which could lead to uncertainty over which jurisdiction's laws would apply.

In response, the paper recommends that, where these issues exist, parties are permitted to agree on a common 'law of the platform' - a uniform choice of law that the parties agree will govern all transactions conducted on the DLT platform.

"DLT offers a great opportunity to reduce inefficiencies and increase automation in the derivatives market, but a number of legal issues need to be addressed to fully realise this potential. This paper provides greater certainty to participants using DLT for derivatives, and helps the industry move a step closer to the operational and cost efficiencies that greater automation will provide," says Scott O'Malia, ISDA's chief executive.

"This paper marks an important step by ISDA in raising the legal issues relating to the use of DLT in derivatives and to highlight the interplay between these issues. These questions relating to DLT are different from smart contracts and can be more complex, particularly in the context of netting and collateral for derivatives transactions," says Paul Landless, partner and co-head of the tech group at Clifford Chance. <a>I



The paper is available at: bit.ly/2uiuvdl

ISDA Appoints New Head of Asia-Pacific Public Policy

ISDA has appointed Su Yen Chia as its new head of Asia-Pacific public policy.

Chia joins ISDA from Euroclear, where she served as alternate chief executive for Euroclear Bank SA/NV (Hong Kong branch) from June 2017. In this role, she played an integral part in developing policy positions and interacting with regulatory and government authorities across the Asia-Pacific region.

She joined Euroclear in February 2016, initially as head of strategy and government affairs for Asia-Pacific. Prior to that, Chia was head of government relations Asia-Pacific for Barclays Bank, and began her public policy career with Credit Suisse in Singapore.

"We're delighted to welcome Su Yen to ISDA. Her in-depth knowledge and understanding of the region and her experience in government relations across Asia-Pacific will be of huge value to ISDA and its members as we continue to advocate for appropriate, risk-sensitive and globally coordinated rule sets," says Scott O'Malia, ISDA's chief executive.

Chia is based in Hong Kong and reports to Steven Kennedy, global head of public policy at ISDA. She took up the role on January 6. 🔯

Trading in SOFR Rises, **but LIBOR Still Dominates**

Trading in products referencing the

Secured Overnight Financing Rate (SOFR) has begun to take off as market participants transition from interbank offered rates (IBORs) to risk-free rates (RFRs), but the US over-the-counter interest rate derivatives (IRD) market is still dominated by LIBOR, analysis of data reported to US swap data repositories has shown.

SOFR traded notional increased from \$6.3 billion in 2018 to \$392.7 billion in 2019, according to data from the Depository Trust & Clearing Corporation swap data repository. That compares to \$119.4 trillion of IRD traded notional based on US dollar LIBOR over the same period. In total, IRD traded notional referencing IBORs totalled \$157.3 trillion in 2019 and represented 61.6% of total IRD traded notional, compared to \$148.3 trillion in 2018, representing 62.7% of total traded notional.

In the fourth quarter of 2019, IRD traded notional referencing SOFR increased to \$178.8 billion, up 68.2% from \$106.3

billion in the third quarter. The number of SOFR transactions increased by 13.6% during the same period, from 478 to 543.

Trading volume in SOFR futures for the full year 2019 totalled \$30.8 trillion, with open interest increasing from \$0.3 trillion at the end of January 2019 to \$2.1 trillion at the end of December 2019.

While the analysis covers only trades required to be disclosed under US regulations and so does not provide a complete picture for the rest of the world, it does highlight growth in non-US benchmarks. Total trade count in the Sterling Overnight Index Average (SONIA) increased from 8,215 in 2018 to 12,618 in 2019, although traded notional remained steady at \$8.0 trillion.

Traded notional in the Swiss Average Rate Overnight (SARON) rose from \$2.5 billion in 2018 to \$25.6 billion in 2019, while Tokyo Overnight Average Rate (TONA) traded notional was \$250.8 billion in 2019, up from \$103.6 billion in 2018.

Trading volume in SOFR, SONIA,

SARON and TONA is certainly growing as the adoption of RFRs gathers momentum, but it is still dwarfed by the traded notional in IRD that references LIBOR and the other IBORs. During the fourth quarter of 2019, only 5.4% of IRD traded notional was referenced to RFRs, while 44.1% referenced US dollar LIBOR and 15.4% referenced other IBORs.

While the continuation of LIBOR will no longer be guaranteed after the end of 2021, there is still a large volume of business referenced to IBORs with a maturity beyond 2021. Of the total IRD traded notional in 2019 that referenced IBORs, \$42.5 trillion had a 2019 maturity. That compares with \$52.8 trillion with a 2020 maturity, \$16.0 trillion due to mature in 2021 and \$46.0 trillion with a maturity after 2021.

Both the total IRD traded notional referencing IBORs and the total maturing after 2021 increased in 2019, in spite of the growing pressure to accelerate transition efforts. Total IBOR traded notional increased by 6.1% from \$148.3 trillion in 2018, while the total traded notional maturing after 2021 increased by 16.2%, from \$39.6 trillion in 2018.

The Interest Rate Benchmarks Review is available on the ISDA website: bit.ly/2RkE58v

Associations Publish Master Regulatory Reporting Agreement

ISDA has joined with the Association

for Financial Markets in Europe, the Futures Industry Association, the International Capital Market Association and the International Securities Lending Association to publish a new agreement intended to simplify reporting across different regulatory regimes in the European Union.

The Master Regulatory Reporting Agreement (MRRA) was published on December 19, and gives market participants the option to use a single template to manage regulatory obligations and provide services related to reporting under the European Market Infrastructure Regulation (EMIR) and the Securities Financing Transactions Regulation (SFTR).

Use of a common template for all reporting relationships under EMIR and SFTR will bring greater efficiency and consistency to regulatory reporting. The MRRA sets out common terms governing mandatory and delegated reporting of derivatives transactions under EMIR, compatible with changes introduced via EMIR Refit, as well as securities financing transactions under the SFTR. The agreement was drafted with the aim of ensuring that the terms would remain effective after Brexit.

The MRRA formalises the terms of a reporting relationship between two entities, one of which is reporting on behalf of the other in order to fulfil either its own regulatory reporting obligations under the mandatory reporting regime, or the client's regulatory reporting obligations under the delegated reporting regime.

The agreement template consists of a main section, followed by sections on both delegated reporting and mandatory reporting and two product-specific annexes on derivatives and securities financing transactions. It also includes template schedules within which parties can specify details relating to static data and any information relating to their reporting operations and procedures.

The MRRA and an explanatory memorandum are available on the ISDA website: bit.ly/2Rj1yqO



Road to Digitisation

New technology could help the derivatives market increase efficiencies and reduce costs associated with post-trade processes, but standardisation is critical

For more than 30 years, ISDA has been developing standards for the derivatives market. It's been a pivotal part of ISDA's mission to foster safe and efficient markets, and has driven much of the work in legal documentation and market infrastructure.

Back in the early days of the derivatives market, the publication of the ISDA Master Agreement gave firms a common template they could use to negotiate derivatives trading relationships, removing the chaos of having to agree terms when each party had its own preferred agreement with its own unique clauses and definitions.

That effort – to push for standardisation where there is no benefit to customisation – remains as important as ever today. As firms turn to new technologies to increase efficiencies, it is vital the right foundations are in place to support wide-scale automation and digitisation.

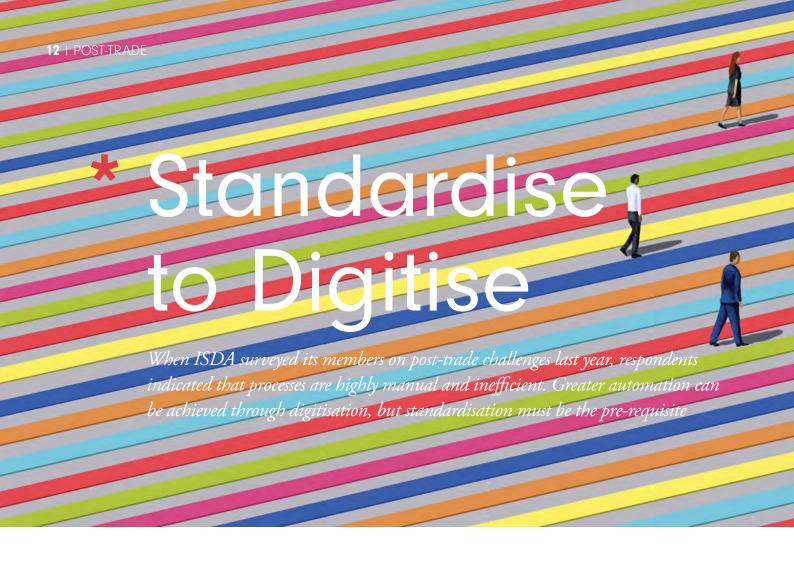
This issue of IQ examines the issues that are driving the adoption of technology (see pages 12-17), and explores the various initiatives to establish standards that will help facilitate full-scale automation across the industry. An important part of that is the launch of the Common Domain Model (CDM) last year. The CDM establishes a common digital representation of derivatives events and processes, eliminating the need to continually reconcile trade information with counterparties and enabling interoperability across platforms (see pages 22-25).

ISDA is also working to ensure legal standards keep pace with the 21st century. This includes the development of a taxonomy and clause library related to the ISDA Master Agreement and certain other documents – a project that will increase standardisation and make it easier to capture key legal data and share that information consistently across the institution (see pages 18-20). This is just one step in ISDA's ultimate ambition to digitise its documents and definitions.

In ISDA Create, ISDA and Linklaters have developed a tool that will allow that documentation to be negotiated and executed online. The platform is up and running for initial margin, and other documents will be added over time (see page 21).

Technology has the potential to significantly improve efficiencies in the derivatives market, but it won't happen without the development and adoption of standards. •

"For technology to be effective and scalable in the derivatives markets, standardisation must be the pre-requisite"



In today's highly digitised world, technology has completely transformed the way people live, work and consume goods and services. Mobile devices allow users to communicate, download music and buy goods, without giving a second thought to the myriad complex interactions that take place beneath the surface. That a smart phone can connect its user seamlessly with cinemas, supermarkets and airlines is no accident; nor is it due to the power of the underlying technology alone. All parties have to achieve a high level of standardisation and interoperability for this to happen.

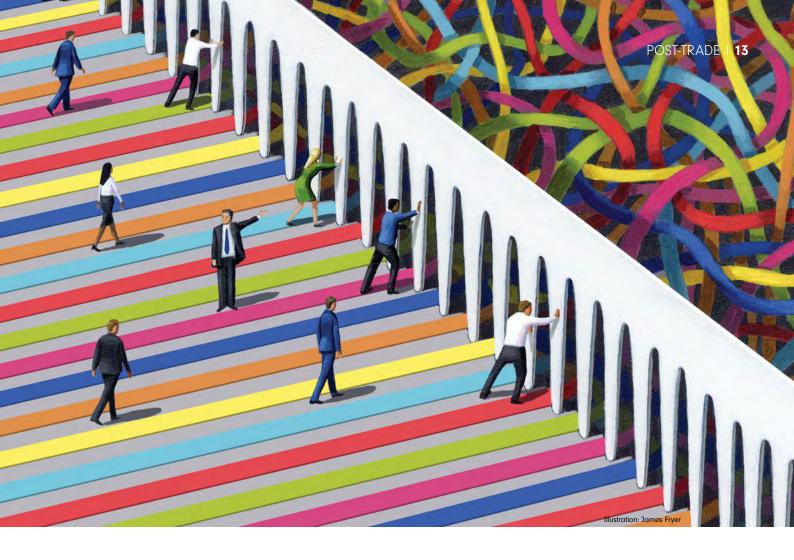
In the derivatives market, despite the many positive developments of the past decade, digital transformation is far less advanced than in the consumer world. The

processing of trades is still hampered by manual processes, with heavy reliance on phone, email and even fax machines. While market participants have been largely focused on the implementation of regulatory reforms in recent years, many now recognise the need to address post-trade inefficiencies and work towards greater standardisation as a pre-requisite to achieving higher levels of digitisation and automation.

"As technology has transformed the world for consumers, the derivatives market has lagged behind. Innovative technologies have been deployed for specific functions, but we're hampered by an ageing infrastructure that has been built piecemeal over time, limiting efforts to automate at scale across firms and platforms. We need

"If the cost of doing business and the cost per trade becomes unacceptably high, then financial institutions will start exploring the ongoing viability of certain offerings"

Lee Braine, Barclays



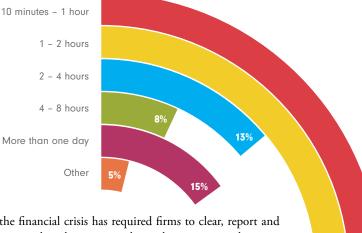
to think bigger and we need to move faster," says Scott O'Malia, chief executive of ISDA.

