

Opportunities and Challenges for Hedge Funds in the Coming Era of Optimization

Part 1: Changes Driven by the Investor Audience

Citi Investor Services



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Key Findings

Outlook for Assets:

Hedge fund industry assets have attained new record highs and our outlook is for growth to remain strong. By 2018, we forecast core hedge fund industry AUM to rise to \$4.81 trillion—an increase of 81% from the \$2.63 trillion noted at the end of 2013.

Institutions will account for 74% of those assets as these investors expand their use of hedge funds in risk-aligned portfolios and as they start to rely increasingly on the advisory relationship provided by leading hedge fund managers in support of the institution's holistic portfolio, direct and co-invest programs.

We also see a new tier of hedge fund investor become an entrenched part of the market—the retail investor. Demand for 40 Act alternative mutual funds is surging. Net investor flows into these products were \$95 billion in 2013 versus only \$67 billion into the entire global hedge fund industry. We see AUM in these products (excluding alternative ETFs) rising from \$261 billion at the end of 2013 to \$879 billion by 2018. Dynamic growth here should spill over and help support growth in alternative UCITS, where we see AUM doubling from \$310 billion in 2013 to \$624 billion by 2018.

Publicly offered funds will thus offer a further \$1.5 trillion in additional alternative industry assets. Today, our forecast is that 50% of those assets are being advised by managers also running hedge fund products. By 2018, we forecast that figure rising to 65%.

We thus see the total pool of capital being advised by hedge fund managers rising from \$2.9 trillion in 2013, of which \$286 billion, or 10%, is being managed on behalf of the retail audience to \$5.8 trillion in 2018, of which \$977 billion—or 17%—will be managed on behalf of the retail audience.

Key Investor Trends:

The majority of changes occurring in the hedge fund industry in the five years since the Global Financial Crisis (GFC) have stemmed from the emergence of risk-averse institutional investors as the dominant source of capital. In tracking this evolution over the course of our past 4 industry surveys, we have laid out a number of key themes that we revisit and update in this 5th annual report.

With the benefit of hindsight, we are also able to position these trends within a broader framework. We now see the past five years as a period in which there have been three key changes in the strategic imperative driving the industry.

In the immediate aftermath of the GFC, the industry imperative was to “Survive.” Several structural flaws were uncovered in the events of late 2008 and early 2009. Addressing liquidity mismatches, transitioning to a more transparent investor-manager engagement model, eliminating adjacency risks, ensuring better alignment of fees and terms, and creating a robust culture of oversight were all activities required to ensure investor allocations and position the industry to rebound from the dramatic losses and issues that surfaced in that period.

As a more stable structure took hold, the imperative changed. Participants looked for ways to “Diversify” their risks and create a more robust and resilient environment. There are three main diversification themes that we highlight in this year's report that show how different today's industry is from the one most participants were familiar with pre-2008.

The first diversification trend involves institutional investors moving from a singular “hedge fund” exposure to a more nuanced approach where hedge fund strategies fall into different categories based on their transparency, liquidity and directionality. Those exposures that have more embedded beta are being repositioned in many investors' portfolios to provide “shock absorption” against potential downside and excessive volatility. This is part of a broader shift in investor portfolio configuration that focuses on better managing and balancing portfolio risks after many institutions saw their historical “60/40” portfolios move almost 1:1 with the underlying equity markets in the GFC.

- Our analysis shows that hedge fund AUM now represents \$1.72 trillion or a post-GFC high of 10.2% of the record \$16.92 trillion in institutional assets invested across mutual funds and hedge funds. This is up from 9.4%, the previous record high level of assets noted in 2012. This increase in hedge funds' share of total institutional investments occurred in 2013 despite hedge funds themselves having significantly underperformed the major equity indices. This illustrates the growing use of these instruments as a risk tool in investor portfolios.

The second diversification trend we discuss in this year's report is the shift to multiple tiers of investors, each focused on a unique hedge fund segment, and the growing divergence in the profile of hedge funds that align to each of those tiers.

■ **Boutique Hedge Funds & Direct Institutional**

Allocators: Pension allocators choosing to select their own hedge funds and allocate capital directly to those managers became major drivers of the post-GFC landscape and remain a critical audience. These direct allocators affirmed their "sweet spot" of targeting managers just coming through the \$1.0 billion AUM institutional threshold but not having grown much beyond the \$3.0 - \$5.0 billion AUM band that we first wrote about back in 2011. These investors also continued to cite hedge funds in this AUM zone as best positioned to absorb large \$100 million-plus ticket size, deploy capital nimbly and be willing to build their advisory relationships with the allocators.

■ **Franchise Hedge Funds & Consultant-Led**

Institutions: Large pensions and sovereign wealth funds supported in their hedge fund manager selection by the industry consultants have focused on the industry's largest firms in the post-GFC years—helping to drive the average allocation for these firms with greater than \$5.0 billion AUM up by 127% between 2008 and 2013. While criticized by many as asset gatherers, these firms have instead used their size to create market-leading platforms that offer investors robust risk and portfolio reporting, highly tuned collateral management, far-flung research listening posts in emerging and frontier markets and a robust platform of trading talent. These firms have very much become "franchise" names with global clout and influence.

- Because many of the founders of these franchise level firms are now approaching the years where they may be considering retirement, and since several brand name hedge funds have opted to give back investor capital and instead operate as a family office, investors have been keenly focused on the new set of second generation—or "Gen 2"—portfolio managers coming out of these franchise firms. These individuals are typically exiting with the full support of and oftentimes a capital stake from their former employers and have large amounts of personal wealth to use to establish their own firms. They are launching near or even above the \$1.0 billion AUM institutional threshold and the rush to lock in capacity with these emerging organizations is reminiscent not of the post-GFC capital-raising environment, but of the pre-crisis years.

The third diversification trend we have identified and that we update in this year's report is the emergence of a completely new investor tier—**retail-oriented financial advisors** looking to place their clients that cannot qualify for the accredited investor status required to participate in a private fund vehicle into publicly traded funds, particularly 40 Act alternative mutual funds—run by traditional hedge fund managers.

- The speed of growth in these strategies exceeded even our most optimistic forecasts. Indeed, we note in this year's report the near identical growth pattern for these products between 2006 and 2014 and for the hedge fund industry itself between 1990 and 1998. Since the hedge fund industry went on to more than double in the next 5 years and then more than double again in the following 5 years, the similarities in trajectory between these products will be an ongoing focus of attention for the industry through 2014 and beyond.

Having used our anniversary issue to update trends that we have been following to some degree for the past four years, we were interested to see in just how many aspects the strategic imperative is shifting once again in the hedge fund industry from "Diversify" to "Optimize."

For the industry's largest participants, this optimization is taking the form of a blurring of lines between investors and hedge funds. Many of the leading institutions that invest into the hedge fund market have built their own asset management organizations in recent years. In line with that move, these investors have also developed robust risk and portfolio management platforms that are allowing them to run factor analysis and trade overlay analysis on the position level information being fed to them by their set of hedge fund managers.

This is allowing some investors to co-invest into securities and to directly invest into markets alongside their hedge fund counterparts. These participants are helping to fill a market-making and lending gap emerging on the sell side in response to the loss of proprietary trading talent, falling inventories and increased sensitivity to balance sheet impacts from the traditional dealer community.

Those investors that are too small to trade alongside their hedge fund counterparts are showing other signs of optimizing their approach to portfolio construction. Several survey respondents discussed their move to create opportunistic allocations that they saw existing outside their core hedge fund holdings. In most instances, these investors were looking to take advantage of small niche or "exotic" alpha opportunities for a short period of time and use those positions to up the risk exposure in their overall portfolio.

Another optimization theme evident in 2013 was the ability of hedge fund managers to leverage the broad investor community's increased focus on categorizing the types of beta in their portfolio and being "smart" in the manner that they sought beta exposure. In some instances, this led to more hedge fund managers being

given allocations to run long-only funds as AUM in this category rose to a new record of \$183 billion in 2013. In other instances, the drive to identify diversifying or alternative beta streams allowed for the successful launch and funding of infrastructure concentrating on real asset-based hedge funds like those focused on timber or toll roads or airline leases—assets that would provide revenue streams uncorrelated to the securities markets.

Shifting Set of Drivers:

Although developments in the investor landscape have been the primary drivers of change in the hedge fund industry for the past five years, we clearly see the coming wave of financial industry regulation having the same transformative impact on the hedge fund industry and financing markets in the coming period. We forecast the next five years being more driven by these influences than by investor trends.

Part II of this year's report provides a separate paper that will explore the regulations reshaping the banks and revamping the industry's financial plumbing. We will look at how these rules are changing the nature of financing and helping to move "collateral" to be a front-office function and new asset class. We will look at the actions being taken by leading asset management organizations and hedge funds to reposition their capabilities to succeed in this new environment and discuss how financing efficiency may become the new optimization that drives differentiation in the emerging landscape.

Methodology

The 2014 Citi Investor Services 5th Annual Industry Evolution report is the synthesis of views collected across a broad set of industry leaders involved in the global hedge fund and traditional long-only asset management industry. Comprehensive interviews were conducted in the U.S., Europe and Asia with hedge fund managers, asset managers, beneficial owners, agent lenders, consultants, fund of hedge funds, pension funds, sovereign wealth funds, endowments and foundations.

To better comprehend evolving industry dynamics and changes, for our 2014 survey we conducted 138 in-depth interviews. Collectively, our survey participants represented \$1 trillion in hedge fund assets and \$14.8 trillion in overall assets managed or advised. The interviews were conducted as free-flowing discussions rather than constructed, one-dimensional responses to multiple-choice questionnaires. The idea of this approach was to ensure that we do not conduct interviews with any preconceived notions. We gathered more than 150 hours of dialog and used this material to drive internal analysis and to create a holistic view of major themes and developments.

Given the breadth and scope of this year's research, we have decided to release the report in two complementary pieces:

Part I will focus on the investor landscape for hedge funds and projections for asset raising in the industry.

Part II will turn attention to the significant regulatory changes that are affecting the financing industry and its impact on financing relationships.

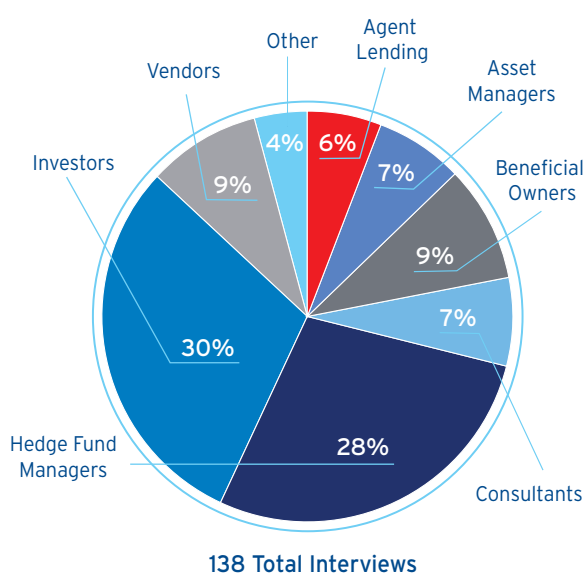
These reports are intended to be a qualitative and quantitative prediction of future industry trends that have been constructed around the comments and views of the participants we interviewed. We have also built indicative models based on those views to illustrate how the hedge fund industry will evolve given the ongoing regulatory changes.

The structure and presentation of the report is intended to reflect the voice of the participants and our interpretation of their views on the market trends. To highlight key points, we have also included direct quotes from our interviews; however, citations are anonymous as participation in the survey was done on a strictly confidential basis.

As can be expected, there are a number of topics that this survey has touched upon that have been covered in more detail by prior Citi Investor Services publications. In these instances, we have referenced the document and, where necessary, have also included direct charts from previous publications.

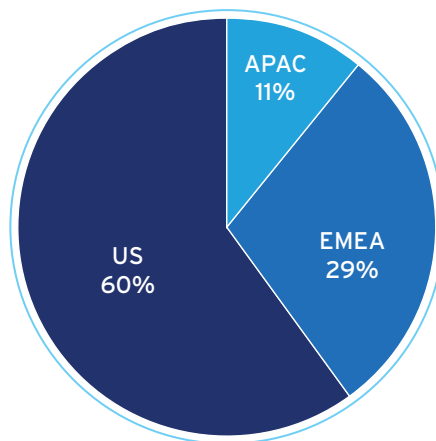
The following chart shows the survey participants that we interviewed this year, representing all major global markets.

Survey Participants

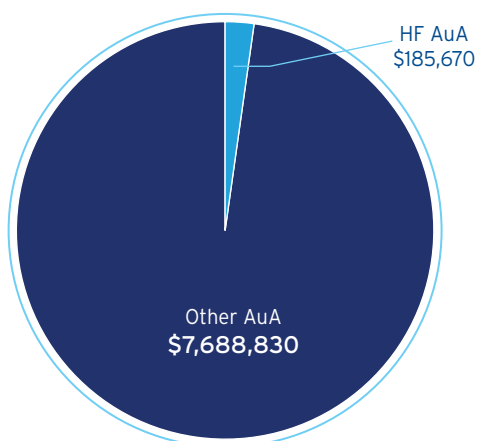


Overview of Survey Participants

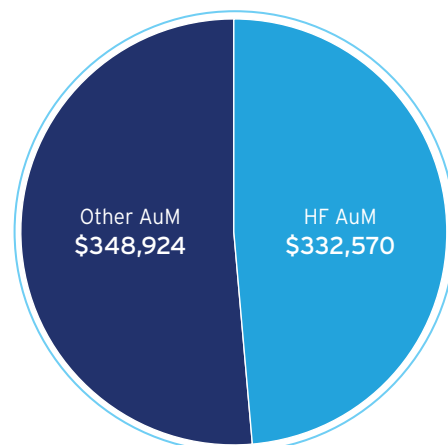
Regional Survey Participants



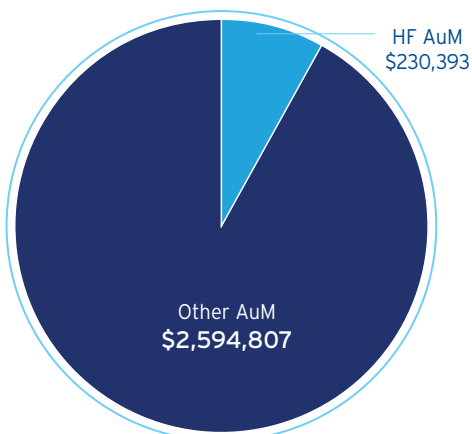
Consultant Participant AuA (Millions of Dollars)



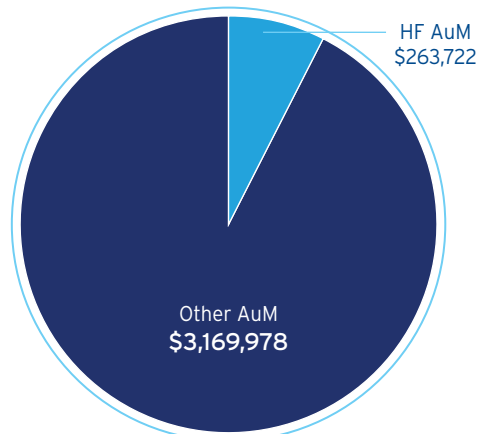
Hedge Fund Participant AuM (Millions of Dollars)



Investor Participant AuM (Millions of Dollars)



Asset Manager Participant AuM (Millions of Dollars)



Section I: Investor Evolution in the Post-Crisis Period

Boom Years End with the Global Financial Crisis

The years prior to the Global Financial Crisis (GFC) can be viewed as a time of unmitigated optimism for hedge funds and for the investors that supported these managers, but also as one that proved to have been shortsighted about structural issues affecting the core of the industry. These issues came to the forefront during the tumultuous period in the latter part of 2008 and early 2009.

The Investor Landscape Pre-GFC

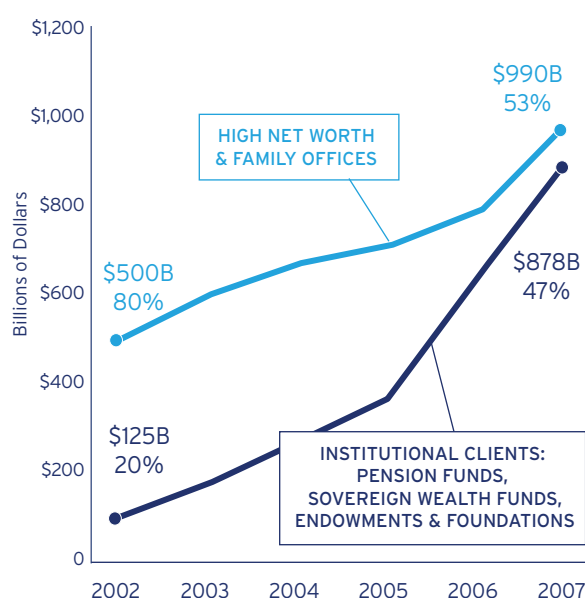
The roots of change that have reshaped the hedge fund industry since the GFC stretch back to the early 2000s and challenges that defined benefit pension plans faced in the wake of the Technology Bubble. In line with their traditional portfolio allocation of being ~60% exposed to equities and ~40% exposed to bonds, many pensions experienced significant losses in their portfolios when global stock markets fell in 2000 - 2002. In the late 1990s, Towers Watson noted that global pension assets equated to 108.5% of projected liabilities (1998 - 2000). By 2002, coverage was down to only 73.7%.

While most pensions suffered substantial losses during 2001 - 2002, large endowments, led by Yale University, were able to achieve significantly better results. Between 1999 and 2002, an average 60/40 portfolio fell -2.2%, whereas Yale University's portfolio for the similar period showed a +17.0% gain and large endowments (>\$1.0 billion AUM) following Yale's lead posted +5.6% returns.

These endowments had expanded their investable universe away from tradable securities in liquid markets and added diversified alpha streams in less liquid markets, allocating to non-traditional participants such as hedge funds and private equity firms.

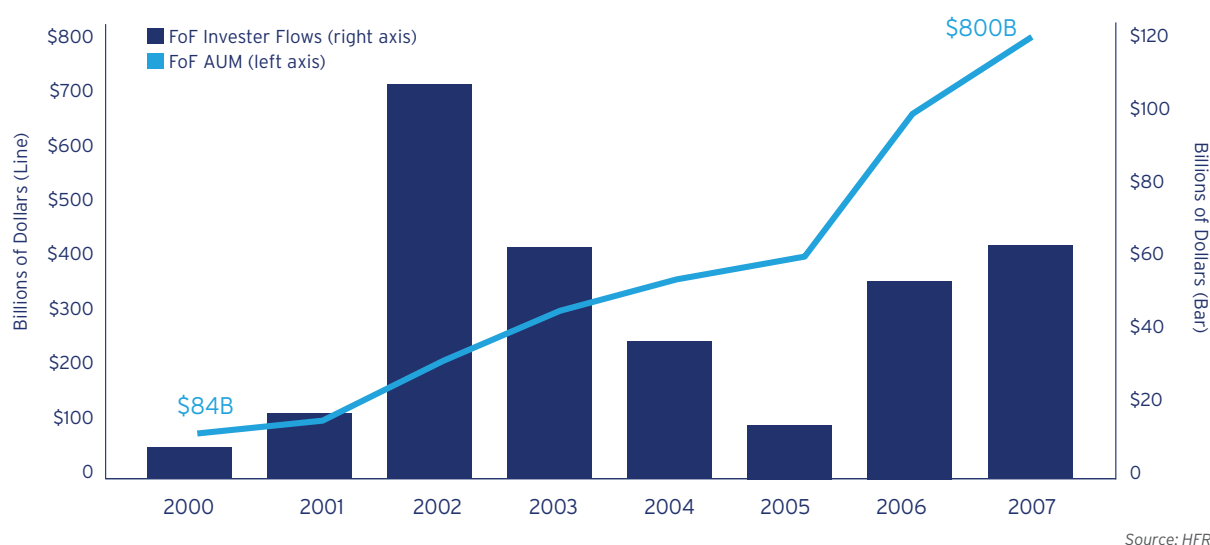
This principle was embraced by the consulting community advising institutions post-2002. Between 2002 and 2007, pension funds, and in the latter part of that period, sovereign wealth funds (SWFs), poured more than \$750 billion in assets into hedge funds, resulting in explosive growth and a booming industry. Indeed, when this massive investment program commenced, the entire hedge fund industry was only \$625 billion and institutional investors accounted for only \$125 billion, or 20%, of total AUM. By 2007, the hedge fund industry had risen to \$1.8 trillion and institutional investors accounted for 47% of total assets. This is illustrated in Chart 1.

Chart 1: Hedge Fund Industry Sources of Underlying Capital 2002-2007



Source: Citi Investor Services analysis based on HFR data & proprietary interviews.

When launching their programs, pensions and SWFs directed the majority of their capital tagged for hedge funds to fund of hedge fund managers (FoHFs) who acted as intermediaries for the underlying institutional investor. According to HFR, between 2002 and 2007, the number of hedge funds increased by 66%, whereas the number of FoHFs increased by 215%. As shown in Chart 2, FoHF AUM increased nearly 10-fold in the early 2000s, rising from \$84 billion in 2000 to \$840 billion in 2007.

Chart 2: Fund of Hedge Fund Investor Flows & Total AUM: 2000-2007

Just prior to the GFC, a small percentage of more market-leading pensions felt that their understanding of the hedge fund space had progressed sufficiently to move beyond the FoHF intermediary model (that added an additional layer of fees) and engage directly with underlying hedge fund managers. On pursuing this approach, there was a definite progression evident in the market.

Industry structure changes in these years clearly reflect this progression. Between 2002 and 2007, FoHFs and multi-strategy funds captured 73% of net investor flows. By contrast, FoHFs and multi-strategy funds accounted for only 33% of net flows in the preceding 6 years.

Institutional investors looking to directly allocate to hedge fund managers was an important step and one that would reshape the industry in the years after the GFC, as will be discussed. Yet, it is also important to note that the traditional hedge fund investor audience of high net worth and family office investors were also increasing their allocations to hedge funds during the early 2000s.

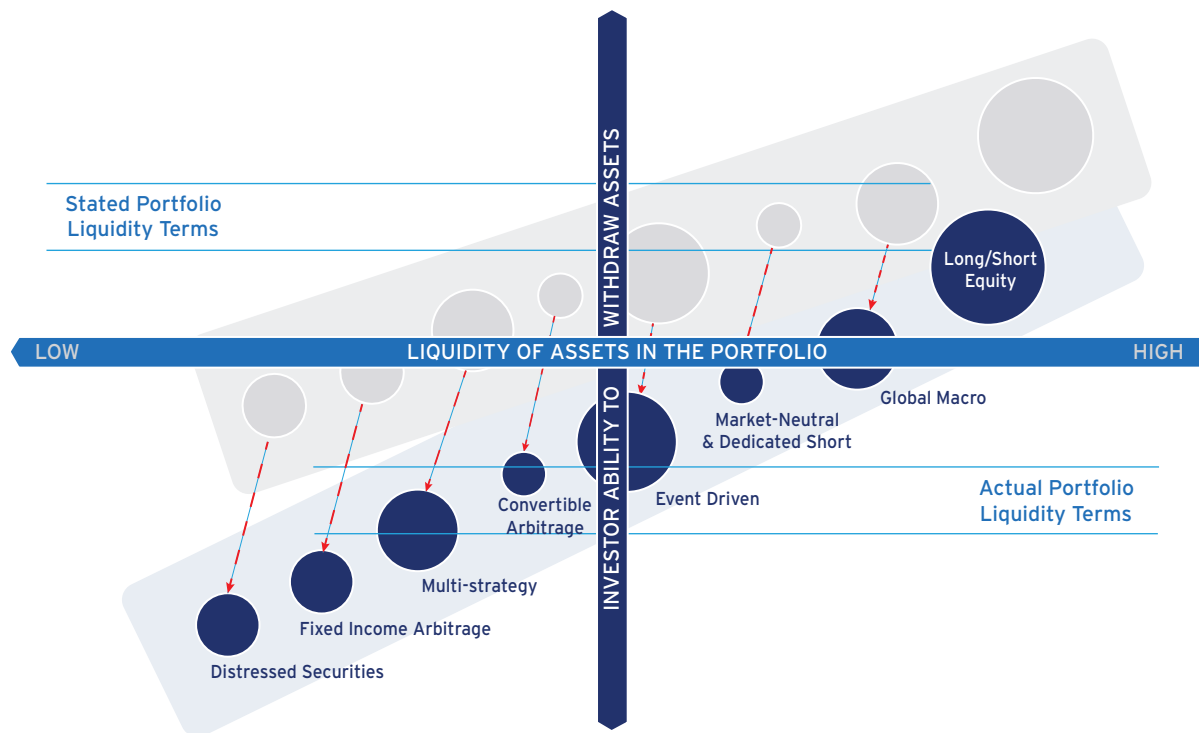
These investors fueled the early years of hedge fund industry growth in the 1990s as they sought to capture excess return in their portfolios with their “risk” capital. Between 1994 and 2000, the average 3-year trailing hedge fund return was 21.8%—on par with the explosive equity markets (MSCI World +15.7% and S&P500 +21.9%). Yet, these hedge fund managers were able to achieve those returns with only two thirds the monthly volatility of the

equity markets (8.3% vs. MSCI World 12.0% and S&P500 12.5%).

Placing hedge funds into their portfolio allowed high-net-worth and family office investors to amplify their returns, but with less risk than if they had purchased more outright long-equity positions. This same dynamic held true in the early 2000s. Between 2000 and 2007, hedge funds actually outperformed the equity markets (average 3-year trailing returns of 9.8% versus MSCI World 3.6% and S&P500 2.0%) and with a substantially lower risk profile (8.4% volatility versus MSCI World 14.0% and S&P500 14.6%).

Between 2002 and 2007, high net worth and family office investors nearly doubled their hedge fund allocations as shown back in Chart 1, but these gains were dwarfed by the much larger allocations coming from the pensions and institutional investor audience. By 2007, high net worth and family office investors were only providing 53% of the hedge fund industry’s capital, down from 80% in 2002. Given changes that occurred post-GFC, the importance of these investors continued to decline.

Chart 3: Illustrative Fund of Hedge Fund Portfolio Liquidity During the GFC



Source: Citi Investor Services.
Size of bubbles represent industry AUM from HFR based on the Q4 2010 report.

Global Financial Crisis (GFC) Uncovers Structural Issues that Impact Investor Confidence

The speed of the industry's growth in the years prior to the GFC masked several structural issues that came to light in the latter months of 2008 and early part of 2009. From an investor's perspective, issues could be grouped around three main concerns—liquidity, transparency and oversight.

As large numbers of investors sought to exit their hedge fund allocations and move back to cash, hedge funds found themselves overwhelmed. Liquid funds described feeling like their funds were being used as an "ATM." Those with illiquid assets were in a more difficult position and, as a result, many hedge fund managers threw up gates, created side pockets or suspended redemptions all together.

This became a significant issue for the FoHFs. The GFC uncovered a serious mismatch between the terms these FoHFs offered on their portfolios and the liquidity they were able to realize. Chart 3 shows what occurred in an illustrative FoHF portfolio during the crisis.

In constructing their portfolios, FoHFs had mixed hedge fund managers with varying liquidity terms in order to achieve strategy diversification, but in so doing, they had failed to anticipate how illiquid many of these hedge fund investments would become in a period of concentrated outflows. The going-in assumption of many FoHFs was that their blended redemption 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. Rather than being able to withdraw capital in a blended manner across their pool of managers, more liquid hedge fund managers in the FoHF portfolio had to shoulder a disproportionate share of withdrawals.

Since the majority of pensions and other institutional investors in the market at the time were still using FoHFs for their hedge fund exposure, this situation had a deep and lasting impact. Two quotes from our first industry evolution survey published in 2010 capture the heart of these issues.

“ 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 exits at once and everyone started asking for their money back at the same time.”

– Fund of Fund & Seeder, 2010 Report

“ 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.”

– Public Pension Fund, 2010 Report

The second major problem that came to light was that there had been very little look through to the positions that hedge fund managers were running in their portfolios and that when investors became aware of what their hedge fund managers were holding, the nature of these positions came as a surprise.

“ 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.”

– Private Pension Fund, 2010 Report

The third problem that came to light was one of oversight. Institutional investors had used FoHFs as intermediaries to capture their hedge fund exposure because of their supposed expertise at performing due diligence and evaluating the investment

manager’s ability to deliver returns. When the Madoff scandal broke in mid-December 2008, it became clear that such diligence had not extended to an evaluation of the manager’s processes and controls. As one pension industry consultant stated in our 2010 report, “Madoff was like a bomb going off in the industry, particularly in Europe.”

