BARCLAYS CAPITAL

PRIME SERVICES

2010 YEAR IN REVIEW

CAPITAL SOLUTIONS
HEDGE FUND INTELLIGENCE

Earn Success Every Day

CONTENTS

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2010 YEAR IN REVIEW, WITH A LOOK TOWARDS THE FUTURE

Dear Clients,

We hope you had an enjoyable holiday season and would like to take this opportunity to wish you a very Happy New Year. Before we get too far into 2011, we thought it might be useful to reflect briefly on 2010 and share our perspective on potential trends in the hedge fund ("HF") industry over the next 12 months.

In this '2010 Year in Review' document, we have compiled all the thought pieces we published in 2010. This compilation consists of nine monthly Hedge Fund Pulse publications on a variety of topics, and four, in-depth, quarterly Hedge Fund Intelligence pieces. In these pieces, we identified a variety of themes and developments for managers and investors alike, which showed how the HF industry was continuing to evolve in 2010. We hope that you found our content useful in your daily endeavors, and as always, we welcome your feedback so we can continue to deliver research that is both timely and valuable.

Below, please find select trends that we identified in 2010:

Investor Trends

- In 'It Takes Three to Tango' (April 2010), we noted that pensions around the globe are becoming more sophisticated in their approach to HF investments, evident in the evolution of the structure and size of their investment teams, and development of more collaborative relationships with their consultants. Consequently, more than half of all pensions with HF allocations today are 'going direct' vs. investing only through funds of hedge funds ("FoHFs"). Also, as a result of this greater sophistication, pensions have become more demanding in their relationships with HF managers, and have pushed for, and received, a variety of concessions on fees, liquidity and transparency.
- In 'Hedge Fund Seeding: Great Expectations' (September 2010), we described how some investors are once again focusing on seeding opportunities due to an unprecedented imbalance between talent and seed capital availability, which in turn provides the potential for significantly higher returns in the future.

Manager Trends

- In 'Operational Due Diligence: Known Unknowns' (May 2010), we reported that HF managers are reconciled to a much greater level of investor focus on operational risk issues, now and in the future. Nearly all managers now are providing much more visibility into their businesses to prospective investors than ever before. Investors, in turn, are far savvier about identifying potential problem areas as a part of their operational due diligence processes.
- In '28 Months Later' (August 2010), we noted that many HF managers in our surveys made concessions on both fee and liquidity terms for their investors. We also highlighted that most managers felt it was the concessions they made on their liquidity terms that were more attractive to investors, rather than concessions on fees. The linkage between management fees and liquidity has become more transparent, with our analysis showing that a 50 bp reduction in the management fee would typically require an investor to be willing to lock up their investment for an incremental two to three quarters.
- In '2011: Look Both Ways' (December 2010), we noted that HF managers spend far more time following the actions of policy makers than they ever did before. More HF managers now explicitly take into account the role of policy makers in their investment process, making it less likely they will be blindsided by sudden policy or regulatory changes. This focus on policy makers is especially important as many managers are now looking to invest in emerging markets, which tend to be even more vulnerable to policy makers' actions.

Looking ahead, there are some key themes we highlighted in various publications that we believe will persist into 2011, possibly playing an important role in determining the direction the HF industry takes.

- The shift of capital from developed to emerging markets will likely continue and may exacerbate the risk of local asset bubbles arising in these markets. This could result in the selective introduction of capital controls in some of these markets.

- Capital raising will continue to be a focus area for HFs, against a backdrop of potentially increased allocation to HFs by institutional investors and FoHFs. The capital raising outlook for small and mid-sized managers will continue to improve with the 'Flight to Quality' trend fading, and more investors aggressively seeking better terms and greater alpha generation potential.
- Growth in spin-outs and push-outs will likely increase the overall demand for initial capital, potentially attracting more investors and managers to get into the seeding business. However, the outlook for the average spin-out will continue to be challenging.
- Convergence between traditional long only managers and HFs will potentially speed up due to traditional long only managers exploring acquisition of FoHFs, and some HFs looking to add long only products to their offering in the hope of broadening their product base.

We plan to explore some of these themes in greater detail in 2011, and welcome your thoughts and suggestions regarding other topics of interest.

To conclude, in the words of a seasoned HF manager, *'2009 for hedge funds was about survival, 2010 was still a bit about looking over your shoulder to make sure no new threats were going to take you by surprise but 2011 will, hopefully, be about getting out of the fire-fighting frame of mind and systematically planning for growth'*.

We do hope that the insights provided by us in 2010 have helped you in your decision making. We enjoyed working with you this past year, and look forward to continuing our partnership with you in 2011.

CAPITAL SOLUTIONS OVERVIEW

The Capital Solutions team within Prime Services offers a unique blend of industry insight and tailored client solutions for a broad range of issues.

Our integrated offering includes:

- Strategic Consulting
  - Provide in-house advisory/consulting services that help asset Managers navigate industry challenges and achieve ‘life-cycle’ goals.
  - Develop actionable solutions for the industry through thought pieces and act as a HF competence center internally for the firm.
- Capital Introductions
  - Maintain ongoing Investor dialogue to provide valuable feedback to Managers.
  - Provide targeted capital introductions.
  - Host events that provide a forum for knowledge transfer and discussion/debate on industry issues that helps educate and inform both clients and Investors.

We partner with our colleagues in the Asset Management Banking group to provide the additional services:

- Advisory on control and minority stake M&A transactions.
- Raising strategic LP capital/advice on fund restructurings.
- Underwriting and placement of debt financings and equity offerings.

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QUARTERLY PUBLICATIONS

IT TAKES THREE TO TANGO

CAPITAL SOLUTIONS
HEDGE FUND INTELLIGENCE

April 2010

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CONTENTS

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I. METHODOLOGY

In continued pursuit of our goal of bringing actionable intelligence to our clients, the Strategic Consulting team set itself the task of doing a diagnostic survey of the Hedge Fund investment landscape as it relates to the interactions among Pension Plans (Pensions), Investment Consultants (Consultants) they work with, and Hedge Fund (HF) Managers[1] (See Figure 1).

In order to achieve this objective, Strategic Consulting conducted in-depth interviews with 50 Pensions and 13 Consultants. For the two categories of interviews, Strategic Consulting set out to explore the following two sets of themes:

Pensions

- Organizational Structure
- Approach to Asset Allocation
- Approach to HF Investing
- Collaboration with Investment Consultants
- Minimum requirements for HFs to be considered for allocations

Consultants

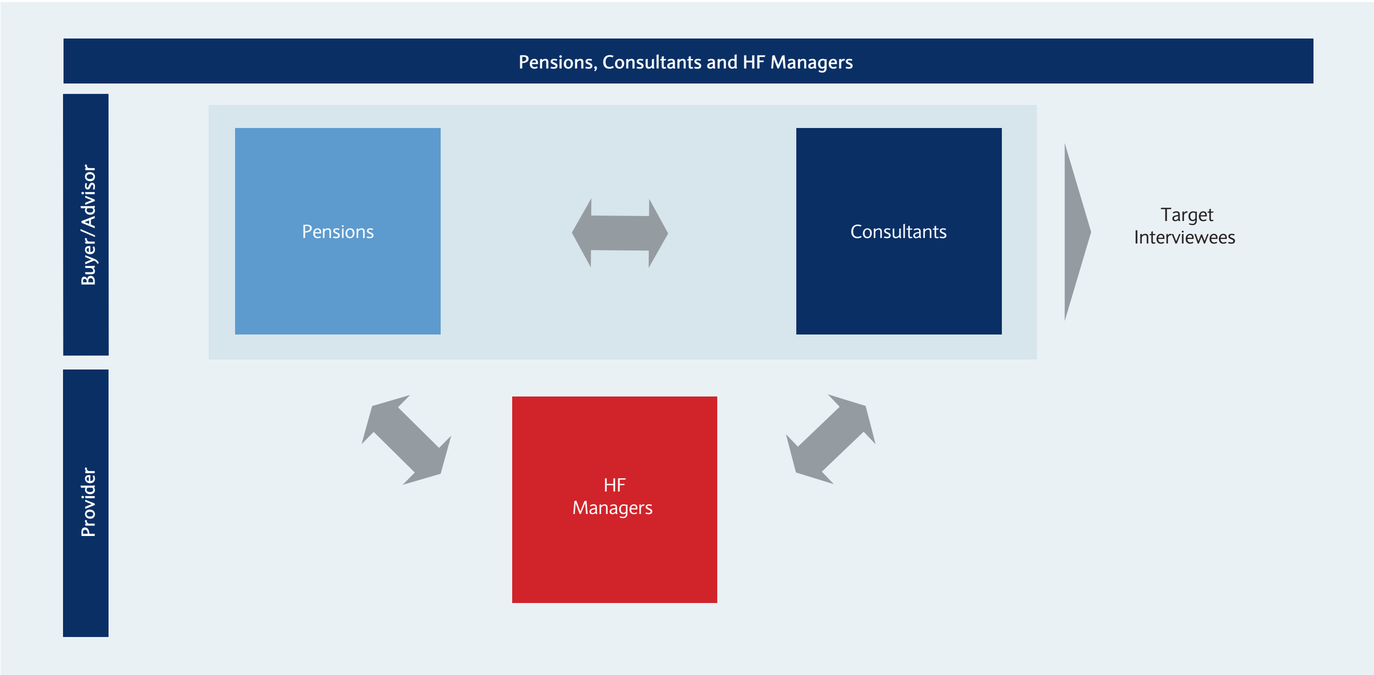
- Organizational Structure
- Current vs. Future Products and Services Portfolio
- Fee Structure and Levels
- Competitive Landscape
- Approach to Screening/Rating HFs

For our Pension interviews, we targeted Chief Investment Officers and senior members of investment teams. The Pensions we chose were a balanced mix of Public and Private Pensions so that our results would be representative of the market as a whole. Although our sample was largely concentrated in the U.S., we included three European Pensions as a control group to perform a spot check to see whether their responses were significantly different from the rest of the sample, which we found not to be the case.

Finally, we concentrated our discussion only on the Defined Benefit (DB) component of funds managed by Pensions. Pensions were grouped into four distinct segments[2] by Assets under Management (AUM) (<$1bn, $1–10bn, $10–50bn, $50bn+), where AUM refers to the DB plan funds they manage. Figure 2 depicts how our Pensions are distributed across these segments as well as the total concentration of AUM in each segment. Key points to note:

- Our 50 Pensions have total DB AUM of $1.2tn, representing ~20% of total U.S. DB pension assets

FIGURE 1: METHODOLOGY OVERVIEW



[1] In this document, HF Management Firms are loosely referred to as Hedge Funds (HFs)

[2] All size segments are in USD throughout the study

- There is a fairly balanced distribution of participants across size segments as well as entity type (Public vs. Private)
  - Two-thirds (66%) of participants are in the $1–50bn AUM range
  - Participants with AUM <$1bn and AUM $50bn+ have similar representation (16% and 18%, respectively)
  - 48% Private Pensions vs. 52% Public
- Total AUM is concentrated among the larger participants
  - Participants in the $50bn+ size segment represent 18% of participants on a count basis yet account for 68% of the total AUM across all participants
  - 38% of Pensions have $10bn+ in AUM and account for 91% of the total AUM across all participants

The Consultants we interviewed spanned the range from regional firms to firms with a large national footprint. Individuals we spoke to were either Research and Advisory professionals or the President/COO of the firm. We spoke both to Consultants that specialize in HF investments (Specialists) as well as those that provide advice on a much broader set of investments (Generalists).

Figure 3 depicts our Consultant participant distribution, by number of Consultants in each size segment and Assets under Advice (AUA). Major highlights:

- Our participants represent ~$5.2tn in total AUA
- There is balanced representation in the above and below $100bn segments
  - 46% in <$100bn AUA vs. 54% in $100bn+ AUA
- AUA concentrated among the larger participants
  - 54% of participants in the $100bn+ segment represent 97% of total AUA

It is possible, given the size bias in our sample, that our Pension participants are more likely to be either over-allocated to HFs or more interested in growing allocations than the universe of U.S. Pensions.

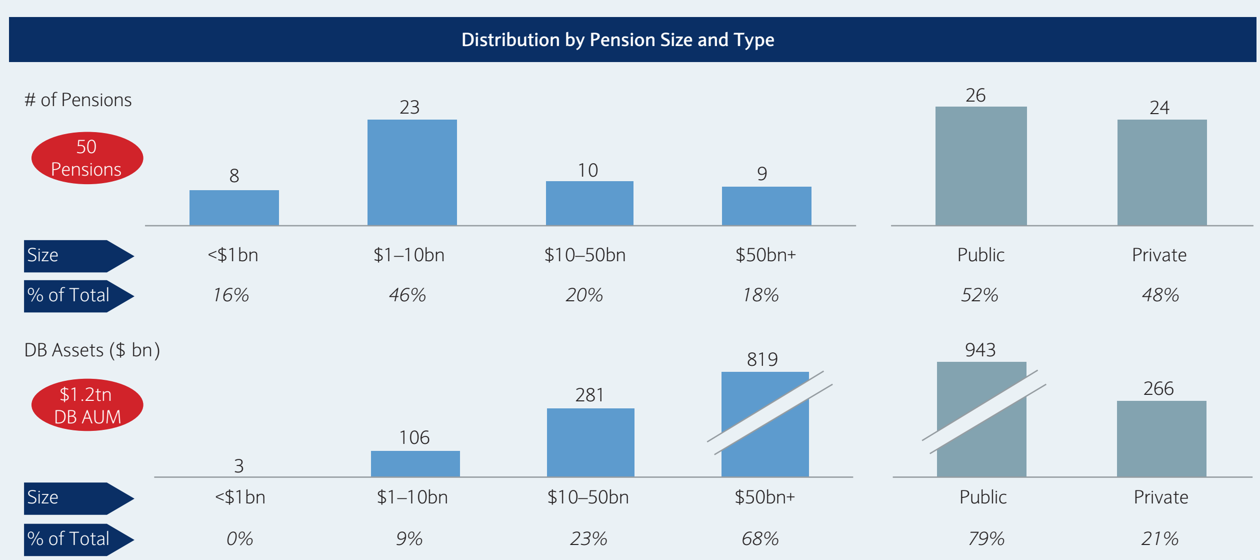
II. EXECUTIVE SUMMARY

The following are our main findings on each of the key topics addressed:

Pensions

- Allocation to HFs has approximately doubled in the past two years to 7% from 4% in 2008, with the strongest future growth, on both a percentage point as well as absolute dollars basis, likely to come from Public Pensions with current HF allocations between 1% and 8%
- Pensions are still ~1 percentage point below their target HF allocation and this represents a ~$100bn inflow opportunity for HFs in 2010

FIGURE 2: PENSION PARTICIPANTS



Note: All figures refer to Strategic Consulting survey results only. The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information presented are derived directly from respondents and we do not pass on the accuracy of such information

- More Pensions are investing directly in HFs rather than exclusively through Fund of Hedge Funds (FoHFs) (51% vs. 19%), especially those that started allocating to HFs after 2008
- Specialists are the advisor of choice for Pensions looking to go direct, with about two-thirds (64%) preferring them vs. the 15% that prefer Generalists

Consultants

- Flat fees are very much the market standard as a vast majority of Pensions (82%) said they pay their Consultants a flat fee for their services while the rest pay fees based on a percentage of the Pensions' AUM
- Pricing of Consultant services to Pensions could be under pressure with about two-thirds of Pensions (68%) paying annual flat fees of less than $0.4mn
- Large Consultants appear to (proportionally) invest more in distribution, as evidenced by our Consultants with $100bn+ in AUA having one and a half times the field consultants relative to Consultants with AUA <$100bn

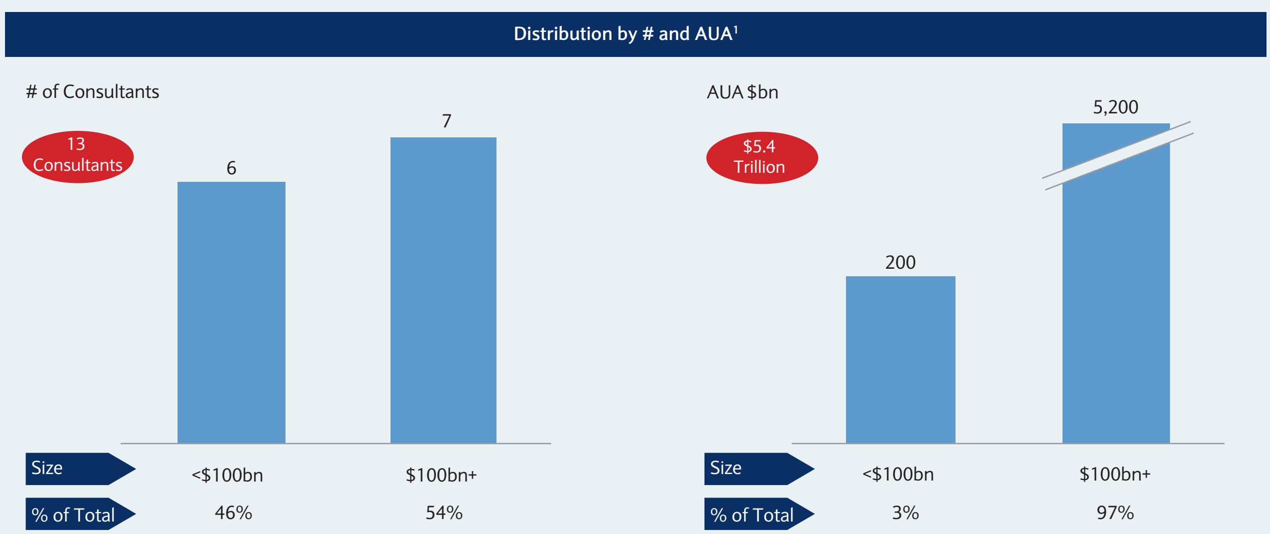
Hedge Fund Manager Selection

- Approximately one-third of Pensions have no strict AUM track record requirement, and are open to start-ups and spin-offs
- Most Pensions (80%) require monthly performance, quarterly attribution and organizational updates, while about one-third require position level data, usually intermediated by a third-party risk aggregator
- Multi-Strategy and Long/Short are the two most favored HF strategies for Pensions, together accounting for two-thirds of total HF portfolio. Growth is expected for Event Driven and Macro strategies, as Pensions diversify out of core Multi-Strategy HFs and into satellite strategies
- On average, Consultants assess ~600 HF managers annually. Of these ~40% receive a rating, and 25% of the rated managers receive an approved status, resulting in an evaluation-to-approval yield rate of ~10%

III. DEVELOPMENTS AT PENSION PLANS

As a result of poor returns experienced by HFs, complemented by redemption pressures in 2008 and early 2009 that resulted in many HFs bringing down gates, it had become conventional wisdom last year to prophesy a death spiral for many HFs. Given the liquidity pressures that many Pensions also found themselves under, conventional wisdom also dictated that Pensions would pull back from making allocations to HFs. We, in Strategic Consulting, did not agree with this thesis and in our quarterly publication 'Picking Up the Pieces' in May 2009, we said that we expected Pensions to continue to fund existing allocations and even increase targets

FIGURE 3: CONSULTANT PARTICIPANTS



1. Assets under Advisory
Note: All figures refer to Strategic Consulting survey results only. The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information presented are derived directly from respondents and we do not pass on the accuracy of such information

in 2009. Our discussions with Pensions have confirmed that our expectations were accurate. While we're naturally happy that our prediction that Pensions will continue to be among the most important allocators to HFs in the long run has turned out to be accurate so far, we were curious to see what changes Pensions had made to their organizations to better address the new investment landscape and how they were, perhaps, working with Consultants differently.

