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New Basis for the Hedge Fund / Prime Broker Relationship

Implementing the Right IT Infrastructure

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Executive Summary

The financial crisis has changed the relationship between hedge funds and prime brokers for good. With the default and quasi-default of some of the leading providers in the space, funds have realized that they should diversify their prime broker relationships and require more transparency on the operational processes of their prime providers. However, as the funds industry regains momentum, they are more than ever turning to their prime brokers to provide the services that will support business expansion. Hence, prime brokers need to adapt their offering and IT infrastructure to respond to the changing market environment by:

- Implementing true multi-asset and multi-market capabilities. In their quest to generate alpha, funds are expecting their prime brokers to provide an extended product and geographic breadth through one platform. This is putting some significant pressure on the prime broker platforms that need to process asset classes and manage credit, risk and exposure, collateral, and margin across products and entities.
- Improving transparency. Prime brokers' customers are expecting them to carry real time processing and statuses, intraday business controls, and real time settlement and position status. This is obviously challenging in a multi-asset and multi-market environment. Prime brokers also expect a high level of operational transparency and are now particularly sensitive to rehypothecation risk. Finally, funds are requesting a clear segregation between the execution and the prime business of its provider, to avoid any information leakage and ensure that each of them earn business on their own merits.
- Ensuring operational efficiency. With most funds having implemented a multi-prime strategy, it has become easier for them to compare providers' services, operations, and risk. Eventually, funds will choose to concentrate assets with the provider that stands apart in the three dimensions already mentioned. This situation is fostering an increased reliance on workflow, reconciliations, reference data, and exception management.

- Focusing on creating value-added services. For prime brokers that have already achieved a high level of operational efficiency, the focus is now on differentiating by leveraging internal and external expertise. Services such as consulting (HR, real estate, strategy, etc.) and capital introduction are being highlighted by the Tier I providers to reinforce their market position.

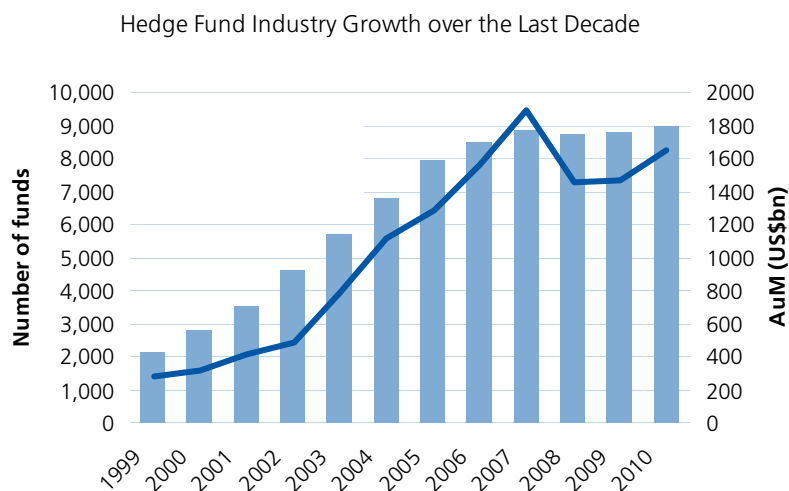
Introduction

The financial crisis has changed risk behavior and risk tolerance within the capital markets industry. The bankruptcy of Lehman Brothers, leaving US\$65 billion of hedge fund assets frozen, has pushed hedge funds to reconsider their relationship with the leading prime brokers. The multi-prime broker model that, before 2007, was slowly being adopted has gained momentum and is now considered best practice within the industry. In parallel, due to concerns about the resilience of some of the leading prime brokers, hedge funds have turned to prime brokerage providers that had strong balance sheets. This phenomenon has clearly benefited the leading global banks, such as Deutsche Bank and Credit Suisse, which have gained significant market share in the past two years and positioned themselves among the top five prime brokerage providers. It has also prompted the interest of other financial institutions such as Société Générale, HSBC, and State Street.

However, the market turmoil has not only impacted the relationship between the hedge funds and their prime brokers, it has also greatly changed the demand and requirements of investors towards the hedge funds they invest in from mostly alpha generation and historical returns to greater focus on risk management practices and transparent reporting capabilities. Since these new requirements were not part of the core expertise of hedge funds, this evolution has had a knock-on effect on their various providers, be they third party solution providers, prime brokers, or custodians.

Now that the dust has settled, the prime brokerage industry shows some signs of strong recovery. Assets under management in the hedge funds industry, while not yet at their 2007 level, increased by close to 12% between 2009 and 2010 (see Figure 1 on page 6). The concern about counterparty risk has not disappeared, but the leading prime brokers seem to be recovering market share. The drive that benefited the mini-prime providers has clearly slowed down. However, the positions are not set in stone. With fierce competition among providers in this space, there is a clear window of opportunity for financial institutions.

