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Citi Perspectives

A Prime Finance Publication

The Liquidity Crisis & Its Impact on the Hedge Fund Industry

Findings At A Glance

Capital flowed steadily into the hedge fund industry over most of the past decade. There were few stresses to test the strength of the industry's practices and controls. When the credit crisis in the dealer and shadow-banking community triggered a liquidity crisis in the hedge fund industry in late 2008, key process and structural issues came to light.

Part I lays out the impacts of the liquidity crisis on hedge fund industry participants:

- Hedge funds' ability to use their collateral to finance positions with their prime brokers became increasingly more difficult, prompting an industry-wide de-levering of portfolios.
- Institutional investors experienced the pitfalls of adjacency risk in co-mingled portfolios and funds, finding their own actions constrained by the fund's other participants. They also found that many managers had placed assets in their portfolio that should have been outside their mandate.
- Many Fund of Funds realized a serious mismatch between the terms they offered on their portfolios and the liquidity they were able to realize on their hedge fund investments.

Part II explores participants' responses to these issues over the past 18 months:

- A large number of institutional investors initially tried to replace co-mingled exposures with separately managed accounts (SMAs) or Funds of One.
- Cost factors and trading/operational challenges associated with SMAs and Funds of One prompted many investors to reconsider this path by the late 2009/2010.
- Improvements in investors' perception of hedge fund engagement and infrastructure are helping swing interest back toward co-mingled structures.
- Hedge funds looking to diversify their mix of investors and attract more direct pension and endowment capital are becoming more "institutional," increasing their transparency, liquidity options and level of investor communications.
- Due diligence is now much more robust between investors and hedge funds and both investment and operational reviews are becoming an ongoing process that spans the life of the investment.
- Fund of Funds and consultants are creating more nuance within the hedge fund industry, adjusting their portfolio construction approach to align investment strategies along a "liquidity spectrum" and grouping strategies with similar profiles.

Part III assesses the likely impact of recent changes and extrapolates current trends:

- The hedge fund industry is moving toward a set of "segments" that group strategies with similar styles, leverage and liquidity—the emergence of these segments is helping blur distinctions between the long-only, Alternative and private equity silos.
- The least-liquid hedge fund segment offers a "complexity" or "illiquidity" premium making that more like a short-term private equity investment.
- The most-liquid hedge fund segment is now competing with an emerging class of "Alternative" mutual funds and regulated UCITS funds for investor allocations—these hedge funds and regulated Alternative vehicles are drawing allocations away from active long-only managers.
- Between these options and fast-growing "pure beta" ETFs and index funds, investors looking to take on exposure within an asset class can increasingly choose from a broad array of investment structures with differing risks, returns, liquidity profiles and fee structures in order to achieve diversification. "Asset-Based Structures" may become the new investor allocation paradigm.

Survey Introduction & Approach

Citi Perspectives is a new Prime Finance series that brings our clients timely, relevant and thoughtful information, leveraging our access and unique vantage point at the heart of the hedge fund industry.

This first *Citi Perspectives* publication, *The Liquidity Crisis and Its Impact on the Hedge Fund Industry*, is a summary of a recent survey conducted with a range of industry leaders.

While quantitative surveys are commonly used to gain input and information, the outputs of such research are often impersonal and only modestly informative as answers rarely expose the nuance of findings or tie sets of findings together to adequately identify and discuss emerging trends.

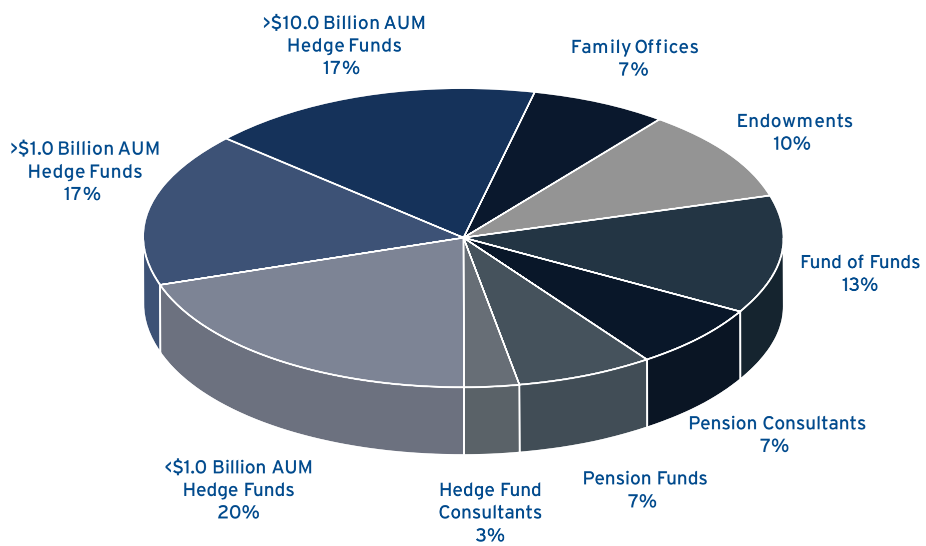
Our approach is different and much more qualitative. To get at the heart of industry needs, wants, opinions and thoughts, we conducted 30 in-depth, one-on-one interviews with an array of industry participants—across investors, intermediaries, hedge funds and service providers.

Using their inputs to spur internal discussion, we collected over 50 hours of dialog and used this material to obtain a 360-degree view of major themes and developments.

To underscore our findings and help quantify or support statements made by participants, we also incorporated data from leading industry research and publications. A listing of these references is available at the end of the report for those looking to learn more on specific topics.

Finally, to bring out the richness of our dialog, we have included many unattributed quotes from participants so that readers can get a sense of the "voices" contributing to the findings.

Mix of Interviewees



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Executive Summary

Over the last 10 years, the hedge fund industry has expanded rapidly. Between 2000-2007, Hedge Fund Research (HFR) shows a 4x increase in assets under management; a 2x increase in hedge fund managers and a 5x increase in the number of Fund of Funds. The speed of industry growth and extended period of capital inflows helped mask many process and structural issues that emerged in this period. These issues came to light in late 2008 as the credit crisis triggered a liquidity crisis in the hedge fund industry.

"By far the number one lesson learned in the past 18 months was that it's all about managing liquidity. The perils of an illiquid environment were misunderstood. The crisis uncovered a lot of other problems in the industry." – Fund of Fund & Seeder

Issues Uncovered In the Crisis

Hedge funds' ability to use their collateral to finance positions with their prime brokers became limited–forcing managers to de-lever or remain on the sidelines during a period of market opportunity.

By mid-September 2008, the LIBOR-OIS spread that reflects the willingness of banks to lend money to one another had risen to near record levels at 86 basis points ahead of 3rd-quarter 2008 bank earnings. The September 14th announcement of the Lehman Brothers bankruptcy and Bank of America/Merrill Lynch merger, followed by the drop of the Reserve money market fund under $1.00 on September 16th touched off a panic across the industry that resulted in this spread skyrocketing to 364 basis points by mid-October. This set the stage for a liquidity crisis in the hedge fund sector as prime brokers had diminished ability to fund positions and/or tap into their bank's balance sheet.

- Smaller funds were primarily in single prime relationships with one of two major industry participants. Anecdotal evidence suggests that at least one major firm began to manage funds off their platform and another called for increased collateral to sustain positions. Many small funds were left with no financing options and were forced to liquidate positions.
- Larger hedge funds tended to have multiple prime relationships which allowed them some insulation from any one prime broker's demise or demands. Even still, many with illiquid portfolios were forced to de-lever. Those with more liquid portfolios were better able to meet prime broker margin calls, but had little capacity to take advantage of market opportunities.

Spread Between 3-Month LIBOR & Overnight Index Swap Rate: Concern Turns to Panic

Sources: Citi Prime Finance, Bloomberg

"There were very attractive trades available during the crisis, if you could finance them. We had good terms on our portfolios, but not a lot of stand-by capacity."
– >$10.0 Billion AUM Hedge Fund

"We were in bed with [two largest prime brokers]. People were like, 'Okay, that's a good diverse place to be.' In September 2008, our prime brokers said you have to be in fully paid securities or out. There were points we thought we'd be out of business. Every day we were getting calls to take down our levels."
– <$1.0 Billion AUM Hedge Fund

Institutional investors found that their portfolio value and liquidity were impacted by other investor's actions and that, in many cases, there were unexpected assets being held in the portfolio that should have been outside a manager's mandate.

- Whether investors had allocated to a Fund of Fund or directly to a hedge fund manager, in the majority of cases their money was co-mingled with other investors' capital. During the crisis, managers had to choose actions that benefitted the totality of their investor pool. For many with illiquid assets, this caused them to throw up gates, create side pockets or suspend redemptions.
- The nature of some of these holdings came as a surprise to many investors as, up until the crisis, most hedge funds reported little to no information on their portfolio investments—only their portfolio returns.

Many Fund of Funds experienced a serious mismatch between the terms they offered on their portfolios and the liquidity they were able to realize on their hedge fund investments.

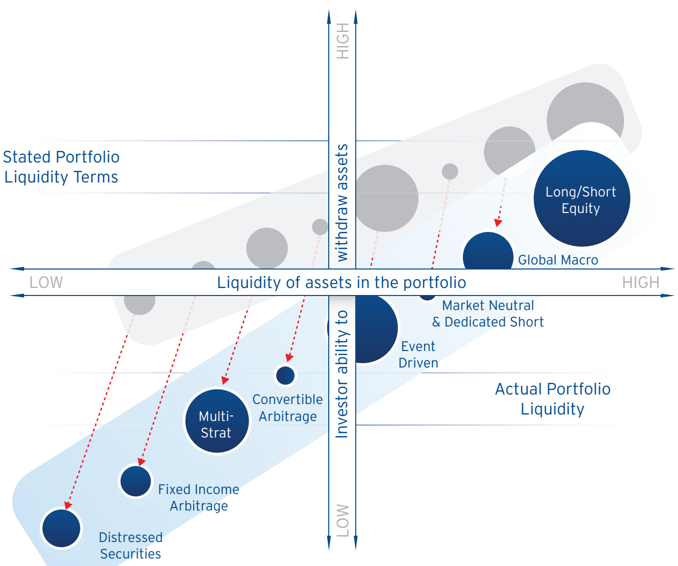
- In constructing their portfolios, they had mixed hedge fund managers with varying liquidity terms in order to achieve strategy diversification.
- A significant number of Fund of Funds failed to anticipate how illiquid many hedge funds would become in a period of concentrated outflows.
- Rather than being able to withdraw capital in a blended manner across their pool of managers, Fund of Funds found that their illiquid managers often could not or would not meet redemptions.
- Hedge funds with more liquid assets had to cover a disproportionate share of redemptions. This left the remaining assets in the fund increasingly less liquid.

"There were accepted practices going on in the industry up until 2008 that in retrospect look like a problem. Funds were using the liquidity of incoming investors to pay out the established investors without testing the investments themselves. It was hard to see this until everyone hit the exit at once and everyone starting asking for their money back at the same time."
– Fund of Fund & Seeder

"People are much more focused on and concerned about adjacency risk in hedge fund LP structures."
– Pension Fund Consultant

"What came out of the crisis was that managers had positions in the portfolio that were to the detriment of the investors in a stress period. Assets like private equity or unrated corporate debt. Many times, these assets were not even in the manager's mandate."
– Fund of Fund & Seeder

Illustrative Fund of Fund Liquidity in the Crisis



Sources: Citi Prime Finance, Size of bubbles represent HFR Q1 2010 AUM.

"The biggest lesson learned in the past 18 months has been that the agreed upon liquidity terms of a subscription agreement don't really matter when the markets are in distress—it's not a guarantee of when you'll be liquid."
– Pension Fund

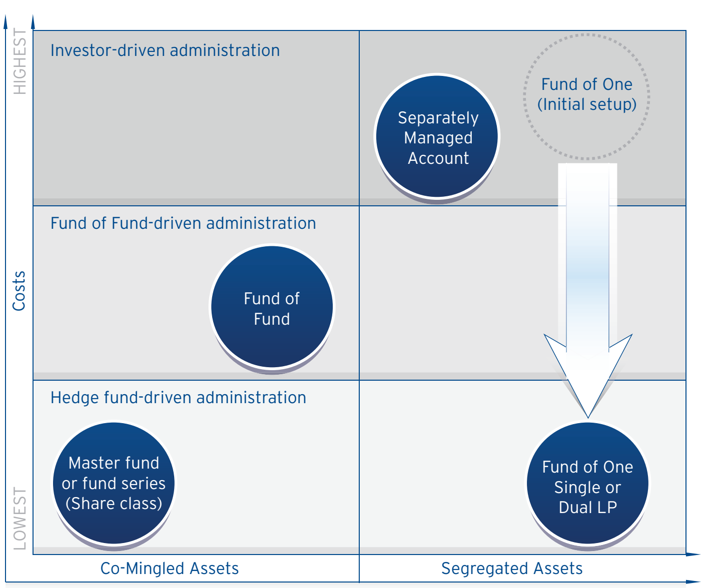
"For us, ensuring liquidity was our biggest lesson learned. Certain managers had to enforce gates or close and restructure their funds having several illiquid underlying investments. We had an idea of their liquidity. We had transparency into their positions. The problem was that everyone was selling, so that things that seemed liquid turned out not to be."
– Endowment

Responses to Issues Uncovered During the Crisis

Many institutional investors initially tried to replace co-mingled exposures with Separately Managed Accounts (SMAs) or Funds of One, but encountered significant trading, operational and cost concerns with these structures.

- SMAs were popular vehicles for investors seeking to replicate mutual fund portfolios and returns in the long-only space; however, many investors found that it was much more difficult to mimic hedge fund portfolios and returns.
- Many hedge fund investments require investors to hold their own ISDAs and separate prime broker terms. Many investors could not meet the operational demands of administering the SMA without a robust back office or costly platform manager.
- To reduce operational friction, many investors particularly Fund of Funds, began to explore Funds of One as a compromise structure between a co-mingled fund or an SMA. In a Fund of One, the investor is the sole LP owner or the dual LP owner along with the manager of a separate share class. These structures are easier to administer, but costly to set up.
- By 2010, improvements in investors' perception of hedge fund engagement and infrastructure were helping to swing interest back toward co-mingled structures.

Alternative Investment Legal Structures



Source: Citi Prime Finance

"On the long-only public side, we'll look at SMAs because they're easy to manage—not on the Alternative side. We don't have a back office and we don't have the capacity to manage a lot of ISDAs."
– Endowment

"We only had one investor ask to go to a managed account structure and we dissuaded them. It's very hard for unsophisticated investors to get involved in separately managed accounts. It can be very dangerous. You really need to have large organizations with a large back office to make them work."
– Fund of Fund

"Some Fund of Funds have negotiated special fees for a Fund of One. The incentive for a Fund of One can be better claw back provisions. Everyone knows that there is some beta in your strategy so having a Fund of One lets you put in a more reasonable hurdle."
– Pension Consultant

Hedge funds emerged from the liquidity crisis with the goal of diversifying their mix of investors and ensuring a more stable capital base—this involved them reducing Fund of Fund contributions and obtaining more direct pension fund, endowment and high-net-worth capital.

"Now we are focused on obtaining investor allocations from Sovereign Wealth Funds and Pension Funds outside the U.S. Previously, we had a higher percentage of Fund of Fund money because we were a relatively young hedge fund. Now, we're trying to broaden that set of investors to have more geographic diversity and more diversity by type of investor."
– >$1.0 Billion AUM Hedge Fund

"We came away from 2008 with a greater 'know your customer' emphasis and a commitment to diversify our marketing footprint. We are now much more interested in having a mix of investors."
– >$10.0 Billion AUM Hedge Fund

"We've opened up a relationship with a private bank and are offering our product via their high-net-worth platform. We don't see very large sums of money coming in from this platform at any given time, but it trickles in and it's pretty stable."
– <$1.0 Billion AUM Hedge Fund

To attract allocations, many hedge funds embarked on a series of operational and structural investments– creating more "institutional" organizations capable of sustaining direct investor communications and scrutiny.

- Across the industry, hedge funds diversified their set of service relationships, with nearly all funds now multi-prime. Many added custodians to ensure better asset protections and more stability for their portfolios.
- Many hedge funds improved their liquidity terms, increasing the frequency of redemptions and notice periods and shortening lock-ups, either in their flagship funds or as new share classes.
- Larger hedge funds invested money into their IT infrastructure, building out robust risk tools to help senior managers independently monitor activity across funds; integrating risk reports into real-time trade decision-making tools to support the investment process; and building shadow accounting and reporting systems to monitor their service provider data and activities.
- Many also expanded their operational staff and invested time and planning into cataloging and identifying risks across their entire set of processes.

Many hedge funds matched their improved infrastructure with a new willingness to provide investors transparency into their portfolios and the inner workings of their operations as part of expanded due diligence.

- Investors are looking to go to the "molecular level detail" on hedge fund portfolios and many hedge fund managers are facilitating this review by providing snapshots of their portfolios on a lag.
- Some hedge funds are also beginning to permission investors to see their prime broker or fund administrator reports directly or have agreed to report to an investor's chosen risk aggregator.
- Operational due diligence has also become a norm. Separate teams with deep operational backgrounds delve into the processes, controls and IT platforms at a fund.

"Performing a holdings-based analysis is now a standard part of our process." – Pension Consultant

"Two years ago when we started our operational due diligence, it was an optional service that clients could ask for , but that most didn't. Now this is becoming a standard part of our process."
– Pension Consultant

"Top of the list in terms of lessons learned has to be the requirement to have multiple prime broker relationships."
– <$1.0 Billion AUM Hedge Fund

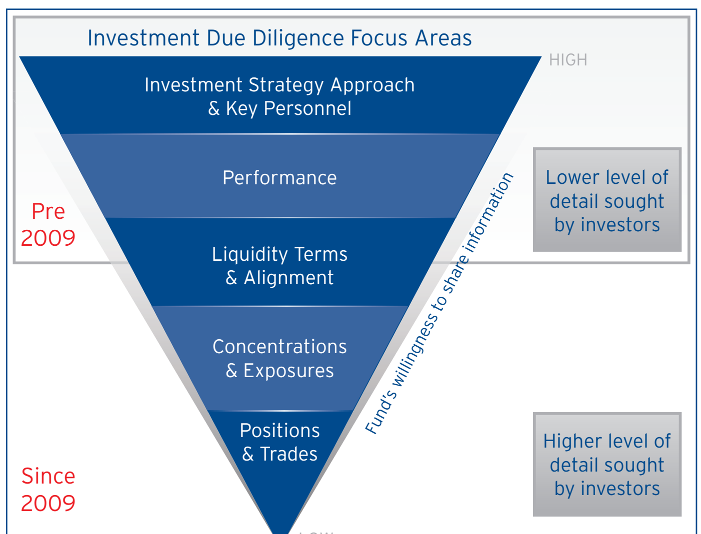
"We addressed our investor liquidity concerns by offering them more options. You can continue to do business with us at the same terms and the same fees, but if people are willing to pay up on fees for more liquidity, we are offering them an opportunity to do so through new series."
– >$1.0 Billion AUM Hedge Fund

"We developed our own proprietary risk application and have integrated our risk system as part of the research and investment decision-making process."
– <$1.0 Billion AUM Hedge Fund

"We invested heavily in IT ... We built a parallel system that captures a mirror accounting process and a mirror reporting process. We're not relying on one individual or one team. We want dual sets of eyes on everything."
– >$1.0 Billion AUM Hedge Fund

"Another thing we get kudos for is documenting every single procedure ... We don't hand it out, but when we pull out a 200-page document with that much detail, people go, 'Wow!'"
– <$1.0 Billion AUM Hedge Fund

Evolution of Investment Due Diligence



Source: Citi Prime Finance

Fund of Funds and consultants are creating more nuance within the hedge fund industry, adjusting their portfolio construction approach to align investment strategies along a "liquidity spectrum."

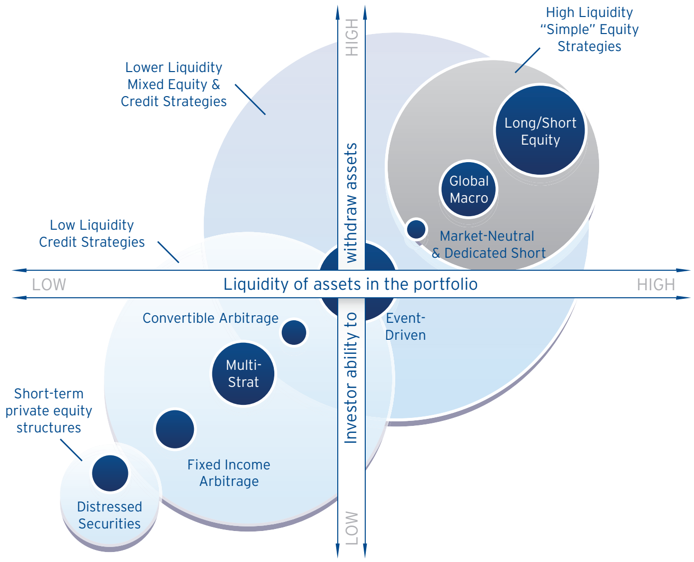
- Liquidity has emerged as a new third dimension in the evaluation of hedge fund investment strategies–supplementing the traditional considerations of style and leverage.
- Strategies invested in highly liquid underlying assets are being pressured to offer up more aggressive liquidity terms that offer investors better cash management options.
- Strategies in less-liquid assets are seen as being able to demand more intermediate terms, and strategies in illiquid assets are needing to incent investors to lock up capital through "complexity premiums."

"We converted to be a more liquid Fund of Fund. Believe it or not, we used to have annualized redemptions. What used to be annualized is now down to quarterly and what used to be quarterly is now down to monthly. We've had to think about which funds we can actually invest in to be able to offer those terms."
– Fund of Fund

"A liquidity and transparency focus is key. If you're doing a distressed or asset-backed liability strategy, you have to put that into a private equity or hybrid structure–not a quarterly structure. It just doesn't work."
– Fund of Fund & Seeder

"There is starting to be a complexity premium. People are willing to pay a liquidity premium for longer duration trades."
– Pension Consultant

The Emerging Liquidity Spectrum



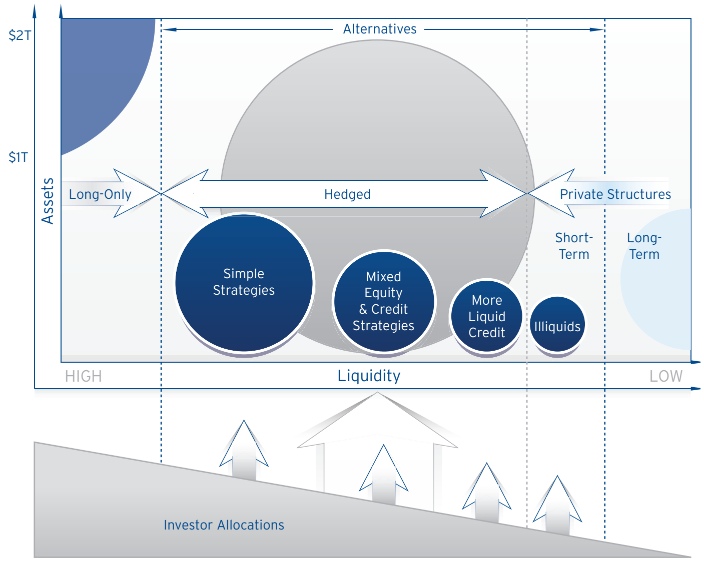
Sources: Citi Prime Finance, Size of bubbles represent HFR Q1 2010 AUM.

