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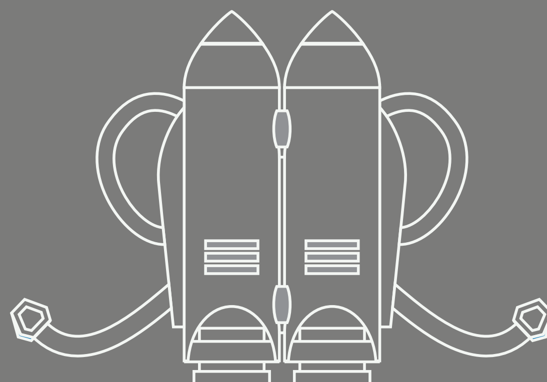

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Amazing tekkers

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SECURITIESLENDINGTIMES

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For those who do not play or watch English soccer, when commentators use the colloquialism ‘amazing tekkers’ to describe a player’s execution of a particular move, they’re saying that it was specially done.

Many a fan has watched a professional soccer player execute a deft feint, pretending to pass the ball in one direction before passing it in another, and revelled in the mastery of the execution. In doing so, the player turns a challenge into an opportunity and a loss into a win.

The same can be said for technology specialists. These professionals do incomprehensible things with equipment and software, turning multiple systems that are spread far and wide into ones that reside in a cloud. Others manage and organise, identifying targets and ensuring that they are delivered on time and to budget.

They all do their jobs without the fanfare of professional soccer players, but their skills are not incomparable and their performances are measured in the same way; by results.

It’s with this in mind that SLT has assembled this year’s securities finance technology annual. A firm’s systems need to be robust, all encompassing, adaptable, accurate and cost effective. The writers featured here hail from vendors, central counterparties, data providers, consultants, post-trade providers and more. They echo the need for results and possess the know-how that is needed for securities finance businesses to address massive and increasingly complex regulatory change.

Theirs is invaluable expertise, and SLT’s annual reflects it in abundance. Turn to the contents page to see what’s on offer. Don’t forget to check out this year’s technology directory—it’s the biggest yet—or the technology map, which charts players’ key areas of specialism.

As ever, SLT always welcomes feedback from readers. If you have anything to say, don’t hesitate to drop us a line.

Mark Dugdale
Editor

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Update loading

SLT revisits the recent past to see why SunGard, Markit Securities Finance, EquiLend, Euroclear Bank, Clearstream, Broadridge and Omgeo hit the headlines

JENNA JONES REPORTS

SunGard launched a global, 24-hour real-time streaming of live securities lending transactions through its Astec Analytics solution suite, competing with offerings from EquiLend and Markit Securities Finance.

Each day, SunGard's Astec Analytics will stream intraday data as its customers feed their transactions directly into the system, continuously updating the online analytics and information throughout the global day. Customers will also be able to see on-screen streamed and analysed data for the previous 48 hours, backed up by online trend analysis of up to seven years.

With the introduction of a global intraday data service, the firm hopes to help increase profitability and improve transparency throughout the world's trading day.

SunGard also released Apex Prime, a global solution to help new and established prime service providers manage their day-to-day client processing and improve client services by maximising transparency, control and efficiency.

The Apex Prime technology solution, which offers prime services providers a single view of all hedge fund client activity, aims to help firms efficiently manage trade exceptions, view security and cash positions in real time, calculate financing costs and generate automated client reporting.

Markit Securities Finance sought to capitalise on the $10 trillion repo market, with the expansion of its content and analytical services to include US dollar triparty repo transactions.

The firm is using triparty US dollar repo data and position updates from BNY Mellon, which has approximately 80 percent of the US triparty market. Adding to this data with original analytics, Markit hopes to aid transparency and price discovery for clients.

The data includes a two-year history and represents outstanding positions in excess of $1 trillion, marking a significant increase in the firm's original stock loan data set.

The aggregated repo data provides enhanced visibility into the key drivers of repo pricing at market, sector and security levels.

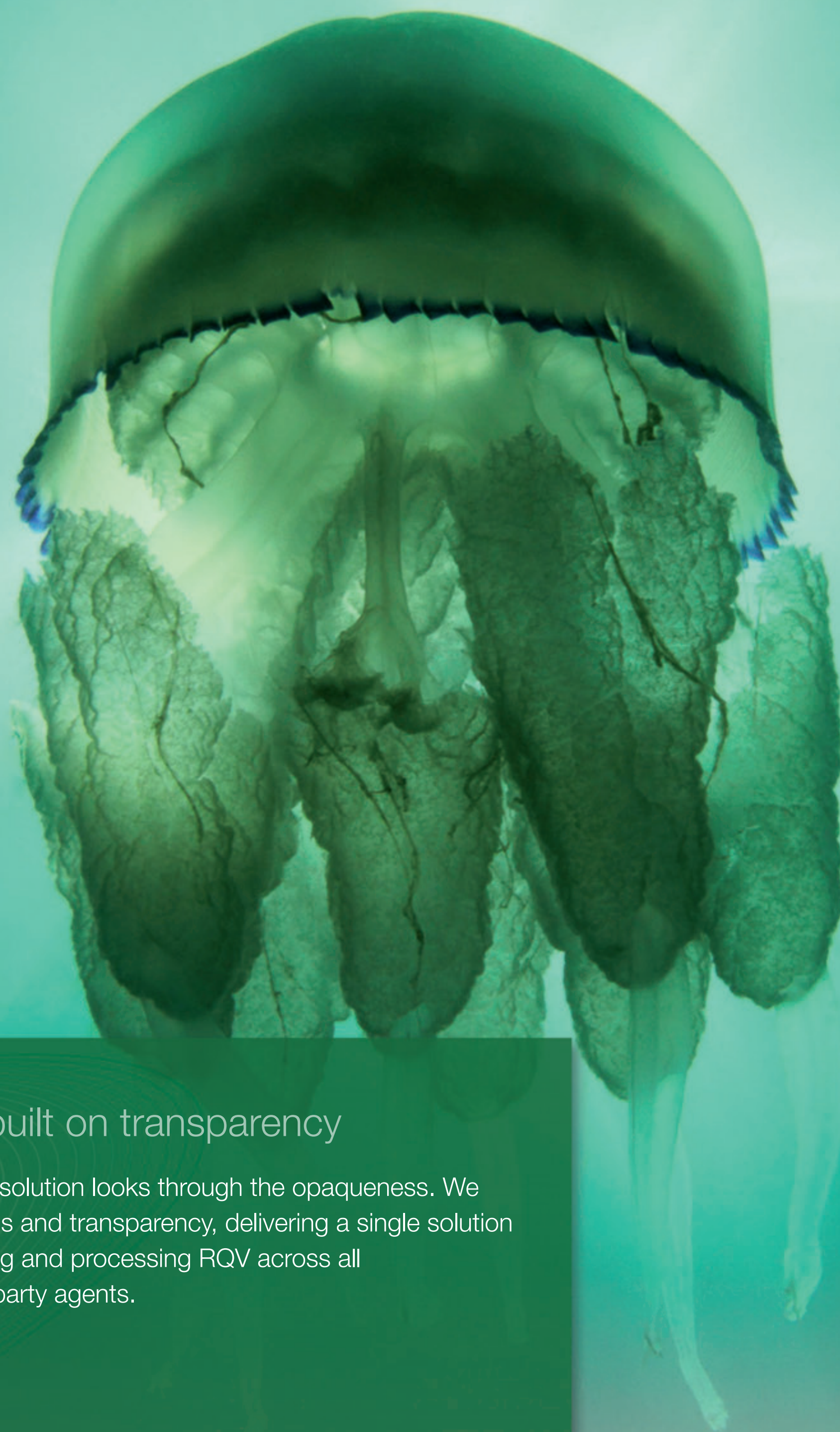
It aims to provide repo market participants with greater clarity into transaction maturities, haircuts, collateral type and collateral quality.

Pierre Khemdoudi, previously of BNP Paribas, and Steve Baker of Calypso Technology have been recruited to Markit as product managers for this and other planned launches.

New enhancements and features were added to **EquiLend's** data service for the securities finance industry, DataLend.

EquiLend launched DataLend at the beginning

Clarity Evolved.



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of 2013. It uses proprietary quantitative cleansing methods to ensure the quality of its data, which is global and covers all asset classes, regions and securities.

The additions to DataLend include an ability to access a pre-defined list of securities to return metrics for a selected business date. Users can also retrieve 90 days of historical data on a single security.

Twenty-eight investment manager and broker-dealer firms adopted the new exchange-traded derivatives functionality in **Omgeo** Central Trade Manager (Omgeo CTM).

Omgeo CTM is the firm's new central matching service for equity, fixed income, exchange-traded derivative (ETD) and contracts-for-difference trades.

Omgeo increased asset class coverage on Omgeo CTM by adding central trade matching workflows for ETDs, building on the existing cross-asset class functionality.

It has also partnered up with portfolio management solutions provider, **Enfusion**, to offer clients a new solution that increases middle-office efficiencies for hedge funds across asset classes.

The solution connects Enfusion's platform Integráta with Omgeo CTM.

It automates ETD post-trade processes for the global hedge fund industry, enabling clients to access the central matching benefits of Omgeo CTM directly from their Integráta portfolio management interface.

Citi launched a triparty collateral management solution in conjunction with triparty agents **Euroclear Bank** and **Clearstream** that allows mutual clients to consolidate their equity and fixed income holdings into a single collateral pool.

As custodian, Citi will hold the assets of mutual clients, but triparty agents will be able to manage collateralisation directly from client trading accounts.

Using Euroclear Bank's global Collateral Highway, clients can use the assets that are deposited with both entities as collateral in real time, maximising flexibility and optimisation.

The alliance boosts the pool of potential collateral that can be used to cover exposures rising from transactions such as repos, loans, derivatives, central counterparty margins and central bank liquidity.

Clearstream's Liquidity Hub enables Citi's clients to consolidate their collateral holdings for use within the Global Liquidity Hub to gain coverage of their global exposures from a single optimised collateral pool.

The Liquidity Hub allows clients to retain their asset portfolios within Citi's custody network while Clearstream carries out collateral management functions including automated optimisation and substitution.

Clearstream and **Belfius** agreed to develop a new collateral management activity for bilateral trades, focusing on OTC derivatives and aimed at corporates and medium-sized banks.

Clearstream will target mid-sized banks and buy-side customers and will offer margin calls, dispute management, portfolio reconciliation, legal contract review and administration, payments and settlements reporting, a cash reinvestment mechanism and collateral transformation.

Copenhagen-based **SimCorp** released a new version of its front-to-back-office investment management platform that offers enhanced collateral management.

Version 5.3 of the company's platform, SimCorp Dimension, includes reverse stress testing for increased risk management, collateral substitution, which enables better forecasting and improved control, and separation of compliance information.

The introduction of new reverse stress testing includes relevant loss scenarios and intuitive tables and charts. In the settlement area, the newly streamlined collateral substitution process allows users to reduce collateral shortfalls.

Additions to DataLend include an ability to access a pre-defined list of securities to return metrics for a selected business date

Markit integrated **Selerity's** dividend event data into its dividend product platform.

Selerity is a provider of real-time event data solutions for the financial services industry.

Selerity's platform will be used to identify key dividend announcements from US companies in real-time, allowing them to update their dividend forecasts as new information enters the market.

Markit also integrated Selerity's real-time US dividend feed to generate intraday alerts automatically on a 45 minute delayed basis. Alerts included changes to the US companies' dividend amount, ex-dividend date, record date and payable date.

Paladyne Systems released its order management system (OMS) as a standalone product for hedge funds, asset managers and prime brokers.

Paladyne OMS was previously bundled as part of Paladyne Portfolio Master, but the firm said that clients would welcome it as a standalone product. It provides a model for the front- and middle office that combines broker-neutrality, support for multi-asset classes, multi-prime and multi-currency trading and order management.

Itaú BBA selected **Broadridge's** technology and business process outsourcing solution (BPO) to support its USD-based securities lending and repo business, Itaú BBA USA Securities.

Itaú BBA will use Broadridge's BPO solution to create a single platform to manage its US based prime services operations, technology and hosting needs.

The agreement will also facilitate Itaú BBA's expansion into the USD-based securities financing and repo businesses.

CIMB Securities Australia also went live with Broadridge's broker client accounting solution, SUMMIT, for its Australian investment banking business.

The solution supports CIMB's cash equity business for principal and agency trades conducted on the Australia Securities Exchange and CHI-X Markets, and enhances the firm's operational processing efficiency while helping to minimise the risks associated with processing delays and manual checks.

CIMB acquired its Australian investment banking business from Royal Bank of Scotland, as part of a regional growth plan. It commenced live operations on SUMMIT in a short timescale to coincide with the business handover from RBS and the commencement of local market operations.

Torstone Technology readied its Inferno post-trade processing solution for the Financial Transaction Tax (FTT) and rolled out the upgrade to existing clients.

Eleven European countries have decided to impose the FTT—subject to EU approval—across a range of equities and derivatives, with France and Italy being first to introduce their own versions of the tax.

The inherent design, support for a broad range of asset classes within one system and the ease of centralising trade and reference data from disparate front-office systems made it possible for the company to implement the changes in Inferno and provide the data required for FTT regulatory reporting.

The system's online and historic transaction and reference data aims to simplify back-dated tax calculations and back reporting that the new rules may demand. It also calculates net-trading positions across multiple source systems throughout an organisation.

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Live and let change

SLT talks to Jane Milner, head of strategy, securities finance, collateral management and prime services at SunGard, about whether securities finance is selling itself short in a changing regulatory and information technology environment

MARK DUGDALE REPORTS

What have been the key changes in the securities finance landscape?

The landscape around securities finance has changed considerably post-2008. As with many areas within the financial markets, broader trends, such as increased regulation and the resultant greater demands on capital, are causing firms to focus on holding down and reducing costs. To this end, firms need to challenge the status quo of their business models, leading to broader visibility and controls across what were previously a series of individually managed silos. In some cases, this is resulting in a convergence of business processes, bringing with it all kinds of implications, including IT considerations.

What impact is this having on securities finance business levels?

The political pressure to reduce risk globally has had a negative impact on securities lending. Although there has been an improvement since the initial lows, volumes in the securities lending market are still down on what they were pre-2008, mainly due to reduced trading volumes overall, and therefore a reduction in hedging demands. Short selling bans have had some impact, although ironically more on the supply than the demand side. The availability of cheap cash from central banks is having a negative impact on the secured funding market, resulting in a reduction in repo volumes.

On a more positive note, moves towards central clearing, particularly in the OTC derivatives market, are driving the need for collateral transformation trades as a core motivation for securities finance transactions. This reduction in volumes/revenues from securities lending is causing a greater focus than ever before on reducing and holding down the cost base.

What types of cost reduction are being looked at?

Lip service has always been paid to the mantra to 'do more with less'. However, now there is a sense of reality to the words in all areas, and securities finance is no exception. This applies to all types of resources, and commonly leads to a demand to use IT to facilitate more process automation and STP, thereby reducing the need for manual intervention.

In the world of securities finance, processes such as exposure management and billing are still areas in which there is room for more automation. Much is still done by labour-intensive forms of communication, often via phone or fax, and here IT can provide tools to help with reconciliation and exception management, allowing resources to focus on the items that need attention. From a front-office perspective, there has been some automation of vanilla collateral trading for a while, but securities lending remains a stubbornly, bilaterally negotiated transaction that is less easily automated.

Can IT help with cost savings in this environment?

One area in which this can be achieved is through consolidation of IT solutions themselves, as this can avoid duplication and hold down the heavy cost of supporting multiple IT platforms. This is clearly only possible where solutions are capable of supporting a broader range of functions and so for the new generation of securities finance solutions there is commonly a remit to support a broader range of business. One example is that rather than having separate securities lending (commonly equities) and repo (mostly fixed income) solutions, one system needs to be capable of doing both. Additionally, simple derivative-type transactions may be used as an alternative for securities lending transactions, and these need to be supported. Many systems grew up doing one of these well, and although it may be possible for them to extend, the devil lies in the detail and a solution that does both well is rare.

