Citisoft

Global Investment Management Consultants

Industry Perspectives

FOCUS ON COUNTERPARTY RISK

Developing comprehensive risk management programs are at the forefront of today's Hedge Fund and Institutional investment management firm's strategic technology and operations agendas. Many forms of risk management are practiced by leading buy-side firms, often governed by a global risk management strategy with underlying roles and responsibilities across firm's credit, research, portfolio management, and operational departments. Managing risk for markets, currencies, portfolios, liquidity, and credit have traditionally been the focus of managers, however; the failure of Lehman Brothers and near failure of Bear Stearns has elevated a risk component historically viewed with less criticality in an overall risk program: counterparty exposure.

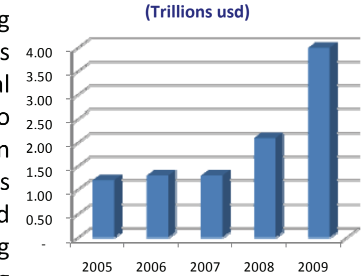
The impact to buy-side firms who had not adequately covered exposures with counterparties, or scrambled to assess their potential losses as events unfolded, shed light on the need for robust and proactive counterparty risk management practices. In this period of market volatility, liquidity concerns, focus on transparency, and government intervention, firms are now assessing if they have the infrastructure and capabilities required to perform effective counterparty risk management.

Managing Counterparty Risk

The bar for managing counterparty risk in an extreme capital markets environment was set with the failure of Lehman Brothers and buy-side firms quickly realized their capabilities for managing exposure and collateralization were insufficient. The lessons learned in the past fourteen months are redefining counterparty risk practices and have increased the demands on firm's operational departments that have struggled to keep up with the pace of change. Counterparty risk related to trading and transaction processing is one area that firms are both experiencing significant pain and beginning to adopt new approaches. Collateral management concepts such as rehypothecation of collateral to increase liquidity and reduce costs are being re-evaluated based on the increased risk stemming from tracking ownership rights. Cash as collateral is continuing it's increase in prevalence as the preferred collateral asset, and tri-party arrangements are being explored to protect access to collateral in the event of bankruptcy.

Collateral management practices have always had to balance risk mitigation against portfolio liquidity and cost, and the sell-side community has historically led the way on the development of collateral management expertise, capabilities, and systems to actively manage exposure and collateral. These firms have also been the early adopters of collateral management vendor solutions available in the marketplace. Institutional and hedge fund managers have only begun focusing within the past couple years on developing the expertise and systems required to have a robust collateral management program. Many buy-side firms still rely today on their counterparty for valuations, margin calculations, and exposures.

Estimated Collateral in the Marketplace (Trillions usd)



Collateral Today:
Collateral in the marketplace is now estimated by the ISDA to be $4.0 trillion usd, a 90% increase over 2008.

Broker Concentration:
Historically and today, approximately 80% of derivative trading and collateralization by hedge funds and institutional managers occurs with less than 20% of the brokerage community.

Counterparty Risk:
Viewing the buy-side as an industry, high concentrations of exposure to the brokerage community underscores the importance of diligent counterparty risk management.

A Call to Action:
Incorporating Collateral Management programs in the overall Risk Management program is a critical step to protecting a firm against counterparty failure.

Concerns firms have about current state capabilities, and the priority placed on improving these programs, should be viewed in context of the size, volume, and concentration of collateral in the market today and expected future growth.

Focusing on Solutions

Buy-side firms have long been hesitant adopters of robust operational and technology capabilities around trending industry capabilities (e.g. order management systems, complex derivatives systems, etc.), often choosing to manage through proprietary solutions or spreadsheets until solutions mature. Collateral Management capabilities in today's hedge funds and institutional managers are no exception. Fortunately, proven solutions exist to get firms to a robust end state.