A comparison of where investor withdrawals hit the hedge fund industry in Q4 2008 and Q1 2009 reveals just how devastating this news was for the traditional FoHF model. Both hedge funds and FoHFs suffered net outflows throughout those six months, but there was a flip in the focus of liquidations from one quarter to the next.

Of the \$151.7 billion redeemed in Q4 2008, single hedge fund managers accounted for 67% of the outflows and FoHFs accounted for only 33%. This reflected many of the traditional high net worth and family office investors liquidating positions to move to cash, just as they were doing in their equity mutual fund portfolios at the time. Most institutional participants were trying to hang onto their hedge fund investments in hopes of cushioning losses elsewhere in their portfolios via the “illiquidity” premiums these investments were supposed to provide.

By contrast, in Q1 2009, investors withdrew an additional \$103.2 billion from the hedge fund industry, but 83% of those redemptions came from FoHFs and only 17% from single managers.

With their confidence shaken by their experience in the crisis period, investors initiated sweeping changes in their approach to the hedge fund industry that have had a prolonged and transformative impact over the past five years.

Section 2: Survive - Foundational Changes Occur in the Audience Investing in Hedge Funds

Sweeping changes that occurred within the industry's core investor base in the immediate aftermath of the GFC have fundamentally altered the hedge fund landscape. Many of these changes were made in direct response to the liquidity, transparency and oversight issues discussed in the previous section, and were undertaken so that investors could survive and continue to invest in hedge funds in the post-GFC world. In this section, we will look at the investor responses to issues that emerged in the GFC and revisit those trends with the benefit of five years of hindsight.

High Net Worth & Family Office Investors Diminish in Importance

THEN:

Redemptions were noted by each hedge fund investor segment during the height of the GFC. Beginning with our 2011 report, we noted that not all investors returned to reinvest their capital in the months following the crisis. Chart 4 shows the sharp drop in assets posted by both institutional and high net worth/family office investors between 2007 and 2008.

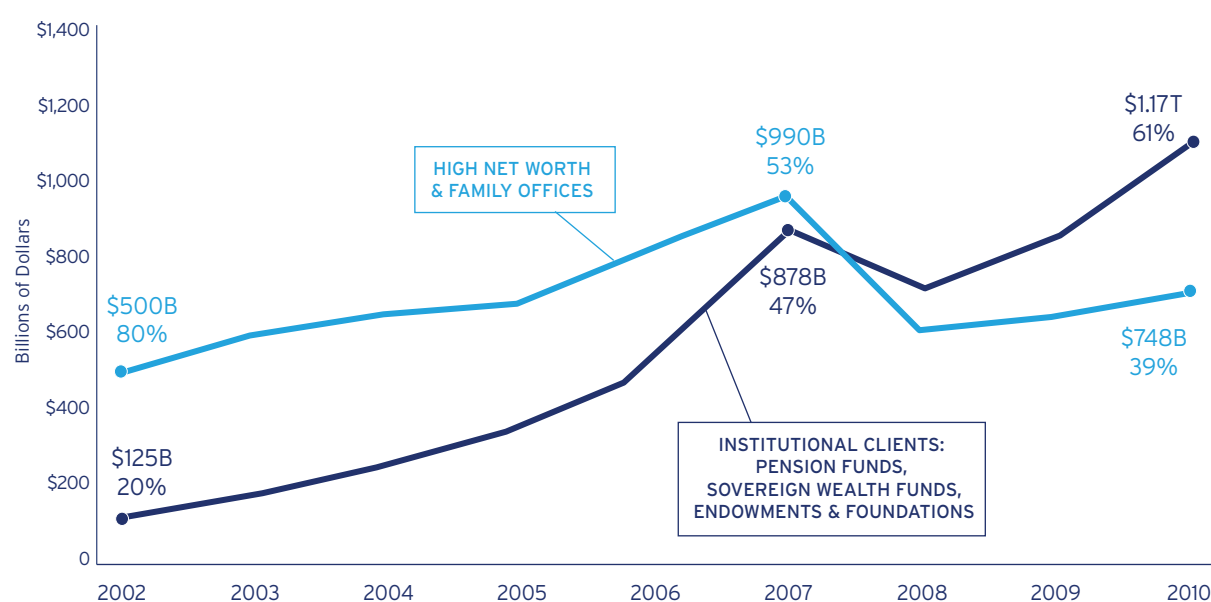
As shown, high net worth and family office assets fell from their 2007 peak of \$990 billion to only \$633 billion at the end of 2008—a drop of 36%. By the end of 2009, those assets had only recovered an additional 8% to \$684 billion. By contrast,

institutional investor assets fell only 12% from their peak during the crisis, declining from \$878 billion to \$774 billion. The rebound in assets originating from this source in 2009 was also much more substantial. Our analysis shows institutional holdings in hedge funds increasing by 18% to \$916 billion.

As a result of these post-crisis shifts in the source of investor money, for the first time in history, institutional investors now accounted for a larger share of the industry's assets than the traditional high net worth and family office investor base.

The changeover in investor audience was attributed to the varying goals that hedge funds played in the investor's portfolio. Institutional investors entering the market were looking for risk-adjusted returns and access to an illiquidity premium not found in daily liquidity markets. This was a very different mandate

Chart 4: Hedge Fund Industry Sources of Underlying Capital 2002 to 2010



Source: Citi Investor Services analysis based on HFR data & proprietary interviews.

than the one sought by high net worth investors and family offices that were looking for outperformance and high returns on what they considered to be their risk capital.

While down sharply in the GFC, hedge funds were still able to demonstrate significantly better performance than long only equity managers during the crisis as hedge funds were down approximately 20% versus declines of 40% plus in both the MSCI World Index and S&P500. Hedge funds were able to realize this result with lower volatility than long-only managers as well. Institutional investors focused on this outcome and saw hedge funds as meeting performance expectations. High net worth and family office investors who were seeking outperformance saw this outcome as disappointing.

NOW:

The shift we noted in the investor base for hedge funds has become significantly more pronounced in the years since we first published Chart 5. As Chart 5 shows, institutional investors went from accounting for 61% of the industry's assets in 2010 to 65% in 2013. Assets sourced from this investor segment rose by 47%, from \$1.17 trillion to \$1.72 trillion. Concurrently, high net worth investors and family office assets posted increases of only 21%, rising from \$748 billion to \$907 billion—a figure that equated to a market share of only 35%.

Many now view the hedge fund industry as a

predominantly institutional landscape. The repercussions of this shift in audience base have been profound and many facets of the post-GFC environment can be directly linked to this change in the industry's primary investor base. There are signs, however, that the high net worth investor and family office interest in hedge funds is rebounding modestly.

Chart 5 shows that assets sourced from these investors rose 18% in 2013—the largest single annual gain since pre-crisis. High net worth and family office assets reached their second highest on record at \$907 billion—just 8% below the 2007 peak of \$990 billion. As will be explored in later sections, there are some encouraging signs that more interest may be emerging from these investors in the coming period.

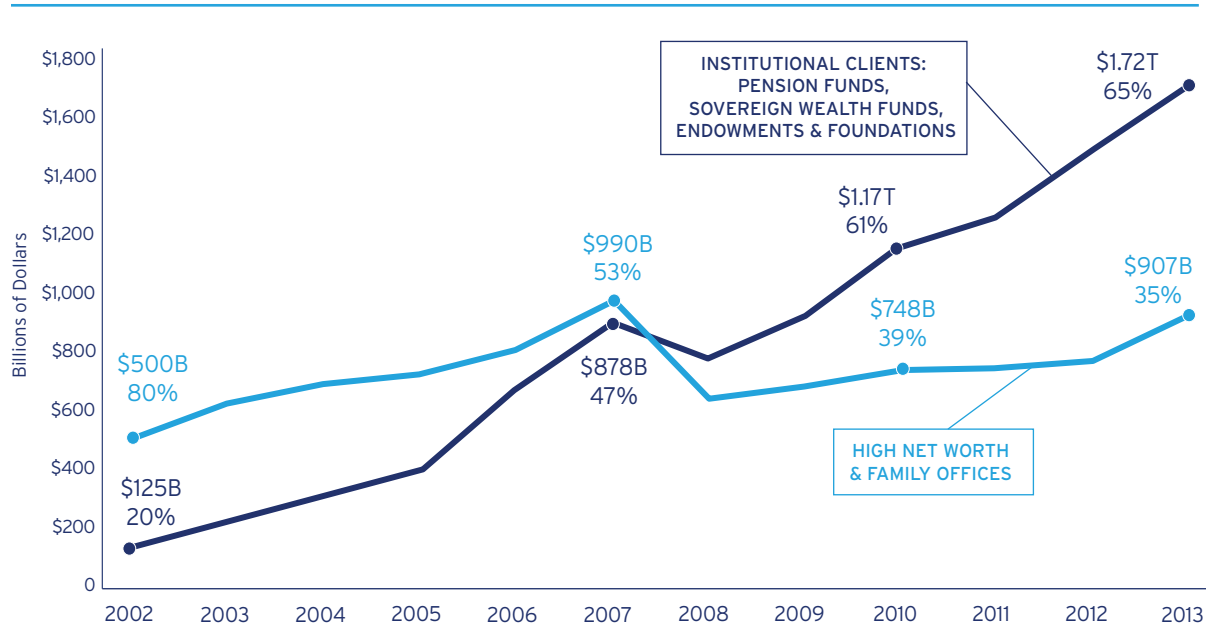
Yet, in the years immediately post-GFC, it was clearly the institutional audience that drove industry change.

Institutional Investors Move Decisively to a Direct Investment Model

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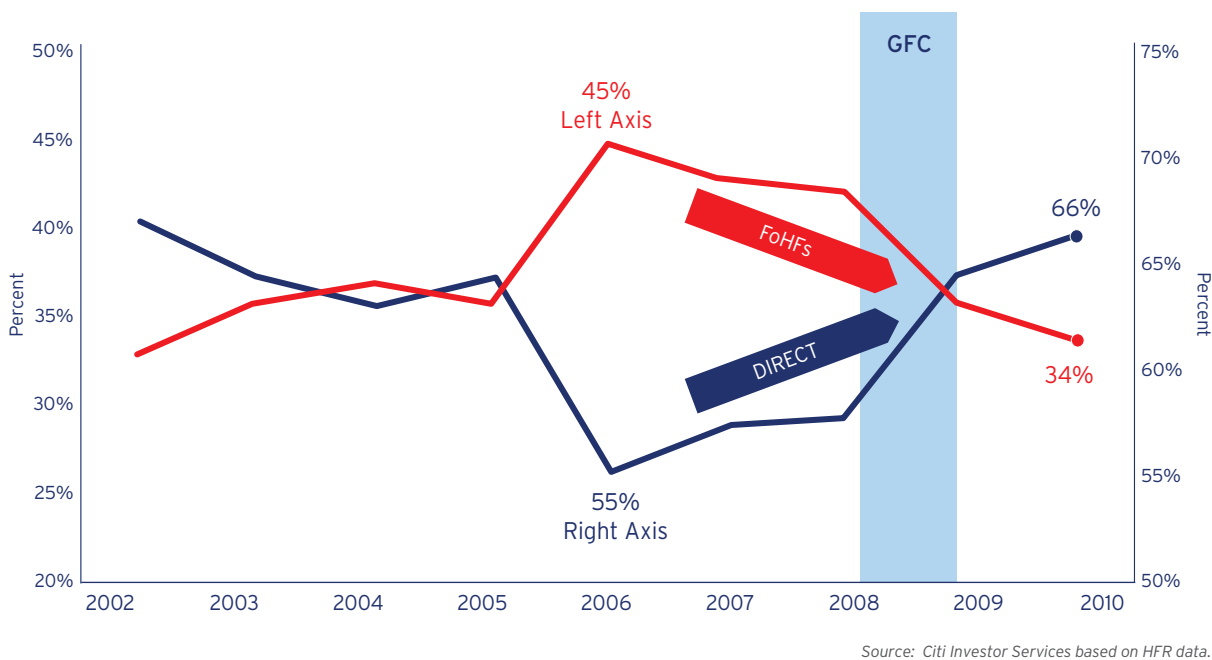
Our 2011 report focused extensively on how pensions and SWFs were increasingly choosing to forego the FoHF route to market and instead take responsibility for directly selecting their own hedge fund managers—sometimes with and sometimes without the help of industry consultants. This changeover in approach was clearly highlighted in Chart 6.

Chart 5: Hedge Fund Industry Sources of Underlying Capital 2002 to 2013



Source: Citi Investor Services analysis based on HFR data & proprietary interviews.

Chart 6: Investor Allocation Methodology: 2002 - 2010



In line with this shift in allocation methodology, there was also a change in the approach to building hedge fund exposure.

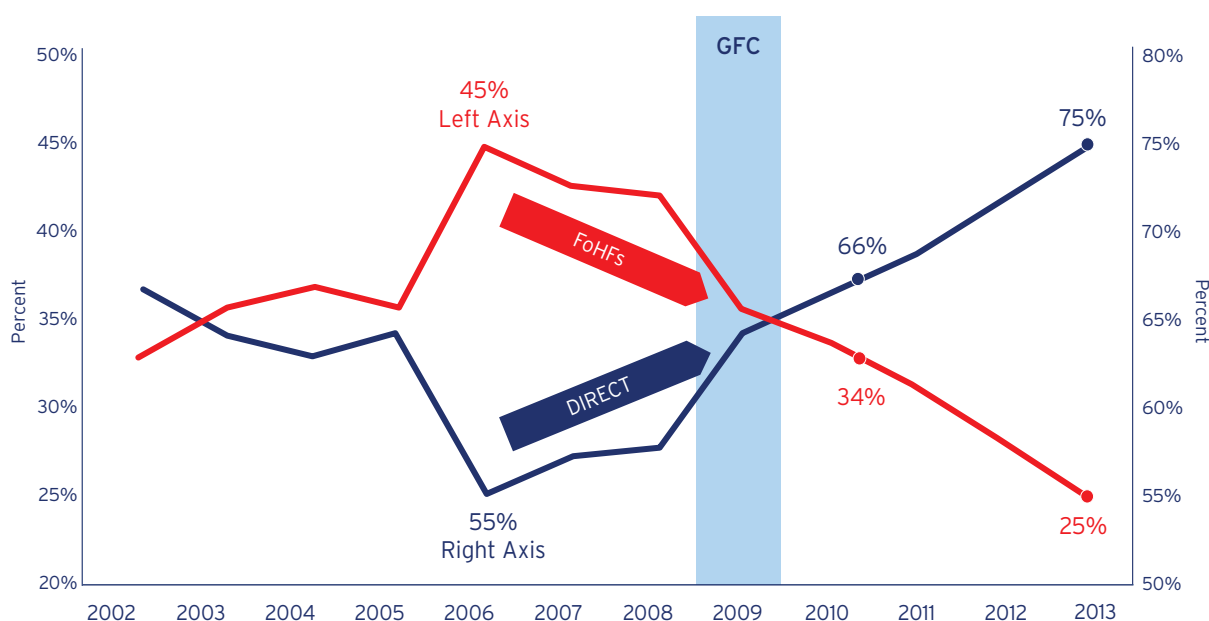
Although many leading FoHF had started to move toward concentrating their hedge fund portfolios in the years just before the GFC, the traditional FoHF model achieved diversification by having an array of managers in the portfolio (100 or more in many instances). In contrast, the portfolio held by direct pension and SWF allocators was significantly smaller and more targeted, at no more than 30 - 50 managers for large pensions and SWFs and as few as 20 managers for smaller institutional allocators. In part, this smaller portfolio size was driven by resource constraints, as most pensions and SWFs had small investment teams of only 1 - 5 individuals. Even in instances where the firm was able to leverage consulting resources to support their manager selection and evaluation efforts, the investment teams wanted to be highly involved in the allocation decision.

This desire by direct allocators to hold small, manageable portfolios together with the size of the capital pool they were mandated to allocate meant that most of these organizations would be looking to write extremely large tickets of \$50 - 100 million or more. This was very different than the small \$5.0 - 10.0 million tickets that FoHFs were typically writing in the pre-GFC period.

Since they did not want their allocation to account for an excessive amount of any one hedge fund's total assets, direct pension and SWF allocators were forced to look at much larger managers. Pre-GFC, FoHFs had favored small, emerging managers under \$500 million in order to capture the outsized returns managers with lower amounts of AUM can often generate. We indicated in our 2011 report that smaller managers were likely to struggle in the emerging environment as an "institutional threshold" was likely to emerge in the market between \$500 million and \$1.0 billion AUM, below which it would be difficult for direct investors to consider allocations.

Because of the size of the individual investment, direct pension and SWF allocators were likely to spend an extensive amount of time considering the right portfolio mix and perform a deep due diligence on each manager they would consider for the portfolio. Indeed, we noted that a key part of that due diligence was building a personal relationship with the manager. As such, we indicated that it could take several months to a year for an allocation to be decided.

While resource constraint was a limiting factor on portfolio size, most direct pension and SWF allocators also affirmed that they were making a deliberate choice about not having excessive diversification in the portfolio. For the most part, they sought to design a model where the mix of strategies helped them align their returns to their long-term investment

Chart 7: Investor Allocation Methodology: 2002 - 2013

Source: Citi Investor Services based on HFR data.

targets with the goal of being able to achieve resiliency through market cycles.

NOW:

Direct allocations have become the norm in the years since we wrote our 2011 report. This is illustrated in Chart 7 that shows direct allocators now accounting for 75% of all assets in the market, up from 66% in 2010. Correspondingly, the FoHF market share has continued to erode each year since 2010—falling to only 25% of total industry assets at the end of 2013.

Moreover, there has been a complete industry realignment in terms of the size of managers receiving allocations. As we had anticipated, a clear institutional threshold has emerged in the market. According to HFR, a total of \$1.22 trillion in assets were added to the industry between Q4 2008 and Q4 2013. Firms with <\$1.0 billion AUM only attracted 6% of these assets, whereas 84% of the assets went to firms with >\$1.0 billion AUM. In Q4 2008, the average AUM of a <\$1.0 billion fund was \$60 million and the average AUM of a fund with >\$1.0 billion was \$1.77 billion. By Q4 2013, the average AUM of small funds <\$1.0 billion AUM remained basically unchanged at \$69 million, whereas the average size of funds >\$1.0 billion AUM rose to \$4.2 billion—an increase of 136%. This is illustrated in Chart 8.

One clear sign that there has been a major shift in the market is the terminology used by many pension and SWF investors. In this year's survey, these investors would make frequent reference to their interest in emerging managers, but when pressed on what AUM ranges these "emerging" managers fell into, the investors typically answered \$1.0 - \$3.0 billion AUM.

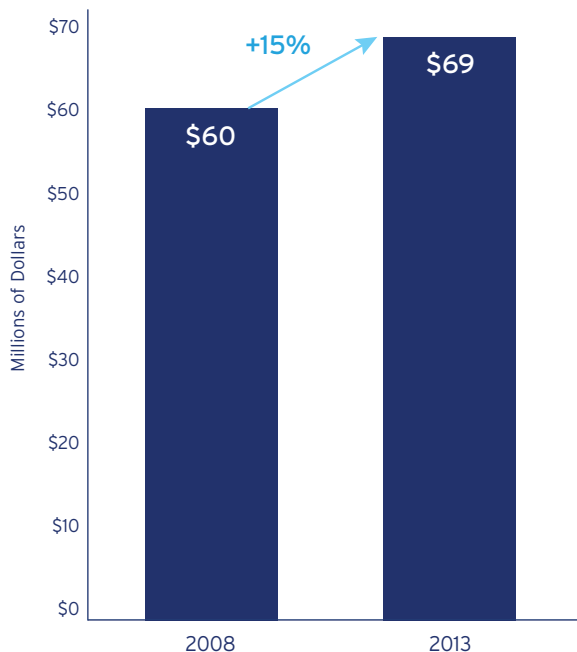
Other aspects of our 2011 report also continue to prove accurate. The size of directly allocated investor portfolios remains limited with 20 - 50 managers. Indeed, most end investors today indicated that they were running portfolios toward the bottom end of that range. Ticket sizes have continued to grow and it is not considered unusual to see an allocation of \$250 million or more awarded from one of these institutional participants.

"Our partners to whom we have allocated hedge fund capital have been very helpful in helping us understand some of the frameworks and tools they use to understand global markets. This was part of their mandate coming into our program. We don't go so far as to ask them to share their 'secret sauce' for managing money, however being able to understand their views on the global economy has been very helpful to our program."

— Sovereign Wealth Fund

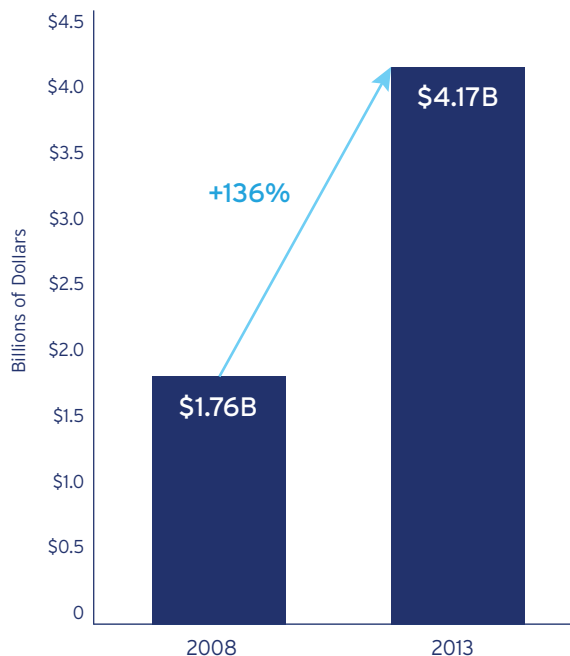
Chart 8

Hedge Funds with <\$1.0 Billion AUM
Average AUM Per Fund



Source: Citi Investor Services based on HFR data.

Hedge Funds with >\$1.0 Billion AUM
Average AUM Per Fund



Source: Citi Investor Services based on HFR data.

As anticipated, the period it takes to complete due diligence on a manager has remained quite extensive. Moreover, these investors have lived up to their reputation for offering sticky money. Turnover in most investor portfolios remains in the 10 - 20% range annually and even in years when hedge fund managers have underperformed, investors have sustained their allocation so long as they continue to believe in the hedge fund manager's process and strategy. Indeed, this emphasis on "philosophical alignment" has surprised many in the industry, but has helped to keep portfolios intact during periods of disappointing market performance.

Finally, the "relationship" aspect of having investors directly engaged with their hedge fund managers has become even more important. Investors noted that they often consult their hedge fund managers about their market views and use those inputs to help manage their broader portfolio. They have also invited their hedge fund managers in to present to their investment committees and boards. This deep level of engagement has laid the foundation for the investor-hedge fund relationship to evolve in many new directions, as will be explored later in the report.

" We have engaged in an Emerging Manager program that we view as somewhat opportunistic. We have grown out our hedge fund allocations from \$4.0 billion to nearly \$9.0 billion since 2009. We are putting our capital to work \$200 million at a time so we don't engage with managers smaller than \$1.0 billion."

– Public Pension

" We are biased toward smaller managers. The majority of our exposure is with managers whose AUM is \$1.0 - \$3.0 billion. This is the sweet spot for us to invest because the manager has an infrastructure that minimizes the business risk, but they are still nimble enough to create unique investment opportunities. We can also create a great partnership with these firms to help us in other ways."

– Public Pension

" A main evolution of our hedge fund portfolio has been to have a more concentrated number of hedge fund allocations. Pre-GFC the portfolio had 35 - 40 allocations, but now having more than 30 allocations would be considered high."

– Private Pension

Consultants Become Gatekeepers & Enforcers of Stringent Due Diligence

THEN:

We noted in our 2010 report that the liquidity crisis shifted the balance of power in the relationship between hedge funds and their investors and intermediaries. Prior to the GFC, many investors and intermediaries discussed how competition to gain access to a fund's limited capacity would cause them to feel pressured to make a quick decision on an allocation, even if that decision was based on incomplete information. Hedge funds were able to resist requests to share more detailed portfolio information. Meanwhile, though operational due diligence existed prior to the GFC, it had never gained much prominence. Most industry consultants offered operational due diligence as an add-on service and few investors saw this as a priority pre-Madoff.

This situation changed completely post-GFC. As institutional investors, especially pension funds, began to directly allocate their capital to hedge fund managers, their boards and investment committees insisted on getting a "seal of approval" from the consulting community. The consulting team's assessment had to cover both the investment and operational aspects of the firm.

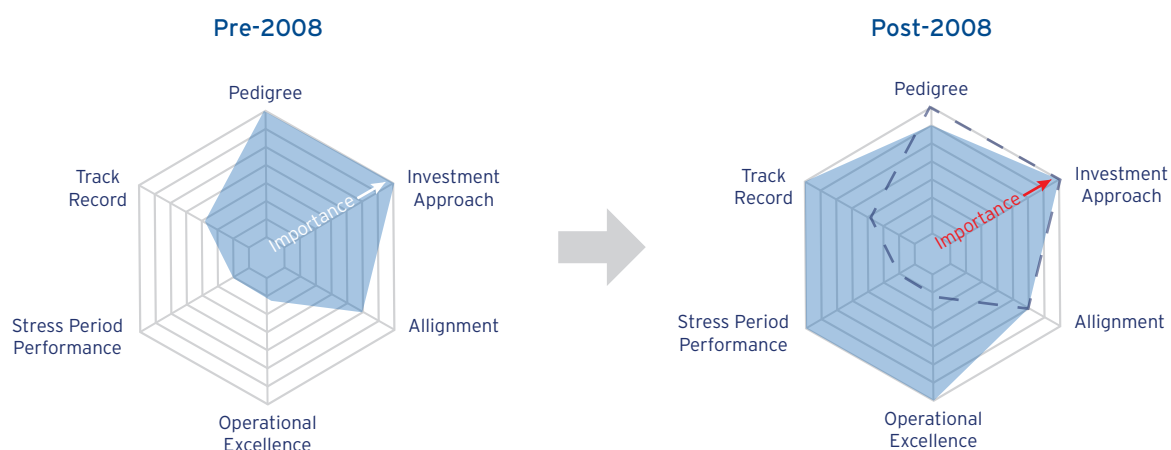
From an investment perspective, consultants began to push for information about portfolio concentrations and exposures and for position and trade level data—content that few, if any, hedge fund managers had been willing to share pre-GFC. Much of the rationale for this deep dive analysis related to concerns about the strategy drift that had been uncovered during the GFC.

The biggest change in the manager assessment process, however, was the emergence of a robust and deep operational due diligence evaluation. Post-GFC, consultants built out dedicated operational due diligence teams that worked separately from the investment due diligence team.

These operational due diligence teams were given a separate vote on whether to move forward with a manager and, if they raised a red flag, the investment due diligence team was expected to step back and reassess their recommendation.

Chart 9 represents a diagram we first used in 2011 to illustrate how the due diligence process has expanded in the years post-GFC.

Chart 9: Focus of Investor Due Diligence



Source: Citi Investor Services

NOW:

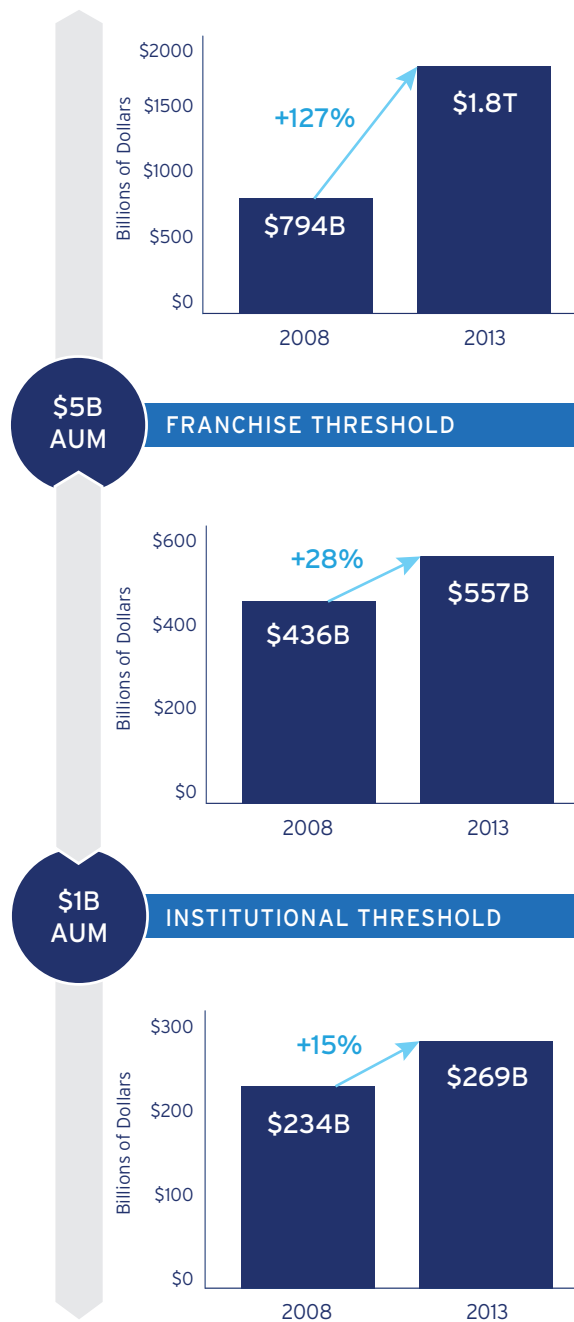
Performing a robust investment and operational due diligence has become such an industry norm that five years out from the crisis it seems strange to recall that this was not always the case. An interesting development, however, has been just how powerful consultants have become by being the gatekeepers of the due diligence process. For direct allocators, these consultants act as an adjunct to the investment team and their recommendations provide the desired “seal of approval.” For other institutions, these consultants are the ones actually determining which managers should be considered for the investor’s portfolio.