Another area for potential consolidation is where a firm is doing business on both a principal and agency basis, for example, where the investment bank is doing one type of business and the custodian is doing the other. Firms may be looking to leverage a single common solution, albeit with Chinese walls internally. Once again, the additional level of complexity to handle transactions done

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on an agency-risk basis introduces a whole new set of functional needs, and handling both agency and principal transactions well within a single solution may historically have been a challenge.

The latest functional areas for consolidation are in a variety of collateral management-related disciplines. The operational aspects of collateral management have many similarities, between securities finance and OTC derivatives, but once again the details vary quite considerably. Having a single solution to handle each well may be a challenge, but with the advancement of enterprise collateral groups this is something that is more in demand.

One change that international securities finance IT is undergoing later than many other areas is the use and consumption of IT as a service itself. Under this model, a third party owns and operates the hardware infrastructure and performs the system administration of the application, leaving the bank free to focus on running its business. This typically gives more predictable and lower costs, aligns vendor and user incentives more closely, and provides future-proofing of the overall solution.

Whereas at one time, being a specialist securities finance solution required front-to-back processing to support stock loan and repo. Nowadays, there is such a cross-over with collateral management that, in a number of instances, the scope of what the market is looking for extends beyond the initial core competencies, and requires additional expertise in areas such as the management of OTC (and centrally cleared) derivative transactions, as well as the traditional securities borrowing and lending and repo trades.

Regulatory change is demanding more transparency—how will this be met?

We are already in a different world with regards to transparency compared to a few years ago. It is true to say that 'electronification' of the securities lending market is further behind than in many other areas, and therefore exchanges cannot be viewed as a primary source of visibility of pricing and volumes. There are, however, other ways in which data is gathered and distributed, for example, through SunGard's Astec Analytics solution suite. Through the collection, cleansing and aggregation of data, useful securities lending analytics are visible to market participants of all types, from beneficial owners through to hedge funds, and all players in between. The availability of this level of transparency is now in its second generation, with demand moving from a simple need to see it at all, to one of timing, ie, as near real-time as possible, and granularity/metrics, ie, different ways to summarise and view the data. Data consumers have become more sophisticated and the ability to access and slice and dice the data in a multitude of different ways is where the focus is now.

It may be, however, that regulators determine it necessary to have a central repository for securities finance data. Many practitioners fear that, in its raw form, this data may not lead to the level of transparency that the regulators envisage, in fact it could lead to potential duplication and double counting.

What are the bright spots in the world of securities finance?

Collateral upgrade trades are becoming a major source of demand for securities finance transactions. This scenario has many similarities with the situation from some years ago when securities lending moved from being a back-office fails avoidance tool to become a front-office business in its own right. Now a similar transition is taking place, with collateral management not only requiring a back-office operational component but also needing a front-office component in order to process the securities finance transactions being used for collateral transformation. This convergence of functions is most effectively supported by a technology solution that is able to address the front office and operational aspects of collateral management, and this often encompasses a consolidated collateral inventory as well. Once these elements are in the place, there is a solid basis for effective collateral optimisation, which is the Holy Grail being sought by many firms.

So is it a case of securities finance is dead, long live collateral management?

Phrases and words such as 'convergence' and 'holistic view' abound. The ability to create real Chinese walls within single system solutions and the need to report in an aggregated fashion for risk monitoring purposes may require a complete rethink of the whole securities finance paradigm. This is not new. Over the last 30 years, there have been a series of iterations both in name and in underlying practices and uses. In 10 years' time, the term 'securities finance' may not exist just as 'securities lending and borrowing' and 'repo' are becoming less common now.

There is a continuing trend towards bundling as the business practices and regulatory frameworks become more homogeneous. As a result, to achieve cost savings and to satisfy this new environment, the business nomenclature may need to become more encompassing as well. Collateral management is slowly and surely being defined in more detail and this is in itself guiding the development of systems and IT policies in general to embrace a single system solution for the sake of cost savings.

The question still remains though, is securities finance being sold short in order to make it fit in to the bigger picture, or will its innate resilience ensure its separate survival and development in the changing environment? **SLT**

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A borderless time

SLT talks to Jerry Friedhoff of Broadridge about breaking down barriers between desks, offices and locations as securities finance goes global

MARK DUGDALE REPORTS

What changes have you seen with the organisational alignment of securities financing desks across your clients?

Repo desks and now securities lending desks have aligned themselves more with the front office than the back office due to their revenue producing capabilities. These groups have similar trading economics and cultures but different regulatory and accounting treatments. A recent trend that we have noticed across our client base is that many firms are now also aligning their collateral management functions with the front office. They say this is happening because of the increasing revenue implications that are associated with their collateral management operations.

Does this mean that there are more synergies between these business lines than before?

Yes, because firms are looking for higher quality collateral to meet recent exchange obligations for central party clearing of OTC derivatives. These 'collateral upgrades' can be executed under a SLA (securities lending agreement), which influences the repo desk's trading activity.

The volume of interactions between these groups has increased and we believe that it will continue to increase as new regulations unfold. There is a very real scramble for high-grade collateral that we are seeing across the industry right now.

We are trying to anticipate our clients' cross-desk financing trading needs by providing an integrated position management solution across various asset and transaction types.

As global regulatory changes occur, what challenges do you foresee arising for your clients?

As global banks and broker-dealers try to meet global regulatory changes and intense funding expense reduction pressures, they are trying to evolve from a geographically segmented business model to a more global operating model. As they transition to this global model, they are often challenged in getting a holistic view of all asset classes across their regional offices. They are telling us that they need enhanced aggregation and trade execution capabilities to efficiently manage collateral requirements/opportunities across the various central counterparties.

Another challenge is the complexity of optimising collateral across the portfolio of options that they have. The complexity continues to increase as they layer regulatory changes onto their various funding models.

In addition, there are often difficulties in moving their inventories of collateral between various entities efficiently because of organisational and system silos that exist due to many years of business line independence.

They want to be able to direct funding activities to the most advantageous markets around the world but there are sometimes system, organisational or process barriers that they need to overcome.

What about those that still regard various business lines as separate or part of the back office?

Part of our role as a solution provider to the securities financing market is listening to what our clients business objectives are and responding appropriately. There are a wide spectrum of organisational models that are used across the industry that we continue to support, but the more progressive firms are moving towards a revenue centric (ie, front office) business model for their global financing desks. We tailor our solutions to support the various securities financing stakeholders in the front, middle and back office regardless of how they are organised. Broadridge is less concerned with how our clients align internal user groups than how we can facilitate the end-to-end business requirements of the various stakeholders.

In a meeting with an executive responsible for global funding for a large Europe-based bank, he outlined a clear road map of current technological needs and his organisation's strategic growth plan. By looking at the roadmap, it is clear that the focus on collateral management is now becoming a front office priority, and the front office sees opportunities in the market to increase revenues by managing this process effectively.

What can a solution such as FinancePro do to satisfy these changing client requirements?

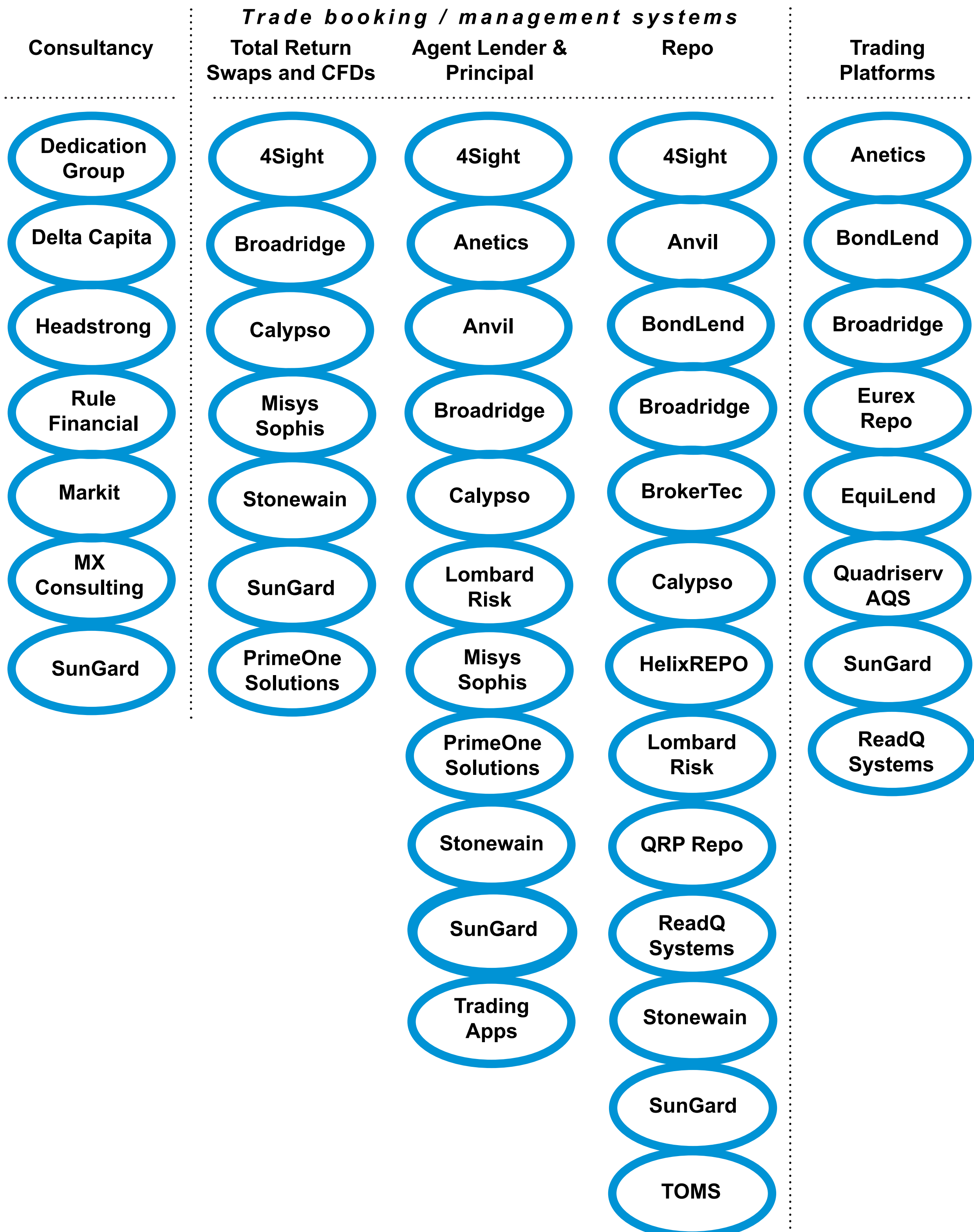
In March 2012, Broadridge announced the FinancePro Global offering to respond to the evolving market demands previously discussed. FinancePro Global is a multi-instance, multi-asset, back office agnostic securities finance trading system. Repo, securities lending and eventually collateral management desks will be able to use FinancePro as a common platform to manage their positions globally. FinancePro was designed to integrate well with Broadridge's securities processing solutions (impact for fixed income, BPS for equities and GLOSS for non-North American securities), as well as other third party processing platforms.

The aggregation capability of FinancePro will provide firms with a holistic view of collateral across multiple business lines. Our goal is to provide funding executives with the tools that they need to make timely, intelligent collateral usage decisions in this fast changing environment. **SLT**

Jerry Friedoff
Product manager, securities financing solutions
Broadridge

Technology classifications map

SLT takes a look at the global technology market to see how the land lies



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Input field of dreams

A 'build it and they will come' approach may work in baseball, but IT systems are a different playing field, says Delta Capita Consulting's Dipak Patel. SLT finds out more

GEORGINA LAVERS REPORTS

How does Delta Capita refresh legacy systems?

There are two main approaches:

- Replace the solution entirely (usually good to get rid of the 'legacy'); or
- Re-platform the solution (if replacing is too expensive or otherwise difficult).

Replacement should always be considered as one option when a platform needs a refresh. A business case will determine whether it is realistic or not—it depends on the scope of the required change.

We have a proven approach for software/solution replacement, usually starting with a review of the business operating model, so as to ensure requirements are in line with current business drivers.

A refresh or re-platforming is an option when there are specific functional or technical issues that can be addressed with a limited-scope change to the solution, for example, from moving to a mainframe-based system to a Windows-based system.

Delta Capita manages programmes and projects in this space. Our technical project/programme managers lead engagements using various technologies and vendor packages. We also have very senior business analysts and architects who can get involved, especially in the earlier stages of a project, to analyse and design solutions, and to help guide the implementations.

How are industry standards influencing system design, and are they universal enough?

It is well documented that having well defined and adopted industry standards leads to increased business agility and improved integration, both of which have a direct impact on the bottom line. For example, the standardisation of messaging plays an important role due to the complexity of communications needed to effectively operate in the market.

Taking this messaging example further to focus on the securities lending industry, it is clear that we do not have a common set of standards in order to integrate systems. As a result, there are many disparate services available in the market with no common data interface. If we were to look at the cash equity market, it has a widely adopted and mature FIX protocol that allows for easier and faster integration between disparate systems.

When our industry agrees on a set of industry wide standards, there will ultimately be an overall improvement in system communication, integration and interoperability.

Are you seeing demand for off-the-shelf systems, or are banks choosing to build their own?

Interest is increasing in commercial packages, even if some banks decide to continue with in-house/bespoke solutions. Banks and brokers are facing a more frugal reality, which demands low-key investment. Off-the-shelf solutions are generally a lower investment proposition than in-house builds as the implementation and overall run costs are not as high as with bespoke solutions. So what tends to happen is that clients are compromising on functionality, leading to users changing the way they work in order to fit in with a package solution. We see this outlook continuing over the short to medium term as business drivers are set on gaining operational efficiencies but at a low cost.

Is static data in corporate actions legacy systems a challenge?

Static data is a challenge almost everywhere. Few banks or brokers have managed to build a comprehensive but flexible static data management system. While a 'master copy' of key data may be maintained in a centrally managed data solution, integrating it with numerous legacy systems is a large investment.

Corporate actions in particular have been an area of concern for our clients. With nearly one million announced corporate actions every year, the industry is said to suffer losses of approximately $1 billion due to inefficiencies in the processing chain. The events can arrive in varied formats, with issuers using different terms to describe the same events. These messages pass through several intermediaries, including agents and custodians, before reaching the investor.

A lack of industry standards for formatting these messages means that at various stages, data may be communicated in differing formats and technologies, even such as fax, thus adding to their processing time. This makes the information flow risky and error-prone, opening companies to the possibility of huge losses and reputational damage. Furthermore, processing of these announcements can be costly with the added in-house data validation coupled with inefficient processing in legacy systems.

With all the technological changes in the industry, is it easier for a new operation to offer a high quality service to customers, rather than an established business that has to change many of its legacy systems and practices?

The old adage, 'build it and they will come', does not necessarily work. So entirely new businesses may have a good/modern solution/platform for services, but that is no guarantee of success. Greenfield implementations are easier for those who have no historical baggage, but the existing business practices and platforms embody a significant level of organisational learning that still needs to be provided by a new platform.

Integration is a tricky part of new or replacement platforms, when a large number of existing systems require interfaces to a new platform. If those interfaces exist in a legacy platform, a partial replacement may be very difficult. A large-scale change that could render many of the interfaces unnecessary (by consolidating many existing applications into few, providing native integration within and between modules in a suite) is a daunting task. **SLT**

Dipak Patel
Partner
Delta Capita Consulting

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A problem shared

The securities finance industry needs to meet business challenges head on, says Armeet Sandhu of Stonewain Systems

Today, the financial industry is dealing with numerous challenges arising from regulatory changes, evolving industry needs, demand for greater transparency and client-driven customisation, along with the business requirements for higher efficiencies and lower costs. The firms in the industry are responding by getting their technology and operations infrastructures lined up in a manner that can address these multiple requirements without breaking the bank.