Implications of Recent Changes

Grouping hedge fund investment strategies by liquidity, style and leverage is moving the industry toward a set of 'segments.' The emergence of these segments is providing investors more choice for allocating within Alternatives and helping to blur distinctions with the long-only and private equity silos.

- The least-liquid hedge fund segment features strategies that invest in distressed and thinly traded securities as well as in "hard" assets, often linked to commodity production (i.e., copper mines).
- This segment is taking on the profile of a private equity investment. Investors are being offered incentives to lock up capital for extended periods and, as a result, are determining their level of interest vis-à-vis their private equity investment capital.
- The most-liquid hedge funds are now taking on profiles that narrow the gap between these strategies and traditional long-only investment fund offerings. Whereas previously, most hedge funds had, at best, quarterly liquidity and, oftentimes, annual or even bi-annual terms, that trend is shifting.
- Many hedge funds, particularly in liquid, equity-focused strategies, are now offering monthly liquidity options. UCITS funds, a regulated hedge fund structure offered in European markets, offer as frequent as weekly liquidity.

Emerging Asset Allocation: Focus on Alternatives



Sources: Citi Prime Finance, ICI, HFR, & Preqin

"The complexity premium is a function of how people are thinking about their incremental dollar. Where is it coming from? My PE pool? My long/short pool?"
– Pension Consultant

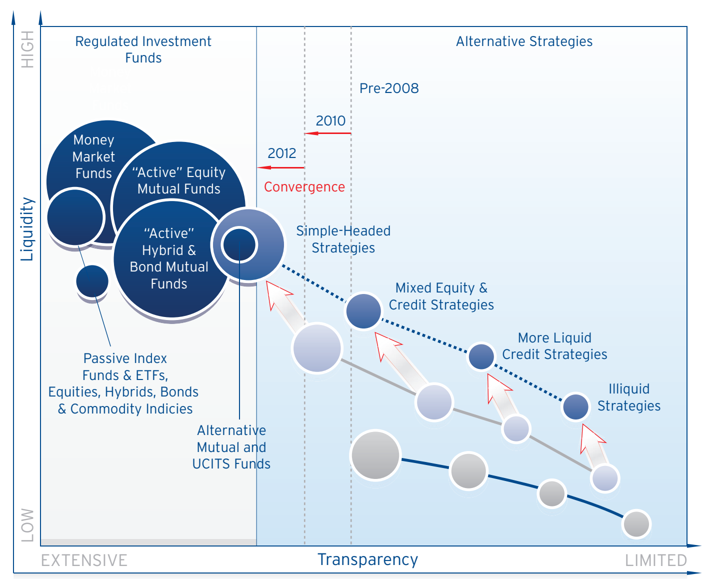
"I think the biggest change is going to be around the traditional silos of the investment management business. I don't see them staying as they are. We have a practice that looks across the liquidity spectrum—long-only, hedged, private structures. At their core, these are all similar in terms of their raw assets."
– Pension Consultant

"A secondary liquidity trend we're focusing on, given our European predominance, is the UCITS funds. We feel our strategies are well positioned to tap into this space. We trade primarily in quoted, liquid investments. We are not very concentrated and we don't use much leverage."
– >$1.0 Billion AUM Hedge Fund

Improved liquidity and transparency in simple hedged strategies position these funds as viable substitutes for investors looking at more aggressive, "active" long-only funds or new "Alternative mutual funds," for enhanced returns.

- Many institutional investors have begun to divert "relative" return allocations to "passive" ETFs and index funds as "active" long-only managers under-performed their benchmarks in recent years.
- To preserve allocations, many active long-only managers are beginning to launch new "Alternative mutual funds" that rely on investment techniques, typically used by hedge funds.
- SEI shows assets under management in Alternative mutual funds and regulated UCITS funds up $110 billion in 2009, to $367 billion—in a year when inflows to hedge funds and "active" long-only managers both fell.

Projected Convergence Between Regulated Funds & Alternatives



Sources: Citi Prime Finance, ICI, HFR. Size of bubbles are illustrative of AUM.

"A lot of investors are saying, 'Hey, my Equity book hasn't performed. I shouldn't have so much of my risk correlated at 1 with beta. Let's go into a hedged vehicle.' If you look across, allocations to Equities as a whole is flat or going down—if an investor was 60% in Equities, half of that is moving to hedge funds."
– Pension Consultant

"Do you want cheap beta and alpha overlay or do you want a hedge fund? We don't know how it will play out. One of the advantages of the UCITS framework in Europe is that it may raise institutional comfort for this type of product. Unfortunately, it might be the right product in the wrong geography."
– >$10.0 Billion AUM Hedge Fund

Increasingly, investors looking to take on exposure and achieve diversification within an asset class can choose from a broad array of investment structures–some regulated, some "institutionalized" and some private equity-like.

- This proliferation of choice could work to evolve institutional investors' approach to asset allocation.
- In the 1980s-1990s, investors used an asset class approach to allocation, balancing equities, bonds, cash and commodities in the portfolio.
- By the 2000s, investors had adapted to more complex markets by moving toward "portable alpha," where a portion of the portfolio was invested in strategies that were seen as uncorrelated to broad markets.
- Now there is evidence that investors may move toward an "asset-based structures" decision where they select an array of investment structures with differing risks, returns, liquidity profiles and fee structures within an asset class in order to achieve diversification.

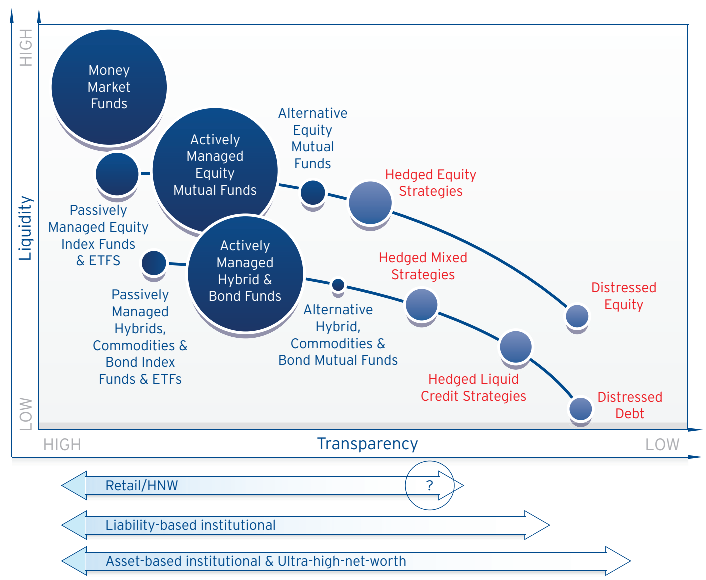
Hedge funds are likely to be the primary beneficiaries of this approach and attract large capital flows as investors shift allocations from "active" managers to Alternatives to achieve more aggressive returns and cover liability shortfalls.

- Greenwich Associates reported in their 2009 U.S. Investment Management survey that the value of assets in the portfolios of U.S. defined benefit plans declined to $5.9 trillion in 2009 from $7.2 trillion in 2008. This represents the lowest asset levels seen since 2003.
- Greenwich Associates also notes that among public funds, the nation's largest pension funds were hit the most substantially and that these participants now have a solvency ratio average of only 81% of their liabilities. Corporate pension funding levels also fell dramatically. Anecdotal feedback suggests that similar liability shortfalls are impacting European institutions as well.
- Finding attractive investment options to help cover these shortfalls is likely to turn institutional investors, particularly pension funds, increasingly toward hedge funds and/or hedge fund-like strategies.

"The largest open question in our mind is whether long-only Equity money is going to be viewed as just an 'Equity' allocation. Six months ago we had conversations about this, but we haven't seen it yet. We've not seen a ticket written on that basis, but we kick this around and talk about it a lot."
– >$10.0 Billion AUM Hedge Fund

"Blinders are starting to come off buyers' eyes. Mostly, it's the CFOs beginning to realize that long-only management is not really active."
– Pension Consultant

Asset Based Capital "Structures"



Sources: Citi Prime Finance, ICI, HFR. Size of bubbles are illustrative of AUM.

"Investors are starting to understand that there are much better options than just Equities."
– <$1.0 Billion AUM Hedge Fund

"Buyers on the institutional and high-net-worth side are basically firing their long-only managers and going after Alternatives managers."
– Pension Consultant

"Our interest in Alternatives has increased over the past 18 months and will likely continue to increase. This growth will be mostly in hedge funds."
– Pension Fund

Large hedge funds with "institutional" profiles are likely to be the main recipients of increased allocations. This will increase scrutiny on these managers about their ability to generate returns that do not correlate to beta.

- Indications are that the 200+ hedge funds managing at least $1.0 billion in assets each already control 69.5% of the industry's total assets. That figure is likely to become more concentrated.
- These firms are best positioned to sustain their operations and investments, based solely on their management fee in periods when fund returns are below previous high-water marks.
- Role specialization is also more evident at larger funds and most have built out extensive investor relations teams. This benefits the organization's ability to pursue and maintain direct relationships with institutional investors and their intermediaries in a period when investors are recognizing the benefit of such relationships, and looking to spend more time getting to know a manager.
- Large managers also have the trading expertise and reputation to either directly offer or forge affiliations with traditional managers to offer regulated Alternative funds. Such was the rationale for the BGI/Blackrock merger and other high-profile mergers or ventures announced recently.
- The biggest concern interviewees expressed about these large hedge funds drawing the majority of institutional flows is about whether the size of the fund itself becomes a hurdle in creating alpha. This uncertainty has existed for some time and was underscored during the liquidity crisis when many of the larger, more-liquid managers demonstrated a higher-than-expected correlation to beta in their portfolios.

"There has been a power shift toward investors substituting bigger managers in their portfolios."
– Pension Consultant

"There is a huge investor population not looking for aggressive returns. They're looking for consistent returns and really large hedge funds will serve that purpose."
– Hedge Fund Consultant

"For products like ours, that are running large correlated positions, clients are becoming much more aware of how our positions are constructed, and we're getting asked more and more about correlation to beta."
– >$1.0 Billion AUM Hedge Fund

"Smaller managers are having trouble in the new environment. All the money is going to the big guys now."
– Fund of Fund

Part I: Liquidity Crisis Reveals Critical Issues in the Industry

Between 2000 and mid-2008, the hedge fund industry grew rapidly in terms of funds, managers, assets under management and service providers. Expansion occurred against a backdrop of uninterrupted capital inflows and broad competition to secure capacity with established and emerging managers.

Investors entering the hedge fund space in this period were broadly seeking "alpha" and their intermediaries facilitated such exposure by creating portfolios that incorporated a broad mix of hedge fund investment strategies. The speed of the industry's expansion in these years and the breadth of participants involved in its growth made it difficult to spot potential issues.

The credit crisis at the major banks, concern about the financial system and falling securities markets caused inflows to turn to outflows by the Fall of 2008. As money began to exit the hedge fund space, this touched off a liquidity crisis in the industry, uncovering both process and structural issues that hedge fund industry participants were forced to address in 2009 and beyond.

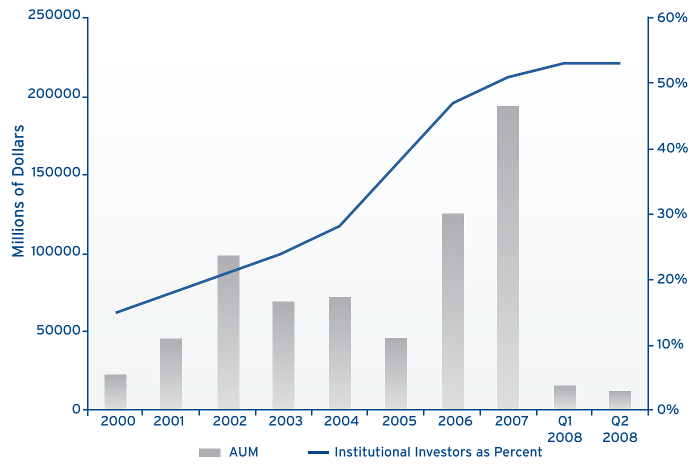
Boom Times In the Hedge Fund Industry: 2000-mid 2008

Hedge Fund Industry Expands Rapidly Post-2000

Between 2000 and 2003, assets under management in the hedge fund industry increased by 67.1%, according to HFR, rising from $490.6 billion to $820.0 billion—an average yearly growth rate of 18.7%. In 2000, hedge fund industry funding originated almost exclusively from high net worth individuals and a sprinkling of more ambitious endowments and foundations.

As the technology boom of the late 1990s faded and market turmoil set in during the early 2000s, institutional investors' allocations to long-only equities and bonds failed to generate the returns many sought. As their liability gaps increased, institutional investors began to broaden their investment horizon and look increasingly at Alternatives. This started off as a slow engagement that rapidly gained steam. In 2003, institutional funding of hedge funds accounted for less than 25% of assets. This situation soon began to change dramatically.

Net Asset Flows Into Hede Funds & Institutional Investor Share of Assets



Sources: HFR, McKinsey & Co., AIMA

Chart 1

As shown in Chart 1, inflows to hedge funds accelerated in 2006. Between 2003 and the peak of industry assets in the second quarter of 2008, assets under management increased by 135%, according to HFR, rising from $820.0 billion to $1.93 trillion—an annual average growth rate of 21%. In this same period, the share of industry assets attributed to institutional investors rose sharply, from less than 25% in 2003 to nearly 53% of assets.

"People who sprung up in the early 2000s, up to 2004, didn't need to have a track record. There was a lot of funding floating around."
– <$1.0 Billion Hedge Fund

"You can really say that the sweet spot for the hedge fund industry was 2003-2008. You could get great terms on your business and your clients were very performance oriented. 2008 was a watershed."
– >$1.0 Billion Hedge Fund

Despite the massive influx of institutional money, hedge fund managers as a whole remained fairly opaque in terms of sharing information on their portfolio holdings and communicating details of their investment approach. Most managers only reported performance information and, at best, gave investors some insight into their top holdings and overall leverage. Investors and Fund of Fund managers tolerated this situation.

Fund of Funds Become Primary Institutional Channel

Asset-allocation theory among institutional investors evolved rapidly in the early-2000s, shifting from the classic "asset-class" approach to a "portable alpha" mindset. Prior to this period, institutional investors sought active long-only managers with stock-picking skills, able to generate "relative" returns better than a standard industry benchmark. The amount that these investors were able to "beat" the index was the amount of absolute or "alpha" return that institutional investors earned on their portfolio. With the shift to the portable alpha theory, investors separated out their allocations, giving some to managers looking to replicate or beat benchmark returns and some to managers pursuing strategies that were seen as uncorrelated to the major markets.

The market downturn of the early 2000s was the spark for this shift in allocation approach. With all the major industry benchmarks down, a "relatively" good performance often meant that a manager was down less than the benchmark. Meanwhile, endowments and foundations that had invested with hedge funds saw positive returns on many of those investments in the corresponding period. This led to a belief that separating or "porting" the alpha component of a portfolio to a manager focused on "absolute" rather than "relative" returns would provide greater diversification.

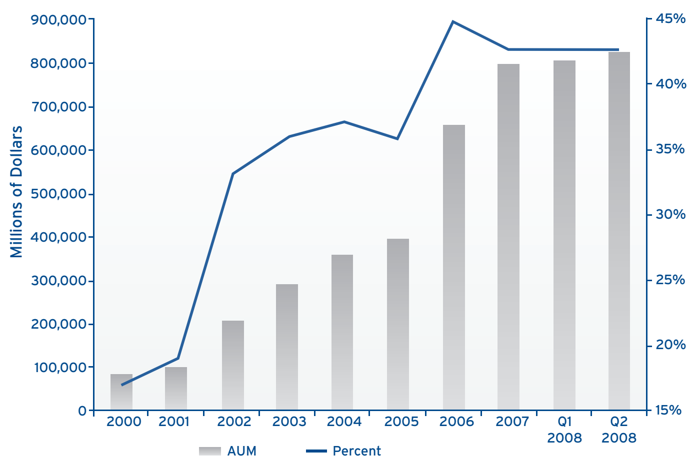
With this goal in mind, institutional investors began to channel funds into Alternative managers. Allocations were rarely done on a direct basis, however. Most institutional investor allocation units had been set up to focus solely on long-only managers and had little exposure or understanding of many of the investment techniques utilized in the Alternatives space, such as shorting, leverage, financing or hedging.

Moreover, institutional allocators were used to dealing with large investment management firms, not with small sell-side spin-outs where the managers themselves were often the point of contact, and where there was typically only a light infrastructure.

Finally, institutional allocators wanted exposure to alpha, but did not have the time, skill set or staff to pick and choose among the broad number of managers and varying strategies being utilized in the Alternatives space. All of these factors prompted institutional investors to turn primarily to one of two types of intermediaries.

> *"Looking back, there was clearly an over-concentration of Fund of Funds, but this was easy money. They made it easy to launch new products and launch them into what appeared to be bottomless pools of money."*
> *– >$10 Billion AUM Hedge Fund*

Fund of Hedge Fund Assets Under Management & Share of Total Industry



Sources: HFR

Chart 2

Institutional investors either developed a direct relationship with a Fund of Funds focused on the hedge fund space or they used an institutional consultant. Consultants would then help investors pick Fund of Funds or occasionally single managers to receive a direct allocation.

As shown in Chart 2, in 2000, Fund of Funds had $83.5 billion, or 17% of the hedge fund industry's assets, under management. By 2003, that figure had more than tripled, to $293.3 billion, and Fund of Funds' share of the Alternatives market had more than doubled, to 36%. Between 2003 and 2008, gains continued. By the second-quarter of 2008, Fund of Fund assets under management in the hedge fund space amounted to $825.9 billion, or 43% of assets under management.

Ensuring Capacity Trumps Extensive Due Diligence

Structurally, the hedge fund industry (particularly in the early 2000s) was not well aligned to taking in vast amounts of institutional money. While there were large numbers of managers, the assets in the industry were heavily concentrated with a small number of firms. According to HFR, there were 3,335 hedge funds in existence in 2000. The vast majority of these funds were single-manager shops running $100 million or less in assets. Even by the end of 2009, with 6,836 hedge funds listed in the HFR database, the annual "Billion Dollar Plus" roster put out by Absolute Returns listed only 213 firms with more than $1.0 billion assets under management. These 213 firms controlled 69.5% of the industry's assets.

Finding homes for all of the money pouring into the Alternatives markets and to Fund of Funds was thus a challenging task. Many of the largest hedge fund managers filled their capacity quickly and favored existing investors when opening new funds. New Fund of Funds entering the space to service the institutional market focused on emerging managers, looking to lock up their capacity.

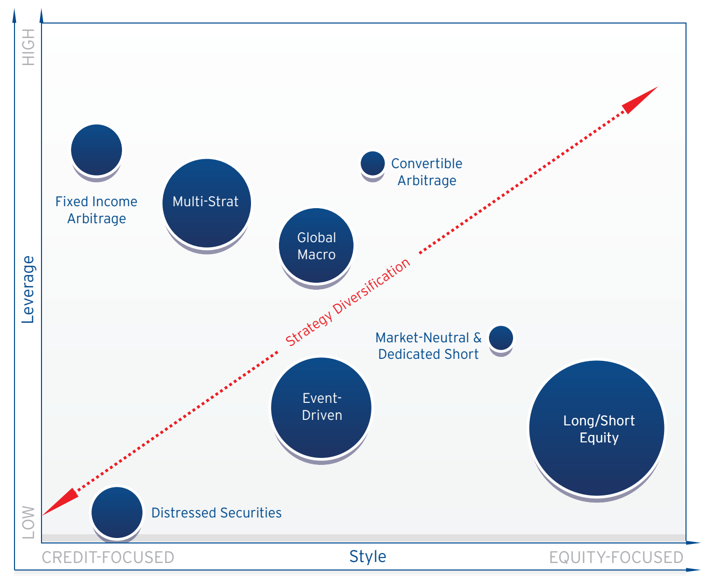
Pressure to find, establish a relationship and ensure capacity with a preferred hedge fund manager was intense. Oftentimes, managers had just spun out of either successful Alternative firms or from proprietary trading desks on the sell-side. These managers had little-to-no track record and allocations were being done on the basis of reputation alone. Locking in a manager was seen as key. Due diligence being done around the operational controls of the manager's firm was often minimal, typically limited to filling in answers on a standard questionnaire.

This reliance on a manager's reputation and the industry's limited focus on Operational due diligence were the roots of process issues, dramatically underscored by the Madoff scandal in late 2008.

Spreading the "Bets" through Strategy Diversification

Fund of Funds' and institutional consultants' approach for creating exposure to Alternatives was another factor that set the stage for much of the shake-out that occurred in 2008-2009.

Typical Fund of Fund/Mixed Alternatives Portfolio



Sources: Citi Prime Finance, Size of bubbles represent HFR Q1 2010 AUM.

Chart 3

> *"We launched in 2007. Our biggest investor was a Fund of Funds. Their initial ticket to us was $25 million. Then, they wrote us a ticket for $15 million and then another ticket for $20 million. There was no due diligence. They didn't speak to our Prime Broker or HFA. They came in with a one-page informational agreement. It was very shocking to us that business was being done this way and that it was being done this way across the industry."*
>
> *– <$1.0 Billion AUM Hedge Fund*

For the most part, institutional investors had a broad mandate of wanting "alpha" when they approached their consultants or Fund of Fund managers. There was little guidance beyond that goal. Given their lack of knowledge and familiarity with the space, institutional investors trusted their intermediaries to determine who would be the best managers to provide that alpha. Consultants and Fund of Funds had a broad landscape of varying Alternative strategies and techniques to select from in making that determination.

Chart 3 illustrates the breadth of investment strategy offerings available in the Alternatives space. From a style perspective, these strategies ranged from Equity-Focused to Mixed to Credit-Focused. Each strategy also had a unique approach in terms of its typical use of leverage to ensure returns and highly diverse amounts of assets under management (as illustrated by the size of the circles).

Most Fund of Fund managers chose to diversify across this spectrum. They would select a mix of managers across different styles and leverage profiles. This met the goal of "spreading the bets" in the Alternatives space, enhancing the odds that at least some strategies in the portfolio would excel and achieve solid alpha returns regardless of market conditions.