Courting consultants has become as much of a preoccupation for many hedge fund managers as courting the investors themselves. Indeed, because of the one-to-many nature of the consultant relationship, many hedge funds have noted that they can get more leverage by working through a due diligence process with these intermediaries than with any single investor.

The imposition of stringent due diligence expectations has also raised the standard of what constitutes an “institutional” platform. This has put additional pressure on small managers. In our 2013 Hedge Fund Industry Business Expense survey, we noted that the breakeven cost for small hedge fund managers looking to survive on management fees alone had risen to \$300 million AUM. Much of that increase reflects the expenditures that hedge funds must make on securing professional risk and operational staff, robust systems and adequate compliance guidelines in order to pass due diligence evaluations.

One criticism that has emerged about the industry’s increased reliance on consultants is that too frequently these players equate “big” with “safe” and will push investors toward the industry’s largest hedge fund managers. According to HFR, hedge fund firms with >\$5.0 billion AUM have grown from accounting for 59.5% of the industry’s total assets at the end of 2008 to 68.6% of the industry’s assets at the end of 2013. From an AUM perspective, this shows assets held by the industry’s largest players rising from \$794 billion to \$1.8 trillion—an increase of 127%. This is significantly better performance than the numbers noted for smaller managers. Firms with \$1.0 – \$5.0 billion AUM saw total assets increase from \$436 billion to \$557 billion in the corresponding period—an increase of just 28%, and managers with less than \$1.0 billion AUM posted just a 15% gain in assets between 2008 and 2013. These changes are noted in Chart 10.

Chart 10: Growth in Industry Assets by AUM Threshold



Source: Citi Investor Services analysis based on HFR data.

“ Operational due diligence has improved in leaps and bounds from where it was in 2008. I believe investment due diligence has over-corrected. Investors have become too cautious and are sticking to large funds. They overlook a lot of very interesting small funds in the process.”

– Fund of Hedge Funds

“For us and our clients direct hedge fund exposures, managers need to be 100% institutionalized on how they build their business. We need to see fully built-out support teams. We really don’t like it when a fund has one person wear the COO, CFO and CCO hat each day. We tell people that they need to build their hedge fund business properly.”

– Outsourced CIO

“Having an institutional infrastructure is a gating factor that firms need to be best-in-class to get started today and raise money.”

– Family Office

“Information from our managers seven years ago was terrible. Now we can ask for 100% transparency and get it from most managers.”

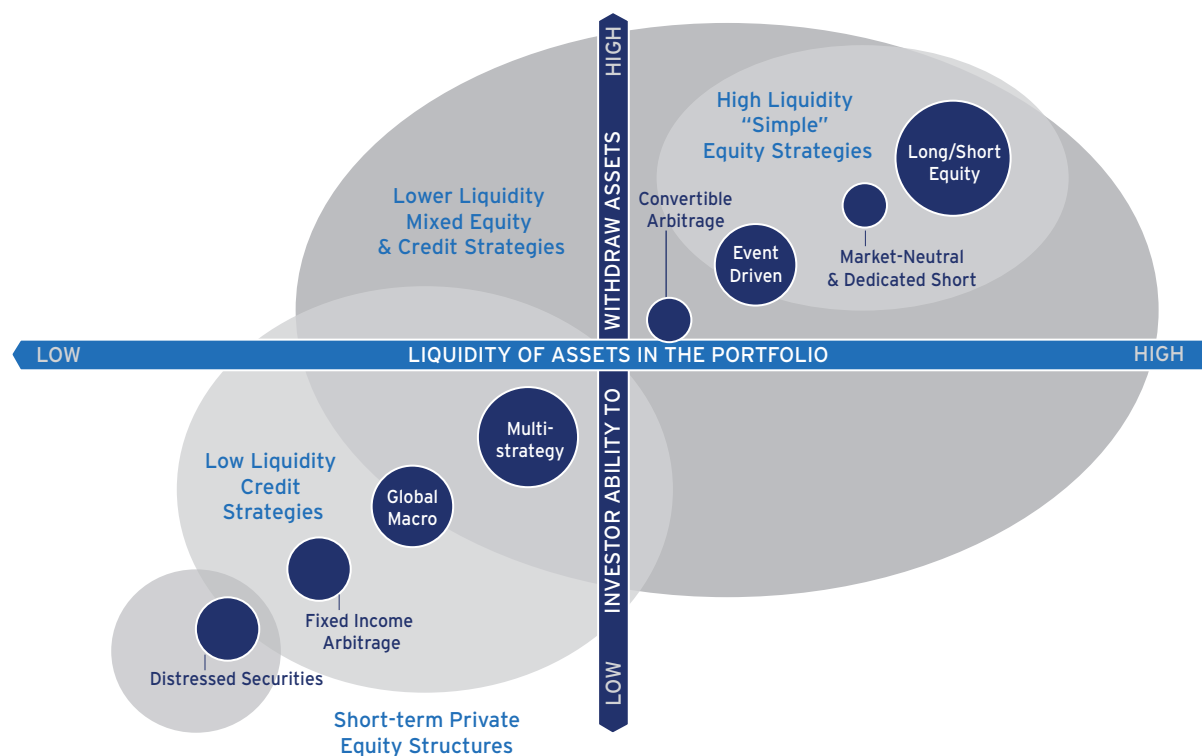
– Consultant

Institutional Investors Leverage Their Buying Power to Demand Better Terms & Fees

THEN:

In our 2010 report, we forecast that liquidity would emerge as a new dimension in the evaluation of hedge fund strategies, supplementing the traditional considerations of style and leverage. We noted that strategies invested in highly liquid underlying assets would be pressured to offer up more aggressive liquidity terms in order to offer investors better cash management options. Strategies in less liquid assets were seen as being able to demand more intermediate terms and strategies in illiquid assets would be able to sustain the least liquid options. The model we presented at the time to illustrate this concept is highlighted in Chart 11.

Chart 11: Forecasts for the Emerging Liquidity Spectrum



Source: Citi Investor Services.
Size of bubbles represent industry AUM from HFR based on the Q4 2010 report

NOW:

Most of what we had anticipated in our earlier reports has been borne out by market developments in subsequent years. Overall, hedge fund strategies have become significantly more liquid. In Q4 2008, only 50% of the funds in the market allowed investors to provide 7 - 30 days of notice to redeem capital, but by Q1 2014, 65% of funds supported 30 days or less notification. Similarly, in Q4 2008, 59% of hedge funds allowed monthly or more frequent redemptions and by Q1 2014 that figure was up to 72% of funds. These figures are highlighted in Chart 12.

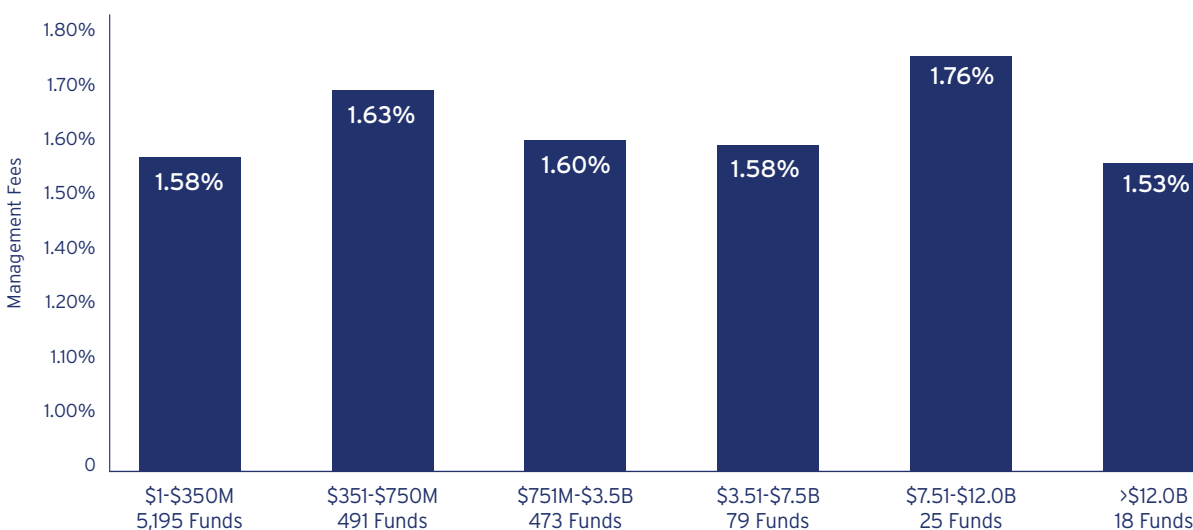
Though most in the industry would be quick to defend the 2% management fee and 20% performance fee structure as remaining in force, our analysis of the publicly stated terms of hedge funds reporting to the major industry databases in 2013 showed that, on average, management fees are down. Chart 13 shows data first presented in our 2013 Hedge Fund Business Expense survey. While actual management fees vary for funds of differing sizes, the range of management fees spanned from 1.53% to 1.76%.

Chart 12: Evolving Liquidity Terms in the Hedge Fund Industry

	2008	2010	2014
Redemption Notice Period	7-30 days: 50%	7-30 days: 56%	7-30 days: 65%
Redemption Frequency	Monthly or less: 59%	Monthly or less: 67%	Monthly or less: 72%
Lock-up	2 years or less: 56%	2 years or less: 52%	2 years or less: 55%

Source: Citi Investor Services analysis based on firms reporting across the HFR & HFN data set.

Chart 13: Average Management Fees by Fund Size: 2013



Source: Citi Investor Services analysis based on firms reporting across the HFR & HFI data set.

“ The hedge fund industry has gone through a significant change with respect to who owns pricing power.”

– Private Pension

“ We are not averse to using our substantial allocation size as a negotiating point on fees.”

–Sovereign Wealth Fund

“ I find applying the right liquidity terms the most important. An equity long/short fund that invests in S&P 500 and offers semi-annual liquidity makes no sense.”

– Fund of Hedge Fund

Investors Push for New Investment Structures that Offer Increased Transparency

THEN:

In our 2010 report, we noted that investors impacted by the contagion that had affected co-mingled account structures during the GFC determined that their best path forward would be to segregate their portfolios in order to eliminate “adjacency” risk. This risk was defined as having other investors able to take actions that would impact the overall performance of the fund.

One response to address this concern was the drive by many investors toward separately managed accounts (SMAs). Proponents of using SMAs in the hedge fund space cited several factors that made these structures preferable to a FoHF or direct allocation into a manager’s co-mingled vehicle. With an SMA, the investor would be the only asset owner for the account, with full transparency and no adjacency risk.

In the immediate aftermath of the GFC, there was a wave of requests by investors to have hedge fund managers establish SMAs. 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 the basic building blocks of getting the relationship set up, such as who should be providing the documents—the hedge fund or the investor.

Other factors also quickly came to light. Replicating the terms a hedge fund receives with its key trading partners was a challenge, as it would now be the investor, not the hedge fund manager as the account owner. This was a particular problem for the ISDA and prime brokerage documents. There were also day-to-day operational challenges that the hedge funds were

not well-suited to handle as investors could select their own service providers for their account and this could dramatically drive up the number of daily touch points the hedge fund had to manage.

Investors still concerned about adjacency risk, but poorly situated to handle the complexities of the SMA structure, began to explore funds of one. Many larger hedge funds had been willing for several years prior to the crisis to establish a separate share class for a single investor within their master-feeder structure. The difference between this and a fund of one related to the legal structure of the fund and ownership of the assets.

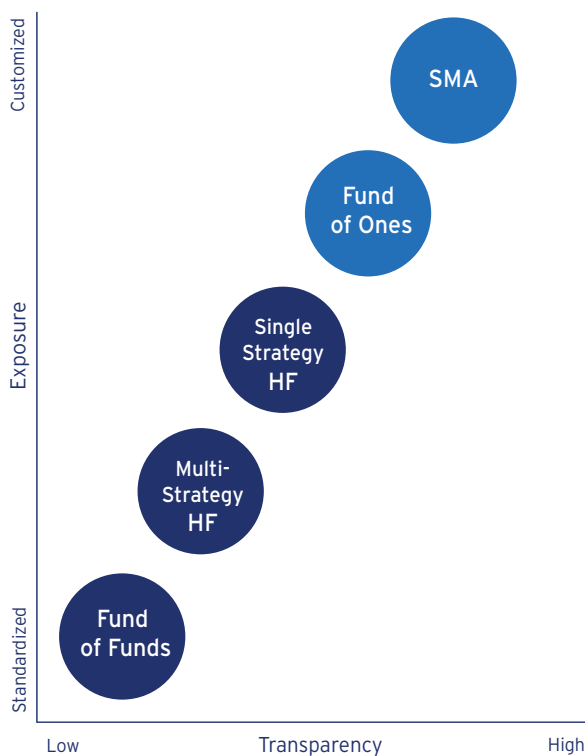
We concluded our 2010 report noting that funds of one were proving highly attractive to FoHFs.

NOW:

SMAs have become a staple of the hedge fund industry in recent years, with many of the early issues being worked through as investors were writing sufficiently large tickets so as to warrant the extra operational burden of supporting the structures. Most hedge funds have a cut-off size below which they will not consider an SMA for an individual investor, with less than \$50 million being cited most frequently. At the same time, funds of one have predominantly become the domain of the institutionally focused FoHFs that have been able to successfully reinvent themselves in the post-GFC world.

While transparency and the opportunity to eliminate adjacency risk were the original motivating factors for pursuing these structures, investors today see a primary benefit of these vehicles as the opportunity to customize their mandates. This is illustrated in Chart 14. Institutions with the means and willingness to allocate a large enough ticket are, for all purposes, able to hire a fund manager to run a customized strategy. This is becoming increasingly common as investors look to mold strategies and acquire specific exposures to fill a particular niche in their portfolio. They can also be much more directive in terms of setting a fee schedule and limits on the use of leverage or volatility parameters. Indeed, as will be discussed later in the report, the emergence of these structures has been a key enabler of new types of investor-manager engagement.

Chart 14: Evolution of Institutional Investor HF Exposure



Source: Citi Investor Services

"We do not have any SMAs. We are not set up to handle SMAs. We do funds of one—not so much on the equity side but more on the credit side. It's 95% our money and 5% the GP's money. For us, it's usually a terms issue. By structuring a separate fund of one, we'll get better terms and may be willing to lock up the money a little bit longer."

– Public Pension

"We have a mandate to allocate to equity long/short funds but we haven't done it to date. But we plan to start to do it by building an SMA platform to allocate to equity long/short funds because we will be writing some chunky tickets."

– Public Pension

"In co-mingled accounts, they are always like, 'trust me.' When I ask for an SMA and I turn it around on them and say, 'Trust me. I'm not going to run stops on you. I just want to see how much the P&L moves on a risk factor basis.' I just want to see if these guys are doing what they say they are going to do."

– Private Pension

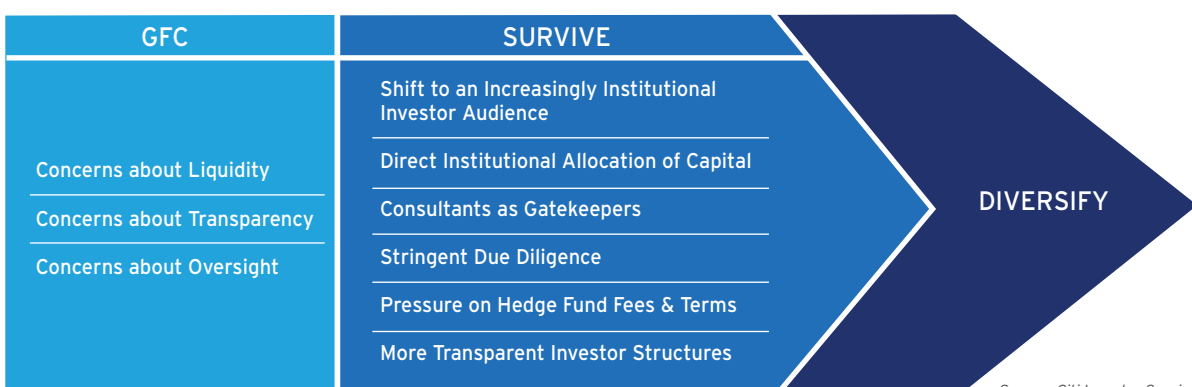
Investor Imperatives Shift to a More Diversified Use of Hedge Funds

Coming out of the GFC, investors in the hedge fund market were anxious to find ways to address structural issues around liquidity, transparency and oversight that came to light during the tumultuous events of late 2008 and early 2009. Changes that occurred in the industry in the period immediately following the crisis helped ensure that key institutional investors would be able to deploy their capital confidently and as such, these changes were necessary to help the hedge fund industry survive.

With foundational changes instituted, the imperative that drove investors began to shift. As we will explore in the next section, as their understanding of hedge fund strategies increased, institutional investors were able to re-evaluate how and where those strategies could be used in their portfolios. Rather than thinking about "hedge fund" exposure, investors began to take a much more diversified view of the individual types of strategies that exist within the broader hedge fund umbrella.

This marks the next major evolution in the investor story, as illustrated in Chart 15.

Chart 15: Investor Imperatives & Resulting Industry Changes



Source: Citi Investor Services

Section 3: Diversify - Institutional Investors' Approach to Portfolio Construction & Use of Hedge Funds Undergoes Foundational Shift

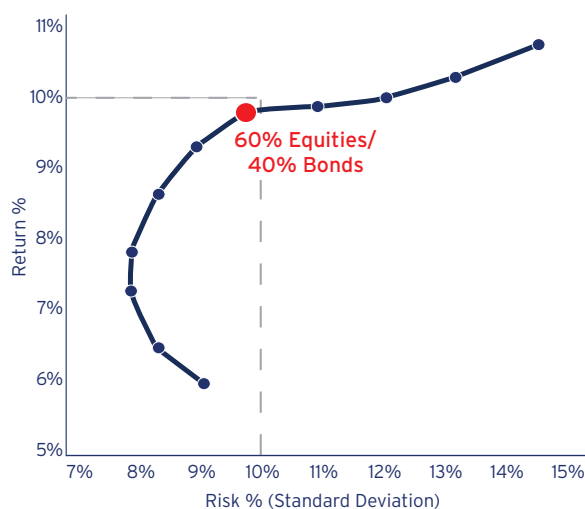
Since the emergence of Modern Portfolio Theory (MPT) and the Capital Asset Pricing Model (CAPM) in the late 1950s, institutional investors have sought to create diversified portfolios that optimally balance the trade-off between risk and reward along the efficient frontier. When hedge funds first started being used in these portfolios, institutional investors created satellite allocation buckets that treated hedge funds like an asset class. Thinking about how to optimally create a resilient portfolio and where hedge funds fit in that exercise has progressed substantially in recent years. These changes are already beginning to take hold and create expanded demand for hedge fund strategies.

Backdrop: Investors Reassess Their Portfolio Construction

Four factors have come together in the post-GFC years to foundationally change the way that institutional investors approach their portfolio construction.

For nearly 50 years, the prevailing market view of how to achieve portfolio diversification related to the distribution of an investor's capital between different asset classes. Each optimal mix of asset classes should demonstrate risk and return characteristics that fell somewhere along an efficient market frontier. This is illustrated in Chart 16.

Chart 16: Performance of the MPT/CAPM Efficient Frontier 1950-2009



Source: Citi Investor Services

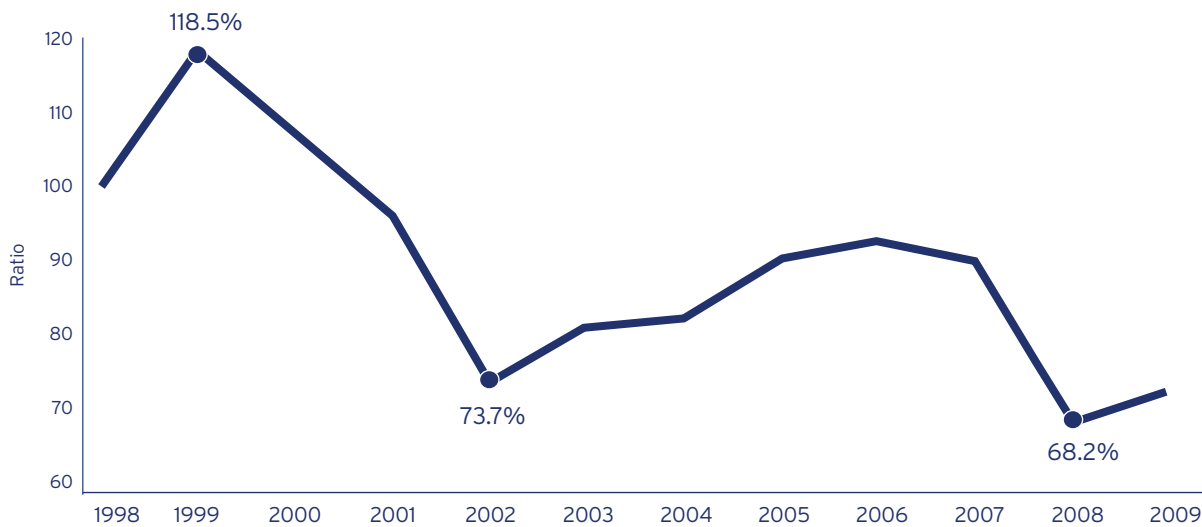
Every dot on the efficient frontier would be considered an optimal portfolio and each would represent a somewhat different mix of equities and bonds. When viewed over the long-term, however, the portfolio that has managed to produce about a 10% average annual return at the lowest available risk has been a portfolio that allocates 60% of its available capital to equities and 40% to bonds. This is the origin of the "60/40" portfolio mix that has been the guiding principle for the majority of institutional portfolios.

One of the main frustrations institutional investors faced after the GFC is that their supposedly diversified 60/40 portfolio instead moved to nearly 1:1 with the underlying equity markets. The diversification of allocations into the fixed income markets did not offer any protection because, from a risk perspective, these fixed income instruments were underrepresented in the investor's holdings and equity investments accounted for the majority of the portfolio's risk.

This realization that the ideal capital allocation may not equate to the ideal risk allocation began to dominate investor dialog in the period following the GFC.

Concern about this factor was especially evident across the pension community. Earlier in the report we noted that pensions' asset coverage fell below their liabilities due to portfolio losses that occurred in the Technology Bubble. Chart 17 shows that at the peak of the 1990s bull market in equities, defined benefit pension plans' assets covered 118.5% of their outstanding liabilities. By 2002, coverage was down to only 73.7%. As discussed previously, this helped drive pensions into the hedge fund market. Any recovery noted in coverage subsequent to 2002 was wiped out by portfolio losses in the GFC. Coverage

Chart 17: Defined Benefit Pension Plans' Asset to Liability Coverage Ratio



Source: Towers Watson

by the end of 2008 was down to only 68.2%. This led to widespread sentiment that significant changes were required to create better downside protection in investors' portfolios.

The third factor that has driven a significant shift in portfolio construction is a growing perception that there is a cheaper way to capture market beta via passive investments in ETFs or index funds. Several academic studies in the late 1990s emerged that challenged the notion that active portfolio managers could outperform market indices when those indices were cut to an adequately discrete level. This called into question the core allocation approach that was used for most of the preceding 40 years of trying to find investment managers that could "outperform" the market. This debate was occurring concurrently with the launch of new "exchange-traded fund" products that sought to replicate the market indices.

Leading investors began to replace a portion of their "active" long-only manager allocations with cheaper passive allotments. The volatile risk on-risk off environment post-GFC sustained this trend. According to eVestment, global institutional investments into passive fund products rose from \$984 billion AUM at the end of 2008 (20% of total institutional allocations) to more than \$3.4 trillion by the end of 2012 (29% of total institutional allocations).

The final factor helping to support a shift in portfolio approach was the move by hedge funds to begin providing investors transaction level details on their portfolios. As institutional investors began to build greater understanding and exposure to the actual

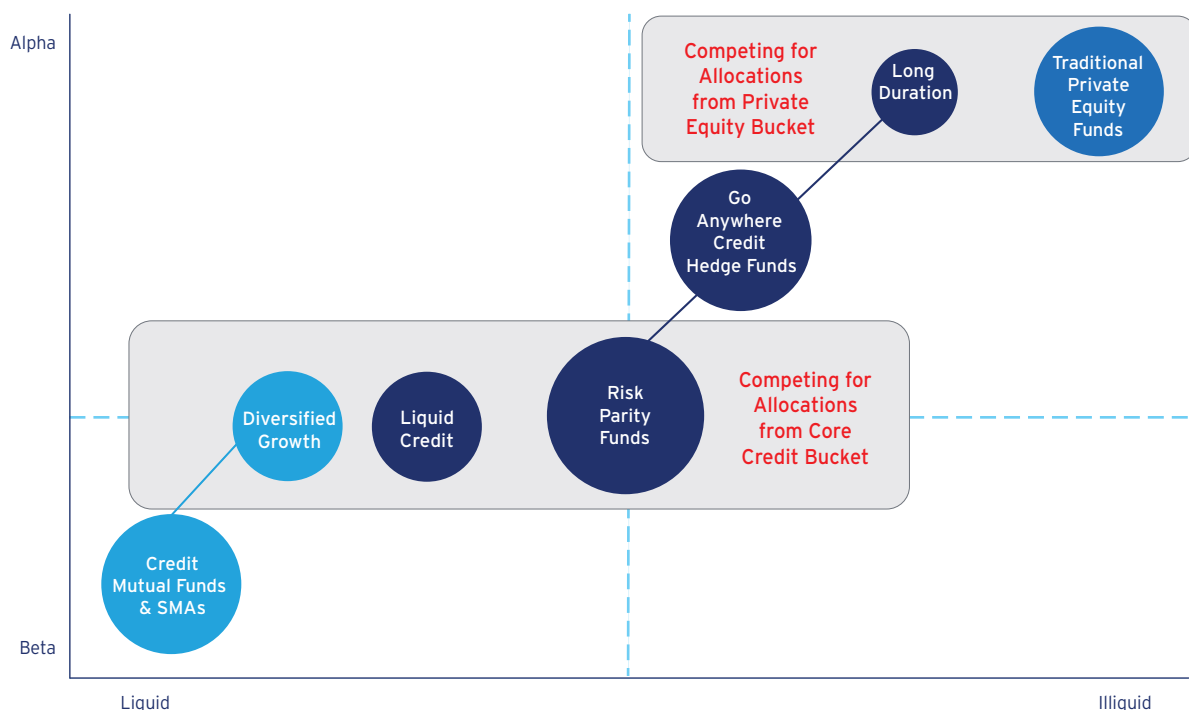
positions in hedge fund portfolios, they were able to develop a more nuanced understanding of how certain strategies fit against their other portfolio holdings. In particular, they were able to begin differentiating hedge fund strategies that had a higher degree of embedded beta from those that were truly absolute return.

Emerging View of Hedge Funds as Shock Absorbers to Provide Portfolio Insurance

THEN:

In our 2013 report, we noted that since the GFC, confidence that hedge funds can outperform the underlying markets has been strained and that more emphasis has been placed on their role in controlling volatility. The annualized 3-year trailing return for the HFRI Equity Hedge index between 2007 and 2012 was only +3.3%—barely better than 10-year US Treasury returns (+3.0%) and only slightly above the major equity market indices (MSCI World +2.4% and S&P500 +2.5%).