Figure 1: The Hedge Fund Industry Is Set to Rebound



Source: Eurekahedge

Prime brokers need to apply the lessons of the financial crisis and respond to the demands from hedge fund customers if they want to succeed. In a market of low leverage and bottom-level interest rates, hedge funds are focusing on sophisticated technological capabilities, notably in terms of reporting and risk management in a multi-prime environment, extended geographical reach and product offering, and greater transparency in prime broker internal processes (e.g., securities lending).

All these additional requirements are putting a lot of pressure on prime brokers' IT infrastructure—which was not designed for such demands. To provide a clear understanding of the challenges ahead, Broadridge has agreed to sponsor Celent's research in this space, while leaving full editorial control of the report to Celent.

We will start this report by analyzing the main trends that are changing the hedge fund / prime broker relationship. Then we will detail how these changes should foster an evolution of the IT infrastructure of the prime brokers to facilitate providing value-added services to create a competitive differentiator.

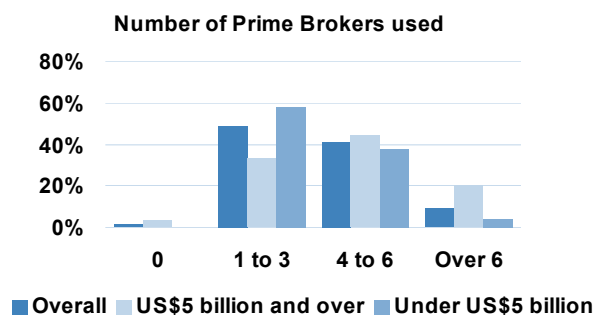
Building a New Prime Brokerage Relationship

The crisis of 2008 had a great impact on the prime brokerage industry, and with the default of one of the leading prime brokers, Bear Stearns, hedge funds have seen the reality of counterparty risk and forced several structural changes in the industry. Developments such as the growing popularity of the multi-prime model are offshoots of the crisis, while other trends such as emergence of multi-asset prime brokerage (PB) are due to the natural evolution of the market. In this chapter, we will analyze the different trends that have shifted the hedge fund / prime broker relationship.

Adoption of the Multi-Prime Model

Due to counterparty risk concerns during the financial crisis, the buy side diversified risk by moving to a multi-prime broker model. Today multiple prime broker relationships are the norm. We see in Figure 2 that a sizable proportion of hedge funds are using more than four prime brokers, especially large funds with greater than US\$5 billion of assets under management—64% of them work with more than four prime brokers. Some of the larger buy side firms were using multiple prime brokers even before the crisis, guided by strategy which often required using specialized prime brokers for certain asset classes and/or for specific markets. However, the financial crisis pushed smaller hedge funds to replicate that model to diversify their counterparty risk, and today the multi-prime model is common across the industry.

Figure 2: Hedge Funds Implementing Multi-Prime Broker Model

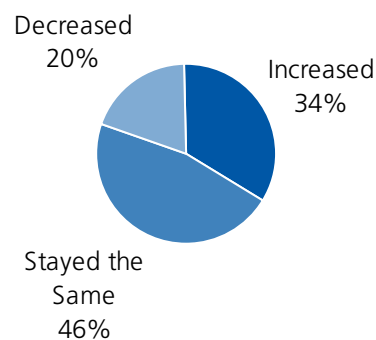


Source: Ernst & Young, Celent

Nevertheless, the adoption of the multi-prime brokerage model has been a quick and almost gut reaction to the crisis. Today, in a more “stable” market, a majority of funds estimate that they have reached a sufficient level of diversification of counterparty risk, and only 34% of them are expecting to increase the number of prime brokers they work with (see Figure 3). It is also interesting to note that 20% of the hedge funds surveyed estimate that they will decrease the number of their prime brokerage providers, a situation that is partially explained by the increased operational complexity and cost that accompanies the multi-prime model.

Figure 3: Hedge Funds Expanding Prime Broker Relationships

Change in Number of Prime Brokers



Source: Ernst & Young, Celent

In fact, the multi-prime broker model generates some challenges for hedge funds, notably in terms of:

- **Trade allocation:** Additional effort is required in allocating trades across multi-primers. Firms may use several criteria to make the allocation decisions, namely lowest financing rate, best execution quality, trades directed by subfund, or strategy.
- **Data aggregation:** Complexities arise from account, administrative, and risk/portfolio reporting data spread across a number of brokers. Data aggregation becomes a key issue. Data aggregation can be taken up by a main prime broker, outsourced to a third party fund administrator, or managed in-house with PMS/EMS/OMS solutions.

The multi-prime model increases competition for financing, margining, and securities lending services. On the flip side, it increases operational complexity with disaggregation of data from multi-prime trades, as captured in Table 1.

Table 1: Comparison of Single Prime and Multi-Prime Brokerage Models

Single prime	Multi-prime
Large counterparty risk with single custodian.	Mitigation of counterparty risk with multi-custodians/triparty accounts.
Consolidated PB view of portfolio, risk, and cash balances.	Disaggregated data from multi-prime trades/accounts.
Monopoly of PB financing, margining rates.	Competitive sources of financing, margining, and securities lending.

