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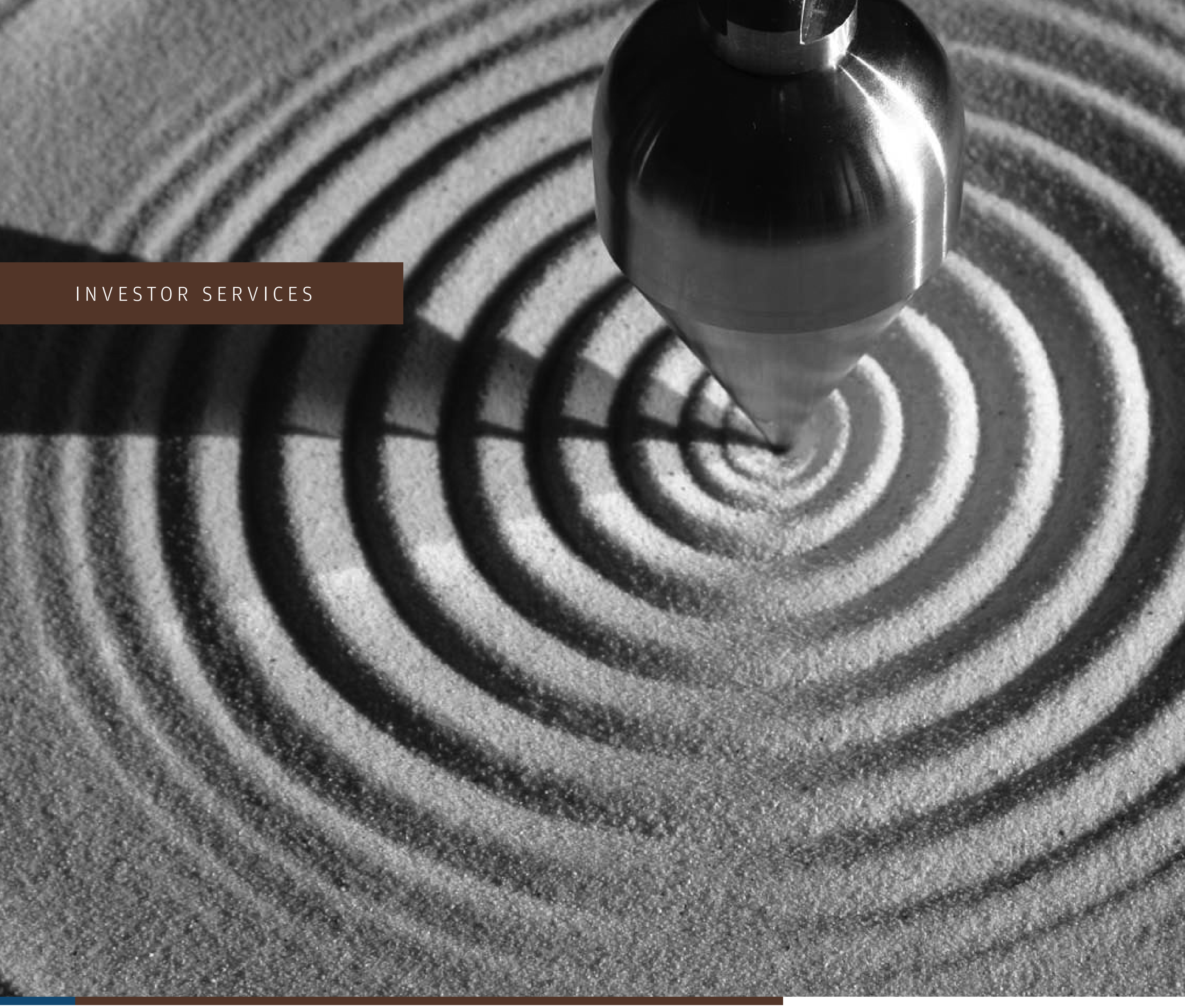

The Optimization Imperative

How will you meet sharply higher demands for collateral?

*by **John Rivett**, Managing Director, J.P. Morgan*

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Collateral has taken center stage in light of regulations that are increasing oversight, focusing on reducing risk and compelling systemic market change. With Basel III, Solvency II, Dodd-Frank and EMIR all calling for transactions to be collateralized to mitigate risk, the expected volume of collateral is expected to increase dramatically.

