GLOBAL INVESTOR GROUP

FOW

ISF

Special Report • September 2022

Collateral Guide 2023

Lead sponsor

J.P.Morgan

In association with

HQLAX

SMARTSTREAM

transcend

BNP PARIBAS

www.globalinvestorgroup.com

Contents

GLOBAL INVESTOR GROUP | FOW | ISF

EDITORIAL

Managing editor
Luke Jeffs
Tel: +44 (0) 20 7779 8728
luke.jeffs@globalinvestorgroup.com

Report editor
Paul Golden
paul.golden@euromoneyplc.com

Special projects coordinator
Anshula Kumar
Tel: +44 (0) 20 7779 7927
anshula.kumar@euromoneyplc.com

Senior reporter, Securities Finance
Ramla Soni
Tel +44 (0) 20 7779 7246
ramla.soni@euromoneyplc.com

Design and production
Antony Parselle
aparselledesign@me.com

BUSINESS DEVELOPMENT

Sales manager
Federico Mancini
federico.mancini@euromoneyplc.com

Head of sales, News & Insight
Sunil Sharma
Tel: +44 (0)20 7779 8556
sunil.sharma@totalderivatives.com

Divisional director Jeff Davis

Chairman Leslie Van de Walle

Chief executive Andrew Rashbass

Directors Jan Babiak, Colin Day, Imogen Joss, Wendy Pallot, Tim Pennington, Lorna Tilbian

SUBSCRIPTIONS
UK hotline (UK/ROW)
Tel: +44 (0)20 7779 8999
US hotline (Americas)
Tel: +1 212 224 3570
hotline@globalinvestorgroup.com

RENEWALS
Tel: +44 (0)20 7779 8938
renewals@globalinvestorgroup.com

CUSTOMER SERVICES
Tel: +44 (0)20 7779 8610
customerservices@globalinvestorgroup.com

GLOBAL INVESTOR
8 Bouverie Street, London, EC4Y 8AX, UK
globalinvestorgroup.com

Next publication
Autumn 2023

Global Investor (USPS No 001-182) is a full service business website and e-news facility with supplementary printed magazines, published by Euromoney Institutional Investor PLC.
ISSN 0951-3604

Welcome to the 2023 Global Investor Collateral Guide

By **Ben Challice,** head of trading services, J.P. Morgan Securities Services

In the 12 months since this guide was last published, the overall global health environment has improved markedly. At the same time, however, the macro-economic and geopolitical situation has become more precarious. This has led to market volatility which has preoccupied markets and presented both challenges and opportunities when managing collateral.

Fortunately, the resiliency ingrained into every market participant over recent years continues to ensure post-trade processes are robust in navigating market conditions while resources are not diverted from the forward-looking agenda.

This year's collateral guide discusses many of the industry trends around innovation, automation and optimisation. One such advancement is the use of digitised or tokenised collateral which is providing real world, tangible benefits to firms.

While we have only scratched the surface of the possibilities for both pre- and post-trade across financing and collateral markets, there are plenty of use cases, and seemingly, every collaborative client meeting sparks new ideas. That said, one of the biggest challenges is keeping product delivery solution-focused, while maintaining a perspective on the broader landscape and how the future ecosystem will interact.

It has been very encouraging to see how the industry has come together to deliver collaborative solutions to meet heightened regulations. The implementation of the CSDR penalty regime in February and phase six of UMR in September mark the passing of the majority of the post financial crisis regulatory responses affecting the post trade landscape.

New learnings from each implementation phase have led to greater automation and evolution in trade portfolio reconciliation, margin call management automation, and pre-trade analytics.

Many of the topics covered in the 2023 collateral guide coalesce around one major trend – collateral convergence. Historically we have used the term 'enterprise collateral management' to describe the combination of fixed income and equities financing desks managing their combined collateral obligations. Convergence has come to represent a more holistic platform, system or infrastructure alignment and mobilising collateral to be agnostic of the exposure driver.

CCP margining is a great example of extending the benefits of tri-party with the simplicity of traditional bilateral settlement to post collateral to CCPs from your existing longbox, thereby facilitating securities lending, repo or OTC derivatives margin.

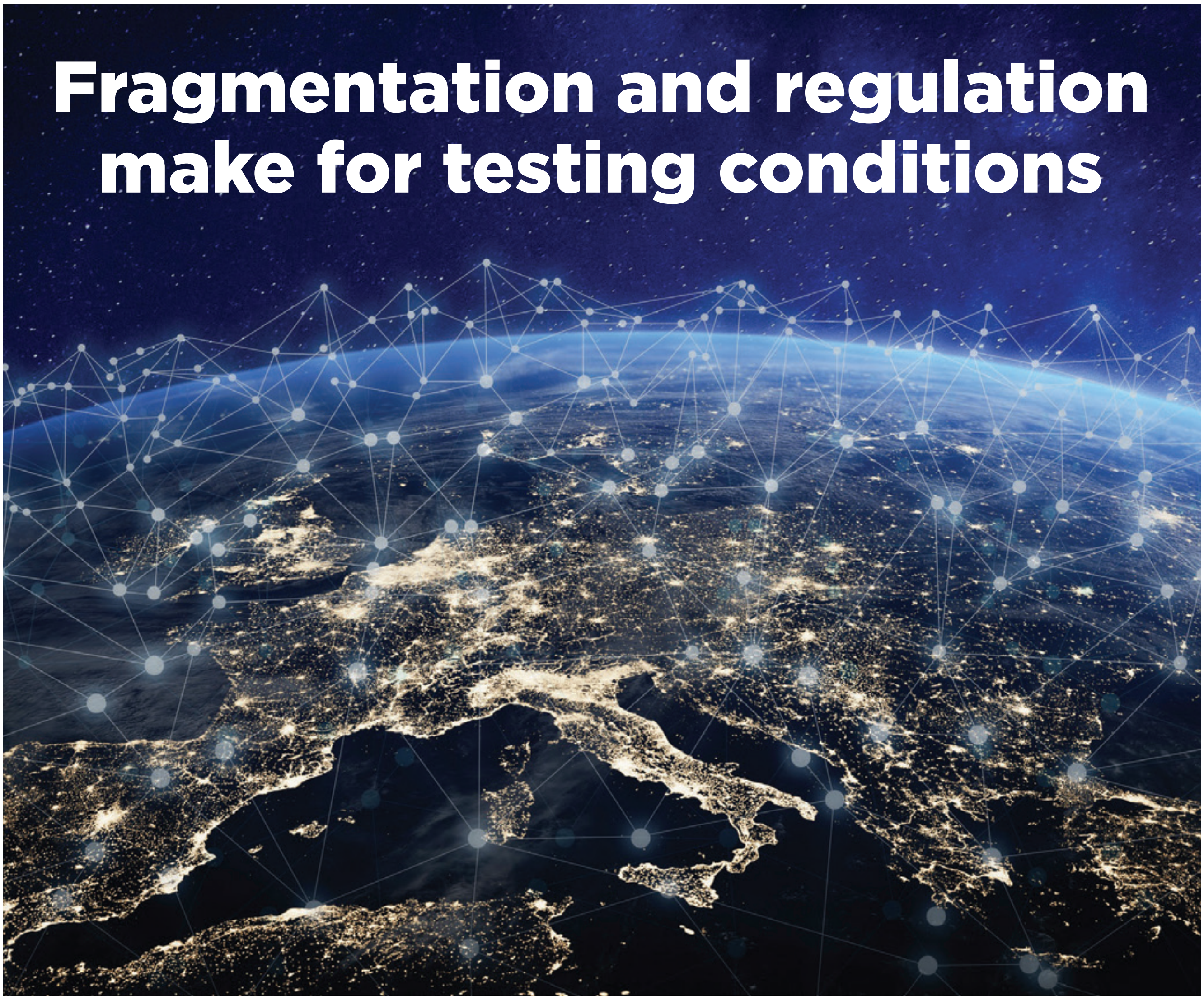
Finally, no collateral guide would be complete without an update on optimisation given how instrumental the benefits to funding, liquidity and capital are in terms of driving P&L and managing risk. Effective optimisation goes hand-in-hand with proficient data and analytics which are also key areas of focus.

This year's regional highlights come from Europe where the pledge discussion has been most active and where ESG has been hotly debated.

All of this and more are adeptly explored in the 2023 edition of the Global Investor collateral guide.

J.P. Morgan is once again a proud sponsor, as we prioritise client service and innovation. ■

Fragmentation and regulation make for testing conditions



Paul Golden looks at some of the unique challenges facing collateral managers, custodians and clients in Europe.

The latest edition of ISLA's securities lending market report notes that as inflation, quantitative tightening and rate hikes came to the fore in Europe towards the end of the year, a mixture of pension fund hedging rate moves, bank treasury asset buying (on lower-than-expected asset growth), and fast money shorting front-end bonds placed extreme pressure on collateral availability, steepening curves and also increasing specials value.

This led to better specials demand as dislocations drove macro, relative value, and futures basis strategy opportunities.

Across 2021, higher-graded sovereigns saw more pressure generally on fixed incomes than lower-graded countries with the core versus peripheral Europe spread slowly growing wider as the year passed.