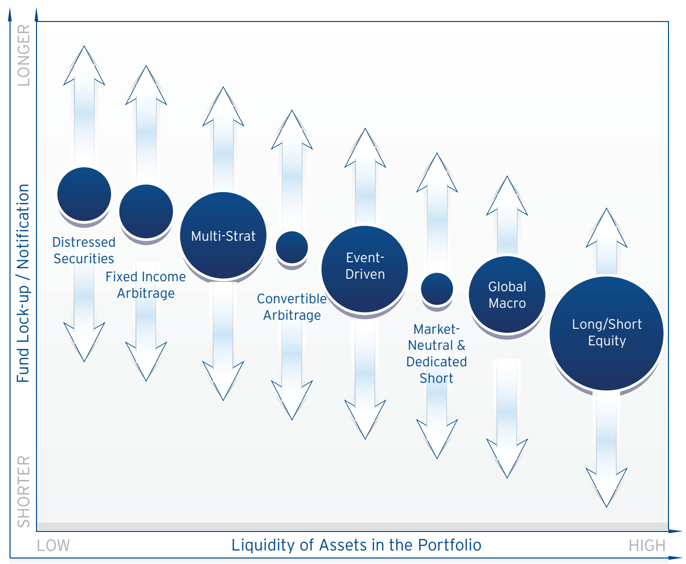
While each individual Fund of Fund determined their own mix of investment managers, over time, Macro and asset-related Credit strategies rose both in terms of industry assets and holdings in Fund of Fund portfolios. HFR shows that between 2000 and 2nd-quarter 2008, Macro, Relative Value and Distressed hedge fund strategies rose from 34% of industry assets under management to 48%. Rising emphasis on these strategies had shifted Fund of Funds blended portfolios toward less-liquid assets with longer lock-ups/notification terms by the middle of 2008.

Fund of Fund Portfolios Mix Liquidity Profiles

Hedge fund managers each offer a unique set of liquidity terms around their portfolio. These terms dictate the minimum amount of time the money allocated to their fund must be left with the manager (lock-up); how frequently investors have an option, once their lock-up period is complete, to redeem money out of the fund (redemption period); and how far in advance of a redemption their investors must notify them of their intention to withdraw money (notice period).

Most hedge funds indicated that they had set their terms in relation to the perceived liquidity of the assets held in their portfolio. There are no "standard" terms. As illustrated in Chart 4, even managers pursuing the same investment strategy can offer a range of more or less aggressive liquidity terms.

Typical Fund of Fund/Mixed Alternatives Portfolio



Sources: Citi Prime Finance, Size of bubbles represent HFR Q1 2010 AUM.

Chart 4

"Our final lesson learned from the crisis to watch out for 'deworsification.' You can't just throw stuff into the portfolio and expect to make money. You need to pick best-of-breed managers with exceptional skill. We're opportunistic. We're not looking to fill a bucket."
– Endowment

"Globally, Fund of Funds were chasing yields and returns. They were choosing more and more guys to put in the portfolio who were chasing yield through private structures, and they were trying to offer that out to investors in a quarterly structure. It was a liquidity mismatch."
– <$1.0 Billion AUM Hedge Fund

"For our part, we had always run our funds on the asset-to-liability profile we needed. We underestimated the ability of our customer base to misunderstand this very important relationship."
– >$1.0 Billion AUM Hedge Fund

Most Equity-focused strategies tend to offer shorter liquidity terms, as these assets can be more readily exited in broadly traded markets. As strategies start to incorporate less liquid assets, the terms being offered by the hedge fund manager tend to extend out. Strategies heavily focused in less-liquid Credit or Distressed Securities require longer liquidity terms in order to ensure an orderly dissolution of assets.

Many hedge fund managers, particularly in strategies with less-liquid assets, required Fund of Funds and other investors to agree to additional cash management terms. These terms included granting the hedge fund manager an ability to "gate" and limit withdrawals from the fund and/or an ability to impose "side pockets," where less-liquid portions of the fund could be isolated while more-liquid parts of the fund could be exited. These emergency measures could be triggered at the hedge fund manager's discretion to control the outflow of assets from their funds in order to protect the fund's overall value for remaining investors.

To achieve their desired level of strategy diversification, Fund of Funds or investors who worked with consultants to create their own mixed Alternative portfolios would combine hedge fund strategies with varying liquidity terms into the same portfolio. It was not uncommon to have a highly liquid Equity Long/Short strategy with a 30-day notice period and monthly redemption window held in the same portfolio as a Distressed Credit strategy with a 90-day notice period, and annual redemption window.

As shown in Chart 5, the Fund of Fund would then "wrap" this mixed portfolio of investments into a structure that had its own set of liquidity terms for institutional or other investors.

Just as the hedge fund managers had done, the Fund of Fund manager would dictate how frequently their investors would be able to redeem capital and how much notice they would have to provide to the Fund of Fund manager before withdrawing money.

So long as money was flowing consistently into the hedge fund industry, and to Fund of Funds in particular, assumptions underlying how Fund of Funds set their portfolio terms remained untested. As outflows began in the Fall of 2008, it became clear in many instances that there was a mismatch between the portfolio and the investment manager terms.

"The investor community changed dramatically in how they think about their own liquidity. Prior to the 2008 crisis, liquidity was not on their Top 5 or even their Top 20 list. It was clear—looking at a lot of the Fund of Funds and even some of the more sophisticated investors—that they had not thought about their own asset-to-liability matching."
- <$1.0 Billion AUM Hedge Fund

Fund of Fund Portfolio Liquidity Structure

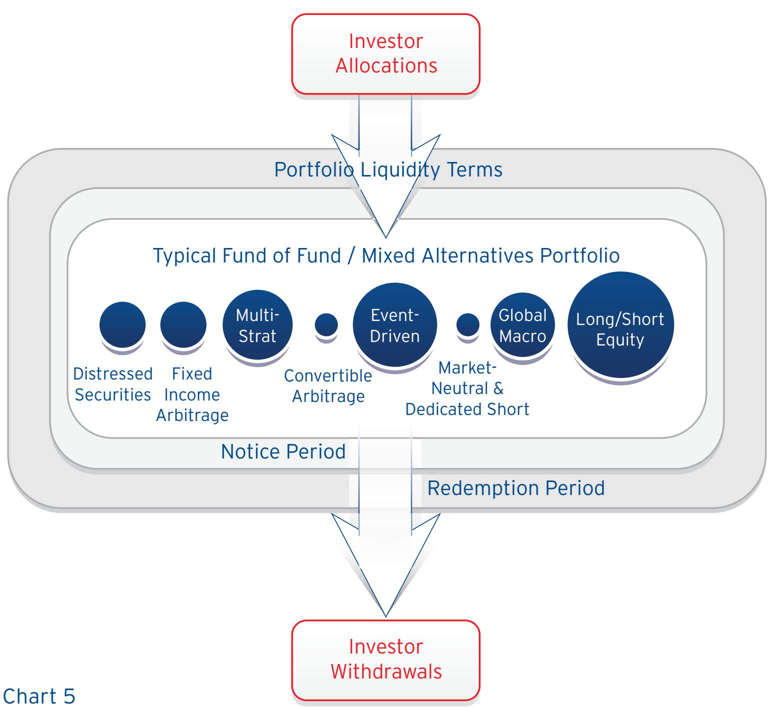


Chart 5

> *"It now looks like hedge funds were better-capitalized than banks were, going into the crisis."*
> *– >$10.0 Billion AUM Hedge Fund*

Bank Credit Tightening Adversely Affects Hedge Funds

Credit tightening in the intra-bank market in response to the sub-prime mortgage crisis and rampant counterparty concerns impacted prime brokers' ability to provide financing to hedge funds in the fall of 2008. This led to a liquidity crisis that rocked the hedge fund industry over the following months.

Banks Suffer Liquidity Hits Due to Sub-Prime Crisis

Because it unfolded over such a long period, it is easy to forget just how dramatically the sub-prime mortgage crisis had been affecting the banking industry prior to September 2008.

As Chart 6 illustrates, whereas the S&P 500 Index dropped 23.8% from its peak in 2007, the Financial sector declined by 49.6% before the September 14, 2008 announcement of the Lehman Brothers bankruptcy filing and the Merrill Lynch/Bank of America merger.

Throughout this period of falling prices, concerns about bank balance sheets and their stability as counterparts had been rising. This impacted their willingness to lend money to one another.

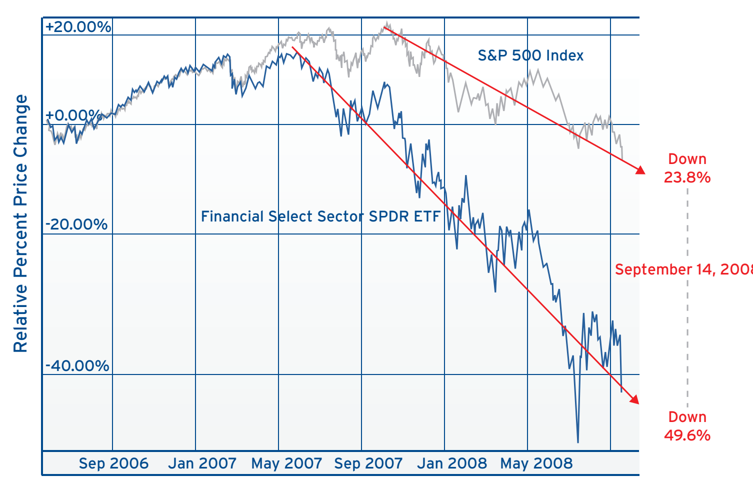
Chart 7 lays out a timeline for key events in the sub-prime crisis up until September 14, 2008. These events are overlaid on top of the 3-month LIBOR-Overnight Index Swap (OIS) spread. This spread is commonly perceived as a measure of how risky it would be for banks to lend their money to each other.

In the early months of 2007 when Freddie Mac announced that it was no longer going to buy risky sub-prime mortgages and mortgage lender New Century filed for Chapter 11, the 3-month LIBOR-OIS spread was flat at about 7-8 basis points. This reflected a situation where banks were easily lending funds to one another and where there was no systemic concern about liquidity.

The spread remained essentially flat even through the events of June and early July 2007, when Bear Stearns first suspended redemptions out of—and then liquidated—two of its mortgage-focused hedge funds, and when Merrill Lynch subsequently seized $800 million in assets from Bear Stearns to cover their exposure to those funds.

This situation changed dramatically in late July, however, when Countrywide, the largest mortgage lender in the United States, warned of "difficult conditions" and drew down their entire $11 billion credit line to help sustain operations.

Broad Market vs. Financials Sector Up to Lehman Brothers Bankruptcy



Sources: Citi Prime Finance, SectorsSPDR.com

Chart 6

By August 2007, another major U.S. mortgage lender, American Home Mortgage Investment Corporation, filed for bankruptcy and BNP Paribas halted redemptions on three of its mortgage-backed funds. These events caused the 3-month LIBOR-OIS spread to skyrocket from less than 10 to over 90 basis points. The spread remained elevated and concern about banks' creditworthiness remained evident for the next year.

Fears of bank failures grew steadily in this period after successive quarters of large mortgage-related losses, the "fire sale" of Bear Stearns to J.P. Morgan Chase in March 2008 and the failure of IndyMac Bank, the fourth-largest bank failure in the U.S. in July 2008. By September 2008, the entire investment community was on edge about the potential for more bank failures as third-quarter earnings became due.

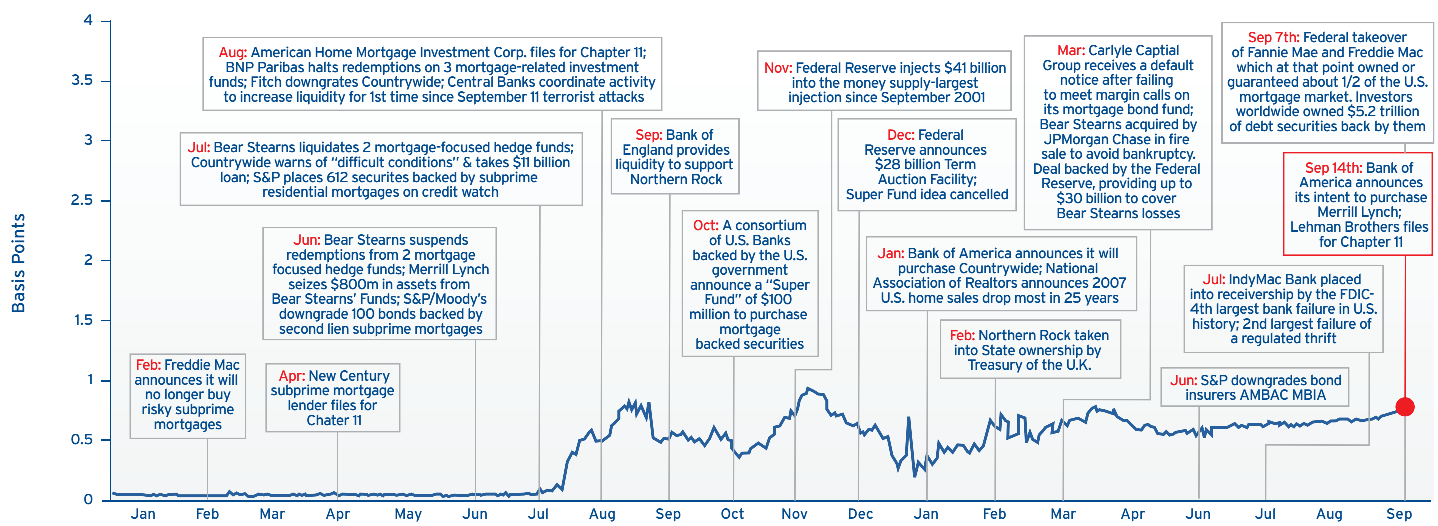
Anxiety became heightened in early September as the U.S. government announced a takeover of Fannie Mae and Freddie Mac, making them the owner or guarantor of nearly half of all the mortgages in the United States. At that point in time, investors worldwide held $5.2 trillion in debt securities backed by the agencies.

The 3-month LIBOR-OIS spread returned to all-time-high territory just as an emergency meeting was called with the bank heads in Washington D.C., the weekend of September 13-14th. That meeting culminated with the announcement that Bank of America would merge with Merrill Lynch and that Lehman Brothers would file for Chapter 11.

Counterparty Concerns Skyrocket—Shutting Down Credit

It took 591 days for events to unfold between Freddie Mac's announcement in February 2007 that it would no longer buy risky sub-prime mortgages to the announcement of Lehman Brothers' bankruptcy. Events accelerated sharply from that point forward. The next 29 days, from September 15 to October 14, 2008, are likely to go down in history as one of the most volatile and risky periods in the global financial markets, when many worried over the very survival of the banking system.

Spread Between 3-Month LIBOR & Overnight Index Swap Rate During Subprime Mortgage Crisis: 2007 through september 14,2008



Sources: Bloomberg; stlouisfed.org; cnnmoney.com; wikipedia.org

Chart 7

Chart 8 illustrates the drama of these 29 days.

Spread Between 3-Month LIBOR & Overnight Index Swap Rate: Concern Turns To Panic

Chart 8

As noted previously, the 3-month LIBOR-OIS spread was 86 basis points on September 12, 2008, holding near its all-time high when the markets closed for the weekend. When markets reopened on Monday September 15th, the impact of three major banks going through such radical change spooked lenders. The blowout of the spread over the next four weeks reflected rampant counterparty fears which resulted in a complete halt in banks' willingness to loan funds to one another. By October 13, 2008, the spread had widened out to 364 basis points.

Chart 9 provides details on the key activities in this 29-day window.

Following the Lehman Brothers announcement, investors exposed to Lehman Brothers debt began to realize losses. The Reserve Primary Fund, the U.S.'s oldest money market fund, realized losses on $785 million in Lehman Brothers commercial paper and medium-term notes on September 16th. Asset values in the fund plunged in Monday's and Tuesday's trading sessions, "breaking the buck" to close at 97 cents a share by Tuesday's close, causing the fund to suspend redemptions for seven days.

This was only the second time in history that a money market had fallen below $1.00 a share net asset value–the minimum level at which investors expected their principal investment to hold. S&P lowered their principal stability rating on the Reserve Primary Fund and on their International Liquidity Fund as well as put nine other Reserve funds on its credit watch list.

The Federal Reserve was forced to step in and take extraordinary actions, including guaranteeing money market funds and loosening lending terms for bank holding companies. This helped alleviate commercial paper market fears. As those fears eased, counterparty concerns continued.

Amid heightened concern about additional investment bank failures, both Goldman Sachs and Morgan Stanley, the last remaining U.S. investment banks, announced that they would change their legal status and become bank holding companies over the weekend of September 20-21. This move paved the way for those firms to be able to access the Federal Reserve's emergency lending facilities and broaden their ability to pledge different types of collateral. These moves helped to stem concerns about their balance sheets.

"Before the crisis, we were focused on the right things—who our counterparties were, including our lines of financing. For the most part, things worked ... We used to plan against a collapse of one and maybe two counterparties. There was a time in 2008 when it seemed like you could see several in a week."

– >$10.0 Billion AUM Hedge Fund

"During the crisis, counterparty concern went from theory to practice. You could have lived three lifetimes and not have had to understand your documents and contracts and ISDAs to the extent we ended up having to. This could have all been theory for decades, but it got put into practice with practically no time to plan."

– <$1.0 Billion AUM Hedge Fund

Spread Between 3-Month LIBOR & Overnight Index Swap
Concern Turns to Panic- Timeline of Events

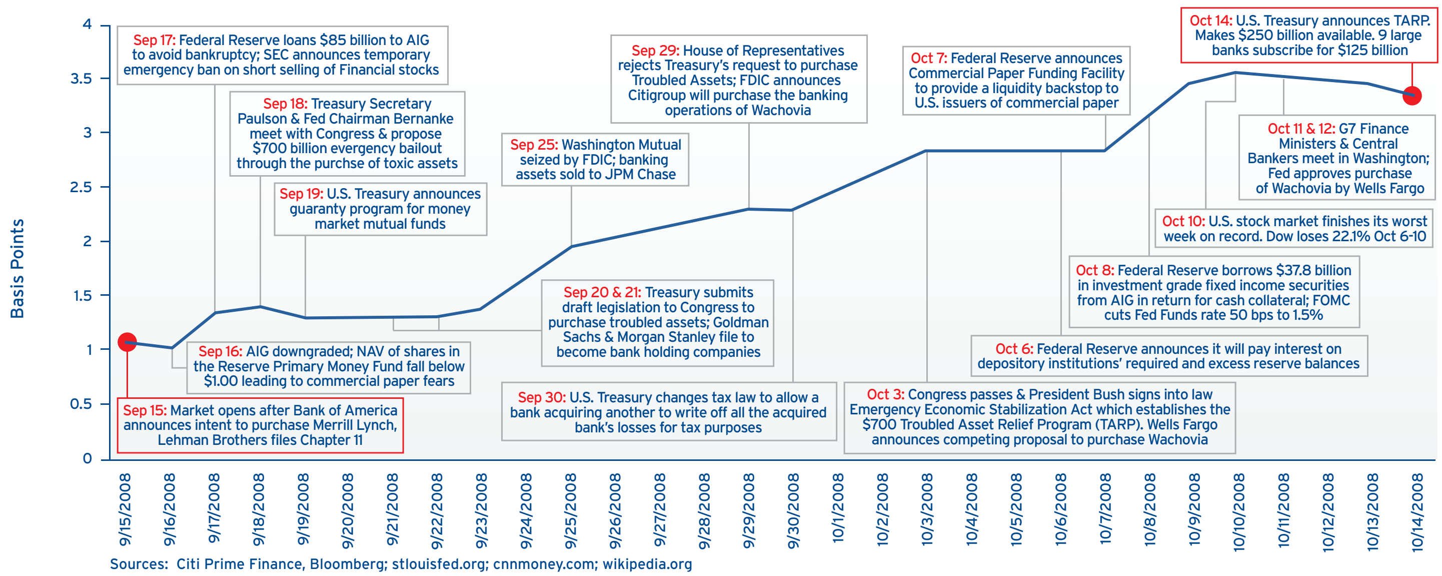


Chart 9

Nonetheless, the seizure of Washington Mutual and transfer of its assets to J.P. Morgan Chase on September 25th and the FDIC's announcement that they were looking to find a buyer for Wachovia on September 29th kept fears of bank failures high and the 3-month LIBOR-OIS spread climbing.

Although the passage of the Emergency Economic Stabilization Act that established the Troubled Asset Relief Program occurred in early October, it was not until mid-October that the U.S. Treasury was in a position to begin awarding funds. The 3-month LIBOR-OIS spread peaked as these funds became available. On October 14, 2008, nine of the largest U.S. banks collectively received injections of $125 billion.

While this move tempered panic about the stability of the overall system, actions taken by the banks to enhance their liquidity profile in response to the skyrocketing cost of capital began to spill over into the hedge fund space.

> *"One key lesson learned for us about Prime Brokerage is that you should not rely on reputations."*
> *– Pension Consultant*

Bank Liquidity Concerns Hit the Prime Brokerage Space

Banks, through their prime brokerage units, were the dominant lenders to the hedge fund community. Prime brokers provide credit to hedge funds and fund this ability through re-hypothecation—pledging of securities in a customer's margin account—and through use of their bank's underlying balance sheet.

> *"Prior to the severe price dislocation in August/September 2008, we had a primary relationship with one prime broker. This did not serve us well. This prime broker basically exited the business overnight."*
> *– <$1.0 Billion AUM Hedge Fund*

As the banks stopped lending to each other and the cost to borrow capital in the intra-bank market became prohibitive, the ability of prime brokers to raise funds and extend credit became constrained. Many assets held in customer margin accounts became illiquid, making it hard to obtain financing on those securities. Balance sheet concerns prompted treasury groups within the major banks to horde their own cash to ensure their bank's survival—limiting the ability of their prime brokerage units to draw on these reserves.

Prime brokers responded by requiring their hedge fund clients to increase the amount of collateral required in order to maintain or establish positions. Only the most liquid collateral types or cash were deemed acceptable.

These developments impacted hedge funds across the board.

Cash Constraints Force Hedge Fund Liquidations

Smaller funds with less than $1.0 billion assets under management were primarily "single" prime in the latter half of 2008. This meant that these hedge funds had a primary or exclusive relationship with only one prime broker on whom they were nearly wholly reliant for credit and financing to remain in business. These participants controlled only about 30% of the hedge fund industry's total assets, but from a numbers perspective there were thousands of these smaller participants.

As prime brokerage credit tightened, collateral requests increased and market prices declined. Many smaller hedge funds were forced to liquidate positions to meet margin calls on their portfolios. In some instances, the assets held in these portfolios were not liquid enough to sell easily and the funds were forced to take substantial hits as they exited positions.