Given the introduction of central clearing for derivative instruments in the U.S. during 2013, the so-called 'collateral crunch' is expected to move from a hypothetical headline to a very pragmatic concern. New margining rules for bilateral derivative trades and liquidity requirements will increase the need for eligible collateral, and there's widespread concern that the supply of available eligible collateral will not suffice to meet those needs.

A mismatch between demand and supply?

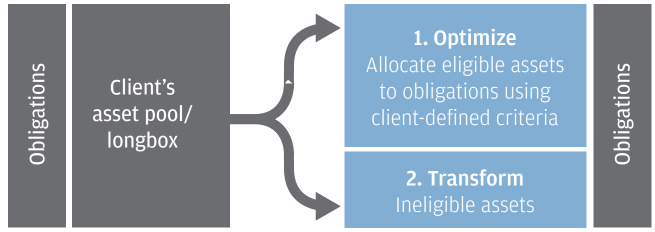
Industry studies estimate that the amount of incremental collateral required by new regulations, for both bilateral and centrally cleared trades, could range from US $500 billion to $5 trillion*. This will phase in as existing trades mature and new trades are booked. Ultimately, the scope will depend on the final rules for margining uncleared derivatives, the efficiency of netting processes at the central clearing houses (CCPs), and how and whether collateral takers and providers change their practices. However, even a conservative estimate of a $2 trillion increase in collateral will create a substantial market challenge.

> *The October 2012 Global Collateral Management Survey by SunGard and London-based risk consultancy InteDelta showed that over half of respondents considered optimization to be of high importance. (Waters, January 25 2013)*

Complicating that picture is the focus on high grade, highly liquid assets - both from counterparties and the CCPs. While eligibility criteria may broaden over time (with some changes already taking place, such as shifts in the Basel III Liquidity Coverage Ratio and the CME's inclusion of corporate bonds in their IEF4 program), the focus is likely to remain on premium collateral as secured parties seeking to manage their own risk are unlikely to lower their standards.

While J.P. Morgan does not believe that there will be a significant shortage of available collateral, you should first look to your own collateral book to meet your obligations. With high quality assets in high demand, it's critical to optimize your own available inventory, particularly if you have multiple internal business lines competing for the same pool of assets.

First optimize, then transform



The notion of 'collateral transformation' has caught the collective imagination of the market. However, it is by no means the magic solution to obtaining the high grade, liquid securities that will be demanded. Rather, you should first concentrate on fully optimizing your portfolio, with sophisticated allocation and analytical tools that allow you to put just the right piece of collateral in the right spot, and to recall and reuse it as circumstances change–whether over time or intraday.

Collateral optimization is cost-effective as it maximizes the efficiency of your inventory in meeting your collateral obligations. At first glance, though, that seems to be a daunting task. Whether by choice or by regulation, institutions have more counterparty, clearing broker, and custodial relationships than ever before. This complex web of relationships makes it very difficult to see what assets you hold and what's available to meet particular obligations.

Central collateral management

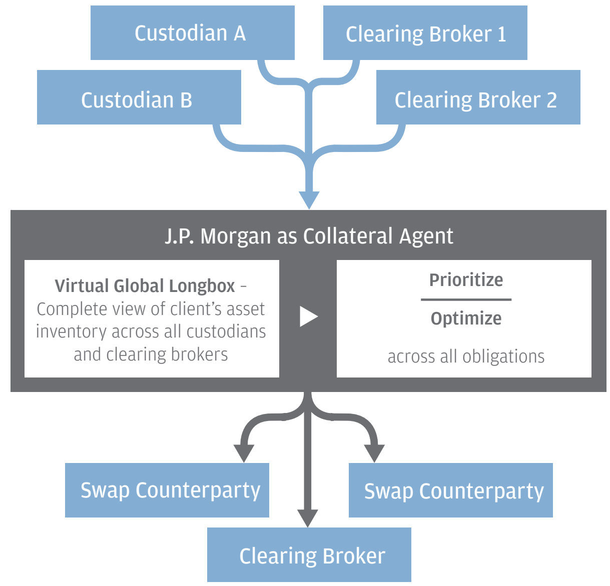
To optimize your allocation of collateral, you must first centralize the management of your assets to gain a consolidated view of your entire inventory—whether already posted as collateral or unencumbered. Ideally, you'd want to view all your assets across multiple clearing broker and custodial relationships to gain a comprehensive picture.

