INTERVIEW
The EC's Martin Merlin on Basel III

DOCUMENTATION
The path to digital documents

BENCHMARKS
The end of US dollar LIBOR approaches

IQ

ISDA® Quarterly
Vol 9, Issue 1: April 2023 | www.isda.org

* UNDER SCRUTINY

Recent market shocks have led policymakers and market participants to consider how the risk of liquidity shortfalls could be remedied

ISDA® SwapsInfo

ISDA SwapsInfo brings greater transparency to the over-the-counter (OTC) derivatives markets. It transforms publicly available data on OTC derivatives trading volumes and exposures into information that is easy to chart, analyze and download. ISDA SwapsInfo covers interest rate derivatives (IRD) and credit derivatives markets.

Interest Rate Derivatives

Transaction Data

Daily, weekly and quarterly traded notional and trade count by product taxonomy.

Notional Outstanding

Notional of all IRD contracts outstanding on the reporting date.

Credit Derivatives

Transaction Data

Daily, weekly and quarterly traded notional and trade count by product taxonomy.

Market Risk Activity

Traded notional and trade count for single-name and index credit default swaps (CDS) that result in a change in market risk position.

Notional Outstanding

Gross and net notional outstanding and trade count for single-name and index CDS.

SwapsInfo.org

ISDA® Safe, Efficient Markets

All Shook Up

The collapse of Silicon Valley Bank (SVB) and Signature Bank and the acquisition of Credit Suisse by UBS are the latest in a series of shocks to have rattled financial markets. Some, like the failure of SVB, appear to be related to poor risk management combined with a high interest rate environment. Others, like the March 2020 dash for cash and the September 2022 gilt crisis, came about when external shocks triggered extreme price volatility followed by high margin requirements, a liquidity squeeze and widespread selling of assets, amplifying the impact and disrupting the functioning of core markets.

Regulators and central banks have been looking closely at the latter issue for some time, with the aim of shoring up potential vulnerabilities and identifying a set of tools to prevent this type of liquidity crunch from snowballing into a financial stability issue. Several regulatory workstreams are underway, including a review of margining practices that will explore levels of transparency in cleared markets, the liquidity readiness of market participants and the responsiveness of cleared and non-cleared initial margin models.

Firms themselves are also likely to be asking what steps they can take to inure themselves against future liquidity shocks. Part of the answer could be to further improve the operational efficiency of collateral management. While significant progress has been made in this space, some firms struggled to process the spike in margin calls in a timely way during the recent periods of stress because parts of the collateral management process are still subject to manual intervention. In response, ISDA is working with industry participants to encourage greater automation and data standardisation – changes that won't prevent liquidity stresses from occurring, but could ease the pressure points and reduce operational risks when they do.

This issue of **IQ** explores some of the implications of the recent stress events, including the regulatory response and industry efforts to increase efficiency in collateral management processes. Both these issues will also feature prominently at this year's ISDA Annual General Meeting in Chicago on May 9-11. It's not too late to book your ticket at agm.isda.org, so we very much hope to see you in Chicago.

Nick Sawyer
Global Head of Communications & Strategy
ISDA

ISDA Safe, Efficient Markets
International Swaps and Derivatives Association | www.isda.org
NEW YORK | WASHINGTON | LONDON | BRUSSELS | HONG KONG | SINGAPORE | TOKYO

Global Head of Communications & Strategy, **Nick Sawyer**, nsawyer@isda.org
Senior Director, Communications, **Joel Clark**, jclark@isda.org
Global Head of Public Policy, **Steven Kennedy**, skennedy@isda.org
Art Director, **Nick Palmer**, nick@sidelong.co.uk

IQ: ISDA Quarterly is an official publication of ISDA. Statements of fact and opinion expressed are not intended as endorsements.
Copyright 2023 by ISDA with all rights reserved. Published April 2023

CONTENTS

REGULARS

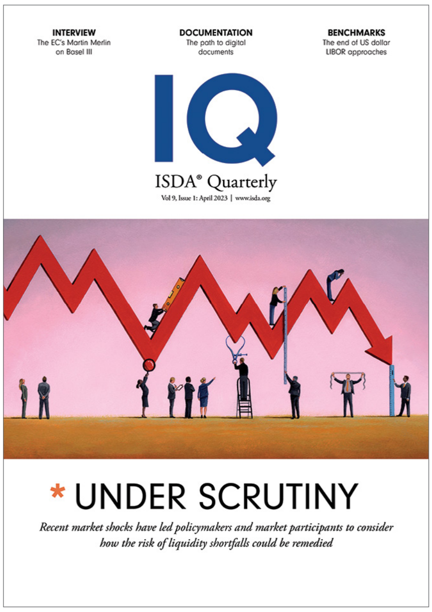
PAGE 40

ALSO IN THIS ISSUE

Volume 9, Issue 1: April 2023

* THE COVER PACKAGE

UNDER SCRUTINY



PAGE 20

"The rise in market-based financing over the past 15 years is a consequence of many factors, including the low-for-long interest rate environment. IOSCO is conscious of the structural vulnerabilities within NBFI, including liquidity and leverage risks"

Jean-Paul Servais, Financial Services and Markets Authority, IOSCO

Addressing Liquidity Risk

Both policymakers and market participants have a role to play in addressing the vulnerabilities highlighted by recent liquidity shocks, writes ***Scott O'Malia***

Just as last year was dominated by a series of unexpected events – including the war in Ukraine, the collapse of multiple crypto entities and turmoil in the UK gilt market – 2023 already has a similar feel. The risk management failures at Silicon Valley Bank and Signature Bank and the acquisition of Credit Suisse by UBS in March took many by surprise and have unsettled markets. As firms around the world navigate the dual challenge of continued high inflation and high interest rates, recent events have added to the uncertainty.

The unpredictable outlook will be one of the topics on the agenda at ISDA's 37th Annual General Meeting (AGM), which takes place in Chicago on May 9-11. We're looking forward to hosting this flagship derivatives event, where we'll have the opportunity to bring the industry together to debate the key issues influencing markets. This year, there will be a particular focus on the implications of the various liquidity shocks that have occurred since 2020.

> "It is clear that markets are now more susceptible to liquidity risk, exacerbating shocks and disrupting the functioning of key markets"

In several instances – including the dash for cash in March 2020 and the UK gilt market crisis in September 2022 – an initial shock led to increased volatility and a drain on liquidity, driven in part by firms rushing to sell assets to raise funds for margin and other liquidity requirements. Timely central bank interventions helped to calm markets and restore stability, but it is important that lessons are learned from these episodes so that markets remain liquid and resilient in future.

There is no doubt that reforms introduced after the 2008 financial crisis, which included clearing for standardised over-the-counter derivatives and initial margin (IM) requirements for non-cleared derivatives, have reduced counterparty credit risk and made the financial system more robust. But it is clear that markets are now more susceptible to liquidity risk, exacerbating shocks and disrupting the functioning of key markets.

Policymakers have instigated a programme of work to address the vulnerabilities that have been exposed by recent events. This includes a comprehensive review of margining practices, which has identified six areas for further work, including increasing transparency and liquidity readiness, streamlining margin processes and evaluating the responsiveness of cleared and non-cleared IM models to market stress.

These are important issues and ISDA will support this work as it progresses. However, another key area of focus for ISDA is encouraging greater efficiency in the management and exchange of margin. Collateral management processes are not always fully automated and a lack of interoperability between systems means firms may struggle to manage the large increases in margin calls and settlement volumes that can occur during periods of heightened volatility, adding to risk.

We think greater automation and data standardisation will help drive efficiency and reduce operational risk, as well as ultimately cut costs for market participants. We're now working with industry participants to bring that to fruition. We've published updated suggested operational practices for collateral management to encourage industry improvements, and we're working with market participants on several collateral management initiatives using the Common Domain Model (CDM), a free-to-use data standard for financial products, trades and lifecycle events.

Using the CDM will streamline counterparty onboarding, enhance interoperability, reduce negotiation time on eligible collateral schedules and automate cash collateral calculations and payment processes. This will increase efficiency and reduce operational risks, settlement fails and fees. We think this is a vital part of the response to recent events.

These are just a couple of the issues we'll be discussing at the AGM – others include the fallout from the crypto winter, challenges in developing a robust voluntary carbon market and preparing for the last days of LIBOR.

I'm looking forward to exploring these issues at the event. As always, it's through constructive dialogue and collaboration between market participants and policymakers that we can make progress on critical issues.

Make sure you book your delegate ticket to the AGM at agm.isda.org and I look forward to seeing you in Chicago.

Scott O'Malia
ISDA Chief Executive Officer

ISDA Publishes Standard Definitions for Digital Asset Derivatives

ISDA has published new standard documentation for the trading of digital asset derivatives, alongside a whitepaper that addresses some of the legal issues raised by the recent bankruptcies of major crypto exchanges and market participants.

The ISDA Digital Asset Derivatives Definitions are intended to bring greater clarity to this nascent asset class by creating an unambiguous contractual framework for digital asset derivatives under the umbrella of the ISDA Master Agreement, reducing credit and market risk by setting clear provisions for execution and settlement.

The definitions initially cover non-deliverable forwards and options on Bitcoin and Ether, but could be expanded in future to cover additional product types, including tokenised securities and other digital assets executed on distributed ledger technology (DLT). Importantly, the definitions have been drafted using a controlled language structure to define the processes contained in the document, facilitating integration with the Common Domain Model and automation within smart contracts.

"Recent failures in the crypto market have emphasised the importance of having a clear, consistent contractual framework that spells out the rights and obligations of both parties following a default. All customers, whether retail or institutional, should know their assets are protected and understand their rights in the event of a default," says Scott O'Malia, chief executive of ISDA.

The accompanying whitepaper is the first of two publications that explore legal questions raised by the collapse of FTX and others, including ownership and intermediation of customer assets in the crypto space. It focuses on the importance of close-out netting and collateral arrangements for derivatives referencing digital assets and identifies several areas of focus for policymakers and market participants to ensure greater certainty. The second paper, which is due to be published shortly, will focus on issues related to customer assets held with intermediaries.

"The new definitions address the unique nature of digital assets settled on DLT and have been designed to be expandable over time. This work will be relevant to a wide range of digital assets executed on DLT, including tokenised securities, which potentially have wide utility across the financial system," says Katherine Tew Darras, ISDA's general counsel.

The ISDA Digital Asset Derivatives Definitions are available on ISDA's MyLibrary electronic documentation platform, enabling ISDA to seamlessly revise the documents in full whenever updates are required. IQ

For more on the ISDA Digital Asset Derivatives Definitions, see pages 26-28

Consider Both Counterparty Risk and Liquidity Risk, O'Malia Tells CFTC

Recent market shocks since the dash for cash in March 2020 have highlighted the increased susceptibility of financial markets to liquidity risk, ISDA chief executive Scott O'Malia has warned.

Speaking at a meeting of the US Commodity Futures Trading Commission's Market Risk Advisory Committee (MRAC) on March 8, O'Malia recognised the positive effect of clearing, capital and margining rules in reducing counterparty credit risk, but he urged regulators to consider the impact of recent liquidity shortfalls.

"Since the pandemic struck, a similar pattern has been repeated in other markets, with an initial shock leading to market volatility and liquidity issues. It happened in early 2022, after the Russian invasion of Ukraine drove volatility in commodity markets, and again in September 2022, when UK gilt yields rose sharply, leading the Bank of England to intervene to calm the market," said O'Malia.

"Regulators and market participants must work together to identify and address the drivers of recent stress events so markets can better withstand future shocks," he added.

One of the potential solutions gaining traction is increased clearing of cash US Treasury securities and repos. In September 2022, the US Securities and Exchange Commission (SEC) proposed rule amendments that would require Treasury clearing houses to direct their members to clear certain Treasury securities transactions.

Prior to the SEC's proposal, ISDA carried out a survey on increased Treasury clearing, which highlighted a variety of views on whether it would materially improve the resilience and efficiency of the market.

"Most respondents were broadly supportive of clearing, but there was little support for a clearing mandate, with suggestions this could lead participants to reduce their activity or withdraw from the market," said O'Malia. IQ

Carbon Markets Vulnerable to Greenwashing, Says CFTC's Goldsmith Romero

Voluntary carbon markets are vulnerable to greenwashing, fraud and manipulation and targeted enforcement efforts are needed, according to Christy Goldsmith Romero, commissioner at the US Commodity Futures Trading Commission (CFTC).

"As a 20-year federal law enforcement official, I take the position that greenwashing is one type of fraud. Greenwashing could include false or misleading representations about the sustainability of a product and the amount of greenhouse gas emissions removed or reduced," said Goldsmith Romero, speaking in a keynote address at the ISDA ESG Forum in New York on March 7.

To clamp down on this activity, the CFTC should develop a specialised group of enforcement staff and seek to bring individual cases of greenwashing and other fraud in derivatives markets, as well as targeted spot market cases, including those related to carbon credits, Goldsmith Romero said.

"Given that carbon credit markets are fragmented, opaque and have inconsistent methodologies, carbon credits may be vulnerable to both fraud and manipulation. Whatever the label used – greenwashing, fraud or misrepresentation – these can all lead to serious harm, distort market pricing, seriously damage a company's reputation, and undermine the integrity of the markets," said Goldsmith Romero.

Her comments echoed concerns raised by ISDA chief executive Scott O'Malia, who highlighted recent research from BloombergNEF that showed the number of carbon offsets purchased fell by 4% last year, in spite of the urgent need to reduce carbon emissions. The drop in the market was attributed to fears of the reputational risk that can arise from purchasing low-quality carbon credits.

"An overabundance of poor-quality credits that don't reflect permanent carbon removal will keep prices low, discouraging investment in new technologies like direct air capture. In this scenario, carbon credits would just be a cheap way for companies to meet their net zero targets without genuinely contributing to overall carbon reduction," said O'Malia in his opening remarks at the ESG Forum.

Concerns over greenwashing threaten to thwart the growth potential of the voluntary carbon market, which BloombergNEF predicts could reach $1 trillion by 2037, versus an estimated $2 billion now. The market enables companies to offset those emissions they can't immediately eliminate while also channelling capital to projects that generate credits by reducing or removing greenhouse gases – but greenwashing is the "fly in the ointment", O'Malia warned.

> "Whatever the label used – greenwashing, fraud or misrepresentation – these can all lead to serious harm, distort market pricing, seriously damage a company's reputation, and undermine the integrity of the markets"
>
> **Christy Goldsmith Romero, CFTC**

"Doubts over credit quality and environmental value, as well as concerns over a lack of transparency, have undoubtedly affected trust in this market and could hamper growth," said O'Malia.

On February 10, ISDA and the Institute of International Finance submitted a joint response to a consultation on compliance carbon markets and a discussion paper on voluntary carbon markets issued by the International Organization of Securities Commissions. The response recommended four key action points – to focus guidance on how regulators can use their authority to enhance market functioning, trust and overall market integrity, to consider interactions between voluntary and compliance markets as they develop further, to clarify the legal and regulatory treatment of carbon credits, and to leverage the work of independent governance bodies to support greater standardisation.

"For this market to reach its full potential and make a real difference, we need greater standardisation and transparency, so market participants can be confident the projects they are supporting when they buy carbon credits have a genuine and verifiable impact on carbon reduction," said O'Malia.

The Integrity Council for the Voluntary Carbon Market – an independent governance body – is developing a set of core carbon principles, which are intended to establish standards for firms to identify high-quality credits that have a permanent, additional and verifiable impact on carbon emissions.

Meanwhile, ISDA has been working to address the need for a robust legal and regulatory framework, with two whitepapers published in 2021 and 2022 that explored the legal issues associated with the voluntary carbon market and recommended steps to create greater legal certainty. Those papers were followed by the publication of the 2022 ISDA Verified Carbon Credit Transactions Definitions in December.

"The definitions will bring greater legal certainty and consistency to the trading of carbon credits. Having a single contractual framework for spot, futures and options contracts that can be used for any carbon standard or registry will allow firms to trade carbon credits more easily and globally – in turn, enhancing liquidity," said O'Malia.

As well as its focus on the voluntary carbon market, ISDA is also working to support the development of sustainability-linked derivatives (SLDs), which embed a sustainability-linked cashflow in a derivative structure and use key performance indicators to monitor compliance with ESG targets. ISDA is now developing standardised terms and clauses for SLDs. IQ

Digital Regulatory Reporting Gets Underway for EMIR Refit

Following implementation of the first phase of amendments to the US Commodity Futures Trading Commission's (CFTC) swap data reporting rules on December 5, 2022, ISDA is working with market participants to adapt its Digital Regulatory Reporting (DRR) initiative to cover the EU's revised reporting rules, set to be mandated under the European Market Infrastructure Regulation Refit (EMIR Refit) on April 29, 2024.

The first iteration of the DRR was launched in November 2022 to support compliance with the amended CFTC rules. The initiative leverages the Common Domain Model, a data standard for financial products, trades and lifecycle events, to transform a mutualised interpretation of the rules into code. The DRR reduces the inconsistencies that can emerge when every firm interprets and implements the regulations independently.

"With the first phase of the CFTC rules, we showed how the DRR can be used to avoid the discrepancies that emerge when each firm takes its own approach. We worked closely with market participants so the DRR code could be used either as the basis of implementation of the rules or to benchmark an independent interpretation. We're not standing still and are now working to adapt the initiative ahead of EMIR Refit next year," says Tara Kruse, global head of infrastructure, data and non-cleared margin at ISDA.

> "We worked closely with market participants so the DRR code could be used either as the basis of implementation of the rules or to benchmark an independent interpretation. We're not standing still and are now working to adapt the initiative ahead of EMIR Refit next year"
>
> **Tara Kruse, ISDA**

Recognising the lack of consistency in derivatives trade reporting, policymakers developed a harmonised set of data standards for jurisdictions to incorporate into their rules.

The CFTC was the first regulator to adopt these data standards in its revised reporting rules and the DRR was developed to enable consistent and effective implementation of those rule changes. Adoption of the common data standards means roughly 40% of the EMIR Refit reporting regulations have already been coded within the DRR for the CFTC rules. The EU reporting framework will have a broader scope, including products across five asset classes and covering both exchange-traded and over-the-counter derivatives.

"We are working closely with a group of market participants to model the EMIR Refit reporting rules that are not already covered by the DRR and are speaking to a number of firms that are interested in getting involved as the 2024 deadline approaches. The benefits of this initiative will continue well beyond EMIR Refit. Given the similarities between the reporting rule changes around the world, once the EU regulations have been coded, we expect the DRR will cover the majority of reporting rule changes that will be mandated in other jurisdictions," says Andrew Bayley, director of data and reporting at ISDA.

