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SFT Technology Annual 2022

Welcome to the 2022 SFT Technology Annual. In this volume, contributors reflect on how technology innovation is prompting securities finance teams to review their business models and to explore new opportunities for revenue generation.

This includes tackling the challenges presented by legacy technology and a lack of harmonisation around common industry standards — factors that have perpetuated workarounds and complex data mapping, while holding back product innovation and magnifying operational cost and risk.

Large scale system upgrades can be disruptive and expensive, however. As Ed Tyndale-Biscoe argues, big-bang transitions are sometimes driven by technology priorities and do not focus on providing business advantages to end users as early as possible in the process. To address this shortcoming, some firms are managing a staged transition utilising microservices-based architecture, enabling firms to upgrade technology on a modular basis and to integrate this step-by-step with their existing infrastructure.

With ongoing margin compression within the industry, a focus on automation and operational efficiency is increasingly important. FIS market data highlights that average daily loan count has jumped from 2.37 million per day during 2021 to 2.71 million per day during Q1 2022. Revenues, however, have grown only marginally during this period, meaning that the industry is working harder to generate these incremental advances. With contracting margins, the need for automation and high straight-through processing (STP) rates becomes particularly apparent. This requirement becomes more acute as the industry takes steps to drive shorter settlement cycles and adapts to the introduction of settlement fines under the Central Securities Depositories Regulation (CSDR) that have been in place since February 2022.

With these developments, the cost or benefit of borrowing cannot be valued simply in terms of the fee or rebate. It is also necessary to factor in settlement costs and penalties for settlement failure, collateralisation costs, reporting costs and the associated cost of regulatory capital. To manage and monitor these efficiencies in a joined up way, it is important to ensure that post-trade systems are aligned with pre-trade and execution and that technology is in place to optimise associated collateral transfers.

This volume provides examples of how emergent technologies are being applied to bring new efficiencies to securities finance and to refine trading strategies. Among many interesting casestudies, contributors describe how distributed ledger technology is being used to support technology upgrades to a central clearing platform for securities lending transactions, providing participants access to transaction data on a shared blockchain-based ledger via a consistent, ordered and synchronised format. As well as reducing reconciliation overheads, this helps the CCP to capture the loan contract terms more fully than it could previously from the delivery confirmation messaging. It is also helping the industry to move from an end-of-day environment, with a reliance on batch files, to real-time reporting.

Another contributor describes how machine-learning methodologies are being applied to locate borrower demand more efficiently, identifying loan requests that are most likely to translate into actual borrowers and stripping out the noise created by speculative requests that are unlikely to translate into concrete loan activity.

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Digital transformation

Why connectivity and interoperability matter in global securities finance and collateral

Interoperability and connectivity are intrinsic necessities as the traditional world of marketable securities moves towards a digital future, says FIS' Igor Salzgeber, VP, business executive, securities and processing



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Matt Wolfe, executive director, clearing systems at OCC, explains the evolution of the company's CCP services for stock loan transactions and the benefits anticipated from DLT-based upgrades to its Market Loan Program



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The distributed ledger for Securities Finance and Repo

Frictionless ownership transfers of assets

At precise moments in time
Without cross custodian settlement movements
Delivery vs. Delivery ("DvD")

Capital cost savings

MARKETPLACE

EUREX

DIGITAL COLLATERAL REGISTRY



TRUSTED THIRD PARTY















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Ed Tyndale-Biscoe, head of secured funding product and business development at Ion Group, explains the intelligent way to break free from legacy technology



Data evolution

Data evolution

Equating more data with more value is a notion that should be relegated to the past. S&P Global Market Intelligence's Melissa Gow describes how the insight that solutions-based capabilities can offer is ushering in the new era of data



Collateral optimisation

Rising interest rates: new hurdle or considerable opportunity?

While collateral optimisation has always helped to minimise funding and liquidity costs, the new rate environment is creating even greater urgency for optimisation to drive P&L benefits, says Transcend's Todd Hodgin, global head of product development



SEC Rule 13f-2

Solve for the SEC's new 13f-2 reporting risk with one-click connectivity

S3's new tool offers one-click compliance and connectivity for proposed daily and monthly short selling reporting requirements



Vendor profiles

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Securities Finance and Collateral Management Solutions for Every Firm



Optimize lending, funding and collateral decisions

Reduce counterparty and operational risks

Enable efficient and high-growth operations

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Trade associations invited bids to run CDM repository

The International Capital Markets
Association (ICMA), International
Securities Lending Association
(ISLA) and the International Swaps
and Derivatives Association (ISDA)
have invited third-party organisations
to submit proposals to provide an
open-source repository for the
Common Domain Model (CDM).

The CDM provides a common data representation of transaction events, offering a common template or set of fields that the industry will use to share trade information and other key data. This is a standardised, machinereadable blueprint for how financial products can be managed across the trade lifecycle.

A firm intending to submit a proposal to deliver the open-source repository must meet four specified requirements.

It must provide a repository for the open-source CDM which enables maintenance of the CDM code and open access for the CDM community. It must support the growth and maintenance of the CDM community, enabling members to contribute to further development of the CDM project.

It must enable ICMA, ISLA and ISDA to validate governance of contributions to the CDM.

It must promote and maintain awareness of the CDM within the financial services industry.

The deadline for firms to submit their proposals has been set for 22:00 BST on 17 June 2022.

In August 2021, the three associations signed a memorandum of understanding (MoU) to guide their collaborative work in developing the CDM.

This MoU laid down a framework for collaboration between the industry associations, defining a model for joint governance, the use and development of open-source elements of the CDM, and related intellectual property considerations.

SWIFT to establish public cloud connectivity to its network during 2022

SWIFT has declared that it will allow users to connect to its messaging network and applications through public cloud service providers including Amazon Web Services, Google Cloud and Microsoft Azure.

They will link to the SWIFT network via Alliance Control Virtual, a connectivity option allowing users to employ SWIFT virtual private network (VPN) connections with these selected public cloud providers, rather than needing to host hardware on premises in their own data centres.

The Brussels-headquartered messaging specialist says that this move will improve access to its messaging network, facilitating new innovation to promote resilience and security.

SWIFT indicates that moving to the public cloud will enable financial institutions to reduce costs, improve automation and enhance their compliance procedures without detriment to business security or flexibility.

With these goals in mind, SWIFT has been working with selected public cloud providers to ensure compliance with its Customer Security Programme (CSP), which is designed to strengthen protection for financial institutions against cyberattacks and to protect the integrity of the wider financial network.



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The SEC's new 13F-2 Short Sale Rule is Coming. Contact us at sales@s3partners.com to solve this Reporting Risk today.



FIND VALUE. FIX COSTS. AVOID RISK.

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SWIFT has been refining the new Alliance Connect Virtual service with a range of early adopters, including financial institutions and new digital banks, and is now in the final stages of testing. It expects to release the service by the end of 2022.

BIS and FNA partner to create regulatory data platform

The Bank of International Settlements (BIS) has been working with FNA, a Londonheadquartered financial analytics and simulation specialist, to build a prototype regulatory data and analytics platform.

Nurtured under its Innovation Hub initiative, BIS has partnered with FNA and the Monetary Authority of Singapore to deliver an integrated regulatory platform that will enable central banks to evaluate the impact of emerging credit risks on the financial system.

This platform prototype draws on data sources including news feeds, contagion algos and interactive visualisations that will enable financial supervisors to react more promptly to credit risk events and to make better policy decisions based on a broader and deeper pool of supporting data.

Labelled Project Ellipse, the twostage project focused initially on how data-driven supervision could be enabled through machineexecutable digital reporting employing a common cross-border data model.

In Phase 2, the project applied

advanced data analytics, including network analytics, machine learning and natural language processing, to unstructured data and granular reporting data on loans. This stage of the programme set out to understand key correlations within the data set, how risk is propagated, and to evaluate market sentiment relating to borrowers.

The BIS intends to create a Project Ellipse collaboration community to share and build on this solution across financial authorities globally.

BME launches digital proxy voting service in partnership with Proxymity

BME has launched its digital proxy voting service for shareholders' meetings in partnership with Proxymity.

The new solution, accessible through Iberclear, BME's central securities depository, connects participant entities and issuers to speed up the voting process at shareholders' meetings.

The service will allow the management of shareholders' meetings that take place on domestic securities, cross border services securities and foreign securities not held by lberclear.

The partnership with BME and Proxymity means that investors will receive "golden source" meeting announcements direct from issuers in real time and be able to vote right through to the market deadline.

The launch of the platform was first announced in December 2021.

Davies acquires Sionic

Davies, the services and technology firm, has acquired Sionic, the international consulting and technology business, serving the insurance and banking markets.

Headquartered in London, Sionic specialises in technology transformation and digitalisation, international regulatory compliance, and risk management.

Sionic will join Davies' Consulting & Technology practice headed by CEO. Mark Grocott.

Sionic CEO, Craig Sher, will continue to lead the day-to-day operations and will join Davies' executive leadership team, with the wider team continuing in their roles within Davies.

In recent years the Sionic team has expanded its international offering to meet the increasing regulatory, commercial, trading and technology disruption needs across global insurance, banking, and other highly regulated markets.

The firm's 340-strong team operates across the UK, US, Canada, Switzerland, India, and Spain.

Davies' core service lines include claims solutions, legal solutions,





11 reasons

ION's secured funding solutions can help you win

ION offers three different solutions for secured funding, all under the Anvil umbrella. Each solution automates your workflows, manages the full trade lifecycle, and delivers data-driven insights whenever you need them.

Get the most out of your business' technology and see 11 reasons why ION can help you win.

See all 11 reasons





IHS Markit partners with Financial Recovery Technologies

IHS Markit (now S&P Global) has partnered with Financial Recovery Technologies (FRT) to deliver asset servicing capabilities for corporate actions and class actions.

Established in 2008 and headquartered in Massachusetts, FRT offers technology-based services to help firms file claims and collect funds made available in securities class action settlements through eligibility analysis, disbursement auditing and client reporting.

FRT's partnership with IHS Markit

aims to offer corporate actions data and processing capabilities to FRT clients while enabling IHS Markit clients to leverage securities class action recovery services.

The partnership will leverage IHS Markit's corporate actions solution that brings together technology solutions and managed data services that help capital market firms to reduce risk, increase efficiency and enhance service quality by streamlining, optimising and automating the whole corporate actions workflow for all asset-classes and markets.

and Metzler Bank, have conducted a securities lending transaction on blockchain without prior collateralisation.

The trade was processed via DekaBank's blockchain-based digital securities platform, the Secure Worldwide Interbank Asset Transfer platform or SWIAT, with technology support from Frankfurtbased software specialist Comyno.

The trading parties note that by lending via the SWIAT platform, the transaction will take place via a delivery-versus-delivery (DvD) transaction and established collateralisation requirements will no longer be necessary.

In a joint statement, the two banks indicate that transfers occur directly between custodian banks without moving securities between accounts at the CSD. This does not involve tokenisation and can eliminate the chains of custody that have traditionally supported securities lending activity.

For such securities transactions, trade and settlement now take place almost simultaneously, says Andreas Tanneberger, head of fixed income trading at Metzler Capital Markets.

Other industry partners are welcome to join this market initiative, released by Deka, which aims to establish itself as the industry standard for digital settlement. Participating partners will also have opportunities to offer their own services and products on the platform, and to develop the

insurance services and consulting and technology. Davies has more than 5,000 employees across the UK, Ireland, Bermuda, the US and Canada.

Davies' acquisition of Sionic follows BC Partners' deal to take a majority stake in the Davies

business, to support Davies next phase of international expansion and digital transformation.

