# securities lending times

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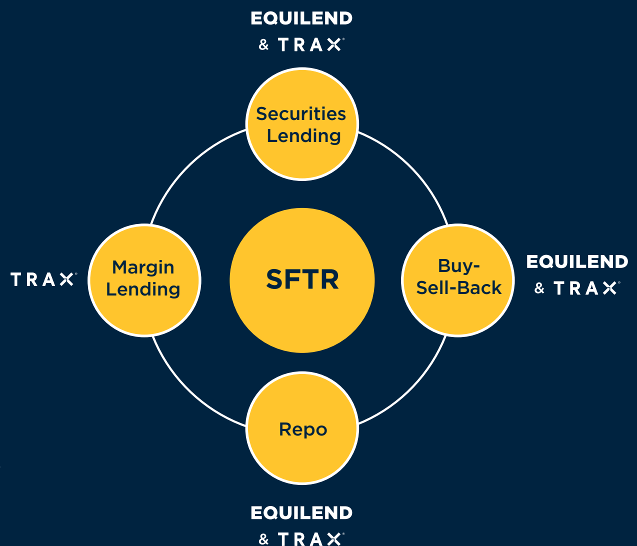


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# Not just a technology bubble

Technology in the securities finance industry is not just about becoming more efficient, but also about opening up new opportunities. The evolution of technology has allowed for firms to expand on their existing products, while new technologies such as blockchain and artificial intelligence have created new opportunities for companies to explore.

This year's Securities Lending Times Technology Annual looks at how technology is transforming the securities finance industry.

David Selwood of FIS explains why new technology might be a revolutionary change rather than a technology bubble that the wider community is shouting about. He discusses some of the possibilities that blockchain may bring to the industry.

Also, OCC's John Davidson explores why financial technology is an important part of innovation, growth and efficiency. He notes that in order to become the best, OCC will need to adapt and meet the changing needs of exchanges, clearing firms and market participants.

Like many other global businesses, the securities finance industry has been debating and discussing for a long time about how to overcome internal silos. Walter Kraushaar of Comyno explains how regulatory requirements from initiatives, such as the Securities Financing Transactions Regulation and new digital platforms, can help to break down silos in the securities finance industry.

Finally, the repo market remains a major financial market in which electronic execution is not the norm, relying heavily on phone calls, emails and instant messages. Glenn Havlicek, CEO and co-founder of GLMX, explains how automation is gathering momentum across global repo markets as both buy- and sell-side firms come to grips with the new realities of compliance.

Thank you to all our partners, whose sponsorship and help has been instrumental in putting this handbook together.

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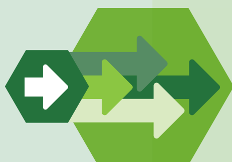

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## Deutsche Börse and HQLAX partner

Deutsche Börse and HQLAX have partnered for the creation of a securities lending solution using the R3 Corda blockchain platform.

The partnership between Deutsche Börse and HQLAX is expected to foster market adoption by enabling connectivity with HQLAX, for both trade execution and post-trade processing. Using Corda's blockchain technology, Deutsche Börse and HQLAX aim to build a fully integrated front to back operating model to facilitate more efficient collateral management of liquid assets.

According to HQLAX, these assets are in heightened demand due to the implementation of bank regulations for liquidity, mandatory clearing and margin requirements for over-the-counter (OTC) derivatives.

The trading layer will be delivered exclusively by Deutsche Börse's Eurex Repo platform, which will enable market participants to leverage existing connectivity to the Eurex repo service.

Deutsche Börse Group will also play a lead role in the custody agnostic, post-trade processing layer, which is designed to interoperate with multiple collateral agents and custodians.

HQLAX aims to help market participants redistribute collateral liquidity more efficiently, by improving interoperability for pools of securities residing in multiple, disparate settlement systems and locations.

In the HQLAX operating model, legal title transfer of baskets of securities will be achieved by the transfer of ownership of HQLAX digital collateral records (DCRs) while the underlying securities remain static within DCR-linked custody accounts.

The use of DCRs to effect transfers of securities will, according to Deutsche Börse, enhance regulatory transparency, mitigate systemic risk, reduce operational risk, and help financial institutions mobilise collateral and manage capital more efficiently.

Guido Stroemer, CEO of HQLAX, said: "Our goal is to mobilise liquidity across pools of collateral currently residing in disparate custody accounts around the globe."

He added: "Partnering with Deutsche Börse enables us to maximise the network effect that will drive widespread adoption of the HQLAX platform."

David Rutter, CEO of R3, commented: "Partnering with a market leader like Deutsche Börse is a major milestone for HQLAX, and Corda is the perfect choice of platform. It was built from the ground up to enable businesses in complex and often highly regulated markets to overcome real-world challenges like those associated with securities lending."

Philippe Seyll, executive manager at Deutsche Börse, said: "With the creation of a neutral custody agnostic control layer, Deutsche Börse is embracing distributed ledger technology and complements it with a neutral and trusted market infrastructure role open to multiple custodians and collateral agents."

## Duco launches new reconciliation solution

Data engineering technology company Duco has launched a self-service reconciliation solution, Duco Cube.

The new hybrid SaaS solution enables banks to deploy Duco's data reconciliation service on its own private or public cloud. As part of the launch, Julian Trostinsky has been hired as vice president of global services and will be taking ownership of the new solution.

As part of his new role, he will build out a larger global services division that will offer onboarding acceleration of customers' reconciliations, advice on market best practices, operation transformation and total cost of ownership reduction services in the reconciliation space. Prior to his new role, Trostinsky has served in various roles at Citi, BNY Mellon and SmartStream.

Commenting on his new role, Trostinsky said: "Hybrid SaaS means that our larger clients benefit from monthly upgrades and reap all the benefits of

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Duco's continued innovation, without having to share their data if they are not ready to, or are subject to restrictive regulations. This innovative solution avoids the 'multiple version' issue that remains a massive, if less spoken about, drag on cost and quality in the enterprise software industry."

## AcadiaSoft end-to-end launches collateral management solution

AcadiaSoft has launched CollateralManager, a solution that will provide end-to-end collateral management for all buy-side firms via the AcadiaSoft Hub.

The web-based platform provides collateral management assistance for CollateralManager, which allows firms to customise dashboards with inventory management, collateral optimisation and margin call communication capabilities, as well as over-the-counter (OTC) bilateral, OTC-cleared exchange-traded derivatives, repo and master securities forward transactions.

It can also be accessed by asset managers, hedge funds and corporates who have regulatory and operational requirements to automate their internal collateral management processes. CollateralManager allows firms to customise dashboards with inventory management, collateral optimisation and margin call communication capabilities. The inventory management capability tracks available collateral from allocation to agreed obligations.

Chris Walsh, CEO of AcadiaSoft, said: "With every global bank and nearly all regional dealers now engaged on the hub, the natural next step for us is to expand AcadiaSoft's offerings to the buy-side community."

He added: "By integrating CollateralManager with MarginSphere, we can provide a one-stop shop for the buy-side's collateral and messaging needs. Our easy-to-use cloud-based platform will help firms reduce the time and cost previously required to manage collateral and margin calculations."

Mark Demo, product director at AcadiaSoft, commented: "Collateral management can be especially time-consuming under the new margin rules for smaller side firms that have fewer internal resources. CollateralManager is a light-touch platform that gives access to both collateral management and messaging services across all agreement types. Through this platform, firms will be able to streamline the management of collateral movements and margin payments, thus eliminating the need to rely on spreadsheets and manual processes."

## Blockchain to transform collateral lending

ING Bank and Credit Suisse have carried out the first-ever live securities trade on a blockchain platform, in what ING described as a ground-breaking transaction.

The two banks successfully swapped €25 million worth of high-quality liquid assets using the collateral lending application of financial technology HQLAx on R3's Corda distributed ledger platform.

ING explained that the technology driving the transaction was developed by its blockchain/distributed ledger technology team. It said that the transaction shows how blockchain can make financial services faster, easier and more efficient. However, according to ING's Ivar Wiersma, head of wholesale banking innovation, its broader impact could be even more meaningful.

He also suggested that it is making the financial industry more efficient and resilient by creating a more transparent marketplace for exchanging digital assets.

Wiersma said: "What's really different is that it gives the regulator the opportunity to get direct access to the ledger and see the entire digital history of the transaction, from where it originated to its ownership and attributes. In the over-the-counter environment, which is traditionally not that transparent, it could make the entire financial system more resilient."

## Next step for NEX and MKP

Financial technology company NEX has expanded its agreement with MKP Capital Management (MKP), a New York-based hedge fund. NEX will provide MKP with its ENSO Core and Exposure Management capabilities, as well as triResolve Margin, its web-based portfolio

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reconciliation and collateral management service. ENSO Core's Exposure Management tool will be enriched by over-the-counter (OTC) data directly from triResolve and triResolve Margin.

NEX suggested that the combination leverages of the capabilities of two services to create a consolidated view of exposure, margin and treasury activity across PB, cleared and OTC portfolios, facilitating next-generation analytics and process efficiency.

The expanded service will enable MKP to make more informed investment decisions and realise efficiencies across the trade lifecycle.

Ken Pigaga, CEO of NEX Optimisation, said: "NEX has seen a significant uptick in the adoption of its services that help clients manage the increase in margin call volume and complexity new regulations have generated."

"The suite of services we are now providing to MKP showcases NEX's broad range of capabilities available to the buy-side looking for customised workflows to make their processes more effective in this new regulatory era."

"We look forward to bringing those critical efficiencies to MKP's treasury management function."

## Deutsche Boerse selects Regis-TR as SFTR repository

Regis-TR, a European repository services provider, has been named as the trade repository of choice for Clearstream and Eurex under Securities Financing Transactions Regulation (SFTR).

According to Regis-TR, its SFTR reporting solution will combine its experience as trade repository under the European Markets Infrastructure Regulation with Deutsche Boerse Group's Global Funding and Financing (GFF) suite of products and services.

SFTR will requires EU counterparties to report a granular data on their securities finance transaction to a registered trade repository. The regulation's requirements are expected to be confirmed by the European Commission at some point in Q2, with a predicted implementation date set for 12 months after that date.

Irene Mermigidis, managing director at Regis-TR, said: "We're delighted to be able to offer this solution. We are uniquely positioned as a trade repository with expertise in regulatory reporting, but also with a wealth of knowledge in the securities finance world through our sister companies at Clearstream and Eurex."

## Caceis introduces new capabilities to TEEPI platform

Caceis' web platform, Tailored Electronic Exchange Platform for Investors (TEEPI), now enables clients to meet new regulatory obligations linked to Packaged Retail and Insurance-based Investment Products (PRIIPs) and the second Markets in Financial Instruments Directive (MiFID II).

As part of change to follow PRIIPs and MiFID II rules, Caceis has developed two new data distribution methods within the platform.

TEEPI Live allows files to be uploaded and downloaded interactively, individually or in bulk, according to the needs of users, while TEEPI Bot performs these functions automatically and at specified frequency.

Following its establishment in 2016, TEEPI initially enabled insurers and management companies to exchange tripartite (TPT) files in connection with Solvency II.

According to Caceis, with TEEPI, financial institutions, management companies, distributors and other operators communicate with each other in a tailored and safe environment.

Joe Saliba, deputy CEO of Caceis, said: "Caceis engaged actively with financial sector working groups and regulators since the introduction of these regulatory proposals."

"Innovation is at the heart of our operations. Thanks to TEEPI and the enhancement of its functionalities our clients can meet their obligations." **SLT**

# GetConnected

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- ☑ Front and back office systems
- ☑ Data

# Evolution of technology

Pierre Brun, head of digital transformation, and Martin Caupin, head of innovation, analytics lab, at BNP Paribas explain how the evolution of technology allows for increased efficiency

***Becky Butcher reports***

**How would you describe the importance of technology within securities finance?**

**Pierre Brun:** Technology is one of the key enablers we use to improve customer and employee experience, industrialise our processes and build the services of tomorrow. BNP Paribas is leveraging our internal technological expertise along with several industry service providers to increase the scalability of our lending programmes, and provide both our clients and the market with increased levels of efficiency.

