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**Executive Summary**

While many things changed in the wake of the economic turmoil of late 2008, one of the most profound shifts has been an increased focus from both investors and fund managers on striking a better balance between achieving non-correlated returns through alternative strategies and protecting assets held by hedge funds and alpha-focused investment managers.

Ensuring such balance had already been emerging as a point of concern prior to the financial industry crisis. Whereas institutional investors were able to segregate and exert direct control over assets purchased with funds allocated to long-only, beta-focused managers via their custodial relationships, they had far less visibility and control over assets purchased with funds allocated to alternative, alpha-seeking investment managers.

To secure the leverage required in many alpha-seeking strategies, hedge funds and investment managers forged strong relationships with Prime Brokers. To secure their financing loans and maximize their access to investable cash, hedge funds and alpha-seeking investment managers offer up long securities to their Prime Brokers as collateral. There would often be excess securities beyond the prime broker’s requirements. While this was not seen as a point of concern prior to 2008, unanticipated collateral losses in late 2008 due to broker-dealer turmoil raised fears about counterparty concentrations and encouraged industry participants across the spectrum to look for a better approach.

Since that time, a new paradigm has emerged around better ensuring asset protection for alpha-seeking strategies by moving excess assets out of Prime Brokerage accounts and into segregated custody accounts. This practice has come to be known as “Prime Custody”.

Distinct models for achieving this segregation have been put forward by various prime brokers. As these models have rolled out, there have been three points of concern.

Specifically, how does the hedge fund or alpha-seeking investment manager 1) ensure the right level of bankruptcy protection; 2) maintain an adequate geographic reach to support global portfolios for assets moved to custody and 3) reduce the operational friction of having both a prime brokerage and custody account with different entities.

Two of the three models put forward by prime brokers fall short on one or more of these measures. Only Citi Prime Custody offers a approach that allows for all three concerns to be adequately addressed.

> “An absolute majority of all assets under management by hedge funds and funds of hedge funds globally are from institutional investors. And a third of those assets from institutional investors now come from pension funds,” AIMA, May 2009

**Portable Alpha Trade-Off: Non-Correlated Returns but Split Asset Pools**

Historically, highly regulated institutional investors charged with managing their constituents’ capital invested with long-only asset managers based on their relative performance to standard industry benchmarks. Conversely, high net worth individuals and qualified investment participants looking for more diversified returns invested in hedge funds focused on absolute performance.

Separation of these approaches began to blur in recent years. Seeking diversified returns to better cover long-term liabilities in the aftermath of Internet bubble losses (2000-2001), many institutional investors shifted their asset allocation approach to a more active management style.
To obtain greater diversification, institutional investors began to shift away from the idea of balancing their returns through the allocation of assets (equities, bonds & cash) to managing their returns by separating market return (beta) from attempts to add value (alpha). This technique became known as the “portable alpha” approach to asset diversification. By 2008, institutional investors had become the largest source of liquidity for hedge funds and alpha-seeking investment managers as noted by the Alternative Investment Management Association (AIMA).

This concentration of institutional money with hedge funds pursuing alpha strategies had two critical impacts.

Direct institutional allocations to hedge funds resulted in a bifurcation of invested asset pools. Securities purchased with allocations to long-only managers were allocated back to investors and placed into segregated accounts held with global custodians. Securities purchased with allocations to alternative investment managers were posted as collateral against financing loans and held with prime brokers.

This split became exacerbated by the other knock on effect of institutional money shifting into alpha strategies. Many long-only fund complexes began to diversify in an attempt to protect their institutional allocations and they added alpha-focused strategies to their menu of fund choices.

To service these alpha-focused strategies, “real money managers” too began to establish financing relationships with prime brokers, mimicking hedge fund’s efforts to unlock the potential of investment assets and allow for greater leverage.

From an investor’s perspective, the trade-off of seeking non-correlated returns through allocations to alpha-seeking strategies was thus a split in the location of their invested collateral across both custodians and prime brokers.

**Increased Counterparty Exposure to Broker-Dealers**

One impact of investor collateral pools being split across custodians and prime brokers was an increase in investor’s exposure to the broker-dealer entity with which their alpha-seeking manager maintains a prime brokerage relationship as shown in Figure 2 below.
Historically, an investor had little direct exposure to a broker-dealer. Long-only fund managers would allocate positions they purchased from broker-dealers directly to the investor and the investor would instruct the broker-dealer to deliver their securities to a designated custodian.

