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Promoting settlement efficiency

Euroclear's Marije Verhelst and Rebecca Carey reflect on how market turbulence is impacting settlement rates and collateral availability

State Street launches peer-to-peer financing platform Venturi

State Street has launched its new peer-to-peer financing platform Venturi, which will connect buy-side firms with new sources of liquidity in the global repo space.

Venturi, built through a partnership with FinOptSys, aims to support trade negotiations, as well as enhance trade settlement and collateral management. Its objective is to help traders manage and diversify their counterparty exposure.

In helping to centralise liquidity pools and enhance transparency, Venturi seeks to open up new trading opportunities for the buy-side, lower transaction costs and improve returns.

The platform looks to provide increased efficiency, improved flexibility in regards to eligible collateral and margin requirements, seamless confirmation of State Street's guarantee to repo buyers, and transparency of trade and margin call settlement.

Users are able to negotiate economic terms of peer repo transactions on Venturi. A programme master repo agreement streamlines the documentation process and supports ready scalability, according to State Street.

With links to State Street's Collateral+ Triparty Solution for peer-to-peer repo, Venturi displays confirmed trade matches, collateral valuation and margin calls, as well as collateral movements between counterparties.

Gino Timperio, global head of Financing Solutions at State Street, says: "As a result of elevated market volatility and the changing liquidity and rate environment, buy-side firms are increasingly seeking new and diversified sources of financing.

"We are excited to further expand our product suite with the launch of Venturi to help foster the growth and scale of the peer-to-peer marketplace. Akin to our 2005 launch of FICC's Sponsored Repo Service, which has also provided our clients with critically needed liquidity solutions, we believe Venturi will empower our clients to discover new liquidity pools and make better, data-driven investment decisions."

The launch of the platform — designed in large part through extensive development and feedback from State Street clients — is a milestone for the firm and the evolution of its peer-to-peer initiatives, Timperio concludes.

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In the search for alpha, you need more than just a lending agent.
RETURNS
You need complexity made simple. Uncertainty made clear.
Decisions made with confidence.
MADE
Above all, you need a trusted partner like State Street.
SIMPLE
Our lending program is the most innovative in the world.[1] We give you easy access to the intelligence and lending tools you need to make the right moves and unlock growth.
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[1] Global Investor ISF Survey 2020 – Securities Finance Agency Lending named Most Innovative Lender

Beijing exchange issues securities lending rulebook

The Beijing Stock Exchange has announced a rules framework for securities lending and margin trading in advance of its proposed launch of trading services in these areas.

In an announcement made through Chinese official press agency Xinhua, the Beijing exchange indicates that these rules will align with those established on the Shanghai (SSE) and Shenzhen (SZSE) stock exchanges, which have already launched securities lending and margin trading services.

According to the Beijing exchange, this development will help to strengthen the pricing function of the market, improve margin liquidity and cater for the diversified trading demand of investors.

Reflecting on its wider listings activity, the Beijing Stock Exchange indicates that 110 companies had listed on the exchange at the start of September, with combined market capitalisation of close to CNY 200 billion (US$28 billion).

Last month, the Shanghai and Shenzhen exchanges extended the range of shares eligible for securities lending and margin financing. SSE added a further 200 names to its list of eligible stocks, bringing this to a total 1000 stocks. SZSE added a further 400 shares, establishing a list of 1200 stocks that are eligible for securities lending and margin trading.

Short selling slows in US consumer discretionary stocks

S&P Global Market Intelligence has indicated a decline in short selling in US consumer discretionary stocks amid signs that inflation may have peaked.

Short interest — which measures the percentage of outstanding shares held by short sellers — in US consumer discretionary stocks stood at 5.13 per cent at the end of October 2022, according to the firm's latest data.

Despite an increase in short interest in US consumer discretionary stocks during August and

September, S&P Global data shows a decline from earlier in October and nearly 50 basis points below a peak in June of 5.62 per cent.

According to S&P Global Market Intelligence, the decline in short interest has coincided with slowing inflation. The consumer price index (CPI) indicates that the pace of consumer price increases may have peaked in June at 9.1 per cent year-over-year.

The latest CPI reading shows consumer prices were up 7.7 per cent YoY in October 2022.

Short interest in the consumer discretionary space remains well above other sectors. Eight of the 20 most-shorted US stocks at the end of October were consumer discretionary stocks, including Carvana Co., Bed Bath & Beyond Inc., EVgo Inc. and Mullen Automotive Inc.

Average short interest in the S&P 500 remains relatively steady and was recorded at 2.33 per cent at the end of October, a decline from 2.54 per cent in October 2021.

EquiLend joins United Nations Global Compact

EquiLend has joined the United Nations Global Compact (UNGC) and launched a new ESG Hub to showcase its commitment to the initiative.

The global financial technology, data and analytics company says the pledge to the UNGC solidifies its dedication to engage in collaborative projects, which advance the broader development goals of the United Nations — particularly the Sustainable Development Goals.

Created by EquiLend, the ESG Hub highlights the firm's ongoing mission statements, established committees and partnerships and future committee events.

It will showcase news and insights from EquiLend staff, informing the latest on global environmental, social and governance (ESG) matters. This includes news from the Charity Committee, the Diversity and Inclusion Committee and the ESG Committee.

The UNGC is a corporate sustainability initiative with nearly 21,000 corporate participants and other stakeholders across 179 countries.

As part of the UNGC commitment, EquiLend employees will have the opportunity to participate in the UNGC Academy, allowing staff to engage in unlimited courses to increase their knowledge of ESG-related initiatives.

Brian Lamb, CEO of EquiLend, says: “Since our firm was formed in 2001, just one year after the UNGC launched, we have embraced ESG principles.

“In joining the UNGC, we are demonstrating — on a global level — our commitment to implementing their core Ten Principles and encouraging corporate governance policies more broadly among our industry peers.”

Astana exchange applies Exactpro’s testing framework for cloud-native Repo Market

Software testing services provider Exactpro has tested the Repurchase Agreement Market that was launched by Astana International Exchange (AIX).

To help increase the operational resilience of AIX’s Repo Market and provide information on its quality, Exactpro used th2 — a Kubernetes-driven microservices framework for functional and non-functional testing (NFT).

AIX’s mission is to develop the public equity and debt capital markets in Kazakhstan and the Central Asian region. The firm says that a cloud-native solution, equipped with a set of test method capabilities, was used to ensure a swift test execution and extensive test coverage.

The testing scope spanned the functional and NFT of the platform, including integration with the AIX CSD segment — powered by Avenir Technology — carrying out the settlement of repo trades.

The NFT included capacity and daily life cycle testing, which verifies the Repo Market’s reaction to short-term and prolonged increased transaction load injection.

The process also included scalability, stress and latency testing for order entry and market data streams.

Valerii Tsoi, chief information officer at AIX, says: “AIX boasts a trading infrastructure that investors from across Eurasia, as well as abroad, can benefit from in the safety of global regulatory compliance.

“We continuously expand our partner banks’ network and services portfolio, which leads to new technology challenges to solve.”

Pavel Medvedev, head of NFT at Exactpro, adds: “AIX uses forward-thinking approaches to deliver quality to their stakeholders. The importance of factoring in non-functional testing when it comes to building cloud infrastructures cannot be overestimated.

“By doing the testing, our team has made a valuable contribution to improving the resilience and scalability of the AWS-driven Repo Market. The complexity of a cloud-native architecture is not easy to match. Our team's domain expertise and reliance on th2 have made us well-equipped for achieving the goals set forward by AIX.”

ESMA grants third-country CCP recognition to Bursa Malaysia Derivatives Clearing

Bursa Malaysia Derivatives Clearing has been recognised by the European Securities and Markets Authority (ESMA) as a Third-Country CCP (TC-CCP), according to a statement from its parent company, Bursa Malaysia Derivatives Berhad.

Under the European Market Infrastructure Regulation (EMIR), only approved TC-CCPs are permitted to provide clearing services to clearing members or trading venues established in the European Union.

With this TC-CCP recognition, market participants clearing derivatives trades through Bursa Malaysia Derivatives will be subject to lower capital charges under the Basel III framework.

Bursa Malaysia Derivatives Berhad explains that with TC-CCP recognition granted to its derivatives clearing arm, the exchange will now have improved access to Europe's investment communities, while European counterparties will find it more straightforward and cost-efficient to trade and clear through the Kuala Lumpur-based exchange group.

Bursa Malaysia Derivatives acting director Mohammed Saleem Kader Bakas says that this recognition confirms that Bursa Malaysia is aligned with international standards and that this will generate new opportunities to do business with European clearing institutions.

"We are the third Exchange in the ASEAN region to be accorded this recognition, which is a significant milestone for Bursa Malaysia," he adds. "We are very grateful for the continued support received from the Securities Commission Malaysia throughout the TC-CCP application process."

Majority of firms are not ready for CFTC Rewrite, says S&P Global Market Intelligence survey

There is a stark contrast between European and US financial regulation readiness, according to an S&P Global Market Intelligence survey.

The Global Regulatory Reporting Survey highlights that the financial services industry is being more proactive in preparing for upcoming regulatory change.

However, a disparity has been found between the two regions and their readiness for upcoming regulation, including European Market Infrastructure Regulation (EMIR) Refit and Commodity Futures Trading Commission (CFTC) Rewrite.

The survey found that 38 per cent of respondents with EMIR Refit requirements are confident that they will be ready, or have made significant progress on the programme, which is expected to go live in the first half of 2024.

In contrast, more than half of respondents with CFTC Rewrite reporting requirements are not ready for the implementation date in December.

According to S&P Global Market Intelligence, the industry is taking a more proactive approach to existing and new regulations, with more than half of respondents making changes in 2022 to enhance existing processes or prepare for new regulations.

The most common change has been an increased use of automation to prevent and manage errors and inefficiencies in regulatory reporting.

The survey indicates a growth in a combination of in-house and vendor reporting, particularly among Tier 1 firms, with 64 per cent of respondents currently using a hybrid approach.

Additionally, managed services for regulatory reporting is expected to increase over the next few years, with 60 per cent of survey participants identifying managed services as a tool being considered in their future plans.

The Global Regulatory Reporting Survey data was collected during August and September 2022 from 89 respondents from banks, asset managers and brokers.

Igor Kaplun, head of Cappitech business development, S&P Global Market Intelligence, says: "The survey results indicate that more than a year ahead of implementation, those firms with EMIR Refit reporting requirements are taking a proactive approach to regulatory readiness.