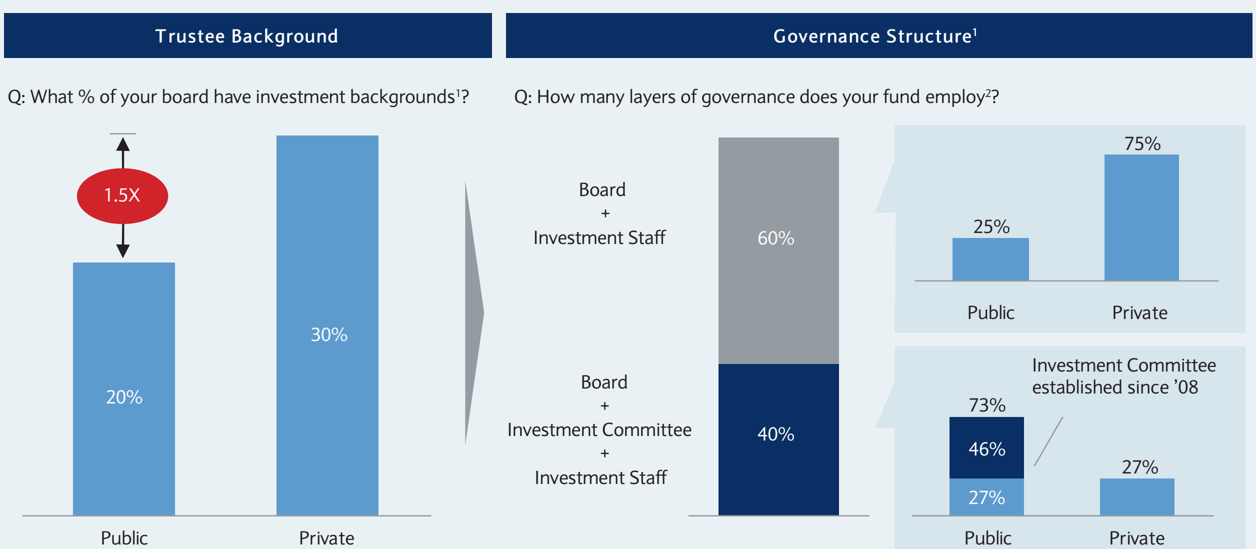
A. Organization Structure

One recent change we have observed and tested in our interviews is that Pensions are striving to put more experienced professionals at work in a more hands-on fashion. Figure 4 shows the percentage of the board of trustees at Public and Private Pensions that have an investment background (defined loosely as experience in a role making or directing investments). 30% of trustees at Private Pensions have an investment background vs. 20% at Public Pensions. Figure 4 also shows that 60% of Pensions have a two-layer governance structure (i.e., board and investment team) vs. 40% that have a three-layer structure (board, investment committee and investment team) and that a two-layer structure is more prevalent among Private Pensions than Public (75% vs. 25%). Public Pensions are compensating for the aforementioned relatively less represented investment expertise among their trustees by strongly preferring the three-layer governance structure – 73% of Public Pensions prefer this structure vs. only 27% of Private Pensions. It's also notable that about 27% of the 73% of the Public Pensions that have a three-layer structure have implemented it after 2008. The investment committee typically has an overlap with the board in its composition but is more available for investment decisions that require immediate attention, as well as for more informal consultation on investment ideas.

Another area we explored was how the investment team size has evolved over the past two years. Figure 5 depicts the investment team size for Pensions across AUM segments based on size (horizontally across the chart) at three points in time: in 2008, at the present time, and the expectation for end 2010. The chart is a box plot that shows three sets of data for each point in time (time period is on the x-axis): the minimum team size, the maximum team size and the average (average depicted by the horizontal disc located inside the bar depicting the minimum and maximum team sizes). The percentage change is calculated based on the averages. Key points to note:

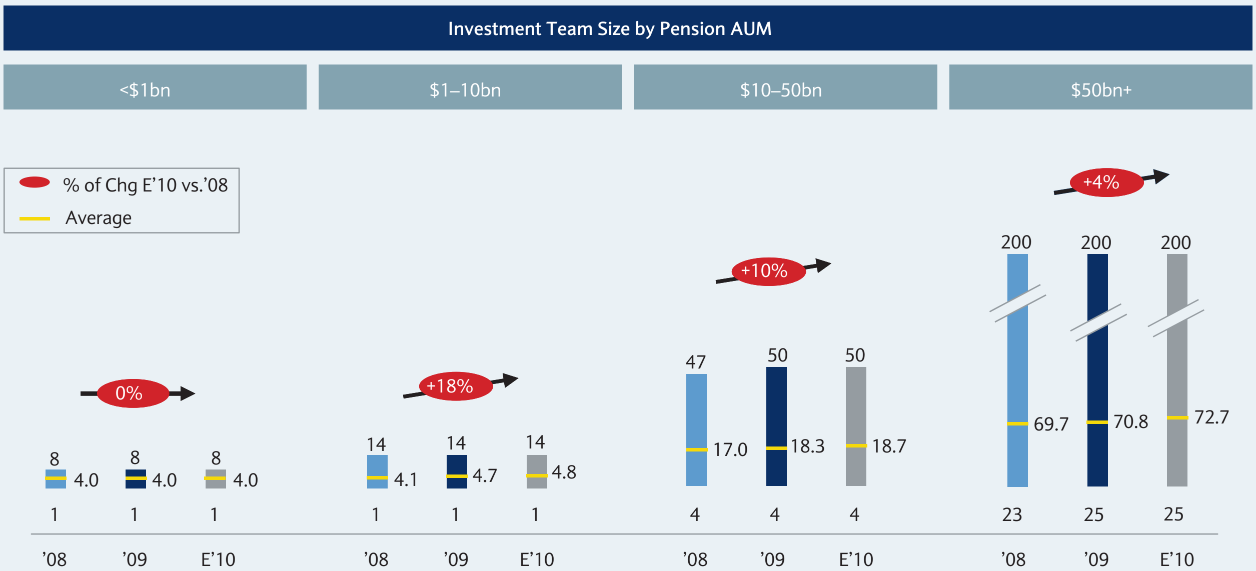
- Rising median team sizes across multiple segments indicate a desire for greater specialization in teams
- There is no change in average team size for Pensions with <$1bn AUM, reflecting the scalability of current teams up to the next segment

FIGURE 4: INVESTMENT PROCESS GOVERNANCE



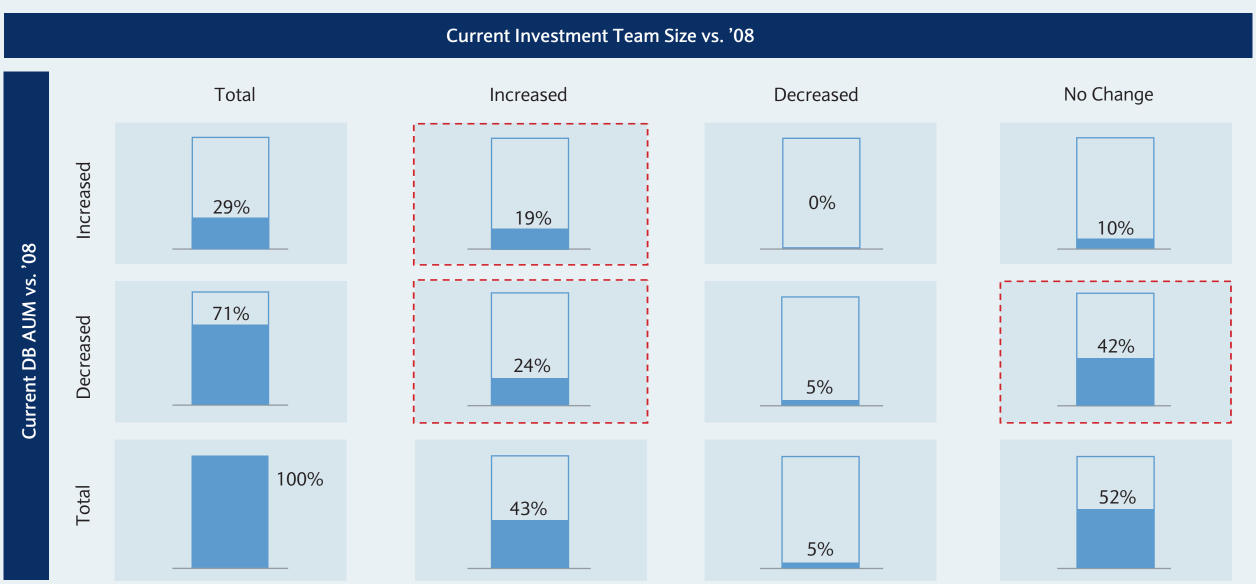
1. Defined as experience in a role making or directing investments
2. Also inclusive of teams and individuals that are responsible for investment implementation
Note: All figures refer to Strategic Consulting survey results only

FIGURE 5: INVESTMENT TEAM SIZE VS. AUM



Note: All figures refer to Strategic Consulting survey results only

FIGURE 6: INVESTMENT TEAM SIZE VS. CHANGE IN AUM



Note: All figures refer to Strategic Consulting survey results only

Top three most frequent occurrences

- The most change is in the \$1–10bn segment, indicating perhaps that there is much greater focus on portfolio diversification here vs. Pensions below the \$1bn AUM mark, which justifies the additional resources required for greater specialization and expertise in the team

We also looked to see if changes to the size of investment teams at Pensions were correlated to changes in AUM. Figure 6 depicts, on the vertical axis, the current DB AUM relative to 2008 and, on the horizontal axis, the change in investment team size from 2008 to now. It's noteworthy that even though a majority of Pensions' DB assets (71%) are below 2008 levels, most have maintained or increased team size (42% and 24% of the 71%, respectively). Only 5% of the Pensions that saw a decline in assets have reduced their investment team headcount.

B. Asset Allocation

The next aspect we looked at was the trend in allocations to Alternatives more generally and HFs in particular. Figure 7 depicts the current allocation to Alternatives across size segments. Interestingly,

- The chart on the left shows that Pensions' allocations to Alternatives as a percentage of AUM are very similar across AUM size segments
- The chart on the right shows that, relative to 2008, there has been a 2 percentage point increase in allocation to Alternatives and an additional 3 percentage point increase is needed to reach the target allocation
- This incremental 3 percentage point increase is expected to translate into ~\$400bn in inflows to Alternatives[3]

If the conclusions above apply to the entire industry, one would conclude that the HF industry is likely to continue to benefit from greater allocations from Pensions. This is especially true as investments in other Alternatives (Private Equity and Real Estate) are still in a hold mode.

Continuing to explore how allocations have changed over the past two years, Figure 8 depicts, on the left, percentage of AUM allocated to HF and non-HF Alternatives by Pensions for 2008, as well as current and targeted levels. Allocations to HFs at Pensions, as a percentage of AUM, have almost doubled between 2008 and now (7% vs. 4%, respectively) and an additional 1 percentage point increase is needed to reach the target allocation. We estimate that this additional percentage point will translate into inflows of ~\$100bn into HFs globally[4].

On the right of Figure 8 is a distribution of Public and Private Pensions across four segments characterized by percentage of AUM allocated to HFs. Here, we noted a clear divergence between Private and Public Pensions' approach to HF investments: Public Pensions have embraced HF investments more wholeheartedly – 87% have an allocation and 21% allocate more than 15% of AUM. The distribution pattern also suggests the existence of some 'herding behavior' as nearly half of all Public Pensions have allocations to HFs between 1% and 8%. Private Pensions, on the other hand, are more divided in their approach, with 38% not making any HF investments at all and 24% allocating more than 15% of AUM.

From the discussion above, we believe that HF Managers – in their attempt to focus their asset-raising opportunities on the most valuable prospects – should specifically target:

- Public Pensions that have 1–8% of AUM allocated to HFs, as they complete their initial build-out and get more comfortable with HF investments
- The 38% of Private Pensions that currently do not invest in HFs at all since other Private Pensions may not be significant contributors, given their already sizable allocations

We know that Pensions have started to rethink how their Alternative investments are categorized and managed within their overall portfolio. Since this has been written about in the press, we set out to quantify the extent to which these practices are being adopted. Figure 9 depicts how Pensions manage their HF investments, i.e., as a distinct asset class managed separately or integrated and managed within traditional asset classes, depending on the risk and return characteristics of underlying investments (e.g., Equity L/S HF investments managed within the Equity 'bucket'). Key facts:

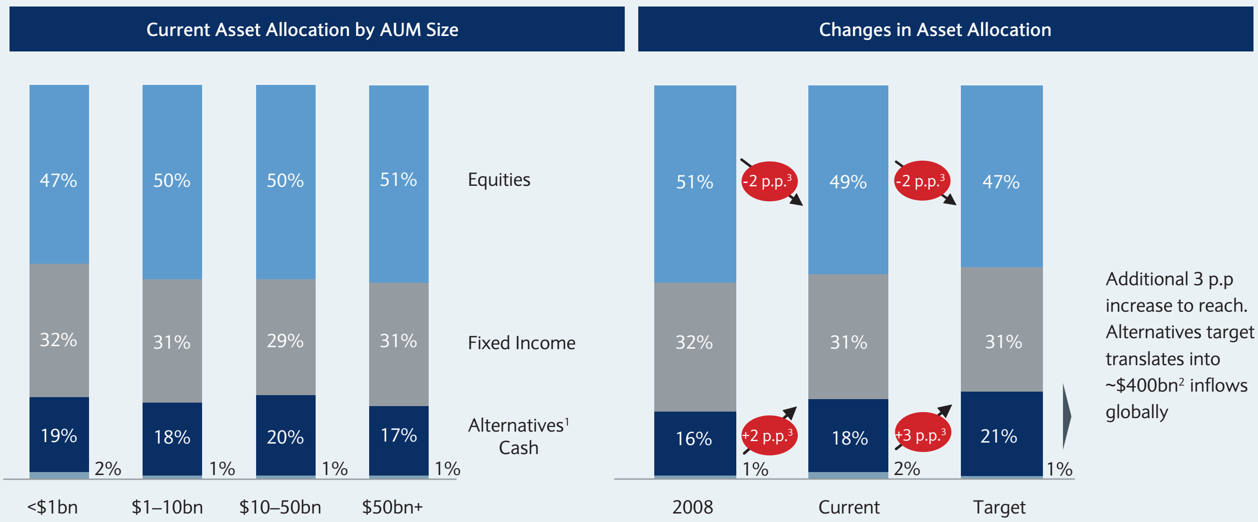
- 37% of plans are integrating at least some of their HF investments with the underlying asset classes vs. 63% that treat HF investments as a separate 'bucket'
- Of the 37% that integrate HFs with other asset classes, a majority (55%) have adopted this approach after 2007
- The integrated model is favored by 50% of the plans that have a larger allocation to HFs (>15%) vs. only 27% of those plans that allocate less (<15%)

The major takeaway from this data is that since Pensions with larger allocations favor the integrated approach, and Pensions have started adopting the integrated model increasingly at least

[3] Estimated based on \$23tn Pension assets EOY 2009 and a 58%/42% Defined Benefit and Defined Contribution asset split, Towers Watson January 2010

[4] Estimated based on \$23tn Pension assets EOY 2009 and a 58%/42% Defined Benefit and Defined Contribution asset split, Towers Watson January 2010

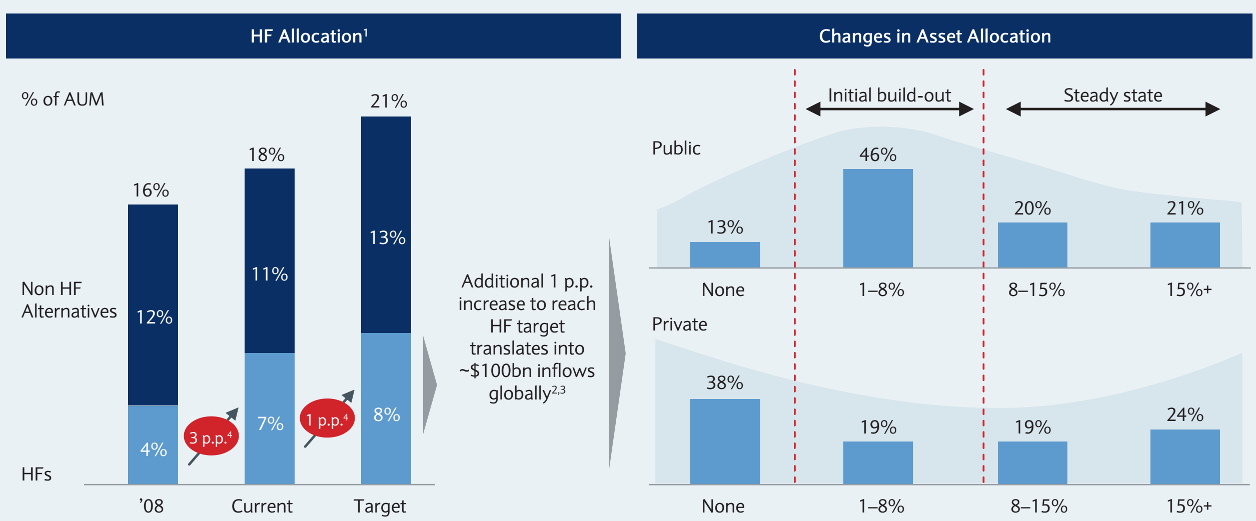
FIGURE 7: CHANGES IN PENSION ASSET ALLOCATION



1. Includes Private Equity, Hedge Funds, Real Estate, Real Assets and other opportunistic investments
2. Estimated based on $23tn Pension assets, and a 58%/42% DB/DC split, Towers Watson 2010
3. Percentage point

Note: All figures refer to Strategic Consulting survey results only

FIGURE 8: PENSION ALLOCATION TO HFS



1. Including allocations to HF managers that are subsumed in equity and fixed income asset classes
2. Estimated based on $23tn Pension assets EOY '09 and a 58%/42% split DB/DC assets, Towers Watson Jan 2010
3. Holding performance constant
4. Percentage point

Note: All figures refer to Strategic Consulting survey results only

partly in response to the market events of the last two years, HFs need to factor this development into how they approach Pensions. The main implication of this has to do with addressable ticket size. If a HF has a strategy that is currently being re-allocated to (e.g., Equity Long/Short) and the Pension he or she is targeting has a significantly large target allocation (say >15%), then that Manager is likely looking at a large ticket allocation (hunting 'elephants'). For other strategies that are neither being re-allocated to, nor being allocated away from (e.g., Distressed), their marketing approach will depend on the individual Pension being solicited. For Managers in a strategy currently out of favor (e.g., Volatility Arbitrage), the implications are that they need to have a large target list and that ticket sizes will likely be small.