Once securities were successfully delivered and settled in an investor’s custody account, there was no longer any exposure between the investor and the broker-dealer. The relationship was directly between the investor and the custodian up until such time that the long-only manager chose to liquidate.

Prime brokered assets are treated very differently. Prime brokers focus on extending their client’s buying power through financing loans made to facilitate leverage and secured by the clients’ long positions. Assets purchased by the hedge fund or investment manager are not allocated to individual investors, but are rather pooled by fund and assigned to the prime broker as collateral.

While the direct relationship is between the prime broker and the investment manager, the investor ends up having an indirect exposure to the prime broker and its broker-dealer entity since the assets that were purchased with their funds remain within the broker-dealer entity.

The downfall of investors having indirect exposure to broker-dealers with whom their alternative investment managers maintained prime brokerage relationships became abundantly clear in the Fall of 2008 as turmoil rocked the broker-dealer community.

Counterparty concerns increased sharply and in some instances, investors were unable to recoup collateral assets that were caught up in bankruptcy proceedings.

Increased concern about counterparty risk prompted a renewed focus on how to better protect alternative strategy assets.

**Segregating Assets Away from the Broker-Dealer**

To protect their remaining investor allocations, hedge funds and alpha-seeking investment managers began to actively demand that their prime brokers provide an option to shift any assets not directly being utilized to support margin indebtedness or cover short selling into a segregated account.

The majority of prime brokers achieved this segregation by moving assets into accounts at custodial banks with more stringent asset protection and reporting requirements. While these investments were still not being allocated or held in any individual investor’s name, there was more transparency around these holdings and more assurance that they would go back to investors in the event of a broker-dealer’s orderly dissolution.

For a period in the months immediately following the Fall of 2008, simply having these assets shifted away from the prime broker’s control and removed from exposure to the broker-dealer entity was seen as a sufficient incentive to sign onto vehicles offered for this purpose.

This “flight to safety” mentality was understandable in the wake of traumatic market events as plummeting investment returns and a sting of bad news about broker-dealers added significant uncertainty to the prime broker landscape. Hedge funds and alpha-seeking investment managers wanted vehicles that allowed them to reassure their investors and protect their asset base.

By mid-2009, stabilization of the investment landscape, a rebound in market performance and impracticalities of the segregation model offered by early entrants became apparent. Hedge funds, alpha-seeking investment managers and investors all began to rethink their requirements and seek a more operationally-viable solution.
**Issues with Early Prime Broker Segregation Offerings**

Simply shifting assets outside the prime broker’s control and off the broker-dealer entity into a special purpose vehicle or a segregated account at a custodial bank solved for some issues around asset protection and transparency, but raised others in turn.

Early “Prime Custody” solutions were set up in one of two ways to ensure speed to market.

**SPV’s:** Some prime brokers created an internal special purpose vehicle or trust company that segregated excess assets into a separate account with enhanced bankruptcy protections.

Feedback on these arrangements highlighted concerns among investors that the segregation of assets was not remote enough to ensure that they would be fully protected and would be able to recoup all their assets in an orderly dissolution as part of a bankruptcy proceeding.

The ability to ensure equal levels of asset protection across the globe was also cited as a concern. Hedge funds and alpha-seeking investment managers tend to operate in multiple markets and trade assets across the globe. This requires an ability to operate in numerous time zones and in many markets with unique and stringent local requirements. Special purpose vehicles set up by some prime brokers for custody failed to take into account the unique bankruptcy protection laws and regulatory requirements of many markets. This limited their effectiveness outside select financial centers.

The SPV Prime Custody model is highlighted in Figure 3.

**Third Party Arrangements:** Other prime brokers created remote arrangements with third party custody banks.

Feedback on these arrangements indicated that they satisfied investor needs to see the assets moved completely off the broker-dealer infrastructure, but increased the operational complexity of managing assets.

As part of daily operations, teams at the hedge fund or alpha-seeking investment manager would need to directly authorize the movement of securities into and out of the custody account or assign those rights to their prime broker through the negotiation of a “control agreement”.

As these were new arrangements, feedback from both custodial banks and funds underscored that control agreements were often unclear on how situations that had not been envisioned between the prime broker and the custody bank should be handled.

According to individuals directly involved in such situations when disputes arose the...
operations teams at the hedge fund or alpha-seeking manager had to intervene and in some instances, assets were reportedly frozen between the custody and prime brokerage accounts pending resolution.

Such actions would block the ability of hedge funds and alpha-seeking investment manager’s to fully utilize the use of assets they had purchased with their investor’s capital to realize their investment strategies.