Other jurisdictions that are expected to implement changes to their derivatives reporting rules include Australia, Canada, Hong Kong, Japan, Singapore and the UK. IQ

SOFR Trading Rises as US Dollar LIBOR Deadline Nears

Trading of interest rate derivatives (IRD) referenced to SOFR has continued to rise in recent months as the market prepares for the June 30 deadline when the last five US dollar LIBOR settings will cease publication on a representative basis.

The percentage of total cleared US dollar over-the-counter (OTC) and exchange-traded interest rate derivatives DV01 referenced to SOFR increased to 59.1% in February 2023, up from 33.4% in February 2022, according to the ISDA-Clarus RFR Adoption Indicator.

The overall indicator, which tracks how much global trading activity is conducted in cleared OTC and exchange-traded interest rate derivatives that reference risk-free rates in eight major currencies, rose to a record high of 53.9% in December 2022, before dropping slightly to 52.9% in February 2023.

Regulators and industry leaders have called on market participants to make sure they are fully prepared for the upcoming deadline and have proactively transitioned as much business as possible to alternative reference rates. Contractual fallbacks are available for legacy trades that continue to reference US dollar LIBOR at the point it ceases publication or becomes non-representative, while legislative solutions have been developed for 'tough legacy' trades.

"It is important that there continues to be a focus on remediating legacy contracts in particular, and making sure that people are ready for the cessation of panel-based LIBOR at the end of June. There are going to be a lot of contracts that have to switch and it's important that people get ahead of that to actively remediate their contracts where possible," says Nathaniel Wuerffel, senior vice president in the markets group at the Federal Reserve Bank of New York. IQ

For more on the US dollar LIBOR transition, see pages 32-35

EU Maintains 2025 Target for Basel III

"Together with the co-legislators, we have worked diligently towards ensuring the banking package is adopted this year and the January 1, 2025 deadline for application is observed"

Martin Merlin, European Commission

The European Union (EU) is on course to implement the final parts of the Basel III framework from January 1, 2025 as planned, even though some jurisdictions, including the US, have not yet published their proposed rules, according to a senior official at the European Commission (EC).

"In our proposed date for implementation, we had to take into account the specificities of the EU's inter-institutional legislative process and our objective to implement the standards in a timely manner. Together with the co-legislators, we have worked diligently towards ensuring the package is adopted this year and the January 1, 2025 deadline for application is observed," says Martin Merlin, the EC's director of banking, insurance and financial crime, speaking in an interview with **IQ**.

The EC adopted legislative proposals in October 2021 that would amend the Capital Requirements Directive and the Capital Requirements Regulation to implement the final Basel III measures in the EU. The Council of the European Union and the European Parliament adopted their negotiating positions on the package in November 2022 and February 2023, respectively, and so-called trilogue negotiations are now underway, with the aim of reaching a political agreement by June.

According to Merlin, the differences between the positions of the EU co-legislators are relatively minor and the main point of discussion is likely to focus on the application of the output floor, which sets a lower limit on the capital requirements banks calculate when using internal models.

Asked about the balance between the need for global consistency and the necessity to account for certain specificities in the EU banking system, Merlin acknowledged the EU has deliberately chosen to make certain deviations from the Basel standards, such as an exemption from the credit valuation adjustment (CVA) risk charge for non-financial counterparties.

"Going forward, we would expect to find a good balance through international regulatory coordination and impact monitoring to detect and correct potential unexpected impacts. Basel III implementation work will also provide a valuable opportunity to benchmark our policy choices against those of other jurisdictions," Merlin explains.

On November 30, the UK Prudential Regulation Authority (PRA) published its own legislative proposals to implement the Basel standards in the UK. The PRA opted not to follow the EU in exempting non-financial entities from the CVA charge, but it deviated from the Basel standards in other areas, including a proposal to reduce the alpha factor under the standardised approach for counterparty credit risk for pension funds and corporates. It also added more granularity to CVA risk weights with the introduction of a separate risk weight for pension funds. Like the EU, the PRA proposed that the new rules would apply from January 1, 2025.

The PRA consultation closed on March 31, allowing four months for respondents to gather and submit data and evidence. A joint response from ISDA and the Association for Financial Markets in Europe was being finalised as **IQ** went to press. IQ

To read the full interview with Martin Merlin, see pages 36-39

ISDA Develops New Data and Digital Roadmap

ISDA is developing a new data and digital roadmap that will set a clear course for its digital strategy over the next three years, following the development of a number of mutualised platforms and services that have successfully digitised critical processes in the derivatives market.

Having conducted a member survey in February, ISDA is now engaging in a series of deep-dive discussions with key stakeholders to gather intelligence and test digital ideas across front-office, risk, operations, technology and legal functions. The findings from these outreach exercises will inform the development of the roadmap.

"We need to identify the business priorities and regulatory requirements that may require changes to the market infrastructure in the years ahead. We also need to carefully assess the digital experience of market participants to find out where the common challenges lie and what further data and digital solutions may be needed across the derivatives lifecycle," says Scott O'Malia, chief executive of ISDA.

ISDA's existing platforms include ISDA Create, which facilitates the negotiation and execution of derivatives documents; Perun, a quantitative analysis platform that underpins the capital benchmarking initiative; and the Common Domain Model, a free-to-use data standard for financial products, trades and lifecycle events, which has been effectively deployed to digitise regulatory reporting and key collateral management processes.

The data and digital roadmap may lead to the development of new solutions, adjustments to those that already exist, or a combination of both. IQ

For more on ISDA's digital documentation platforms, see pages 29-31

THE COVER PACKAGE

Under Scrutiny

Recent market shocks have led policymakers and market participants to consider how the risk of liquidity shortfalls could be remedied

In the nearly 15 years that have passed since the global financial crisis, the over-the-counter derivatives market has changed almost beyond recognition. The implementation of clearing, margining and capital requirements has significantly reduced counterparty risk, creating a robust framework to maintain stability when market volatility rises.

Recent stress events have shown that while the market is far more resilient than it was in 2008, it is still vulnerable to sudden shortfalls in liquidity. When an external shock occurs – be it a global emergency, a geopolitical event or an unexpected fiscal announcement – the knock-on impact on liquidity can be very destabilising, to the extent that central banks may need to intervene to calm the market. This happened at the start of the coronavirus pandemic in March 2020, and a similar trend was repeated during the UK gilt market crisis last September. Other shocks such as the collapse of Archegos Capital Management in 2021 and Russia's invasion of Ukraine have also led to market issues.

Recognising the significance of recent events, international policymakers have embarked on a comprehensive work programme to explore the vulnerabilities that have been revealed and consider what policy measures may be needed. They are broadly focusing on three key areas – margining practices, leverage and liquidity (see pages 12-16).

One of the agencies that is leading this work is the International Organization of Securities Commissions (IOSCO). In an interview with **IQ**, IOSCO chair Jean-Paul Servais explains how it is working with the Basel Committee on Banking Supervision and the Committee on Payments and Market Infrastructures to review margining practices (see pages 20-25).

It is not yet clear whether additional policy measures will be necessary, but immediate action can be taken to improve the efficiency of collateral management processes. During recent stress events, many firms struggled to process the higher number of margin calls and this has underlined the need for end-to-end automation and greater interoperability. Leveraging the Common Domain Model, ISDA is working with market participants to bring about the change that is urgently needed in this area (see pages 17-19). IQ

"The market shocks that we've seen since 2020 are of a kind that might generally be expected individually once in a generation, and this increased frequency is in itself a cause for concern"

Eric Litvack, ISDA

* Measuring Vulnerabilities

Following a series of financial market shocks since 2020, global regulators are exploring potential issues associated with non-bank financial intermediation. What policy measures are being considered in response?

Over the past three years, a series of unique shocks have tested the resilience of financial markets and raised concerns over specific vulnerabilities relating to non-bank financial intermediation (NBFI). The dash for cash in March 2020, the collapse of Archegos Capital Management in 2021, the energy crisis following Russia's invasion of Ukraine in March 2022 and the spike in UK gilt yields in September 2022 have collectively brought NBFI under the spotlight. Markets were also shaken in March by a series of banking collapses, as well as the acquisition of Credit Suisse by UBS, but the full implications were still to be determined as **IQ** went to press.

International policymakers including the Financial Stability Board (FSB), the International Organization of Securities Commissions (IOSCO), the Basel Committee on Banking Supervision (BCBS) and the Committee on Payments and Market Infrastructures (CPMI) have undertaken a programme of work to assess and address the risks that have been identified, with a particular focus on margining practices, leverage and liquidity supply during stress events. The work is driven by concerns that the vulnerabilities associated with NBFI have the potential to amplify shocks to financial markets, increasing price volatility and liquidity stresses and disrupting normal market functioning.

MARGINING REVIEW

Read the review of margining practices from the BCBS, CPMI and IOSCO: bit.ly/3LDOqcc

"The market shocks that we've seen since 2020 are of a kind that might generally be expected individually once in a generation, and this increased frequency is in itself a cause for concern. They came from different sources, as crises always do, but they had in common market-driven liquidity tensions. This was not just business as usual, because there appears to be a meaningful risk of contagion and instability during periods of market stress. It is right that policymakers should probe further to unpick what is going on and consider whether additional policy measures may be needed," says Eric Litvack, chairman of ISDA.

Testing resilience

Despite the challenges of recent years, the financial system has been largely resilient as a result of the reforms implemented in the wake of the financial crisis of 2008. Banks have substantially increased their holdings of high-quality capital and liquid assets, a large proportion of the derivatives market has migrated to central clearing, and initial margin (IM) requirements for non-cleared derivatives were successfully rolled out on a phased basis between 2016 and 2022.

The collective effect of these reforms meant that when the coronavirus pandemic struck in 2020 and economies around the world suddenly shut down, the financial system was able to continue functioning. While market volatility at the start of the pandemic exposed certain weaknesses that have prompted attention from policymakers, markets largely remained open, and banks continued to support the real economy.

"After the global financial crisis, a primary aim of regulators was to reduce counterparty credit risks and risks arising from interconnectedness in the banking system, through higher capital requirements, margin and clearing rules, and more. As a result, banks now take on

Illustration: James Fryer

less risk, and additional risk has been dispersed to smaller, less systemically significant entities. Banks are discouraged from taking on market risks, so it's perhaps no surprise that markets can seem more volatile, especially during unusual events such as the onset of COVID and the accompanying shutdowns. But in spite of those challenges, the financial system worked fairly well through the pandemic, and the official sector used the tools at its disposal to support market liquidity as it saw appropriate," says Darcy Bradbury, managing director at the DE Shaw Group.

The outbreak of the pandemic was widely considered to be the first major test of the financial system's resilience since the regulatory reforms that followed the 2008 financial crisis. While it showed the strength of the reforms that had been implemented, it also revealed some of the implications of those changes, including the potential increase in liquidity risk during periods of volatility.

In what has become known as the dash for cash in March 2020, liquid assets were sold off around the world as asset prices plummeted – a downward spiral that was broken only by the intervention of central banks. As policymakers have since identified, the dash for cash was exacerbated by a major liquidity imbalance, with widespread selling of high-quality assets including US Treasuries. At the same time, there was limited demand to buy those assets in large volumes due to reduced risk appetite, regulatory constraints and operational challenges at that time. Money market funds (MMFs) saw particularly high redemptions, leading policymakers to focus on MMFs and the NBFI ecosystem as a whole.

"One of the important, broader changes in the financial system post-financial crisis has been the shift in the importance of bank and non-bank finance, with the latter growing relative to the former. This is not accidental: the post-crisis reforms meant that there were asset classes that were no longer suitable to hold in large scale on the balance sheets of banks," said Bank of England governor Andrew Bailey, speaking at ISDA's Annual General Meeting in May 2021.

NBFI in focus

Non-bank financial institutions comprise a range of entities, including investment funds, insurance companies, pension funds and other financial intermediaries that have come to play an increasingly important role in financing the economy. The NBFI sector has grown substantially over the past decade and its share of global financial assets reached 49.2% in 2021, according to the FSB.

In October 2021, the FSB published policy proposals to enhance the resilience of MMFs and reduce the potential for sudden and disruptive redemptions. But further market stress events meant those proposals marked only the beginning of the official sector's focus on NBFI. Following Russia's invasion of Ukraine in February 2022, high volatility in commodity markets led to a spike in margin calls on commodity and energy derivatives. Then, in September 2022, a sharp rise in UK gilt yields following an announcement on the government's fiscal plans left pension schemes that pursue liability-driven investment strategies facing large margin calls.

→ While both of these shocks were unique, a common pattern has emerged: sudden volatility in markets leading to an increase in margin calls, with market participants needing to quickly obtain cash or high-quality liquid assets to post as collateral. To some extent, this comes down to a trade-off between counterparty risk and liquidity risk – while clearing and margining effectively mitigate counterparty risk, they can also lead to liquidity issues when market participants need sudden access to cash to post as collateral.

"These events had in common market-driven liquidity tensions – stress induced on the system by a shortage of access to cash that leads to significant stress throughout the system. Part of the post-2008 reforms involved trading away a certain amount of counterparty risk in exchange for liquidity risk by increasing clearing and margining. On the whole, there have been fewer counterparty risk events and that is good for market stability, but it is important that the extreme liquidity tensions are analysed and appropriately addressed," says Litvack.

The combined effect of the series of shocks since 2020 has led international policymakers to consider specific vulnerabilities associated with NBFI and what further measures may be necessary to address them. In a letter to Group-of-20 (G-20) finance ministers and central bank governors on February 20, FSB chair Klaas Knot reiterated the commitment to this work in light of recent events.

"After Russia's invasion of Ukraine, some commodities firms faced challenges in sourcing cash collateral to cover the spike in margin requirements, and this led to some market volatility. This follows previous episodes of liquidity demand in the non-bank sector amplifying market shocks and spilling over to broader financial markets, underscoring the importance of the FSB and its members taking steps to materially enhance the resilience of the sector," wrote Knot.

The FSB has committed to continuing its NBFI work programme, with reports and consultations expected in specific areas and an overall progress report to the G-20 due towards year-end. Beyond enhancing the resilience of MMFs, other specific areas within the work programme include liquidity risk in open-ended funds, non-bank leverage and margining practices. Given the severity of the recent periods of market turmoil, the far-reaching NBFI work programme has become a high priority.

"Few end users may have previously experienced a period of such volatility in the energy markets as was seen following the Russian invasion of Ukraine last year. That volatility led appropriately to significant increases in margin requirements. EU policymakers recognised a need to allow for some flexibility to protect end users' access to these vital hedging markets, and part of the solution was to allow end users and producers in the EU to draw on lines of credit from banks rather than posting cash collateral," says DE Shaw's Bradbury.

Margin revisited

The global work programme on NBFI has a number of different strands, each of which is proceeding at its own pace, but efforts to identify potential improvements in margining practices were already well advanced as last year's market shocks were unfolding. A major report on margining was published by the BCBS, CPMI and IOSCO in September 2022, just under a year after an initial report and consultation.

NON-CLEARED MARGIN: FUTURE PROOFING THE ISDA SIMM

In their review of margining practices published in September 2022, the Basel Committee on Banking Supervision (BCBS), the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) identified a marked contrast between cleared and non-cleared markets during the volatility of March 2020. While initial margin (IM) requirements rose dramatically in cleared markets, IM requirements in non-cleared markets remained relatively stable.

This stability was attributed to the conservative design of the ISDA Standard Initial Margin Model (ISDA SIMM), which provides a single, consistent methodology for calculating IM requirements for non-cleared derivatives and has been the bedrock of the effective implementation of non-cleared margin regulations since 2016.

Nevertheless, the BCBS, CPMI and IOSCO raised the potential for further refining non-cleared IM models, which would include the ISDA SIMM. The last of six workstreams set up to review margining practices will focus on evaluating the responsiveness of IM models to market stress events. Policymakers suggest this work might include looking into the timeliness of mechanisms for incorporating stress periods into the calibration of models, as well as the timely remediation of IM shortfalls and the level of disclosure on the performance of non-centrally cleared IM models.

Over the past year, ISDA has been working closely with regulators and users of the ISDA SIMM to ensure the continued resilience of the model. This initiative responded to both the margining practices review and a June 2022 letter from the UK Prudential Regulation Authority (PRA) to chief risk officers seeking assurance that the ISDA SIMM would provide sufficient coverage for the final phase of IM implementation in September 2022. Specifically, the PRA raised questions over whether the governance process could lead to a shortfall in margin requirements, as well as whether firms were able to identify and remediate model underperformance on a timely basis.

The PRA letter triggered extensive dialogue between ISDA and a group of regulators during the second half of 2022 to refine the

> "Banks are discouraged from taking on market risks, so it's perhaps no surprise that markets can seem more volatile, especially during unusual events such as the onset of COVID and the accompanying shutdowns"

Darcy Bradbury, DE Shaw Group

Based on surveys carried out during the development of the report, daily variation margin (VM) calls at central counterparties (CCPs) increased from around $25 billion in early 2020 to a peak of $140 billion in March of that year. The total IM requirement across CCPs increased by around $300 billion in March, with a roughly 40% overall increase in collateral pre-positioned at CCPs, the report found. IM requirements in the non-cleared market remained relatively stable at that time – an outcome that is attributed to the conservative design of the ISDA Standard Initial Margin Model (see box).

A sharp increase in margin requirements for cleared trades is to be expected during periods of market stress and shows prudent risk management, the report points out. While the valuable role of margin in mitigating risk is not in doubt, policymakers are exploring what improvements could be made to margining practices to better prepare for future market events. If volatility leads firms to sell assets to meet a spike in margin calls, there is concern that this could amplify future shocks and disrupt orderly market functioning.

The BCBS, CPMI and IOSCO identified six areas for further work in their September 2022 report, including increasing transparency in centrally cleared markets, enhancing the liquidity preparedness of market participants, streamlining VM processes in centrally cleared and non-centrally cleared markets, evaluating the responsiveness of centrally cleared IM models to market stresses with a focus on the implications for CCP →

governance framework for the model, and ultimately led to the publication of a revised version of the ISDA SIMM Remediation Annex, a supplementary document to the ISDA SIMM Governance Framework, in December 2022.

"Our members wanted to address the PRA concerns centrally to avoid fragmented approaches, and a group of global regulators were ready to have a dialogue with us on this work. That led to a really productive process that allowed us to publish our changes to the framework before the end of 2022. We'll continue to have a recurring dialogue with that group of regulators to address any further questions or suggestions they may have in the future," says Tara Kruse, global head of infrastructure, data and non-cleared margin at ISDA.