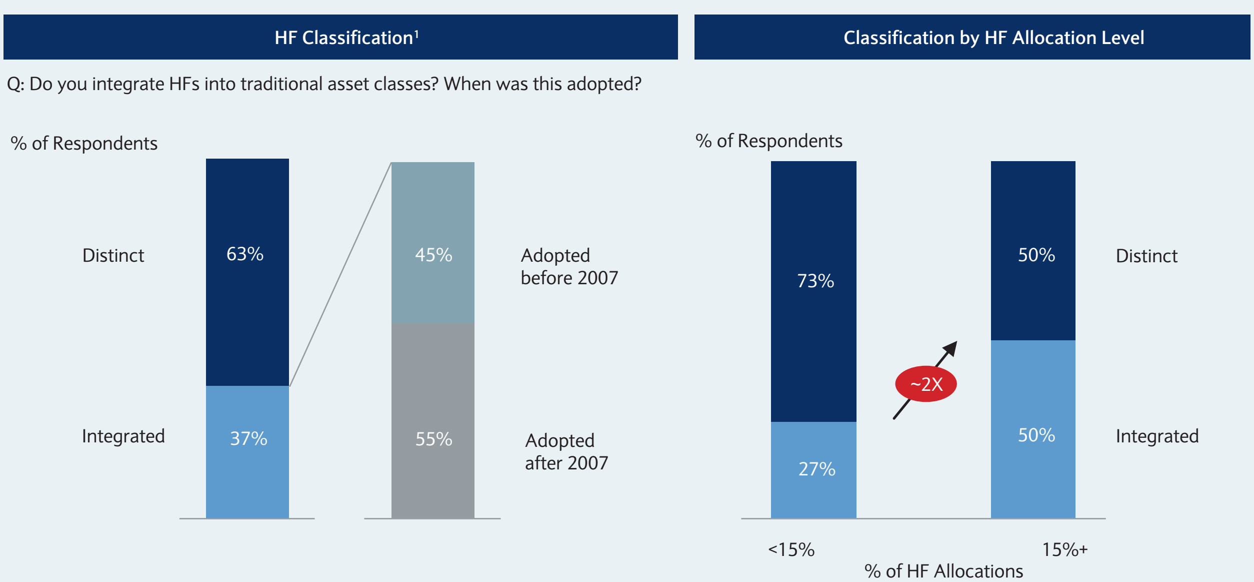
There is some mixed news to go with the good news that a majority of the Pensions we interviewed plan to maintain their HF allocations. However, these Pensions, on average, are reducing the number of HF Managers on their platform. Figure 10 shows responses of Pensions that are holding HF allocations steady. The chart plots the old target number of Managers on the horizontal axis, and the new target number of Managers on the vertical axis. The diagonal line represents maintaining the status quo (i.e., intending to keep the same number of Managers in the portfolio as they have today). Any Pensions above the line would be looking to increase the number of Managers and the ones below, to decrease them. It is interesting to note that, of the Pensions holding HF allocations steady, Pensions with 25+ Managers plan to reduce that number while those with <10 Managers plan to hold the number steady.

C. HF Access Channel

A critical development today is around the access channel used by Pensions for HF investments (i.e., through FoHFs exclusively, using a combination of Direct investments and FoHFs, and Direct investments only). Figure 11 depicts the use of these access channels (represented by the ellipses) as well as the use of Generalists, Specialists or neither (represented by the letter 'G', 'S', and 'N', respectively in the column bars). Going from left to right, the three columns represent the response across all Pensions we spoke to, responses from Pensions that started investing in HFs prior to 2008, and finally, responses from Pensions that started investing after 2008. There are three critically important takeaways from this data:

First, Generalists are selectively being substituted. Specialists are the default choice for Pensions investing direct, as about two-thirds (64%) of those Pensions use a Specialist vs. 15% using a Generalist (See Figure 11, first column, bottom row). Additionally, Pensions investing exclusively through FoHFs are more likely not to use a Generalist (only 50% use Generalist after 2008 vs. 100%

FIGURE 9: CLASSIFICATION OF HF INVESTMENTS INTO TRADITIONAL ASSET CLASSES

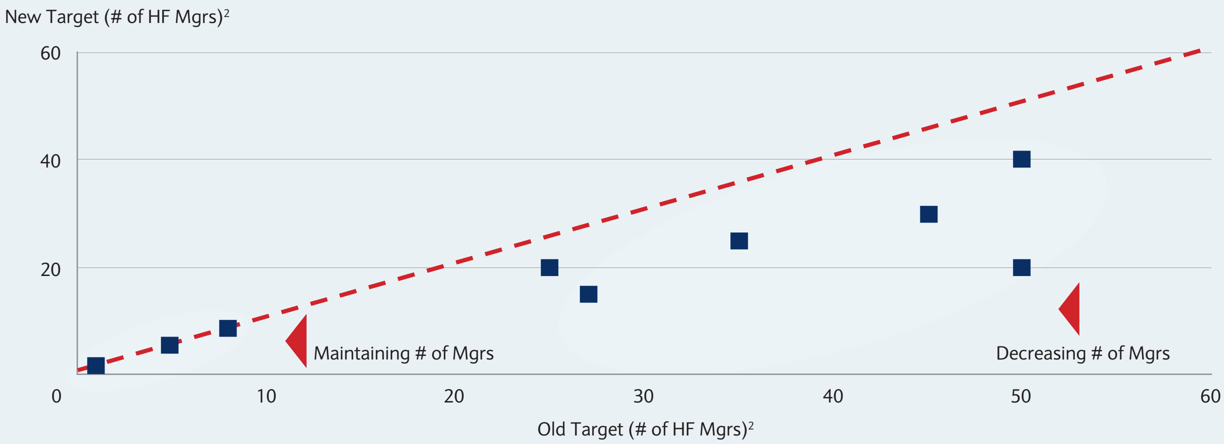


1. Excluding HF managers employed for potable alpha programs and extension strategies
Note: All figures refer to Strategic Consulting survey results only

FIGURE 10: HF MANAGER CONSOLIDATION AT PENSIONS

Changes in # of HF Mgrs on Platform (holding HF allocation constant)[1]

Q: How has or will the # of HF managers on your platform change?

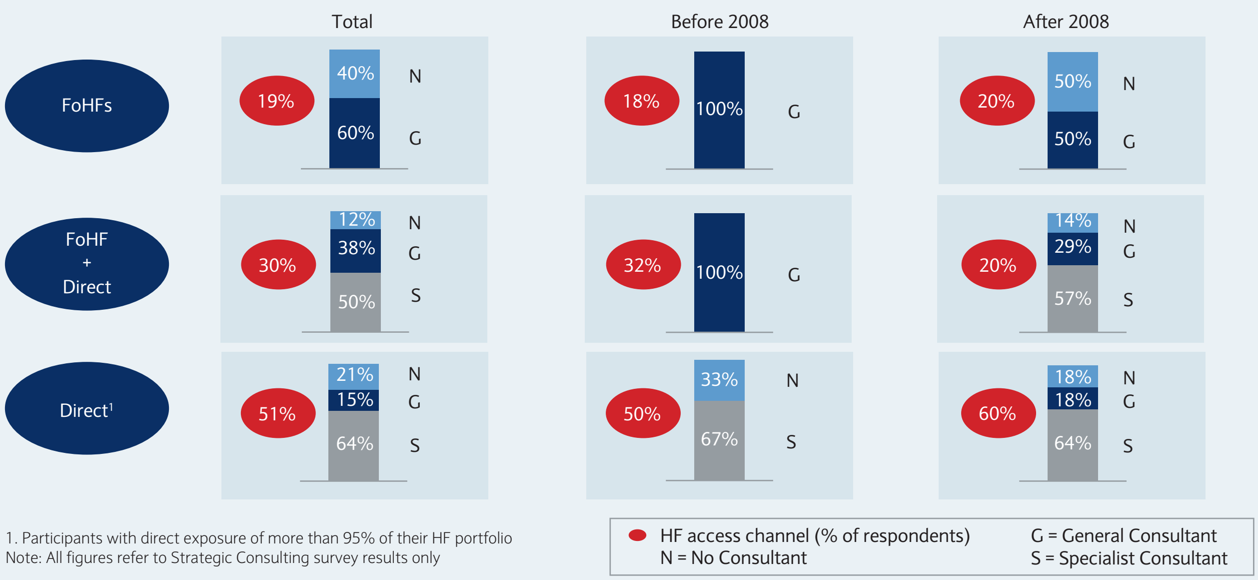


1. Question is directed to Pensions with steady HF allocations only; Not all participants have responded to question
2. No set time frame has been specified for old or new targets

Notes: All figures refer to Strategic Consulting survey results only

FIGURE 11: ACCESS CHANNEL AND CONSULTANT USAGE BY HF INVESTMENT INCEPTION

Access Channel and Consultant Usage by HF Inception



1. Participants with direct exposure of more than 95% of their HF portfolio

Note: All figures refer to Strategic Consulting survey results only

before 2008, shown in Figure 11, first row). This could be due to a combination of pressures to de-layer fees and/or FoHFs offering to take on some Generalist functions, i.e., perform one-off due diligence on a Manager not on their platform. Finally, Pensions that invest via both Direct and FoHFs channels are also more likely to use a Specialist than a Generalist now vs. two years ago (57% use a Specialist after 2008 vs. 0% before 2008, shown in Figure 11, middle row).

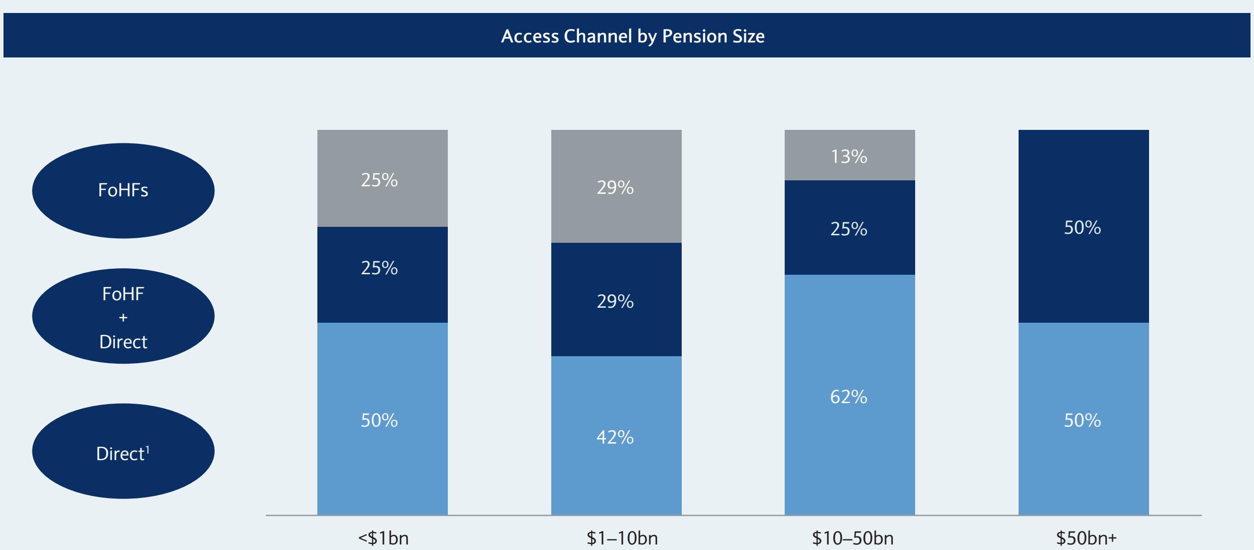
Second, after 2008, Generalists are targeting and winning business with plans that invest directly, thanks to newly created specialized HF offerings and their ability to leverage existing relationships with Pensions. Generalists are preferred by 18% of Pensions investing direct after 2008 vs. virtually none before 2008 (See Figure 11, bottom row). While so far this does not appear to be eating significantly into Specialists' market share, Specialists may find it hard to displace Generalists in the future given their ability to leverage deep client relationships to sell newly acquired specialist capabilities.

Finally, our data shows that the trend for going direct is a result of an industry maturity rather than that of an individual player. In other words, the conventional wisdom that would have you believe that the evolution of Pensions from making HF investments only through FoHFs to exclusively making direct investments is a function of the individual Pension's own level of experience with HF investments does not appear to be true. On average, a majority of Pensions (51%) invest directly in HFs today (See Figure 11, bottom row). Of these, Pensions that started investing in HFs after 2008 are much more likely to go direct than those that started before 2008 (60% vs. 50%). Similarly, Pensions that invest in both FoHFs and Direct declined from 32% of the total before 2008 to 20% (See Figure 11, middle row). These statistics show that the evolution is driven much more by the whole industry's experience curve so that if a Pension is starting to make HF investments today it is more likely to be driven by what other Pensions are doing today, and skip going up the so-called FoHF learning curve. This is, presumably, driven by a desire to have more control and reduce the overall fee burden.

We further explored how the preferred access channel changed, based on the AUM of the Pension. Figure 12 depicts the preferred access channel for Pensions making HF investments by AUM of the plan. Highlights:

- Exclusive investment through FoHFs goes down as the AUM of the plans goes up. 25% of Pensions with AUM <$1bn only use FoHFs vs. 0% of Pensions with AUM >$50bn
- However, 50% of Pensions with AUM >$5bn continue to use FoHFs on a non-exclusive basis (i.e., in conjunction with direct investments), twice more than Pensions in other segments

FIGURE 12: PENSION USE OF ACCESS CHANNELS TO GAIN HF EXPOSURE



1. Participants with direct exposure of more than 95% of their HF portfolio
Note: All figures refer to Strategic Consulting survey results only

It appears that FoHFs do have 'sticky' relationships with Pensions that use them. Even if they are no longer exclusively relied upon as an access channel by the Pensions as the Pensions get bigger, they continue to add value in other roles, e.g., to provide exposure to niche strategies/sectors or take on due diligence responsibilities on a one-off basis for an incremental fee or as part of the overall relationship.

D. Consultant Selection

We also explored the different factors that Pensions take into account when choosing a Consultant. Figure 13 depicts these key factors. Highlights:

- Most Pensions (82%) care about ease of access to their Consultants, and the reputation of the Consultant in the industry (60%)
- To a lesser extent, Pensions also care about fees (47%), size and capabilities of research team at Consultants (47%) and level of objectivity / absence of conflict (41%)
- What Pensions seem to care the least about is seniority/ relationship with lead contact (30%) since they truly rely on all the resources a firm can bring to bear

Finally, Figure 14 is a tally of the Consultants mentioned by Pensions as their current service provider during our interviews. Based on our data, Albourne appears to dominate the Pension market for investment consulting, as they are mentioned by more Pensions than any other Consultant.

