Outsourcing Collateral Management in the Evolving OTC Derivatives Landscape

Insights | Financial Institution Clients

The Background
The concept of outsourcing was originally born out of a need to seek services provided outside one’s organization with the objective of lowering costs. In fact, the official definition of outsourcing found in Investopedia is consistent with this explanation: “A practice used by different companies to reduce costs by transferring portions of work to outside suppliers rather than completing it internally.”

Over the past five years however, if one were to narrow the concept of outsourcing, particularly in the securities and fund services sector of the banking industry, it is evident that both the nature of outsourcing as well as the drivers behind it have changed significantly. Key drivers such as effective risk management, regulatory requirements, a need for better transparency and sophisticated reporting have all been significant factors for firms seeking outsourcing opportunities from third-party providers.

The subprime crisis of 2008 both influenced and played an instrumental role in the growth of outsourcing of banking services. As the crisis gained momentum, spilling into global markets in the third quarter of 2008, the defaults of banking giants such as Bear Sterns and Lehman Brothers sent shockwaves through every segment of the market. Regulators, risk officers and senior management at banks and buy-side firms shifted their attention from traditional market risk management towards gaining a better understanding of the nature of credit risk.

As markets globally began to absorb the magnitude of the crisis, regulators were the first to react, putting in place a series of proposals to enforce credit risk management and transparency, especially in the over-the-counter (OTC) derivatives markets - a roughly USD700 trillion market where much of the activity is bilateral in nature and therefore opaque to the public. Amongst the new regulatory measures proposed by both Dodd-Frank Act in the US and the European Market Infrastructures Regulation (EMIR) in Europe, the more prominent ones that took effect immediately were mandatory trade reconciliation, trade netting and trade affirmation. Although not a direct regulatory ruling, the various initiatives taken up by market participants to enhance controls around its credit risk exposures also included the implementation credit support annex (CSA) or collateralization of bilateral trading relationships.

As these measures were introduced, both buy- and sell-side market participants soon woke up to the challenges of implementing them on a practical level. The move to mitigate credit risk through new regulatory measures actually led to an increase in operational risk, as market participants struggled with two main issues – how to deal with the increasing costs associated with upgrading systems and processes and also where to find the technical know-how of implementing and integrating the new regulations into their internal infrastructure and processes. In short, a need for expertise, new technology and finding the optimal investment strategy were key elements that defined the new OTC landscape post the financial crises of 2008-09.

The remedy came in the immediate years following the financial crisis, as the market saw a gradual introduction of securities and fund services focused on risk mitigation products and operational services offered by a few large global banks and custodians.

1 Source: Investopedia
Amongst such services, collateral management is arguably one of the fastest growing. Today, outsourcing of collateral management is a global trend, which recently has made an entry into the Asia Pacific Rim region, with significant interest over the past two years from all client segments active in the OTC markets.

**Collateral Management: Overview and Challenges**

According to the International Swaps and Derivatives Association (ISDA), the number of CSAs executed has risen from 28,000 in 2002 to 150,000 in 2011.\(^2\) In the light of this growth, some firms have dedicated project teams to assess the costs and challenges of building their own in-house collateral solution. Others, especially amongst the investor segment community, have taken the route of outsourcing this service.

The sudden rise in demand for collateral services can be attributed to the complexity and nature of its functions. In order to determine how institutions trading OTC derivatives in the region are dealing with their collateral needs, Citi’s OpenCollateral team met approximately 100 clients in 2011, all of whom were engaged in some form of OTC derivatives trading in the Asia Pacific region. From the discussions that ensued, it was evident that the main challenges faced by these clients in implementing CSAs were:

- Performing daily valuation for the underlying OTC derivatives trades
- Managing dispute resolutions with their counterparties particularly for cross border transactions
- Dealing with non-cash collateral
- Tracking Rehypothecation
- Collateral Optimization
- Integrating a collateral management platform into the firm’s existing infrastructure

It was interesting to observe that whereas client responses were varied in the strategy adopted towards collateral management, the responses nonetheless were very much consistent based on the client segment to which they belonged. Amongst the more sophisticated segment in the market, i.e., the international banks and broker dealers, there seems to be a larger appetite for investing in an in-house collateral management solution by building a specialized team of dedicated collateral operations officers supported by a well-established vendor system.