BNP Paribas has made it a priority to utilise technology across our lending platform. Technology and data applications have assisted in removing many monotonous and often low margin transactions for the front office,

resulting in increased returns for clients. Our middle and back offices have also benefited from advances in technology primarily in the reconciliation and trade settlement areas. Our ability to implement processes levering technology provides our clients with better execution, higher margins and greater transparency.

## Is new technology just about becoming more efficient or does it open new opportunities?

**Martin Caupin:** Technology provides both. Its evolution allows for more efficiency when we embed new technologies in existing processes. On this front, optical character recognition combined with deep learning networks can process documents, where there used to be operators processing information manually.

At the same time, some transformative technologies, such as blockchain or artificial intelligence (AI) will allow us to explore new opportunities, with which we aim at differentiating ourselves for the benefit of our clients.

As an example, BNP Paribas Securities Services partners with Fortia Financial Solutions, a software company which uses AI, machine learning and business process monitoring to help fund clients meet their rising compliance and data management requirements. It brings internal efficiency as the machine scrubs documents (for instance prospectuses) and provides tools to monitor the content instead of a human going through the file manually.

It is also an opportunity for BNP Paribas as we engage and partner with financial technology and regulation technology firms to enhance our customer experiences by providing additional services. Synergies were quickly spotted, and the bank acquired an equity stake in Fortia Financial Solutions.

## Three areas of focus for you right now are artificial intelligence, smart data and blockchain, what can you share with us about these areas?

**Brun:** Our smart data programme is the key milestone in our digital transformation success. It will help us make the most of the data we hold to implement intelligent services for our clients but also to enhance internal operations.

On AI, we foresee natural language processing capabilities as a key enabler for additional efficiencies in the banking industry. Given that banks deal with large sets of unstructured data, from client communications to contracts or news, our ability to extract and structure this information could generate significant improvements in our processes, as well as new insights to create business ideas.

BNP Paribas utilises natural language processing applications in various ways to increase the efficiency of lending. The team has developed a front-office trading layer to confirm broker locates and execute in real time. The ability of the technology to cross-reference the email locates against the existing static data requirements like credit limits, drastically increases the efficiency of lending. The automation of such developments have enhanced the client experience, increased profitability, and have provided greater capacity for the front office to engage in higher margin transactions. The team will continue to enhance the front office trading layer over the next several quarters all with the notion of leveraging the current functionality.

**Caupin:** Regarding blockchain, several projects already run across the bank as we try to harness the technology. Its core characteristic—safe record management in a distributed ledger—makes it attractive for different companies to work together in a trusted environment. BNP Paribas took an early first mover approach towards blockchain, as we thought of potential applications in banking. In December 2016, we completed our first instant, cross-border blockchain payment as part of our ‘cash without borders concept. The cash movements settled in just a few minutes across three European countries. We deployed a private blockchain in our own treasury group and integrated it with our legacy technology. We found meaningful operational efficiencies such as a better ability to manage cash across different international businesses.

## How will these deliver client benefit?

**Caupin:** As we extend our service offering with technology, our clients will directly benefit from it. Blockchain records and transfers data in a transparent safe and auditable environment, which is ultimately what our clients are seeking for. As we embrace the technology, our clients will

ultimately benefit from it as we increase our efficiency. We believe blockchain will be widely adopted, so we are thinking about what services will make us unique. As more and more participants use this technology, players will move toward standardisation of protocols for exchanging information, and we foresee this standardisation to play a great role in efficiency, transparency and accessibility of data, both internally and externally when working within the network or with regulators. Thanks to our smart data programme we expect to provide insights to our clients based on the information, we process for them or elsewhere on the market.

**Brun:** Our clients also expect an improved experience. Tech companies were the first to understand that trend and invested a lot in user experience to increase their usage. This trend is spreading to all services, from customers to businesses. Aside from market coverage and capabilities, this user experience, across the platform, will be a differentiator in the market. Securities services detected that trend early and had a dedicated team focusing on client digital experience. Their role is to work with clients (in co-creation mode) to enhance and provide new services through our portal. As an example, Neolink, BNP Paribas Securities Services' client main portal is now becoming a instant trade monitoring tool delivering customisable data.

## How has the involvement of Tata Consultancy Group and the partnership has helped?

**Brun:** TCS is a long-time partner of BNP Paribas Securities Services. We decided to step up this partnership last year by co-creating on a blockchain project to enhance corporate actions processing, one of the most complex areas in the asset servicing value chain. Indeed, the presence of many intermediaries in the dissemination of corporate actions results in delayed information, tampering, task duplication and heterogeneous message structure at an international level. Our objective is to eliminate these difficulties by using blockchain to integrate information seamlessly across our portals.

Data acquired from official sources on over 90 markets will be stored resiliently in a distributed infrastructure and disseminated instantaneously through new channels, application programming interface or Node. This initiative is a perfect example of our willingness to move forward and to build momentum over time.

## BNP Paribas estimates that 70 percent of its market volume is now conducted on electronic marketplaces, how far will this trend go and why?

**Caupin:** Indeed, the securities market has moved quickly to an electronic marketplace with minimum human intervention. The trend is upward, as we try to include more products in our electronic platform. This allows for standardisation and lowered margin as well as quicker execution for our clients. We don't expect it to reach as high as 90 percent, as there will be trades requiring human intelligence to sort through. The limit will be defined by our clients in need of bespoke services.

As the securities finance market becomes more complex and as our client base becomes more sophisticated, manual intervention will continue to play an essential role in maximising client revenues.

The lending of 'specials' or hard-to-borrow securities, special situation or corporate action events like SCRIPS/ Dividend Reinvestment Plans (DRIPS) and transactions linked to collateral transformation will still involve manual intervention. Further, offering clients bespoke and customised lending programmes will also command increased levels of manual involvement. Certainly, technology will assist in the execution and trade maintenance of these transactions, but the expertise of market professionals will still be required.

## How do you see the human intervention in the market changing?

**Brun:** Thanks to AI and robotic process automation, our employees will have more time to dedicate to value-added tasks and work requiring expertise and creativity. As well as automating time–consuming and repetitive tasks, we are also looking at how AI can help us generate client reports automatically with recommendations for actions to take. Armed with this information, our sales team can then focus on value-added tasks such as relationship building. **SLT**

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# Drive for change

Laura Allen of Trading Apps explores the uncertainty around AI and robotics reshaping the securities finance industry

At a recent securities finance conference the audience was encouraged to anticipate and embrace change. Several of the sessions implied that artificial intelligence (AI) and robotics will reshape the financing market and drive change. This is a massive claim considering the global securities lending market continues to be a predominately fractured marketplace where many transactions continue to happen the old fashioned way via email, Bloomberg, instant message and the telephone.

From our vantage point it does appear that a great deal of automation has been established within the operational function of the business, such as contract compare and mark to market. Up until recently, a lot less emphasis has been placed on driving automation in the front office. Given the significant rise in multilateral trading facilities (MTFs), the ability to seamlessly connect and auto-trade is becoming increasingly critical.

Over the past 18 months, Trading Apps has experienced a dramatic rise in the number of broker dealer and retail broker clients looking for trade automation and efficiency. Two key areas of interest included introducing technologies to support trade automation via various vehicles, and devising a more efficient and automated process with regards to managing firm wide inventory.

The first ask was solved by the Trading Apps Gateway, which serves as a digital highway between a securities lending business and the various MTFs. The gateway allows the user to:

- Provide real time availability (with rates) throughout the day
- Send or dynamically respond to borrow requests
- Provide or access liquidity
- Demonstrate best execution
- Significantly increase trading volumes

The second ask, which was to create functionality to manage firm-wide inventory, was tougher. For broker dealers the focus is on return-on-equity, increasing profits and reducing capital consumption. To achieve this, borrowers require technology and tools to centralise inventory.

As with many of our clients and prospects, the process by which this is done today is disjointed, manual, and loaded with inefficiencies. The first task was to provide a platform that can interact with multiple legacy systems to create a centralised view of inventory, from here you can begin to build the tools required to efficiently deploy it.

The goal for most of our broker dealer clients is to manage their firm inventory as efficiently as possible. For many this means covering their shorts with internal longs and distributing the excess inventory in the most efficient and optimal way. Unfortunately, for many, this has been quite a manual and laborious process that takes time and interferes with the higher margin trading activities that the desk ultimately wants to exert time and effort on. The Trading Apps Cross Book Flattener, and its series of related apps is specifically designed to inject automation into a process where it previously did not exist.

The app uses real time data from Trading Apps Inventory Management App or your firm's inventory management system to determine which books are long or short and it books internal trades according to your internal account hierarchy, with the capability to include/exclude specific books to effect optimal netting. The user can determine the pricing structure to be applied with the ability for the securities finance desk to apply costs, and take a spread across non-related books. And of course, once the app is configured and the trading hierarchies are set, all of this netting will happen automatically and before the trader arrives.

Once the internal netting is complete, the remaining short positions are then automatically fired out to the street and covered through your normal liquidity channels. Any excess longs can be auto returned based upon configurable rules sets and pre-determined hierarchies.

What you're left with are the sensitive names and higher margin trades that require the expertise and hand holding of a professional.

At Trading Apps we anticipate, embrace and drive change working with our clients and other vendors to create automation. Will AI and robotics re-shape the securities finance market? I'm not sure, but I know that investment in technology will continue to grow as participants look to fulfill prudential liquidity management, regulatory compliance and profitability. **SLT**

# Time for change

With financial technology being an important part of innovation, John Davidson, president and chief operating officer of OCC, discusses the firm's technology upgrade

Financial technology is an important part of innovation, growth and efficiency for the US exchange-listed equity options industry. If OCC, the world's largest equity derivatives clearing organisation, is to become the 'gold standard' for central counterparty (CCP) clearing services, we must continue to adapt to meet the ever-changing needs of our exchanges, clearing firms, and market participants.

Technology is enabling us to accomplish our strategic goals and initiatives more efficiently and less expensively, with a higher degree of security than we

have had in the past. This is critical to our mission if we are to reduce systemic risks, increase transparency, and provide capital and collateral efficiencies to the users of our markets. This includes a much stronger focus on enhancing our cyber resiliency and cyber security.

While cybersecurity has always been a vital part of OCC's technology roadmap, today's global cyber ecosystem dictates that we increase our endeavors to safeguard the integrity of cleared markets. To address this extremely complex objective, in 2017, we created a new position dedicated to delivering an ambitious and long-term cyber security vision for OCC. We named Mark Morrison, formerly with State Street Corporation and several US government defense and security agencies, as chief security officer. Morrison's 35 years of experience and leadership has helped our organisation integrate information security best practices into our service offerings while lowering systemic risks. Thanks to the dedicated focus of Morrison and his team, OCC has made significant strides in our cyber security environment on an accelerated pace and we will to continue to invest in this area in 2018.

We are also investing in a significant effort to build or buy the next generation of clearing technology at OCC, and this is our biggest strategic priority. Around 25 years ago, most CCP clearing organisations like OCC were building their own proprietary technology. Today, with such technology becoming more widely available than ever before, there are a variety of different providers of that technology where a lot of that functionality has become more commoditised.

Presently, we use a proprietarily developed platform called Encore, which after 20 years is reaching the end of its useful life. The system has performed admirably over the last two decades as it has scaled up to handle increases in options volume and new products. It is incredibly stable and still manages our processes on a daily basis and well within the service level agreements we have set with our clearing firms. However, it became a more complex and expensive system to operate.

While there have been many upgrades to Encore, it is time to build a new platform. We have initiated the process to evaluate options for replacing Encore and the related infrastructure with a modularised system that will use an OCC-specific data model and warehouse.

While we are in the early stages, we are contemplating greater use of cloud technologies as they will offer us more efficiency, lower cost, and enhanced security. We expect that when this project is completed, the new system will be cloud-based and far more modular so it can work with our system for theoretical analysis, and numerical simulations margining system and the 36 components within it. It will deliver a more nimble and self-controlled system that will provide our exchanges and clearing firms with additional capabilities.

Aside from operational efficiency, another objective of our technology upgrade is to free up our development time so that we are in a better position to bring to market the new products we are being asked for by our exchanges, clearing firms and market participants. Having a strong technology platform allows OCC to support the strategic plans of our exchanges by providing high-quality clearing and risk management services.