"As with any large-scale regulatory change, it pays to prepare early to stay ahead of the next wave of changes on the horizon."

ISLA launches working group to promote document digitisation

The International Securities Lending Association (ISLA) has launched a new working group focused on digitising the Global Master Securities Lending Agreement (GMSLA).

Known as the ISLA Document Digitisation Working Group, this ISLA stream will concentrate initially on integrating business outcomes from the Association's Clause Library and Taxonomy into the Common Domain Model (CDM).

This group will also define modelling principles for representing legal clauses digitally, enabling future clauses and business outcomes to be added to this digital taxonomy.

Led by D2 Legal Technology's (D2LT's) founder and chief executive Akber Datoo, the working group will begin its activities this month. D2LT previously worked with ISLA in guiding standardisation of industry-negotiated securities lending trade documentation, including the GMSLA, and on the release in September 2021 of the ISLA Clause Library and Taxonomy.

D2LT has also been working with the International Capital Markets Association (ICMA) on standardisation of industry-negotiated repo documentation, including the General Master Repo Agreement (GMRA), and on the October 2021 release of the GMRA Clause Library and Taxonomy.

Commenting on the launch of the ISLA Document Digitisation Working Group, Datoo says: "The efforts of this working group are imperative to move from the creation of a legal agreement data standard for the GMSLA, to unlocking business value through the digital agenda by giving meaning to GMSLA documentation from the lens of capital, liquidity, risk, collateral and operations. This is the key step before we can benefit from automation and digitisation."

ISLA director of market infrastructure and technology David Shone, says "By bringing the CDM and the ISLA Clause Library & Taxonomy together, there is an opportunity to introduce benefits greater than the sum of the parts."

Shone indicates that it is time to combine these foundations together to provide an industry-accepted and standardised methodology, representing smart contracts and enabling the securities lending industry to automate, digitise, and meet its future needs head on. "This is the intention for this new ISLA working group," adds Shone.

Smart Communications and Broadridge are the first two firms to become members of the ISLA Digital Documentation Working Group.

Mike Lambert, securities lending product director at Broadridge Financial Solutions, says: "Broadridge is excited to work with the team to help accelerate this digitisation transformation which will benefit the industry. This is a great opportunity to incorporate the work done on the Clause Library and Taxonomy with the ground breaking work done on the CDM."

On 31 October, ISLA released a white paper in collaboration with Linklaters, The Future of the Securities Lending Market: On the Cusp of Transformation, that highlights future priorities across the securities lending transaction lifecycle to guide the industry's continuing moves towards digital transformation and straight-through process flow.

Promoting settlement efficiency and managing market volatility

Euroclear's Marije Verhelst and Rebecca Carey reflect on how market turbulence is impacting settlement efficiency and collateral availability and explain how the firm is helping clients to manage this volatile market

Global markets have been highly volatile in 2022. Rising inflation, tightening monetary policy, including rapidly rising rates and reversing of Quantitative Easing (QE), have mixed with a febrile geopolitical situation. This has led to high market volumes and deteriorations in the value of securities globally.

At the same time, new regimes have come into play such as Uncleared Margin Rules (UMR) Phase 6 and Central Securities Depository Regulation (CSDR), both of which have the intent of increasing the use of collateral and making financial markets more robust. All of these factors are driving a need for settlement efficiency like never before. To discuss this situation in greater detail, Marije Verhelst, head of business development, securities lending and collateral management at Euroclear, and Rebecca Carey, product manager of transaction processing at Euroclear, share their insights on what has been happening and what Euroclear is doing to help its clients.

There have been high volumes and high volatility in the market this year. What have you seen in terms of how these have affected your business?

Marije Verhelst: Volatility in the market typically translates into higher settlement volumes and, often, to higher volumes in our lending products — Autoborrow and GC Access. During this time, our collateral business volumes have been very strong as we have seen growth in all the business lines — UMR, triparty securities lending and triparty repo.

In terms of settlement efficiency, it should be noted that efficiency rates fell by several percentage points in Q3 2021 and so we started 2022 at rates that were already low compared to previous years. This was followed by a further dip in March 2022, at the start of the war in Ukraine. While we have seen some recovery in 2022, we are still not back at the levels seen in the first half of 2021.

There are several reasons for failing, but it is clear that the majority of settlement fails are due to lack of securities. The second largest reason for fails in Euroclear Bank is late matching.

In terms of settlement efficiency and collateral shortfalls, is this period of volatility different from previous times, such as March 2020?

Rebecca Carey: You would expect temporary settlement efficiency issues in periods of high stress such as in March 2020, at the start of the Covid crisis, in March 2022, at the start of the war in Ukraine, or in October 2022, given the stresses in the gilt market. However, it is unusual, at least in the recent past, to see such a long period of high activity and low liquidity. For the latter, the various (QE) initiatives certainly play a role as a substantial amount of HQLA assets are sitting in central banks' accounts and are not always properly lent back to the market. Limited HQLA supply and massive cash positions — combined with massive positioning on expectations of rate increases — have compounded the issue of collateral shortfalls.

In addition, this time round, we have had the double impact of volatility in the market together with the application of sanctions. While it is hard to put any exact figures on it, it seems clear that the screening processes that all intermediaries have had to put in place have impacted straight-through-processing rates, which have had a knock-on effect on settlement efficiency.

You mentioned the recent gilt market volatility in the UK.

"There are several reasons for failing, but it is clear that the majority of settlement fails are due to lack of securities. The second largest reason for fails in Euroclear Bank is late matching"

Marije Verhelst
Head of business development, securities lending and collateral management
Euroclear

What insights can you give us about settlement efficiency and collateral during recent weeks?

Verhelst: In recent weeks, gilt settlement volumes in the UK reached unprecedented levels following the turmoil in financial markets. Volumes of specific gilts doubled, as did the self-collateralising repo volumes that help to inject liquidity into the system. Nevertheless, there was consistent pressure on market participants and, as such, settlement efficiency dropped by a few percentage points. However, we are seeing a recovery of those settlement efficiency numbers as of the end of October.

To support the market, Euroclear UK & International extended system deadlines by 15 minutes to alleviate some of the operational pressure in the market. This extension of the settlement window followed an earlier extension by 30 minutes at the start of the Covid crisis. This additional time was given to enable market participants to ensure instructions were matched in the system.

Earlier in November 2021, Euroclear UK & International introduced an extension of the Delivery-by-Value (DBV) window to allow all-day settlement of collateral operations. This helped move the volume of settlement earlier on the intended settlement date, and to reduce systemic and credit risk due to intra-day credit exposures. The Euroclear Bank Autoborrow service has also been made available in Euroclear UK & International to avoid settlement fails on deliveries between Euroclear UK & International participants.

Finally, on 21 November, and following a market consultation, Euroclear UK & International will extend auto-splitting (partialling) to gilts. This is expected to further enhance settlement efficiency.

Earlier this year, the new CSDR regime came into force. How has this settlement discipline regime performed over the course of the year?

Carey: Considering the high level of activity and the liquidity shortage in many securities, it is probably too early to draw meaningful conclusions at this stage on the impact of the settlement discipline regime, introduced in February this year. Since its introduction, the number of daily penalties at Euroclear Bank has remained at levels around 60,000 per day. Anecdotally, the average penalty fees are around €50, whether at Euroclear Bank or at Euroclear Belgium, Euroclear France or Euroclear Nederland (the ESES CSDs) on T2S. At Euroclear Bank, penalties for late matching account for around 20 per cent of the number of penalties. But in terms of cost, late matching now accounts for over 30 per cent of the cost of the penalties.

What tools does Euroclear have to help clients meet the requirements of this new regime?

Carey: At Euroclear Bank and the ESES CSDs, we continue to see an increase in the take up of partial settlement services, which have become a significant tool to reduce fails. At Euroclear Bank, we have seen the contribution of auto-partial to settlement efficiency increase from around 2 per cent a year ago to 3.5 per cent now.

It should be noted that auto-partial cannot be used by custodians if client assets are not segregated, as there would be risk of mixing client assets. Therefore, to allow a wider use of partialling across the entire client base, we will introduce a partial release in Euroclear Bank. This will allow custodians to request a partial delivery when their underlying client has only a part of the position.

Verhelst: We see very few fails due to lack of purchasing power — lack of cash or absence of a credit arrangement. Euroclear Bank extends over €100 billion of credit every day to our participants to support their settlement activity, across more than 50 currencies, covering all time zones.

In addition, whenever a client that is participating in the Autoborrow programme faces a lack of securities to settle a delivery, our Autoborrow service kicks in and automatically triggers a loan. This enables borrowers automatically to tap into Euroclear Bank's €1.6 trillion pool of lendable securities — without the need to instruct. These loans are fully automated and will be generated at the start of the day and throughout different runs during the day. They will also be reimbursed automatically as soon as the securities hit back into the account. Borrowers will only pay borrowing fees on loans still outstanding at the end of the day. Autoborrow contributes a further three per cent to settlement efficiency.