However, when viewed on a risk basis, hedge fund performance was significantly better. HFRI returns showed average volatility of only 9.8% in these years versus 18.2% for the MSCI World and 16.6% for S&P500. This performance helped drive perceptions with the investor community that hedge funds could be used as "shock absorbers," like volatility dampeners in their portfolio, and be placed into an investor's holdings to provide downside protection against negative market moves. This view was

Chart 18: Competition for Institutional Allocations: 2012

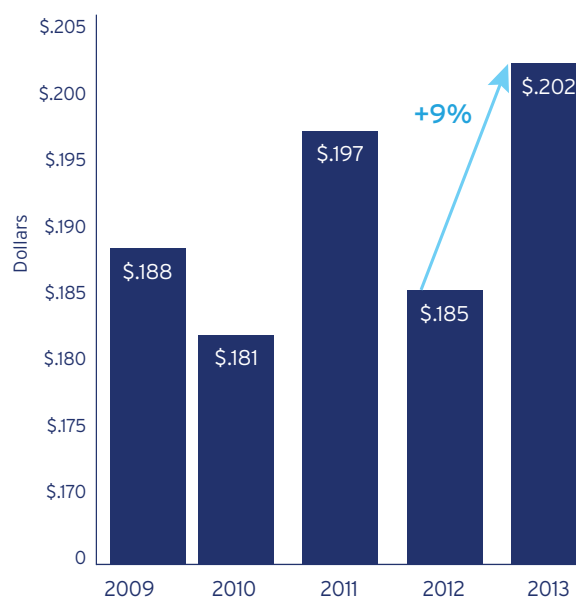
Source: Citi Investor Services

particularly important to defined benefit pension plans concerned with protecting against any further erosion in their asset-to-liability coverage.

We noted that with the move to record highs in the equity markets in early 2013, there was a growing perception that the markets might be entering a renewed period of growth and that the impacts of Quantitative Easing had advanced enough that investors felt more comfortable taking cash off the sidelines—ending the risk-on, risk-off behavior they had been exhibiting in the prior two years. A growing view about the dangers of taking on unhedged equity risk also led us to expect that as investors upped their allocations to the long-only equity markets, they would in tandem look to increase their allocations to equity-focused hedge fund strategies.

We also expected to see expanded interest in using credit focused hedge fund strategies for insurance to help insulate against downside in investor's core credit positions. Concerns about credit exposure were coming from two sources at the time.

In their search for yield, many investors had begun to move out the credit curve into more opaque and illiquid products. To counter the extra risk this pursuit added to their portfolio, many institutional investors had begun to work with credit hedge funds in 2012 and early 2013 to carve out a longer duration credit hedge fund product. These new products could

Chart 19: Institutional Investment into Equity Hedge & Event Driven For Every Dollar Invested into Equity Mutual Funds

Source: Citi Investor Services analysis based on HFR & eVestment data.

help minimize possible asset-liability mismatches by ensuring that the hedge fund manager would be free to invest the capital and seek short-side profits without fear of redemptions if another liquidity shock

were to occur. This was seen as an effective insurance policy against illiquid assets and, as such, these funds were drawing off allocations typically earmarked for longer-duration private equity funds.

On the other end of the liquidity spectrum, we also saw these same credit hedge fund managers filter out the more liquid portions of their go-anywhere credit multi-strategy funds to create long-bias products that have the potential to seek short-side alpha as the credit cycle begins to turn. These products were competing directly with risk parity funds being offered by some of the larger hedge funds in the market as well as with new diversified growth funds being offered by credit managers affiliated with traditional asset management firms. This expansion of credit hedge fund strategies into offering insurance for private equity and long-only allocations is illustrated in Chart 18.

NOW:

Thoughts that the equity markets were due for a strong year panned out. Overall, institutional holdings of equity mutual funds rose from \$6.2 trillion in 2012 to \$7.1 trillion in 2013—an increase of 13.6%. Interestingly, all of that increase came from performance. eVestment data for 2013 shows institutional flows into equity mutual funds down by \$274 billion. Clearly, as the markets moved higher during 2013, many institutions took that as an opportunity to take profits.

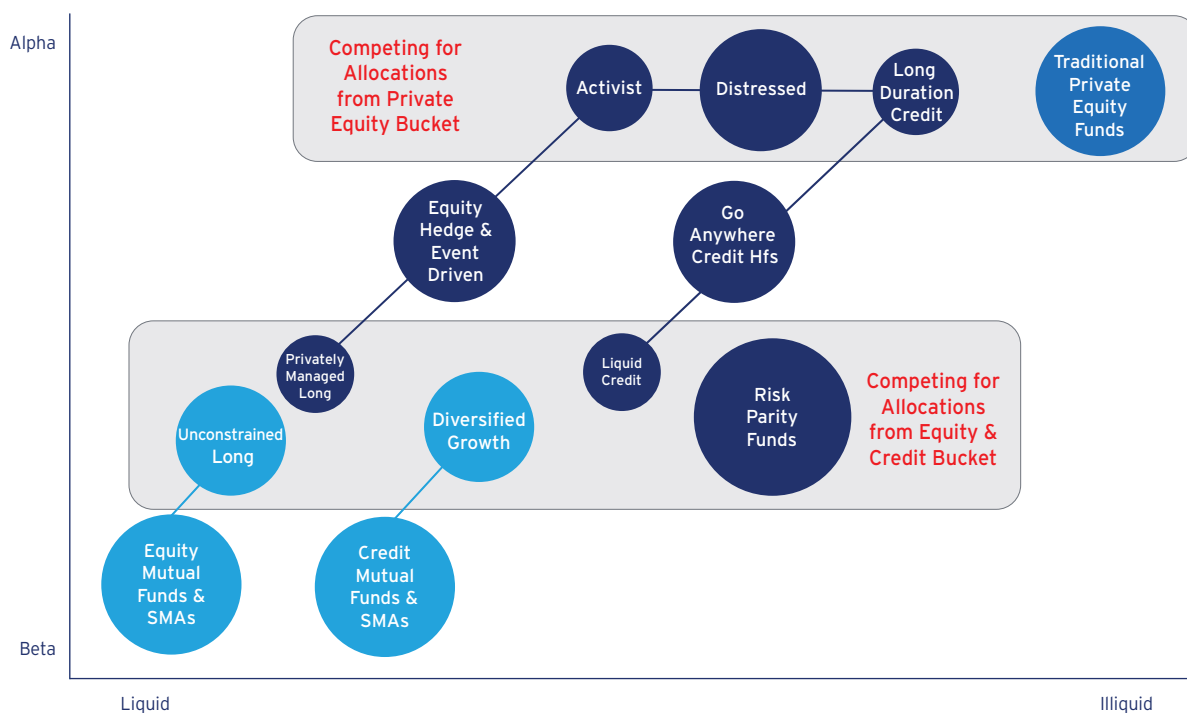
While there were net outflows from equity mutual funds, institutional investors had their largest net inflows into equity hedge and event driven strategies since pre-GFC. HFR shows combined inflows equaled \$47.5 billion in 2013—nearly three-quarters of all flows into the industry. Total assets across these two categories rose to \$1.46 trillion, up 24% from the \$1.16 trillion registered in 2012.

The impact of movements in these two asset pools is very telling about how hedge funds are increasingly seen as a shock absorber in investor portfolios. Chart 19 shows the amount of money flowing into equity hedge and event driven strategies relative to every dollar flowing into equity mutual funds.

In 2012, for every dollar of AUM that moved into equity mutual funds, 18.5 cents moved into equity hedge and event driven strategies. In 2013, that allocation increased 9% to 20.2 cents for every dollar. This was the highest share of money moving into equity hedge and event driven strategies relative to money moving into equity mutual funds since 2009. The increase occurred with global equity markets hitting new highs and with the HFRI Equity Hedge index underperforming the MSCI World by 18.2% and S&P500 by 23.2%.

In part, the increase in allocations to hedge fund managers was driven by the extended use of equity and event driven strategies across a broader portion of the institutional investor's portfolio. Just as we

Chart 20: Competition for Institutional Allocations: 2013



“ The return expectation for hedge funds is really much lower than it used to be. We are overall pretty happy with the past five years of performance in our absolute return program even though it didn’t come close to outperforming the S&P. We really like the downside protection. The old days of always thinking about double digit returns from your hedge funds have gone.”

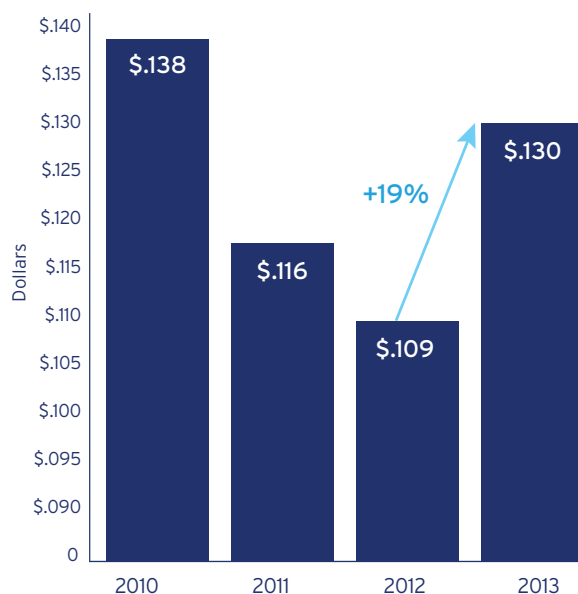
– Endowment

“ We expect to get some directional equity exposure from our equity long/short funds, but they should be less volatile than our long-only equity allocations.”

– Public Pension

saw in 2012 with credit strategies, there were starting to be more spots in the portfolio where equity or event driven hedge fund managers were being selected to manage money that would normally be allocated to core equity, bond or private equity managers. This is illustrated in Chart 20.

Chart 21: Institutional Investment into Relative Value Hedge Funds for Every Dollar Invested into FI & TAA Mutual Funds



Source: Citi Investor Services analysis based on HFR & eVestment data.

Institutional fixed income and tactical asset allocation (TAA) mutual fund AUM was down in 2013 according to eVestment, at \$5.27 trillion versus \$5.56 trillion in 2012. Investors added net inflows of \$43.3 billion to these strategies, but this was not enough to overcome losses related to concerns about the end of Quantitative Easing and potential for interest rates to soon move higher. Relative value hedge funds fared somewhat better in 2013, seeing AUM rise from \$609 billion to \$684 billion according to HFR. New inflows accounted for \$22.6 billion of this increase and the rest was related to performance.

Chart 21 shows that for every dollar moved into fixed income or TAA mutual funds, 13.0 cents moved into relative value hedge funds. This is up 19% from the 10.9 cents per dollar noted during 2011 and the highest since 2010—again illustrating how more allocations are going to strategies that offer some insurance against excessive market moves.

Using hedge funds in this manner is part of a much broader shift in the way many leading institutional investors are starting to approach their portfolio construction.

“ Sometimes to compound your returns, you have to implement a strategy where it is only going to be a fraction of the S&P returns but it gives downside protection.”

– Private Pension

“ The only thing that’s really changed for us in our hedge fund program is our need for downside protection. Upside is pretty easy to get, even in an equity market neutral strategy, but we are in need of downside protection to offset our beta risk.”

– Private Pension

“ It makes sense for us to give good long/short hedge fund managers more money on the long side. On the hedge fund side, we’re always worried about capacity but if you’re a good stock picker, it makes sense for us to try and get more juice out of you.”

– Public Pension

“ Activist equity is equity beta and even equity long/short to some extent. We’ve been talking about whether that fits in the equity bucket.”

– Public Pension

Risk-Aligned Portfolio Construction Allows Hedge Funds to Compete for Core Allocations

THEN:

The majority of our 2012 report was dedicated to an exploration of how institutional investors were moving from capital-based to risk-aligned portfolios. The goal of these portfolios was to group all the various investments that had similar underlying risk exposures and to manage those risk factors more actively through strategic shifts in the portfolio allocation. These shifts would relate to the investor's views on key indicators, such as inflation and economic growth.

While this sounds relatively straightforward, the new approach broke a decades-long tradition of determining portfolio allocations based on distinct asset classes. In the risk-aligned model, all of the investments that would be affected by a similar piece of news would be grouped together in the portfolio and the overall exposure assessed holistically. In practice, this meant that the equity and credit exposures to a specific company would have to be looked at side by side in the portfolio in order for the CIO to understand their total exposure to that company's risk. Similarly, macro-driven funds such as currencies, commodities and other interest rate-linked investments like sovereign bonds would also be grouped together since these investments would all move in tandem to inflationary pressures.

Not only would the new approach break the tradition of allocating equities and bonds to different asset classes, it would also end the treatment of "alternatives" as a separate asset class.

Chart 22 shows the traditional allocation buckets used by pension funds. Historically, in determining their portfolio, these managers would assign 60% of their capital to their equity bucket and 40% of their capital to their bond bucket. Within each of those buckets, they would then allocate the pool of money between active and passive managers.

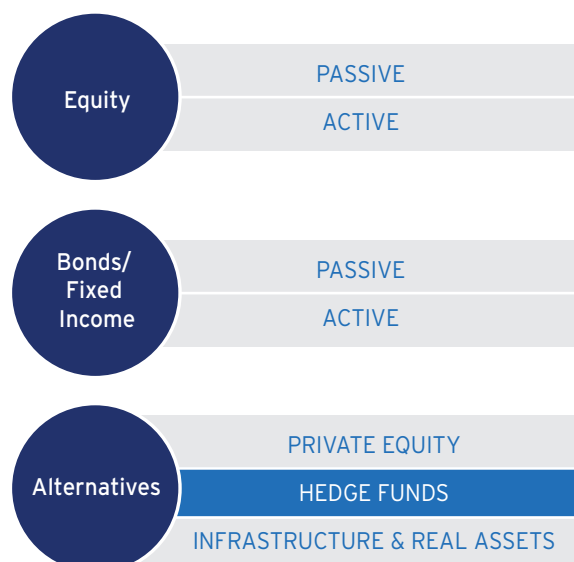
When they started to add "illiquid" managers, these funds did not fit in either the pension's equity or bond bucket. They therefore created a separate "alternatives" asset class bucket and grouped all their illiquid investments, including hedge funds, in this category. They would then choose a portion of their allocation to divert from either equities or bonds (usually equities) to this alternative asset class and divide that new pool of money up between

the sub-components of the alternatives category. SWFs, endowments and foundations took a similar approach, but instead of having dedicated categories within their alternatives bucket, they just called all those investments "opportunistic" and allowed their allocators to shift assets at will.

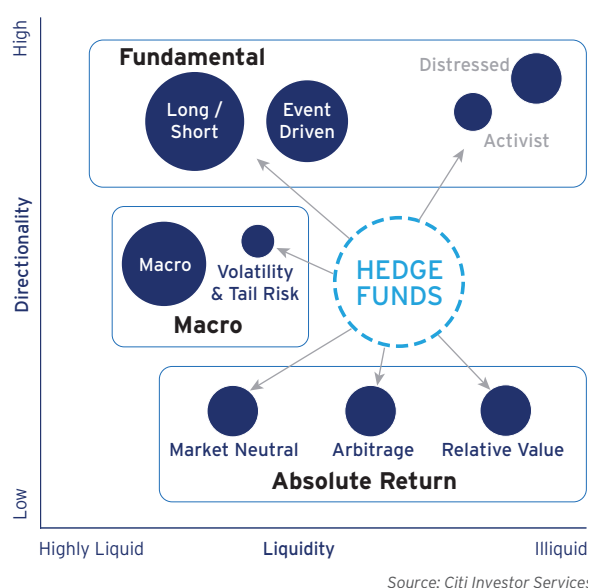
Initially, this approach to hedge fund investing worked because institutional investors wanted broad exposure to hedge fund return streams. That was one of the benefits of using a FoHF as an intermediary when beginning their allocation program. As these investors began to move over into direct allocation programs they became more aware of the underlying differences between the various types of hedge fund strategies. This was a necessary prerequisite to being able to create their own diversified hedge fund exposure.

Armed with increased transparency into the actual position holdings of these managers that became available post-GFC, they also began to look beyond style and liquidity to directionality. This was determined by examining the net and gross exposure of the hedge fund positions. Chart 23 illustrates how the view of "hedge funds" as a single type of exposure began to shift to different categories of hedge fund exposure—fundamental, macro and absolute return.

Chart 22: Institutional Portfolio Configuration: Dedicated Alternatives



Source: Citi Investor Services

Chart 23: Emerging View with Multiple Hedge Fund Categories

Armed with this more nuanced view of the characteristics of the various hedge fund groupings, investors were then able to think about where each of these types of exposures fit in their new risk-aligned model. Fundamental hedge fund strategies took directional views of the equity or credit opportunities offered by specific companies. The exposures these managers took would either add to or reduce the directional bets that active and passive long-only managers were taking in potentially the same equity and credit securities. As a result, these strategies moved into the new “company” risk bucket, which seeks to improve the diversification of a traditional global equity portfolio by offering more downside protection to offset higher beta strategies elsewhere in the portfolio. Similar thinking also allowed investors to move their corporate private equity holdings into this same category.

Macro & CTA hedge funds as well as managers pursuing volatility or risk strategies were primarily looking at changes in the underlying supply and demand of non-securities markets to realize their profits. Since interest rates, currencies and commodities were a key focus of these funds, they were slotted into the new risk-aligned “inflation” bucket.

This left strategies that were looking to isolate asymmetrical return streams between similar types of securities. These strategies have little embedded beta and run at close to zero net exposure. As such, holdings of these securities should be offsetting and not significantly add to or reduce the directional bets that long-only equity and bond managers are taking. Because of this profile, these strategies are often carved out into a separate allocation in the new risk aligned portfolios.

The new dispersed allocation of the various types of hedge fund strategies within the risk-aligned portfolio are summarized in Chart 24.

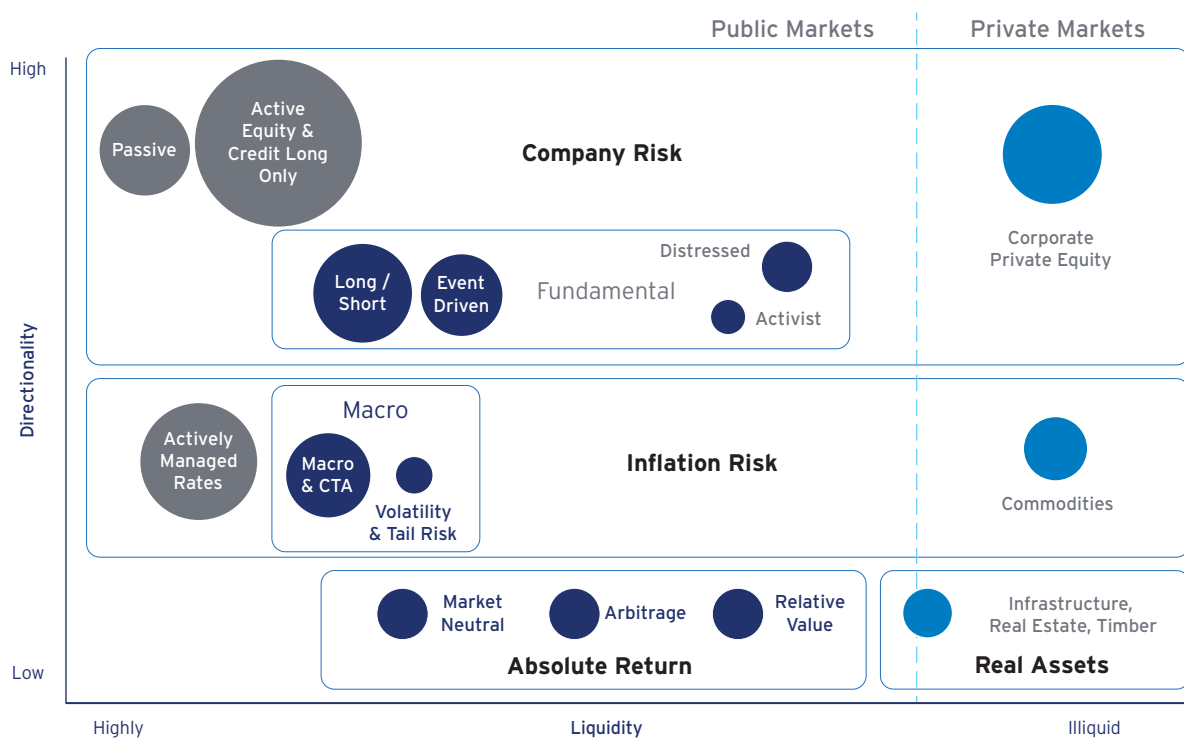
Because these investments are the “hedge” to the outright long-only positions, the amount of capital being allocated to these strategies should rise or fall in line with investor’s macro views of the landscape and their equity and bond allocations. For this reason, we forecast that hedge funds would no longer be considered as a “satellite” holding designed to generate a return stream in isolation from the remainder of the portfolio, but rather would be considered a facet of the core portfolio itself. We forecast that this should allow hedge fund managers to compete for a much larger pool of allocations. Rather than being confined to the 5 – 10% of capital most pensions prescribe for their hedge fund portfolios, managers could now compete to manage part of the much larger equity or bond asset pool.

NOW:

The update on how hedge funds are being used as an insurance policy in investor portfolios in the preceding section is very much a reflection of this shift toward risk-aligned portfolios at work. Looking at overall flows of institutional money in recent years is also instructive.

Chart 25 looks at hedge funds’ share of the combined set of institutionally held hedge fund, passive and active mutual fund assets. It is interesting to note that even with lackluster performance in 2013, institutions are proportionately holding more hedge fund investments than at any time since December 2008 at the height of the GFC market sell-off. In our view, this very much reflects the repositioning of hedge funds as being more central as a risk mitigation tool in risk-aligned institutional portfolios.

Chart 24: Illustrative Risk-Aligned Portfolio Allocation



Source: Citi Investor Services

“ We recently announced that we were doing away with having a separate hedge fund allocation bucket in favor of integrating our hedge fund investments as part of our overall portfolio. All major asset classes—global equities, global credit, real assets and special situations—may now be implemented with allocations to hedge funds of up to 10%. In addition, the plan will maintain a 5% absolute return allocation for event driven, relative value and other hedge fund strategies that don’t neatly fall into any of the traditional asset class categories. This integration introduces a tactical component to these asset classes, providing the pension with flexibility to respond to market changes more proactively.”

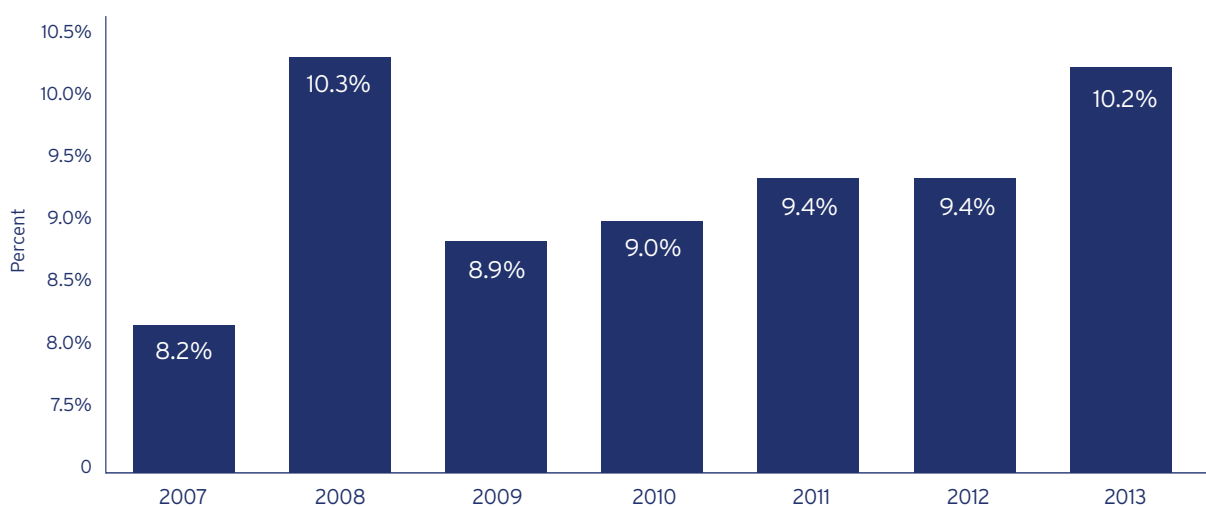
– Public Pension

The ability to look through to the underlying positions held by their internal and external investment managers and make portfolio decisions with this level of insight has given rise to a tremendous number of opportunities for institutional investors to optimize their portfolio. Before we explore those possibilities, there is another facet of the diversification imperative that we will discuss. These themes relate not to the types of portfolios being created by investors, but rather to the profile of hedge fund managers they are targeting.

“Over the last five years, hedge funds have played a more prominent and specific role in our plan's portfolio. We now use hedge funds in three different buckets and classify them as absolute return vehicles, credit-oriented funds or equity-oriented funds. We expect funds in our absolute return category to provide diversification benefits to the entire portfolio. Meanwhile, we expect to get some directional equity exposure from our equity long/short funds.”

– Public Pension

Chart 25: Institutional Investment into Hedge Funds as Percentage of Total Institutional Investment Across Hedge Funds, Passive & Active Mutual Funds



Source: Citi Investor Services analysis based on HFR & eVestment data.

“We’ve seen an evolution of how we view hedge funds and how they affect the trust. Originally, we put them into a single absolute return portfolio that represented 5% of the trust's assets. This was a very vanilla approach. Its purpose was to educate our board and staff. Now, we think of equity long/short exposure like a 150/50 strategy that sits in our equity bucket. Activist strategies also fit very well in our equity portfolio. We have lots of relative value credit and other strategies that fit in our fixed income portfolio.”

– Public Pension

Section 4: Diversify - Investor Audiences Align to Distinct Hedge Fund Tiers

Just as there has been a shift from viewing hedge funds as one distinct allocation to multiple allocations that align to different portions of their portfolio, investors have also undergone a shift in the profile of hedge fund manager they target.

As we will discuss in this section, we now think that there are three tiers of hedge fund managers, each with a unique set of qualifying characteristics and each matched by a specific investor audience within the traditional hedge fund industry. This diversity is allowing hedge fund managers options to determine the type of business they want to build. Strategic business planning has become an imperative against this backdrop, as a manager must ensure that their organization, platform and capital-raising focus are targeted at the right set of investors.

Direct Allocators' "Sweet Spot" Targets Boutique Managers Below the Bi-Furcation Zone

THEN:

In our 2011 report, we noted that institutional allocators selecting their own hedge funds as investment targets were interested in targeting managers with funds that had AUM above the institutional threshold, but limited to an upper range of no more than \$3.0 - \$5.0 billion. This direct allocator "sweet spot" is illustrated in Chart 26

There were three primary factors driving this upper band. These managers were seen as more nimble than larger managers in their ability to deploy capital and capture market opportunities. These managers were seen as small enough to truly value their relationship with the investor and thus were more willing to create a true partnership. Yet, for many investors, they expressed that the most important reason to be in "early" was that many managers would determine their fund to be capacity constrained as they began to grow past \$3.0 billion AUM, and they would shut the fund to new investors.

Managers cited benefits to limiting their capital base. It allowed them to keep comparatively small organizations in place, which helped facilitate employee goals of wealth accumulation and allowed them to have more control over their culture—keeping a more entrepreneurial aura to their firm. It allowed them to operate with a leaner infrastructure and support team which left them better positioned to cover their cost base with revenues coming in solely from the management fee.

Finally, by limiting their size, many of these managers felt that they would be able to be more restrictive about the type of investor they wanted to take into

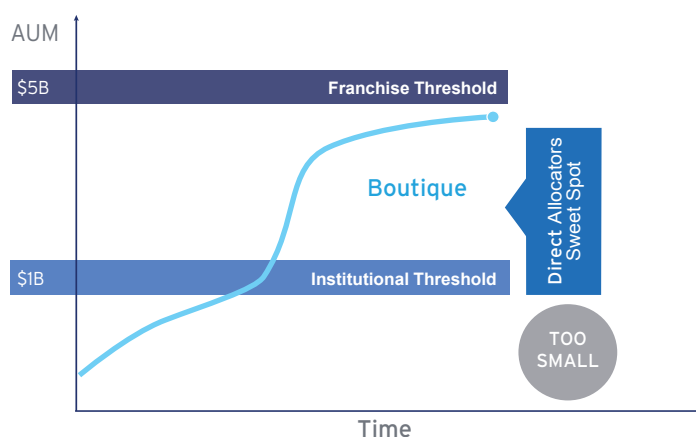
their fund and turn away those that they felt would not work with their investment style.