On the other hand, many of the insurance companies in the region, (where the bulk of collateral needs arise mainly from its various funds that engage in OTC trading for hedging purposes) have been the most receptive to outsourcing its collateral requirements rather than building an in-house solution.

An alternative approach to building an in-house solution or outsourcing is to manage CSAs manually using existing Microsoft Windows applications or other manual processes. Approximately 60% of the clients met in 2011 in the region were currently managing their margin requirements using Excel or other rudimentary means. This segment was mainly composed of smaller regional or local banks, some asset managers and nearly all of the corporate players in the Asia Pacific Rim OTC market.

Analyzing the breakdown of clients further by country, the results seem quite scattered around the region. In terms of OTC trading volumes, the largest market in the region is Japan, followed by Singapore, Hong Kong and Australia. Based on the above meetings and various other client engagements in Asia Pacific for Citi’s OpenCollateral team in 2011-12, the need for collateral services appeared consistently higher in the above jurisdictions over the rest of the region. While in Singapore, the interest was mainly driven from the investor segment. It was interesting to note that in Hong Kong, the main drivers for this service were amongst the local intermediaries.

Recently, a rising awareness for collateral services is also being noted in the Australian buy-side sector. On the intermediary side though, top banks in Australia seem to prefer the route of managing collateral “in-house and have all invested in vendor-based collateral management systems supported by their own in-house collateral specialists. Finally, Japan, with the highest volume for OTC derivatives traded in Asia, has demonstrated varying degrees of interest in both the investor and intermediary segments. One of the primary drivers for using collateral agents in Japan is centered on finding effective solutions for negotiating disputes with offshore counterparties.

The rest of the Asia Pacific region is still in the early stages of implementing CSAs. Some of the countries, notably Taiwan and Malaysia, have requirements that call for a regulatory sign-off on certain services outsourced to an offshore party. Other jurisdictions such as Korea have an internal infrastructure connecting local market participants, which is designed to auto-settle domestic collateral.

**Regulations and Collateral Management**

While there is tremendous interest in collateral management around the APAC region, the actual number of outsourced to third party providers is yet to reach a critical level.

Although no exact figures are currently available globally, a November 2011 Finalium survey entitled ‘Strategies for Successful Collateral Management in the Age of CCPs’ notes that only 15% of end users sampled in its study have

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\(^2\) Source: ISDA Margin Survey
outsourced collateral services to banks to manage. The same study shows that approximately 50% of the respondents who happen to be broker dealers have invested in a comprehensive in-house solution. This is mainly in the broker dealer/banking segment, which still leaves approximately 35% of the market that continues to manage its collateral using manual processes. One factor that could explain why there is still hesitancy to outsource collateral services, (as noted by the Finadium survey) can be found by taking a closer look at the regulatory environment.

There have been a series of measures passed in the OTC market - mainly from regulatory bodies such as Dodd-Frank, Basel and European Market Infrastructure Regulation (EMIR) - on OTC derivatives trading, primarily with the objective of increasing transparency and tightening counterparty risk. Key initiatives such as Title VII of the Dodd-Frank Act, which proposes the shifting of bilateral OTC trading to central counterparty clearing houses (CCPs) as well as the requirement to post initial margin for non-cleared bilateral trades, will invariably increase the amount of collateral required to support current levels of OTC trading, to around an additional USD2.2 trillion.

However, strictly with respect to collateral, while Basel III has guidelines on treatment of collateral or how the usage of collateral can provide regulatory capital relief, there seems to be no specific legislation on setting global best practices guidelines on collateral management and associated penalties for not following them.

The absence of punitive measures in promoting strict guidelines for collateral management could explain why some of the smaller market participants in the region are still managing their collateral using manual processes and adapting a "wait and see approach" until proposed global regulations in the OTC market are adopted firmly by local regulators.

The Case for Outsourcing
As stated earlier, the key drivers for outsourcing have shifted from being a purely 'cost' play to the consideration of other factors such as risk management, sophisticated reporting and meeting regulatory requirements. Nonetheless, the cost component is still an integral part of the equation, especially when institutions decide on outsourcing versus an in-house solution.

The main costs incurred in insourcing a collateral management solution are threefold:

- The cost of buying a vendor platform
- The cost of implementing the platform and integrating it with the rest of the firm's infrastructure
- The cost of hiring technical expertise in the field of collateral management

There are around 6 collateral vendors in Asia, which regularly compete against each other, with a wide base of intermediary and investor-based clients. Initial costs for the platform range from USD1.5 million to USD2.7 million. From an implementation perspective, costs range from USD1.5 million to USD3.5 million for a one-time implementation that could typically take around 6-12 months. The platform as well as implementation and integration combined can cost up to USD6 million.

