

A rude awakening

Many aspects of buy-side technology and operations have had to grow up fast following the collapse of Lehman Brothers. Collateral management, for many firms a low-priority function entrusted to Excel spreadsheets before the credit crunch, is the stand-out example of an often sorely neglected back-office operation suddenly elevated to mission-critical status with the emergence of counterparty risk. **Stewart Eisenhart** reports



Lack of proper capabilities to keep track of collateral tied up with brokers, many on the brink of collapse, set off major alarm bells at many traditional fund managers and hedge funds in 2008 and 2009. This wake-up call prompted greater efforts to mitigate counterparty risk in general, and now initiatives to evaluate and improve collateral-management processes as part of that risk mitigation effort are gathering steam. What this entails in terms of systems implementation, infrastructure changes and connectivity work will vary depending on the complexity, strategy and instruments used by individual

managers, but most shops are likely to find the work at least moderately substantial given the lack of attention to collateral functions pre-crisis. Nonetheless, undertakings to improve collateral management not only benefit counterparty risk controls, but also other front- and back-office operations – and can help mollify investors made nervous by recent history.

Collateral management – the process by which organisations keep track of assets used to secure credit with investment or custodian banks – found itself in something of a dark age compared to other buy-side operations leading up to the calamitous events of late 2008. Methods applied to this function, including manual spreadsheets and simply going along with whatever figures counterparties provided, were disturbingly common across the investment management industry.

Since the financial crisis many managers have been driven by a new sense of urgency to improve their collateral-management processes. In other words, managers first began considering improvements to how they tracked collateral after the operationally and fiscally painful effects felt by many shops with collateral tied up in Lehman Brothers. As part of the industry's ensuing focus on counterparty risk mitigation, managers have been increasing their numbers of prime broker relationships, but that has also complicated collateral management generally because buy-side firms taking the multi-prime route must now keep track of those assets across more than one counterparty, rendering

spreadsheet-based handling of collateral functions ineffective.

Fortunately, buy-side managers seeking more robust collateral-management tools have a healthy array of options to consider. Collateral-management technology is well established on the sell side, and vendors of both stand-alone and modular collateral products report attracting healthy numbers of new buy-side clients.

How it's done

Alas, widespread availability of viable collateral-management systems doesn't necessarily make adoption and implementation an easy proposition, especially with economic conditions still putting constraints on technology budgets. But the advantages of developing mature collateral management in terms of risk and portfolio management, as well as better transparency for investors, have grown increasingly compelling.

One investment manager that has revamped its collateral-management operations is APG Asset Management, a Dutch buy-side firm with about €220 billion under management serving some 25 pension fund clients.

Bauke Vriesema, operational manager for collateral, and Inez Prins, senior treasurer of the firm's global treasury team, describe APG's new collateral-management processes and how they came about.

"We run several distinct collateral processes for our largest customer – one for OTC derivatives, one for repo trading and one for our short-only mandates with prime brokers," says Vriesema. "We also run OTC derivatives collateral processes for several other pension funds."

Prior to Lehman Brothers' collapse, Vriesema says APG's collateral management functions operated mostly in the background, receiving little attention except to make sure the firm's



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Bauke Vriesema, APG Asset Management

credit risks were covered on a weekly basis.

Of course, that attention increased significantly post-Lehman, he continues, as the firm's clients wanted to know if and how their investments were affected by the financial crisis.

"So for the past year-and-a-half, we have tightened the parameters of our collateral processes, going from weekly to daily processes with all our counterparties," Vriesema says. "Risk parameters were tightened to zero threshold and lower minimum transfer amounts and we started investing in our tooling quite a bit. There used to be a lot of Excel spreadsheets to calculate positions and maintain collateral positions – advanced Excel, but still Excel."

Maintaining such an environment became more and more untenable as APG's clients increased, explain Vriesema and Prins, which prompted the manager to implement Algorithmics' Algo Collateral product to replace its Excel tools and TriOptima's triResolve portfolio reconciliation platform to

enable weekly position reconciliation with most of its counterparties. The manager is also considering making it compulsory for all its counterparties to make use of triResolve for its reconciliations.

Tying in collateral management to other elements of APG's operations required more than just implementation of third-party systems, however. According to Vriesema, a significant amount of internal infrastructure work is also underway.

"Up- and downstream interfaces to other systems from our collateral process are getting attention as well," he says. "We're moving to a central feed from our data warehouse that contains all our positions and other information we need, for example forex and interest rates, and valuations of the securities used as collateral."

"Downstream, where transactions used to be manually entered, we're automating interfaces to our payments platform and our securities transfer platform," he continues.

"So we've tightened our policy and are now working on strengthening infrastructure."

Why it's done: key drivers

The major factors behind APG's initiatives to enhance its collateral-management operations – counterparty risk mitigation as well as dealing with growing numbers of clients and collateral agreements – were of course hardly particular to the Dutch investment manager.

These issues have driven managers of various shapes and sizes to seek more automated collateral-management capabilities, according to Gina McCafferty and Brad Burnett, principals at buy-side consultancy Cutter Associates.

"This is front and centre, and that's a function not only of counterparty risk but also best practice to manage the collateral process," says Burnett. "What we're seeing now is that as these volumes grow, there's a shift from Excel-



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Burnett adds that, as collateral management ties strongly into reconciliation, the move from monthly to daily reconciliation for more than half of Cutter's clients has exacerbated the need to automate collateral-management functions.