NOW:

Very little has changed about the size of hedge funds being targeted by direct allocators, but there has started to be more criteria being applied around the profile of firms that best fit the needs of these investors. Investors are looking for firms that have made a deliberate choice to be a certain size and have shown an ability to effectively deploy capital at or near their current AUM level for a measurable period of time. Funds that are growing their AUM too rapidly have begun to fall off the radar of some allocators.

This group of allocators tend to seek boutique firms that have stuck with their core investment mandate and have not been looking to alter their investment approach in response to shifting market conditions or diversify their product range by adding new strategies or new investment managers.

Chart 26: Focus of Direct Allocations Sweet Spot Post-GFC



Source: Citi Investor Services

“I’m a single-man team. My ability to look at new guys that I have no opportunity to invest in just doesn’t work. I want people that have been running real money in an existing fund, but it has to be right sized—generically speaking, the smaller the better because they are more nimble. Find me somebody that’s \$1.0 – \$2.0 billion. That’s enough liquidity that a manager can do what they want, but it keeps them in their zone. Sometimes, if a manager wants to move out of their zone, they perform poorly. It skews the whole thing. If a manager comes back to me and says that they want to change their process or that they want to up their leverage, that’s a real red flag to me.”

– Private Pension

“There have been times when we have been tracking a manager and they look good and then their assets grew too quickly and we backed away.”

– Public Pension

They seek to identify managers who are keeping access to their fund more exclusive and who have avoided the private bank and wealth channels. Indeed, several direct allocators noted that they saw any hedge fund with too large a component of high net worth or FoHF money as overly risky, even if the investor himself is running their exposure via an SMA or fund of one structure. This attitude had to do with the manager’s focus.

For this reason, we increasingly see the managers most appealing to direct hedge fund allocators as fitting a “boutique” model. This is quite different from the profile of larger, more franchise-like hedge fund firms.

“Our typical hedge fund is in the \$500 million to \$3.0 billion range. We don’t go investing in the big-name hedge funds of the world as we wouldn’t have the influence with those firms that we have with our current managers. As well, our clients can get access to those large firms through their private banks.”

– Outsourced CIO

“I do not want a portfolio manager that is susceptible to worrying about co-investors. Too many managers have a high component of FoHFs or high net worth clients invested in them. To me, this is very skittish hot money. I can’t be forced to sell off assets because a manager is trying to meet redemptions from sub-par investors.”

– Public Pension

“Asset Gatherers” Morph into Franchise Firms as Operating Demands Increase

THEN:

In laying out the original argument for the bi-furcation zone in our 2011 report, we noted that there was an entire other category of hedge fund managers who chose to continue to grow their assets and expand their capacity well beyond the \$5.0 billion—and even the \$10.0 billion—AUM level. We noted that these larger firms were more frequently favored by the industry consultants engaged by large institutional investors to help formulate their hedge fund programs—a distinct audience from those institutions that wanted to select managers on their own.

Many of the largest managers were well versed in making the case for hedge funds at the board level and explaining how their portfolios could add diversity to the organization’s return stream. Nearly all the managers who had reached the \$5.0 billion-plus AUM size additionally offered an extensive history for the investors to review and had been able to show resiliency through different market cycles—a factor highly appealing to new investors first venturing into the hedge fund space. Many of these managers were seen as offering “brand names” which made the large institutions more comfortable.

Critics of the consultant propensity to target allocations to the largest funds said that there was a mistaken correlation between “big” and “safe.” They also accused these firms of being “asset gatherers” as opposed to being focused on the creation of alpha. They worried that the size of investments being made by these firms would be too large to effectively isolate alpha opportunities and that there would be an excessive amount of inherent beta in the strategies of these managers.

Large hedge funds countered this argument, stressing their focus on ensuring a pipeline of new talent within their organization and pointing out that they would often invest their own proprietary money into emerging portfolio managers they brought onto and nurtured on their investment platform. This allowed these larger managers to source ideas from a much broader talent pool and to have “on-deck” offerings. As internal managers were able to establish a track record, they were gradually exposed to investors, offering them new opportunities within an established manager with a proven record.

NOW:

Characterizations of the industry’s largest hedge funds as asset gatherers have not ceased and criticisms that consultants continue to focus too

extensively on these firms persist, but investors equally point to the advantages these firms offer in an increasingly complex and regulated world.

These firms' operating platforms are being seen as a true differentiator. Many of the industry's largest hedge funds now have infrastructures that equal—if not exceed—the most established asset management firms. Not only do these platforms minimize operational drag on the portfolio, they offer customized risk and investor reporting which has been a key enabler of investors being able to more effectively assess the role that hedge funds play across their broader portfolio.

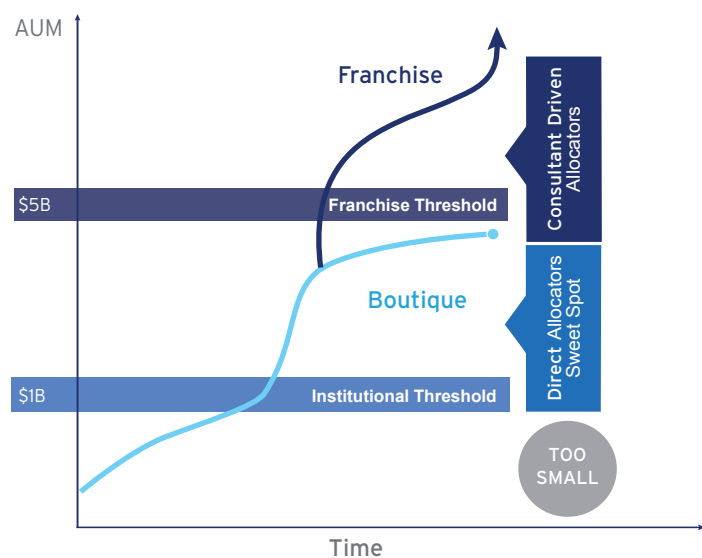
These managers also have far more specialized operating units, such as central treasury and collateral management teams, to more effectively understand the deployment of the firm's capital and internal financing desks in order to extract the maximum possible value from their assets and holdings. They have built out highly tuned research organizations where individual P&Ls are tracked and best ideas accordingly rewarded. This is allowing them to expand their "listening posts" all over the world and into hard-to-access frontier markets, as well as draw off top talent from the sell side and step into gaps in lending and financing markets created by increasingly burdensome bank regulations (as will be discussed in Part II of this year's survey).

The industry's largest hedge fund organizations have also become a critical gathering point for emerging talent. Many of the industry's top portfolio managers who do not want to divert their attention from trading to attend to the grueling demands of capital-raising and running an institutional quality platform in the post-GFC environment are instead joining these firms. Nearly all the largest hedge fund organizations have expanded from their original investment focus and from their original geographic presence to provide diverse platforms that operate in multiple regions and offer truly global brands.

It is for this reason that we have dubbed these firms as "franchise." These large organizations have become a primary conduit for institutional capital in the post-GFC world. As first shown back in Chart 11, these firms with more than \$5.0 billion AUM saw their assets expand from \$794 billion at the end of 2008 to more than \$1.8 trillion 5 years later. HFR reports that these firms now account for 68.5% of the industry's assets, up from 56.5% in Q4 2008.

Chart 27 adds in the industry's largest managers to our hedge fund evolution diagram and shows their relation to the boutique players. This "two-tier" market has been morphing in recent years and the following sections present new findings from this

Chart 27: Focus of All Institutional Investors Post-GFC



Source: Citi Investor Services

year's survey showing how the traditional hedge fund industry is becoming more nuanced and evolving into a multi-tiered structure.

"Our investment consulting practice manages approximately \$2.0 trillion in assets for primarily U.S. corporate-defined benefit plans. We manage \$35 billion in our hedge fund program—\$7.0 billion of which is fully discretionary. We have 50 approved hedge funds on the platform with 10 - 15 funds in any model portfolio for a client."

— Consultant

"One of the things we did best to position ourselves for growth was that we had to stop thinking like a boutique even while we still were a boutique. Our investors made us look at our internal systems while we were running a couple billion dollars and figure out how to upgrade them as if we were running \$20 billion."

— >\$10 Billion AUM Hedge Fund

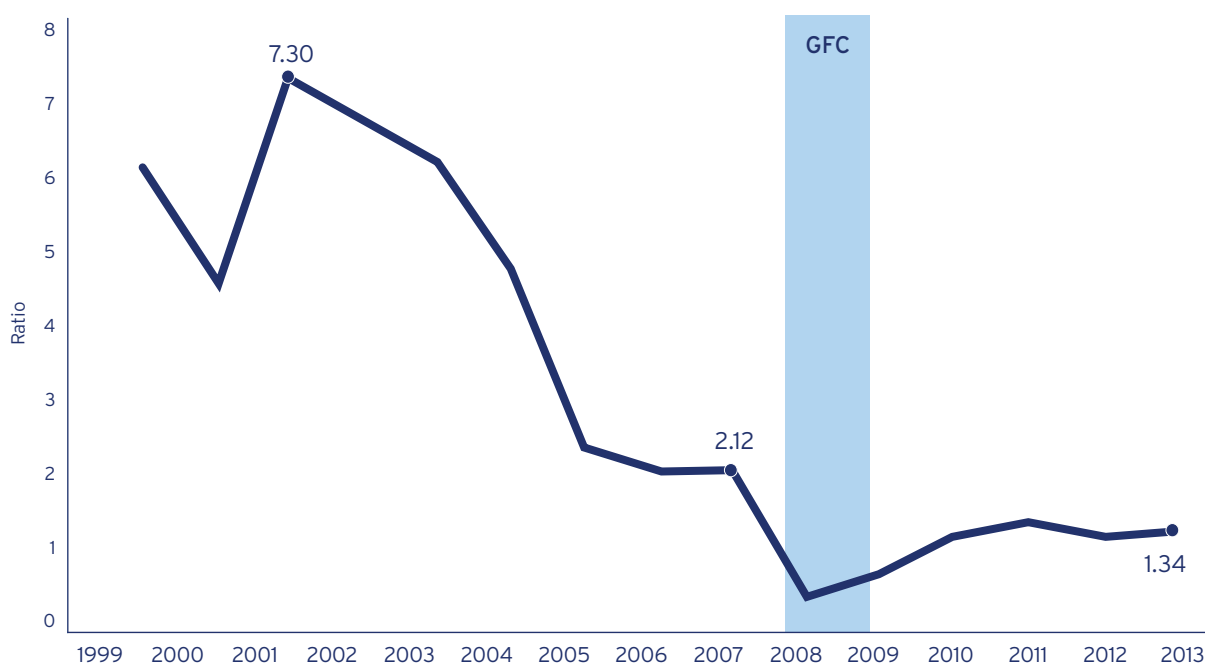
"We've been innovating in funding and liquidity management strategy, counterparty diversification and durability of funding for over a decade. We continue to look for ways to optimize our approach to ensure we have the most efficient framework in the industry."

— >\$10.0 Billion AUM Hedge Fund

"One of the things we did early on because we came out of the big banks is to have a central treasury with senior lines. We run collateral on a fund-by-fund level, but administered by a single team that is expected to join the dots and get us the best financing and funding available. We view them almost as a trading team in their own right."

— \$5.0 - \$10.0 Billion AUM Hedge Fund

Chart 28: Ratio of Hedge Fund Launches Relative to Liquidations



Source: Citi Investor Services analysis based on HFR data

Small Managers Struggle to Get Past the Pre-Institutional Hurdle of \$100 Million AUM

Establishing a new hedge fund in the post-GFC environment has been difficult. Meeting an institutional standard in terms of infrastructure and team build-out is costly. As we noted earlier, our 2013 Hedge Fund Business Expense survey showed that breakeven for hedge fund managers looking to survive off their management fee alone was up to \$300 million AUM.

Securing capital has been challenging as large institutional investors we interviewed for this year's survey were starting to use the term "emerging" managers to highlight firms crossing the \$1.0 billion AUM threshold. FoHFs that were at one time the main conduits of capital for small managers have experienced net outflows every year since 2008, and while overall industry AUM has grown 87% since Q4 2008, FoHF AUM has only grown 12%.

According to HFR data, more than half the funds trading at the end of 2013 (53.3%) have now been around for more than 5 years, whereas at the end of 2008 that figure was only 43.8%. Chart 28 shows that the ratio of fund launches to fund liquidations has yet to recover meaningfully from the lows that were hit in 2007. Where 2.11 funds were launched for every fund liquidated in the year prior to the crisis, in 2013 that ratio was down to only 1.34. Finally, back in Chart 9 we showed that the average AUM for funds

"Hedge funds have evolved and the majority of them now have institutional infrastructures—even many of the smaller funds. Many are using external service providers to satisfy the needs of investors."

— Family Office

"We view the firms across the hedge fund landscape as either institutional or pre-institutional."

— Endowment

"Managers have had to build big enough teams to handle increased investor requests and regulatory reporting issues so the head count of non-investment professionals continues to grow for hedge fund managers."

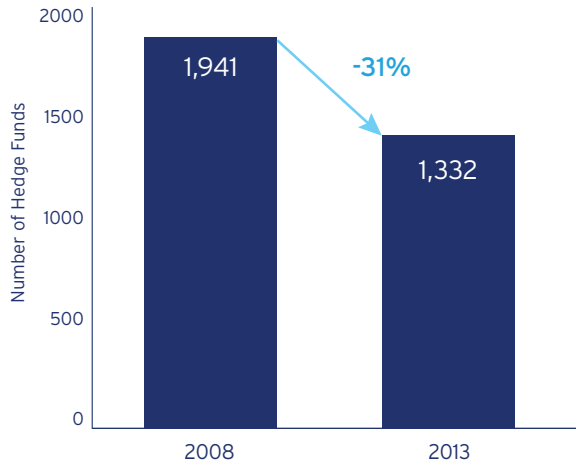
— Consultant

below \$1.0 billion had only been able to expand 15% between Q4 2008 and Q4 2013 while the average amount of AUM being managed by funds over \$1.0 billion increased by 136%.

At face value, this fact pattern seems daunting. Yet, a look more deeply into the market structure for hedge fund managers under \$1.0 billion AUM shows a

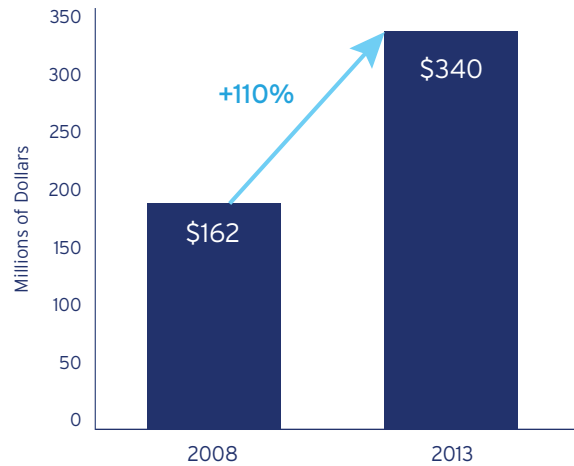
Chart 29:

Number of Hedge Funds w/\$100M to \$1.0B AUM



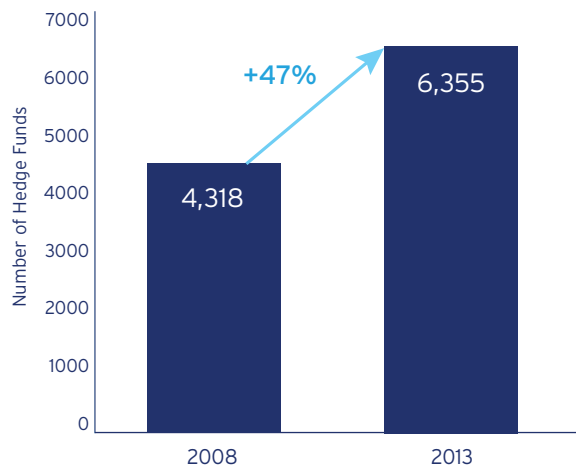
Source: Citi Investor Services analysis based on HFR data

Average AUM Per Fund w/\$100M to \$1.0B AUM



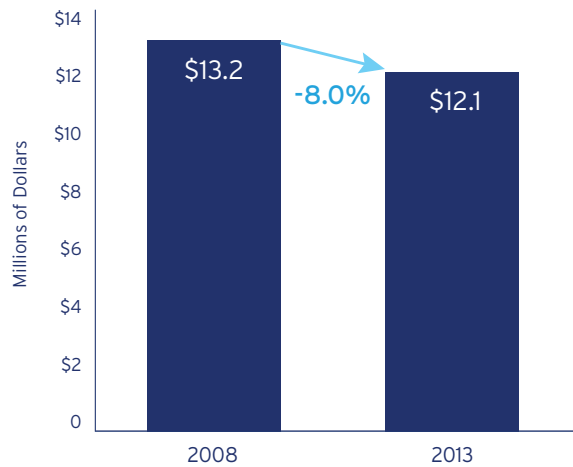
Source: Citi Investor Services analysis based on HFR data

Number of Hedge Funds w/<\$100M AUM



Source: Citi Investor Services analysis based on HFR data

Average AUM Per Fund w/<\$100M AUM



Source: Citi Investor Services analysis based on HFR data

pattern that should give smaller managers cause for hope.

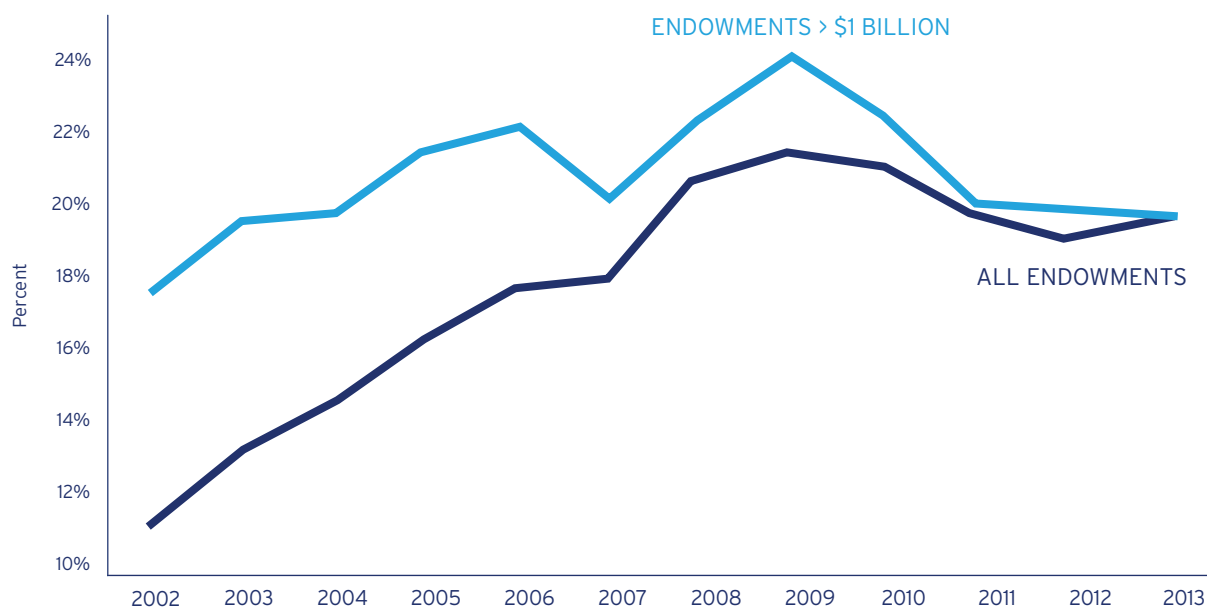
Chart 29 breaks managers with <\$1.0 billion AUM down into two pools—those with less than \$100 million AUM and those with \$100 million to \$1.0 billion AUM. The results of this analysis are striking.

Between Q4 2008 and Q4 2013, the number of funds with <\$100 million AUM rose by 47% from 4,318 to 6,355, while in that corresponding period, the number of funds with \$100 million to \$1.0 billion AUM fell by 31% from 1,941 to 1,332. The average AUM for each segment also moved in an opposite direction. Funds

with <\$100 million saw their average AUM decline by 8% from \$13.2 million to \$12.1 million, whereas funds with \$100 million to \$1.0 billion AUM saw their average AUM more than double from \$162 million to \$342 million.

These figures show that while there is a tremendous amount of competition under the \$1.0 billion threshold, those funds that can grow past the churn and surpass the \$100 million AUM mark are finding a more conducive capital-raising environment.

This analysis supports comments made by several survey participants about their growing interest in

Chart 30: U.S. & Canadian Endowments' Asset Allocation to Marketable Alternative Securities

Marketable alternative strategies include hedge funds, absolute return, long/short, market neutral, 130/30, event driven and derivative strategies.
Source: NACUBO Commonfund Study

"niche" hedge funds that may not have the capacity to absorb an institutional ticket, but that are still attracting capital from a growing cadre of investors.

Backlash Against Institutionalization Builds as Investors Focus on Niche Managers

By far the largest audience showing interest in smaller niche managers has been family offices. After having shifted their risk capital to more tangible assets such as real estate and art in the immediate aftermath of the GFC, these investors are showing a renewed interest in hedge fund investments. As noted previously, hedge fund assets from high net

worth and family office investors spiked by 19% in 2013. This was the largest increase in assets from this investor audience since 2006 and helped to push AUM for this segment back up to \$907 billion—just 8% off their 2007 record level.

Several family office investors interviewed for this year's survey noted that they were looking for managers who would be more aggressive about pursuing alpha opportunities as opposed to aiming for the steady returns and low volatility sought by larger institutions. These family office investors affirmed that they were willing to support managers with more concentrated portfolios and higher volatility to achieve these aims. These goals align to the classic hedge fund profile evident in the industry prior to the large influx of institutional capital that began in 2002.

A sub-set of investors in the institutional category were also beginning to express an interest in managers who presented a more niche and creative mindset. Small and mid-sized U.S. and Canadian endowments have been increasing their allocations to hedge fund managers for several years now, closing a fairly sizeable gap that had existed between their share of capital earmarked for hedge fund managers as compared to the share allocated by the largest endowments with >\$1.0 billion in investable assets.

These largest endowments with >\$1.0 billion in investable assets cut their allocations to hedge funds during the GFC and have shown a slow but steady

"Regulation is forcing the average size in the industry and a level of institutionalization, but there are still a lot of firms with small capital bases that have viable businesses out there."

– Managed Account Provider

"Historically our investor base has been family offices. We operate below the radar going after \$10 - \$20 million tickets. The underlying managers that we invest in through managed accounts are early stage managers—often in frontier markets...they are really tiny. They know investments but not operations."

– Fund of Hedge Funds

withdrawal from the market in subsequent years. Small and mid-sized endowments reduced their allocations less dramatically during the crisis and, after having stabilized their allocations in subsequent years, they actually increased their allotments in 2013. As a result, there is now no longer a gap between the largest endowments and the overall segment. This is illustrated in Chart 30.

Incoming money from these smaller endowments and foundations has targeted more niche-type hedge fund managers offering unique return streams while many of their larger, more institutional counterparts have instead adapted their return expectations to the somewhat more conservative investment profile of larger hedge fund managers.

Investors Respond to the Generational Shift in Hedge Fund Portfolio Management

Another backlash against institutionalization has been the decision by many prominent hedge fund firms to give back investor capital and transition to being a family office. Brand name hedge funds like Soros, Duquesne and Shumway have opted to pursue this path. As more and more of the founders of established hedge fund firms approach retirement age, investors are engaging with managers to understand their future plans and are hoping to be a part of that dialog so that they can retain access to top trading talent. This is an important phenomenon to monitor as there are starting to be new models coming into the market that shift the nature of hedge fund and investor involvement.

Survey participants highlighted three paths toward succession. In each, investors are playing a critical role.

The first path toward succession is for the hedge fund manager to exit their business via a sale to a third-party organization. While pre-GFC, there were outright sales of hedge fund organizations—primarily to asset management firms, this interest seemed to peak with the Blackrock and BGI merger in 2009. Since then, it has become much more common for there to be a sale of a majority or minority stake in the hedge fund's management company to another entity. This allows founders to begin replacing their equity in the firm and work with their partner to determine the best path forward over time. Interest in this approach has originated primarily from private equity organizations looking to become more diversified financial services firms.

Another model gaining traction has been to have private equity firms create special purpose private equity funds that they then deploy to buy minority stakes in mature hedge fund organizations. Neuberger Berman created their \$1.3 billion AUM Dyal

“ The risk appetite for family offices over the past several years has noticeably increased. We have seen them looking to put a greater concentration of their hedge fund book with firms that can produce more alpha generation than they have recently experienced. At the end of the day, family offices can stomach mark-to-market volatility more so than institutional investors. They are looking for more niche-y strategies where managers have less competition and take on greater overall position risk.”

– *Consultant*

“ What we’ve witnessed is hedge fund managers adapting their products to be more in line with what insurers and pensions want. I think endowments and foundations are somewhat unhappy about this approach because they are looking for somewhat higher return, higher volatility products.”

– *>\$10.0 Billion AUM Hedge Fund*

“ There continues to be demand for niche strategies. We are seeing a shake out of small and mid-sized funds without a defensible niche.”

– *Endowment*

Capital fund in late 2010 and had deployed more than 75% of their capital in that fund by Q4 2013, with 20% ownership stakes taken in a number of leading hedge funds, including Waterfall, Halcyon, Capital Fund and MKP. Dyal is reportedly now raising capital for a second \$1.5 billion AUM fund. In February 2013, Blackstone Group hired the former head of Barclay's Alternative Asset management group to create a similar minority stakes fund, and announced in February 2014 that it had raised \$1.4 billion in capital and had made its first minority stakes purchase in Senator Investment Group. Blackstone has indicated that their capital raising target on this fund is \$3.0 - \$4.0 billion.

Private equity firms seeking to purchase stakes in hedge funds and private equity funds set up to do the same thing both focus on mature hedge fund managers with proven track records and a strong existing client base and are thus differentiated from seeding funds that target new managers looking to launch and build their business. With a minority stake, these investors become instrumental in working with the founders of the firm to determine their future course and are unlikely to be locked out of having access to the fund's trading talent by those firms choosing to become a family office.

"If our founder were to leave, everyone would pull their money."

– >\$10.0 Billion AUM Hedge Fund

"We will eventually just become a family office. Ego is at play and will keep us taking investor money until there are two to three bad years."

– >\$10.0 Billion AUM Hedge Fund

"An alternative to becoming a family office is selling out to somebody, but you need somebody with very deep pockets. Also, nobody will buy your hedge fund and let you walk away."

– >\$10.0 Billion AUM Hedge Fund

A second path to succession involves the founder of the hedge fund transitioning control over their organization to a designated individual who will take over the helm of the firm, making it a multi-generational investment organization. There have been both successful and unsuccessful examples of this type of changeover.

Successful examples share some common characteristics. The new lead is co-positioned with the founder for an extended period of time and the two individuals jointly engage with the firm's staff and investors. In this construct, transparency around the performance attribution for the new lead is an important facet in building investor confidence in their investment management skills. By the time an actual turnover of control happens, the impact of that change is minimal as there is already a high degree of comfort with the new individual. If investors have issues, those issues are likely to have come to light much earlier in the process when the founder was still in a position to address their feedback.

The third path is one that has gained prominence in the past year. This model involves the founder of the firm releasing their top portfolio managers to spin out and create their own investment organizations. Often, the founder will provide an investment stake to the individuals to help them launch their platform and they will allow the individuals to approach existing investors of the firm. We are terming the firms being

established via this model "Gen 2" managers as they represent the next generation of talent emerging from already successful firms and are finding a very different path to market than less pedigreed start-ups.

Investors Rush to Lock in Capacity with Gen 2 Managers

Gen 2 managers represent a very different launch profile than the typical hedge fund emerging in the post-GFC world. These managers are already wealthy in their own rights from their prior organizations and are in a position to place \$100 million or more of their own money into their funds. This is an exceptional degree of alignment and one that gives the manager more flexibility and negotiating power than the average start-up.

Gen 2 managers are less likely to negotiate with investors to provide preferential terms or reduced fees in exchange for large tickets. They have typically already built deep relationships with a broad set of investors at their prior organizations. These managers are likely to be oversubscribed as oftentimes they are emerging from firms that have been closed to new investors for an extended period and investors will not want to risk being shut out as the managers are likely to want to strictly control their pace of asset growth in the early years of establishing their independent track records.

Indeed, the rush to lock in capacity with these new managers ahead of their launch is reminiscent of the capital-raising environment pre-GFC. Several managers in the Gen 2 category that launched in 2013

"This industry thrives on star culture."