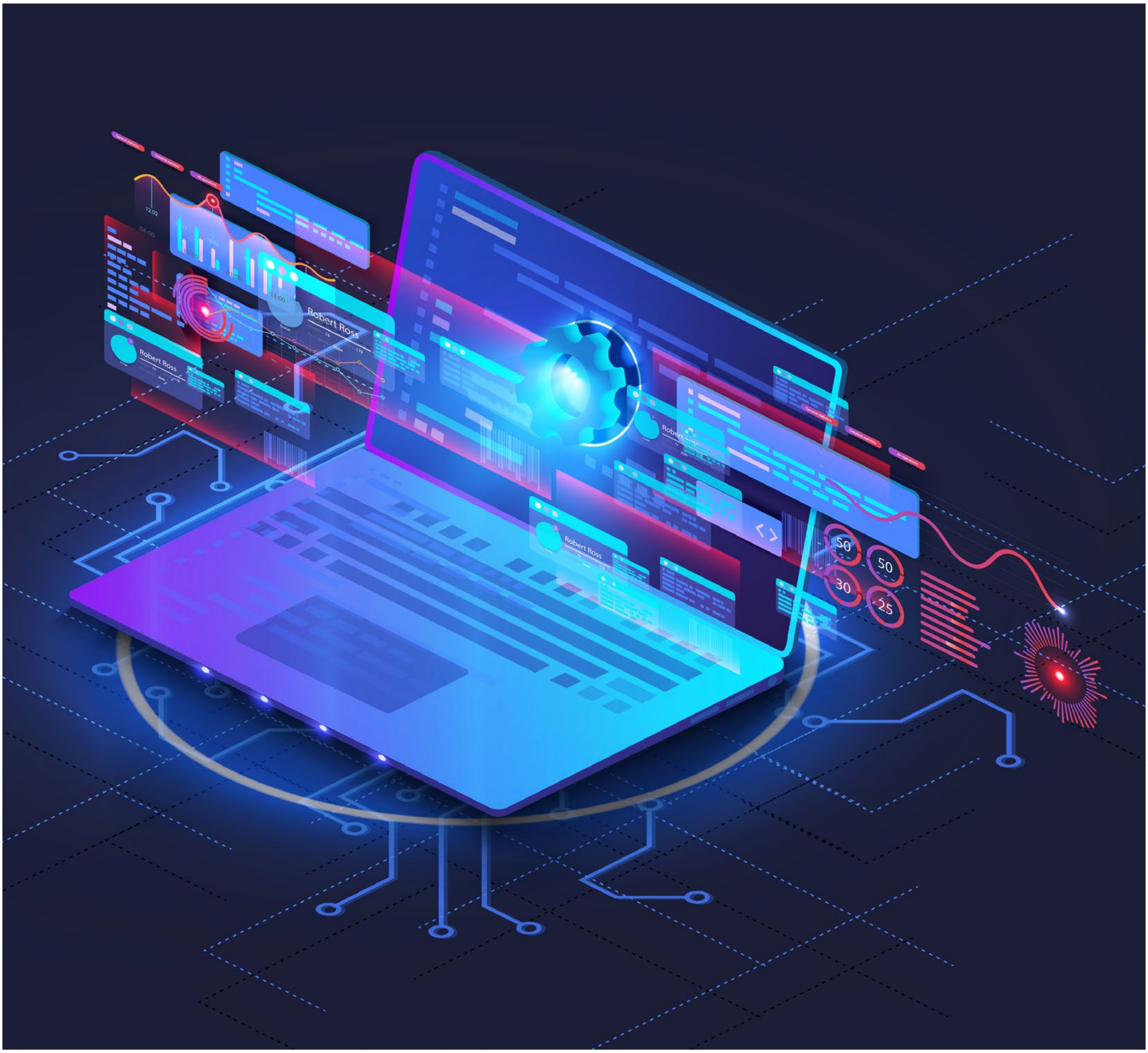
How else are you helping settlement efficiency in the wider post-trade space as a whole?

Verhelst: In addition to our settlement optimisation measures such as auto-partial and our Autoborrow programme, we offer a number of tools that help our clients to improve collateral mobility. One is the collateral allocation interface. This tool allows collateral givers to transfer collateral to other triparty agents to cover exposures with counterparties that have accounts with those triparty agents and not in Euroclear Bank. It also automatically recalls the securities as soon as they are required for settlement in Euroclear Bank. Therefore, it prevents fails even if securities are initially located outside Euroclear Bank. This service is available with three triparty agents: BNY Mellon, J.P. Morgan and Clearstream Banking Luxembourg.

Furthermore, our Open Inventory Sourcing service enables the management of inventory held with other CSDs and custodians. This tool transfers collateral to Euroclear Bank while ensuring sufficient collateral remains locally to satisfy domestic delivery obligations. If a security is required in the local market to make a delivery, our service automatically triggers a substitution and transfers the security back to the local market, therefore also contributing to the settlement efficiency in the local market. This service exists in Euroclear UK & International, Euroclear France and Euroclear Nederland, and through two custodians in Italy, and Spain.

Carey: We are also addressing the wider market problem relating to matching and exception management, because instructions that are not matched on time are the cause of over 30 per cent of the cost of penalties.

To help with that, we launched EasyFocus last year to provide insight to clients that can help in the prioritisation of exceptions. By leveraging Artificial Intelligence (AI), EasyFocus provides predictive insights into unmatched settlement instructions that carry the highest risk in terms of settlement failure and CSDR penalty impact. This saves time and resources by identifying the unmatched instructions that matter the most. Taskize, our query resolution network, can then help to resolve the exceptions with a single, streamlined digital channel to manage the penalties and appeal process and achieve significantly reduced resolution times for the daily operational issues.



Making the big call: choosing how to manage your next major IT project

Trading Apps' chief administrative officer Den Leonard examines the relative benefits of on-premise versus hosted technology solutions for banks looking to implement technology upgrades

When Trading Apps first started supplying software to the securities finance industry, the norm was to deliver software to the customer's in-house IT department for them to manage as an on-premise installation. Today, Trading Apps almost exclusively provides its products as Software-as-a-Service (SaaS) on hosted infrastructure managed by Trading Apps.

On-premise and hosted technology provisions have their perceived advantages and disadvantages, as do proprietary systems versus vendor products and services. In this article, I hope to explore the pros and cons of both approaches, albeit from a Trading Apps perspective.

Whenever banks are seeking to bring in or use technology from an external provider, they have several important considerations. Firstly, they need the confidence that the new product will meet or exceed the expectations or promises that have been made by the vendor or internal technology projects. Will the final solution truly solve the issues, or indeed increase the profitability and business performance of the desk, or reduce risks for those who depend on its performance? How do you calculate your return over investment costs?

When considering a product to implement, the suitability should be easy to assess for an existing vendor product, either hosted or on-premise. It is possible to see good demonstrations of the product, alongside thorough scrutiny of documentation and Q&A sessions with the vendor, before making the purchase. Fortunately, our marketplace involves recommendations and people moves, both of which add confidence to the pre-existing vendor solution.

But our industry has many examples where a new system development project, with many promises relating to functionality and costs, are proven unsuccessful. That is true of vendors and of IT departments, of course. Maybe this is why proven systems tend to stand the test of time and there is occasional reticence to change.

Normally with vendors, and definitely with Trading Apps, there is no big financial commitment until the product is fully accepted by the customer as fit for purpose — if the product does not deliver what was promised, the institution has the right to a refund for all its licence fees. Vendors tend to provide 'proven' products but, in many ways, they compete against the ambitions of internal initiatives.

Do institutions compare these in-house build proposals well enough and properly understand the true upfront and ongoing costs and risk of failure. Do they understand the likely timescales to going live, of internal provision versus buying in a ready-to-roll service? Hosted provision enabled Trading Apps to recently deploy a trading stack within five months of contract signature, working in close collaboration with internal teams to assist with integration. This was a real success for both vendor and customer.

> *"If a good product cannot be maintained to be functional and accessible whenever it is needed, this could cause havoc with workflows, reputation, risk and personnel morale"*

Alongside the functionality of the product, the other high priority consideration is one of security. Banks and their supply chains are a continuous target for cybercriminals. They must ensure that their systems and data are protected from malicious attacks as the reputational damage from data breaches can be incalculable. Vendor assessments that Trading Apps must complete are a testament to how seriously this is taken. We have the benefit, in some ways, of multiple audits and scrutiny from across our entire customer base. The vast array of increasingly challenging questions continually pushes our team to be best in class, taking in suggestions from multiple banks and audit companies.

The next important consideration is how reliable the provision of the technology will be to the desk. If a good product cannot be maintained to be functional and accessible whenever it is needed, this could cause havoc with workflows, reputation, risk and personnel morale. Everyone knows what it is like when your system goes down and how stranded or stressed it can make you feel. But does the desk really know why the service went down? Where the product is managed in house, it may not be the fault of the vendor — the supplied product relies on the environment in which it is installed and managed. With so many moving parts, often it is difficult to identify the true causes.

So, what about on-premise versus hosted when it comes to 'functionality'? Products of the complexity and interoperability of Trading Apps place great reliance on the background infrastructure and database management to work correctly. For on-premise customers, these are handled by the internal IT team of the bank and any equipment or infrastructure challenges commonly sit on their to-do list with all of the other demands that the team faces.

The IT crowd may present a one-office team focused on sorting your issues, but that is not often the case in a global bank and varies greatly between institutions. There are often separate teams with responsibility for networks, databases, hardware, software configuration and interfaces — quite commonly operating in a relatively siloed manner.

When Trading Apps hosts a product, we strive to ensure everything works harmoniously and stays connected on the client's behalf and we provide this as a fixed annual fee. When considering budgets, vendor fees should be compared appropriately against the true costs within the bank of providing all of these services internally. Those costs are not just the machines and the connectivity, but the personnel costs to support, maintain and fix issues as they arise. With vendor-hosted products, all a client needs to manage is their web browser and external connectivity. Once the vendor is locked and loaded to the right parts of the system, we manage everything that is needed to have optimal enjoyment of the product.

After clients have made their decision and they move forward and want new features, there are new considerations. Inevitably, workflows and opportunities change continually through time. New systems and new interfaces need to be adopted and connected. Incoming files or feeds may alter and downstream connections to other systems or to external bodies need managing continually too.

As on-premise customers seek to enhance their vendor-provided product, the speed at which those improvements are available to them can be hindered by the process of moving through the internal pipeline to deliver this into the production environment. Whereas, in a hosted deployment, the vendor has direct access to their system logs to constantly analyse and fine tune the product's performance, this is not always the case with on-premise setups, where it can be very difficult for vendors to get the correct diagnostic information they need from deep within the bank's systems. When hosted, the vendor has access to both user acceptance testing (UAT) and production environments, allowing rapid diagnostic analysis, appropriate testing and deployment of the next enhancement or bug fix.

In summary, there is a lot to mull over before deciding to build or buy the next solution, and then whether to bring it in house or have it provided as a service (SaaS). Key considerations in shaping this decision are:

- **functionality** – does it solve your problem or improve your business?
- **security** – is it reassuring to know that vendor environments and procedures are multi-audited to the highest degree available in the industry, or do you prefer the comfort of the bank's own standards?
- **reliability** – good software is no use without good hardware, database and infrastructure management, which needs to improve with the product as you grow the business — how easy will it be to improve the product through time to keep you ahead of your competition?
- **cost** – have all the costs been compared appropriately, including the future management of the product, and are those figures fixed or variable? If it fails, who picks up the tab?

When mulling these big decisions over, remember Trading Apps and, of course, other vendors are very happy to share their experiences. Trading Apps are keen to support clients in making the best decision for their situation.

