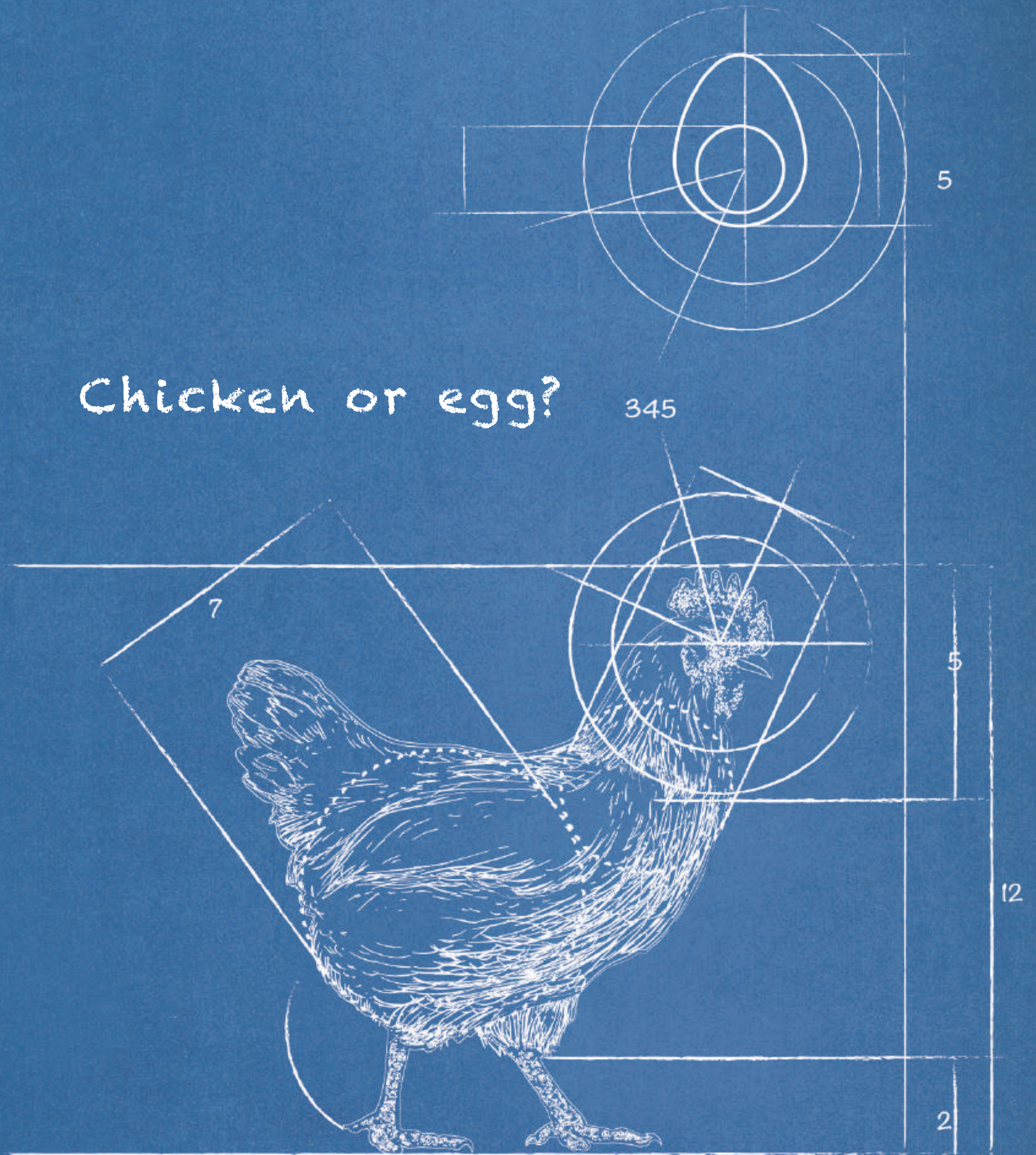
SLT SecuritiesLendingTimes

AnnualReport Technology Guide 2016/17



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Chicken or egg?

The point at which technology ceases to be a hindrance and becomes a help is almost a chicken and egg situation in that, usually, its costs are borne well before it's put to any use. But without that initial, always costly, investment, the help that is needed to overcome the hindrances that are legacy technology and manual labour is never delivered. Of course, that technology was once a costly investment dragging down a balance sheet, so when you think about it—egg, chicken, chicken, egg, and so on.

SLT SecuritiesLendingTimes

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Published by Black Knight Media Ltd

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Nothing has typified this struggle more than collateral management, those ever-present watchwords that are often mentioned in the same sentences as power verbs—optimise, mobilise, COLLATERALISE!—but really only describe an old practice. They've been reinvigorated, repurposed, and yes, repowered, to the point where no-one can stop talking about them, Securities Lending Times included.

But what they really mean is cost, time and pressure. Cost is self-explanatory, except where your boss is concerned, but time and pressure less so, because they only come to light once the project has been funded and given the go-ahead. From then on, time is wasted, pressure is piled, shortcuts are sought and, insert pity for operations here, more money is required.

With that out of the way, here is the point—none of that truly matters. What you should care about is the capabilities of your organisation and the service you are delivering to clients. These are the reasons you should get out of bed in the morning. And, when all's said and done, what technology promises is the ideal. This is explained succinctly in our collateral management feature on p8, which makes clear that while regulations might be forcing hands, idle ones do the devil's work, and badly. Elsewhere, the new idol of financial services technology and future cost centre that is blockchain makes an appearance on p20, where we've covered its potential in detail.

The rest of this, the Securities Lending Times Technology Guide, is dedicated to the myriad challenges that you will face over the next year, including the EU's SFTR, MiFID II, and the safety and security of market infrastructures. There are also plenty of tips and tricks to keep you talking for another year, when, we fully expect, blockchain will be a core technology and collateral management will be yesterday's news.

Mark Dugdale
Editor
Securities Lending Times

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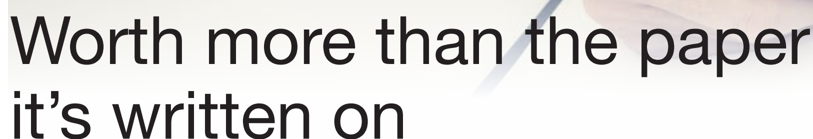

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Costs abound, but wasn't better management of collateral supposed to be the ideal?

Collateral management in the new, highly-regulated environment requires optimising inventory allocation, often across multiple markets, while managing and stimulating collateral velocity in order to maintain market liquidity through a commitment to rehypothecation.

The only feasible way to achieve all of this is through a technology solution that allows for efficient asset distribution from a pooled collateral portfolio that can also automate the majority of everyday tasks in order to free up teams' time to focus on disputes and data anomalies.

But first, the regulations. "The main focus [of collateral management] has had to be on regulation with the European supervisory authorities publishing the final draft technical standards on margin requirements for non-centrally cleared over-the-counter (OTC) derivatives on 8 March 2016," explains Helen Nicol, product director for collateral, clearing and optimisation at Lombard Risk.

"Those institutions that are impacted by the 1 September 2016 deadline have been reviewing the impact of the final draft in order to interpret the rulings and any global variances with the US and Asian regulations."

"We have also seen interest from organisations looking to move non-OTC business lines onto a central clearing platform where possible," Nicol adds.

Basel III's capital rules such as the liquidity coverage ratio and the supplementary coverage ratio are disincentivising heavy balance sheets, causing large broker-dealers to rethink how they use collateral to optimise their way around such capital impacts.

Balance sheet efficiency often involves engaging in upgrade trades in the hunt for balance sheet-friendly, high-quality liquid assets (HQLAs), instead of holding on to hot potatoes such as less liquid equities or dormant cash.

The shift to favouring non-cash over cash collateral is a direct result of Basel III capital requirements and a well established trend that has been gaining momentum in recent years.

The April 2016 International Securities Lending Association (ISLA) market report, which used data from all major industry data providers, cited a 60/40 split, globally, in favour of non-cash.

It is worth noting that ISLA's report also showed that the transition to non-cash has slowed in the past six months, levelling out at roughly 60 percent. By way of explanation for this, ISLA's report argued: "As on-loan balances were reduced ahead of the year-end, it would appear that cash collateral loans were returned first."

"This is perhaps explained by noting that many non-cash collateralised loans (especially those involving HQLAs) are likely to be term liquidity coverage ratio-driven transactions which borrowers would likely prefer to retain."

The report also highlighted regulatory hurdles still to be overcome, including the US Securities and Exchange Commission's Rule 15c3-3, which bans the use of equities as collateral for certain beneficial owners, as another likely cause of the plateau.

Despite the slowdown, many industry figures predict the ratio will continue to move in favour of non-cash, in turn pointing to persistently low interest rates as an inevitable driver behind the latest conference mantra that 'cash is trash'. Other regulatory-driven trends in the collateral management space include a sharp growth in the demand for term trades and collateral upgrade trades, both of which are driven by a need for greater balance sheet efficiency (see box outs one and two) and can be solved by technological means.

Jim Malgieri, head of the collateral management and segregation businesses for BNY Mellon's markets group, sets out the drawback of short-term loans, stating: "Any funding or lending trade versus cash that has a term of less than 30 days has a 100 percent capital charge. Participants must lock up 100 percent of the value of the trade in HQLAs or leave cash on the books."

Therefore, in order to remain compliant, a participant must adapt to favour term trades of more than 30 days or exchange equities for HQLAs, usually in the form of government bonds. For borrowers, these trends represent a need to optimise the allocation of diverse collateral buckets, while lenders are more focused on their programme's collateral eligibility profile, acceptable haircuts and concentration limits.

Breaking down barriers

One crucial adaptation to a collateral management infrastructure is the phasing out of separate silos in favour of a single holistic collateral pool. However, taking such a radical step away from traditional storage methods can be, in a relative sense, more financially draining for top tier entities than their smaller, nimbler counterparts that may not have legacy systems to update.

Ted Allen, vice president of capital markets collateral at FIS, says: "In larger banks, the silos that have existed for many years are much harder to break down. At the same time, big banks are the ones hardest hit by regulation and that's drawing away a lot of their technology investment budget."

"The most forward facing firms are looking at adopting a single pooled view of their assets and allocating it globally in the most efficient manner possible."

The most forward facing firms are looking at adopting a single pooled view of their assets and allocating it globally in the most efficient manner possible

"We at FIS often speak to three or four different departments within large banks that all have their own siloed inventory but are not able to mobilise themselves enough to solve their mutual issues in a holistic manner."

Supplementary leverage ratio

The supplementary leverage ratio (SLR) is intended to be a 'backstop' to the risk-weighted capital requirements and limit the amount of leverage that a bank may incur using a blunt, non-risk-based measure. Because the SLR is not risk-sensitive, a bank must hold the same amount of capital against low risk assets (such as cash and US treasuries) as higher risk assets (such as corporate equities and securitisations). Unlike other leverage requirements, the SLR includes both on- and off-balance sheet exposures in a 'total leverage exposure'.

"On the other hand, in the second tier of the industry's participants, such as regional banks, pension funds and insurance companies, effective collateral pooling is already a reality. That's looking at derivatives, repo, securities lending, as well as treasury requirements," Allen adds.

Malgieri reinforces this analysis, stating: "The large broker-dealers have grown up with silos. If you go back five or six years, fixed income and equity desks were separate desks and corporate treasury wasn't part of the funding scheme. That's all changed."

Go go gadget

One major advantage that any vendor will boast about is automation, as both a time- and long-term cost-saving method for both sides of the trade.

"The volume of business that needs to be collateralised is growing and therefore collateral velocity is also increasing, and this turn is driving a trend towards greater automation," explains Allen. "There is a heavy focus on achieving straight-through processing wherever possible. Firms are moving to an exception-based process, meaning collateral operations teams are only involved in exceptions and resolving disputes—everything else is automated."

"Using platforms such as [FIS's] Apex Collateral means that, as long as the data validation checks are passed, the entire margin call process can be hands-free. The volume of margin calls is expected to increase five-fold, but firms aren't going to hire five times as many staff. In order to adapt to the greater level of volume firms must adapt their processes through automation."

Build it and they will come

Once an entity sees that its technology infrastructure is no longer fit for purpose, the next question is inevitably whether the new model should be built in-house or come from a vendor. This debate has been raging for longer than anyone can remember, but, for collateral management at least, the end might be in sight.

Thanks to the speed of regulatory requirements in development and the looming fear of yet more to come, the cost of implementation and up keep when every shift of the goalposts potentially signals a massive technological overhaul is simply too much for most to bear.

Allen comments: "There are always firms that want to build in-house because they think they know their own needs best but that is less and less the case. It's increasingly expensive to build these systems and also the maintenance costs are only going up when you consider all the new regulatory requirements that currently exist or may exist the next few years."

"Apex has clients who are taking this opportunity to revisit their whole collateral management infrastructure and replacing it with a single platform that covers them across the entire securities financing spectrum. Others are solving the specific problem of optimisation by implementing our optimisation model on top of their separate third-party or in-house solution."

"For collateral operations, up to 90 percent of firms use a vendor platform," Allen added.

Malgieri, as head of BNY Mellon's triparty agent that primarily services lenders, feels these costs acutely. "As a business manager, technology budgets tend not to go down, only up. You must constantly re-invest in your business, especially one like collateral management, which is so technology laden."

"These are all technology-driven developments in the industry and it's the triparty agents that have to come up with these solutions. With lender collateral requirements now this complex, efficient technology solutions are the only way it can be done on the scale the market needs," Malgieri says.

Unlike challenges around pooling collateral, entities big and small are all affected by steep costs to remain compliant with regulations. Nicol offers a blunt summary, stating: "There are no winners in this area. Regulation carries cost implications regardless of whether you have legacy platforms or are a new entrant."

"Legacy systems will need to be upgraded to incorporate the new parameters or external workarounds reviewed from both a technical and business perspective."

She adds: "Newer entrants have the benefit of structuring platforms to manage both legacy and regulatory functions as part of the initial purchase and implementation process and can therefore often streamline the requirements but may face a greater challenge in moving from the current, often spreadsheet-based process to a new platform within the timeframes. As a result, we are seeing a growth in interest from the market as they look for viable options."

There might be few winners here, other than the vendors, as the cynics would say, but that might be missing the point. Afterall, isn't better management of collateral the ideal? Regulations might be forcing hands, but don't idle ones do the devil's work?

Sooner or later, everyone must embrace better collateral management, whatever the cost, or be left behind. **SLT**

Liquidity coverage ratio

Basel III's liquidity coverage ratio (LCR) requires dealers to hold enough liquid assets to cover liquidity outflows over a 30-day period. Cash-settled derivatives positions due within 30 days, including futures, options and equity swaps, form part of the outflows calculation. Given the LCR has a 100 percent minimum, this forces banks to find more liquid assets to plug the gap, constraining new business.

Shares held to hedge these positions are a level 2B asset in the LCR, subject to a minimum 50 percent haircut under the ratio.

The US implementation timeline of LCR requires that banks must meet 90 percent of the standard in 2016 and 100 percent in 2017. This is a full two years ahead of the international schedule, which does not require full compliance until 2019.

As a result, US banks are already making changes to manage the LCR whereas their foreign counterparts may not yet be.

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Dawning of a new era

Traditional collateral management functions are evolving into a collateral and liquidity trading business, says Bimal Kadikar of Transcend Street Solutions

The securities finance industry is going through a major evolution, driven primarily by regulatory and economic forces. A vast amount of literature and research has been published about the size and impact of these forces, and they are finally beginning to take shape. These changes are causing an increase in the demand of collateral and, at the same time, decrease in supply of high quality collateral. It is important to use collateral strategically, as a misaligned source and use of collateral may result in a significant capital impact due to liquidity coverage ratio (LCR) regulations. These dynamics are changing some of the most well established principles in the industry and creating some unique opportunities.

It is clear that this transition has already begun and many firms, either individually or with the help of consulting advisers, are busy identifying the appropriate target operating model. This operating model needs to address some critical questions and considerations. Given the significant rise of collateral requirement for initial and variation margin for cleared and uncleared businesses, it is imperative that collateral needs to be optimised. Should margin operations take on the challenge of optimisation or do they need to leverage front-office expertise to manage this process? Regardless of the operating model of choice, it is clear that securities lending and repo businesses will need to have a much tighter coordination with OTC and other margin operations functions.

Similarly, how should equities and fixed income funding businesses manage liquidity and coordinate with treasury and regulatory functions? New liquidity regulations such as the LCR and net stable funding ratio (NSFR) are very specific about how they treat various sources and uses and their term structure of liquidity in capital calculations. If these functions did not coordinate liquidity management and analytics, they would have significant punitive impact on capital.

In addition, new regulatory guidelines from recovery and resolution planning such as SR 14-1 also mandate specific capabilities for collateral and liquidity management. So, collateral and liquidity can no longer be managed in silos and firms need to have a broader and more comprehensive approach.

This sentiment is echoed in various industry conferences and events and most will agree that securities lending, repo trading, and traditional collateral management functions are evolving into a ‘collateral and liquidity trading’ function. Many firms are making organisational changes to support this evolution. Some firms have

made ambitious moves and created one large organisation that manages all collateral and liquidity trading activities under one unit, whereas others have taken baby steps to make progress in this direction. This will probably go on for some time before it settles into a consistent organisation construct across the industry.

Organisational changes start to align incentives and priorities, but the key challenge is to align business, operational and technology capabilities across business silos to take advantage of the new organisation structure. Just like any other major change in the industry, there will be winners and there will be losers. It is clear that firms that embrace this change and adopt a strategic approach in managing their collateral and liquidity trading from business, technology, and operations perspective will have an edge over competition.

Currently, most firms have dedicated technology and operational capabilities for specific silos such as securities lending, repos, margin operations, treasury, and regulatory areas. There is some coordination of data and analytics across silos, but for the most part they operate on their own individual platforms. This is a huge challenge for firms to figure out how to develop a business and technology architecture for the new paradigm.

Some firms look for specific connectivity that needs to be built across units and address those requirements as per business priorities and pressures. This may seem like a practical approach but the key challenge is that, over time, firms will end up with a chaotic architecture that will be very difficult to manage, maintain, and modify.