Source: Celent

Daily interactions with multiple prime brokers will give a fund a good view into the operational efficiencies and risk of each prime broker, and logically funds will concentrate assets where processes are most efficient. This evolution puts greater pressure on prime brokers to differentiate and increase the reliance on workflow, reconciliation, reference data, and exception management. It also drives the need to develop additional services like consulting and capital introduction to reinforce the relationship with customers.

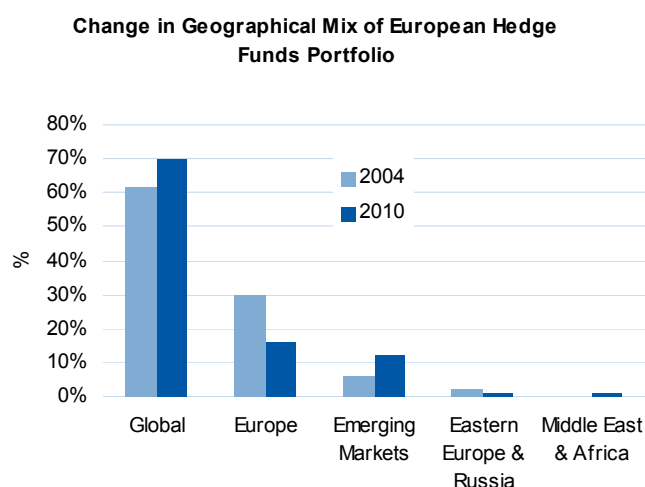
Implementation of Multi-Asset Trading and Multi-Market Strategy

Multi-asset trading is a widely accepted trading model. Increased adoption of electronic trading and development of advanced cross-asset algorithms have played a vital role in the adoption of multi-asset trading strategies by hedge funds. A multi-asset front end has become one of a prime broker's core offerings. Access to multiple liquidity sources along with a wide range of asset classes are key considerations for hedge fund firms. For example, we have seen a significant increase in hedge fund participation in foreign exchange; according to the latest statistic, hedge funds now account for 11% of the volume executed in the global FX market. The challenge for the prime broker lies in managing the additional complexity in post-trade, collateral management, and cross-margining. The key requirement from a prime broker is really the reporting on multiple asset classes. The prime brokerage platform needs to process across asset classes and manage credit, risk, collateral, and margin across products and sometimes entities.

Multi-markets connectivity is a must have. The traditional home bias that has always prevailed within the investor community has been steadily blurring during the last decade with the implementation of

global strategy. In its quest for alpha, the hedge fund industry has always been demanding multi-market access to develop global trading strategies. This trend has certainly not slowed down, and we will take the European hedge funds as an example. While 30% of hedge funds in the region were using a regional strategy in 2004 (see Figure 4 on page 10), that percentage has dropped below 20% in 2010. During the same period, the percentage of European hedge funds that have adopted an emerging market strategy has almost doubled. There are two elements to the connectivity issue: execution and settlement. While the trading may be direct market access (DMA) or give-up from the execution broker, the prime broker's key differentiator is on providing multi-market access and connectivity to ensure the settlement and custody function plus the finance. While this trend is not new to the prime brokerage providers, it is nevertheless crucial that they continue to expand their multi-market connectivity capabilities to serve the growing demand of hedge funds in that space. In addition, hedge funds often conduct multi-market/multi-region business through different entities. Therefore the prime brokers need to monitor risk and exposure across entities from both an operational and legal perspective.

Figure 4: European Hedge Funds Implementing Global Strategy



Source: Eurekahedge, Celent

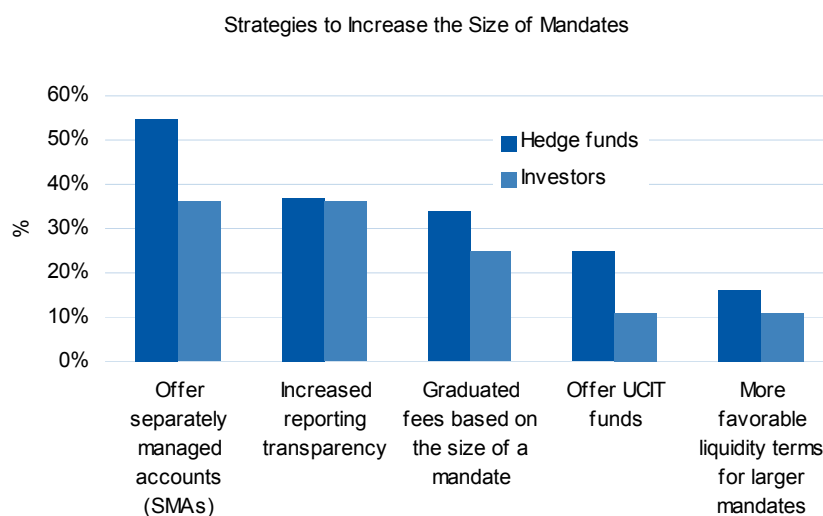
In the context of multi-asset and multi-market trading strategy coupled with multi-prime broker relationships, the capability of conducting reconciliation between funds, their multiple primes, and their administrators is of utmost importance and creates a strong value proposition.