There is much to be done to bring the derivatives market, and particularly the post-trade space, into the digital age. The good news is that the pace of change is gathering momentum. Recognising the need for standardisation as the pre-requisite to automation, ISDA has developed a comprehensive strategy to bring that standardisation to the heart of the industry. With the Common Domain Model (CDM) now freely available, there is an opportunity for all market participants to work together to facilitate this process.

"The challenges that exist in post-trade will not disappear - if anything, they will only get worse as time goes on. ISDA has identified the problems and charted a way forward. We now need the industry to come together and work with us to eliminate manual processing wherever possible and bring about the automation that will ensure the long-term efficiency of the market," says Clive Ansell, head of market infrastructure and technology at ISDA.

The continuing reliance on clunky manual processes is the symptom of a much broader issue, which is the way in which the derivatives market has developed over the years. As the market evolved, each firm developed its own way of doing things, its own systems and its own terminology. This may have been unavoidable when the market was still in its infancy, but as the years went by, it has led to huge complexity and rising costs that are ultimately unsustainable.

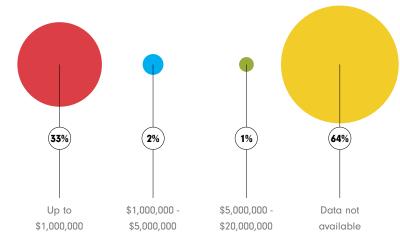
Every firm records trade information differently, so constant cross-checking and reconciliation is required on every trade. The advent of regulatory reforms since What is the average length of time spent by team resources to resolve a collateral-related reconciliation or dispute issue (based on 2018 data)?



the financial crisis has required firms to clear, report and margin their derivatives trades, and to execute on electronic trading venues in certain cases. These reforms improved the safety of the derivatives market, but the connectivity and real-time requirements exposed weaknesses in an ageing, manually intensive infrastructure.

"The fact is, we've been trading using an early 1980s framework," says O'Malia. "This is underpinned by bespoke paper documentation and definitions and an antiquated and incomplete infrastructure that can't deliver the straightthrough-processing you would expect in 2020. The potential is much greater, and we need to get to the stage where the entire trade lifecycle is fully digitised and automated."

25%



→ Surveys

Last year, as part of an effort to identify opportunities for standardisation and automation, ISDA initiated three surveys of its members on collateral management transformation, legal documentation and post-trade services and processes. The surveys revealed the most common pain points in the trade lifecycle, but they also highlighted opportunities for increased automation and efficiency.

Respondents to the post-trade survey identified margin and collateral processing as the top priority for improvement, followed by payment and settlement processing and regulatory reporting (see Table 1). Resource and budget constraints were listed as the biggest obstacle to reaching the desired future state for post-trade processing, followed by inconsistent data representation and nonstandard or proprietary technology or interfaces.

"There are significant risks if banks don't do something about this. If the cost of doing business and the cost per trade becomes unacceptably high, then financial institutions will start exploring the ongoing viability of certain offerings, so it's important for the long term," says Lee Braine, director of research and engineering at Barclays.

"Consider that one individual interest rate swap, for example, may be stored in up to 24 different databases across the industry, and every time there is a lifecycle event, each of those copies may need to be updated and reconciled - this inefficiency has to be addressed. It's to everyone's benefit to bring post-trade costs down and reduce risk," says Braine.

In the collateral management transformation survey, a number of issues were highlighted, including the fact that firms have to respond to multiple reconciliations and disputes, caused by a lack of data transparency through the trade lifecycle. These reconciliations and disputes often

take time and effort to resolve - 15% said more than one day on average.

This problem is compounded by the lack of automated collateral transfer settlement, which means firms must track the process manually, consuming precious time and resources and increasing the potential for settlement failures. Despite the high cost of this problem, 64% of respondents said they are not able to estimate the economic impact of collateral settlement failures because they don't have the necessary data.

Technology has the potential to improve this process, and respondents agreed that use of distributed ledger technology (DLT) could reduce the need for position reconciliation and improve speed to settlement. However, only 6% of respondents are currently using DLT as part of the collateral management process.

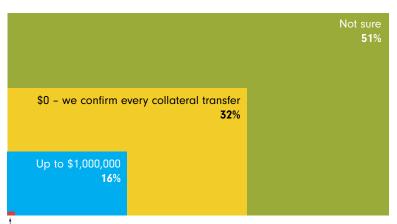
"We learnt from the survey that not many people track confirmation of settlement for collateral and many cannot even measure the economic impact of the lack of digitisation. Having identified the main issues, ISDA will now focus its collateral work in several key areas, including digitisation of legal documents, and reconciliation and dispute management," says Amy Caruso, head of collateral initiatives at ISDA.

Settlement concerns

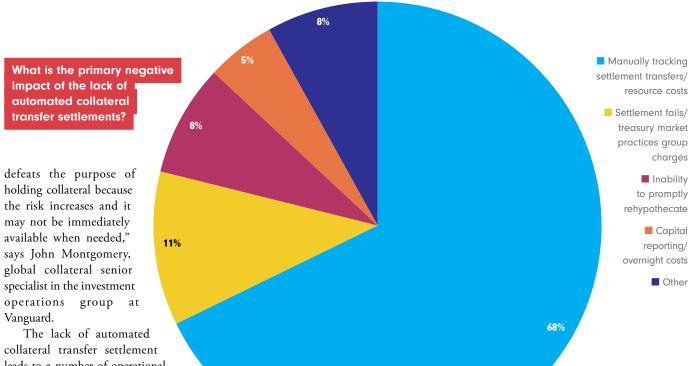
For collateral managers, the inability to automate settlement is a major bugbear that prevents straightthrough processing. The fact that a fax is often still required to authorise the release of collateral is widely considered primitive in a world where digitisation has already transformed so many manual processes and reduced operational risk in other businesses.

"A firm might have hundreds of collateral movements in a single day, but if those movements are being settled by email, phone or fax, that's a very manual process that is prone to settlement failures. To some extent, this also

Based on 2018 estimates, what does the lack of confirmation of collateral settlements cost at your firm?



\$1,000,000 - \$5,000,000 **1**%



leads to a number of operational issues, but 68% of respondents to the survey identified resource costs and the need to manually track settlement transfers as the primary negative impact. Although 32% of respondents said they confirm every collateral transfer settlement in real-time, 16% said the lack of confirmation of collateral transfer settlements costs up to \$1,000,000 each year, based on 2018 estimates.

Custodians also struggle to meet same-day settlement requirements when there is still so much reliance on manual processing. "Achieving same-day settlement in line with regulatory requirements can be challenging because it means one party agreeing with another the amount of margin that needs to move and settle that same day. Manual processing of tickets is not conducive to meeting same-day settlement requirements," says Judson Baker, senior vice-president and product manager for derivatives and collateral management at Northern Trust.

Towards standardisation

The surveys clearly indicate the existing post-trade infrastructure is not fit-for-purpose, but the industry is coming together to build the essential foundations that are needed to leverage technology and eliminate manual processes where possible. One factor that favours change is the fact that implementation of regulations has now progressed to the point where firms should have more capacity to address other issues than in recent years.

"Derivatives market participants have been heavily focused on complying with regulation and there has been very little bandwidth to think about driving efficiencies and improving processes. Now that the bulk of the regulations has been implemented, there is widespread recognition of the need to address some of the biggest problems in the post-trade space, but this requires industry leaders to take a more long-term strategic view and embrace the

TABLE 1: POST-TRADE SERVICES SURVEY RESULTS

Priority areas for improving post-trade efficiency

- 1. Margin and settlement processing
- 2. Payment and settlement processing
- 3. Regulatory reporting
- 4. Trade confirmation and affirmation
- 5. Lifecycle event processing

Top five obstacles in reaching desired future state for post-trade processing

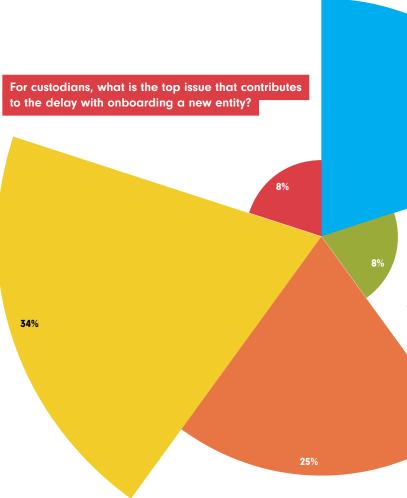
- 1. Resource and budget constraints
- 2. Inconsistent data representation
- 3. Non-standard or proprietary technology or interfaces
- 4. Inconsistent regulatory reporting requirements
- 5. Inadequate internal systems

Top five areas for improvement or modernisation of post-trade processing

- 1. Automation of existing processes
- 2. Increased digitisation of legal documentation and confirmation templates
- 3. Standardisation of legal documentation and confirmation templates
- 4. Transformation of business processes to streamline and remove redundant operational steps
- 5. Greater use of industry utilities and shared infrastructure

Technologies most likely to bring a tangible return on investment for post-trade services within the next five years

- 1. Digitisation of processes
- 2. Cloud technology
- 3. Artificial intelligence and machine learning
- 4. Decentralised data warehouse
- 5. Robotic process automation



standardisation that is needed to fully digitise post-trade processes," says Ansell.

> The challenge is in determining exactly how to address the wide-ranging issues that have been identified. A glance at the results of the post-trade survey is helpful - beyond resource and budget constraints, the biggest obstacles to reaching the desired future state in post-trade processing are inconsistent data representations and a low level of standardisation of technology and interfaces.

What are the inhibitors to using distributed ledger for collateral management/transfer?

Don't expect cost savings to outweigh investment 22% Still too early in development 49% We are in the process of researching/developing a project 8% Other 7%

While resource and budget constraints can only be managed on an internal basis, there is much that can be done across the industry to address the lack of consistent data representation and low level of standardisation of technology and interfaces. Just as smart phones would achieve very little without the standardisation and interoperability that connects them with the digital world, the derivatives industry needs to work on standardisation before it can effectively bring digitisation to post-trade processes.

Lack of standardised

Negotiating documents

documentation

is too manual

standardisation

Othe

Lack of settlement instruction standardisation Lack of know-your-customer

"There is little point in having the latest iPhone if you're still on a 2G network. Change needs to occur first at the infrastructure level in order to realise the benefits of new technology. For technology to be effective and scalable in the derivatives markets, standardisation must be the pre-requisite. ISDA has been developing standards for the derivatives industry for more than 30 years, and we're now focusing on developing the necessary standards to facilitate full-scale automation across the industry," says O'Malia.

Mutualised solutions

25%

The CDM will play a critical role in the overhaul of posttrade services, bringing the necessary standardisation to pave the way towards higher levels of automation. The CDM is a single, common digital representation of derivatives trade events and actions that enhances consistency and facilitates interoperability across firms and platforms.

In March 2019, ISDA published the full version of the CDM for interest rate and credit derivatives, and it has since been tested and deployed by a range of market participants, technology providers, regulators and market infrastructures (see pages 22-25). It is expected that the CDM will become more widely used this year as market participants recognise its potential to transform posttrade processes.

"Establishing a standard set of representations that can be used by the entire market cuts down on the need to constantly cross-check and reconcile trade information, and enables firms to develop automated solutions that can be interoperable and scalable in a way that has not been achieved before," says O'Malia.

Beyond the development of the CDM, ISDA is pursuing a number of other initiatives to promote digitisation through the use of mutualised industry solutions. One important strand of that work is to bring greater standardisation to legal documentation. Over time, firms have negotiated small changes to relatively basic clauses within their documents, but with very little real benefit to that bespoke wording.

94% For legacy contracts, this bespoke wording makes it more difficult to accurately track key legal information and can lead to inaccurate regulatory reporting of legal agreement data. For new contracts, it results in time-consuming negotiation and client onboarding. Crucially, the lack of standardisation hampers efforts to digitise documentation and automate certain contractual terms.

Do you currently use a distributed

ledger solution as part of your collateral

management/transfer process?

No

Yes

As part of an effort to address this, ISDA has been working on a taxonomy and clause library related to the ISDA Master Agreement and certain other documents. The project has involved analysis across thousands of ISDA Master Agreements to develop a taxonomy of the most commonly used clauses (see pages 18-20).

"We recognise that market participants will always need to negotiate bespoke terms, but this work will introduce greater standardisation in the way firms negotiate and agree certain contractual terms, increasing efficiency in contract negotiation and enabling use of technology to capture structured legal data," says Ciarán McGonagle, assistant general counsel at ISDA.