In a slightly different approach, some firms are looking to identity an existing system and make it as an anchor platform that can be used by other areas. This approach will end up with a better architecture but is very difficult to execute. The typical technology platform for this industry is at least a decade old, and the number of changes that need to be implemented can overwhelm the technology and project delivery capabilities. Most firms are not yet comfortable with the thought of an uber monolithic platform that can serve the need of all business units in a meaningful way.

However, there is an alternative. At Transcend Street, we have focused on developing a strategic approach and technology that is specifically designed to support businesses through this evolution. Our approach is a thoughtful integration of existing systems, while providing new capabilities through state of the art technology developed for the new paradigm. Our technology fits into an existing business enterprise

and does not mandate any major retirement or reengineering efforts for current platforms. This enables firms to leverage their current investments for the purpose they serve, but also develop next-generation capabilities in a smart and more predictable manner.

We see a three step process in building next-generation collateral and liquidity data management to support requirements across business areas. The first step is to focus on the biggest challenge in this space—data. We have developed targeted business models of data focused on the new reality, but which also leverage some of the new generation technologies to ensure easy extension and flexibility. The main focus is harmonisation and integrity of the data such as collateral agreements, trades, positions, settlement ladders, margin and exposure data, reference data for securities, accounts, legal entities, market data, and so on.

The second part is analytics and decision support services that operate on this data. This is how data is turned into information. Decision support is where a collateral substitution or optimisation process can result in quantifiable cost savings or new opportunities.

The third, and most visible part, is the rich user dashboards. Our dashboards bring information to users in a business friendly and actionable way. In addition, allowing users to control how decision support services should operate really drives the evolution of data into information and then into action. Our main goal is to provide a powerful technology platform and give users control via our dashboards.

This approach, coupled with next generation functional capabilities provided by CoSMOS, unlocks a massive opportunity for firms as they navigate through this evolution. CoSMOS provides several functional modules

Agreement Insight: This module allows firms to bring various collateral agreements together and harmonises them such that they can be evaluated consistently across business areas. Agreement Insight can connect to repositories of agreement data, external third parties such as triparty agents, as well as allow agreements to be captured and managed on the system. This module provides a key capability in meeting SR 14-1 compliance requirements for agreements.

Real-time Inventory/Position Management: CoSMOS connects to internal systems in front and back offices. It also has external settlement platforms to provide a real-time view of inventory as well as collateral across the enterprise with detailed traceability of transactions. This module allows users to identify exact collateral location, its liquidity and trading profile, ownership, and pace of movement through settlement ladders—all in real-time. This module is a critical component of the SR 14-1 requirement for visibility of collateral across the firm.

Margin Dashboard: Most firms have multiple margin centre such as over-the-counter (OTC) derivatives and repos. These margin centre can be a significant source and/or users of collateral in the firm and in most places they are buried in back-office infrastructure. CoSMOS margin dashboard connects operational margin infrastructure to the front-office collateral traders to plan and execute optimal collateral decisions.

Collateral Optimisation: The CoSMOS optimisation module provides the ability for businesses to optimally allocate collateral across businesses and functions. Sophisticated optimisation algorithms allow firms to leverage unique solutions from CoSMOS for optimisation decisions. Optimiser is then integrated with the appropriate processing platforms for straight-through operational capabilities. Firms also have flexibility to choose their own algorithms and integrate with the platform to leverage and the rest of data, analytics and straight-through processing capabilities.

Liquidity Analytics: CoSMOS provides many ways to manage and measure liquidity analytics across the firm. A sophisticated and rules-based sources-and-uses engine is a critical backbone for many functions such as cost of funds, client profitability, term structure of funding, to name a few. This engine can be customised for firm-wide or business specific scope and can also provide a 'what if' scenario for firms to evaluate new client or firm portfolio and its impact on liquidity profile. Other metrics include client portfolio trends as well as triparty allocation efficiency analysis and planning. In addition, CoSMOS provides an easy and extendable architecture to build new metrics and dashboards very quickly for user reviews and adoptions.

These are exciting times as economic environment, regulatory pressures and technological advances are creating entirely new opportunities for the industry. This is a big change and, like any large scale change, it needs to be navigated carefully. There will inevitably be winners and losers, but we strongly believe that an enterprise-wide collateral and liquidity management function to drive optimisation of cost and capital is a key differentiator in the new era. We will see a lot more integration and automation in the coming years across securities lending, repo, treasury, OTC derivatives and operations areas, and their silo-based systems will come under a lot of stress. Firms that embrace this change smartly and focus on developing a strategic operating environment with a sharp focus on execution will be clear winners. **SLT**

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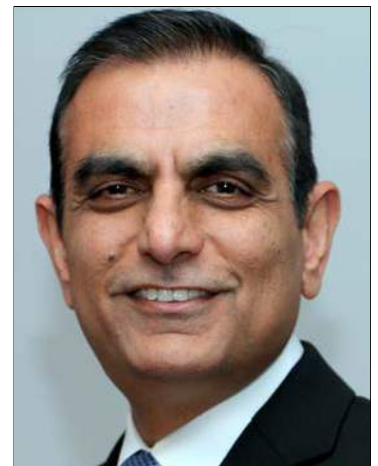

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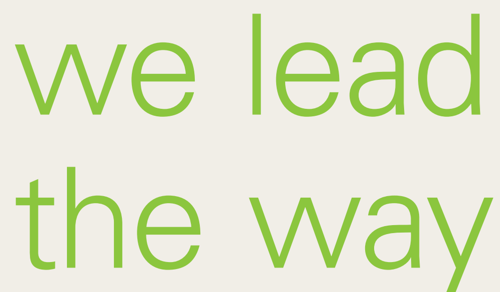

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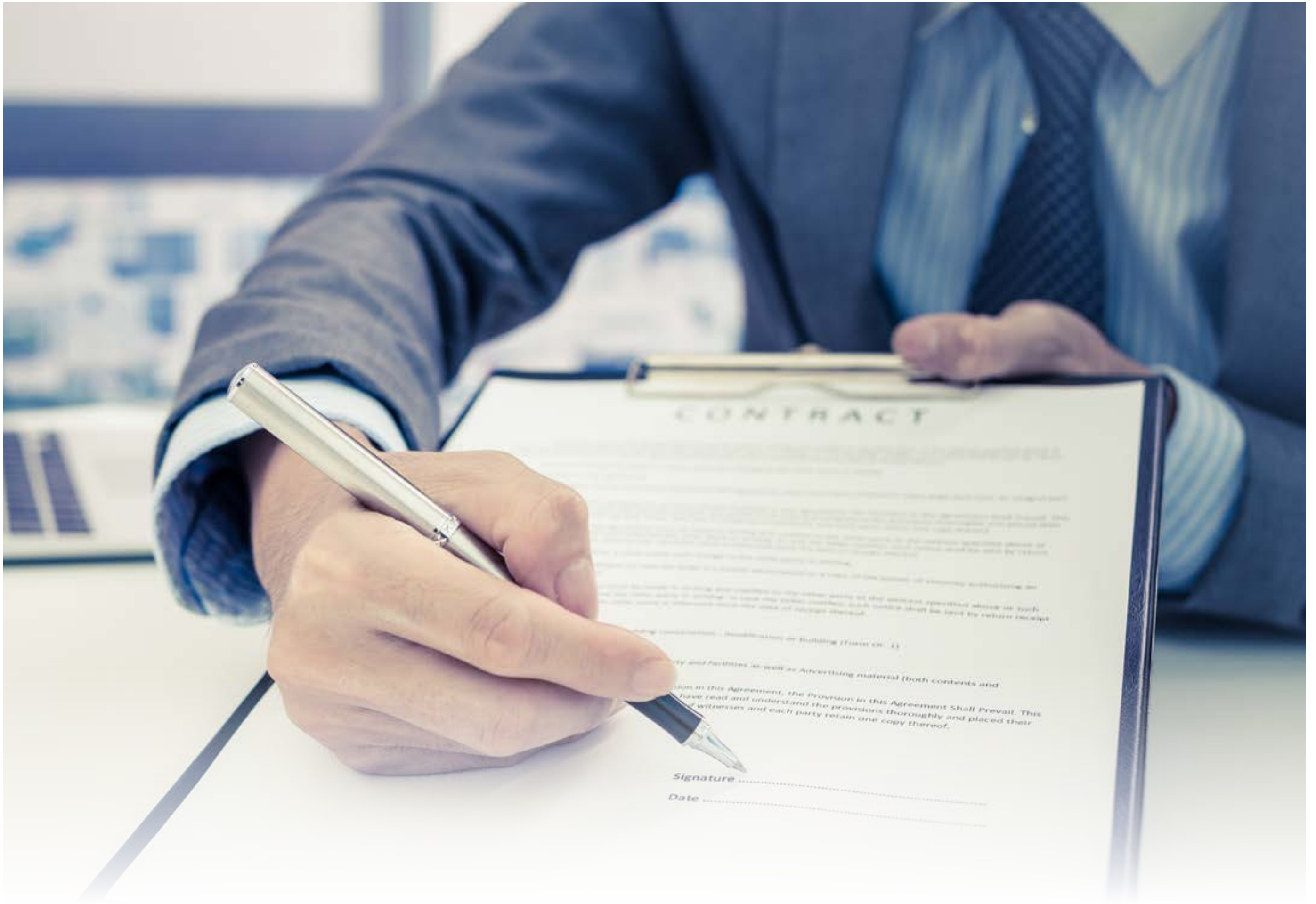


Worth more than the paper it's written on

Can collateral optimisation work if legal agreement execution remains pedestrian? Bimal Umeria and Jonathan Adams of Delta Capita take a look

The slow, fragmented and manual process of changing legal agreements increases risk for all market participants.

One consequence of multi-jurisdictional business growth, product diversity and increasing regulation is that the contractual process becomes more fluid. Legal agreements, their annexes and addenda require regular review and change. This has led to an increase in administrative burden and legal costs for all participants in the securities finance industry.

In many areas, the financial sector is at the forefront of innovative technology change due to product complexity and functional requirements. However, innovation in documentation processing has lacked the pace of other transformations in banking.

This is despite the significant growth in demand for documentation execution and change driven largely by regulation. Manual and slow contract maintenance has an undesirable impact on investment in a cross-product collateral optimisation infrastructure.

The problem

Many new regulations aim to simplify and standardise products to make them less risky from a financial system-wide perspective. This may work for certain vanilla products with sufficient volume to commoditise them without reducing existing liquidity. Complex products remain 'paper-based' without widely agreed standards to make them easier to process electronically. The problem gets worse when multiple parties are involved.

The current spectrum of documentation across organisations ranges from editable documents stored as files on servers or simple document sharing systems to automated templating using advanced content management systems.

The former requires manual intervention to make any kind of change, whereas the latter may have elements of automation usually in the form of templating and workflows. These systems may also break the documents into logical constituent parts, allowing easier localised

editing, and the potential for tagging specific terms and rules with standardised mark-up.

Then there is the transfer of the contract terms and rules from documents or templates to the systems that consume the terms and rules to turn them into actionable data. Agreements such as the Global Master Securities Lending Agreement (GMSLA), Global Master Repurchase Agreement and International Swaps and Derivatives Association Master Agreement can have a number of annexes and addenda attached.

There are diverse criteria and rules specific to collateral management, ranging from collateral eligibility rules (such as concentration limits, and inclusions and exclusions such as issuer, issuer domicile, rating and currency), minimum transfer amounts, collateral type (such as cash, fixed income and equities), collateral sets, collateral pricing, rehypothecable/non-rehypothecable, and so on. This adds significant complexity to efforts to automate the process.

Contract change can be a notification trigger to the business of a potential unexpected liquidity event. Changes to collateral eligibility or to the margin percentage can result in an unexpected outflow of liquidity. Automation of the process provides the benefit of preparedness for adverse liquidity events. For example, in adverse market conditions, a request from a client to raise its minimum quality level of collateral would prompt a substitution for higher quality securities collateral or even cash. This would force a change to an existing addendum or annex of a bilateral agreement.

While cash previously provided a straightforward and liquid form of collateral, the decline of interest rates into negative territory in several markets has made cash less attractive for some counterparties. Thus, there is a greater demand for high quality securities, which, in turn, require contract management. This is an issue particularly for institutional clients for which cash used to be an obvious option with low administrative overhead.

Contract change negotiation takes place often via document exchange over email, without a controlled protocol for sign-off and execution. Changes are then manually transferred from documents to the recipient collateral applications in both organisations (for bilateral agreements), which is a highly error-prone activity.

Risk is further increased by users having to intervene manually to ensure new rules are applied by the effective date. The lack of agility and precision in execution and processing turnaround can cause avoidable counterparty risk, particularly in periods of market stress.

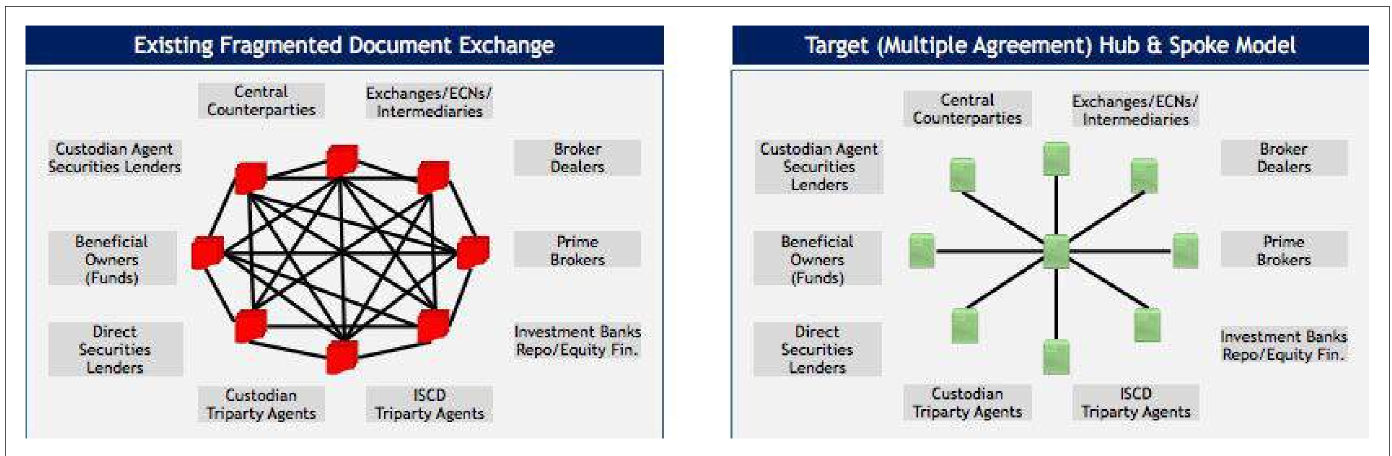
Solving the problem

The fundamental requirement is for contracts that can be more easily changed and consumed by trading and risk management systems with limited manual intervention. This is a long way off, but there are encouraging developments in standardisation and technology that may eventually offer much higher automation and productivity.

At a macro level, the ultimate goal is a market-wide agreement with respect to approach and standards. However innovative a solution, it requires all parties (bilateral, tripartite or multilateral) to a contract to share a protocol if the process is to be properly digitised. Migration to this kind of a new paradigm is fraught with difficulty, as a large volume of existing contracts will remain live for years to come.

The lack of agility and precision in execution and processing turnaround can cause avoidable counterparty risk, particularly in periods of market stress

Jonathan Adams, Principal consultant, practice lead, securities finance and collateral management, Delta Capita



To begin solving this problem, existing paper (or PDF) documents need to be managed more easily in an electronic format.

The ideal solution requires technology to scan existing documents, extract relevant information and apply a taxonomy/tags to standardise the language. Efforts on product standardisation are underway in various industry bodies, such as the Enterprise Data Management Council's Financial Industry Business Ontology.

Further, the structure of contracts and how they are modelled electronically is another area of current research, development and investment—"smart contracts for financial services".

Taken together these developments would enable automated delivery of contract content to the business applications, delivering tangible efficiencies.

A centralised solution could offer a portal to allow all the parties to the contract to access, amend and agree efficiently. Furthermore, electronic interfaces would be required to feed downstream systems to enable further automation. Currently, this procedure requires specialist legal processes, which lack digital output.

New technology exists for the centralised management of multilateral document negotiation and execution. One instance is being piloted in the asset management industry.

Designing and building the appropriate functionality over this type of technology to make it suitable for securities finance is a complex process that requires collaboration between industry participants and bodies such as the International Securities Lending Association.

Much like clearing and settlement, highly automated contract management could be optimised through a utility, run by an impartial third party such as a central counterparty. Further benefits would include providing proof to regulators that legal change is effected and complied with quickly.

Moreover, the industry associations that represent market participants would gain a tool to help negotiate regulatory change more effectively.

Effective and low-risk collateral and counterparty risk management can only be achieved with accurate and up-to-date legal agreement rules and data. Many banks are currently addressing the problem largely manually, which is unsustainable in current markets conditions, let alone in a volatile market.

A potentially viable solution would be a utility or managed service offering a secure, centralised and standardised (as far as possible) management of contracts to all willing participants. An intelligent and dynamic solution would benefit all parties in the transaction chain, expediting contract change and mitigating risk.

A jump directly into a utility model would be difficult. Turning existing paper or PDF documents into electronic is an initial step to address the problem. This would entail scanning existing live agreements and using solutions to increase standardisation of the formats and language to allow more efficient change to the agreements.