The foremost solution lies in streamlining technology platforms that are in use by the company. Using multiple and disparate systems contributes to increased cost, time, effort and inefficiencies. Today, what a firm needs is a highly integrated platform that is functional, comprehensive, adaptable and flexible. The market is placing a higher demand on the capabilities and functionality being offered by a technology platform without a corresponding increase in cost. The more traditional proprietary systems involve significant outlays to develop, maintain, upgrade and evolve the systems to keep abreast of the industry changes. In light of this, third-party vendors are an appealing prospect since they spread these costs among multiple implementations, leading to economies of scale and a lower per-client base cost. They are also more aggressive in staying ahead of the curve by integrating new requirements emerging from industry feedback and regulatory changes that is in turn passed along to clients in an efficient manner.

Invest—don't digress

Once you begin the process of streamlining the platforms, you need to evaluate the requirements, functionality, overlap and redundancy of existing solutions. The current environment must make way for a more efficient and focused solution that minimises information breaks. It is important that all the necessary information—borrows, loans and collateral, as well as regulatory, internal and client guidelines—are contained in one unified platform. This cohesion drives home operational efficiencies, which are not lost to hunting for information or reconciling different systems.

A unified STP should similarly be streamlined from front-to-back. A minor change, such as calculating a new expense, factors not only into the trading systems but into the contract management system as well. A streamlined system ensures that the expenses are being correctly accrued and accurately calculated without maintaining numerous spreadsheets and an army of people at the side.

Cost seduction

The most effective form of cost savings come from optimum utilisation of technology. This certainly does not mean that you have to get rid of all existing systems to make way for one platform, but there has to be a limit on the number of systems in use and their ability to integrate well with each other.

While this change in technology infrastructure can be extremely beneficial from efficiency and saving standpoints, this can also be phenomenally expensive. Once these efficiencies and savings are identified, how do you go about achieving these without parting with a lot of capital up front? In order to bridge this gap, there are vendors that are promoting software as a service rather than a product, much similar to cloud computing and private cloud infrastructures. The client pays for the services and usage rather than the upfront infrastructure cost. The vendor is able to spread this cost over a term and number of clients, recouping their investment with duration and scale.

Being open to new means of operations and technology infrastructure includes looking for vendors that will make the investment on your behalf, so to speak.

This offers a new perspective for the securities finance industry—firms can procure services from vendors such as Stonewain that provide highly functional, comprehensive, and fully integrated solutions while co-investing in a long-term partnership. Stonewain takes on the risk of evolving the platform at a fast pace to keep up with business changes, and the client takes on the risk of relying on the vendor to be able to deliver it in a malleable and acceptable manner. **SLT**

Armeet Sandhu
CEO
Stonewain Systems

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How suite it is

The future of securities finance technology is already here. Ben Glicher of EquiLend takes a closer look and identifies some interesting trends

As firms globally seek to do more with less, there will be an increased emphasis on automating the areas of securities finance that are still conducted manually. While securities finance is one of the last areas of financial services to automate, a movement towards the use of various technologies to help bridge the gap has grown rapidly in the last few years.

Since securities finance is a relationship-oriented business, firms have to find ways to maintain those relationships while simultaneously using automated platforms. From an initial approach at risk mitigation and efficiency, post-trade services functionality has usually been addressed first. After all, who doesn't do an automated marks reconciliation today?

So, having conquered the automation of post-trade reconciliation to a certain extent, the securities finance industry can now turn its attention to the pre-trade and trade areas. Let's examine the roles in a typical securities finance trade lifecycle.

First of all, what does a broker want? It wants to see its orders filled at a suitable rate/fee with the proper counterparty, utilising agreed upon settlement parameters. A closer look would seem to indicate a similar set of requirements for the lender.

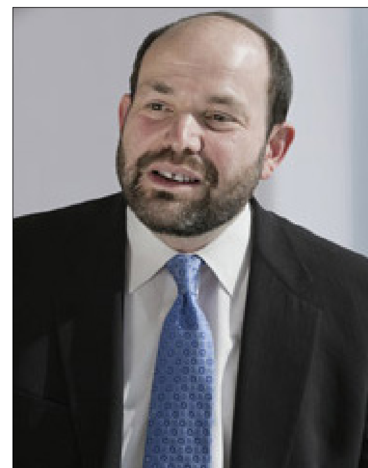
EquiLend's modular, trading suite of services, ranging from the automated advertisement by the lender of its inventory, Availability, to the fully computer-to-computer, yet completely bilateral, AutoBorrow, to the sophisticated, best-fit matching algorithm, Trade OptimizatIon, to a negotiated screen-based trading interface, Trade2O, offer the tools to satisfy the above requirements and to maintain the varying degrees of relationships.

Even if the trading suite is taken at the component level, the benefits of their use are many, and they include STP, which is a tightly coupled integration of proprietary systems that mitigate risk and increase the efficiency of a trade lifecycle. But clearly the benefits of a harmonised, interactive and interconnected trading suite are vast and include much more than STP. Mix in a dash of market data (ie, DataLend) to help inform the trading choice and increase transparency, and this quickly provides the context for better decision making and minimisation of risk.

An analogous scenario to this is the smartphone and its rapid spread as the ubiquitous remote control in peoples' lives. Companies are already making all types of products such as household appliances that are controlled by apps. When integrated with complex software, these smart widgets can work in concert with each other without human intervention.

All of this fits into our broader vision of where securities finance technology trading is going—a future where smart servers and their even smarter software communicate with each other, passing along unexecuted trades to different venues depending on what dials are spun, utilising predictive and trustworthy algorithms. And all the while, retaining the relationship between the counterparties.

As firms move to combine current application protocols that leverage each of their synergies with a platform that provides connectivity to a cloud-based hub or application service provider, it is important to note that this isn't Shangri-La. It's here today. **SLT**



Ben Glicher
Managing director and CIO
EquiLend

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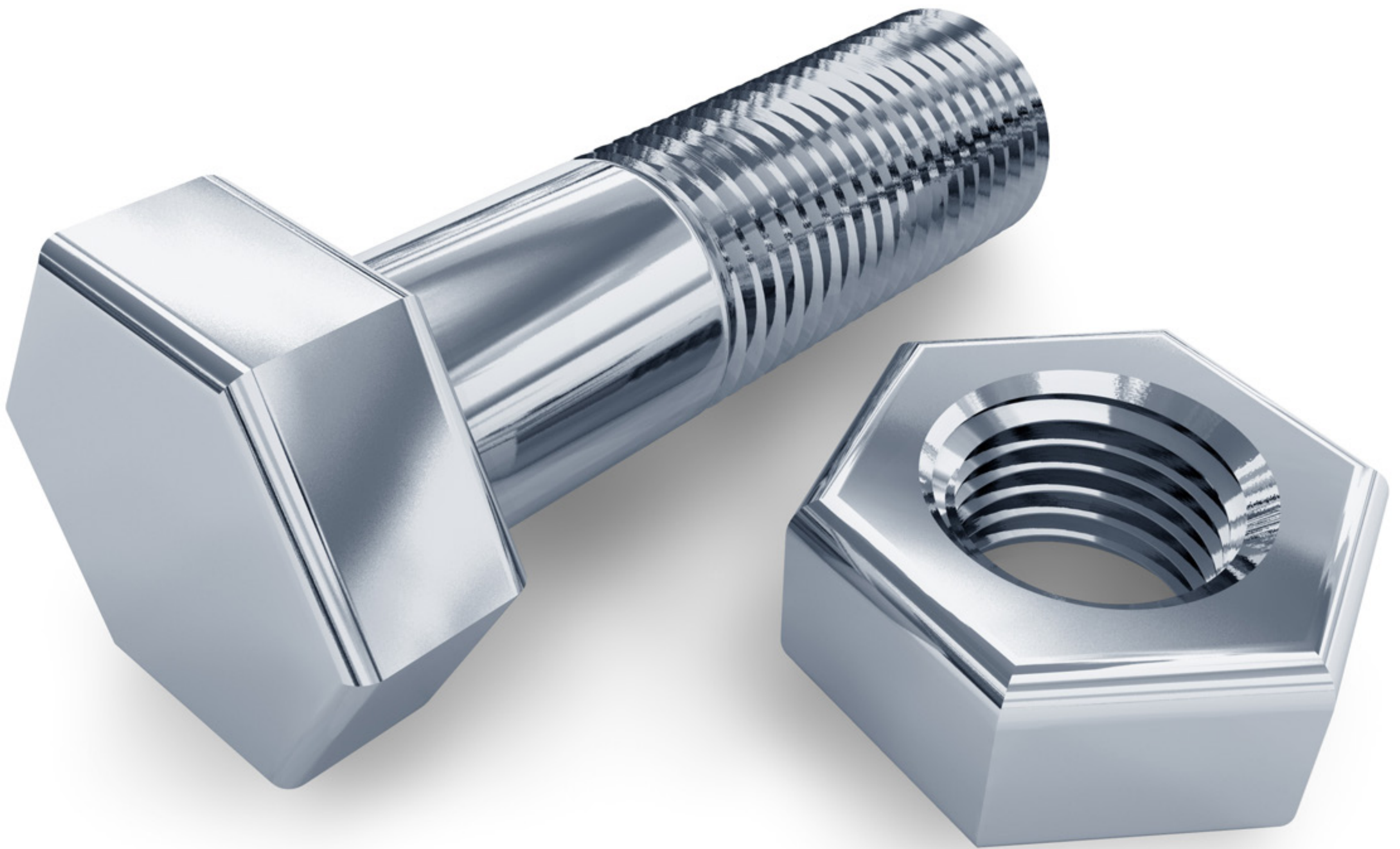


Build, buy or bolt-on

Jean-Paul Musicco of Trading Apps examines the options that are available to securities finance firms that are planning IT projects

In school, we learn the concept of 'rent or own' to determine whether or not to purchase a home or to rent one. Based on financial inputs, either renting or purchasing an asset is considered to be a better financial decision to make when measured over a period of time. Fast forward that student to now being an employee working in the financial services industry and the inevitable question is posed: should you 'build or buy' when it comes to your systems solutions? Business heads have been tasked with the decision of whether to 'build or buy' and have had to live with the outcomes.

Build—internal IT project

Defining the project sounds like an easy enough task. But those individuals who have experienced being a part of a team, whose sole duty is to define 'the project', know how challenging it can be to actually figure out what the end state will look like. Too many other parts of the firm put their requirements and needs into your project and what looked like a realistic goal becomes a much bigger task. More importantly, how do you then define the system requirements when many different types of users and requests change the original focus of replacing an existing but ineffective system?

It is so difficult to define a project because—more often than not—internal builds are more susceptible to increasing in scope. Initially, the project starts off as replacing a dated core system and adding some minor functionality that has been executed daily on spreadsheets on the desk. But then traders and sales staff add to the original project plans. What begins as an aggressive delivery schedule

turns into an exercise in negotiating what should be on the essential list.

Figuring out the necessities and extras is time consuming for management. And that's not including all of the various data feeds and data adaptors that will be required to communicate with the rest of the firm and the industry.

The amount of time that is demanded by members of staff to help design the initial specifications in conjunction with the product development team is a 'stealth tax' on businesses. Staff members can feel that they are being overworked and underpaid for the extra effort. At the same time, senior members of staff have to find the right balance between managing the demands of day-to-day responsibilities with finding the time for key people to work through endless conference calls and reviews of updated development documents.

Over the past 10 years, the definition of the word 'internal' has also changed. In the 1990s, when IT work was done internally, programming staff would carry it out. They would be sat on the trading desk, or at worst, a floor away, meaning that they would have a high level of understanding about how the business actually worked. Over time and especially with larger projects, further structural changes meant that a firm's IT department took on the task of building strategic system solutions, leaving the tactical solutions within the business.

Today, the reality for most financial services firms is that there is a project manager at a senior level who counts on the support of various product development staff members who in turn coordinate their efforts with an offshore development team.

I don't think I need to go through the challenges that many of us have experienced with this model, and from further conversations with senior industry leaders, there seems to be a slow down in growth regarding the concept of outsourcing, with a focus now on insourcing to speed up delivery and the quality of the end product.

So much for an 'internal build', but that is how the world works today and it is an accepted practice for many firms. Time has no end when I think back to the projects that we worked so hard to contain and define, and that has a real cost when a firm is not using or delivering cutting edge technology to clients.

The financial challenge of building internally is that typically the estimated costs far exceed the budgeted amounts. More importantly—but rarely discussed—is the lack of a hard delivery date that seems to be a constantly moving target. If delivery dates are met, the releases are typically watered down with reduced functionality and the release that is delivered to staff underwhelms what the client expects.

Yet another challenge of building internally in this era of cost cutting is attempting to keep your systems operating at an optimal level while juggling the ongoing costs of maintaining and managing your IT strategy.

Buy—vendor purchase

Buying a global financing system also comes with a significant cost, but hopefully even this option will be more defined than building a solution. The following unknowns are where the challenges lie:

- Vendor consulting costs—customising a standard version for a particular business.
- Integration costs—often carried out by consultants who are 'experts' in the new product. They have a nasty habit of still being around well after the implementation is completed!
- Internal IT costs—in-house IT staff will need to carry out work in addition to running the existing systems. Often, a new team is hired but strangely the old team never seems to leave!

Bolt on

Amazingly, we are in the 14th year of the new millennium, and after the past four years of volatility and uncertainty, those who work in the financial services industry are a little worse for wear. For the most part, the core systems for all financial services firms—when it comes to processing their securities financing activity—have proven that they can handle the significant volumes of the past decade. What has been lacking are the upgrades that are necessary to manage an overwhelming amount of business with typically fewer members of staff as businesses have been forced to make difficult staffing decisions.

Much of the core processing activity in current systems already sends real-time files to the key parts of a firm: operations, treasury, legal, risk and credit. All of those departments within a firm all support their own systems so that they can either process transactions or manage risk of various types independently. So 'bolting on' as an option really means spending time and capital wisely by not re-inventing the parts of the IT solution that work, but by introducing customisable application tools to optimise current proprietary and client work flow.

At Trading Apps, we believe that by utilising our proprietary application building toolkit known as GLASS, coupled with our industry expertise, we can quickly and efficiently deliver customised solutions to all types of securities finance companies.

By accessing our simple yet scalable data model via our customisable apps, each firm can choose to include all of their data across the various asset classes by building as many adaptors as required to various in-house or vendor-based systems.

If you are looking for the next generation of software solutions that have been designed by industry experts and will not consume your entire budget, but provide an immediate impact on your franchise, then consider the lesser-known third option when looking for an IT solution. **SLT**

Another challenge of building internally in this era of cost cutting is attempting to keep your systems operating at an optimal level while juggling the ongoing costs of maintaining and managing your IT strategy

Jean-Paul Musicco
Managing director
Trading Apps

Preventing a Code Red with managed services

There may be a way to avoid an emergency situation in a securities finance business, say Sander Baauw and Raymond Vuyst of Synechron

How is it possible in a world of demand for transparency, growing regulations, and financial audits that organisations are still allowed to conduct securities finance without a proper infrastructure? The dependency on a desktop package such as Excel is still surprisingly acceptable as a reporting tool, but what is even more stunning that we have seen it used as a core trading system within one of the biggest banks of the world. This shows the quality of internal and external audits in securities finance and the lack of control from regulators. If an audit is going to be carried out on a securities finance department, then it is usually done as a part of the overall package that the big four (PwC, Deloitte, Ernst & Young and KPMG) perform. People with a limited understanding of securities finance tend to do the audit, their only focus usually being security and stability of the systems, which results in a general high-level audit. Proactivity from the business in combination with the internal IT department is definitely required here to prevent the business from ending up in a 'Code Red' emergency. People don't realise that 80 percent of the players in this market will end up in a Code Red situation within two years when securities finance will not be exempt from many regulations. Even when they do realise, it is unacceptable that they are still not acting on it.