The ultimate aim is to digitise ISDA legal documents and definitions where appropriate, enabling firms to capture key information in a structured way and share that data consistently across the entire institution. Aligning these documents with the CDM and Financial products Markup Language standards will also help drive greater consistency in how trades are recorded and managed through the lifecycle, encouraging greater automation.

An early step in this initiative will be to make the forthcoming 2020 Interest Rate Derivatives Definitions available on a web-based platform that will allow users to view a consolidated version. The mechanics of the document will also be accessible in code, ensuring more consistency in how the definitions are implemented.

With the launch of ISDA Create in January 2019, a platform is also available that enables online negotiation and execution of this documentation (see page 21). ISDA Create is an online tool that automates the process of negotiating agreements. The first iteration was

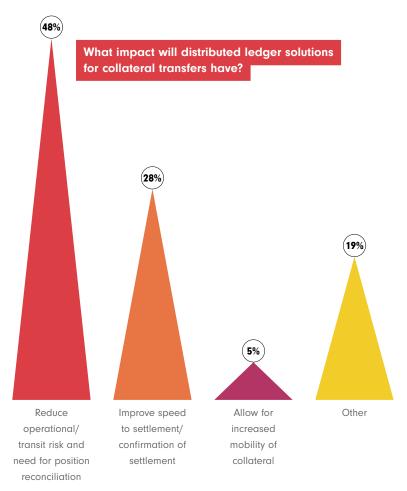
launched for initial margin documentation, but it will be extended to cover other ISDA and non-ISDA documents, including the schedule to the ISDA Master Agreement.

Other initiatives are

also under way to analyse

some of the legal issues that may arise when introducing greater automation into derivatives products and processes. For example, ISDA recently published a paper in conjunction with Clifford Chance, R3 and the Singapore Academy of Law that provides analysis on issues such as choice of law and enforceability relating to the use of smart derivatives contracts on DLT (see page 9).

"ISDA is re-imagining the derivatives lifecycle," says O'Malia. "We build on common standards, integrate these standards into digital definitions and documents, and put all these data solutions on mutualised platforms that market participants can seamlessly access to drive further innovation and automation at scale."



A Step to Digitised Documentation

ISDA is working to make its legal documentation and definitions digital to create efficiencies and drive automation. An initiative to develop a standard taxonomy and clause library is a big step towards that goal, writes ISDA's Ciarán McGonagle

It is 4:30pm on a Friday afternoon. A market event has just occurred that could result in the triggering of certain clauses within a firm's trading documentation, allowing it or its clients to demand additional collateral, terminate certain trades or even close out the entire trading relationship.

In response, the firm would first attempt to find out which client relationships are affected, which contracts contain provisions relating to this type of event, and what the clauses actually say. That might take time: the firm's systems may not easily allow it to identify specific types of counterparty and access all trading documentation associated with those entities.

An initial search might result in thousands of potentially affected contracts. Within those contracts, the relevant provisions might each contain slight drafting differences. While they might appear to achieve the same or similar outcomes, the differences mean those provisions need to be carefully reviewed by lawyers to ensure their precise legal effect is correctly understood.

Having finally analysed the universe of relevant clauses, the firm discovers that the contractual terms and the underlying operational processes that record, track and manage them are inconsistent. Put simply, the words on the page do not match the processes in place to manage the relevant transactions.

When the regulatory authorities call on Monday morning to enquire about the response to the market event, the firm may not be able to give a reassuring answer.

This scenario may be exaggerated and simplified, but these types of issues can affect many firms. While great strides have been made in recent years to extract data

from legal agreements and create records or taxonomies of certain clauses within contracts, these have tended to be for specific and narrowly defined purposes, such as recordkeeping requirements for qualified financial contracts or for recovery and resolution planning. Many databases also require manual updates, meaning they can quickly become outdated and inaccurate. As a result, market participants struggle to effectively manage and operationalise data relating to their legal documentation.

To help tackle these issues, ISDA has launched the ISDA Clause Library project. This is intended to introduce greater standardisation in the way firms negotiate and agree terms in their contracts on a forward-looking basis, allowing for more efficient and cost-effective contract negotiation. It also will enable more effective use of technology in capturing, analysing and reporting legal agreement data in legacy contracts.

Lack of standardisation

Much of the difficulty that firms face in maintaining and managing legal agreement data arises from the bespoke and customised nature of the provisions they capture and record. While ISDA documentation benefits from a high degree of standardisation in its structure and architecture, certain documents like the schedule to the ISDA Master Agreement are routinely - and sometimes heavily negotiated.

Firms typically maintain their own customised templates and negotiation guides, which set out a menu of negotiated positions. These may conflict with those maintained by other institutions, leading to lengthy

READ ISDA'S PAPERS ON **SMART CONTRACTS:** www.isda.ora/ 2019/10/16/isda-

smart-contracts

contract negotiation and the creation of customised wording across different contracts that are effectively a composite of multiple parties' own forms.

The bespoke wording creates a number of issues for market participants, particularly those with large volumes of trading agreements. For new contracts, the lack of standardisation can lead to time-consuming and inefficient negotiation and client on-boarding. For legacy contracts, the use of customised wording across large legal agreement

portfolios makes difficult to accurately and efficiently track key terms in contracts that might impact important business and operational functions, liquidity, such as counterparty credit risk and netting enforceability. It also complicates regulatory and marketdriven repapering exercises by increasing the need for manual intervention and analysis, and may result in inconsistent or inaccurate regulatory reporting of legal agreement data.

The ISDA Clause Library project addresses this lack of standardisation through the creation of

standard-form drafting options for commonly negotiated provisions within the ISDA Master Agreement, along with the most common variants of those provisions.

Deconstructing derivatives documentation

For the ISDA Clause Library to be effective, it is important that it is sufficiently representative of the way in which these contracts are actually negotiated and used within the market.

Fundamentally, a derivatives transaction is a series of legal rights and obligations created and agreed between parties. These rights and obligations are formalised through the creation of a legal contract. The contract will also include a framework for addressing events that could occur from time to time and may impede, restrict or otherwise affect the ability of parties to continue meeting their respective obligations. These rights, obligations and events are then reflected in a series of back-office processes that are intended to operationalise the recording, monitoring and - in some cases - the performance of certain aspects of the contract.

The lack of standardisation in the way these rights, obligations and events are expressed in contracts means their supporting processes may only ever be an approximation of their precise legal meaning. Managing these bespoke elements within contracts has become a significant burden. In some cases, firms will create bespoke business and operational processes to accurately reflect variations in the way these provisions are expressed within contracts.

It is therefore crucial that efforts to standardise clause wording consider the underlying business, operational or regulatory outcome the clause is actually trying to achieve in order to promote greater alignment between documentation and process.

Much of the difficulty that firms face in maintaining and managing legal agreement data arises from the bespoke and customised nature of the provisions they capture and record

In approaching this issue, ISDA has worked with D2 Legal Technology to analyse thousands of diverse ISDA Master Agreements, covering a broad range of precounterparty and transaction types, including a number drafting templates and clauses provided by members of ISDA's legal technology working group. Through analysis of these real commercial examples, ISDA has been able to develop an industry standard framework for identifying, categorising and managing legal agreement data within

contracts that reflects prevailing market practice. Crucially, this scheme of classification focuses on outcomes and the actual substance of each clause, rather than the precise wording or form. It is upon this framework that the ISDA Clause Library is being developed.

Looking back

In recent years, the combination of global regulatory reform, increased cost pressures and the natural evolution of the market has led to the creation of an increasingly complex legal documentation framework. Changing regulations and market events often mean market participants are required to identify certain clauses and variants of these clauses within their legal agreement portfolios. There is currently no standard way of categorising and referring to these clauses.

Development of the ISDA Clause Library provides firms with an industry standard framework for identifying, understanding and categorising important contractual terms in legacy contracts, providing valuable context to large-scale legal agreement data analysis of the kind often required for regulatory reporting or repapering.

The challenges faced by firms in managing their legacy legal agreement portfolios have also led market participants to explore various technology solutions to help resolve \rightarrow these issues, including by investing in natural language processing or artificial intelligence-based tools to extract important information from their agreements. While the accuracy and efficiency of these tools is steadily increasing, large-scale implementation has been hindered by the lack of industry standards on how these clauses are defined, meaning each implementation needs to be configured to work with individual firms' representations of clauses and clause variations.

> The ISDA Clause Library will help to overcome these challenges, allowing legal agreement review tools to be used more effectively by mapping to such standards and deriving learning from different representations across the industry.

Towards digitisation and smart contracts

Increased standardisation of legal documentation through the ISDA Clause Library project is a vital component of ISDA's strategy for delivering enhanced legal documentation standards and facilitating further automation of derivatives products through the development of smart derivatives contracts.

In addition to the ISDA Clause Library project, ISDA is currently engaged in a number of other initiatives aimed at enhancing or increasing the levels of standardisation in ISDA documentation.

For example, ISDA Create promotes greater standardisation through the development of common templates, based on the framework created through the ISDA Clause Library project. ISDA Create also allows users to capture, process and store data from negotiated documents, providing firms with a complete digital representation of their documents.

By removing unnecessary customisation and complexity in contract drafting, these standardisation initiatives provide a robust foundation for further digitisation of ISDA documentation.

As firms operationalise their businesses through automated, data-driven processes, digitisation of documentation will allow for greater alignment between the key commercial and operational terms captured and monitored within legal agreements.

ISDA CLAUSE LIBRARY CLAIMS GONGS

The ISDA Clause Library was the recipient of the FT Innovative Lawyers 2019 Award for innovation in legal expertise in the 'creating a new standard (in-house)' category. ISDA and D2 Legal Technology were also awarded the FT Intelligent Business Award for work to standardise the ISDA Master Agreement through the development of the clause library.





Development of the ISDA Clause Library provides firms with an industry standard framework for identifying, understanding and categorising important contractual terms in legacy contracts

This alignment between process and documentation will be supported through the integration of ISDA Create and the ISDA Clause Library with the Common Domain Model (CDM).

The expression of standardised clauses created within the ISDA Clause Library and delivered through ISDA Create can then be digitised, published and distributed through the ISDA CDM in many programming languages, allowing these components to be used to drive consistent implementations. This framework will provide technology developers with an interoperable industry standard, allowing them to focus on creating and implementing technology solutions that achieve greater efficiencies and cost savings through automation. Technology developers can then deploy automated business logic in a way that draws on the CDM to facilitate specific functionality, including through the development of smart derivatives contracts.

The ISDA Clause Library for the ISDA Master Agreement will be completed in the first quarter of 2020. It is anticipated that the ISDA Clause Library will be expanded to cover ISDA collateral documentation during the second quarter. 🔯

Ciarán McGonagle is assistant general counsel at ISDA

* Creating Efficiency

ISDA Create enables the electronic negotiation of documentation and capturing of structured data. The platform's first release creates efficiencies for firms caught by initial margin requirements and represents a further step in the drive towards greater automation

If standardisation is the necessary pre-requisite

to efficient and effective digitisation, the next step is to automate processes and generate data in a form that can be stored and distributed to other systems. In this sense, ISDA Create has proved its mettle as an online platform for the digitisation of documentation.

Given the current focus on the final phases of implementation of initial margin (IM) requirements, automating the negotiation of IM documentation was a natural starting point for ISDA Create. In the future, it will extend to other types of documentation to support the digitisation of derivatives markets.

The strength of ISDA Create lies in the reduction of inefficiencies at multiple stages. Not only does it automate the negotiation of documentation, but it also enables firms to capture, record, analyse and store structured legal data, and to share that efficiently with other parts of the organisation.

"ISDA Create has enabled huge efficiencies in the implementation of IM requirements for smaller firms, but what we have seen so far is only the beginning. As we work towards the digitisation of the derivatives market, the platform will support the electronic negotiation of both ISDA and non-ISDA documentation, as well as recording structured data," says Katherine Tew Darras, general counsel at ISDA.

ISDA Create was developed jointly by ISDA and Linklaters and launched in January 2019. Last year, regulators recognised the possibility of IM compliance challenges in September 2020, and split the final phase of implementation into two chunks. ISDA analysis suggests that rather than having 1,100 entities coming into scope this year, roughly one-third of that group will be caught in September 2020 and the remainder in September 2021.

The revised implementation schedule will help mitigate the risk of a compliance bottleneck, but meeting the September 2020 deadline will still be a challenge. ISDA Create will allow firms to automate the processing of documentation and IM, saving time and resources on a long-term basis. In September 2019, a new custody function was incorporated, which enables

users to complete all IM documentation from a single platform.