The requirement for a functional and rapid change to contract management is not just a nice-to-have but a prerequisite for achieving more efficient and effective use of securities collateral. **SLT**

> ***A potentially viable solution would be a utility or managed service offering a secure, centralised and standardised management of contracts to all willing participants***

Bimal Umeria, Managing partner, Delta Capita

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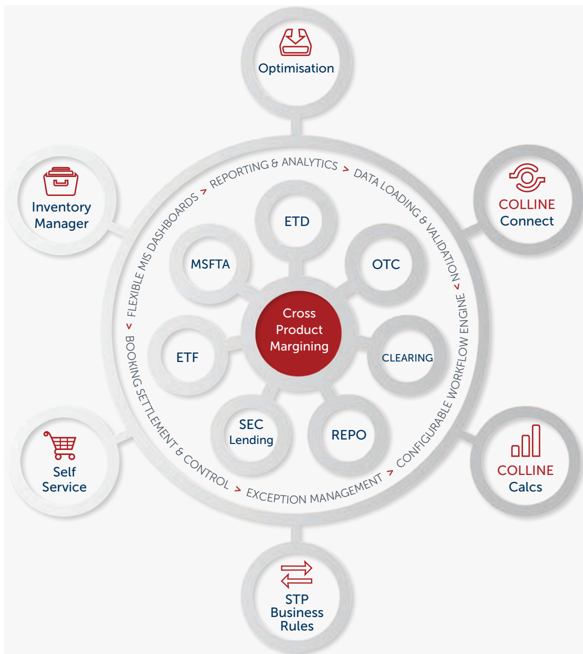

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Block by blockchain

No longer confounded by crypto-currency, fintechs, start-ups and institutions alike are stripping bitcoin back to the underlying ledger technology to see what they can build from the ground up

The hype over bitcoin appears to have blown over. When one of bitcoin's founding fathers, Mike Hearn, publicly washed his hands of the currency in early 2016, he described a crypto-community at civil war and mining pools that were unsustainable, and ultimately declared the whole "experiment" a failure.

That's not to say, though, that the financial industry has turned its back on crypto-currency altogether, and in financial services in particular, attention has turned to the underlying technology and perpetual enigma that is blockchain itself. In the conference circuit of 2015, barely a moment went by without some hyperbole of how blockchain holds the possibility to turn the industry upside down, whether it's bolstering security, slashing settlement times or eliminating back-office processes all together.

In 2016, however, we have no time for hypotheticals. In Q1 alone the industry saw the Depository Trust & Clearing Corporation (DTCC) partner up with Digital Asset to develop distributed ledger technology for improving repo clearing, Nasdaq completed the first private securities issuance using blockchain, and GFT launched a prototype app for commodities using the technology. R3 hailed the success of tests on five new cloud-based blockchain platforms, with 40 major financial institutions taking part, and ICAP completed a proof of technology test for blockchain in its post-trade risk and information division.

Institutions around the world are starting to figure out how blockchain can work for them. Primarily, the focus has been on utilising the decentralised database that blockchain provides, and the possibility for multiple parties to access to the same information at the same time, with any changes tracked and time-stamped.

Robert Palatnick, chief technology architect at DTCC, notes: "The best applications [of blockchain] are those where this specific benefit solves existing business challenges. Applications that have multiple parties involved in a transaction, or where multiple parties need to see changes to information at the same time, are a good starting point."

Similarly, Diana Chan, CEO of Euro CCP, hails the "golden source" of transaction data, noting that the technology could be best used "where it is important to capture and maintain the complete history of ownership and transfer of a financial asset."

A single source of data could effectively eliminate several steps of reconciliations and manual checks and processes that make financial transactions so lengthy.

According to Dave Pearce, a spokesman for the NXT blockchain platform and founding member of the NXT Foundation, blockchain technology is taking the 'central core' of crypto currency, originally intended only to record financial applications, and applying it to both financial and non-financial applications, expanding the potential markets for use of blockchain and crypto-currency technology.

Pearce says: "Blockchain technology could provide a technological quantum leap that allows institutions to cleanly replace a lot of the legacy processes that have built up over the years."

He points out that, historically, financial institutions have been all about building up and maintaining trust in the system. "Up until now," he says, "that has required a lot of verification, both by humans and later on by computers. A blockchain system has these verification mechanisms built into its very core."

In the big institutions the approach is perhaps a bit more conservative, however they also have the resources at hand to explore the possibilities themselves. Philippe Ruault, head of clearing and custody solutions at BNP Paribas Securities Services, suggests that although they're "still quite exploratory", the bank welcomes the proof-of-concept innovations.

He says: "There is good scope in transfer of assets, but there are also topics like voting, know-your-client and securities financing concepts that we would like to explore."

"We are identifying areas where processes are not fully automated, that are very costly or very manual."

On the other hand, Christian Sjöberg, head of clearing at Six Securities Services, says that while he welcomes the possibility for a single source of data, the industry should perhaps not be getting too ahead of itself.

"There are many challenges to overcome, such as capacity, legal frameworks, and most importantly, the use of blockchain will require industry-wide coordination," he says. "Otherwise, it will just create the same situation as today where we have multiple new solutions with different sets of standards."

Indeed, in some of the complex auxiliary areas of the financial sector, there is still some scepticism over just how useful blockchain technology is likely to be. In securities financing, for example, the use case of having a single source of shared information, rather than each party maintaining their own, seems fairly clear. Information will not become outdated and reports will be automated. However, as Sjöberg points out, the majority of blockchain testing in securities financing has been done in a "reasonably simple environment, without investigating the full impact such an approach to securities financing may have on the underlying processes".

This is a new technology being applied to a form of financing that has been around for years. One concern is that, as the technology develops over time, any solutions implemented now will be rendered practically useless within just a few years.

Palatnick explains: "Any solutions that are implemented today may need to be completely changed in the future. Additionally, core components of a loan transaction, for example, such as smart contract terms and the security model, are all new and have not been proven over any duration of time."

He notes that, while there may be no noticeable impact on simple buy-sell transactions with a single settlement, anything more complex could pose a problem, potentially causing additional, and unnecessary, risk.

"For long duration transactions, such as any type of loan where the issue is less about the start of the transaction—the lending—and much more about the end of the transaction—the lender getting their securities back plus interest—the implications of depending on a technology that has had a shorter lifespan than most existing loans add to the risk of the transaction."

According to Chan, blockchain could be best kept out of the actual lending and repayment process, making itself more useful in the accurate tracking of collateral.

"If the distributed ledger containing information about the collateral available and its location is open to view to the relevant parties, then collateral mobilisation and use could be made more efficient," she says. "This might not help a collateral giver recovering his assets

in the event of the bankruptcy of a collateral taker, but at least the collateral could be traced to where it has ended up."
Causing similarly mixed feelings is the issue of clearing and settlement using blockchain. In theory, automatic reconciliations and immediate data updates mean that settling a transaction, which can currently take weeks, even months, could be much quicker—even instant.

Bas Wisselink, a founder of the NXT Foundation, sticks to the practicalities, however, saying: "Blockchain is a technological thing. There is, of course, a legal side to clearing and settlement that technology cannot solve. But the operations side—the actual clearing—that is the thing that blockchain provides an actual technical answer to."

He specifies: "There has never been a way for trades to be completed unsupervised and securely, and blockchain has finally managed to solve this problem. That's a biggie."

Ruault expresses similarly tentative optimism, suggesting that the technology could work in an integrated clearing and settlement model. He says: "When you have the issuance of the instrument, the trading, the settlement and the custody in an integrated chain, it could be an efficient way of working."

"Having said that, it will be have to be focused on very specific instruments to be compatible with existing legal and regulatory aspects."

With such regulatory annoyances affecting every nook and cranny of financial services, there are differing opinions on whether they really have a place in new innovations. While Wisselink and Pearce suggest that blockchain is at risk of being stifled by regulation before it has had a chance to expand, Ruault suggests that regulators are taking a back seat, allowing for innovation and development, and only imposing rules if and when it is practically implemented.

Sjöberg, however, takes a slightly alternative view, suggesting that, although differing by jurisdiction, it will be the existing regulation applied to settlement cycles will stop blockchain making any meaningful difference.

He says that, realistically, blockchain will take off in markets such as Asia, Australia and the Middle East "where one infrastructure group can control the entire process", as opposed to markets like Europe, which have a more complex infrastructure of central securities depositories, central counterparties and different currencies.

In Europe and the US, he says, T+2 and T+3 settlement cycles are not a result of lacklustre technology. "Rather, it's more a question of set-up practices as well as, in certain circumstances, legislation that needs to be changed. Practices related to funding, for example, may be crucial."

That said, the mere suggestion of T+0 settlement casts an uneasy shadow over an entire industry. If counterparties can keep accurate and transparent records and settle instantly, with no room for default, there is a question of whether, at some point, blockchain could eliminate the need for CCPs entirely.

Currently, the consensus seems to be that the two can co-exist. As CEO of such a CCP, Chan specifies: "Blockchain is a technology and CCPs are service providers. It is possible for CCPs to use a blockchain format of payment in settlement, for example."

And a partnership like this could serve to make the market more efficient. Sjöberg says: "Blockchain may help with faster settlement, but a CCP can support with providing a safe legal framework, credit risk management for both short and long positions, and netting of transactions in order to reduce the number of settlements."
Ruault, however, is less certain about the future of CCPs, conceding: "It's a big question, and I'm still not sure of the exact answer. If we move to a T+0 process you don't get the settlement risk, but using blockchain you also don't get the netting abilities and anonymity that CCPs provide."

With initiatives cropping up like spring daffodils, it's clear that although blockchain's usefulness is no longer in question, it's application is still very much up for debate. What is clear, however, is that in this industry nothing is likely to happen very fast.

Citing the example of the unexpectedly positive effect that videotapes had on cinemas, Wisselink argues that such disruption could mean big things for financial services, saying: "Due to increased security and lowering of cost, there may actually be an influx of consumers."
Pearce adds to this, noting that institutions are starting to look seriously at blockchain, trying to apply it to their own areas of expertise. "If there are economies to be had or profits to be made, or a revolutionary way of doing business that fits within ordinary parameters but still utilises blockchain, they we will see those products starting to crop up."

However, Pearce also notes the intrinsic conservatism of the industry, adding: "It is going to take a while for blockchain to be adopted by the entire financial world, if that ever actually happens."

With technology evolving so rapidly, it is just as crucial for institutions to get involved in the experiment, or risk being left behind

It may still not be clear exactly where the industry will end up, but with technology evolving so rapidly, it is just as crucial for institutions to get involved in the experiment, or risk being left behind.

"Providers are bringing more concrete projects and focused instruments and processes to the market," Ruault says. "It's important to be part of the conversation and to have that ongoing initiative." **SLT**

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Worlds ahead

David Selwood outlines how financial technology service providers have evolved from one-man-bands into the innovation hubs of today

How has financial technology been developed by companies such as FIS to resemble the modern service you now offer?

In a general sense, financial technology has developed from one-man-band software houses that created standalone solutions and sold them to customers to a position where service providers such as FIS are able to offer a full front-to-back service model. This evolution of fintech is underpinned by innovation in the way financial technology and services are incorporated into a single package.

There are very few true, single-line software houses left out there now and that is because the trend is strongly going in favor of those able to offer this more developed, front-to-back model.

Which areas of securities lending have seen the most advances in technology?

Automated trading technology has definitely made some of the biggest strides forward. Those brokerage firms that have embraced this have implemented solutions that encompass every aspect of their businesses. They are all about computer power and bringing their traders together with their IT departments to enhance their operations. As a result, they become the complete package.

Increasingly, we see that big banks are less interested in becoming data centers and servicing solutions themselves. They are more interested in forging an effective partnership. Clients aren't simply looking for a one-off software purchase that they then manage themselves. They want the full service that a technology provider can bring with that software solution.

Many participants are striving to achieve greater automation. How far can automation go before it peaks?

For securities lending specifically, there will always be improvements that can be made to the process. The nature of securities lending is that one of its core purposes is to fulfil a need from areas of the wider financial industry, and that won't change. Therefore, there will always be a need for expertise in the industry that automation cannot in itself provide. However, innovation will continue to drive change going forward in ways that we haven't even thought of yet, so it's very hard to make accurate predictions.

Having said that, it's unquestionable that there is still lots of scope for what greater automation can bring to securities lending overall.

What are the challenges that some may face when looking at technology investment?

It's often down to the appetite for change and innovation which can vary hugely across the industry. It's also down to budget.

We work with some market participants that are constantly striving to move their business forward and are willing to allocate assets in order to do that. However, there are also those that would like to move forward but are stuck in a model that means they see benefits, but not enough to commit to the change.

Education is a key part of this, and that is one thing that is largely in the hands of the solution providers. We have to be able to show participants, even those on tight budgets, that there are real advantages to investing in fintech and work with them to ensure those results are seen throughout the process.

Is the cost too high to meet?

It can be, but it shouldn't be. From a fintech perspective, this is another way the world has changed. Part of the modern package, which includes service as part of the solution, is aimed at easing that migration from legacy systems. Issues such as dealing with challenges around legacy systems are exactly where technology firms can shine, because part of our primary remit is to fill that gap between old and new and make sure it is as easy to navigate as possible.

Business disruption should always be avoidable. Upgrades to your underlying software solution should never negatively affect your day-to-day business. **SLT**

> ***It's unquestionable that there is still lots of scope for what greater automation can bring to securities lending overall***

David Selwood, Head of managed services for securities finance and collateral management, FIS

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Broadridge and Anetics join forces

Jerry Friedhoff and Rob Sammons explain Broadridge's January 2016 acquisition of Anetics, and what it means for their clients

What attracted Broadridge to Anetics?

Jerry Friedhoff: A careful evaluation of solutions in the securities lending space proved to us that the Anetics toolset is a market leader in front-office stock borrow and loan functionality. Its modular design appeals to any securities lending desk looking to improve its operations.

Additionally, the deep global securities financing knowledge that Rob Sammons and his team possess makes the whole Anetics business very attractive to us at Broadridge.

What about Anetics?

Rob Sammons: Anetics has grown a lot in recent years, to the point where the company was ready to take the next step. This required significant investment in infrastructure, as well as adding in new levels to our sales, marketing, oversight and compliance, among other areas. It was very inviting to make that process a lot simpler by joining Broadridge, where all of that expertise already exists.

How will clients of Anetics benefit?

Sammons: Enhanced infrastructure and the fact that the future of Anetics is no longer tied tightly to a small number of key personnel. There are now whole teams of people to look after the many facets of service delivery for our clients.

Friedhoff: On the product front, Anetics clients will benefit from access to linkages with Broadridge's extensive suite of front-, middle- and back-office solutions.

Broadridge is a leader in the global securities processing arena and Anetics will now be able to interface seamlessly with our other related applications.

> ***Clients will gain efficiencies in personnel and collateral usage***

Jerry Friedhoff, Managing director and product manager, securities finance and collateral management
Broadridge

In addition, we see a strong correlation between Broadridge's clients that use its other securities financing solution offerings and the securities lending clients of Anetics.

Over the long term, we believe that many of these clients will be interested in merging their repo and securities lending capabilities to gain efficiencies in personnel and collateral usage.

Broadridge continues to move towards offering a multi-asset securities financing toolset that will address these needs.

How will the two businesses be integrated?

Sammons: The Anetics product will be transformed into a part of Broadridge's securities financing solution suite leveraging the strengths and capabilities of the Broadridge organisation.

Our offices have already been transformed into a Broadridge site, with security and monitoring to Broadridge standards. We are also on the Broadridge network, which allows for seamless communication throughout the organisation.

> ***We are seeing lots of new opportunities. Watch this space***

Rob Sammons, Senior director, securities finance and collateral management
Anetics, a Broadridge company

Anetics facilities and personnel are now all Broadridge. The Anetics product suite is expected to evolve, allowing us to grow into new opportunities and to expand our service offerings.

How are Anetics and Broadridge aiming to expand their offerings?

Friedhoff: We are continuing the process of integrating Anetics into Broadridge without losing its entrepreneurial and client focus. Additionally, we are looking across Broadridge's extensive client base to understand how the Anetics securities financing solution set can help them succeed. This has already led to many great conversations.

Beyond that, we are looking into potential opportunities to expand our value-added services in multiple areas, such as analytics and collateral management.

Sammons: I'd add that because we are now a part of Broadridge, it will be easier for our customers that use Broadridge's other services. This is because we can do the interfacing behind the scenes instead of through a customer facility.

We expect to provide enhanced capabilities around real-time messaging for offers and needs, borrows and loans, leveraging the resources of key third-party vendors in this space.

We also see opportunities for better tools to support the shift from cash collateral to synthetic collateral, and there are new opportunities to make better use of the Options Clearing Corporation. Watch this space. **SLT**

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Raising the stakes

There is a difference between getting by and excelling. Markus Buettner and Admir Spahic of Comyno explain why intelligent automation is that difference

Is full automation of securities finance the ultimate aim for all participants?

Markus Buettner: Automation is definitely the most powerful tool in the arsenal of a securities finance market participant. It allows participants to increase efficiency and minimise the operational risks across the whole trade lifecycle. Also, a lot of manual processes result in an (internal) limitation of the desk's ability to fulfill trade opportunities because, often, a maximum number of trades is enforced on the desk due to the high manual efforts required by the downstream departments. As a result, automation also has an impact on a desk's profit and loss capability and the way a participant can interact with, and is perceived by, other market participants.

What can a fully automated system, from front to back, offer in terms of business opportunities?

Admir Spahic: Some of the everyday tasks of securities finance traders take up a lot of time if performed manually. Take, for example, a lender that receives a vast number of locates per day. A lot of participants that we have worked with admit that they struggle to respond to as many locates as they wish they could. This leads to an unsatisfying locate-to-trade ratio and lower profit and loss, and leads to borrowers reducing the number of locates they send to the lender over time because they hardly receive a response, making the situation for the lender even worse.

Thanks to automation, the C-One locate manager relieves traders of the manual task of responding to locates by processing, filtering and then displaying the messages in a standardised, easy-to-read format, offering a powerful tool that allows traders to focus on the locates that can be filled. Coupled with additional functionalities such as automated replies and automated trade booking, an efficient processing of incoming locate requests with minimal manual effort can be achieved, increasing the trade-to-locate ratio and hence business opportunities.

In addition, traders nowadays have to spend a lot of their time complying with regulations, checking internal and external credit limits, dealing with queries, manually entering trades executed on trading platforms, uploading availability to trading platform, and so on. One

aspect of automation is that these maintenance tasks can be reduced to a minimum, allowing the desk to focus entirely on trading. This in return allows them to actively pursue new business opportunities.

How does Comyno's C-One system work in terms of pre- and post-trade automation?

Buettner: Our system offers out-of-the-box, two-way connectivity to a whole range of trading platforms, collateral agents and clearinghouses.

C-One offers a real-time feed of transaction related data such as trade confirmations, security and collateral allocations into the system landscape of our clients. C-One supports the translation of multiple protocols from multiple venues, coupled with intelligent, highly-configurable data enrichment and linking capabilities that can be adapted in line with your business needs. We can combine data from different sources or add information to messages received to cater for the requirements of our clients' in-house software.