– \$1.0 - \$5.0 Billion AUM Hedge Fund

or early 2014 were able to commence trading near or even above the \$1.0 billion AUM threshold—putting these managers on a fast-track to institutional status and on their way to becoming the next generation of franchise sized firms.

"Succession planning is a very relevant topic in hedge funds today. How should we pass equity stake from original holders to the next generation? How can we convince investors about the viability of our succession plans?"

– \$1.0-\$5.0 Billion AUM Hedge Fund

“ We have gone through quite the evolution since 2008 in terms of who holds the pricing and negotiating power. We expect there to be a lot of new start-ups and spin outs coming out now that will have a lot of success on the capital-raising side. There are strong hedge funds closing and a second tier of talent is starting to take hold. These are the managers that are starting to take on a lot of capital.”

– Private Pension

Small Manager Paths Diverge as They Target Specific Investor Opportunities

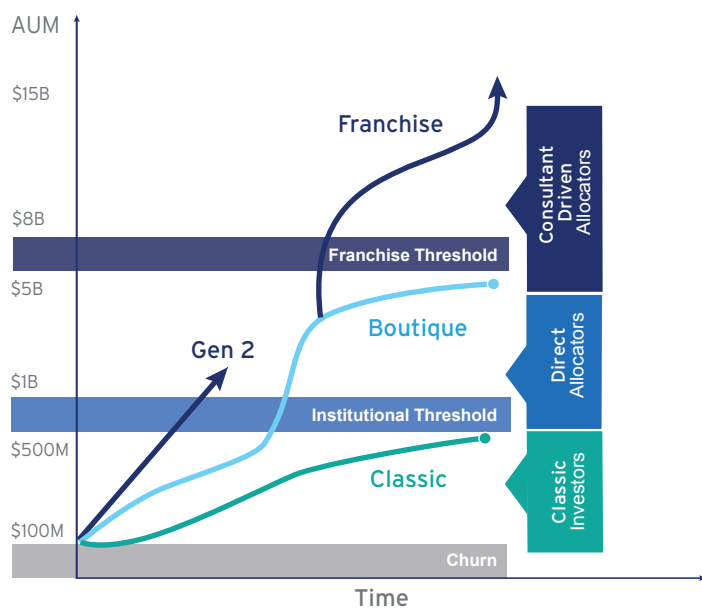
There are now three paths to market we can isolate for managers with less than \$1.0 billion AUM, as illustrated in Chart 31.

For Gen 2 managers, this will be an accelerated path toward franchise fund status as they will be able to fund their platforms with the equity that they themselves can put into their firm. They are also likely to benefit from a robust capital-raising environment as investors compete to lock up capacity with them. To position themselves for a franchise firm standard, these managers should consider building more advanced treasury and financing platforms alongside their trade and portfolio management capabilities and determine their desired geographic presence and research organization early in their development so that they can scale their assets quickly.

Other institutionally aspiring firms will need to engage in the more typical paths to market that have characterized the post-GFC landscape. Investors interested in these managers will expect them to not only have a defined strategy that is designed to minimize volatility and produce steady, reasonable investment returns with strong risk oversight, but these firms must also demonstrate that they have created a robust operational platform and a professional support and investor relations team. They will most likely have to offer founders share classes and be willing to negotiate fees and terms in exchange for large tickets. Because of the extent of competition across these managers, they may also need to accept different economic arrangements in order to accelerate their growth to institutionally acceptable AUM bands. Such acceleration could be through either seeder arrangements or an aggressive pursuit of specialty allocators focused on Day One and early stage capital.

The third path to market moves small managers into a very different competitive realm. These firms will focus on their ability to deploy risk capital more aggressively in pursuit of alpha opportunities and be willing to defend their use of higher levels of leverage

Chart 31: Emergence of Multi-Tier Hedge Fund Industry



Source: Citi Investor Services

and volatility to attain these returns. In this way, they will align more to the “classic” hedge fund profile from pre-2002 and look to establish themselves as niche players.

This multi-tier structure of classic, boutique and franchise type firms offers managers a number of paths to consider in building their hedge funds and distinct investors they can face off against in looking to support those businesses. There is, however, one more facet of diversification we must explore before turning our focus to the ways in which investors and hedge funds are using their post-GFC engagement to optimize their interactions. Beyond targeting investors for their traditional hedge fund offerings, there is a set of managers that is now looking at new products and new retail investors for additional opportunities in the emerging liquid alternatives space.

Section 5: Diversify - New Retail Investor Audience Creates Fourth Tier to Industry

When we published our 2013 report on the industry's evolution, we noted that the topics discussed in these annual surveys are typically based on nuanced changes that happen gradually over time, but that occasionally, we encounter an abrupt and more disruptive change that can work to reshape the industry. This was the case with the GFC and it was also the case last year in terms of the emergence of 40 Act liquid alternatives as a new product opportunity for the hedge fund industry. As this section will show, there continues to be growing interest and opportunity in this space and we now firmly expect retail investors to be the fourth investor audience hedge funds target in building out their businesses. This is illustrated in Chart 32.

Backdrop: "Perfect Storm" of Factors Encourages the Emergence of 40 Act Alternatives

While there were a number of factors that came together in recent years to make it more attractive for hedge fund managers to consider launching 40 Act alternative mutual fund products, the most important factor—and the one that is driving the expansion of AUM in this category is the structure of the U.S. investor market.

Chart 33 shows that of the professionally managed assets in the U.S., 47% are being managed on behalf of retail investors. This equated to nearly \$14.0 trillion

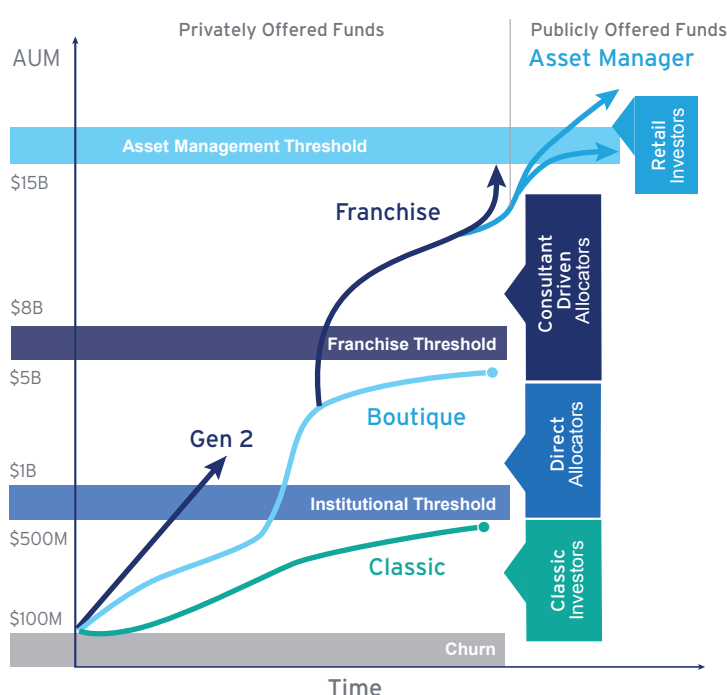
in AUM as of end 2011. Not only is this a tremendous pool of capital, it is also a much higher percentage than in comparable European markets where retail assets make up only 25% of the professionally managed asset pool.

The reason that this large retail asset pool is so important is that nearly three-quarters of such investors, representing almost \$9.0 trillion in AUM, fall below the accredited investor threshold that would allow them to invest directly into a hedge fund manager's privately offered 3(c)7 or 3(c)1 fund. Demand for the insurance these types of alternative strategies can provide is surging, but the financial advisors who have discretion over these retail clients' portfolios cannot place the majority of those clients into a hedge fund manager's existing products.

There are several types of financial advisors within the U.S. market, but the key fact to consider for this report is that the basic pay model for all these market participants has been undergoing a shift in recent years, from a commissions-based model where the financial advisor would be paid off their volume of transactions to a fee-based model where the advisor is paid based on the size of their assets under management.

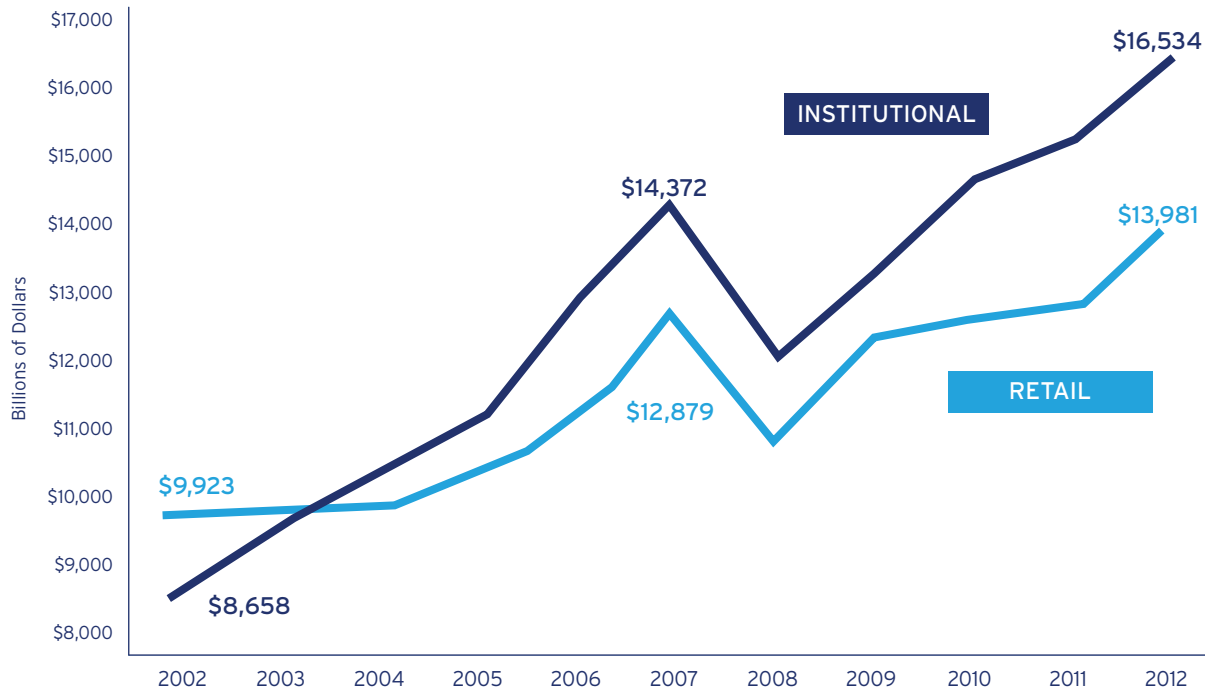
This shift has been occurring slowly since the Technology Bubble burst in the early 2000s, but the implications of the change became widely apparent in 2008. As their clients' AUM fell sharply in that period, so too did the compensation of their financial advisors. This touched off the same debate about capital-based allocations versus risk-based allocations that has dominated the institutional investing audience. Like their institutional counterparts, the retail-focused financial advisor community has also concluded that they needed to offer more products that would act as "insurance" and offer downside protection and volatility dampening into their clients' portfolios.

Chart 32: Expansion of Multi-Tier Hedge Fund Industry



Source: Citi Investor Services

Chart 33: Professionally Managed U.S. Assets Under Management Retail & Institutional
(Excludes Non-Professionally Managed Assets and Adjusts Channels for Double Counting)



Sources: Cerulli Associates citing Department of Labor Judy Diamond, CFO, Investment Company Institute, Federal Retirement Thrift Investment Board, PlanSponsor, Insuranceassetmanager.com, The Foundation Center, NACUBO, Investment Company Institute, Insured Retirement Institute, VARDS, Morningstar Direct, Strategic Insight/SIMFUND, Securities Industry and Financial Markets Association, Investment News, Financial Planning, Bank Insurance Market Research Group, Meridian IQ, S&P Capital IQ MMD, eVestment, The Institute of Management and Administration, Pensions & Investments, FDIC, OCC, Barron's, Cerulli Associates, in partnership with Advisor Perspectives, Financial Planning Association, Investment Management Consultants Association, and Morningstar

The problem was that they could not use hedge funds' traditional products to meet this demand and they thus needed a new set of products to fill this niche.

Other factors had also shifted to allow the growth of 40 Act liquid alternatives. Changes were wrought in the U.S. mutual fund industry that worked to make mutual funds a stickier investment product. Such changes included the imposition of redemption fees that would be assessed if an investor exited a fund, and the allowance for financial advisors to collect a distribution fee or 12(b)1 fee on an ongoing basis for the duration of the client's investment into a specific mutual fund.

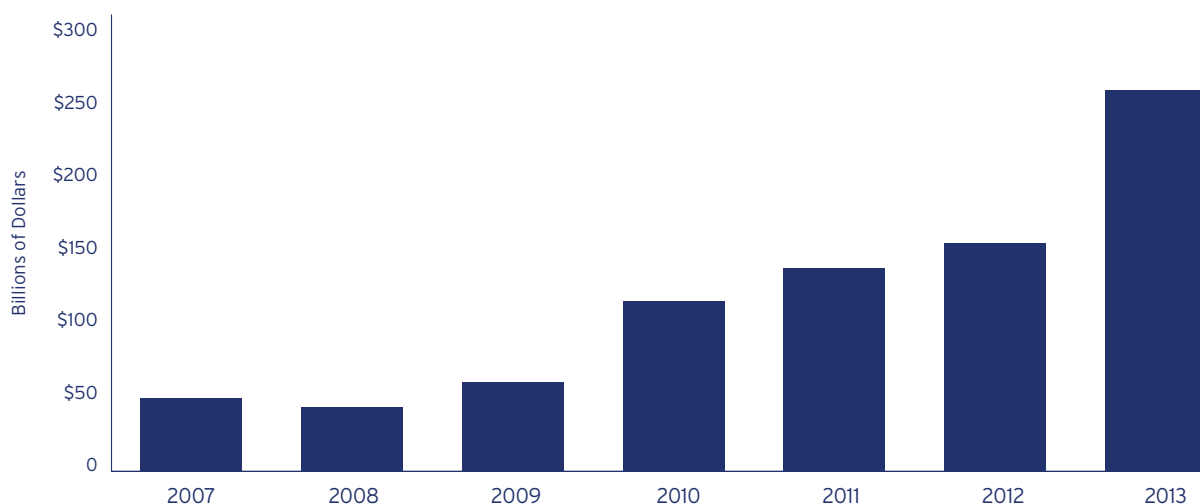
A growing regulatory burden being imposed on hedge funds has also played a role in breaking down some of the barriers to entry that may have prevented a manager from considering these products in the past. As of March 2012, the vast majority of hedge funds had to register as investment managers with the SEC and put into place a robust compliance program and detailed regulatory reporting regime. This was a costly exercise and one that made the gap between what was required to offer a regulated and a private fund increasingly narrow.

The final factor that helped to support a growing interest in creating 40 Act alternative products was that FoHFs began to see a new opportunity to use their hedge fund manager connections and expertise at portfolio construction to access a new audience. Several of these participants were able to team with leading retail distributors to launch a new type of "multi-alternative" fund. This new fund structure offered hedge fund managers a way in which to participate in the publicly offered fund market but without creating any direct access to their investment strategies and without having to expose their position level information in a manner that could undermine their privately traded, higher-fee funds.

Publicly Offered Alternative 40 Act Mutual Fund Assets Surge

THEN:

Alternative mutual funds struggled to gain broad acceptance in the period just before and after the GFC. Institutional investors were reluctant to embrace the earliest versions of liquid alternatives because of the poor outcomes noted in 130/30 products in 2007. While these funds were beta extension strategies, not

Chart 34: Alternative Mutual Fund Assets 2007 - 2013

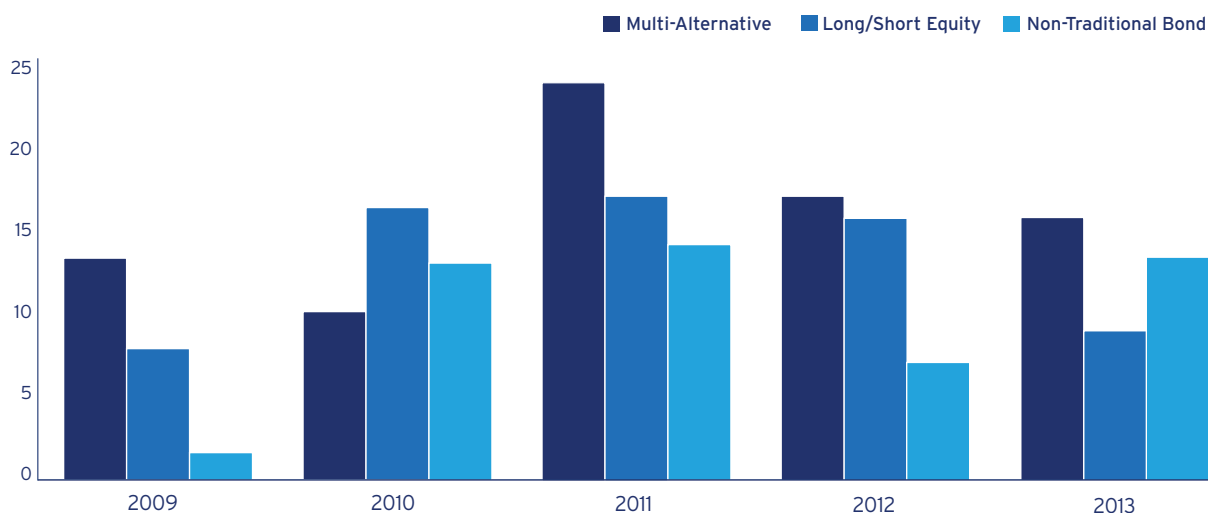
Source: Citi Investor Services Analysis based on Morningstar Data.

alternative strategies, they did not perform well in the August 2007 Quant Quake as many of the managers offering these products were unskilled in managing a short book. This left a negative perception that alternative mutual funds still struggle against to this day. For retail investors, limited demand was primarily driven by a lack of in-depth education and marketing of these products. Financial advisors struggled in understanding how to market these products to retail audiences and create model portfolios for their clients.

Further hindering the growth of these products was a lack of product depth as only a limited number of alternative mutual funds were available to investors

pre-GFC. According to Morningstar, in 2007 only 112 alternative 40 Act mutual funds were available to advisors and investors out of a mutual fund universe of over 8,000 funds.

These growth inhibitors quickly started falling away in 2009 as alternative mutual funds were launching at an increasing pace post-GFC with 22 new launches in 2009 and 44 new launches in 2012. As blue-chip asset managers such as BlackRock, AQR, PIMCO and GSAM grew their product offerings, more attention was paid to these products by both asset managers and investors alike. In this time period, RIAs and independent wealth advisors started increasing their clients' allocations to nontraditional bond funds,

Chart 35: Number of Alternative Mutual Fund Launches 2009-2013

Source: Citi Investor Services analysis based on Morningstar data.

as these vehicles were viewed to be well suited for retail investor portfolios in a rising interest rate environment. As Chart 34 illustrates, alternative mutual fund AUM started to grow quickly after 2009 and by the end of 2012 totaled over \$154 billion.

In terms of new launch activity, 2013 followed 2012 as another very active year for alternative 40 Act mutual funds, as 46 new products launched—more than double the total launches seen in 2009. Strategy-wise, multialternative vehicles were the most prolific with 15 launches – on par with 2012. The high profile managers launching these products received headlines in industry press as Blackstone and GSAM introduced Multialternative products with several prominent hedge fund managers as sub-advisors. Non-traditional bond funds proved to garner headlines in the industry as well; 13 new products were introduced in 2013, on par with 2011 for the most launched in this category since Morningstar started tracking this data in 2002. Launch activity over the past five years is highlighted in Chart 35.

NOW:

As we look back at the growth of these products, it's important to note that in just four years, assets in alternative 40 Act funds and alternative ETFs surged over 200%, growing from \$98 billion at the end of 2008 to \$305 billion at the start of 2013. This pace of growth exceeded traditional mutual funds and

"We are still at the front end of the growth of liquid alts. There still are a lot of new users—whether they be retail investors buying these products or advisors selling them for the first time. It's still a new asset class for many people."

— >\$10 Billion Asset Manager

"I see a lot of HFs that historically offered two flavors of their fund and were adamant on not changing now suddenly considering a long-only fund, a 40 Act or managed account. Now a lot of these guys are thinking of how to evolve their firms to the next level with these products."

— Fund of Hedge Fund

"We think the alternative mutual funds concept has legs. Because the penetration into defined contribution plans is so low it presents a huge opportunity for funds that can come to market."

— Consultant

"It's pretty much accepted in the industry that liquid alternatives are not at all a fad. These products have gained acceptance by managers and investors alike. The road has been paved for their future growth."

— >\$10 Billion Asset Manager

"Over the next five years we expect to double the number for mutual funds we offer to clients. This is the area of our business poised for the biggest growth for us."

— Consultant

ETFs, which collectively grew by only 36% over the same period. Our projections for \$255 billion in total alternative mutual fund assets for 2013 were broadly in line as large net flows to the category pushed AUM to \$261 billion at year-end. The vast majority of new net flows were captured by nontraditional bond funds (+\$56 billion) and equity long/short funds, which realized \$22 billion gains in new investor flows for the year.

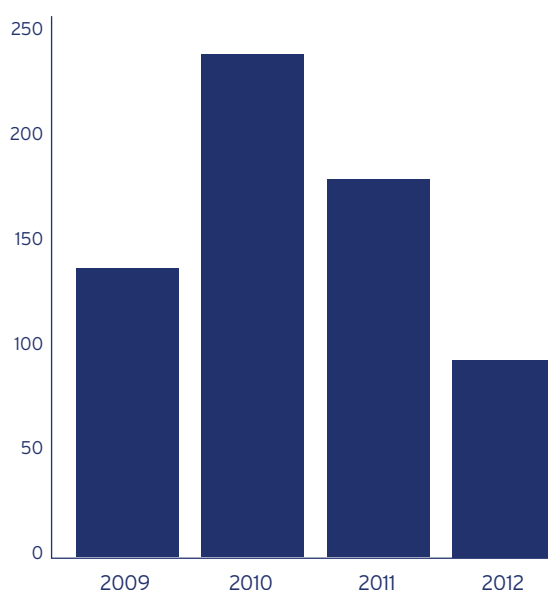
Our interviews with consultants and wealth advisors confirm the popularity of these vehicles as they are increasingly being positioned to balance portfolios in anticipation of a rising rate environment and near-term equity markets corrections. Analyzing recent investor flow data confirms this view, as across investor activity for both institutional and retail-focused investor flows of \$95 billion outpaced the total global flows into privately offered hedge funds vehicles which realized \$63 billion in flows for the year. All told, by the end of 2013, there were 403 alternative mutual funds managing \$261 billion in assets.

Our interviews with hedge fund managers have been similarly optimistic about the growth potential for these products with many expressing the view that the industry is still in the early days of a sustained growth cycle.

Spillover Demand is Expected to Stimulate Interest Outside the U.S.

THEN:

Taking a closer look at the liquid alternatives growth phenomenon on a global basis reveals a nuanced landscape, specifically in Europe where the UCITS structure has afforded hedge fund managers a regulatory structure to access both institutional and retail-focused investors. Despite a slight retraction during the 2008 financial crisis, alternative UCITS saw meaningful growth in the years that followed.

Chart 36: Number of Alternative UCITS Launches 2009-2012

Source: Citi Investor Services analysis based on SEI data.

Although many industry participants projected a strong demand for alternative UCITS from European retail investors in the immediate years following the GFC, our interviews with investors and wealth platforms consistently pointed to demand primarily from institutional investors during this period. In part this reflected the much lower concentration of retail market participation in the European landscape as the majority of their professionally managed assets

(75%) remain in the hands of institutional participants. Lack of demand also related to the same concerns about the early set of alternative UCITS products that hindered 130/30 structures. Early alternative UCITS products were primarily being offered by traditional, long-only asset managers with little experience in managing a short book.

With the backlash against FoHFs emerging in the wake of the Madoff scandal, many European hedge fund managers chose to launch more liquid alternative UCITS versions of their hedge fund products. This led many in the industry to term these new products 'Newcits' as a moniker to differentiate the second wave of alternative UCITS product launches from the earlier offerings. Even with new managers bringing these funds to market, by 2011 - 2012 interest from both institutional investors and retail investors had clearly waned.

In analyzing the growth of liquid alternatives in our 2013 report, we predicted that there would be renewed interest in alternative UCITS offerings as a follow-on effect as EMEA retail investors also began to seek the portfolio diversification offered by these structures.

NOW:

As a follow-on to the success of liquid alternatives in the U.S., we still anticipate alternative UCITS gaining adherents among a more retail audience in Europe and in other regions participating in the UCITS regime. Recent launch activity has demonstrated a consistent interest in these products as 275 were launched in 2011 - 2012, as noted in Chart 36. Our interviews with European-based hedge fund managers and wealth platforms confirm that the future demand for these products from an increasingly retail-focused audience is robust.

With the onset of new AIFMD rules taking effect, we also see a rise in the popularity of the Qualifying Investor Alternative Investment Fund (QIAIF) as a structure for both U.S. and European-based managers to access European investors. The QIAIF structure has been aligned to the AIFMD rules and provides asset managers with a more flexible structure to manage alternative strategies while creating a minimum investment threshold of 100,000 euros. These products gained the industry's attention, as experienced liquid alternative managers BlackRock and Marketfield launched successful QIAIF products in 2013. Industry participants we surveyed expect increasing interest from hedge fund managers to launch additional QIAIF funds in the next several years.

" Alternative UCITS will be more retail-dominated going forward and we see the demand as 70% retail and 30% institutional. We feel insurers will be forced to stay in UCITS by regulations; in the end the largest institutions and the smallest end investors will end up in the same product."

- \$5.0 to \$10 Billion AUM Asset Manager

" Alternative UCITS funds are not a fad. It's an evolution of the industry. There remains real demand for these products, especially from institutional investors."

- \$5.0 to \$10 Billion AUM Asset Manager

" We view alternative UCITS as a long-term play to fully realize potential with retail investors. Our estimates for retail investments in alternative UCITS is about 5% of total assets under management however, we anticipate steady uptake in the coming years."

- Wealth Platform

Going forward, there is some anticipation for strong reception for the proposed Retail Investor Alternative Investment Fund (RIAIF), which will give investment managers the flexibility of a structure that can be marketed to retail clients excluded by the AIFMD. RIAIFs would give the retail audience the option of investing in differentiated alternative products beyond UCITS and the ability to invest in precious metals, private equity and fund of funds. The positioning of these funds would correspond somewhat more closely to the manner alternative mutual funds are used by RIAs and independent wealth advisors in the US.

A Growing Portion of Hedge Fund Manager AUM Is Likely to be Directed at Retail Audience

THEN:

The last several years can be viewed as a somewhat experimental phase for hedge fund managers entering in the retail-focused product landscape. Multialternative mutual funds offered hedge fund managers an ideal vehicle to test the waters on how their current investment management process could be adapted to run a daily liquidity product. In these structures, the hedge fund manager acted as a sub-advisor to one sleeve of a multi-sleeved product. Reporting was done at an aggregate level for the funds and investors could only purchase shares at the aggregate level. Hedge funds participating in such vehicles were thus insulated from creating unwanted competition with their core private fund offering.

Multialternative strategies also allowed hedge fund managers to participate in the retail landscape without them having to build out any of their own distribution arrangements. For many managers, this is the extent of retail market participation they wish to pursue. It is an opportunity for them to realize investor diversification and create another management company income stream.

Moving further into the retail space would require them to address the distribution hurdle which is proving a daunting challenge to many in the hedge fund world. This becomes a concern only when a hedge fund manager chooses to move from participating in a multialternative product to launching their own single manager product.

There are four primary distribution models we have noted for accessing the retail audience. The first is to hire third-party marketers with deep ties to the RIA and independent broker-dealer channel to create demand on the hedge fund manager's behalf. The second involves getting a fund listed on the main

retail distribution platforms, specifically wirehouses in the U.S. and private bank platforms in Europe, as these venues are uniquely positioned to sell these products to an investor audience not eligible for private hedge fund product, but each has listing fees and minimum AUM requirements to participate. Another path is to forge a sub-advisory partnership with a leading asset manager with a fully mature distribution arm. Mainstay's innovative partnership with Marketfield and PIMCO's purchase of EqS are notable examples of traditional asset managers leveraging their robust marketing teams to grow alternative mutual fund offerings. Lastly, the option for hedge fund firms to build their own team of wholesale distributors remains an option for firms committed to managing the end-to-end marketing efforts for their liquid alternative funds.