> *"We needed to be able to post convertibles as collateral. It didn't give us ample room to explore opportunities in the market that we knew were there, but we needed any kind of credit we could get."*
> *– <$1.0 Billion AUM Hedge Fund*

The concentration of prime brokerage market share at just two firms had a disproportionate impact on smaller clients. Relationship managers at the two firms that controlled 55%-60% of market share were more focused on working with the larger hedge funds whose greater asset levels had more impact on the prime broker's business and exposures. Anecdotal evidence suggests one major firm was looking to actively manage many of their smaller hedge fund clients off their platform during the latter months of 2008.

Larger hedge funds with more than $1.0 billion assets under management were far fewer in number (only 200-300) but typically controlled the majority (~70%) of assets. These participants had moved to a multi-prime model in earlier years and usually had several prime brokers with whom they maintained active relationships by the latter part of 2008.

Having greater diversification across their prime brokerage set helped many of these larger participants weather the events of 2008 more effectively. More-liquid large hedge funds were able to use at least portions of their assets to continue to secure financing, but the amount of cash they were able to raise was adversely affected by tightness in the funding market. To maintain margin requirements, many of these hedge funds were forced to post their most liquid assets or cash. This left many of these participants without excess cash on hand to invest in this period.

Many larger hedge funds with less-liquid assets were forced to de-lever despite having a broader set of prime brokers as they sought to manage their exposure.

For those hedge funds (large and small) with assets caught up in the Lehman Brothers bankruptcy filing, that situation was more severe as collateral postings made prior to September 14th, 2008 were frozen as part of the legal proceedings and unavailable to use during the volatile market conditions.

> *"We were in bed with [the two largest prime brokers]. People were like, 'Okay, that's a good diverse place to be.' In September 2008, our prime brokers said you have to be in fully paid securities or out. There were points we thought we'd be out of business. Every day we were getting calls to take down our levels."*
> *– <$1.0 Billion AUM Hedge Fund*

Asset Protection Fears Accelerate De-Levering

The legal entity where a significant portion of Lehman Brothers prime brokerage clients' collateral postings were being held was another factor feeding uncertainty. Lehman Brother's prime brokerage unit had channeled much of their client business through their international, as opposed to their U.S., legal entity. This reflected the bank's "arranging" business whereby clients were able to obtain greater than Reg T leverage levels outside the United States legal jurisdiction.

While arranging is a common prime brokerage service, anecdotal evidence suggests that Lehman Brothers had a different structure and were more aggressive in their offering than other prime brokers. Indications were that Lehman Brothers had a higher proportion of client's excess collateral held in their international legal entity as compared to other prime brokers.

There were no legal precedents on what investor protections were afforded to assets held in Lehman Brothers International entity during the bankruptcy proceedings. Asset holders were left in an uncertain predicament. This was not an outcome that many in the industry had considered prior to the events of September 2008.

The direct impact of this situation was clearly on those hedge funds and their investors caught in the legal proceeding.

The indirect impact, however, was that many investors and hedge funds became concerned about better protecting their assets. Even clients unaffiliated with Lehman Brothers prime brokerage began to voluntarily reduce their leverage and shift their collateral holdings out of their prime broker's international entities.

Investors Reverse Allocations & Hedge Funds See Outflows

Investors too began to notify their Fund of Funds and hedge fund managers of their intent to redeem allocations to meet capital calls and as part of their general shift out of the securities markets and into cash.

For the first time in over a decade, the Alternatives industry experienced a net outflow rather than a net inflow of capital. This exposed frauds that had gone undetected in the industry—the most prominent being the Bernard Madoff "ponzi" scheme, which came to light on December 9, 2008.

Investors Exit Securities and Shift to Cash

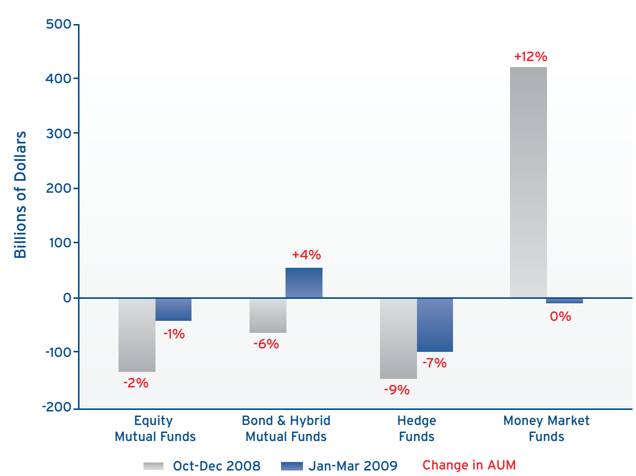
From October 6-10, 2008, the U.S. stock market recorded its worst week on record, falling 22.1% over the course of five trading sessions. This inauspicious start to the final quarter coming on the heels of already substantial market declines, touched off a significant shift of institutional investor assets out of securities investments and into cash. This is illustrated in Chart 10.

"We understood well in advance the risks we had when it came to asset segregation. We had been proactively talking to all our primes and pushing people. I guess the lesson learned is that we pushed, but we didn't act. We kept giving our primes more time. We ended up taking a hit on Lehman Brothers."
– >$10.0 Billion AUM Hedge Fund

"High net worth investors were negatively impacted by the recession, and then negatively hit again by taxes. These investors tend to invest in more than just Alternative funds. They needed that money unexpectedly."
– Fund of Funds

"We took bets off and built up a mountain of cash. We tend to be prudent. We require six weeks notification ahead of end of quarter. We knew on November 15th what we'd have to pay out on the 15th day of the new quarter. We didn't want to bet on money being available in January 2009. We went through a disciplined process—generating cash well ahead of the distribution date. We went through the same process again on February 15th."
– >$1.0 Billion AUM Hedge Fund

Investor Fund Flows: Q4 2008 & Q1 2009



Sources: Lipper Fund Flows Reports; 10/08, 12/08, 1/09 & 3/09; Lipper Riding the Currents report April 2010; HFR Q4 2008 & Q1 2009

Chart 10

Outflows from the hedge fund industry in the fourth quarter of 2008 amounted to $151.7 billion. This compared to outflows of $140.0 billion from stock and mixed equity mutual funds and outflows of $67.8 billion from bond mutual funds.

Given the size of these long-only mutual funds, the dollar amounts had only minimal impact on their overall assets under management. By comparison, withdrawals of this magnitude hit hedge funds much harder, amounting to 9% of total industry holdings.

The newly guaranteed U.S. money markets and international money markets were the primary recipients of this liquidated capital. Inflows to money market mutual funds topped $418 billion in the fourth quarter, a 12% rise in assets under management.

By the beginning of 2009, the pace of these withdrawals slowed appreciably for equity mutual funds. The trend reversed and investors actually added assets to bond mutual funds by the end of the first quarter.

Hedge funds did not fare nearly as well, however. News of the Madoff scandal emerged in early December 2008, triggering yet another wave of investor liquidations in the hedge fund space. This drove assets under management down an additional $103.3 billion and pared another 7% off of total hedge fund industry holdings.

Madoff Scandal Touches Off Panic in the Fund of Funds Market

A comparison of where investor withdrawals hit the hedge fund industry in the final quarter of 2008 and first quarter of 2009 reveals an interesting pattern. Chart 11 shows net outflows from single hedge fund managers and from Fund of Funds managers in these periods.

"Madoff was like a bomb going off in the industry, particularly in Europe."
– Pension Fund Consultant

Both hedge fund and Fund of Funds managers suffered net outflows throughout the six months. Yet, there was a flip in the primary focus of liquidations from one quarter to the next.

Of the $151.7 billion redeemed in the fourth quarter 2008, $101.1 billion of those funds were withdrawn from single manager hedge funds while only $50.6 billion came from Fund of Funds managers. By the first quarter of 2009, that situation inverted. Single-manager hedge funds suffered only a $17.8 billion decline in assets, whereas Fund of Funds managers saw withdrawals of $85.4 billion

"We learned an important lesson about the stability of various investors. Large segments of hedge fund investors pulled their allocations. Managers had to realize that with those types of investor allocations, you don't own that money, you rent it."
– >$1.0 Billion AUM Hedge Fund

"We went through a drop in our AUM that we thought our terms would have protected us against, but we underestimated what investor demand for liquidity would be. We saw investors willing to pay fees to get at their money. Paying 10% fees to get out was clearly a panic play."
– <$1.0 Billion AUM Hedge Fund

"The irony is that our Fund of Funds was only down 5% in 2008 and up 17% in 2009. We were punished because we couldn't provide liquidity, not because our returns were poor."
– Fund of Funds

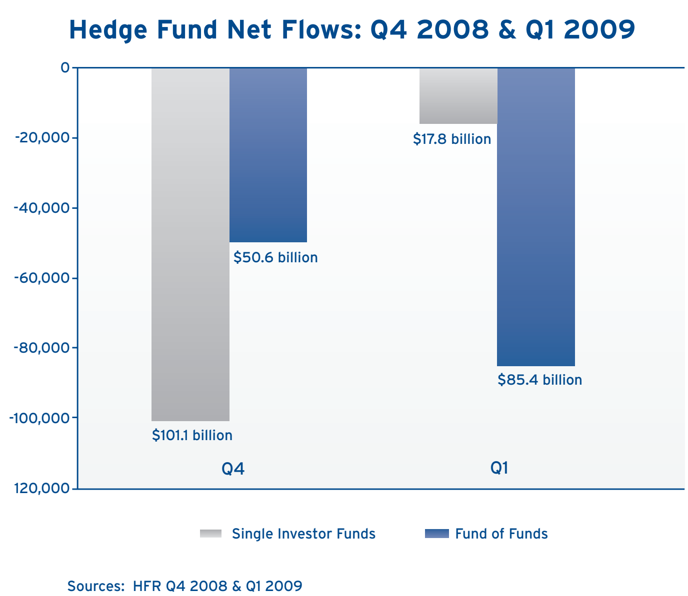


Chart 11

The discovery of the Bernard Madoff ponzi scheme in December 9, 2008 cut to the core of investor fears about Alternatives, particularly in Europe where many Fund of Funds managers were caught with exposure to Madoff funds.

This event specifically called into question the extent of due diligence done in selecting hedge fund managers for institutional investor portfolios. Concerns about due diligence emerged just as investors were also beginning to realize that their actual ability to withdraw capital from their Alternative portfolios was not working out as expected.

Liquidity Mismatches & Portfolio Concerns Come to Light

Outflows from the Alternatives space also disclosed liquidity mismatches in the portfolio construction approach utilized by Fund of Funds.

Portfolio Terms Blend Liquidity Profiles

As noted back in Chart 5, in constructing their mixed Alternatives portfolios, Fund of Funds had typically selected a number of hedge fund managers with variable liquidity terms and co-mingled these managers into a single portfolio. The Fund of Funds then "wrapped" this portfolio with its own set of liquidity terms.

While hedge fund managers had an ability to "tune" their liquidity terms to most accurately reflect the nature of the assets they held in their portfolio, Fund of Funds managers chose to align their liquidity terms to what they perceived their "average" ability to withdraw funds would be across their blended set of hedge fund managers. This is illustrated in Chart 12.

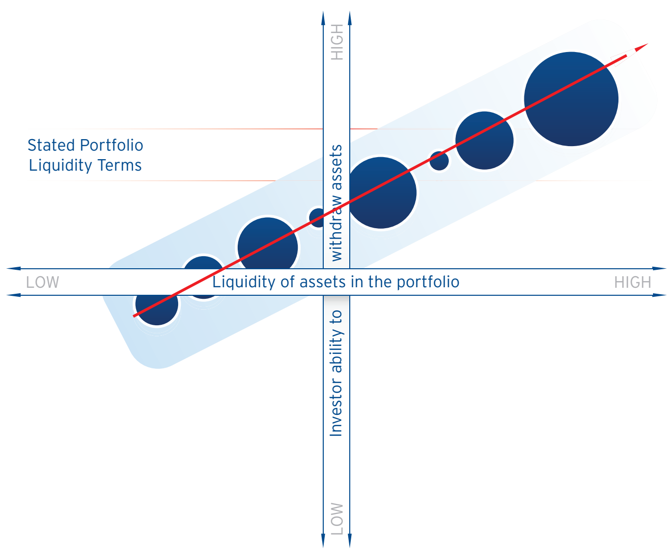
The thinking from many of these Fund of Funds managers was that in a blended portfolio, any investor redemptions could be handled by the more-liquid strategies if, for whatever reason, the investor needed capital prior to when the Fund of Funds manager could withdraw money from hedge fund managers with longer liquidity terms. Over a period of time, the Fund of Funds would be able to rebalance the portfolio as money from the longer-dated funds became available. If this worked out as expected, redemptions would not have a lasting impact on performance across the overall fund.

"There were accepted practices going on in the industry up until 2008 that in retrospect look like a problem. Funds were using the liquidity of incoming investors to pay out the established investors without testing the investments themselves. It was hard to see this until everyone hit the exit at once, and everyone starting asking for their money back at the same time"
- Fund of Fund & Seeder

"In looking back, many funds were offering liquidity terms on portfolios with illiquid investments."
- Pension Fund

"I used to do a Fund of Funds. Something that used to bother me a lot was that there was a definite mismatch between what we were offering and what the managers in our portfolio were offering. Hedge funds came up with more onerous liquidity terms, especially from 2004 onwards. There was nothing we could do about it. As a Fund of Funds, our terms were set. It was a disaster waiting to happen."
- >$1.0 Billion AUM Hedge Fund

"Anticipated" Fund of Fund Liquidity Prior to Crisis



Sources: Citi Prime Finance, Size of bubbles represent HFR Q1 2010 AUM.

Chart 12

This theory remained untested until the latter half of 2008 as investor money flowed steadily into hedge funds and Fund of Funds. When inflows turned to outflows, however, the flaws in this approach became readily apparent, to the detriment of many investors, Fund of Funds and hedge fund managers.

Many Credit Funds Throw Up Gates

Chart 13 compares what Fund of Funds thought would happen with their portfolios in terms of liquidity and what actually happened.

Illustrative Fund of Fund Liquidity in the Crisis

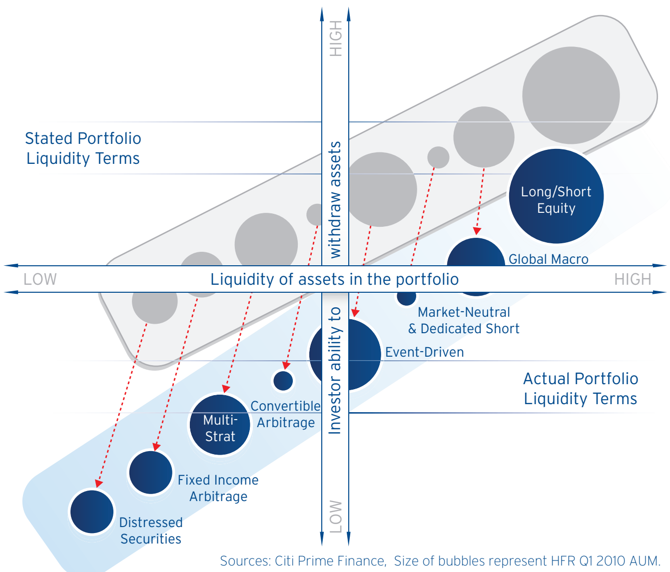


Chart 13

The first assumption that had to be revised was that the liquidity terms a hedge fund manager had agreed with their Fund of Funds manager would remain unchanged when a wave of redemptions occurred. While many managers stuck with their liquidity terms, many also opted to invoke gates and create side pockets—measures they had included as cash management tools in their documents. Many hedge fund managers suspended redemptions completely as the extent of withdrawal requests threatened to undermine their entire fund to the detriment of remaining investors.

Many Fund of Funds managers were ill-prepared for this move. While they knew the rights to gate and create side pockets existed, most had never modeled what the impact of a massive wave of such actions would do to their holdings. Large portions of their portfolio, which they expected to be modestly difficult to liquidate, proved to be impossible to liquidate.

Hedge fund managers with portfolios based around Distressed Securities, Fixed Income Arbitrage, Multi-Strategy and in some cases Global Macro with hard asset investments ended up having much less ability to exit positions than expected. This steepened and elongated the distance between a Fund of Funds' most-liquid and least-liquid investments.

Investors Go to More-Liquid Funds for Cash

Unable to secure cash out of many of their less-liquid hedge fund managers, Fund of Funds and other investors instead began to go to the more-liquid pockets of their portfolio for withdrawals.

"All of us knew from our documents that there were side pockets and that funds had an ability to gate, but we didn't really think about it as an industry. Our worst-case scenario was off. By the numbers, we analyzed our portfolios properly, but we didn't take into account the worst-case analysis of our investors leaving us and our managers all rushing for the gates at the same time."
- Fund of Fund

"For us, ensuring liquidity was our biggest lesson learned. Certain managers had to enforce gates, or close and restructure their funds having several illiquid underlying investments. We had an idea of their liquidity. We had transparency into their positions. The problem was that everyone was selling, so that things that seemed liquid turned out not to be."
- Endowment

"We gated in 2008 because we didn't have easy-to-exit assets and didn't want to degrade our performance. Our situation became much worse when people suspended redemptions completely. People equated gates to suspended redemptions, even though they were completely different things. It gave a bad name to the individual fund, if they gated."
- >$1.0 Billion AUM Hedge Fund

This led to the second assumption that had to be revised. While the underlying assets in a portfolio may be relatively more liquid, those funds, too, have trouble exiting positions in times of stress.

Chart 13 shows that even those strategies deemed to be "highly" liquid (Equity Long/Short, Global Macro and Market Neutral, Dedicated Short Bias) or even moderately liquid (Event Driven and Convertible Arbitrage) were all less liquid than expected. This shifted the entire curve of the Fund of Funds/mixed investor portfolio downward in terms of an investors' ability to withdraw assets.

The concepts illustrated in Chart 13 are backed by the hard numbers displayed in Chart 14.

"The reality was that people couldn't get money they needed and they were forced to go to their more-liquid pockets. Unfortunately, it was the more successful funds—low leverage, positive performance—that could get money out."

– >$1.0 Billion AUM Hedge Fund

"We run reasonably liquid funds. There were many instances where we served as the ATM machine to the industry."

– >$10.0 Billion AUM Hedge Fund

Rather than showing a fairly stable balance across the two quarters to support their "averaging" theory, Chart 14 shows that Fund of Funds and direct investors with mixed Alternative portfolios pulled far less money out of "low" liquidity hedge fund strategies (-16.0%) between October

2008 and March 2009 than out of strategies comprised of assets with a higher liquidity profile (-29%).

Liquidations Reveal a Higher-Than-Expected Correlation to Beta

As more and more money came out of liquid portions of the portfolio, Fund of Funds were forced to revise their third assumption. While many hedge fund managers sold themselves as producing 'alpha,' their returns in a period when their strategy should have been able to differentiate itself from the broader market indices actually revealed that many were simply using leverage.

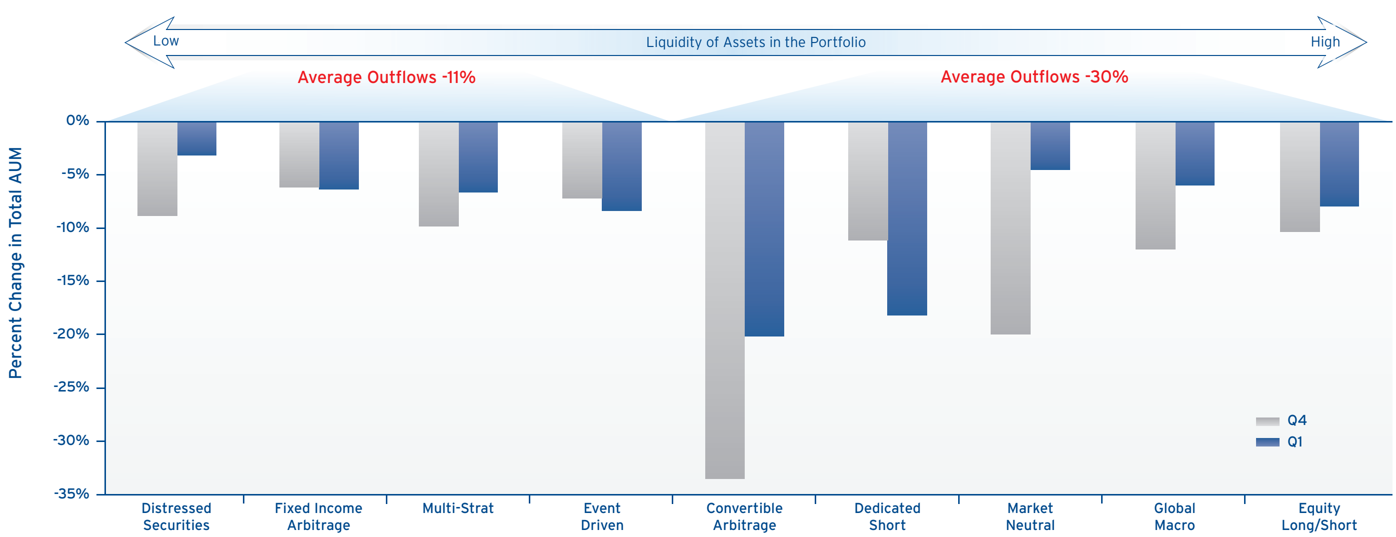
The correlation to 'beta' returns noted in the industry at the time crystallized many fears that not all hedge funds were truly 'hedging' and isolating their alpha.
To some extent, this is a chicken and egg question. Many of these managers were being forced to exit positions to raise capital for their investors because they were the only liquid pocket in a Fund of Funds' or mixed-Alternative investor's portfolio. Some of the largest funds at the time were also heavily concentrated in some positions.

If positions had been left on, or if the portfolio managers had more options to gate, perhaps the correlation to beta noted in the period would not have been as high.

"The crisis uncovered a lot of other problems in the industry. There were deep questions as to what was alpha and what was beta. People realized that if the market is rising or flat, it's easy to put up numbers. Hedge funds were supposed to be uncorrelated. To have the HFR Fund of Funds index down 20% is just ridiculous."

– Fund of Fund & Seeder

Change in Investor Flows by Strategy: Q4 2008 & Q1 2009



Sources: Citi Prime Finance, HFR 2008 & 2009

Chart 14

On the other hand, perhaps the size of hedge fund positions in large funds will always result in a higher-than-anticipated correlation to beta in any period of liquidation.

Regardless of the answer, Fund of Funds and consultants advising institutional clients on their selection of managers have been left with a legacy of needing to dig into a manager's decision-making process to understand precisely how they look to create alpha and that just relying on the hedge fund's strategy classification is no longer a sufficient approach.