Inez Prins

"What we've heard from our members is that as managers get to 50 or more collateral agreements, it gets very difficult to manually track," says McCafferty. "It may be the number of agreements or looking at the margin activity – the frequency of moving collateral – that starts to drive the need to really automate the process and have a firm-wide view of your counterparty risk and exposures."

Pro-activity begets automation

Other factors pushing managers to get a better and more automated handle on their collateral functions include investor pressure



and multi-prime trading environments – two issues becoming more common across traditional asset management and hedge fund sectors.

Jeff Siemer, head of North American business development for Algorithmics' collateral-management business, notes that as buy-side firms and hedge fund shops began more proactive collateral management, the limitations of spreadsheet-based functions quickly become apparent – and unacceptable.

"Prior to the credit crisis a fair number of buy-side firms were very much reactionary when it came to collateral management," Siemer says, adding that those managers would typically wait for their counterparties to call them rather than keeping on top of what collateral would be required of them and of their counterparties.

"They don't want to be in the position essentially where the exposure is out of line with the collateral, which has also led to a revisiting of independent amounts, and the need for those to be held bankruptcy-remote from the sell-side counterparty."

Not only does managing collateral become more difficult via spreadsheets once a manager tries to do so across multiple locations, but such an approach no longer holds up to investors' requirements, according to Siemer.

"Buy-side firms are certainly feeling pressure from their investors to manage their derivatives risk particularly much



Gina McCafferty

more strongly than they have in the past," he says. "Telling an investor that you've got \$10 million of their assets out as collateral and you're tracking it on a spreadsheet is not quite the story you want to be telling now."

In addition, Siemer explains that as buy-side managers expand the number of sell-side partners they deal with in order to rein in counterparty risk, that instantly complicates their collateral arrangements.

"It stands to reason that if you're concerned about not having as much risk with just one or two counterparties, you're going to tend to want to be more on top of the details, but it also complicates collateral matters and makes the need for a technology solution that much more important," says Siemer, adding that different brokers each have different methodologies, approaches and eligibility requirements.

"The relationship that you had with one

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John Burchenal, Omgeo

counterparty has now expanded to several counterparties. So realistically, trying to manage that the same way you did before is not possible – either you'll throw more people at it or streamline the process through technology."

John Burchenal, managing director of market growth at Omgeo, argues that better collateral management is essential not just to mitigate counterparty risk, but to grow without incurring additional operational expenses.

"Increasing your number of counterparties increases your complexity in terms of what you have to do on a daily basis, geometrically, in terms of managing your collateral arrangements now with two or three parties," says Burchenal. "You have to have very good tracking ability in place in order to do that, or you're going to be increasing your costs with staffing."

Firm-wide relevance

Automating collateral-management processes in order to alleviate back-office operational headaches would alone justify making the necessary investments and infrastructure work. But these improvements stand to benefit firm-wide operations – provided, that is, the right technologies are implemented.

"A change that we've seen is that the information coming out of the collateral-management systems is used by a much broader range within a firm – for instance, the reporting on where your risk is," says Omgeo's Burchenal. "These systems' robust reporting allows you to describe your risk by counter-

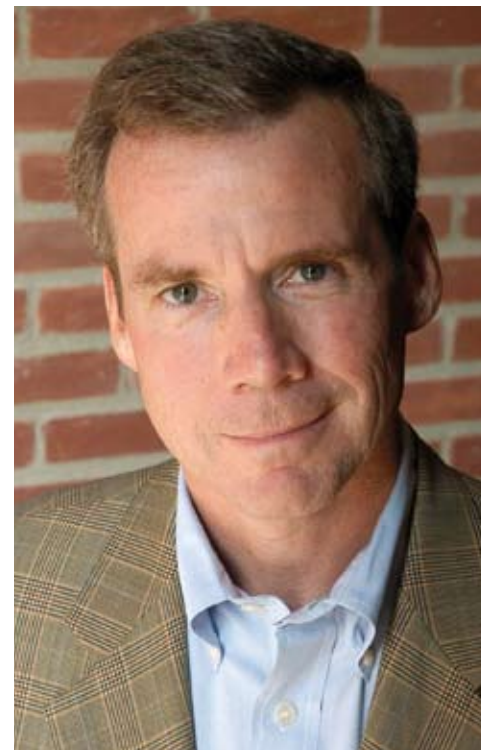
party, by asset type, by region, then cut that data and slice it and dice it in any given way to show members of management, compliance and potentially regulators exactly where your risks lie and that you are able to measure them in some way."

Vriesema at APG makes a similar point, explaining that the collateral-management enhancements the manager has made have had an impact beyond the firm's back office.

"Because we improved the [collateral-management] process, we are able to deliver data in more detail to our front office and risk management departments," he says. "The whole chain is being strengthened and more aligned."

As further proof of how far-reaching collateral management automation can prove for investment managers, Prins adds that front-office decision-making functions at APG have also been affected for the better.

"In the front office, information on our collateral process is used far more as an input into decision-making processes, and is



integrated into, for example, our liquidity policy," she says. "We're actively making decisions on what type of collateral we want to use, given other liquidity requirements we have." >

Salient points

- Collateral management has emerged as a vital component of counterparty risk management following the global credit crisis
- Risk mitigation efforts – especially moving from single to multiple prime-broker arrangements – have exacerbated the need for automated collateral-management capabilities
- Although still primarily a back-office function, automated collateral management can benefit middle- and front-office operations as well as improve investor relations when carried out correctly