NOW:

There is starting to be a clear split in the market between those hedge fund firms content to access limited amounts of retail money via multi-alternative fund participation and those that are looking to more directly capture the market opportunity via the launch of their own single manager product. This is a natural progression for many managers as they prove out their ability to manage a product differentiated enough from their hedge fund offering so as to dampen any fears of "cannibalizing" their high fee fund. A slew of single manager hedge fund launches is likely to be seen in the coming 18 months as many firms make this transition and figure out their distribution approach.

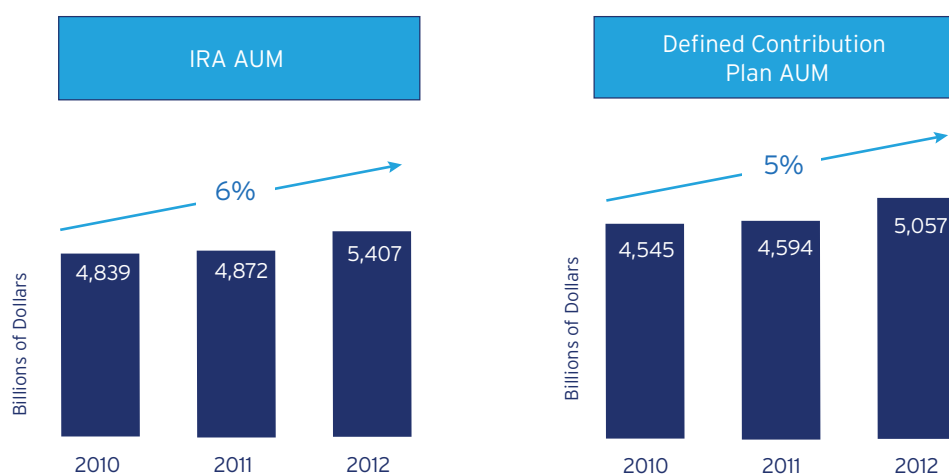
Another trend we have detected from our recent interviews is a renewed interest in managers launching closed-end interval funds as an additional product targeted at investors not eligible for private 3c7 and 3c1 funds. Several blue chip managers have recently filed with the SEC in anticipation of launches in 2014.



The last way hedge fund assets will be increasingly positioned toward retail investors will be from liquid alternative products positioned to tap into defined contribution (DC) plans. Since the 1980s, retirement assets have drastically shifted from defined benefit (DB) plans to DC plans. Total private DC plan assets first surpassed private DB plan assets in 1997 and the spread has consistently widened since then. As of 2012, total private DC plan assets stood at \$5.1 trillion, a significant portion of the total pool of retail assets. The products mostly entrenched in these plans include target date funds, which are frequently the "default" investment selected for employees falling under DC plans. The next step in maturation for firms managing

alternative mutual funds is designing products that can incorporate alternative strategies into a target date-style fund. The growth of DC and IRA assets and the targeted wealth pools are highlighted in Chart 37.

We remain optimistic for the growth trajectory for alternative mutual funds by a confluence of factors from both the demand and supply side of the industry. As we will explore, there is a precedent for such product growth.

Chart 37: US Retirement Wealth Pool Attributes



Opportunity for Liquid Alternatives		
Key Channels	<ul style="list-style-type: none">• Registered Investment Advisors (RIAs)• Independent Broker Dealer (IBD)• Wirehouses	<ul style="list-style-type: none">• Plan Sponsors
Target Products	<ul style="list-style-type: none">• Mutual Funds• CEFs• ETFs	<ul style="list-style-type: none">• Mutual Funds• Collective Trusts• Unit Investment Trusts
Target Wealth Pool	<ul style="list-style-type: none">• Non-QIP• <\$5mm Net worth	<ul style="list-style-type: none">• Entire wealth pool: QIP and Non-QIP

Source: Citi Investor Services analysis based on Cerulli data

Similarities Between 40 Act Alternative Mutual Funds & Hedge Fund Industry Growth

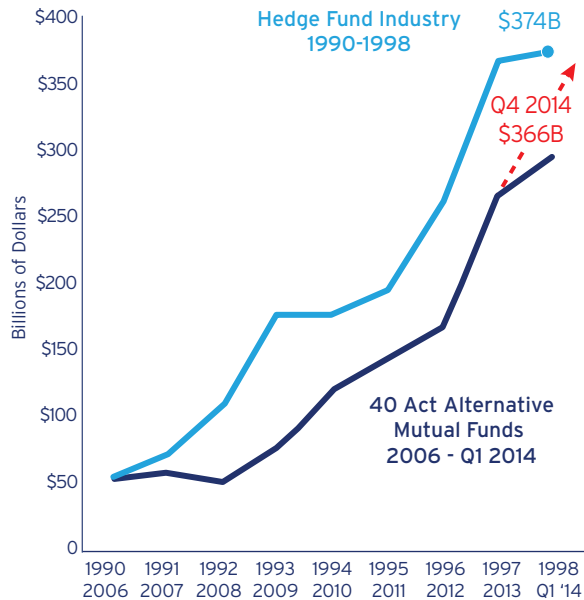
The AUM being registered by 40 Act alternative mutual funds, while growing quickly, is still only a fraction of the size of the hedge fund industry. This leaves many wondering why the new products garnered so much attention and prompted so much discussion over the past 18 months. Chart 38 offers some context to help explain this focus.

Between 2006 and 2013, 40 Act alternative mutual fund AUM rose from \$37.2 billion to \$261.3 billion. Rapid inflows (as highlighted in Chart 39) and positive performance in Q1 2014 pushed assets up to \$290.1 billion. If we extrapolate that first-quarter performance, year-end assets should hit \$366 billion. With 9 years of growth data, we are able to look for other industries that showed similar asset accumulation, and in this case, we don't have to look very far.

HFR shows that the hedge fund industry itself grew from \$38.9 billion AUM in 1990 to \$374.8 billion at the end of 1998 in a similar 9-year period. This is a striking comparison. What occurred in the following 5 years is even more striking.

Chart 40 shows that the hedge fund industry more than doubled between 1998 and 2003, rising from \$374 to \$820 billion AUM. Though not illustrated, assets again more than doubled in the following 5 years, rising to a pre-crisis high of \$1.95 billion in mid-2008.

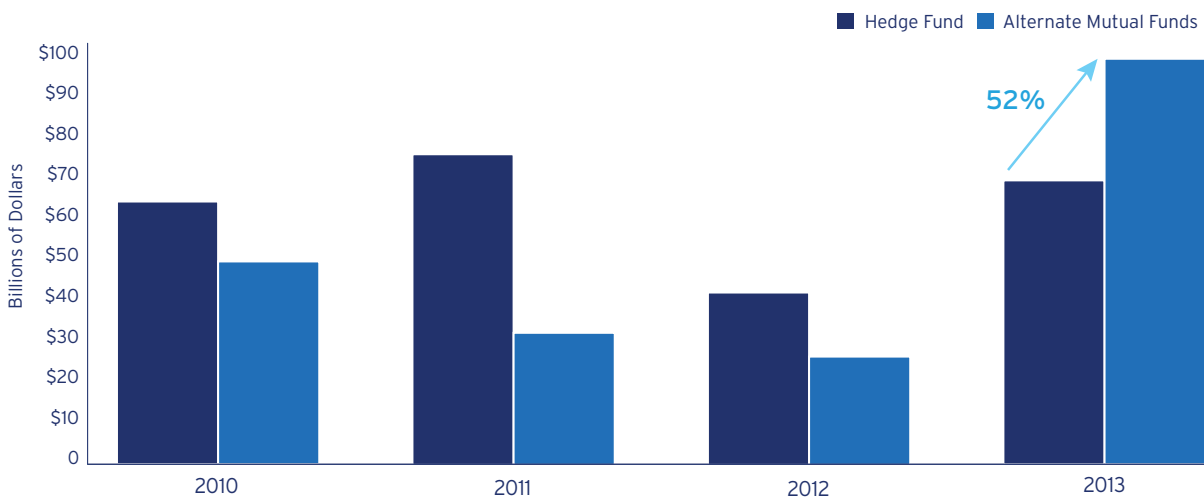
Chart 38: Growth of Hedge Fund Industry Assets 1990-1998 vs 40 Act Alternative Mutual Funds 2006 - Q1 2014



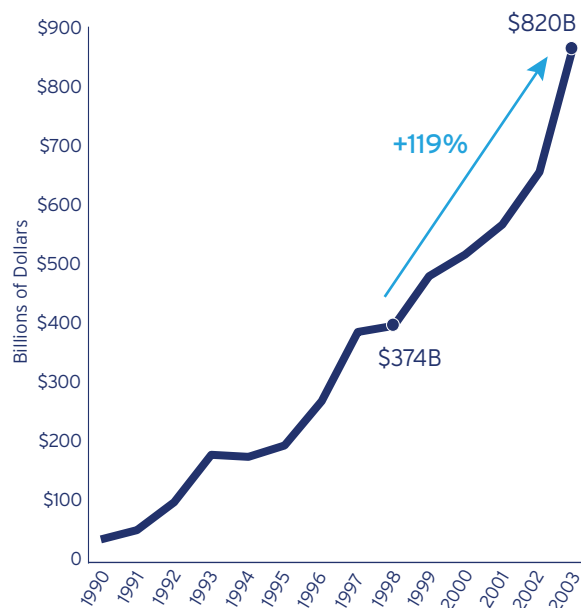
Source: Citi Investor Services analysis based on HFR and Morningstar data.

Though we do not know if factors will support as rapid an evolution of the 40 Act alternative mutual fund space, it is certainly an exciting trend to watch. The industry's largest managers that are able to support these products alongside their traditional hedge fund offerings may want to consider this space.

Chart 39: Comparison of Net Investor Flows to Hedge Funds vs. Alternative Mutual Funds



Source: Citi Investor Services Analysis based on HFR and Morningstar Data

Chart 40: Growth of Hedge Fund Industry Assets 1990-2003

Source: Citi Investor Services analysis based on HFR data & proprietary interviews.

portfolio. Whereas pre-GFC, hedge funds were viewed as a separate asset class by institutional investors looking to capture an illiquidity premium, that view has morphed in recent years and we increasingly see more pensions and institutional players focusing on using hedge funds as “shock absorbers” in their core portfolios alongside their traditional long-equity and bond holdings.

The second was the emergence of a multi-tiered investor audience that has allowed hedge funds to have many options about the type of firm they wish to create. This specialization in the type of hedge fund profile being sought by different investor audiences is a sign of maturation of the industry. Managers will be able to target specific types of investors based on their strategy, firm size, investment goals and capital-raising objectives.

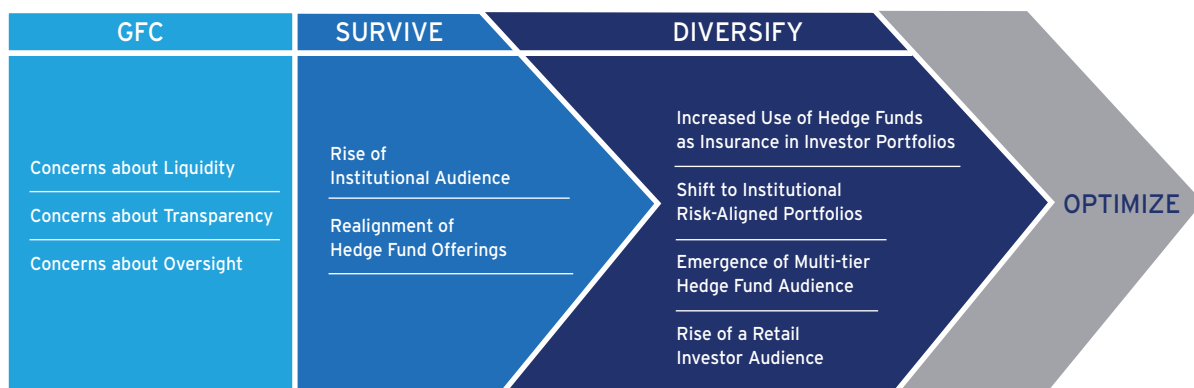
The third diversification trend relates to the expansion of alternative trading strategies from accredited investors in the private fund space to a broader, more retail-oriented investor audience in the publicly offered fund space. Hedge fund managers pursuing this route are now leveraging their investment skills more broadly to facilitate a range of products that have differing liquidity and return targets. These diversification trends are summarized in Chart 41.

Together, changes that were required for the hedge fund industry to survive in the immediate aftermath of the GFC and the foundation those changes laid for the industry to become much more diversified have been the story of the past five years. Looking ahead, we see the strategic imperative in the industry shifting from Diversify to Optimize. This will be explored in the coming section.

The Shift from Diversification to Optimization

As we have discussed in the preceding sections, the industry has now gone through three major diversification trends as a result of changes in the investor landscape post-GFC.

The first was the expansion in the manner by which investors evaluated and placed hedge funds in their

Chart 41: Investor Imperatives & Resulting Industry Changes

Source: Citi Investor Services

Section 6: Optimize - Enhanced Partnerships Between Investors and Hedge Funds Forge More Joint Investment Opportunities

One of the facets we discussed earlier in the paper that has been a hallmark of the post-GFC era has been the deepening relationship between hedge fund managers and their core institutional investors—particularly among those managers engaged with investors who choose to directly allocate their capital. Increased dialog between participants about how hedge fund manager insights may support the investor's total portfolio has been augmented more recently by an increasing number of investors having robust risk and portfolio tools available to them to analyze their own portfolios. This is creating opportunities for those organizations to engage more meaningfully with their hedge fund counterparts.

Leading Institutions Internalize Asset Management & Upgrade Risk Tools

Earlier in the report, we discussed that several changes in portfolio construction theory began to occur in the late 1990s that discouraged the notion that active long-only managers could significantly outperform an industry benchmark when that benchmark was cut to an adequately discrete level.

Increased adoption of passive ETF and index funds was a direct outgrowth of these changes in portfolio construction theory and more institutions determined that they could obtain their desired beta exposure by investing in these funds that had cheaper fees associated with them than by allocating capital to active long-only portfolio managers. Another outgrowth of this same phenomenon has been a growing trend toward large pension funds creating internal asset management organizations.

In 2013, there were 27 public pensions and 5 private pensions listed among the Top 300 U.S. Money Managers in Institutional Investor's annual summary. Collectively, these pensions managed \$1.7 trillion in AUM. This trend was mirrored globally. Of the Top 100 Money Managers in Europe, there were 7 pension plans listed managing \$1.2 trillion, and of the Top 100 Money Managers in Asia-Pacific, there were 23 sovereign wealth funds and pensions listed managing just over \$3.0 trillion between them.

This move by leading institutions to internalize the management of their firm's core equity and bond positions reflects concerns about the costs of paying for external management and a sense that there are vanilla areas of the market where an internal team can equal—if not exceed—the broad market performance. In nearly all these instances, the pensions and SWFs

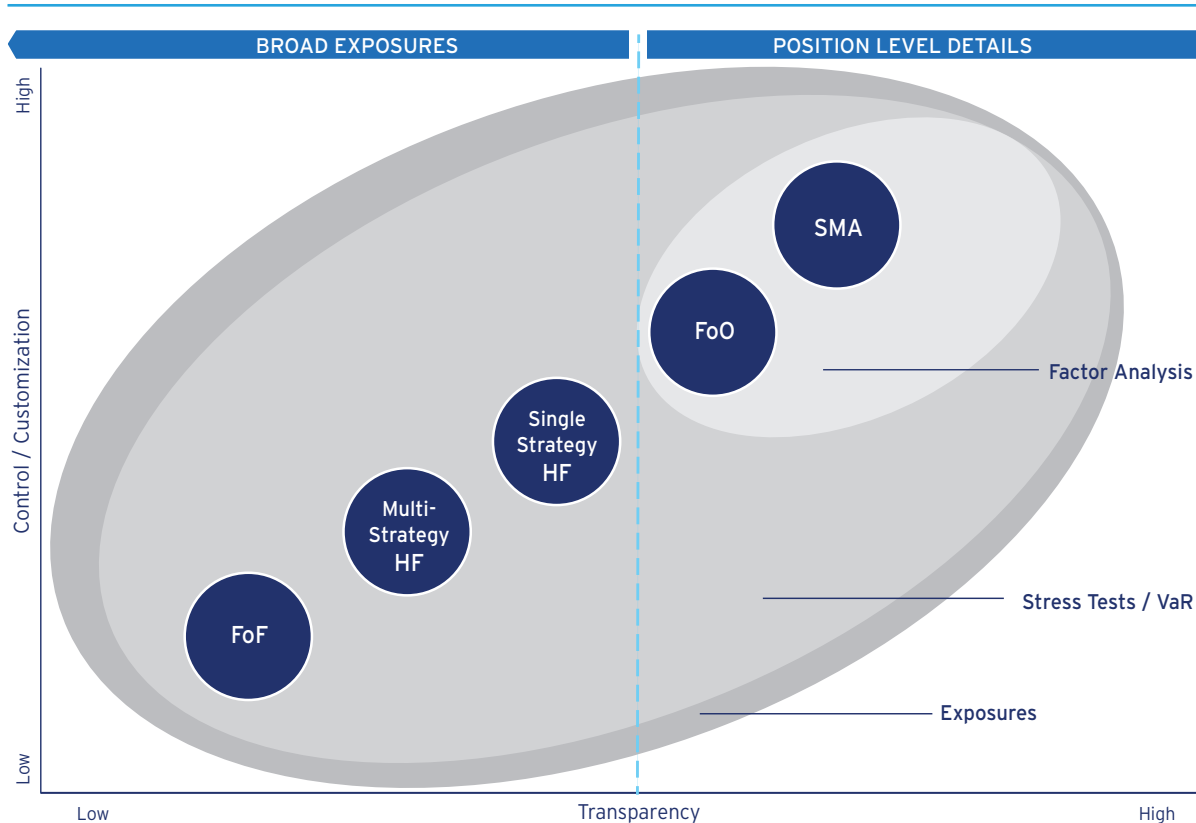
also look at external managers, but typically only for more niche areas of their portfolio, such as hedge funds.

A by-product of pensions and SWFs using both internal and external managers for their portfolios has been the need to upgrade their set of risk tools to evaluate their total holdings. For their hedge fund investments, many institutions were asking their managers to report via risk aggregators such as RiskMetrics. This is a trend we have noted in our past three industry evolution surveys. In our most recent set of interviews, we heard from many of these organizations that they have now built out their own toolsets that either integrate the aggregated risk data with internal portfolio data or that directly import risk data into the institution's systems.

Chart 42 shows the ability of these pensions and SWFs to run this type of analysis is a direct by-product of the evolution in hedge fund transparency and the willingness of hedge fund managers to provide position-level details to their investors through new investment structures that gained prominence in the post-GFC world.

Having the ability to run better risk scenarios and perform factor analysis on hedge fund positions side-by-side with their broader set of portfolio holdings has been a key contributor to these investors being able to assess sources of beta and alpha across their hedge fund allocation. This has facilitated their expanded use in institutional portfolios under the risk-aligned portfolio model, helping to explain why hedge fund allocations have been spiking in recent quarters despite disappointing performance. There has also been another optimization enabled by this more robust analytic capability.

Chart 42: Evolution in Institutional HF Exposure Analysis



Source: Citi Investor Services

"We have an internal team to manage the passive portion of our portfolio. If we don't find any good active opportunities, that's what we'd be invested in. If we find an active opportunity we like, we'd sell out the corresponding portion of our passive portfolio."

– Public Pension

"We've been doing a lot of work building out our technology platform. We have built a CRM system tailored to hedge funds or plan sponsors. This should help us maintain our organizational knowledge in case of turnover. We have built our risk systems that help us run our portfolio. We look at the marginal contributions to risk and return. We look at the exposure overlaps as well as the position overlaps. We look at each manager's return stream and determine how differentiated those return streams are. We are feeding more and more data into this risk platform and soon we will be able to look across the entire portfolio."

– Public Pension

"We do most of our management of long securities internally. We run our large cap and ETF trades this way. We trade our own options and derivatives. That way, we can manage the collateral at the same time that we place on the trade."

– Private Pension

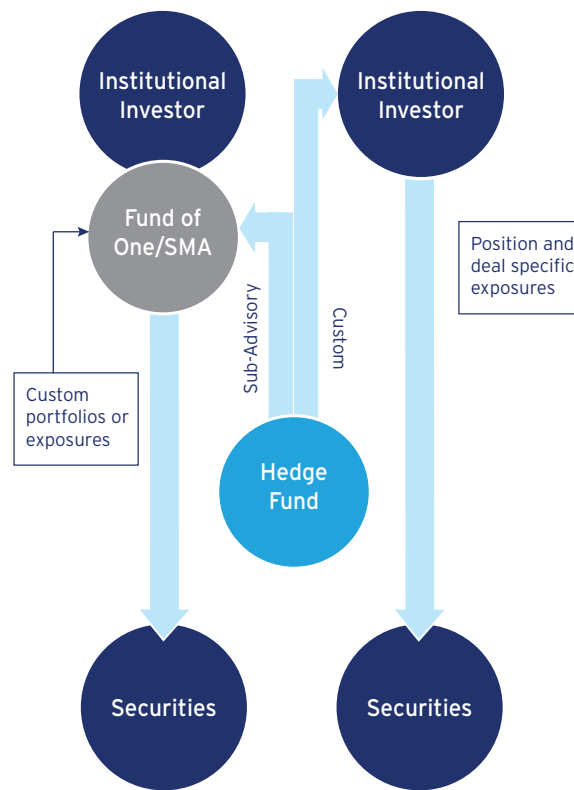
Benefits of Closer Institutional Relationship with Hedge Funds Creates Co-Invest Opportunities

Since beginning broad investment programs into hedge funds post-2002, institutional investors have been progressing toward having an ever-more direct engagement with their underlying hedge fund managers.

The move to funds of one or SMAs post-GFC evolved the model again into one where the hedge fund manager is making the trading decisions on the account, but as a designated sub-advisor. The ownership of the assets has instead shifted to either a combination of the hedge fund and investor (dual LP model) or to the investor outright.

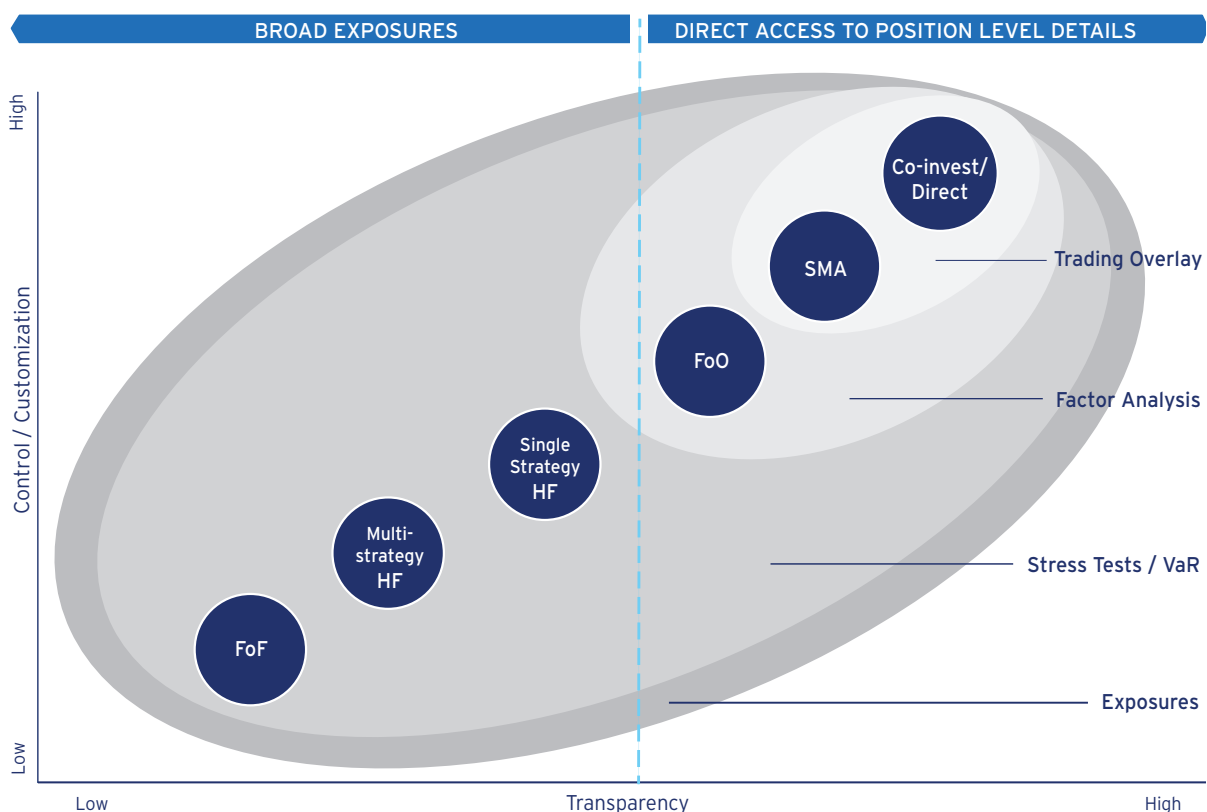
Most recently, we are hearing from more of the industry's largest investors that they were not only employing their hedge funds to be sub-advisors, but were actually pursuing a pure advisory relationship with those managers in which they would seek their investment ideas and then co-invest capital alongside the hedge fund. The difference between these models of engagement and the traditional means of accessing hedge fund trading talent is illustrated in Chart 43.

Chart 43: Institutional Investment Models: Co-Investment & Direct Investment



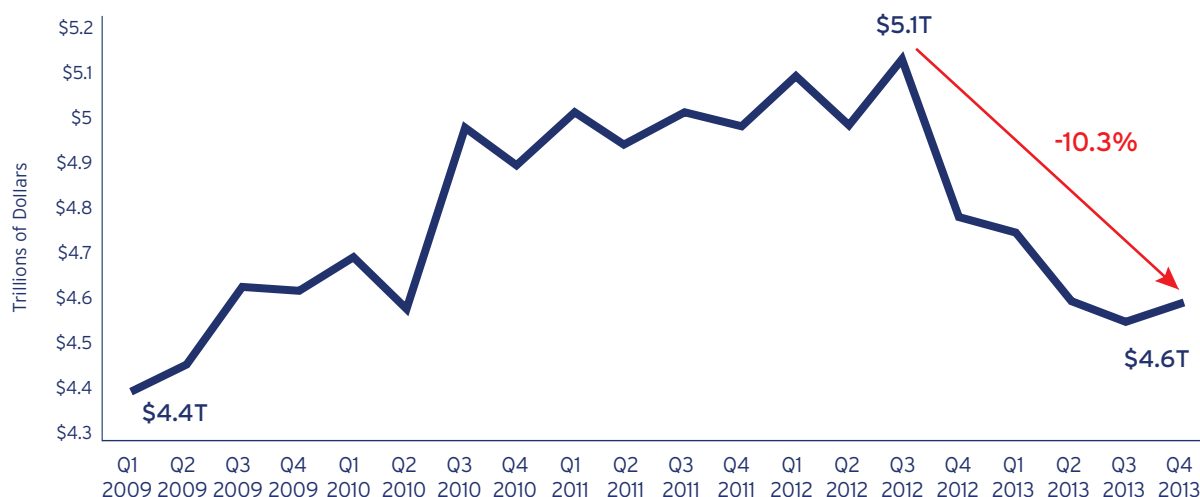
Source: Citi Investor Services

Chart 44: Evolution of Investors' Hedge Fund Access & Risk Analysis



Source: Citi Investor Service.

Chart 45: Securities & Trading Assets held on U.S. Commercial Bank Balance Sheets - Combined Banks & Bank Holding Companies



Source: Federal Reserve Board of NY

Interest in being able to customize portfolios via co-investing or direct investing into securities alongside their hedge fund managers is being enabled by the enhanced risk systems that investors with internal asset management units have been deploying. With position level data, these investors can now see how shifts in the position sizing of certain securities impact their broader portfolio, not just the account being sub-advised by the hedge fund. This trading overlay illustrated in Chart 44 allows investors to model out specific ideas and understand the impact on their overall exposures and factors as well as providing a model as to how these revised position sizes would

impact the portfolio's value-at-risk or stress scenario performance.

Expanded Hedge Fund-Investor Collaboration Fills Void Left by Reduced Dealer Activity

Part II of this year's survey will go into depth on the regulatory pressures causing dealers to reduce their market-making activity and trading inventories. What is important to note for this analysis is the sharp drop in the securities and trading assets held on the balance sheet of the largest U.S. banking organizations. This is illustrated in Chart 45.