Portfolios Become Increasingly Less Liquid

The final assumption about Fund of Funds' approach to portfolio construction that had to be revised related to their understanding of their "blended" portfolio liquidity terms. The going-in assumption of many Fund of Funds managers was that their blended terms would be close to their most-liquid portions of the portfolio. Real-life experience showed that, instead, blended terms were closer to the most-illiquid portions of the portfolio as illustrated on Chart 13.

As redemptions occurred in the Fund of Funds' more-liquid investments, the remaining assets in the portfolio became increasingly difficult to exit. Many hedge fund managers had moved into private equity-like assets—sometimes with, and sometimes without, the knowledge of their Fund of Funds manager. Stories about Fund of Funds being left owning physical real estate and raw commodity production facilities abound.

> *"We looked at the side pockets offered on the secondary market in 2009 because you could buy into these investments at quite attractive prices. We saw stuff like real estate in Kazakhstan, copper mines in Angola—lots of investments in the raw commodity sector. The multiples on these assets are down and people don't want to buy that. It's at least a 3-5 year commitment."*
> *– Pension/Insurance Fund*

Many Fund of Funds continue to hold those assets even 18 months later and will not be able to liquidate those investments for years. Even those portfolios without hard assets, but heavily laden with illiquid distressed debt securities, experienced this problem.

> *"What came out of the crisis was that managers had positions in the portfolio that were to the detriment of investors in a stress period. Assets like private equity or unrated corporate debt. Many times, these assets were not even in a manager's mandate."*
> *– Fund of Fund & Seeder*

Lessons Learned in Crisis Trigger Massive Industry Change

Outflows of capital from the hedge fund industry subsided by the spring of 2009. According to HFR, total assets under management declined $599 billion, or 31%, from their peak level of $1.93 billion in June 2008 to only $1.33 billion in March 2009. Investor withdrawals accounted for $287 billion, or 48% of that decline, and performance losses accounted for the remainder.

Beyond having to look to rebuild assets in the wake of such dramatic declines, the industry was also left with several key lessons learned that they would need to address in the coming period.

Institutional investors realized that they needed to revisit their approach to, and understanding of, the Alternatives space, taking on more direct responsibility for their portfolios. This involved both their getting more educated to make better decisions about their allocations, and their looking to take a more-direct role in obtaining the level of transparency and control they desired to ensure their investments.

Hedge funds recognized that they needed to take active steps to ensure a more-stable investor mix. This required them to become more "institutionalized" in terms of their processes—making substantial adjustments to their service provider relationships, their internal processes, and their engagement with and responsiveness to their investor community.

Fund of Funds and Institutional Consultants realized that they needed to revamp their portfolio construction philosophy armed with real-life experiences around areas that had been theoretical up until the events of late 2008-early 2009.

Part II of our report details these changes.

Investors Seek More Direct Control over Their Portfolios

Institutional investors had been increasing their allocations to Alternative strategies to obtain portfolio diversification and alpha returns since 2000. Because this was a space most were not familiar with, the majority of participants relied on institutional consultants for advice and manager selection, or they invested directly with Fund of Funds and outsourced their selection of hedge fund managers.

Issues uncovered during the liquidity crisis pushed investors to become more active in their approach to Alternatives. This increased level of engagement was first demonstrated through a shift in focus away from Fund of Funds investments and toward Separately Managed Accounts (SMAs).

"The impetus for SMAs comes from clients being very leery on who they're partnering with, and their wanting transparency."
– Pension Consultant

Explore Separately Managed Accounts as a Structure

Many investors walked away from the liquidity crisis with concerns about having "adjacency" risk in the Alternatives space. Adjacency risk was seen as having other investors able to take actions that would impact the overall performance of the fund. Because each investor's assets were co-mingled with other investors in both single-manager funds and in Fund of Funds, many felt that their ability to choose their course of action was limited.

The immediate response to the liquidity crisis, thus, was for many investors to seek to "segregate" their portfolios and eliminate their adjacency risk.

Separately Managed Accounts (SMAs) are a common asset management structure in the long-only space and one with which many institutional investors are very comfortable. SMAs are vehicles through which an investor can have direct exposure to the underlying stocks and/or bonds that a fund manager may purchase. The appeal of this approach is that in a mutual fund, the institutional investor can only own shares of the mutual fund and it is the mutual fund itself that owns the underlying securities. In an SMA, the investor can hire the actual fund manager and have direct ownership and custody of the assets.

Concerns about their Fund of Funds and single-manager experience in the liquidity crisis and their ability to protect their own assets led many investors to explore the SMA framework as a preferable approach for working with hedge fund managers. This trend was particularly noticeable in the first half of 2009.

"People are much more concerned and focused on adjacency risk in hedge fund LP structures."
– Pension Consultant

Proponents cited several factors driving this interest, making SMAs preferable to Fund of Funds or direct allocations to a hedge fund manager's co-mingled offering.

With an SMA, the investor would be the only asset owner in the account. There would be no adjacency risk from other investors looking to liquidate and force down the value of the fund. Conversely, as the sole owner of the assets, the investor could choose to liquidate their holdings at will, without a hedge fund manager or Fund of Funds manager limiting their ability to act.

Because the investor was the sole owner of the assets, they would have complete transparency into the holdings of the account, and could feed information on these holdings into their own risk systems or to chosen risk aggregators, such as RiskMetrics. Finally, the investor could choose their own hedge fund administrator to value and report on activity in the account. This meant that the investor was not reliant on the hedge fund's relationship and that they could have an independent service provider.

In the immediate aftermath of the liquidity crisis, there was a wave of requests from investors looking to set up SMAs with their Alternative hedge fund managers. High-profile investors announced their intention to transfer their entire portfolio of Alternative investments into SMA structures. Even investors with relatively small amounts of capital were approaching hedge fund managers about setting up these accounts.

Separately Managed Account Operating Model

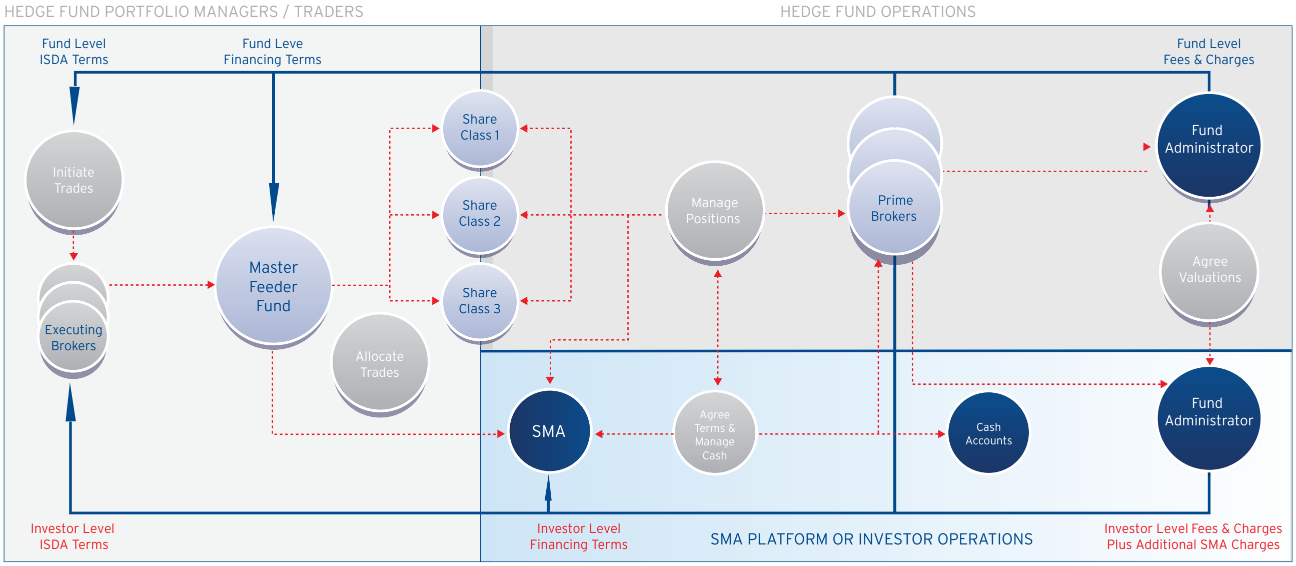


Chart 15

Struggle with SMA Set-Up & Operational Hurdles

Creating the SMA structure in conjunction with a hedge fund proved much more difficult than many investors anticipated. While there were some hedge funds that had worked with these types of accounts prior to 2009, this was an exception rather than the rule in the Alternatives space. Most hedge fund managers had little experience with SMAs and most investors had little experience with Alternative SMAs. This often led to extensive, drawn out negotiations or even confusion over basic building blocks of getting the relationship set up, such as who should be providing the documents—the investor or the hedge fund.

> *"We're an exception to the rule, in that we got started with SMAs, and we're used to operating with those structures. It takes more resources and it takes a big back office."*
>
> *- >$10.0 Billion AUM Hedge Fund*

Other factors quickly came to light that many investors had not anticipated in looking to move to an SMA. Chart 15 illustrates the complex nature of operating an SMA within a hedge fund framework.

Replicating the terms a hedge fund receives with its key trading partners in all but the most simple, liquid strategies is difficult for investors in an SMA structure. While a hedge fund manager can use their executing dealer relationships to put on trades and their prime broker relationships to finance and manage trades of behalf of their SMA investor, they cannot do so under their own terms. The investor, not the hedge fund, is the owner of the assets held in the SMA and therefore the hedge fund has to negotiate a new set of ISDAs and prime brokerage documents for their SMA investor. Terms in these agreements are sometimes not as favorable, making it difficult for the hedge fund to truly replicate their performance in an SMA.

There are also set-up challenges that the hedge fund has to manage in order to be able to work effectively day-to-day with their SMA investors.

Investors independently select a hedge fund administrator to value and report on their SMA portfolio. If this administrator differs from the administrator being used by the hedge fund, the hedge fund must set up their own connectivity to the new administrator. They also must ensure that their prime brokers are set up to share information with that entity. While this may not be exceptionally difficult with one SMA and one additional hedge fund administrator, several hedge funds indicated that the problem compounds exponentially when they are working across eight or nine different SMA accounts and administrators.

> *"If we were to set up an SMA, we wouldn't be able to negotiate the same terms that we get for an investor ... They would have a smaller asset base. They would never be able to do in an SMA what we can do as a fund."*
>
> *- >$10.0 Billion AUM Hedge Fund*

> *"Investors simply can't put on the same trade with the same return on investment."*
>
> *- <$1.0 Billion AUM Hedge Fund*

> "Clients choose their own administrator with an SMA. We have eight SMAs and eight new relationships we have to manage. That requires set-ups, free-transfers and a lot of other work. Even though the direct cost is not ours, the difficulty of managing these relationships is ours. It's a compounding problem. I think it will be a challenge for the business to continue down the SMA path."
> – >$1.0 Billion AUM Hedge Fund

> "On the long-only public side, we'll look at SMAs because they're easy to manage—not on the Alternatives side. We don't have a back office and we don't have the capacity to manage a lot of ISDAs ... managing across multiple prime brokerage relationships is not going to work for us."
> – Endowment

Finally, the investor also has to either self-administer their SMA through their own operational unit day-to-day, or hire an SMA platform manager to perform margin reconciliations and coordinate cash movements to and from the hedge fund in order for them to meet their margin calls.

Managing hedge fund SMAs from their own operational unit requires that the investor have a team in place with sufficient expertise and infrastructure to manage ISDAs and prime broker relationships. While some of the largest investors might be able to handle this challenge, many institutional investors are not set up from a systems or staffing perspective to ensure these functions.

Hiring an SMA platform manager can add excessive cost into operating an SMA and has to be weighed against the returns the hedge fund is expected to generate. As one investor noted, if they are only expecting 7-8% returns and are paying 2-3% SMA fees, that leaves very little margin. Several hedge funds also noted that they may start to charge investors additional fees to help finance the operational complexity of managing an SMA. This could cut further into the economics of the structure.

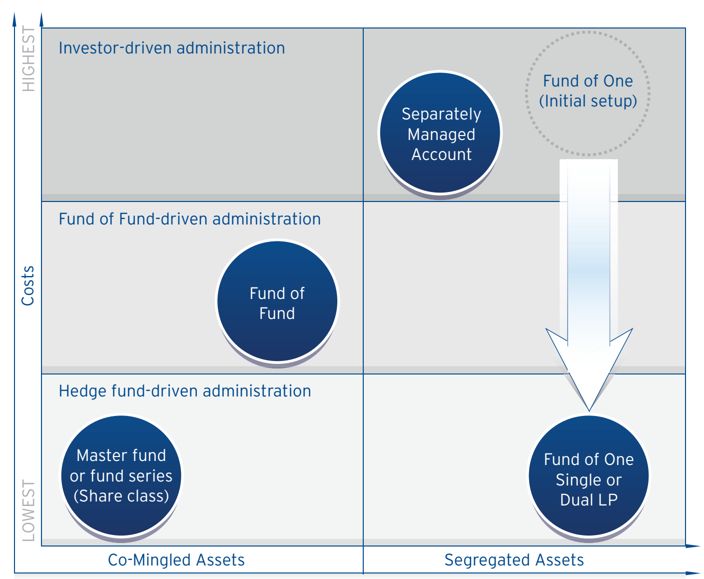
Test Fund of One Structures as SMA Alternatives

Fervor about exploring SMAs appears to have peaked by the latter part of 2009. Many investors realized that it would be difficult to truly replicate the hedge fund manager's portfolio returns. Smaller investors began to understand that without a robust operations unit, they would have to outsource management of their SMA to an independent manager, adding significant costs to the structure. Hedge funds not already tooled to service these types of accounts also pushed back around the operational complexities.

This left only a segment of the investor community—with robust infrastructures or enough buying power to negotiate down SMA management fees—well positioned to pursue these accounts. Thus, SMAs are likely to remain a feature of the hedge fund industry, but not catch on to the extent that many thought in the early months after the liquidity crisis.

Investors still concerned about adjacency risk, but poorly situated to handle the complexities of the SMA structure, were left looking for options on how to effectively segregate their assets.

Alternative Investment Legal Structures



Source: Citi Prime Finance

Chart 16

> "Some Fund of Funds have negotiated special fees for a Fund of One. The incentive for a Fund of One can be better claw-back provisions. Everyone knows that there is some beta in your strategy, so having a Fund of One lets you put in a more reasonable hurdle."
> – Pension Consultant

Traditional hedge fund industry offerings did not meet their needs. As shown in chart 16, an investor's assets would be co-mingled with other investors in both a hedge fund manager's single fund and in a Fund of Funds' portfolio. This left investors one more structure to explore, and by the latter part of 2009 many investors had begun to work with hedge funds to set up Funds of One.

In many ways, Funds of One are seen as a compromise structure between hedge funds and investors. A version of the Fund of One has existed for some time. Many larger and mid-sized hedge funds have been willing for several years to set up a separate share class for a single investor within their master-feeder structure. The difference between this and a Fund of One relates to the legal structure of the fund and ownership of the assets.

In traditional single-investor funds, the hedge fund manager would remain the legal owner of the fund and would own the assets. The investor would have more leeway on negotiating terms and they would receive the full benefit of returns, but they would not have the right to independently liquidate the assets. They also remained liable for the costs of the management fee and the payout of any incentive fees.

Many of these same limitations remain in place with the newer Fund of One structures, but there are differences around the legal structure and ownership of the assets. Either the investor becomes the sole owner of the account and the assets (Sole LP) or there is an arrangement made whereby the hedge fund manager themselves put capital into the fund along with the investor and they co-own the account and the assets (Dual LP). For investors looking to have their hedge fund manager's interests optimally aligned with their own interests, the Dual LP structure offered attractive incentives.

"Large investors are looking at Funds of One to handle their adjacency risk. I have been surprised at the size people are demanding for these structures. I thought you would have had to have a larger size."
– Pension Consultant

In both instances the assets of the Fund of One are segregated from the hedge fund's co-mingled accounts, but as illustrated in Chart 17, the operational maintenance of the account is much simpler as the hedge fund manager has all responsibilities and manages the structure alongside their own funds.

Sole LP Fund of One structures have proven especially attractive to some Fund of Funds looking to have more influence over hedge funds managers in their portfolio. The thinking behind this move is that there would be less likelihood of a hedge fund manager throwing up gates or creating side pockets if the only investor in the fund is a Fund of Funds seeking withdrawals. Additionally, as the owner of the fund, the Fund of Funds will have full transparency in the account's holdings.

"Dual LP Funds of One come up because the investor wants the GP of the fund to move cash from the big, co-mingled fund into one where there is direct alignment with the investor."
– Pension Consultant

It remains to be seen how widely these Fund of One structures are adopted. Like SMAs, there are likely to continue to be some segments of the institutional investor community that prefer this approach, and their suitability for Fund of Funds may provide room for growth.

Fund of One Operating Model

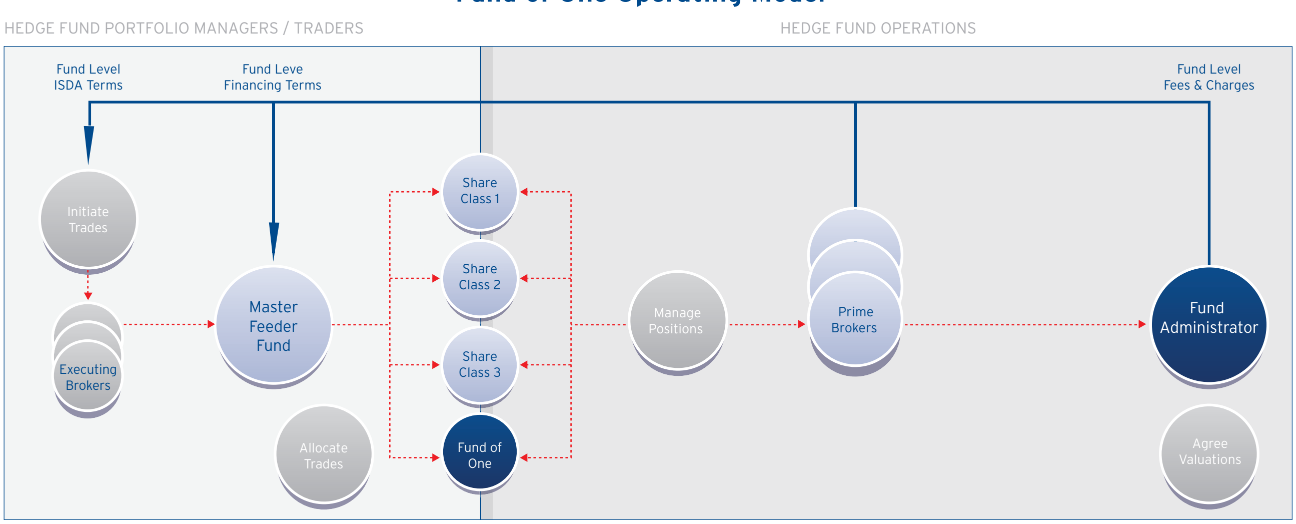


Chart 17 Source: Citi Prime Finance

Changes occurring in parallel that have deepened the interactions between investors, their intermediaries and their hedge fund managers may limit the need for these segregated structures, however. Many participants see increased engagement and transparency emerging in the hedge fund industry, swinging the industry back toward direct-investor allocations to hedge funds' co-mingled offerings.

Hedge Funds Seek More Direct Investor Allocations

While investors' immediate response to the crisis was to seek more direct control over their assets, hedge funds emerged with a determination to diversify their sources of capital and ensure a broader, more stable mix of investors. To accomplish this aim, they have made significant enhancements to "institutionalize" their controls and "systematize" their investment edge. Such enhancements are seen as increasing their attractiveness as direct investment targets.

Broaden Their Investor Mix

Smaller and mid-size hedge funds indicated that they were looking to reduce their reliance on Fund of Funds. Some of the impetus for limiting Fund of Funds exposure tied back to the liquidity terms mismatch discussed earlier, and the excessive pressure many hedge funds felt to exit contracts in order to satisfy Fund of Funds' shorter redemption windows. Some of the impetus for this was simply a desire to be less concentrated with any one type of investor going forward.

Mid- and larger-size hedge funds were looking to expand their direct-investor allocations from pensions, endowments and sovereign wealth funds. Securing these allocations was seen as a longer-term relationship building exercise where both the institutions and the allocators spent significant time getting to know one another over the course of many months. There was also a decided geographic aspect to these plans with hedge funds wanting to have a more diverse set of investors to match their global strategies.

Another source of money that proved "stickier" than expected during the liquidity crisis was contributions from high net worth investors. The most well organized of these ultra-high net worth participants—the family office—have long been a focus for hedge funds and form the foundation of some firm's most long-standing capital. These investors tended to remain with hedge fund managers throughout the crisis.

The expansion of UCITS funds in Europe (regulated hedge fund entities with extremely high liquidity) and a greater focus on Alternatives by private banks has helped to open up a distribution channel to high net worth individuals further down the wealth chain from the family office. The majority of high net worth investors do not have the resources or knowledge-base to perform the due diligence required for direct investment with a hedge fund. New private bank distribution platforms now act as the intermediary in these relationships—providing the hedge fund a single counterparty which makes it easier for them to take in the smaller amounts of capital that come in via these platforms.

To improve their chance of obtaining a more diverse mix of investors, hedge funds also cited other changes they are implementing to become more attractive investment vehicles.

Improve Their Liquidity Terms

Many funds reviewed and improved the liquidity terms they were willing to offer investors or created an expanded number of options for investors to choose from, to better align their liquidity requirements.

"We've gotten a lot of calls in the past year from funds that have kicked out their Fund of Funds investment in favor of shifting to direct Pension and Endowment investments."
– Pension Fund

"Our lesson learned is that we want to broaden our investor base. Going into 2008, 3 out of 4 of our investors were Fund of Funds. Now going into 2010, we are purposely moving that ratio to only 2 out of 5."
– >$1.0 Billion AUM Hedge Fund

"We came away from 2008 with a greater 'know your customer' emphasis, and a commitment to diversify our marketing footprint. We are now much more interested in having a mix of investors."
– >$10.0 Billion AUM Hedge Fund

"We've actually opened up a relationship with a private bank and are offering our product via their high net worth platform ... these investors tend to stick around and see if it works out. In that sense, they are more like Pension or Endowment money,"
– <$1.0 Billion AUM Hedge Fund

Funds with highly liquid trading strategies noted that this has become a key selling point for them in marketing calls with investors, post the events in 2008-2009.

Many of these hedge funds embraced the role they played in helping investors manage their cash flow during the crisis. By reducing their notice periods and/or re-engineering their liquidity terms to offer monthly—as opposed to quarterly—redemptions, these funds are touting their ability to offer investors more choices in their cash decisions.

In some instances, hedge funds changed their terms on existing portfolios and, in many instances, higher liquidity funds were launched as an additional share class to supplement the hedge fund's traditional offerings. For these newer share classes, most hedge funds were charging slightly higher fees than in their original portfolios and putting parameters around the fund's exposure to credit or less liquid investments.