A good case in point is our stock loan business, which grew 22 percent last year and is up 34 percent through February. As the only US CCP for securities lending transactions where return of stock or cash to bilateral and exchange-traded securities lending participants is guaranteed, OCC already has a foothold in the securities lending market with nearly $88 billion in loans being cleared, which includes a nearly seven percent increase in February. This year marks 25 years after the launch of our clearing programme, but access has been limited. Currently, we are working on expanding our model to better accommodate the buy-side through various enhancements, and we are very much looking forward to expanding our footprint and service to the securities lending market.

All of our work on enhancing our technology will help OCC as we address a number of regulatory challenges in our role as a systemically important financial market utility. I am confident that we will be able to successfully move OCC into the next generation of clearing technology so that we will be well positioned as a CCP, and deliver on our promise to be the 'gold standard' for CCP clearing services everywhere in the world. **SLT**

# A new approach

## Walter Kraushaar, head of advisory services at Comyno, explains how regulatory requirements and new digital platforms can help to break down silos in the securities finance industry

Like many other global businesses, the securities finance industry has been debating and discussing for a long time about how to overcome internal silos. Silos can occur in global corporations or start-up ventures with as little as 10 employees. Regardless of the size, silos are counterproductive to an organisation's need to succeed in a rapidly changing world.

It's also important to realise that silos can be vertical or horizontal. Business units divided, for example, into asset classes can lead to high barriers between them or senior leadership and can be completely isolated from lower management levels. As a result, an organisation split into silos cannot react quickly to upcoming opportunities that arise in a fast-paced digitalised business landscape, which makes it difficult to execute productive decisions about how to change in order to seize these new opportunities.

In general, silos cut off communication between different business/product/asset class units. Silos create an extremely high loyalty to the immediate unit, which at the same time prevents building trust outside of one's own silo hindering other business initiatives within the firm, which might negatively affect one's own business line but would benefit the global organisation. As a result the silos become inwardly focused on maintaining the internal status quo thus losing contact with the 'outside world', resulting in missed opportunities and new market developments.

Silos make it extremely difficult for a company to comply with the increased regulatory reporting requirements. After the global financial crisis, the Financial Stability Board, the European System of Financial Supervision and the European Commission started various initiatives with the aim of looking at measures to generally improve the transparency and monitoring of non-bank alternative credit provision (or shadow banking), aside from the general new capital related banking regulations like liquidity coverage ratio (LCR), net stable funding ratio business (NSFR), the second Markets in Financial Instruments Directive (MiFID II).

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In an EU context, this has resulted for the securities finance industry in the regulation on transparency of securities financing transactions, and of reuse of collateral with Securities Financing Transactions Regulation (SFTR), which came into force on 12 January 2016.

The above mentioned requirements are meant to create transparency for the regulators as well as automatically create transparency for the securities finance firms themselves. The new regulations help unintentionally to overcome the established silos as they have to be performed across asset classes, products, business and reporting lines.

SFTR will help any company to 'merge' their own product silos through integrated reporting disregarding the current silos. In other words, for the first time, regulatory reporting requirements will push any securities finance business to integrate which will, in turn, reveal new opportunities of allocating and optimising the firm's collateral and assets thus creating new business opportunities and a new way of monitoring and managing risks and capital.

As a further result the European Securities and Markets Authority is required to produce regulatory technical standards and implementing technical standards for the securities finance business, which requires also a new approach towards digitalisation and securities finance information technology.

The SFTR aims to enhance transparency and enable regulators to better monitor risks by:

- Introducing reporting requirements for securities financing transactions (SFTs)—similar to those already applicable to derivatives transactions under the European Market Infrastructure Regulation
- Introducing limitations on the reuse of collateral (not just in the securities financing markets but also in the wider collateral markets—thus, the application of these limitations is wider in scope than to just SFTs)
- Also Article 4 of the SFTR sets out the transaction reporting and record keeping requirements. For example, the conclusion, modification or termination of an SFT must be reported to a trade repository, which is in accordance with the SFTR

Comyno has taken a new approach on how to collect, display and merge the required information and has developed a platform-based environment, which can be used and connected via various adaptors (interfaces) to almost any given securities finance infrastructure.

While banks, their counterparties, trading venues, collateral services providers, central counterparties (CCPs), asset servicing providers, depositories and even TR's are all working on isolated IT systems with mostly proprietary interfaces, huge budgets are necessary to make straight-through processing (STP) happen with internal software developments while strengthening the silos at the same time.

Without automating the whole transaction chain, both on trading as well as on the collateral side, it's hardly possible to make profit anymore while at the same time being obedient to the regulators.

Comyno's C-One suite solves exactly those issues, by providing out-of-the-box but configurable connectivity to the securities finance market players combined with covering repo, securities borrowing and lending, derivatives and collateral trade flows to fully automate a modern securities finance desk including regulatory reporting out of one hand.

It also 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.

With the help of this platform, we are able to provide customised reporting and inventory management for securities finance market participants across all asset classes and connect them to various CCP's, agent lenders, tri-party agents as well as asset managers.

It is fair to say, that the urge to overcome the old silos in the securities finance business, driven by regulatory changes, can turn into a long-term benefit to an organisation if it sees it as an opportunity to digitalise the business and uses the new technics and platforms to revamp their digital strategy. **SLT**

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# A journey of a thousand miles

## As automation gathers momentum across repo markets, Glenn Havlicek, co-founder and CEO of GLMX, explains how firms are dealing with regulatory compliance, while tackling increasing costs

The business of securities financing has grown from a back-office utility to a consistent and often top profit centre for many investment firms. Although the profile of repo has grown dramatically from its humble beginnings and especially since the financial crisis, the importance of the activity to the smooth functioning of the broader capital markets cannot be understated. Repo's utility spans central bank operations, fosters hedging activity, promotes price discovery and enables continuous liquidity in an array of markets. Individual institutions rely on their financing activities to 'keep the lights on' in both their equity and bond businesses. Repos and reverse-repos are at the very core of the financial markets' plumbing. They underpin government bond trading, provide a critical source of short-term funding, enable a smooth management of liquidity and collateral and help settle trades and satisfy margin calls. In the near future, repo will provide the reliable replacement for London Interbank Offered Rate (LIBOR).

This favourable perception of the repo markets has not always been the case. Market volatility in 2008, during the early stages of the financial crisis, led to finger-pointing in the direction of the repo markets. In certain circles, repo became part of the problem as it was perceived to have accentuated market turmoil when trust evaporated and participants became concerned about counterparty reliability and repayment capacity.

With hindsight, that conception of the repo markets seems flawed. In fact, at a recent European Repo and Collateral Council (ERCC) meeting, one panelist claimed that, "in retrospect, the repo market was more savior than demon". The problem was not the repo market itself but, in a non-trivial way, the antiquated communication and reporting mechanisms surrounding the repo markets. Much of the global regulatory effort since the Financial Crisis has focused on promoting improved information flow in the securities financing markets.

One could argue that not much of that intended evolution has been apparent in the 10 years since 2008, however, that is about to change.

### Build bridges, not walls

Historically, investment in repo-specific technology has focused on collateral management and trade clearing. Investment in trade execution and reporting technologies has lagged notably. In fact, the repo market remains as perhaps the very last major financial market in which electronic execution is not the norm. The current process for locating cash and securities still relies heavily on phone calls, emails and instant messages. This time-consuming discovery process is often followed by the generation of manual trade tickets and, in some cases, the 'double-keying' of trades into trade management systems. 'Workarounds' and 'band-aids', as they are often described, have been developed over the years to reduce some of this arduous and error-prone manual workflow. In most cases, spreadsheet macros and bulk uploading are the extent of the modernisation of these essential workflows.

These patches are simple solutions that still rely on manual intervention, more often than not by a broker-dealer, and they sometimes lead to trade input errors. Incorrect trade details can lead to fails, exposure to market fluctuation due to poor position management, and wasted time cancelling and correcting trades. Processing mistakes are expensive.

To those outside the financing business, this is an outdated process. Counterparties in other sectors of the fixed income business have been streamlining execution protocols for decades. Electronic trading platforms with post-trade straight-through-processing capability are commonplace in global sovereign debt and derivatives trading, while some 20 percent of corporate bond trades occur electronically.

Recently, reporting pressures stemming from the second Markets in Financial Instruments Directive (MiFID II) and the Securities Financing Transactions Regulation (SFTR) in Europe have raised both the stakes and the urgency for change. Pre- and post-trade reporting requirements render existing manual processes virtually unusable. In fact, the pending implementation of SFTR may signal the tipping point in the transition to electronic trading in the securities financing markets.

Automation is gathering momentum across global repo markets as both buy- and sell-side firms come to grips with the new realities of compliance with more invasive regulatory regimes, while also tackling increasing costs and ever-rising customer expectations.

Additionally, changing dynamics within global repo markets, including broadened counterparty engagement and cleared financing alternatives, adds pressure for single-stop technologies, which provides access to multiple execution mechanisms.

Finally, in today's data-driven world, ready access to business intelligence otherwise hidden within a firm's own data can enable better-informed decision-making and improved profitability.

While there is a growing understanding of the value of global financing to the smooth functioning of broader financial markets, there remain challenges to broad adoption of execution technology in this vast ecosystem.

These observations were the genesis of GLMX, where our mission has been to bring a streamlined and data-rich solution to the otherwise tech-deprived repo markets. While GLMX has already made significant inroads to that end, we are but a part of the overall transition taking place in repo markets, which will ultimately lead to a level of efficiency on par, or even beyond, that can be found in other financial markets.

## A journey of a thousand miles

During the initial development of our own repo execution technology at GLMX, it was imperative that we dedicated some time to hear what market participants were looking for as this age of automation unfolded.

Few would deny that operating in the repo markets has become much more challenging in recent years. And, while the overall size and daily trading volumes in global securities financing markets may inspire envy, efforts to apply technology tailored to the rapid and complex flow of these markets have been stubbornly resisted.

This resistance is not without understandable rationale. Both the buy and sell sides have long, and rightly so, valued their personal relationships with each other. The symbiosis, which has ensued has benefitted all markets participants. Candidly, much of the trepidation in transitioning into the age of repo financial technology derives from the desire to maintain these close and unquestionably valuable relationships.

However, much like the flawed perception of repo markets during the financial crisis, repo execution technology, in practice, holds the promise of providing greater opportunity for relationship building by freeing up valuable time otherwise spent on unnecessarily manual processes.

In other words, as global interest rates have begun to rise and brought with them increased volatility, it is a lot easier to have a conversation about your counterparty's needs in a fast-moving market if you're not keying trade details into a spreadsheet.

Finally, if the repo market is to fulfill its potential as both the vital provider of short-term funding and liquidity, plus the trusted replacement for LIBOR, including the Secured Overnight Funding Rate, few will argue that change is not urgently required.