The revisions to the ISDA SIMM reduce the threshold for when parties would need to report and remediate portfolio coverage issues, and set out how they would bilaterally deal with margin shortfalls. The time frame in which remediation would be expected to take place is reduced from 60 days to 40 days – parties must now communicate issues within 20 days of testing and complete remediation within 20 days after that. The remediation annex also clarifies that ISDA SIMM users should identify and remediate significant shortfalls from risks that are not incorporated into the model, responding to PRA concerns that users should use actual profit-and-loss testing to detect coverage issues.

Separately, ISDA has also updated its testing procedures so it now assesses on a quarterly basis whether an additional recalibration of the model is needed outside of the annual recalibration due to market volatility in the preceding quarter.

"The regulators were comfortable that the changes we proposed addressed their concerns. There are still some additional areas they want to look at and we'll do that as part of the ongoing dialogue. They're paying close attention to how the ISDA SIMM is working for new portfolios that came into scope in the final phase of implementation in September 2022. We send them quarterly reports for monitoring and that data also helps us to determine whether any further changes to the model may be needed," says Kruse.

"In a volatile market, it's always the VM requirements that are more problematic than any change in IM. If a market moves a long way, valuation changes can be large and firms making losses will need to collateralise"

Philip Whitehurst, LCH

→ resources and the wider financial system, and evaluating the responsiveness of non-centrally cleared IM models to market stress. Consultations are expected on these workstreams during the course of 2023, and ISDA plans to respond to those topics that are relevant to derivatives market participants.

"In the context of NBFI, there is a great deal of focus on IM and VM for both cleared and non-cleared derivatives. ISDA submitted an extensive response to the original consultation from the BCBS, CPMI and IOSCO, in which we advocated for more transparency in cleared markets to help firms prepare for changes in IM and VM requirements to the greatest extent possible. We will continue to engage as policy proposals are developed, and we're also considering additional issues, such as what safeguards may be needed in connection with additional types of collateral," says Ann Battle, senior counsel, market transitions at ISDA.

CPMI and IOSCO are expected to take forward the work to improve transparency in centrally cleared markets, and the September report suggests this may include metrics and disclosures relating to procyclicality, responsiveness to volatility and model performance. Policymakers may also consider the role that enhanced disclosures of CCP margin models might have in improving the understanding of CCP model behaviour.

While there is no suggestion that CCP margining models should be identical to one another, the review notes that model choices can lead to differences in how IM requirements react to market volatility. In response, some CCPs caution that this should not be seen as a silver bullet to address market challenges or anticipate future crisis.

"This work should aim to bring all CCPs up to a certain level of transparency and to ensure that's applied consistently, rather than turning the ratchet up on all CCPs irrespective of where they sit today. We're already very transparent about our margin methodologies and our risk framework, and we have independent representation on our risk committees that assess potential changes to the models. But let's be clear: extra disclosure doesn't give anyone the power to predict what the market is going to do – the market will behave unexpectedly at times," says Philip Whitehurst, head of service development for the rates business at LCH.

Beyond transparency of margining models, policymakers are also set to explore VM practices in both cleared and non-cleared markets. By their nature, VM requirements rise in line with market volatility, but the margining review suggests further work may be needed to prepare for higher VM requirements and to identify good practices for VM collection and distribution by CCPs.

"In a volatile market, it's always the VM requirements that are more problematic than any change in IM. If a market moves a long way, valuation changes can be large and firms making losses will need to collateralise. We give a lot of thought to intraday VM practices, and we deliberately allow our customers to collateralise intraday VM changes with non-cash. This allows firms to pre-position themselves to some extent and means they're not forced to raise cash intraday," says Whitehurst.

As the work to improve margining practices continues within the broader NBFI work programme, it is clear that a combination of policy measures may develop in the future. It is too early to predict exactly what those measures might comprise, but through the creation of six separate workstreams to focus on different practices and markets, policymakers have acknowledged the need to ensure any changes are applied appropriately.

"There is no one-size-fits-all solution to the issues that have been identified, but there is also little doubt that certain measures could help, such as the ability to post high-quality securities as collateral in cleared markets, at least under certain circumstances. None of these measures would be a panacea, but we recognise the need to explore a range of options to improve readiness for margin calls in the future," says Battle. IQ

* Time to Automate

Recent financial market shocks have highlighted the need for greater standardisation and automation in collateral management processes. ISDA is developing automated workflows and data standards that will reduce risk in this area

The challenge of raising sufficient cash to meet rising margin requirements has been a common theme of the various financial market shocks that have occurred since 2020. While regulators are reviewing margining practices, these episodes of market turmoil have also shone a light on the need for greater efficiency and end-to-end automation in collateral management.

Margining practices in the derivatives market have changed significantly over the past 15 years, with the introduction of mandatory clearing and margining requirements. While many firms have taken steps to improve their own operational processes and bring greater efficiencies to collateral management, further progress is needed across the industry to achieve more complete automation and interoperability and to reduce the need for manual intervention.

"Policymakers are rightly working to address the implications of recent crises and develop appropriate policy responses, but the industry also needs to focus on transforming collateral management processes. Digitising documentation, standardising data and working towards greater automation across the different phases of collateral management will support greater market efficiency and resilience in the event of future shocks," says Scott O'Malia, chief executive of ISDA.

Operational challenges

Following the implementation of post-financial-crisis derivatives market reforms to mitigate counterparty credit risk, many more firms now post margin than in the past. Central counterparties require margin to be posted against cleared trades, while firms around the world must also now post margin against non-cleared derivatives trades.

Increased clearing and margining of non-cleared derivatives have led to an overall rise in the volume of collateral in the system. Among 32 firms in scope of the first three phases of implementation of initial margin (IM) requirements for non-cleared derivatives, $304.1 billion of IM was collected by year-end 2021, according to ISDA's 2022 Margin Survey. This represents a nearly 40% increase on the $217.8 billion of IM collected by a similar pool of 32 firms at the end of 2020, according to the previous year's survey. As a much larger number of smaller banks and buy-side entities have been brought into scope during the subsequent three phases, the total amount of IM posted is now likely to be much greater.

While the increased number of entities posting margin and the greater volume of collateral in the system mitigates counterparty risk, managing a higher volume of margin calls can be operationally challenging.

→

COMMON DOMAIN MODEL

Read a fact sheet on how the CDM is being used to automate collateral management processes: bit.ly/41DHEsR

"Our capacity to manage a higher number of margin calls in volatile markets is much greater than it would have been if we were using spreadsheets and manual processes"

Mark Solomon, Brandywine Global Investment Management

"Collateral volumes have certainly risen in recent years, and this has required firms to get the right technology in place. Our capacity to manage a higher number of margin calls in volatile markets is much greater than it would have been if we were using spreadsheets and manual processes. We have doubled the size of our collateral management team, but it's really the technology that has given us the biggest leg-up in being able to handle the margin calls," says Mark Solomon, director of trading and securities operations at Brandywine Global Investment Management.

A lack of automation in processing margin calls can create bottlenecks and inefficiencies during the normal course of business, but it is during times of market stress that the operational strain becomes really clear. As margin requirements rose sharply during the dash for cash in March 2020 and the multiple shocks in 2022, collateral operations came under heavy strain and a reliance on manual intervention impeded the ability of firms to efficiently process their margin calls.

> "The level of automation varies significantly across the market and even within large institutions it can be quite fragmented, with a number of different systems in use"
>
> **Helen Nicol, CloudMargin**

As lessons are learned from recent events, margin and collateral management have become industry priorities. A report on margining practices published by the Basel Committee on Banking Supervision, the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions in September 2022 identified multiple areas for further work, including increasing transparency and streamlining variation margin process in cleared and non-cleared markets (see pages 12-16).

In addition to the work of the official sector, market participants can also take steps to improve their operational capacity to process margin calls in the event of future shocks.

"Market participants are focusing on how to more efficiently deal with the increase in margin calls and settlement volumes during periods of high volatility. Despite the progress that has been made in bringing automation to trading and front-office processes, collateral management is still challenged by inefficiencies. In some cases, processing of margin calls can still be dominated by the use of spreadsheets, email and faxes. Even during times of relative calm, a lack of end-to-end automation and a reliance on manual intervention makes collateral processes time-consuming and prone to errors," says Amy Caruso, head of collateral initiatives at ISDA.

Many firms have taken steps to automate certain key processes, but it is the reliance on human intervention at various points that can be a source of risk. When markets become more volatile and margin calls spike, manual processing quickly becomes unsustainable.

"The level of automation varies significantly across the market and even within large institutions it can be quite fragmented, with a number of different systems in use. In light of recent events, we're seeing a renewed drive towards operational and technological improvements to bring costs down, reduce risks and bring greater efficiencies. Manual processes just can't handle the rise in margin calls that we've seen during recent periods of market volatility," says Helen Nicol, head of product at CloudMargin.

The sudden and unexpected periods of market volatility have underscored inefficiencies in the collateral management process, as well as operational and data challenges. Market participants have identified a number of areas that would benefit from improvement, including automating margin calls, settlement, substitutions and recalls.

"When it comes to margining activities on the average business day, the industry has come a long way over the past 15 years and routine operations are in a good place – a margin call that used to take hours to process now takes seconds. But improvements can still be made, especially when it comes to handling exceptions and substitutions, which are not yet fully automated. Collateral substitutions are fairly infrequent during normal times, but they can rise sharply when markets become volatile," says Eric Jiobu, derivatives collateral specialist at Northern Trust.

Collateral initiatives

In 2017, ISDA published a blueprint for the optimal future state of collateral processing and followed up with a series of collateral management transformation toolkits in 2020. These toolkits provide resources and intelligence to help firms identify opportunities to improve collateral management in key areas, including digitising documentation, automating margin calls and collateral settlement, and streamlining portfolio reconciliation and dispute management.

More recently, ISDA has worked with its members to develop an up-to-date set of suggested operational practices for collateral management, which take changes in regulation into account and seek to create consistency and efficiency in market practices. The suggested practices cover a →

> "Achieving standardisation of data and processes and end-to-end automation in collateral management will be a critical step to reduce risk, increase efficiency and cut costs"
>
> **Scott O'Malia, ISDA**

wide range of areas, including know-your-counterparty procedures, margin requirement calculations, margin call issuance and response, and dispute mitigation. They also cover practices relating to collateral fails, rehypothecation and substitution, and custodian reconciliation and reporting.

In addition to these resources, ISDA has been working closely with members across the derivatives market to develop and implement automated workflows and data standards that will reduce operational, liquidity and counterparty risks. Achieving greater standardisation of collateral data is a critical step on this journey.

"Collateral data has become increasingly precious, as market participants can now effectively leverage this data to balance ever-tougher performance and safety demands. Efforts to standardise and harmonise collateral data will eliminate friction as increasing volumes of data travel from one point to another," says Jiobu.

The potential for greater standardisation applies to all collateralised products – for example, the lack of interoperability and real-time data transfer between over-the-counter and exchange-traded derivatives, repo and securities lending activities has been a source of operational risk, according to ISDA's members. Although work is still needed to achieve end-to-end automation across products, ISDA is collaborating with the International Capital Market Association (ICMA) and the International Securities Lending Association (ISLA) to bring market participants together to identify the key challenges and develop mutualised solutions where possible.

This collaboration includes leveraging the Common Domain Model (CDM), a free-to-use data standard for financial products, trades in those products and the lifecycle events of those trades. The CDM has a key role to play in bringing about the data standardisation and automation that is needed. Together with ISLA and ICMA, ISDA has successfully applied the CDM to the collateral space and this work is continuing to develop.

An efficient collateral management process starts with document negotiation and execution, which can be delivered by the ISDA Create digital documentation platform. The next step is obtaining digital output from legal documents. The CDM enables firms to capture legal data from their collateral documentation in standardised digital form, which can then be fed into collateral management systems, reducing manual onboarding and thereby addressing the root causes of disputes and post-trade operational discrepancies. ISDA members, including technology vendors and infrastructure providers, have been working towards mapping the CDM standard document output and collateral representation to their own systems, which will improve initial onboarding and ongoing interoperability.

"Document digitisation is really important, because firms are currently using a combination of digital and analogue solutions to track their collateral documents. Downstream integration is also critical to the efficiency of this process, so digitised documents feed straight into collateral management systems," says Solomon of Brandywine Global.

As well as being used to develop standard digital representations of eligible collateral specifications and key operational provisions of ISDA's most widely used credit support documentation, the CDM can enable streamlining of margin call and collateral inventory data, improve liquidity management and collateral optimisation and decrease settlement fails. Further work is in development to standardise data to automate additional processes, including cash collateral calculations and payment processes, and portfolio reconciliation and dispute resolution.

"We recognise that firms have many priorities all competing for attention, but recent periods of market volatility, rising volumes of margin calls and liquidity needs have emphasised the challenges that can occur when firms maintain systems that are not interoperable and rely on manual intervention. Achieving standardisation of data and processes and end-to-end automation in collateral management will be a critical step to reduce risk, increase efficiency and cut costs, but this requires everyone to act. We invite all firms to participate in the industry effort to make collateral management safer and more efficient," says O'Malia. IQ

To find out more about ISDA's collateral initiatives, visit: bit.ly/3xxLANG

* A Coordinated Response

A group of international bodies are working to address potential risks arising from non-bank financial intermediation. ***Jean-Paul Servais****, chairman of Belgium's Financial Services and Markets Authority and chair of IOSCO, explains how this wide-ranging work is progressing*

IQ: You were appointed as the new chair of the International Organization of Securities Commissions (IOSCO) at its annual meeting in October 2022. What issues do you expect to be a priority in this role?

Jean-Paul Servais (JPS): Financial markets are increasingly exposed to an avalanche of possible external disruptions and a massive digital transformation. At IOSCO, we must contribute to markets continuing to work effectively in a globally coordinated fashion. Ensuring trust, which is the lubricant that makes markets function, translates into the IOSCO core objectives of investor protection, market integrity and financial stability. We are aiming to be agile and impactful in responding to the current environment that includes geopolitical uncertainty and environmental risks as they impact these three core objectives. Responding to the various challenges in financial markets arising from recent technological developments, macro-financial policy and investor demand for sustainability-related disclosures requires a globally coordinated approach. There is widespread recognition that IOSCO standards continue to play a key role in achieving effective regulation, supervision and enforcement in this respect.

The most important IOSCO priorities fall into three core areas. Firstly, IOSCO is playing a key role in ensuring investors have access to comparable, consistent, reliable and high-quality sustainability disclosures. Robust sustainability disclosures by corporates are now absolutely critical to meeting investor demand. IOSCO has been a strong supporter of the International Sustainability Standards Board since its establishment under the IFRS Foundation umbrella a little over a year ago. We are closely following the finalisation of the first standards in anticipation of starting our independent assessment and, consequently, their potential endorsement. The

"Financial markets are increasingly exposed to an avalanche of possible external disruptions and a massive digital transformation. At IOSCO, we must contribute to markets continuing to work effectively in a globally coordinated fashion" expectation is that an IOSCO endorsement of these inaugural standards would be a catalyst for their global take-up, as was the case with the financial reporting standards 20 years ago.

Secondly, IOSCO is focusing on the crypto-asset markets as a priority. Some of the recent failures in this area, as well as the significant risk of investor harm, call for the approach of 'same risks, same regulatory outcomes'. Last year, IOSCO published a crypto-asset roadmap, which sets out our regulatory policy agenda and work programme for 2022-2023. IOSCO's current work is primarily focused on analysing and responding to market integrity and investor protection concerns arising from a rapidly developing, complex and opaque crypto-asset ecosystem. We aim to publish policy recommendations on crypto and digital assets in the first half of 2023 and, at a later stage, on decentralised finance. We are also working closely with the Committee on Payments and Market Infrastructures (CPMI) and the Basel Committee on Banking Supervision (BCBS) on stablecoins.

Last but not least, addressing systemic risk originating from non-bank financial intermediation (NBFI) is a key priority and responsibility for IOSCO. The rise in market-based financing over the past 15 years is a consequence of many factors, including the low-for-long interest rate environment. IOSCO is conscious of the structural vulnerabilities within NBFI, including liquidity and leverage risks. We are aiming to ensure that robust liquidity management frameworks are in place, both at the design phase and in the day-to-day operations of investment funds. Our joint work with the Financial Stability Board (FSB) has been productive so far as we investigate different components of the NBFI ecosystem. At the same time, we are of the view that improvements in the underlying short-term funding and bond markets, even if incremental, will serve the cause of overall financial stability and market functioning.

Of course, IOSCO priorities do not end with these three areas. The protection of retail investors is an important objective, especially in the context of technological changes, digital engagement practices and the search for yield. We will shortly publish an important report on retail investor protection, drawing on the lessons of the past couple of years. Among many other ongoing projects, IOSCO has been actively involved in monitoring the transition from LIBOR. For the sake of completeness, I should also flag IOSCO's recently conducted important work on commodities, financial market infrastructures and derivatives with the CPMI and BCBS.

As a consensus-based organisation, we are very attentive to having an inclusive approach to our more than 100 emerging market members throughout all our standard-setting activities. We are also very active in developing capacity building programmes and in supporting market development.

"IOSCO is conscious of the structural vulnerabilities within NBFI, including liquidity and leverage risks. We are aiming to ensure that robust liquidity management frameworks are in place, both at the design phase and in the day-to-day operations of investment funds"

JEAN-PAUL SERVAIS ON DIGITAL ASSETS

IQ: Following recent turmoil in the crypto-assets market, what is your view on the appropriate regulatory approach to this sector? What role will IOSCO play?

Jean-Paul Servais: Our very keen interest in this area stems from the behaviour of many investors that approach these markets as a substitute for investment markets. This, in turn, creates various investor protection issues and challenges for IOSCO members.

Today, certain inappropriate and unsustainable business models that lack transparency and basic hygiene with regard to conflicts of interest and protection of client assets continue to persist in the crypto world.

Many crypto assets are issued, listed and traded through crypto-asset service providers (CASPs). While CASPs vary in size and number, the largest institutions with extensive jurisdictional presence and reach concentrate the most significant share of global crypto-asset trading volume. The largest CASPs typically have a significant cross-border presence. They conduct a wide range of activities, including trading, order matching, settlement and clearing, lending, staking, proprietary trading, custody and brokerage services. The bundling of different services is often accompanied by a lack of transparency, various conflicts of interests, recycling of funding and liquidity, opaque relationships between connected parties and sizeable loans between interconnected crypto-based businesses.