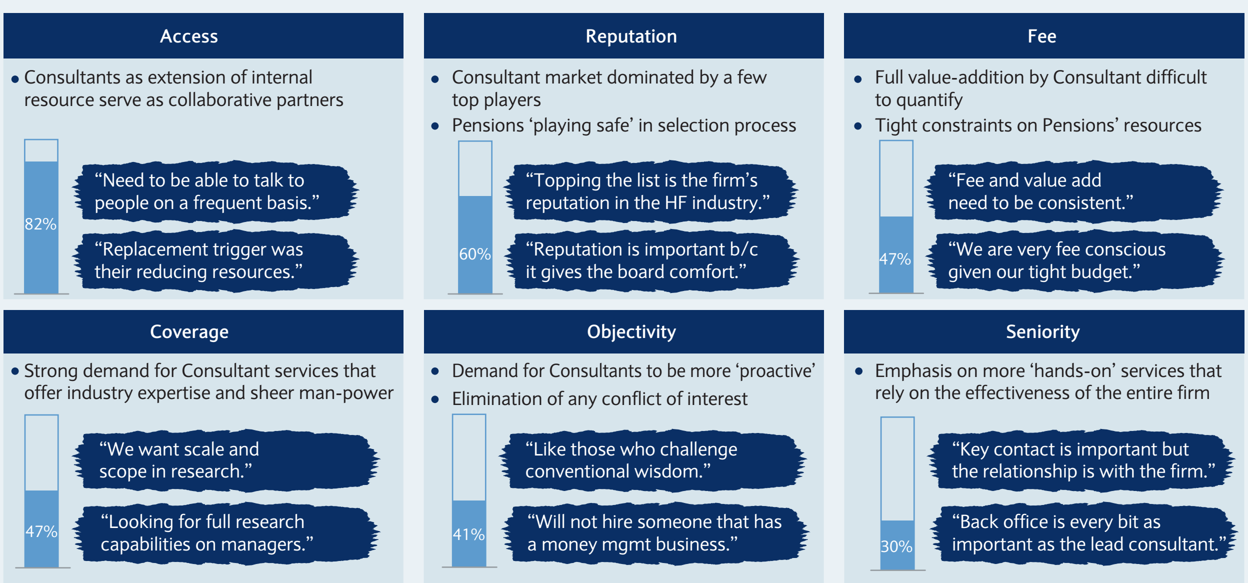
IV. DEVELOPMENTS AT INVESTMENT CONSULTANTS

In our publication 'Raising the Game' in December 2009, the Strategic Consulting team had highlighted the importance of Consultants and the need for marketers at HFs to develop a coverage model that includes not just research professionals at these firms but also field consultants that cover key institutional clients. For this piece, Strategic Consulting set out to calibrate changes at Consultants as a result of the market turmoil of the last two years and the implications of these changes.

A. Organization Structure

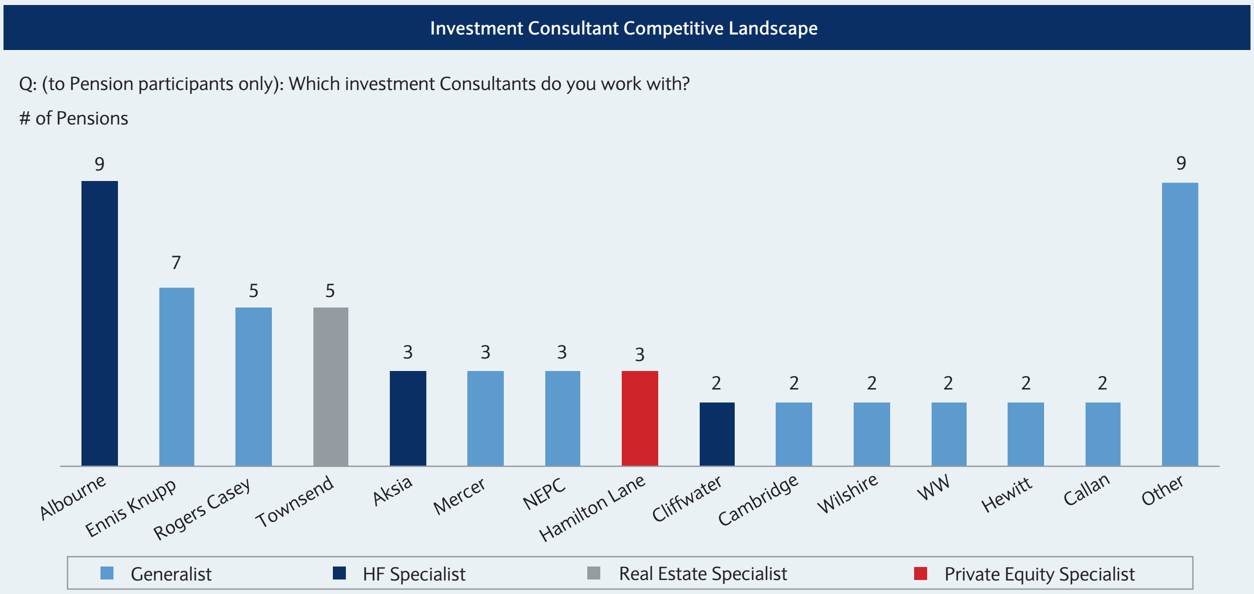
The first theme we address is distribution of personnel at Consultants across different functions. Figure 15 depicts this distribution of personnel at Consultants across two segments, one with less than \$100bn in AUA and another with more than \$100bn in AUA. The personnel are broken down into three categories: research, field consultants and other. Further to the right, a chart shows the ratio of number of clients to total investment professionals, with investment professionals being defined as research personnel or field consultants. Key points to note:

FIGURE 13: INVESTMENT CONSULTANT SELECTION BY PENSIONS



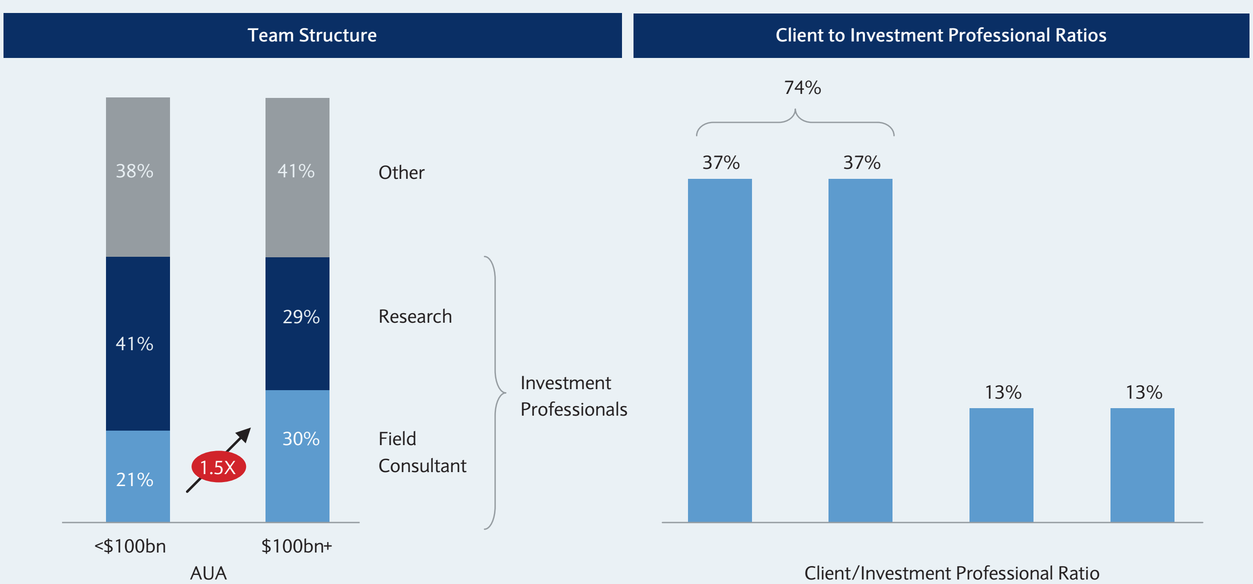
Notes: All figures refer to Strategic Consulting survey results only

FIGURE 14: COMPETITIVE LANDSCAPE FOR CONSULTANTS



Note: All figures refer to Strategic Consulting survey results only

FIGURE 15: ORGANIZATION STRUCTURE OF INVESTMENT CONSULTANTS



Note: All figures refer to Strategic Consulting survey results only

- Number of field consultants at firms with AUA >$100bn is one and a half times that at firms with AUA <$100bn, suggesting that larger Consultants are reaching more clients by scaling up their field consultant headcount, relative to research
- 74% of Consultants have less than five clients per research professional while 26% have six or more indicating that there is a finite limit to the scalability of Consultants' models

B. Generalist vs. Specialist

As described earlier in this piece, in our conversations with Pensions we focused on the types of Consultants that they prefer to work with. Figure 16 depicts the types of Consultants used for advice on Pensions' HF portfolios. On the left is the breakout of those Pensions that use a Generalist vs. a Specialist. On the right is a deep dive on those Pensions that changed their Consultant in the last three years to show whether they changed from a Generalist to a Specialist or vice versa. Key points to note:

- A majority of Pensions (54%) use a Specialist vs. a Generalist
- Of the 25% of the Pensions that have changed Consultants in the past three years, a large majority (75%) have switched from a Generalist to a Specialist vs. only a quarter who have gone the other way

This data indicates that there is a definite trend towards using Specialists. Later in this piece, we will show that Generalists are actively taking steps to address this challenge.

C. Product and Fees

Looking ahead, we polled Consultants to determine what they plan to change in their offerings. Figure 17 depicts the types of services Consultants are focusing on in 2010.

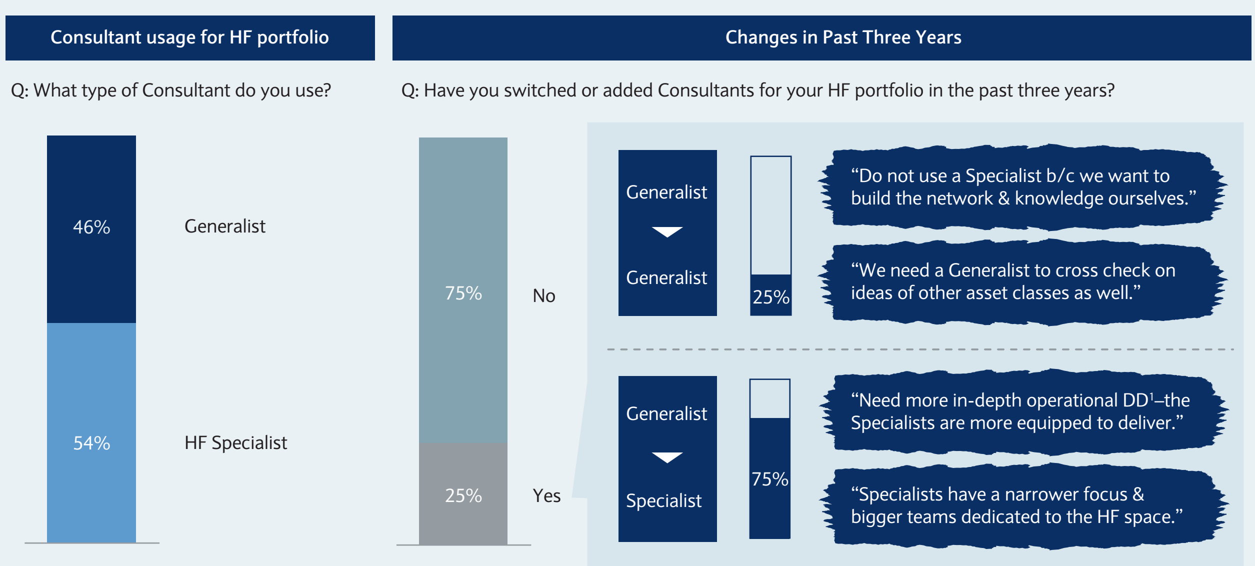
The service that most Consultants (38%) are focused on adding is a suite of analytics and a database that would allow clients to access all of their research, thus monetizing research to the maximum extent possible and either creating a new revenue stream from clients that do not need additional advisory services or cementing relationships with clients that do.

Other services that an equal number of Consultants consider important (31% each) are:

- Discretionary Advisory, either as a new service at Consultants that previously did not offer this service or an existing service targeted at new clients, e.g., small or medium - sized Pensions
- Broadening the scope of strategies covered and the broadening as well as deepening of Manager due diligence

The service that seems important to the least number of Consultants is Non-Discretionary Advisory. This is in response to their clients' desire and willingness to have a more hands-on

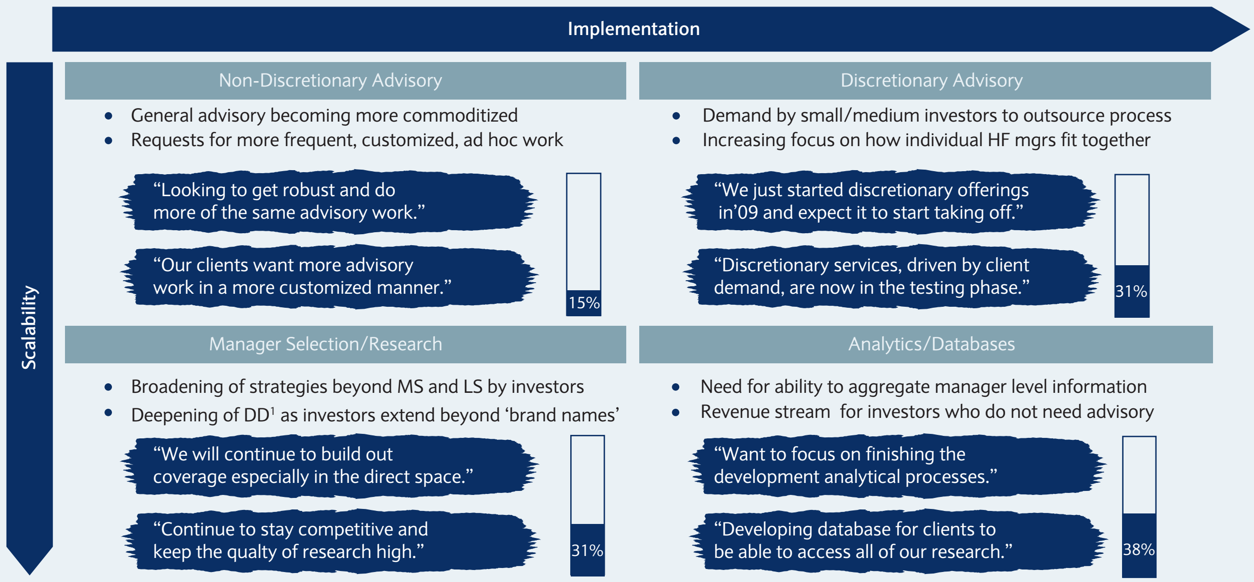
FIGURE 16: INCREASING USE OF SPECIALIST CONSULTANTS BY PENSIONS



1. Due diligence

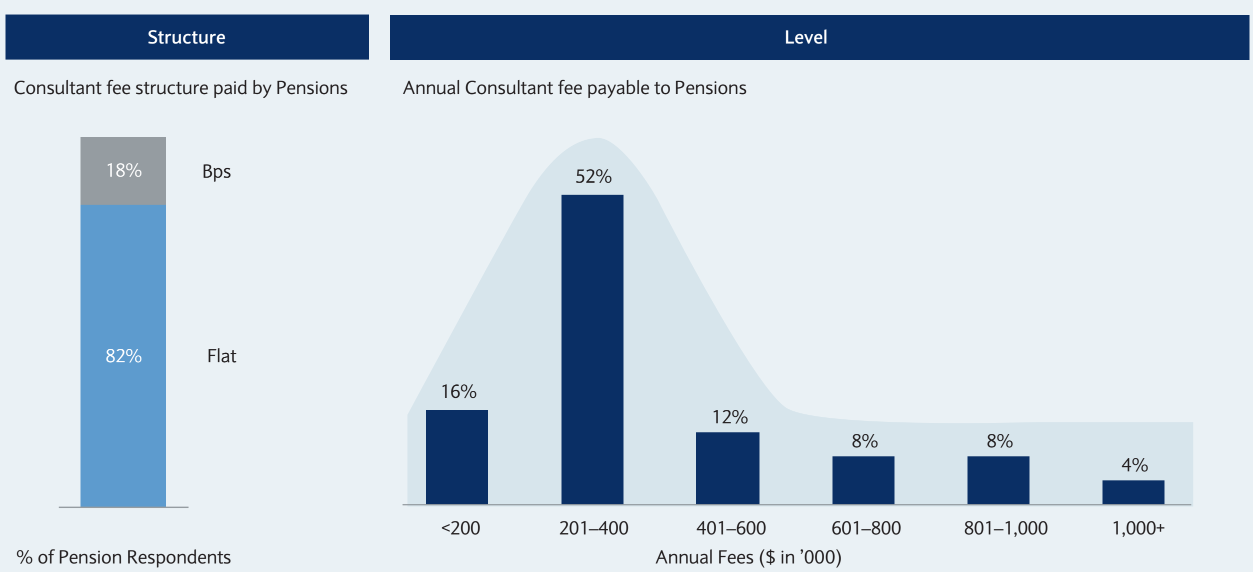
Note: All figures refer to Strategic Consulting survey results only

FIGURE 17: INVESTMENT CONSULTANTS' PRODUCTS AND SERVICES



1. Due diligence
Note: All figures refer to Strategic Consulting survey results only

FIGURE 18: PRODUCT PRICING ADOPTED BY CONSULTANTS



Notes: All figures refer to Strategic Consulting survey results only approach to allocations, not only as a response to the recent market turmoil but also driven by a genuine desire to learn.

Next, we probed Pensions to see how they pay Consultants. Figure 18 depicts the breakdown of fees paid by Pensions into a flat fee or a fee based on the size of the Pensions' AUM (on the left), as well as a number of different ranges of dollar amounts paid on an annual basis. Key points:

- 82% of Pensions pay a flat fee rather than a fee in bps on the underlying portfolio
- 52% of the Pensions pay a flat annual fee that falls within the $200–400K range

From this data, if representative of the industry as a whole, it would appear that the majority of Consultants have limited pricing power and revenue does not scale up as the Pensions' AUM goes up. Additionally, there does not appear to be any check on the resources a Pension can consume once it is signed up to pay a flat fee. This may have implications on the ability of Consultants to maximize the monetization of their research resources, unless the use and pricing of research resources is carefully monitored.