At GLMX, we're hoping to play a key role in that exciting, evolutionary change. **SLT**

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# A costly choice

## Martin Walker of Broadridge explains that only the right system today can give you the foundation for tomorrow's trading environment

There is a point in the life of any core system in capital markets where the continuing dependence on it starts to make IT users and senior management uneasy. This can be for a variety of well justified reasons. It may be built on top of other technologies that are no longer supported. It is very likely that few, if any, of the staff

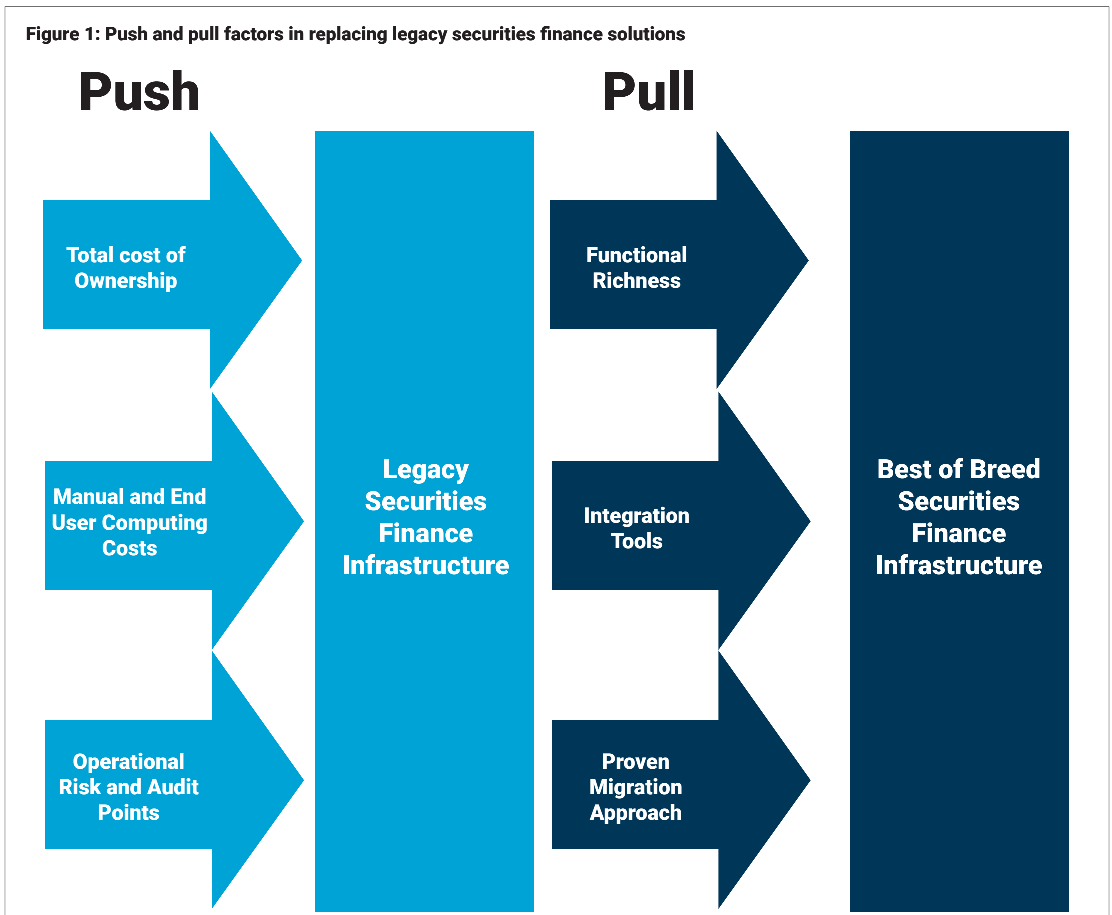
from the original implementation remain. This can cause significant problems if there is a need to explain the workings of more complicated parts of the system, let alone fix more difficult problems.

An aging system is also likely to have acquired a series of audit points and have other high profile issues, related to information security or supportability. Perhaps worst of all, they typically lack the flexibility to deal with new requirements, and may be harder to integrate into new infrastructure. As regulatory changes hit securities finance, such as the Securities Financing Transaction Regulation (SFTR), the last thing any business or IT department wants are systems that cannot be adapted in a timely manner.

In spite of the very strong reasons to upgrade to more contemporary and functionally rich system, there can be a great deal of organisational inertia. Changing a core system, particular securities finance solutions that are connected to multiple front and back office systems, are often viewed as an expensive process. On the other side of the benefits case, it is likely that the running costs of the core legacy securities finance system would appear to be low, with the investment cost fully amortised. There are also perceived risks involved in replacing any system that has grown to be a fundamental part of a firm's capital markets infrastructure.

While consideration of the risks and costs is a key part of building any business case, it is not the full story. On the cost, it is necessary to establish the total cost of ownership of the legacy system. With legacy securities finance systems, it is very common for them to develop a rich 'crusting' of additional systems and components,

**Figure 1: Push and pull factors in replacing legacy securities finance solutions**



put in place to supplement its functionality. The cost of maintaining and supporting those supplemental systems is typically several multiples of the cost of the legacy 'workhorse' in the middle. The current trend for simplifying system infrastructure is based on the justified belief that supporting a complex web of interconnected systems results in higher costs.

Further costs from legacy infrastructure can be found in the manual processes, and end user workload required to fill the gaps and deal with any errors resulting from poor connectivity or hard to solve issues. The proliferation of access databases, spreadsheets and manual processing can apply equally strongly in both the front and back office. In the worst cases, the legacy system many not even be a specialist securities finance system, thus generating a greater proliferation of manual processes and spreadsheet based work-arounds.

Looking further ahead, the last thing business or IT want is to add additional functionality and components on top of an already fragile ecosystem to deal with the need for regulatory compliance and enhanced control.

The push to put in place new systems is clearly much stronger if you consider all of the relevant factors but how strong is the pull? The right modern system can provide the functionality and the implementation tools to both maximise value and minimise the cost and risk in implementation. The first thing to look for is a set of functionality that can replace both the core legacy system, and all of the ancillary systems that have built up around it over time. It is even better if the chosen system provides functionality to support multiple regions, multiple product types and multiple phases of the trade lifecycle. This allows an even higher degree of simplification and cost savings.

Almost as important as a rich set of functionality are the tools to aid integration. The days when every interface between a securities finance system and risk, operations, reference data, compliance, finance and other front office systems was hand crafted should be long over. A credible replacement system needs to come with a configurable integration layer that reduces both the costs and risks of system integration. The final way to drive out project risk and significantly reduce project risks is to make sure your new systems vendor has performed similar data migrations in the past.

In spite of tight IT budgets, it is clearly possible to build the business case for improving your securities finance infrastructure if approached in the right way. However, the most fundamental reasons for implementing a more flexible and more functional system related with the past or present. To survive in a future where competition for revenues grows stronger, while regulation may grow more onerous, requires a solid system foundation. Technologies such as artificial intelligence or even algorithmic trading, are in their infancy in most areas of securities finance. However, both have a fundamental reliance on good quality data that is easy to access and process. Only the right system today can give you the foundation for tomorrow's trading environment. **SLT**

***To survive in a future where competition for revenues grows stronger, while regulation may grow more onerous, requires a solid system foundation***

**Martin Walker**
Head of product management for securities finance and collateral management
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# Key to success

## According to Pierre Khemdoudi of IHS Markit, the key to successful deployment of technology is investment, both in capital costs and workforce

The technology needs of the securities lending industry has evolved significantly and staying at the forefront whilst remaining cost conscious is a challenge. At IHS Markit, we've found that by partnering with industry participants on varying project scales, we're able to focus on value-add services, which evolve with client needs. In our securities finance franchise, we are able to leverage the technology investments made across our enterprise—including resources for blockchain, machine learning and artificial intelligence—and combine them

with knowledge of the industry specific needs of the global securities lending business.

The key to successful deployment of technology is investment, both in capital costs and workforce. Given the pressures on all firms to efficiently allocate human and financial capital, it's essential that these investments be targeted. We have found that the best way to address industry needs is to establish a group of client design partners, which allows everyone to defray development costs, with a trusted vendor managing the process. For buyers of technology at global financial firms, this approach lowers the risk associated with development projects, while retaining control over project requirements. This type of thinking is exemplified in our know your third party (KY3P) and commission manager solutions, which were developed with design partners, and have seen significant client adoption.

A key area of investment for IHS Markit is regulatory reporting and the required technology infrastructure. We worked with the industry to prepare for the second Markets in Financial Instruments Directive (MiFID II), and were proud of the successful roll-out of that effort earlier this year. The need for regulatory solutions provides an opportunity for vendors to centralise costs and develop effective solutions, which work together rather than in a silo.

## SFTR

The Securities Financing Transactions Reporting (SFTR) project is a perfect example of the design partner framework being applied to a regulatory solution. We invested early to architect the plan for a solution and formed a strategic partnership with Pirum. We approached industry participants and built a group of design partners whose input was critical up front, and whose feedback allows us to design for deployment ahead of next year's deadline.

The broad nature of the requirements and large number of required fields—along with the consideration that within a single entity there will be multiple data reporting lines—meant a potentially costly implementation for firms and an uncertainty regarding trade matching at the repositories, with the potential disparities from different reporting mechanisms. In the regulation, we saw an opportunity to cut through the complexity and deliver a modular end-to-end solution for the market.

Given the particular requirements of SFTR, we entered into a strategic partnership with Pirum, who have 18 years of experience in matching and reconciling securities finance data through contract and billing compare services.

With our expertise in securities finance data, along with specialised knowledge regarding connection to trade repositories from the MarkitSERV loan processing business, we have been able to assemble best-in-class techniques toward the goal of a future-proof solution. The unique skill sets from IHS Markit and Pirum are merged into the SFTR design, and have given us an advantage in the management of participant legal entity identifier (LEI) codes as well as the creation and matching of unique transaction identifier (UTIs).

One critical aspect of the SFTR project is the need for massive scalability. The advantage of a diverse set of design partners is immense, allowing us to build the solution with confidence that it will deliver for individual client needs, as well as the total potential scale of reporting across the industry. A forward-looking approach that is built to scale is important when dealing with large datasets, and the combined reporting of all European securities financing transactions will certainly be that.

Another aspect of the project worth noting is the need for interoperability, ensuring our solution works efficiently with other vendor solutions. This highlights the importance of the vendor ecosystem thinking constructively about where it can add value, while taking cues from clients on their preferred mix of vendor solutions, which often complement solutions developed in-house. One tool toward that end is to carefully process mapping client workflows to gain a deep understanding of where the solution fits in and what the real requirements are.

## New technology

Going forward, we see opportunity for new technologies to leverage data for the benefit of the industry. We have

traditionally faced the securities lending industry as a data vendor, and data management continues to be the differentiator for us across our business. That is particularly true on the benchmarking side of our business, where data complexity can easily appear to be overwhelming.

As practitioners look to automate routine tasks, there is an increased focus on the timeliness, accuracy and means of delivery for data vendors. To answer that challenge, we have invested in a web-based front end capable of delivering an unprecedented depth of benchmarking data to a user-friendly graphical user interface. We've also increased the frequency of our data publishes, and added new fields such as inventory stability and short interest forecasts. And, most importantly, our increasing partnership efforts with other vendors point to a clear objective: we are partnered with the securities lending industry to deliver the most accurate and timely information to all stakeholders.

One place we've worked with clients who are leveraging new technology is in building pricing engines for lending rates. Given the wealth of data available, the opportunity to automate pricing has increased, along with a need for the cleanest indications at the point of trade for trades, which are worked manually. With financial firms making increased investments in machine learning and artificial intelligence, it's likely that we'll continue to see more resources going toward securities lending trade analytics. We also see opportunities to partner with clients in collateral management and post-trade reconciliation services, as their data and technology needs evolve.

A smaller scale technology build we're excited about is our intraday service, which displays new trades throughout the day across time zones. The data aggregation aspect of this project has been underway since 2012, and we reached a quorum, which allowed us to make the dataset available to contributors in the fall of 2016. We've made consistent improvements to the contributor base as well as the processing timeline for new trades. We've also partnered with Pirum to reduce contribution challenges for mutual clients. So far, we've worked with our clients who value the timeliest data, and we anticipate even greater adoption going forward. The approach of allocating resources alongside client demand has served us well, allowing us to build a flexible platform, which can integrate directly from clients or other vendor partners.

Looking to the future, we anticipate a successful roll-out of the SFTR reporting solution in Q4 2018, and are fully engaged and committed to that end. We're also looking at other opportunities to partner with our clients in building technology for their future needs. With new technology providing new opportunities to better leverage data, analytics and human capital, there are numerous channels for productive investments, and we look forward to pursuing them with our industry partners. We view IHS Markit as an information powerhouse, and that means having the highest quality data along with the most well thought-out technology solutions. **SLT**

***"With financial firms making increased investments in machine learning and artificial intelligence, it's likely that we'll continue to see more resources going toward securities lending trade analytics"***

**Pierre Khemdoudi**
Managing director
IHS Markit

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# Lowering the barriers

## Jonathan Adams of Delta Capita explains that mutualisation in the securities finance industry is the key to lowering barriers to entry

There has been much talk about the world being on the brink of a Fourth Industrial Revolution and the rise of digital technologies creating market disruption, resulting in the disappearance of household names in certain industry sectors. Within financial services, however, arguably many view financial technology (fintech) as a school of piranhas nipping away at industry leviathans, begging the question: are they too small to have any real impact?

Yet in the world of securities finance, both the drive for increased industry transparency and cost efficiencies mean that further change is inevitable. This change will eventually stem from the identification of those functions and processes operating on shared technology, rather than simply the status quo of individual firms interfacing through enterprise technology with multi-jurisdiction settlement infrastructure. Furthermore, as more beneficial owners begin to view securities lending revenue as integral to the overall yield of their portfolios, the distribution model itself warrants some reinvention.