"The addition of the custody function creates a onestop-shop for regulatory IM documentation and has the potential to significantly reduce the burden for firms that will be in-scope for phases five and six. As we develop ISDA Create to automate other types of documentation, it will continue to be an invaluable tool for compliance with IM requirements," says Doug Donahue, partner at Linklaters.

Since the launch of ISDA Create, more than 50 firms have joined the platform for live negotiation of IM documentation, and more than 160 firms are actively testing. BNY Mellon was the first custodian to go live, and others are expected to join in the coming months.

Dominick Falco, head of collateral segregation at BNY Mellon Markets, explains that the negotiation of IM documentation tends to be a highly manual process, during which multiple documents pass between custodian and client as they are reviewed and marked up by legal teams on both sides. Automation will create tangible efficiencies, he says.

"As a custodian, there are certain clauses in our documentation that are completely non-negotiable and ISDA Create provides a framework where we can take those clauses off the table and indicate very clearly what elements are up for negotiation. We anticipate ISDA Create will significantly speed up the negotiation process – and therefore onboarding - for IM documentation, freeing up custodian capacity and reducing risk. We also see this as a tool that could usefully extend to other custody and collateral management documents in time," says Falco.

For now, many market participants are firmly focused on IM implementation, but ISDA and Linklaters are actively planning for the future.

"Over the past year, ISDA Create has clearly shown what can be achieved when we reduce the reliance on paper contracts, manual workflows and unstructured data. As we develop the roadmap for 2020 and beyond, we will be looking to bring the benefits of electronic negotiation to a broader universe of derivatives documentation," says Tew Darras.

Unleashing the CDM

Following deployment and testing last year, ISDA's Common Domain Model will develop rapidly in 2020 as it becomes part of the solution to major industry challenges, ranging from benchmark fallbacks to collateral management

Imagine a scenario in which 20 people have to get from one place to another across a complicated landscape of roads and pathways. Rather than working together to identify the best possible route, they each draw up their own maps, with unique symbols and markings to enable them to find their way. In the end, they might all reach the same destination in their own time but, without greater collaboration and coordination, it would be impossible to make the journey safer and quicker for all.

In the derivatives market, a similar scenario has evolved over the past 30 years as market participants developed their own terminology and processes to navigate the complex world of trade processing. In this age of digital transformation, it is impossible to leverage the benefits of advanced technology to bring greater efficiency and reduce risk when every firm has its own unique way of representing trades, processes and lifecycle events.

The Common Domain Model (CDM) has the potential to change this. By creating a standard representation for events and processes that occur throughout the trade lifecycle, the CDM eliminates the need to constantly cross-check and reconcile trade information. Crucially, it enables firms to develop automated solutions that can be interoperable and scalable in a way that has never been achieved before.

Since the full, open-source version of the CDM was launched for interest rate and credit derivatives in March 2019, the model has been deployed and tested by various market participants, regulators and technology providers. During the course of 2020, the CDM will be used to tackle industry challenges in a number of key areas, including benchmark fallbacks, clearing, collateral and equity derivatives.

"We've already seen the potential of the CDM in the early phases as market participants and technologists have worked to solve industry problems and test possible use cases. By establishing a common set of representations for events and processes that can be used by everyone, the CDM improves efficiency and facilitates automation. We have exciting developments in the pipeline for 2020, and encourage everyone to try out the model and come to us with ideas," says Ian Sloyan, director of market infrastructure and technology at ISDA.

Regulatory reporting

One of the earliest test cases of the CDM has been the digital regulatory reporting (DRR) pilot, a UK initiative led by the Financial Conduct Authority (FCA) and the Bank of England to explore the use of technology to help firms meet their regulatory reporting requirements and improve the quality of information reported.

This initiative dates back to November 2017, when the FCA and the Bank of England held a two-week 'tech sprint' to explore the potential for model-driven, machine-readable and executable regulation. Bringing together a wide range of participants, the tech sprint worked with a small subset of reporting rules and successfully proved that it would be possible to turn a regulatory requirement into a language that machines could understand and execute upon.

While machine readable and executable reporting was not yet ready for full deployment in 2017, there was sufficient potential for both firms and regulators to commit to the further development of a proof of concept. In the second half of 2018, the FCA and the Bank of England ran a six-month pilot with six financial institutions based on two use cases - UK domestic mortgage reporting and the calculation of the common equity tier-one ratio.

The second phase of the DRR pilot began in February 2019, and explored the economic viability of the initiative, as well as how it could be applied to different product groups. This phase also sought to explore the potential benefit that might be brought by third parties and, to this end, the CDM was used as part of the pilot to harmonise reporting and

MORE THAN 900 users have accessed the CDM since the full

version was launched in March 2019

ensure consistent information was accurately reported.

"During the course of about 12 weeks, we demonstrated how the CDM could be used to automate the end-to-end process of reporting, with a visual representation that would make it accessible and beneficial to a wide range of users. Using the CDM meant that the machine executable expression of a rule could be changed in real-time and the output would change accordingly a few seconds later," explains Leo Labeis, co-founder and chief executive of REGnosys, the regulatory fintech firm that worked with ISDA on the development of the CDM.

As part of the DRR pilot, the CDM was deployed in this way to cover a significant chunk of transaction reporting under the European Market Infrastructure Regulation and the Markets in Financial Instruments Regulation, proving the potential to scale such a solution. "The pilot clearly showed the potential value of the CDM to alleviate the huge challenges associated with regulatory reporting in an efficient, scalable way," says Labeis.

As well as potentially playing a role in the future of regulatory reporting in the UK, ISDA has also been in active dialogue with regulators in multiple jurisdictions to discuss how the model might be deployed to support and improve the quality of reporting frameworks - for derivatives, but also for other asset classes.

In the UK, a landmark report on the future of finance commissioned by the Bank of England and published in

June 2019 recommended that the central bank look at improving the efficiency and effectiveness of the overall system of accessing, storing and analysing large volumes of data. On January 7, more detailed proposals for data reforms across the UK financial sector were published, and these included a discussion paper on the approach to transforming data collection from the UK financial sector.

The Bank of England and the FCA have committed to work together on common data standards, to commission both a joint review of the legal implications of writing reporting instructions as code and

a joint review of some of the technical solutions explored as part of the DRR pilot.

"We are committed to finding ways to decrease the burden of reporting on the industry, and to improve its effectiveness. Our collaboration with ISDA allowed us to test a new approach to regulatory reporting for derivatives, combining industry subject matter expertise, exciting new technology and in-depth knowledge provided by experts from the Bank of England and FCA," says Gareth

Ramsay, executive director of data and statistics at the Bank of England.

Vendor testing

Number of teams that tested

the CDM in New York, London

and Singapore during the

Barclays DerivHack in

October 2019

Instrumental as the CDM could be in addressing issues relating to regulatory reporting, its potential impact extends well beyond this function. The advent of CDM 2.0 last year and its availability to all market participants

"We are committed to finding ways to decrease the burden of reporting on the industry, and to improve its effectiveness. Our collaboration with ISDA allowed us to test a new approach to regulatory reporting for derivatives"

Gareth Ramsay, Bank of England

"This is a tough problem to solve - people will often have different ways of describing the same product or process, or two people might use the same term but actually mean something different. We have been through an extensive mapping exercise on the terms firms use for equity swaps and when we pair that with the CDM, we have a compelling level of standardisation to work from," says Greg Schvey, chief executive of Axoni.

By providing a single, common digital representation of derivatives trade events and actions, the

CDM provides a solid foundation for the application of new technologies. It means that technologists without previous experience of the derivatives market can apply technology much more easily without having to get to grips with complex industry terms and develop their own representations.

This was highlighted in October 2019, when ISDA joined with Barclays to hold the second DerivHack event, during which teams of developers with no prior domain

"The CDM represents a oncein-a-generation opportunity to restructure the foundations of the market"

Scott O'Malia, ISDA

knowledge were able to use the CDM to quickly build solutions for the trading and management of securities and collateral. Taking place simultaneously in London, New York and Singapore over a two-day period, DerivHack showed the potential of the CDM to facilitate the effective application of advanced technologies.

Prior to DerivHack, distributed ledger technology provider Digital Asset had worked with ISDA to develop an open source reference code library to assist developers in implementing the CDM in solutions for trading and managing derivatives via its smart contract programming language, DAML. Many of the teams that competed in DerivHack

used DAML to work with the CDM and develop solutions.

"Initiatives such as the DerivHack have been very valuable in raising awareness of the benefits of smart contracts and the CDM. Now we want to see a move towards production, whereby institutions can leverage languages like DAML in conjunction with the CDM to automate and reduce the burden of non-differentiating post-trade processes," says Yuval Rooz, co-founder and chief executive of Digital Asset.

CDM'S VALUE EXTENDS BEYOND DERIVATIVES

ISDA's Common Domain Model (CDM) was originally born out of discussions among ISDA members back in 2017. As the implementation of post-crisis regulation in the derivatives market entered a new phase of review and refinement, market participants recognised that the post-trade infrastructure had become excessively complex, disjointed and costly to maintain.

The development of the CDM appeared to be worth exploring as a way of bringing about the standardisation that would be needed to address these issues and move towards digitisation of post-trade processes. Three years later, the CDM is now readily available and has been deployed and tested in the market. Its value has also been recognised beyond the derivatives world by practitioners and trade associations in other markets, such as securities lending where the need for

standardisation is just as relevant.

"Because of the very detailed reporting obligations in the Securities Financing Transactions Regulation (SFTR), which requires the industry to standardise data and create efficiencies, our market is now in a much better position to consider the use of the CDM than it was a few years ago. While our front office is already fairly automated, with widespread use of trading platforms, there is much less uniformity and efficiency in the back office," says Andrew Dyson, chief executive of the International Securities Lending Association (ISLA).

As its members manage the implementation of SFTR, ISLA has set standardisation and digitisation high on its agenda. A whitepaper published by ISLA and Linklaters in September 2019 on the future of the securities lending market

recognised the need for common data representations as a first step towards standardising and streamlining inefficient and costly legacy processes.

"The fact is that technology vendors in our market have to work hard to unravel the spaghetti of legacy systems that don't talk to each other, so if they can start to develop product to a common standard, that will percolate across the market and should ultimately make the movement of securities and collateral more efficient," says Dyson.

"For a very long time, the agenda in our market has been set by regulators, but for the first time in many years, we can now set our own course," he adds. "There is clearly an exciting opportunity to work towards greater efficiency and collaboration across markets, which will in turn enable our own market to flourish."

"Post-financial crisis, there are higher cost pressures and more regulatory mandates forcing firms to refine their trading processes. Moreover, any part of the trade lifecycle that doesn't help a firm differentiate itself should really be automated to create efficiency and reduce cost and risk," he says.

Standardisation is the essential stepping stone towards realising that efficiency. While it is not a new concept, it has generally been confined to messaging and communication. The Financial products Markup Language, for example, has been an essential component of derivatives markets for the past 20 years. Technologists now recognise the need for greater standardisation in the actual processing of trades, which can be achieved with CDM.

"When you look at the industry, you realise that every transaction is replicated in dozens of systems across different entities. Every party has its own version of each transaction, which opens the door to potential inconsistencies. Today, market participants use reconciliation systems to address this, but because there is no standardisation, the reconciliation process is complex and must be repeated again and again all along the life of the transaction, which is very costly and prevents real-time straight-through processing," says Jean-Baptiste Gaudemet, product management leader at Finastra.

Gaudemet believes solving the matching and reconciliation challenge will dramatically change the cost structure of the industry. Embracing the CDM as a market standard so that all entities can represent their version of a transaction using a single default language is only the first step, however. Financial institutions, technology providers and market infrastructures need to work together to enhance interoperability, reduce reconciliation and promote straight-through processing.

"We have found that dealers are excited about the CDM because they see the potential to dramatically streamline trade processing, which today represents a pure tax on the middle and back office. Over the course of 2020, I think we will begin to see dealers exploring ways to use the CDM and smart contract tools like DAML to improve the way trades are processed," says Rooz.

While the initial version of the CDM was developed for interest rate and credit derivatives, ISDA is further developing the model to support forwards and foreign exchange. To ensure the CDM evolves in line with the needs of market participants, ISDA is also establishing a governance framework that will involve feedback from a diverse group of ISDA members and non-members.

"The CDM represents a once-in-a-generation opportunity to restructure the foundations of the market," says Scott O'Malia, chief executive of ISDA. "There are always reasons to do nothing and maintain the status quo, but the challenges we face today will not get any easier, and we will never be able to fully harness the potential of new technologies if we don't seize this opportunity."