Combined together, these risks can render boom-and-bust cycles in crypto more pronounced than those of traditional markets. Fortunately, regulators and traditional financial institutions have so far adopted a relatively conservative approach, which has limited the interconnectedness between the crypto ecosystem (both decentralised and centralised finance) and traditional finance. Hence, we have not seen any systemic risk impact, but we have serious investor protection concerns.

We are deeply concerned that crypto-asset markets come with the risk of increasing levels of retail harm. IOSCO is engaged in this area from an investor protection and market integrity perspective. Although some jurisdictions have national frameworks to limit the risks, the crypto market globally lacks important investor protections against fraud, manipulation, insider trading, front running, co-mingling of assets and material disclosure for investors purchasing these assets. The current environment also creates additional challenges in bringing enforcement actions against bad actors to protect investors that are defrauded.

On top of all these issues, regulatory reporting or public disclosures on crypto activities are still insufficient, making it challenging for regulators to assess the associated vulnerabilities and detect potential failures. As information is inconsistent and unreliable, addressing data gaps should be a priority.

Crypto assets are a global market without national or regional borders. That is why IOSCO is aiming to provide an outcomes-focused and principles-based approach to the crypto-asset area through the application of IOSCO's principles and standards. Similar risks can therefore be addressed through similar regulatory approaches and outcomes. IOSCO is planning to publish a consultation with its recommendations on the regulation and supervision of crypto assets in the first half of this year. Cross-border cooperation between regulators will be crucial.

→ **IQ:** NBFI continues to be a major area of focus for international policymakers following the dash for cash in March 2020 and other recent market shocks. How is IOSCO approaching this issue?

JPS: Many concerns about system-wide fragility during the dash for cash in March 2020 centred on the investment funds sector. In stressed situations when there is a dash for cash, the combined actions of investors can result in fire sales of assets and liquidity drying up. The open-ended structure of many investment funds may play a role in these situations and is therefore a vulnerability that needs to be properly addressed. Some types of money market funds (MMFs) experienced significant redemptions while facing challenges in selling their assets during the stress period. To enhance the resilience of MMFs, the FSB and IOSCO, working together, published a toolkit of policy options in November 2021, and we will be taking stock of the measures adopted by jurisdictions this year.

Thanks to analytical and evidence-based work over the past couple of years, there is today a far better understanding of the nature of systemic risks in the NBFI sector as compared to the banking sector. The agency model constrains asset managers to stick to their investment mandate and segregate their assets from those of their clients. Effective liquidity risk management is an essential aspect of the asset management sector and contributes to financial stability.

IOSCO recently carried out a detailed review of the application of its 2018 recommendations on liquidity risk management. Our joint findings with the FSB reveal certain areas for improvement in liquidity risk management in open-ended funds. Empirical evidence shows that funds holding more illiquid assets and with greater mismatch between their redemption terms and the liquidity of their underlying assets tend to experience larger outflows. This was the case during some of the market stress events at the outbreak of the COVID turmoil, when certain emerging market and advanced economy bond funds reached redemption levels not seen since the global financial crisis. Our findings also show that there remains room for greater uptake of liquidity management tools in open-ended funds, such as those that invest in certain types of bonds. This is particularly the case for the use of anti-dilution tools that are intended to pass on the cost of liquidity to redeeming shareholders.

The best line of defence against structural vulnerabilities in the asset management sector – those that could potentially cause market and financial instability – is for asset managers to have robust liquidity risk management programmes in place. Aligning portfolio composition with redemption terms and restricting open-ended funds from investing in illiquid assets without appropriate safeguards would help address systemic risk concerns during both normal and stress periods.

Turning back to the NBFI vulnerabilities, important work is being carried out on both cleared and non-cleared margin. In addition to addressing liquidity vulnerabilities on the demand side, it is also important to have a holistic view across the ecosystem, including the supply side. We are therefore starting work with the FSB to improve the liquidity of short-term funding markets. Thereafter, we will consider measures with regard to corporate bond market liquidity, on which we published a discussion paper last year.

IQ: Recent market turmoil has raised concerns about how well markets function during periods of stress. How can policymakers strike the balance between maintaining appropriate risk safeguards through margin and capital requirements and ensuring sufficient market liquidity and balance sheet capacity?

JPS: The interaction between capital and margin is complex and this is an area in which the full range of interactions needs careful consideration. To be clear, both capital and margin perform important risk mitigation functions, but they are distinct in a number of ways. Margin is 'defaulter pay' in the event of a counterparty default and is more targeted and dynamic. In contrast, capital adds loss absorbency to the system and is shared collectively by all an entity's activities so it may be more easily depleted at a time of stress. It is also difficult to rapidly adjust capital to reflect changing risk exposures.

Crucially, when calibrating capital and margin, consideration must be given to factors such as variations in capital requirements across different types of entities, the effect certain margin requirements may have on the capital calculations of different types of regulated entities subject to differing capital requirements, and the current asymmetrical treatment of collateral in many regulatory capital frameworks, where benefit is given for collateral received but no cost is incurred for the encumbrance risks of collateral posted.

The recent volatility might mean the margin framework is working as intended, as margin should go up and down in line with volatility. The question is how much the margin increase should be, and this is what should be analysed when determining whether procyclicality is adequately factored into margin frameworks. Going forward, there is important work to be done on margin practices and procyclicality.

"The recent volatility might mean the margin framework is working as intended, as margin should go up and down in line with volatility. The question is how much the margin increase should be"

IQ: A review of margining practices published by the BCBS, CPMI and IOSCO in September 2022 identified six areas for further work. Which of these areas do you see as particular priorities and what policy options could be considered?

JPS: The six areas of further work identified in the joint BCBS-CPMI-IOSCO report on margin practices are: increasing transparency in centrally cleared markets; enhancing the liquidity preparedness of market participants and liquidity disclosures; identifying data gaps in regulatory reporting; streamlining variation margin (VM) processes in centrally and non-centrally cleared markets; evaluating the responsiveness of centrally cleared initial margin (IM) models to market stresses; and evaluating the responsiveness of non-centrally cleared IM models to market stresses.

These areas have been allocated to different workstreams: the BCBS-CPMI-IOSCO margin group, the FSB, the CPMI-IOSCO policy standing group and the BCBS-IOSCO working group on margining requirements. These workstreams have each made their respective work a priority. They are considering the issues to focus on and the data and information available or required to complete their respective analyses. Next steps could involve industry outreach.

In tandem with this, we are exploring ways to coordinate the efforts of the different workstreams to avoid overburdening the industry with surveys and data requests. Based on the results of the analysis, each workstream will identify the necessary policy responses to the issues identified and consult in due course.

> "We have witnessed some extraordinary increases in volatility in recent years, which gave rise to margin spikes. Additional requests for margin, in the form of intraday cash calls, exacerbated market stress"

→ **IQ:** During recent bouts of market volatility, some firms struggled to manage a sharp rise in margin calls and settlement volumes. Could further standardisation and automation of collateral processes help?

JPS: When volatility increases, IM levels normally adjust upwards. This is mainly because IM is designed to cover potential future exposures in the event of a participant default. When volatility increases, so does the likelihood of large potential future exposures. Likewise, as large price movements mechanically trigger large VM calls, higher margin should naturally be expected during heightened turbulence.

We have witnessed some extraordinary increases in volatility in recent years, which gave rise to margin spikes. Additional requests for margin, in the form of intraday cash calls, exacerbated market stress as some key exchanges increased margin requirements multiple times. Nickel markets provided one recent example of this type of market stress.

JEAN-PAUL SERVAIS ON CARBON MARKETS

IQ: IOSCO recently consulted on recommendations for sound compliance carbon markets (CCMs) and key considerations for enhancing the resilience and integrity of voluntary carbon markets (VCMs). What role should regulators play in developing integrity, transparency and liquidity in the carbon markets?

Jean-Paul Servais: CCMs allow for a real reduction in greenhouse gas (GHG) emissions globally. They can complement environmental policy, which is why IOSCO is putting forward a set of recommendations to all relevant authorities that may have a regulatory and/or oversight role in these markets. We are focused on the same objectives that we seek to achieve for any financial market – integrity, transparency and liquidity.

Integrity can be achieved through clarity on the legal nature of carbon allowances and the establishment of regulatory frameworks that identify and mitigate the risk of market abuse.

Transparency is necessary to allow market participants to anticipate, manage and price risks and can be achieved through the development of appropriate infrastructure – both at the primary and secondary level – for trading emission allowances and their derivatives.

Finally, where it relates to compliance markets, liquidity is a necessary component to ensure firms can meet their emission reduction needs. In this context, we call on relevant authorities to consider the benefits of auction mechanisms and see benefits in allowing non-compliance entities – companies for which participation in emissions trading systems is not mandatory – to participate in both primary and secondary markets to foster liquidity and price formation.

I am also glad to say that VCMs are emerging as an alternative, particularly for the so-called harder-to-abate industries to compensate for their GHG emissions. At the moment, most jurisdictions do not have direct government or regulatory oversight frameworks for VCMs, with the exception of derivatives in certain circumstances. As these markets continue to grow, jurisdictions may seek to develop regulatory frameworks that can foster sound and well-functioning voluntary carbon markets.

Above all, we want to ensure jurisdictions have the appropriate toolkit for developing a regulatory framework. It is important that we put in place measures to make sure these markets have trust and credibility. For this reason, our recent consultation report outlines a set of regulatory considerations that could help relevant authorities in building fair and functional markets.

Notably, the big spike in margin requirements may attest to the relatively higher procyclicality of certain asset classes, such as commodities, and relevant margin models. While it is challenging to find an optimal equilibrium between increased collateralisation and its liquidity implications, the procyclical effects of margin requirements can be further evaluated. Exogenous shocks may sometimes break the correlation between instruments included in portfolio margining. This decoupling of correlation needs to be carefully analysed.

The responsiveness of IM models in both cleared and non-cleared markets to volatility and stresses is an important area for consideration. In fact, this is what IOSCO is looking at together with other international bodies. Standardisation and automation of collateral processes could indeed help with this issue.

At IOSCO, we developed a framework together with the BCBS that established minimum standards for margin requirements for non-centrally cleared derivatives. This framework and the related reforms were designed to reduce systemic risk in non-centrally cleared derivatives markets and help promote central clearing. I must congratulate firms, especially smaller entities, that moved ahead with getting ready for margining despite the burdensome operational preparations. This reflected their understanding of the need to address systemic risks in this area.

IQ: How should policymakers strike the balance to make sure margin requirements in cleared and non-cleared markets are risk-appropriate but not excessively procyclical?

JPS: Our work on margin together with the CPMI and BCBS and the six follow-up workstreams respond to the need to achieve this balance.

To address procyclicality, central counterparties (CCPs) should tailor their margin models to the specific characteristics of markets or products where price increases may not always move in a linear manner. Different external factors may affect the correlation between instruments included in portfolio margining, as we witnessed in recent events.

In essence, margin requirements should be calculated to appropriately capture the characteristics, complexity and liquidity of each derivatives product or market. CCPs should also make sure their margin methodologies are anti-procyclical. This would enable them to identify certain targets anchored to conservative anti-procyclicality measures. It should be noted that there may be a trade-off between increasing margin levels and discouraging clearing member participation, depending on the type of financial asset and whether mandatory central clearing exists in a jurisdiction. Therefore, there should not be a one-size-fits-all approach. There are, of course, various tools that can be used to manage procyclicality.

In addition, managing changes in the rate and frequency of margin calls is critical. When volatility returns unexpectedly, the size and speed of margin increases may put clearing members under pressure. CCPs should measure the potential for such increases and factor them in, setting the maximum rate of change under their discretion, based on the specifics of the market segment and product (eg, commodities). This rate and the rationale behind it should be disclosed to clearing members and regulators. As an aside, a widening of the acceptable collateral basket with some careful consideration can also help to alleviate margin pressure during times of stress, such as the recent volatility in commodities.

Finally, achieving the optimal level of transparency on margin calculation methodologies would enhance liquidity management in times of stress. Increased transparency of CCP IM models, which could include forward-looking (predictive) and backward-looking (performance) disclosures – as well as more sophisticated tools and simulators – should enable clearing members and clients to understand ex-ante how individual models respond to various market scenarios and better plan for stressed liquidity needs through increased predictability. Clearing members may also have a role to play in facilitating transparency for their clients. IQ

JEAN-PAUL SERVAIS ON REGULATORY REPORTING

IQ: Regulators around the world are revising their derivatives trade reporting rules to incorporate globally agreed standards. How important are these changes? What are the benefits of taking a digital approach to implementing the amended rules?

Jean-Paul Servais: Despite the apparent progress since the launch of the over-the-counter derivatives reforms in 2009, regulators today continue to lack a true picture of risk concentrations, interconnectedness and leverage at the global level. This is mainly because of incomplete and inconsistent trade repository data and trading requirements, as well as various impediments to data sharing.

Having reporting regimes in place, as well as data collection by itself, are clearly not sufficient to achieve the systemic risk monitoring objectives. Likewise, data collection itself is not sufficient to address the transparency goal. What is needed is the ability to aggregate this data, convert it into meaningful information and then use it to monitor the build-up of risk and concentrations in the system.

Digital reporting of data, use of regulatory and supervisory technology, machine-readable codes and technology-based data management, while not a panacea, can definitely be part of the solution to improve derivatives data and reporting and help both firms and regulators.

Providing Contractual Certainty

Following recent turmoil in the crypto-assets market, the ISDA Digital Asset Derivatives Definitions create more contractual certainty for users of digital asset derivatives, writes ***Ciarán McGonagle***

The collapse of several major crypto exchanges and market participants last year has raised critical legal and regulatory issues, including the fundamental questions of how legal ownership of digital assets is established and how customer assets are protected in the event of an intermediary's bankruptcy. While existing legal and regulatory rules governing the protection of customer assets will generally apply to digital assets, the technology protocols underpinning certain forms of digital asset present some novel practical questions that may not apply to traditional financial assets.

Crypto assets typically use some form of blockchain or distributed ledger technology (DLT). Many of these DLT platforms rely on decentralised consensus mechanisms to record technological control of assets on the ledger. Despite their decentralised nature, many investors choose to hold their crypto assets through centralised exchanges or other intermediaries.

The failure of FTX, the insolvencies that followed and the apparent loss of billions of dollars of customer assets suggest this market has yet to fully embrace some of the risk mitigation techniques that are routinely used in traditional financial markets to protect indirectly held customer assets.

These issues must now be addressed by considering the appropriateness of different intermediated or custodial structures and the enforceability of risk mitigation tools in a bankruptcy scenario. ISDA has developed two whitepapers to support derivatives market participants in achieving greater certainty in the application of these foundational principles to the digital asset market.

The first, which was published in January 2023, focuses on the application of certain risk mitigation techniques – namely, close-out netting and collateral – to digital asset derivatives. The second, due for publication shortly, explores specific questions on how customer assets may be held with intermediaries and how they might be treated in an insolvency situation.

These whitepapers focus on the direct impact of defaults on customers and counterparties. However, the broader impact on markets cannot be ignored. Changes in asset prices may occur due to a counterparty default, and uncertainty about how a particular risk affects a transaction could make it more difficult to settle, collateralise or close out that trade. This serves as a reminder of the important role that robust documentation plays in establishing effective credit risk management practices.

The ISDA Digital Asset Derivatives Definitions, which were published in January, are an important step forward in providing a standard contractual framework for digital asset derivatives within the ISDA Master Agreement architecture, reducing credit risk and market risk by setting clear provisions for settlement.

Developing definitions

The development of the over-the-counter digital asset derivatives market poses several key issues. For example, it may be challenging to identify reliable valuation sources for these transactions, as there is no primary venue for trading specific digital assets and few established conventions for valuations. Some market participants may also not be willing or able to accept physical settlement of digital assets, leading to a preference for cash-settled transactions. In addition, digital assets may be subject to one-off or periodic events that can disrupt the functioning of a transaction or render performance impossible, with little or no industry-standard conventions on how these events should be addressed.

As the market has developed, the need for standard approaches to documenting these transactions has become more pronounced. As has historically been the case in traditional derivatives markets, there are many benefits associated with the development of contractual standards for digital asset derivatives. They allow market participants to transact in confidence using clearly defined provisions for business-as-usual execution and settlement, while also setting out a clear path for the resolution of many different asset- and market-related risk scenarios. A standardised approach also minimises unintended basis risk across otherwise similar products.

In response to market demand, ISDA began work to develop a definitional booklet for digital asset derivatives last year. The first iteration of the digital asset definitions is limited in scope, providing standardised contractual terms for non-deliverable or cash-settled forwards and options on Bitcoin and Ether – but it is expected that the definitions will be expanded over time to include additional terms relevant for other derivatives products and digital assets.

Valuation

Derivatives transactions require robust mechanisms to obtain accurate and timely valuations of the underlying reference asset. These valuations are used to determine payment obligations, the close-out amount following early termination of a transaction and the extent of any collateralisation obligations.

In the digital assets market, there are some novel issues to consider when selecting valuation sources and methodologies. One challenge is that there is generally no primary venue for trading a specific digital asset. While this issue also applies to certain other asset types, it is a significant feature of the digital assets market. For example, Bitcoin is traded on several hundred different exchanges and trading volumes can move swiftly between them, leading to variability in prices observed across multiple trading venues.

There is also an increasing number of index providers in the digital asset space, and parties may wish to reference the published levels of these indices as the valuation source for their trades. These index providers typically derive their benchmarks by aggregating observed prices from several different trading venues, helping to smooth volatility following sudden shifts in trading volume among individual venues. However, index providers may use pricing data from different groups of trading venues or apply distinct methodologies for calculating the index, meaning there may still be some variability between the prices published by different index providers.

The digital asset definitions currently assume parties will select a single price or index source for the purpose of valuing these transactions. The definitions include a settlement price source matrix, which sets out a list of certain price sources for both Bitcoin and Ether that can be used for these purposes, although parties are free to choose alternative price sources that are not included in the matrix.

> "As has historically been the case in traditional derivatives markets, there are many benefits associated with the development of contractual standards for digital asset derivatives"

The definitions also provide a framework for determining how adjustments can be made to a transaction in a scenario where a price source is disrupted because it hasn't been published on a particular day, it has been discontinued or there has been a material change in the methodology used by the price source provider. The parties can elect within their transaction confirmation for specific contractual consequences to apply following the occurrence of one or more of these events – a designated fallback price source to replace the disrupted one, termination of the transaction or a designated calculation agent to make an appropriate adjustment to the transaction so it can continue to function on amended terms.