On a macro basis, the market started to see higher beta emerging market demand towards the end of the year as general spreads synchronised with Fed expectations.

Along with most developed markets, European indices saw a positive performance in 2021. Despite this, the traditional consistent securities lending revenue streams associated with deep and broad specials were not seen.

AFTER MANY YEARS OF UMR IMPLEMENTATION THE INDUSTRY HAS BUILT A GOOD CADENCE OF ANNUAL IMPLEMENTATION, CULMINATING WITH A SMOOTH GO-LIVE OF PHASE SIX IN SEPTEMBER

Graham Gooden, head of collateral services product and strategy for EMEA at J.P. Morgan

Industries exposed to the impact of Covid-19, such as travel and airlines, were the highest performing sectors in terms of short interest and lending revenue. Germany was the top performer in terms of special situations activity and while interest was lower than expected, revenue for the region still outperformed, driven by a rise in corporate activity that created significantly increased spread opportunities.

When ISLA compared the percentage value of reported securities or commodities lending or securities or commodities borrowing transactions which are single-sided (transactions where only one party is captured by the relevant SFTR regime) and transactions which are dual-sided, it noted a marked change in European counterparty relationships over 2021.

Although the vast majority of activity was still sourced from outside the region, the change in this metric over 2021 illustrated a 5.89% change in the selection of European trading counterparts.

Pledge collateral continues to be a priority area in Europe, with dealers in particular focusing on capital benefits pledge offers according to Graham Gooden, head of collateral services product and strategy for EMEA at J.P. Morgan.

"Japanese collateral represents a significant portion of collateral available for many dealers but can require a local law security structure to be in place to be effective," he explains. "We have worked with clients to provide a pledge solution which satisfies the local security requirements for Japanese pledge alongside the offshore documentation, to provide for pledge collateral to be applicable globally."

One key area of innovation is the emergence of securities lending aggregators, servicing retail clients and providing new supplies of often highly sought after securities to lend to counterparties.

As a tri-party agent, J.P. Morgan has developed a number of structures with these aggregators to make ensure that collateralisation continues to be highly automated and manageable for borrowers, while the collateral pools are segregated as required by the aggregators to enable them to meet obligations to their underlying clients.

"After many years of UMR implementation the industry has built a good cadence of annual implementation, culminating with a smooth go-live of phase six in September," says Gooden. "In the most recent phases, many buy side firms used tri-party as a collateral provider for the first time to collateralise counterparties for UMR and once fully connected also have the opportunity to broaden their use of tri-party to facilitate securities financing activity and sourcing eligible collateral to be posted as initial margin."

J.P Morgan continues to see some consolidation and rationalisation of different legal entity strategies across clients' European footprints, necessitating inter-entity and inter-book collateral mobilisation to ensure post trade efficiency and most optimal allocation of balance sheet resources.

"The CSD regulation will put pressure on firms to ensure collateral movements are booked timely, and importantly flow through to their custodian's real time," observes Trevor Negus, senior product manager at SmartStream. "This will require seamless API connectivity between the collateral and settlement systems."

Despite efforts as part of the Capital Market Union to harmonise European market structures, Europe is still a fragmented set of markets, rules and regulations.

That is the view of Jérôme Blais, co-head of tri-party collateral management, securities services at BNP Paribas, who says tri-party agents and custodians like BNP Paribas will work to adopt the new European Central Bank standard practices for collateral management over the next few years. "Adoption of SWIFT ISO 20022 will be a step in the right direction, but harmonisation goes beyond technology with more cross-border harmonisation in the fields of payment, corporate actions and eligibility management," he says.

"In the wake of UMR, tri-party collateral agents will still have to work towards supporting new entrants into tri-party via the UMR window. Many of these firms are European buy-side players who come with their own set of regulatory obligations. Collateral managers, custodians and depositary banks will have to cooperate to ensure these regulated vehicles can easily benefit from plug-and-play tri-party solutions (the de facto market standard for regulatory initial margin) while guaranteeing that these models are in line with their specificities."

Interest rates rising, markets becoming more volatile, and regulatory regimes becoming less co-operatives are all factors that are impacting collateral managers, custodians and clients in Europe, explains BJ Marcoullier, head of sales at Transcend. "These developments highlight the value of new technology solutions," he adds.

In contrast to US firms who have been able to rely on dealer initial margin calculations, UMR meant a requirement for all European firms to calculate initial margin themselves, adding to the regulatory burden in the region explains Neil Murphy, business manager triResolve at OSTTRA.

"Firms also face the prospect of a new CSDR environment, with the threat of increased operational costs," he says. "Those with manual processes in place - particularly with regards to settlement - should be focusing on improved processing so as to reduce the risk of late settlement penalties."

Outside of the regulatory landscape, the geographical split across Europe means a diverse set of market participants, with firms often trading not only with large international dealers but local regional banks too.

ADOPTION OF SWIFT ISO 20022 WILL BE A STEP IN THE RIGHT DIRECTION, BUT HARMONISATION GOES BEYOND TECHNOLOGY WITH MORE CROSS-BORDER HARMONISATION IN THE FIELDS OF PAYMENT, CORPORATE ACTIONS AND ELIGIBILITY MANAGEMENT

Jérôme Blais, co-head of tri-party collateral management, securities services at BNP Paribas

"Regional banks have often been slow to adopt market standards and automation, which has a knock-on impact for their counterparties," says Murphy. "With UMR moving to the rear view mirror for many, this means their focus will turn to improving legacy processes. Regional banks that have been slow to adopt change may face increased pressure from clients." ■

The big issues

A look at how current market conditions (and CSDR) are impacting clients and collateral service providers and whether providers have become more innovative in terms of their approach to product development.

In August, the European Central Bank published an opinion as part of the ongoing review of the European Commission's proposal to amend the Central Securities Depositories Regulation (CSDR).

The ECB advised that the entire application of the mandatory buy-in regime should be removed, stating that it would cause 'a significant interference in the execution of securities transactions and the functioning of securities markets' and also highlighting the non-availability of a buy-in agent in the market.

The ECB also suggested excluding securities finance transactions from the scope of mandatory buy-ins were they to come into effect.

The previous month, ISLA CEO, Andrew Dyson, described CSDR as something of a wakeup call for the industry, noting that fail rates remain persistently high and if recent data is to be believed, marginally worse than this time last year.

The effects of ESG

According to ISLA, the industry is increasingly factoring climate financial risk and other sustainability risk considerations into collateral selection. However, it warns that any new ESG criteria applicable to collateral selection must not result in a collateral set which is too narrow as this could disrupt financial stability and liquidity as well as the ultimate goal of an orderly transition process to a sustainable economy.

It therefore remains vital to ensure adequate diversification of collateral guidelines. Accordingly, the risk analysis for collateral acceptability should continue to take into account all relevant risks, including - but not limited to - sustainability and ESG risks.

The securities lending industry is in a transition phase. Instead of implementing exclusion policies or narrow lists of favoured collateral assets with potentially adverse impacts on risk management and market stability, ISLA considers that appropriate, achievable guidance from regulators and central banks in relation to securities lending and collateral would help to accelerate market participants to the next stage of the path to net zero.

Over the past few years, the financial services industry has witnessed increased interest and focus on ESG conscious investing, especially as firms look to sustainably rebuild and recover in the aftermath of the pandemic.

"Within the securities financing ecosystem, integrating ESG principles into flexible collateral requirements has grown in importance as the

"If we fail to grasp the nettle this time, I fear that our industry will become less relevant and increasingly confined to the margins of the capital markets ecosystem, as other products offer similar economic outcomes with less operational friction," he said.

Another major challenge facing market participants is collateral rarefaction suggests Jérôme Blais, co-head of triparty collateral management, securities services at BNP Paribas.

"As a collateral provider, we have to be proactive when supporting clients who may be short on liquidity and assist them in their collateral relationships across counterparties," he says.

Allowing clients to fine tune collateral eligibility criteria has also become critical. By building user friendly and reactive tools with pre-trade simulation features, collateral service providers can help clients pilot their funding needs more accurately.

Collateral departments are also dealing with the squeeze on cash collateral driven by inflation and rising interest rates.

"Cash may no longer always be cost effective, so firms must look at non-cash collateral and increasingly at equities," says Trevor Negus, senior product manager SmartStream. "We have seen requests for eligibility schedules and concentration rules adjusted to allow for equity collateral."

Firms must also look at their ESG credentials and eligibility schedules are being further tailored to accommodate ESG (see sidebar).

"CSDR has put pressure on firms to connect their collateral and settlement systems through APIs, allowing programmatic flow of booked collateral out, and settlement and fail information back," adds Negus. "Operating on a batch basis is no longer sufficient."

According to Bimal Kadikar, founder and CEO Transcend, current market conditions are a major factor in the focus on the intersection of collateral, liquidity and funding across the globe, particularly in North America and Europe.

pace gathers from asset owners looking to align their eligibility requirements with their funds' overall ESG objectives," says Rickie Smith, collateral services product manager J.P. Morgan.