During the course of 2020 and beyond, the derivatives market will face a number of key challenges, including

BENEFITS OF THE CDM

The Common Domain Model (CDM) provides a machine-readable and machine-executable data model for derivatives products, processes and calculations. Having a single, common digital representation of derivatives trade events and actions will enhance consistency and facilitate interoperability across firms and platforms, providing a bedrock upon which new technologies can be applied.

Specific benefits include:

- The CDM will speed up the development of new technology solutions for the derivatives market by allowing providers to focus on the technology itself, rather than requiring them to interpret and represent derivatives market events and processes individually.
- The CDM promotes transparency and alignment between regulators and market participants. For example, regulatory obligations such as reporting or stress testing could be met by specifying via code that certain CDM components or transaction data should be collected and presented in a certain way. This will drastically improve fidelity and integrity of regulatory data, removing regulatory and interpretation risk.
- · The CDM enables interoperability between systems and services, removing the burden of setting up connections to different systems and entities. For example, an ISDA Credit Support Annex might be shared with two collateral management systems, each responsible for different parts of the collateral process. If the data and processes are defined in the CDM, it allows for portability and frictionless interchange of information. This would be extremely costly and complex if every entity has its own bespoke and opaque formats and processes.
- The CDM provides the basis for successful cloud and artificial intelligence applications. Financial institutions implementing the CDM across businesses would be able to ensure frictionless analytics across asset classes for risk, capital and margin purposes.
- Using the CDM, ISDA can communicate best practices, definitions and standards in a more complete and formal manner to ISDA members and others. For example, updates to ISDA legal definitions could be accompanied by a CDM-coded version of the changes, removing the risk of misinterpretation by developers reading legal text.

benchmark reform and the adoption of risk-free rates, as well as the continuing implementation of initial margin requirements. Technology creates an opportunity to do things differently, but the industry needs standards and digitisation to maximise this potential.

"We are now at a very exciting juncture where the CDM is being tested for all sorts of different use cases across the industry. ISDA's work on benchmark reform will be supported by CDM code to help facilitate a smooth transition, and we will soon see the impact of the model extend across the industry as major infrastructure and technology vendors use it to solve some of the biggest challenges we face," says Sloyan. 10

To find out more about the CDM, visit www.isda. org/2019/10/14/isda-common-domain-model/

New, more robust fallbacks for derivatives referenced to certain interbank offered rates will be published this year. What will be covered, and how can market participants prepare for the change?

This will be a critical year for benchmark reform, as market participants ramp up their efforts to adopt alternative risk-free rates (RFRs) ahead of end-2021, the date the UK Financial Conduct Authority (FCA) has said it will no longer compel or persuade banks to make LIBOR submissions. As firms focus on transition, another important initiative will come to fruition this year that will reduce the systemic risk posed by continued exposure to LIBOR and other key interbank offered rates (IBORs) - the development of new fallbacks for derivatives.

Following a number of market-wide consultations, ISDA will publish amendments to the 2006 ISDA Definitions that, once they take effect, will incorporate fallbacks into new derivatives trades referencing certain key IBORs. Simultaneously, a protocol will be launched that will allow counterparties to include fallbacks in legacy trades if they choose to. Both will be published this year, and should take effect approximately three months after publication.

"The implementation of robust fallbacks within derivatives contracts is an extremely important part of the overall benchmark reform effort, and will go a long way to mitigating the systemic risk posed by ongoing exposure to IBORs. Having robust fallbacks clearly defined in derivatives documentation will minimise market disruption following an IBOR's demise," says Scott O'Malia, ISDA's chief executive.

Work on fallbacks has been under way since 2016, following a request from the Financial Stability Board's Official Sector Steering Group (FSB OSSG) for ISDA to participate in work to enhance the robustness of derivatives contracts that reference key IBORs. The RFRs identified by various public-/private-sector working groups as alternatives to the IBORs were quickly selected as a basis for the fallback rates, but it was recognised that adjustments would be necessary in order for the fallbacks to be applied to contracts originally negotiated to reference an IBOR.

Adjustments

These adjustments reflect structural differences between IBORs and the RFRs. IBORs are currently available in multiple tenors - for example, one, three and six months - but RFRs are overnight rates. The IBORs also incorporate a bank credit risk premium and a variety of other factors (such as liquidity and fluctuations in supply and demand), while RFRs do not.

ISDA has run a number of marketwide consultations over the past 18 months to reach a consensus on the methodology for these adjustments - the first in 2018 covering sterling LIBOR, Swiss franc LIBOR, yen LIBOR, TIBOR, euroyen TIBOR and the Australian Bank Bill Swap Rate, and a supplemental consultation last year on US dollar LIBOR, Hong Kong's HIBOR and Canada's CDOR. In both cases, a majority of respondents preferred a 'compounded setting in arrears rate' to address the difference in tenors, and a significant majority across different types of market participant preferred a 'historical

"Having robust fallbacks clearly defined in derivatives documentation will minimise market disruption following an IBOR's demise"

Scott O'Malia, ISDA

mean/median approach' to address the difference in risk premia.

A further consultation was published in the second half of 2019 to flesh out the details of those methodologies. The results, which were published in November, found that a majority of participants preferred a historical median approach over a five-year lookback period for the spread adjustment. For the compounded setting in arrears rate, a clear majority favoured a two-banking-day backward shift adjustment for operational and payment purposes.

On the heels of that, ISDA published an additional consultation on the spread and term adjustments that would apply to fallbacks for derivatives referencing euro LIBOR and EURIBOR - the timing reflecting the fact that the alternative rate for euro, €STR, has only been published since October. That consultation closed on January 21.

"With these consultations now complete, ISDA is closer to being able to publish the amendments to the 2006 ISDA Definitions, as well as the protocol for legacy trades. Assuming the feedback for euro LIBOR and EURIBOR is consistent with our earlier consultations, we'll implement these fallbacks at the same time as the other nine," says Ann Battle, assistant general counsel and head of benchmark reform at ISDA.

Publication

Deciding on the methodology for the adjusted RFR is one thing, but it's also important that market participants are able to access the new fallback rates as easily as they were able to access LIBOR.

In response, ISDA selected Bloomberg to calculate and publish the adjustments, following a request for proposal process last year. Bloomberg will publish a compounded setting in arrears rate for each RFR for each relevant term, the median of the historical differences between the IBOR and the compounded RFR for each tenor over a fiveyear period, and an 'all-in' fallback rate for each tenor. Publication of this information as 'indicative fallback rates' will begin soon after the amendments are published by

"Bloomberg will make IBOR fallback calculations broadly available to industry participants. Market participants can

FALLBACKS: THE NEED TO KNOW

Once the amendments to the 2006 ISDA Definitions and the protocol are published, market participants will have approximately three months to prepare for them to take effect. Among the issues that need to be considered are:

Understand the documentation and protocol: Get to grips with the amendments being made to the 2006 ISDA Definitions. These changes will apply to all derivatives referencing the relevant interbank offered rates (IBORs) that incorporate the 2006 ISDA Definitions and are executed after the amendments take effect. Specifically, ISDA will amend certain floating rate options in Section 7.1 of the 2006 ISDA Definitions for certain IBORs to incorporate the fallbacks. For legacy trades, understand the implications of adhering to the ISDA protocol, which will alter outstanding derivatives with other adhering parties to include the fallbacks. When published, both the amendments to the 2006 ISDA Definitions and the protocol will be available on the ISDA website.

Protocol adherence: Decide whether to adhere to the ISDA protocol. Determining factors may include a desire to maintain consistency between legacy books and new derivatives that incorporate the amended 2006 ISDA Definitions (which will include

the fallbacks), and between cleared and non-cleared derivatives (the major central counterparties (CCPs) have announced they will make changes to their rule books to incorporate the ISDA fallbacks for new and legacy cleared trades). Participants will not need to adhere to the protocol for their cleared legacy trades at major CCPs - this will be done automatically via changes to the CCP rule book.

Infrastructure: The methodology to determine the adjusted fallback rate involves a compounded setting in arrears calculation. Firms should make sure their internal systems and processes are set up to cope with a rate that is known at the end of the period instead of the start.

Access to the fallback rates: Bloomberg will publish the adjustments and all-in fallback rates via a variety of distribution platforms. Understand how best to access that information and the terms of use. A set of FAQs is available at: bit. ly/373C8D3.

Next steps: Fallbacks are not intended to be a primary means of moving from IBORs to risk-free rates. So, once the fallbacks are in place, market participants should focus on voluntary transition before the cessation of any key IBOR.

choose from various access points that suit their operational needs, including via other vendors and the publicly available Bloomberg website," says Umesh Gajria, global head of index-linked products at Bloomberg.

Even with the adjustments, however, the fallback rates will not exactly match the IBORs they replace. As a result, it is important for market participants to implement the fallbacks and then use the time prior to cessation to negotiate with counterparties and transition voluntarily, says ISDA's Battle.

"We strongly recommend that firms continue to voluntarily shift from IBORs to risk-free rates ahead of end-2021. Rather than being the primary means of transition, fallbacks are more like seatbelts or parachutes. You hope you won't need them, but they exist as a fail safe," she says.

Pre-cessation

Most of the consultations published to date have focused on fallbacks that will kick in following the permanent cessation of an IBOR. But there has also been discussion about whether and how to incorporate \longrightarrow

-> pre-cessation fallbacks that would take effect following a statement from a regulator that LIBOR is no longer representative of an underlying market.

Following a request from the FSB OSSG, ISDA ran an industry consultation on pre-cessation fallbacks last year. That consultation found market participants would generally not want to continue referencing LIBOR in existing or new derivatives contracts following a statement from a supervisor that it is no longer representative. However, there was no consensus on how to implement precessation triggers, including whether the permanent cessation fallback rates should apply following a 'non-representativeness' determination.

In a letter to the FSB OSSG in December, ISDA stated it will continue to finalise fallbacks that take effect following a permanent cessation of an IBOR. Simultaneously, ISDA will work with regulators and the industry to increase market understanding of the implications of a non-representative IBOR, in order to determine whether consensus can be reached on whether and how to implement precessation fallbacks.

In doing so, additional information on two points would help provide some clarity - the length of time a non-representative IBOR would be published and the specific action central counterparties would take.

There has been progress on both of these points. For example, LCH launched a consultation in January on proposed rule book changes to implement precessation fallbacks. In the same month, letters sent to ISDA by the FCA and ICE Benchmark Administration (IBA) also provided some detail on the length of time a non-representative LIBOR would be published.

"The letters from the FCA and IBA set out useful details for market participants to consider in the context of pre-cessation fallbacks for LIBOR, including welcome additional information on how long a nonrepresentative LIBOR would be published. ISDA will continue to co-ordinate with market participants and the FSB OSSG on this topic," says ISDA's O'Malia.

With fallbacks scheduled for publication this year, the derivatives market will soon have an important safety net in place.

FALLBACKS: THE BASICS

What is a derivatives fallback?

Fallbacks are replacement rates that would apply to a derivatives trade referenced to certain interbank offered rates (IBORs). These would take effect in the event the relevant IBOR becomes unavailable while market participants continue to have exposure to that rate. Specific fallback rates are set out in the 2006 ISDA Definitions. ISDA is working on new robust fallbacks that would apply in the event of a permanent cessation of a key IBOR.

Why are changes to fallbacks necessary?

Current fallbacks under the 2006 ISDA Definitions require the calculation agent to obtain quotes from major dealers in the relevant interdealer market. If an IBOR has been permanently discontinued, it is likely that major dealers would be unwilling and/or unable to give such quotes. It is also likely that quotes could vary materially across the market. With respect to LIBOR, the UK Financial Conduct Authority has stated that it will not compel or persuade banks to make LIBOR submissions after the end of 2021, raising the likelihood that LIBOR will cease to exist after that date.

What rates have been chosen as fallbacks?

It was determined that the fallbacks will be the risk-free rates (RFRs) identified by public-/private-sector working groups in each jurisdiction as alternatives to the IBORs. These are AONIA (Australian dollar), CORRA (Canadian dollar), €STR (euro), HONIA (Hong Kong dollar), SARON (Swiss franc), SOFR (US dollar), SONIA (sterling) and TONA (yen).

What is a fallback adjustment?

There are inherent structural differences between the IBORs and RFRs. IBORs

are available in multiple tenors while RFRs are overnight rates. The IBORs also incorporate a bank credit risk premium and other factors. Adjustments are therefore needed to the RFRs to ensure contracts originally negotiated to reference an IBOR continue to meet their intended objectives.

What are the 2006 ISDA Definitions?