> The main excuse is a lack of budget, but this quickly becomes no excuse at all in the case of Code Red situations

We are having conversations with accounting firms and regulators to see what is required to change this situation and get everybody back in control. Based on these findings, we are in the middle of developing a full health check programme. We will offer this programme as a service for our clients whereby we will perform a gap analysis on this subject with a standardised checklist, so that we can analyse within a week what should be made a priority. In the last few years, we have seen to many people coming up with the excuse of other priorities or they rely, against all odds, on their system vendors to solve their issues. The main excuse is a lack of budget, but this quickly becomes no excuse at all in the case of Code Red situations. It is now the time to make this industry healthy again before it is too late.

One of the reasons behind the budget issue is that organisations are still working in the traditional way while the world around them has completely changed. Now is the right time to assess the methodology behind the management of your IT budget. There is always an IT budget (often called run budget) to keep your systems up and running—otherwise you could not trade at all—but it is more a matter of making the right decisions in a period of cost reductions.

If you look at the questions below and you answer one of these questions with a 'yes', then you definitely need to rethink your current strategy:

- Do you only fix something when it is broken?
- Is your entire IT budget spent on mandatory issues?
- Is there no budget for new functionalities and process improvements?
- Is it impossible to implement quick wins?
- Is there still an old soldier in your organisation who fixes your breaks manually without any documentation?

What you see in the market is that nine out of 10 organisations answer at least one, if not all, of the above questions with a 'yes'.

Most organisations are still working with the 'break and fix' model and every year they realise that their IT budget is spent reactively. Instead, they should be planning a constructive way to proactively avoid future incidents. The trick is to save cost on the run budget and create from these savings some space for quick wins and process improvements, leading to more STP that mitigates dependency on manual processes.

Many banks still have a one-man key dependency risk on one old loyal soldier within their securities finance departments. On his own, he fixes the breaks on the spot without any documentation, communication or reporting. Just as organisations consider their own old soldiers as a given fact, they also consider the consequences of this set up as a given fact. The result will always be an opaque IT budget for the business, because it is not based on facts—it is based on assumptions. They should know that this methodology never provides them with the information that they need to make well-informed decisions on their IT budgets. Instead of staying in denial and persevering with this methodology, they should realise that this is the right time to take action and make sure they don't end up in a Code Red situation.

We all know changing the way of working is one of the most difficult processes to enforce in an organisation, so to avoid the shock effect we always suggest the model of 'managed services' in combination with functional application management. This is not a revolutionary new model, but it creates a different mindset with people. The managed service model is an easy one to implement for everybody and it quickly improves transparency on the cost side.

One of the main roles of a managed service provider is to act as the key player between the internal IT department and the system vendor. The managed service provider detects, solves, registers, patches, tests, implements and documents quickly and efficiently for a consistently low price. It is very important that the selected managed service provider has a deep knowledge of the existing securities finance systems next to its business and IT skills. The workload of the involved parties will then be reduced due to the fact that everybody will act clearly and transparently. **SLT**

Sander Baauw
Managing director
Synechron

Raymond Vuyst
Managing director
Synechron

Advantages of the managed service model

Minimal disruption level
Due to the fact that you measure not only the amount of disruptions, but also the route cause of the disruptions, you can work on a proactive and focused way of improving the user productivity and core business processes.

Dedicated, experienced resources for run and change combined in one role
This way you can combine the experienced people who know the vendor system inside out, so you don't need to reinvent the wheel. They can create small enhancements or report at the desk and document it straight away, but also work at the same time on process improvements.

The dentist approach
A twice yearly health check on technical and business functionalities prevents a lot of pain at a later stage.

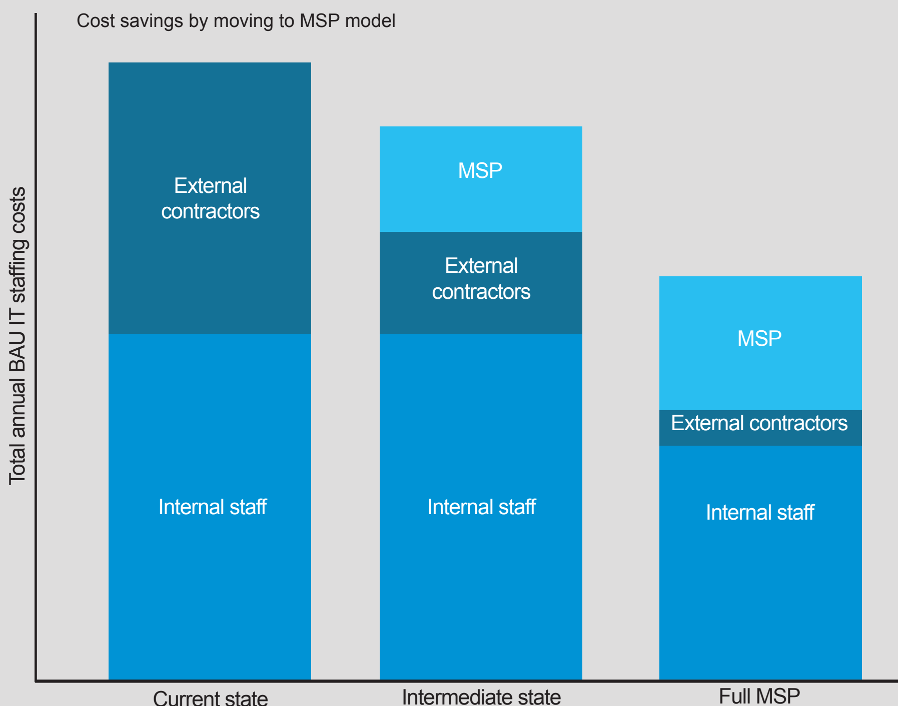
24/7 global infrastructure
You can combine the 24/7 end-to-end business process monitoring with the on-site support around the globe.

Easy to implement per IT component
You can already achieve a lot with two dedicated experienced people who will not only act as the extended proactive IT arm for your internal IT department, but also for the system vendor.

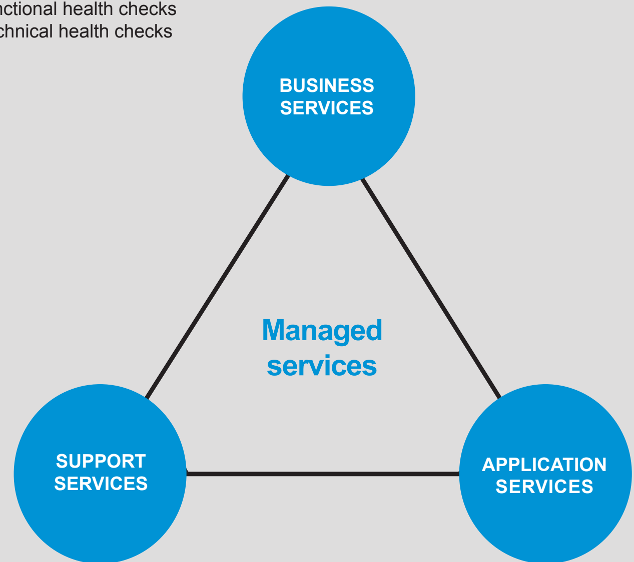
Increase productivity of internal staff
Internal staff can dedicate their time to crucial projects that can only be done by employees with a long history within the firm.

Decrease (operational) risk
Increase the STP level and ensure continuity by eliminating the dependency on one key person and single external contractors.

Costs are transparent and under control
Agree with one service provider on a fixed cost per IT component. This way you can mitigate the dependency risk on single contractors in a phased approach.



Overview of managed services



You’ve got email

The future of technology may be read from the past, says Rob Sammons of Anetics

The first email was sent between two computers almost 42 years ago. That was a time when computers were very expensive, centrally located, and each had multiple users.

There already was a programme in place called SNDMSG, which allowed one user to send a message to any other user on the same machine, but with advent of ARPANET (the military communications network, precursor to the internet), there was need for a user on one machine to be able to send a message to users on other machines.

A programmer named Ray Tomlinson, who already had experience with file transfer between machines, was tasked with modifying the SNDMSG programme to work across the network. He succeeded late in 1971 and was the first to use the ‘at’ sign (@) as part of an addressing scheme (user@host).

Email usage today has become ubiquitous with many users in our industry having more than one account. It has become easier to blast out an email as securities become available to lend, or are needed to borrow, than to pick up the telephone and start calling around.

The problem is, not everyone has time to open and read all of the mail that comes in. Even if you do, there are few among us that can remember the content of each email, and so who has what and who needs what.

The Anetics Twill platform offers an automated mailbox with tools that capture and collate all of this. Here’s a curious observation: roughly three out of five emails processed do not have any content in the body of the mail. It’s all in the subject.

Examples include:

- Pushing JCP 22700 in pos @ -4 ½
- Please show me 169k CASC need all or part
- Here we go again—NVGN for buy-in
- EWH 66k @ 0 who wants it

Average volume for a typical desk is 50 to 150 emails per day representing thousands of different securities (when you include the emails with attachments and actual lists within the body).

What's trending in 2013

Our customers report dominant issues falling into three primary camps, each one playing upon the other:

- Mandates from senior management to simplify and cut costs
- How to re-factor legacy systems (whether in-house or vendor sourced) that are outdated, no longer efficient or not a best practice
- A clear wish for more automated integration at a time when opportunities have fewer people to act on them.

Consider this: it's not uncommon to find a customer running two different stock loan systems and one or two repo systems with, at best, a home-grown or vendor-sourced dashboard to help tie them together. These underlying stock loan and repo systems are not the official stock-record, but must reconcile with the stock-record, frequently through omnibus accounts that are not conducive to certain transaction types.

Our advice to customers is to invest in the dashboard and the stock record and bin the three or four systems that sit in the middle. Think of the cost savings! Your stock record is the place where all of the assets are recorded and accounted for. So much of today's dealing involves moving assets from one account to another, for both firm and customer benefit, all of which must be done under very tight control and scrutiny.

Automation

The first New York to San Francisco long-distance telephone call was made in 1915. In 1927, there was AT&T's inaugurated commercial transatlantic service between New York and London using radio to cross the pond. The cost was $75 for three-minutes, one call at a time.

Long-distance calls were set up manually. Operators at toll stations linked routes to connect the parties to a call. Early on, you would get a call back once the line was ready. Later, a rate operator would quote the price of the call and give an optimised route to the local operator, all of which would happen while you waited.

It wasn't until late in 1951 that the first self-dialled, customer-connected, long-distance call was made in North America. From New Jersey to California, one party direct-dialled the other using AT&T's new Direct Distance Dialing feature. The call took 18 seconds to set up, with no human intervention. To relate this to securities lending, it's a bit like auto-borrow. It was the first call dialled with an area code, using the new 10-digit dialling. This development also saw the introduction of a national seven-digit standard for local numbers.

With the transistor replacing vacuum tubes, coax cable replacing copper pairs, and then microwave radio and fibre optics, thousands of simultaneous long-distance calls could be carried on a single channel. Voice quality on a long-distance call became as good as a local call while the cost to provide the service plummeted.

Naturally, not all of the cost savings were passed on. At least, not until 1984 when the US government imposed rules to allow providers other than AT&T to compete via the Equal Access Act as long-distance carriers. Today, the rates are at-the-market. Each party to a telephone call has a unique standard phone number and service providers couple to each other seamlessly.

Interoperability

Our industry has seen considerable advances in technology as well as new vendors with service offerings in everything from inventory management and rate benchmarking with comparison to auto-borrow/auto-loan, billing and contract comparison. However, these service providers function in isolated clusters. To link with a counterpart that ties-up with cluster A, one must also tie-up with cluster A, and so on with other counterparts in clusters B and C.

All of this only adds to cost and complexity. Absent is the cross-cluster interface. Even if interoperability proved to be a word in cluster vocabulary, it is likely that the compound cost basis and opposing technologies might render such a commercial link-up undesirable. We've a way to go before an auto-borrow order on one platform can be filled on another without a third process sitting in the middle.

The future

Email would appear to be the lowest common denominator when it comes to linking one desk with another. Each industry participant can be uniquely identified by one or more email addresses and the cost of sending or receiving an email is about as close to zero as one can get (admitting that retention and processing costs are being ignored).

Email senders and receivers are each aligned with known desks. Transmittals are a private, protected dialogue between sender and receiver, even when the recipient is a blind list or group mailbox. Our Twill platform provides for a dedicated mailbox for each desk that we support. Connection to that mailbox can be encrypted, though this is not commonly done. We have identified close to 300 people sitting on one of almost 80 different desks in the US market. When an email comes into a desk mailbox, we know precisely who sent it and what desk they sit on.

We see many firms doing a fine job with system-generated emails for current needs and availability. And while we are ignoring these for now, need-back and recall notices are also being sent this way. Though not quite suited for fill-or-kill auto-borrow, there are many other routine desk functions that could be handled by system-generated, unattended email. To suggest a few: cross-desk locate requests, end-of-day-billing comparison and daily auto-mark notification.

As heavily used as email may appear at present, it is not being used to its full potential. Expect to see more. **SLT**

it's not uncommon to find a customer running two different stock loan systems and one or two repo systems with, at best, a home-grown or vendor-sourced dashboard to help tie them together

Rob Sammons
Managing director
Anetics

Time to invite RQV to the triparty

The industry is littered with buzzwords, but which ones mean the most? Jonathan Lombardo of Pirum looks them up

Never have there been so many parts of speech attached to collateral. Let's take the positive verbs: 'optimise', 'transform', 'upgrade', 'manage' and 'cover'. And then the negative: 'crunch', 'squeeze' and 'expose'.

The market has increasingly turned to the use of triparty collateral agents to add efficiencies to the optimisation and allocation of their valuable collateral.

While regulation is creating the need to use various parts of speech to embrace yet another wave of change to our industry, one tends to overlook some of the basic words that are associated with collateral in the triparty space. For this, we should use a different set of verbs: 'calculate', 'reconcile', 'match', 'submit', 'automate', and ultimately, 'cover'. All of these bring their own challenges, of course.

Then perhaps, in the world of triparty collateral, we can treat RQV (required value) as a noun. This can be defined as a physical process that is required to properly allocate lines of collateral covering day-to-day exposure. Through automation and real-time intraday visibility, this critical process adds to the value chain of overall optimisation.

Market participants are facing the daunting task of digesting regulation reform and need the ability to align their businesses to a service provider that brings enhanced operational and risk controls while eliminating error-prone manual processes.

Alignment doesn't cease at this point. Automation service providers need the flexibility, as well as the technological and business expertise, to identify and partner with other vendors, in this case triparty collateral agents, to offer a total solution to not only their participants, but the entire industry.

Pirum has strived to be that service provider and through its RQV Automation offering, partnering with both J.P. Morgan and BNY Mellon, has brought to market a unique real-time service that delivers innovation for both internal and external processes.

Let's then focus back on the basic set of words that are associated with collateral in the triparty space: 'calculate', 'reconcile', 'agree', 'match', 'submit' and 'cover'. Words that are unfortunately associated with today's existing RQV calculation practices often resemble the following adjectives: 'manual', 'slow', 'disputable' and 'error prone'.

The last verb to discuss is 'automate'. Automation has been a key word in the securities lending industry for the past decade. Full lifecycle processes, from order routing, execution and settlement to post-trade efficiencies and benchmarking, have all benefitted from automated solutions enabling business lines to increase efficiency and minimise risk. What the verb 'automate' lacked is an adjective, and the adjective that comes to mind is 'instant'. Instant, real-time data is the natural evolution that is required to bring our market to new levels of automation, STP and risk management, streamlining manually intensive and time critical post-trade processes throughout the day.