When integrating ESG principles into the selection criteria, asset owners must also consider the importance of ensuring adequate diversification of collateral, especially given the primary role that collateral plays as a credit risk mitigant.

"ESG is highly subjective and due to the lack of standardisation and regulatory clarity it is important that the industry associations (ISLA, PASLA, RMA, GASLA) continue to work together with their member firms in defining recommended best practices and providing support and regulatory advocacy to ensure minimal disruption to the liquidity and smooth running of the underlying markets," says Smith.

From a J.P. Morgan tri-party perspective, transparency is a key requirement from clients. Within its tri-party programme the bank has introduced a number of ESG indices to support clients looking to align their eligibility parameters to their underlying investor ESG objectives.

"As the demand around transparency continues to accelerate, it is imperative that we increase our menu of supportable indices in addition to exploring potential new solutions that enable customisable, granular and fully automated collateral requirements with underlying reference data which is broadly adopted," adds Smith. ■

"WITHIN THE SECURITIES FINANCING ECOSYSTEM, INTEGRATING ESG PRINCIPLES INTO FLEXIBLE COLLATERAL REQUIREMENTS HAS GROWN IN IMPORTANCE"

Rickie Smith, collateral services product manager J.P. Morgan

"INCREASED VOLATILITY HAS RESULTED IN SIZEABLE MARGIN REQUIREMENTS AND THE RISING INTEREST RATE ENVIRONMENT MEANS THE COST OF MAKING THESE DECISIONS HAS BECOME MORE SIGNIFICANT, SO ANY OPPORTUNITY TO OPTIMISE WILL HAVE A NOTABLE EFFECT ON RETURN ON INVESTMENT

Bimal Kadikar, founder and CEO Transcend

"Increased volatility has resulted in sizeable margin requirements and the rising interest rate environment means the cost of making these decisions has become more significant, so any opportunity to optimise will have a notable effect on return on investment," he says.

Clients are looking for solutions that offer increased automation and visibility. "From our perspective, the ability to coordinate across collateralised business areas is a major focus for clients," adds Kadikar. "There is a lot of innovation taking place in terms of bringing together different elements around equity finance, repo, OTC derivatives, cleared derivatives, and functions relating to operations and treasury."

Industry players have acknowledged that there needs to be a higher level of internal and external connectivity adds BJ Marcoullier, head of sales at Transcend.

"There is a lot of evaluation taking place around service provider versus principal activity – once the systems and data have been organised, who should be doing what to make sure the best decision making is sitting in the smartest locations," he says.

Neil Murphy, business manager triResolve at OSTTRA notes that collateral managers continue to be sensitive to the next period of market volatility. For many, this manifests itself in ensuring a state of readiness so that they are able to cope with increased call volumes and a potential spike in collateral funding needs.

In order to prepare, firms are looking to increase use of market standards, thus ensuring more potential for STP and an ability to cope with larger volumes.

"Technology innovation should be at the forefront for both providers and collateral managers," says Murphy. "The ability to cope with increased volumes and ongoing regulatory change - while removing legacy manual processes - provides a common thread."

Innovation can take many forms, but is increasingly about connectivity to counterparties, custodians, and a disparate range of systems.

"For providers, this often means working collaboratively to ensure interoperability across platforms, thus helping clients to reduce complex IT connectivity and moving away from product silos," adds Murphy.

Tri-party agents play a key role in the operating and practical side of posting collateral and agents must evolve in tandem with their clients, regulations and the financial markets according to Sagar Patel, head of Americas tri-party product at J.P. Morgan.

"Broadly, there is simply more integration and connectivity with tri-party agents than ever, whether it is with clients' systems or with third party service providers that they have hired," he explains. "For example, digitising collateral eligibility schedules and feeding that data to our clients' systems or third party vendors has been a common theme, as firms want a holistic view of their eligibility criteria to run over their own analytical processes."

There has been a lot of investment and time spent on these types of enhancements and Patel sees this as an ongoing theme.

"In general, the collateral network will expand and there will continue to be more connectivity across organisations," he says. "There are vendor solutions out there that can help, connecting both internal and external systems, taking data directly from the client or their service providers and consolidating it, providing a real time view of collateral."

In many cases, clients can directly instruct the vendor as to what they require downstream.

To efficiently move collateral for optimal treatment, whether bilateral or tri-party, is a natural next step once a firm has a consolidated view. The integration of third parties, tri-party agents and other market infrastructure is key to efficiently moving collateral from one place to another in an automated way and in a timely fashion.

"The benefit of using third parties is that they maintain the connectivity across all those systems and sources, taking the component of build and maintenance off the client's plate and allowing them to focus on the bigger picture," says Patel.

There also has been much innovation in terms of collateral mobility of hard to finance assets. Hard to finance assets have value but are challenged in terms of financing - for example, the challenge could be scarcity of reference data and pricing, the security may be strictly controlled, or not held at a traditional depositary. Examples of such assets include private issuances and restricted shares. "The programme of restricted shares referenced above are not held at a traditional depository (such as DTC) but rather at a transfer agent," explains Patel. "The shares are difficult to mobilise and utilise in a traditional financing and tri-party transaction due to the location and lack of connectivity to financing platforms."

To free and mobilise these types of assets, agents such as J.P. Morgan have developed a framework and process flow to support accessibility within the tri-party programme. The primary challenge to mobilise these types of assets is receiving and delivering the securities from and to a transfer agent and reconciliation in an automated fashion.

Innovative operational, legal and technological models are required here for full comfort across an organisation's front office, operations, and various oversight teams. ■

"TECHNOLOGY INNOVATION SHOULD BE AT THE FOREFRONT FOR BOTH PROVIDERS AND COLLATERAL MANAGERS, THE ABILITY TO COPE WITH INCREASED VOLUMES AND ONGOING REGULATORY CHANGE - WHILE REMOVING LEGACY MANUAL PROCESSES - PROVIDES A COMMON THREAD"

Neil Murphy, business manager triResolve at OSTTRA

"BROADLY, THERE IS SIMPLY MORE INTEGRATION AND CONNECTIVITY WITH TRI-PARTY AGENTS THAN EVER, WHETHER IT IS WITH CLIENTS' SYSTEMS OR WITH THIRD PARTY SERVICE PROVIDERS THAT THEY HAVE HIRED"

Sagar Patel, head of Americas tri-party product at J.P. Morgan

Moving on

Market participants have taken a variety of approaches to improving access to collateral where market structures or regulation make it difficult to get hold of.

While tri-party has been an undeniably powerful tool to efficiently allocate general collateral, it comes with limitations in some cases - especially when it comes to less traditional markets.

That is the view of Jérôme Blais, co-head of triparty collateral management, securities services at BNP Paribas, who says that having the ability to allow clients to leverage domestic inventory is a key feature that can benefit corporate and investment banks that have a combined network of domestic custodians and tri-party agents.

"The ability to combine both under one roof can open the door to improved efficiency," he says. "Solution providers like HQLA^{X} will start tackling this issue of hard-to-fund assets but it may take some time for these solutions to materialise and for them to be widely used."

In the interim, expanding the use of pledge structures is an effective solution but does affect the economics of a trade and comes with a significant amount of additional legal layers.

"Other themes to explore here include how to efficiently manage a global inventory, the extent to which tri-party can help reduce friction, the risk implications of increased asset velocity, and where managers can add value," says Blais.

It is important to identify collateral in a way that makes mobilisation decisions easier and the first step to mobilisation is breaking collateral down into contextual components, says BJ Marcoullier, head of sales at Transcend.

"From there you have to be able to incorporate the operational aspect of every decision, for example making sure bookings take account of factors such as sequencing," he adds. "Mobilisation is potentially on a par with decision making in terms of importance."

Mobilisation is a theme that is reflected in many of J.P. Morgan's recent strategic initiatives says Ed Corral, managing director - global head of derivatives collateral management and head of collateral services product and strategy for Americas.

"One of the inefficiencies of achieving a truly global optimised funding book is the difficulty in moving certain securities collateral from where they naturally reside to the location of need," he explains. "Legacy solutions have focused on increasing the efficiency of movement of the securities collateral themselves, while our alternative approach is to immobilise these securities in their natural depot and instead mobilise the value of those securities."

Through the tokenisation of the securities collateral, the value the securities represent becomes infinitely

"OUR INTEGRATION WITH J.P. MORGAN'S MMF PLATFORM STREAMLINES A PROCESS THAT WAS HISTORICALLY CLUNKY AT BEST"

Mike Calandra, collateral services product manager J.P. Morgan

"ONE OF THE INEFFICIENCIES OF ACHIEVING A TRULY GLOBAL OPTIMISED FUNDING BOOK IS THE DIFFICULTY IN MOVING CERTAIN SECURITIES COLLATERAL FROM WHERE THEY NATURALLY RESIDE TO THE LOCATION OF NEED"

Ed Corral, managing director - global head of derivatives collateral management and head of collateral services product and strategy for Americas at J.P.Morgan

mobile without disturbing the established custody and settlement of those securities.