"We have definitely seen more co-investment opportunities. Oftentimes, the hedge fund wants to leverage up the position they are putting in the flagship fund but for whatever reasons they can't do in the main fund. In those cases, we'd handle it out of our internal group."

– Public Pension

"We get calls all the time about co-investment and direct investment opportunities. These are instances where we rely on our relationship and give discretion to the manager."

– Public Pension

"We are really watching the disintermediation of the financial players unfold. There are lots of things banks used to do that they are not willing to do anymore. We can step into those shoes. We are finding more and more opportunities on the insurance side in particular."

– Private Pension

Federal Reserve Board of New York data shows that inventories of securities and tradable assets held on bank balance sheets fell by \$500 billion—or 10.3%—over the past 18 months from Q2 2012 to Q4 2013. This is a tremendous dislocation. Indications from both investors and hedge funds interviewed in this year's survey show that these participants are stepping in to take on more of this supply.

This marks a major shift in the liquidity of the marketplace. Risk is moving off bank balance sheets and more securities are shifting to the investor and manager communities. Since the hedge fund manager may be limited by their investment approach or by their capital base from taking on as large a position as they might find an opportunity warrants, many have begun to approach their investors directly to determine whether they are interested in tranches of the same securities. This is what has fed the trend toward more investors looking to co-invest or directly invest with their hedge fund manager in this year's survey results.

In a sense, having these assets shift to end-institutions may turn out to be a positive outcome. Several large investors noted that they are well positioned to sit on the inventory given their long-term investment horizon. Since many of these institutions are actively engaged with the industry's largest hedge funds, participants may be able to trade these assets directly with each other if required to meet liquidity needs or

investment objectives in the unfolding environment. As will be explored in Part II of this year's report, many participants are seeing their traditional roles change in the post-GFC world.

Though the data above highlights the impact on U.S. bank balance sheets, a similar trend is taking place in Europe as well with banking organizations there responding to Basel III capital rules, as will be discussed in the next section.

Not only is this trend occurring in individual securities, there are also now more areas of the market where hedge funds and investors are stepping in to play a role that was historically filled by the large broker-dealers and banking organizations. More hedge funds have been launching specialty funds to do middle-market or direct lending in the riskier portions of the credit curve, where many banks have opted to withdraw either because of the loss of proprietary trading talent prompted by the Volker and Liikanen rules or by their desire to reduce their balance sheet impacts. The full impact of these rules will also be explored in Part II.

Because of these developments, we see the line between investors and hedge funds becoming blurred between the industry's largest institutions that have an ability to manage their own securities positions side-by-side with their external hedge fund managers.

"If you look at bank inventories, they are about 20% of their size from a few years ago and their ability to act as liquidity providers has somewhat gone away. We obviously aren't a bank or a broker, but there are times when we can be a liquidity provider and this allows for really good returns."

— >\$10.0 Billion AUM Hedge Fund

"We think that over time the banks will be forced to make more loans as the regulators are beginning to see the success of the BDC direct lending funds. The entrance of hedge funds into the lending markets is going to draw lots of attention to the question of shadow-banking."

— \$5.0 - \$10.0 Billion AUM Hedge Fund

"We see ourselves in many different asset classes having more of a role of liquidity provider, especially where dealers are less actively taking positions. Dealer inventory is generally down across the street. This has provided an opportunity for us as we see a lot of flow in different businesses we didn't trade in a few years ago. This isn't because we have increased our counterparties—rather they are seeking liquidity from us rather than trying to take it."

— >\$10.0 Billion AUM Hedge Fund

Section 7: Optimize - Investors Seek to More Broadly Leverage Hedge Fund Managers' Core Skill Set

Only a subset of those institutions investing in hedge funds have the internal organizations and platforms required to be co-investing or directly investing alongside their managers. Yet, even smaller investors that are now starting to have mature investment programs and the consultants who advise them are starting to identify more optimal ways to leverage the hedge fund manager's core investment talents.

Maturation of Hedge Fund Investing Sees Differentiation of Core & Opportunistic Allocations

Earlier we noted that the first step in investors looking to create their own direct hedge fund investment programs was to understand the differences between the main types of hedge fund strategies in order to create a diversified portfolio. A key goal in creating a direct allocation program was to find a small, but well diversified set of managers that an institution could count on to perform in a variety of market conditions as most allocators underscored that they would not be skilled at trying to time market moves.

We noted that most allocators were looking for somewhere around 20 - 35 investment managers in this core portfolio. Selecting the right set of managers and deploying the bulk of the capital targeted for the hedge fund program was a large task given the limited size of most institutional investment teams. Even with the help of industry consultants, the time required to perform both an investment and operational due diligence and create the personal bond with the hedge fund manager that many institutions sought could mean that most institutions were only able to make 2 - 4 allocations per year.

Several institutions interviewed for this year's survey are now beginning to have their core set of hedge fund managers decided, and though there may be 10 - 20% turnover of this portfolio, we were starting to hear of more mature investment programs beginning to optimize their portfolio by targeting a set of niche managers around the periphery of their core investment holdings.

Investors making these opportunistic allocations around their core portfolios were doing so with a looser and less stringent set of selection criteria. Because of the limited size of these strategies, they often chose to deploy tickets that would cause them to be a highly concentrated portion of that manager's book or they would select a manager who might not have completed the extensive due diligence and been awarded a slot on a consultant's approved list. Because these allocations represented such a small portion of the overall capital in the hedge fund program and because a lot of the goal in capturing these opportunities related to having good timing, investors were willing to be more creative with this sub-set of their portfolios.

"We manage our portfolio in a core/satellite manner. We look for more esoteric or limited exposure strategies for the satellite. Everybody wants to be in the core, but not all strategies are going to be appropriate. We have only 15 allocations there and we feel that it is not useful to diversify beyond that. The purpose of the core is to achieve our targets and the strategies are all highly complementary. We end up under-risking that portion of the portfolio. We look for strategies to augment the risk portion. For that, we'll reach for returns opportunistically. Chinese convertibles are trading with zero percent optionality right now. That's a great opportunistic trade."

– Public Pension

Hedge Fund Managers Targeted for Broader Role in “Smart Beta” Allocations

Another type of optimization we started to see in the way that hedge fund managers were being used in investor portfolios had to do with an emerging concept called “smart beta.” Like the word optimization itself, there are many definitions of smart beta out in the marketplace. At their most stringent, these definitions refer to a pushback against the choice of using market capitalization weightings in compiling the diversified set of stocks or bonds that make up market indices and passive investment products. Instead, strict proponents of smart beta encourage the use of ETFs or indices based on equal-weighted measures that they have determined to perform more dynamically over time than funds created with the traditional methodology. In a sense, this approach is a hybrid between passive and active management.

Many investors referred to 2013 as the “Year of Beta,” however, and as such, a much looser definition of what comprised smart beta was also discussed fairly broadly. In this less formal definition, investors insisted that they were being smarter about managing their beta exposures. This involved them being much more nuanced in the manner by which they classified the various types of beta present in their portfolio and coming up with allocation goals around each type of beta exposure. This was especially true of investors

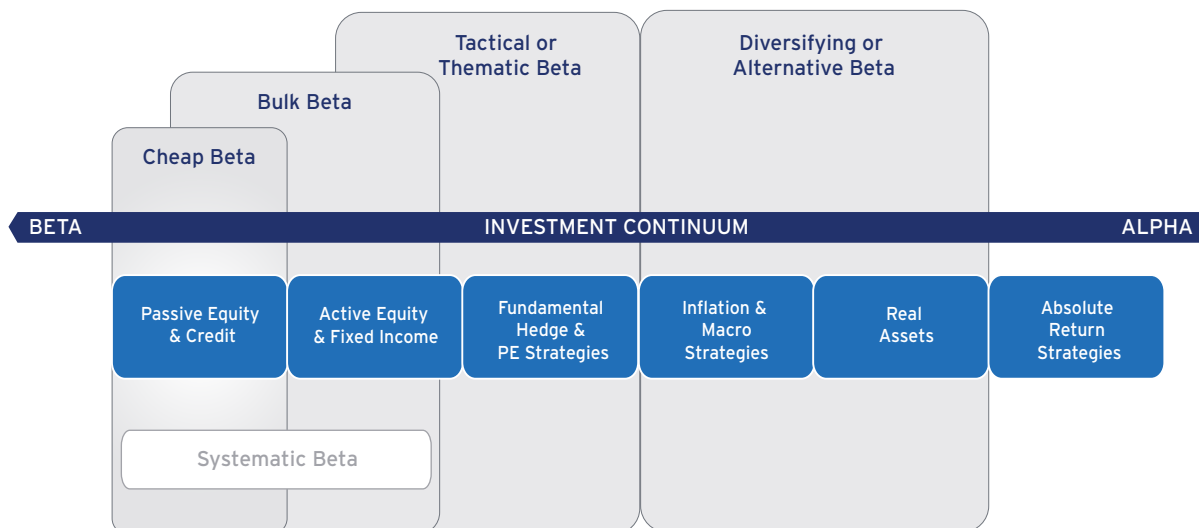
who had moved to a more risk-aligned portfolio model because their spectrum of alpha and beta was already, to a degree, optimized.

This broader approach to smart beta is illustrated in Chart 46.

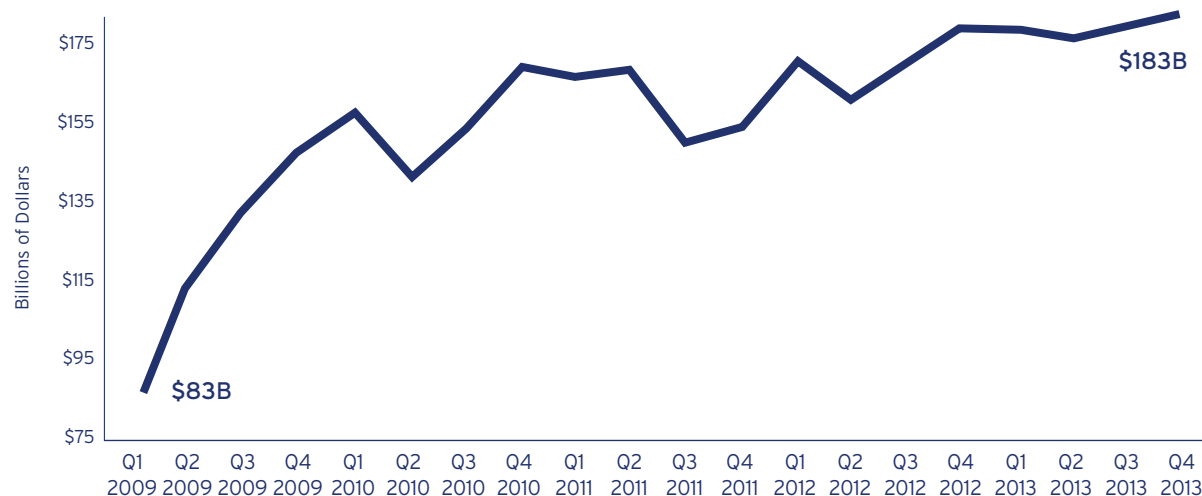
Rather than going into the nuances of the various types of betas, we will focus on where this emerging style of investing intersects most directly with the hedge fund industry. This is around the ideas of tactical or thematic beta and with a move to have more diversifying or alternative beta.

Investor interest in using hedge fund managers to obtain increased tactical or thematic beta has to do with them targeting a more directional hedge fund manager with a strong sector specialty and asking that manager to run a long-only portfolio alongside their hedge fund book. This would accentuate the return potential of the beta portion of the manager’s exposure—a highly desired outcome in periods of high beta. This approach of using hedge fund managers for their long-only expertise is not new, but typically investors have sought this in capacity constrained portfolios. In the new smart beta paradigm, more investors were looking to use this approach in sectors where they determined they wanted more outright exposure.

Chart 46: Illustrative Smart Beta Options



Source: Citi Investor Services

Chart 47: Hedge Fund Long Only Assets

Source: eVestment

Chart 47 illustrates that by Q4 2014, eVestment estimates that the AUM in long-only funds run by hedge fund managers reached a record \$183 billion. This is up from only \$83 billion at the outset of 2009.

These figures track AUM in official LP funds run by hedge fund managers and reported to the eVestment database. The actual amount of assets being managed on the long-only side by hedge fund managers is likely to be much higher since we have noted for many years that investors often choose to set up SMAs for this type of exposure rather than joining a co-mingled pool investment.

Hedge Fund Optimization Linked to the Changing Financing & Collateral Management Landscape

Hedge funds too have begun to pursue their own set of optimizations that are focused primarily on their collateral management approach and ability to be efficient with their financing. This is in response to a shifting regulatory environment as opposed to a changing investor landscape.

The investor evolution to a more institutional footing and investors' response to the liquidity, transparency, and oversight issues they saw emerge in the GFC have transformed the hedge fund industry over the past five years. Going forward, we now see the impact of regulations becoming the dominant story to drive industry change in the coming period.

We will examine the origin, progress and impact of these regulations in Part II of this year's survey and delve more deeply into how this is impacting hedge fund activities, relationships and infrastructures.

In the meanwhile, we will conclude this paper with our forecasts on hedge fund industry growth.

"There has definitely been more focus on beta as a driver of returns. Do you want cheap beta, tactical beta or smart beta? Cheap would be index exposure. We can do this for a couple of basis points. There's a lot of people pushing us to pick a couple of smart betas. I'm not a fan. These strategies haven't been able to deliver. Tactical beta is what interests me. We are looking for a 150/50 type of product—something that fits in the beta bucket, but where a manager has the ability to use leverage and short. We can't do that internally."

– Public Pension

Section 8: Outlook - \$4.8 Trillion in Hedge Fund Industry Assets & Expanded \$1.5 Trillion in Publicly Traded Alternative AUM Likely by 2018

Growth in the core hedge fund industry is likely to remain strong in the coming five-year period and build to consecutive record high levels. Chart 48 shows the key institutional audiences we have been tracking in recent years and their expected changes in AUM between 2013 and 2018.

As shown, we divide the institutional landscape up into global pension funds, sovereign wealth funds, and endowments and foundations. The total asset base from this combined set of audiences in 2013 is seen at \$38.6 trillion, and based on the individual growth trends in each category, we see the combined set of assets rising to \$46.6 trillion by 2018. Alternative investments were, on average, receiving 21% of that total pool of capital in 2013 and that share should expand to 28.1% by 2018.

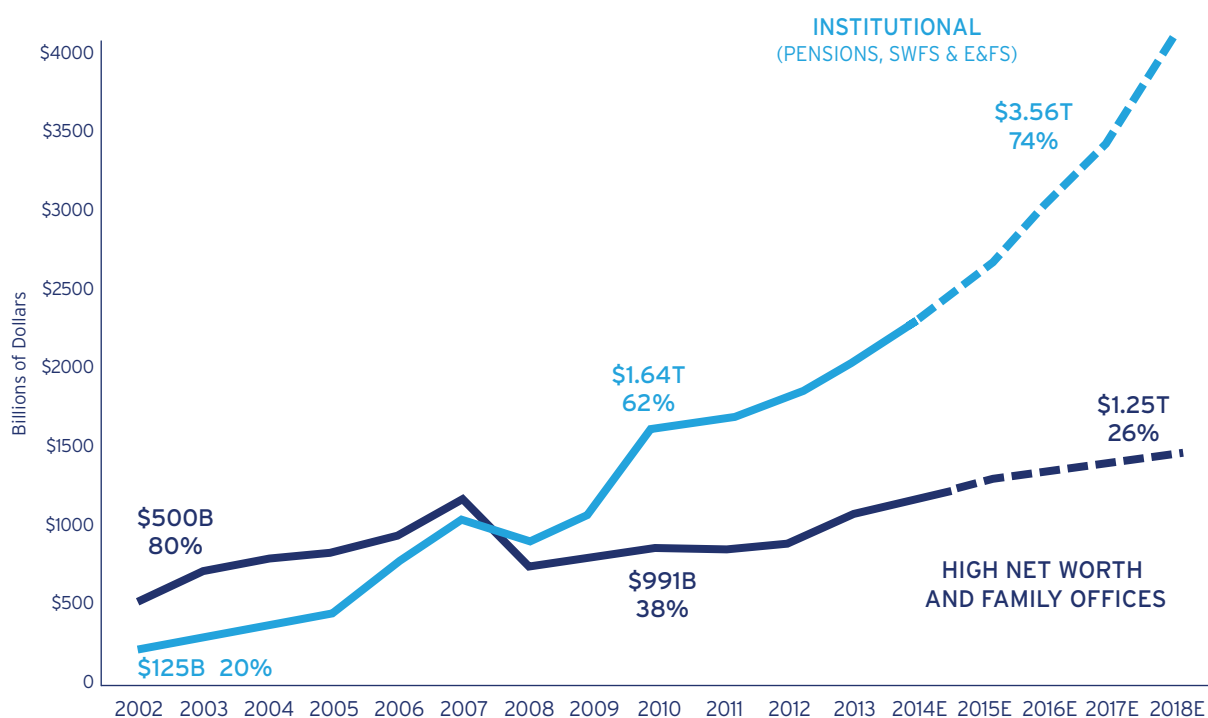
Our analysis shows that in 2013 hedge funds accounted for 19.9% of the total alternative allocation or 4.5% of the institutional audience's total assets. By 2018, we see that share rising to 28.1% of alternatives and 8% of the total global pool of institutional capital. In dollar terms, this should allow institutional hedge fund industry AUM to expand from \$1.72 trillion in 2013 to \$3.56 trillion by 2018.

Chart 48: Institutional Investment in Hedge Funds by Segment

	2013 ESTIMATES					
	Total Assets Billions US\$	Alternative as % of Total Assets	Alternative Assets Billions US\$	Hedge Funds as % of Alternatives	Hedge Fund Assets Billions US\$	Hedge Fund as % of Total Assets
Global Pension Funds	\$31,980	18%	\$5,756	19.0%	\$1,094	3.4%
Sovereign Wealth Funds	\$5,712	35%	\$1,999	23.0%	\$460	8.1%
Endowments and Foundations	\$959	53%	\$508	33.0%	\$168	17.5%
Total Institutional	\$38,651	21%	\$8,264	19.9%	\$1,721	4.5%

	2018 FORECAST					
	Total Assets Billions US\$	Alternative as % of Total Assets	Alternative Assets Billions US\$	Hedge Funds as % of Alternatives	Hedge Fund Assets Billions US\$	Hedge Fund as % of Total Assets
Global Pension Funds	\$38,165	24%	\$9,160	27.0%	\$2,473	6.5%
Sovereign Wealth Funds	\$7,191	40%	\$2,877	30.0%	\$863	12%
Endowments and Foundations	\$1,294	50%	\$647	35.5%	\$230	18%
Total Institutional	\$46,650	27%	\$12,683	28.1%	\$3,566	8%

Source: Citi Investor Services

Chart 49: Sources of Underlying Hedge Fund Industry Capital: Forecasts to 2018

Source: Citi Investor Services

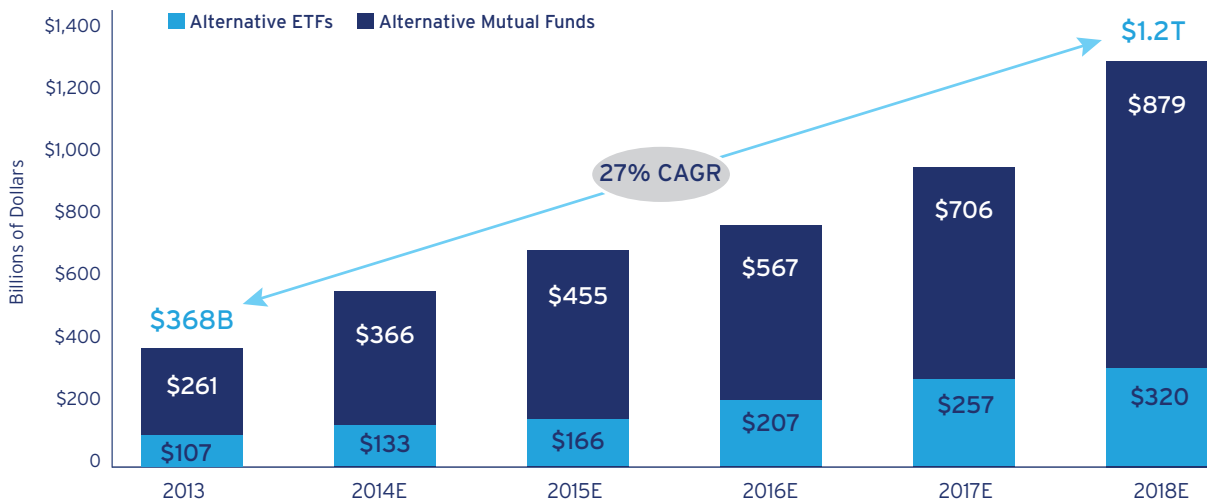
This recent analysis allows us to update our five-year forecast for hedge fund industry assets as shown in Chart 49.

We see the institutional investor audience growing their AUM from \$1.64 trillion to \$3.56 trillion in the coming 5 years and increasing the share of the capital they contribute to the hedge fund industry from 62% to 74%. The high net worth and family office categories are seen growing their capital contributions from \$991 billion to \$1.25 trillion in the corresponding period. Though this capital growth is substantial, it will not be enough to offset much larger institutional flows and we thus see the classic investor audience continuing to lose market share and their capital contribution shrinking from 38% to only 26% of the industry's total assets.

When these audience pools are combined, we see total hedge fund industry AUM increasing from \$2.63 trillion in 2013 to \$4.81 trillion by 2018. This represents assets being managed in core privately offered hedge fund strategies. There is, however, another pool of publicly traded fund assets that we feel will be supervised by hedge fund industry managers and inflate the total assets being managed by these investment managers.

The CAGR for the 40 Act alternative mutual fund & ETF space has been averaging 35% over the past 5-year period, but since there was such a close correlation between the pace of asset accumulation in this space and the rate of growth in the hedge fund industry from 1990 to 1998, we have opted to use a lower 27% CAGR to forecast likely asset growth for 40 Act alternative mutual funds and ETFs going forward. This figure corresponds more closely to the rate of growth we saw in the hedge fund industry from 1999 to 2004.

Chart 50: Forecast Growth in 40 Act Alternative Mutual Funds & ETFs

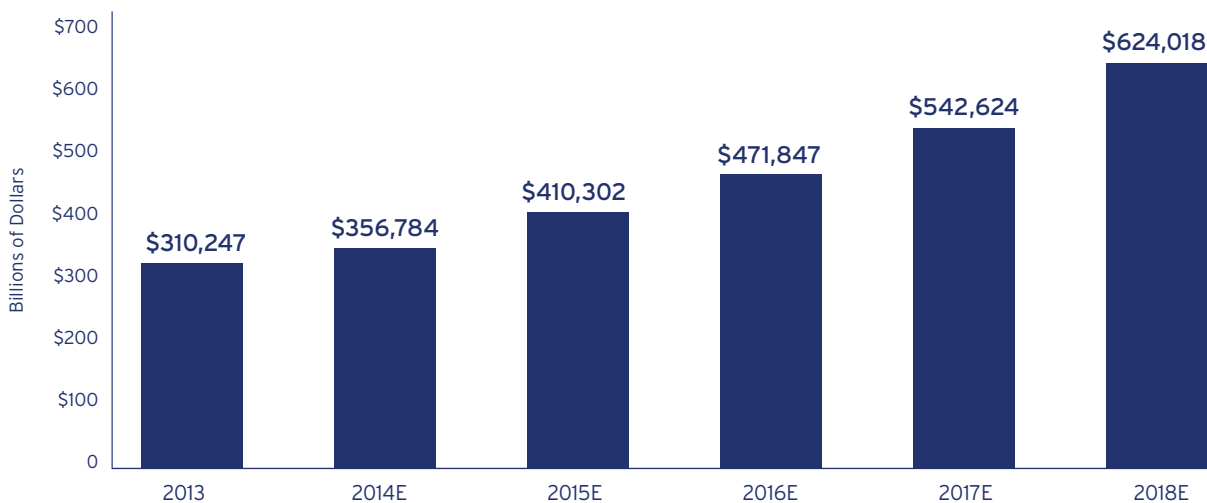


Source: Citi Investor Services Analysis based on Morningstar data.

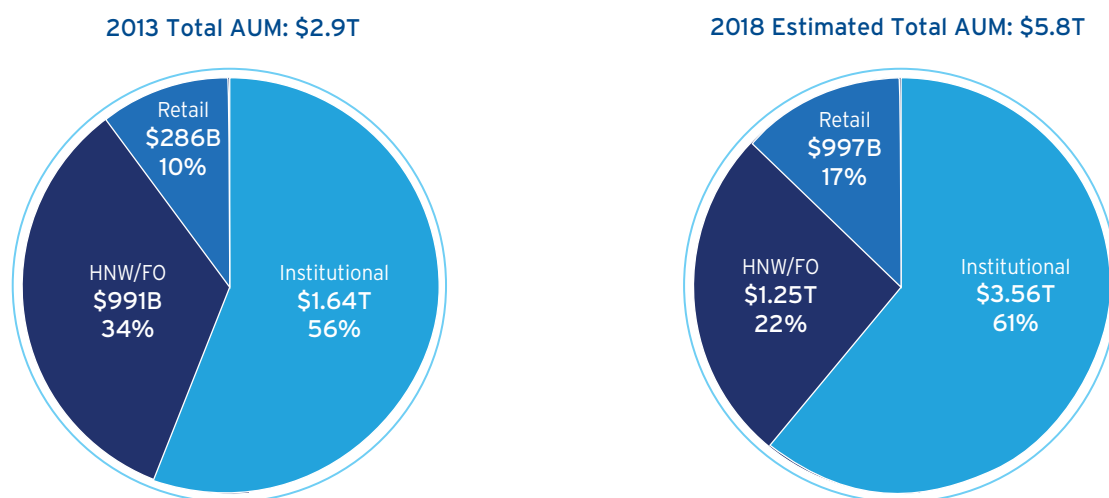
The results of that analysis are highlighted in Chart 50. As shown, we anticipate total 40 Act alternative mutual fund & ETF assets to increase from \$368 billion at the end of 2013 to \$1.2 trillion by 2018. The mutual fund portion of total industry assets are forecast to increase from \$261 billion to \$879 billion. This is the segment of the market most likely to be managed by the traditional hedge fund set of investment managers whereas the ETF products are likely to be covered by a more specialty set of managers.

Growth in the alternative UCITS products, which in many ways parallel the trends in the 40 Act mutual fund space, is also expected to accelerate, but not to the same extent. As noted earlier, there is likely to be an increased amount of competition to offer QIAIF products with the new AIFMD rules coming into effect and this could split the asset pool for European managers. Also, as noted earlier, there are more trading restrictions around which instruments can be used in alternative UCITS than in 40 Act products, making it harder to express certain strategies. Our

Chart 51: Forecast Growth in Alternative UCITS



Source: Citi Investor Services Analysis based on SEI data

Chart 52: Comparative Sources of Hedge Fund AUM: 2013 vs. 2018 Estimate

Assumes 50% of total 40 Act alternative mutual fund AUM & alternative UCITS AUM is currently managed by hedge funds and forecasts that by 2018 that figure will be up to 65% of total 40 Act alternative mutual fund and alternative UCITS AUM being managed by hedge funds. Source: Citi Investor Services based on data from HFR, Morningstar and SEI.

forecast for growth in the alternative UCITS space is highlighted in Chart 51. As shown, we see total AUM in these products rising from the \$310 billion cited by SEI in 2013 to \$624 billion by 2018.

Together, forecast growth in 40 Act alternative mutual funds and alternative UCITS is seen rising from \$601 billion in 2013 to \$1.5 trillion by 2018. Our current assumption is that half of that capital is being advised by traditional hedge fund managers and our forecast is that by 2018 that figure will be up to 65% of the capital. This would show retail-focused AUM being advised by hedge fund managers in 2013 at \$286 billion across both 40 Act alternative mutual funds and alternative UCITS and that figure rising to \$977 billion by 2018.

When all of these components are combined, we come up with our formal outlook. We see total industry AUM rising from \$2.9 trillion today, with 10% of that capital being managed on behalf of retail investors, to \$5.8 trillion in 2018 with 17% of the industry's assets being managed on behalf of retail investors. This is highlighted in Chart 52. This is a very robust forecast for the industry and one that should leave all hedge fund managers—classic, boutique, franchise and alternative asset managers—well positioned to grow their businesses and take on a deepening role in the financial landscape.

Part II of this paper will now explore the financing and lending opportunities for these managers in the new order likely to be wrought by changes in the regulatory landscape.

NOTES



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