All those across the spectrum of industry participants acknowledge the need for transformation and the need to replace aging legacy systems, but have balked at the cost and project timeframes of enterprise upgrades, especially as the burden of regulatory change has absorbed resources that historically would have been dedicated for change. Furthermore, having had waited this long already, many are waiting to see what new approaches will emerge and how that will streamline the industry's operating model and deliver efficiencies. Indeed, the shared model is emerging but market participants are waiting to see whom the winners are and what the impact will be.

### Sophisticated distribution

The securities lending industry was created to avail the asset liquidity locked within the portfolios of buy-side institutions back to the professional markets. This proved hugely successful in generating securities liquidity to facilitate sell-side securities trading strategies for a pre-crisis speculative market. Substantial spreads were derived both from demand-driven value and speculative strategies that anticipated that demand. It was also a substantial source of securities collateral

and an important factor in the development of the prime services industry.

Transactions were executed bilaterally between lenders and borrowers. Borrowers transacted bilaterally with each other or via interdealer brokers on a named give-up basis. Because not all market participants had the necessary contracts in place, 'passthrough' activity was also prevalent. There was limited requirement for disclosure of underlying principles by agent lenders to their sell-side borrower counterparties; borrowers were informed of the list of principals in the programme and were informed (to their credit risk departments only) post-settlement of their exposure of undisclosed principals. Agent lenders provided an optional indemnification to their beneficial clients for a nominal charge as part of their securities lending programmes, with a relatively limited charge to their balance sheets. Despite occasional, but serious occurrences that were associated with cash collateral reinvestment, securities lending was viewed overall as a low-risk, discretionary, value-add activity for beneficial owners.

Nevertheless, it was operationally burdensome. Billing discrepancies with resulting write-offs were the norm, and cash was the collateral of choice (where permitted), because securities collateral required a single deal capture per booking, manual daily valuation, and the risk of substitution.

On the whole, beneficial owners were risk averse, ambivalent about returns, and wanted a service that caused minimal interruption—a discretionary revenue stream to mitigate custody costs. For both lenders and borrowers, spreads were healthy and lending programmes took cash as collateral, which was invested in commingled investment programmes at a time when there were 'real' interest rates and regular interest moves by the key central banks.

Today's post-crisis environment is very different. For banks, the significant regulatory burden dictates types of permitted activity and strict rules around the use of balance sheet. Agent lenders have to take a significant charge to their balance sheets for client indemnification, and offer principal lending programmes where they borrow the beneficial owners' securities onto their own balance sheets before on lending to borrowers.

Distribution is now far more sophisticated, with the emergence of lending platforms (both bilateral and cleared), and on exchange volume repo trading activity is almost without exception cleared through central counterparties. These mutualised facilities have improved settlement efficiency, with billing write-offs now being the exception rather than the norm.

Nevertheless, some elements have remained unchanged; with technology only evolving on a functional basis to keep pace with product evolution with limited innovation. A shift in attitude by the larger buy-side firms has occurred, with a desire for greater transparency and value from the securities lending industry. This desire has been supported with the emergence of electronic multi-user distribution channels, which has slowly begun to challenge the traditional distribution model with some distribution across lending platforms, leaving market professionals to structure the bespoke activity. However, with price transparency remaining a contentious issue for some beneficial owners, last summer the US State Pension Fund Industry, supported by the Federal Reserve, took steps to address this by looking to see if those beneficial owners could be supported by a dedicated distribution platform. Closer to home, the Bank of England securities lending committee also met not so long ago to explore the very same topic.

Specifically, by viewing securities lending revenue as part of the overall value of a portfolio, rather than a discretionary value-add, the buy-side is beginning to see that shared technology solutions could reduce barriers to entry, enable direct lending, and obtain increased price transparency, whilst retaining the safeguards currently provided by the traditional lending programmes (acknowledging that specific strategies would remain with the professional lending community).

Regulation has required that banks adhere to strict usage of their balance sheets, and have set basis point return targets on their activity. Borrowers require greater transparency with regards to underlying principles with a view to undertaking pre-trade checks. Furthermore, the demand drivers for the banks and broker-dealers are no longer about supporting

proprietary speculative activity, instead supporting the demand from prime broker clients and shoring up their balance sheets to ensure they meet risk weighted asset (RWA) and liquidity coverage ratio (LCR) targets.

## So, what's next?

**Pre-trade**

Further mutualisation? Will beneficial owners, who previously felt the too high barriers to entry of managing their own lending programme, choose to lend on a shared facility? Will borrowers be able to electronically match their demand to the aggregated individual supply of each? What would an 'Amazon' for securities finance require?

**Post-trade**

The big 'next step' for the securities finance industry is not necessarily distribution, more post-trade services. Unlike the processing of cash markets (principal trading activity in fixed income and equities), which has seen some outsourcing to post-trade processing utilities, post-trade services for securities finance still resides firmly inside firms. Historically, businesses have been reluctant to risk either outsourcing or relocating this function to another location given the complex trade lifecycles and teamwork of both front, middle and back office that exist when managing lengthy, open-ended transactions in particular.

Another hurdle that is slowly abating is the reluctance of firms to embrace cloud-based technology.

In the past, highly effective middle and back office functions offered a competitive advantage. A firm that could demonstrably show demonstrate accurate fee, rebate history, or exposure calculations could essentially force their billing or margin call. Likewise, firms that could demonstrate settlement efficiency through effective inventory management could ensure that fail costs were not attributed to them; indeed, it was a source of revenue to deal with counterparties with a poor settlement record.

Post-trade processing is no longer a profit centre. However, due to the emergence of non-differentiating services including platforms, trades cleared via central counterparties (settlement netting), contract and billing comparison services, and higher-quality inventory management. Yet the technology cost burden for these non-differentiating services is increasing. Why? Simply, the already heavy costs to support older technology. Functions that have improved post-trade processing and can support new products are built outside the core application, meaning development and maintenance occurs over multiple applications rather than a single application.

In an environment that has become less focused on profit and more on return on use of balance sheet, cost remains an issue. However, the idea of sharing technology seems more appropriate given that post-trade functions would now benefit from technology synergy. Market participants can formalise an established single-process approach, albeit via the use of different and separate enterprise technologies. Not only does the market as a whole enjoy improved efficiency, individual firms can also benefit from a pay-per-use model enabling costs to follow revenue, removing the burden of fixed costs.

Outsourced services and technology do not suffer the same competition of resources that occur with an enterprise technology environment that has to support multiple business lines and applications. Instead, they enjoy a single focus and priority development. Moreover, participants are functionally kept in sync and initiatives can be researched and resourced via industry consortia.

Looking forward, tokenised assets, blockchain, and machine learning are all expected to revolutionise the financial services industry still further. Mutualised managed services solutions should therefore be seen as an interim step, providing an approach in which utility providers can run a platform in a flexible, feature-filled, efficient and cost-effective way.

## Lowering barriers to entry

Given the trade lifecycle complexity of securities finance transactions, and that regulatory obligations have competed with firms' technology spend, pre-trade, and post-trade mutualisation can keep the focus on the development of the global securities finance marketplace. Mutualisation is key to lowering barriers to entry, both in terms of new entrants and new jurisdictions. **SLT**

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# SFTR: A driver of innovation

## Tom Pikett of Trax explains why SFTR is a catalyst to create more efficiency, automation and technological process

It's not often thought that regulation can help drive innovation, but in the case of the securities financing industry, Securities Financing Transaction Regulation (SFTR) is a catalyst to help create more efficiency, automation and technological progress. Securities financing, including repo, notoriously is made up of manual markets relying heavily on voice transactions and fax and email confirmations. With SFTR, regulators appear to have taken note of outdated processes and listened to the call for change, perhaps having learned lessons from previous regulatory reporting implementations.

European Market Infrastructure Regulation (EMIR) came into force in February 2014 and is known to have been plagued with a number of issues surrounding implementation. Fundamentally the EMIR implementation suffered from a lack of clarity, a lack of standardisation and varied implementations at the trade repositories. This has not been repeated. For example, European Securities and Markets Authority (ESMA) has mandated the use of ISO 20022 for reports going to and from the repositories, marking a significant shift away from the model under EMIR where message specifications varied greatly between repositories.

The drafting of SFTR has also taken note of regulations that have helped accelerate the adoption of more efficient practices. In the case of the second Markets in Financial Instruments Directive (MiFID II), the

reporting, transparency and best execution obligations brought on by the regulation had the knock-on effect of encouraging more on-venue trading, thus improving market efficiency and insight. Similarly, SFTR, with its 153 reporting fields and extensive matching requirements, is sufficiently burdensome that without automation the operational overheads will start to become very large indeed.

## How will SFTR impact the market?

The securities finance market, in particular the securities lending and bilateral repo markets, are set for a period of significant change as a result of SFTR. Areas that will be heavily impacted by SFTR are: confirmation, reporting, reconciliations, connectivity, messaging, valuation and risk, trade capture and collateral management—an extensive group. This is particularly pertinent given the increase in the overall size of the repo market, with the latest International Capital Market Association (ICMA) survey highlighting that the baseline size of the European repo market reached €7.2 trillion—the largest figure ever recorded since the survey began in 2001. More importantly for SFTR, the number of bilateral trades has continued to grow, with each percentage increase representing additional manual burden on the middle office and potentially increased operational cost.

Within the securities lending market, the changes are far reaching with more fundamental market structure changes anticipated. At a very basic level, the information regarding who borrowers are ultimately trading with will be made available to teams other than the credit risk areas that historically have been the recipients of the agent lender disclosure (ALD). This adds another layer of complexity.

It isn't simply a case of agent lenders having to disclose who the underlying principal is, there is also a requirement to match on a vast number of economic and reference data fields within very limited tolerances. This reporting burden is generally accepted as something agent lenders will take on for their clients. However, this presents two main challenges for most agent lenders. Firstly, they commonly have very little, if any, experience of transaction reporting. Secondly, we have seen that clients want comfort from the agent lenders that they are submitting the report correctly, particularly given the more prescriptive approach regulators have taken on control and oversight of transaction reporting. With all of this to consider, a greater use of automated trading and matching is something that will be needed to support a firm's own reporting, and that of its underlying clients to whom they wish to offer a delegated reporting service.

## Repo market

In the repo market, there is a significant level of on-venue trades utilising central counterparties (CCPs), which is mainly restricted to dealer-to-dealer overnight repo trades. Outside of these parameters, longer term or open repos, including dealer-to-client trading, tend to use existing processes that are commonly manual and outdated. We expect SFTR will make manual processing sufficiently difficult and costly, having the following impact:

- Bilateral repo trades, where possible, will be moved on to a trading venue (supported by the fact there has been a recent growth in the number of repo multilateral trading facilities, some of which are offering all-to-all trading)
- Manual trade management will be replaced by automated processing and confirmation

Trax Match Repo provides pre-settlement trade confirmation solutions to help identify trade errors and manage exceptions early in the trade lifecycle. Responding to the growth of the repo market, Trax Match Repo has seen an increase of 40 percent in the number of trades in the past 12 months, as well as a significant increase in the number of buy- and sell-side firms actively using the platform. With the need to share and match more information under SFTR, we expect this trend to continue.

## Securities lending

Within securities lending, compared to the repo market, a greater use of automation through a group of well-established vendors is broadly the norm. However, there are fundamental market structure changes expected to impact the securities lending market, including:

- A continued move to trading on-venue, allowing for Unique Trade IDs, timestamps, key economics etc. to be shared at the point of trade. We consider this of particular importance if the principal level information is available at the point of trade, providing the maximum possible time for submission of the SFTR report
- Consolidation to a small number of vendors for trading, matching and reporting

There are a select number of vendors who have heritage or expertise in the SFT market. Given the complexities SFTR presents, leveraging a solution with a vertical stack of trading, matching and reporting is a compelling offering. Simply accommodating all trading into a post-trade reconciliation platform may not be the easiest or most comprehensive solution. Reporting firms may ease their SFTR implementation through greater use of a full front-to-back solution, whilst other efficiency gains can be achieved through automating trading flows, confirmations and break resolution. The collaboration between the largest trading platform, EquiLend, and one of the largest repo matching and transaction reporting providers, Trax, allows firms to benefit from such efficiencies, as it enables firms to trade, match and report through one solution.