We also offer solutions to help our clients to comply with the increasing number of regulatory reporting requirements, such as the European Market Infrastructure Regulation and the Markets in Financial Instruments Directive (MIFID), and will continue to do so for the new regulations to come, including MIFID II and the SFTR, to name a few.

How does your offering allow for interaction between trading systems, triparty agents and clearinghouses?

Spahic: C-One facilitates the interaction with trading platforms via its two-way connectivity. During the pre-trade phase, the fully automated upload functionality allows our clients to upload their borrowing demand and lending supply, as well as the download of quotes into in-house systems. After a trade has been executed, C-One receives the trade confirmation via the interface and feeds it in real-time into the connected in-house systems. Often, the trade data received does not meet all requirements of the in-house systems, so C-One comes with configurable data enrichment and linking capabilities that can be adapted in line with our clients' needs.

For triparty agents, C-One offers a comprehensive overview of the collateral allocation at various levels such as per trade, per trade type, per collateral schedule/eligibility set, per counterparty, or globally. Based on the agent's reporting (MT569 and proprietary formats are supported), the system identifies the key information and presents this information at exactly the level of detail required by our clients for further internal processing such as collateral optimisation or central inventory data gathering.

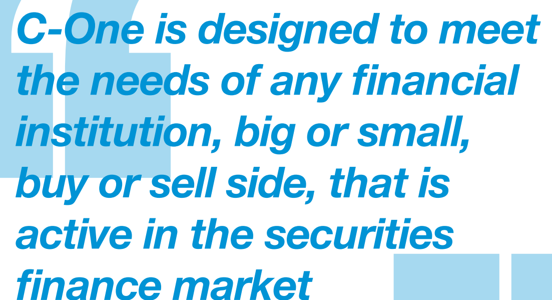
Furthermore, we can combine information from different sources—for example, whether a collateral position is eligible for reuse tends to only be specified at the collateral schedule level, so C-One extracts the information from individual collateral schedules and displays it at the security level.

Although the concept of securities lending central counterparties (CCPs) is still relatively new to the market, it has gathered pace in recent months as the Basel III capital cost savings and credit risk benefits of trading via a CCP become apparent. Working directly with Eurex Clearing on its service offering, Comyno has been at the forefront of this trend and can facilitate every aspect of the Lending CCP trading lifecycle with C-One. The system offers fully automated connectivity to the third-party flow providers that are the entry point to the CCP.

In addition, we can process the loan information received from the CCP, such as loan novation confirmations, loan portfolios, fee and rebate calculations, corporate action information, and extract the relevant information and feed it into our clients' downstream systems, which at this stage are often not ready to reflect the trilateral trading relationship between our client, the CCP (as the legal counterparty) and the trading counterparty, and require the details in a specific, pre-processed format.

What about those that don't want to fully automate? Do your clients have to take on the entire C-One system or can they cherry pick aspects that suit them best?

Buettner: The C-One software system has an entirely modular design to cater for every aspect of the securities finance trading range. Each module can act as a standalone application to automate just one aspect of a portfolio of traded products or as part of a customised, fully-fledged system application, allowing our clients to automate their full portfolio of traded products, be it repo, securities borrowing and lending, or derivative transactions. C-One is designed to meet the needs of any financial institution, big or small, buy or sell side, that is active in the securities finance market.



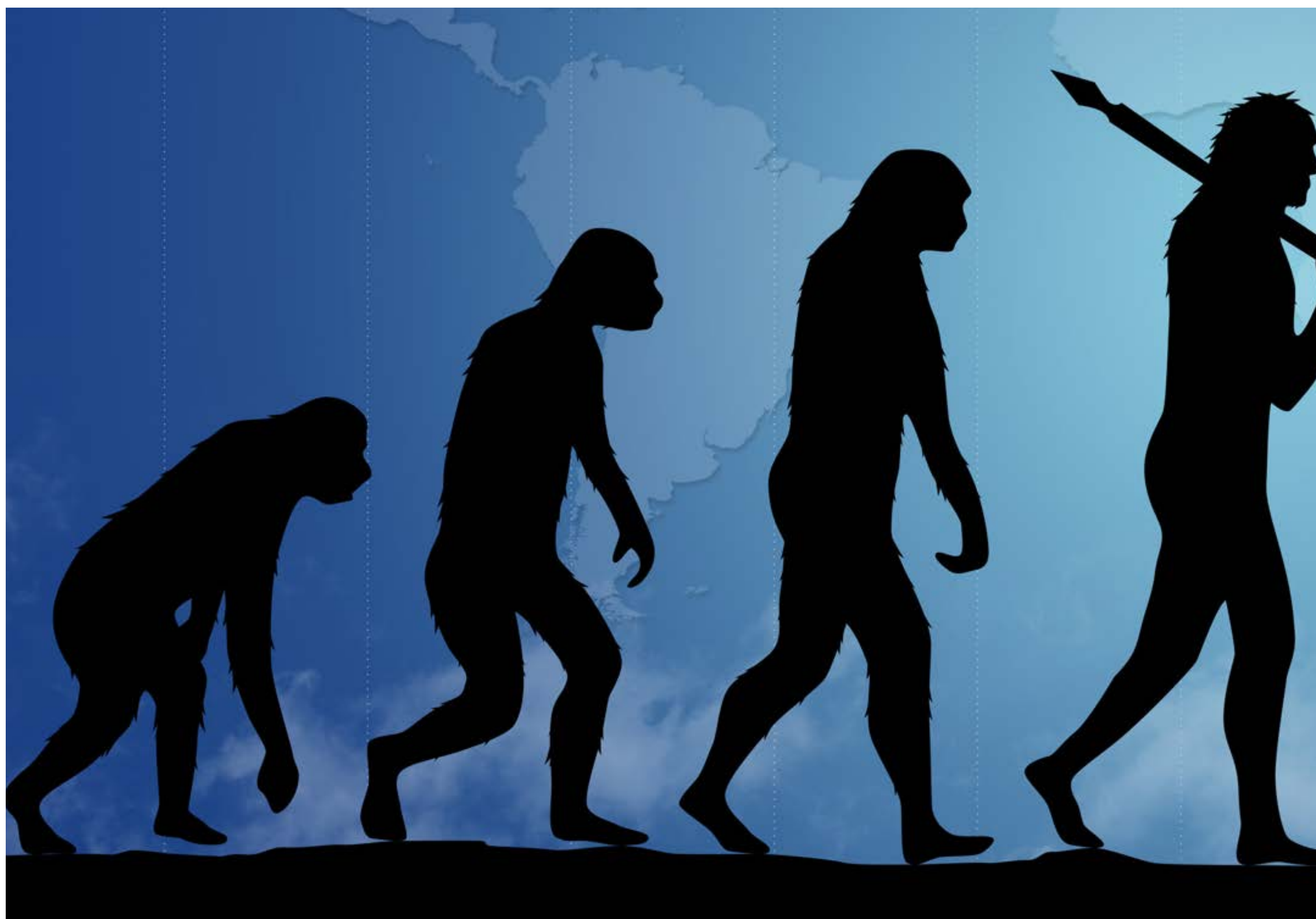
Markus Buettner, CEO and founder, Comyno

This design allows us to offer a cost-effective, fully transparent pricing model. Our client base ranges from clients that use only one module, to automate trades executed via Eurex Repo F7, for example, to other clients that use a combination of modules to automate their whole delta one trading activity via C-One, for example, centrally cleared and bilateral derivatives transactions, Xetra transactions, and to meet their MiFID over-the-counter post-trade transparency requirements.

How are you looking to develop this product in the future to keep up with the evolving needs of your clients?

Spahic: For our clients the pivotal point is to get the right technology solutions in place for the challenges of today's securities finance market. As market regulation continues to evolve and makes itself increasingly prevalent in the business, the requirement for technological solutions through integration and automation becomes inevitable.

Comyno's software solutions offer interaction with multiple systems and providers, help to comply with the increasing number of regulatory requirements and enhance the business and its revenue potential. **SLT**



The exception that manages the rules

Post-trade securities finance services are having to evolve to meet new market dynamics, according to Iain Mackay of EquiLend

Tracking, reconciling and managing risk from trade transactions is time consuming and resource draining. Without sufficient automation, this process is vulnerable to human error, leading to operational inefficiencies and regulatory compliance risks.

In tackling this task, securities finance market participants rely on their back offices to utilise a suite of automated tools that drive productivity in an increasingly regulated market.

Once a trade has been executed between counterparties, the post-trade activities begin. These trade management activities have become more sophisticated over the years and are now critical in order for firms to manage not only their large volumes but also the associated risks.

There was a time when these activities were considered a cost of doing business, perhaps a post-script to the emphasis placed on trading. But that time is no more.

As firms face the one-two punch of meeting new regulatory requirements while encountering tighter spreads, securities finance market participants are looking more to their post-trade staff and systems to optimise their programmes. The back office is moving more to the forefront. Coupled with the ever-present drive for increased productivity is the additional force of increased regulation. Myriad existing and upcoming regulations are driving major changes in the securities finance industry.

At the forefront in Europe is the Securities Financing Transactions Regulation (SFTR), which was established by the European Commission to increase transparency in the securities finance markets. The regulation, which is being phased in over the next several years, will require firms to report their securities finance transactions to an EU-approved trade repository.

“The more you can automate, the more you can adapt to the ever changing industry requirements with scalable solutions,” says Iain Mackay, product owner for post-trade services at EquiLend. “The SFTR is a classic example of this. The requirements that clients are going to face in terms of reporting and the timing of their reporting are going to be significant.”

Mackay expects market participants will look to vendors to help them streamline the reporting process. “Firms such as EquiLend, which are already processing a vast array of trade data for market participants, are perfectly positioned to provide the standards critical for success.”

The Central Securities Depositories Regulation (CSDR), another European Commission regulation, was established to harmonise cross-border settlement rules across Europe and standardise settlements on a T+2 basis. "With fines being levied for failed trades, there will be more costs and an increase in buy-ins as a result of the CSDR," Mackay says.

"That will be costly for firms, but especially for securities finance market participants, who are already operating on thin margins. As a result, clients are placing much more focus on efficient trade booking and processing." By utilising real-time trade matching services, counterparties may quickly identify any discrepancies and therefore avoid costly fails.

Firms are also looking to better manage their balance sheets given capital restrictions under the global regulatory framework of Basel III and US regulation the Dodd-Frank Act. This is encouraging firms worldwide to consider the use of central counterparty (CCP) clearinghouses, which offer balance sheet relief. Previously, market participants were routing significantly less volumes to CCP platforms for global securities financing trades.

With the rise of CCPs and the introduction of agent lenders into the model, however, efficient post-trade services will become even more crucial. Mackay explains: "There is a very standardised process flow that CCPs follow, and it requires a flow provider such as EquiLend to be able to facilitate the connectivity between a client and the CCP."

Not only that, it is also essential that the trade is accurate throughout that whole flow as the CCP model does not allow trades to have discrepancies. CCP participants will need to have effective post-trade functions in place throughout the process to handle any exceptions. Furthermore, downstream processes such as billing and dividend comparisons can be agreed in a much more timely fashion. Target2-Securities (T2S) is also on the horizon. While it is likely to be a couple of years before the full impact of T2S becomes apparent, its concept of harmonising the fragmented European settlement market is appealing. Depending on how clients choose to interact, they potentially will have a consolidated inventory pool that will allow them to manage their collateral more effectively.

"This will have added benefits, as we are seeing clients opt toward the use of balance sheet-friendly non-cash collateral," says Mackay. "To automate what has been a labor-intensive process, clients will likely want to leverage central automated tools such as our connectivity to triparty agents for RQV communication."

Regulations are further encouraging firms to become more active in leveraging the comparison services at their disposal on an intra-day basis. As a result, real-time post-trade functions, particularly trade matching and comparisons, are increasingly in high demand among market participants globally, says Dow Veeranarong, global product owner of EquiLend. "It's not enough for clients to be evaluating their exposure or risk to a counterparty at the end of the day, or at one point in time during the day," she says. "Firms now are trying to be more proactive to either find opportunities or proactively mitigate any potential risks."

Shorter settlement cycles and increased focus on exposure management are leading the drive for intra-day and real-time

comparisons of pending trades, open positions and collateral management. Mark Byrne, a post-trade product specialist at EquiLend, says: "As the level of risk management and trade comparison becomes more sophisticated, the natural drive is to approach a real-time comparison if possible."

Veeranarong explains the new dynamic: "Contract comparisons used to be done once a day. Trade matching didn't exist. Firms often waited until a trade settled before they compared them." Now, she says, firms are looking earlier in the process to identify and correct discrepancies. Primarily that is to prevent failed trades, but equally important is to eliminate the need for staff to spend time reconciling those discrepancies when their time can be better spent on other tasks. For instance, identifying a discrepancy early on can help a firm avoid a failed trade and eliminate possible penalties, but it also eliminates the knock-on effect with contract and billing discrepancies that would need to be resolved internally and with counterparties later on.

It is part of a larger trend among firms, some of which are taking a deeper look into their counterparty relationships with the aim of identifying their most efficient counterparties. It is a novel approach. In the long run, market participants with full automation and straight-through processing (STP) in place can conduct their business at a lower cost than those that require many manual touch points along the way. If a firm's counterparty is less automated, doing business with that counterparty can be more costly for both sides of the trade. Therefore, a counterparty with full STP may get preferential treatment than a less automated counterparty.

"A lot of our more automated clients are looking at how they can help their counterparties be more automated themselves," says Veeranarong. "They are saying, 'I want to continue doing business with this counterparty, but if they require more touch points along the way, that's driving the cost up.'" Post-trade service providers are able to help firms better understand their counterparty relationships so that they can make more informed trading decisions and pricing structures.

Mackay echoes the trend: "We have clients asking us for detailed reporting to see how cost effective it is to conduct business with counterparties. They are analysing the manual touch points and efficiency of when outstanding items get paid. The technology relationship is fundamental in measuring the efficiencies of working with counterparties, establishing the costs of doing business with the counterparties and to ascertain the cost per trade."

The evolution of the post-trade securities finance space is driven by the need for accurate reporting to satisfy regulatory requirements; the desire for accurate and real-time exposure management; and the drive to reduce costs through operational efficiencies. "The post-trade function for most market participants is relatively manual and labour-intensive, and consequently difficult to manage and control," says Byrne. "A well-designed post-trade system will allow the post-trade teams to focus on exception management rather than manual processing. Trades that are matched from inception and throughout their lifespan lead to efficient, automated mark-to-market processing, quick and easy billing processing and effective risk management."

As firms look more to their own back offices to optimise their programmes in the new environment, efficient post-trade systems are more crucial now than ever before. **SLT**

EquiLend's Post-Trade Suite

Aligned with our clients, EquiLend has invested significantly in enhancing our post-trade offering. Notably, we've ramped up our client service model, bringing on board post-trade product specialists John Daly and Mark Byrne, both based in London.

Daly brings more than 25 years of post-trade experience to the firm, previously having led securities lending operations teams at Nomura, UBS, Deutsche Bank and RBS. He has also managed prime brokerage, client confirmations and collateral operations teams.

Byrne also has extensive experience in both trading and post-trade services in the securities finance industry, having served as both securities lending operations desk manager at Nomura in London and head of equity derivatives at the firm in Hong Kong.

Additionally, EquiLend continues to invest in developing our post-trade suite. Recent developments include:

- One File, a seamless, multi-asset, one-entry access point to all post-trade services
- Trade Match, which automates pre-settlement, cross-product trade comparisons
- CCP Connectivity, enabling clients to seamlessly route transactions to Eurex Clearing's Lending CCP for novation and downstream processing
- The rearchitecture of the Post-Trade Suite to align with evolving client needs
- Unified Comparison, a streamlining of EquiLend's full suite of comparison services

Post-trade service providers are able to help firms better understand their counterparty relationships so they can make more informed trading decisions

Iain Mackay, product owner, golbal post-trade services, EquiLend

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More bang with less balance sheet

With automated tools that deliver more transparent, timelier and better internal balance sheet reporting, management may be quicker to allow greater SFT netting in their firms, says Bryan VanderPutten of Helix Financial Systems

Financial institutions, especially global systemically important banking organisations, are managing the impact to their businesses of large scale regulatory mandates imposed worldwide. Aimed at reducing the size and risk of a financial crisis, such as the one that shook the markets in 2008, firms are now obliged to comply with a heightened regulatory environment that can potentially restrict trading activity, pressure revenue growth and confine profitability.

This trend is clearly demonstrated in requirements such as those imposed globally under the US Dodd-Frank Act and Basel III, among others, calling for financial institutions to increase the capital or reduce the assets on their balance sheet until a required capital-to-assets leverage ratio is met.

This poses some interesting industry challenges. Generally, the larger the institution, the higher this ratio needs to be. Also, if an institution operates in multiple locations around the world, it may be subject to different regulatory interpretations on leverage and other liquidity ratios. There are many rules, and interpreting all of them is not always so straightforward.

The result has been a massive deleveraging or reduction in assets from balance sheets, which is trickling down to the profit centres of these regulated firms. The bottom line is that firms have less balance sheet to generate revenue from, with particular areas such as repo and securities lending desks hit worse than others.

Evaluating capital in a new world order

So how are financial firms, especially those active in securities lending or trading repo instruments, navigating this new world order in which effective balance sheet management is increasingly emerging as the path to achieving healthy profit margins?

Typically, firms have been required to report balance sheet figures to regulators on a monthly basis. This timeframe between reports has been a sore spot for the industry, with some critics noting that figures reported at month-end are potentially not representative of what the daily averages truly are. As such, regulators are going to require that firms have the ability to report balance sheet figures daily, if requested, which would be a much more difficult exercise.

Financial institutions have also been virtually forced to deleverage their balance sheets and determine what investments of capital will get the most ‘bang for their buck’. Comprehensive efforts have already begun at many firms to collect transaction, position, collateral, and balance sheet data points, so they can evaluate the various regulatory rules and formulas globally against their portfolio strategies and the efficient use of capital. It is a daunting task.

Firms need to consider how the different calculations and ratios that regulators are imposing can potentially diminish their abilities

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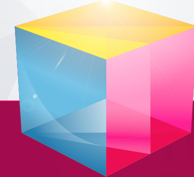

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to generate profits. Financial institutions may also need to reassess their current trading strategies to take advantage of certain incentives or opportunities for relief that come with these rules. One rule is a process known as netting securities finance or repo transactions, or 'SFT netting', which is designed to reduce the assets and liabilities reflected on a firm's balance sheet.