Beyond uncertainty around the handling of disputes, there were other aspects of the remote custody model that created operational concerns.

Specifically, remote third party custody arrangements require that the fund’s operational team monitor the movement of securities between custody and prime brokerage accounts, ensure that parties meet transfer deadlines, monitor international accounts for actual settlement of positions and manually instruct and manage the recall of securities with pending voluntary corporate actions if portfolio managers want to utilize those positions in their trading strategy.

The Third Party Custody model is highlighted in Figure 4.

**Remote Custody and Its Impact on Buying Power Calculations**

Another facet of to be considered with the remote third party custody model is its impact on the prime broker’s ability to calculate hypothetical buying power.

Remember, the primary purpose of a prime broker was to extend their client’s buying power through financing loans made to facilitate leverage and secured by the clients’ long positions.

Prime brokers have spent hundreds of millions of dollars in recent years creating infrastructures wholly geared to the timely and effective calculation of buying power and optimal utilization of assets.

Unlike the traditional waterfall approach to trade and portfolio processing around which custodians built their infrastructures, prime brokers built platforms able to provide 360 degree views of activity as shown in Figure 5.

Inputs from every part of the trade and portfolio lifecycle are factored by prime brokers seeking to calculate the buying power of their hedge fund and alpha-seeking investment manager clients.

By offloading a significant portion of their assets to third-party custodial banks, prime brokers undercut their own ability to most effectively service and advise their clients.

Under these arrangements, the prime broker has to wait for the custodian holding segregated assets to update their valuations and release a report on the assets being held in their account.

This is typically at best an overnight process, and in some instances, reports from custodians take much longer to be updated and delivered. Obtaining a buying power
calculation is thus made more difficult. In rapidly moving or highly volatile markets, this could potentially impact fund trading decisions.

Many custodians are not set up to transmit reports via electronic formats common within the broker-dealer and prime broker community.

Oftentimes, custodial reports are delivered via files that must be either manually keyed or mapped into the prime brokers’ systems. This raises the likelihood of input errors and increases the need for the prime broker and the custodian to normalize their underlying data models--a difficult proposition.

Even when third party custodians can deliver the data effectively to support prime brokerage buying power calculations, there are still multiple touch points to navigate if assets need to be shifted between the prime brokerage and custody account. Coordinating across multiple service organizations adds time and the potential for errors into the process.

As a full-service bank with both a broker-dealer and a custodial banking entity, Citi has long been able to offer remote custody arrangements for prime brokered clients if they so desired.

Rather than tout this native ability as a Prime Custody “solution”, our approach has been to go beyond ensuring asset segregation in crafting our offering and instead extend to our clients a robust, seamless set of services that allow them to ensure protection and oversee the use of their assets in an operationally superior manner.

Advantages of Citi’s Integrated Prime Custody Solution

Citi has an inherent advantage to many other leading organizations in crafting a Prime Custody solution. Rather than having to create a brand new special purpose vehicle or employ a remote third party, we were able to combine capabilities across two-established and internal market-leading businesses.

Prime Custody is a joint venture offered by Citi Prime Finance and by Citi Securities and Fund Services.
Since Citi Prime Finance is part of the broker-dealer entity and Citi Securities and Fund Services is part of a separate custodial banking entity, clients are able to:

- Move assets off the broker-dealer legal entity and onto a bank legal entity to ensure bankruptcy protections
- Physically shift assets from the broker-dealer’s to the custodian’s infrastructure for additional security
- Benefit from a normalized data model and systematic data exchanges between their custody and prime brokerage accounts.
- Examine their holdings and buying power across their custody and prime brokerage accounts from a single reporting platform.
- Instruct and monitor movements between their custody and prime brokerage accounts from their existing tools

These abilities are highlighted in Figure 6.

Citi’s Prime Custody offering also exceeds the geographic reach of any competitor in this space, providing a truly global solution that delivers to hedge funds and alpha-seeking investment managers the information they need in the local market time require to realize their investment strategy.

Citi Prime Finance operates in more markets worldwide than any competitor. This reach is matched and enhanced by Citi Securities and Fund Services with the industry’s largest and most established custodial network.