With organisations looking for any and every optimal solution, the addition of real-time functionality in the RQV space is being embraced with open arms. In the past, triparty users faced numerous challenges, such as lack of timely visibility and root cause analysis of disputed trade valuations, as well as maintaining multiple processes for different agents. The calculation, agreement and submission of RQV figures bring their own complexities. Ensuring that trades are allocated to the correct triparty accounts while including prepays and excluding trades with returns settling on the same day is quite a challenge. Coupled with the hundreds of calculations and submissions for fund managers and disclosed agency lender programmes, this can be a problematic process. Time required to produce these RQVs creates a real squeeze (that word again!) at the end of the day to get figures agreed with counterparties and ensure that exposure is covered.

Vendor solutions that have the ability to provide a single portal across all triparty agents for the real-time calculation, reconciliations and submission of RQVs across all counterparties—irrespective of platform participation—enables a holistic approach for the entire securities lending industry to engage with.

'Value add' solutions must encompass all participants, in this case borrowers and lenders. Lenders want to realise a benefit that provides a fast, accurate, secure, single point of submission while improving controls around RQV submission and analysis, providing easier dispute resolution processes with borrowers leading. Beneficial owners will also appreciate this improved control. Borrowers want service providers that allow greater intra-day visibility of proposed collateral values highlighting discrepancies through an exception-based processing engine. Variances are then automatically identified to a level of granularity that does not presently exist in today's world. This results in borrowers' increased ability to monitor, agree and match with their underlying lenders via a single process with all triparty providers.

Triparty agents partnering with providers that bring this new dynamic to the RQV space would also see benefits through earlier submission, increased accuracy and a reduction of pressure on operational staff. This would bring greater client satisfaction due to increased automation, visibility and agreement of values.

Service providers must engage with users and develop efficient ways to manage day-to-day collateral, adding value in the full optimal solution that is required to operate in today's environment. The collateral space is filled with a 'newspeak' language using multiple verbs, nouns and adjectives, but the two most important words are 'flexibility' and 'nimbleness'. **SLT**

Jonathan Lombardo
Head of global sales
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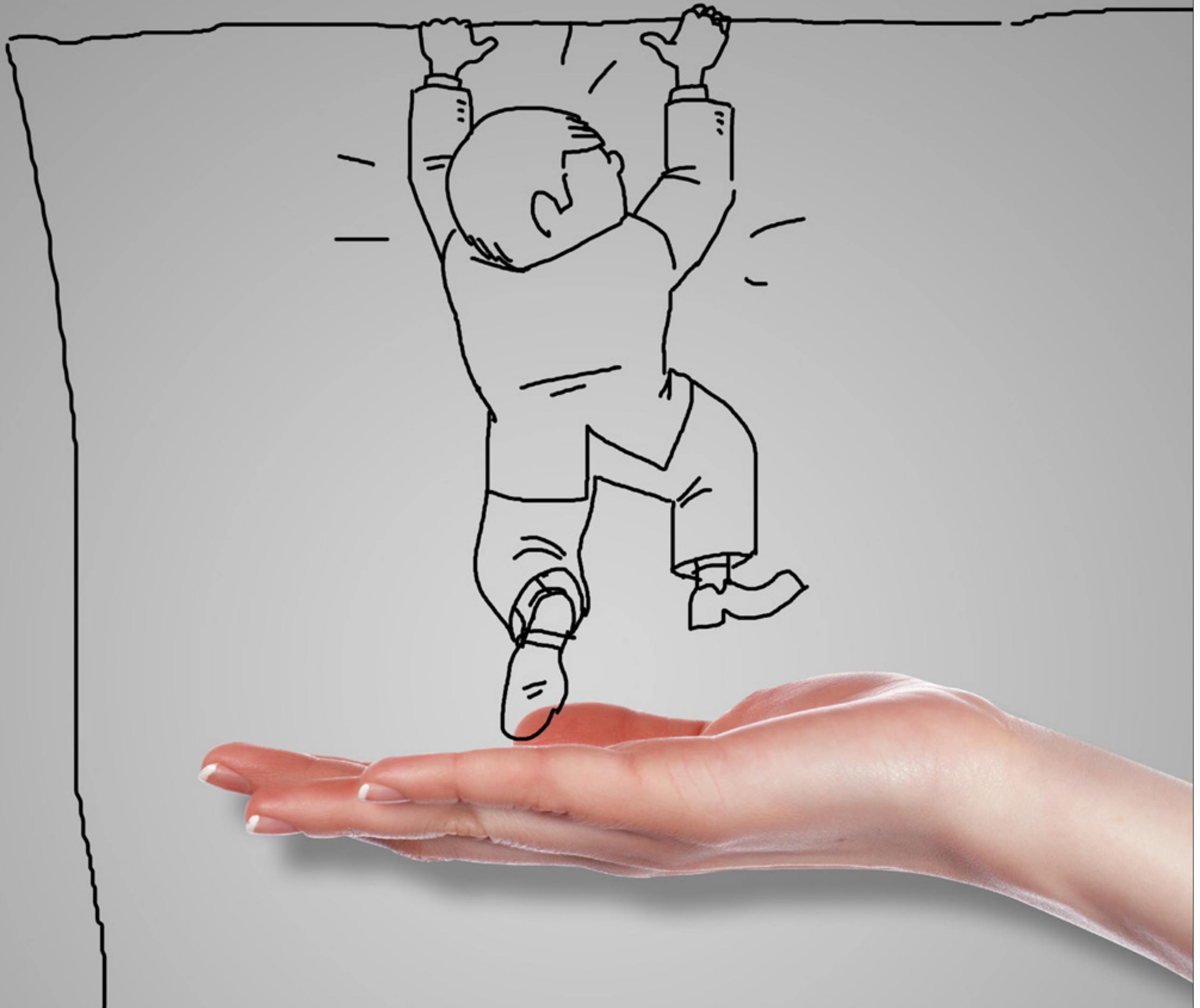


Help is where the ROI is

What is the return on investment on collateral optimisation technology? Martin Seagroatt of 4sight Financial Software takes a look

Collateral optimisation techniques offer a number of benefits to both buy- and sell-side firms and can generate a measurable return on the investment in technology required.

There is undoubtedly a large amount of inefficiency in collateral usage from market participants. An Accenture/Clearstream report in 2011 estimated that up to 15 percent of collateral that is available to financial institutions is left idle, costing the global industry more than $5.6 billion a year.

Consultancy firm Finadium gave the example of a fund manager with $500 million in assets, needing to collateralise a total return swap of $100 million. Finadium estimated that using cash as collateral on the trade could result in a loss of 25 basis points. Using treasuries would cost 24 basis points and using corporate bonds would cost nothing.

In a final example, a mid-sized bank carried out an analysis of its collateral and balance sheet usage. The bank found that more than 90 percent of the collateral that it pledged out to counterparties was cash. The bank also identified $14 billion of high-quality fixed income assets and equities sitting idle on its balance sheet. When the bank compared these assets with its counterparties' collateral eligibility schedules, it estimated that it could save more than $2 million a year through collateral optimisation.

In this instance, the break-even timeframe for purchasing and installing a software solution such as 4sight's collateral system will be around one to two years. After that point, it will continue to be a very cost-effective solution in terms of ongoing support and maintenance. This is even the case for a large global, multi-site installation across timezones.

Furthermore, quality collateral should become more expensive as the shift to trading derivatives via central counterparties (CCPs) takes place and Basel III kicks in. A shrinking supply of high-grade assets, coupled with demand for initial and variation margin for CCPs, and increased capital to comply with Basel III, will increase collateral costs. The boost to the bottom line from optimisation should therefore also rise as time goes on.

How technology systems can help

Of course, carring out efficient optimisation can be a complex process. Trying to optimise manually using spreadsheets or outdated legacy systems is time consuming. Optimisation runs also need to be carried out quickly when booking trades. An advanced solution therefore becomes a necessity, particularly when processing higher volumes of trades for multiple business lines.

In contrast to manual systems, 4sight's collateral optimisation solution can identify the cheapest-to-deliver assets to pledge out as collateral at the touch of a button. It also offers the added benefit that the system can identify when a counterparty has been over-collateralised. This process can dynamically reflect intraday changes in credit ratings, credit limits and eligibility schedules during the lifecycle of a trade.

Collateral management systems can also offer significant automation around booking cheapest-to-deliver collateral. These time saving features range from margin call processing and netting to STP of settlement instructions.

Finally, collateral optimisation solutions offer the ability to substitute assets that are pledged as collateral on a regular basis to ensure that they remain the cheapest to deliver. In bilateral trading, this is not always practical, as a counterparty may not want assets to be recalled and substituted regularly. However, more frequent substitutions could be possible when trading via CCPs. They will potentially have the scale and operational efficiencies to make regular asset switches less of a headache.

There are also a number of more subjective benefits to using a collateral optimisation system. These are harder to quantify yet still valuable. For example, collateral management technology systems allow all of the required data on collateral across securities lending, repo and derivatives to be consolidated in one place. Previously, this information was sourced from many different places and multiple systems. This allows internal assets that are held at a firm to be made use of as collateral to cover a margin call before going to the street to source more expensive collateral.

Furthermore, collateral management solutions such as 4sight's ensure that users do not accept ineligible collateral and stay within the firm's collateral concentration limits. They also assist in Basel III compliance by helping users to hold onto high quality liquid assets for regulatory purposes rather than needlessly pledging them out as collateral.

There is an argument that banks with better capital ratios will find it easier to attract customers and investors. Again, this can add hidden value to collateral optimisation. Systems should therefore take into account the effect of Basel III reforms when proposing allocation of collateral assets.

In addition to the benefits listed above, an integrated solution for securities lending, repo and derivatives collateral management can help to avoid conflicts between various internal groups. This helps to deal with competing demands for collateral from securities lending, OTC swap collateral, exchange-traded margin requirements, repo/reverse repo transactions, liquidity and financing needs.

There is an argument that banks with better capital ratios will find it easier to attract customers and investors. Again, this can add hidden value to collateral optimisation

For firms providing client-clearing services, state of the art technology systems mean that they can offer optimisation of collateral to their clients as a value-added service. Clearing members can also add new revenue streams by offering collateral upgrades. Because collateral upgrades involve a repo transaction on the other side of the trade, there are advantages to using an integrated technology solution such as 4sight's that can collateralise the derivatives trade and process the repo leg in a single system.

Why use a vendor solution?

Some of the larger tier one sell-side banks and brokers have already developed their own in-house solutions for the new demands of collateral management. In many cases, this makes sense as they have the scale and in house IT teams to deal with the complexity involved in this.

At the other end of the market, some smaller firms have simply outsourced their collateral management to third-party providers. While this can be expensive, it can be a logical choice for smaller firms that don't want to increase their headcount and technology footprint to manage collateral in-house. However, for a large number of firms in the middle, managing collateral themselves using a vendor-supplied technology solution makes sense from a cost/revenue perspective.

Technology vendors can supply knowledge of market best practices that they gain from working with a wide range of clients. This shared approach with other customers of the vendor keeps development costs low compared to building in-house. There is also the benefit of being able to take advantage of functionality requested by other clients.

Technology providers can assist with making the often complex changes in operations and mind sets required to make best use of assets and consolidate previously siloed processes. Furthermore, instead of reinventing the wheel, a vendor solution may already meet many of your functional needs with minimal customisation.

Of course, each firm's specific definition of optimisation is by its nature, unique to that firm, its risk profile and strategy. It is therefore important to select a technology vendor that is prepared to customise to meet needs where required. This allows you to get the best of both worlds. The system is developed, maintained and supported by someone else. The cost remains affordable, yet you still get a tailored solution with your own proprietary functionality.

Outsourcing to a vendor also allows you to focus on your core competency, rather than trying to be a software developer as well as a bank/asset manager/insurance company. In addition, vendors can often deploy a system more quickly compared to building a solution in-house from scratch.

Finally, because the pace of regulatory change is moving so rapidly, significant time and resources must be invested in updating software solutions in order to stay competitive. Leaving this to a vendor can save a lot of time and effort. It also ensures that you can make use of a technology solution that offers the most cutting edge collateral optimisation and automation tools available well into the future. **SLT**

Martin Seagroatt
Head of global marketing
4sight Financial Software

Collateral quest

The quest for single solution technology in collateral management is long and fraught with difficulty. Elaine MacAllan of Lombard Risk treads the tricky path

The days when all that was required of a collateral management system was to calculate simple margin requirements, issue margin calls and book collateral—within product silos—are far behind us.

With the increasing focus on collateral management as a key method of controlling and reducing risk in the financial markets, the requirements for an enterprise collateral management system are ever-increasing in complexity and expanding in functionality.

Since 2008, we have observed a noticeable shift in the focus of collateral management, from a purely back-office operational function, to a firm-wide global process, implicating front office, treasury, credit risk and governance functions, which all have to accept some responsibility and accountability for the proper design, governance and execution of the collateral management programme.

To some extent, this has been driven directly by the pressures being applied, post-financial crisis, by the evolving regulatory requirements that demand that institutions should be able to demonstrate the existence of strong and efficient collateral management technology and processes. For example, the new Basel III principles require that FMIs (Financial Market Infrastructures) use well-designed and operationally flexible collateral management systems. Other market participants are also increasingly faced with a regulatory push to have robust collateral management solutions to support their business growth.

Furthermore, the impact of the changing regulatory landscape (the US Dodd-Frank Act, European Market Infrastructure Regulation guidelines and their global equivalents) is forcing a long, hard look at collateral programmes as the answer to the well-documented emerging market pressures of tightening liquidity, mandated margin requirements for both cleared and uncleared portfolios, the reduction of collateral availability, and the resultant increasing cost of collateral.

Firms are looking to proactively manage and optimise their collateral inventory in order to maximise the utilisation of all available assets. Collateral management had long been regarded as primarily a counterparty risk mitigation process, however, as financial institutions look for greater returns on capital as funding, and regulatory charges become more prevalent, efficient collateral management is now perceived to have greater benefits than just risk mitigation.

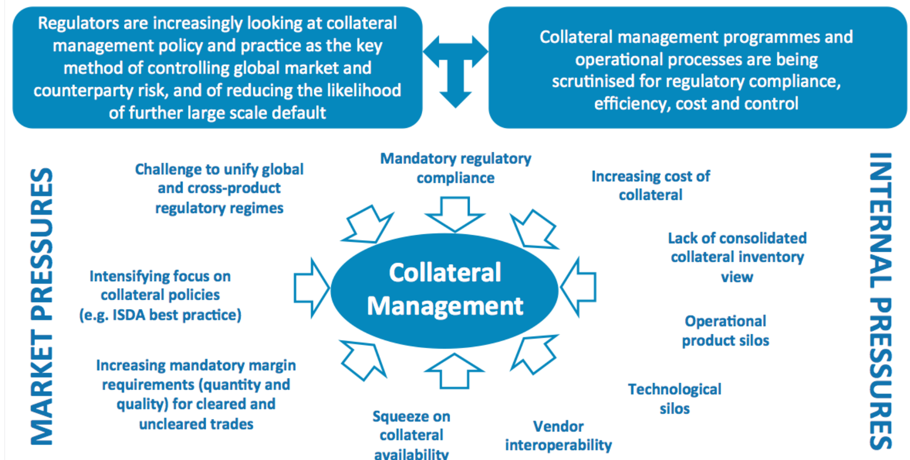
Add to this the ever-present (but now highly prioritised) need to maximise the efficiency of collateral operations and you begin to understand why collateral has become one of the foremost strategic priorities of all firms that are engaged in the global financial markets, regardless of the type of institution, product focus or jurisdiction.

A strong technology solution is required to handle the new requirements for increased volumes, process automation, intra-day margining and centralised and consolidated risk and inventory data.