Requirements for Greater Transparency and Reporting Capabilities

The credit crisis significantly increased investor and hedge fund demand for transparency and reporting capabilities. Today there are more strict operational management processes in the post-trade environment. In fact, hedge funds now require a high level of operational transparency and expect prime brokers to carry real time processing and statuses, intraday business controls, and real time settlement/position status. In addition, hedge funds are now particularly sensitive to rehypothecation risk. Rehypothecation is a process by which prime brokers use the collateral extended to them by their clients to pledge for their own borrowings. This reduces the cost of funds, and the prime brokers, in turn, are able to lend credit to their clients at lower rates. With such an arrangement, insolvency risk and the difficulty in reclaiming assets in case of bankruptcy is of high concern with the buy side clientele. This resulted in big financial firms like Goldman Sachs and JPMorgan launching prime custody services, where the buy side posted collateral would be kept in segregated accounts and would be accessible to both buy side firms and PB lenders. If the buy side firm defaulted, the lender picked up the collateral. If the prime broker fell, the contract between the buy side firm and the prime broker lender remained intact.

However, prime custody services do not fully answer the need for greater transparency. The financial crisis has pushed hedge funds to refocus their attention on client retention and increasing trust. Increasing reporting transparency has clearly emerged as a key differentiator to win new mandates; in 2010, 37% of hedge funds and 36% of investors mentioned that improving reporting capabilities was crucial for hedge funds to attract new mandates (see Figure 5 on page 12).

Figure 5: Increased Demand for Advanced Reporting Capabilities



Source: Ernst & Young and Greenwich Associates "Restoring the Balance: 2010 Global Hedge Fund Survey"

The analysis goes beyond a simple demand for increased reporting transparency. The survey conducted by Ernst & Young and Greenwich Associates points out to important discrepancies in terms of reporting. While only 33% of hedge funds are able to provide transparent information of the full position, over 40% of investors mentioned this data as being of utmost importance. There is a clear gap that needs to be filled, and prime brokers could certainly play a role in helping hedge funds answer their customer needs and win additional mandates.

This demand from the buy side for real time monitoring of rehypothesized assets, segregation of assets, and integrated reporting across all asset classes in a multi-prime and multi-asset trading environment further enhances the complexity of consolidated reporting across asset classes, as mentioned earlier.

Leveraging IT Infrastructure to Answer New Market Demand

As we have seen in the previous chapter, the complexity of the environment in which the hedge funds operate has increased significantly during the past three years. The adoption of the multi-prime model, the implementation of multi-markets, and multi-asset trading technology coupled with advanced reporting and transparency requirements are forcing hedge fund managers to look for providers that can help them deal with the level of sophistication required in the investment ecosystem. If they leverage existing IT infrastructure and implement the right technology, prime brokers are ideally positioned to answer these needs.

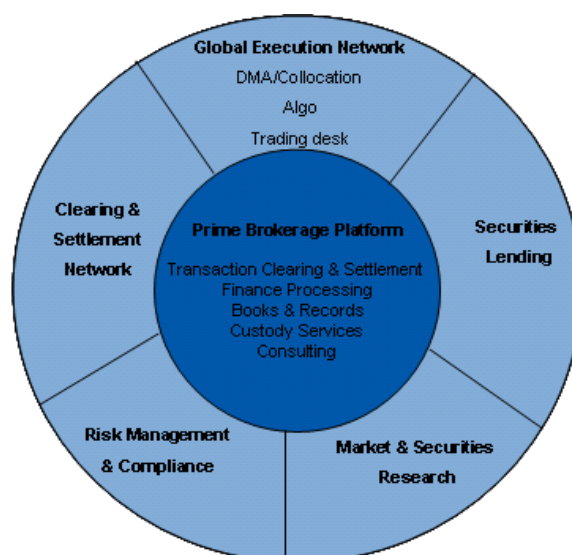
The Prime Brokerage Platforms in the Broker-Dealer IT Ecosystem

The core function of a prime broker is to provide and manage all aspects of trading and reporting for its buy side customers, including clearing and settlement, brokerage, stock lending, custody, and credit facilities for leverage. In addition, the prime broker will facilitate introductions to potential new capital and institutional investors. To ensure a high quality of service delivery and efficient leverage of the existing infrastructure and capabilities of the broker-dealer, the prime brokerage platform has to be integrated in the broker-dealer IT and functional ecosystem (see Figure 6 on page 14) and interfaced with the firm wide applications reusing some of the legacy operational function and platform, such as:

- **Execution technology.** Prime brokers need to implement platforms that provide full STP across their various in-house desks. Prime brokerage customers will use execution services of their broker-dealer from internal crossing networks and algorithmic technology to in-house desk and DMA. The integration of the prime brokerage platform with the execution services of the broker-dealer allows greater STP and more efficient leverage of the broker-dealer resources.
- **Risk management.** Monitoring broker-dealer exposure to its prime broker counterpart is key considering the new regulatory constraint and the increased focus on efficient risk management practices.