> *"We addressed our investor liquidity concerns by offering them more options. You can continue to do business with us at the same terms and the same fees, but if people are willing to pay up on fees for more liquidity, we are offering an opportunity to do so through new series."*
> *– >$1.0 Billion AUM Hedge Fund*

Hedge funds trading less-liquid strategies have also shown some give in their terms. Most of these hedge funds cut the length of their lock-ups and/or moved to a soft as opposed to a hard lock-up. Many of these hedge funds too are offering additional share classes with more favorable investor liquidity terms at a higher fee, although the shortest redemption window noted was still quarterly.

Finally, many hedge funds with both highly and moderately liquid strategies have begun to offer a new approach for managing their liquidity, called an investor-level gate. Unlike the fund-level gate that limits how much investors as a whole can withdraw from the fund, the investor-level gate curtails the percent of their total investment that an individual investor can withdraw in a given redemption period.

For example, a 25% investor-level gate in a quarterly redemption fund means that it would take an entire year for the investor to completely liquidate their allocation with the manager. Having an investor-level gate is seen as a preferable alternative to fund-level gates by many hedge funds and investors alike, as it provides them protection against destabilizing withdrawal requests and is seen as helping them avoid needing to invoke fund-level gates or side pockets to ensure the fund's value for remaining investors.

Diversify Their Prime Brokerage Relationships

Another enhancement smaller hedge funds have pursued to increase their investor appeal has been to diversify their service relationships. Nearly all funds now pursue a "multi-prime" model where they have relationships with at least two, and typically several, prime brokers.

Our survey revealed that even equity-focused hedge funds with less than $1.0 billion in assets under management now have active relationships with several prime brokers. The rationale for this diversification is that hedge funds will be less vulnerable to counterparty risks and have access to a broader and more competitive set of credit terms and financing. This should allow a hedge fund to better weather another period of liquidity tightening, increase the likelihood that they will be able to obtain needed capital to take advantage of market opportunities from at least one of their counterparts and prevent them from having excessive exposure to any given bank's balance sheet.

In their 2010 survey of the prime brokerage space, Greenwich Associates noted a distinct flattening of prime brokerage market share in the past year with relationships now more evenly spread across the "name" prime brokers.

> *"We've seen a lot of quarterly hedge funds going to monthly. The only reason a lot of them had been quarterly was because they could get away with it."*
> *– Fund of Fund*

> *"Some of the less-liquid funds moved from having a two-year hard lock to a one-year soft lock. Many of the more-liquid funds moved to having a monthly with 30-day notice from a quarterly with 60-day notice, and they removed the fund-level gates."*
> *– Pension / Insurance Fund*

> *"Top of the list in terms of lessons learned has to be the requirement to have multiple prime broker relationships."*
> *– <$1.0 Billion AUM Hedge Fund*

> *"We've done a lot around Prime Broker diversification. We now have at least three prime brokers per account."*
> *– >$1.0 Billion AUM Hedge Fund*

Ensure Better Asset Protections

Hedge funds demonstrated three approaches to better protecting their investor's assets in the wake of the liquidity crisis.

Hedge funds worked with their prime brokers to maximize their exposure to the bank's U.S. legal entity with guaranteed SIPC protections. This was a direct response to the Lehman bankruptcy and the uncertainty around the disposition of assets caught up in that event.

Hedge funds established custody relationships, working with their prime brokers and in many instances in-house or third-party custodians, to set up accounts where they could move excess fully paid assets out of their counterpart's broker-dealer entity and into a more protected entity. Several models of custody emerged in the past 18 months—each with their own unique set of pros and cons. For more information on this topic, please request a copy of our white paper, *Prime Custody: Asset Protection & Operational Simplicity.*

The final measure hedge funds invoked to provide better protection of their assets was to "sweep" their excess cash reserves into overnight interest-bearing accounts or protected money market funds rather than leaving excess balances with their counterparts.

Showcase Their Operational Strengths

The final way in which hedge funds have sought to underscore their attractiveness as direct investor targets is to increase their investment in their own operational and IT infrastructures to demonstrate their reliability as a counterpart, post the liquidity crisis. Anticipation of coming regulatory changes that are likely to result in hedge funds needing to support audits, reviews and inquiries from several different local and international agencies have also supported such investments.

New spending has been focused on enhancing several operational areas. Many hedge funds are now building out toolsets that allow users to query data and model risk exposures in real time. This offers senior management better control over their portfolio and better information to share with their counterparties and investors.

Integrating the outputs from these risk analytics into the research and portfolio investment process has also been a priority. With a better toolset allowing for real-time queries around risk, hedge funds can now provide their portfolio managers more insight into their capital utilization, buying power and exposures. This increases investor's confidence that the manager is well poised to capture market opportunities and effectively generate alpha.

Downstream of the trader, many funds are also investing in their infrastructure to create "shadow" views of their prime broker and hedge fund administrator activities. In pursuing this goal, hedge funds are looking to have their own record—to reconcile with, not replace, the services they receive from these providers. Having a "shadow" view is seen as a precautionary move to avoid fraud, reduce errors, control costs and ensure the accuracy of their providers' data. It also allows hedge funds more ability to create and frame their own reports for their investors and distribute those reports at will.

Finally, several funds have created in-depth manuals that document their operational controls, processes and safeguards. These manuals trace the roles, responsibilities, interactions and disposition of the fund's orders, trades, positions and assets, both internally and across their set of providers.

Funds possessing this level of insight and control can much more easily engage with investors and demonstrate a level of transparency most apt to draw the direct allocations they desire.

"We did a lot of work around our counterparty domiciles and legal entities. Our preference was to be in the U.S. For us, it's about the jurisdictional risk."
– >$1.0 Billion AUM Hedge Fund

"We have one custody relationship that we set up because we had some specific securities that we wanted fully segregated. We didn't want those assets lent out or re-hypothecated."
- <$1.0 Billion AUM Hedge Fund

"We developed our own proprietary risk application and have integrated our risk system as part of the research and investment decision-making process."
– >$1.0 Billion AUM Hedge Fund

"Another thing we get kudos for is documenting every single procedure— from cash reconciliations to payroll to compliance—step by step ... We don't hand it out, but when we pull out a 200-page document with that much detail, people go, 'Wow!'"
– <$1.0 Billion AUM Hedge Fund

"We invested heavily in our IT. Our thinking was that we didn't want to replace or take over what our administrator and what our prime broker do. We want a parallel system that captures a mirror. If you're responsible for something, I'm going to help you watch it."
- >$1.0 Billion AUM Hedge Fund

Industry Due Diligence Reaches an "Institutional" Standard

Signs that enhancements to hedge funds' liquidity, transparency and control are working to reassure the investor community can be seen most readily in the manner by which due diligence has evolved. Improvements in this process have increased confidence from investors about hedge funds as counterparts, helping to stem the SMA tide; limited interest in Funds of One; and reinvigorated interest in direct investments into a hedge fund's co-mingled vehicle.

Investment Due Diligence Expands

Performing due diligence around a hedge fund manager's investment approach is a long-standing practice. However, as chart 18 shows, on the whole, evaluations prior to 2009 only extended down to a limited depth of information.

Part of the reason investment due diligence was more limited lay with hedge funds' historic reluctance to share detailed portfolio information. For many years, hedge fund managers were comfortable resisting investors' requests to have transparency into their portfolios.

Several investors and their intermediaries discussed how competition to gain access to a fund's limited capacity would make them feel pressured to make a quick allocation decision, even without this information.

The liquidity crisis changed the balance of power in these relationships over the past 18 months. Investors and their intermediaries are now seeking and receiving highly

Evolution of Investment Due Diligence

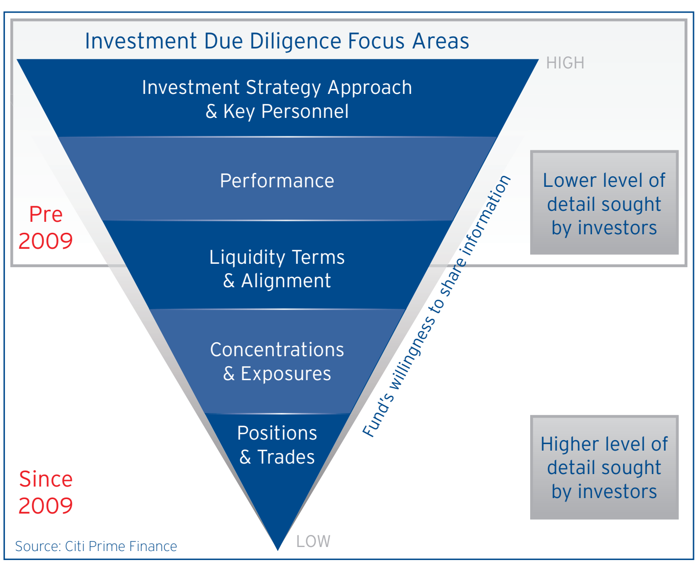


Chart 18

> *"Can you get your arms around the risk of a fund at a molecular level?"*
> *– Pension Consultant*
>
> *"We always want to see snapshots of the portfolio before investing. Are they investing as they say they are? If they say that they're 50% U.S. and 25% European, I want to see that reflected in the portfolio snapshot."*
> *– Fund of Fund*

detailed information "down to the molecular level" from many of the hedge funds they review.

Several hedge funds have also increased their transparency and communications to attract investor allocations, drawing on the experience they had during the liquidity crisis as a model. Many hedge funds were forced to become highly communicative and transparent with their investors during the weeks of the liquidity crisis and this experience helped to ease some of their concerns about information-sharing.

Several hedge funds noted that they were in daily and sometimes more frequent communication with their investors during the height of the liquidity crisis. They openly discussed their portfolio holdings and investment plans with their investors. Rather than this having been a deterrent to their ability to act, many instead noted positive experiences, including some instances where they were able to hold onto allocations or maintain their relationship with an investor and recapture allocations that were redeemed once capital freed up in 2009.

Diminishing concerns from hedge funds about sharing information have positively impacted investors' ability to perform investment due diligence.

Most investors and their intermediaries are now receiving fairly detailed views into hedge fund manager portfolios. Typically, these views are being offered on a lag—sometimes by as little as a week but more frequently out 30 days. For the purposes expressed by most investors and their intermediaries, this delay is an adequate compromise.

The desire to perform a holdings-based analysis relates to investors' desire to "check" whether the holdings in the portfolio match the manager's stated investment approach.

Investors are looking more to see that a manager does not have holdings that would be outside their mandate than to evaluate the specific holdings the manager has in their portfolio.

Ongoing Investment Monitoring Improves

Another trend discussed across interviewees was the idea that investment due diligence is becoming more of an ongoing part of the relationship between the hedge fund manager and the investor or intermediary.

Prior to the liquidity crisis, many hedge funds put little focus on their investor reporting. Either they outsourced this function to their hedge fund administrator or they encouraged their internal marketing team to put together occasional letters, updating investors on their performance and some key measures around the fund's top investment exposures.

Subsequent to the crisis, providing frequent, consistent reports to the investor community has become a standard practice. Much more content is being provided in such reports as well. Many hedge funds are willing to show details around their portfolio holdings, risk profile, use of leverage, liquidity, on-hand cash and performance.

Some hedge funds noted that if their investors were willing to sign confidentiality agreements, they were willing to copy them on their prime brokerage reports or authorize them to directly access their fund administrator reports.

As more information around a manager's risk profile emerges and is tracked by investors and their intermediaries, several investors have begun to request that hedge funds feed this information to independent risk aggregators, such as RiskMetrics. This would allow the investor or their intermediaries to build their view of a fund's concentrations and exposures out over a period of time and help them spotlight potential issues and engage in more informed and detailed discussions with the manager.

There are split views among both investors and hedge funds as to the efficacy of using third-party risk aggregators, however. Several investors worried about the dated nature of the portfolios most funds would be willing to send through and had questions as to the relevancy of value-at-risk analysis for many investment strategies. Several hedge funds, particularly those under $10 billion AUM, expressed hesitancy at the costs of creating the desired level of integration and they worried that these platforms would not be able to adequately measure and reflect the more esoteric products in their portfolios.

"Performing a holdings-based analysis is now a standard part of our process. We're looking at this from a risk-return perspective as a way of seeing if the fund aligns with its stated investment goals."
– Pension Fund Consultant

"There is a real desire to see different slices and cuts of the portfolio expressed in different ways. We are starting to see a little more interest in third-party aggregators, like RiskMetrics/Barra."
- Pension Consultant

Operational Due Diligence Becomes Mainstream

Operational due diligence existed, but had never gained as much prominence as investment due diligence prior to the liquidity crisis, a fact dramatically underscored by the Madoff scandal. While many consultants offered operational due diligence as an add-on service, few investors saw this as a priority. Anecdotes of investors, particularly Fund of Funds managers, performing only rote examinations prior to the Madoff scandal were widespread.

Chart 19 shows that, pre-2009, most operational due diligence consisted of a top level understanding of a hedge fund's policies, controls and key service providers. Most investors and their intermediaries adopted a "check the box" approach, where they would come in with a standard questionnaire and ask a series of questions.

Since the liquidity crisis, investors and their intermediaries have placed a tremendous emphasis on operational due diligence and have focused numerous resources in this area. Many intermediaries have built out dedicated operational due diligence teams that work separately from the investment due diligence team. Individuals hired into these roles come from operational backgrounds and are capable of digging into a hedge fund's actual process flows and activities to understand not just what the fund says their control policies are, but to evaluate how well they are likely to work.

Operational due diligence teams are performing independent background and reference checks of the individuals in key control roles. They are contacting prime brokers and fund administrators to verify balances.

They are also working closely with hedge fund operational teams to review how well documented a hedge fund's operational and business continuity processes are and, in many instances, are spending time side-by-side with the hedge fund team shadowing their middle- and back-office teams to observe them run through a month-end or daily process. Hedge funds are also working with operational due diligence teams to help them understand how recent investments have "tooled" their infrastructure to support their trading edge and improve their controls.

To accomplish such a broad examination, most participants discussed having operational due diligence teams perform several on-site visits over the course of many sessions before coming to their final recommendation on a fund.

When an allocation decision is being made, most investors and their intermediaries indicated that the operational due diligence team is given a separate vote on the fund and that, if they raise a red flag, there is a general consensus to pull back and perform additional analysis before going forward with an allocation.

"Two years ago when we started our operational due diligence, it was an optional service that clients could ask for, but that most didn't. Now, this is becoming a standard part of our process."
– Pension Consultant

"Our operational due diligence team is separate from our financial analysts. They act as a check and balance. They opine on different things. If they have issues and put up a red flag on a fund, we have to sit down and have a discussion. Since you have people focusing on both sides, you have different areas of expertise. I can say, 'here's what a Distressed manager looks like' and I can check their trades to make sure they line up with our expectations. They have a view of what a Distressed Debt manager's auditors and systems should look like. If I did that analysis, the best I could do was tick some boxes, but they really understand those profiles and know what to look for."
Fund of Fund

"We absolutely do operational due diligence. We have a separate team, and they have their own processes and forms. They perform their own background and reference checks. If the manager or someone at the firm fails the check, we don't get involved."
– Fund of Fund & Seeder

Liquidity Spectrum Emerges

Changes discussed thus far made by hedge funds, institutional investors and their intermediaries (including Fund of Funds) were all intended to better the quality of communications, transparency and day-to-day operations in the industry. Fund of Funds also had a more structural issue to address, however.

In the wake of their late 2008-early 2009 experience, Fund of Funds needed to retool their approach to achieving strategy diversification in the Alternatives space. In many instances, earlier attempts at combining different hedge fund managers with divergent liquidity terms into a single portfolio and wrapping that portfolio with separate liquidity terms resulted in severe liquidity mismatches.

Since that time, new thinking has emerged and Fund of Fund managers are now beginning to align investment strategies across a liquidity spectrum, and create nascent investment "segments" based around strategies with similar liquidity, style and leverage profiles.

Evolution of Investment Due Diligence

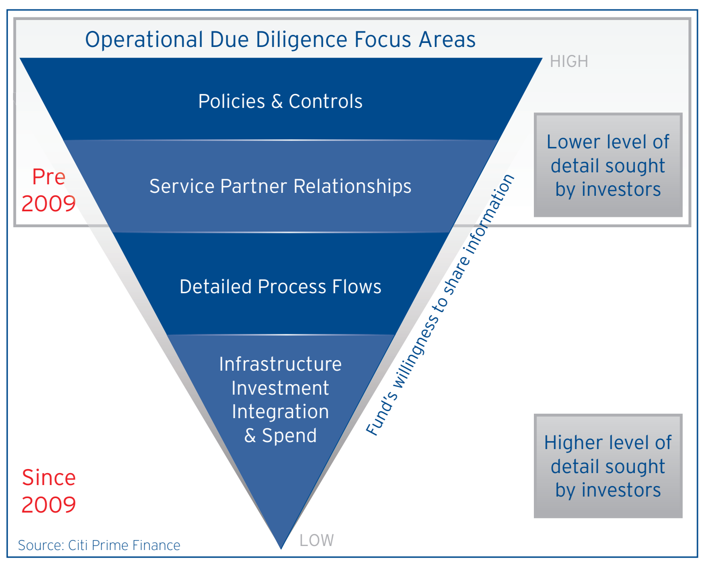


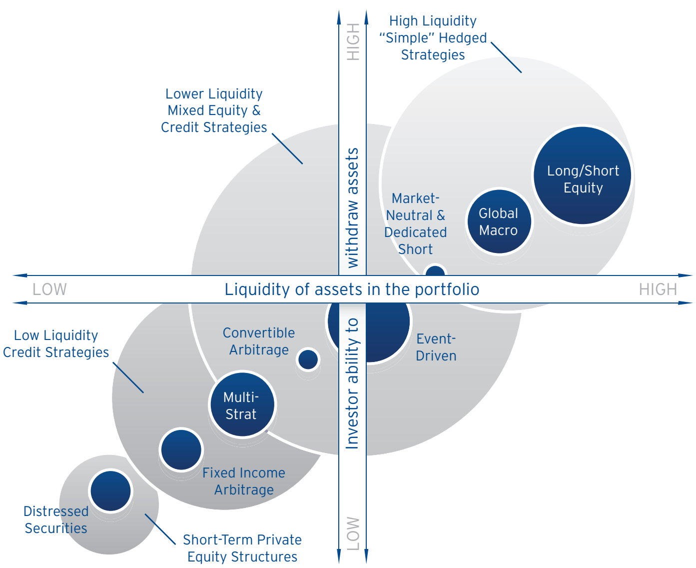
Chart 19

Strategies Grouped into Similar Liquidity Pools

The positioning of individual investment strategy pools shown in Chart 20 represent how liquid the assets held in different strategies proved to be during the liquidity crisis and how easily investors were able to withdraw funds from these strategies. As noted earlier, this array of strategies turned out to be wider, the spread between the most- and least-liquid proved to be much steeper and the positioning of each pool turned out to be less liquid than Fund of Funds managers had anticipated prior to the liquidity crisis (see Chart 13).

The major lesson emerging from this period for Fund of Funds was that they could not create strategy diversification by mixing this entire set of Alternative strategies into a single portfolio.

The Three Dimensions of the Hedge Fund Landscape



Sources: Citi Prime Finance, Size of Strategy Circles Broadly Representative of AUM.

Chart 20

As Chart 20 shows, there are now several liquidity "pools" that extend across this array of investment strategies. These pools are based around groups of strategies whose underlying assets are all such that hedge fund managers in the pool should be able to offer fairly similar liquidity terms.

When viewed in this manner, the constituent strategies that make up the most- and the least-liquid "pools" of assets are widely divergent. For this reason, we are dubbing these pools as falling along a "liquidity spectrum."

"We converted to be a more liquid Fund of Funds. Believe it or not, we used to have annualized redemptions. What used to be annualized is now down to quarterly, and what used to be quarterly is now down to monthly. We've had to think about which funds we can actually invest in, to be able to offer those terms."
- Fund of Fund

Less Liquid Strategies Offer a Complexity Premium

Investment strategies in the upper right-hand corner of Chart 20 represent the most liquid in the Alternatives space. These are equity-based strategies that have assets that can be exited in a very short period since they trade in highly liquid global markets.

Investors choosing to focus solely on strategies in this space can expect relatively fluid terms that allow them to move money into and out of a portfolio of such strategies easily—at worst quarterly, and typically monthly, or in some cases even less.

"The biggest change we initiated is to improve the liquidity of our portfolio. We're shrinking our bucket of less-liquid managers."
– Fund of Fund

"A liquidity and transparency focus is key. If you're doing a distressed or asset-backed liability strategy, you have to put that into a private equity or hybrid structure—not a quarterly structure. It just doesn't work."
– Fund of Fund & Seeder

By contrast, Distressed Securities, falling in the lower left-hand corner of the chart, have the least-liquid profile. Assets held in these strategies begin to take on the characteristics of short-term private equity structures. In some instances, hedge funds in this space are offering investors "series," providing "vintages" and adopting other language and concepts from the private equity world.

Investors in these less-liquid strategies would need to agree to lock-up capital for an extended period of time to effectively realize the benefit of these investments. Exiting the assets in a rushed or forced manner is likely to result a disorderly market and have excessive impact.

If some of the "hard" assets such as mines and real estate purchased by Global Macro funds could be pulled out and separated from the more liquid assets also utilized in Global Macro strategies, those hard assets would fall even lower on the left-hand quadrant and require an even more extended lock-up to prevent excessive impacts.

> *"What hurt most at these hybrid shops is that they had both liquid and illiquid investments in the same portfolio. The liquid part of the portfolio did well. It was the illiquid part that created problems."*
>
> *- Pension / Insurance Fund*

Increasingly, investors willing to allocate down the liquidity spectrum can demand an "illiquidity" or "complexity" premium for their money. This premium can be realized in several ways.

Some hedge funds in this space were cited as being willing to set less frequent incentive fee calculations—oftentimes only when the lock-up periods end. Others are offering their investors lower fees altogether. Regardless of their approach, investors have considerable clout in negotiating terms with hedge fund managers in this space.