Allowed under Financial Accounting Standards Board Interpretation No 41 (FIN 41), SFT netting, if fully utilised, can provide tremendous balance sheet compression for securities finance and repo desks and increase their return on balance sheet. Finadium, for a September 2014 research report, heard from repo dealers that netting can compress high-quality liquid asset (HQLA) bilateral trading books by 60 to 80 percent. Using a 60 percent compression assumption and an example repo balance sheet with assets of $10 billion, the benefit of SFT netting for a book this size could generate an estimated additional annual revenue of $6 million. Note that this was calculated using an assumed dealer matched book repo rate profit spread of 0.1 percent on HQLA products as per several conversations with active sell-side repo traders. The spread can be even higher for less liquid, higher risk assets.

SFT netting—developing a viable solution

SFT netting simply matches the payable and receivable legs of securities finance and repo transactions that are booked with the same counterparty, clearing at the same settlement custodian and with the same final settlement date. If certain transactions match, the notional value of the transaction can be removed, or netted out, from the total amount of assets on the balance sheet, making regulatory capital ratios more favourable. SFT netting is perceived to be the light at the end of the tunnel and one of the most powerful tools that securities finance and repo desks have to squeeze as much profit from the balance sheet they've been allocated from upper management.

As the industry looks to move towards greater adoption of this solution, a point to remember is that there is a bit more detail to these netting rules. Different firms will not necessarily be consistent on how this process is interpreted and enforced with their securities finance and repo desk managers. In addition, firms with manually-driven, less sophisticated analytical tools, such as spreadsheets, and minimal transparency of their various business unit balance sheets will apply a more conservative interpretation of the netting rules to avoid potential misreporting to regulators. As a result, securities finance and repo desks are being allocated less balance sheet to trade, and/or are having some of their repo netting activities invalidated. In turn, they are not realising the balance sheet relief they might deserve.

Lastly, bilateral counterparty netting is the area most strictly scrutinised by management. In terms of providing balance sheet relief, they arguably don't fit the 'simultaneous settlement' requirement from some regulators. This had led to these transactions not qualifying for netting altogether.

Finding the solution for greater SFT netting

Switching to a full securities finance central clearing counterparty (CCP) novation model, where every single securities firm becomes a netting member to this CCP, would solve the bilateral counterparty 'simultaneous settlement' interpretation issue. However, transactions would still be required to be matched by settlement date within the CCP before realising any netting benefits. Thus, a pure CCP model is not necessarily an ideal situation.

In addition, the vast majority of bilateral transactions are between large sell-side banks or dealers and smaller buy-side firms. The balance sheet constraints of these larger sell-side firms are negatively affecting the rates offered to bilateral customers where there is no netting opportunity.

If buy-side firms had the ability to manage their own balance sheets, and the way they affect the balance sheets of their counterparties, they could potentially attain more favourable pricing and rates, as the banks and dealers would have less overall capital cost associated with these trades and could pass on these savings.

Technology solution providers are exploring a variety of ways to implement easier and more efficient bilateral SFT netting, under the premise that the market is ripe for an effective system and balance sheet management process that can bring greater benefits to the bottom line.

Either way, with automated tools that deliver more transparent, timelier and better internal balance sheet reporting, management may be quicker to allow greater SFT netting in their firms. If management are able to see their balance sheet exposures easily, feel confident that these exposures can be instantly mitigated, and quantify the financial opportunity that netting provides in real time, then firms might also ease up on their interpretations and allocate securities finance and repo desks with more total balance sheet and netting relief. **SLT**

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SFT netting is perceived to be the light at the end of the tunnel and one of the most powerful tools that desks have

Bryan VanderPutten, Senior product manager, Helix Financial Systems

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Cyber secure

Luke Moranda explains how the Options Clearing Corporation is strengthening the resiliency of financial markets through technology

Regulated central counterparties (CCPs) such as the Options Clearing Corporation (OCC) have an excellent track record of performing extremely well during times of market stress. This demonstrated resiliency led global policymakers to mandate that more financial transactions be centrally cleared through CCPs following the 2008 financial crisis.

OCC, and other designated systemically important financial market utilities (SIFMUs), are even stronger today as a result of the improvements that regulators have made to the regulatory framework for CCPs. We are proud of the changes we have made to our organisation since our SIFMU designation in 2012, and we are honoured to continue contributing to reduced systemic risk in our financial markets.

As an expert in managing the risks of others, we deeply understand the need to appropriately incentivise users to help safeguard our markets and contribute to maintaining equilibrium in a mutualised system. Without that balance we run the risk of becoming less secure or diverting attention away from CCPs—in contravention of the goals established by domestic and international policymakers in dealing with the 2008 financial crisis.

Within this new regulatory landscape, OCC has been very focused on improving our resilience and meeting heightened regulatory standards such as the Dodd-Frank Act. OCC has engaged in a comprehensive review of every aspect of our business, including technology, operations, risk management and compliance. This ongoing review has prompted us to implement significant enhancements to further strengthen our core processes and achieve an elevated level of resilience.

These enhancements bolster OCC's leadership role in fostering confidence and reducing systemic risk, while maintaining our

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position as an independent risk manager. The changes that OCC has made to meet heightened regulatory expectations have instilled even greater confidence in OCC to support market participants in both the ordinary course and during times of crisis.

Now more than ever, the degree of interdependency and interconnectedness within financial markets makes it vital that all participants have resilient, well controlled systems. An incident, whether it occurs at a central player like an exchange or clearinghouse, at a single clearing member, or even at a supporting service like a data provider, can have far reaching impacts.

Markets also can be shut down by disasters and non-market events. These incidents can fundamentally weaken the trust that investors have in the markets. In just the last few years, we have seen events such as the Flash Crash in 2010 and Hurricane Sandy in 2012 shape the development of subsequent rulemakings.

As the foundation for secure markets, OCC must continue to cultivate confidence in our resiliency while meeting the needs of the markets by delivering cost-effective solutions. In 2015, OCC accomplished these objectives through a keen focus on three key areas: (i) maturing our risk management framework; (ii) strengthening our cyber defences and overall system resiliency; and (iii) laying the foundation for overhauling our technology infrastructure.

We introduced several measures designed to mature our risk framework. First, we improved the comprehensiveness of our STANS margining system by integrating additional stressed risk factors, most notably implied volatility. This enhancement significantly expands on the market risks considered and mitigated by OCC. Second, we expanded our capabilities to proactively identify potential challenges to our financial resources by implementing rigorous new stress testing modules to our risk framework. Third, we increased our ability to promptly respond to exposures by adding the authority to collect additional clearing fund contributions intra-month, ensuring that we continuously maintain adequate resources available from our clearing fund calibrated to our risk.

In 2016, OCC will implement additional enhancements to its clearing fund approach, further enhancing the comprehensiveness and resilience of our model. Continuous refinement of our risk management tools is evidence of OCC's commitment to managing risk, especially during extreme market events, with the overall objective of reducing systemic risk.

Cyber security and system safeguards continue to be top priorities for the listed options industry and OCC. In 2015, we made further investments in cyber preparedness and system resiliency as part of our efforts to implement the US Securities and Exchange Commission's (SEC) Regulation Systems Compliance and Integrity (SCI). In particular, we completed a concerted effort to perform a survey of our systems, identify which systems are covered by these new regulatory standards, and then further identify critical systems within our infrastructure.

Collecting this information allowed us to make further system enhancements, as well as update and align policies and controls to the new regulation. This year, we will continue to make significant investments in systems and cyber-related projects that will further improve our alignment with Regulation SCI.

One major aspect of SEC Regulation SCI is industry testing. This includes coordinated testing with designated clearing members to ensure that our business continuity and disaster recovery plans will function as intended during an emergency. The first test will be conducted this year and will continue to evolve and expand in 2017 to include industry-wide testing among other market participants covered by this regulation.

In addition to the system work for Regulation SCI, OCC conducted a thorough evaluation of our technology platforms to assess our ability to support the evolving needs of our clearing members, while also meeting the heightened expectations of global regulators. We used the assessment to develop a comprehensive strategy for rebuilding and modernising our technology platforms.

As a part of this new roadmap, we will refine our risk systems and data analytics, boost our clearing and settlement systems, and upgrade corporate support. This multi-year effort will ensure that OCC has the technology necessary to deliver best-in-class clearing solutions for years to come.

Our capability to develop and use technology to support market resiliency is important to OCC because it will help build confidence in the market's ability to respond to different types of events, whether it is a systems problem, cyber attack, or even Mother Nature.

At OCC, we are always striving to be more resilient, and we are confident that other key participants are doing the same.

This also forces everyone in the industry to work together to ensure the market is resilient against external events, and to refine our processes and technology for coordinating across all entities when an issue does occur. All of these efforts demonstrate OCC's ongoing commitment to providing a foundation for secure markets. **SLT**

"We will refine our risk systems and data analytics, boost our clearing and settlement systems, and upgrade corporate support"

Luke Moranda, Senior vice president and chief information officer, Options Clearing Corporation

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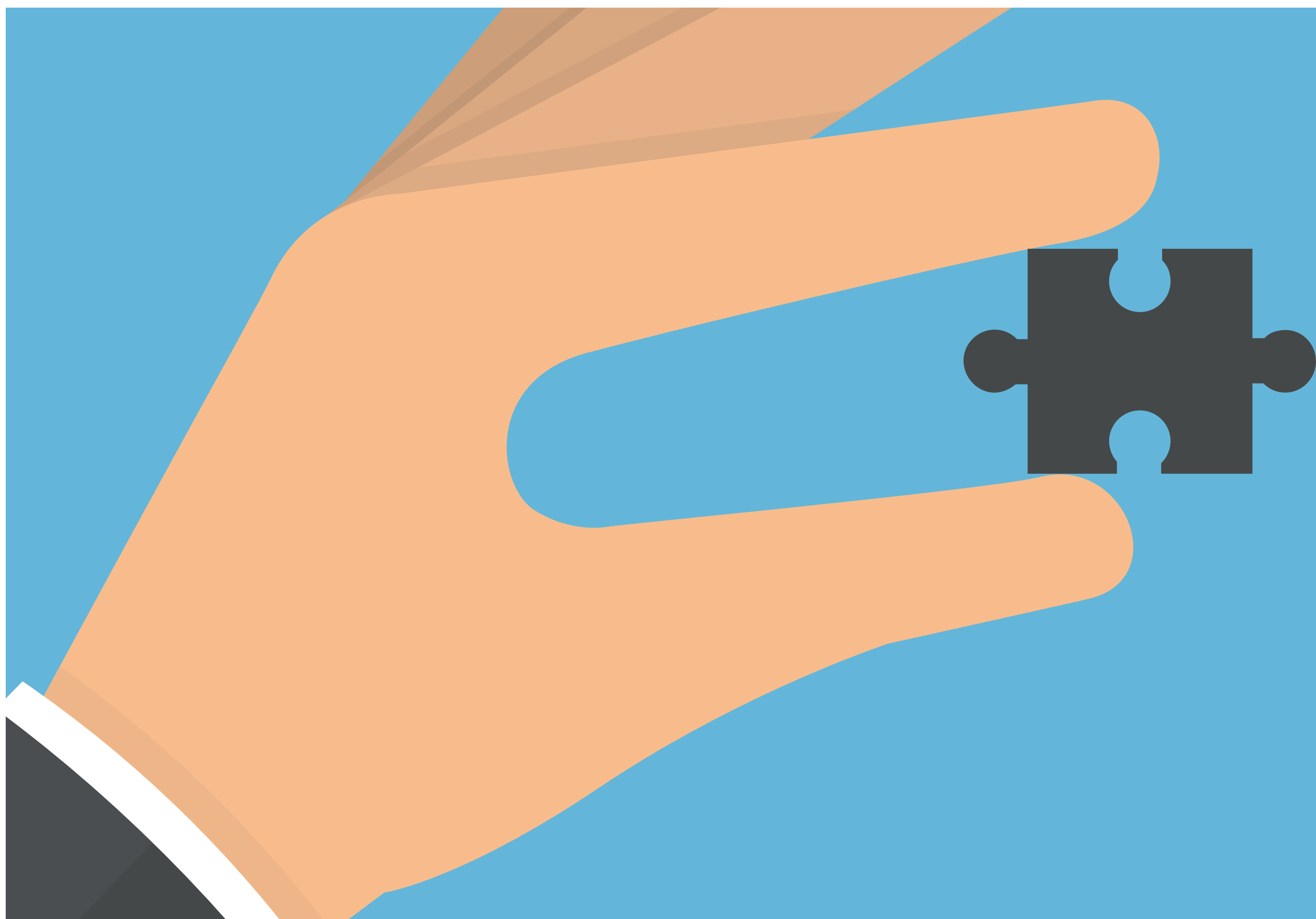


How do you solve a problem like BCBS-IOSCO?

Active management is a far better strategy than wait and see, according to Martin Seagroatt, head of global marketing at 4sight Financial Software

The forthcoming Basel Committee on Banking Supervision and International Organization of Securities Commissions (BCBS-IOSCO) uncleared margin rules are set to make the collateral management process far more demanding than in the current operating environment.

The most immediate impact will be on the sell side. However, there will also be far-reaching consequences for the buy side and other derivatives end-users.

Although the rules affect uncleared derivatives transactions and do not currently affect the securities lending and repo markets, the growing trend for centralising the collateral management function across all business lines means this is a relevant topic for most collateral managers.

The new rules will create a number of headaches for collateral teams, with the potential to increase workload and overwhelm operations.

The changes will result in a need to:

- Source more collateral;
- Mobilise collateral more efficiently;
- Optimise the collateral that is pledged to manage costs;
- Deal operationally with the increase in margin calls and collateral movements;
- Appropriately segregate collateral;
- Manage the quality and concentration risk of the collateral portfolio more closely; and
- Ensure compliance with a more complex regulatory checklist.

This will mean legacy technology systems and unsupported spreadsheets that are currently widely used will no longer be able to cope with the new operating model.

Responses include increasing headcount, improving systems to enhance automation and straight through processing of margining, and leveraging industry utilities wherever possible. Some level of collateral optimisation will also most likely become the norm as collateral costs increase for all market participants.

The infographics overleaf provide a high-level overview of aspects of the US version of the BCBS-IOSCO rules that affect collateral management, as the US version of the regulations have now been finalised. Other jurisdictions are still some way behind in implementing the final rules, although at the time of writing, European regulators have published draft technical standards.

While the initial margin aspects of the new rules will take a number of years before they start to affect some in the market due to decreasing compliance thresholds, the variation margin rules will take effect from March 2017.

It is therefore important for all firms trading derivatives to perform an impact analysis and to begin outlining their future target state now to avoid bottlenecks further down the line. The rules require numerous technology system changes in order to comply smoothly.

Global inventory management is key

A fundamental step in preparing for the BCBS-IOSCO rules and the many other regulations creating increased demand for collateral is collating all of the firm's inventory and exposures into a single view.

The keystone for this matching process is the collateral management system. This provides the bridge from inventory to exposures, providing links between where and when, and all importantly, what the collateral must be.

An ineffective solution here prevents the maximisation of inventory efficiency in collateral use. Core to these processes are detailed contractual terms and collateral schedules.

The requirement to collect variation margin and initial margin on non-cleared derivatives is one of the last major changes imposed on the markets by regulators. But it is also one of the most disruptive. By pushing the exposure out of the banks, it makes markets safer, but the shift is now borne by investors.

While there is still some time for many market participants before the regulations begin to take effect, it is important to gain an understanding of how the rules will affect your firm.

This allows you to understand the changes in process flows and business models and then estimate the potential costs of the regulations to your business. With that information in hand, one can move on to analysing the benefits of implementing new processes and technology.

From there, it is possible to clearly outline your required target state. This ensures you have an accurate picture of the end goal you want to reach and how your operational and systems architecture will look.

Implementing new technology solutions can be complex. However, there are immediate benefits to making the required improvements in collateral management systems. These benefits will only increase as the rules come in and moving now allows you to avoid a rush to comply when expertise is at a premium.

Firms that view collateral as a scarce resource that requires active management and invest strategically in technology solutions will also tend to outperform those that take a more passive, wait-and-see approach. **SLT**

This article is an excerpt from a whitepaper published by 4sight Financial Software entitled, Solving Collateral: BCBS IOSCO Uncleared Margin Rules: How to Adapt, http://www.4sight.com/products/4sight-collateral-management/bcbs-iosco-uncleared-margin-whitepaper

BCBS IOSCO UNCLEARED MARGINING RULES

Some key points in the new regulations impacting derivatives market participants

2 Way Exchange of Gross Initial Margin

Minimum transfer amounts for Initial Margin

$500,000

Thresholds before margin exchanged

Daily Exchange of Variation Margin

Zero Threshold on Variation Margin

Baseline Initial Margin Calculation Methodology

One tailed 99% confidence interval over 10 day horizon

OR:

Internal model requiring regulatory approval

Implementation Timelines

Phased Implementation. Compliance thresholds based on average daily aggregate notional amount of non-cleared derivatives for March, April and May of the previous year (US Rules)

BCBS IOSCO UNCLEARED MARGINING RULES

Some key points in the new regulations impacting derivatives market participants

Restrictions on Rehypothecation and Segregation of Counterparty Collateral

Increased Collateral Demand

$315b

Additional $315 billion of extra collateral required for initial margin.

(FED impact analysis)

Increased Funding Cost

$2.5b

(FED impact analysis)

Uncleared 30% to 40% more expensive than cleared trades

(FED impact analysis)

More stringent Settlement Times

T+1

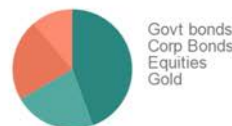
Exchange of margin must take place within one day of trade date

Cross Currency Haircuts

8%

Haircut on trades collateralized with collateral in currency different than settlement currency

Regional regulators define eligible collateral and concentration limits



Global Implementation of the Regulations

Differences in application of rules in different jurisdictions

Some key aspects of the rules differ in the US vs Europe. There are questions around which rules should apply when a US entity is trading with a European entity.

Asian regulators have not yet defined draft technical standards.