German banks execute realtime securities lending trade on blockchain

Two German banks, DekaBank

COLLATERAL RESILIENCE & MARGIN EFFICIENCY

- Improve Collateral Resilience to Market Events
 - True Collateral Optimisation & Rebalancing based on liquidity and cost
 - VM Forecasting Reduce Cash Buffers
 - SIMM Threshold Monitoring to ensure no posting requirement
- Margin Efficiency lowers demands on firm inventory
 - | Margin Optimisation = Less Need for Collateral
 - Pre-Trade decisions ensure minimal margin needs
 - Intraday Margin Analysis
 - Margin Attribution | Understand Drivers | Day on Day Moves
 - Cassini gives you the tools to understand your margin and collateral needs, and to ensure optimal use of inventory.
 - A market leading optimisation model allows you to allocate collateral based on true cost of use, and to react immediately to changes in inventory needs or contraints.



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range of functions offered by the SWIAT platform.

Deutsche Börse releases digital post-trade platform

Deutsche Börse will launch a fully digital post-trade platform from Q4 2021, taking advantage of the framework established by the recently enacted German digital securities law.

This digital platform, known as D7, will support distributed ledger-based technology and links to cloud-based services, enabling market participants to digitise financial products with connectivity to established central and distributed markets and infrastructure.

The German market infrastructure group indicates that this will provide the foundation for same-day issuance and paperless, automated straight-through processing across the full transaction value chain, embracing issuance, settlement, payments, custody and asset servicing for a broad range of digital securities.

Deutsche Börse is developing the D7 platform in association with its long-term technology partners Digital Asset and Microsoft, along with DLTspecialist R3 and VMware.

It has partnered with a number of financial services companies to deliver the project, including BNP Paribas, Citi, DekaBank, Deutsche Bank, dwpbank, DZ Bank, Goldman Sachs, Raiffeisen Bank International and Vontobel. D7 will be implemented through a phased roll out that is likely to extend to 2024

In the first phase, scheduled to begin in November 2021, Clearstream Banking AG's new digital register will provide the foundation for securities issuance and custody in alignment with new legislation introduced earlier in 2021 under the German digital securities law, eWpG. This central register will link through Clearstream Banking AG Frankfurt, the German CSD, to existing core post-trade infrastructure including the TARGET-2 Securities platform.

The group anticipates that by mid-2022, more than 80 per cent of German ISINs will be eligible to be digitised through the digital central register, enabling same-day issuance and paperless, automated STP for certificates and warrants issued at Clearstream Banking AG.

As an open platform, D7 will support decentralised and delivery-versus-payment (DvP) settlement and custody systems. This will offer connectivity to a range of existing DLT platforms, including FundsDLT for fund administration and distribution and HQLAx for collateral transformation and lending of collateral baskets.

Digital bank EQIBank launches DeFi platform for lending crypto

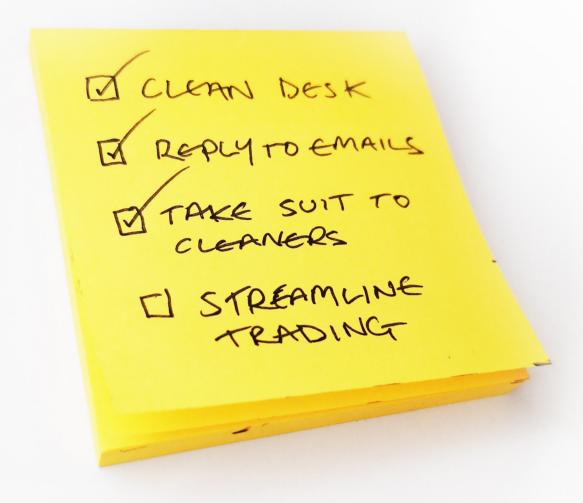
EQIBank has launched EQIFI, a unified platform for DeFi products, designed to overcome traditional banking issues and make the lending and borrowing of cryptocurrencies and certain fiat currencies more accessible.

EQIFI is a decentralised protocol for pooled lending, borrowing and investing Ethereum-based cryptocurrencies, stablecoins, and select fiat currencies. Its new DeFi platform comprises newly introduced fixed- and variable-rate lending products, as well as an advanced yield aggregator and interest rate swaps.

These new products simplify DeFi, EQIBank says, consolidating a range of services into a single user-friendly platform, and are designed to address shortcomings within traditional banking, such as high fees, outdated technology, obsolete pricing models and expensive cash handling.

Run by holders of the platform's native EQX token, EQIFI operates under a decentralised ethos, giving community members the power to make important decisions regarding the project's future, such as listing and delisting assets and tokens, adjusting interest rates, modifying collateral limits and pausing loans or deposits.

EQIFI CEO Brad Yasar says:
"Through blockchain technology,
EQIFI democratises financial
products previously only available to
a select few, and we are confident
that EQIFI is best positioned to
bring these products to clients who
want to embrace the evolution of
digital banking, in an accessible and
regulated manner."



Say goodbye to tedious tasks. Say hello to potential.

Wouldn't Securities Finance be simpler with more integration and automation? Shouldn't the day be about opportunities, not mundanities?

It's time to change the way we work.







Bridging the value chain

Comyno's Markus Büttner and Frank Becker discuss the advantages of a single hybrid platform that covers the full securities finance value chain and has an established track record in the execution of blockchain-based trades

The securities financing market is known to be undergoing structural change, with a wide range of optimisation needs. At the macro level these include ever increasing regulatory requirements, a lack of automation and process standardisation and, consequently, a big human error factor and high costs. But problems are also omnipresent at the micro-level in day-to-day business practices. These include operational inefficiencies due to multiple manual and error-prone work steps or processes resulting from siloed, fragmented legacy systems. The causal chain related to this dilemma is well known everywhere and can be found in figures, data, and facts — reflected in monetary terms or in increasing dissatisfaction from the people involved.

But how can this hassle be stopped? It is worth taking a closer look at Comyno.

Founded almost two decades ago, Comyno pivoted from a specialised consulting firm into a software development boutique for the securities finance industry. Its unique combination of strategy, business and IT expertise found its purpose in the creation of Comyno's modular trading software, C-ONE.

Leading private and public financial institutions, asset managers, clearing houses and triparty agents trust Comyno's services and products. Further development and expansion are managed by its founder Markus Büttner, Admir Spahic and Frank Becker.

A particular focus lies on trend identification and innovation, as well as value-added enhancements of its hybrid platform. The solution not only covers the entire value chain of current securities finance business

processes, but already has a proven track record in the execution of blockchain-based trades.

Supporting the world's first DvD transaction in real-time

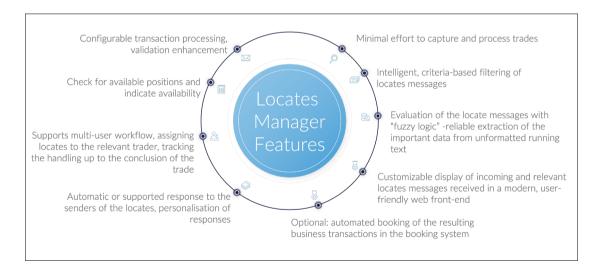
Comyno supported two German banks to conduct a securities lending transaction without prior collateralisation. The trade was processed on a blockchain-based digital securities platform using Comyno's securities finance software C-ONE. The trading parties point out that the delivery-versus-delivery (DvD) transaction makes the established collateral requirements unnecessary. Transfers occur directly between custodian banks without moving securities between accounts at the CSD. This does not involve tokenisation and can eliminate the chains of custody that have traditionally supported securities lending activity. Trade and settlement

existing tools to optimise business processes.

One of these tools is the Locates Manager. This has been developed to provide trading desks with a sophisticated solution to manage the ever-growing number of locate messages which come in through various channels.

Comyno's chief operating officer Frank Becker explains: "This is a problem for the trade desk today, as it will be tomorrow. The goal must be to process the trade initiation as quickly as possible, no matter what environment we are talking about — in the current legacy world or using any DLT-based solution in the future."

Chief executive Markus Büttner adds: "Bringing structure and clarity to unstructured and diverse information is a challenge. There are countless locate

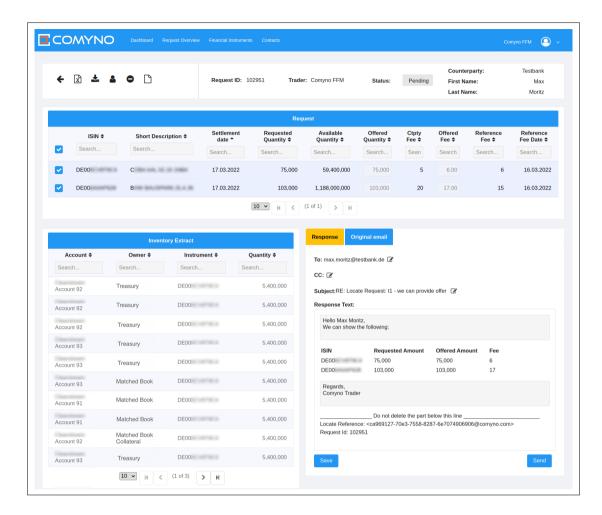


can now take place almost simultaneously for such securities transactions. This reduces counterparty risk, as well as delivering a range of other resource-saving benefits.

Comyno is proud to have played an active role in the achievement of this industry milestone and aims to maintain itself at the forefront of innovation. This includes ensuring the flexibility of the platform from a technology standpoint and continuously improving messages with single or multiple security requests being sent every day. Each request contains more or less usable information, with the result that no trader can manage the process efficiently, hence facing the risk of errors."

C-ONE Locates Manager

The software pre-processes locate requests originating from multiple sources and displays the



messages in a standardised, easy-to-read format. The module significantly reduces the manual effort involved in responding to locate requests and, therefore, reducing response time to counterparties. Coupled with additional functionality such as automated replies and trade booking, efficient processing of incoming locate requests can be achieved with minimal manual effort.

Comyno's Locates Manager is a powerful tool. The potential lender is improving the utilisation of its inventory and increasing its revenues, while the requesting entity has an improved chance of finding securities in the depth of the pockets of its trading network. The traders can focus on concluding the trade itself, or on more complex

activities, while the laborious, time-consuming tasks are covered by the Locates Manager.

The installation of the C-ONE Locates Manager does not even require implementation of a complex, much larger system environment. The dedicated module can be installed with limited interaction with the existing technology framework of the lending desk – just basic static data, the available inventory, and a connection to the email server to begin with.

This generates immediate benefit with limited effort and can be further integrated into the overall architecture if required.

The Locates Manager is part of a one-stop-shop

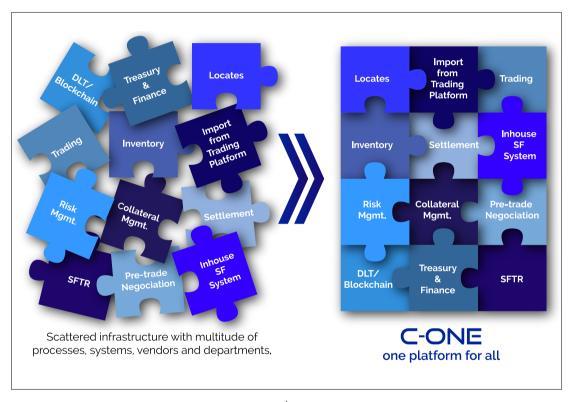
approach offered by Comyno's securities finance platform C-ONE in which the worlds of securities lending, repo and collateral management for 'traditional' and digital assets have merged.

Comyno's hybrid platform

This hybrid platform supports securities lending and borrowing (SLB), collateral management, regulatory reporting and blockchain in one single source.

and collateral management system, a multi-entity and multi-product platform across asset classes.