"Another key area of interest around the market is leveraging our technology and solutions as a collateral services provider to increase the velocity and utilisation of less portable securities," says Corral. "A prime example of this is Visa-B shares, which do not settle at a depository (for example, DTC) and are registered and recorded at a transfer agent. Our solution supports the exchange of these securities between qualified counterparties on our tri-party platform."

Money market funds in tri-party were discussed for some time but are now a reality with use cases across various collateral obligations, including segregated initial margin observes Mike Calandra, vice president - collateral services product manager J.P. Morgan.

"From the purchase of money market funds to the recognition of those shares as eligible collateral to their utilisation as collateral, our integration with J.P. Morgan's MMF platform streamlines a process that was historically clunky at best," he says.

Partnering across groups to create value for clients is not unique to money market funds – for example, the securities finance desk and the collateral services group teamed up to launch a tool called collateral transport.

"Our asset mobilisation tool keeps track of what assets are being held in custody and used for collateral and where they can alternatively be optimised for securities lending, increasing mobilisation and adding the potential to unlock incremental value from their portfolios," adds Linda Roth – Americas head of trading services sales. "This is another example of convergence, but on a larger scale across more products."

Consolidating across all business lines and regions and accessing a firm's global inventory is fundamental to allow collateral usage and optimisation to run effectively observes Trevor Negus, senior product manager at SmartStream.

"This can only be done properly if the collateral solution, through APIs, can supply real time eligibility, position, and margin call data out and consume optimised collateral back in," he concludes.

Rule 153c-3 in the US means that equity collateral cannot be mobilised efficiently, and additionally impacts cross regional liquidity. Grant Davies, head of sales EMEA at EquiLend suggests that in part, the US needs a change of regulation to free up liquidity.

"The limited interoperability between tri-party agents in current market structures means it is cumbersome and inefficient to transfer with ease across platforms and custodians," he says. "Nothing has really changed in recent years although the emergence of tokenisation and its inclusion in industry technology could help."

According to Davies, the real benefit will be once custodians manage a central digital ledger to enable instant transfer of collateral and the removal of settlement windows across the global landscape "but we have a while to wait for that." ■

"OUR ASSET MOBILISATION TOOL KEEPS TRACK OF WHAT ASSETS ARE BEING HELD IN CUSTODY AND USED FOR COLLATERAL AND WHERE THEY CAN ALTERNATIVELY BE OPTIMISED FOR SECURITIES LENDING"

Linda Roth, Americas head of trading services sales, J.P. Morgan

A lot done, but more to do

Phases five and six of the uncleared margin rules have affected market participants and clients in many different ways – and there is still work to be done.

Over recent years, UMR has focused attention on issues such as data quality and management, the robustness of margin models, how to calculate margin on exotic instruments, and best practice for tracking collateral ownership transfers.

The phase six deadline may now have passed, but while a significant number of buy-side firms are in scope in this final phase, a large subset of these firms will remain below the segregated initial margin threshold and therefore will not be required to exchange margin.

Trading under the IM exchange threshold offers in-scope firms temporary relief from initiating segregated IM operations, but this eventually will need to be addressed as long as the firm is being captured under the uncleared margin rules explains O'delle Burke, head of collateral services product and strategy APAC J.P. Morgan.

"THE MAJOR DIFFERENCE WITH THE PREVIOUS PHASES IS THE HUGE NUMBER OF RELATIONSHIPS THAT HAVE TO BE SET UP"

David Beatrix, head of OTC & collateral services, securities services BNP Paribas

"Another alternative that is attracting consideration is the advantage of central counterparties or CCPs," he says. "Some firms are weighing the cost of investment and resources for non-cleared OTC trades that are clearable against the cost of central clearing through clearing brokers. Equities seem to be emerging as a new frontier for IM collateral as well as variation margin collateral, which will make tri-party an indispensable tool for buy-side firms going forward."

It has been expected for a few years now that the low average aggregate notional amount or AANA threshold (€8bn) would catch a significant number of buy-side entities in the scope of regulatory initial margin.

Many firms have tried to take advantage of the €50 million equivalent threshold to minimise funding costs, but mainly to have more time to finalise the negotiation of the documentation packages explains David Beatrix, head of OTC & collateral services, securities services BNP Paribas.

"A big part of the readiness projects has been to define the allocation of threshold, simulating initial margins in both SIMM and Grid and defining scenarios to prioritise the negotiation packages (which entities versus which counterparties)," he says.

"The major difference with the previous phases is the huge number of relationships that have to be set up, either to operate margin exchanges from day one or - in most cases - to manage the IM threshold calculation. The post-compliance phase, where relationships will progressively move from an IM monitoring to an executed documentation mode, will last for months (possibly years), hence the need to keep a strong onboarding governance for quite some time."

For smaller firms, forecasting is fundamental to ensure that collateral buffers are minimised and there are no collateral shortfalls.

"Predicting calls and looking at cash ladders over a future time horizon allows firms to see what they

will have and what their requirements will be ahead of time," says Trevor Negus, senior product manager SmartStream. "This enables informed decisions on term lending and potential borrowing requirements to cover margin calls."

Bimal Kadikar, founder and CEO Transcend refers to two specific areas where further work is required in the UMR space.

"One of the key requirements of UMR is that when a firm receives collateral the responsibility is with the recipient to ensure they received the right quality and quantity of collateral from their counterparty," he says.

"There is therefore a validation component that requires significant focus and we expect that to be a significant focus over the next 18 months among companies that did not prioritise it during the compliance phase."

In terms of posting collateral there will also be emphasis on optimisation to see if there are opportunities

ANOTHER ALTERNATIVE THAT IS ATTRACTING CONSIDERATION IS THE ADVANTAGE OF CENTRAL COUNTERPARTIES OR CCPS"

O'delle Burke, head of collateral services product and strategy APAC J.P. Morgan

to reduce costs.

Unlike those firms in phases 1-4, some phase five and six firms were able to benefit from a rule that allowed firms to delay (or never be subject to) some of the UMR preparation steps should their IM remain below $50m.

While the regulatory relief was certainly welcomed by the market, it still meant a significant amount of preparation explains Neil Murphy, business manager triResolve at OSTTRA.

"In reality, some firms ploughed on to complete all - or most - UMR steps ahead of time, including signing IM documentation and opening custody accounts," he says. "In contrast, others focused on the regulatory minimum of IM calculation only."

The end result was a wide range of readiness across the market, with some firms exchanging IM from day one, some scrambling to open custody accounts in time, and others considering these steps something they may be able to defer for years.

"While phase six has been the largest phase to date, in-scope firms have been significantly smaller, often with fewer resources and less knowledge of delivering complex regulatory change," says Murphy. "This has perhaps added to a sense of last minute preparations for many, as some firms get to grips with the new reality and others remain uncertain as to what needs to be done, and when."

Firms that have taken an internal approach to IM calculation and monitoring can only really affirm their numbers by comparing with their counterparties. Depending on their approach, this may be a highly manual process.

"Alternatively, firms that engaged vendors for this calculation have been able to leverage their expertise, often gained across multiple UMR phases," says Murphy. "In addition, high levels of co-operation have seen most dealers willing to share their own internal IM calculations with phase five and six counterparties. This approach means a central distribution mechanism, combined with the option to reconcile via a common industry utility, IM Exposure Manager."

Firms that prepared well ahead of UMR deadlines were able to begin IM comparison with their counterparties well ahead of 1 September, which hopefully meant no hidden surprises once calculations went live.

In contrast, Murphy notes that firms who haven't been able to validate or align their IM exposures may find themselves subject to margin calls much earlier than anticipated. Then, if not following industry-standard use of shared tools, they run the risk of not being able to verify and investigate differences in the SIMM calculation. ■

Looking beyond regulation

Whilst firms will continue to keep an eye on UMR post-phase six, there is now an opportunity to focus on issues such as cost reduction, consolidation, and automation says **Trevor Negus,** senior product manager at SmartStream.

UMR may not be completely done and dusted in that there will be some legacy considerations around the regulation, but now that phase six has been implemented there is an opportunity to look beyond OTC and consolidate across business lines.

One of the big consolidation issues is getting data from all the different clearing houses across Europe and the US into the collateral management system. Being able to normalise the different data structures from each of the clearing houses and brokers will enable firms to monitor margin calls, funding, and inventory more effectively.

This is important for global management reporting, but also fundamental for managing inventory. Firms must look at inventory on a global basis, rather than by region or business line to facilitate an efficient optimisation process.

The peripheral inventory systems feed in data enabling firms to determine what is available. These connections are through APIs and allow firms to connect the collateral system to the inventory management system - as well as connecting to analytical tools for optimisation and initial margin calculations. APIs also permit interfaces to new technologies like micro services and distributed ledger technology.

We have been working very hard on our API suite. We understand that we are just one part of the ecosystem within the back or middle office and have to receive data from upstream trading, inventory management and credit risk management systems, whilst at the same time feed data like collateral movements downstream into settlement systems, general ledgers, and custodians.

Having access to that data in real time is very important, particularly when it comes to settlement - firms need to know whether something settled or failed immediately rather than at the end of the day or the following day.

Cost reduction

From a technology perspective we see a shift towards micro services. One of the big expenses with any software solution is upgrading it, so being able to take different components of the application independently without upgrading the whole system will obviously help in terms of overall cost of ownership.