The consequences are designed to be applied in a pre-specified order to ensure their logical use. When a particular outcome cannot be used – for example, if all fallback price sources are disrupted – a subsequent consequence can then be applied, ultimately leading to termination if the issue cannot be resolved.

Another novel feature of digital asset markets is that they are generally open for trading at all times. The digital asset definitions include a specific election to allow valuations to occur on any day, as well as offering the more traditional approach of limiting them to business days.

Disruption events

Firms must also consider the potential for one-off or periodic occurrences that can interrupt or disrupt the transaction. These disruption events can prevent parties from valuing the transaction, impede settlement or jeopardise the economic viability or legality of the trading relationship.

The digital asset definitions allow parties to choose to include provisions in their contracts to address these types of events and allocate the associated risks appropriately. These include standard disruption or adjustment events that are analogous to those that can occur with traditional asset classes, as well as more novel and idiosyncratic events specific to digital assets. The definitions outline the circumstances under which each of these events will be considered to have occurred, as well as the consequences for the affected transaction.

A novel risk for digital assets is a →

→ blockchain fork – in particular, a so-called hard fork that results in two distinct assets emanating from the original asset. It might not always be clear which of the new successor assets should be the reference asset following the fork, and therefore which should be valued to settle the derivative. This could lead to differences in market opinion, meaning a contractual mechanism is needed to ensure the transaction continues to accurately reflect the parties' commercial intentions. Trading venues, custodians and index providers may also need to choose which fork path to support, which can influence the values of the respective digital assets and must be considered when determining any adjustment to a transaction referencing that asset.

The digital asset definitions define the scope of fork events that may require an adjustment to the derivative, taking account of market practice – in particular, the approach adopted by the price source provider specified for the contract. They then offer a series of elective procedures for adjusting the transaction where changes are needed to reflect the fork event.

Digitisation and smart contracts

The contractual framework will need to adapt to the rapidly evolving digital assets market and its emerging technological infrastructure. ISDA has therefore structured and drafted the definitions in a manner that supports digitisation and automation.

To achieve this, the key operative provisions within the digital asset definitions are drafted using a controlled semantic structure by expressing most contractual provisions as a series of parameterised conditions and consequences. This allows the operational mechanics of the definitions to be distilled into a series of IF/THEN statements, facilitating their translation into computer code and future implementation within DLT-based infrastructure and smart contracts.

The layout of the definitions has also been designed to be more intuitive for those unfamiliar with the standard layout of existing ISDA documentation. For example, provisions dealing with product types and settlement terms have been included at the beginning of the definitions, and a more modular structure has been used so key definitions are incorporated into the sections to which they relate rather than being confined to a lengthy general definitions section. This modularity will make the definitions more user friendly and will also make it easier to expand the scope to other product types and/or asset classes in future. IQ

Ciarán McGonagle is assistant general counsel at ISDA

For more information about the ISDA Digital Asset Derivatives Definitions, visit: bit.ly/3EC9PhL

Read the ISDA whitepaper, *Navigating Bankruptcy in Digital Asset Markets: Netting and Collateral Enforceability*: bit.ly/3EA4eJ0

EXPLORING LEGAL ISSUES ARISING FROM CRYPTO FAILURES

Alongside the ISDA Digital Asset Derivatives Definitions, ISDA has developed two new whitepapers that address some of the key legal issues arising from the recent failure of several major crypto exchanges and market participants.

The first whitepaper focuses on the importance of close-out netting and collateral arrangements for derivatives referencing digital assets, and identifies several areas of focus for policymakers and market participants to ensure greater legal certainty. The second paper addresses issues relating to digital assets held with intermediaries. It examines how digital assets may be held, their treatment in insolvency, and how customers can ensure the necessary documentation and due diligence are in place to ensure their assets are protected.

These papers underscore the centrality of enforceable property rights as a fundamental principle of customer asset protection, particularly in bankruptcy scenarios. These rights are core tenets of the global financial system and central to the risk mitigation techniques and practices promoted by ISDA as part of its mission to foster safe and efficient derivatives markets. The papers recommend that rules governing ownership of digital assets on insolvency should be made as clear as possible in order to protect customers, and these rules should afford customers the equivalent rights and protections they would expect to have with traditional assets.

Fortunately, various jurisdictions, including the US and England and Wales, have recognised digital assets as capable of being the subject of property rights, and this is examined in both papers. On the specific issue of customer protection, the analysis in the second paper finds that, from both an English and New York law perspective, existing private law concepts – such as trusts – can be applied to digital assets to protect customer assets upon insolvency.

Initial analysis of these insolvency laws set out in the first paper indicates that close-out netting for digital asset derivatives is also likely to be enforceable in certain major jurisdictions, including England and New York. ISDA will help to provide clarity on this issue and is working with opinions counsel to identify any areas where further detail on the treatment of digital asset derivatives may be needed.

The whitepapers also emphasise the need for established legal frameworks to adapt to innovative technologies. For example, the operation of a distributed ledger may not always be consistent with existing laws that determine ownership of traditional financial assets.

Given the decentralised nature of digital assets, it may not always be clear which governing law applies or how a proprietary claim to a digital asset should be enforced in the relevant jurisdiction. ISDA encourages national authorities to work with organisations such as the International Institute for the Unification of Private Law and industry stakeholders to provide clarity in this area.

Digital Revolution

ISDA has extended the number of definitions and agreements available on the MyLibrary digital documentation platform, while continuing to develop ISDA Create for document negotiation. How are these platforms reshaping the experience of using derivatives documentation?

In the digital age, the great benefit of technological innovation is that it renders outdated systems and processes obsolete, creating efficiencies and savings for users. Just as the proliferation of smartphones has enabled consumers to shelve their flip phones, cameras and music players in favour of a single, more intuitive device, digital platforms are rapidly changing the way in which critical derivatives documents are stored, updated and negotiated. This is leading to major improvements, savings and a reduction in operational risk.

Ever since standard templates were first developed for over-the-counter derivatives, they were made available in booklet form, which parties would use to manually negotiate the terms of a trade. But the development of MyLibrary and ISDA Create means the bulk of ISDA's flagship documents are now available in natively digital format, with the ability to negotiate terms electronically. Derivatives lawyers and market participants are reaping the rewards from transitioning to digitised documentation of trades.

"Much like switching to a smartphone, once market participants start using these platforms to access and negotiate documents, I think they will quickly realise the tremendous benefits of going digital and will not want to go back to paper. MyLibrary and ISDA Create are intuitively designed and easy to use, and they have the important advantage of being both risk-reducing and time saving. Thanks to digitisation in this critical area, I believe that paper documents will eventually become a thing of the past in the derivatives market," says Ilene Froom, partner at Katten Muchin Rosenman.

> "Much like switching to a smartphone, once market participants start using these platforms to access and negotiate documents, they will quickly realise the benefits"
>
> **Ilene Froom, Katten Muchin Rosenman**

Document hosting

In the past, flagship derivatives definitions were periodically updated through the addition of supplements, which would be appended to the booklet over time to reflect changes in market practice and regulation. For interest rate derivatives, more than 90 supplements were added to the 2006 ISDA Definitions over the 15 years that followed the initial publication. While the addition of supplements provided an effective mechanism to keep documents up to date, it required users to manually assemble the booklet in paper or PDF form for every trade – a cumbersome, labour-intensive process that was increasingly prone to errors as the number of supplements grew.

The 2021 ISDA Interest Rate Derivatives Definitions were the first to be published as a natively digital definitional booklet, coinciding with the launch of the MyLibrary electronic documentation platform in June 2021. Jointly developed with Kinetix Trading Solutions and Linklaters>Nakhoda, MyLibrary includes a range of advanced, user-friendly features, such as enhanced navigation and search, comparison tools and bookmarking.

As the first new set of definitions to be published on MyLibrary, the 2021 Definitions completely overhauled the traditional process of adding supplement after supplement →

> "Nearly two years on from their digital publication on MyLibrary, the 2021 Definitions have succeeded the 2006 Definitions as the de facto standard for interest rate derivatives trades around the world"
>
> **Katherine Tew Darras, ISDA**

→ to a definitional booklet. Instead, ISDA republishes a revised digital version of the definitions in full every time updates are required, completely eliminating the need for supplements.

"Nearly two years on from their digital publication on MyLibrary, the 2021 Definitions have succeeded the 2006 Definitions as the de facto standard for interest rate derivatives trades around the world. The ability to blackline between consolidated versions of the definitions allows market participants to establish the terms of their trades far more efficiently, while hyperlinking between defined terms and their definitions has revolutionised their ease of use. The definitions have already been updated seven times since 2021, and have proved themselves much more robust in the face of market evolutionary events, such as the changes to a key benchmark that occurred following Russia's invasion of Ukraine in 2022," says Katherine Tew Darras, ISDA's general counsel.

Following the launch of the 2021 Definitions, MyLibrary has quickly gathered momentum as additional derivatives documents have been added to the platform (see box).

The digital format of documents hosted on MyLibrary is a step change from the reliance on paper booklets and PDFs, but the enhanced functionality has made the switch a very natural one. Much like upgrading from a traditional mobile phone to a smartphone, the ability to carry out multiple functions with an intuitive user interface has accelerated the adoption of MyLibrary. Being able to navigate electronically through documents, compare different versions and bookmark key clauses and topics is a major step forward for users of these documents.

"MyLibrary is a great example of how technology can be used to make documents work harder and more intuitively for users. I keep hard copies on the shelf, but I use MyLibrary all the time. Being able to search for provisions in key ISDA documents and run instantaneous comparisons of different versions of the 2021 Definitions has led to huge efficiencies in workflow," says Deepak Sitlani, derivatives partner at Linklaters.

As more than 40 flagship documents have been added to MyLibrary since launch, it has become the de facto home for new documents such as the 2022 ISDA Verified Carbon Credit Transactions Definitions and the ISDA Digital Asset Derivatives Definitions. The ability to seamlessly revise and update these documents will be critical as market practices evolve.

"One of the major benefits of MyLibrary is that the definitions can be updated electronically and users can easily compare different versions to determine what has been revised. Rather than having to flip through pages in a hard copy or search through PDFs, which can be cumbersome and time consuming, we now have the advantage of being able to navigate through different digital versions of ISDA publications using the search functionality. To me, that's simply a better and more efficient way to operate in this market," says Froom.

Document negotiation

As MyLibrary has become the electronic home for derivatives documents in recent years, ISDA Create has become the go-to platform for negotiating and completing the terms of agreements.

Powered by Linklaters' proprietary technology platform, CreateiQ, ISDA Create enables users to digitally capture, process and store critical legal data from key documents, with the ability to quickly and efficiently extract and review relevant clauses when needed. The platform drastically reduces the time taken to draft and agree derivatives documents, track negotiation status and unlock critical legal data.

According to lawyers at Linklaters, some clients have said ISDA Create reduces the amount of time it takes to put documents in place by 50-70%. "Our team uses ISDA Create for numerous clients through the platform's advisor functionality. Not only does this mean they are spending a fraction of the time it normally takes to produce drafts, but it also means one team member can seamlessly pick up from another on the platform," says Sitlani.

ISDA Create supports a wide range of flagship derivatives documents, including ISDA Master Agreements containing the ISDA Clause Library, benchmark reform amendment agreements, variation margin credit support annexes containing the ISDA Clause Library for collateral documentation and Bank of New York Mellon (BNY Mellon) account control agreements (ACAs). Roughly 300 buy- and sell-side firms have joined the platform, while many more are currently testing it.

"ISDA Create changes the way that parties can prepare and negotiate derivatives documentation in a helpful way. Once my clients permission me, I can negotiate documentation on their behalf and track the status of different sections, seeing very clearly what has been agreed and what hasn't. Having a negotiation be available online, with open terms and related comments maintained digitally, offers efficiencies over sending markups back and forth by email or paper," says Froom.

Ahead of implementation of the sixth phase of initial margin requirements for non-cleared derivatives in September 2022, BNY Mellon published its triparty and third-party ACAs on ISDA Create, enabling firms to complete this key custodial documentation electronically, with full digital capture of the resulting legal data. With a large number of entities falling within the scope of phase six – including hundreds of smaller entities – the platform enabled BNY Mellon to manage the increased volume of documents that had to be processed.

"Given the thousands of ACAs that needed to be delivered ahead of phase six last year, we needed a workflow tool that would efficiently manage the heavy lift and provide a robust platform for the passing of confidential information without being overloaded. It proved very effective in managing the high volume in a very tight time frame. We're now looking at other ways in which we can leverage the underlying capabilities of ISDA Create for client engagement and data capture," says Mark Higgins, senior product manager for Europe, the Middle East and Africa at BNY Mellon.

To enable the structured legal data captured during the document negotiation process to feed through to trading, operational and risk management systems, the Common Domain Model – a data standard for financial products, trades and lifecycle events – has been integrated with ISDA Create. This allows legal documents and operational processes to be linked in a way that hasn't been possible before.

ISDA Create will soon become available within S&P Global Market Intelligence's Counterparty Manager service, which includes ISDA Amend – an online tool that allows market participants to make changes to their ISDA documents and exchange information with counterparties to comply with regulations. The development of the combined platform is underway and will enable users to access a complete digital record of all relationship and contractual data exchanged or created on either platform.

"The linking of ISDA Create and Counterparty Manager will allow firms to gain a comprehensive, umbrella view of any contractual relationship in digital form, which can then feed directly into collateral, risk and other systems. This will help facilitate further automation and efficiency in derivatives markets, while reducing risk and the potential for error," says Tew Darras. IQ

DOCUMENTS AVAILABLE ON MYLIBRARY

1998 FX and Currency Option Definitions
- Annex A To The 1998 FX And Currency Option Definitions Amended and Restated November 19, 2017. Amended February 23, 2022
- May 2022 Barrier Event Supplement to the 1998 FX and Currency Option Definitions
- Non-Deliverable Cross Currency FX Transactions Supplement (May 31, 2011)
- November 2018 Volatility Swap, Variance Swap and Correlation Swap Supplement to the 1998 ISDA FX and Currency Option Definitions
- Revised Additional Disruption Event Provisions for an Offshore Deliverable CNY Transaction (January 28, 2014)
- Revised Form of Confirmation for incorporating Additional Provisions and Fallback Matrix (January 28, 2014)
- Revised ISDA Offshore Deliverable CNY Transaction Disruption Fallback Matrix (September 8, 2016)
- September 2022 Averaging Supplement to the 1998 FX and Currency Option Definitions

2002 ISDA Master Agreement

2008 ISDA Inflation Derivatives Definitions
- Supplement Number 1 to the 2008 ISDA Inflation Derivatives Definitions November 20, 2009
- Supplement Number 2 to the 2008 ISDA Inflation Derivatives Definitions June 20, 2012
- Supplement Number 3 to the 2008 ISDA Inflation Derivatives Definitions (Published on August 4, 2022)

2021 ISDA Interest Rates Derivatives Definitions
- 2021 ISDA Interest Rates Derivatives Definitions Compounding Averaging Matrix
- 2021 ISDA Interest Rates Derivatives Definitions Consolidated Confirmation Templates
- 2021 ISDA Interest Rates Derivatives Definitions Currency/Business Day Matrix
- 2021 ISDA Interest Rates Derivatives Definitions Floating Rate Matrix
- 2021 ISDA Interest Rates Derivatives Definitions Form of Amendment Agreement
- 2021 ISDA Interest Rates Derivatives Definitions MTM Matrix
- 2021 ISDA Interest Rates Derivatives Definitions Settlement Matrix
- Additional Disruption Event Provisions for an Offshore Deliverable CNY Transaction (2021 Definitions) (the "Additional Provisions")
- Additional Provisions for use with Deliverable Currency Disruption Events (2021 Definitions) (the "Additional Provisions")
- Confirmation terms for use with the 2021 Definitions Additional Provisions for Offshore Deliverable CNY Transactions
- Confirmation terms for use with the 2021 Definitions Additional Provisions for use with
- Deliverable Currency Disruption Events
- ISDA Deliverable Currency Disruption Fallback Matrix
- ISDA Offshore Deliverable CNY Transaction Disruption Fallback Matrix
- Non-Deliverable Swap Transaction Standard Terms (2021 Definitions) Supplement

2022 ISDA Securities Financing Transactions Definitions
- ISDA Securities Financing Transactions Schedule Provisions

2022 ISDA Verified Carbon Credit Transactions Definitions

FpML Coding Schemes

ISDA Benchmarks Supplement

ISDA Clause Library

ISDA Digital Asset Derivatives Definitions

This listing includes all documents currently held on MyLibrary, a number of which have multiple versions available

The Final Hurdle

With little time left until the last five US dollar LIBOR settings are due to be retired after June 30, market participants must continue the transition to alternative reference rates and make sure they have arrangements in place for legacy LIBOR trades

In the middle of this year, the last five US dollar LIBOR settings will cease publication or become non-representative, marking the completion of one of the most complex structural transitions financial markets have ever experienced. With the June 30 deadline edging closer, policymakers and industry leaders are calling on market participants to make sure they are fully prepared for the end of US dollar LIBOR.

The industry now has the advantage of having already worked through the complete cessation of 24 LIBOR settings and the non-representative publication of an additional six tenors for use in legacy contracts only. That landmark transition at the end of 2021 was successfully achieved without significant market disruption, providing a valuable playbook for the last five settings. Overnight, one-, three-, six- and 12-month US dollar LIBOR were given an additional 18 months on account of their widespread use and the need for additional time to allow them to run off naturally. The same diligent approach that was deployed ahead of the end-2021 deadline is now needed to ensure the successful completion of the transition.

"After about a decade of work on this very thorny financial stability problem, we've seen tremendous progress in moving away from LIBOR, which was this fundamentally flawed rate that became susceptible to manipulation. I think the groundwork has been laid, but you don't want to let your foot off the gas in the last couple of miles of the journey, because you want to make sure that transition moment goes smoothly. That's one of the lessons we've learned as we've seen transition occur in other jurisdictions," says Nathaniel Wuerffel, senior vice president in the markets group at the Federal Reserve Bank of New York.

59.1%

of total US dollar interest rate derivatives DV01 referenced SOFR in February 2023

Source: ISDA-Clarus RFR Adoption Indicator

Transition playbook

The end of LIBOR has been a long time coming, with preparations starting in earnest after a landmark speech in July 2017 by Andrew Bailey, then chief executive of the UK Financial Conduct Authority (FCA), in which he signalled the regulator would no longer persuade or compel banks to make LIBOR submissions after the end of 2021. That speech effectively gave the industry four-and-a-half years to get ready for a world without LIBOR.