- **Clearing platform.** The development and management of the clearing platform are usually performed outside the prime brokerage environment, since the platform may be used by the broker-dealer's global market operations and by customers outside the prime brokerage business. However, the clearing function is performed on behalf of trading clients and may require financing (the lending of cash or securities) to facilitate settlement, which is a natural fit within prime brokerage, and hence the need to interface the prime brokerage platform with the clearing platforms of the broker-dealer.
- **Market research and expertise:** Through their prime brokerage relationship, customers expect access to broker-dealer securities and market research practice and benefit from investment advice to fine-tune their strategy. Managers today expect their prime broker to provide the tools, solutions, knowledge, and capabilities to generate alpha.
- **Securities lending:** Sometime the securities lending platform is integrated to the prime brokerage platform of a broker-dealer, but it is often an independent solution. However, securities lending services are core products of the prime brokerage offering. Therefore, while this platform should remain separate from the prime brokerage one, it is essential that some of the functionalities, business processes, and nomenclature are shared by the two platforms.

Figure 6: Prime Brokerage Platform in the Broker-Dealer Ecosystem



Source: Celent

It is crucial to consider the development of a prime brokerage platform within the overall broker-dealer existing IT infrastructure and capabilities, but the platform should nevertheless be designed around the specific processes and requirements of this business:

- **Transaction processing.** The prime brokerage platforms need to provide the right tools to manage the full pre- and post-settlement cycle of a transaction. It has to be designed to serve a suite of prime-focused transactions from client trading (done with/away, allocation and bulk, zero consideration), financing (stock borrow loan, repos), FX (done with/away, cash wires), asset transfers (internal and external), stock and cash sweeps, nostro funding, asset servicing, and client fees.
- **Finance processing.** Financing services are central to the prime brokerage value proposition. The prime brokerage platform has not only to process the securities lending activity but also to provide cash management functionalities (cash funding) and finally to serve collateral management and cash margin operations.
- **Client account types.** Prime broker client accounts can be broadly classified by the strategy used: margin account or fully paid account. Subcategories would be driven by the account structure: either an omnibus settlement account or a separate account structure. It is important to note that the greater focus on transparency is pushing prime broker clients to adopt the segregated account model more often. Although this approach provides greater transparency and control to investors, it also generates complexity and requires more operational oversight. A third category has emerged with the adoption of the multi-prime model by hedge funds which is the “hearsay account,” where the client assets held at another prime broker may be included in the margin calculations or reported through “prime of prime” reporting. The “hearsay” account can also be used for client-owned settlement account.
- **Books and records.** This element is core to the prime brokerage offering. The solution has to maintain operational control over client-related information that are used for calculation and reporting. The data has to be available not only for each of the customer positions (security, cash, and long/short), but also according to the strategies used, be they fully paid, margin, or short sell.

- **Position management and stock record.** This element is part of the books and record functionalities. The platforms has to provide a granular level of data to deliver an enhanced position management tool. It should include the client position (trade, value, and date of settlement) delineated by strategy within account (e.g., margin, short sell, fully paid), the exposure (pending and fails transactions per counterparty and per client), the depot position either for omnibus account and segregated ones, the FX exposure, the financing position, and finally the position for asset services.
- **Custody services.** This is the provision of safekeeping services for securities and cash, plus the asset servicing business. However, with growing concerns that have emerged among the buy side industry due to the Madoff scandal about the safety of assets held in custody, there has been increased focus on the operational efficiency of the custody services provided by prime brokers. This has driven demand for detailed online reporting capabilities.

Implementing the Right Level of Segregation Between PB and Broker-Dealer Business

Information leakage is an acute concern in the fund industry. It is therefore essential for prime brokers to ensure that Chinese walls are implemented between their platforms and the execution broker-dealer to reassure customers that they will not leverage any insights they may gather on their clients' trading strategy. Without the proper level of segregation, funds' positions will be known by the sell side of financial institutions, and therefore they are likely to see the market move against them and are unlikely to receive the best price for their trades. Therefore, it is crucial that all the information related to a fund's position and give-up trades is held in a closed environment where the data can only be accessed by authorized staff and system to support the client business and ensure proper risk management. When customers are trading through their prime brokerage account, they expect confidentiality even with the prime broker front office / trading team. The situation is even more sensitive in the case of the hearsay model, because the main prime could potentially have a complete view of its customer's activity across all their prime relationships.