This enables clients not only to manage their whole securities finance business with C-ONE, but also grants online access to and for their clients and counterparts, including white-labelling potential simply via the web. C-ONE provides seamless possibilities for position sharing, locates management as well as affirmation processes. Furthermore, clients and counterparts can

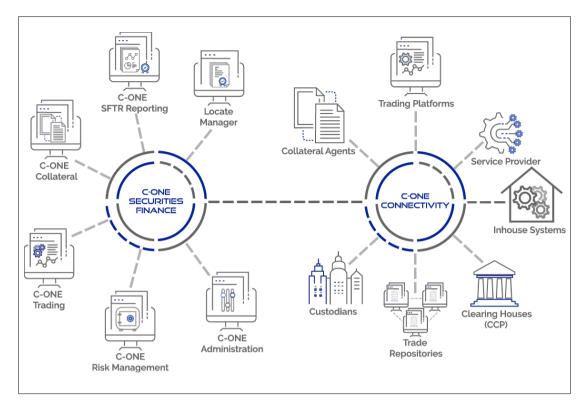


Depending on customer requirements C-ONE is available on-premises or as a software-as-a-service (SaaS) model. Its modular approach leads the securities finance business step by step into the future. A particular focus here is to expand the existing business while increasing profit simultaneously.

The innovative C-ONE suite offers a complete solution for securities finance trading and collateral management, covering the complete value chain of the corresponding transactions. It is built as a 'hybrid platform', incorporating features for an in-house trading

see 'their side' of the trading activity, as well as 'their side' of the collateral and exposure management. Even the profit and loss (PnL) features can be used by all entities with access to the platform.

One of the biggest cost drivers for the industry is the multitude of internal and external parties involved in securities finance transactions. The variety of software systems and IT components, as well as a big number of manual workarounds and interfaces which are necessary to fill gaps, lead to high inefficiencies. Comyno has tackled this industry



challenge for the benefit of our market with its C-ONE solution: with an extensive modular approach that covers the whole value chain, both from a business and technical perspective.

"Launching Comyno's hybrid platform C-ONE at your company means moving your securities finance business onto an efficient, modern, and state of the art system. Low entry costs and customised solutions through its modular and extensible approach boost profits right from the start. The emerging area of digital assets paves the way for Comyno to add more modules to cover the entire 'digitised' lifecycle," explains Markus Büttner.



Frank Becker COO & Head of Sales Comvno



Markus Büttner Founder & CEO Comyno

OCC Stock Loan Programs

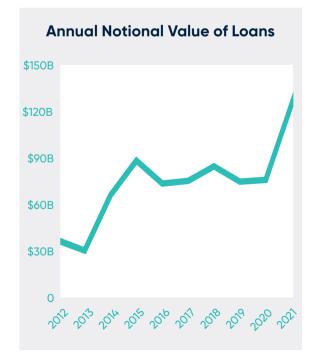
Key Benefits

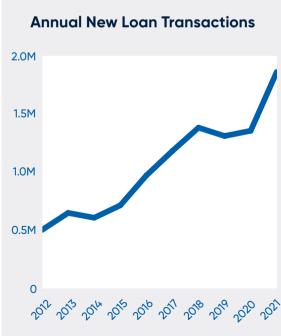
- Counterparty disintermediation
- Expanded credit and trading allowances for cleared activity
- Risk weighted asset savings of approx.
 95% compared to uncleared stock loans
- Margin offset
- Automation and streamlined operations

HEDGE LOAN PROGRAM MEMBERS A

125B

AVERAGE DAILY LOAN VALUE AT YEAR END 2020







The securities finance regulatory horizon

For firms using derivatives and securities finance transactions, a wave of new regulatory amendments is demanding that they review their regulatory reporting architecture and adapt to changing reporting obligations. S&P Global, Market Intelligence, Global Regulatory Reporting Solutions's Igor Kaplun and Ron Finberg offer guidance on managing this regulatory pipeline

Financial markets, and the securities finance market in particular, have been facing an increasing number of regulatory reporting obligations over the past few years. This has impacted not only plain securities lending and repo trades through the Securities Finance Transaction Regulation (SFTR), but also synthetic securities financing trades, involving

swaps, options, futures or forwards, through the lens of various derivatives-focused regulations all over the world.

For those firms using derivatives and securities finance which have heavily invested in developing disparate internal systems at great cost, both

for implementation and maintenance, there is little reprieve in sight with more regulations and investments on the horizon to keep up with the steady flow of incoming additional requirements. S&P Global Market Intelligence regulatory reporting experts have compiled a short summary — one that is by no means final — of the main regulatory changes expected. Securities finance firms should find this article useful when reviewing their regulatory reporting architecture and preparing for the upcoming wave of new regulatory changes.

EMIR REFIT and equity derivatives

With SFTR planning and implementation now well in the past, European Market Infrastructure Regulation (EMIR) REFIT is the new regulatory buzz. First arriving in June 2020 with clearing threshold obligations and requirements to report for non-financial counterparties (NFCs), a much larger update arrives for REFIT when its Technical Standards for Reporting goes live.

Both the European Securities and Markets Authority (ESMA) and the Financial Conduct Authority (FCA) published similar consultation papers in 2021. Feedback on those papers, and regulator approval from the EU and UK, has yet to be published at the time of writing. Taking into account the requirement of an 18 month lead time following parliamentary approvals, we could see the new technical standards go into effect by Q4 2023.

Despite the go-live date being still well in the future, complexities of the REFIT require adequate preparation — with 203 fields and 41 per cent of them being newly introduced — to comply with the updated standards. Below, we review a number of the changes affecting equity derivatives often traded by securities finance teams.

Lifecycles

As part of the REFIT, EMIR is introducing new event types and action types to those that currently exist. The goal is to provide additional granularity

TABLE 4 COMBINATIONS OF ACTION TYPES AND EVENT TYPES

								E	vent 1	Гуре			
		TRADE	STEP-IN	PTRR	EARLY TERMINATION	CLEARING	EXERCISE	ALLOCATION	CREDIT EVENT	INCLUSION IN POSITION	CORPORATE EVENT	UPDATE	No Event Type required
	NEW	т	Т,Р	т		т	т	т		Р	T, P		
Action Type	MODIFY	Т,Р	T,P	Т,Р	T,P		T, P	т	T,P	Р	T,P	T, P	Р
Τy	CORRECT												T,P
pe	TERMINATE		T,P	T,P	T,P	т	T,P	т	T,P	T,P	T,P		
, i	ERROR												T,P
	REVIVE												T,P
	VALUATION												T,P
	MARGIN UPDATE												T,P
	POSITION COMPONENT												т

Source: ESMA Final Report Technical standards on reporting, data access and registration of Trade Repositories under FMIR REFIT

to describe why events are taking place. Examples are descriptions for new actions, terminations or modifications that are the result of an allocation, post-trade risk reduction (PTRR), credit event or corporate events (see ESMA chart below). For equity derivatives, the corporate event type is of interest. The new event type will now allow reporting firms to explain in more detail modifications and new transactions of derivatives that are the result of stock splits and mergers of their underlying equities.

ISO 20022 XML submission format

Familiar to firms currently reporting under SFTR, the REFIT update will also require all submissions to trade repositories (TR) to be in the ISO 20022 XML format. This change is expected to improve data quality as it standardises the submission format across all reporting entities and TRs. As a result, firms currently submitting to TRs in CSV or fPML formats will require processes to comply with the ISO standard.

Counterparty details

Another item that should be familiar to SFTR reporting firms are the new counterparty fields that are being introduced. This will add:

- · Entity Responsible to the trade
- Non-Reporting Counterparty Identifier type indicator if LEI is used
- Nature of Non-Reporting Counterparty description of non-reporting party NFC/FC/Other
- Corporate Sector of Non-Reporting Counterparty

 sector description for NFC/FC
- Clearing threshold of Non-Reporting
 Counterparty indication if above the clearing threshold
- Reporting Obligation of Non-Reporting Counterparty – whether they have
- EMIR obligation

While the data fields are not complicated, they do put the burden on reporting firms to collect additional details about their counterparties for use in submissions.

Equity options

Currently, there are five option-specific fields under EMIR reporting. That number grows to 11. Of the

current five, Option Type, Exercise Style, Strike Price and Maturity Date of the Underlying will remain. The Strike Price Notation field is being removed.

Two new fields are explicitly relevant to equity options: Option Premium and Option Premium Currency. The Option Premium field is the amount per option paid by the buyer. The value for this field mimics that of Price.

Cryptocurrency derivatives

The REFIT aims to fill a gap for how to report cryptocurrency derivatives. As a derivative product, crypto products such as Contracts for Difference (CFDs), options, tokens and total return swaps fall under the scope of EMIR. However, reporting them is difficult. As they lack ISO 4217 currency codes, they can not be submitted under the Foreign Exchange asset class. As a workaround, most firms currently report cryptos under the Commodity asset class, using the Commodity Base description of 'Other'.

With cryptocurrency derivatives volumes rising substantially to billions of dollars per day for both over-the-counter (OTC) and exchange-based offerings, EMIR REFIT introduces a new field called 'Derivative based on Crypto-assets'. While neither the FCA or ESMA directly define the asset class of cryptocurrencies, the new field will allow regulators to identify how exposure and risk relates to the cryptos.

Direction field

Another area where REFIT aims to align reporting to how products are booked and traded is with an adaptation of the Direction field. Currently, the field is limited to Buy and Sell. However, Buy and Sell do not correctly describe multiple leg products such as swaps and forwards where there is payment made by both sides of the trade.

As an alternative, REFIT introduces the 'Direction of Leg 1' and 'Direction of Leg 2' fields to be used instead of the Direction field for swaps, forwards and forward rate agreements (FRAs). In place of the Buy and Sell values, firms will report whether they are the 'Payer' or 'Receiver' of each leg. For equity derivatives, the change does not affect equity contract for difference (CFDs) or options

and futures, but securities swaps will fall under the new format.

CFTC Rewrite

One year after the publication of the CFTC rewrite final rules, released in January 2021, the implementation timeline has been extended for an additional six months to 5 December 2022 from the initial compliance date of 25 May 2022.

By issuing this no-action relief, the CFTC Division of Data is indicating that they will not recommend enforcement action against anyone that does not meet the 25 May 2022 compliance date.

Ultimately, this is welcome news to the industry that has been expecting a reprieve from the May timeline and an additional six months will help both the SDRs and market participants prepare for the implementation.

The rewrite represents the most significant change to the CFTC reporting rules since they first went live in 2012. The entire derivatives ecosystem, from trade capture, risk management and confirmation systems, will potentially be impacted in some form to ensure data is captured accurately and represented in the new formats required.

This announcement also clarifies to the industry that the CFTC rewrite will be implemented in two phases. Phase 1 will be actual submission changes (new data fields, timing of trade state, etc.) for 5 December 2022 and Phase 1 to bring in UPI and ISO in Q4 2023.

The UPI and ISO implementations are significant in their own right and it will be interesting to see how these will be rolled out, particularly with the work around EMIR REFIT running in parallel.

The delay to the CFTC rewrite also introduces inherent delays to suggested REFITS and rewrites in Canada, which has historically stayed tightly integrated to the US reporting rules.

As with any delay or extension to the compliance

date, it is imperative that firms use this opportunity to review their current systems, processes, technical and product solutions and ensure they are fit for purpose to meet the next regulatory challenge in front of them.

S&P Market Intelligence is partnering with clients to help them with the CFTC rewrite and is already servicing over 500 of the largest customers around the world with their trade and transaction reporting requirements. Clients using S&P Market Intelligence for the current CFTC requirements will seamlessly migrate to the Rewrite for the December 2022 implementation date.

SEC 10c-1

On 18 November, the SEC released for comment proposed Rule 10c-1 under the Securities Exchange Act of 1934. The comment period was initially 30 days, but the SEC subsequently reopened the consultation with an amended close date of 1 April.

The core objective of this proposal is to increase transparency in the securities finance market by requiring any person lending securities to report that transaction to a registered national securities association (RNSA). The RNSA being proposed here is the Financial Industry Regulatory Authority (FINRA), which will collect and publicly disseminate information about each transaction and aggregate information.

Let's examine some of the key elements of the proposal:

Who needs to report under SEC Rule 10c-1?