Den Leonard
Chief administrative officer
Trading Apps


standard chartered
Progress doesn't have to cost our planet
From financing innovations that build sustainable cities to powering millions of people through clean energy – find out all the ways we're using money as a force for good at **sc.com/hereforgood**
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A hurdle too large to clear

The SEC proposes to mandate central clearing in the US treasury and repo markets for all eligible secondary market transactions to improve risk management practices for CCPs. Carmella Haswell discusses its potential and impact on the markets

As firms evaluate the potential impact of central clearing reforms proposed by the SEC, market participants contemplate concerns for increased costs, disruption in liquidity flows and a reduction in trading activity for US treasury securities.

Formulated by the U.S. Securities and Exchange Commission (SEC), the proposal aims to improve transparency and lower systemic risk in the US$23.3 trillion market for US treasury securities. By increasing the number of transactions subject to central clearing, the Commission says that these amendments should strengthen the US treasury market and increase resiliency to unexpected shocks.

The SEC plays a critical role in how the treasury market functions, ensuring that the markets remain efficient, competitive and resilient. For SEC chair Gary Gensler, central clearing does not eliminate all risk, but it does lower it. He indicates that there is more work to be done in the treasury market, with only 13 per cent of treasury cash transactions centrally cleared in 2017. He says: "I think that these rules would reduce risk across a vital part of our capital markets in both normal and stress times."

Part of the proposal would require clearing agencies in the US treasury market to mandate that their members submit for clearance and settlement all eligible secondary market transactions — including all repo and reverse repo trades collateralised by US treasuries.

The list of secondary market transactions refer to all buy and sell trades entered into by a clearing member that is an interdealer broker, and buy and sell trades between a clearing member and specified types of counterparty — specifically a government securities broker, a government securities dealer, a registered broker-dealer, a hedge fund or certain types of leveraged account.

Firms will have 60 days following the publication of this proposing release in the Federal Register to provide commentary on any concerns or advice for the SEC regarding the future of the US treasury and repo markets.

Falling short

The SEC's objective to encourage greater adoption of central clearing in the US treasury market aims to reduce risk and improve resiliency, which is critical to the strength and stability of the US economy, according to the Depository Trust & Clearing Corporation (DTCC).

DTCC's whitepaper "More Clearing, Less Risk: Increasing Centrally Cleared Activity in the U.S. Treasury Cash Market" notes that the US treasury market is the deepest, most liquid market that is dwarfing in size every other market in the world. The US-based post-trade financial services firm has long advocated for a greater use of central clearing, recommending that, as an industry, the causes, trends and risks in the shift to bilateral clearing for cash activity in the US treasury market must be explored further.

Central clearing plays a critical role in the financial system and became a key element of financial system reforms in the aftermath of the great financial crisis. This contributed to market resilience through the crisis by continuing to clear contracts despite the bilateral markets drying up. Since this time, central clearing has evolved significantly.

According to DTCC, there are various benefits to centrally clearing US treasury activity through the Fixed Income Clearing Corporation (FICC). For example, bilateral counterparty credit risk is mitigated through the novation of FICC and market risk is eased through standardised margin processing. In addition, central clearing repo transactions alleviates capital constraints by enabling members to reduce capital usage and, therefore, helps to maintain liquid markets.

Clear Street's managing director and head of repo trading Joseph DiMartino says centrally clearing more US treasury transactions will improve liquidity. Balance sheet optimisation will be more efficient and fails will be dramatically reduced. However, DiMartino believes that the SEC's proposal might fall short of some of its goals in regards to central clearing.

He explains: "During periods of economic volatility or market stress, participants will be more likely to face clients through a centrally cleared platform without taking on specific counterparty risk. However, the costs of such a significant increase in centrally cleared activity might be a hurdle too large for many participants.

"Additional transaction costs as well as increased capital requirements will make market making in US treasuries less favourable. The hurdle rate increase will lead larger banks and broker-dealers to re-allocate precious balance sheets."

Among the listed proposals laid out by the SEC, the organisation dictates that CCPs would be required to calculate, collect and hold margin for a direct participant's treasury securities transactions separately to that of an indirect participant. CCPs are also expected to take steps to ensure that there are appropriate means to facilitate access to clearance and settlement services of all eligible secondary market transactions.

Furthermore, the proposal suggests an amendment to SEC Rule 15c3-3a. The rule permits broker-dealers to include a debit in the reserve formulas for customer cash and treasury securities delivered to a treasury CCP to meet a margin requirement, with respect to such a customer's treasury securities transactions.

Speaking to SFT, Colleen Stapleton, repo product manager at MarketAxess, says: "Like much of the coverage on this topic of late, improvements can and should be made to increase market stability, transparency and resiliency, but it should be a measured incremental response building off the success of the Sponsored Repo programme.

"A mandate of this nature will force the UST repo market to completely overhaul current technology and its operations approach. MarketAxess will work with the industry to support any regulatory change that will help make the market more efficient and resilient."

A thoughtful approach

James Tabacchi, chairman of the Independent Dealer and Trader Association (IDTA), applauds the SEC's desire to improve transparency, reduce systemic risk and level the competitive playing field for all participants in the US treasury market through a central clearing mandate.

The treasury market consists of a wide range of investor participants, including corporate treasuries, trading firms and dealers. Tabacchi notes that all of them are important participants in the liquidity flows of the treasury and treasury repo market — which is vast and currently trades with tight margins.

As the chairman of the IDTA, Tabacchi confirms that the organisation is preparing a comment letter on the SEC's proposal on treasury market central clearing.

"We believe a disruption in any one of these participant liquidity flows could have negative systemic impact and should be planned and implemented in a thoughtful manner," Tabacchi explains. He recognises that the impact that the SEC proposal will have on market competition is highly dependent on how central clearing will be implemented. He concludes: "Any central clearing mandate which would inhibit competition and narrow sources of liquidity, even in the short term, should be avoided at all costs."

Despite the SEC's confidence in its ability to improve transparency and lower systemic risk, several market participants are cautious about the new proposals and what they will mean for the treasury and repo markets.

The smaller, non-bank broker-dealer community has been a valuable source of liquidity for the buy-side for many years, says Clear Street's DiMartino. He anticipates that additional transaction costs will be passed along to their clients, which will result in a reduction in trading activity in US treasury securities. DiMartino indicates that this will become a barrier for new entrants into US treasury trading and market making.

DiMartino adds: "The result could be less liquidity in times of stress as the totality of market makers and balance sheets have been reduced dramatically. Perhaps revisiting past regulatory exemptions would be a simpler way to improve transparency and lower systemic risk in the US treasury market."

According to Tabacchi, it is not currently a realistic expectation to require all market participants to centrally clear — and certainly not all at once. He continues: "Central clearing requires mutualisation of risk and a likely increase in cost and capital requirements which, while potentially beneficial to the market in the long term, could cause a disruption in treasury liquidity flows in the short term."

Tabacchi suggests that this could cause some disintermediated flows to be concentrated with the largest financial institutions. Since central clearing, by design, creates a single point of failure, he notes, any concentration risk is compounded by the potential disruption of just one large SIFI institution. "Concentration of risk is also, by definition, non-competitive, and inconsistent with the goals of Dodd Frank," Tabacchi indicates.

Tabacchi concludes: "We believe a methodical, well developed, phased in plan, hopefully with the incorporation of DLT technology, makes sense and enables all participants to achieve the SEC's stated objectives."

The SEC will need to take onboard the thoughts and the expertise of industry participants as it attempts to pave the way for an improved and protected US treasury and repo market.

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- What if scenarios
- Pre-funding examination
- SPAN/VaR analysis

Optimisation
- Cost benefit across multiple attributes
- Minimizing the cost of collateral allocation

Self Service
- Configuration dashboard
- Immediate on-line access to portfolios
- Quick identification of 'critical' events

Connectivity
- MarginSphere
- Settlements/Payments

Operations
- Configurable Workflow
- Regulatory compliance
- Intuitive dashboards
- Process automation
- Flexible Rules Engine

Inventory
- Liquidity management
- Risk and inventory projection
- Forward funding
- Real time reporting/MIS
- Multiple Views

China's repo market: a guide to the present, an eye on the future

Richard Comotto, senior consultant to the International Capital Market Association, speaks to Bob Currie about the release of the China chapter of ICMA's guide to Asian repo markets and his thoughts on how this financing marketplace might develop

The International Capital Market Association (ICMA) has released a guide to China's repo market, representing the fifth chapter in its domestic repo markets in Asia.

This latest chapter provides a detailed introduction to repo market activities on the Chinese mainland, including analysis of the evolution of the market, both its interbank and exchange-traded markets, products and trading activities and market infrastructure, along with a review of the regulatory and legal framework and its ongoing development.

Authored by Richard Comotto, senior consultant to the ICMA's European Repo and Collateral Council and longstanding repo market expert, this contribution follows on the back of domestic repo market guides for Japan, Indonesia, Vietnam and the Philippines which have been released in stages earlier this year.

The latest chapter notes that China has a 30-year history of repo trading, with activity building from informal transactions conducted on local exchanges in the early 1990s to a market today that generates almost US$220 trillion annually in turnover, equivalent to an average daily turnover of US$850 billion or CNY 5.6 trillion.

Given the scale of the repo market in China, Comotto advises that it should be compared with other large repo markets globally, rather than its smaller Asian regional counterparts. The repo market is now the largest fixed income and money market in China, with repo turnover during 2021 of CNY 1,395.4 trillion compared to CNY 214.5 trillion cash trading in bonds and CNY 118.8 trillion in unsecured interbank lending.

While China's domestic repo market has grown substantially from where it was 30 years ago, he suggests that the market may now have entered something of a cul-de-sac in terms of the opportunities it offers for further development. It is not a conventional repo market, he notes, insofar as some of the functions it fulfils would typically be performed through other instruments or trading mechanisms in other jurisdictions. In its current form, it has potential to grow further as a domestic market, but it offers only limited possibilities for integration with the international financial markets and to evolve as a funding channel that is attractive to international participants.

Collateral illiquidity

The guide concludes that, although the repo market is the most efficient and liquid financial market in China, the underlying cash market for securities deployed as collateral is relatively illiquid, with very low turnover, and collateral illiquidity is a systemic risk in this market.

The consequence, says Comotto, is that liquidity-providers (ie collateral takers) will typically avoid term business and limit their financing trades to overnight, in the hope that they will exit the transaction before anything goes wrong.

