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Pirum's Todd Crowther discusses the power of technology-enabled collateral optimisation

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Tech-enabled collateral optimisation: From must-have to game changer

The business case for tech-enabled collateral optimisation at enterprise level has never been stronger and the ROI case has never been more compelling, says Pirum's Todd Crowther, head of corporate development and collateral services

The post-global financial crisis regulatory wave continues to impact our industry. Regulators, globally, have focused on reforms to reduce systemic risk and improve liquidity in global capital markets.

However, this resulted in dramatic and costly obligations for financial institutions, as can be seen across two macro-trends.

First, prudential regulations seeking to reduce default risk and boost resiliency have placed costly capital requirements on firms to improve backstops and liquidity.

Second, regulator-led structural changes aimed at increasing efficiency and addressing systemic risk in capital markets. For example, mandating minimum margin, expanding margin participants, migrating more products to clearing and reducing settlement periods have proved expensive obligations to implement.

The scale of what is at play also bears mentioning. The global collateral market of around US$28 trillion

or more, plays a critical role in facilitating secondary capital market activity across margining and financing. To put these figures into perspective, EY estimated that collateral posted in North America and Europe accounted for around 30 per cent of aggregate bank balance sheets in these capital markets.

This collateral market is also growing in terms of size. To illustrate, the European repo market doubled from €4.6 trillion in 2008 to €10.9 trillion in 2024, and the International Capital Market Association (ICMA) estimates that primary issuances will continue to grow from €225 trillion today to €336 trillion by 2030.

During times of market stress, the demand for collateral also expands dramatically. For example, due to market volatility in January to February 2020, CCP margin increased by 560 per cent for initial margin (IM) from US$25 to US$140 billion and, from February to March 2024, variation margin (VM) increased by around 40 per cent or more to around US$415 billion (BIS).

These new regulatory capital requirements seeking to ensure high-quality liquid assets (HQLA), coupled with the growing demand and velocity of collateral, have meant that firms need to focus on becoming highly efficient in managing their costs and finite financial resources.

Higher-cost environment presents opportunities to optimise revenues

These two macro-trends have reverberated across firms, increasing their cost to comply significantly, as well as acting as a meaningful drag on business performance. As a result, when it comes to collateral management and optimisation, efficiency has increasingly become the difference between profit and loss.

Inefficiency in meeting regulatory obligations results from the need to maintain larger (and in many cases excessive) capital buffers, balance sheet and risk-weighted assets (RWAs), as well as high liquidity add-ons for liquidity capital ratio (LCR) and net stable funding ratio (NSFR). These can drag down P&L and hamper a firms' ability to grow its business, support clients and challenge competitors.

As a result, rather than focus on cost downside, firms are approaching collateral optimisation as an opportunity to realise meaningful savings or increase revenues. Through a one per cent improvement in collateral efficiency, Deloitte estimates that medium and large-sized firms can generate additional revenue or reduce costs by over US$1.1 million in normal market conditions and from US$1.7 million to US$3.5 million in stressed market conditions.

From cost to profit centre

The cost of secured funding and financing rose three to four times in the wake of the global financial crisis, resulting in securities finance becoming the largest non-FTE cost within secondary capital markets.

As the Basel 3.5 Endgame and Basel 4 are being implemented, particularly during a positive interest rate environment, the cost pressures are not going to abate.

Beyond new prudential standards, newly mandated regulatory market structural and practice changes also continue to increase the cost to comply. From a collateral management perspective:

1. Mandated central clearing and uncleared margin rules for existing products continues to increase the volume and complexity through two-way, segregated margining. As a result, market infrastructure is being updated to meet requirements to collateralise a growing number of counterparties, products and locations.

2. T+1 accelerated settlement is now live in North America and soon coming to Europe. The shortened timelines push for improved speed and accuracy of post-trade processing. This is especially so for collateralised transactions which benefit from lower net margin requirements, but which suffer from increased fail rates for same day or next day margining.

3. New market structures are developing, such as increased activity in peer-to-peer, pledge and CCP products, including securities financing transactions (SFTs), which provide capital friendly alternatives to traditional securities finance structures.

Legacy technology stacks and the reliance on large teams to manage margin and collateral are ill-suited for these three trends. As a result, the cost of doing business for those utilising them is increasingly prohibitive given the increases in volumes and complexity.

Inefficient processing still plagues the industry. To illustrate, in Europe, the average daily fail rates on 6,000 trades creates an estimated €1.7 billion in settlement penalties.

> "Harnessed properly, technology helps firms address not only ongoing changes, but is also a game changer in improving business performance"

The knock-on effects of inefficient operations mean higher costs, including greater risk (credit, operational, default etc), increased collateral needs, greater credit line usage, as well as higher funding and liquidity charges.

Updating technology is now seen as the only real answer to evolving market structures.