## What next for market participants?

In an increasingly complex world of transaction reporting, with multiple overlapping regimes requesting different levels of data on different frequencies, more and more reporting firms appear to be looking to vendors to ease the burden. Heritage, cross-asset class capabilities and transaction reporting expertise have been notable factors identified by reporting firms when selecting a vendor.

Trax is collaborating with EquiLend to offer a best in class SFTR solution. EquiLend's expertise in the securities finance industry, combined with Trax's regulatory reporting and repo trade confirmation heritage, will provide a comprehensive service covering all SFTR-eligible asset classes.

As leading providers of trading, confirmation and post-trade lifecycle management, EquiLend and Trax are ideally placed to solve for the headaches around unique transaction identifier (UTI) generation, timestamps and lifecycle events. EquiLend and Trax receive new trades and lifecycle events on an intra-day basis, allowing for regulatory reporting monitoring on a near real-time basis.

While firms cannot outsource their reporting obligation, they should look to the expertise of solution providers to help them confidently meet their compliance requirements. EquiLend and Trax combine years of experience and expertise to help ensure that firms have access to a solution built in response to industry feedback to mitigate risks. Industry participants can leverage the community fostered by EquiLend and Trax by taking advantage of the collective mind-share and innovation developed through the interoperable solution, helping firms stay a step ahead of regulatory change. **SLT**

> ***While firms cannot outsource their reporting obligation, they should look to the expertise of solution providers to help them confidently meet their compliance requirements***

**Tom Pikett**
Product manager
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C-ONE
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# Are CCPs dead before they've even lived?

## David Selwood of FIS discusses why new technology might be a revolutionary change rather than the technology bubble that the wider community is shouting about

Within securities finance, it feels like we have kicked around the idea of central counterparties (CCPs) and how they will be used, for a number of years now. Almost as long as the spectre of additional, albeit cautiously welcome, regulation of one sort or another has been discussed.

Now, with the relatively recent onset of blockchain concept, through the use of direct customer-to-customer connectivity and the notion of integrated smart contracts/agreements, it would appear that a distributed ledger model might just ring the death knell of CCPs in their current format, before they've ever really taken off. In addition, the usual argument of slow adoption due to revised regulation headache might just not be as big an issue as we may think because the broad-brush stroke of Securities Financing Transaction Regulation (SFTR) may already have this covered.

I also appreciate the headline is a pretty brave statement from someone approaching this from a primarily technology background. Below, I will try and set out why I think this new technology may just be the revolutionary change rather than a technology bubble that the wider community is shouting about.

To set the scene a little, I am fundamentally a technology advocate. I like the fact that we can apply technological advances from a wide range of areas into our business solutions, not just for the sake of it, but to make lives easier from a general perspective and do business better day to day.

When I look at the possibilities of the changes blockchain may bring about—or as some would argue, has already brought about—the move to a trusted, encrypted method of buy and sell or lend and borrow directly between two parties will potentially be redefined by this apparently brave new world. In my opinion, the obvious initial casualty is the notion of CCP as an alleviator of risk in its current form, unless they adapt. Although, I don't think the basic premise of how the business operates will be replaced, I believe these new innovative elements will be incorporated into the day-to-day operation—as all good ideas are.

Attempting to unpick the likelihood of any impending changes is obviously difficult. The CCP management of risk in this way, which is by ensuring that there is enough collateral to support the transactions and market participants, has always seemed like a strong model in its ability to take away the uncertainty of failure. However, the inherent cost in this third-party model, by delivering into and managing collateral in this centralised manner seems to be restrictive and lacking the flexibility needed in such hotly contested business and tight margins.

However, the immediate nature of a peer-to-peer, or customer-to-customer direct interaction using the blockchain method of a 'smart contract', which is effectively a way of providing a tangible translation of the legal agreement into a digital method of execution may offer an alternative—and may already supersede this. This direct interaction between counterparties and the direct transmission of the financial transaction, the development and adoption of smart contracts, I believe, is key for the business to succeed.

When looking at the mechanism of that overall shared ledger design, the obvious view would be that this

simply becomes an extension of your overall books and records. If you use a trusted partner in creating your private transaction blockchain then there becomes an inherent ability for the regulator to have an accessible view and the technology provider to act as gatekeeper for all the market participants in that particular technical solution, be that through traditional connection, third-party providers or public or private cloud.

Where do crypto-currencies fit into this? As you can't seemingly talk blockchain without crypto-currency being mentioned I think the answer to this and the simplest scenario would be a simple collateral transport mechanism fixed at deal time as part of the smart contract, subsequently managed by the underlying trade mechanics. Effectively, this becomes an extension to facilitate business, while still being a business in itself in other areas—exactly the same as any other traditional currency.

Fundamentally, I think the safest bet is that the market will adapt, as it always has done, and despite its relative immaturity, this new technology offers an opportunity beyond the usual response to periods of highs or lows, as new ways of doing business and as technologists build supporting functions to make innovation work.

I think there is enough evidence to believe that while they won't immediately go away, CCPs will not be the answer in their current form, simply because of the general overall slow adoption and much faster moving technical advancements.

Regulation of the changing times will happen, but the open nature of the transaction model means the service provider itself could be the trusted conduit into the market oversight that is now required by the government and regulators as good practice. This is where the wide net of SFTR may help facilitate this by providing details of the transactions at source.

As I've articulated on previous topics, the core business will always wait for the trend to subside, figure out who is the winner and then follow that lead. In a risk-averse business world, there is a reasonable, if boring, logic to this.

For securities finance, there is a clear approach being shaped—the successful Credit Suisse and ING blockchain transaction shows a viable, if not common mechanism, and I am not sure there is a clear horse to back just yet.

I think it's fair to say we have clearly raised more questions:

- Will blockchain re-invigorate the bilateral arrangement with the seemingly inevitable move into digital payment transfer for a growing and healthy market?
- Will crypto-currency in business become a supporting function for more traditional currencies?
- Will traditional currencies simply adapt to and squeeze out crypto, by becoming more crypto themselves? Is this even possible?

I think these questions point to a number of scenarios, and at this stage, this is not a bad thing, as we have room to innovate and hurdles to overcome and the more creative thought that goes into this, the better overall outcome for everyone.

As a final thought, is the decentralised transaction model something to embrace or something to fear? Of course, I don't have a definitive answer, but the groundswell of change and reaction to these new technologies is something the market must get to grips with and, dare I say, embrace. Even if this means that existing mechanisms will have to change and we may see some current practices, in this case CCPs, rethought and re-engineered, as a result. **SLT**

**David Selwood**
Vice president and head of management services for securities finance and collateral
FIS

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# Benchmark your books

With the increase in global non-cash collateral usage, Matt Ross of DataLend explains how agent lenders can optimise their books

# Collateral Benchmarking

Standardising performance measurement has always been a key area of focus for DataLend. With the successful launch and market-wide adoption of our new-and-improved client performance reporting (CPR) suite, our next step—after extensive discussions with clients and an ongoing review of market trends—was to add non-cash collateral benchmarking to our performance reporting tools.

Non-cash collateral acceptance is on the rise and showing no signs of slowing down (see figure 1), while cash collateral acceptance has remained flat to down over the past four years.

With almost two-thirds of the market, or $1.6 trillion, on loan against non-cash collateral by the end of 2017, DataLend has made strides in providing transparency and accurate benchmarking into that area of the market.

Following this trend, agent lenders across the globe have indicated a need to benchmark their clients against other beneficial owners accepting similar types of collateral. As a result, DataLend has added a new benchmarking capability to CPR (for agent lenders) and DataLend Portfolio (for beneficial owners) to do just that.

In order to tackle this requirement, DataLend determined how best to classify a beneficial owner's non-cash collateral acceptance. In conjunction with the agent lender community, we developed a risk tolerance scale that would allow the lending agents to bucket their beneficial owner clients into one of four categories depending on the client's "risk appetite".

The first and most conservative bucket represents beneficial owners that only accept investment-grade sovereign debt (Sov1). The second accommodates those that are able to accept major index constituent equities (Equity1). The third bucket then introduced the acceptance of investment-grade corporate debt (Corp1) and lower-rated sovereign debt (Sov2). The fourth and final bucket includes beneficial owners willing to accept lower-rated corporate debt (Corp2), equities that are not part of a major index (Equity2) and all other types of collateral (Other).

Not surprisingly, the results of the collateral acceptance allocation exercise were heavily skewed toward the first two buckets: investment-grade sovereign debt and major index constituent equities.

With each beneficial owner's non-cash collateral acceptance defined, DataLend gathered data on the effects of different non-cash collateral guidelines. Figure 3 outlines some of the more noticeable differences between fees for clients accepting only investment-grade sovereign debt versus those accepting some level of equities as collateral.

A sizable difference in fees is evident for those clients accepting Sov1 as collateral versus those accepting Equity1 as collateral. The average borrow cost for all securities was 26.42 basis points when investment-grade sovereign debt was pledged as collateral; however, when equities were pledged, the average fee increased by nearly seven basis points.

Upon drilling into global fixed income and eventually down to US Treasury, the spread between the two collateral groups continues to widen—so much so that lenders accepting equities as collateral were earning 11 basis points more on average than those who were just accepting other investment-grade sovereign debt.

With all of the recent financial regulations, this is evidence that borrowers are willing to pay up when pledging equities as collateral in order to source more high-quality liquid assets (HQLA). Non-cash collateral usage also appears to impact utilisation, which in conjunction with fees drives a lender's return to lendable. Figure 4 gives a breakdown of utilisation by non-cash collateral acceptance.

Similar to the disparity in fees, there is a difference in utilisation when lending against sovereign debt versus equities. Across all assets, utilisation increased noticeably when clients were willing to accept equities as collateral. What this illustrates is that when agent lenders have the ability to accept different types of collateral, they can lend at a higher rate of utilisation and potentially generate a greater return to lendable.

With the increase in global non-cash collateral usage, and the disparities noted in both fees and utilisation for clients with different non-cash guidelines, DataLend's non-cash collateral peer group benchmarking feature is a vital tool for agent lenders to optimise their books. **SLT**

FIGURE 1. CASH VS. NON-CASH LOAN BALANCE GLOBALLY (USD BILLIONS)

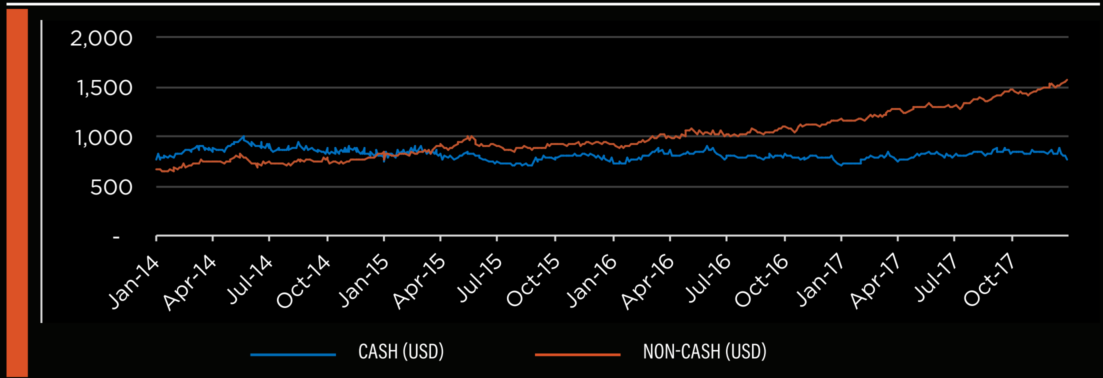



FIGURE 2. BENEFICIAL OWNER BREAKDOWN (BY COLLATERAL ACCEPTED)

| CASH ONLY | MIXED COLLATERAL | | NON-CASH COLLATERAL | |
|---|---|---|---|---|
| 24% | 41% | | 35% | |
| | SOV1 | +EQUITY1 | +SOV2, CORP1 | +CORP2, EQUITY2, OTHER |
| | 59% | 34% | 4% | 3% |

FIGURE 3. AVERAGE FEES FOR DIFFERENT NON-CASH COLLATERAL ACCEPTANCE (BPS)

| BORROWED ASSET | SOV1 AS COLLATERAL | EQUITY1 AS COLLATERAL |
|---|---|---|
| ALL SECURITIES | 26.42 | 33.41 |
| GLOBAL FIXED INCOME | 14.61 | 23.45 |
| US TREASURYS | 16.37 | 27.76 |