More specifically, given the lack of liquidity in the underlying cash securities markets, it is difficult to accurately value collateral. Collateral-takers may have broad confidence in the default characteristics of government bonds, municipal bonds and policy bank bonds delivered as collateral in repo transactions — believing that the Chinese government is likely to back its government debt, along with debt issued by government agencies and state-owned enterprises.

However, given the illiquidity of underlying securities markets, it is challenging to manage the mark-to-market and to track the movement in collateral valuation over time. These factors, collectively, represent a significant constraint on the future development of the market.

Although the one-day duration of most repo transactions does mitigate this liquidity risk to investors, it does present a significant funding risk for borrowers. Comotto notes that extensive use of short-term wholesale funding to generate leverage and to manage maturity transformation exposes the repo market to risk of sudden deleveraging.

A further source of systemic risk arises because almost all repo trades are pledged transactions, which are effectively secured loans rather than true repo. In the event of a counterparty default, Comotto notes that such repos would fall within the scope of the statutory insolvency regime and Chinese bankruptcy law, which is little tested and may delay or block access to collateral.

A new Futures and Derivatives Law (FDL) came into effect in China on 1 August 2022 which recognises the enforceability of close-out netting, but only for futures. ISDA has also published a netting opinion for the derivatives market in China that aligned with the enactment of this FDL legislation.

These developments notwithstanding, Comotto remains cautious about how far the market has advanced in terms of the surety available to repo market participants.

“This does not currently offer market participants the assurances that they require from a mature financing market,” says Comotto. “This demands that their rights to the collateral are clearly protected, typically through transfer of title, and that is not currently the case in China. Further, in case of counterparty default, it is unclear whether close-out netting could be assured for mutual positions under China’s existing insolvency law, notwithstanding progress with derivatives. The regulatory authorities have issued statements indicating that the rights of collateral takers will be protected in case of a counterparty default, but that assurance is untested in practice.”

> *"If the financial authorities can encourage the development of a title transfer repo, supported by a robust bankruptcy law that protects collateral rights and netting against the insolvency regime, this would be a major step forward"*

More broadly, pledged repo does little to encourage liquidity in the underlying securities market because cash lenders are not able to re-use pledged collateral, for example to cover short positions.

Trading and post-trade infrastructure

The repo market in China is divided across the Interbank Market and two stock exchanges, the Shanghai Stock Exchange and Shenzhen Stock Exchange. The Interbank Market is a largely wholesale and quasi-OTC market. The exchanges are centralised markets and primarily support retail activity.

SFT asked Richard Comotto how he expects the relative market share of the Interbank Market and stock exchanges to evolve for repo trading in times ahead. The exchanges raised their share of trading turnover to 35 per cent in 2017, before falling back in the face of tighter monetary policy and regulation to just over 20 per cent at the end of 2021 (p 5).

“Looking back five years or so, it seemed likely that the stock exchanges would strengthen their market share of the Chinese repo market on the back of greater interest in credit collateral,” explains Comotto. “However, in practice, that trend was not maintained. Shocks to the market, including the challenges presented by the Covid-19 pandemic, have focused repo trade through the longer established and more liquid Interbank Market, which has also been encouraged by central bank participation through this channel.”

With the move to “risk off” that has accompanied these shocks, this has slowed growth of repo trading through the stock exchanges. If risk appetite returns, Comotto predicts that the exchanges may again start to encroach on the market share of the Interbank Market. On the other hand, if the Chinese government increases its issuance of government bonds, this is likely to provide additional stimulus to repo trades against government debt collateral through the Interbank Market.

In theory, Comotto notes, the Interbank Market trades on the China Foreign Exchange Trading System (CFETS), which supports trading and data services for repo, cash bonds, foreign exchange and OTC derivatives. In reality, repo market participants commonly trade bilaterally off CFETS, using voice or chat, with CFETS used to report the transaction in keeping with the regulatory obligation in the Chinese market for OTC transactions.

Comotto believes there is small probability that repo trading activity will move substantially from voice to electronic trading on CFETS in the immediate future. To support electronic trading, it is necessary to offer strong liquidity in standardised trading instruments and contracts — and this is currently not available in China’s domestic repo market. Credit availability is also a constraint, particularly in the Interbank market.

The financial authorities in many emerging capital markets are keen to demonstrate that they are building an international-standard trading and post-trade infrastructure. However, automatic trading systems operating via a central limit order book cannot operate efficiently without strong trade flow. Comotto notes that in the US and Europe, this has been driven particularly by a large and vibrant repo market supporting short-term financing of government bonds. However, China’s domestic market cannot currently deliver this level of repo market liquidity.

At clearing level, two CSDs are currently providing clearing and settlement services for the Interbank Market. China Central Depository and Clearing Corporation (CCDC, or Chinabond) is the designated CSD for government bonds and enterprise bonds and settles approximately 80 per cent of the Interbank Market. The Shanghai Clearing House (SHCH) settles repo against other collateral, typically commercial paper and medium-term notes. Both CSDs offer DvP central bank money settlement, with CeBM payments supported by the PBOC's China National Advanced Payments System. Settlement is typically T+0, although next-day settlement is permitted.

In October 2018, the central bank granted permission for the CDCC and SHCH to offer triparty collateral management services — which went live at SHCH in October 2018 and at CDCC in April 2019 — with potential for custodian banks to offer triparty collateral management services at a later time. However, triparty volumes are currently reported to be "insignificant" since the launch of these services (p 7).

SHCH has also proposed a GC financing facility involving its CCP and its triparty collateral management service (similar to the GCF service in the US, €GCPlus and GC Pooling in the EU and £GC in the UK). However, again, there has been little significant financing activity against GC baskets through this channel.

For repos traded on the exchanges, clearing and settlement takes place on the China Securities Depository and Clearing Corporation (CSDC, or Chinaclear), which supports T+1 settlement against commercial bank money payment. For repo trades executed on the stock exchanges (but not for OTC repos reported after execution to the exchanges), CSDC offers a CCP service to counterparties trading standardised repo against AAA-rated bonds.

This provides guaranteed settlement and anonymity to the counterparties, Comotto notes, but does not align with the CPMI/IOSCO's Principles for Financial Market Infrastructures. CSDC also provides triparty collateral management services to both exchanges, including automatic collateral allocation.

"This again shows evidence that China's financial authorities are committed to developing a post-trade infrastructure, including clearing services, that mirror the architecture employed in international capital markets," says Comotto. "However, I do not anticipate significant take-up of these central clearing services for repo market trades in the near term. Fundamentally, CCPs require volume in standard easily-nettable products. Whereas the US and European markets have electronic platforms supporting high trading volumes in short-term government bond repo, this trade flow does not currently exist in China's domestic repo marketplace. In the Interbank market, a major share of business is bank-to-customer and therefore unlikely to drive significant volume through the central clearing solution established by SCHC."

Concluding thoughts

In concluding, Richard Comotto highlights the important role that the Interbank Market has played since its inception in 1997 in supporting the central bank's move towards an interest rate-based monetary policy framework. This has facilitated the People's Bank of China's move from quantitative credit targets and direct interest rate guidance towards a monetary framework guided by daily open market intervention, reserve averaging, standing facilities and strategic policy signals.

Comotto notes that an efficient repo market provides a secure medium for open market operations, while repo rates provide an accurate indicator of the cost of wholesale funding, providing an effective benchmark for pricing risk and short-term financial assets.

China's desire to be integrated more fully into the international financial system, and to play a more prominent role in this system, is likely to prompt reforms to address some of the obstacles to development identified in this article. "Reforms to China's bankruptcy law will be an important starting point," notes Comotto. "If the financial authorities can encourage the development of a title transfer repo, supported by a robust bankruptcy law that protects collateral rights and netting against the insolvency regime, this would be a major step forward."

From a market structure perspective, he notes that China would benefit from promoting the development of a true dealer-to-dealer market, rather than the predominantly bank-to-customer arrangements that dominate the Interbank Market currently, where a wide range of trading entities are invited to participate.

These will be the key steps in developing a repo market that supports the wider development of China's financial markets and economy. "The People's Bank of China is fully aware of the importance of these reforms and progress will be dependent on whether political decision-makers will be willing to follow through with these changes, preparing the foundation for the next phase of China's repo market development," concludes Comotto.

UMR and FX clearing: a new landscape offering many benefits

UMR adoption has generated an exponential growth in regulatory IM, driving more focus on collateral management and optimisation. Vinayak Dange, head of product management, clearing and reconciliation at Adenza, says firms stand to gain from FX clearing

The introduction of Uncleared Margin Rules (UMR) significantly impacted the foreign exchange (FX) clearing world. It substantially increased trading costs for uncleared derivatives and accelerated the expansion of clearing programmes globally.

It mandated that counterparties post a new two-way initial margin (IM) in segregated accounts. Although cash-settled products fall outside UMR, unsettled FX forwards are included in the Average Annual Notional Amount (AANA) calculation that determines whether a firm is in scope for UMR and, therefore, must post IM when it exceeds the relevant UMR threshold. The bilateral margin requirement created additional collateral and capital costs that incited firms to consider more cost-effective clearing channels.

Surge in FX Clearing

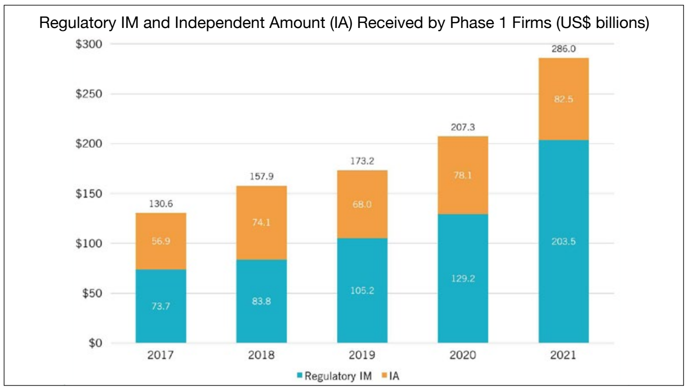
To avoid costly UMR compliance, firms now aim to reduce AANA by clearing more products. Central counterparty clearing houses (CCPs) offer FX netting, trade compression and cheaper IM, enabling firms to optimise their collateral positions on a portfolio basis and, thereby, decrease their operational and settlement costs.

The UMR-driven push to clear more products has been one of the main drivers of a huge surge in demand for FX clearing and the commensurate expansion of CCPs' support of vanilla FX products (spot, forwards, swaps). Firms clear FX via global CCPs for non-mandated products (e.g. FX non-deliverable forwards (NDF) and cash-settled FX products). Encompassing approximately 1,200 firms, UMR's six phases have gone live, progressing as shown in Figure 1.