Collateral management was a little slow to embrace software-as-a-service on the basis that it was seen as a critical function. But concerns around security have been addressed, particularly through our use of private cloud. Cloud technology, of course, offers lower install costs combined with services such as auditing, archiving, and service level agreement reporting as part of the package.

Firms have been benefiting from automation through messaging for a long time and this has become the norm for margin call processing, but we also need to be looking at processes such as interest and substitution events. Monthly interest processing can be onerous and allowing for automatic reconciliation and messaging should reduce the staffing required.

Pre- and post-trade optimisation

Optimisation comes in a lot of different forms, from straightforward collateral optimisation where you are looking at what is the most cost-effective collateral to deliver based on eligibility rules and the inventory position, to margin optimisation where the focus is on transparency around the cost of a trade. So optimising where best to trade and which clearing house to use - based on the likely IM impact - is paramount.

If firms are optimising their collateral portfolios, not only will they be optimising at the point of the original margin call – they will also be rebalancing retrospectively, looking at whether the collateral held or posted on particular agreements is optimal.

Regular rebalancing will require firms to automate the substitution process. Having adaptors to connect to messaging platforms is fundamental because collateral will have to physically move back and forth as it is switched from one agreement to another. Automating this is likely to be the next big thing.

Treasury optimisation is also key through forecasting future margin calls and aligning that with cash or collateral ladders. By understanding what they have got to cover in future margin calls, firms can minimise their collateral buffer, avoid scenarios where they are left short of collateral, and make better term lending decisions.

Intelligent approach

There has been much discussion about the impact of artificial intelligence on collateral management over the last few years. A lot of the decisions that are made in the margin call process tend to be done by humans or by rules-based approaches – AI systems can learn the processes that users go through in terms of deciding whether a call is good to send out or not.

There is also a need for natural language reading to automate the reading of emails and call notices. In our industry there are lots of reconciliations beyond standard portfolio reconciliation and AI tools can manage these ad hoc reconciliations very efficiently.

These systems do not require configuration but read in the files, carry out the matching and understand the correlations through machine learning.

Best practice processing

We are all looking to streamline processes, but there are many instances where people are just following a process rather than understanding why that process exists. This underlines the importance of training and skills retention.

Understanding the market is fundamental. There has been a trend in the industry for moving manual processes to cheaper locations, which obviously makes sense to reduce costs. But are we losing and not replacing people who understand the collateral market and know why the processes are there? This is important for continuity, but also to ensure new business is integrated correctly. For example, the introduction of crypto derivatives or taking crypto collateral may not fit into the current paradigm, so having people that are familiar with the whole collateral market, the regulations and the history is critical.

New business, volatility, or a crisis can all disrupt existing processes, so understanding the 'why' as well as the 'how' is vital. ■

NEW BUSINESS, VOLATILITY, OR A CRISIS CAN ALL DISRUPT EXISTING PROCESSES, SO UNDERSTANDING THE 'WHY' AS WELL AS THE 'HOW' IS VITAL.

Trevor Negus, senior product manager at SmartStream

Ledger interoperability

Richard Glen, solutions architect at HQLA^{X} outlines the importance of interoperability across ledgers and offers a perspective on how interoperability will evolve over the next five years.

The current challenges to ledger interoperability stem primarily from the way distributed ledger technology has evolved. The combination of different data structures, technology stacks and approaches to achieving consensus has resulted in a variety of ecosystems being designed across the financial services sector.

Achieving consensus is one specific challenge for interoperability across private blockchain networks. Hand off workflows need to be agreed and orchestrated, transition states need to be perfectly aligned and synchronised, and resilience levels need to remain intact across all aspects of the transaction flow.

None of these items are impossible to solve. But for transactions at HQLA^{X} where billions of dollars of securities can be exchanged at precise moments in time, these are specific touchpoints that need to be assessed and implemented diligently if participants are to gain confidence in future interoperable use cases.

Progress made

Legal compatibility is also critical to facilitating interoperability across ledgers as rulebooks will need to ensure alignment on scenarios such as insolvency and default as well as other edge cases. The good news here is that HQLA^{X} is making great progress on addressing these challenges with the specific ledgers that it has chosen to partner with.

However, one size doesn't necessarily fit all and although many of the challenges to ledger interoperability can be resolved with standardisation, this doesn't mean that we should all move towards a single blockchain solution. In the securities finance space, the industry is aiming to reach common agreement on three key themes.

The first is the development of cross chain standards that would allow different DLT networks to share data more easily. Many blockchain technology providers recognise this and enterprise level cross chain specifications - leveraging either peer-to-peer or intermediary solutions - have begun to evolve in earnest as a result.

The second key theme is to develop multi-asset or multi-token transaction solutions. At HQLA^X the initial set of use cases has focused on the development of a delivery vs delivery mechanism that allows the ownership of baskets of securities held at different locations to be transferred at precise moments in time on a single ledger.

As we move forward with our solution maturity, we have noted that clients are encouraging us to explore use cases where a basket of collateral on one ledger can be exchanged for a basket of collateral or cash on another, thereby increasing the reach and benefit of our digital collateral records.

Finally, we also think that getting more clarity around the regulation and governance of DLT networks will help the industry achieve higher adoption levels and greater interoperability.

Future challenges

All firms building out a digital strategy are focused on two objectives:

- Use cases that create real value for stakeholders
- Business models capable of generating economies of scale in the medium term

Whilst existing single ledger solutions can achieve both of these objectives, we feel that interoperability between networks and across ledgers will reach a level of maturity over the next five years that will enable enterprise transaction volumes to grow with greater certainty and momentum.

In the securities finance space, this will certainly evolve rapidly between private chains, in particular those that have common sets of investors with matching ambitions, as well as across specialist ledgers with complementary use cases.

In the next two to three years specifically, we feel that clients will intensify their focus on ledger solutions that are able to offer multi-product compatibility and therefore maximise benefit vs spend for stakeholders. This in turn will see many single ledger solution providers consider interoperability arrangements as a matter of priority.

From a macro-political perspective, regulators will continue to play a role in how quickly DLT technology is adopted across a wider range of firms, in particular if further clarity is offered around the treatment of digital technology as well as digital assets. This will undoubtedly influence the number of interoperating ledgers and the related network effect.

IN THE COLLATERAL MANAGEMENT SPACE, MOST BANKS ARE FOCUSED ON OPTIMISING THEIR INVENTORY AS EFFICIENTLY AS POSSIBLE WHILST ENSURING CONTROL OVER COSTS. FOR THIS REASON, WE FEEL THAT SOLUTIONS LIKE THOSE OFFERED BY HQLA^X WILL INCREASE COLLATERAL VELOCITY FOR PARTICIPANTS AS WELL AS HELP TO REDUCE THE NUMBER OF CROSS-CUSTODIAN REALIGNMENTS.

Changes ahead

In the collateral management space, most banks are focused on optimising their inventory as efficiently as possible whilst ensuring control over costs. For this reason, we feel that solutions like those offered by HQLA^X will increase collateral velocity for participants as well as help to reduce the number of cross-custodian realignments.

As new interoperability opportunities arise, firms will recognise that they have the ability to manage decentralised pools of collateral and liquidity using a single wallet system. This in turn will provide firms with more visibility over asset usage and availability which in turn will create even more opportunities to mobilise assets on a same-day or even an intra-day basis as these markets start to develop. ■

AS WE MOVE FORWARD WITH OUR SOLUTION MATURITY, WE HAVE NOTED THAT CLIENTS ARE ENCOURAGING US TO EXPLORE USE CASES WHERE A BASKET OF COLLATERAL ON ONE LEDGER CAN BE EXCHANGED FOR A BASKET OF COLLATERAL OR CASH ON ANOTHER, THEREBY INCREASING THE REACH AND BENEFIT OF OUR DIGITAL COLLATERAL RECORDS.

Data developments

Data standardisation, optimisation and centralisation remain a key focus for industry associations as they seek to promote automation.

ISLA, the International Capital Market Association (ICMA) and the International Swaps and Derivatives Association (ISDA) recently announced the appointment of Finos to provide a repository with a view to fostering the growth of an open-source community for the common domain model or CDM.

Open-source CDM establishes a single, common digital representation of trade events and actions across the lifecycle of financial products.

The associations will announce once migration is complete and describe how institutions can contribute when it occurs. Contributions are encouraged by either contacting the associations or visiting the portal website.

The ISDA CDM is providing useful standardisation, enabling firms to focus on how they can automate without the overhead of large data translation projects says Trevor Negus, senior product manager at SmartStream.

He makes the point that optimisation through portfolio rebalancing will by its nature drive up collateral substitution volumes. "Firms need to automate the communication of these events," he adds. "As with margin calls, electronic messaging of substitutions will become essential to keeping processing costs down."