Any lender or lending agent would be required to report. A lending agent is identified as an intermediary such as a bank, broker-dealer or clearing agency that helps lend securities on behalf of the beneficial owners (which includes banks, insurance companies, pension funds). For example:

Where insurance or pension funds employ an agent lender to loan their securities, the agent lender would be responsible to report. If an agent lender is not used and the beneficial owner lends securities directly, then the responsibility lies with the beneficial owner.

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- Clients of broker-dealers that take part in fully paid lending programmes would have their loans reported by their broker-dealer.
- Clearing agencies that have programmes that lend on behalf of beneficial owners would be responsible for providing the stock lending activity.

As we have seen with other regimes, the reporting could be delegated by the client to another party and there is a point in the proposal where a reporting agent can be designated through a written agreement.

What needs to be reported under SEC Rule 10c-1?

Any securities lending trade involving equities or fixed income would need to be reported. If we compare the SEC's 10c-1 proposal against ESMA's SFTR, we see that participants that are in scope for reporting under SFTR would be well versed in retrieving the vast majority of fields required for 10c-1, as most of them are reported in SFTR. Although there are similarities in terms of data required, they have different objectives. The SEC is looking to improve transparency in the market, while ESMA wanted to measure risk and exposure in the securities finance market, which additionally includes repos, buy or sell backs and margin loans.

The following table on page 27 covers the data points requested by the SEC proposal. The fields in black indicate information that would be made public and those in green refer to fields that would be kept away from the public eye.

The key open question is how to determine whether a firm has to report. It is unclear if the determination is at the product level (US securities), which would capture non-US entities that lend US securities? Or is the scope limited to firms domiciled in the US, regardless of where the actual security being lent is?

How should the trades be reported under SEC Rule 10c-1?

For those that have been involved in trade and transaction reporting, there is a concept of reporting a trade with a unique trade identifier (UTI). The way

this has worked for other regimes was that, typically, the UTI could be system-generated by a trading venue, or CCP-generated if trades are cleared or involved in dual sided regimes generated by one of the counterparties.

In the SEC proposal, however, it seems that subsequent modifications would need to be reported by a registered national securities association (RNSA)-assigned UTI. This means when a market participant submits a new trade to the RNSA, the RNSA would have to acknowledge the trade, assign a UTI to it, send it back and only then would the client be able to submit subsequent modifications associated with that trade with the same UTI. The SEC proposal around UTI is similar to the current CFTC derivatives obligations where a trade repository (Swap Data Repository) would create the UTI when the reporting party is a non-registered entity (non-SD, non-MSP, etc.)

The format, in which the reports need to be compiled, is still unspecified and there is an open question regarding whether this should be defined by the SEC or the RNSA. What we do know is that the reporting agent is required to submit the necessary information to the RNSA within 15 minutes after the securities loan is affected or the terms of the loan are modified. In addition, the proposal requires each lender to submit their on-loan balances, as well as their available-to-loan inventory at the end of each business day.

These three regulations and REFITS are only the tip of the regulatory iceberg hitting the physical and synthetic derivatives and securities finance ships. Among many others, the Monetary Authority of Singapore (MAS), the Australian Securities and Investments Commission (ASIC), the Hong Kong Monetary Authority (HKMA), the Japan Financial Services Agency (JFSA), are all going through some sort of REFIT, putting even more pressure on the firms trading those products in scope. It is the right time for each firm to take a hard look at its current process and to assert its scalability and sustainability in an increasingly demanding regulatory reporting environment.

SEC 10C-1 proposed fields	SFTR#	SFTR field names	Comment
Legal name of the issuer of the securities to be borrowed, LEI of issuer if available	2.54	LEI of the issuer	SEC's approach to potentially allow Legal Names of the Issuer instead of only the LEI would be well received. We have found that for all the securities that we enrich, US issuers are the main offenders to not have a LEI.
Ticker symbol/ ISIN/ cusip /other identifier of those securities	2.41	Security identifier	
Time and date of the loan	2.12	Execution timestamp	
Name of the platform or venue, if one is used	2.08	Trading venue	In addition to providing MIC codes of the trading venues, SFTR also allows for XOFF (traded off exchange) and XXXX (OTC)
Amount of securities loaned	2.46	Quantity or nominal amount	
Rates, fees, charges and rebates for the loan as applicable	2.58; 2.59; 2.66; 2.67	Fixed rebate rate;Floating rebate rate; Spread of the rebate rate; Lending Fee	
Type of collateral provided for the loan and the collateal margin percentage	2.75; 2.89	Type of collateral component; Haircut or margin	
Termination date of the loan if applicable	2.14	Maturity date (End date)	
Borrower type, e.g. broker, dealer, bank, customer, clearing agency, custodian	N/A	No equivalent	S&P Global platforms currently store regulatory classifications for SFTR, Dodd Frank, EMIR and others. Additionally, each participant must stipulate what kind of entity they are (custodian, corporation, dealer, asset manager, etc). These fields could be leveraged to populate a transaction report.
The legal names of the parties to the loan	1.03; 1.11	Reporting counterparty; Other counterparty	SFTR also include branches of the counterparty when trades are conducted by a branch
When the lender is a broker-dealer, whether the security loaned to its customer is loaned from the broker-dealer's inventory	N/A	No equivalent	
Whether the loan will be used to close out a fail to deliver pursuant to Rule 204 of Regulation SHO or whether the loan is being used to close out a fail to deliver outside of Regulation SHO	N/A	No equivalent	



Digital transformation affects every aspect of our personal and professional lives. The ability to store and transfer data, and to analyse and process it to deliver actionable information, drives virtually every aspect of modern life. Similarly, within the financial markets digital transformation has gained significant momentum over the recent past. As such, it is no surprise that the securities finance and collateral industry is looking closely at how to leverage digital technologies to change existing business models and processes and to provide new revenue and valuegenerating opportunities.

In our industry, as with many others, such a transformation is vital to meet today's challenges and

for future growth. The good news is that there are multiple innovative initiatives available today from providers like FIS and from industry partners. This article looks at what is driving this digitalisation in our domain and how market participants are addressing it.

What do the statistics say?

Digitalisation and the need for efficiency improvements represent broad objectives, but what are the actual numbers behind this pressure? In 2020, FIS Securities Finance Market Data recorded an average daily loan count of 2.32 million. In 2021, these numbers increased very slightly, by around 2 per cent, to 2.37 million a day. The first quarter

of 2022, however, has seen a jump to 2.71 million loans per day. So, while the difference between 2020 and 2021 was marginal, the growth in activity between 2020 and 2022 shows a 17 per cent increase in activity.

The number of loan 'units', defined as one share or bond lent or borrowed, is on the rise too. In 2020, each day saw an average of 2.06 billion units lent. Last year saw this jump to 3.27 billion units, and the first quarter of 2022 has seen daily averages of over 4.05 billion units, almost double the volumes moved across the market in 2020.

Revenues have grown during the same period — but only marginally, indicating that the industry is working much harder to gain these incremental advances. The outlook for 2022 would suggest that the steep rise in transaction rates will continue, with each additional loan creating frictional costs for booking, settling, marking, and reporting. With the additional spectre of enhanced penalties for settlement failures looming, the need to automate and drive those costs down intensifies further.

Taking advantage of machine learning

Widening the pipework to accommodate the increase in breadth and depth of activity is only part of the solution. Successfully managing these increased flows can only come through effective, accurate and timely connectivity from the origination of the borrow request to the settlement of the return leg of the desired instrument, all against the most economically suitable collateral.

Breaking that out into logical steps, FIS has machine learning processes in place that can identify and address the requests most likely to turn into actual borrows, enabling the many thousands of speculative requests to be downgraded. This process enables downstream activities to focus on the requirements that will deliver for the requesting clients, while facilitating trades that earn revenues.

Once orders are processed effectively, they need to find the right supply. There are several platforms and

solutions available on the market, each addressing specific parts of the puzzle rather than the entire cross-product picture. An efficient and automated marketplace that delivers the most economic match will outperform simple rules-based messaging systems.

But what does 'most economic match' mean? The cost to borrow a security can no longer be measured by just the fee or rebate. Reporting costs, the cost of collateral delivery, settlement failure risks and balance sheet utilisation all play a part in determining the actual cost of a transaction. With loan count activity levels on the rise, and revenues lagging frustratingly, margins are under pressure. As a result, making the most of every trade becomes increasingly important.

The application of machine learning will enable future platforms to make increasingly accurate and effective recommendations for matching availability and demand. This will bring down the costs of transactions, preserving and even growing margins.

New connections Using the CDM

The current flow of securities lending post-trade processing is being challenged both by regulation to shorten settlement timelines and by tighter fail control. However, FIS is working on significantly improving and streamlining existing processing times to enhance the interoperable flow. This includes working with those clients who are only partly on our platform, planning communications with other vendor platforms through the Common Domain Model (CDM).

Callback message processing, when borrowers and lenders are on separate platforms, is currently a manual task. This process can result in mismatches that can create costly headaches, from delays in the return of collateral to the application of shares to the incorrect loan, which can be time consuming to resolve. Recalls are another area where not all participants are using the automated solutions in the market, resulting in incorrect recall processing. With regulations moving toward accelerated settlement dates in the US and fines in EMEA, market participants will not have time to research and correct errors caused by manual processing which

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risk failures or fines. Removing as much manual intervention as possible will play a part in alleviating some of these pain points.

As new products come to the market, connecting to these platforms will become integral in terms of giving clients the connectivity they need to support their businesses.

Interoperability: advances in pre- and post-trade

In light of ever-growing trading volumes and squeezed margins, efficiency gains are more important than ever. In the past, having conceptual knowledge of who will accept what collateral has been good enough, but today that approach needs a technical overhaul. To empower efficient trading decisions, deep sets of data need to be analysed.

From a simple availability perspective, firms need to know what positions they have, where they are located, what they are worth and where they can be used. These are simple enough questions on the face of it, but as you drill down into each, the need for the right wiring is evident. This can be thought of as a three-part maxim: centralise, analyse, optimise.

Gathering your inventory of usable positions demands up-to-date feeds of trading, liquidity and settlement activity. That calls for connectivity with all the trading activity across the firm, as well as with the custodian and triparty network to centralise what assets are unencumbered in the box at any location and all in real-time. That usable inventory should then be overlaid with a centralised store of collateral schedules for all the possible uses of those assets: triparty shells, central counterparty (CCP) schedules, central bank schedules and bilateral counterparty schedules. It is vital to have connections in place to external infrastructure providers to import the eligibility rules, pricing rules and concentration limits.

Once the firm knows which assets are at its disposal, and where they can be used, the next step is to look at what is needed. Those requirements can be affected by revenue objectives as well as liquidity,

capital, and collateral needs across CCPs, triparty, central banks and bilaterally. That will become simpler in a distributed ledger based world, but in the meantime, those are connections that every firm in the market must manage and may be best handed over to a trusted partner to benefit from scale. With those connections in place, the firm will be able to analyse inventory potential in detail, and map strategy to goals for liquidity, revenue, and collateral. Only then can the next optimisation step be taken.

As the traditional world of marketable securities moves along the path to its digital future, interoperability and connectivity are intrinsic necessities. The Common Domain Model will help with standardised representations of assets, trades, schedules and so forth, all of which are key staging posts along that road. It is incumbent on technology vendors and infrastructure providers to support those standards as the lines between traditional assets and digital assets become increasingly blurred.

In conclusion

In an increasingly complex and globally connected world, making the right connections in the right way is essential. Overlay distributed ledger delivery with the benefits of having market participants communicating using the Common Domain Model, and the market has the template it needs for efficient order origination, management and matching, all of which is key to ensuring the accurate and timely delivery and return of assets and optimised collateral. Many of these market developments have been discussed in the abstract for years, but they are now a reality — and, indeed, a necessity if the market is to grow and develop both efficiently and effectively.

About FIS

Whether you're looking to trade in the cloud or take advantage of Al-driven risk analysis, FIS Trading & Processing has everything you need. With the most established and comprehensive set of front-to-back solutions in the market, you can harness global automation, gain a real-time view of your trading and operations, and access next-generation post-trade operations.