As demonstrated by the industry's work ahead of the end-2021 deadline, an effective transition depends on proactively switching to alternative reference rates for new business, and systematically working through existing trades referencing LIBOR settings that will cease publication or become non-representative.

Several options are available for those legacy exposures that are expected to outlast the benchmark they reference. In some cases, counterparties may be able to proactively negotiate a switch to an alternative reference rate, removing the exposure to LIBOR. Where pre-emptive renegotiation is not possible, contractual fallbacks developed by ISDA can act as a safety net for non-cleared derivatives. For cleared derivatives, central counterparties (CCPs) have announced plans for the mass conversion of US dollar LIBOR trades to SOFR-based products prior to the end of June.

Over the past few years, market participants have also included contractual fallbacks in certain non-derivatives transactions, including loans, floating rate notes and securitisations. For more complex 'tough legacy' contracts that cannot be proactively transitioned and for which no workable fallback exists, US federal legislation is now in place to enable references to US dollar LIBOR in contracts governed by US law to be replaced with a

SOFR-based alternative rate.

For non-US law tough legacy contracts, the FCA announced on April 3 that it will require continued publication of one-, three- and six-month US dollar LIBOR under a synthetic methodology until the end of September 2024. The publication of synthetic LIBOR, which would only be available for use in legacy non-cleared contracts, follows an approach that has been taken for six yen and sterling LIBOR settings that were published on a non-representative basis after the end of 2021.

While synthetic LIBOR could play a role in the smooth switchover of the most challenging legacy contracts, regulators have always been clear that it should not be considered an alternative to active transition or the use of contractual fallbacks.

"Absent intervention, some tough legacy contracts could potentially benefit from synthetic LIBOR and others will benefit from the US federal legislation. Understanding what path each of those legacy products will take, what negotiations need to take place and what the cliff looks like if those negotiations fail is an important piece of work as we move towards the June deadline," says Tom Wipf, vice chairman at Morgan Stanley and chair of the Alternative Reference Rates Committee in the US.

With little time left until the final five US dollar LIBOR settings are due to cease publication or become non-representative, it is up to market participants to ensure they have proactively transitioned as much business as possible to alternative reference rates and have appropriate arrangements in place for legacy trades, Wipf adds.

"There's not a lot of time left on the clock now, so firms really need to understand what is left to do. They need to think about the operational processes that need to take place once cessation occurs. The end-of-2021 transition gave us a pretty good picture of what it's going to look like, but this is a larger data set for US dollar LIBOR. As we move towards the end, there is an operational lift that has to occur," says Wipf.

Up until mid-2021, adoption of SOFR as an alternative reference rate to US dollar LIBOR had been fairly limited and it was clear that greater momentum was needed. But a series of regulatory initiatives since mid-2021, coupled with proactive industry efforts, have led to a steady increase in the use of SOFR as an alternative to US dollar LIBOR.

In July 2021, the Commodity Futures Trading Commission's Market Risk Advisory Committee launched its SOFR First initiative, a phased programme to incrementally switch interdealer trading conventions from US dollar LIBOR to SOFR. Multiple regulators, including those in the US, have also prohibited regulated entities from entering new US dollar LIBOR trades from the start of 2022, except in limited circumstances.

In July 2021, the percentage of total US dollar cleared over-the-counter and exchange-traded interest rate derivatives DV01 referenced to SOFR was just 7.4%, according to the ISDA-Clarus RFR Adoption Indicator. With incremental increases in almost every month since then, the proportion of trading referenced to SOFR rose to a record high of 64.1% in December 2022, highlighting the substantial progress that has been made to reduce use of US dollar LIBOR. In February 2023, the proportion of trading referenced to SOFR was 59.1% (see chart).

> "After about a decade of work on this very thorny financial stability problem, we've seen tremendous progress in moving away from LIBOR, which was this fundamentally flawed rate that became susceptible to manipulation. I think the groundwork has been laid, but you don't want to let your foot off the gas in the last couple of miles of the journey"
>
> **Nathaniel Wuerffel, Federal Reserve Bank of New York**

Understanding fallbacks

The work to develop robust contractual fallbacks began in 2016, when the Financial Stability Board's Official Sector Steering Group called on ISDA to take the lead in improving the contractual robustness of derivatives referencing LIBOR and other key interbank offered rates (IBORs). The fallbacks were designed to act as a safety mechanism for contracts that have not switched to alternative reference rates at the point a particular IBOR ceases publication or, in the case of LIBOR, becomes non-representative. →

"There's not a lot of time left on the clock now, so firms really need to understand what is left to do. They need to think about the operational processes that need to take place once cessation occurs. The end-of-2021 transition gave us a pretty good picture of what it's going to look like, but this is a larger data set for US dollar LIBOR"

Tom Wipf, Morgan Stanley, Alternative Reference Rates Committee

→ After extensive consultation with policymakers and market participants, ISDA launched the IBOR Fallbacks Supplement and IBOR Fallbacks Protocol in October 2020, with both becoming effective on January 25, 2021. While the supplement updated ISDA's standard interest rate derivatives definitions to incorporate fallbacks in transactions executed on or after that date, the protocol allows parties to embed the fallbacks into non-cleared derivatives trades entered into prior to January 25, 2021 with other counterparties that have adhered.

"It is important that there continues to be a focus on remediating legacy contracts in particular, and making sure that people are ready for the cessation of panel-based LIBOR at the end of June. There are going to be a lot of contracts that have to switch and it's important that people get ahead of that to actively remediate their contracts where possible. At a minimum, they must ensure they have adequate fallbacks if they are not going to proactively transition away from US dollar LIBOR. If parties to non-cleared derivatives markets have not signed up to the ISDA 2020 IBOR Fallbacks Protocol, that's something they should do now," says Wuerffel.

The fallbacks automatically take effect at the point at which a relevant IBOR ceases publication or becomes non-representative. Contracts referencing US dollar LIBOR would switch to an adjusted version of SOFR. Given the inherent differences between overnight risk-free rates (RFRs) and IBORs, which are available in multiple tenors and include a bank credit risk premium, the fallbacks contain certain adjustments. Specifically, they use a compounded in arrears calculation with a shift to account for the difference in tenors, and a spread adjustment based on a historical median over a five-year lookback period to address the difference in risk premia.

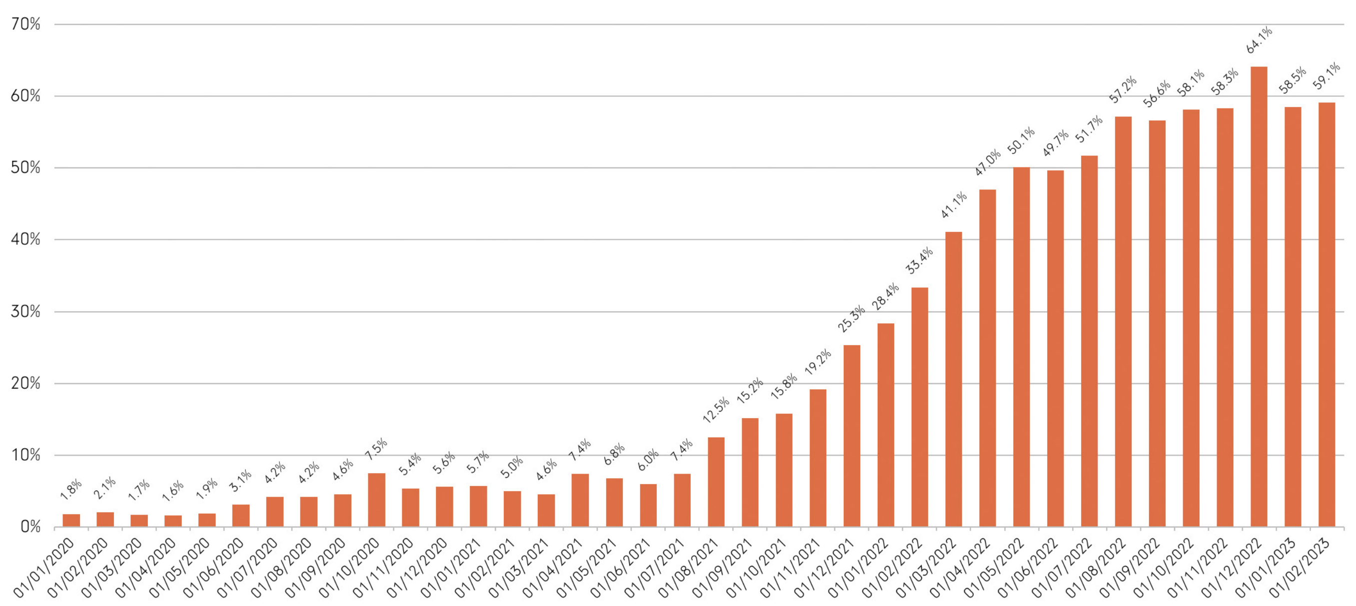
So far, more than 15,600 entities around the world have adhered to the protocol, making it one of ISDA's most widely adopted protocols. CCPs have also included the fallbacks in their rulebooks as the basis of the CCP conversion programmes scheduled for April and May 2023. While the success of the protocol is encouraging, adherence in itself is not sufficient – parties also need to make sure they fully understand the operational mechanics of the fallbacks.

"The fallbacks provide a robust alternative rate based on SOFR that will automatically take effect for the majority of non-cleared derivatives once panel-based US dollar LIBOR ceases. Nonetheless, the sheer volume of trades that will be affected means firms should take the time between now and June 30 to fully understand how the fallbacks will work and how their mechanics compare to standard SOFR overnight index swaps. Firms also need to be aware of any differences between fallbacks on their cash instruments and derivatives hedges," says Ann Battle, senior counsel, market transitions at ISDA.

The mechanics of the fallbacks are unique. The compounded in arrears methodology incorporates a backward shift to the calculation period, which is designed to ensure payment amounts are known at least two days before they become due. This differs from standard RFR overnight index swaps, which usually have a payment delay. The fallback rates are published by Bloomberg, whereas a calculation agent usually computes the value of overnight index swaps at the end of each period. Market participants can prepare for the use of fallbacks by reviewing the contractual language and Bloomberg's IBOR Fallback Rate Adjustments Rule Book so they understand how the publication and backward shift will work.

Given the different conventions, there will inevitably be some variation between derivatives that rely on the fallbacks and other products, including cash instruments that may have applied different methodologies. If a derivative referenced to US dollar LIBOR switches to adjusted SOFR via the fallbacks, but a corresponding cash instrument does not, parties will need to manage the basis risk between the two transactions. They may need to modify systems and processes to account for the differences, although

PERCENTAGE OF TOTAL INTEREST RATE DERIVATIVES DV01 REFERENCED TO SOFR



Source: ISDA-Clarus RFR Adoption Indicator

they could bilaterally negotiate changes to their reference rates over time to reduce discrepancies. These challenges should be carefully considered as firms prepare for the mid-year deadline.

"Managing basis risk is certainly one part of the transition challenge, but it is also important not to lose sight of the bigger picture. The most critical thing at this stage is to be familiar with where Bloomberg publishes the fallbacks and how they are published – market participants need to understand how to determine the observation date for the fallbacks. That is going to be two local business days prior to the payment date, based on the terms of the original contract," Battle explains.

For non-cleared derivatives referencing the five remaining US dollar LIBOR settings, the fallbacks will kick in on July 3, the first London banking day after those settings cease publication. However, they will only have an impact on payment calculations on the subsequent reset date for each trade, which will occur at different times and may be many months later.

"When thinking about the overall transition from LIBOR, the fallbacks have really de-risked the derivatives market in a meaningful way. In these last months heading into the cessation of US dollar LIBOR, we need to make sure there is complete clarity so that people understand what their fallbacks are for different products, including cash and derivatives, and how they will work operationally," says Wipf. IQ

"The most critical thing at this stage is to be familiar with where Bloomberg publishes the fallbacks and how they are published – market participants need to understand how to determine the observation date for the fallbacks"

Ann Battle, ISDA

A Delicate Balance

*European legislators are aiming to reach agreement on the banking package, which includes the final parts of Basel III, by mid-year. **Martin Merlin**, director of banking, insurance and financial crime at the European Commission, explains how the package remains faithful to the Basel standards while also reflecting the specificities of the EU financial system*

IQ: The European Commission (EC) published its proposals for the third Capital Requirements Regulation (CRR III) in October 2021 and trilogue negotiations are now underway with the European Parliament and the Council of the European Union to agree a final legislative text. Where do you expect the main points of discussion will lie, and what role will the EC play in the trilogue?

Martin Merlin (MM): The Council and the European Parliament adopted their negotiation positions on the banking package in November 2022 and February 2023, respectively. Both texts introduce a number of amendments in specific areas, but largely support the EC proposals. The EC will play, as usual, a mediating role in the trilogues with a view to facilitating an agreement between the co-legislators, while achieving the objectives of the proposal – notably, to strengthen the risk-based capital framework for banks without significant increases in overall capital requirements.

Overall, the European Parliament and Council positions are not too far apart. I expect the main point of discussion will concern the level of application of the output floor and the transitional arrangements accompanying it. The output floor is a measure that sets a lower limit – a floor – on the capital requirements that banks calculate when using their internal models – the output – and is introduced to reduce excessive variability of banks' capital requirements calculated with internal models.

We are aiming to reach a political agreement on the banking package by June 2023, which would allow it to be applied from January 1, 2025.

IQ: At the outset, the EC made clear its intention that this package should not lead to a significant increase in overall capital requirements for EU banks. How will you ensure the capital increase remains moderate as the regulation goes through trilogue and as technical standards are drafted?

MM: The banking package aims to strike a delicate balance between staying faithful to the Basel agreement and using the flexibility within it and certain temporary adjustments to reflect the specific features of the EU financial system and avoid a

"The banking package aims to strike a delicate balance between staying faithful to the Basel agreement and using the flexibility within it and certain temporary adjustments to reflect the specific features of the EU financial system" significant increase in capital requirements in the short term. The main objective of the ongoing finalisation of the Basel III reform implementation is to improve the simplicity, comparability and further risk sensitivity of the regulatory framework for banks and to fully restore confidence in the risk-based capital requirements. The current package also aims to avoid significant increases in overall capital requirements.

We believe our proposal has achieved these objectives. The package is not leading to a significant increase in tier-one capital requirements on average (less than 10% in the medium term), and the most significant targeted amendments are only meant to be temporary, so they do not affect compliance with the Basel standards after the transition period. I would not expect the agreement reached during the trilogue discussions to lead to a material rise in overall capital requirements, as co-legislators broadly share the objective to avoid significant capital increases. With regards to technical standards, these acts are aimed mainly at specifying and harmonising the rules included in the basic legislative act. Moreover, they undergo regulatory scrutiny and consultation with stakeholders to prevent unintended consequences, such as an undue increase in capital requirements.

IQ: The EC proposed that the rules would apply from January 1, 2025 – two years later than the Basel Committee on Banking Supervision deadline – to allow banks and supervisors time to properly implement the reforms. If alignment of implementation timing across jurisdictions remains a priority, is this timeline still realistic given some major jurisdictions have not yet published their proposed rules?

MM: In the EU, similar to other jurisdictions, the timeline for the implementation of the final Basel standards was affected by the COVID-19 pandemic and the priority to ensure banks would continue their role in financing the economy throughout the crisis. In our proposed date for implementation, we also had to take into account the specificities of the EU's inter-institutional legislative process and our objective to implement the standards in a timely manner. Together with the co-legislators, we have worked diligently towards ensuring the package is adopted this year and the January 1, 2025 deadline for application is observed. We always said we would be able to implement in 2025. Other jurisdictions seem to be following the same calendar. This would provide the necessary legal certainty for banks and would hopefully allow the banking regulatory framework to broadly stabilise.

IQ: The EC incorporated some deviations from the Basel III framework to account for the specificities of the EU banking system. How did you balance the need for global consistency with the need to account for those specificities, and how do you expect that balance will be maintained going forward?

MM: In the EU, unlike in other jurisdictions, we have made the choice to apply the Basel standards to all banks and hence implement high prudential standards across the entire EU banking system, which is also in line with our ambition to build a strong single market for all EU banks. Moreover, the Basel standards are applied not just at the consolidated level but also at solo level. This introduces →

"Together with the co-legislators, we have worked diligently towards ensuring the package is adopted this year and the January 1, 2025 deadline for application is observed. We always said we would be able to implement in 2025"

→ two important additional layers of conservativeness into the prudential regulation and supervision of the EU banking sector, compared to a situation in which the Basel requirements would be applied solely to large and complex banking groups and at the consolidated level, as in other jurisdictions.

This broad application also implies that the Basel standards need to be tailored to fit the diversity of our banking system, where appropriate. The most important deviations from the Basel standards proposed by the EC relate to unrated corporates, strategic equity investments, low-risk mortgages and derivatives, but do not affect compliance with the Basel standards over the medium term as they are only meant to be temporary to allow banks sufficient time to adapt to the impact of the introduction of the output floor.

One area where the EU is seen to be deviating relates to credit valuation adjustment risk, where exemptions previously introduced in the prudential framework are maintained. The banking package proposes to complement this with disclosure requirements to enhance supervisory monitoring. Other important jurisdictions are also deviating in related areas.

Going forward, we would expect to find a good balance through international regulatory coordination and impact monitoring to detect and correct potential unexpected impacts. Basel III implementation work will also provide a valuable opportunity to benchmark our policy choices against those of other jurisdictions.

IQ: The UK Prudential Regulation Authority published its own proposals in November 2022, which don't include some of the deviations from the Basel standards that the EC has proposed. Do you believe the regimes will ultimately converge, and will a level playing field be preserved?

MM: As one of the first jurisdictions to publish a complete proposal for the implementation of the final Basel III standards, complemented by a number of technical standards, we have certainly assessed with interest some of the policy choices made so far by other jurisdictions. At the same time, I think it is bad practice to comment on how other jurisdictions are implementing the standard. I just note that the UK authorities are proposing to tailor some elements of the global standards for their specific situation. The UK consultation recently closed, with implementation also planned for 2025. It remains to be seen what the final rules will look like.

IQ: The European Banking Authority (EBA) has been reviewing the role of environmental risks in the prudential framework, and the EU is generally moving faster than other jurisdictions in this area. How do you expect environmental risks might be integrated into the EU prudential framework in the future?