V. FINDINGS ON HEDGE FUND MANAGER SCREENING

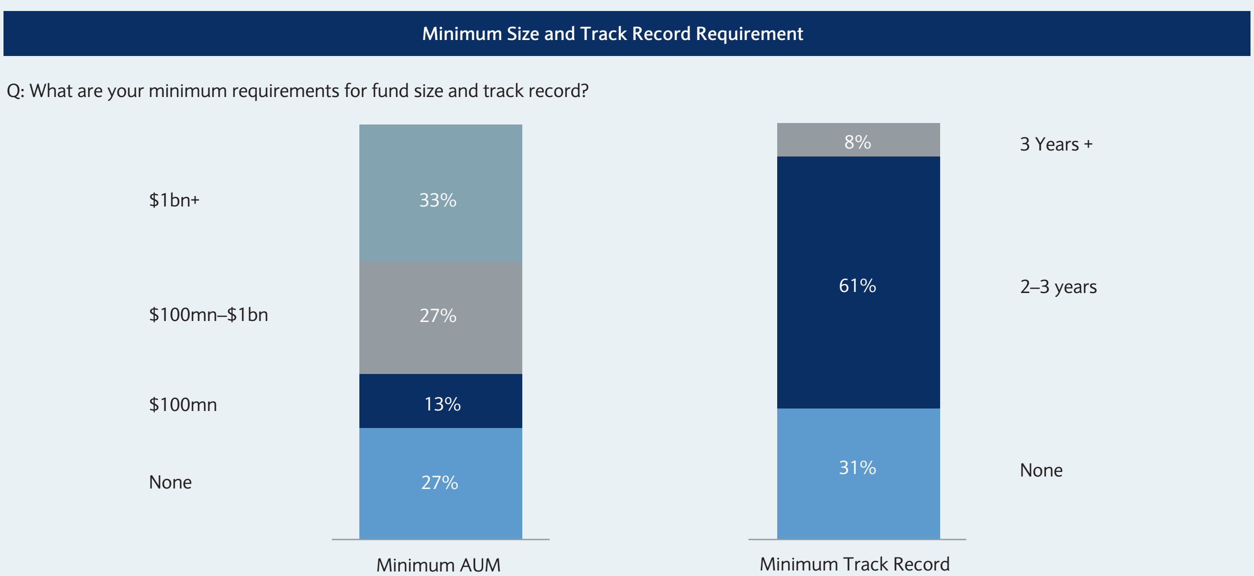
In conversations with Pensions and Consultants, the Strategic Consulting Team focused on extracting insights on how both these players make decisions to invest in certain HF Managers vs. others and what objective criteria are attributable to those decisions. The following is a high level summary of our findings:

A. Size and Track Record

One key element in our discussions with Pensions was the threshold requirements that HFs had to meet in order to even make it to their consideration set. Figure 19 depicts the minimum AUM and track record requirements of Pensions. Key points:

- 73% of Pensions require HFs to have >$100mn in AUM and 33% require $1bn+
- Minimum requirement is driven primarily by investors' ticket size – Pensions like to be no more than 30% of overall AUM and preferably below 10%
- 69% of Pensions require a minimum track record of two to three years, with many preferring Managers that have enough experience to have lived through at least one business cycle (approximately five years)

FIGURE 19: HEDGE FUND SELECTION: TRACK RECORD AND AUM



Note: All figures refer to Strategic Consulting survey results only

- About a third of Pensions are willing to consider start-ups and spin-offs and do not have a minimum track record requirement

B. Transparency

We know that transparency is one of the biggest hurdles to investment by Pensions. Figure 20 depicts Pensions' views on HF transparency. On the left is the breakout of Pensions that chose not to invest in a Manager for transparency reasons vs. other reasons. On the right is a further delineation of transparency-related reasons into more granular factors. Key highlights:

- All Pensions want full disclosure of investment strategy and process, team and organization
- 40% of Pensions say that they have passed on a Manager for not meeting transparency requirements. In this group:
  - Lack of regular updates is quoted by most (90% said monthly performance and 80% said quarterly attribution) as a key reason
  - 35% were put off by lack of position level data and 10% wanted a separate account arrangement

Most of these issues come up prior to initial investment, rather than on an ongoing basis. While we in Strategic Consulting understand the additional burden placed on Managers by the transparency requirements of Pensions, we do feel that there is nothing wrong in greater disclosure, especially since relatively few investors are asking for real position level data.

C. Strategy

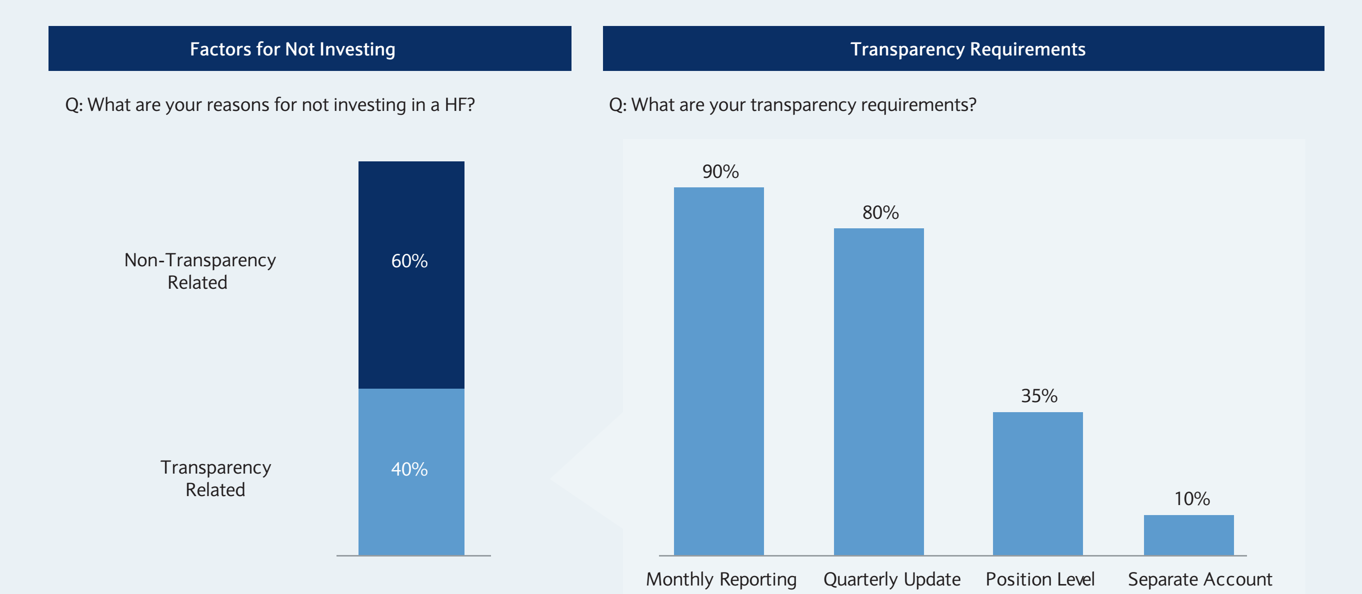
Continuing to explore strategies popular with Pensions, Figure 21 depicts how much of Pensions' HF allocation is invested in one of several different strategies. The x-axis depicts the percentage of the HF portfolio allocated to each strategy and the vertical bars represent the percentage of Pensions reporting each strategy/allocation data point. Key findings:

- Multi-Strategy funds are the most popular with an average of 38% of HF portfolio invested in them, followed by Equity Long/Short (29%), Event Driven (14%), Macro (10%) and Relative Value (9%)
- Diversification and absolute return drive the choice of Multi-Strategy funds
- Simplicity and low leverage drive selection of Long/Short funds
- Event Driven and Macro funds are likely to see more interest going forward given the favorable macro-economic variables for these strategies as well as the trend for Pensions to diversify out of core Multi-Strategy funds and into satellite strategies

D. Crowding Effect

An interesting theme we explored further was the possibility that

FIGURE 20: HEDGE FUND SELECTION: TRANSPARENCY



Note: All figures refer to Strategic Consulting survey results only

FIGURE 21: MOST FAVORED HF STRATEGIES OF PENSIONS

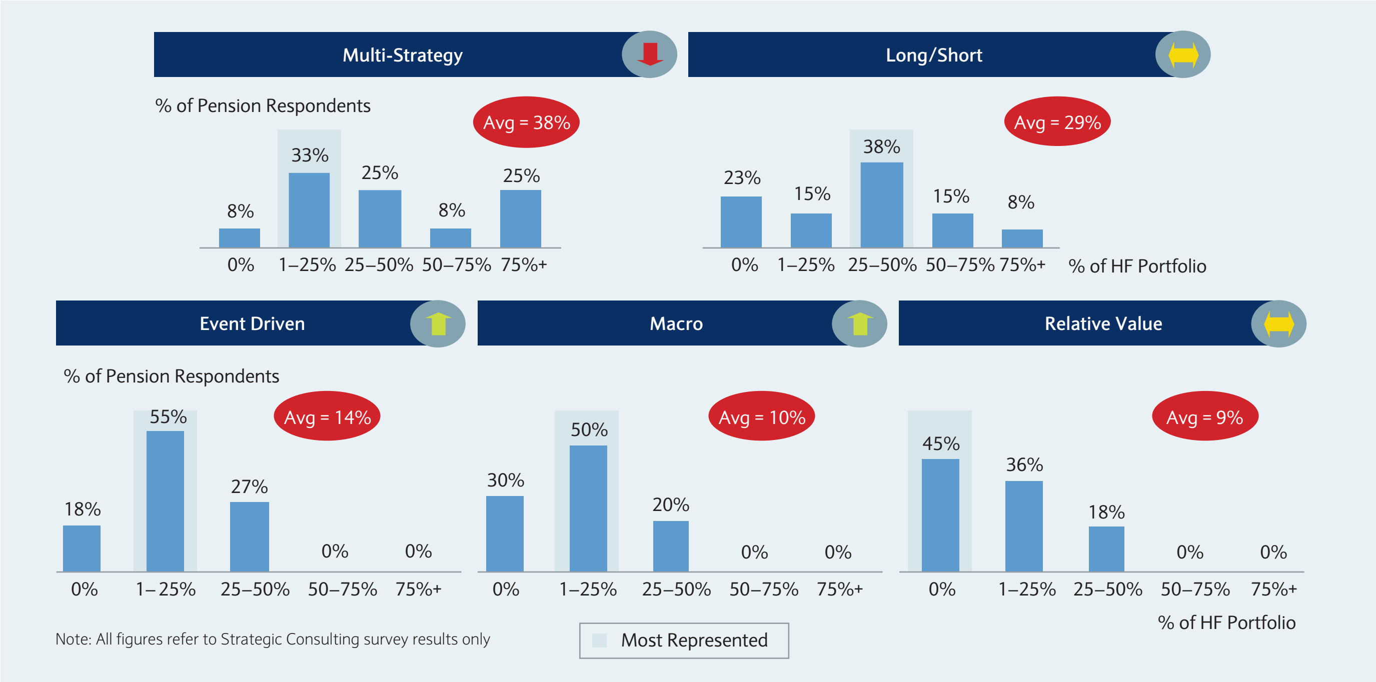
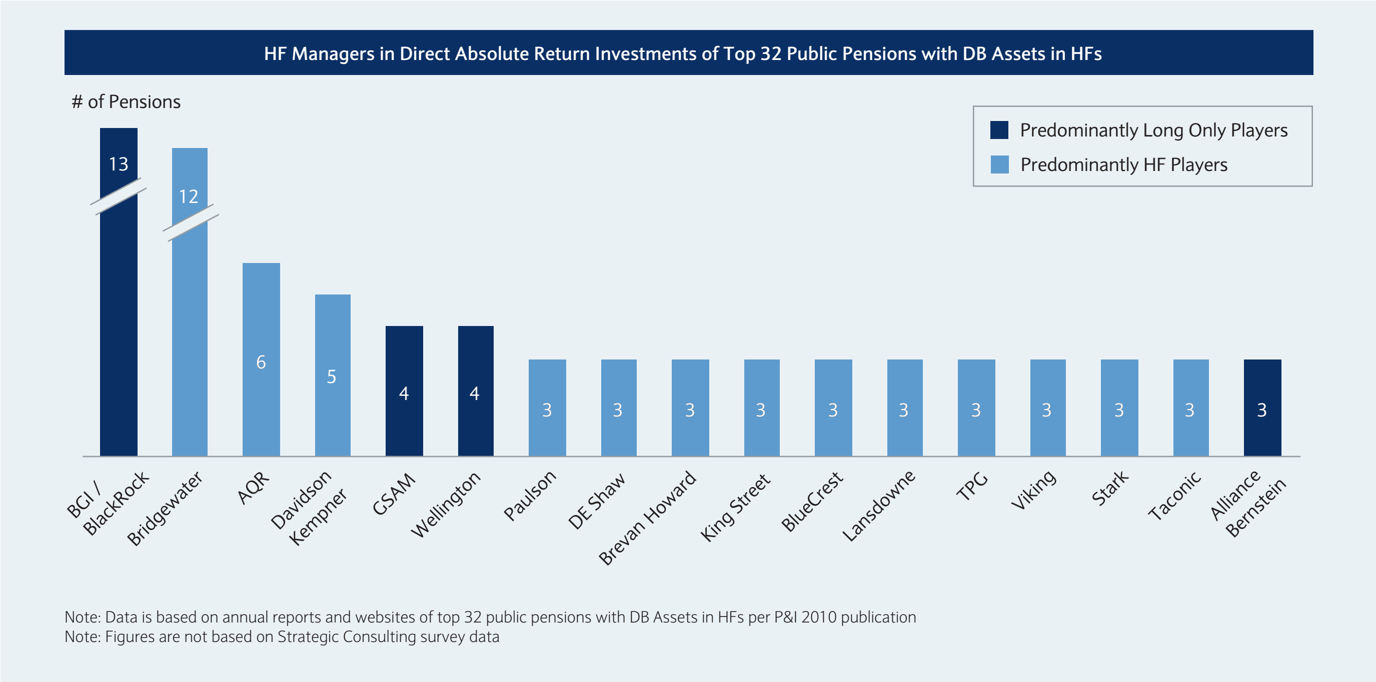


FIGURE 22: POTENTIAL CROWDING EFFECT IN HF INVESTMENTS OF PENSIONS



there may be a 'crowding' of Pension allocations into a few marquee HF Manager names. Figure 22 depicts the frequency distribution of HFs that are mentioned most frequently in annual reports of 32 Public Pensions' absolute return investments. Key points to note:

- While there are HFs such as BGI/BlackRock[5] and Bridgewater that show up in multiple Pensions' portfolios (13 and 12, respectively), this is not unusual or unexpected given the size of these HFs and the multiple strategies/structures they encompass, including long-only vehicles
- The frequency distribution has a relatively long tail but the number of Pensions that include a particular HF drops off quite sharply

Our conclusion based on the above data is that there is little or no crowding of Pensions' absolute return investments, which opens opportunities for smaller HFs with an institutional platform to seek an allocation.

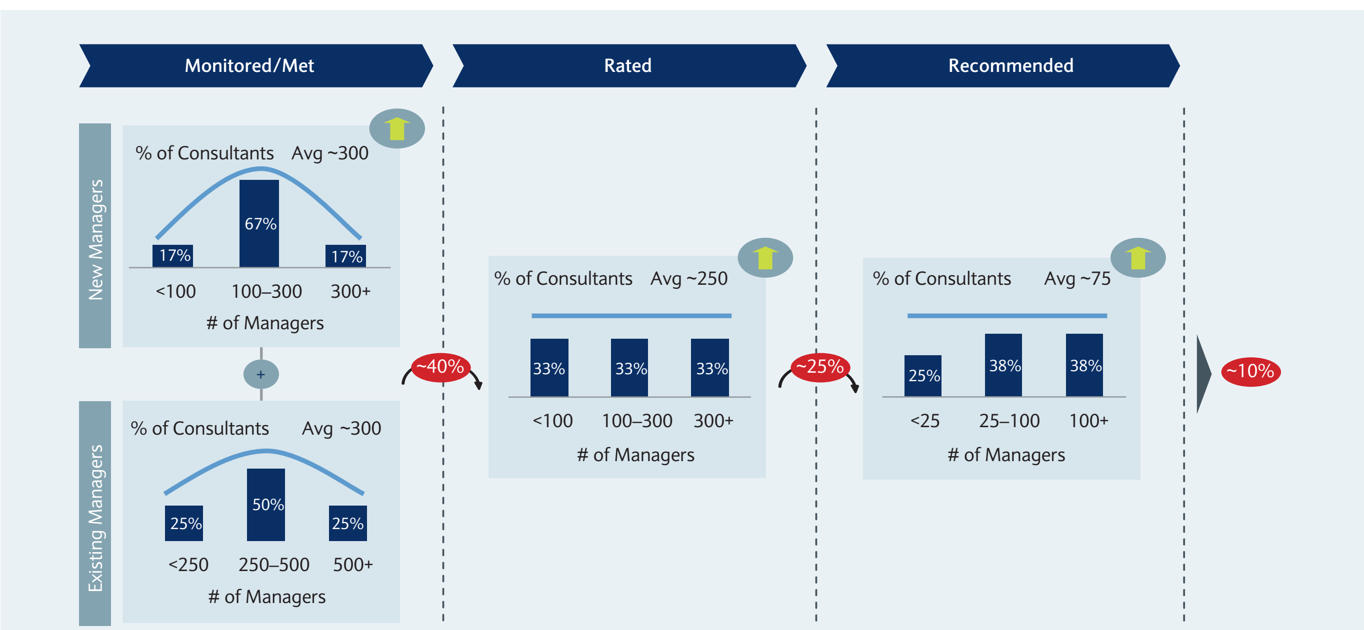
E. Rating Statistics

Figure 23 depicts the process of screening of HF Managers by Consultants. From left to right, the progression along the funnel indicates milestones in the process of reducing the number of HF Managers that make it to the next level. Key points:

- On average, Consultants engage with about 300 new HF Managers annually on top of the 300 Managers they already follow
- Our analysis indicates that about 50% of new Managers are added to the consideration set by clients
- Of these 600 Managers, Consultants actively rate around 250 Managers, on average, based on a curve with 4–6 rating categories, representing a ~40% survival rate from the covered to rated categories
- Finally, about 75 Managers, on average, make it to the approved/recommended list
    - Which represents a 30% pass rate for rated Managers (75/250) and a ~10% pass rate for the Managers that participated in this screening process (75/600)
- It's worth noting that all Consultants are working actively to increase the number of Managers that are covered/rated
- Rated Managers are regularly tracked by Consultants (e.g., through monthly updates and quarterly calls) and there is a bias towards changing ratings more frequently in the future

An interesting takeaway is that for HF Managers, getting on the radar screen of Consultants is not a big challenge. More important for Managers is getting a better understanding of the criteria that got them on the approved or not approved list in the first place so that they can work to maintain an approved status or make it to the approved list the next time around. Some HF Managers will not be approved just because they do not meet the bar for

FIGURE 23: HEDGE FUND SCREENING AND APPROVAL PROCESS BY CONSULTANTS



Notes: All figures refer to Strategic Consulting survey results only

[5] Barclays Capital has 19.9% ownership in BlackRock

minimum AUM or track record – issues that will potentially be addressed over time. For others, getting approved could require improving transparency or liquidity terms or just improving how the investment thesis is communicated.