Cross border settlement

Margin must be exchanged on T+1 after the trade date.

This may result in difficulties around regional settlement cycles for US firms trading with APAC firms.

Back to business

Outsourcing critical business solutions is becoming more necessary in today's ever-changing market, says Matthew Harrison of Trading Apps

Within the securities finance industry, there are often gaps in functionality that exist with the major software vendor products. Customising these for the individual needs of an investment bank, hedge fund or asset manager cannot only be costly, but push solutions for the user further away from delivery and produce an unsatisfactory return on investment.

Developing proprietary-based systems has frequently been the solution for finance institutions, so that they can utilise multiple data feeds and software, which are necessary for them to trade. However, the time taken to deliver these systems often means that budgets overrun, internal resources are stretched and delivering the business requirements becomes increasingly difficult as the market is continually changing. Many other industries have moved away from this model due to its inefficiencies and lack of technology utilisation and standardisation.

Organisations such as Trading Apps are quicker to market than in-house proprietary-based systems (90-day implementation) with targeted applications that can keep pace with the business, vendor and regulatory changes. By leveraging the Trading Apps robust application-building platform Glass, we bring a tangible and immediate return on investment to the client and free up over-stretched IT departments that are challenged with front-end user requirements and back-office system enhancements and changes. Trading Apps works in tandem with the client's existing infrastructure to leverage the return on investment and avoid high-cost infrastructure replacements and upgrades that often cripple IT budgets and fail to deliver immediate user benefits. The industry needs solutions that are relevant, contextual, and employ a consistent look and feel so that training users and maintenance are not a burden on the organisation or the industry as it evolves.

Financial institutions' IT departments should be investing their time, talent and capital to develop competencies that will set them apart, creating differentiation from their competition and driving higher revenue returns.

High-performance financial businesses need to move to a cost-efficient, highly flexible and scalable software model, which allows them to respond rapidly to market and regulatory changes, improve operational efficiencies, elevate performance and jump-start new growth in a challenging marketplace.

Trading Apps is challenging securities lending organisations to move away from complex and inefficient software environments and instead build capabilities that are more scalable, agile, reliable and responsive to the trading needs of the business, today and in the future.

The six main benefits of outsourcing software development for the business and IT department are:

Controlling and managing costs: When you outsource your organisation's system development, you are able to control costs by paying a set licence and maintenance fee per application, so you know what your expenditures are without fluctuation. You are also able to take advantage of economies of scale, with predictable implementation and reduced consultancy charges, and learned efficiencies and expertise. When you have your own software development team to fund and run, it can be extremely expensive with high levels of risk on individual team members and project costs set by internal procedures and external consultants, reducing the return on investment from your budget, which can be utilised in other areas.

Focusing on your business: Your organisation is a financial institution with its core competencies in this area not software development. Every company has limits to its resources and an external vendor such as Trading Apps will let you redirect them from non-core activities toward activities that provide a greater return on investment. By allowing Trading Apps to utilise your current vendor or proprietary systems, this frees up valuable resources and time to concentrate on the areas that make you successful and grow, while maximising your return on investment on current vendor systems that do not require large overhauls that are costly and time consuming with little direct value to the user and support teams.

Accessing the most current technology: Trading Apps brings world-class knowledge and experience to your organisation on a continual basis. You will receive access to new technologies and knowhow that you may not have considered previously, as well as techniques and tools that you currently do not possess. These tools include tried-and-tested features, benefits and procedures that can replace the numerous ad-hoc processes, such as Excel spreadsheets, that are still being used to support mission-critical parts of your business. Additionally, Trading Apps tests the software developers they hire, and maintains their training and examinations on a continual basis to keep them up to date with the latest technologies.

Continuously monitoring your software environment: Even if you do have knowledgeable and qualified software professionals on staff, with a limited number it would not be reasonable to have them monitor your IT environment every hour of the day, every day of the year. The Trading Apps team and software have the tools to do this, and can foresee serious issues with your system environment and can fix them before business-critical issues occur. Trading Apps maintenance can also take care of day-to-day tasks such as software updates and patches to legacy third-party systems, which are often out of date and difficult to maintain.

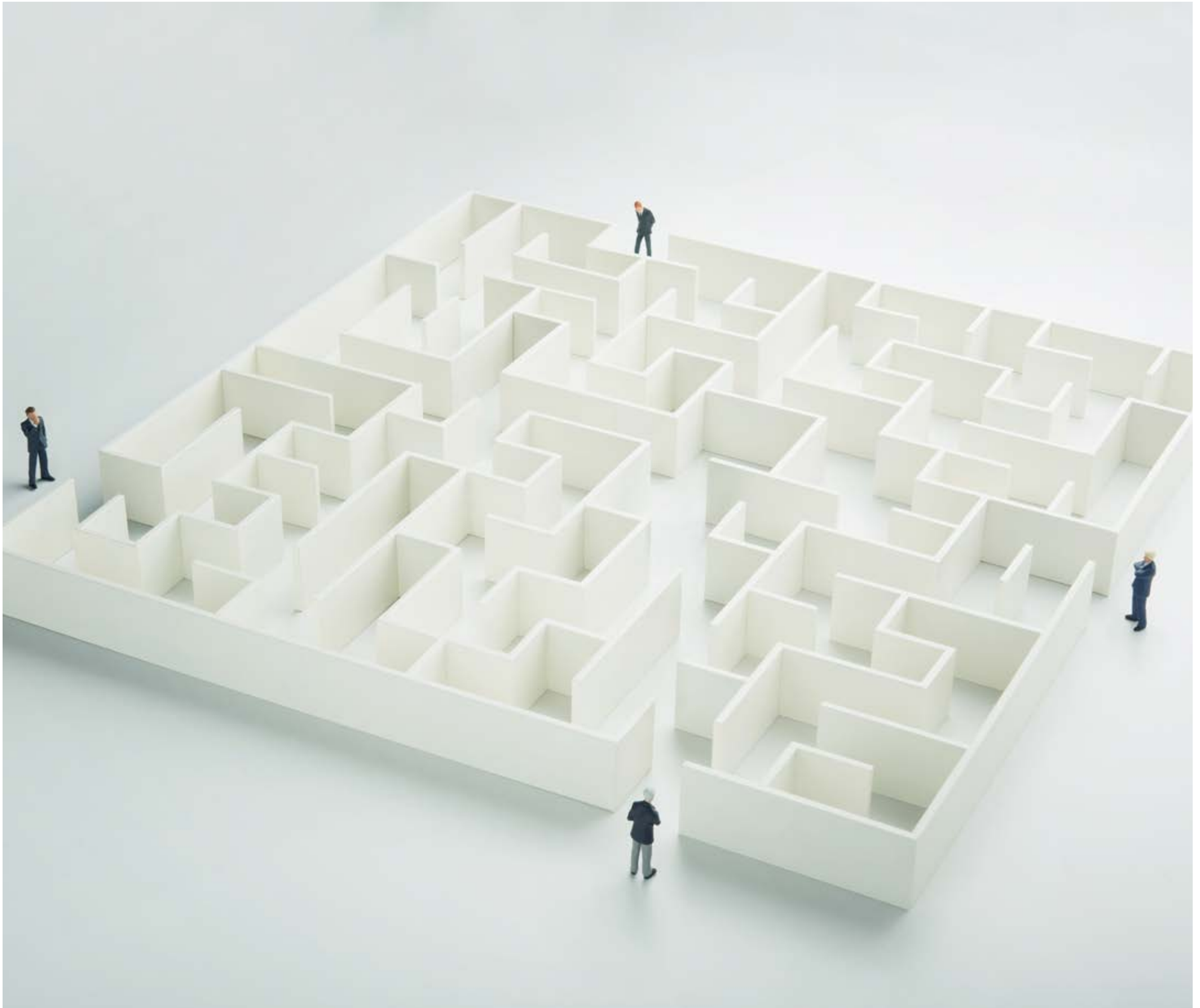
Minimising risk and future software strategy planning: Trading Apps can provide you with its experience of working with different clients. It looks at best practices across the industry with a view of the impact of changing regulatory standards, ensuring the latest software technology. Technology is constantly changing, and it is difficult to ascertain what a company will need in the future and how those needs will translate into a financial return. By selecting Trading Apps with our modular software approach, uncertainties become more predictable.

Increasing productivity: Because of all of the above benefits, your organisation will be able to lower its internal costs and focus on its core competencies. Trading Apps can help predict, prevent and quickly respond to serious business and regulatory issues, minimising both business and system failures. Moreover, you will be using the most current finance technology that enhances your success and makes you more competitive. With the Trading Apps modular software approach, you can streamline processes and make them more efficient and productive, and your traders will also be able to take advantage of rapidly changing market opportunities more quickly.

In summary, outsourcing is a natural evolution for the securities lending participant. Getting the right technology solutions in place is paramount and as market regulation continues to evolve and makes itself increasingly prevalent, the requirement for technological solutions that capitalise on existing investments through integration and automation becomes inevitable. Trading Apps offers solutions that create interaction with multiple systems and information that satisfies the regulatory requirements and removes the burden of proprietary development to enhance the business and its technical delivery and revenues. **SLT**

"High-performance financial businesses need to move to a cost-efficient, highly flexible and scalable software model"

Matthew Harrison, CEO, Trading Apps



What don't they want to know?

Rajen Sheth of Pirum examines the proposed Securities Financing Transaction Regulation reporting requirements, and expects a difficult challenge ahead

It's not often that describing something as 'onerous' could be called an understatement, but when one person used the word when describing the proposed Securities Financing Transaction Regulation (SFTR) reporting requirements, I couldn't help but think it didn't quite capture the size of the task.

Even the fact that the discussion paper on the draft technical standards, recently published by the European Securities and Markets Authority (ESMA), was exactly 187 pages long seemed ominous for any fans of American crime shows—'187' being the code used for a homicide by police.

Although that comparison may be extreme, it would be fair to say that breadth of the proposed requirements has left the market somewhat stunned, which was evident in an initial meeting that the International Securities Lending Association (ISLA) held on this topic. For those who have already made it through the discussion paper or who participated in the ISLA meeting, some of the initial requirements are already known. Every securities finance transaction (SFT) performed by an EU-based firm, or by the European branch of a non-EU firm, must be reported to a trade repository, which will in turn pass the data onto ESMA.

This on its own may sound relatively straightforward, but as always, the devil is in the detail, and if there's one thing the SFTR reporting requirement has, it's details.

First and foremost, the regulator wants both parties to an SFT to send their version of the position, and the data it receives from both sides to match. This matching is to be done using unique transaction

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identifiers (UTIs), which both sides of an SFT will need to include on their reporting to the trade repository, allowing the repositories to match the borrower and lender sides of the same trade.

As a company whose specialist subject would be matching SFTs, experience has taught us that this can be a more difficult task than many would suspect. When you start to analyse the composition of an open book between market participants, which often include multiple trades on the same security, and where both parties agree the total of the security borrowed or lent but neither party matches the other's quantities on a trade by trade basis, the challenges start to become clear.

Since much of the post-trade processing in the SFT market is based on aggregate positions, with exposure calls largely made at a counterpart rather than transaction level, we have spent many years refining one-to-many or many-to-many matching to make sure that our reconciliations accurately provide the post-trade services that our clients require.

I suspect, however, that the trade repositories or ESMA will not be similarly inclined to spend the same amount of time and effort dealing with the intricacies of the typical securities lending book. This will either lead to poor matching or push the requirement to ensure matching transactions back on to the trade originators.

To compound an already difficult task, the SFTR has gone one step further, requiring UTIs to be supplied at a principal level, as if matching at a trade level weren't challenging enough. As a result, for each market trade between a borrower and a lender trading on an undisclosed basis, ESMA wants both the borrower and the lender to provide a UTI per beneficial owner allocated to the trade.

Typically, the borrower only finds out about this breakdown overnight via the agency lending disclosure (ALD) process. Now they'll need to match the breakdown from the ALD data, generate a UTI per principal allocated to the trade and report each down with the UTI and as a separate transaction to the trade repository, all within the same day that they receive the ALD file.

That's just on the first day and before you've even thrown reallocations into the mix and stirred in the possibility that a single market trade would contain a mix of EU and non-EU entities and therefore would only be reportable in part.

Somewhat depressingly, I could quite easily write many more pages on potential issues that the current reporting proposals would pose. I would start by asking for a show of hands from everyone who already has the legal entity identifiers (LEIs) for both the central securities depository and its participants that settle their trades ready to report.

There is, however, still room for cautious optimism. Some of the requirements are hard coded into the main SFTR text—UTIs are here to stay—but the final format and detail of the reporting are still only in draft. ESMA invited the industry to respond to a grand total of 145 questions included within the discussion paper to help shape the final reporting requirement. The next consultation is due in Q3 2016.

Although responding to 145 detailed questions on a technical reporting standard may not be reason alone for optimism, in fact I imagine to many people it may be the exact opposite, it did represent an important opportunity for the industry to provide feedback and help make the final reporting requirement something that satisfies the regulator's desire for greater transparency without consuming every available IT resource in the market for the next two years.

There do seem to be potential ways to satisfy the twin demands of granular detail without completely overhauling existing infrastructure. For example, reporting each allocation on an undisclosed trade as an individual transaction, each with its own UTI, would need significant technical effort.

On the other hand, reporting the market-level trades with a single UTI and a list of quantities of each allocation with the respective LEI may be achievable. Both borrowers and lenders produce or consume this data set as part of the existing ALD process, and being able to report on this basis would still provide the regulator with the data it ultimately requires on exposures between counterparties.

The important next steps will be the industry responses to the regulators and articulating the issues the market would face with the draft reporting model, while at the same time providing viable alternatives that are both technically achievable and maintain the data points they ultimately want to see. A coordinated industry response with a consistent message will be crucial to making this a manageable reporting requirement. We'd also encourage anyone who isn't already actively looking at the reporting requirements of the SFTR to start this process sooner rather than later.

Whatever final shape the reporting takes, what is already certain is that participants will require enhancements to both their internal systems and their vendor-provided solutions to satiate the new regulatory appetite for data and transparency. **SLT**

“The SFTR requires UTIs to be supplied at a principal level, as if matching at a trade level weren't challenging enough”

Rajen Sheth, CEO , Pirum

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Going global

4sight Financial Software director Edward Cockram and consultant Jérôme Cardon make the case for a global market view of securities finance

The securities finance transaction (SFT) market, including securities lending and repo, is experiencing a rapid transformation that other, more mature, asset classes have experienced gradually—a transition to electronic markets.

Over-the-counter (OTC) by nature and strongly relationship-based because of the credit risk, SFTs have historically been conducted over the phone or via a broker.

However, several trends, natural or provoked by the recent onslaught of regulations, are driving a transition. They are:

- Regulatory and market pressures to show best execution.
- Technology advances have made the transition to electronic trading a more practical proposition.
- Centrally cleared markets allow netting benefits against a range of regulatory measures and have lower risk weights. These markets are often most easily accessed through electronic trading platforms.
- Firms can leverage centrally cleared markets accessed via electronic trading platforms to maximise operational efficiency gains from straight-through processing (STP).
- The movement towards centrally cleared electronic markets has caused a shift in liquidity to these platforms. In order to achieve best price, it is now essential to gain access to these markets.

The platforms themselves have responded to demand by broadening the product offerings and trading methods available on any given platform. For example, ICAP Brokertec has greatly increased its coverage of markets. These markets now span across most of Europe, overlapping with London Stock Exchange's MTS and Eurex's electronic solutions. A further example is EquiLend's Next Generation Trading (NGT) supporting a wider range of bidding processes in support of securities lending transactions.

This overlapping of liquidity channels increases the need to provide a coherent view on secured financing markets. A first step is the requirement to aggregate market quotes all together, in a single view.

This allows the secured financing professional to get a market-wide view on quote levels and sizes. Combined with a single real-time view of firm and client inventory, this provides a powerful tool for finding the best route to market for financing needs.

Most brokers and electronic markets provide sufficient functionality around displaying, creating and hitting/lifting of quotes. However, they are inevitably restricted to displaying the single market on which they are built.

Additionally, each of them have in-built idiosyncrasies, visibly inherited from their platform DNA. MTS, for example, is strongly influenced by its historical background in the cash bond markets, which is reflected in how the MTS market view shows pricing. Conversely, Brokertec displays its exchange-based background in the style of 'matching' incorporated into the platform.

The power of bringing the markets together in a single interface is that the user can now trade the best of all markets. This allows us to introduce the concept of the Global Market View. This is the combined market as seen in the consolidation of activity across all secured financing markets.

A view on the global market allows the secured financing professional to review inside spread as well as size, increasing visible liquidity. This has important consequences. Regulations such as the Markets in Financial Instruments Directive II in Europe require improvements around demonstrating best execution and liquidity in funding markets.

Most activity in the secured financing markets occurs early in the morning or mid-afternoon as cut-offs loom. This often leaves the secured financing professional with limited time to scour the markets to assess levels and spot trends before executing. Therefore, any tools that provide global views across markets, and that can be prepared ahead of time, can aid in achieving best execution and reducing operational risks.

To further support these aims, combining with firm and client inventory can help to reduce the market noise. It allows the rapid assessment of the global market against only the inventory positions of which the firm currently has need.

For such a solution to be valid, however, it is vital that the user can be certain the market view is current and active, especially at the height of the trading day as quotes and orders move at a furious rate.

Added to this is a need to ensure that any allocations and settlements can and will be fulfilled in a timely manner, according to market conventions. Inventory views must update in real-time to keep the professional up to date as he/she trades. This requires being able to communicate directly with the central counterparts that will increasingly back up the marketplace, fulfilling orders and settling securities and cash as required. Otherwise, it requires checking credit limits with counterparts, ensuring that the trade stays within institutional credit policies before final execution is confirmed.

Where we are now

There are a few limited options out there currently that attempt to provide this global view on secured financing markets. Some focus on introducing broker quotes and providing them to their clientele. Others provide trading systems embedded with market views, bringing the global view right on to inventory and trading screens.

These are all-powerful solutions and provide huge added value for the user. However, most solutions remain isolated by product, focused on repo, securities lending or synthetic financing markets. But the lines continue to blur between these products with market participants increasingly willing to switch products to maximise their all-in return or provide best possible pricing. This means that demand for a cross-product view on global markets will only increase with time.