Another dimension to the concept of segregation between the prime and execution business of a broker is transaction flow. The prime brokerage platform should be execution method-agnostic, allowing transaction execution to be conducted by a competitor without addi-

tional burden or decrease of efficiency. This flexibility is essential to win additional mandates from clients, especially in a multi-asset environment where the broker trading desk might not have the same depth of expertise and services across all asset classes. This approach ensures that the prime brokerage activity is not penalized by the front office limitations and that the client can use any execution provider while still relying on its main prime broker.

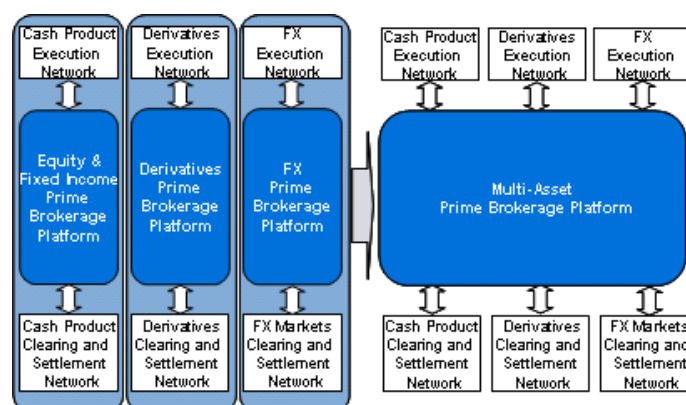
Multi-Asset Offering May Require Multiple Platforms

As hedge funds increasingly implement multi-asset strategy they expect from their prime broker the provision of reporting and position keeping across asset classes and often expect the ability to offer cross margining as well.

Broker-dealer internal infrastructure is often siloed by asset class. When executing multi-asset trading strategy, clients often deal with separate desks and systems. The siloed nature of the broker-dealer asset class coverage has often led to fragmentation in the prime brokerage offering with the development of multiple prime brokerage platforms to serve each asset class. Often a hedge fund dealing in equity, FX, and derivatives ends up working with three separate prime brokerage platforms, which leads to the provision of separate reports from each business line. Acknowledging the unharmonized nature of market practices and of pre- and post-trade environment across asset classes, development of separate prime brokerage platforms was an easier path for most broker-dealers rather than development of integrated solutions. However, it certainly does not reflect the way customers deal with prime brokers, and it limits the opportunity to develop value-added services such as cross-margining.

Complete, cross-product post-trade processing is where the industry needs to go to (see Figure 7 on page 18). Multi-asset prime brokerage platforms allow the prime broker to increase its value proposition. By covering a wider spectrum of the assets traded by its customers, the prime broker will not only provide a “one stop shop” but also increase its ability to manage collateral requirements and risk exposures for its customers.

Figure 7: Moving from Multiple Prime Brokerage Offering to a Multi-Asset Prime Brokerage Platform



Source: Celent

Reporting: Real Time Updating of Transaction Status

In a multi-prime environment, the availability of consolidated data is essential for carrying out functionalities such as risk management and client reporting and aiding quick decision-making. Speed of decision-making has assumed greater significance with the rise of automated trading across asset classes. Therefore, technology systems are not only expected to reduce the operational complexity of aggregating data but also expected to do it in real time.

The days of T+1 transaction status reporting are clearly behind us; the volatile environment of the past few years has reinforced requirements for real time transaction reporting. Looking forward, markets are expected to remain volatile despite periods of respite. There are already signs of perilous times ahead. Hedge funds will be navigating tumultuous waters in order to deliver to their investors. Not being able to provide real time transaction status will put prime brokers in a difficult situation in their competitive environment.

Consolidation of Data for Client Portfolio

As we discussed in the first section, the multi-prime broker model is leading to greater disaggregation of data, resulting in increased complexity of processing, integrating, and reconciling data. Shifting from a single prime broker to a multi-prime broker model typically requires a significant upgrade in hedge funds' IT infrastructure. For example, the

upgraded system would be required to produce unified reports from disparate structures and formats provided by different brokers, and deliver a unified view of positions, trades, and balances.

In the risk management context, additional tools are required to accurately compute the portfolio's exposure and other risk measures, since some of the metrics are not additive (VaR, for example). Data aggregation in this context would also require the computation of correlations between asset classes and instruments. Therefore, there is a lot more to a data aggregation solution than providing a consolidated view of positions and integrated reporting. A summary of the key features expected from a good data aggregation solution follows.