MM: In recent years, the EU has advanced quite significantly in the area of environmental risks compared to other jurisdictions, partly due to the urgency of the EU Green Deal and the importance of these risks for the economy as a whole. In the prudential area, the banking package includes specific requirements and incentives for banks to implement systematic and consistent management of environmental, social and governance (ESG) risks. It also introduces requirements for banking regulators to assess the adequacy of banks' management of ESG exposures in their regular supervisory review and evaluation process. And it empowers supervisors to perform regular stress tests on exposures to climate risks.

In the long term, we expect to get advice from the EBA and the European Insurance and Occupational Pensions Authority on possible changes in the capital requirements of our prudential frameworks to further address climate- and social-related financial risks in 2023. At the international level, the EC is also closely following the work of the Basel Committee on this front.

IQ: In December 2022, the Basel Committee published final standards for the prudential treatment of banks' exposures to crypto assets. How will the EC go about transposing those standards into EU law?

MM: Although the crypto-asset market remains small relative to the size of the global financial system, it has grown rapidly in recent years and, despite recent turmoil, further rapid developments cannot be excluded. It is therefore important to have in place a proper regulatory prudential framework to address the different types of risks faced by banks potentially trading crypto assets on behalf of their clients and providing crypto-asset-related services.

Anticipating the finalisation of the Basel prudential standard, the banking package introduced a requirement to assess, by December 31, 2025, the need for a dedicated prudential treatment for banks' exposures to crypto assets and subsequently submit a legislative proposal to the co-legislators. The amendments to the proposal introduced by the European Parliament indicate a willingness to shorten the deadlines significantly. We will see during the negotiations what will be possible to achieve while being consistent with the EU regulatory framework for crypto assets and stablecoins and the internationally agreed timeline for the implementation of the standards.

IQ: The EC has driven the development and adoption of capital requirements in the EU since the 2008 financial crisis. What lessons have you learned during this process? As CRR III will effectively complete the Basel III process in the EU, do you anticipate further changes to any particular parts of the prudential framework in the future?

MM: We are indeed approaching the final stage in the implementation of the broad set of banking reforms that began almost 15 years ago in the aftermath of the financial crisis. It has been a long and interesting journey that highlighted, above all, the importance of international cooperation and exchange of information for the design and implementation of the new prudential framework, and also for subsequent impact monitoring and potential targeted amendments.

On the EC's side more specifically, I would note that careful planning and coordination, targeted preparatory discussions and stakeholder consultation have been instrumental in achieving a balanced proposal while remaining faithful to the Basel standards. We would also like to acknowledge the EBA's essential contribution to the process.

Implementing the Basel reform agenda in the EU has given rise to the enhanced resilience and soundness of the banking sector via higher and better quality minimum capital requirements, leverage ratio requirements and liquidity ratio requirements. Risk-based capital levels and leverage ratio levels have doubled since 2008. Banks are now well capitalised and well supervised, also thanks to the establishment of the Single Supervisory Mechanism.

Looking forward, I would hope the adoption of the banking package will lead to a certain regulatory stability. On the other side, we will need to be vigilant about new or emerging risks, such as those linked to increased digitisation and climate change. IQ

THE EU BANKING PACKAGE

The European Commission (EC) adopted a review of EU banking rules in October 2021, comprising legislative proposals to amend the Capital Requirements Directive and the Capital Requirements Regulation to implement Basel III in the EU.

The EC proposals sought to faithfully implement the final parts of the Basel III framework, while taking into account the specific features of the EU banking sector. It aimed to strengthen resilience without significantly increasing capital requirements. It also aimed to ensure internal models used to calculate capital requirements do not underestimate risks, thereby ensuring the capital required to cover those risks is sufficient.

As part of the package, banks would be required to systematically identify, disclose and manage environmental, social and governance (ESG) risks. This includes regular climate stress testing by both supervisors and banks. All banks will have to disclose the degree to which they are exposed to ESG risks. The package also provides stronger tools for supervisors overseeing EU banks, establishing rules to assess whether senior staff have the necessary skills and knowledge for managing a bank.

The EC proposed to apply the rules from January 1, 2025, in order to give banks and supervisors sufficient time to properly implement the reform in their processes, systems and practices.

Trilogue negotiations on the proposals are now underway between the EC, the European Parliament and the Council of the European Union.

> "Although the crypto-asset market remains small relative to the size of the global financial system, it has grown rapidly in recent years and, despite recent turmoil, further rapid developments cannot be excluded"


ISDA®
Annual General Meeting | May 9 – 11, 2023
CHICAGO
agm.isda.org
@isda
@isdaconferences
#isdaagm

TUESDAY, MAY 9	
10:00 AM	**ISDA Accounting Meeting: Accounting and Reporting – Digital Assets, ESG and Key Updates** This event will give derivatives market participants an update on accounting and regulatory changes, including issues affecting digital assets and environmental, social and governance (ESG) transactions. Delegates will hear updates on US generally accepted accounting principles and International Financial Reporting Standards, as well as the transition to alternative risk-free rates.
12:45 PM	**Pre-AGM Symposium: Energy Policy and ESG Documentation** This event will explore how the shortage in gas supplies and higher energy prices are shaping policy and how regulators are responding to the growth in sustainable finance and ESG issues. The conference will also describe current and existing work to publish standard documentation for environmental and ESG derivatives, including an in-depth look at the recently published 2022 ISDA Verified Carbon Credit Transactions Definitions.
4:00 PM	**Early Registration and Arrival Hospitality Lounge**
8:00 – 10:30 PM	**ISDA AGM Welcome Reception at Morgan Manufacturing** Sponsored by LCH
WEDNESDAY, MAY 10	
8:00 AM	**Breakfast, Registration, Networking, Exhibition Opens**
8:45 AM	**Opening Remarks** *Scott O'Malia*, Chief Executive Officer, ISDA
9:00 AM	**Odd Lots Podcast Live!** Hosted by Bloomberg's *Tracy Alloway* and *Joe Weisenthal*
10:00 AM	**NBFI: Threat to Financial Stability?** Regulators have expressed concern that the growth of non-bank financial intermediation could amplify shocks and threaten financial stability. Global standard setters have outlined several possible responses, including monitoring leverage, improving margin practices and ensuring liquidity supply during stress events, including through the clearing of Treasury cash and repo markets. What progress is being made in these areas and what impact will it have on financial markets?
10:45 AM	**Networking Break**
11:15 AM	**Fireside Chat** *Terry Duffy*, Chairman and Chief Executive Officer, CME Group
11:35 AM	**Counterparty Risk vs Liquidity: Is the Balance Right?** Markets have experienced a succession of liquidity crunches in key markets in recent years, including US Treasuries and gilts, prompting questions over whether measures designed to mitigate counterparty credit risk and constrain bank balance sheets after the 2008 crisis have contributed to these liquidity issues. Is there a trade off? What can be done to respond to liquidity issues while maintaining increased systemic resilience?
12:20 PM	**Keynote Address** *Gary Gensler*, Chair, US Securities and Exchange Commission
12:40 PM	**Fireside Chat** *Douglas A. Cifu*, Co-Founder & Chief Executive Officer, Virtu Financial
1:00 PM	**Lunch**
2:15 PM	**Lessons from the Crypto Winter** The collapse of major crypto exchanges and market participants has brought some important legal and regulatory questions to the fore, including what rights customers have in the event of a bankruptcy of a crypto exchange or wallet provider and whether they can recover their assets. What is needed to provide greater certainty in this asset class and how is the crypto sector responding?
3:00 PM	**Regulatory Reporting 2.0** Global regulators are amending their derivatives reporting rules to incorporate globally agreed standards, marking a big step towards greater global consistency in rule sets. With the US Commodity Futures Trading Commission's amended rules coming into force on December 5, 2022, attention has turned to forthcoming changes in the EU, Asia-Pacific and elsewhere. What will these changes mean for financial institutions and how can digital solutions help with implementation?
3:45 PM	**Networking Break**
4:15 PM	**Pathway to Digital Documentation** Derivatives market participants have increasingly looked to technology to harness key provisions within both legacy and new documentation for collateral management, regulatory reporting, credit decisions and counterparty trading purposes. From the ISDA Create electronic negotiation platform to artificial intelligence solutions for legacy documentation, what solutions are currently available and what are the logical next steps to achieving full data? What are the roadblocks and what will it take to transition fully to a digital world?
5:00 PM	**Last Days of LIBOR** It's now a matter of weeks until the remaining five US dollar LIBOR settings are retired, prompting fallbacks to automatically kick in for a large proportion of derivatives that continue to reference those LIBOR tenors. How are firms preparing to implement these changes, as well as the conversion of cash products that continue to reference US dollar LIBOR? What are the implications for hedges?
5:30 PM	**Day 1 General Sessions Conclude**
5:45 PM	**Women in Derivatives (WIND) Panel Discussion and Cocktails** Sponsored by BNY Mellon
8:00-10:30 PM	**ISDA AGM Evening Reception at the Field Museum** Sponsored by ICE

Agenda is subject to change

THURSDAY, MAY 11	
8:00 AM	**Breakfast, Registration, Networking, Exhibition Continues**
8:45 AM	**Welcoming Remarks** *Scott O'Malia*, Chief Executive Officer, ISDA
8:50 AM	**Chairman's Remarks** *Eric Litvack*, ISDA Chairman, Managing Director, Group Director of Public Affairs, Société Générale
9:05 AM	**Keynote Address** *J. Nellie Liang*, Under Secretary for Domestic Finance, US Treasury Department
9:25 AM	**Outlook for Markets** How have trading desks responded to recent macro economic and geopolitical events? What strategies and asset classes have prospered, and what's the outlook for the remainder of 2023?
10:10 AM	**Views from the Exchange** The market environment has changed significantly over the past 18 months, with rising interest rates, inflation and energy prices. How have market and geopolitical events affected exchange-traded markets?
10:55 AM	**Networking Break**
11:25 AM	**Fireside Chat** *David Schwimmer*, Chief Executive Officer, London Stock Exchange Group
11:45 AM	**Trading Green Assets** Work to develop a robust, global voluntary market for trading carbon credits is gathering pace. What progress has been made and what issues remain outstanding? How are market participants using other ESG-related products, indices and derivatives to achieve their sustainability objectives?
12:30 PM	**A Level Playing Field?** The forthcoming release of a notice of proposed rulemaking on the Basel III trading book rules by US prudential authorities will mean all major jurisdictions will have published their proposals. How consistent are the rules likely to be and what will this mean for banks with global operations?
1:15 PM	**Board of Directors Election/Financial Report** **MEMBERS ONLY**
1:15 PM	**Lunch**
2:30 PM	**BREAKOUT SESSION A** **Steps to Collateral Management Efficiency** Recent events, including the March 2020 dash for cash and the September 2022 gilt crisis, have highlighted how the lack of automation, data standards and interoperability in all areas of collateral management can increase liquidity challenges. What steps can firms take to improve the efficiency of their collateral operations and help liquidity risk management? How can the Common Domain Model help?
	BREAKOUT SESSION B **Crypto Derivatives Definitions: Next Steps** ISDA has published standard definitions for cash-settled forwards and options referencing Bitcoin and Ether in an attempt to bring greater clarity to this nascent asset class, but the standards could be extended to other product types – and could also be applied for smart contracts executed on distributed ledger technology (DLT). What are the key provisions of the new definitions, how does the innovative new drafting style support DLT and smart contracts, and what are the next steps?
3:20 PM	**BREAKOUT SESSION A** **Managing Risk in Commodity Markets** Commodity derivatives traders have experienced a number of challenges over the past year, including soaring prices, the introduction of an EU gas price cap mechanism and the suspension of nickel trading. Did ISDA's commodity derivatives documentation prove to be resilient? What lessons have been learned?
	BREAKOUT SESSION B **Evolving the European Regulatory Framework** EU regulators are updating MIFID II/MIFIR and EMIR, including establishing rules on the clearing of euro derivatives. Meanwhile, the UK is in the process of developing its own regulatory framework following its exit from the EU. How will the regimes evolve in the coming years?
4:05 PM	**Networking Break**
4:35 PM	**BREAKOUT SESSION A** **Porting Clients: The Unsolved Clearing Challenge** Clearing clients should be insulated from the default of their clearing member by porting, a process that ensures client positions are moved to a solvent clearing member. Porting is crucial for clients, which need continuation of their hedges, and can significantly reduce the risk that the central counterparty has to manage during default management. However, porting is fraught with challenges. This panel will look at how these challenges can be overcome and the impact on the clearing ecosystem.
	BREAKOUT SESSION B **Developing Robust Derivatives Markets** Legislation ensuring the enforceability of close-out netting is expected in Saudi Arabia this year. Following the implementation of China's Futures and Derivatives Law last year, it means all of the Group-of-20 nations will have netting legislation in place. How does this critical step help the development of robust, liquid domestic capital markets, and what should come next?
5:20 PM	**ISDA AGM Concludes**

Agenda is subject to change

agm.isda.org @isda @isdaconferences #isdaagm

EVENING EVENT SPONSORS

LCH AN LSEG BUSINESS

ICE

PLATINUM SPONSORS

DTCC

S&P Global Market Intelligence

GOLD SPONSORS

ALLEN & OVERY

Linklaters

SILVER SPONSORS

BNY MELLON

CLEARY GOTTLIEB

CLIFFORD CHANCE

DRW

EY Building a better working world

Katten

KINETIX

LATHAM & WATKINS LLP

Morgan Stanley

MUREX

QUANTILE

TRADE HEADER

XVA Blockchain Digital Solutions for Derivatives

EXHIBITORS

acadia

Adenza

aosphere an affiliate of ALLEN & OVERY

droit

DTCC

FACTOR

ICE

ISDA Amend powered by S&P Global

ISDA create Powered by CreateiQ

LCH AN LSEG BUSINESS

PAUL HASTINGS

Treliant

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

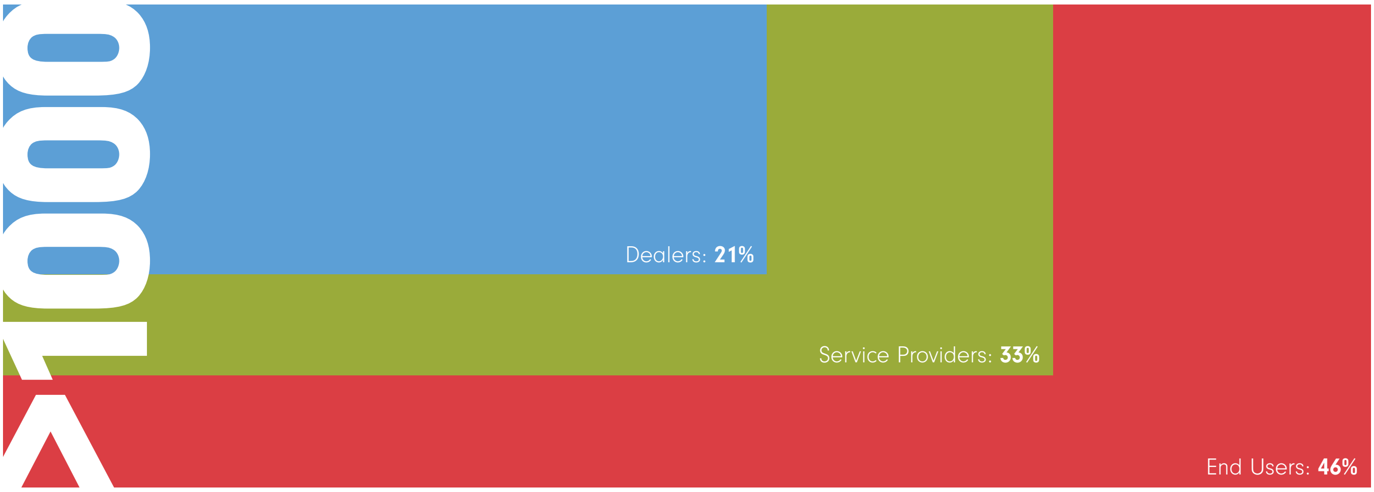
Advancing practices related to trading, clearing, reporting and processing of transactions in order to enhance the safety, liquidity and transparency of global derivatives markets

www.isda.org

MEMBERSHIP INFORMATION

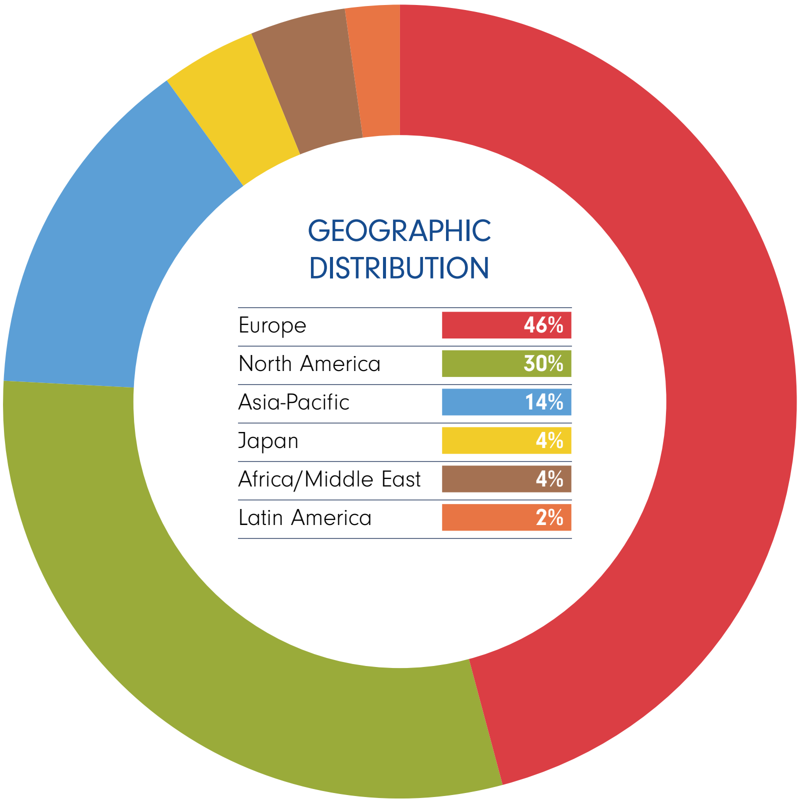
ISDA has over 1,000 member institutions from 79 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers.