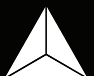
FIGURE 4. AVERAGE UTILIZATION FOR DIFFERENT NON-CASH COLLATERAL ACCEPTANCE (%)

| BORROWED ASSET | SOV1 AS COLLATERAL | EQUITY1 AS COLLATERAL |
|---|---|---|
| ALL SECURITIES | 10.87 | 15.19 |
| GLOBAL FIXED INCOME | 18.25 | 23.53 |
| GLOBAL EQUITY | 5.94 | 9.24 |

**NON-CASH COLLATERAL DEFINITIONS**

Sov1 - Investment-grade sovereign debt, AAA-A rated
Sov2 - Below A-rated sovereign debt
Corp1 - Investment-grade corporate debt, AAA-A rated
Corp2 - Below A-rated corporate debt
Equity1 - S&P 500 or equivalent major index constituent
Equity2 - Any other equity that is not a member of a major stock index
Other - Any other collateral not defined above





with China, says S&P Global CEO

# The journey to SFTR compliance

## Should firms be reallocating resources from MiFID II to SFTR? Andrea Ferrise of UnaVista explains more

Following the recommendation by the Financial Stability Board (FSB) and European Systemic Risk Board to mitigate the risks in shadow banking and increase transparency in the use of securities lending and repurchase and reverse repurchase agreements, the European Commission published the Securities Financing Transactions Regulation (SFTR) in January 2016.

| August 2013 | The FSB published the policy framework for addressing shadow banking risks in securities lending and repos |
|---|---|
| **January 2014** | The European Commission published a proposal to regulate securities financing transactions (SFTs) |
| **January 2016** | SFTR entered into force |
| **March 2017** | ESMA's final report on technical standards under SFTR was published |
| **Q4 2017** | European Commission's review of the final report |
| **Q2 2018** | Expected endorsement of final draft RTS by the European Commission |
| **Q2/Q3 2019** | Estimated phased go-live of the SFTR Transaction Reporting obligation for financial counterparties to begin. 12 months following the endorsement by the European Commission as well as non-objection period by Parliament and Council |

The financial instruments impacted by SFTR are securities lending, repurchase and reverse repurchase agreements, and any sell/buy-back transactions involving securities or commodities.

Historically speaking, the actions regarding this matter were initiated in 2013, by the joint effort between the G20 and FSB to identify the key risks in shadow banking. The table to the left summarises SFTR's path from the preliminary steps until the endorsement by the European Commission.

### Where does the industry stand?

The adoption of Level 2 measures is currently delayed, and expected to be approved between Q1 and Q2 2018 for a phased go-live beginning 12 months after, for example Q2/Q3 2019.

In order for firms with an SFTR requirement to meet the deadline, the first compliance phase, which includes design, build and test of the infrastructures, should begin in H2 2018. This will impact the workload of the industry to perform the impact analysis and start implementing efficient operating models to take advantage of the opportunities provided by SFTR.

The industry was committed and worked very hard to meet the 3 January 2018 deadline for the go-live of the second Markets in Financial Instruments Directive (MiFID II). It is evident now that market participants need to analyse the potential impact across firms in terms of resources and budget to be compliant ahead of SFTR transaction reporting go-live in mid 2019.

At the current stage, many firms are considering whether to continue deployment of resources until completion of MiFID II or begin reallocating resources to build and implement operation models and infrastructure for SFTR.

This uncertainty might have a detrimental effect on the success of the aforementioned regulation. It is quite evident that SFTR is more than a simple trade reporting practice and impacts a wide-range of investment firms in areas such as businesses processes, controls, operations, IT systems and compliance. It is noteworthy that effort and costs will vary depending on the extent of system integration, the size of the firm and the transaction volumes.

Further, challenges impacting the business model are the unique trade identifier (UTI) generation, the reporting obligation to the trade repository and, finally, the reconciliation process. Therefore, the industry needs to be prepared to tackle this objective rather than take a wait-and-see approach.

## Following the footsteps of EMIR

From a technical standpoint, similar to the European Market Infrastructure Regulation (EMIR), SFTR includes two-sided reporting.

This will affect both financial and non-financial institutions engaging in SFTs and will require them to report details of their transactions. This requirement will be phased-in according to the following timeline:
The main SFTR's cornerstones are the following:

| | | |
|---|---|---|
| **Phase 1** | • Investment firms<br>• Credit institutions | Day one |
| **Phase 2** | • CCPs<br>• CSDs | After three months |
| **Phase 3** | • Insurance<br>• Pension funds<br>• AIF<br>• UCITS | After six months |
| **Phase 4** | • NFCs | After nine months |

Disclosure of information: UCITS are obliged to specify the SFTs which funds are permitted to use and include a clear statement of which of those are used. The following information must be included in the UCITS prospectus:

- Description and rationale of the SFTs/TRSs used
- Criteria to select the counterparty, such as credit rating and legal status
- Collateral description with particular reference to asset types, issuer, diversification and maturity
- Description of the risks of SFTs/total return swaps and collateral management
- Collateral valuation methodology
- Description of any restriction
- Overall data for each SFT

**Collateral reuse:** the counterparties involved in SFTR have the right to reuse financial instruments received as collateral if the following conditions are satisfied:

- Reuse in accordance with terms
- Express consent
- Duly informed in writing
- Transfer from account

**Transaction reporting:** on the reporting side, the regulation is structurally identical to EMIR. They both require counterparties to report the details of any lifecycle event on a T+1 basis timely fashion. Nevertheless, counterparties to an SFT will be required to keep record of the transactions that have concluded, been modified or terminated for at least five years following the termination of the trade, as is currently required under EMIR. Trade repositories will apply a two-way key legal entity identifier (LEI) and UTI regardless of whether or not both counterparties to each SFTR contract have reported to the given trade repository.

In terms of reporting format, in 2017, European Securities and Markets Authority (ESMA) released the SFTR final report, specifying the format and frequency of the report. The novelty is represented by requirement also on the counterparties' side to report to trade repositories using the ISO 20022 standard. The final target is to provide to the industry a single

standardisation approach, which will ensure open and transparent market's practices.

## How does SFTR differ from other regulations?

What is very interesting from a regulatory perspective is the introduction for the first time of the reporting requirement. The proposed regulation would cover SFTs conducted by any firm established in the EU, regardless of where the individual branch is. Furthermore, SFTR represents a significant move towards enhanced transparency in securities lending market and risk reduction from shadow banking. However, from a regulatory standpoint, the market participants will face the following challenges once the regulation is going-live:

- **The collateral re-use practice can lead to complex collateral chains, especially referring to situations where:** (i) there is an extensive rehypothecation, so the same collateral will need to be reported several times; (ii) where pools of collateral are used against multiple trades, there will be difficulty allocating each element of the collateral against a specific transaction. Finally, a default on one transaction can cause a domino effect with other counterparties defaulting on their respective SFTs if the same collateral has been used in all of these.
- **Reconciliation:** the process requires both counterparties of the trade to provide a UTI if they are in scope. However, in some cases such as CCPs, the industry is wondering who will generate the UTI for cleared trades considering that CCPs will enter into SFTR just in Phase 2. In addition, further clarity is required in situations whereby after reporting to CCPs, the transaction is subsequently novated. The industry is keen to know whether the different UTIs should be reported to the CCP by the counterparties.
- **Counterparties in scope:** SFTR will cover EU counterparties, non-EU branches of EU firms and EU branches of third country firms. The market participants have concerns regarding the involvement of non-EU counterparties in the reporting chain. Indeed, those may be impacted when they trade in STFs, as the reporting entities will require certain information to fulfil their reporting obligations, for instance, the LEI of their counterparty and matching UTIs.

Following the implementation of EMIR, lessons were learned. Before the go-live of EMIR many market participants decided to take a wait and see approach and, as result, most of them were not prepared. This turned into additional compliance and operational costs.

In addition, the most important lesson learned from EMIR relates to the industry preparation to deal with continuously changing regulatory requirements and new reporting regimes. For instance, EMIR has been amended several times since its introduction in 2012. During this evolutionary period, new regulations, such as benchmark, short-selling and MiFID II transaction reporting entered into force.

Preparing for the new reporting regime will provide a huge benefit not only from the regulatory standpoint in terms of transparency, but also efficiency and cost-minimisation. Indeed, the industry will get the chance to have access to a more data granularity and business intelligence.

The regulators hope that this will dramatically improve the decision making process resulting in better business outcomes. The SFTR text is just one step in a continuously changing regulatory landscape, and it is essential that the industry integrates the rules prescribed by the regulator to increase transparency and integrity of the market.

In conclusion, the nuances of SFTR highlights the need to pick a trade repository with advanced data quality tools as regulators will be looking at rejection and matching rates. The onus is on firms to start putting their SFTR delivery team in the place of others to fully assess the project requirement ahead of time. Firms with MiFIR and EMIR reporting obligations can leverage their existing infrastructure and vendor experience. Finally, the industry is in the information gathering stage. Therefore firms can benefit from being part of industry groups, attending industry events and joining SFTR conversations. **SLT**

# Notes

# BONDLEND

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.

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Broadridge Securities Finance and Collateral Management (formerly 4sight) provides an integrated front- to back-office solution for firms of all sizes on both the buy-side and sell-side through the full trade life cycle. Broadridge helps clients optimise inventory, enhance trading opportunities, reduce costs and improve efficiency across their business with a global, real-time, multi-asset solution for securities lending, repo and collateral management.

Our solution supports both agency and principal trading of equities and fixed income securities, as well offers enterprise-wide collateral management and optimisation for cleared/bilateral OTC and exchange-traded derivatives, securities lending and repo. With a real-time view of global inventory and exposures through intuitive dashboards, Broadridge helps clients transform their business by generating efficiencies through margin automation, collateral optimisation, life cycle management, settlement and connectivity with market infrastructure.

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Comyno is a financial technology software and business consultancy boutique with a clear focus on treasury and securities finance. For more than ten years we are specialists in securities lending and repo, collateral management, treasury and liquidity management, clearing, regulatory topics and technology.

Our experts combine innovative software and consultancy services, creating lasting solutions and deliver enhanced functionality and integration across all parts of the process chain.

Comyno provides in house workshops and training for all security finance and treasury products.

We are working successfully with private and public financial institutions, clearing houses and tri-party agents.

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 C-ONE provides real-time front-to-back straight-through processing software that facilitates the interaction with thirdparty 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 the business needs of our clients.

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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

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# DATALEND

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.

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Delta Capita is an international business and technology consulting and managed services provider.

We work with many of the world's most important financial institutions helping them comply with regulatory obligations, transform and simplify operations, reduce cost and adopt ground-breaking models and technologies.

We operate an end-to-end consulting model, including advisory, solutions and delivery capabilities and high-quality specialist managed services.

**Managed Service Solutions**
Post trade operations and technology managed services: Collateral and exposure management and billing, asset servicing, operation controls, stock settlement record and financial transaction ledger. UK-based industry practitioner servicing team.

**Software Solutions**
Front office inventory management, trade booking and position keeping
Pre-trade risk tools: credit limit management and balance sheet usage/optimisation

**Consultancy**
Target operating model
Vendor selection
System implementation
Regulatory: BASEL III, SFTR, MiFID II, EMIR, BCBS IOSCO
Post-trade

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# EQUILEND

EquiLend is a leading provider of trading services for the securities finance industry. EquiLend facilitates straight-through processing 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.

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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 programme 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 over 12 years.

Astec Analytics advanced 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
- Access data solutions to suit you, from hourly data file updates to an advanced secure API into our intraday databases

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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, enterprise collateral and optimisation needs.

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

- Increasing profitability, 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 efficiency of your business
- Managing risk and holding down the cost of collateral/capital usage

FIS's solutions for securities finance allow you to automate your entire operation: from enterprise collateral management, collateral optimisation, 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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Founded in 2010, GLMX is an independent financial technology company financed by Sutter Hill Ventures, Otter Capital and Tippet Venture Partners. Wall Street veterans partnered with Silicon Valley technologists to develop GLMX proprietary technology which provides an intuitive, comprehensive, integrated global money market trading solution for institutional participants.