Figure 1

UMR adoption has generated an exponential growth in regulatory IM, driving more focus on collateral management and optimisation. In its Margin Survey Year-End 2021, ISDA notes that Phase 1 firms collected US$286.0 billion of IM for non-cleared derivatives transactions at year-end 2021, a 38.0 per cent increase versus the US$207.3 billion of IM that Phase 1 firms collected at year-end 2020 — as ISDA shows in Figure 2.

Figure 2



FX clearing's many benefits

Across the board, firms can benefit by opting to clear all FX products, mandated or not. We discuss nine of the most compelling drivers here.

Capital efficiency and margin optimisation: At the start of FX clearing, studies were done to assess its benefits in the context of incoming margin rules. One such study was done by Greenwich Associates, titled "FX Options in the Age of Uncleared Margin Rules", in which they indicated that FX options would require significantly less margin and capital and could be approximately 86 per cent more capital efficient than bilateral positions that need to post IM under UMR.

CCP clearing improves operational efficiency in addition to vastly improving balance-sheet positions and minimising other regulatory capital charges, as the following methodologic, transactional and experiential observations indicate.

- Margin period of risk (MPOR): The ISDA Standard Initial Margin Model (SIMM), for example, uses a 10-day MPOR, whereas clearing houses (e.g. CME, LCH) use a five-day MPOR for house-clearing and a seven-day MPOR for client-clearing, resulting in lower margin exposures for cleared trades.

- Risk-weighted assets (RWA): Basel III attributes lower counterparty risk-weights to a CCP than to a bilateral counterparty. Therefore, a firm's RWA and leverage ratio profiles benefit, and the netting effects of consolidating positions against a single counterparty contribute to reducing overall capital requirements.

- In addition to clearing bilateral products, firms clearing listed FX options through a CCP benefit from risk-offsetting and cross-margining methodologies by which their overall IM requirements decrease significantly. Given the UMR changes, and that firms have experienced a deterioration in the quality of bilateral FX options quotes, many traders now consider listed FX options as a viable alternative for managing their OTC portfolios.

- To effectively select whether to use a cleared or uncleared channel and assess potential capital-reduction benefits, firms increasingly want the capability to simulate pre-trade IM at the portfolio level in real time — directly within their systems.

Netting/Compression: Compression eliminates economically redundant derivatives positions and thereby reduces outstanding contracts. CCP-enabled FX blending further reduces the number of open trades while keeping the original risk profile the same and contributing to operational efficiency.

Tools help firms perform multilateral netting that:
- reduces gross and net notional positions
- enhances capital efficiency and leverage ratios
- helps manage counterparty credit risk
- reduces operational risks and costs

Fewer line items require less reconciliation and reduce netted settlement. Multilateral netting enables firms to hold a single position per instrument (e.g. CCY Pair/Settle Date), rather than servicing individual lines with each bilateral counterparty and holding complex ISDA master agreements and/or credit support annexes (CSA).

No disputes, less management: CCPs use standardised market data per industry best practice to calculate Variation Margin (VM), Price Alignment Interest (PAI) and a robust risk methodology to calculate IM. This discipline eliminates disputes on VM and IM calls versus bilateral trades.

Operational efficiency: Utilising a single clearing agreement provides access to the full liquidity available in FX futures and options and eliminates the need for complex ISDA agreements and/or CSAs with multiple bilateral counterparties.

Settlement and trading platforms support: CLS delivers settlement, processing and data solutions launched by CLSClearedFX — the first Payment-versus-Payment (PvP) settlement service specifically designed for OTC-cleared FX derivatives. The CCP CLS unique cycle provides settlement certainty and netting benefits for OTC FX and cross-currency swaps members. Therefore, CCPs and clearing members can settle cleared FX products safely and effectively.

Settlement netting: For those firms using self-clearing, CCP clearing can provide an effective mechanism to:
- free up bilateral credit lines
- access more liquidity providers
- achieve netting for daily settlements
- automate the trade allocation process

Buy-side firms can aggregate their positions in a single account directly with a CCP or via a futures commission merchant (FCM). This reduces settlement risk as most CCPs use CLS's PvP, whereby all settlements are netted across positions by currency.

Cheapest-to-Deliver (CTD) collateral: While keeping a minimum margin level is critical, a key goal is to minimise collateral cost with CTD collateral. CCPs allow firms to post a variety of collateral, whereas bilateral CSAs limit collateral types (including government securities, ABS, MBS and corporate bonds). Some CCPs are using real-time collateral optimisation through Euroclear Bank, offering collateral allocation and substitution for FCMs and end users.

Ringfencing collateral: CCPs support various models such as the individual segregated model (asset seg/value seg), which allows firms to ringfence non-cash collateral and help safeguard underlying collateral from defaulting. These structures facilitate the porting of trades facing the defaulting FCM.

Portfolio/cross-margining and capital reduction: Regulatory bodies have authorised CCPs to conduct portfolio margining across exchange-traded derivatives (ETD) and OTC FX products. Trading in a regulated, transparent, all-to-all marketplace with firm liquidity offers attractive qualitative benefits. Quantitatively, it also helps reduce counterparty credit risk (CCR). According to the CME Group, a listed FX Options portfolio reduces IM to 0.8 per cent of notional compared with 2.6 per cent of notional for a comparable portfolio with bilateral SIMM requirements. This approach results in a cost differential of 595 per cent, as delineated in Figure 3 from the CME's article, titled "Listed FX Options: A Capital-efficient Low-cost Solution".

Figure 3

Analysis using SA-CCR model assumption

	Futures CME SPAN	Netted SIMM ("PB")	Bilateral SIMM
Funding Requirements			
Initial Margin ("IM")	7,987	22,806	74,431
IM as % of Notional	0.8%	2.3%	2.6%
Default Fund	0	0	0
Total Funding	**$7,987**	**$22,806**	**$74,431**
Captial Requirements			
Leverage Ratio ("SA-CCR")	442	442	1,190
EAD w/ Collateral (Proxy for CVA)*	5,346	5,671	13,992
Default Fund	0	0	0
CVA VaR*	18	19	48
Total Capital	**$461**	**$462**	**$1,238**
Annualized Costs			
Funding Costs	160	456	1,489
Capital Costs	46	46	124
CVA Costs	64	68	168
LCR* Costs	40	114	372
Total Costs Annualized	**$310**	**$684**	**$2,152**
Cost Differentials over CME:		+121%	+595%

** Exposure at Default ("EAD"); Credit Value Adjustment ("CVA"); Value at Risk ("VaR"); Liquidity Coverage Ratio ("LCR").*

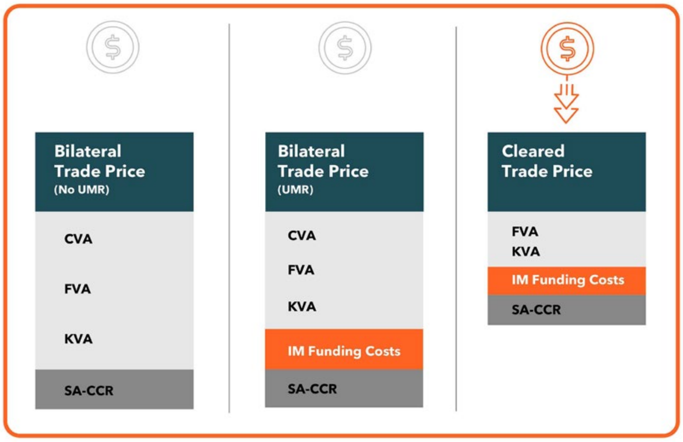
Assumptions		
Default Fund as % of IM	5%	CME Ranges
Funding Costs	2%	CME Estimate
Cost of Capital	10%	CME Estimate
Annualized CVA	1.2%	CME Estimate
LCR (based on funding)	0.5%	CME Estimate
Default Fund C-Factor	1%	CME Ranges
CVA VaR Multiplier	0.34%	CME Estimate
S-CCR C/V Ratio	125%	Over 100% indicates Over Charge

Margin model assumptions: MPOR	
Bilateral SIMM	10 Days
Netted SIMM ("PB")	10 Days
CME SPAN/Futures	5 Days

The benefits of clearing extend to CCR and related capital costs. Per Basel III reforms, financial institutions are now subject to the standardised approach for counterparty credit risk's (SA-CCR) capital charge. Optimised collateralised exposure can significantly reduce SA-CCR if firms clear their OTC trades. Indeed, the MPOR for cleared trades drops from 10 days (for non-cleared) to five to seven days. Cleared trades are aggregated in a CCP or clearing member netting set, which generates additional risk netting resulting in smaller exposures. Lastly, smaller risk weights are applied to cleared trades, contributing to lower RWA.

In summary, by selecting clearing channels, the total cost of the trade can be fully optimised as shown in Figure 4, illustrating trade decomposition into XVA (credit valuation adjustment (CVA), funding valuation adjustment (FVA) and capital valuation adjustment (KVA)), IM and SA-CCR exposure.

Figure 4



A dramatically changed landscape

Overall, firms are on board with FX clearing to avoid the costly UMR margins and to leverage the operational and capital efficiency offered by the clearing world. The UMR Phase 6 cohort go-live on 1 September 2022 added approximately 800 entities to the expanded clearing landscape. We expect continued growth across participants, trade volumes and FX product types. The LCH's data of August 2022, shown in Figure 5 on the followng page, substantiates this growth trend.

FX clearing coverage is expanding, with numerous FX programmes offered by clearing providers, as illustrated by our tabulation of 2 November 2022, shown in Figure 6 on the following page. We expect these offerings to grow over the next few years.