The definitions are published by ISDA to provide a basic framework for the documentation of privately negotiated interest rate and currency derivatives transactions. The 2006 ISDA Definitions are intended for use in confirmations of individual transactions governed by ISDA Master Agreements, and are also referenced by central counterparties that clear interest rate and currency derivatives transactions. From time to time, ISDA publishes supplements to amend the 2006 ISDA Definitions on its website. The amendments made by these supplements apply to transactions referencing the 2006 ISDA Definitions that are entered into on or after the date the relevant supplement is effective.

What is an ISDA protocol?

A protocol is a multilateral contractual amendment mechanism that is used to effectuate standard amendments to ISDA documentation among adhering counterparties. Protocols provide an efficient way of implementing industry standard contractual changes over a broad number of counterparties. Legally, the effect of protocols is the same as bilateral amendments among adhering parties, but protocols have the benefit of eliminating the need for costly and time-consuming bilateral negotiations.

Market participants can then focus on broader voluntary transition efforts, safe in the knowledge that fallbacks will take effect in the worst case.

"Like regulators, we strongly believe

robust fallbacks are an essential means of mitigating systemic risk, and we share the same objective of delivering industry endorsed solutions that provide broad protection," says O'Malia.





asset management group

Benchmark Strategies Forums 2020

February 12: New York | February 26: London

The ISDA/SIFMA AMG Benchmark Strategies Forum will explore the issues market practitioners should consider as they adopt and trade alternative risk-free rates (RFRs). These conferences in New York and London will look at progress in building liquidity in RFRs, and consider how the transition from LIBOR and other IBORs is influencing trading and hedging strategies in the cleared and noncleared derivatives markets. Delegates will also learn about the implications of new contractual fallbacks for derivatives, as well as pricing and valuation issues arising from benchmark transition.

- Building liquidity in RFRs
- Trading alternative RFRs
- Managing legacy books
- Implementing fallbacks
- Changes to cleared derivatives
- Outstanding challenges

Who Should Attend: Senior industry participants from the buy and sell side involved in trading, structuring, risk, legal and compliance, as well as infrastructure providers, benchmark administrators and vendors.

Registration is free for buy-side firms.



Visit www.isda.org/events/isda-benchmark-strategies-forum-2020/ for more information and to book your delegate pass.







A Multi-rate Approach

Australia is pursuing a multi-rate approach to benchmark reform, with the reformed BBSW continuing to operate alongside AONIA. Christopher Kent, assistant governor (financial markets) at the Reserve Bank of Australia, explains how local and global market participants need to prepare

IQ: At the ISDA Australia conference in Sydney in October 2019, you said the biggest risk associated with LIBOR is that the industry is not ready by the end of 2021. How should firms prepare?

Christopher Kent (CK): First and foremost, senior management - from the chief executive down - need to acknowledge that LIBOR will end, and that it is a problem that needs attention. Second, they need to understand the size and nature of their exposures to LIBOR. The on- and off-balance-sheet exposures are more obvious, but LIBOR is also likely to be used extensively for pricing, valuation and risk management processes. Once they have assessed the full extent of their exposures, they need to put in place transition plans. These should cover the transition from LIBOR to robust benchmark rates, such as the risk-free rate (RFR) — this is appropriate for new contracts, but can also apply to existing contracts. They should also involve adopting robust fallback provisions in contracts referencing LIBOR, and making the relevant changes to operational processes and IT systems to support the transition.

On the issue of switching from LIBOR in existing contracts, I should note that more than £4 billion of outstanding LIBORlinked securities in the UK have now been switched to reference compounded SONIA through consent solicitation processes. This is an established process that others can

Firms that are not progressing with

such transitions, or do not devote sufficient resources to the task, are taking a significant risk. After 2021, when LIBOR ends, they face the real risk of extensive contract frustration and litigation. This will not only be a significant disruption to their own business, but it also risks disruption to the financial system more broadly.

While all of this may seem a daunting task, holding off to see how things evolve is a very risky strategy, given the significance of the problem and the tight timeline. There is a lot of good work under way by various industry bodies that firms can tap into to keep up to date and get support on these issues. This includes the work of ISDA, loan market associations around the world, and the likes of the Australian Financial Markets Association (AFMA) and the Australian Securitisation Forum (ASF) in Australia.

IQ: Australia is slightly different from other jurisdictions in that a multireference rate approach has been agreed, whereby AONIA will operate alongside the Bank Bill Swap Rate (BBSW) rather than replacing it. Why was this approach adopted?

CK: BBSW rates have long been important credit-based and term benchmarks in Australia. Bank bills provide an important source of funding for banks, and are an important liquid asset for fund managers - so the underlying supply and demand is there.

The bank bill market as a share of Australian bank balance sheets is much larger than the equivalent markets in the US and Europe, and it is supported by a sufficient number of transactions to build robust benchmarks. Australia is not alone in taking this multiple rate approach. It's also used in Canada and many Asia-Pacific jurisdictions.

IQ: What has been done to make BBSW more robust and viable than other IBORs?

CK: The Australian regulators have worked closely with the industry and the BBSW benchmark administrator, ASX, to strengthen BBSW as a benchmark. This has involved implementing a new transactionsbased methodology that is consistent with the International Organization of Securities Commissions' principles, and, importantly, including a robust waterfall of fallbacks. The Reserve Bank of Australia (RBA) has also moved the time of its daily market operations to support liquidity in the BBSW market. Furthermore, the Australian government has implemented a new regulatory framework for benchmarks, overseen by the Australian Securities and Investments Commission (ASIC), to address uncertainty firms were facing by participating in markets underpinning benchmarks. In July 2019, the European Commission assessed Australia's benchmark regime as sufficiently equivalent to its own, which supports the use of BBSW and AONIA internationally.



"Firms that are not progressing with such transitions, or do not devote sufficient resources to the task, are taking a significant risk. After 2021, when LIBOR ends, they face the real risk of extensive contract frustration and litigation"

IQ: How might transition efforts differ under a multi-rate approach? How should firms determine which rate to use for their derivatives business?

CK: While we don't have the same urgency to transition away from a credit-based benchmark like LIBOR, we cannot afford to be complacent. The experience with LIBOR highlights that the future is uncertain, so putting in place robust contractual fallbacks is very important, whatever benchmark rate is being used.

Furthermore, just because BBSW remains

robust does not mean it is the right reference rate for all products. For many financial products, it will still make sense to reference a credit-based benchmark, such as BBSW, which measures banks' short-term wholesale funding costs. For others, an RFR may be more appropriate - floating rate notes issued by governments, non-financial corporations and securitisation trusts are possible examples. What is conceptually the most appropriate reference rate for a product will depend on the nature of that product. For derivatives, it will be the rate that meets the hedging purpose of the derivative or otherwise best suits the product's purpose. Ultimately, it is up to financial market participants to decide which reference rate makes most sense for their products, taking all these factors into account. In this regard, I suspect that for some products, approaches adopted widely by market participants offshore will have an important bearing on which reference rates are ultimately used in Australia.

IQ: A large proportion of debt in Australia is issued in foreign currency and swapped back using crosscurrency swaps. Is it possible to have an IBOR-RFR cross-currency swap, or will market participants prefer RFR-RFR cross-currency swaps?

CK: It is certainly possible to have an IBOR-RFR cross-currency swap, but whether market participants adopt this or instead prefer a swap with RFRs on both sides is something only they can answer. The Alternative Reference Rates Committee is a group of market participants and officialsector representatives convened by the US Federal Reserve Board and the Federal Reserve Bank of New York to aid the successful transition away from US dollar LIBOR. This group has been working on new interdealer market conventions to facilitate both RFR-RFR and IBOR-RFR cross-currency swaps, so market participants have the choice. Ultimately, it is up to dealers and their end customers to determine which pair of benchmarks is most appropriate for their needs. As I've already noted, there are a number of currencies that are maintaining IBORs, so it isn't certain that all cross-currency swaps will shift to having RFRs on both sides. Having ->

"The experience with LIBOR highlights that the future is uncertain, so putting in place robust contractual fallbacks is very important, whatever benchmark rate is being used"

→ said that, you can imagine that if the swaps market internationally shifts largely to RFR-RFR, then it is likely that swaps using the Australian dollar would do the same, adopting AONIA.

IQ: Why are fallbacks still important in a multi-rate environment?

CK: What we have all learned from LIBOR is that benchmarks shouldn't be taken for granted. We cannot assume they will always be there, so putting in place robust contractual fallbacks is very important. In the case of BBSW, while underlying demand from managed funds for bank bills as liquid assets remains, bank bills have been slowly declining both as a share of managed funds' assets and major banks' liabilities. This is partly due to the liquidity standards introduced over recent years, which reduced the value banks place on short-term wholesale funding. It's also worth noting that one-month BBSW is already largely a buy-back market, and has seen a lower number of transactions of late than for other tenors. It has also been subject to considerable short-term volatility. Having robust fallback provisions in all contracts referencing BBSW is very important to ensure a smooth transition should the BBSW benchmark cease to exist at some point in the future. Indeed, for new securities referencing BBSW, the RBA will make it a requirement that ISDA's soon-tobe-published fallback provisions be adopted before these securities can be eligible in the RBA's market operations.

IQ: How would you describe the level of readiness among Australia's financial institutions, both in terms of transition to RFRs and the development of more robust fallbacks?

CK: Australia's financial regulators expect all institutions that currently make use of LIBOR to consider how they will transition away from these rates smoothly and reduce the risks associated with the pending end of LIBOR. Accordingly, ASIC, with the strong support of the RBA and the Australian Prudential Regulation Authority (APRA), last year wrote to the chief executives of a number of major Australian financial institutions - including large and smaller banks, super funds and insurance companies - about their preparations for the end of LIBOR. The regulators are currently going through the responses in detail and the results will be published in the coming months, but a number of things were immediately clear. While a lot of good work is already under way in a number of institutions, the 'Dear CEO letters' have helped raise awareness at other institutions of the issues and the magnitude of the task at hand.

As you might expect, there are different stages of readiness across the industry, with the internationally exposed banks the most prepared - although even these note the difficulties with the scope of work. By contrast, the smaller banks and buy-side firms are less prepared. They tend to have less resources to devote to the task, and are more reliant on counterparties and external advisers to navigate the transition. More generally, in Australia, as elsewhere, most work remains to be done in cash markets. Although these account for a relatively small share of LIBOR exposures, they will also involve the most transition effort given the

bespoke nature of individual contracts, with agreement from all counterparties required to amend terms.

It is pleasing to see the first signs of progress on transitioning to RFRs. The major Australian banks have already issued a number of sterling floating-rate bonds referencing SONIA. Last year in Australia, we also saw a floating rate note referencing AONIA issued by the South Australian Government Financing Authority and a residential mortgage-backed security referencing one-month compounded AONIA issued by Commonwealth Bank of Australia. Common feedback from firms is that they are waiting for international conventions on fallbacks to be determined before taking action on this front. ISDA's final fallback language is due to be published soon, and we will be looking for firms to adopt this wherever possible once it is made available.

IQ: Some market participants, particularly in cash markets, are keen to see the development of forward-looking term rates to support transition. How would this help and how likely is it?

CK: As in other markets, some Australian market participants, most notably those in cash markets, have expressed interest in forward-looking term RFRs with similar tenors to LIBOR and BBSW. This would minimise the contract and system changes required in those markets where existing infrastructure is built on the use of forwardlooking term rates. In the Australian context, it could be possible to generate a forwardlooking term rate using transactions and executable prices from the overnight indexed swap market, the futures market or the repo market. Unlike in some other jurisdictions, these markets are well established.

Even in Australia, however, there would need to be significant effort to develop the appropriate market infrastructure and practices to ensure sufficient liquidity and transparency in the underlying derivatives markets before these could be considered robust benchmarks. In the meantime, market participants - particularly those using LIBOR, which has an imminent end date - should be preparing to use compounded overnight RFRs, rather than waiting for the emergence at some future uncertain date of a forward-

looking term RFR, which may or may not turn out to be sufficiently robust. Indeed, we have already seen issuance based on compounded RFRs in a number of jurisdictions, including Australia. I should note that users in Australia relying on forward-looking term rates also have the option of continuing to use BBSW. However, as I've already noted, BBSW is more robust at some maturities than others, and it's important that users consider which reference rate makes most sense for their product.

IQ: What role has Australia's official sector played in supporting transition efforts and encouraging trading in the risk-free rates? How might this develop as time goes on?

CK: Regulators around the world, including in Australia, have been working with the industry in a variety of fora to support a smooth transition

to RFRs, where appropriate, and to ensure that robust fallbacks for reference rates are included in contracts. The RBA has engaged actively with global benchmark reform through the Financial Stability Board's Official Sector Steering Group (FSB OSSG) to ensure we are abreast of global

developments and the Australian perspective is duly considered.