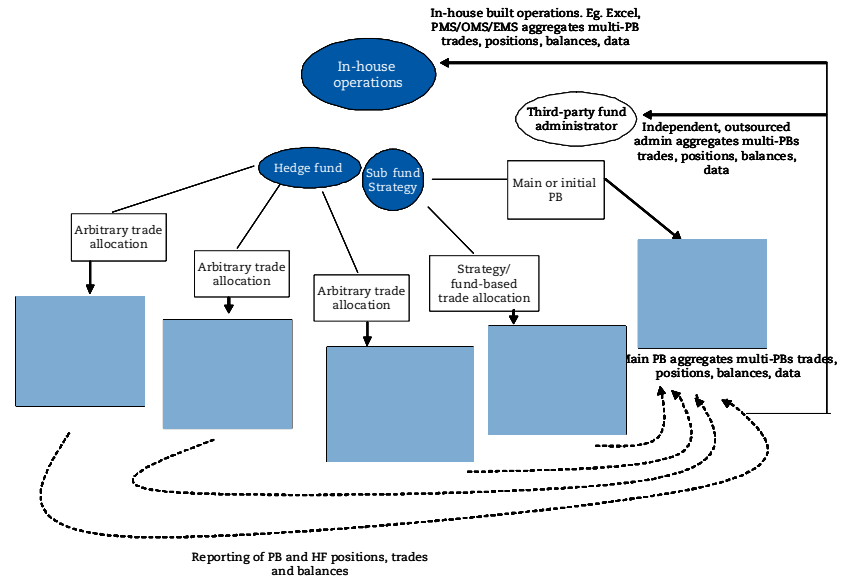
- Provides a consolidated view of position, balance, trading activity across asset classes and instruments, margin and credit risk processing, and compliance reporting.
- Supports a wide range of instruments and transactions.
- Provides near real time, high performance processing.
- Has interoperability with solutions provided by multiple vendors.
- Provides adapters to allow customization of the solution by plugging in modules offered by other vendors.

Methods of Data Aggregation

In a multi-prime scenario, the hedge fund allocates trade to different prime brokers based on various criteria, as discussed in the first section. Data from the multiple prime brokers can be aggregated by one of

these three entities: a main prime broker, a third party aggregator, or the hedge fund itself. Figure 8 depicts the three data aggregation scenarios in a multi-prime environment.

Figure 8: Data Aggregation Scenarios



Source: Celent

The “hearsay” reporting model. In this scenario, one of the prime-brokers of the hedge fund becomes a main prime broker and takes up the task of aggregating data from the remaining brokers. The main prime broker offering data aggregation services is typically a large player with a large balance sheet, strong credit ratings, and a comprehensive technology infrastructure. In order to develop this offering, the prime broker needs to implement a platform that is seamlessly integrated not only with its multiple in-house desks but also with technology platforms hosted by other prime providers. In the hearsay model, the prime broker platform must combine accounting, reconciliation, and reporting to provide consolidated reports to the fund manager on a daily or weekly basis. However, if strong barriers are not implemented, the hearsay model could create serious issues because it provides a complete view of a fund portfolio to the aggregating prime broker.

Third party administrators. In this scenario, aggregating data from multiple prime brokers is outsourced to a third party fund administrator (TPA). The key differentiator in using a TPA is independence. They are especially attractive for smaller hedge funds because they provide a good alternative to the expensive main prime broker.

In-house operations. A third alternative is to employ internally developed solutions, or PMS/OMS platforms, for aggregating the data received from the prime brokers.

Regional Connectivity: Multiple CCPs and CSDs

The clearing capability of a prime broker is a core component of its value proposition. With the adoption of multi-market investment strategy, hedge funds are requesting access to an increasing number of local markets and an extensive clearing network. As customers execute transactions on a global level, the prime broker platforms need to provide market and trade information on a real time basis. The ability to self-clear rather than rely on a correspondent is a key differentiator in the prime brokerage industry. In order to position itself as the main prime broker and to deepen its relationships with its customers, it is essential for a prime broker to build an exhaustive network that allows a broad range of instruments and markets to be cleared.

With the adoption of multi-market and multi-asset strategies by buy side firms, prime brokerage platforms must be able to handle multi-currency, global securities and derivatives across multiple time zones and various local regulations. Hence, the prime broker platform has to be robust and flexible enough to integrate new clearing and settlement connectivity to support the expansion of clients into new territories.

In addition, the implementation of the Dodd-Frank Act in the US and EMIR regulation in Europe is likely to drive greater focus on the clearing of derivatives. Institutional investors are focusing on efficient portfolio-level margin and consolidated service and reporting, the segregation between prime brokerage and clearing is slowly blurring. The ability to gather a 360° view over customer collateral requirements is becoming essential to optimize the prime broker financing capabilities. Hence the evolution toward integration of the clearing business into the prime brokerage platforms of the leading players.

Buy Vs. Build

The development of a complete suite of prime brokerage services requires some significant resources and expertise. Therefore, we have seen a clear trend among prime brokers to implement a mix of buy and build strategy, with firms relying on internal resources to build client differentiation functions and leveraging third party vendor expertise to deliver best-of-breed solutions. The evolution goes further with an increased reliance on BPO providers for non-client-facing functions such as fund administration. The increased level of competition that the adoption of the multi-prime model has fostered is pushing prime

brokers to focus on the development of value-added services like consulting or capital introduction. We can broadly divide the various prime brokerage functionalities between those which should be acquired through best-of-breed solutions and those which should be developed leveraging in-house expertise.