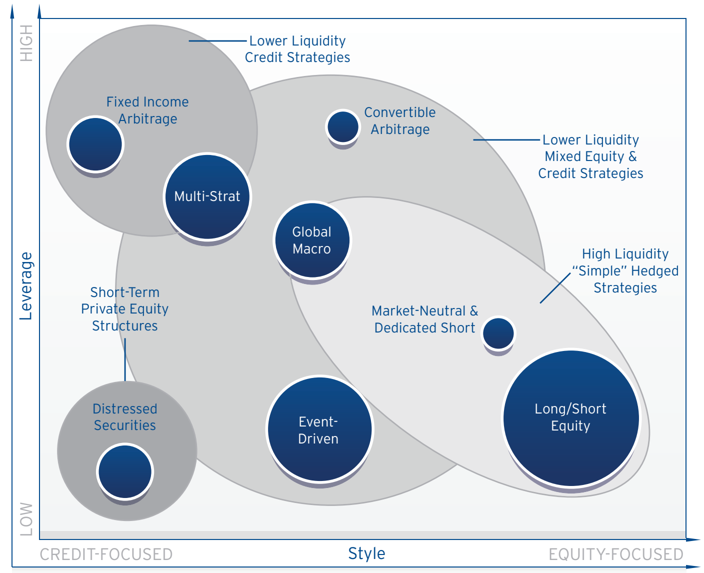
Consider Liquidity as the New "Third" Dimension in Alternatives

Chart 21 presents an updated version of the Alternatives landscape originally highlighted back in Chart 3. Prior to the liquidity crisis, achieving strategy diversification was accomplished by moving along the two-dimensions of "style" and "leverage." What becomes clear in looking at chart 21 is that "liquidity" has now become the third dimension to consider in constructing an Alternatives portfolio.

Once this third dimension is considered, the problems that occurred in 2008-2009 become easy to understand. An investor cannot look to achieve diversity by trying to blend a broad set of strategies into a single portfolio because this causes them to "jump" liquidity pools.

> *"People underestimate the cost of illiquidity. The terms you get as an investor and the liquidity of the investments that the manager does have to match up. If you go illiquid, you need a big bang for your brick."*
>
> *- Pension / Insurance Fund*

The Three Dimensions of the Hedge Fund Landscape



Sources: Citi Prime Finance. Size of bubbles represent HFR Q1 2010 AUM.

Chart 21

> *"Managers are not great at allocating funds to illiquid investments and end up reaching their side-pocket limits quickly. We are looking to avoid share classes with exposure to illiquids."*
>
> *– Endowment*

Some strategies overlap liquidity pools, but, even then, investors would at most be able to blend with one or the other set of strategies to keep a consistent liquidity profile.

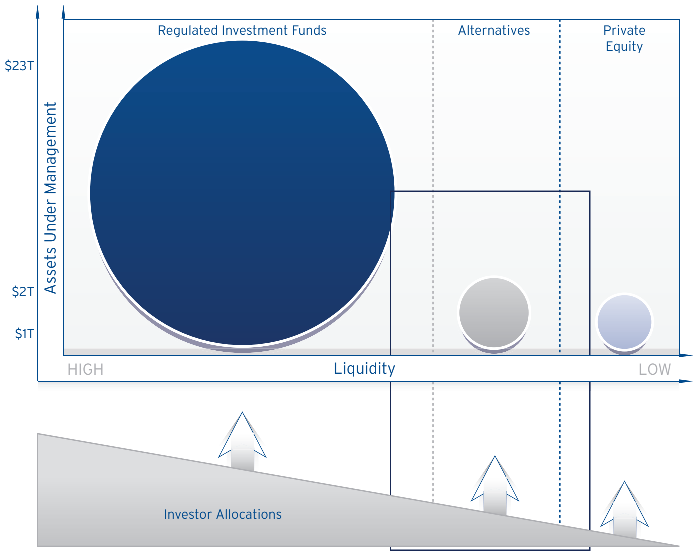
For this reason, rather than viewing Alternatives as a single landscape, it is becoming increasingly more accurate to describe the space as a collection of distinct "segments" that group investment strategies with compatible styles, leverage and liquidity.

This structural change marks maturation not only in how Fund of Funds approach the market, but for the way in which institutional investors and consultants are likely to think about and allocate to Alternatives.

The impact of this shift in thinking about Alternatives is likely to accelerate trends already at work pushing hedge funds toward convergence with elements of the mutual fund and long-only world. Ultimately, changes wrought in the hedge fund space could work to transform the current approach used in portfolio construction.

In recent years, an investor looking to create broad-based portfolio exposure would look across long-only, Alternatives and private equity, and typically make a decision about how much of their capital they would seek to "budget" to each of these investment areas. This is illustrated in Chart 22.

Asset Allocation Across Investment Pools



Sources: Citi Prime Finance, ICI, HFR, & Preqin. Size of bubbles are illustrative of AUM.

Chart 22

What's important to consider, is that once this highest level determination was made, all subsequent allocation activity would take place within one of these three silos. Capital allocated to long-only funds in the regulated investment space would be split out across various "traditional" asset managers. Money allocated to Alternatives would be channeled directly, through Fund of Funds or through institutional consultants to hedge fund managers. Allocations to private equity would go to managers focused exclusively on these structures. Each of these worlds was separate and distinct.

Alternatives "Silo" Becomes Less Distinct

Points brought forward in this final section of the report will highlight how that situation is beginning to change and how there is likely to be "convergence" and blurring across these three distinct silos. This will force investors to rethink their approach to portfolio allocation.

> *"There is going to be an ongoing premium for liquidity. That's definitely here to stay. Investors will always want some part of their allocation to always be liquid, so that they can get at it if they need it. You'll see a lot of conservatism in portfolio construction."*
>
> *- Fund of Fund & Seeder*

Investors Budget Their Alternative Dollars

Changes wrought by Fund of Funds in their approach to ensuring strategy diversification have now altered how those participants create their portfolio and how institutional consultants seek to advise clients in the Alternatives space. Rather than there being a single portfolio that could give an investor exposure to the full set of hedge fund strategies, there are now, at a high level, multiple Alternative segments.

> *"Portfolio construction is also likely to change. There will be more thought and research. How are different portions of your portfolio going to perform in all market environments? People will be more serious about risk budgeting, real asset budgeting and planning for inflation, deflation and growth."*
>
> - Pension Consultant

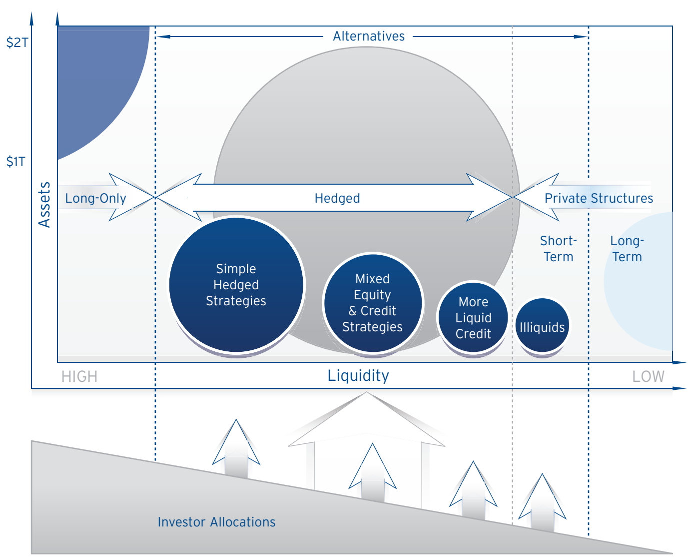
Institutional consultants are already beginning to discuss and work with their clients to optimally allocate their risk across these various segments. Increasingly, Fund of Funds managers looking for strategy diversification are likely to offer separate portfolios around each segment for investors to choose from, and select hedge fund managers based on their style, leverage and liquidity fit for each segment. Initially, these portfolios are likely to remain focused on the most-liquid segments, but over time Fund of Funds are likely to move away from their "blended" approach and sponsor distinct offerings across the different liquidity pools

As shown in Chart 23, an investor will thus need to align their desired liquidity profile to their Alternatives investments across the liquidity spectrum. In making this decision, they can work directly with different hedge fund managers, with their consultants and, over time, potentially with their Fund of Funds intermediaries, to "allocate" their Alternative dollar to one or more of the emerging segments.

There are two reasons for "allocating" this dollar. First, each segment has a different risk profile in terms of the liquidity of the underlying assets and their use of leverage. The investor will need to match their allocation to their desired levels of exposure and their projected investment horizon. Additionally, macro market influences are likely to impact the investment strategies contained within each segment differently. Investors will want to determine their overall view on the macro environment and budget their capital accordingly.

This more "budgeted" approach to Alternatives is likely to force investors to more closely consider how the most- and least-liquid options in this space compare to their long-only and private equity allocations.

Emerging Asset Allocation Focus On Alternatives



Sources: Citi Prime Finance, ICI, HFR, & Preqin. Size of bubbles are illustrative of AUM.

Chart 23

Boundaries Around Alternatives Blur

Now that investments with an "illiquid" profile can be grouped together into their own segment and command an "illiquidity or complexity premium," the choice about whether to invest in that segment is likely to be made more in relation to an investor's private equity dollar than their "Alternatives" dollar.

Indeed, as we have already discussed, these strategies have lock-ups and offer terms that that are mimicking many of the structures already in use in private equity funds, though typically of a shorter-term duration. Chart 23 illustrates this overlap and shows the "Illiquids" segment aligned under the Private Structures arrow as opposed to the "Hedged" arrow.

> *"There is starting to be a complexity premium. People are willing to pay a liquidity premium for longer-duration trades. The complexity premium is somewhat a function of how people are thinking about their incremental dollar. Where is it coming from? My PE pool? My long/short pool?"*
> *– Pension Consultant*

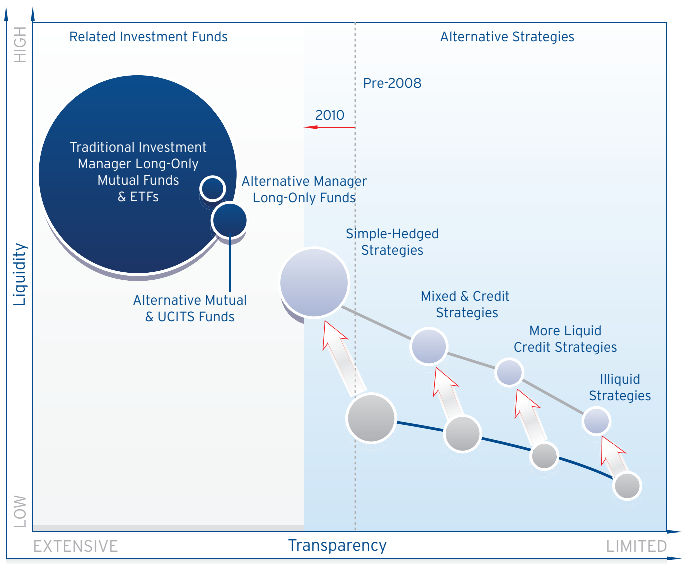
This provides investors a new "mid-liquidity" option between more liquid Alternatives and traditional private equity, which typically commands 5-10-year lock-ups.

On the opposite side of the spectrum, there is starting to be more and more focus on the idea of "convergence" between the long-only world and the Alternatives space.

"Regulated" Alternatives Emerge as an Option

Chart 24 shows that improved liquidity terms and a greater willingness on the part of hedge fund managers to provide transparency around their portfolio holdings has resulted in a significant shift upward and to the left for the set of Alternative investment segments. This has helped to narrow the gap that traditionally existed between long-only and Alternatives.

A Narrowing Gap Between Regulated Funds & Alternatives



Sources: Citi Prime Finance, ICI, HFR. Size of bubbles are illustrative of AUM.

Chart 24

Moreover, the introduction of UCITS funds has allowed the "Liquid Hedged Strategies" within the Alternatives space to begin to edge into the regulated investment funds landscape.

UCITS funds are a European structure that has been authorized by regulators for broad distribution. They are extremely high-liquidity (usually weekly) vehicles that are deemed suitable for retail and high net worth investors, as well as for the more traditional hedge fund ultra-high net worth and institutional audiences. Although they are regulated and more liquid than most other offerings in the Alternatives space, UCITS funds remain "hedge funds" in terms of their co-mingled investment structure and their ability to command both management and incentive fees.

Another class of regulated Alternatives is also emerging. Within the regulated investment funds space on Chart 24, right next to the large bubble, sits another smaller dark blue bubble. This represents a new class of fund offering–the Alternative mutual fund.

> *"I think the biggest change is going to be around the traditional silos of the investment management business. I don't see them staying as they are. We have a practice that looks across the liquidity spectrum–Long-Only, hedged, private structures. At their core, these are all similar in terms of their raw assets."*
> *- Pension Consultant*

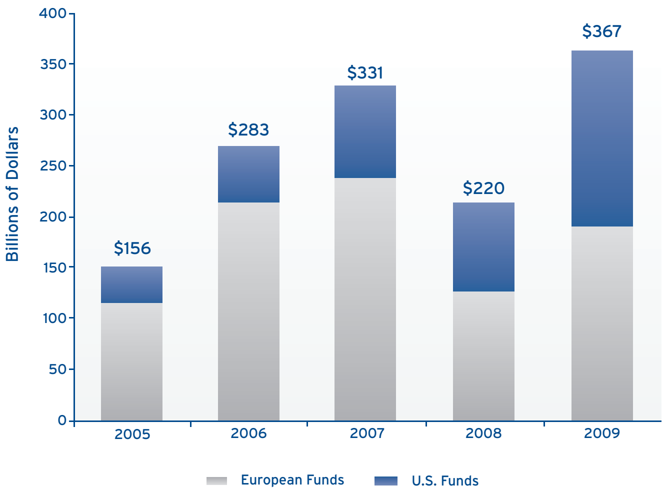
These funds utilize hedge fund investment techniques, such as long/short or market neutral, and/or CTA techniques like leverage and trend-following to generate returns, but unlike hedge funds, these are regulated mutual fund structures. "Alternative" mutual funds have multiple flavors including index-tracking mutual funds, actively managed alpha seeking mutual funds and exchange-traded-funds (ETFs).

There are also unregulated exchange-traded-notes (ETNs) tracked within this category. These Alternative funds are being offered both by traditional asset managers like PIMCO, Vanguard, Fidelity, T. Rowe Price, Oppenheimer Funds and Franklin Templeton and by hedge fund managers like J.P. Morgan Highbridge and AQR. These funds are also being offered by some high-profile "merger" firms that have created capabilities across the long-only/alternatives spectrum–such as Blackrock/BGI and Rydex/SGI.

> *"Long-only managers came out with opportunistic funds. This is forcing some commoditization of the Long/Short strategy side."*
> *- Pension Consultant*

The growing popularity of these funds is illustrated in chart 25.

Global Assets In Alternative Mutual Funds & UCITS Funds



Source: Strategic Insight, Exotic to Mainstream, Growth of Alternative Mutual Funds in the U.S. and Europe, 2010

Chart 25

According to SEI's Strategic Insight, assets under management in Alternative mutual funds and UCITS funds rose $110 billion in 2009, topping $367 billion in total, a new record for this investment category and a 67% increase over 2008's $220 billion. By comparison, ICI estimated a $28 billion net outflow in US equity mutual funds and HFR reported $132 billion outflow from the hedge fund industry in the similar period.

SEI went on to report that 18 U.S. retail Alternative funds (nearly 5%) topped the $1.0 billion assets under management mark in net inflows in 2009. Leading these allocations was $13.6 billion taken in by the SPDR Gold Shares ETF followed by $6.7 billion taken in by the second-biggest-selling PIMCO Total Return fund. In contrast, SEI indicated that only 3% of long-only U.S. funds (including ETFs) topped $1.0 billion in net inflows in that same period.

In their first-quarter 2010 Alternative Investments Observer, Morningstar (the mutual fund tracking company), reported that they are now following 350 Alternative mutual funds in their database. These Alternative funds are targeted primarily at the institutional audience seeking higher, more-diversified returns.

"Buyers on the institutional and high net worth side are basically firing their long-only managers and going after Alternatives managers."

- Pension Consultant

More Liquid Alternatives Compete with Long-Only

The emergence of Alternative mutual funds and regulated hedge funds is important because this blurs the boundary between Alternatives and long-only. Ongoing developments in the long-only space are likely to drive not just blurring, but actual overlap and direct competition between Alternative strategies and a large segment of the long-only space—"active" portfolio managers. This tension is already playing out in the equity space.

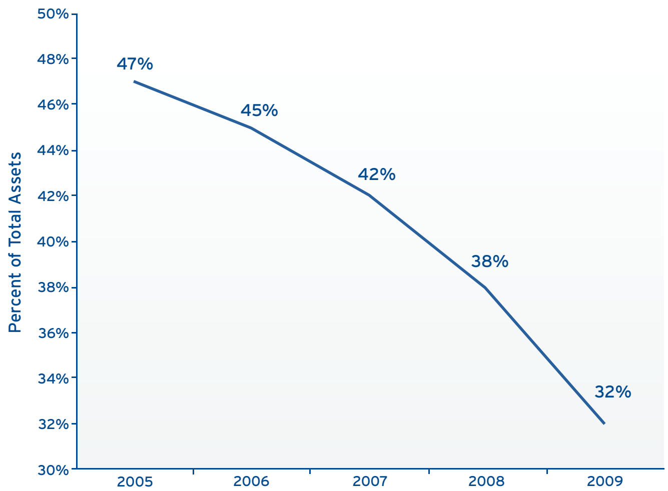
Equity Allocations Fall on Disappointing "Active" Manager Returns

Institutional investors have come to account for a higher portion of the overall U.S. mutual fund market in the past five years with holdings increasing from 12.5% in 2005 to 16.5% in 2009 according to ICI. Yet, their focus on equities as an asset class has diminished.

Greenwich Associates recently completed their 2009 U.S. Investment Management study. Data emerging from that report showed that as a whole, allocations from U.S. pension funds, endowments and foundations to domestic stocks declined to only 32% of total assets in 2009, down from 47% of assets in 2005.

This drop is shown in Chart 26

U.S. Institutional Investor Allocation To U.S. Equities



Source: Greenwich Associates 2009 U.S. Investment Management Survey

Chart 26

Two factors have accounted for this decline. First, equity markets performed poorly in the dramatic stock market plunge in 2007-2008, and erased a tremendous amount of asset value in the equities space. Though the recovery begun in 2009 helped levels rebound, equity mutual funds overall remain down from previous high-water marks and ongoing uncertainty about the economic recovery is limiting additional investment interest.

The other trend that has impacted equity allocations is growing frustration with the ability of "active" equity mutual fund managers to obtain desired returns.

"Active" portfolio managers in the long-only world are those that deliberately seek to achieve "relative" returns better than their underlying benchmark (an index of some sort that tracks a representative basket of stocks or bonds). This compares to "passive" index funds and exchange-traded-funds (ETFs) that try to replicate the returns of a benchmark.

One commonly watched benchmark is the S&P 500 Index. Many active long-only managers trading U.S. large-cap stocks will compare their performance to this measure. If their return beats this index, they are said to "outperform." This is true in negative as well as positive market conditions. If an "active" long-only U.S. large-cap manager is down 8% while the S&P 500 Index is down 10%, that manager is still said to have outperformed, despite having a negative performance.

> *"Investors are starting to understand that there are much better options than just equities."*
> *- <$1.0 Billion AUM Hedge Fund*

According to the S&P Indices Versus Active Funds (SPIVA) scorecard for end-2009, over the past five years (between 2005 and 2009) the S&P 500 Index outperformed 61% of actively managed U.S. equity funds; the S&P MidCap 400 Index outperformed 77% of mid-cap funds and the S&P SmallCap 600 Index outperformed 67% of small-cap funds.

This failure of many "active" long-only managers to beat their respective industry benchmark has prompted several Alternative managers confident in their stock-picking methodologies to launch "40 Act" mutual funds and compete for "active" long-only equity allocations in recent years (small, light blue bubble in regulated investment fund space on Chart 24)

> *"We know of funds that have gone from the hedge fund side to the long-only side. Their thinking was, why do all the shorts with the pressure coming down on us?"*
> *- >$10.0 Billion AUM Hedge Fund*

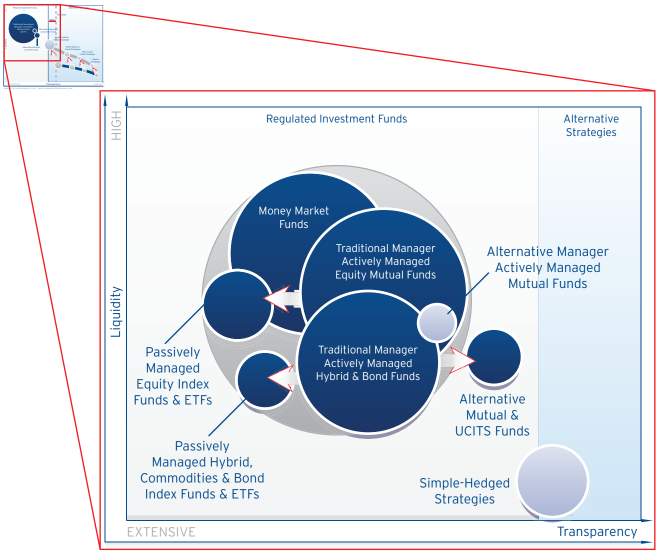
Passive Funds Draw Increased Percentage of Investor Assets

More importantly, concern about "active" long-only managers' ability to generate returns has fueled a shift in the manner by which many institutional investors are obtaining their beta exposure. There has been a dramatic increase in the growth of "passive" index tracking funds and ETFs.

ICI shows that between 2005 and 2009, the number of ETFs increased from 204 to 797 and the number of equity index mutual fund share classes increased from 658 to 756. Holdings of equity index mutual funds and ETFs increased from $849 billion assets under management in 2005 to $1.45 trillion by 2009.

This same trend is also holding true for bond mutual funds, but on a much smaller scale. The March 2010 SPIVA scorecard also indicated that across all categories, with the exception of emerging market debt, more than

Regulated Investment Funds



Sources: Citi Prime Finance, ICI, HFR. Size of bubbles are illustrative of AUM.

Chart 27

"Blinders are starting to come off buyers' eyes. Mostly it's the CFOs beginning to realize that long-only management is not really active. They're thinking, 'I might as well go ETF if they're small or index if I'm big.'"

- Pension Consultant

70% of active bond managers failed to outperform their relative benchmarks over the last five years. ICI shows that allocations to hybrid and bond index funds rose from $72 billion in 2005 to $159 billion in 2009.

Active Long-Only Managers Squeezed from Both Sides

Thus, "actively" managed long-only funds have been hard hit.

Traditionally, a dollar allocated to long-only strategies would be divided across "cash" as represented by money market funds and then either equities or bonds & hybrids. Now, in addition to this high-level allocation, within both equities and bonds & hybrids, allocators are increasingly needing to decide the "structure" they want to play–passive, active or Alternative.

Competition for investment dollars across these pools is illustrated in Chart 27.

As noted, passive funds are drawing off a portion of active managers' allocations. Putting money into these funds assures the investor of doing at least as well as the index they are seeking to replicate. The issue with passive funds, however, is that these structures leave the investor wholly exposed to directional market risk. They are not, therefore, an adequate replacement for investors looking to obtain better than benchmark returns, nor for those faced with liability gaps. For those investors, alpha allocations remain important.

The only investment technique that active portfolio managers in the long-only space can use to achieve alpha returns is overweighting or underweighting their purchases. Indeed, the most aggressive negative stance an active manager can take is to not own a certain stock or bond. Alternative mutual fund managers have a much broader array of investment techniques to choose from in their pursuit of alpha such as shorting, arbitrage and using leverage. This broader set of techniques increases the likelihood that a manager can produce and isolate alpha.