He makes the further point that optimisation through portfolio rebalancing will by its nature drive up collateral substitution volumes. "Firms need to

> OUR FOCUS IS ON CREATING A HARMONISED ECOSYSTEM THAT CUTS ACROSS ALL BUSINESS AREAS AND SUPPORTS IMPROVED VISIBILITY, CONNECTIVITY AGGREGATION AND ANALYTICS ON A FRONT TO BACK BASIS."
>
> **Bimal Kadikar,** founder and CEO Transcend

automate the communication of these events," he adds. "As with margin calls, electronic messaging of substitutions will become essential to keeping processing costs down."

Securities reference data and eligibility parameters have a symbiotic relationship with optimisation criteria such as the source of the collateral or proposed use in terms of trading activity. Both sets of data need to be effective and transmitted between systems and actors within the collateral ecosystem in an automated, scalable and standardised fashion.

"This has been a progression over many years with iterative developments and in recent years we have seen far greater integration between collateral managers, clients and vendors as a result," says Graham Gooden, head of collateral services product and strategy for EMEA J.P. Morgan.

Within the world of equity finance, all market participants have their own data structures and models. There are various industry initiatives underway to standardise data - such as ISLA's CDM initiative – but Bimal Kadikar, founder and CEO Transcend observes that it is not enough to standardise data across just equity finance, for example.

"It has to be comparable across repo, OTC derivatives and cleared derivatives," he says. "Even within cleared derivatives, all the CCPs have their own ways of doing things so there are lots of challenges. Our focus is on creating a harmonised ecosystem that cuts across all business areas and supports improved visibility, connectivity aggregation and analytics on a front to back basis."

When this topic is discussed the focus is often on trade, position or settlement data adds BJ Marcoullier, head of sales at Transcend. "However, eligibility is also very important and that covers issues such as legal agreements and collateral schedules," he says. ■

Collateral management digitalisation

Collateral management has come to the fore in recent years. For many firms, the process had historically been handled manually using fragmented processes, which could make it difficult to get reliable data or end-to-end visibility during an exposure's lifecycle, writes **Johann Palychata,** head of partnerships and new platforms at BNP Paribas Securities Services

Recent volatile market conditions and ongoing regulatory obligations have put pressure on these systems and shown the need for infrastructure able to manage, mobilise and analyse collateral inventory and obligations effectively and flexibly.

Momentum around solving specific transactions or removing market pain points indicates that collateral will continue evolving across the securities financing ecosystem.

Leveraging digital innovation is one such way to help address operational limitations and risks, and reduce inefficiencies in areas including asset valuations, data reliability and portfolio management. Digitalisation and automation are playing an ever more important role. The digitalisation of collateral is one area where advances are currently being made: digitised securities could be mobilised without the potential complexities surrounding physical securities, while automated processes could support smoother transaction flows.

According to Johann Palychata, head of partnerships and new platforms at BNP Paribas Securities Services, there are three different levels worth exploring where the digitalisation of collateral is having an impact and could bring major efficiencies to the industry in the long run.

Smooth transfers

The first area to highlight is the development of solutions to simplify the physical movement of collateral between triparty agents and custodians. Firms' internal systems and the different products they manage can suffer from a lack of interoperability, causing varying levels of operational and management friction, and at times, lead to trapped assets.

One solution to this would be relying on distributed ledger technologies (DLT), which use smart contracts (self-executing programmes whose terms are written directly in the underlying code) to finalise a transaction. DLT has the potential to impact securities post-trade and could change how custodians and central securities depositories (CSD) manage and store assets.

While the technology has been around for some time, it is only recently that it has been put to use in practical scenarios. In the case of collateral management, DLT could have some advantages as underlying securities would not need to be moved and would remain available at all times. This would also have positive effects on collateral monitoring and reconciliation, regulatory

DLT HAS THE POTENTIAL TO IMPACT SECURITIES POST-TRADE AND COULD CHANGE HOW CUSTODIANS AND CENTRAL SECURITIES DEPOSITORIES (CSD) MANAGE AND STORE ASSETS.

transparency, and cost management.

BNP Paribas Securities Services is an investor in fintech HQLA^X, alongside other major players in the industry. Its aim is to foster collateral mobility between triparty agents and custodians by 'transferring ownership of securities across disparate collateral pools at precise moments in time' without the need for the underlying securities to move.

"It is based on the concept of interoperability between triparty agents," explains Palychata. "Because it implements innovations like delivery vs. delivery (known as DvD) of securities instead of triparty payment, settlement and delivery, it has real benefits on risk management and available liquidity for a transaction."

Banks' existing infrastructure will have to co-exist alongside newer technologies such as DLT for some time, at least until these newer technologies become more widespread. Palychata notes that when solutions such as the one developed by HQLA^X becomes more widely used, they can have a "positive impact on intraday liquidity and more generally provide capital savings for financial institutions".

The main challenge will be carrying out the work for these to adapt to regulatory and operational requirements.

Common language

As such, a second area of focus is automating the operational workflow between counterparties. The idea is to create a set of digital standards so parties can not only communicate better with each other using more reliable data, but also make their respective workflows and processes run more smoothly and responsively.

Work has already been done at industry level for several years now with more underway – for example, the Common Domain Model (CDM), a standardised blueprint which provides common terminology on how financial products are traded and managed throughout a transaction's lifecycle.

This has become all the more relevant with the introduction in 2016 of the European Securities Financing Transactions Regulation (SFTR), which sets out various reporting requirements for securities financing activities.

For securities lending purposes, the CDM is used in loan documentation to detail eligible collateral and describe various data points

"WE ARE NOW STUDYING HOW WE CAN INTEGRATE THE CDM INTO THE NEXT GENERATION OF TOOLS AND HAVE A DIGITAL REPRESENTATION OF PRODUCTS AND EVENTS TO FOSTER AUTOMATION EFFICIENCY IN THE INDUSTRY"

and properties – for instance, the type and description of the asset, its maturity profile or various credit risk ratings. The CDM and DLT could be natural allies: after all, the latter relies on standardised data and processes when it comes to smart contracts.

"We are now studying how we can integrate the CDM into the next generation of tools and have a digital representation of products and events to foster automation efficiency in the industry," explains Palychata. "We are still considering the 'where' question at present. If you look at application design, for example, where do you leverage the CDM?"

"Should we redesign our existing tools and put the CDM at the core data model, or use it as a translation layer between our tools and those of our counterparties? We may get an idea of the direction we are going in in the coming months, as more tools are released and we see how they perform."

Another area where leveraging the CDM could show promise is the management of information relating to the transaction itself. The primary aim of the CDM has been to provide standardisation of the data format across all parties. Palychata notes that rolling out a CDM would bring more transparency and facilitate the exchange of data as well as interoperability between software.

BNP Paribas is working on several initiatives with clients to design how digital solutions could look in practice. An example of this is a web portal and additional tools to manage the collateral eligibility matrix.

Uphill challenge

The third and final area – and perhaps the one where the most work still needs to be done – is digital assets.

"It is still a bit of a blank canvas, but it is very much on everyone's agenda at industry and regulatory levels," says Palychata. "There are many discussions happening on how digital assets need to be designed to support and to be used as collateral."

Authorities globally, including at EU level, are looking at regulating the digital asset sector, which has been quite volatile over the past couple of years. Plans focus on defining what exactly falls under the definition of a 'digital asset' and how these function in practice.

The International Securities Lending Association (ISLA) recently announced it was reviewing its Global Master Securities Lending Agreement (GMSLA) in the context of digital assets. It said it was looking at what should be 'extended, added, or changed to cater for digital assets'.

ISLA lists tokenised traditional assets, native digital securities, and types of digital cash as categories of assets covered by this review. This effort could spur new agreements for purely digital assets in the event they were to remain separate from existing pools of collateral.

When it comes to the issuance, settlement and custody of these assets, BNP Paribas Securities Services is working with a number of fintech partners to develop its digital asset custody offering and help clients issue, transfer and safe keep regulated digital assets alongside traditional assets.

In July 2022, it took part in an experiment which saw it support the settlement and custody process of a non-listed digital bond on the French market. It was also responsible for its distribution to investors.

According to Palychata, the issuance and custody process is maturing, and the door is now open to investigating collateral use cases and processes encompassing digital assets.

"It is important that we master these elements in the transaction chain first before we look at anything else," he says. "But for them to be widely adopted will depend on the ability of holders of digital assets to use them for more complex use cases, such as developing how you can lend or borrow these assets as well as use them as loan collateral."

The legal work is ongoing, as noted above, but

> "HOW DO YOU MOVE DIGITAL ASSETS, MONITOR THEM, WHO OWNS THEM, EVEN – THESE ARE QUESTIONS THAT NEED TO BE WORKED ON, IT REMAINS TO BE SEEN, FOR INSTANCE, IF CUSTODIANS WILL PROVIDE A FULL INTEROPERABILITY LAYER, SO THAT A COUNTERPARTY WOULD NOT NECESSARILY KNOW IF IT IS A DIGITAL OR A TRADITIONAL ASSET."

from an operational standpoint the bulk of the work remains to be done. Digital assets rely on a specific bookkeeping process because they are recorded on a digital ledger. Their settlement is also different – traditional settlement relies on TARGET2-Securities (T2S), where the delivery of securities can happen at the same time as payment. Traditional assets are also registered in a CSD.