In particular, the RBA, APRA and ASIC have been working with ISDA to strengthen the contractual fallbacks for BBSW at the same time as LIBOR. As I've already mentioned, the RBA will require these fallback provisions to be adopted in new securities for them to be eligible in the RBA's market operations. The Australian financial regulators have also been involved in the FSB OSSG's work to identify areas where global coordination on accounting, tax and regulatory issues is appropriate to assist in the transition to RFRs. They also continue to work with domestic industry

letters sent by ASIC and endorsed by APRA and the RBA were the start of an important direct engagement with firms on these issues, which will continue as transition progresses.

IQ: What support might smaller banks and buy-side firms need in order to ensure they keep up with the rest of the market in transition efforts?

CK: I would encourage these firms to engage with the work being done by industry bodies. There is a lot of great work and information they can draw on to make sure they keep

> abreast of developments and avoid reinventing the wheel.

"For new securities referencing BBSW, the RBA will make it a requirement that ISDA's soon-to-bepublished fallback provisions be adopted before these securities can be eligible in the RBA's market operations"

> groups in Australia, such as AFMA and the ASF, to raise awareness of the importance of contractual robustness and considered use of reference rates among industry participants. The financial regulators highlight benchmark issues regularly in public appearances, and the 'Dear CEO'

IQ: An ISDA consultation on pre-cessation issues last year found that the majority of market participants would generally not want to continue referencing LIBOR in existing or new derivatives contracts following a statement from a supervisor that it is no longer representative of the underlying market. However, there was no consensus on how to respond to such a statement in the context of fallbacks for derivatives contracts. What approach do you think should be taken with pre-cessation triggers?

CK: This is a question that the FSB OSSG and ISDA are currently working through. Australia, however, pre-cessation triggers are not relevant. There is no allowance in Australian law for an existing benchmark

to be declared non-representative. Only permanent cessation triggers - where the benchmark administrator stops publishing the benchmark or ASIC revokes the benchmark administrator's licence - are relevant for fallbacks to be triggered in the Australian market. 10

Reviewing Progress

The final pieces of the Basel III jigsaw will fall into place over the coming years as standards on market risk, counterparty credit risk and credit valuation adjustment are transposed and implemented around the world. IQ presents a bird's eye view of the outstanding issues

For the Basel Committee on Banking

Supervision, the dawn of this new decade represents the start of a new chapter of sorts. Following years of painstaking work, Basel III is now largely complete, at least at the global standard-setting level. As the rules are transposed and implemented around the world, the committee has a duty to rigorously monitor their impact and promote timely, consistent and effective implementation across all of its 28 member

The coming years will be dominated by implementation of some of the most challenging components of Basel III, including capital requirements for market risk, counterparty credit risk and credit valuation adjustment (CVA). In some cases, there are still areas of outstanding concern, where fine tuning may be necessary either at the Basel level or the local level. With a new chair and secretary general installed last year, the Basel Committee is in listening mode and recognises the need to fully engage with the industry during the next phase of implementation.

"The committee has a long and well established history of engaging with external stakeholders," said Basel Committee chairman and Bank of Spain governor Pablo Hernández de Cos in a speech in October 2019. "Our role as the global standard setter for banks demands nothing short of this. I intend to build on this commitment to engage transparently with a wide range of stakeholders as part of the committee's future work and its evaluation of post-crisis reforms."

So far, Basel III has had a positive effect on the resilience of the banking sector, at least in terms of overall levels of capital, liquidity and leverage. Internationally active banks have increased their supply of common equity tier-one capital by 85% since 2011 to more than €3.7 trillion, holdings of high-quality liquid assets have

risen by more than 60% to €13.6 trillion, and the level of bank leverage has fallen from 28 times to 17 times, according to Basel Committee estimates.

However, the next phase of Basel III looks set to be more challenging, as regulators, legislators and market participants grapple with more technical, granular changes to the capital framework. In some cases, such as CVA capital requirements, the Basel Committee has recognised the need to consult on targeted revisions. In other cases, concerns will need to be addressed at the national level when the standards are transposed into law.

Credit Valuation Adjustment

Following the financial crisis, regulators set about crafting a capital charge to capture the potential mark-to-market losses from derivatives that result from the deterioration of a counterparty's creditworthiness. While this is only one component of Basel III, it

The next phase of Basel III looks set to be more challenging, as regulators, legislators and market participants grapple with more technical, granular changes to the capital framework

With less than two years to go until the FRTB is due to be implemented on January 1, 2022, it is now up to individual jurisdictions to transpose the global standards on a consistent and timely basis

is particularly important because of the scale of counterparty credit risk volatility in derivatives portfolios during the crisis.

Following several rounds of consultation and review, the final CVA capital standards were issued in December 2017, alongside other Basel III revisions. The most obvious change at that point was the complete removal of the option to use internal models to calculate capital, leaving banks with the choice between either the standardised approach or the basic approach. The Basel Committee reasoned that CVA is a more complex risk than the majority of risks in banks' trading books and cannot be internally modelled in a robust and prudent way.

A confidential quantitative impact study (QIS) based on data submitted by 17 global systemically important banks showed that the calibration of the CVA framework would lead to a substantial increase in riskweighted assets and capital requirements. ISDA's analysis identified specific issues that contributed to the high capital impact: poor recognition of counterparty credit spread proxy hedges, a lack of alignment between accounting CVA and regulatory CVA and an overall conservative calibration of the framework. CVA risk therefore contributes significantly to overall capital requirements for derivatives.

Following a meeting in Madrid on October 30-31, the Basel Committee agreed to consult on a final set of limited and targeted adjustments to the CVA framework,

Increase in common equity tier-one capital held by internationally active banks since 2011

while sticking to an implementation deadline of January 1, 2022. A consultation paper was published on November 28, with revisions that aim to better align the CVA framework with the final market risk framework and improve the calibration of the capital requirements.

Comments on the proposed revisions are due by February 25. ISDA is working with its members to determine the impact of the proposed changes, and will submit its response ahead of the deadline.

Fundamental Review of the Trading Book

The revisions to the market risk framework, known as the Fundamental Review of the Trading Book (FRTB), represent one of the most significant changes in Basel III. After many rounds of drafting and consultation dating back to 2012, the Basel Committee published its final standards in January 2019, addressing a number of areas of concern that had been highlighted in

response to the previous version.

With less than two years to go until the FRTB is due to be implemented on January 1, 2022, it is now up to individual jurisdictions to transpose the global standards on a consistent and timely basis. So far, legislators in different countries have indicated they may take diverging approaches to the adoption of the rules.

In the European Union, reporting requirements are set to be adopted initially as part of the second Capital Requirements Regulation (CRR II), while binding capital requirements would follow under CRR III. More detailed proposals are expected later this year. US prudential regulators have not yet published a notice of proposed rulemaking, but this is expected in the coming months. In Asia, the Hong Kong Monetary Authority consulted on the technical aspects of the FRTB last year, while the Monetary Authority of Singapore carried out a more high-level policy consultation. Other regulators in the region have not yet started the consultation process.

As the process of transposing the FRTB into national and regional law continues, a number of areas of concern remain. While the revised standards are expected to significantly reduce the impact on overall market risk capital compared to previous versions of the FRTB, subsequent analysis has led to concerns that the capital requirements would remain very high in spite of the revisions.

These concerns are supported \rightarrow

would result in a weighted average increase of about 22% in total market risk capital requirements relative to the current Basel 2.5 framework, the Basel III monitoring report suggests the impact could be 55% higher on average, and the EBA advice suggests the impact could be 105% higher.

One of the key drivers of the high capital impact is the loss of diversification benefits in different parts of the framework, including the internal model approach (IMA), the standardised approach (SA) and the default risk charge. Analysis has shown that even if the sum of desk-level capital remains constant compared to current requirements, the overall market risk capital requirement will increase at an aggregate level because of the diversification constraints.

In addition, there are also more granular concerns over the product-level impact of the FRTB. For example, there is ambiguity over IMA eligibility for equity investments in funds. In order to be eligible for IMA, a bank must be able to decompose the funds on a daily basis, and capital must be calculated using the SA for funds that are not eligible. The SA for equities would be particularly punitive due to high risk weights and the lack of delta-gamma diversification.

A disproportionate increase in market risk capital could adversely impact banks' intermediation activities, potentially affecting their ability to provide the financing and hedging services that are so important for a vibrant economy. ISDA has been working to ensure the Basel Committee and national regulators are aware of key areas of concern as they transpose the rules.

Standardised Approach to Counterparty Credit Risk

In drawing up the standardised approach for measuring counterparty credit risk (SA-CCR) to replace the current exposure method and the standardised method, the Basel Committee sought to find a more

Analysis has shown that the output floor would have a much more significant and widespread impact than intended, driving a substantial increase in risk-weighted assets

> granular, risk-sensitive methodology that would appropriately differentiate between margined and non-margined trades, while also recognising the benefits of netting.

> The SA-CCR framework was originally finalised in 2014, with implementation scheduled for January 2017, but this timetable was delayed. The standard is now live in certain jurisdictions, while Europe and the US have set implementation for mid-2021 and January 1, 2022 respectively.

> As SA-CCR is used in the calculation of multiple risk-based capital requirements, including the leverage ratio, it can have a significant impact on exposures and capital requirements. It is therefore particularly important that the rules are appropriately calibrated to avoid unintended consequences.

In early 2019, ISDA ran a QIS on the US agencies' proposed rule and found that it would result in increases in capital requirements for derivatives of 30% overall and 50% for end users. A number of recommendations were made to address this, including the recalibration of proposed supervisory factors for commodities and equities.

> The final US rule, published in November 2019, addressed some of the concerns that had been raised in response to the notice of proposed rule-making. For example, the alpha factor was removed from the exposure amount formula for derivatives contracts with commercial end users, in recognition of the fact that these users may be less likely to present the types of risks the alpha factor was designed to address. The final rule also included greater recognition of collateral in the calculation of total leverage exposure relating to client cleared derivatives, thereby avoiding a negative impact on client clearing.

> The US rule represents considerable progress on what had previously been proposed, but it also highlights the key areas of concern relating to

SA-CCR. In Europe, the standard is set to be implemented as part of CRR II in June 2021, and the EBA has said it will review the rules four years after implementation. ISDA has asked for the SA-CCR calibration to be reconsidered at the Basel level to ensure the standard is implemented consistently across jurisdictions.

Leverage Ratio

The Basel III leverage ratio was always intended to act as a backstop to risk-weighted capital requirements, incentivising banks to maintain healthy capital buffers well above the leverage ratio. However, concerns had been raised that the leverage ratio in its original form would have had a negative impact on client clearing businesses because of its failure to recognise the exposurereducing effects of initial margin.

In June 2019, the Basel Committee

finalised targeted revisions to the leverage ratio to align the treatment of margin with SA-CCR and thereby allow margin received from a client to offset the exposure amounts of client-cleared derivatives. This was an important step because, without these revisions, the leverage ratio would have significantly increased the amount of capital needed to support client clearing, which could have led some banks to scale back or withdraw from the business.

The industry welcomed the revisions on the basis that they provide the right incentives for central clearing, a key practice in the broader regulatory framework, without undermining the original objectives of the leverage ratio as a robust backstop to risk-weighted capital requirements. It is now critical the revisions are implemented consistently across all jurisdictions and institutions to avoid the creation of an unlevel playing field.

Output Floor

In an effort to limit the extent to which banks rely on internal models to calculate capital requirements, the Basel III output floor is meant to act as an aggregate backstop measure.

Finalised in December 2017, the revised output floor requires that banks' risk-weighted assets must be calculated as the higher of total risk-weighted assets calculated using the approaches the bank has supervisory approval to use, or 72.5% of the total risk-weighted assets calculated using only the standardised approaches. The output floor is to be implemented on a phased basis, starting at 50% on January 1, 2022, and rising by 5% each year until it reaches 70% in 2026 and 72.5% in 2027.

Analysis has shown that the output floor would have a much more significant and widespread impact than intended, driving a substantial increase in risk-weighted assets. While the objective was to ensure outlier banks cannot benefit from using overly aggressive internal model assumptions, and an appropriate minimum amount of capital is held by all banks, it appears that the effect of the output floor would be much greater.

Given the punitive effect of the output floor, many banks are now incorporating its impact into their transaction evaluation processes, and a measure that was designed as a capital backstop is instead becoming



Basel Committee deadline for revised Basel III standards to come into force



US regulators publish the final US rule for the standardised approach for measuring counterparty credit risk



The Basel Committee publishes a consultative document on revisions to the credit valuation adjustment risk framework



The Basel Committee finalises revisions to the leverage ratio treatment of client cleared derivatives



The Basel Committee publishes final revisions to the market risk framework, known as the Fundamental Review of the Trading Book

a determining factor in risk-return evaluation and capital allocation decisions. There is legitimate concern that without reconsideration, the output floor would significantly reduce the risk sensitivity of the Basel III framework and negatively impact the development of risk-sensitive internal models.