Technology impact

The term 'collateral management' no longer means simply to make and settle a margin call. It now encompasses:

- Timely capture and validation of multi-product trade data
- Capture, validation and configurable application of static and market data (from multiple sources)
- Accurate trade and collateral valuations
- Margin requirement calculation with flexible application of varying calculation methodologies
- Automation of traditional manual functions (eg, call issuance and booking)
- Collateral sourcing, including centralised inventory management



Lombard Risk COLLINE for collateral management

- Optimisation—the identification of 'optimal' collateral to be used to make the best possible use of available inventory
- Real-time messaging and connectivity to internal and external technologies
- Collateral tracking, including rehypothecation and settlement location
- Dispute management, including automated reconciliation
- Transaction and risk reporting
- Client reporting

A truly fit-for-purpose collateral platform must be capable of supporting all products on a global basis to provide a firm-wide holistic view, which cannot be achieved without appropriate and capable technology. Even where a function or process is not expected to be supported within a collateral system, the technology must be able to consume data from, and communicate seamlessly with, any or all other internal and external technologies.

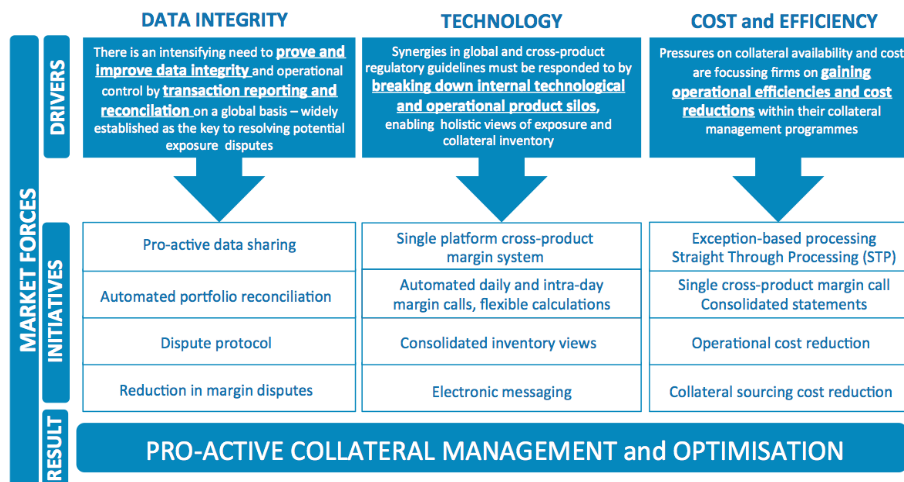
Collateral systems are becoming firmly embedded into technology architectures, with growing responsibilities in terms of calculating, managing, reducing and reporting exposures, rather than being 'end-of-trade-lifecycle' applications capable only of consuming data for the purposes of margin call management.

Financial entities will need to restructure their collateral processes and ensure they have scalable and sophisticated technology to support these responsibilities. Ideally, they will migrate from a silo-based approach to a single, cross-product platform where all collateral agreements can be monitored in order to centralise and consolidate the operational workflow.

'Best practice' collateral technology must be:

- Real-time, as end-of day-margin processes are rapidly becoming a thing of the past so the solution must be technically capable of retrieving data and recalculating and processing intra-day exposures on an 'any/real-time' basis.
- Source neutral and integrated, so that it is capable of consuming and configuring data from multiple sources—including static, market and trade data, risk parameters

Data integrity, operational efficiency and cost reduction



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and inventory data—and able to provide data to settlement, risk and control and reporting systems.

- Connected/interoperable and capable of directly interfacing to external sources for the dynamic exchange of data, including clearinghouses/exchanges and messaging platforms.
- Cross-financial product in order to calculate and process margin requirements for cleared and uncleared agreements, covering all product types (Repo, Securities Lending, OTC, FX, Clearing, etc), on a single platform. It must provide consistency of user-experience, while catering for distinct calculation and process differences that are demanded by market practice and the detail of the underlying master agreements (GMRA, GMSLA, MEFISLA, ISDA etc). Product-siloed platforms are no longer fit-for-purpose as they fail to provide the firm-wide, consolidated data view that is required in order to establish firm-wide risk and exposure.
- Enterprise-wide, providing a centralised asset inventory that is capable of holding collateral and firm positions in a single inventory, while controlling and tracking collateral assets and re-use, and maximising the efficient utilisation of all available collateral inventory.
- Configurable, supporting single business-lines where required or providing data filters and user privileges to control access to data per module, product or region. With cross-product and enterprise-wide technology must come modular functionality and access controls. Risk managers may want to access firm-wide data, but trading participants may only want to view their own business at a granular level.
- Expandable—business and functional requirements are evolving at an unprecedented rate, and so technology and functional design should be conceptually flexible and extendable.

Technology must also provide:

- Calculations, including multi-product trade valuations and risk indicators such as eligibility validations and concentration risks. It must also support configurable methodologies and calculation parameters.
- STP, enabling the collateral manager to create a truly exception-based process, where bespoke business rules can be defined to trigger auto-issuance of margin calls according to individual and extensive parameters.
- Electronic messaging, taking STP one step further and automating the bilateral communication process of the margin call from issuance to booking.
- Forecasts, supporting exposure forecasts based on future trade populations and valuations, and enabling simulation functionality, and 'what-if?' scenario calculation and reporting.
- Decision-making, enabling the collateral manager to make informed and enterprise-wide decisions to increase the efficiency and reduce the cost of the collateral programme, while providing an integrated calculation and assessment of optimisation based on flexible user-definable rules—eg, which collateral is 'best/cheapest' to use in defined scenarios.
- Bespoke reporting and data transparency, providing the data that is required to those who need it and when they want it. Risk managers are demanding increased visibility over firm-wide data.
- Collateral cost calculation and attribution to calculate the cost of the collateral programme and providing transparent calculations to enable those costs to be attributed back to the source of the exposures.

The ultimate challenge for a software provider is to develop a solution that is fit for purpose for all users, whether buy or sell side, clearinghouse or clearing member, broker or client, across all products, master agreements, markets and jurisdictions.

A vendor technology solution that can be adapted for use by any financial market participant, according to their own product coverage, functional requirements and business priorities, is more likely to be successful in the current environment where breadth of coverage is king.

Firms reviewing the capacity of their margin technologies to support their growing business should look for:

- Single platform technology—the ability to support all financial products on a single collateral management platform, providing consolidated data views and maximising efficiencies. There are clear operational benefits to managing a single collateral process.
- Optional business line coverage—a modular solution offering optional cross-product functionality, ensuring that where multiple business lines are supported on a single platform, the experience is consistent and seamless.
- Interconnectivity and interoperability—no platform offers everything, so this is key. The ability to communicate with other platforms; consume, use and share data so that the user only has to log into a single interface to manage cross-product collateral activities (eg, electronic messaging platforms, clearinghouse APIs, automated triparty/custodian reporting, direct links with reconciliation and matching platforms, etc).
- Single code base, functional flexibility—supporting configurable functionality, providing consistency of user experience, ease of implementation and upgrade, but allowing the user to flex the parameters, rules and workflows to adapt to and meet individual requirements.

All too frequently, technology infrastructures find it difficult to adapt rapidly to evolving market requirements, and struggle to keep pace with the demands of the business as it flexes and responds to the increasing demands of the global regulatory environment. Internal technologies in particular have an uphill challenge to meet the connectivity requirements of multiple external systems.

The answer lies in breaking down product silos, overhauling legacy systems and processes, and implementing flexible and configurable technology that allows the user to design and utilise the software according to individual requirements and rules. Contrary to popular opinion, it may not always be necessary to do away with the incumbent system entirely. It is often the case that the integration of a cross-product collateral system, capable of looking across as well as within product silos, can provide the required functionality with the minimum impact on legacy and complex technical infrastructures.

Lombard Risk's COLLINE solution specialises in providing cross-product collateral management and clearing technology including Repo, Securities Lending, OTC, FX and Clearing. **SLT**

Elaine MacAllan
Business matter expert and product consultant
Lombard Risk

At the forefront

The emerging quadparty solution could be the key to overcoming formidable operational challenges, says James Tomkinson of Rule Financial

Collateral management, is a key focus across the markets with institutions grappling to implement the solutions required for them to be compliant with the US Dodd-Frank Act and the European Markets Infrastructure Regulation (EMIR). Although there is increasing discussion around collateral optimisation, the reality is that most are simply focused on developing the required infrastructure connectivity (to central counterparties, or CCPs) and the necessary account structures in order to simply be able to fulfil their regulatory obligations to effect the timely movement of sufficient and eligible collateral.

It is evident that there are numerous market developments underway in order to respond to these needs. Inevitably, the challenges being faced by some (eg, general clearing members) are presenting others (eg, collateral service providers) with opportunities. Only time will tell how these developments will conclude, but it is evident that the triparty mechanism (originally developed to support the repo markets in the 1990s) is now being modified to offer valuable functionality to support an automated collateral movement with the CCPs. The solution that is being developed under the 'quadparty' banner is rapidly becoming a key service differentiator between those custodians that have a triparty capability and those that do not.

This article describes the key collateral challenges that firms are addressing in their preparations to comply with regulatory changes, and how the evolution and adaption of the triparty product is proving a valuable infrastructure solution in this process.

Having standards

A common feature of the new market structures is the formalisation and standardisation of collateral practices. In the past, counterparties were able to agree the basis on which exposures should be secured by the pledging or delivery of collateral assets. Best practice and standardised documentation, such as ISDA Master Agreements and Credit Support Annexes (CSAs), Global Master Repo Agreements (GMRAs), and Global Master Securities Lending Agreements (GMSLAs), evolved with market participants retaining the ability to tailor their collateral arrangements. This had the advantage of enabling firms to take into account the nature of their counterparty when agreeing terms of business. As an example, an insurance firm or institutional investment fund would face significantly less onerous margin requirements than a leveraged hedge-fund, thus allowing for the most efficient deployment of assets relative to risk.

The lack of strict rules resulted in many bilateral relationships having no daily collateral management process, hence many institutions found themselves with significant counterparty credit risk exposures. This was acceptable until the crisis events of 2007 to 2008.

The quantification of counterparty credit risk in the form of CCPs, the exchange of collateral and the maintenance of adequate capital reserves are therefore central to the new regulations. The health of this circulatory system depends critically on the ability of firms to identify eligible and sufficient collateral in order that it can be delivered in time to satisfy margin calls.

The step change in the value of collateral required to sustain financial activity has created the need to move assets with the minimum of friction and cost to where they can be most efficiently deployed to secure exposures and support investment and hedging strategies.

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A lack of available collateral assets relative to the desired level of activity, whether because of competing demands or narrow eligibility criteria, will lead to inefficient markets in which risk managers are unable to hedge effectively and speculators cannot provide liquidity. If the financial system is burdened by excessive transaction costs or cross-border settlement inefficiencies it is inevitable that the financial markets, particularly under stress conditions, will again prove unfit for purpose.

New generation

We believe that the efficiency of the collateral ecosystem is being significantly enhanced by the developments in the triparty model now becoming widely known as quadparty. Developed originally in the repo markets, triparty collateral agents offer market participants an efficient means of allocating collateral. The key point here is that triparty products were designed to automate both the eligibility and sufficiency checks that are required when selecting collateral—a particularly powerful operational capability, especially when it is combined with the automation of instruction generation, substitutions, corporate actions, and so on. Interestingly, this is precisely the same set of requirements that are needed to support the automation of collateral movements to and from CCPs.

There are four institutions currently offering global triparty collateral capabilities that have the potential to develop a quadparty capability: these are the two international central security depositories (ICSDs), Clearstream and Euroclear, and two large global custodian banks, J.P. Morgan and Bank of New York Mellon. Barriers to setting up new triparty services are substantial, particularly in terms of the breadth of network and level of initial investment that is required, and we are therefore expecting other global custodians to seek to offer quadparty services in partnership with one of the established agents.

Triparty agents are also well placed to address a new requirement that is becoming apparent as CCPs, clearing agents, and non-clearing institutions grapple with the new rules for the collateralisation of OTC derivatives. Under normal circumstances, collateral to meet initial margin requirements is called by the CCP. The clearing agent must meet this obligation and in order to do so the clearing agent will in turn call for collateral from its non-clearing client. Unlike the established futures model, in which non-clearing institutions' collateral could be commingled by the clearing agent and only the net collateral requirement passed on to the CCP, the new rules demand that CCPs and clearing agents segregate collateral assets. This is designed to reduce the risk to the non-clearing client institution so that its collateral cannot be consumed in the event of the bankruptcy of the clearing agent or one of the clearing agent's other non-clearing clients.

Collateral segregation—whether in the Legally Segregated Operationally Commingled (LSOC) model that is prescribed by US regulators or the omnibus and individual segregation options set out in EMIR—creates substantial operational overhead across the clearing chain. However, the evidence suggests that non-clearing client institutions will be obliged to take advantage of the protection that they are offered even though the trade-off in both cost and operational complexity is not yet fully transparent.

The segregation of collateral assets is, however, only part of the story. Market participants are exploring alternative means of meeting their collateral obligations while minimising counterparty/service provider credit and transit risk. A non-clearing institution may not wish, or be allowed, to hold or park securities at its clearing agents. Instead, they may prefer to allocate collateral directly to the clearinghouse.

In conjunction with collateralisation rules that are set out in Dodd-Frank and EMIR, the Basel III capital adequacy standards reinforce the prevailing capital requirements that are associated with counterparty credit risk. The revised treatment of trade exposures and posted collateral will make a material difference to the cost of OTC derivatives activity and must therefore be evaluated carefully in the analysis of the optimal collateral segregation model.

Clearing members of a qualifying CCP must apply a flat 2 percent risk weight to trade exposures for the purposes of calculating their counterparty credit risk capital charges. CCP default fund contributions must also be reflected in capital. A bank accessing a qualifying CCP as a client of a clearing member faces the same two percent risk weight if particular account segregation and portability requirements are met.

An intermediate risk weight of four percent is applied if the non-clearing bank is exposed to loss in the event of the joint default or insolvency of both its clearing agent and another of the clearing member's clients, but is otherwise protected. Alternatively, if the non-clearing institution is exposed to loss if either its clearing agent or one of its clearing agent's clients default or become insolvent, the non-clearing institution's exposure must be treated as a bilateral trade, leading to a substantially higher capital charge. If the non-clearing institution is not a bank then of course it does not face capital requirements directly, but it will certainly see the cost of the additional capital that must be held by its clearing agent in derivatives pricing or other service charges.

In general, equivalent counterparty credit risk capital charges also apply to collateral that is posted by a non-clearing institution to a clearing agent or by a clearing agent to a CCP. Significantly, collateral that is posted to a clearing agent or a CCP is not subject to a counterparty credit risk capital charge if it is held in such a way that it remains bankruptcy-remote from the clearing agent or a CCP (for example at a custodian).

This creates an attractive opportunity for providers of custodial services to offer collateral management services that minimise the incremental capital and operational costs to participants in the cleared and bilateral OTC derivatives markets. Hence the emergence of the quadparty model, which builds on the functionality and flexibility of triparty collateral management and links together the CCP, the clearing agent and the non-clearing client institution.

The quadparty model offers clear benefits to the collateral giver as it can now allocate securities directly to the ultimate collateral taker (the CCP), achieving the desired bankruptcy remoteness from both CCP and clearing agent. The CCP is largely unaffected and continues to receive eligible collateral in response to its margin calls to the clearing agent through the quadparty structure.

Firm handshakes

The key to a functional quadparty model is the cooperation of the clearing agent. The challenge for the clearing agent is that it has effectively been dis-intermediated from the collateral chain, and no longer receives securities from its non-clearing client either directly or through the triparty system of accounts. However, as the principal to the cleared trade with the CCP, the clearing agent is directly exposed should its non-clearing client fail to deliver adequate collateral to the CCP through the quadparty structure. In order to support a quadparty structure, it is likely that clearing agents will require some form of security interest in the non-clearing institutions collateral assets.