Figure 5

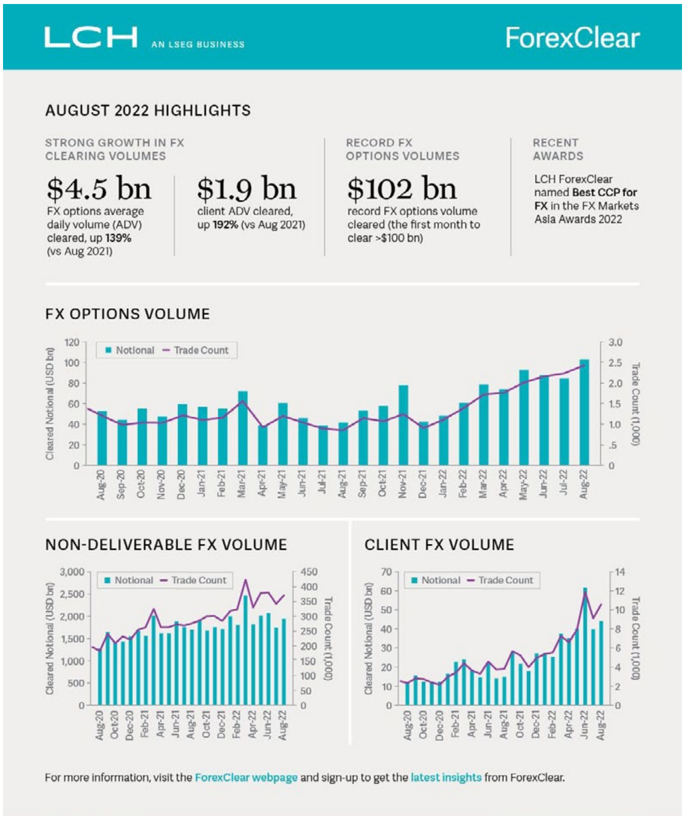


Figure 6

Clearing Houses: Number of Currency Pairs Offered by FX Product Type

CCPs	FX NDF	FX Options	FX Spot	FX Forwards	FX Swaps	Listed FX Futures	Cross-CCY Swaps
LCH	26	17	8	8			
CME	11	7	7	26		8	
Eurex	6					24	
HKEX	4			2	2	8	2
Comder	2						

Gaining from change

Considering the changes and benefits highlighted here, firms stand to gain from the FX clearing function's dramatic change — an expansion boosted by mandatory clearing, UMR, and CCPs' attractive cross-margining, netting and compression programmes.

To take full advantage of this surge in FX clearing, firms need end-to-end clearing, collateral and risk mitigation with TCO optimisation. Selecting a utility or managed-service model enables firms to quickly onboard and/or start self- and client-clearing businesses without the burdens of maintaining system infrastructure, connectivity to various CCPs, software implementation and upgrades, and BAU clearing operations staff.

In closing, we share our key learning from this discussion. We will continue to face unpredictable change in the margin, collateral and clearing landscapes. Only by being proactively ready for change will firms be able to adapt, evolve and optimise. Opting for a consolidated, cloud-based utility model will help firms future proof their capital markets platform and capitalise on the many benefits of FX clearing.

Vinayak Dange
Head of product management, clearing and reconciliation
Adenza

The coming revolution in repo

State Street's Travis Keltner and Kevin MacNeill argue that uncertain global financial market conditions, the rise of P2P business models and technological developments in the industry mean that repo markets could be poised for their biggest leap forward

Liquidity in financial markets is often taken for granted. Like water, we do not typically think much about it until it is not there. But with a changing interest rate environment unleashing greater volatility in global markets, liquidity is re-emerging as an important consideration.

Recent turmoil in the UK market underscores the point. As interest rates suddenly rose in response to announcements about new fiscal policy measures, bond values slumped and pension funds scrambled to cover collateral demands, resulting in a liquidity squeeze that forced the Bank of England to step in.

While those conditions were UK specific, the global buy-side has become all too familiar with liquidity stressors in a macro environment dictated by unprecedented events and rapidly changing trends. That has implications for repo markets, where each day approximately US$4.5 trillion is traded in the United States (over US$3 trillion in US treasuries alone) and close to double that globally.

To understand why, let us start with what these markets do. The market for repurchase agreements (repos) makes up a crucial part of collateralised money markets by providing buy-side firms with funding options for their changing investment needs.
These markets facilitate the flow of cash and securities and have implications for intra-bank loan activity and monetary policy more broadly. In particular, the repo market allows investors that need cash — both in well-functioning and stressed markets — to convert assets temporarily instead of selling outright, which can be disruptive, especially when buyers are scarce.

In the US, prolonged low rates during the COVID-19 pandemic made it difficult to find value and fund opportunities on the short-end of the curve. Conversely, the current environment of unprecedented rate hikes and prolonged inflation uncertainty has flooded cash into overnight markets, while associated collateral supply remains sparse in comparison. The Fed's Reverse Repo Facility (RRP), a key player in the US treasuries repo market, has ballooned since the start of 2021, reaching all-time highs above US$2.3 trillion this year.

The influx of cash and rapidly rising rates provide opportunities for the buy-side, but not all firms have access to every outlet, like the Fed RRP. Also, the Fed RRP is just overnight repo against US treasuries. Opportunities exist for the buy-side to expand into a broader set of collateral types and maturities. Unlocking new liquidity outlets for the buy-side in repo markets has implications not just for money markets, but for the economy more broadly. Peer to peer (P2P) models can help. P2P models allow buy-side firms to transact directly with non-dealer counterparties to capitalise on identified trends in a changing market. When the buy-side has the power to negotiate among themselves, opportunities can be customised under a broader set of options to more closely fit each firm's needs.

P2P platforms such as Airbnb and eBay already have unlocked tremendous value in many sectors of the economy. They can do the same for repo markets by increasing visibility and options for buy-side firms via an intuitive, sleek platform. More importantly, advances in technology support the design of automated front-to-back solutions, especially critical for financial markets, and provide real-time intelligence.

The benefits could be significant and include:

- A ready ability to send and receive indications of interest to a broad counterparty set for price transparency.
- Integrated messaging supporting settlement and collateral management, enabling more firms — who otherwise lack the necessary infrastructure — to engage.
- Broad participation by firms lacking the requisite infrastructure themselves to readily interact.
- Opportunity for lower costs for buy-side participants. Traditional repo intermediaries (i.e. dealers and banks) may incur material balance sheet utilisation costs, which is not-unreasonably passed along to counterparties in the form of less-favorable spreads.

As State Street and Finadium outlined in April, overall costs are expected to be lowest in a P2P model, in which the intermediary costs are removed or reduced. Under an indemnified P2P model, buy-side counterparties transact directly and a bank or insurer guarantees either or both the repo buyer and seller that the repurchase price and collateral securities will be returned in the case of a counterparty default. A fee for this protection is passed along in spreads, but the overall cost that is passed along is expected to be less than in traditional repo models. This also offers the same peace of mind that the buy-side has come to expect when transacting with traditional counterparties.

Lastly, a P2P platform in the repo market could, over time, be used to include other markets such as the securities lending market and, eventually, with the adoption of blockchain technology, markets for digital assets.

The repo market has been evolving since the late 1970s, but the confluence of an uncertain global economic and financial market environment, the rise of P2P business models, and technological developments in the financial industry mean it could be poised for its biggest leap forward yet — and bring other related markets along with it.

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ETFs: a shining star for 2022

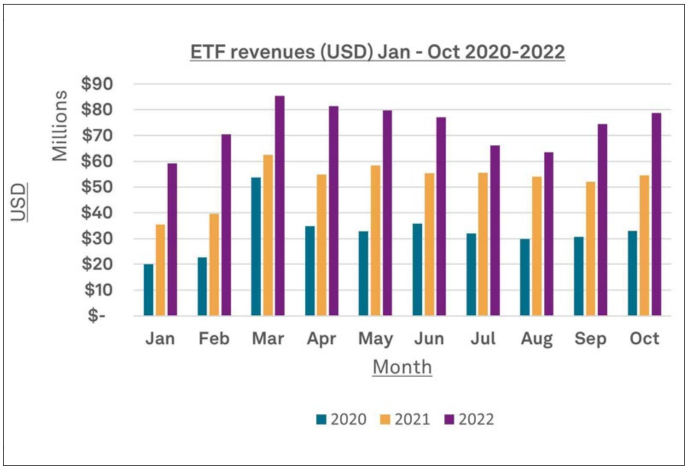
Matthew Chessum, director, securities finance at S&P Global Market Intelligence, explains that 2022 is likely to be the best performing year for securities finance revenues since the financial crisis, with exchange-traded funds being a stand-out performer over the period

The current year, 2022, will no doubt be referenced in finance textbooks for a long time to come. The economic backdrop has been unique when looking at the breadth of risks that financial markets have been required to navigate. Geopolitical risk has remained high due to the diplomatic and economic ramifications of the war in Ukraine, supply chain dislocation has been commonplace as global economies emerge from COVID, and inflationary pressures, which central banks have been slow at trying to tame, have all led to a perfect storm for investors. Financial markets have remained volatile as a result and central banks have pursued some of the fastest monetary tightening in history.

Higher interest rates have suppressed equity valuations and central bank tightening has increased yields in both corporate and government bonds. This is one of the few years on record where both bonds and equities have faced simultaneous double-digit declines. Investment funds have struggled to outperform as mainstay popular strategies, such as the 60:40 portfolio, have been subject to double-digit declines. Hedge funds have been impeded by a lack of corporate activity and market fluctuations that have been both unexpected and unlike many seen previously.

Despite the challenging investment landscape, the securities finance market offers a glimmer of hope to investors and asset owners as it has remained robust throughout the year. Not only has the geopolitical risk been effectively managed through the restriction and recall of assets, but the volatility that markets have faced has been offset by flexible and robust collateral management processes. Revenues remain impressive, given broader market sentiment, with 2022 looking to surpass 2021 in absolute returns. 2022 is therefore likely to be the best performing year for securities finance revenues since the financial crisis. The asset classes contributing to this impressive performance have been well documented in the S&P Global securities finance monthly snapshots. ETFs have been cited, since the beginning of the year, as one of the shining stars of 2022.

Securities finance revenues for ETFs surpassed their 2021 total (US$635.6 million for January to December) in September and have generated US$736 million year to date. This figure has grown consistently since 2020 (+59 per cent for 2020 to 2021, +41 per cent for 2021 to 2022) along with average on loan balances (US$112.7 billion for 2022, versus US$92.09 billion for 2021, and US$60.9 billion for 2020). The average fee for each month of 2022, except for March, was also higher when compared to the same respective month in the previous years. The current average fee for 2022 is 0.79 per cent, versus 0.68 per cent for 2021, and 0.63 per cent for 2020. All figures compare the January to October period of each year.



The main driver behind this impressive performance has been Americas ETFs, which continue to dominate this market. From the US$736 million of revenue generated by the ETF segment so far this year, US$631 million (86 per cent of total revenues) was generated by Americas ETFs. This number has been rising steadily since 2020 when Americas ETFs accounted for 70 per cent of the total revenues. This proportion subsequently increased to 80 per cent in 2021.