"How do you move digital assets, monitor them, who owns them, even – these are questions that need to be worked on," concludes Palychata. "It remains to be seen, for instance, if custodians will provide a full interoperability layer, so that a counterparty would not necessarily know if it is a digital or a traditional asset." ■

Johann Palychata has more than a decade of experience in financial services in London and Paris and has contributed to the creation of new solutions for asset managers, insurers and pension funds helping them to improve distribution to their clients and manage their assets. He is committed to exploring how new technology impacts trust networks such as finance and how it can create new opportunities. He raised the awareness of the industry around blockchain as the author of the first publications in the industry.

Looking ahead

We gather the views of a disparate range of market participants on how collateral management will develop over the next 12 months.

Many in the industry may assume the market can put UMR to bed and move on to the next thing but for some that will likely be wishful thinking. That is the view of Neil Murphy, business manager triResolve at OSTTRA.

In particular, many phase five & six firms will find themselves caught between not yet completing all UMR steps, and having to monitor IM exposure while slowly making changes to continue on their path to UMR alignment. These firms may be constrained in their ability to move quickly with regards new collateral developments.

"In contrast, those firms that went for a 'big bang' approach may benefit from an ability to look at improving their wider processing capabilities," he says.

Particular areas of focus include increasing adoption of market standards for margin messaging and reconciliation, and increasing levels of automation – both in terms of call workflows and settlement.

"We can also expect to see an increased focus outside the traditional bilateral OTC space with firms looking to leverage those improvements delivered in the OTC space in recent years to benefit cleared and ETD processing," adds Murphy. "We have already seen evidence of this as firms increase reconciliation across a wider set of products and begin to exchange non-cleared calls electronically."

If we look at the intersection of collateral funding and liquidity there are a number of different factors in play, such as centralisation/consolidation, and ESG. According to Bimal Kadikar, founder and CEO Transcend, ESG will make the data issue more complex in the short term because there are large amounts of data that need to be integrated into existing platforms for better decision making.

BJ Marcoullier, head of sales at Transcend agrees that centralisation has moved from being a theoretical concept and that it will deliver increased functionality over the next year.

As collateral costs rise, firms will need to look at optimisation in all its forms - which will mean not only using the cheapest collateral to cover calls, but regularly rebalancing across CSAs.

"Beyond that there is pre-trade optimisation to minimise future collateral requirements, back loading OTC trades to clearing houses, netting and compression," says Trevor Negus, senior product manager at SmartStream. "Then with the help of liquidity tools, treasury optimisation in the form of predicting future calls to manage collateral buffers is the future."

Another pressing concern for many firms is the skills

"WE CAN ALSO EXPECT TO SEE AN INCREASED FOCUS OUTSIDE THE TRADITIONAL BILATERAL OTC SPACE"

Neil Murphy, business manager triResolve at OSTTRA

shortage across the collateral industry. The strategy of outsourcing has left many firms with the skills on 'how' to run collateral management, but not the understanding of 'why'. According to Negus this factory line approach is risky in the long term, so industry business training is important to ensure there is not a future skills gap.

Finally, he adds, there is also a drive to consolidate, so bringing all collateral-focused activity into one solution specialised in that field is important. "Connecting up to complementary systems through electronic API interfaces for optimisation, inventory, credit risk, and settlements allows for an integrated ecosystem."

According to Jérôme Blais, co-head of triparty collateral management, securities services at BNP Paribas, 2023 will be a recovery year after the rush to initial margin UMR phase six readiness, but also a year to adapt to the new norm of inflation, rapid market changes, and continuing macro-economic and political shifts.

"This will keep market participant on their toes

"WE SEE CLIENTS TAKE DIFFERENT ROUTES TO ACHIEVE OPTIMISATION: UTILISING A TRI-PARTY AGENT'S PROPRIETARY ALGORITHM, PARTNERING WITH A VENDOR, BUILDING THEIR OWN OPTIMISATION ALGORITHM IN-HOUSE, OR BY EMPLOYING A COMBINATION OF THESE"

Eileen Herlihy, global head of trading services sales, J.P. Morgan

and may limit the ability or bandwidth firms have to engage in transformational projects," he says. "In this context, ESG will keep on gaining momentum with, probably, a growing need for regulators to set the pace and the rules of the game."

Eileen Herlihy, global head of trading services sales at J.P. Morgan believes that that the buy-side will have an increased focus on collateral availability over the next year.

"Increased market volatility has highlighted the importance for asset owners with large directional portfolios to have a variety of tools at their disposal for managing their liquidity requirements," she says. "Market movements have been so significant that in some instances they have forced outright asset liquidation and it has been challenging to mobilise even the most liquid of assets quickly enough to satisfy obligations."

Focusing on the digital agenda more specifically, she notes that she expects further clarity on the legal and capital considerations around digital assets, which will pave the way for further use cases as industry participants become more comfortable with allocating resources and investing in digital initiatives.

Some of the concept trades of the past 12 months - such as tokenised money market funds – are expected to move beyond pilot trades and as the market gets comfortable with the technology (coupled with the recent collateral squeeze) Herlihy forecasts wider adoption.

Furthermore she expects the developments on DLT repo to continue apace. "Trading activity already available in the market - such as DLT repo - will expand to term, cross-currency and increase the number of collateral markets available," she adds. "Adoption across the market will become much further reaching."

Another prediction is that clients will look for ever more sophisticated optimisation solutions driven by the growing complexity of their business. This is due in part to legal entity fragmentation derived from Brexit and the regulatory-driven binding constraints, all of which were exacerbated by the reduction of available inventory throughout this year.

"We see clients take different routes to achieve optimisation: utilising a tri-party agent's proprietary algorithm, partnering with a vendor, building their own optimisation algorithm in-house, or by employing a combination of these," says Herlihy.

"As the availability of collateral and trading opportunities tightened throughout 2022, there was an increase in demand for cross-regional expertise as clients looked for introductions to new counterparties, and solutions to mobilise collateral in more complex markets. We anticipate clients' continued focus on alternative regions to identify new revenue opportunities in 2023."

Asset aggregators have experienced significant growth over the last 2-3 years with one of the fundamental shifts fuelling this growth being the availability of digital platforms. As these firms mature, focus shifts to a broader product set for their client base with securities lending a natural expansion area.

"The nature of retail investing results in attractive portfolios from a securities lending perspective consisting of a rich supply of 'special' securities," concludes Herlihy.

The evolution of distributed ledger technology

Tom Phillips, platform sales and **Paul Pirie,** collateral services product management J.P. Morgan assess the current state of play around blockchain

Blockchain technology first hit the mainstream with the emergence of cryptocurrencies, most notably Bitcoin. Whilst the application of bitcoin may not have reached the heights that its founder once hoped for, it's safe to say the use cases emerging from the underlying technology have exceeded initial expectations.

For financial service companies the technology could pave the way for faster and cheaper transactions, automated contracts and greater security. These benefits have resulted in a number of use cases and proof-of-concept projects which have become commonplace in recent years.

At a high level, blockchain is a digital database that is able to provide a clear record of transactions and balances for a specified asset. It enables instantaneous and indisputable settlement and acts as a single source of truth for asset ownership.

There is one key difference that we see between different blockchains - whether they are permissioned or public. Let's take J.P. Morgan's blockchain (Onyx) as an example.

Onyx is a permissioned blockchain, where actors are granted access by a controlled, centralised authority. On the other hand, blockchains such as Ethereum are public, which means anyone is able to view the record of ownership at any time, as long as they have an internet connection.

As we look at the benefits that distributed ledger technology (DLT) can provide, it won't come as a surprise to learn that a number of institutions have started to carve out focused digital groups within their organisations to identify potential use cases.

Until recently, it has primarily been sell-side participants that have been allocating resources towards digital groups and projects. More and more this is branching out, with strategic partnerships announced on a regular basis between buy-side participants and digital asset innovators.

To analyse the state of play of DLT initiatives we have grouped a number of use cases and highlighted some of the benefits.

FOR FINANCIAL SERVICE COMPANIES THE TECHNOLOGY COULD PAVE THE WAY FOR FASTER AND CHEAPER TRANSACTIONS, AUTOMATED CONTRACTS AND GREATER SECURITY.

Tokenisation of traditional assets

To reap the benefits that DLT has to offer with traditional assets, one must first be able to represent the asset on a blockchain. This is the 'tokenisation' process and is where, in many instances, tri-party agents have had a key role to play.

Clients will allocate an asset through a regular tri-party structure to a blockchain's trusted third party (TTP) or collateral token agent (CTA). In doing this, the collateral is secured as it would be normally for a traditional securities financing transaction. It is this 'locking-up' process that enables the asset to be tokenised onto a blockchain.

This can also be achieved at a custodian level, with the appropriate segregation of assets into a CTA account. This multi-pronged approach to tokenisation provides clients with the flexibility to hold the assets at their preferred location.

We have already seen a variety of successful cases that utilise the tokenisation of traditional assets. J.P. Morgan's DLT repo application has processed over $300bn of transactions to date and allows tokenised collateral to be exchanged for tokenised cash. HQLA^{X} - in which J.P. Morgan is a strategic investor - recently announced a successful pilot trade for a securities lending transaction using the HQLA^{X} DLT platform.