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Securities lending CCP services: redesigning the model

Matt Wolfe, executive director, clearing systems at OCC, explains the evolution of the company's CCP services for stock loan transactions and the benefits anticipated from DLT-based upgrades to its Market Loan Program

For nearly 30 years, OCC has worked with clearing members and the US equities depository to increase the operational efficiency of the stock loan system. As part of our technology transformation, OCC's new clearing platform plans to enable a range of automation and provide new ways for transactions to be cleared with greater transparency and ease.

OCC operates two stock loan programmes in which it acts as a central counterparty (CCP) for stock loan transactions. The first is the Stock Loan/Hedge Program (formerly 'Hedge'), which was introduced in July 1993 to allow clearing members to use borrowed and loaned securities to reduce OCC margin requirements by reflecting the real risks of their intermarket hedged positions. Transactions are initiated directly between clearing members on a bilateral basis (i.e. broker-to-broker model). The second is the Market Loan Program, through which OCC processes and maintains stock loan positions that originated through a loan market. Transactions are initiated on either a bilateral basis or anonymously through a multilateral loan market (i.e. the market model of matching bids and offers).

Both programmes rely on the US equities depository to facilitate the settlement of equity securities and cash collateral between members. Once validated and settled, OCC novates each transaction and maintains and margins each loan, with the daily mark-to-markets moving through its settlement system. In addition, OCC provides posttransaction reporting capabilities including real-time reporting of executed transactions, stock and cash movements through the US equities depository, as well as record keeping and reporting via industry standard formats. Additional key benefits include counterparty disintermediation, expanded credit and trading allowances for cleared activity, regulatory capital savings of approximately 95 per cent compared to uncleared stock loans, margin offsets, and automation and streamlined operations.

Transaction volume and average notional value of loans at OCC grew significantly in 2021.

There were nearly 1.9 million annual new loan transactions, a 38 per cent increase over 2020, and average daily loan value at year-end grew 65 per cent at US\$125 billion. Our current system has handled this steady increase in both volume and notional values extraordinarily well. However, the new system will offer even greater flexibility and resilience for the future.

When the new platform launches, OCC will continue to support both the Hedge Program and the Market Loan Program. We plan to introduce changes and enhancements to the transaction workflows for both programmes intended to improve reconciliation ability, reduce operational processing and costs, and track and improve the completeness of records in real-time. We aim also to expand OCC's guarantee and further reduce counterparty credit risk, while providing balance sheet savings through the netting of cash flows.

Currently, in the case of Hedge, when the lender and borrower have negotiated the loan the details are sent to the depository. Following the delivery-versus-payment confirmation, OCC records and guarantees a loan between the lender and the borrower. The delivery confirmation of the current system does not include the terms of the loan (e.g. the dividend rate, the rebate rate, any term structure, etc.). This creates gaps in what OCC can guarantee, causing the lender and borrower to have some residual bilateral credit exposure. The lack of information is also a barrier to expanding clearing services such as supporting non-cash collateralised loans.

Under the new programme, OCC will have the full contract details, enabling OCC to expand its guarantee of Hedge Program transactions. An example of this improvement is that OCC will be able to maintain rebate rates and calculate accrued interest. The accrued rebate amounts will be settled on a net basis with OCC, replacing the current process of creating payment orders for every counterparty. Having full visibility into the contract details enables OCC to expand the products and services that it offers over time.

The Hedge Program will eventually be decommissioned and clearing members will migrate to a single enhanced Market Loan Program which will handle stock loans that are either bilaterally negotiated or matched through a Loan Market. To support this enhanced Market Loan Program, OCC is utilising Axoni's distributed ledger technology (DLT) platform, AxCore, which is slated to be hosted in the cloud pending regulatory approval. Later this year, OCC will release technical specifications, sample data and layouts for the new platform, and testing is scheduled to begin in 2023.

Shared distributed ledger

Since we needed to replace the current system, we believe this is a good opportunity to be forward looking and implement DLT because it allows programme participants to track a securities lending transaction throughout the entire lifecycle on a shared distributed ledger. This is important because it can help address issues that may result from reconciling individual books and records. Currently, OCC's role is based upon creating daily files of information about transactions and contracts and then distributing those files through a variety of means to programme participants. To receive the files and compare the information to their internal books and records, programme participants need specialised systems to decrypt, unpack and load the required information into their internal systems.

OCC's new Stock Loan system and programme are targeted at reducing operational costs and risk across market participants. The goal of implementing DLT is for both the lender and borrower to have a direct connection into a ledger and be able to see in real time what their positions are. In addition, users can stay connected to OCC and any relevant counterparties, confident that they are working off the same version of the contract as the counterparty. This means that, rather than waiting for a daily update, the state of a contract is visible in real-time throughout the day.

To summarise, market participants can look forward to the following enhancements as part of the new

platform and programme:

- Reducing reconciliation processes: prematching of data and a shared ledger provides each party access to transactional data in a consistent, ordered, and synchronised format.
- Shared workflows: participants can process loans or post-trade activity in a consistent manner.
- Standardisation: harmonisation of data formats and business logic can streamline processes and result in greater standardisation.
- Open Innovation: open APIs with standard integration points enable the opportunity for greater innovation and ease of onboarding for new vendors, reference data providers, or borrowers and lenders.
- Auditability and transparency: participants
 that are not necessarily direct counterparties
 to the trade, but are required to manage
 risk or provide a service, can now gain
 full transparency into the gold record data
 (depending on level of permissioning). Agent
 lender disclosures and regulatory compliance
 (Reg SHO) can be done seamlessly and at
 lower cost via DLT.
- Real-time infrastructure: this eliminates
 the reliance on batch files and moves
 the industry from end-of-day to real-time
 reporting, with the ability to access data ondemand. This also increases transparency
 for internal risk management and more
 informed trading decisions.

Interested clearing members will have the option to adopt a node following the new platform launch. These nodes can be located in a data centre or in the cloud and allow users to customise the format, type and frequency of updates received.

It is important, however, to note that the new platform is not radically different from the current system, just more efficient at sending and receiving data. Clearing members can choose to maintain their current systems and standard messaging protocols, and our new platform will still be able to process and translate messages received in the existing information.



FIS® is your strategic and innovative partner for growth, providing you with resilient, secure and scalable technology solutions, today.

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Collateral resilience: more than just understanding initial margin

Liam Huxley, CEO of Cassini Systems, examines volatility and trading risk in derivatives markets and the importance of putting post-trade management at the core of the trade control process

The volatility we have seen across derivative markets in recent years has presented many challenges to portfolio and risk managers, but one area that has become more significant in recent volatile periods has been the swings in margin requirements to support derivative portfolios. This impact has been across the board, but has been recently highlighted in areas such as commodities and emerging markets. In addition, increasing regulation — and specifically the rollout of the Uncleared Margin Rules (UMR) — has broadened the amount of the portfolio that has to be collateralised, which has created even more stress on collateral demands and on meeting counterparty obligations.

We have seen many examples in recent times where

outsized swings in margin requirements have forced firms to unwind positions or, in some cases, to suffer more severe consequences, with some firms being forced to cease trading altogether. Recent cases that spring to mind include an energy firm whose margin has gone up by 600 per cent, and a wealth manager that had to unwind US\$400 million of positions in the volatile markets of 2020

Having to back out of trading positions, or to take losses because of collateral liquidity issues, is the last thing any risk manager should countenance.

We are therefore seeing many firms kick off initiatives to strengthen their collateral processes and

transparency, as well as more awareness of the need for collateral resilience as a key control point in the trade control matrix

What is collateral resilience?

So, what does this really mean? In essence, collateral resilience is an operating model that ensures there is sufficient collateral available to cover all trading demands and, specifically, the unexpected impact of volatile markets.

This means putting post-trade management at the core of the trade control process, alongside compliance, market risk, and credit risk management, and implementing tools to track collateral impact from pre-trade through the lifecycle until closeout.

Given the siloed nature of technology and data in many firms, the exact implementation of a collateral resilience programme will vary, but it should include the following core pillars:

Pillar 1 - Margin optimisation

By using tools such as pre-trade margin checks, or post-trade rebalancing, it is often possible to reduce the margin requirement across the portfolio. Doing so reduces the ultimate need for collateral and is, therefore, a key foundation of the whole resilience model.

Pillar 2 – Collateral optimisation

A robust collateral optimisation model will reflect the true value of collateral inventory to the firm, including trading demands and funding costs. Mathematical optimisation can then be applied to ensure that the largest possible amount of high-quality liquid asset (HQLA) is retained in the unencumbered pool to allow flexibility when shocks arrive.

Pillar 3 - Forecasting and stress testing

As with market risk and any other risk control model, it is important to project future potential impacts and, therefore, stress test your books against high-risk scenarios. For collateral resilience, this involves stressing trade and margin levels, collateral values, as well as legal terms with counterparts such as eligibility schedules.

Challenges

Of course, none of this is easy to implement and there are common challenges that many firms encounter.

These include:

- Understanding inventory availability and collateral mobility across the firm. Too often firms default to posting cash, or maybe US Treasuries, when they are holding other eligible assets or could easily source alternative collateral assets.
- Integration across business lines. Collateral resilience requires a firm-wide solution that ensures all obligations are met and all sources are utilised. Bilateral, cleared, exchange-traded derivatives (ETD), and prime brokerage (PB) portfolios are often segregated at both business and technology levels and harmonising across these boundaries has many obstacles.
- Changing business workflows to implement dynamic intraday or pre-trade controls is not simple, as it requires changes to both order staging and execution systems.
- Implementing post-trade optimisation and forecasting requires support for a multitude of counterparty risk and margin models.
- With collateral held at multiple, internal, and external sources, firms may struggle to create an all-inclusive, real-time view of their collateral.

Summary

Initial margin (IM) has become the 'topic de jour' because of new regulations and recent extreme global events, but the increasing demand for collateral means that investment managers of all styles must focus on more than just their daily regulatory and operational compliance. They must also ensure that the collateral function can guarantee the ability to support derivatives trading in all market conditions, which includes the technology and the systems you use.

Collateral risk is a real risk and should be controlled and monitored with a focus equivalent to market and credit risk. This requires a strategic approach with integration across business lines and technology silos, and novel tools that allow for sophisticated control and transparency.



Bypassing the big bang

Ed Tyndale-Biscoe, head of secured funding product and business development at Ion Group, explains the intelligent way to break free from legacy technology

How we think about secured funding, and how secured funding services are offered, have changed fundamentally in the last 20 years. But often, the platforms underpinning the market have not.

Secured funding first emerged as a front office business area in the late 1980s and early 1990s. Compared to today, the business back then was unrecognisable. Trades were captured over the phone and executed using paper tickets. Secured funding was more of a process than an asset class, so it did not have its own

dedicated systems. Instead, it was built around existing technologies.

Our thinking and offerings have evolved a long way since then. But much of the technology used, from the front office to the back, still dates back to those early years.

What was once a process for an existing operation using available tools is now a business area in its own right, with its own technological requirements. Across secured funding markets, there are growing interdependencies that are systemically

critical. The industry is resting a delicate, bespoke offering on an increasingly fragile framework.

It is time to harness the capabilities of new technology and simplify systems by taking a smart approach to upgrades.

Time for action

The problem is clear. So what are the options for fixing it? Firms can replace their whole framework at once. Alternatively, they can update their framework over time. Or they can simply ignore the problem until the inevitable happens.

Continuing to rely solely on legacy technology presents a fundamental barrier to the business. Workarounds, complex data mapping, and mismatched technologies result in enormous wastes of time, energy, and resources. In the short term, these make-do-and-mend solutions might get the job done. But they hamper the firm's ability to scale or develop new capabilities.

Over time, the overheads and operational headaches of continuing with an existing system only get worse. Rising technology costs, and the resulting inability to trade as effectively, are eventually passed on to the client in one form or another. This undermines the firm's competitive advantage.