The right collateral agent can provide that clear, central view, enabling you to better:

- Understand and manage margin requirements, by employing advanced analytics to rapidly assess over- or undercollateralization. Effective margin management takes into account a variety of factors, including which counterparty requires the lowest total collateral value (based on netting or lesser margin requirements) and where too much—or not enough—collateral is posted. The ability to dynamically manage margin is becoming more critical, as:
  - Regulation requires more active margin management, including two way margin calls between counterparties.
  - Leaving 'excess' collateral at a counterparty or at a broker not only reduces your ability to optimize that collateral against other obligations, but also results in unsecured exposure.

* Sources: Finadium, Morgan Stanley, Bloomberg, TABB Group, Bank of England, and the Bank of International Settlements

- Optimize collateral allocation by leveraging sophisticated calculations to continuously identify the best mix of assets to meet obligations, with rigorous testing against pre-defined standards set by counterparties. These tests include margin and haircut requirements, asset allocation preferences, concentration limits, and other eligibility criteria. A strong optimization algorithm factors in the asset mix, cost of funding and obligations while giving you 'what if' tools to assess whether an asset would be better utilized in the financing markets, or whether it should be exchanged for other assets better suited for use as collateral.
- Make informed decisions with ready access to pricing and asset servicing information. This data, combined with flexible reporting that shows the real-time impact of allocations and decisions on your portfolio, helps you meet your obligations without posting more collateral than is needed.



The time for transformation

At the time of writing, using a collateral agent's optimization service will cost approximately 10% of a 3 month U.S. corporate to U.S. treasury upgrade trade. The implication is clear – you need to make best use of all available inventory before transforming any shortfall.

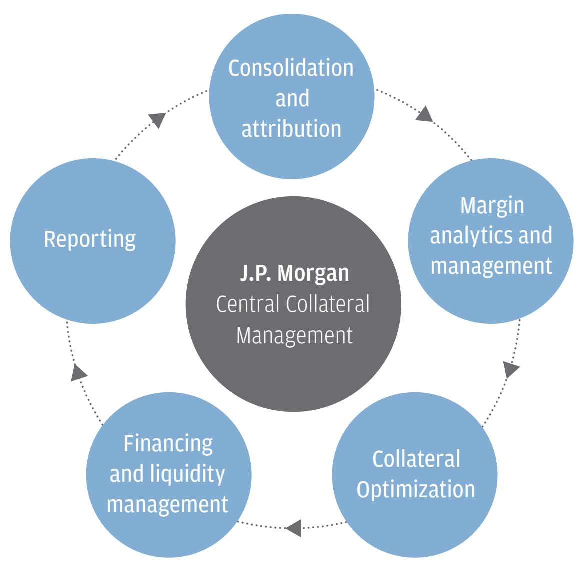
Even though your assets may have been fully optimized against your obligations, there still may be a mismatch between what you have and what you need. That's where time-tested transformation strategies, such as upgrade trades, securities lending, margin financing, secured credit or other options come into play. Transformation techniques have been used for decades to obtain the right asset to secure an obligation. They can provide the essential last step to being fully collateralized, but should be employed sparingly to maximize efficiency and minimize expenses. The cost of acquiring the most eligible assets is likely to reflect their scarcity and value.

The case for a central collateral agent

Gathering and managing the data from multiple counterparties, clearing brokers, CSDs and custodians is complex and requires a sophisticated infrastructure. Given the advanced analytics and intricate algorithms required to manage margin and optimize collateral, that infrastructure is expensive to build and maintain. It requires an ongoing, and significant, investment that only grows as counterparty relationships multiply and volumes increase. Faced with the time, technology, and cost implications of managing these activities in house, in addition to the burden of keeping pace with ongoing regulatory change, institutions increasingly turn to independent collateral agents such as J.P. Morgan.

J.P. Morgan is the only collateral agent able to provide a central view of all bilateral or centrally cleared collateral activity, spanning assets and obligations in custody- and clearing-agnostic environment. Whether you hold assets or clear with J.P. Morgan or with other providers, our sophisticated technology and expert service can help you effectively manage your collateral across all regions, asset classes and counterparties.

Treating and viewing assets as a single pool across all obligations helps you extract maximum value from your portfolio while reducing operational and counterparty risk. All exposures can be managed to defined eligibility criteria, while highly ranked assets are retained for use, reinvestment, or other business imperatives.



J.P. Morgan's central collateral management model

For more information, please contact your representative or visit: jpmorgan.com