The operational challenges appear formidable, particularly in terms of timeliness of collateral movement and the propagation of accounts as full segregation is implemented. Initially, we expect significant focus on the quadparty structure as it represents an operational cornerstone to the automation of collateral movements in the cleared market and is consequently likely to become a key differentiator between service providers. Although there are a limited number of triparty offerings, strategic alliances are already developing, with a number of key institutions still in the process of identifying their ideal solution. **SLT**

James Tomkinson
Specialist in clearing and collateral management
Rule Financial

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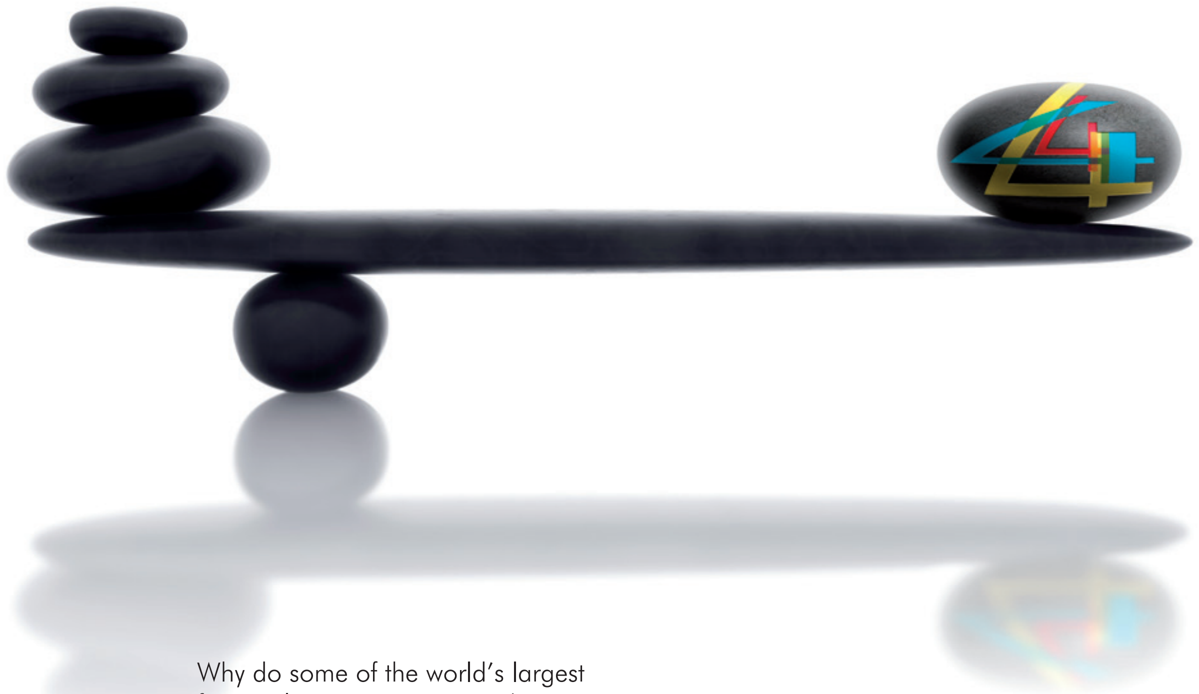

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Reaping the benefits

Joe Pellegrini of OCC updates SLT on how the organisation's platforms are doing and what is next for CCPs in the securities finance industry

MARK DUGDALE REPORTS

How was the end of 2012 for your securities lending business?

Two thousand and twelve ended on a good note for the OCC stock loan programme, which includes OCC's internal hedge programme and the AQS securities lending marketplace. The hedge programme provides clearing for OTC bilaterally negotiated deals while AQS transactions come to us from the AQS marketplace, matching anonymous bids/offers through its secure, anonymous trading platform. New loan activity in Q4 was up 44 percent over the Q4 2011, and new loan activity in 2012 grew 31 percent over 2011.

Interest from broker-dealers continues to rise as they look to incorporate central counterparty (CCP) clearance to a variety of their OTC products, so we continue to receive a considerable amount of queries from the industry. Several new members have joined the programme in the last year, and existing clearing members continued to increase their activity.

In fact, 2012 was the best year ever for OCC's stock loan programme. OCC began providing clearing services for AQS in 2009, and has been operating its internal Hedge programme since 1993.

To what extent do risk appetites improve in the US when politicians act rather than dither?

Upcoming regulations are definitely forcing institutions to review their collateral needs and risk management practices. Obviously knowing what and how regulations will affect their businesses allows firms to react quicker and more decisively in moving forward. We continue to see firms looking closely at how they are conducting business and finding ways to address these regulations (upcoming or existing) to ensure OTC transactions are less risky and to provide a better strategic fit for their organisation. This applies to securities lending transactions as well and trading through a CCP may improve the trade's risk profile.

What about the CCP model? Is an electronic business safer than a relationship one?

At OCC, we have always believed that stock loan transactions cleared through a CCP present a more secure model. The task is for each firm is to decide which transactions benefit from the CCP model based upon collateral obligations and economics of the trade. Not every securities lending transaction may benefit from a CCP model, but I believe many firms can reap some benefits, whether from a capital requirement perspective or as a credit intermediary, for some portion of their portfolio.

As a clearing member, another benefit in clearing securities lending transactions through OCC is the possibility of reducing your margin requirement by offsetting those transactions with other positions (options, futures) you may be clearing through us. This portfolio margining approach provides a safer model for the industry by reducing overall systemic risk.

From a trading perspective, the AQS platform offers a safe, accessible automated market with price transparency and open order book for credit efficiencies in addition to utilising the CCP model.

Speaking of AQS, how has that relationship been going?

Very well. As you know, we have been working with Quadriserv, the parent of the AQS Securities lending platform, since early 2009. This industry is quickly evolving and the electronic platform/CCP model is still somewhat in its infancy. Quadriserv does a great job working with industry participants to shape that model and our teams have worked very well together over the years to enhance this solution for the securities lending industry. Quadriserv is also very innovative—it is expanding its product suite to include equity repo contracts and has asked OCC to provide the clearing solution for the product. AQS will provide an anonymous market connecting buyers and sellers; matched trades will be routed to OCC for real-time clearing throughout trading hours. The equity repo solution proposed by AQS leverages OCC's expertise in managing equity collateral portfolios and provides the market with central counterparty novation and centralised risk and default management.

What are your predictions for 2013?

Discussions of the benefits of a CCP model will undoubtedly continue. The model will also evolve to allow access to a wider audience. I also believe trading volumes in OCC's stock loan programme will continue to grow as the industry and our membership gain more and more comfort with the OCC model and the benefits that it can provide. SLT

Not every securities lending transaction may benefit from a CCP model, but I believe many firms can reap some benefits, whether from a capital requirement perspective or as a credit intermediary, for some portion of their portfolio

Joe Pellegrini
Vice president, business development
OCC

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An innovative CCP solution for securities lending

In November 2012, Eurex Clearing's Lending CCP was launched. Thomas Wißbach explains its background and scope

A few years ago, there were a number of central counterparties (CCP) that were active, or looking to become involved within the securities lending market. Contemporary market conditions indicated that any solution that could help with the mitigation of credit counterparty risk and the reduction of regulatory capital would be most welcome. This was the time when Eurex Clearing decided to introduce a fully automated STP clearing service for the securities lending market—the Lending CCP. Eurex Clearing is one of the world's leading clearinghouses and an innovator in risk management, with a proven track record and market expertise within secured funding and securities financing with Eurex Repo and GC Pooling products.

While the CCP offerings available at that time were more or less derived from existing services for the cash equity market, our own assessment showed that some particular lending-specific service features were not yet available in the global clearing landscape for securities lending.

In 2010, the first draft of the Lending CCP service description was published for market consultation. The feedback received was extremely encouraging, confirmed the cornerstones of the model and has since then formed the basis of the Lending CCP.

Key market participants endorsed the introduction of the CCP for securities lending as it included the opportunity to give market participants greater choice by servicing multiple trading venues for bilaterally negotiated transactions as well as transactions concluded on electronic trading platforms. At the same time, it retains the bilateral market characteristics of trade negotiation and relationship management which are crucial to this market.

Trade connectivity

In terms of electronic trading platforms, the Lending CCP has been connected to Eurex Repo - SecLend Market, which is an electronic marketplace based on the well-established capabilities of the successful Eurex Repo and GC Pooling products for fixed income and equities. The benefits of being connected to the Eurex Repo - SecLend Market are that all existing Eurex Repo and GC Pooling customers are able to utilise their already existing technical infrastructure to connect to the Eurex Repo - SecLend Market and the Lending CCP.

Eurex Clearing's Lending CCP also incorporates the full integration of Pirum Systems' Real-Time service. Pirum is engaged as a flow provider that is able to supply the automated reconciliation and trade-flow of the securities lending transactions completed between bilateral counterparties to Eurex Clearing using Pirum's CCP Gateway. Thus, Pirum is collecting data from connected agent lenders and brokers, interfacing with Eurex Clearing and providing all information received from the CCP back to the market participants—all of this is on top of their already available well-known reconciliation services. Another good example of how infrastructure connectivity, which is already available in the marketplace, can effectively be re-used.

An innovative solution for lenders

In terms of lenders, the Lending CCP has devised a unique operating model that has been developed jointly with prominent agent lenders across Europe and the US. As a result, the beneficial owners and agent lenders are able to maintain their existing business relationships. By using the so-called Specific Lender Licence with a distinctive Eurex Clearing membership, beneficial owners are able to remain acting as principal for their loan transactions, while agent lenders continue to act in their existing agency roles. The agent lender continues to arrange loans as well for any CCP-eligible transactions and uses its existing market expertise and operational links with the securities lending flow providers or trading platforms.

The strong advantage and distinction between Eurex Clearing's Lending CCP and other models is that—for a pure lender—there is no requirement to:

- Clear through a (third party) general clearing member;
- Pay margin; or
- Contribute to a default fund.

A prerequisite for this is a collateral pledge model using the services of a connected triparty collateral agent.

All of these innovative features have been received positively by agent lenders as it enables their existing arrangements and structures to remain in place and lets them benefit from the advantages of Eurex Clearing.

As part of the core service offered, Eurex Clearing's Lending CCP—after novation—becomes the guarantor of the loan and collateral securities, and so it is offering protection from counterparty default, which is the purpose of the current practice of indemnifying against borrower default that is offered by agent lenders. The lessening of such an indemnification over time will enable agent lenders to offer a more efficient and cost-effective service to beneficial owners, in combination with Eurex Clearing's risk mitigation.

Integrated risk and collateral management

Securities lending transactions are incorporated into Eurex Clearing's risk management methodology that provides a robust and safe environment leading to an overall reduction in systemic risk for the market. The CCP undertakes near-time intraday risk calculations to ensure coverage of mark-to-market exposure, and in case of collateral shortfalls, intraday margin calls are initiated.

In addition, we have included the services of two triparty collateral agents into our offering: Clearstream Banking Luxembourg and Euroclear Bank. Both of these specialist service providers are connected to the Lending CCP in order to manage the collateralisation process for non-cash collateral on behalf of the counterparties.

This enables users of those triparty agents to optimise their collateral usage to a further extent by adding CCP-novated loans. A wide range of equity and fixed income securities is accepted as loan collateral by Eurex Clearing while the lender will still be able to define its own collateral eligibility (as a subset of the CCP's collateral universe). Eurex Clearing will instruct the triparty collateral agent with the total amount of exposure to be covered on the borrower side, while the triparty collateral agent determines suitable collateral out of the selected subset of collateral taking into account eligibility criteria, haircuts and concentration limits of Eurex Clearing. The lender can re-use the non-cash collateral securities that are received according to the rules and regulations of the triparty collateral agent and the borrower has the ability for substitution.

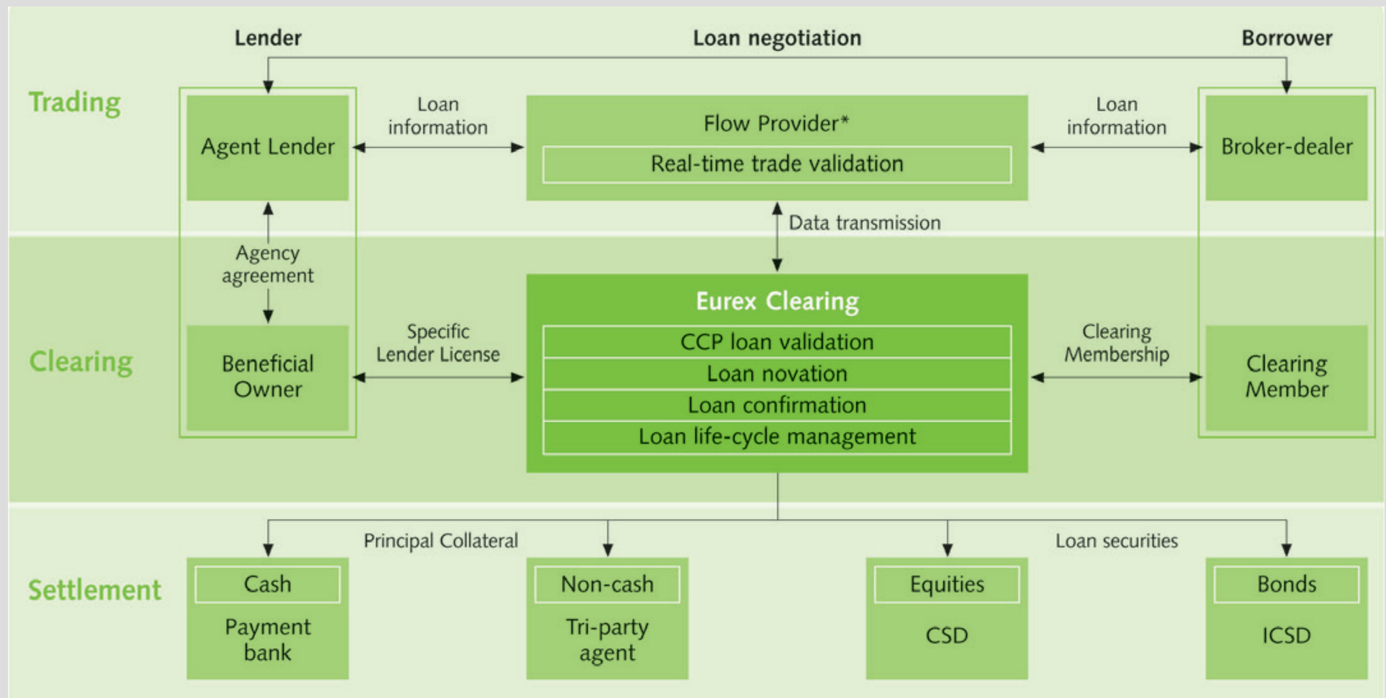
Full service advantages

As part of the consultation process with the market, a solution to incorporate all post-trade functions of the existing marketplace was requested and delivered in an automated manner. Eurex Clearing developed a fully automated straight-through process that is able to capture and manage all the re-rate, recall, return, corporate action and billing processing that is currently undertaken by the individual market participants and as such is able to increase significantly the operational efficiency for its users.

Automated processing of dividend compensation proceeds, as well as the calculation and movement of lending fees and rebates, is also included within the service. On top of this, there is full reporting for clearing members either directly or via the specialist service providers.

Eurex Clearing's Lending CCP is specifically attractive right now: there are beneficial regulatory

Lending CCP: the overview



* Eurex Repo SecLend Market and Pirum used as flow providers for the entry channel from market participants to Eurex Clearing e.g. for new loans, re-rates, recalls, returns etc.

capital requirements for CCP exposure under Basel II (at 0 percent) and Basel III (at 2 percent). Users can alleviate pressure on operational cost—functions such as settlement, corporate actions and billing all become fully automated on a STP basis. This CCP service facilitates improved distribution for all market participants—the ability to transact with a wider range of counterparties.

A fully integrated solution for trading, clearing and settlement

Eurex Clearing has integrated both electronic markets and OTC bilateral transactions within its CCP service, and provides a central gateway to the international central securities depositories, CSDs, triparty collateral agents and payment banks for securities, collateral and cash movements. Hence, Eurex Clearing's Lending CCP delivers a fully integrated solution for the trading, clearing and settlement of its customers' securities lending business. In November 2012, the service went live for the German and Swiss equity markets; the first bilateral transactions via Pirum's CCP Gateway were novated and settled for our clearing members—including the first ever CCP-novated loan versus non-cash collateral at a tripartry collateral agent.