Thus, in addition to diverting a portion of their allocations from active long-only managers to passive funds, institutional investors are also shifting a portion of their active long-only manager money to "direct alpha" funds. Such funds span Alternative mutual funds, regulated hedge funds and more "institutionalized" hedge funds focused on liquid equity strategies.

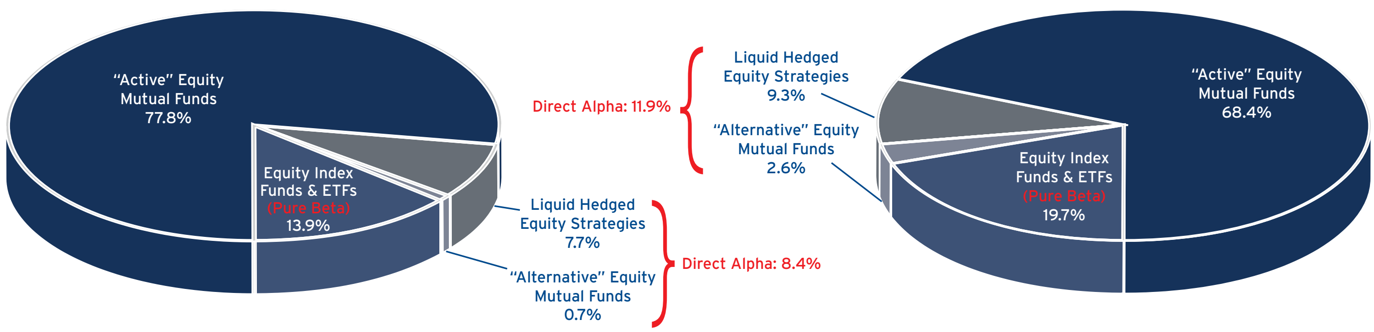
"Do you want cheap beta and alpha overlay or do you want a hedge fund? We don't know how it will play out. One of the advantages of the UCITS framework in Europe is that it may raise institutional comfort for this type of product. Unfortunately, it might be the right product in the wrong geography."

- >$10.0 Billion AUM Hedge Fund

"In the traditional long-only world, the most extreme expression of not liking a stock is not owning it."

- Pension Consultant

Breakdown Of U.S. Focused Equity Investments: 2005 vs. 2009



Sources: Citi Prime Finance, ICI, Strategic Insight, HFR. Totals may not add due to rounding. Assumes U.S. hedge funds manage 75% of AUM allocated to Liquid Hedged Equity Strategies.

Chart 28

The extents to which these trends have already taken hold are illustrated in Chart 28. As shown, total assets held in U.S.-focused Equity investments amounted to $5.7 trillion in 2005. Active mutual funds accounted for 77.8%; passive index funds and ETFs accounted for 13.9% and direct alpha funds, which include both Alternative mutual funds and hedge funds trading liquid hedged equity strategies, accounted for 8.4%.

By 2009, those allocations had shifted significantly. Total assets held were $6.4 trillion. Active mutual funds lost 9.4% share of those allocations, however, and only accounted for 68.4% of total assets. Passive index funds and ETFs picked up 5.8% market share, rising from 13.9% to 19.7%. Direct alpha assets rose 3.5%. Combined, Alternative equity mutual funds and liquid hedged equity strategies increased from 8.4% to 11.9%.

Having different structures to obtain "direct alpha" is beneficial to investors, but at the same time raises questions around which types of managers are best suited to deliver desired returns. Remember, both traditional asset management firms and hedge funds are offering Alternative mutual funds. Moreover, IT and operational investments since 2009 make traditional hedge fund structures viable choices as well, particularly those toward the most liquid part of the spectrum.

"A lot of investors are saying, 'Hey, my Equity book hasn't performed. I shouldn't have so much of my risk correlated at 1 with beta. Let's go into a hedged vehicle.' If you look across, allocations to Equities as a whole is flat or going down—if an investor was 60% in Equities, half of that is moving to hedge funds."

- Pension Consultant

Investors Uncertain about Traditional Managers in Alternatives

A lot of focus was given back in 2007 to the emergence of the 130/30 fund structure. These funds allowed mutual fund managers to expand their set of investment techniques beyond overweighting and underweighting to utilize a limited portion of their portfolio exposure to put on outright short positions, and to lever their long positions by an equal percent (i.e., 130% long and 30% short).

Expectations from some industry participants in 2007 were that assets under management in 130/30 structures could grow to as much as $1.0 trillion by 2011. Actual interest proved far less. *Pensions & Investments* estimates that total assets under management in 130/30 structures peaked in the third quarter of 2008 at $47 billion.

Morningstar tracks $30 billion of assets in these types of funds as part of their "levered net long" institutional category. In their first-quarter 2010 *Alternatives Investments Observer* they indicate that "130/30 strategies have failed to produce the alpha they were expected to generate." They note that of the 70 U.S. equity 130/30 strategies in their database, only 33 outperformed the S&P 500 in 2008 and that only 21 of the 59 reporting funds in 2009 outperformed.

In explaining the factors impacting 130/30 performance, Morningstar specifically cites "fears of counterparty credit risk, financing issues and, to a smaller extent, uncertainty surrounding short-selling restrictions."

While these may have been operational concerns for traditional managers, they are everyday considerations for hedge fund managers used to dealing with prime broker counterparts.

In an April 2010 piece entitled *Breaking Down the Walls: Convergence Between Traditional Investment Managers and Hedge Fund Managers*, BNY Mellon and Greenwich Associates released the results of a survey they had conducted at the end of 2009 across institutional investors, traditional asset managers and hedge funds.

In their survey, they noted that 52% of hedge fund manager respondents indicated that they are reaching across the hedge fund/long-only divide as a means of attracting or retaining assets. They also indicated that 46% of traditional investment manager respondents are launching hedge fund-like products to capitalize on institutional demand for hedge fund strategies.

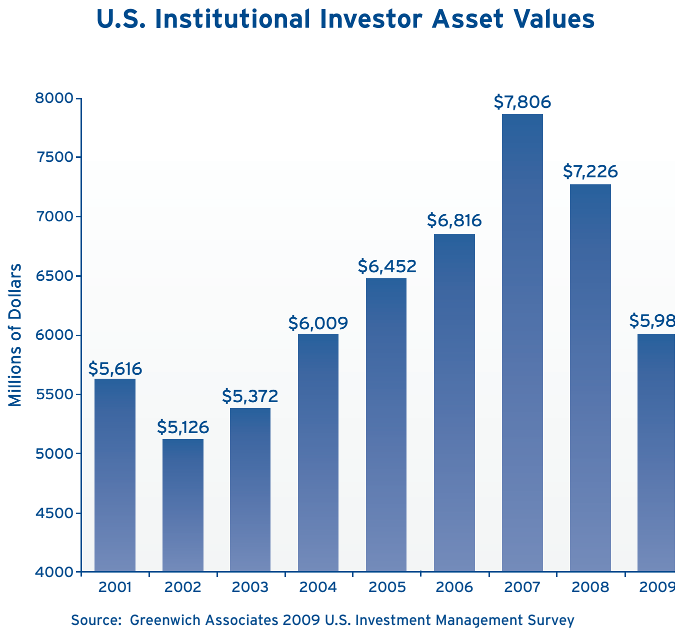


Chart 29

"Larger hedge funds will morph into more of a traditional asset manager, in their scope and in the types of products they offer. These firms will be 'asset players' who offer both mutual fund and Alternative asset products."

- Hedge Fund Consultant

"There are likely to be more pensions and endowments entering the Alternatives space, looking for better returns."

- <$1.0 Billion AUM Hedge Fund

One of the key questions they asked investors was how receptive they would be to using traditional managers for hedge fund-like strategies. Of the respondents, 63% indicated that they had absolutely no interest in using a traditional manager.

This finding could have profound implications for the hedge fund space as we may be at the start of a new wave of institutional investor allocation interest equivalent to or even greater than the influx of money seen in 2000-2003.

Liability Shortfalls Could Drive Allocations to Hedge Strategies

Chart 29 reflects the impact of recent events on institutional investors. Greenwich Associates reported in their 2009 U.S. Investment Management survey that the value of assets in the portfolios of U.S. defined benefit plans declined to $5.9 trillion in 2009 from $7.2 trillion in 2008. This represents the lowest asset levels seen since 2003.

Greenwich Associates notes that among public funds, the nation's largest pension funds were hit the most substantially and that these participants now have a solvency ratio average of only 81% of their liabilities. Corporate pension funding levels also fell dramatically. The report indicates that portion of U.S. corporate pensions funded at less than 85% rose from approximately 8% in 2008 to 57% in 2009. Anecdotal feedback suggests that similar liability shortfalls are impacting European institutions as well.

"Our interest in Alternatives has increased over the past 18 months and will likely continue to increase. This growth will be mostly in hedge funds. Our current allocation target is approximately 24%. A new allocation target is being developed, and it will probably come out in the 30%-35% range. We are also very interested in private equity, but the liquidity is a concern and we can't allocate too much to this space."

- Pension Fund

Finding attractive investment options to help cover these shortfalls is likely to turn institutional investors, particularly pension funds, increasingly toward hedge funds and/or hedge fund-like strategies. Chart 30 shows the relative returns of several major investment categories over the past three years.

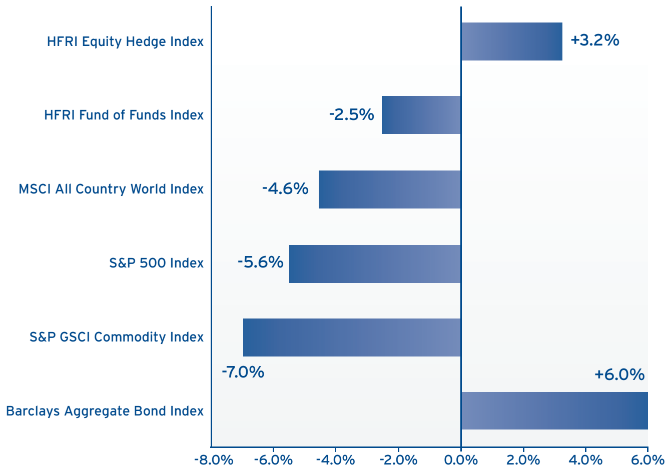
Despite the sharp rebound experienced by many markets in 2009, losses in 2007 and 2008 proved too severe to recoup. Looking across U.S. equities, international equities and commodities, major indices were all down over the last three years. Similarly, the HFRI Fund of Funds index was also down for reasons highlighted throughout this report.

By contrast, bond market returns were up, as was the HFRI equal-weighted equity hedge index. Bond allocations in U.S. mutual funds have already risen sharply as highlighted previously and may be poised to do so further. Bond returns, even in favorable markets, are not likely to be sufficient to close institutional liability and funding gaps, however. Our expectation is that increasingly, we will see U.S. and European pension funds raise their exposure to hedge funds and hedge fund-like investments.

"Pensions and Endowments are so underfunded that, as bad as Fund of Funds returns were in 2008, if you look at the absolute return markets versus the long-only markets they still did relatively well. There's hundreds of billions of more capital out there."

- Fund of Fund & Seeder

Relative 3-Year Performance 2007-2009



Sources: HFR, ishares.com

Chart 30

Complexity of Allocation Decision Increases

Institutional Inflows Could Nearly Double

Most pensions and consultants advising such participants in the Alternatives space contacted for this report indicated that, on average, institutional allocations to hedge funds are likely to rise from current targets of 8%-10% among large pensions to as much as 15%. This target is in line with allocations currently being awarded to hedge funds from endowments and foundations. Some participants cited even higher target levels.

This shift in allocation targets could result in an increase of more than $150 billion to hedge funds from U.S. institutional investors alone. In the BNY/Greenwich Associates survey, total investments from this sector were estimated at $231 billion in 2009. If this represents an average 9% allocation, an increase to a 15% allocation could boost hedge fund assets under management from these participants toward $385 billion in coming years.

European institutions and sovereign wealth funds are likely to follow suit and have an even broader array of choices in the hedge fund space. These investors can look across traditional hedge fund structures, regulated UCITS structures being offered by experienced hedge fund managers and Alternative mutual funds.

Competition to access new inflows from institutional investors, coming at a time when hedge funds are deliberately pursuing enhancements to appeal to this audience, is likely to feed ongoing "institutionalization" of the hedge fund industry.

"A 10% allocation to hedge funds from our clients wouldn't be surprising at all. It has to be enough to move the needle. The industry seems to be more conducive to institutional clients in terms of being more transparent, more accessible and more open."

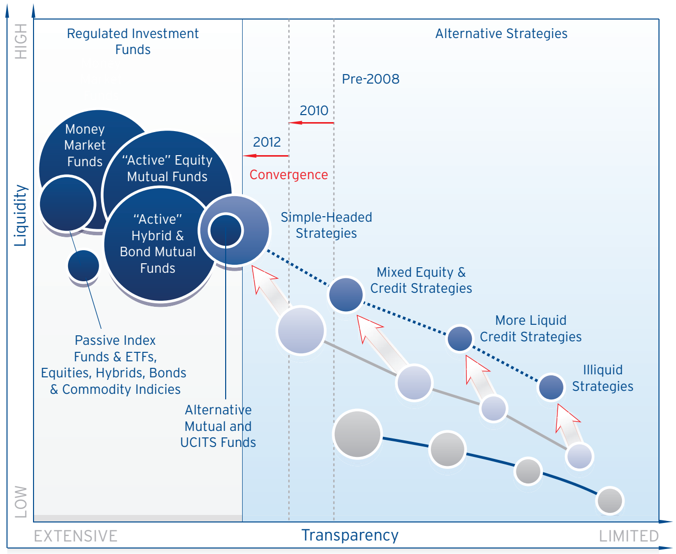
- Pension Consultant

"Fees will be based off what the investor is willing to pay. Investors used to mutual fund products are likely to pay less fees, and many hedge fund managers may be happy to take this money, trading off size for fees."

- Hedge Fund Consultant

The hallmarks of this shift will be increased transparency, liquidity and controls. Foundational improvements by hedge fund in their own infrastructure begun in 2009 are likely to extend into the coming period. These investments are just beginning to show results as efforts often take one to three years to be fully realized. Clarification of the current regulatory uncertainty is also likely to result in more open exchanges of information. Our projected impact of such changes is illustrated in Chart 31.

Projected Convergence Between Regulated Funds & Alternatives



Sources: Citi Prime Finance, ICI, HFR. Size of bubbles are illustrative of AUM.

Chart 31

Competition for Allocations Could Drive Convergence

By 2012, there is likely to be overlap between simple hedged strategies in the Alternatives space and Alternative mutual funds in the regulated investment space. A larger share of simple hedged strategies are also likely to be regulated as compared to 2010. This will reflect ongoing growth in UCITS funds and the likelihood that several of the largest hedge funds in the U.S. or elsewhere will respond to investor demand for lower-fee, regulated structures to satisfy more conservative board members of institutions and sovereign wealth funds.

As the liquidity and transparency differences between the various investment options diminish, the major remaining difference between regulated investment funds and Alternatives strategies is going to become fees. Many of the interviewees contacted for this report indicated that they believed investors would be open to having multiple types of structures in their portfolios and be willing to pay up for investment managers capable of posting alpha returns.

Many hedge fund managers are already only requiring investors to pay incentive fees on returns generated beyond the fund's previous high-water mark. If a hedge fund manager fails to generate such returns, the fund only collects its management fee which typically ranges from 1% to 2% of the assets under management. This fee range is broadly in line with the existing long-only mutual fund space.

For investors able to go this route, the appeal of not having to pay an incentive fee unless the hedge fund manager actually generates new high performance could erode resistance to using these managers. Many interviewees indicated their belief that the majority of direct institutional investor allocations are already going to the largest hedge funds most willing to accept high-water arrangements and that this trend will continue and strengthen. Convergence and a willingness among hedge funds to tie incentive fees to performance could set the stage for a more radical shift in investors' approach to portfolio allocation in coming years.

"As more capital is flowing into these big, big guys, there is no incentive for them to change. Hedge funds are going to keep getting bigger, which is frustrating. Big guys don't have to make returns to get rich. They have the management fee."
- Family Office

"The largest open question in our mind is whether long-only equity money is going to be viewed as just an 'equity' allocation. Six months ago, we had conversations about this, but we haven't seen it yet. We've not seen a ticket written on that basis, but we kick this around and talk about it a lot."
- >$10.0 Billion AUM Hedge Fund

Portfolio Decisions Could Shift to "Structures"

While we can readily forecast an increase in allocations to hedge funds and hedge fund-like strategies, there is a broader question around which of the investor's allocation pools will originate from.

Back in Chart 28 we illustrated the shifts that have occurred in U.S. institutional investors' equity holdings. We indicated that of the total allocation to equities, active long-only managers' share had diminished between 2005 and 2009, while awards to passive funds and direct alpha funds had both increased. The manner in which we presented that chart diverges from how an investor would think about their allocation today, since we blended allocations from two silos—long-only and Alternatives.

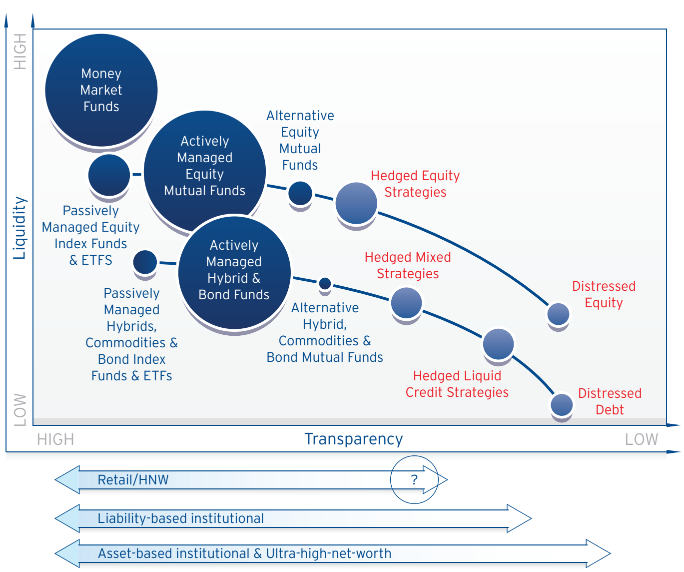
If we followed today's accepted portfolio allocation approach, we would have separated out the long-only portion of the investors' equity assets and not considered how those funds were allocated in the same data set as investments in liquid hedged equity strategies. We would have said that in the long-only space, U.S. institutional investors altered their mix of equity holdings, shrinking their allocation to active long-only managers and increasing their awards to passive funds and the emerging Alternative mutual funds category. Separately, U.S. institutional investors also increased their Alternatives allocation and awarded an increased share of their portfolio to liquid hedged equity strategies.

The reason we portrayed the pie in the manner we did is that we wanted to underscore that regardless of whether there is an official shift in terminology, the impact of blurring boundaries between Alternatives and long-only has already begun to occur and that the decisions about where the money is coming from is being done across silos.

While the difference may seem subtle, it has profound implications for the way in which investors construct their portfolios.

Chart 32 puts forward a view of how "new" investment allocation decisions may be made. In this model, an institutional investor looking to make an "equities" allocation would think about those dollars across passively managed equity index funds and ETFs, actively managed equity mutual funds, Alternative mutual funds, simple hedged equity strategies and eventually even distressed equity strategies.

Asset-Based Investment "Structures"



Sources: Citi Prime Finance, ICI, HFR. Size of bubbles are illustrative of AUM.

Chart 32

A "bond or hybrid" decision could similarly be made across a range of capital market structures, some regulated and some "institutionalized."

"I definitely see more of a specialty-consulting business coming. We've carved out groups to focus on Alternatives and on hedge funds within that."
- Pension Consultant

"There is a huge investor population not looking for aggressive returns. They're looking for consistent returns and really large hedge funds will serve that purpose."
- Hedge Fund Consultant

Some institutional investors are already recognizing the move in this direction. One example is the San Bernardino County Employees Retirement Association (SBCERA). In an April 28, 2010 HFM Week article entitled "*A Singular Approach*," it was revealed that the $5 billion fund would be increasing its investments in the long/short equity space with said allocations forming part of its equities allocations "bucket," not as part of its Alternatives portfolio.

James Perry, SCBERA's Investment Officer is quoted in the HFM Week article as saying "My concern is not about investing in a long-only traditional account or a hedge fund or a private equity structure; rather, the objective is to find the best opportunities set and then identify the best structure or approach to get an investment in that opportunity set—and in a lot of cases, the hedge fund structure is the best structure to attack an opportunities set."

If more institutional investors adopt this mindset, there is likely to be a much-transformed allocation landscape emerging in coming years with much more fluidity in styles, leverage and liquidity profiles to be considered.

Large Hedge Funds Most Likely to Benefit

Large hedge funds are best positioned to benefit from this shift in the portfolio allocation approach. These managers already draw the majority of hedge fund allocations. They are also the most well positioned to pick up money shifting away from active mutual fund managers seeking alpha. They have both the trading expertise and the reputation to either directly offer such regulated Alternative funds or forge affiliations with traditional managers to jointly create and market such offerings. Such was the rationale for the BGI/Blackrock merger and other merger activities in the past year.

As already noted, these managers are best positioned to sustain their operations and investments based solely on their management fee in periods of flat to lower returns, due to the size of their asset base. These hedge funds also tend to draw the highest share of direct investor allocations due to the robustness of their IT and operational infrastructures which are the most "institutionalized" in the hedge fund space.

Finally, role specialization is also more evident at larger funds and most have built out extensive investor relations teams. This benefits the organization's ability to pursue and maintain direct relationships with institutional investors and their intermediaries in a period when investors are recognizing the benefit of such relationships and looking to spend more time getting to know a manager.

The biggest concern interviewees expressed about the largest hedge funds drawing the majority of institutional flows is about whether the size of the fund itself becomes a hurdle in creating alpha. This uncertainty has existed for some time in the market, and was underscored during the liquidity crisis when many of the larger, more-liquid managers demonstrated a higher-than-expected correlation to beta in their portfolios as noted earlier.

One facet to watch in coming years is whether these large hedge funds are able to sustain their returns and isolate their performance from beta.

The other facet to watch will be emerging regulatory mandates and their potential for increasing the operational burden on hedge funds. Some participants expressed concerns that excessive regulation could begin to drive funds out of the major U.S. and European money centers to Asian or Swiss locations with looser rules. Others worried about the unintended consequences of regulators trying to flex their extra-territorial rights. As more clarity about upcoming rules emerges, we will create another update exploring those issues in depth.

"There has been a power shift toward investors substituting bigger managers in their portfolio."

- Pension Consultant

"Smaller managers are having trouble in the new environment. All the money is going to the big guys now."

- Fund of Fund

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