Earlier in the year, J.P. Morgan unlocked BlackRock money market funds to be used as collateral via tokenisation. There are plans to expand this into other asset classes as we build out our tokenised collateral network (TCN) application.

Note that this is far from a conclusive list, with many other DLT based projects being worked on in the market.

So what are the benefits that can be gained from tokenising traditional assets? Instantaneous settlement is the standout as it enables the frictionless transfer of collateral, reduces counterparty risk, and allows clients to manage intra-day liquidity with the ability to execute trades within a much shorter time horizon.

In addition, assets can be moved outside of their traditional market hours, and tokenisation has enabled the 'unlocking' of trapped or hard-to-fund assets.

WITH THE EXPANSION OF CRYPTOCURRENCY MARKETS, CRYPTO PRIME BROKERS SUCH AS COINBASE HAVE ALSO BECOME MAINSTREAM. THEY OFFER SIMILAR SERVICES TO A TRADITIONAL PRIME BROKER, BUT FOR THE MORE VOLATILE CRYPTOCURRENCIES.

Natively issued assets

Whilst tokenisation of traditional assets provides numerous benefits, we remain constrained by the traditional market infrastructure. What about securities that exist only on-chain for their whole life cycle (issuance, trading, asset servicing, maturity)? Some certainly see this as the way forward.

A great example of this was seen in 2021 when the European Investment Bank issued its first ever digital bond on Ethereum's public blockchain. The blockchain acts as the custodial record for the bond, which can be transferred between participants' wallet addresses via a tried and tested settlement process.

As with tokenised traditional assets, these natively digital assets offer much greater settlement efficiency. Settlement of the digital EIB bond occurs in hours rather than days, which enables participants to free up liquidity and greatly reduces the counterparty risk.

In addition, there is a reduction in the number of intermediary actors which lowers fixed costs, whilst providing greater market transparency with regards to asset ownership given the readable nature of Ethereum's public chain.

Thus far, such natively digital issuances have replicated the attributes of a traditional bond and the stages in traditional issuance on a blockchain. The next stage for natively digital assets is to prove liquidity through various transactional use cases in order to match long-established traditional markets. It is yet to be seen whether public or private chains will take the lion's share of natively issued securities.

Crypto prime

With the expansion of cryptocurrency markets, crypto prime brokers such as Coinbase have also become mainstream. They offer similar services to a traditional prime broker, but for the more volatile cryptocurrencies. While their purpose is different from that of tokenised and natively issued assets, as described above, they have played a role in bridging traditional markets with the emerging 'crypto markets' – as can be seen with the crypto financing transactions that were announced earlier in the year.

Crypto prime is a nascent business with tiny volumes in a niche market – a germinating seed in the digital financial marketplace. But what will it grow into?

Central bank digital currencies

Without digital cash to facilitate true DvP on and across blockchains, we will not realise the full potential of the digital revolution in financial markets. This is where central bank digital currency or CBDC comes into the equation.

Almost all major central banks have CBDC projects. But do we really need them? This is a very divisive topic, with some firmly believing that having true CBDCs is a very bad idea and that other solutions such as the 'trigger mechanism' are far more efficient to support capital market liquidity. Then there is the question of whether digital currencies should be separated somehow between wholesale and retail flows.

In the meantime, institutions like J.P. Morgan are creating atomic DvP within their private permissioned chains through JPM Coin, which is a digital representation of USD cash on ledger. This can be used to instantaneously move cash between J.P. Morgan's customers, which can at any time be converted back into fiat USD and moved into the financial markets.

What is clear is that there is an opportunity to rethink the way cash and liquidity flow both in the wholesale financial industry and between individuals.

Where do we see traction?

While many of the initiatives mentioned above are in their infancy, we see some clear themes that are progressing more quickly by providing immediate value-add to their participants. Tokenisation of traditional assets is the leader, which makes sense as the first step in the digitisation process.

DLT repo products have had extremely positive uptake as they provide desks with the tools to manage liquidity like never before. DLT enables the collateral and cash tokens to be exchanged simultaneously, thereby eliminating intra-day credit exposure and operational risk, as well as the associated capital and liquidity costs. Demand will only increase as capabilities expand across currencies, to term and further down the collateral curve.

TOKENISATION IS A MASSIVE FOCUS ACROSS THE WHOLE INDUSTRY, BOTH IN ESTABLISHED ORGANISATIONS AND FINTECHS. RIGHT NOW THE BENEFITS WILL BE CREATING EFFICIENCIES, REDUCING COSTS AND INCREASING SPEED IN EXISTING TRADE FLOWS – PARTICULARLY POST-TRADE.

The market understands traditional assets and how they work. With tokenised traditional assets, the most prevalent hurdle is getting comfortable with DLT representing true ownership and security interest for the underlying asset being tokenised.

Expect to see further use cases in 2023 as desks look to increase efficiencies with traditional assets they have access to today and try to unlock trapped assets using the technology. The next question is how comfortable collateral receivers will be with their ability to liquidate the underlying asset, especially in more esoteric markets.

When we consider which market participants are gaining the most traction with this new technology, there are two standout factors. The first is when the institution has a segregated digital assets group within their business, and the second is when the desk that is responsible for collateral management has an ongoing and open dialogue with these groups. There is a clear correlation between this and the level of discussion that we are having with our clients.

ISLA's appointment of Ashurst to work on legal analysis of the GMSLA as it relates to digital assets is most welcome to the industry. Industry bodies and regulators providing this clarity will allow the market to move forward and for other participants to start allocating required resources to make progress.

Tokenisation is a massive focus across the whole industry, both in established organisations and fintechs. Right now the benefits will be creating efficiencies, reducing costs and increasing speed in existing trade flows – particularly post-trade.

Tokenisation alone cannot create liquidity in a non-liquid asset, but as the market accepts and adopts the concept we will start to see market makers and primary dealers creating secondary markets in previously impossible scenarios as they spot new opportunities to make money and generate liquidity. If you look around, this is already happening and waiting to gain momentum and bridge the gap into the mainstream.

Challenges

Although the advancements made utilising DLT have clear benefits – increased efficiency, reduced costs and the potential to solve for binding constraints – it doesn't come without challenges.

Currently, not everyone has the DLT infrastructure and resources to participate and integrate with the uses we highlighted earlier. Even when they do, organisations still face the challenge of upgrading a variety of existing systems. For example, when we consider intra-day repo transactions that DLT enables, system upgrades will be required to book these trades correctly.

In the medium term, firms will have to deal with a hybrid portfolio of digital and traditional assets. This will likely increase costs and arguably reduce efficiency as they are forced to run new and legacy tech stacks in parallel.

Existing market infrastructure providers will also need to focus on integrating traditional and digital environments. SWIFT has long been the market standard for messaging, but its use is not as common in a digital world. Firms need to be able to connect with new counterparts and solution providers alongside their existing setups for traditional assets.

In its current state, the traditional custodial layer does not exist with natively issued assets. This may result in firms being left to manage a variety of wallets for each blockchain and issuance registrar. We must focus on ensuring that market fragmentation doesn't increase. It is important that we find interoperability between blockchains to avoid carrying over old problems into these new solutions. Enabling different blockchains to interact with each other is not an easy task, but third party technology providers might be able to help bridge this gap.

While there will be fintech solutions to help us on this journey, economic viability along the trade flow must remain. If we require multiple intermediaries to enable these solutions, we increase the risk of losing the cost saving benefit that DLT promises.

However, even with all the challenges mentioned above, we must not ignore the benefits that this technology can bring. Organisations must start to understand what role DLT will play in their business, and the market must focus on leaving behind inefficiencies that the current infrastructure presents.

WE MUST NOT LOSE SIGHT OF THE FACT THAT THIS IS AN OPPORTUNITY TO UPGRADE AND ADOPT NEW TECHNOLOGY STACKS. THE BUILD-OR-BUY ANALYSIS IS MORE IMPORTANT THAN EVER.
TAKE TIME TO ANALYSE THE BENEFITS OF EACH PATH.

Making progress

There is no blueprint for organisations to follow, but J.P. Morgan's experiences highlight key points to consider.

As mentioned earlier, we see a clear correlation between the depth of conversations we have with clients and how integrated they are with their digital groups. If your organisation has a digital group, now is the time to start having a discussion with them – even if it is only to understand what they are working on. You may be surprised by some of the potential use cases for your business that they can identify.

Collaboration is important to make progress with the opportunities that DLT presents. If your organisation doesn't have a dedicated digital group, then turn to clients, peers, fintechs and other service providers. Your J.P. Morgan coverage team is here to help navigate these discussions across our business lines.

It is natural that throughout this transition firms will rely on their existing infrastructure. However, we must not lose sight of the fact that this is an opportunity to upgrade and adopt new technology stacks. The build-or-buy analysis is more important than ever. Take time to analyse the benefits of each path.

This structural change is happening quickly, and your system architecture will need to keep up. ■

37th Securities Finance & Collateral Management Conference

October 10–13, 2022

The Ritz-Carlton Key Biscayne, Miami