GLMX's request-for-quote based buy-side-to-dealer trading platform has been expressly built to enhance the relationship between buy-side and sell-side counterparties and addresses the need for a more efficient repo trading infrastructure, particularly considering increasing regulatory reporting requirements.

The platform, which was re-launched in January 2018 with a fully-redesigned, advanced architecture, provides a highly scalable back-end, rapid feature development, comprehensive data tools and direct connectivity to multiple portfolio management systems. The goal of GLMX is to be a leader in technology, to maximise trade lifecycle efficiency and reporting and to improve client access to market liquidity.

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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 complemented 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 repo and equity stock loan, US and non-dollar collateral management, counterparty and market risk, profit and loss, 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.

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IHS Markit is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. We serve customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions.

**Analytics**

Our Securities Finance dataset covers more than $20 trillion of global securities in the lending programmes of more than 22,000 institutional funds, which includes more than three million daily transactions dating back more than 10 years. We work with leading industry practitioners, including custodians, prime-brokers, asset managers and public funds, to optimise their securities lending programmes utilising web, Excel, datafeed, application programming interface (API) and third party delivery mechanisms .

**Consulting**

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

With many years of consulting and practitioner experience in securities finance and programme analysis, the team can draw on the most globally comprehensive daily stock loan database with over 10 years of transaction history.

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

- Performance benchmarking
- Programme evaluation
- Exposure reports
- Collateral reviews
- Spotlight surveys

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IHS Markit, in partnership with Pirum Systems, offers a fully hosted data and end-to-end reporting solution for SFTs, which sets an industry wide standard, providing the foundation needed to reconcile trading activity down to the UTI and LEI level of granularity. The SFTR solution offers participants turnkey connectivity to trade repositories. This modular, fully hosted, solution leverages our proven track record of delivering industry wide reporting solutions and our 10 years of partnership with the securities lending community.

Key benefits:

- Built-in infrastructure and relationships – Tap into the existing relationships that IHS Markit has built across the securities finance industry. Our network of data contributors, built over the last 10 years, represents $15 trillion of inventory held by over 120,000 underlying funds. We process and match over 3 million transactions daily using a reporting spec that already covers the majority of fields required by the latest draft of the SFTR legislation. Flexibility – Use the solution's modular nature to meet your individual needs and structure.
- Flexibility – starts with the data ingest architecture all the way down to trade reporting as the solution will be connected to every trade repository.
- Future-proof compliance – Get a solution that has the flexibility to deliver transaction reporting across future legislation, which might require transaction reporting, as well as any additional transparency/risk reporting framework that could be mandated across the securities finance industry.

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**Murex—MX.3 for Collateral Management and Securities Finance**
For more than 30 years, Murex has provided enterprise-wide, cross-asset financial technology solutions to capital markets players. Its cross-function platform, MX.3, supports trading, collateral management, treasury, risk and post-trade operations, enabling clients to better meet regulatory requirements, manage enterprise-wide risk, and control IT costs. With more than 50,000 daily users in 60 countries, Murex has clients in many sectors, from banking and asset management to energy and commodities.

**MX.3 reinvents active trading of enterprise asset inventory.** It provides funding and collateral trading desks with a real-time view of their equity and bond enterprise inventory. The solution includes tri-party repos with agent connectivity, evergreen and extendible, fee and rebate stock loan, as well as synthetic financing across asset classes. Corporate actions can be executed automatically. Compliance and concentration rules, as well as collateral eligibility checks, automatically apply.

**MX.3 for Collateral Management and Securities Finance offers a single framework for enterprise-wide margining, optimization, regulatory compliance and collateral trading.** The offering features an enterprise inventory manager for cash, security and physical commodity positions—synchronized in real-time with positions, market data and settlement events. The analytical optimization algorithm proposes optimal allocations, substitutions or repo booking against margin or funding requirements and user-defined constraints.

**The single platform bridges gaps between silos, decreases cost of ownership and increases efficiencies across the chain**. Operational processes are rationalized around a single data source. This avoids unnecessary reconciliations between front, back and risk functions.

**This solution centralizes collateral processing across entities and business lines** for bilateral or cleared OTC, repo or securities lending, and exchange-traded derivatives products. The exception-based workflow manager enables intra-day margining and high STP across the collateral chain, including connectivity with key market infrastructure.

**MX.3 for Collateral Management and Securities Finance supports the mandatory collateralization of un-cleared trades**, it is compliant with BCBS/IOSCO, including Basel III and SFTR, and regional or local jurisdictions, as well as initial margin methods, including ISDA SIMM.

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Automation positively transforms the lives of people and business. ION is reinventing the way business is done through innovations in automation technology. Our software improves decision-making, increases efficiency, simplifies complex processes, and empowers people.

The ION securities finance solution helps you take control of your repo and securities lending business. With ION, you can enjoy unrivalled connectivity to electronic markets. You can access all your electronic and voice brokers from one place. And you can track and manage all your orders in one system - email, chat, voice, and electronic.

Our inventory management, pricing, and trade management tools automate and guide your decision-making, while our extendable data model ensures you can meet your regulatory obligations today and into the future.

To learn more, visit secfinance.iongroup.com.

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London
Stock Exchange Group

UnaVista is London Stock Exchange Group's global platform for reference data, reconciliation and regulatory reporting. UnaVista provides firms with a range of solutions designed to reduce operational and regulatory risk through one interface.

UnaVista is an award winning European Trade Repository for EMIR, so when SFTR begins you will be able to report all of your SFTs via UnaVista.

UnaVista's Rules Engine can take in data from multiple internal sources and validate it using our own reference data and rule logic. The rules engine will then normalise, convert and format imported information as desired. UnaVista's Rules Engine has the logic built in to assist you with multiple regulations including SFTR.

Here's how UnaVista can help you with SFTR:

- UnaVista's CPD-certified training courses helps firms get a better understanding of the regulation and the reporting process. Our support team offer expert 24/5 assistance to clients
- UnaVista's Rules Engine acts as a central hub for the production of data to meet global regulatory reporting requirements providing firms with the benefit of having all their global reporting in one place
- Enrich your data using exchange's reference data from source (LEI, ISIN, SEDOL, etc.) and plug in third party reference data you require
- UnaVista can work in the way that suit yours business. Clients can import and export data in any format, and take advantage of highly customisable user permission and validation rules
- London Stock Exchange Group has been at the forefront of helping clients with global regulations for decades

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OCC is the world's largest equity derivatives clearing organization and the foundation for secure markets. Founded in 1973, OCC is a low-cost, customer-driven organization that delivers world-class risk management, clearance and settlement services to 20 exchanges and trading platforms for options, financial futures, security futures and securities lending transactions. It operates under the jurisdiction of the US Securities and Exchange Commission (SEC) and the US Commodity Futures Trading Commission (CFTC). OCC has been designated by the Financial Stability Oversight Council as a Systemically Important Financial Market Utility (SIFMU), which reflects OCC's critical role within the US financial markets infrastructure.

In 2016, OCC cleared 4.17 billion equity derivatives contracts, representing its fifth-highest volume year ever. OCC stock loan activity in 2016 was up 37 percent from the previous year with nearly two million new loan transactions.

More information about OCC is available at on our website.

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Pirum offers a secure, centralised automation and connectivity hub for global securities finance transactions, enabling complete automation of the post-trade and collateral lifecycle. Our position within the securities financing market enables clients to seamlessly access counterparts, tri-party agents, trading venues, market data companies and CCPs, as well as regulatory reporting facilities.

We combine an in-depth understanding of both the securities finance industry and the most innovative technology to provide highly-innovative and flexible services. Supporting established and emerging financial institutions, Pirum's pioneering approach consistently reduces operational risk while increasing processing efficiency and profitability.

Pirum's innovative designs and customer focus have resulted in widespread industry recognition and multiple awards. Pirum was most recently named Global Post-Trade Service Provider of the Year at the International Securities Finance 2017 Awards.

Pirum in a nutshell:

- Independent
- Trusted
- Cross product
- Real time
- Collaborative
- Agile
- Cost effective

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Stonewain Systems Inc. develops software solutions for the securities finance industry. Our modular and scalable securities finance platform Spire is a comprehensive, fully-integrated solution that combines industry-specific functionality with ground-breaking technology and automation.

Our deep domain knowledge lends itself to relevant functionality resulting in accelerated workflows, greater operational efficiencies and lower costs. Spire's extensive reporting capabilities also lead to significantly improved risk management and control.

With unprecedented power, more capable functionality, open standards compatible with a wide range of solutions, and a fixed-cost model that holds steady through volatile markets- Spire has emerged as the preferred choice of the Industry.

Offerings and Solutions:

- Global stock loans and borrows
- Agency lending
- Repo/financing
- Collateral management and optimisation
- Cash management
- Regulatory locates

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Trading Apps was founded in 2011 with a mission to deliver cutting-edge software services for participants in the global securities finance market. Since then, our team of industry leaders and technologists has built a reputation for expertise and innovation in this market through pioneering work with some of the largest Lenders and Broker-Dealers in the global financial marketplace. Our efforts were recognised at the 2016 and 2017 ISF Awards where we accepted the award for the Best Software Solutions Provider.

Since then, our best-in-class technology and industry-leading expertise has allowed several clients to transform and scale their business—whilst maximising revenue, and optimising process efficiency. We specialise in providing solutions for the securities finance business vertical within lenders, asset managers, HFs and broker-dealers.

Our Apps provide solutions in the following functional areas of the business:

- Business Analytics and Intelligence
- Borrowing
- Lending
- Collateral management
- Portfolio pricing and valuation

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TRAX®

A MarketAxess Company

Trax is a leading provider of capital market data, trade matching and regulatory reporting services to the global securities market. Trax processes on average over 1 billion annual transactions on behalf of its community of over 600 entities including approximately 12 million fixed income transactions. Trax operates an approved publication arrangement and approved reporting mechanism for MiFID II trade and transaction reporting in addition to providing support for other regulatory regimes.

Trax additionally provides capital market firms with information to assist them in conducting net asset valuations, mark-to-market calculations, fixed-income portfolio mapping, liquidity and volume modelling, as well as reference data population updates. Trax data products include a universe of over 300,000 fixed income securities with unique pricing and volume information on approximately 60,000 individual bonds.

Trax is based in London and was originally established in 1985. Acquired by MarketAxess in 2013, Trax is a trading name of Xtrakter Ltd. and is a wholly owned subsidiary of MarketAxess Holdings, Inc. For more information, please visit www.traxmarkets.com.

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wematch.live
SECURITIES FINANCING

Wematch is a web-based tool disrupting the dealing process on the securities financing and equity derivatives markets.

Wematch optimises matching of interests on financing structures (TRS, repos and SBLs) and equity derivatives over-the-counter (OTC) structures and integrates features to monitor events during the lifecycle of the trades. Wematch offers additional dashboards for compliance and operations teams, allowing for proper controls and integration into the client's infrastructure. All trades are confirmed by an Financial Conduct Authority-regulated broker.

Wematch SF covers total return swaps on equities on specific and financing structures, securities borrowing and lending enabling lenders to upload their inventory and borrowers to cover their short positions, together with collateral upgrades/downgrades, and repos on both specific names and financing structures.

Wematch EQD covers OTC equity exotic products including call vs call, quanto forward spreads, outperformance and best of worst of strategies on both index and single stocks underlyings. Other equity derivatives OTC/listed products are under development for release in 2018.

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# we lead the way

**OCC guides its customers safely and securely through a dynamic marketplace with the industry's most innovative risk management, clearing and settlement services. We're always on course.**

OCC is the world's largest equity derivatives clearinghouse and a leading innovator in risk management solutions. As a Systemically Important Financial Market Utility, OCC provides market participants with industry leading efficiencies in the clearing and settlement of options and futures transactions. We strive to achieve the highest standards possible in everything that we do in order to promote financial stability and integrity in every market we serve.

The Foundation for Secure Markets www.theocc.com

# FIS APEX

## SECURITIES FINANCE AND COLLATERAL MANAGEMENT

- Automate, innovate and optimize with proven solutions.
- Reduce your total cost of ownership with managed services.
- Uncover market insights with global intraday market data and analysis.

## Empower and optimize your business

FIND OUT MORE AT: **FISGLOBAL.COM**
CONTACT US: **GETINFO@FISGLOBAL.COM**

FIS

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