With respect to building a team of collateral specialists, it was observed from discussions with clients that that one full-time employee could support around 7-10 CSAs on a daily margining basis. A typical local bank in the region has around 20-30 CSAs and approximately four staff members, with one team leader who usually being a manager or vice president. In contrast, larger international banks could potentially have approximately 200-500 CSAs with a staff of 10-15, with senior team leads being expatriates (VP’s or Directors) with experience working across global centers outside Asia.

Notably, while labor costs are higher in Tokyo, Sydney, Hong Kong and Singapore in comparison to Manila, Taipei, Kuala Lumpur and Seoul, it is evident that the scope for finding technical expertise in the field of collateral management is also fairly limited in those lower cost countries. The argument that outsourcing applies to instances where countries with higher labor costs outsource functions to those with lower labor costs is not applicable to collateral management services. Outsourcing collateral management services therefore is more a function of mitigating operational risk and paying for sophisticated services that are in line with market best practices rather than finding a lower labor cost jurisdiction to perform the service.

In summary, the decision to invest in an in-house solution will have to factor in the significant upfront costs that arise from vendor platforms and implementation along with accounting for time taken to integrate platforms as well as hire expertise in building a team.

The nature of outsourcing-related costs is such that they tend to be more evenly distributed through the lifetime of the outsourcing contract. Typically, a collateral outsourcing contract is charged by the number of CSAs and is incurred on a monthly basis without any upfront costs. The advantage of having this form of arrangement is that the client may adjust costs according to the number of counterparties faced and therefore the level of OTC activity, thus reducing the need to maintain a fully equipped team during periods of low volumes. Conversely, a spike in volumes or any scalability requirements could be immediately supported by the service provider without any dependency on increasing headcount or any issues factoring in for time constraints.

Outsourcing to a service provider also assumes that the collateral service provider would be responsible for following market best practices and regulatory changes and therefore constantly upgrade and fine-tune its offering to keep track of external changes occurring in the markets.

In today’s financial environment with various regulatory uncertainties such as limited capital for investments, strict hiring approval criteria and an uncertain market outlook, the decision to invest a large amount of capital in building in-house solutions may well be a risky one.

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2 Source: 2010 Tabb Group report
In conclusion, there seems to be a cautious shift in APAC both within the investor and intermediary client segments towards outsourcing complex and risky functions, such as that of collateral management to service providers who are in a position to implement quickly and smoothly in the face of a fast paced changing landscape.

The Way Forward
The collateral service provider’s core functionalities of supporting collateral and derivatives valuation, margin call calculation, CSA management, safekeeping, margin call issuances, rehypothecation and reporting are still largely in demand in the Asia Pacific Rim region, especially amongst the investor segment as well as some of the local and regional banks.

However, increasingly the focus in client meetings seems to have shifted to understanding how a collateral agent can assist in meeting the client’s collateral needs, at a time when most participants feel a liquidity squeeze could arise as a result of additional collateral requirements, stemming from the regulatory measures discussed above. Some clients in Singapore, Hong Kong and Australia have enquired on how a collateral agent can assist in offering funding in various currencies to meet non-USD margin calls from CCPs globally. Investor-based clients such as asset managers that have large pools of inventory such as corporate bonds have also enquired whether a collateral agent can, in fact, play a role in aiding the transformation of their assets into eligible collateral such as US treasuries or cash for a premium.

Market participants today are aware of the regulatory changes in the OTC landscape and, consequently, the increased need for collateral and in narrow eligibility terms. Concerns around liquidity management of collateral seem to be the dominant theme lately alongside the traditional risk and operational management of the collateral. It is this precise need that is driving market participants to approach collateral service providers for more sophisticated services involving collateral funding and transformation. As some collateral service providers evolve from specializing in the outsourcing of risk, administrative and reporting functionalities to engaging in funding and other risky balance-sheet-intensive financing, this may well revolutionize the role and nature of collateral agents. The key question, however, rests with the market participants: would participants feel at ease outsourcing the custody and management of their collateral, a key risk area within their firms, to a collateral service provider that, in turn, engages in risky balance sheet and financing activities? Let the markets decide.

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