At the start of 2013, the Eurex Repo SecLend Market was added as an additional flow provider and in early March and more than 8000 fixed income securities were introduced as lendable securities. Later this year, in May, further European equity markets such as France, the Netherlands and Belgium will be incorporated, as well as an integrated solution to support the management of voluntary corporate actions.

Overall, Eurex Clearing has introduced an innovative offering of clearing services for loan transactions in equities, ETFs and fixed income securities serving the needs of the entire market place and ready for further extension to keep you clear to trade. SLT

Thomas Wißbach
Senior vice president, clearing initiatives
Eurex Clearing

Securities lending's only dedicated industry title | Wordwide news daily | Exculusive newsletter fortnightly

Securities Lending Times aims to discuss and communicate news and industry events that are in the shared interests of participants in the securities lending industry.

The newsletter will:

- Allow regulators to communicate to the industry the safe and efficient framework for securities lending.
- Explore the opening up of new markets for securities lending. Provide information about securities lending market developments. Cover the hottest news as it breaks.
- Enhance the public profile of the securities finance industry. Help industry associations to communicate with the market. Be the vehicle of choice for brand creation and promotion. Answer questions posed by the industry.

The website will:

- Keep the industry informed daily on all aspects of securities lending, including industry news, technology, regulation, people moves and mandate wins.
- Inform on industry job vacancies in the recruitment section and specialist training courses available from expert training providers.
- Allow access to all back issues of the Securities Lending Times newsletter.
- Always be a FREE to access all areas site with no login passwords or subscription fees.

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Company description

Eurex Clearing is one of the leading central counterparties globally—assuring the safety and integrity of markets while providing innovation in risk management and clearing technology. We clear the broadest scope of products under a single framework in Europe—both listed and OTC—including derivatives, equities, bonds, secured funding, securities financing and energy transactions.

We at Eurex Clearing stand between the buyer and the seller, which makes us the central counterparty for all your transactions. We mitigate your counterparty risk and maximize your operational efficiency.

Our one-stop shop offering combines seamless post-trade services, efficient collateral and delivery management with an industry leading risk management—to keep you clear to trade.

Eurex Clearing serves more than 150 clearing members in 16 countries, managing a collateral pool of around EUR 50 billion and processing gross risks valued at almost EUR 8 trillion every month.

Together with Eurex Exchange, the International Securities Exchange (ISE), the European Energy Exchange, Eurex Bonds and Eurex Repo, Eurex Clearing forms Eurex Group. Eurex Group is part of Deutsche Börse Group.

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OCC is the world's largest equity derivatives clearing organization. In 2012, OCC cleared 57 percent of all U.S. exchange-listed derivatives.

For 40 years, OCC has provided high-quality clearing and settlement services and sound risk management with unsurpassed cost effectiveness for the listed options market. Today, the protections of our financial guarantee and central counterparty role extend beyond listed options to financial and commodity futures, security futures and securities lending.

OCC's role as a trusted industry utility is built upon our commitment to excellence in risk management and the strength of our financial guarantee, which allows us to stand behind every trade that we clear. OCC's three-tiered system of financial safeguards includes margin requirements, a clearing fund and rigorous membership standards. This system allows OCC to provide stability during times of unexpected events in the derivatives markets.

OCC is the foundation for secure markets.

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Company description

Comyno is a software development and consulting firm specializing in Securities Finance. Working with banks, asset managers, agents and CCP's we deliver enhanced functionality and integration across all parts of the process from trade to settlement. Our expertise combines business and technology to provide tailored and flexible solutions.

Our staff has a wealth of business and technology experience with an average of over ten years within financial institutions and technology firms in Over The Counter markets including swaps and derivatives, repo and securities lending and structured products.

Only this breadth of knowledge can deliver solutions that add real value whether through improved flow, reduced costs or better compliance.

Services

Our expertise in the financial services sector combined with profound technical know-how provides our customers with guidance and support for every phase of the project lifecycle including:

- Advisory
- Analysis
- Implementation
- Support
- Management

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Company description

Delta Capita is an independent consultancy specialising in Capital and Financial Markets. We excel in change management and technology advisory, as well as large and complex programme/project management.

Our partners and consultants are industry practitioners with 10+ years in senior roles—positions such as COO, CIO, head of change, head of technology and programme director. We bring very deep expertise in each of our business consulting practices: Equities, fixed income, securities finance & prime, and FX/money markets.

We are experts at translating strategy into business solutions and providing execution capability. Our C-level partners can engage with senior management or board level to align, energise and enable an organisation to 'drive' change through to delivery—providing necessary independent perspective to help clients maintain focus and stay on course for achieving their strategic goals.

Our specialities are:

- Business Operating Models
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Company description

The MX team have a deep understanding of the securities finance market from years of working in the industry and can help you meet the challenges you face. MX consulting has successfully delivered solutions to clients involved in Agent Lending, Principal, Custodial Lending and Repo Programmes.

Our in-depth industry expertise gives clients the opportunity to work with a consultancy that is truly securities lending focused.

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Understanding how regulatory change may impact your business, and having the solutions to satisfy your clients is now key. If you have regulatory questions and need solutions please contact us.

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Company description

Rule Financial is a leading independent provider of advisory, business consulting and IT services, employing over 500 people in the UK, the USA, Spain and Poland. Our specialists work alongside their counterparts at the world's leading investment banks, asset managers, hedge funds and other financial institutions, helping to lower costs, improve productivity and extract the maximum value from IT investments.

We cover all aspects of advisory, execution and support services. Our domain specialisms include: Securities Finance, Prime Services, Risk Management, Trading, Legal & Compliance and Operations. Our delivery specialisms include: advisory and execution services in system development, user-centric design, software development, integration, testing, on-going support and IT outsourcing.

We offer our clients end-to-end solutions that solve their complex business and IT issues. Our specialists have a deep understanding of the increasing regulatory and efficiency pressures faced by financial institutions and a number of our recent engagements have included strategic consultancy around OTC derivatives regulation and the implications of central clearing on integrated systems and collateral management.

Company description

SunGard Securities Finance Services offer a flexible business model that allows our customers to remain focused on their core competencies and lets SunGard concentrate on providing what it does best: Highly trusted implementation, integration, support and development services for the management and improvement of our customers securities finance technology and processes.

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SunGard is a Fortune 500 company with annual revenue in excess of $5 billion, serves more than 25,000 customers in more than 50 countries, including the world's 25 largest financial services companies.

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Synechron was founded in 2001, and is globally a 4000+ professionals company with 18 locations worldwide.

Headquartered in New York, it has presence across the US, Canada, UK, the Netherlands, UAE, Japan, Hong Kong, Singapore, and state-of-the-art development centers based in Pune, India. Synechron specializes in banking, insurance and financial technology services including treasury & risk management, fraud detection and compliance.

As a leading provider of high-end technology solutions and services to clients in the Capital Markets domain, Synechron has deep understanding of the securities finance market. Our strategic decision to step up focus in this niche domain is in line with our long-term goal to further expand our global capital markets division and diversify our service offerings.

We provide Securities Finance IT experts who understand the high demands of the SBL, Repo and Collateral Management industry and provide agile, customized solutions which enables you to maximize your control and minimize your IT costs.

Our portfolio for Securities Finance includes high-end bespoke solutions in front office, back office, collateral management, risk, data warehousing, accounting and reporting. The unique service offerings of domain business knowledge in combination with a global team of more than 100 Securities Finance IT experts enables us to provide our clients a tailor-made engagement model.

You can contact us to know more about how we can help you with your technology challenges in the Securities Finance business.

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Company description

The team at Anetics have developed and host a suite of software tools that handily connect borrower with lender and automate the workflow associated with Securities Lending. Any of the functionality listed here can be deployed for your firm on-demand.

- Collate all known sources of both supply and demand into one central utility enabling immediate lookup and cross-referencing of inputs from counterpart availability feeds, e-mail lists, in-house needs and excess available to lend.
- Real-time, on-line sharing of your current needs and availability, financing and locate requirements without having to blast e-mail requests.
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Please feel free to contact us with inquiries. Always a pleasure to arrange a demonstration. No cost or obligation if you wish to try an evaluation instance of any of our service offerings.

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Company description

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

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

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Broadridge Financial Solutions, Inc. (NYSE:BR) is the leading provider of investor communications and technology-driven solutions for broker-dealers, banks, mutual funds and corporate issuers globally. Broadridge's investor communications, securities processing and operations outsourcing solutions help clients reduce their capital investments in operations infrastructure, allowing them to increase their focus on core business activities. With more than 50 years of experience, our infrastructure underpins proxy voting services for over 90% of public companies and mutual funds in North America, and processes more than $4.5 trillion in fixed income and equity trades per day.

Broadridge FinancePro Global offers a global multi-asset financing solution designed to help financial institutions optimize repo and securities funding activities enterprise wide. FinancePro Global enables comprehensive tracking and management of financing transactions throughout the entire trade lifecycle. Traders have real-time access to collateral inventory positions, and can easily navigate screens and enter information for quick deal entry, deal collateral allocation and transaction maintenance. Our advanced reporting and workflow options provide users with a streamlined approach to managing large amounts of complex data.

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

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Company description

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

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

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

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Also in New Jersey, Mumbai, Shanghai and Tokyo, with service centres in Atlanta, Cape Town, Luxembourg and Miami.

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Company description

Lombard Risk is a leading provider of integrated collateral management, risk management and regulatory compliance solutions with over 23 years' experience.

Our 300+ clients include banking businesses—over 30 of the world's "Top 50" financial institutions—investment firms, asset managers, hedge funds, fund administrators, insurance firms and large corporations worldwide.

Our solution range comprises:

- **COLLINE**—collateral management and clearing designed by experienced business practitioners for end-to-end, cross-product (OTC derivatives, repo and securities lending) collateral management and clearing. COLLINE provides a consolidated solution for mitigating exposure risk while satisfying the growing demand for multiple/global entities, cross-product margining, clearing, optimisation, master netting, MIS reporting, dispute management and electronic messaging.
- **ComplianceASSESSOR**—addressing regulatory risk
- **LISA**— scenario analysis and stress testing
- **REFORM**—transaction regulatory reporting for derivative market reform
- **REPORTER and REG-Reporter**—global regulatory reporting
- **ReporterMIS**— business and management information

PrimeOne Solutions

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Company description

PrimeOne Solutions, a CoreOne Technologies LLC company, provides globally hosted applications integrating multi-asset platforms across securities lending, swap and physical prime brokerage.

Our Prime Services team blends experience and informed insight to create practical solutions that are grounded in an understanding of the unique needs and challenges faced by front, middle and back offices.

We leverage the simplified integration of the most complex and powerful platforms while providing efficiency and reducing overhead.

Prime Finance Expertise: Our team brings deep operating knowledge and far reaching experience.

Proven Technologies: Our technology has been deployed at banks across the globe and used by industry leaders for over 15 years.

Trusted, Secure and Scalable Solutions: We offer the tools needed to increase volume, add customers and scale your business.

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Company description

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

Pirum's Classic Service delivers:

- Contract Compare
- Billing Compare
- Billing Delivery
- Daily Position Reporting
- Income Claims

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

- Marks Automation
- Exposure Reconciliation
- Automated Returns
- Automated Payments
- Real-time contract compare and pending compare
- Automated Triparty RQV Processing
- CCP Gateway

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Company description

Stonewain Systems Inc. is an independent provider of world class software and solutions for the securities finance industry. Our growing customer base, comprised of the leading names in the industry, is a testament to our commitment to preserving years of domain knowledge, integrating emerging needs, and adopting the latest technologies in the field of securities finance. Our proven product platform, reliable services, and innovative solutions are creating a new benchmark for the evolving face of securities finance industry.

Stonewain's platform offers a comprehensive, fully integrated solution with a high level of industry specific functionality, leading edge technology, and automation. This scalable, seamlessly-integrated solution results in significantly reduced cost, higher operational efficiencies, accelerated workflows, faster trading, and improved overall risk management and control.

Stonewain Services and Solutions:

- State of the art securities finance platform
- Customized enhancements and software solution development
- Implementation and integration
- Software support services

SUNGARD®

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Company description

SunGard provides best of breed solutions for all aspects of securities finance and related businesses. We help a broad range of participants address their stock borrowing and lending, repo, synthetic finance, collateral management and prime finance technology requirements.

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

- Increasing profitability, improving transparency and making smarter decisions throughout the global trading day
- Expanding your business through support of a broad range of product types and markets
- Controlling operational cost and increasing the efficiency of your business
- Managing risk and holding down the cost of collateral/capital usage

SunGard's solutions for securities finance allow you to automate your entire operation: from order routing, trading, real-time positions management, operations, accounting, settlement, transaction analytics to trade automation services. Our solutions are used by more than 140 of the world's leading financial institutions, including the world's 10 largest banks.

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Company description

Trading Apps has a track record of success in developing and deploying cutting edge software to meet the demands of global investment banks, hedge funds and other wholesale financial institutions.

By leveraging our robust application building platform known as Glass, Trading Apps brings immediate return on your investment and tangible results, whether it is identifying opportunities in your trading book or reducing operational inefficiencies.

Contact us to learn more.

4SIGHT FINANCIAL SOFTWARE

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Company description

4sight Financial Software is an independent software solutions provider with seventeen years of experience. Our customer base includes a full spectrum of market participants from principal intermediaries, custodial lenders & agents, to direct lenders and global broker dealers.

Some of the world's largest financial institutions use our software to meet their business needs and we offer the reliability and experience of a company with a proven track record. We also provide project management, consultancy services and global support through our worldwide network of offices.

Our product range consists of:

- 4sight Securities Finance (4SF)—a software solution for lending, borrowing, repo, swaps and collateral management across the equity and fixed income markets.
- 4sight Xpose—software for enterprise wide collateral management and optimization. Xpose provides cross product collateral management for securities lending, repo, and derivatives in a single solution.

These solutions provide front-to-back office support and help our clients to:

- Boost revenues
- Reduce costs
- Increase trading volumes
- Reduce manual effort
- Improve customer service
- Control risk

Data Providers

OUR INNOVATION. YOUR ADVANTAGE.

DataLend

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Company description

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

This offering extends EquiLend's position as the standard of excellence in the securities finance industry.

DataLend builds on EquiLend's strengths in technology and benefits from its economies of scale. EquiLend, as a regulated trading platform, is a trustworthy repository for sensitive securities finance data.

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

The DataLend mission is to be the leading provider of securities finance market data.

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Company description

Markit Securities Finance is the leading provider of securities lending data, tracking short selling and institutional flow across all global markets.

The company's analytics help clients to identify investment opportunities and manage risk. Content is sourced directly from market participants including prime brokers, custodians, asset managers and hedge funds.

The database covers:

- Over 3 million intraday transactions
- $13 trillion of securities in the lending programs of over 20,000 institutional funds
- Up to 10 years history

The service is available through datafeeds, an API, web applications and an Excel toolkit with integrated datasets including Markit's Dividend Forecasting and ETP data and US dollar Repo data. The equities securities lending data is available on the major market data platforms including Bloomberg, FactSet, S&P CapitalIQ and Thomson Reuters.

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Company description

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

Astec Analytics customers are able to see on-screen streamed and analyzed data for the previous 48 hours, backed up by online trend analysis of up to 7 years.

Astec Analytics unique intraday data offering allows you to:

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

TRANSFORMING
SECURITIES FINANCE, COLLATERAL MANAGEMENT AND PRIME SERVICES

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

Innovative solutions for **enterprise-wide collateral management** and **optimization**

Cutting-edge **prime services** technology to help you better manage and serve hedge fund clients

SunGard is one of the world's leading software and technology services companies with more than 17,000 employees serving approximately 25,000 customers in over 70 countries. Contact us to find out how we can help you to transform your business by maximizing your visibility and control.

For more information

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