While still perhaps some way off, the day will come where a trader can get a single coherent view on all markets, whether electronic, voice brokered or direct to counterparts, across all secured financing

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products. From there, they can achieve best execution and, importantly, demonstrate to clients that the firm has robust systems in place to achieve best execution.

Supporting this will also require the continued expansion of pre-trade analytics, assessing the all-in trade costs against the quoted levels prior to execution.

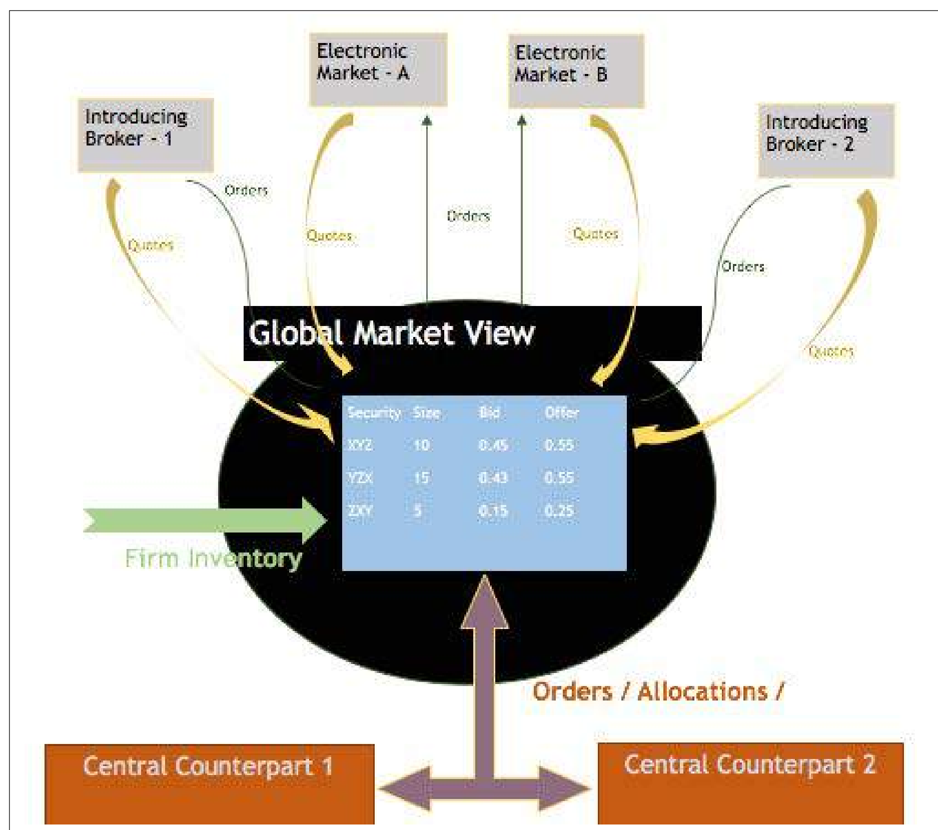
Getting there might be tough

There are several barriers to be breached before this view on the future is realised. The authors predict this will all be resolved, but it will take some time. The future of the real-time aggregated global market view is definitely a few years away.

Currently, there are few systems available that offer truly cross-product single solution software. While there is a tendency between the vendors to converge on the holistic solution, there is still some work yet to be done.

In addition, the markets themselves are evolving more rapidly than ever before. The providers of electronic markets are responding by improving their services as the underlying markets themselves adapt as a reaction to regulatory and financial pressures.

How the different models of the central counterparty of the future will look remains an unknown. As the efforts continue to find a solution that will allow both the buy and sell sides to be members of the same central counterparty, the changes required to the model could disrupt how the markets work. Technology budgets are constrained and more often than not absorbed by complying with more immediate regulatory requirements. Although most financial institutions can acknowledge the need, few have the spare budget or human capital to spend on the projects necessary to implement or build such a solution.



Many financial institutions are still at the stage of collating inventory or indeed the entire trading processes into a single space, a task that is often underestimated for its complexity and difficulty. While the benefits are typically worth the investment, it takes time to fully implement.

This is coupled with the need to improve pre- and post-trade analytics and transfer pricing to reflect the new regulatory regimes and their effects on resource pricing. While this can be developed in parallel, it often puts pressures on the very same resources required to implement a global market view.

Preparing for the future

However, just because you can't turn the key today doesn't mean we need to turn our backs on a global market view. Several important preparatory steps can be taken to make this outcome easier to achieve in the long run.

For a start, technology solutions must be product-type agnostic at their core. Even though important differences exist between different products, secured financing products share key common components that allow the professional to switch between them as required.

Systems must be able to collate firm-wide inventory. Attempts to optimise trading against partial inventory will lead to sub-optimal results.

Systems must also be able to execute trade flows from a single source. Whether using a single trading platform or providing for full integration between platforms, a global market view loses potency if execution is required to occur out of disparate platforms.

In addition, it is essential that settlement paths are organised around STP and are timely and efficient in order to meet the often tight timelines required by centrally cleared markets. Again, the global market view loses effectiveness if the user has to dissect the information into markets before execution, in order to be sure execution and settlement can occur before any deadlines.

Lastly, most institutions are still busy building out analytics and transfer pricing models that assess the effects of new regulations on firm resources. To support pre-trade analytics, these models must be able to estimate resource usage at the trade level, a simple sounding but confoundedly difficult task to complete.

To meet these needs, 4sight is releasing solutions for repo electronic markets and for EquiLend's NGT clients later in 2016. 4sight's ROQ (Repo Order and Quotation) module provides linkages to multiple electronic markets, allowing users to tailor their views, collate quotes from multiple markets into a single view and compare all of this to their inventory.

Although initially standalone from the work to support Equilend NGT, reflecting client needs that currently remain diverged by product lines, the future will surely see the two merging. With the growth of offerings, such as in the synthetic financing space with the Options Clearing Corporation in the US, equity and fixed income derivative market views will surely follow. **SLT**

ARRIVALS

Destination | Status

MiFID II | DELAYED

MiFID II: There is no avoidance in delay

As daunting as MiFID II may appear, firms still have time on their side, says Jeremy Taylor of GFT

The decision by the European Securities and Markets Authority (ESMA) to delay the Markets in Financial Instruments Directive (MiFID) II's implementation date by 12 months has undoubtedly been met with a huge sigh of relief by many firms. The revised start date provides a more realistic timescale for both the regulator and financial institutions to be ready for the regulation when it begins in January 2018. Whenever such delays are announced, there is always the natural tendency for people to believe they can relax and focus their attention on other projects while believing there will be enough time to put into place the necessary measures for the new regulation.

MiFID II is one directive where such thoughts would be fatally misguided. It is one of the biggest and most wide-ranging of all the regulatory changes to have been implemented in recent years. Firms should definitely not delay their existing plans. The additional time means that achieving compliance is now actually achievable, but only if there is no delay. Now is the time to review existing MiFID II programmes and begin to accelerate them as required. Despite uncertainty surrounding future rule amendments to the directive, this should not distract attention from the fact that there is still a huge amount of work to be completed in a relatively short space of time.

Breaking MiFID II down

If the industry thought MiFID I was big, MiFID II is 25 times bigger, covering approximately 10 million instruments.

MiFID II is aimed at supporting investors, and can be separated into three core pillars:

- Fairer, safer and more efficient markets;
- Stronger investment protection; and
- Greater transparency.

The roots of MiFID II can be traced back to its predecessor, MiFID I, which was enacted just prior to the start of the recent banking crisis. However, the scope of MiFID II far exceeds that of MiFID I, both in terms of its breadth and its depth. Unsurprisingly, much of the burden will fall upon investment banks, with the impact being felt throughout the entire organisation, from the front to the back office.

With a regulation as wide-ranging as MiFID II, it can be difficult to neatly summarise it all. We believe that breaking it into manageable chunks can help in assessing the overall impact on each individual firm. At GFT we have extrapolated 27 workstreams emerging from the directive, categorised within three key themes as follows:
Theme one: Markets venues, instruments and infrastructure.
Theme two: Trade and reference data reporting.
Theme three: Compliance and investor protection.

Taking each one of these themes in turn, we can assess the true impact of the regulation on each individual firm.

Market venues

While MiFID I addressed 'only' equity markets, MiFID II covers virtually all financial instruments, with the exception of spot foreign exchange and a small subsection of commodity derivatives.

Firms need to know the difference between the different trading facilities, from regulated markets to multilateral trading facilities, organised trading facilities (OTFs) and systematic internalisers. They must also not forget what remains in the over-the-counter markets.

Firms must then decide which business they are in and which they are not in, and more importantly, which business they would like to be in? As well as introducing a new venue in OTFs, there are tighter rules around the existing venues and updated guidelines on how they operate, and what reporting is required.

Trade and reference data reporting

MiFID II introduces changes to transaction reporting requirements. Not only are there changes in which instruments are reportable but

the scope of the data has increased significantly, with some of the required fields not even in existence yet.

Firms have already struggled with the reporting requirements of MiFID I and with the number of fields to be reported increasing from 21 to at least 65, MiFID II has already provoked much debate within the industry.

Firms will need to be more aware of who they are reporting to, as well as understanding that the MiFID II reporting mechanisms will include far greater obligations than at present.

Compliance and investor protection

The introduction of MiFID II is the first time we have seen directives that cover the responsibilities and the organisation of the individual departments within the bank.

MiFID II builds directly on MiFID I in terms of investor protection. It goes further, with deeper measures and a wider scope of products falling within its remit. Many UK Financial Conduct Authority-regulated firms will already have implemented programmes to address the requirements. However, firms will need to undertake a complete review of their processes, procedures and operating systems in this space to be sure they are compliant.

Creating an effective MiFID II programme

To effectively tackle MiFID II, firms must face the enormous challenge of structuring a programme (or programmes) of work around the three themes identified.

This is a significant challenge and given the differing sizes and structures of the various players, there is not a ‘one-size-fits-all’ approach. Every organisation will have its own specific challenges in terms of structure, technology and conflicting priorities. Typically, larger firms will adopt a matrix approach with a programme officer overseeing project teams in each function.

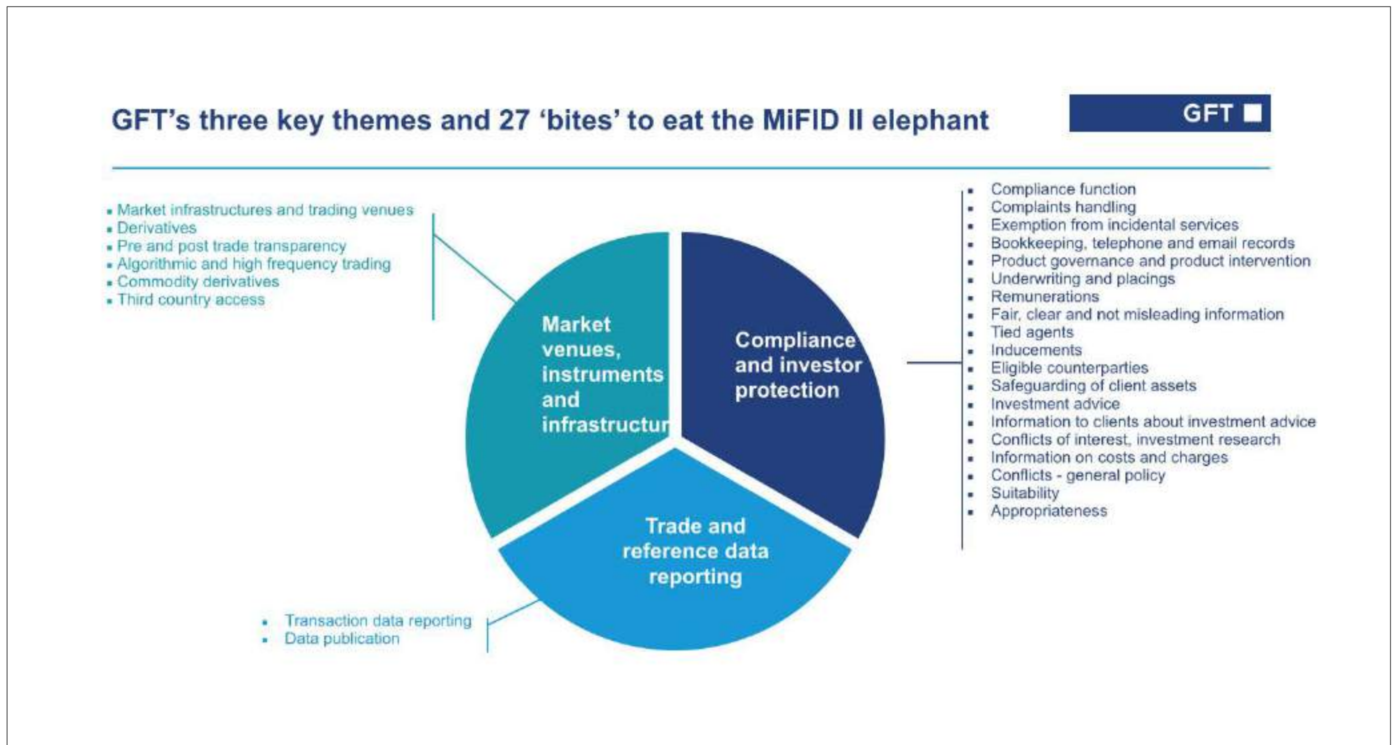
This approach is not without its pitfalls, which should be highlighted. Firstly, the directive does not necessarily lend itself to being broken down into a functional model, since it is very much a ‘front to back’ view. This in turn generates conflict in terms of ownership of delivery and compliance. Even tracking this ownership across an organisation at a macro level can be a full-time job. It is critical that this is properly thought through and is workable for the organisation in question.

An effective MiFID II programme will also require a thorough review of existing technology platforms. Many of the regulatory-driven technology changes that have taken place in recent years have been tactical in nature, a consequence of tight deadlines and unclear requirements. Firms now have an ideal opportunity to adopt a more strategic approach in dealing with the massive technology challenges presented by MiFID II.

When structuring a programme around MiFID II, firms need to think about their entire business model, from front-to-back, in terms of both organisation and architecture. Keeping track of regulatory updates is difficult enough, but overlaying these on the structure of the firm is an additional complex challenge, but one which we have already been helping firms achieve.

The GFT Regulatory Change Management Service brings together three powerful components, giving firms the ability to keep on top of their entire regulatory challenge. The regulatory document management component provides updates of any regulatory change by pulling in data from a range of data sources. The process tool uniquely links process to regulatory requirements via regulatory interpretations. The toolset then enables the automatic generation of cross-function business requirements for each regulation and asset class. The dashboard brings it all together, visualising regulatory change progress against defined milestones, utilising the inbuilt workflow engine.

Implementing a successful MiFID II regulatory programme begins with good planning and ensuring there are strong governance structures in place. Firms must avoid common mistakes made in earlier



The GFT MiFID II monitor

regulatory programmes where poor governance structures hampered proceedings and meant an over-reliance on tactical solutions. This inevitably leads to compliance standards being missed.

Firms should avoid adopting an overly federated approach towards their MiFID II programme, as what is needed is a more centralised command and control of such a huge and complex regulation.

Ultimately firms will need to find the right balance that works for their own unique circumstances and challenges. They will need to ensure that the programme delivers a robust solution that works for each individual part of the business that is affected, but which coordinates with the overall programme.

Many firms will already have a well-advanced MiFID II programme in place and will most likely have secured a budget for 2016. However, they should consider whether the appropriate and detailed planning and analysis has taken place which will give them the best opportunity to comply with the full requirements. As daunting as MiFID II may appear, firms still have time on their side, but in the immortal words of Aeschylus, the author of Greek tragedy: "There is no avoidance in delay". **SLT**

> ***Now is the time to review existing MiFID II programmes and begin to accelerate them as required***

Jeremy Taylor, Head of strategy, capital markets, GFT

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4sight Financial Software is an independent software solutions provider founded in 2003.

4sight's customer base includes a full spectrum of buy- and sell-side market participants from smaller banks and asset managers through to global broker dealers. Clients in sixteen countries on four continents use 4sight's software to meet their business needs and 4sight offers the reliability and experience of a company with a proven track record.

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Lake Success, NY 11042
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The team at Anetics (now a Broadridge company) have developed and host a suite of software tools that handily connect borrower with lender and automate the workflow associated with securities lending. Any of the functionality listed here can be deployed for your firm on-demand.

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- Track Locate requests by customer and trading counterpart with full history, audit trail, and customer authorisation to pre-borrow or pay-to-hold
- Manage all your open contracts with capability for bulk rate-change, return, recall, refinancing, and counterpart credit/risk monitoring
- Auto-borrow and auto-loan using commercial and open-standard interfaces
- Rebate/fee allocation tools allow you to distribute stock borrow/loan cost and benefit to your customer—with special handling for collateral mismatch and micro-transactions
- Link directly to your customer and trading counterparts with open-standard web-services and FIX messaging

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BondLend is a securities finance technology platform created specifically to support the fixed income borrowing, lending and repo community. BondLend's trading and financing services provide straight-through processing automation for borrowing, lending and repo using a common standards-based protocol and infrastructure processing eliminating manual processes, freeing up valuable resources.

BondLend comparison services add efficiency and reduce the risk of potential collateral management errors. Comparison services are security type agnostic and support global usage for cash and non-cash records. BondLend's trading and post-trade services help drive down unit costs and increase efficiency. It allows firms to free up resources to expand their market presence, increase trading volumes, and reduce error rates all without additional cost.

Broadridge

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Broadridge Financial Solutions is the leading provider of investor communications and technology-driven solutions for broker-dealers, banks, mutual funds and corporate issuers globally. Broadridge's investor communications, securities processing and business process outsourcing solutions help clients reduce their capital investments in operations infrastructure, allowing them to increase their focus on core business activities. With over 50 years of experience, Broadridge's infrastructure underpins proxy voting services for over 90 percent of public companies and mutual funds in North America, and processes more than $6 trillion in fixed income and equity trades per day. Broadridge employs approximately 7,400 full-time associates in 14 countries.