- **Reliance on third party providers:** There are a set of core services that can be delivered through the implementation of a vendor solution, since there is limited differentiation that can be created through in-house development. This element includes: trade workflow, risk and reporting for multiple prime and custodian relationships, multi-asset and multi-entities books and records, position management, and custody services.
- **In-house solution:** There are certain elements delivered to funds by prime brokers that require specific expertise which allows the firm to differentiate. Some of these services are IT-related and others are highly dependent on human capital. This includes: asset class pool of expertise, securities lending, funds strategy, consulting, and capital introductions.

There are a clear set of benefits that a prime broker can expect when implementing third party solutions:

- **Faster time to market:** The reliance on third party providers is even more prevalent today since the window of opportunity to capture market share in the prime brokerage business will not last indefinitely. Hence, leveraging third party providers to reduce time to market is key for prime brokers that need to upgrade their prime brokerage platform to a truly multi-asset environment, providing real time reporting, and improving client services. We have seen examples of multi-market and multi-asset prime brokerage platform implementations that have taken around six months to be implemented, a time to market that is hardly replicable through in-house development.
- **Cost reduction:** This is an obvious point because the development cost of a third party prime brokerage platform is mutualized among the clients of the vendors. In addition, when implementing a third party solution, the prime broker is also externalizing the compliance cost to the vendors, which is a significant benefit considering the regulatory uncertainties in the financial industry. It is also important to note that by improving the efficiency of middle office cus-

tomer service through automation, a prime brokerage platform can significantly reduce the overall cost and lower the financing requirement.

- **Standardization:** Most third party platforms are designed to be interfaced seamlessly with existing solutions, be they internal systems such as risk management or external systems to support multi-market connectivity and implementation of a hearsay model. This implies that the platform is not only IT format agnostic but also an exhaustive library of nomenclature to exchanges with the various systems it is interfaced with.

Conclusion

The financial crisis has changed the environment in which prime brokers operate. It has opened up competition with the adoption of the multi-prime model by funds and created opportunities for entrants in this market. However, it has also led to increased operational complexity for all market participants that is putting considerable pressure on their resources and IT capabilities.

Funds today expect their prime brokers to support their business expansion and quest for alpha but also to provide them with extended reporting capabilities and improved operational transparency. They are expecting a mix of sophisticated technological capabilities in terms of: market access, risk and collateral management, reporting for multi-asset /multi-market activities and for multiple prime and custodian relationships, coupled with in-house expertise to facilitate capital introduction, support operations development, etc. These increasing requirements from their clients have and will continue to push prime brokers to revamp their IT infrastructure to serve them.

In today's market, a prime broker should ensure that its platform is able to:

- Leverage its legacy systems. To ensure a high quality of service delivery and an efficient leverage of the existing infrastructure, the prime brokerage platform has to be integrated within the broker-dealer IT and functional ecosystem and interfaced with firmwide applications, reusing some of the legacy operational function and platform. Hence the platform should be built using existing messaging standards and be server agnostic.
- Handle prime brokerage-specific workflow. The platform should be framed around the various client account types to serve a suite of prime-focused transactions (e.g, client trading, asset transfer, etc.), support the finance processing (e.g., securities lending, cash and collateral management, etc.), maintain operational control over all client-related information that is used for calculation and reporting, and finally enhance transparency in custody operations.

- Provide true multi-asset capabilities. The market is still dominated by single asset solutions, but the movement is clearly toward a multi-asset prime brokerage platform supporting clients' expansion into new asset classes. This integration by increasing the quality of client services will reinforce the relationship and encourage the customer to drive more volume toward the prime broker.
- Deliver transaction status in real time. In a volatile market, this information is crucial to funds. It's clearly a must have.
- Facilitate data aggregation. Adoption of the multi-prime model has put a greater burden on funds, especially for data aggregation, which can be delivered by prime brokers with the right technology in place. The platform should be required to produce unified reports from disparate structures and formats provided by different brokers, and deliver a unified view of positions, trades, and balances. Also, additional tools are needed in the risk management context to accurately compute the portfolio's exposure and other risk measures. Therefore, the platform should not be limited to providing a consolidated view of positions and integrated reporting.
- Serve global capability. The prime broker platform has to be robust and flexible enough to integrate new clearing and settlement connectivity to support the expansion of clients into new territories. The platform should be the core underlying architecture that helps clients manage their books and records globally. The time to market for adding markets should be closely monitored to ensure that future market expansion will not be delayed.

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Typical projects we support include:

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Business practice evaluations. We spend time evaluating your business processes, particularly in the FX market, focusing on the electronic trading patterns in Europe, Asia, and America. Based on our knowledge of the market, we identify potential process or technology constraints and provide clear insights that will help you implement industry best practices.

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About Broadridge

Broadridge Financial Solutions is a technology services company focused on global capital markets. Through its Gloss solution, Broadridge offers an industry leading multi-asset transaction processing, settlement and book keeping solution for international operations, enabling firms to capture, process and settle multi-asset instruments in virtually any currency and market.

For more information about Broadridge, please visit www.broadridge.com.

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