So firms face a choice. They can either replace their systems wholesale, or they can renew them slowly and carefully over time.

Clean break or a wrong turn?

Firms can be tempted to make a clean break and replace their entire systems. The appeal of fresh, new technology, designed for the evolving needs of the business and built on the latest, shiniest ideas, can be hard to resist. Surely, the benefits must outweigh the costs?

The results, however, can be disappointing. Large-scale system replacements often have a serious flaw — they are driven by technology and not by the real needs of the business. They do not focus on providing business benefits to end users as early as possible in the process.

Proceeding this way, without buy-in and (long term) patience from the business, runs risks that should not be underestimated.

A better way: the hybrid approach

Fortunately, there is a way to avoid many of these pitfalls. And it does not have to disrupt a firm's day-to-day operations.

Thanks to new technology, systems can now be replaced gradually over time. Service-oriented architectures in trading systems have developed into loosely coupled, modular, or microservices architectures. These allow firms to take advantage of cloud-based computing and spread out the risk involved in replacing wholesale enterprise systems.

End users can benefit immediately from flexible, intuitive, real-time solutions. But there is also time to upgrade, and eventually replace, downstream integrations and data at a calmer pace that makes it easier to manage risk.

Firms can take a hybrid approach and layer their new technology on top of their existing infrastructure. This removes the need for a one-time big bang upgrade. So it avoids the costs and productivity challenges of a big bang. And, at the same time, it eliminates the risks of continuing to depend on outdated legacy technology.

In this way, firms can preserve the sophistication of the systems they have built up, while reducing the risk of introducing a new system. They can sidestep the dangers of new and old technology and enjoy the benefits of both.

This is often the better strategy. And it is one that increasing numbers of firms are pursuing, both in secured funding and across other asset classes. Making this approach feasible requires a solution that offers a choice of functionality, coupled with simple integration options.

ION Anvil: advanced technology you can build at your own pace

ION was founded on the conviction that combining innovative, personalised technology solutions with timely and insightful information would transform capital markets for financial institutions worldwide.

Anvil, ION's solution for secured funding, provides rich functionality for repo and securities lending desks. Users can manage all their business needs with a scalable solution that fits desks of any size.

Anvil comprises three independent, interoperable products built on ION's core platform. Users get a powerful set of business tools that they can adapt for their specific needs to gain a leading edge.

Anvil is componentised, offers comprehensive open APIs, and provides data in real time. So it is easy to layer Anvil's advanced features on top of existing legacy infrastructure, which can then be replaced gradually.

The solution can be deployed on-premises or hosted in the ION Cloud:

ION Anvil e-trading lets dealers see a
real-time, aggregated view of global repo
markets, determine best prices, and execute
trades by operating on a single, virtual
market. With out-of-the-box connectivity to
all global repo markets for trading market
data providers, plus simple STP integration,
you can see all your markets and execute
orders according to your chosen strategy in
one user interface. That means you can take
advantage of the best opportunities.

- ION Anvil OMS enables dealers to capture and respond to client inquiries across multiple channels, including request for quotes (RFQs), emails, chats, and voice. They can also initiate orders and route them to lenders. Designed to digitise and optimise repo and securities lending order management, Anvil OMS captures all flows, generates orders, and consolidates decision-making. It provides risk limit checking and automated pricing, as well as a clear and flexible sales-to-trader workflow.
- ION Anvil Trade Processing is a single solution for repo and securities lending, allowing you to manage liquidity across all trading types and asset classes. You can manage positions and availability, trade capture and lifecycle, billing, and collateral for all funding activities. Anvil Trade Processing supports simple, complex, and structured products, real-time P&L, and transfer pricing.

Facing the future with confidence

Urgently upgrading technology is a challenge that is not going away. Market participants demand flexibility with no loss of functionality. Both are necessary to remain competitive in a highly disruptive and systemically important environment.

Fortunately, businesses can now take advantage of flexible, intuitive solutions that are easier to integrate with legacy technology and can be replaced at a more controlled pace.

The digital transformation of secured funding has a long way to go. There's a lot of work still to do. However, as we look forward, the possibilities enabled by new and innovative technology can only give us encouragement.

Click here for 11 reasons on how ION can help you harness the power of software.



Analyze. Understand. Monitor.



Leverage our experience to optimize your program performance, enhance investment decisions, and confirm good governance through powerful tools and analytics.

- Largest securities lending dataset includes corporate actions, credit consensus, ETF collateral lists, liquidity and more
- Global securities lending flows, borrow costs and market share updated intraday
- Diverse signals to identify short squeezes, capture alpha, and refine risk management
- Robust performance measurement tools exceed enhanced industry standards
- Full-service governance, performance, risk, and operational assessments

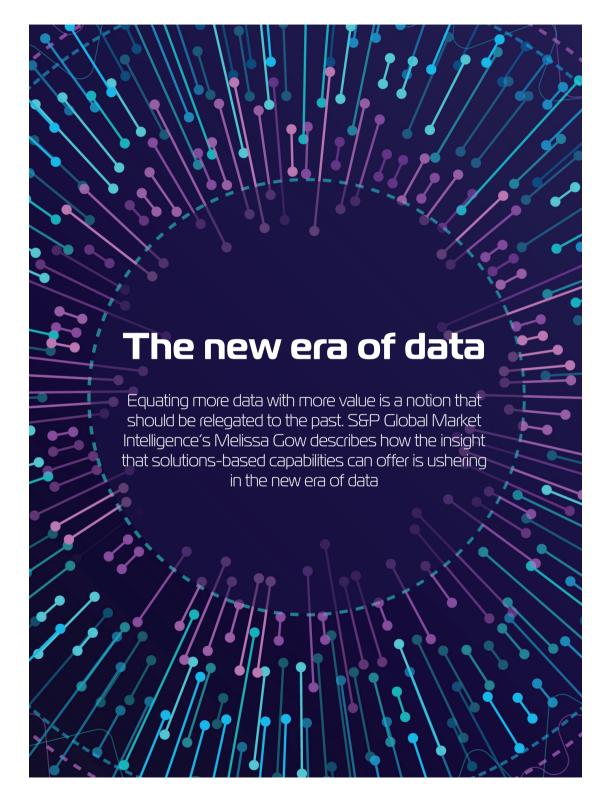
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Since the inception of the first securities lending trade, data has played a vital role in the efficient running of operational, trading and reporting functions. Over time, the proliferation of securities finance data has transformed a formerly straightforward process to one that market participants can find overwhelming for its heightening depth, breadth and complexity. In today's environment, data for the sake of data no longer makes sense.

At S&P Global Market Intelligence Securities Finance (SF), which IHS Markit Securities Finance has now become a part of, we believe that building intelligent and insightful tools and using data-led analysis is the best way to drive efficiencies in the market. We have transformed into a new era of solutions-based capabilities by using the largest and deepest securities finance dataset as our foundation and combining it with adjacent and complementary data streams.

One area of the current focus is the development of tools to provide actionable content and insight. In the early days of data transparency, it was enough to simply provide basic metrics about the market size, number of participants, rudimentary returns to lendable, and basic fee data. As the industry has grown and evolved, more sophisticated analytics have developed along with the number of data points collected.

Over the years, securities finance has migrated from its perception of being an operational function to becoming an integral part of the investment management process. More emphasis has been placed on differentiation of fees, collateral and counterparty types; on development of inputs into alpha and predictive models; on metrics around the stability of demand and supply, short interest, and more. Today, the market's expectation of service providers is to combine data and analytics into innovative solutions that address real-life gaps by providing actionable, relevant, timely and insightful content via the customer's choice of delivery mechanisms. SF has met those market expectations through a robust set of tools to provide critical industry solutions.

To address the need for beneficial owners to independently monitor adherence to agreed lending parameters, we launched a Compliance Check portal for beneficial owners. The portal gives beneficial

owners a simple, yet robust, exception-based tool to identify potential breaches of lending parameters at the transaction, instrument, market and counterpart level. Parameters are customised according to the specific terms of the Securities Lending Agreement (SLA) and monitored against loans (and soon collateral). This first-of-its-kind solution efficiently manages lending programmes through the early identification and resolution of potential compliance issues.

Actionable insight

Our Securities Transaction Exception Analytics Report (STEAR) tool provides insights for market participants to monitor the execution quality of their loans. The tool examines loans against all daily transactions and compares fees on a given trade to the market low, high or average for the day. The exception-based report flags any potential threshold breaches to allow timely investigation and resolution. Parameters are flexible and customisable to account for bespoke needs and results can be delivered via a portal, API, excel toolkit and datafeed.

Continuing on the theme of providing actionable insight, our Borrow Cost Optimization (BCO) tool is a powerful and intuitive way for brokers to compare their borrow rate performance. Similar to performance reporting for lenders and beneficial owners, we have created peer groups to measure borrows against other brokers, providing insight into the market size, share and trading performance. Trades in all asset classes can be tracked across fee categories and dividend requirements, monitored at the country and index level, and analysed against a peer group to provide an efficient and accurate way to gauge and manage the borrow book.

We have also focused on building solutions to address areas of inefficiency in securities finance operational processes. Our Client Onboarding Accelerator Tool (COAT) leverages existing S&P Global workflow capabilities to streamline the process of onboarding new funds. The current agent loan disclosure (ALD) onboarding process between borrowers and lenders is inefficient, time consuming, and prone to error, often leading to delays in commencing lending for new accounts. Onboarding new accounts requires mutual approval. Currently, the changing requirements between

counterparts, manual communication, and the industry's lack of standardisation and transparency have delayed the timely capture of revenue opportunities.

The efficient use of collateral has long been an area of focus for securities finance. Our ETF collateral lists leverage the strength of several S&P Global datasets to bring transparency, efficiency and automation to the collateral management process. Using our industry-agreed methodology, collateral receivers can customise parameters to meet their risk profiles. It allows clients to screen the global ETF universe for instruments that meet their eligibility standards, thereby vastly increasing the number of ETFs which can be identified and accepted as collateral. The process looks at several different criteria, including fund size and management structure, and then confirms that the collateral manager accepts the fund's underlying securities.

Governance continues to be an essential element of a well-run securities lending programme for lenders and beneficial owners. In the past few years, ESG considerations have grown to include all segments within the industry. SF has addressed the need for enhanced ESG capabilities through several innovative solutions. First, SF provides security-specific data points on 15 corporate actions events to assist with decision-making processes around voting, including record and effective dividend dates, annual and special meetings, splits, mergers, and acquisitions. The availability of this data in multiple delivery platforms allows for easy integration into workflows and models.

Loan evaluation

Later this year, we will be introducing a loan evaluation report to provide more clarity on loan positions around upcoming annual general meetings (AGMs). The report will use SF loan data and incorporate both data from our corporate actions team and S&P Global's existing ESG dataset. The report will evaluate open loans data (utilisation, percentage of shares outstanding, days to recall, current revenue) against customisable ESG criteria.

The report aims to provide clients with a full picture of their loan positions and to assist their decision making

on when, and if, to recall a security from loan around key corporate action events. In collaboration with S&P Global's existing ESG dataset, we will overlay raw ESG scores covering over 20 categories, loan details, and group level SF metrics to provide all the data needed to make informed decisions. This report will provide a flexible and customised solution to manage the challenges faced when evaluating risk in a fund's portfolio.

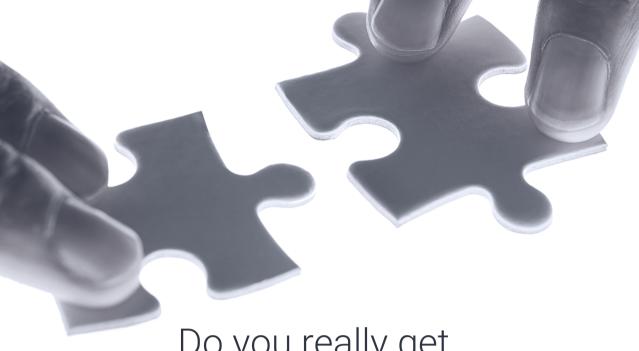
To complement our securities finance solutions, in Q2, SF is launching Repo Data Analytics (RDA), which will offer price discovery, metrics, and market analysis for repos across global markets, tenor, and haircuts. We are partnering with Pirum's RepoConnect product to allow users to automate the trade and lifecycle matching process. This will increase operational efficiency, reduce risk and ensure regulatory compliance.