VI. CONCLUSIONS AND RECOMMENDATIONS

Our conversations with Pensions and Consultants provided insights into how they have evolved in response to the events of the last two years and how that is impacting their screening and selection of HFs. While their thinking is still evolving in many respects and all players are definitely not moving in the same direction in terms of the changes that we have seen, there are some observations and recommendations we would like to put forward for consideration by industry participants.

One big takeaway from the whole study for us is around the continuing evolution of the relationship between Pensions and Consultants. Most Consultants focused primarily on intermediation between Pensions and HFs, in the past, in a way that almost suggests an 'outsourcing' of many key functions related to the allocation process. Today, there is much greater room for true collaboration between these two industry participants throughout the allocation process. Many Pensions are today looking for Consultants to be true 'sounding boards' for investment ideas and allocations to specific Managers that may or may not be on the Consultant's approved list as they get more comfortable with making direct investments, in many cases for the first time.

The following are our recommendations for action as they pertain to the three industry participants.

Pensions

- Consider reviewing governance structure. Recognizing that it would be very hard to change the composition of the board of trustees to enhance the level of investment experience, the next best thing might be to get the board to delegate certain authorities to an Investment Committee that would have representation from the board but would be much closer and more available to the investment staff in a crisis or as a go-to group on investment ideas. A number of Pensions we spoke to have already adopted this model to become more nimble/agile
- Examine whether an integrated approach to managing HF assets within broader asset classes makes sense. Examples of criteria which would favor taking an integrated approach would be as follows:
  - HF strategies they have allocated to: Equity Long/Short and fixed income/credit lend themselves more easily to an integrated approach than Event Driven, as an example
    - Investment objective: If the objective is to get uncorrelated returns, then it makes sense to manage HF allocations separately
    - Structure and focus of internal teams: If the investment team has a strong focus on continually evaluating new HFs and there is strong commitment to grow the HF allocation over time, managing separately might make more sense

Consultants

- Emphasize team approach to client relationships. Pensions care less about the seniority of the single point of contact at their Consultant and more about ability to access multiple layers of the Consultant organization as needed
- Carefully choose positioning on the price-service level matrix
  - A large number of Pensions (82% of Pensions we spoke to) are now paying a fixed fee for a standardized set of services (e.g., access to a database of manager research and due diligence reports)
  - For those Consultants that are looking to either take a completely different market positioning or add to a relatively low cost, standardized offering, the recommended approach is to offer 'half customized solutions'. For example, consider creating several model portfolios vs. offering either a standardized or a completely customized offering, similar to Private Banking offerings of Conservative, Balanced, Aggressive asset allocation models
- As a Generalist, focus on exploiting distribution synergies within your firm to build a specialist client base within the large client base you currently serve
- As a Specialist, continue to invest in scaling up research capabilities to be both broader and deeper in your coverage of managers to protect market share from Generalists. Additionally, you should explore opportunities to make your research available to the largest set of clients possible as a way to maximize the monetization of research
- Focus on finding emerging Managers. While there is value in using relatively strict criteria to screen new HF Managers there is something to be said about the ability to find new and promising HF Managers that are flying under the radar– several Pensions told us that their biggest grouse against Consultants is their tendency to 'play safe' and recommend 'brand names' only
- Emphasize partnership with Pensions. Do not resist the trend

where HFs are going 'direct', rather you should help it along. Pensions will not appreciate being told that Consultants would like to do it all. They have decided they want to get their hands dirty, and the best thing for Consultants to do is to partner with them on this journey

HF Managers

- Prospect, prospect, prospect. As mentioned before in our 'Raising the Game' piece in December 2009, HF IR/ Marketing teams would benefit from developing relationships with Consultants, both with research professionals as well as with field consultants covering key investors to ensure visibility. This is further borne out by our conversations with both Pensions and Consultants that suggest that, in their advisory capacity with boards, Consultants retain significant 'soft veto' power even at Pensions that invest directly in HFs. Additionally, more opportunities and openness exist as the majority of Pensions now go direct and Consultants are determined to ramp up their HF Manager coverage to meet this trend
- Address investor needs as they relate to transparency; these needs are unlikely to go away and are a major factor why Pensions pass on so many HF Managers

Fund of Hedge Funds

- Consider targeting Pensions with AUM <$1bn as these plans do not have the relevant infrastructure and expertise to make HF investments on their own but may have the appetite for and would benefit from a well-diversified portfolio of HF investments
- Increase relevance to Pensions as they graduate to making more and more direct investments by offering strategic advisory and other services, e.g., access to risk management tools/ expertise, conduct due diligence on Managers identified by the plan on one-off basis, be willing to act as sounding board for investment ideas
- Focus on the three areas where FoHF skills still represent a fairly robust, sustainable competitive advantage, i.e., identifying emerging Managers (new and promising Managers albeit with short track records), leverage Manager selection skills in newer markets (e.g., Asia) and highlight/market structuring capabilities (e.g., portfolio construction, stress testing, risk aggregation and analysis)

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28 MONTHS LATER

CAPITAL SOLUTIONS
HEDGE FUND INTELLIGENCE

August 2010

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CONTENTS

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I. OBJECTIVES AND METHODOLOGY

In the British post-apocalyptic horror film '28 Weeks Later', an outbreak of the 'Rage' virus turns the entire population of the U.K. into zombies. When the Strategic Consulting team first started to look into researching and writing a piece on changes at Hedge Funds (HFs), we were struck by the fact that it would be about 28 months from the fall of Bear Stearns to the publication of this second quarterly piece for 2010. While there are some analogies between the film and what happened to the HF industry in the past two years, we are not expecting or looking forward to a sequel!

As part of our continued focus on providing thought leadership to our clients, when Strategic Consulting decided to investigate changes at HFs over the past two plus years in response to a changed business environment, and to demands from Investors, we were particularly interested in finding answers to the following key questions:

i. How has the composition of HF assets changed, quantitatively and qualitatively, and which HFs have benefited from this?

ii. What changes have HFs made to their terms and which of these changes have had the greatest impact on capital raising?

iii. What are the trends and accepted practices related to information disclosure and Investor communications?

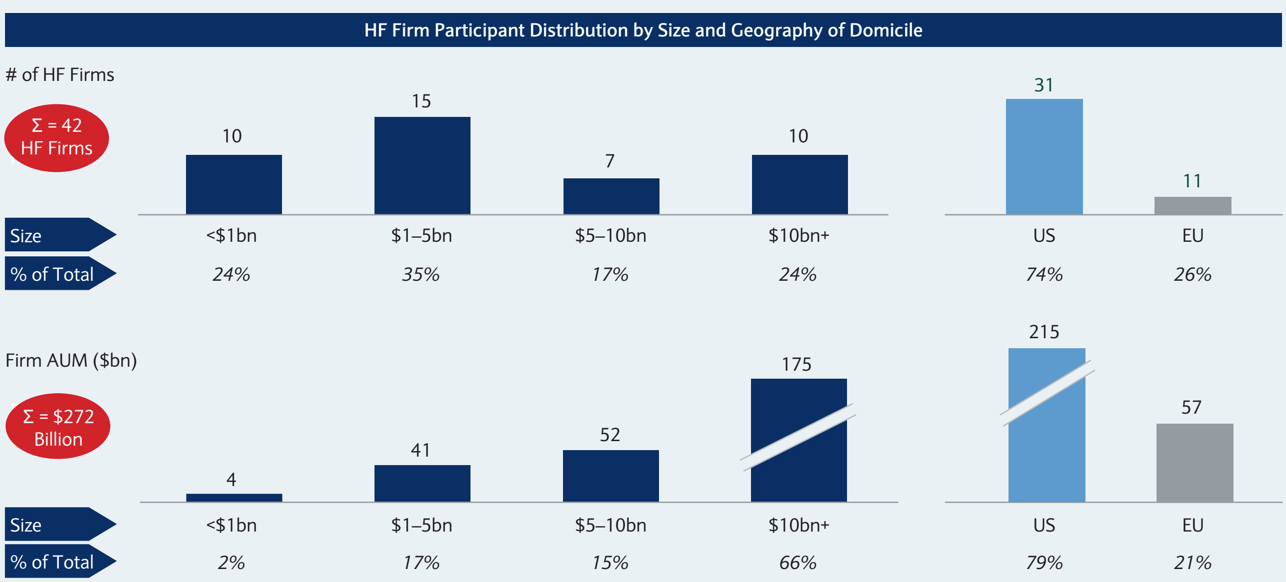
iv. What new products have been added by HFs, how broad has the adoption of these products been, and why?

To answer these questions, Strategic Consulting conducted in-depth interviews with 42 HF Managers. We typically interviewed the Head of Investor Relations or Business Development or the CEO / COO at these HFs. Additionally, we cross-referenced our findings against existing marketing materials, Investor reports and due diligence questionnaires (DDQs) that were provided by many of these HFs. We grouped HF participants into four distinct Assets under Management (AUM) size segments (<$1bn, $1–5bn, $5–10bn and $10bn+). These segments, we believe, represent key watersheds in the growth trajectory of a HF and, within each of these segments, HFs tend to have a common set of strategic priorities and concerns.

Figure 1 depicts the distribution of our study participants by count and total AUM of HFs in each size segment. Key highlights to note:

- The 42 HFs interviewed manage $272bn in AUM representing ~16% of the global HF industry
- There is a fairly even distribution of HFs across all size segments with a slight overrepresentation in the $1–5bn segment (35% of HFs we interviewed vs. the 25% we would have expected to see)
- The majority of the group's AUM is concentrated within HFs with AUM of $10bn+
- With approximately three-fourths of both the number of HFs and the related AUM with U.S. domiciled HFs, the geographic distribution of both the funds as well as their AUM is largely in line with the overall HF industry

FIGURE 1: HEDGE FUND PARTICIPANT DEMOGRAPHICS



Note: The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information presented are derived directly from respondents and we do not pass on the accuracy of such information. All figures refer to Strategic Consulting survey results only.

Figure 2 shows the breakdown of our study participants by HF strategy. Participants are broken out both at the firm as well as at the fund level. Distribution of HFs across the six strategies is largely consistent with industry sources such as Hedge Fund Research (HFR) once the following adjustments made by Strategic Consulting are accounted for:

- We treated Quantitative Funds as part of Macro Strategies
- We separated Credit and Multi-Strategy as distinct categories (Multi-Strat HFs are distributed across all four broad strategy types by HFR)

II. EXECUTIVE SUMMARY

Below are the key findings on the four main topics addressed in the study:

Assets Under Management

- Across all HFs in our study, there has been a 25% increase in AUM relative to end of year (EOY) 2008 with performance accounting for a 30% increase, offset by a 5% decline attributable to net flows
- Mid-sized HFs ($1–5bn) have seen their AUM grow by 15% due to net flows alone, the most net flows as a percentage of AUM across all size segments
- The Investor base across all HFs interviewed is becoming more Institutional, with Institutional Investors accounting for 35% of HFs' AUM at EOY 2008 vs. 41% in Q1 2010, and FoHFs declining from 41% to 31% in the same period

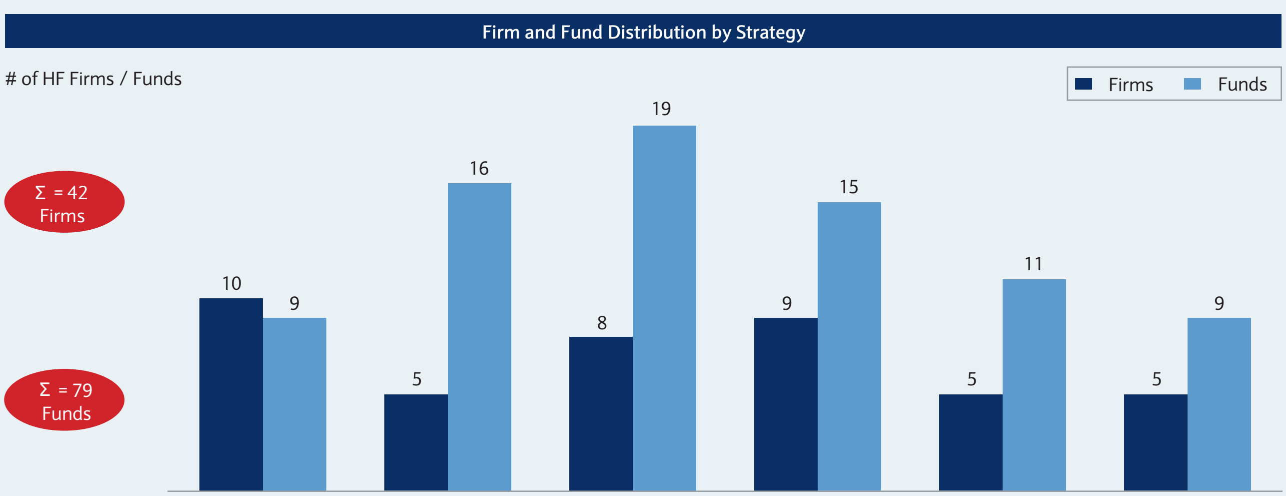
Hedge Fund Terms

- A majority of HFs (~75%) have made changes to their terms
- 32% introduced a new share class with lower fees and 72% made changes to liquidity terms (e.g., initial lock, redemption frequency) and approximately one-third made changes to both
- There is evidence of fee compression with the average new share class at 1.5% / 19% vs. 1.8% / 21% for all share classes currently in existence
- Total Time to Redemption has decreased by 20% from 19 months to 15 months, driven primarily by a reduction in the initial lock period
- There appears to be a trade-off between Management Fees and Total Time to Redemption for Investors; an extension of the total Time to Redemption by 2–3 quarters can potentially earn a reduction in Management Fees of ~50 bps

Transparency

- Two-thirds of HFs now provide portfolio data to a third party risk aggregator, at the request of one or more of their Institutional Investors
- The provision of risk reports and Investor letters appears to be an accepted standard now with 92% and 96% of Managers, respectively, offering these, but the institution of regularly scheduled conference calls and annual Investor events is not (not offered by 68% and 75% of Managers, respectively)
- Specific types of communications that have seen the greatest increase in adoption are disclosure of Tier 3 assets, provision of a Qualitative Strategy Commentary, and provision of Return Attribution / Long Short Exposures
- Position level data is shared with Investors by 20% of Managers, with an additional 40% providing this information on an ad hoc basis, i.e., based on reverse inquiry

FIGURE 2: PARTICIPANT DISTRIBUTION BY HF STRATEGY



	Multi-Strategy	Equity LS	Macro	RV	ED	Credit
% of Total By Firm	*24%*	*12%*	*19%*	*21%*	*12%*	*12%*
% of Total By Fund	*11%*	*20%*	*24%*	*19%*	*14%*	*12%*

Note: The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information presented are derived directly from respondents and we do not pass on the accuracy of such information. All figures refer to Strategic Consulting survey results only.

Product Portfolio

- About a third of Managers have launched separate accounts, with about half of these launches being 'Fund of One' structures
- Portfolio customization appears to be a primary motivation for Investors to seek separate accounts, with less than 20% of separate accounts offering tracker funds
- UCITS III products have not gained traction among U.S. based Managers, with only 3% having launched such a product, but these products have seen more acceptance with Europe based Managers (18% have launched these products)
- Other new products launched by Managers include Tail Risk products, Distressed Opportunity Funds, and Multi-Strat, Equity Long Short and Macro funds

III. EVOLUTION OF HEDGE FUND AUM

Hedge Funds came under severe pressure in late 2008 and early 2009 as a result of the financial crisis and multiple scandals. There was significant redemption pressure, driven by Investors' need for liquidity or due to concerns over poor investment performance of some HFs. The latter phenomenon triggered an Investor stampede for the exits at some HFs, resulting in gates being raised. Consequently, the first theme we explore is the impact of all the turmoil on HFs' AUM.

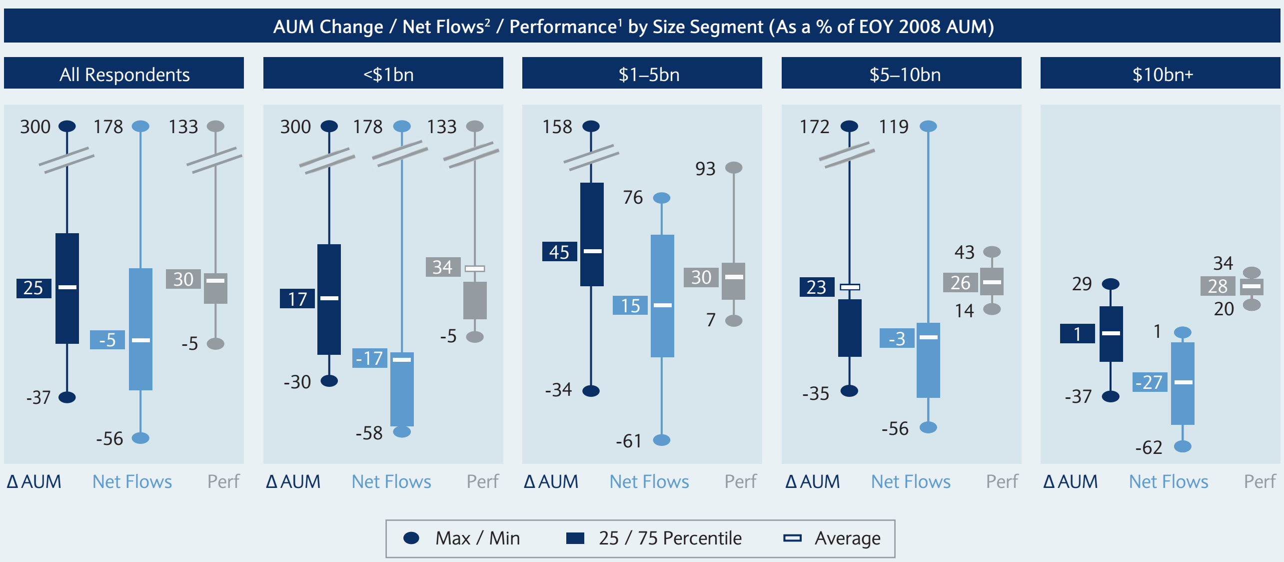
A. AUM Change and HF Size

Strategic Consulting found that the Managers interviewed as a whole saw a 25% average increase in AUM between Q4 2008 and Q1 2010, driven by a 5% decline in AUM due to net flows and a 30% increase in AUM due to performance.