Current State of Buy-side CM Programs	Solutions for Buy-side CM Programs
▪ Unsophisticated solutions	▪ Best of breed systems
▪ Disconnected and / or unsupported collateral management functions	▪ Robust functional capabilities across the collateral management lifecycle
▪ Limited asset classes	▪ Scalable solutions
▪ Constrained transaction volume	▪ Automated workflow
▪ Manual workflow	▪ Exception based processing
▪ Lack of control	▪ Internal / External data integration
▪ Inefficient communication	▪ Utilization of industry expertise
▪ Reliant on individual expertise	▪ Third Party Administrators

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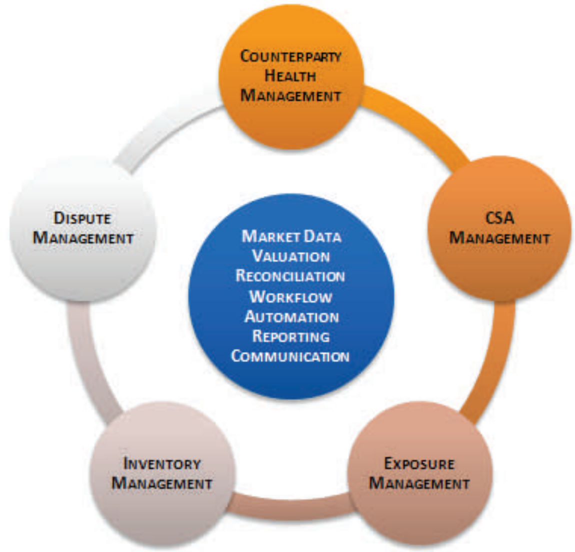
Assessing Today's Collateral Management Demands

Historically, fixed income and credit derivative exposure made up the bulk of the collateralization firms performed, with roughly 60% of the exposure of these trades collateralized. As global markets become more volatile, the industry is seeing increased collateralization across all derivative types along with growing volumes. Buy-side collateral management groups are becoming overwhelmed and require robust solutions to process the volumes and breadth of asset types. Many firms currently rely on counterparties for valuations, margin calculations, exposures, and are communicating margin calls and instructions manually. Outdated portfolio accounting systems lack proper functionality to record collateral, workarounds are performed in spreadsheets or access databases. Buy-side collateral management expertise is scarce and qualified resources are in demand to effectively execute a collateral program while interacting across departments such as credit, legal, portfolio management, trading, operations, and dealing with counterparties.

Collateral Management Lifecycle



Designing a solution for each of the components of the collateral management lifecycle requires sound operational and technology principles and enables robust counterparty risk management via collateral management.

Achieving Risk Management Objectives

Determining whether to develop custom Collateral Management solutions or look to the vendor market is a critical decision point. Solutions with straight through processing enable strategic counterparty risk management programs, and reduce operational risk along with burdens of inefficient and error-prone processes. Capabilities needed to meet the market practices being set forth by the industry, align the buy-side with dealers, and satisfy government regulators are expanding. Fortunately, solutions are available which offer the scalability, breadth of functionality across asset classes, and workflow required to meet these growing demands. Collateral management is being viewed as critical risk management practice against counterparty failure and an effective tool to ensure transparency and agreement of derivative portfolios between market participants. Effective collateral management programs reduce risk, disputes with counterparties, operational burdens, and enable adherence to regulatory mandates for derivatives processing.

Citisoft assists our clients with:

- Evaluation of their current collateral management operations people, process and technology
- Rationalization of build, buy, outsource decisions
- Selection of collateral management vendors or service providers or development of customized solution
- Development and implementation of redesigned collateral management technologies and processes

Industry Working Groups are actively defining market-wide practices and making commitments to regulators:

- Major dealer, buy-side firms, and vendors are participating in the formulation of practices and include groups such as the ISDA, OMG, SIFMA, and FpML
- Committees are focused on reducing credit risk through dispute resolution practices, reconciliation guidelines, and derivatives processing guidelines
- Derivative and collateral market governance is becoming an equal partnership between the dealer and buy-side

Outsourcing: Third party administrators are increasingly prevalent in the collateral management space. Some considerations when evaluating:

- What is your firms current outsourcing model across the middle and back office?
- How to develop integration, synergy, and governance between in-house and outsourced components of the lifecycle?
- What is your firms appetite for outsourcing a key risk management function?

Citisoft partners with the world's leading Investment Management firms and service providers to create impactful and effective solutions to today's complex business problems. Our sole focus is assessing, designing, and delivering results-oriented operations and technology change across the entire Investment Management process. Please visit us at www.citisoft.com for a more in-depth description of our core service offerings.

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