While we have naturally focused on building relevant and innovative functional solutions, SF has also made a significant investment in the delivery channels required to ensure these solutions are easily available and accessible to our customers. In addition to our traditional channels such as the web portal, excel toolkit, proprietary data feeds and API, we have expanded the number of third-party platforms that support SF data. Snowflake, Broadridge, Novus, SIG Tech, Spire and TS Imagine are several new platforms we have recently partnered with.

The evolution of data from simple metrics to meaningful solutions in the securities finance world has brought a vast array of exciting potential and possibilities. At SF, we harness the power of our market intelligence, broad and deep securities finance dataset, and complementary S&P Global adjacencies to usher in the new era of data.

About S&P Global Market Intelligence

With a record-high US\$37 trillion in lendable inventory and US\$3.5 trillion in on-loan balances, S&P Global Market Intelligence Securities Finance solution (SF), which IHS Markit Securities Finance has now become a part of, is the trusted partner for more than 600 institutions active in the securities finance market. SF has set ambitious goals, focusing on delivering innovative and relevant solutions for all client segments.



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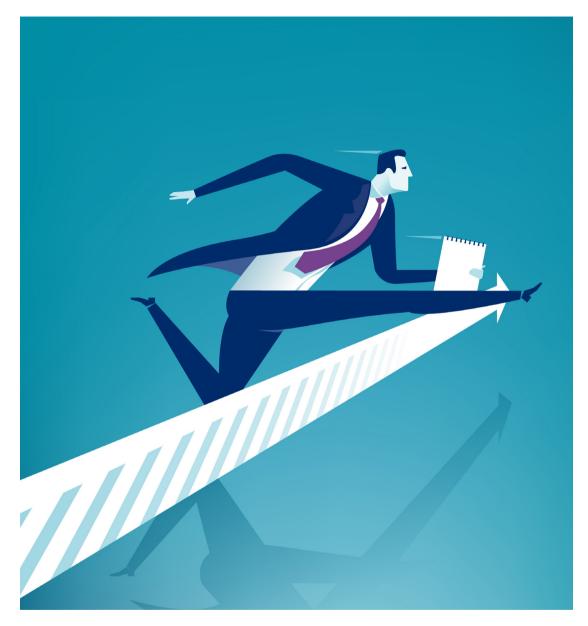
At **wematch.live** securities financing we offer you a new way to share interests and to facilitate negociation and dealing on TRS, REPO and SBL,

ensuring you always get the best possible match in a fully compliant environment.

Our web-based platform is hosted on a secured and real time application **anticipating expected regulatory requirements** around increased transparency, liquidity, matching and reporting. Its usage is **very intuitive and flexible.**

Get in touch with us at contact@wematch.live.





Rising interest rates: new hurdle or considerable opportunity?

While collateral optimisation has always helped to minimise funding and liquidity costs, the new rate environment is creating even greater urgency for optimisation to drive P&L benefits, says Todd Hodgin, global head of product development at Transcend

To combat inflation and a potentially overheating economy, the Federal Reserve has begun communicating plans to aggressively raise interest rates throughout 2022 and 2023. The Fed began with a modest increase of 0.25 per cent. However. market professionals are estimating the likelihood of as many as six additional rate increases in 2022 to move monetary policy toward a more neutral rate environment. Similar interest rate increases have occurred in other industrialised economies as inflation continues to grow globally. Market participants are now increasingly looking for new financing and trading efficiencies to get ahead of additional funding costs and the risk of stunting profitability and growth. While collateral optimisation has always helped to minimise funding and liquidity costs, the new rate environment is creating even greater urgency for optimisation to drive P&L benefits.

The impact on financing collateral

The first impact of potential changes in the rate environment are increases in absolute interest rates and the overall costs to finance collateral. Simply put, the cost of borrowing cash will be more expensive than it has been in years and will increase the overall costs to support certain trading and customer financing strategies. Banks and broker dealers have enjoyed a period of relative calm for balance sheets. However, as central banks step away from asset purchases, there will be new supply that needs to be financed in the market. As a result, firms that are inefficiently utilising their collateral and unsecured funding risk impacting their P&L.

In addition to increases in absolute rates, the new environment can mean it will be more costly to support long-term funding and financing lower-quality collateral. While there are various projections for future funding costs as a result of rate increases, the premia for longer term funding could increase over time. Additionally, funding spreads for lower quality collateral could increase and create a more punitive environment for financing non-government collateral. Volatility of certain asset classes,

including corporate bonds, may act as an accelerant for credit spread widening. These potential changes to term premia and spreads would impact certain portfolios and trading strategies, impacting the funding costs and P&L of those businesses.

Finally, rising interest rates can also influence firms' risk tolerance and subsequently their investment choices, ultimately causing certain sources of funding to be less attractive, less stable and harder to manage.

An opportunity for optimisation

With increasing absolute rates, spreads and term premia, the cost of financing businesses is set to be higher and more volatile. The goal of an effective collateral optimisation strategy is to help market participants extract the greatest value from their financial resources; as such, there is a large opportunity for collateral optimisation to maintain and increase profitability. By evaluating the costs of financing various collateral types with differing qualities, an optimisation strategy will help firms more strategically select the collateral that meets a counterparty's eligibility requirements while minimising liquidity and funding costs to the business. With higher costs to consider, the potential savings from a collateral optimisation strategy will materially increase.

Optimisation potential in practice

Transcend has seen firms realise significant benefits from implementing collateral optimisation across their financing and margining activity. By strategically implementing end-to-end solutions that incorporate funding and capital costs, collateral eligibility and operational costs into their optimisation solutions, firms have been able to automate the allocation of preferred collateral to these exposures and obtain millions in annualised saving across financial, efficiency and risk factors.

In an environment of increasing absolute rates, wider spreads and higher costs of unsecured funding, these firms are poised for even greater cost savings. Transcend's research and analysis team found that, based on conservative rate assumptions, potential savings from optimisation could increase an additional 16 per cent to 250 per cent.

The importance of technology

The value of being able to optimise vertically or horizontally across collateral silos under a new rate environment is clear. However, achieving collateral optimisation can be difficult without the right partners and tools. While developing a cross-product collateral optimisation solution in house can take several years, market participants need to implement an optimisation solution now before rate increases impact profitability. As a result, more firms are looking to partner with companies like Transcend to more quickly mitigate the impact of a new rate environment.

"Based on conservative rate assumptions, potential savings from optimisation could increase an additional 16 per cent to 250 per cent"

However, not all optimisation solutions are the same. With a holistic optimisation platform built on enterprise inventory that considers multiple cost dimensions, market participants can more effectively understand and improve the utilisation of collateral in totality, therefore, limiting unnecessary financing and liquidity costs. A single optimisation solution for all asset classes, triparty providers and margin needs will deliver significantly higher returns, and ultimately will be a firm's competitive financial edge. However, scalability is also crucial to ensuring both

the immediate and long-term value of optimisation results. By leveraging technology that can optimise decisions within a specific product or business line first, with the opportunity to expand to multiple divisions over time, clients can realise a quicker time to value without limiting future potential.

Lastly, an effective optimisation solution should enable straight-through processing. Delivering the collateral that maximises cost reduction could require complex collateral mobilisation activities. As a result, any optimisation solution needs to be able to automate and seamlessly execute movement recommendations to limit operational friction and roadblocks.

Introducing Transcend

The market evolution is creating real urgency for firms who have not yet invested in collateral optimisation to implement tried-and-true solutions and stay ahead of the impact of incremental rate increases. Similar feedback from market participants has revealed the importance of solutions that can automatically adapt to fast-changing environments.

With a history of successes deploying cross-product and cross-business optimisation solutions at some of the industry's largest banks and broker dealers, Transcend is the solution of choice to address the urgent optimisation requirements under the new rate environment. Transcend's holistic data framework and powerful, yet configurable, optimisation algorithm ensures that clients can achieve the greatest optimisation results today, while scaling to address rate and market evolution in the future. With an integrated booking service, Transcend ensures its clients can execute their optimisation strategy both quickly and efficiently.

With a team of more than 140 seasoned industry professionals possessing decades of hands-on capital markets and technology expertise, Transcend partners with clients to design an implementation strategy that delivers results in months, not years. This means new clients can achieve tangible optimisation benefits before interest rates severely impact their firm's growth and profitability.



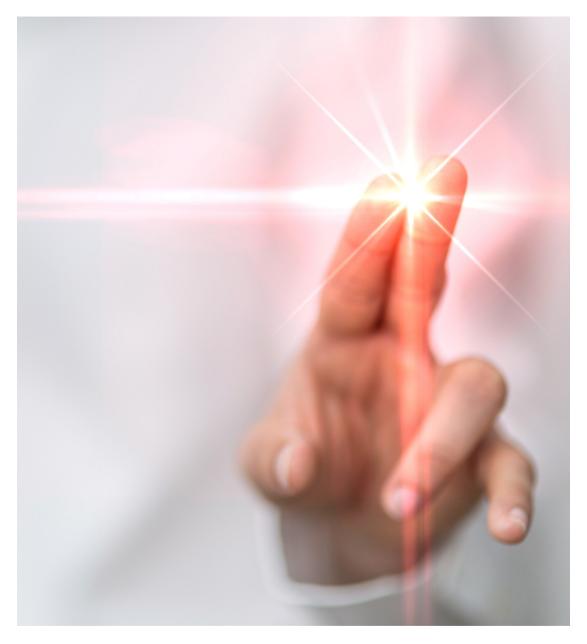
Inventory | Liquidity | Funding

The Optimization Leader

Transcend's unique technology provides a true, enterprise-wide solution for collateral, funding and liquidity optimization – in real-time. So whatever your needs, trust Transcend to help drive greater profitability across your collateralized businesses.



50



Solve for the SEC's new 13f-2 reporting risk with one-click connectivity

S3's new tool offers one-click compliance and connectivity for proposed daily and monthly short selling reporting requirements

Background: here comes reporting risk

On 25 February 2022, the US Securities and Exchange Commission (SEC) announced a new short sale disclosure rule that requires institutional investment managers to report short sale related information to the SEC on a monthly basis. Daily trading activity that affects an investor's gross short position for each date of settlement must also be reported.

To help investors prepare, S3 Partners has developed a new 13f-2 reporting and monitoring dashboard that allows funds to monitor and file all positions daily with one click of a button.

As it stands today: how the new rule impacts investors

Within 14 calendar days after the end of each calendar month, investors will be required to report and file the following information via EDGAR:

- Any equity security of an issuer that is registered pursuant to Section 12 of the Exchange Act
- Any equity security for which the issuer is required to file reports pursuant to section 15(d) of the Exchange Act in which the manager has a gross short position greater than or equal to US\$10 million or a monthly average gross short position greater than or equal to 2.5 per cent of shares outstanding
- For any equity security of an issuer that is not a reporting company issuer as described above, managers are required to report when a gross short position is greater than or equal to U\$\$500,000 at the close of any settlement date during the calendar month

Managers are required to report:

- · The name of the eligible security
- End of month gross short position information
- Daily trading activity that affects a manager's reported gross short position for each settlement date during the calendar month reporting period

What's next?

The end goal of the SEC's new rule is transparency, which is an outcome that will benefit all market participants. However, the reporting requirements to get to this market transparency will be extremely onerous for fund management companies, and this new rule from the SEC represents a massive shift in how buy-side participants will have to monitor and file short positions.