Figure 3 depicts change in AUM from Q4 2008 to Q1 2010, starting with the results for the group as a whole at the extreme left and the results for each AUM size segment displayed horizontally across the page to the right. There are three box plots for each grouping of respondents, going from left to right: total percentage change in AUM over the EOY 2008 number, contribution of net flows to the AUM percentage change, and contribution of performance to the percentage change in AUM. Each of the three box plots has three sets of data: maximum positive and negative change (vertical extremities), 25 / 75 percentiles (vertical rectangle), and average change (horizontal dash within rectangles). Additional key points to note:

- Among the different size segments, mid sized yet institutional HFs in the $1–5bn segment saw the largest increase in AUM (45%), driven by a 15% increase attributable to net flows and a 30% increase attributable to performance
- HFs in the <$1bn and $5–10bn segments also saw moderately positive average AUM change (17% and 23%, respectively), negative average inflows (-17% and -3%, respectively), and positive average performance (34% and 26%, respectively)
- The largest HF participants in our study saw a negligible average increase in AUM (1%) with negative average net flows (-27%) balancing out positive average performance (28%) almost exactly
- While the negligible increase in AUM for the largest HFs as a group

FIGURE 3: AUM CHANGE / NET FLOWS / PERFORMANCE BY HF SIZE



1. Performance data is typically based on the performance of the HF Manager's flagship Fund
2. Net flows information is either provided by the participant directly or estimated based on HF Manager's AUM and flagship Fund performance data; Tracking error may exist due to the difference between the performance of the HF firm and the flagship Fund

Note: All figures refer to Strategic Consulting survey results only

seems counterintuitive, given that some of these funds have attracted large flows in dollar terms, note that the data in Figure 3 represents AUM increases relative to a base of year end 2008 (we do not discount the possibility of some sample bias, although with 10 HF firms in this size category, our sample size is robust)

B. AUM Change and HF Strategy

A related issue we explored was change in AUM by strategy. Figure 4 shows the breakdown, from left to right, across the six strategy types. Key highlights are as follows:

- Macro, Credit, Equity Long Short and Relative Value strategies all saw positive average AUM change (35%, 46%, 29% and 48%, respectively), while Multi-Strat and Event Driven HFs saw no change and a 15% decline, respectively
- The trend in net flows followed the exact same trend as above, with Macro, Credit, Equity Long Short and Relative Value strategies all seeing positive average net flows (27%, 12%, 10% and 3%, respectively) while Multi-Strat and Event Driven strategies saw average net flows of -25% and -37%, respectively, although the variation around the average net flow numbers was pretty significant for Credit, Relative Value and Multi-Strat HFs (indicating uneven distribution of net flows across players)
- The above trend in net flows highlights the predilection of Investors towards more liquid and opportunistic strategies in 2009
- Change in AUM due to performance was positive across all strategies, with particularly strong results for Relative Value (45%), Credit (34%), Multi-Strat (25%) and Event Driven HFs (23%)
- Despite their strong performance, Multi-Strat HFs (MS HFs) did not attract positive flows, likely because some Investors are questioning the importance of MS HFs in their portfolios
- Similarly, Event Driven HFs did not see net flows consistent with their performance but are likely to be much bigger recipients of flows through the rest of 2010, as early data already seems to indicate

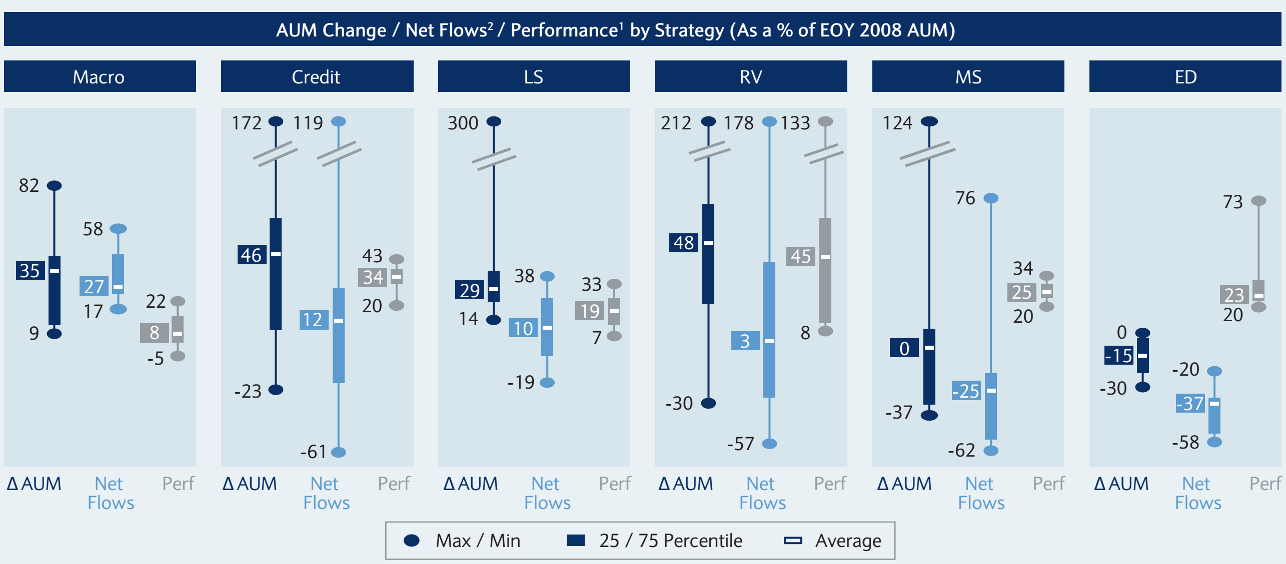
Our takeaway from the above data is that while Investors exhibited their 'herd instinct' in 2009 by chasing the most liquid and opportunistic strategies, there is a gradual 'reversion to the mean' happening now and we expect Investors to be more even handed across strategies going forward.

C. Investor Composition by Investor Type

The next aspect of change we looked into is the change in Investor composition at HFs. In April this year, in our research piece 'It Takes Three to Tango', we had highlighted a growing trend towards Pensions making direct investments in HFs vs. making allocations through FoHFs. The data we collected from HF participants in this study seems to confirm this trend.

In Figure 5, we highlight the average Investor composition for HFs in 2008 vs. now. We break down Investors into four broad categories: Institutional (Pensions, Endowments and Foundations, Insurance Companies), FoHFs, Private (High Net Worth and Family Offices) and Proprietary (HF principals' and employees' own funds). Going horizontally across the page from left to right, we also outline the changes in Investor composition for each size segment. Important points:

FIGURE 4: AUM CHANGE / NET FLOWS / PERFORMANCE BY HF STRATEGY



1. Performance data is typically based on the performance of the HF Manager's flagship Fund
2. Net flows information is either provided by the participant directly or estimated based on HF Manager's AUM and flagship Fund performance data; Tracking error may exist due to the difference between the performance of the HF firm and the flagship Fund

Note: All figures refer to Strategic Consulting survey results only

- Overall, across all HFs, AUM from Institutional Investors has increased by 6 percentage points and AUM from FoHFs has declined by 10 percentage points
- The increase in importance of Institutional Investors is a reflection of both their greater ability and willingness to go 'direct', as well as the redemption pressures on FoHFs over the past two years
- Two other trends are discernible: HFs in the <$1bn size segment have seen the greatest turnover of AUM involving Institutional Investors and FoHFs (+11 percentage points and -16 percentage points respectively) and HFs $10bn+ have made significant inroads into Private capital, mostly through Family Offices (increase of +4 percentage points)

D. Investor Distribution by Geography

While we did not have a specific hypothesis about changes in geographic composition of the Investor base of HFs, we were curious to see if there are any clear trends. Here is what we found:

- Geographic distribution of the largest Investors for U.S. based HFs remained unchanged with about two-thirds of Investors domiciled in North America and about 27–28% in Europe
- For U.S. based firms, representation of Investors from Asia and the Rest of the World[1] doubled, but its hard to draw any significant conclusions because of the very small starting base (from ~4 to ~8% of Investors)
- Europe based HFs have improved their penetration of North American Investors by 9 percentage points (42% to 51%), mirrored almost exactly by a decline in the representation of Europe domiciled Investors (53% to 44%)

It is our belief that the current distribution of Investors for both U.S. and Europe based HFs has not reached a state of equilibrium and that further geographic diversification is inevitable. The importance of Investors from Asia and the rest of the world is expected to continue to grow strongly for both Europe and U.S. based HFs. On the other hand, the proportion of North American Investors allocated to European HFs and vice versa will be driven in large part by the extent of friction generated by new regulation, e.g., European Investors may be precluded from investing in certain U.S. HFs that do not meet legal domicile restrictions.

IV. CHANGES IN HEDGE FUND TERMS

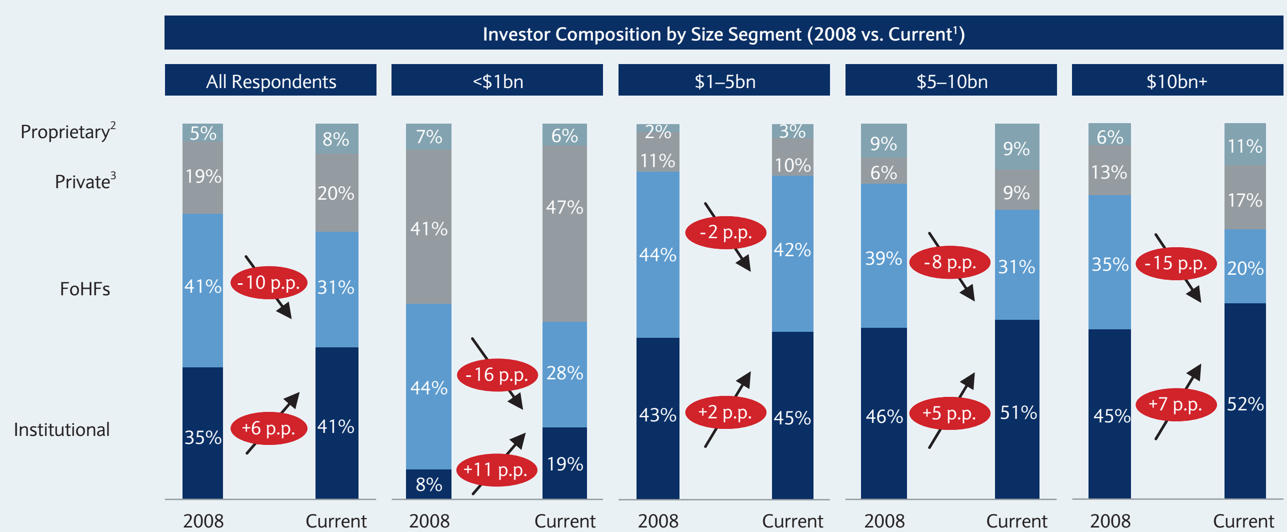
A key hypothesis that we at had at the beginning of this study was that Investors had managed to extract significant concessions from HFs in the last two years or so, both on fees and liquidity. We also expected to see other Investor friendly changes to HF terms, such as addition of clawback provisions and hurdle rates, and removal of fund level gates. This expectation was based, in part, on how vocal some large Institutional Investors have been about changes they have demanded from the HFs they have made allocations to. The following outlines our findings:

A. Fee Related vs. Liquidity Related Changes

Two key questions we explored were: What are the key changes HFs have made to their terms and which of these changes do they think have had a positive impact on their asset raising activity?

Figure 6 shows the breakout of Managers that made or did not make changes to their terms on the left, and for the ones that did, a further

FIGURE 5: INVESTOR COMPOSITION BY HF SIZE SEGMENT



1. Q1 2010
2. Includes the founders' and employee assets
3. Includes HNW and Family Offices
Note: All figures refer to Strategic Consulting survey results only

[1] Includes Middle East, Latin America and Africa

breakdown of the changes made by them is depicted on the right. Additionally, the impact of the changes made on the asset raising is shown by the color coded legend. Key points to note:

- Significantly more Managers made changes to their liquidity related terms (72%) than to their fee related terms (32%)
- Of the 32% Managers that made changes to their fee structure, almost a third offered a fee break for longer lockups, 17% offered a fee break for larger ticket size, and less than 20% added a clawback, reduced Management Fee or added a hurdle rate
- None of the above changes were seen by the Managers who made these changes as 'high impact' for asset raising but rather as 'nice to have'
- Liquidity changes, on the other hand, such as addition of Investor gates in lieu of fund level gates, reduction in initial lock period, addition of new liquidity classes, and the ability to 'opt out' of side pockets were all seen as 'must haves' for success in asset raising

It might seem counterintuitive to see in the above findings that fee related term changes were not seen as a 'must have' vs. some of the liquidity changes. One additional perspective on that issue is that Investors, for the most part, have been comfortable with a 2 / 20 fee structure from well performing Managers. What they have strived to correct, though, is liquidity structures that are out of alignment at certain HFs – either relative to their peers in the same strategy or relative to the type of underlying assets they hold or both. Our finding that fee structures matter less relative to the liquidity terms is not broadly applicable to those HFs whose fee structures are significantly higher (for good reasons, sometimes) than the mean (e.g., 3 / 30 or higher).

An additional takeaway for Managers is that they should not be quick to offer fee concessions as part of their efforts to raise assets since there seems to be only a weak link between the two, unless making changes would address a major anomaly in the positioning of the HF's fee structure relative to peers.

B. Correlation of AUM Changes and Term Changes

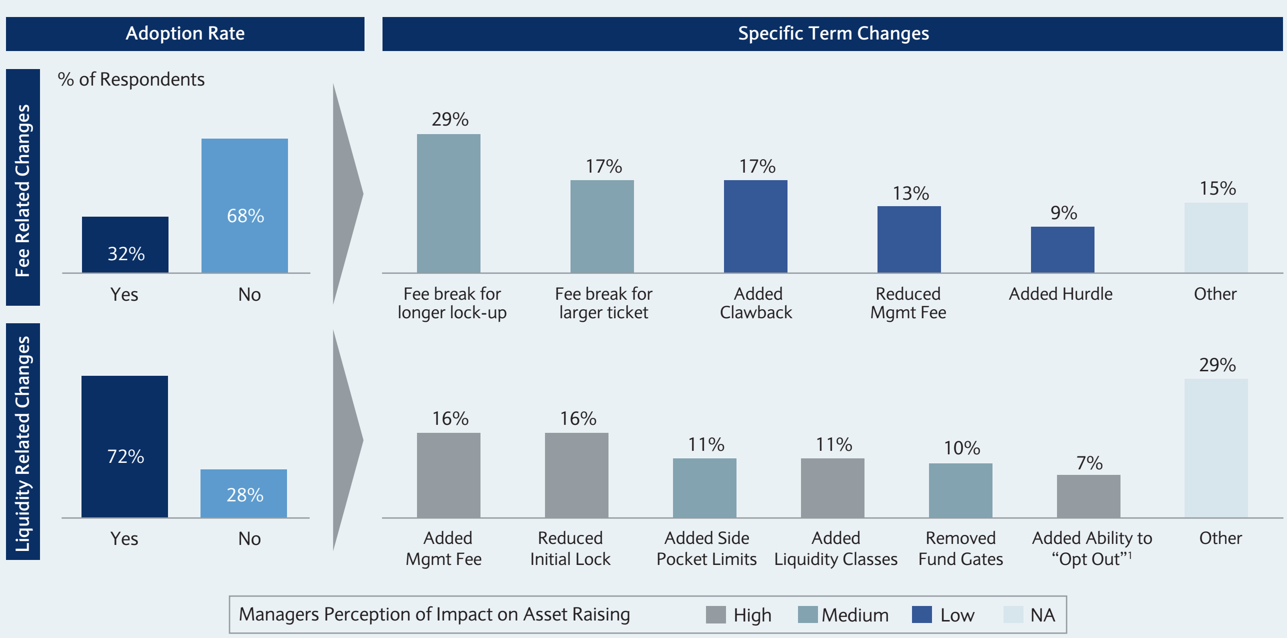
The analysis of changes made by HFs in the previous section begs the question: Were most changes to HF terms made by Managers who were under pressure due to redemptions and / or low returns in a tough market? We decided to test this hypothesis and have presented the results in Figure 7.

Changes in HF terms appear inversely correlated to the change in AUM (relative to EOY 2008), whether driven by net flows, performance or a combination of both. The top panel represents the HFs that made fee changes (dark blue bars) and those that did not (light blue bars), broken out by the size of AUM change seen since Q4 2008 (going from <-30% on the left to >60% on the right). The bottom panel in Figure 7 depicts the same information for HFs relative to liquidity changes. Key highlights:

- 100% of HFs that saw 60%+ increases in AUM made no fee concessions while 50% of those that saw AUM fall by >30% did
- 63% of HFs that saw AUM rise by 60%+ made no liquidity concessions while 75% of those that saw AUM fall by >30% did

From the above data it appears that there is at least some correlation between a decline in HF AUM and either the willingness or the degree of pressure from Investors to make changes to terms.