Increasingly, firms view new technology, such as collateral management solutions, as a positive return on investment (ROI), which by lowering overheads, improving efficiency and client service levels can generate additional revenues while also reducing costs, thereby facilitating scaling and business growth.

What does good look like?

Digital. Interoperable. Automated. Smart.

Technology is the enabler. Harnessed properly, technology helps firms address not only ongoing changes, but is also a game changer in improving business performance.

As our industry evolves, firms focused on collateral management challenges are increasingly leveraging market infrastructure providers, agents and vendors, to adapt platform infrastructure.

The key benefits of this cooperation are threefold. Mutualised solutions, like Pirum's CollateralConnect, enable industry participants to materially:

- Reduce initial and ongoing development costs and resource burdens.
- Accelerate time to market and ROI payoffs.
- Mitigate risk, including delivery risk and future compatibility risk.

By adopting networked, proven digital solutions, like Pirum's CollateralConnect, firms can improve their P&L, reduce their cost base, decrease their investment costs and ensure they successfully deliver in shorter time frames.

The objective of firms should be to create the data and infrastructure ecosystem that facilitates an algorithmic optimisation that automatically and intelligently manages the collateralised transactions and meets margin obligations.

Below we look at four crucial areas of technology that enable these benefits.

Networked

Connecting to the wider collateral ecosystem is a foundational requirement. Firms can leverage established and newly emerging market networks developed by third parties to get plugged into the ecosystem more easily and quickly. These networks bring better plumbing and enable turnkey access to new margin participants, traditionally bilateral margin venues, new triparty jurisdictions and emerging CCPs for secured financing.

Digitised

Digitisation improves the ability of firms to harmonise data models and processes, which is critical in managing collateral across multiple, disparate internal and external platforms. Participants can further standardise and streamline data exchange and digitise workflows across the full trade lifecycle through the adoption of emerging technology, such as common domain model (CDM) and distributed ledger technology (DLT).

Automation

Automation concurrently enables networked interoperability and real-time digitised data exchange and processing (eg smart contracts), to provide enhanced straight-through-processing (STP), operational scalability and accuracy. In this regard, Pirum achieves 99.8 per cent STP, meaning firms that had previously managed manually intensive processes can now focus on growing their businesses.

Intelligence

Algorithms are increasingly being utilised for collateral optimisation for better trade and collateral decision making, as well as for optimising P&L, financial resources and regulatory operations. Machine learning and artificial intelligence are being leveraged with connectivity, data and automation, to better support timely decision making and execution.

A compelling case for collateral optimisation investment

Firms are increasingly prioritising efficiency and alpha generation through collateral optimisation.

During this time of revenue and margin pressure, firms want to realise such efficiencies and are turning to technology as a key enabler.

From a ROI perspective, the business case for investing in collateral optimisation has never been more compelling.

Revenue upside. The potential opportunity size can be up to US$150 million or more annually in funding cost savings, combined with the ability to drive liquidity, capital and RWA benefits (EY). Firms are investing in technology to break down silos and maximise portfolio benefits, enable smart algorithms to maximise profitability while remaining regulation compliant, and use networked solutions to better connect and automate the full transaction lifecycle.

Cost-effective investment. Optimisation initiatives have a significant payback on the investment cost, where industry participants typically realise annual ROI in excess of 10 times of their investment (EY). Mutualised providers and vendors, like Pirum's software-as-a-service (SaaS) platform, offer networked, automated solutions, which can fully outsource the build, maintenance and ongoing support of new technology.

Rapid payback. Optimisation projects can be self-funded through near-term savings, where typically 40 per cent of the opportunities are realised within the first year, enabling same-year payback (EY). Industry participants are increasingly choosing to leverage off-the-shelf solutions from service providers, such as Pirum, where the time to market can be three to six months, compared to a multi-year in-house project.

Return risk. Given the scale and complexity of a collateral infrastructure project, the choice of the solution needs to be carefully considered from a risk-return perspective. Associated project risks, including delays, roadblocks and missteps, can materially affect the probable return, total investment cost and payback time frame. Trusted solution providers with well-established and resilient platforms and a track record of successful implementation, can de-risk delivery and provide certainty of success.

Today, firms are investing in data and infrastructure enhancements that will ensure they are well positioned for long-term growth and profitability. Technology investments enable firms to utilise collateral optimisation to maximise profitability and ROI, while remaining compliant with regulatory requirements and enabling them to adapt to structural changes in global capital markets. Technology offers game changing benefits (including positive ROI) to firms looking to face these challenges head on.

CollateralConnect

CollateralConnect offers an enterprise-wide, cross asset collateral management service which can be utilized across all types of collateralized products, including Stock Loan, Repo and Derivatives.

Get in touch to learn how CollateralConnect can help firms work smarter and faster, improve their P&L, and gain valuable business intelligence in the process.

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