The rule introduces a whole new regulatory requirement and risk on asset managers. S3 has always been an innovative force in data analytics and workflow solutions and our goal has been to show how quickly we will help clients and the broader industry. Forty-eight hours after the SEC released details of the new 13f-2 rule, we were ready to solve this headache for hedge funds, asset managers and allocators.

Rule 13f-2 was open for public comment for a period of 60 days from 25 February. In the meantime, S3 is offering its new reporting tool complimentary to help managers better prepare for this seismic shift in reporting. Buy-side market participants can plug their current portfolio holdings into the S3 dashboard to gain instant transparency and education regarding their exposure to 13f-2 filing requirements. When the new 13f-2 rule is live, users will also be able to file directly to the SEC's EDGAR system with one click of a button.



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Broadridge Financial Solutions, a global Fintech leader with over \$4.5 billion in revenues, provides the critical infrastructure that powers investing, corporate governance, and communications to enable better financial lives. We lead business transformation and deliver technology-driven solutions for enriching client engagement, navigating risk, optimising efficiency, and generating revenue growth, helping our clients get ahead of today's challenges with products that streamline and simplify the Securities Finance industry.

Broadridge Securities Finance and Collateral Management (SFCM) offers a suite of global, front to back office securities finance solutions for buy side and sell side. Both our full service integrated Mainline solution and new FastStart rapid spin up operating solution both support agency and principal trading of equities and fixed income securities across securities lending, repo, collateral management, collateral optimisation, and end to end transaction reporting solutions. Broadridge's solutions help customers comply with new regulations, increase efficiency, improve strategic decision making and make more intelligent use of capital, balance sheet and liquidity.

In addition, Broadridge provides project management, consultancy, business analysis and testing support to augment firms' internal regulatory project teams and help them comply with the rules in a timely manner. Broadridge's technology and operations platforms underpin the daily trading of on average more than US\$10 trillion of equities, fixed income, and other securities globally.

For more information about Broadridge and our proven securities finance, collateral management, and transaction reporting solutions, please visit our website.



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Founded in 2014, Cassini Systems offers an award-winning derivatives margin analytical platform that provides the industry's only front-to-back margin and cost analysis across the entire lifecycle of a trade. Cassini users can calculate any margin on any cleared or uncleared derivatives asset; analyze drivers and movement in margin exposure; reduce Initial Margin levels; and maximize margin efficiency with the firms' industry-leading, advanced algorithms. Cassini services have a proven track record of enhancing portfolio returns at every point in the daily business cycle, empowering traders, and portfolio managers with the ability to analyze instantly in the pre-trade stage the all-in, lifetime cost of a transaction. Top-tier hedge funds, asset managers, and Tier 1 banks rely on Cassini for powerful, flexible, automated tools to manage their portfolios of over-the-counter and exchange-traded derivatives products. Cassini was named Best UMR Service of the Year in the Risk Markets Technology Awards 2022. For more information, visit www.cassinisystems.com.



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Comyno is a specialised FinTech company with more than 15 years of experience in Securities Finance, focusing on software and consulting. We work with leading private and public financial institutions, clearing houses and triparty agents, combining our expertise in strategy, processes and technology.

We have extensive experience in the provision of standardised and tailor-made solutions, increasing functionality and efficiency across the entire value chain. Our innovative strength is demonstrated by our expertise in the area of Blockchain/DLT and its practical application, e.g. its usage in our trading software.

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- Product Architecture & Design
- · Software Development
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C-One Connectivity

Standard Connectivity to Systems and Providers in SecFinMarket

- · C-One Blockchain/DLT Solution
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EquiLend is a global financial technology firm offering trading, post-trade, market data, regulatory and clearing services for the securities lending, collateral and swaps industries.

EquiLend's services include:

- NGT, the securities finance industry's most active trading platform
- Collateral Trading, enabling funding and financing desks a centralised way to execute and manage trade structures with their counterparties
- Swaptimization, automating global equity total return swaps trading workflow
- EquiLend Post-Trade Suite for securities finance operations
- DataLend, providing performance reporting and global securities finance data to agent lenders, broker-dealers, beneficial owners and other market participants
- EquiLend Clearing Services, offering trading services and CCP connectivity
- EquiLend SFTR, a no-touch, straight-through solution for the Securities Financing Transactions Regulation
- EquiLend Spire, a front-, middle- and back-office platform for securities finance businesses



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FIS is a leading provider of technology solutions for financial institutions and businesses of all sizes and across any industry globally. We enable the movement of commerce by unlocking the financial technology that powers the world's economy. Our employees are dedicated to advancing the way the world pays, banks and invests through our trusted innovation, system performance and flexible architecture. We help our clients use technology in innovative ways to solve business-critical challenges and deliver superior experiences for their customers. Headquartered in Jacksonville, Florida, FIS is a member of the Fortune 500® and the Standard & Poor's 500® Index.

Whether you're looking to trade in the cloud or take advantage of Al-driven risk analysis, FIS Trading & Processing has everything you need. With the most established and comprehensive set of front-to-back solutions in the market, you can harness global automation, gain a real-time view of your trading and operations, and access next-generation post-trade operations.

To learn more, visit www.fisglobal.com. Follow FIS on Facebook, LinkedIn and Twitter (@FISGlobal).



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Combining Wall Street expertise with Silicon Valley technology, GLMX has developed a thriving ecosystem for the negotiation, execution and management of money market instruments including securities financing transactions (SFT). Using state-of-the-art streaming technology, GLMX facilitates a wide array of SFT including multi-variable negotiation, lifecycle events management, STP, reporting and data management. Funded by leading Silicon Valley venture capital firms, GLMX brings unparalleled trading and liquidity management workflow efficiencies to existing counterparties in the global securities financing markets. The GLMX solution provides intuitive technology, extremely quick development times and enhanced customisation. These characteristics allow GLMX to create a premium user experience.

GLMX technology functionality supporting SFT and Time Deposit trading includes:

- · Web-based, RFQ-driven, Multi-variable Negotiation
- Bilateral, cleared, and triparty
- Cross-currency, locates, rate runs, packages
- Extensive data capture
- · Trade life-cycle management
- Full SFTR reporting
- Pre and post trade API
- Pre-trade control functions



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HQLA^x is an innovative financial technology firm founded by financial market practitioners. Our core clients are financial institutions active in securities lending and collateral management, and our shareholders include market-leading service providers in the global financial ecosystem.

Our vision is to be the distributed ledger for Securities Finance and Repo. We aim to achieve this vision by collaborating with our clients to design, develop and deliver innovative, technology-driven solutions for specific pain points in the financial markets.

Our immediate goal is to provide capital savings to global banks by improving collateral mobility across market-leading triparty agents and custodians in Europe. Together with Deutsche Börse, we created a multi-layer operating model which enables our clients to exchange ownership of baskets of securities across disparate collateral pools at precise moments in time. The atomic nature of our Delivery vs Delivery (DvD) ownership transfers provides our clients with capital cost savings by reducing credit risk, intraday liquidity requirements, and operational risk.

S&P Global Market Intelligence

S&P Global Market Intelligence Securities Finance

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S&P Global Market Intelligence is a division of S&P Global (NYSE: SPGI), the world's foremost provider of credit ratings, benchmarks and analytics in the global capital and commodity markets, offering ESG solutions, deep data and insights on critical business factors. S&P Global has been providing essential intelligence that unlocks opportunity, fosters growth and accelerates progress for more than 160 years.

Securities Finance

Gain market sentiment insights and trading transparency from a macro to an individual stock level, with a dataset covering more than \$37 trillion of global securities from 20,000 institutional funds, twenty years of daily history and over three million intraday transactions. Our data is sourced directly from leading industry practitioners, including prime brokers, custodians, asset managers and hedge funds. We empower firms to manage securities lending programmes, optimize trading performance and enhance investment decisions through unparalleled trading data and analytics, powerful benchmarking tools and governance reports.

Learn more at ihsmarkit.com/products/securities-finance.html*

* IHS Markit Securities Finance has now become a part of S&P Global Market Intelligence

S&P Global Market Intelligence

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If you have a question for the authors of our article on page 22 or would like to learn more about your regulatory reporting please contact regreporting@ihsmarkit.com.



ION provides mission-critical trading and workflow automation software, high-value analytics and insights, and strategic consulting to financial institutions, central banks, governments, and corporates. Our solutions and services simplify complex processes, boost efficiency, and enable better decision-making. We build long-term partnerships with our clients, helping transform their business for sustained success through continuous innovation.

Our <u>Anvil solution for secured funding</u> provides rich functionality for repo and securities lending desks. Anvil comprises three independent, interoperable products built on ION's core platform: Anvil e-Trading, Anvil OMS, and Anvil Trade Processing.

Anvil can replace outdated and unconnected legacy systems, giving you everything you need for trading, order management, and trade processing in one unified system that fits desks of any size. With Anvil, you can:

- · Connect to all major D2D and RFQ platforms.
- · Digitize email, chat, voice, and electronic flows, and manage collateral, P&L, and transfer pricing.
- · See a complete view of your business in real time to make your best decisions.
- Choose our fully managed ION Cloud solution for quick, easy deployment and lower costs. All with the same advanced capabilities.

Discover how ION can help you harness the power of software.

To learn more, contact us at https://iongroup.com/markets/contact-us.



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The Options Clearing Corporation (OCC), named Risk Magazine's 2022 Clearing House of the Year, is the world's largest equity derivatives clearing organization. Founded in 1973, OCC is dedicated to promoting stability and market integrity by delivering clearing and settlement services for options, futures and securities lending transactions. As a Systemically Important Financial Market Utility (SIFMU), OCC operates under the jurisdiction of the U.S. Securities and Exchange Commission (SEC), the U.S. Commodity Futures Trading Commission (CFTC), and the Board of Governors of the Federal Reserve System. OCC has more than 100 clearing members and provides central counterparty (CCP) clearing and settlement services to 19 exchanges and trading platforms.

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Transcend is a leading provider of analytics, optimization, and automation solutions for collateralized businesses. By connecting data across disparate systems and business-lines, Transcend is uniquely suited to help clients identify and address key inefficiencies and risks. With a growing roster of world-class banks, broker-dealers, custodians and asset managers as clients, the firm is quickly becoming the gold standard for the real-time, firm-wide management of inventory, funding and liquidity.

Transcend is the only solution to provide clients with both a full picture of their enterprise as well as the tools to automate optimal decisions. Powerful capabilities harmonize and analyze disparate data sets including eligibility terms, global inventory, collateral obligations and cash flows. With a complete scope, Transcend is equipped to identify and execute the smartest collateral moves and trades, resulting in transformational improvements to performance and efficiency.

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- Wematch develops technology solutions replacing voice broking by automating matching and negotiation as well as automating trading-related workflows (e.g. lifecycle management, optimization, sales to trader)
- Wematch is currently active in 3 assets classes: Securities Financing (TRS, repo and securities lending),
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- · Its user base includes 70+ banks and asset managers in both Europe and North America
- Wematch partners with operators of regulated venues (e.g. OTF, MTF) for the execution of certain trades (e.g. Interest Rates Swaps, Securities Lending, Total Return Swaps)
- It is headquartered in Tel Aviv, Israel and, as of end March 2022, it had 40 employees split between its
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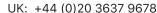
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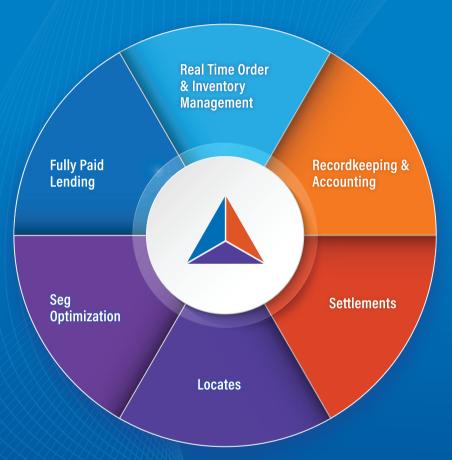


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