Broadridge Securities Finance and Collateral Management Solutions offer global, multi-asset systems designed to enable global investment banks, asset managers and service providers to optimise their regional and global collateral management, repo and securities funding operations. Used together, or as standalone solutions, traders and collateral managers have real-time access to collateral inventory positions, and can easily navigate screens and enter information for quick deal entry, collateral allocation and transaction maintenance. Advanced reporting and workflow options provide users with a streamlined approach to managing large amounts of complex data.

For more information about Broadridge and our proven securities financing and collateral management solution, please visit our website.

CloudMargin

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CloudMargin has responded to new industry trends by developing the first cloud-based collateral and margin management solution. This evolution in approach allows firms to meet their new, post crisis objectives whilst bypassing many of the shortfalls of historical software and outsourced alternatives. The CloudMargin solution is simple to implement, but embodies a functionally rich workflow management tool that facilitates the centralisation of all collateral activity irrespective of instrument or asset class in a highly automated, highly scalable, robust and risk managed environment—all within an accelerated and cost effective manner.

Comyno

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Comyno is a software and consulting firm specialising in securities finance since 2006. Working with banks, asset managers, agent lenders, CCPs and other service providers, we deliver enhanced functionality and integration along the entire process chain from trade to settlement. Our expertise combines business and technology to provide tailored solutions.

Based on our sophisticated software framework C-One, Comyno offers a range of flexible, easy to integrate solutions for the pre- and post-trade automation of your securities finance activities. Our product suite provides real-time front-to-back STP software that facilitates the interaction with third party service providers, automates manual processes, improves efficiency and helps mitigate operational risk, as well as having intelligent, highly-configurable data enrichment and linking capabilities that can be adapted in line with your business needs.

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In the constantly evolving landscape that is the securities finance industry, it is important that you have people that you can trust and rely on to ensure you reach your goals.

Are you updating a legacy or selecting and implementing a new system? Do you have business processes that require development or optimising? Regulatory change to deliver? If so, then our extensive industry knowledge and experience makes Consolo the partner of choice for all of your project and resourcing needs by working with you to deliver the results you want, your way.

Consolo is a new company whose aim is to provide a specialised business change service within securities finance. The nucleus of the company each possesses over 20 years industry experience, which enables us to offer focused solutions for all aspects of your business.

Among our specialties are agency and principal lending, including:

- Repo
- Cash and collateral management
- Operational risk
- Project management
- Regulation
- Third-party lending
- Back-office outsourcing

In-depth functional and implementation expertise of the current industry standards:

- 4Sight Financial Software
- GlobalOne
- Trading Apps
- EquiLend/BondLend/Next Generation Trading
- Pirum

OUR INNOVATION. YOUR ADVANTAGE.

DataLend

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DataLend is the securities finance data services division of EquiLend, providing the market with global data across all asset classes.

This offering extends EquiLend’s position as the standard of excellence in the securities finance industry. DataLend builds on EquiLend’s strengths in technology and benefits from its economies of scale. EquiLend, as a regulated trading platform, is a trustworthy repository for sensitive securities finance data.

Our innovative approach enables our clients to have a direct hand in shaping the evolution of the securities finance industry by producing market data that is best suited to serve the needs of industry participants.The DataLend mission is to be the leading provider of securities finance market data.

Delta Capita

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We formulate and deliver strategic business and technology change in financial services organisations. Our unique combination of advice, solutions and delivery enables us to provide an end-to-end business and technology consultancy service for financial services firms. We offer complimentary managed services in specific business areas.

We develop service propositions with emphasis on tangible value creation for clients. Our focus is on solving real business problems and 'getting things done' rather than offer pure strategic advisory or generalist execution. Senior industry practitioners lead and deliver our work.

In the securities finance space we focus on:

- Transformation in repo, equity finance, securities lending, prime and collateral management
- Inventory management enabling exposure management allowing firm-wide collateral optimisation
- Documentation maintenance and change
- Regulatory impact analysis
- Post-trade services

Elixium

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Repo and securities lending are the engine of the financial markets. However some institutions are having difficulty pricing repo and securities lending transactions because regulatory initiatives often make transactions economically unviable, leading to dysfunctional collateral markets.

Where does Elixium fit into all this?

Global peer-to-peer electronic trading venue, designed to provide a transparent and unbiased venue for trading collateral and seeks to address the growing issues around liquidity which have been affected by on-going market evolution.

- Regulated as an MTF
- Diverse range of participants including corporate treasurers, CCPs, asset managers, hedge funds, banks, government issuers, central banks, insurers, and agencies
- Designed to address the impact of regulation, balance sheet pressures and deteriorating levels of liquidity in these markets
- An efficient conduit to raise/invest cash/collateral on a secured basis to manage margin and cash-flow
- Uses standardised products (collateral baskets with a range of maturities and currencies), standardised processes and documentation
- Settlement, bilateral, triparty or CCP
- Auction, CLOB, RFQ, IOI protocols
- Collateral upgrade/downgrade

EquiLend

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EquiLend is a leading provider of trading services for the securities finance industry.

EquiLend facilitates STP by using a common standards-based protocol and infrastructure, which automates formerly manual trading processes. Used by borrowers and lenders throughout the world, the EquiLend platform allows for greater efficiency and enables firms to scale their business globally.

Using EquiLend's complete end-to-end services, including pre- and post-trade, reduces the risk of potential errors. The platform eliminates the need to maintain costly point-to-point connections while allowing firms to drive down unit costs, allowing firms to expand business, move into different markets and increase trading volumes, all without additional spend. This makes the EquiLend platform a cost-efficient choice for all institutions, regardless of size.

ENSO Financial Analytics

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ENSO Financial Analytics (ENSO), an ICAP Post Trade Risk and Information Group Company, is a market-leading portfolio finance and treasury workflow solution offering hedge funds and prime brokers the ability strengthen their counterparty relationships.

ENSO Core: A fully hosted web-based solution which provides managers access to security lending and repo financing analytics, counterparty exposure and risk metrics, wallet share, cash and collateral management, margin analysis, peer benchmarking, as well as bank commentary.

ENSO Edge: The new emerging manager offering built from the award-winning ENSO Core platform, providing scalable portfolio and finance solutions to assist the daily operational needs of a growing manager.

ENSO Color: A feature set of ENSO Core, which allows clients to consume securities lending desk flow commentary directly from prime brokers.

ENSO ROA Optimizer: An extended distribution channel within ENSO Core, allowing prime brokers to strategically advertise to clients and prospects, which connects supply and demand of post-trade collateral. Clients can easily quantify their prime brokers financing strengths by asset class, currency, and region, as well as manage their balance sheet usage and profitability.

ENSO Broker Vote: Enables client to understand their wallet, manage broker consumption, and track meetings. It aids fund investors and portfolio managers in facilitating the vote and delivering the result along with historical analysis.

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Eurex Clearing is one of the leading central counterparties globally—assuring the safety and integrity of markets while providing innovation in risk management and clearing technology.

We clear the broadest scope of products under a single framework in Europe—both listed and OTC—including derivatives, equities, bonds, secured funding and securities financing.

We at Eurex Clearing stand between the buyer and the seller, which makes us the central counterparty for all your transactions. We mitigate your counterparty risk and maximize delivery management with an industry leading risk management—to keep you clear to trade. Eurex Clearing serves more than 185 clearing members in 17 countries, managing a collateral pool of around €59 billion and processing gross risks valued at almost €17 trillion every month.

Eurex Clearing pioneers the market by offering Europe's first central clearing service for the securities lending industry. It not only supports the safety and efficiency of the market but also combines it with the flexibility of the special bilateral relationship structure.

Together with Eurex Exchange, the European Energy Exchange, Eurex Bonds and Eurex Repo, Eurex Clearing forms part of the Eurex Group.

Eurex Group is part of Deutsche Börse Group.

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FIS provides best of breed solutions for all aspect of securities finance and collateral management. We help a broad range of participants address all aspects of their securities borrowing and lending, repo, synthetic nance, and enterprise collateral and optimisation needs.

Whether you are on the supply or demand side of the securities nance business, FIS helps you maintain agile growth and run smarter operations by supporting you in:

- Increasing pro tability, improving transparency and making smarter decisions throughout the global trading day
- Expanding your business through support of a broad range of product types and markets
- Controlling operational cost and increasing the ef ciency of your business
- Managing risk and holding down the cost of collateral/capital usage
- FIS's solutions for securities nance allow you to automate your entire operation: from enterprise collateral management, collateral optimization, order routing, trading, real-time positions management, operations, accounting, settlement, trade analytics to trade automation services. Our solutions are used by more than 140 of the world's leading financial institutions, including the world's 10 largest banks.

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FIS's Astec Analytics offers the most up-to-date rate and volume information on securities lending transactions globally through intraday transactional data. It also provides analytics and benchmarking tools for trading, performance measurement and program management to global financial institutions involved in investment management and securities finance.

Astec Analytics customers are able to see on-screen streamed and analysed data for the previous 48 hours, backed up by online trend analysis of up to seven years.

Astec Analytics new Reporting Services web solution provides securities lending reports specifically designed to allow managers to evaluate their programme, quickly understand its strengths and weaknesses, and benchmark performance against accurate and relevant peer-groups.

Astec Analytics unique intraday data offering allows you to:

- Access continuously updated information on global securities throughout the trading day
- Be alerted to stocks movements and adjust strategies in real-time
- Maximise opportunities and spot securities as they become hot
- Reduce risk by predicting stocks with potential recalls or short squeezes
- Make sure supply/demand channels are available and rebates/fees represent the best execution possible

GFT

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GFT is a specialist global consulting firm focused on delivering management consulting, programme and project management, user experience design, technical strategy and implementation services for financial services firms. Headquartered in Stuttgart, we support our clients with consultants based in key locations for capital markets, including: London, New York, Toronto, Boston, Barcelona and Frankfurt. We deliver technical design, implementation and support services from our nearshore facilities in Poland, Spain, Costa Rica and Brazil.

GFT specialists provide advisory, execution and support services to the world's leading financial institutions. Our domain specialisms include: securities finance, prime services, risk management, trading, legal and compliance and operations. Our delivery specialisms include: advisory and execution services in system development, user-centric design, software development, integration, testing, on-going support and IT outsourcing.

We offer our clients end-to-end solutions that solve complex business and IT issues. Our specialists have a deep understanding of the pressures faced by financial and large-scale change programmes driven by regulatory and compliance initiatives.

Helix

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Today's challenging times, now more than ever, demand the most comprehensive and dependable Securities Finance and Balance Sheet management tools available. With the ability to provide 'the small company touch' responding to the specific requirements of each individual customer, but with the added security and resources of being backed by parent company Cantor Fitzgerald, Helix Financial Systems continues to be a leading provider of software solutions, hosting and consulting services for the buy and sell-side communities.

HelixREPO, the original standard bearer for Fixed Income Repo trading, is complimented by our HelixSL, HelixMBS, and HelixALARM modules. Used together or separately, these modules offer global multi-asset solutions for managing every requirement of a modern securities finance and collateral management desk. Solutions offered include, but are not limited to, full lifecycle contract management for both fixed income yepo and equity stock Loan, US and non-dollar collateral management, counterparty and market risk, P&L and cost of carry reporting, TBA pool allocation management, and regulatory balance sheet and capital cost reporting.

For more information about Helix Financial Systems and our solutions, please visit our website.

Lombard Risk

Lombard Risk

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Lombard Risk is a leading provider of collateral management and regulatory reporting solutions to the financial services industry. Through intelligent automation and optimisation, Lombard Risk's clients are able to improve their approach to risk management, gaining the agility they need for competitive advantage. As well as bringing immediate and urgent solutions to clients' needs, Lombard Risk's global team of experts look beyond today's reporting and collateral management to develop technology solutions that help them adapt as industry challenges evolve.

Colline is a web-based solution that supports all of your regulatory and strategic collateral management needs anywhere your business operates, across all time zones. The solution enables firms to move away from managing collateral in business silos. Colline supports multiple business lines on a single platform thus permitting more efficient collateral management, collateral optimisation and proactive management of liquidity and capital charge constraints.

At the heart of the system is a powerful, configurable enterprise inventory manager that interfaces with your existing systems. With this holistic understanding of the underlying assets, the system is then able to:

- Automatically calculate exposure and balance collateral needs
- Manage end-to-end margin call workflows
- Reconcile margin call disputes
- Calculate interest and produce fully configurable client statements
- Provide consolidated information in user-defined dashboards
- Support an array of sophisticated risk and trade analytics

Find out more at www.lombardrisk.com

Markit

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Markit provides performance benchmarking, exposure calculations and structural analysis for securities lending programmes.

The consultancy team has many years of consulting and practitioner experience in securities finance and program analysis. The team draws on the most globally comprehensive daily stock loan database available dating back to 2002. It tracks $2 trillion on loan from a pool of $15 trillion of securities in the lending programmes of over 20,000 institutional funds.

Securities finance consulting provides fully independent research and advice to institutions already active, or considering becoming active, in the securities finance market. This includes repo, securities lending and prime brokerage activities.

With a reporting infrastructure built around the unique securities finance data set, the consulting team have a proven track record in providing:

- Performance benchmarking, covering periodical securities lending performance compared against a predefined, comparable peer group
- Programme evaluation, including indemnities, exclusives, fee splits and compliance
- Exposure reports, spanning counterparties, loan/collateral matching and peer group comparisons
- Collateral reviews and spotlight surveys

Messer Financial Software

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Messer Financial Software gives you precise control and new insight into your borrowing and lending activity.

Our solution features accurate capture, reconciliation, management and reporting of all borrows and loans from pre-trade through to return. Each activity is tracked at the lowest granularity of your reporting hierarchy and our flexible workflow fits with your current operations rather than dictating them.

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Since its creation in 1986, Murex has played a key role in proposing effective technology as a catalyst for growth in capital markets, through the design and implementation of integrated trading, risk management, processing and post-trade platforms. Driven by innovation, Murex's MX.3 Front-to-Back-to-Risk platform leverages the firm's collective experience and expertise to offer an unrivalled asset class coverage and best-of-breed business solutions at every step of the financial trade lifecycle.

MX.3 for Securities Finance and Collateral Trading reinvents active trading off the enterprise asset inventory, providing funding and collateral trading desks with a real-time view of their equity and bond enterprise inventory.

Key features include:

- Comprehensive product coverage for bilateral and triparty repos with native connectivity to multiple agents, security lending borrowing and synthetic financing
- Powerful lifecycle and STP management, including corporate actions automated execution
- Advanced collateral transformation and optimisation
- Flexible compliance and concentration rules
- Full uncleared margins regulatory compliance

OCC

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OCC is the world's largest equity derivatives clearing organisation and the foundation for secure markets. Founded in 1973, OCC operates under the jurisdiction of both the US Securities and Exchange Commission (SEC) and the US Commodity Futures Trading Commission (CFTC).

OCC now provides CCP clearing and settlement services to 19 exchanges and trading platforms for options, financial futures, security futures and securities lending transactions. More information about OCC is available www.theocc.com

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Pirum provides highly innovative, functional and reliable electronic services specialising in automating post-trade processes in the equity and fixed income securities finance markets globally. With a focus on service excellence, Pirum is invariably regarded as the users' service provider of choice.

Pirum's Classic Service delivers:

- Contract compare
- Billing compare
- Billing delivery
- Daily position reporting
- Income claims

Pirum's real-time service delivers new levels of automation and straight-through processing to the industry, streamlining manually intensive and time-critical processes throughout the day and covers the following:

- Marks automation
- Exposure reconciliation
- Automated returns
- Automated payments
- Real-time contract compare and pending compare
- Automated triparty RQV processing
- CCP gateway

Stonewain Systems

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Stonewain Systems is a leading provider of software solutions for the securities finance industry. Stonewain's reputation for reliable services and innovative products remains the cornerstone of our success. Spire, our modular and scalable securities finance platform leads the industry as a comprehensive, fully integrated front-, middle-, and back-office solution that blends with the client's preferred technology choices. It supports:

- Agency lending
- Stock locates, loans and borrows
- Collateral management and optimisation
- Cash management
- Repos

We help our customers emerge above their complex business challenges and acquire a position of strength with our in-depth services offering and world class support:

- Improved risk management and control
- Reduced cost and higher operational efficiencies
- Accelerated workflows
- Faster trades
- Customised enhancements and software solution development
- Seamless Implementation and integration

Trading Apps

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Trading Apps (TA) has developed software services to the securities finance businesses of financial institutions worldwide since 2011. Within the securities finance industry, TA aim is to fill the gaps in functionality that exist with the major vendor products. We are quicker to market than proprietary-based systems with targeted applications that keep pace with the business and regulatory changes in the finance industry. By leveraging our robust application-building platform (Glass) we bring a tangible and immediate return on investment to our clients.

Our apps work in tandem with the existing client infrastructure to leverage ROI. They are relevant, contextual, and employ a consistent look and feel. The client can pick and choose which of our solutions are best suited to their business, and most importantly, employ additional apps as their business needs evolve. We target the many applications still running in Excel or legacy proprietary systems, improving security, regulatory transparency, as well as creating flexibility for the user and the back office IT team.

For more information please contact us via sales@tradingapps.com

Transcend Street Solutions

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Transcend Street Solutions provides next generation collateral and liquidity management technology solutions for fast changing capital markets industry. Transcend team thrives on solving complex business challenges and building sustainable technology solutions. Our team has decades of hands-on experience in some of the top tier wall street banks, in the areas of capital markets trading, funding, prime brokerage, clearing and operations, and a successful track record of developing and delivering enterprise-wide front- to back-office strategies for solving complex business challenges.

Team Transcend brings you CoSMOS, an innovative approach and technology that allows you to embrace the challenges of Collateral and Liquidity management with a modular, agile and scalable technology platform.

CoSMOS gives you a highly effective means of collating, harmonising, mining and analysing all dimensions of collateral information across your enterprise, without the need for expensive systems replacements.

CoSMOS core modules are:

- Agreements Insight
- Real-time Inventory/Position Management
- Margin Dashboard
- Liquidity Analytics
- Collateral Optimisation

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SECURITIES FINANCE & COLLATERAL MANAGEMENT

Proven and reliable solutions to manage and automate your entire securities finance business

A suite of managed services to help reduce the total cost of ownership of your securities finance and collateral solutions

Innovative solutions for enterprise-wide collateral management, trading and optimization

Access to global intraday securities lending market data and insightful analysis

FISGLOBAL.COM

FIS

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