MEMBERSHIP BREAKDOWN



TYPES OF MEMBERS

Banks	31%
Law Firms	21%
Asset Managers	9%
Government Entities	13%
Energy/Commodities Firms	7%
Diversified Financials	5%
Technology/Solutions Providers	5%
Other	9%



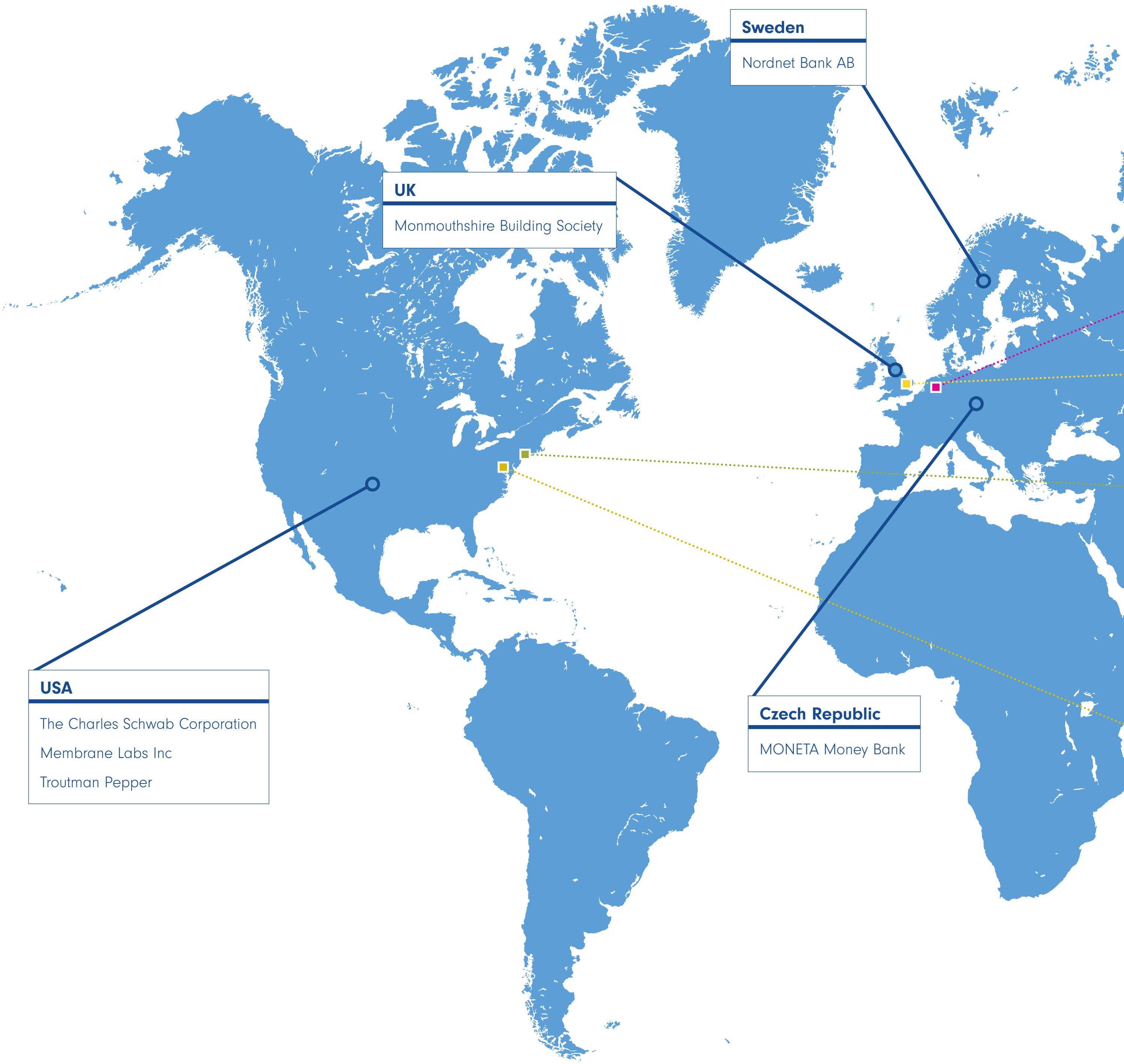
GEOGRAPHIC DISTRIBUTION

Europe	46%
North America	30%
Asia-Pacific	14%
Japan	4%
Africa/Middle East	4%
Latin America	2%

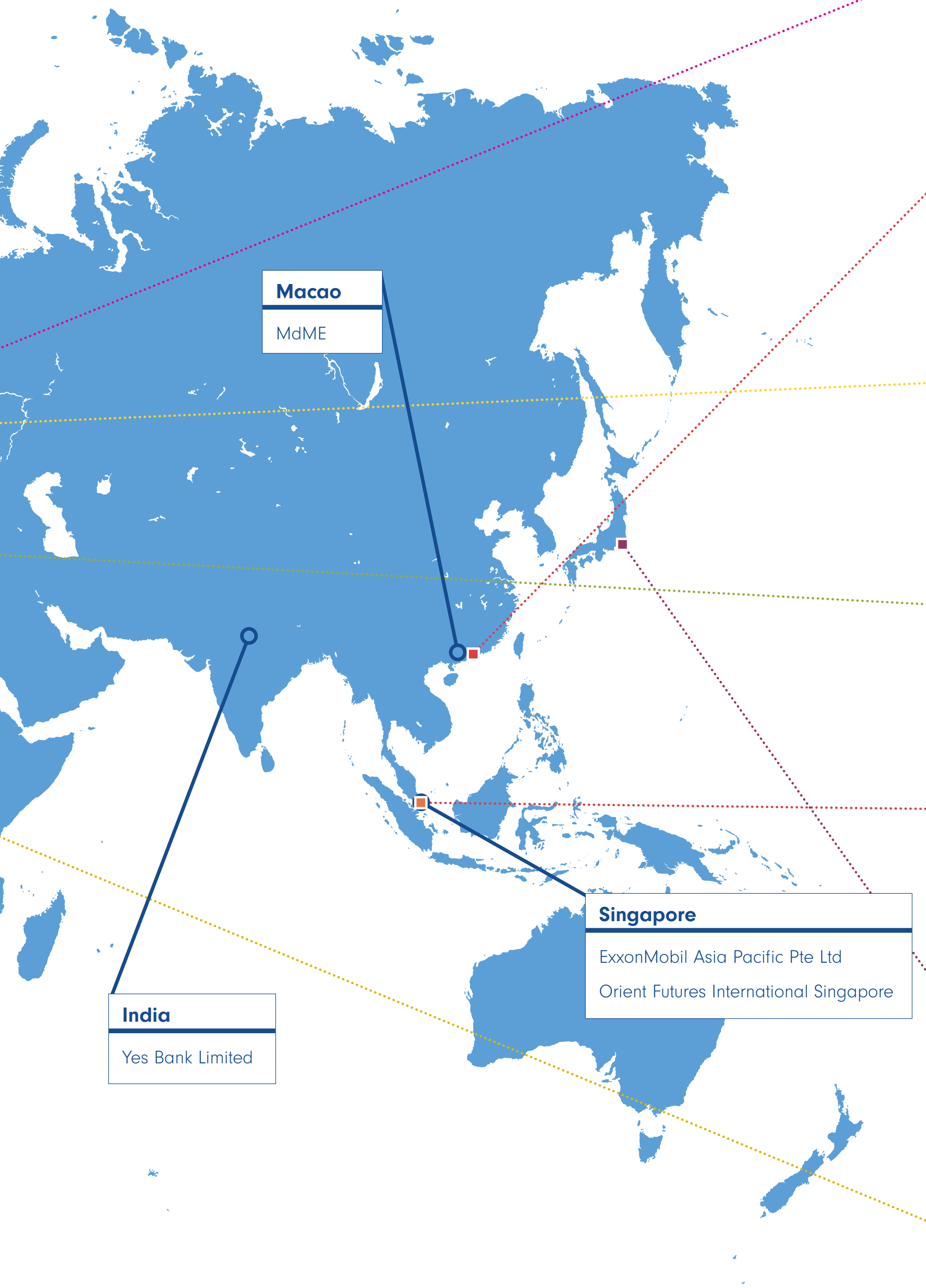
Additional information regarding ISDA's member types and benefits, as well as a complete ISDA membership list, is available on the ISDA Membership Portal: https://membership.isda.org/

NEW ISDA MEMBERS

A big welcome to all new members that joined ISDA in the fourth quarter of 2022. We look forward to working with you in the future



For additional information on joining ISDA, please visit the ISDA Membership



OFFICE LOCATIONS

BRUSSELS

2nd floor, Square de Meeûs 5/6
1000 Brussels
Belgium
Phone: 32 (0) 2 808 8013
isdaeurope@isda.org

HONG KONG

Suite 1602, 16th Floor, China Building
29 Queen's Road Central
Central, Hong Kong
Phone: 852 2200 5900
Fax: 852 2840 0105
isdaap@isda.org

LONDON

25 Copthall Avenue, 3rd Floor
London EC2R 7BP
United Kingdon
Phone: 44 (0) 20 3808 9700
Fax: 44 (0) 20 3808 9755
isdaeurope@isda.org

NEW YORK

10 East 53rd Street, 9th Floor
New York, NY 10022
Phone: 1 212 901 6000
Fax: 1 212 901 6001
isda@isda.org

SINGAPORE

One Raffles Quay
North Tower, #49-51A
Singapore 048583
Phone: 65 6653 4170
isdaap@isda.org

TOKYO

Otemachi Nomura Building, 21st Floor
2-1-1 Otemachi
Chiyoda-ku, Tokyo 100-0004
Phone: 813 5200 3301
Fax: 813 5200 3302
isdajp@isda.org

WASHINGTON

600 13th Street, NW, Suite 320
Washington, DC 20005
Phone: 1 202 683 9330
Fax: 1 202 683 9329
isda@isda.org

Portal at **https://membership.isda.org/**

BOARD OF DIRECTORS

OFFICERS

Eric Litvack, Chairman
Managing Director, Group Director of Public Affairs
Société Générale

Axel van Nederveen, Vice Chairman
Managing Director, Treasurer
European Bank for Reconstruction and Development (EBRD)

Jack Hattem, Secretary
Managing Director, Global Fixed Income
BlackRock

Darcy Bradbury, Treasurer
Managing Director
D. E. Shaw & Co., L.P.

DIRECTORS

Thijs Aaten
Chief Executive Officer
APG Asset Management Asia

Marc Badrichani
Head of Global Sales & Research
J.P. Morgan

William Black
Managing Director and Global Head of OTC Clearing
Credit Suisse

Charlotte Brette
General Counsel
AXA Investment Managers

Christine Cremel
Managing Director, Head of Onboarding, Transaction Management & Clearing
Credit Agricole CIB

Tina Hasenpusch
Managing Director, Global Head of Clearing House Operations
CME Group

Kieran Higgins
Co-head, Global Finance, Head of Linear Rates, EMEA, Senior Manager G10 Rates, LM Rates and Markets Treasury
Citi

Amy Hong
Head of Market Structure and Strategic Partnerships
Goldman Sachs & Co. LLC

Sian Hurrell
Head of Markets Europe
RBC Capital Markets

Gesa Johannsen
EMEA Head of CCM and Global Head of Product Strategy - Clearance and Collateral Management (CCM)
BNY Mellon

Jeroen Krens
Managing Director, Credit, Rates & Emerging Markets
HSBC Bank Plc.

ISDA EXECUTIVES

LEADERSHIP TEAM

Scott O'Malia
Chief Executive Officer

Katherine Tew Darras
General Counsel

Huzefa Deesawala
Chief Financial Officer

Mark Gheerbrant
Global Head of Risk and Capital

Steven Kennedy
Global Head of Public Policy

Tara Kruse
Global Head of Infrastructure, Data and Non-cleared Margin

Nick Sawyer
Global Head of Communications & Strategy

Lorraine Sneddon
Global Head of Human Resources

SENIOR EXECUTIVES

Clive Ansell
Head of Market Infrastructure and Technology

Ann Battle
Senior Counsel, Market Transitions

Amy Caruso
Head of Collateral Initiatives

Monica Chiu
Senior Counsel, Asia Pacific

Roger Cogan
Head of European Public Policy

Panayiotis Dionysopoulos
Head of Capital

Lisa Galletta
Head of US Prudential Risk

Benoît Gourisse
Head of Public Policy, Asia Pacific

Jing Gu
Head of Asia, Legal

Seslee Howell
Head of Conference Operations & Technology

Erik Tim Mueller
Chief Executive Officer
Eurex Clearing AG

Andrew Ng
Group Executive & Head of Treasury and Markets
DBS Bank

Shigeru Nonomura
Managing Director, Global Markets Japan
Nomura Securities Co., Ltd.

Scott O'Malia
Chief Executive Officer
ISDA

Emmanuel Ramambason
Financial Markets Global Head of Resources Management and Analytics (RMA)
Standard Chartered Bank

Duncan Rodgers
Managing Director, Head of ALM Strategy
UBS AG

Joanne Rowe
Corporate Risk Officer
Intercontinental Exchange, Inc.

Marc Seidner
Managing Director, Chief Investment Officer
PIMCO

Michael Stanley
Co-head of Global Rates & Counterparty Portfolio Management
Bank of America

Niamh Staunton
SVP Treasury
bp plc

Esra Turk
Managing Director, Co-head of Global Emerging Markets Sales, Head of CEEMEA and LATAM Institutional Client Group, Chair of Middle East & Africa
Deutsche Bank AG, London

Hideki Ushida
Managing Director, Global Markets Internal Control Office
MUFG Bank, Ltd.

Jacques Vigner
Chief Strategic Oversight Officer for Global Markets
BNP Paribas

Tom Wipf
Vice Chairman
Morgan Stanley

Marisa Irurre Bauer
Head of Conferences

Igor Kaplun
Head of Cyber Security

Ulrich Karl
Head of Clearing Services

Shafqat Malhi
Senior Controller

Jonathan Martin
Head of Derivative Products Management

Olivier Miart
Head of Analytics

Dillon Miller
Chief Technology Officer

Alan Milligan
Head of Data and Digital Solutions

Tomoko Morita
Senior Director and Head of Tokyo Office

Mark New
Senior Counsel, Americas

Nnamdi Okaeme
Head of SIMM

Olga Roman
Head of Research

Bella Rozenberg
Senior Counsel & Head of Regulatory and Legal Practice Group

Rick Sandilands
Senior Counsel, Europe

Fiona Taylor
Head of UK Public Policy

Peter Werner
Senior Counsel (Legal Infrastructure and Law Reform)

Chris Young
Head of US Public Policy

Liz Zazzera
Head of Membership

ISDA Conferences

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

Education has been part of ISDA's mission since the association's inception. ISDA's highly qualified instructors continue to educate the industry through online conferences and in cities across the globe. Visit isda.org/events for up-to-date listings of our virtual and in-person events

ISDA ICI
GLOBAL MARKETS FORUM

June 28, 2023
LONDON

Announcing the first ISDA/ICI Global Markets Forum

Join us this this summer in London for the first joint ISDA and ICI Global Markets Forum. This inaugural event will bring together regulators and industry experts to discuss pressing issues such as:

● Liquidity in Stressed Markets ● Margin Practices ● Collateral Management Efficiencies
● Digital Transformation of Financial Services ● And Much More

Head to **www.isda.org** for more information and to register!

ISDA Safe, Efficient Markets

Masterclass Series

ISDA Masterclass Highlight: Derivatives Documentation

Welcome back to the classroom! This small group learning course, led by experienced practitioners, will provide students with an in-depth understanding of the ISDA Master Agreement and supporting documents. You will participate in a hands-on negotiation workshop and follow real-world examples of counterparties using derivatives, why they use them and how they need to be documented

2-Day Course | In-Person | 2023 Dates in London, Hong Kong and New York. Visit **isda.org** for more info.

If you have an idea for a topic you would like to sponsor or if you see an event you would like to sponsor, please contact Rob Saunders: +44 (0) 20 3808 9727 | rsaunders@isda.org

ISDA Safe, Efficient Markets

Fundamentals of Derivatives

ISDA has produced a series of short educational videos on the functioning and key features of derivatives markets. The full series is available on the ISDA website, via the links below

How do Derivatives Benefit the Global Economy?

Derivatives play a critical role in helping to reduce the uncertainty that comes from changing interest rates and exchange rates, as well as credit, commodity and equity prices

bit.ly/3PiiB7N

How Big is the Derivatives Market?

This animation sets out the size of the market and describes some of the changes that have taken place in recent years to make the derivatives market safer and more resilient

bit.ly/3cgVb4d

How is Collateral Used in the Derivatives Market?

Collateral acts as a backstop that protects market participants and the economy as a whole. The requirement to post collateral makes the derivatives market more transparent, resilient and safe

bit.ly/3PfjSwz

How do Derivatives Help Firms Access Global Markets?

This animation shows how the global nature of the derivatives market allows companies to borrow outside their domestic market and hedge that risk efficiently

bit.ly/3INjKlr

What are the Benefits of Close-out Netting?

Close-out netting occurs when two counterparties agree to combine their various obligations into a single net payment following a default, drastically reducing credit exposure

bit.ly/2K1KJf1

Who Uses Derivatives and Why?

Thousands of companies around the world, including mortgage providers, retirement funds, asset managers, food and beverage companies and airlines, use derivatives to reduce risks and increase certainty for their customers

bit.ly/3PgU0Aq

What Role will Derivatives Play in Tackling Global Climate Change?

Countries across the globe have pledged to reduce the amount of carbon dioxide they release into the atmosphere, and derivatives will play a critical role in the transition to a greener world

bit.ly/3yQI8hl

The Resilience of Financial Markets

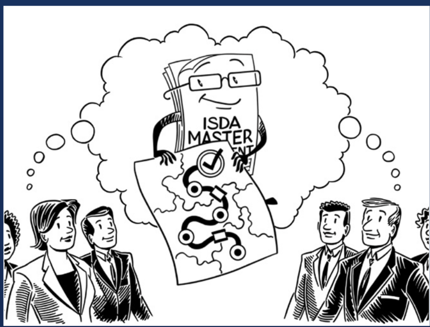
The global pandemic significantly disrupted economic activity, but derivatives markets and the financial system in general remained robust, allowing firms to continue to borrow and manage risk

bit.ly/3Pyv4E5

Understanding the ISDA Master Agreement

For 35 years, the ISDA Master Agreement has helped create standardisation in the derivatives market by providing a common contractual template for the trading relationship between two derivatives counterparties

bit.ly/3AYWuiG



*

"IOSCO is conscious of the structural vulnerabilities within non-bank financial intermediation, including liquidity and leverage risks. We are aiming to ensure that robust liquidity management frameworks are in place"

Jean-Paul Servais
Financial Services and Markets Authority
International Organization of Securities Commissions

©2023 International Swaps and Derivatives Association, Inc.