Benchmarks

While benchmark reform and the transition to risk-free rates (RFRs) might not be directly connected to Basel III, the replacement of interbank offered rates (IBORs) is widely considered to be one of the most material changes to banks' trading infrastructures in the history of regulatory capital and modelling standards.

With less than two years to go until the end of 2021, when the Financial Conduct Authority will no longer compel or persuade banks to contribute to LIBOR, the derivatives market is now squarely focused on adoption of the RFRs. This process is likely to impact significantly on risk and capital - for example, the transition could result in additional market risk capital under the FRTB as changes are made to banks' trading books, hedging tools and risk-factor universe.

As they transition from IBORs to RFRs in different jurisdictions, firms will need sufficient data to build or recalibrate their internal models. If this data is not available because the relevant RFRs are not yet widely traded, a period of forbearance might be necessary to avoid unnecessary capital increases. There is also the risk of a bottleneck if widespread model approvals are pursued simultaneously.

As liquidity moves from markets referencing IBORs to those based on RFRs, this may impact firms' modelling of counterparty exposure through an increase in the margin period of risk, which could impact corporate end users. There could also be an impact on contractual terms in certain instruments, leading to costly repapering exercises.

ISDA has been working with its members and other trade associations to identify the key issues arising from benchmark reform, and urges regulators to provide clarity where necessary to ensure a smooth transition without unintended consequences in risk and capital.

10 Questions with...

Eric Litvack

Eric Litvack, group director of public affairs at Société Générale, became chairman of the ISDA board in January 2015. Five years on, he talks about ISDA's achievements and the agenda for 2020

IQ: You became chairman of ISDA five years ago. What have been the biggest achievements of ISDA during that time?

Eric Litvack (EL): There have been many significant achievements, thanks to a disciplined and aligned organisation, which has seen ISDA firing on all cylinders. We delivered the Standard Initial Margin Model, which has been the backbone supporting the globally coordinated implementation of margin rules for non-cleared derivatives. We've built an impressive capital team, which regularly leads industry engagement, notably on trading book capital, as well as facilitating implementation. ISDA has been a driving force in the move towards implementation of benchmark fallbacks through its roadmap and industry consultations. Faced with cost challenges and evolving technologies, ISDA is constantly working with members to provide solutions and standards via our work on the Common Domain Model (CDM), data and collateral workflows. Wherever you look, ISDA has been preparing the derivatives market for the future, to ensure that safe, efficient risk management tools continue to be available to all users.

IQ: In your first interview with IQ in 2015, you listed the three biggest challenges in the derivatives market as cross-border conflict of law, scarcity of resources, and media and popular distrust. What are the three biggest challenges now?

EL: Those will continue to be the big and lasting challenges, because they are structural. The derivatives market is global,



but must conform to regulation that is local. Capital, solvency and cost pressures will continue to drive the allocation of scarce resources, and will push us as an industry to promote innovative and collaborative solutions. And working to overcome media and popular distrust via continued education and outreach is a constant challenge, because if you can't explain your social purpose in simple terms, then you won't remain in business for long.

IQ: How has the ISDA board changed during your time as chair?

EL: It has become broader and deeper. We've expanded the board membership from what was largely a rates and credit dealer-dominated group to a much more inclusive governance entity that represents the expanding and evolving nature of the market. We now have two central counterparties on the board, a broader range of end users, and a multinational development bank. The range of views, competence and expertise has expanded significantly in that time. The board structure has also become better aligned to provide ISDA with appropriate governance on all aspects of its mission. All board members serve on dedicated board committees, which oversee the ISDA working groups. That means every issue gets appropriate consideration and insight from a group of board members who constantly challenge the association to be best-in-class in all aspects.

IQ: What are ISDA's top priorities in 2020?

EL: Our priorities are guided by a simple question: where and how can we add value for our members and the marketplace? That means we'll continue to work on advocacy and implementation relating to the global capital rules, the final rollout phases of the margin rules for non-cleared derivatives, facilitating digital initiatives in the derivatives market through the CDM and digital documentation, improving collateral workflows, supporting benchmark transition and contract renegotiation, and furthering the development of netting recognition.

IQ: Benchmark reform will continue to be a top priority issue in 2020. What should be the main areas of focus for derivatives practitioners?

EL: Preparing for benchmark transition is a complex challenge. The first step is to identify all aspects of their business in which interbank offered rates (IBORs) are used, whether contractual fallbacks currently exist and whether they are fit-for-purpose, what the legal, tax and regulatory impacts of migration will be, whether and how alternative risk-free rates can adequately replace the existing indexes, how that transition should be managed for new transactions, and whether and how it can be managed for legacy transactions. ISDA is leading the work on derivatives, which is the largest part of the market in terms of notional amounts, but this project touches on all elements of finance. Far too many aspects of financial markets are still based on benchmarks for

unsecured wholesale term lending, which is an insufficiently active market to support robust indexation for all the current uses. This is simply not sustainable.

IQ: This year's ISDA annual general meeting (AGM) will take place in Madrid on May 5-7. Why should people attend?

EL: Because the AGM continues to be the pre-eminent event in the derivatives industry. The 35th annual meeting in Madrid will bring together hundreds of attendees from around the world for networking receptions, keynote speeches, first-class panel discussions and breakout sessions. It's an intense schedule, but well-balanced and absolutely worth every minute.

IQ: You recently took on a new role as group director of public affairs at Société Générale. What does the job entail?

EL: The job entails identifying developments in the regulatory and legislative landscape that are likely to have a significant bearing on the bank's business, agreeing core messages with the bank's leadership, carrying those messages in public fora, and helping the business adapt to regulatory change. At its core, the mission is to secure the firm to enable it to continue to grow and serve its clients. I previously held this role at the wholesale level, but the new job takes that responsibility to group level, which is a significant expansion - and quite daunting.

IQ: What is the best part of the role?

EL: Nothing is off-limits. At 3am on sleepless nights, that's arguably also the worst part.

IQ: We know you like cooking. What is your favourite meal to cook?

EL: Generally speaking, anything I haven't tried before. It's the creative challenge that makes cooking satisfying, as well as the feeling that you're opening up the horizons of the people you'll share a meal with. I like working with different spices, and I like working with time: whether it's slowcooking, or curing or even pickling. I find the transformation process fascinating. I like using locally sourced products for a range of reasons: it supports local farmers, it reduces the carbon footprint, and it challenges me to be creative. For similar reasons, but also out of a sense of respect, I'm very much of the nose-to-tail school.

IQ: What would a perfect weekend involve?

EL: My guilty secret is that my favourite weekend of the year is the one between Christmas and New Year. It's a rare time of the year when everything feels in balance. With luck, you'll have closed out all your deliverables for the year, and the next year's deliverables can be put to one side for a few days. It's the opportunity to see family, to enjoy a long walk in the countryside with the dog, to curl up in front of a roaring fire with a drink and a good book, and wait patiently while time works its magic on dinner. Io

Annual General Meeting

Madrid - May 5-7, 2020

The **ISDA Annual General Meeting** (AGM) is the premier event for derivatives professionals globally. Bringing together hundreds of senior industry executives and policymakers over three days, the event combines top-quality content during the day with unrivalled networking opportunities over two evenings.



Now in its **35th year**, the AGM in Madrid on May 5-7, 2020 will cover the topics most relevant and important to the derivatives market.

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Visit agm.isda.org for more information and to book your delegate pass

Year of Review

A review of the revised Markets in Financial Instruments Directive/Regulation and the Benchmarks Regulation will be high on the European policy agenda in 2020, writes Roger Cogan, ISDA's head of European public policy

The new European Commission (EC)

and European Parliament for the 2019-2024 term will focus on finalising a number of post-crisis reforms that impact derivatives, notably in the area of capital. The EC will also review the existing legislative framework, including the revised Markets in Financial Instruments Directive/Regulation (MIFID II/MIFIR), the Benchmarks Regulation (BMR), the Market Abuse Regulation and the Short Selling Regulation (SSR).

MIFID II/MIFIR has been one of the most ambitious reforms rolled out by European regulators, and was probably the industry's most challenging implementation exercise in the run-up to the January 2018 start date. Certain European Union (EU) member states have already signalled their intention to support limited changes to the existing regime, mostly to fix specific shortcomings or to address the consequences of Brexit.

However, the review may address a broader range of issues: commodity derivatives position limits; selling of financial products to retail investors (investment advice and inducements); calibration of pre-trade transparency; data and reporting; structure of markets (particularly the mandatory systematic internaliser regime); a consolidated tape for equity and non-equity markets; and market access.

ISDA strongly supports a limited approach to the review, and would welcome a focus by EU policy-makers on the following issues: recalibration of the pretrade transparency derivatives asset classes (ie, equity and commodity derivatives); limitation of the scope of the mandatory systematic internaliser regime to instruments traded on trading venues; and a more consistent approach to trade reporting across the EU.

ISDA will continue to highlight that changes to core MIFID concepts would affect many other pieces of legislation



(ie, the European Market Infrastructure Regulation, the SSR and the BMR), because the MIFID framework is the cornerstone of EU financial markets legislation.

The MIFID II/MIFIR review will also aim to address equivalence for trading venues. In the post-Brexit context, the equivalence determination process will be hugely important to market participants, and will be critical to ensuring market continuity and the avoidance of fragmentation. From an ISDA perspective, deference and an outcomes-based approach should be at the heart of the determination process.

The European Securities and Markets Authority (ESMA) is expected to produce advice in early 2020, which will feed into a report the EC will publish later in the year, ahead of a legislative proposal for a 'MIFID II/MIFIR Refit' or 'MIFID III'. The EC is also expected to launch a consultation in early 2020 on the review of this important legislation.

Benchmark reform

Another area of focus will be the regulation of benchmarks. On October 11, the EC

ISDA EUROPEAN PUBLIC POLICY

Roger Cogan is ISDA's head of European public policy. The European public policy team in Brussels and London supports ISDA's strategic goals, and represents ISDA's members on European regulatory and legislative issues.

launched its long-awaited consultation on various aspects of the BMR, seeking to gather stakeholder feedback on the functioning of the EU benchmarks regime, two years after its entry into force.

On the basis of the responses received, the EC will submit a report to the European Parliament and the Council of the EU in April 2020, which will assess whether there is a need to amend the BMR. It is understood that the EC will launch further consultations after the BMR review report is published, which will provide ISDA's members with additional opportunities to feedback on priority issues.

The consultation closed on December 31, and focused on: a) the regime for critical benchmarks; b) the effectiveness of the authorisation and registration processes for EU benchmark administrators; c) the calibration of BMR scope; d) the supervision of climaterelated benchmarks; e) the operation of ESMA's register for administrators; and f) the third-country regime.

This captures ISDA's main concerns about the BMR. In particular, ISDA has advocated for an overhaul of the BMR's third-country regime, which has resulted in significant compliance challenges for benchmark users, administrators and contributors. ISDA has put forward targeted proposals to the EC with a view to rectifying a number of shortcomings and complexities in the BMR.

MEMBERSHIP INFORMATION

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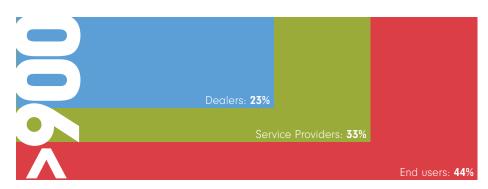
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ISDA has more than 900 member institutions from 72 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and 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

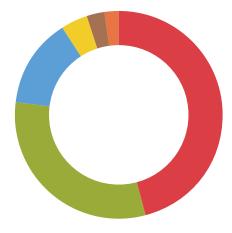


Banks	31%
Law Firms	22%
Asset Managers	10%
Government Entities	12%

Energy/Commodities Firms	7%
Diversified Financials	5%
Other	13%

GEOGRAPHIC COLLATERALISATION

Europe	46%
North America	31%
Asia-Pacific	14%
Japan	4%
Africa/Middle East	3%
Latin America	2%



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/

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Head of Membership



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

www.isda.org





What is the ISDA CDM?

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

WHY THE ISDA CDM?

Catalyst

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

Opportunity

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

BENEFITS OF THE ISDA CDM

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



"What we have all learned from LIBOR is that benchmarks shouldn't be taken for granted. We cannot assume they will always be there, so putting in place robust contractual fallbacks is very important"

Christopher Kent, assistant governor (financial markets), Reserve Bank of Australia