A final aspect of Citi’s offering is the provision of a smart algorithm. This algorithm was designed to make our Prime Custody offering risk and financing optimized to help our clients

**Citi Prime Custody Offering**

1. **Client Instructs**
2. **Assets Moved to Custody Account**
3. **Assets Assessed & Selected**
4. **Assets Automatically Moved Back to PF Account**

**Benefits**

- Joint offering from two market-leading businesses
- Single Point of Contact
- Assets are moved off broker-dealer entity to completely separate bank entity
- Assets are moved off broker-dealer infrastructure to completely separate bank infrastructure
- Client continues to instruct all trading activity through their Prime Finance account
- Normalized data and systematic exchange of data
- Consolidated position, activity & balance monitoring & reporting across Prime Finance & Custody accounts via PrimeServe web portal
- "What If" margin reporting—displaying potential buying power
get the leverage they need at the most efficient price point.

Our smart asset selection algorithms take into account the outstanding margin requirement on the Prime Finance account and figures out what excess exists across both the Prime Finance and the Custody asset pools.

In addition to assessing the financing potential of assets, our Prime Custody offering recognizes that a asset servicing event is forthcoming and automatically sweeps back that asset from the Custody account so that the hedge fund or alpha-seeking investment manager can take full advantage of the Prime Broker’s longer declaration window.

**Conclusion**

Concerns about asset protection increased after recent financial turmoil, underscoring concerns about counterparty exposure and the safety of excess assets held in prime broker accounts. To combat those concerns, prime brokers are now offering new “prime custody” arrangements whereby funds can shift excess assets away from the broker-dealer legal entity into remote arrangements that offer greater protections in case of bankruptcy.

Early Prime Custody offerings followed one of two basic models.

In one approach, a special purpose vehicle or trust was set-up as a distinct legal entity from the broker-dealer and excess assets could be moved out of prime broker accounts and into these arrangements. This model allowed for funds to continue to monitor and manage both their prime broker and custody accounts through their existing service relationship and allowed for an effective and easy exchange of data and reporting across the two accounts.

Feedback on the approach raised some concerns, however. Assets remained on the same broker-dealer infrastructure, eliciting questions as to whether the assets were remote enough in case of a bankruptcy.

There was also concern expressed around the geographic coverage of this approach and how the local market bankruptcy rules would be interpreted. A second model moved securities completely out of the broker-dealer entity and off the broker-dealer infrastructure, shifting excess assets to third party custodians. This arrangement was perceived as offering greater bankruptcy protections, but feedback from market participants highlighted fairly substantial concerns about the increased operational complexity of having to work across un-related entities.

With these arrangements, it became increasingly incumbent upon the fund’s own operations teams to supervise activity between the prime broker and custodian. Additionally, the difficulties of normalizing data, exchanging information, tracking security movements and using information to generate holdings reports or calculate buying power in a fund’s prime brokerage account were cited as issues.

Citi’s Prime Custody solution provides the benefits and avoids the pitfalls of both models. Citi’s Prime Custody solution combines two established and market-leading businesses—thus providing a broader geographic reach than any competitor worldwide.

Our solution physically moves assets off of the Citi broker-dealer infrastructure and onto the custody infrastructure ensuring adequate segregation and bankruptcy protection.

Our solution features normalized data exchanged systematically, online tracking of security movements and consolidated reporting (including hypothetical buying power) between prime brokerage and custody accounts. We have implemented a smart asset algorithm to work across both Prime Finance and Custody accounts to support more efficient movements of a fund’s assets.

Finally, our solution also allows for the entire relationship to be managed through a single point of contact and off existing Prime Finance tools for operational ease.

With Citi’s Prime Custody solution, investors can achieve their desired level of asset protection in an operationally simple and intuitive manner.
Highlights of Citi’s unique role in promoting sustainability include: (a) releasing in 2007 a Climate Change Position Statement, the first US financial institution to do so; (b) targeting $50 billion over 10 years to address global climate change: includes significant increases in investment and financing of renewable energy, clean technology, and other carbon-emission reduction activities; (c) committing to an absolute reduction in GHG emissions of all Citi owned and leased properties around the world by 10% by 2011; (d) purchasing more than 234,000 MWh of carbon neutral power for our operations over the last three years; (e) establishing in 2008 the Carbon Principles; a framework for banks and their U.S. power clients to evaluate and address carbon risks in the financing of electric power projects; (f) producing equity research related to climate issues that helps to inform investors on risks and opportunities associated with the issue; and (g) engaging with a broad range of stakeholders on the issue of climate change to help advance understanding and solutions.

Citi believes that sustainability is good business practice. We work closely with our clients, peer financial institutions, NGOs and other partners to finance solutions to climate change, develop industry standards, reduce our own environmental footprint, and engage with stakeholders to advance shared learning and solutions.
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