S&P Global data shows that US ETF investment vehicles have seen inflows of US$500 billion so far during 2022, despite it being a particularly grim year for Wall Street. Retail investors continue to benefit from the low cost, well-priced, liquid wrappers that ETFs provide. The recent rise in both thematic and factor-based ETFs has reportedly improved their attractiveness among investors in the current market environment. ETF inflows in the US have coincided with subsequent outflows in more traditional US Mutual funds (40 Act). While asset values are suppressed and capital gains obligations fall as a result, investors are reportedly taking advantage to switch investment vehicles.

From a securities finance perspective, market volatility and hawkish central banks have made ETFs an attractive asset for market participants. The top five borrows so far this year focus on high-yield and investment-grade bonds, which is unsurprising considering that corporate bonds are recording their worst performance in recent history. Other popular borrows include SPDR S&P 500 (SPY, with S&P performance of -19 per cent for January to October) and ARK Innovation (ARKK, with performance of -60 per cent so far this year). As ETFs become more prevalent in investment portfolios, they are also

Top 5 Revenue Generators - ETFs Jan - Oct 2022

Ticker	Name	SL Revenue ($M)	Market	Sedol
HYG	Ishares Iboxx High Yield Bond Etf	99.02	US ETF	B1VZ486
LQD	Ishares Iboxx Invt Grade Bond Etf	30.32	US ETF	2971502
BKLN	Invsc Senior Loan Etf	27.64	US ETF	BZ03L33
SPY	Spdr S&P 500 Etf	26.49	US ETF	2840215
ARKK	Ark Innovation Etf	26.01	US ETF	BSBNFV9

Source: S&P Global Securities Finance

2022 S&P Market Intelligence

increasingly considered to be a liquid and well-priced form of collateral. An ETF is priced throughout a trading session and can therefore be valued in real time, it can be bought and sold like a main index equity, and it can diversify underlying risk as it typically represents a basket of securities.

Despite this, it has often been time consuming and problematic to perform the analysis required to decide upon an ETF's suitability. The ability to dissect the ETF into its underlying components, to understand the true level of risk that is being assumed, has always represented a challenge. It is important to have this ability, not only for margin calculation but to ensure that there is a true and full understanding of correlation and sustainability (or ESG) risk.

To streamline and improve this process, S&P Global has developed an efficient and timely solution, called the ETF collateral list, that removes these well-documented issues. Through the Securities Finance portal, a custom set of filter criteria can be set by the user based on their compliance and risk appetite. The screening report then automatically produces and updates a daily list of ETFs that matches this set of criteria. Compatible lists are produced daily and contain qualifying ETFs which physically hold the same underlying assets as those in the collateral receiver's current eligibility set.

When defined, the solution continues to manage acceptable ETF inventory by automatically identifying newly qualified ETFs and removing those which fall out of criteria. This process therefore automates ETF selection and offers a unique list of eligible assets on a per borrower basis. In the current market, as collateral velocity remains elevated, this solution aims to provide market participants with a broader set of collateral and risk management options.

As exchange-traded funds continue to solidify their place within the investment landscape, the contribution that this asset class is making to the collective securities finance revenues is expected to grow. The asset class not only generates good returns for lenders, but can also act as a robust source of risk-adjusted collateral. As a result, there is no doubt that the same finance textbooks of the future will look favourably upon this multifaceted and innovative asset class in years to come.

Latest moves at DoxAI, Baton Systems and VERMEG

Macquarie Group, the Australia-based global financial services firm, has appointed Ian Hallam as equity finance and Delta One trader at the company's London office.

Prior to joining Macquarie Group, Hallam was a senior trader on cross-asset 1D secured financing solutions at Société Générale from 2019 to 2022.

From 2000 to 2019, Hallam held a range of positions at Commerzbank AG, including vice president of cash management, vice president of liquidity management and collateral trader, and most recently, director in the securities finance trading area.

In the earlier years of his career, Hallam worked within collateral management at Dresdner Kleinwort Benson and BNP Paribas.

VERMEG for Banking & Insurance Software has welcomed back Samuel Welford-Smith as senior sales executive.

He joins the firm's London office from a senior sales executive position at Regnology.

Prior to this, he joined VERMEG for Banking & Insurance from 2014 to 2021 as a senior sales executive.

Post-trade solutions provider Taskize has appointed Alan Samuel as global head of sales.

Based in London, he will be responsible for continuing to drive the growth Taskize has experienced globally this year.

DoxAI appoints Lisbeth Hadingham

Digital marketplace and member of the Lakeba Group DoxAI has appointed Lisbeth Hadingham as executive vice president for North America.

Based in New York, Hadingham will head the US office and contribute to Lakeba's growth and expansion in the US to boost digitally engineered technology globally.

Hadingham joins DoxAI from Transcend, where she was sales director at the firm's New Jersey office from 2020 to 2022.

Prior to this, Hadingham was head of sales for North America, and managing director, regional head, Americas at CloudMargin between 2016 and 2018.

Hadingham has more than 20 years of experience in the financial industry. Having also worked at FIS and Citi, Hadingham began her career at J.P. Morgan Chase, where she held a 13-year tenure.

Commenting on the appointment, DoxAI's CEO and managing director, Adrian Vallino, says: "Lisbeth's appointment as our executive vice president is a further demonstration of our commitment and growth strategy as we continue to add US "boots on the ground".

"It is an important phase. We are extremely excited to have someone of Lis' calibre and exceptional US experience across investment banking and software start-ups that will accelerate our plans as we expand our market share, delivering extraordinary digital solutions to our clients and their customers."

Samuel has more than 30 years of experience in market infrastructure. Most recently, he held the role of chief sales officer of London Stock Exchange listed low-latency cloud provider Beek's Group. Prior to this, he was an account director at Equinix.

Before Equinix, Samuel served at BGC Partners, where he focused on the management of e-FX institutional sales.

The growth of the Taskize's network has been driven by the wave of new regulations such as the Settlement Discipline Regime of the Central Securities Depository Regulation and the Uncleared Margin Rules, along with industry initiatives such as T+1 settlement.

Commenting on his new role, Samuel says: "Taskize is leading the way in post-trade issue resolution for the financial services industry. As an innovator in the field of post-trade financial technology, I am excited to join the Taskize leadership team and be a part of the next phase of their growth story."

Global alternative investment management platform Brevan Howard has appointed Wilson Chau as a repo trader.

Chau joins Brevan Howard's London branch from a repo trader position at Junova Capital Management, which he held between 2018 and 2022.

Prior to this, Chau was a repo trader at Hutchin Hill Capital from 2015 to 2018. Earlier in his career, Chau was employed by Deutsche Bank and Morgan Stanley as vice president. His career at Deutsche Bank spanned 20 years, where he held positions in the firm's New York and London offices.

Global fintech Baton Systems has appointed Alistair Griffiths as director of EMEA sales.

Based in London, Griffiths will focus on new business acquisitions across all Baton solutions in the region. He will report to Baton Systems' global head of sales Alex Knight.

He brings vast experience of the industry to the role, having worked for a number of large firms including BNY Mellon, BlackRock and UBS. Griffiths will also harness his in-depth knowledge from a buy- and sell-side perspective within the securities finance and derivatives space.

Griffiths joins Baton Systems from FIS Global, where he was previously senior sales executive of post-trade solutions. At FIS, Griffiths led sales for the UK, Channel Islands and the Netherlands.

At BNY Mellon, where Griffiths held an eight-year term as vice president and relationship manager, he developed his expertise in collateral management, sourcing and growing the firm's triparty collateral management activity across the global market.

The appointment comes as Baton Systems focuses on reducing settlement risk and increasing available liquidity and funding by extending its Core-FX solution across additional currencies and counterparties.

Commenting on the appointment, Knight says: "Alistair's deep knowledge and industry experience complements that of the wider team, as we seek to ensure that our clients are served by those who have an authentic understanding of the collateral and FX markets and the challenges our client's face.

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OCC Stock Loan Programs

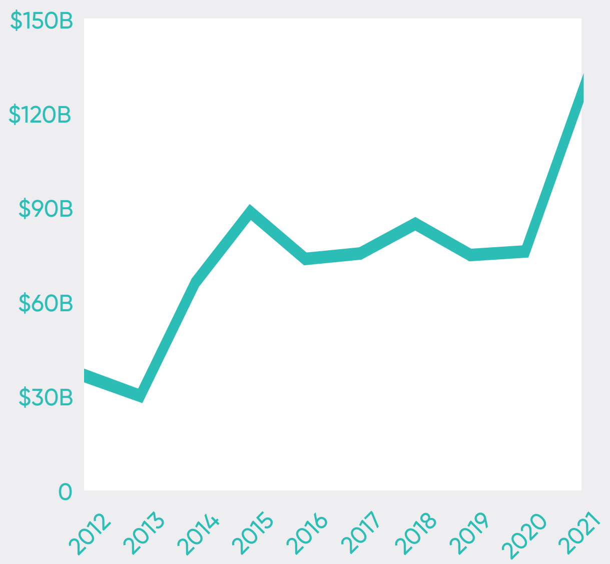
Key Benefits

- 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

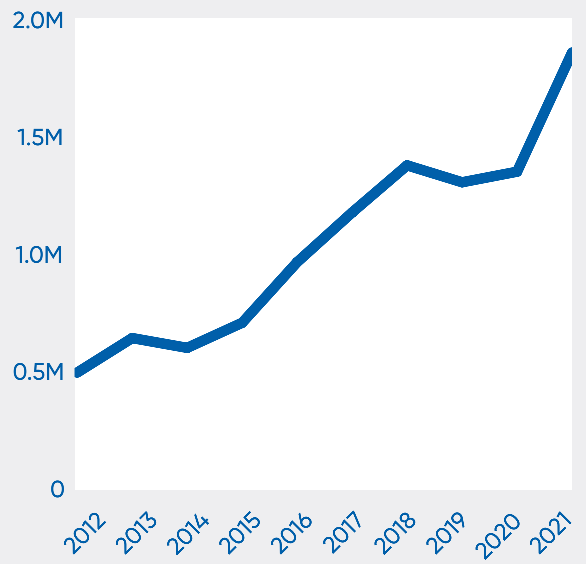
79
HEDGE LOAN PROGRAM MEMBERS

125B
AVERAGE DAILY LOAN VALUE AT YEAR END 2021

Annual Notional Value of Loans



Annual New Loan Transactions



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