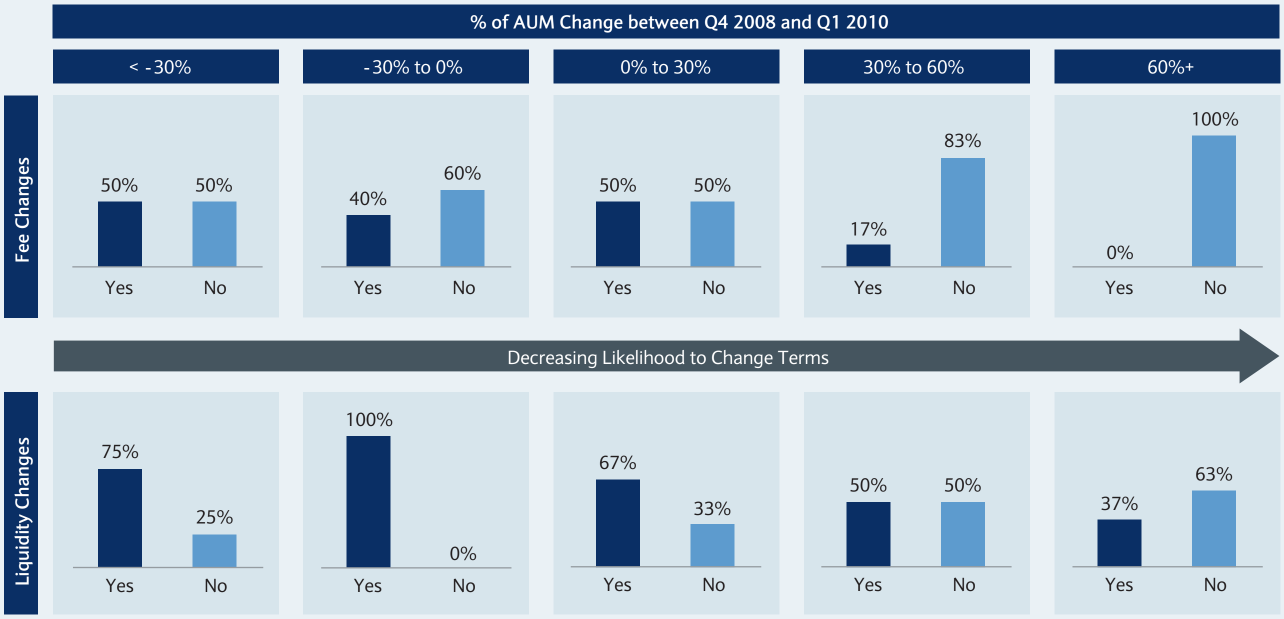
FIGURE 6: TERM CHANGES



1. Of side pockets

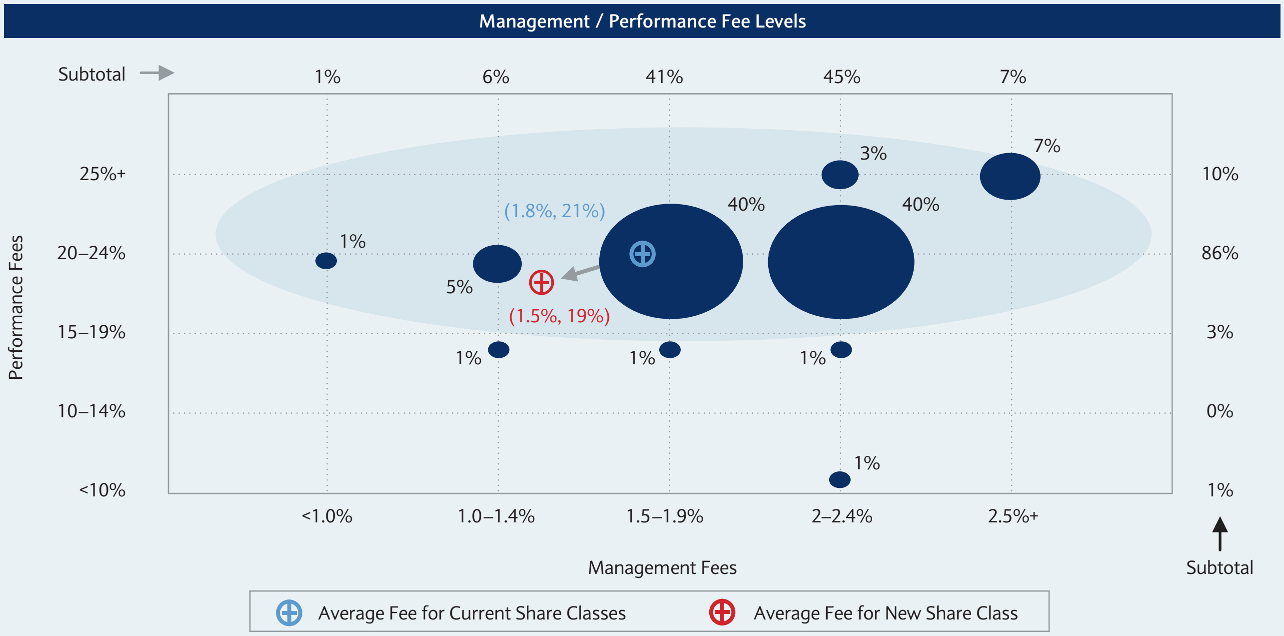
Note: All figures refer to Strategic Consulting survey results only

FIGURE 7: TERM CHANGES VS. CHANGE IN AUM



Note: All figures refer to Strategic Consulting survey results only

FIGURE 8: MANAGEMENT AND PERFORMANCE FEE LEVELS



Note: All figures refer to Strategic Consulting survey results only

Anecdotally speaking, our sense is that the pressure from Investors on HFs to alter terms is moderating and we may be close to reaching an equilibrium between Investor demands and what HFs are willing to concede.

C. Trends in Fees

Getting into the specific changes made by HFs to their terms, we first address changes to the fee structure offered to Investors. Our approach to this issue was to look at the average fees charged by HFs for funds / share classes currently in existence vs. average fees of new funds / share classes launched after EOY 2008.

Figure 8 outlines our findings. The chart plots Management Fees on the x-axis and Performance Fees on the y-axis. The size of the bubbles represents the percentage of HFs clustered at a particular x-y coordinate on the chart. The percentage of HFs at each key point on the x and y axes is listed opposite the respective axis (as Subtotal). Additionally, the bubbles with a cross in them represent the average fee structure for existing funds / share classes (light blue in color) and that for new ones (red in color). Key highlights:

- Most HFs (86%) charge a 20% Performance Fee, only 10% charge more than 25%, and only 4% charge less than 20%
- Near even split between HFs charging a Management fee of about 1.5% (41%) and those charging about 2% (45%)
- Clear evidence of fee compression: Average fees for new funds / share classes are at 1.5% / 19% vs. 1.8% / 21% for existing funds / share classes
- Decline in Management Fees is more significant than Performance Fees (as a % of the base, 30 bps decline in Management Fees is sharper)

From the data, it is clear to us that Investors have won at least a tactical victory in getting some fee concessions from HF Managers. As discussed in the previous section though, apart from some exceptions, the Managers most likely to have made these concessions are not those that have seen very strong AUM growth.

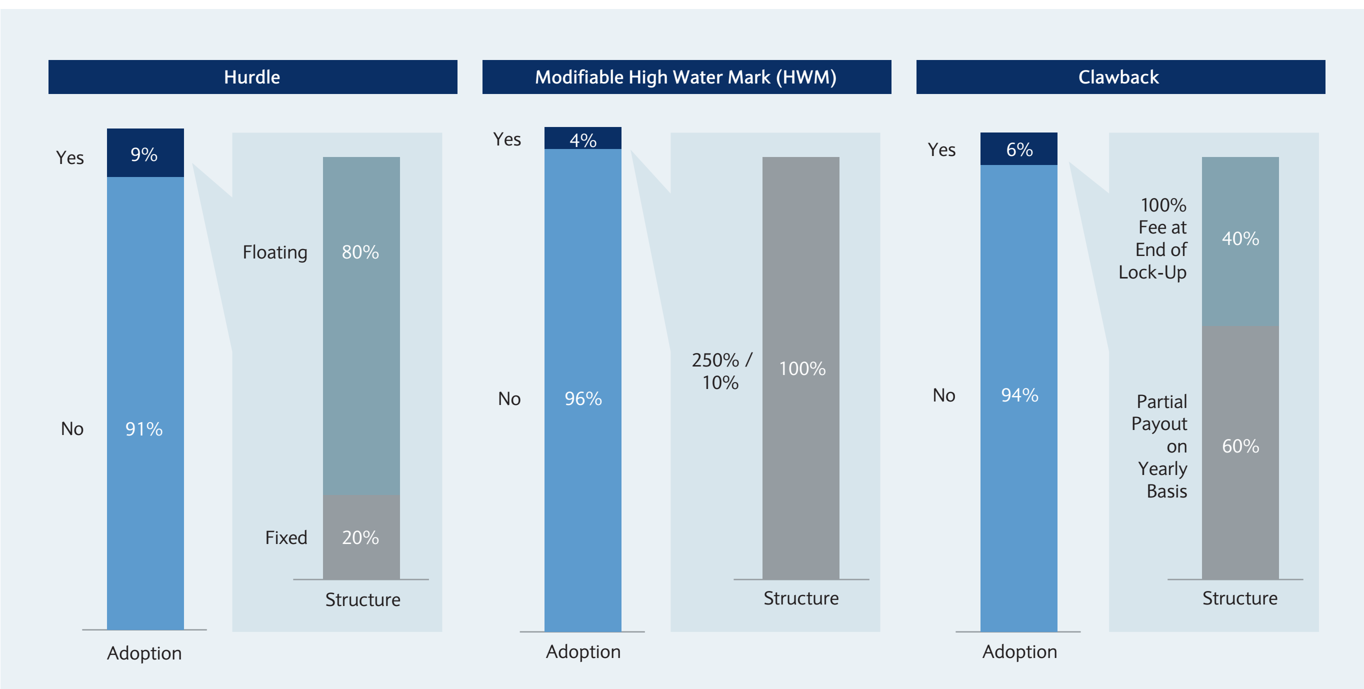
The use of other Performance Fee related provisions such as a hurdle rate or a clawback provision appears to be minimal. Although High Water Marks (HWMs) are a standard feature at most HFs, only a handful of HFs have a resettable or modifiable HWM. Figure 9 illustrates these findings.

- Only about one in ten of the Managers we interviewed had a hurdle rate they had to meet before they could start charging Performance Fees, and a majority of those that did were pegged to a floating benchmark such as six month Libor
- Virtually all HFs use a standard HWM with less than 5% reporting a Modifiable HWM with 250% / 10% terms (i.e., must recover 250% of a decline from the HWM to start charging usual Performance Fees but, until then, will charge 10% fees)
- Only 6% of the HFs currently have a clawback provision

D. Trends in Liquidity

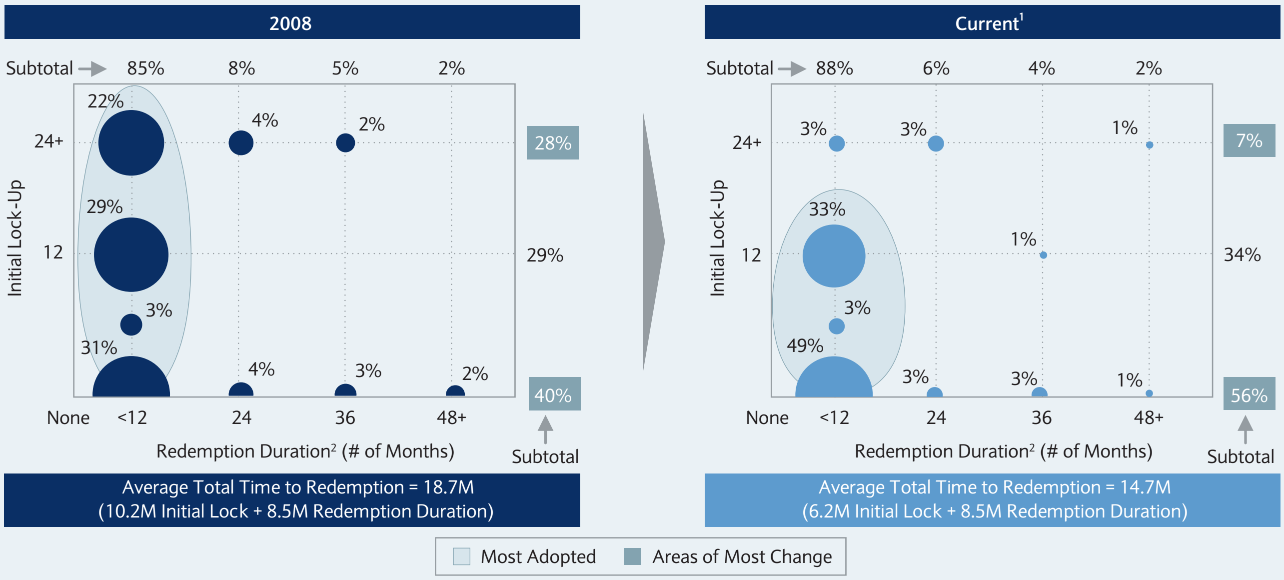
Another area of interest we explored was changes that HFs have made to their liquidity terms. It has been a common refrain in the industry that some HFs had unnecessarily restricted liquidity for their Investors through

FIGURE 9: USE OF HURDLES, MODIFIABLE HIGH WATER MARKS AND CLAWBACKS



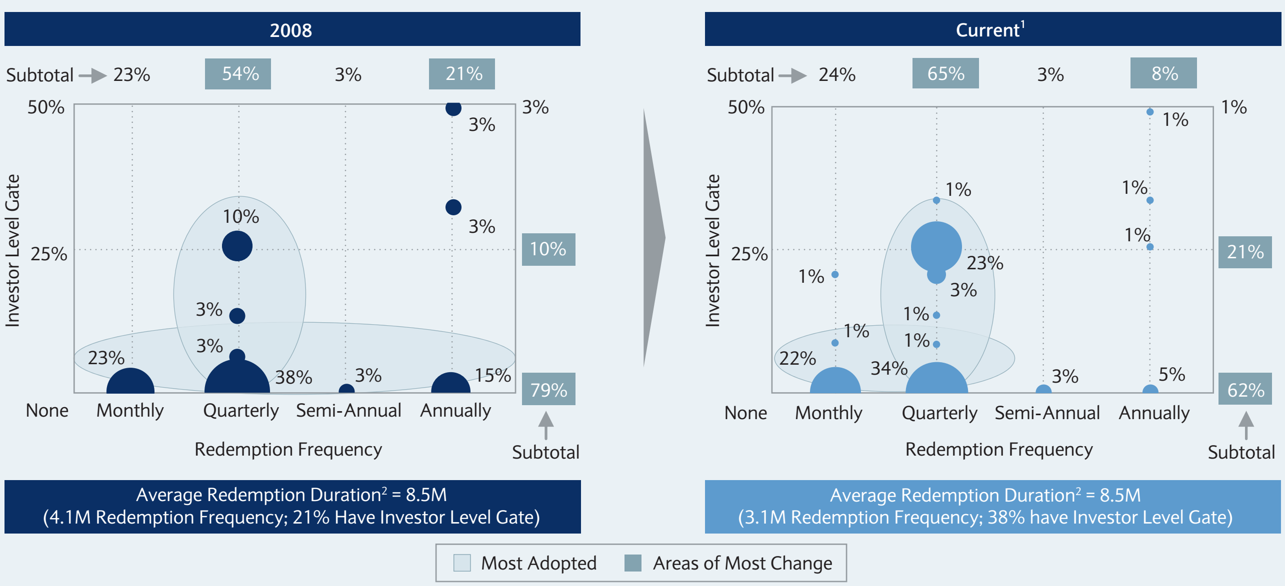
Note: All figures refer to Strategic Consulting survey results only

FIGURE 10: TRENDS IN INITIAL LOCKUP AND REDEMPTION DURATION



1. Q1 2010
2. Defined as total time to redeem 100% investment minus initial lock, typically accounts for additional time needed to redeem due to Investor level gates and redemption frequency
Note: All figures refer to Strategic Consulting survey results only

FIGURE 11: TRENDS IN INVESTOR LEVEL GATES AND REDEMPTION FREQUENCY



1. Q1 2010
2. Defined as total time to redeem 100% investment minus initial lock, typically accounts for additional time needed to redeem due to Investor level gates and redemption frequency
Note: All figures refer to Strategic Consulting survey results only

long hard and soft lockups[2], fund level gates, long notice periods, long redemption frequencies (some HFs allowed only one calendar day each year for a redemption notice to be given) before the financial crisis. Given this backdrop, we focused our attention on the relationship described by the following equation:

Average Total Time to Redemption = Initial Lock + Redemption Duration[3]

Our analysis shows us that Investors have won better liquidity terms with average Total Time to Redemption having decreased ~20% from 19 months to 15 months, driven entirely by a reduction in the Initial Lock. Figure 10 provides additional detail by means of a comparison between the liquidity terms offered by HFs in 2008 vs. now. The charts plot the Initial Lock on the vertical axis and the Redemption Duration on the horizontal axis. The size of the bubbles, as before, represents the percentage of HFs at each x-y coordinate, while the percentage of HFs at each key point on the x and y axes is listed opposite the respective axis (under Subtotal). Key highlights:

- While 28% of HFs had an initial lock of 24 months in 2008, only 7% do now
- The percentage of HFs with no initial lock has gone up from 40% in 2008 to 56% now
- Redemption duration has changed little, with 88% of HFs today having a Redemption Duration of 12 months or less vs. 85% in 2008
- Consequently, average Total Time to Redemption, as a sum of the Initial Lock and Redemption Duration, has decreased ~20%, driven entirely by the reduction in average Initial Lock (6.2 months now vs. 10.2 months in 2008) as the Redemption Duration has remained steady at 8.5 months

Combined with a reduction in average fees described before in this publication, the reduction in Initial Lock (and consequently, in Total Time to Redemption) represents a significant concession won by Investors from HF Managers – allowing Investors to be more nimble and to allocate more dynamically between different HF Managers and HF strategies. What we found rather curious was the fact that the Redemption Duration remained more or less constant between 2008 and now. On investigating further, we found that this is so because HF Managers are compensating for higher redemption frequency by instituting Investor level gates. Figure 11 highlights the changes in the two variables.

- In 2008, 54% of HFs offered quarterly redemptions while 21% offered annual redemptions
- Today, 65% of HFs offer quarterly redemptions while only 8% offer annual redemptions, a significant increase in average redemption frequency
- While this change alone would reduce HFs' Redemption Duration, the impact of the change appears to have been roughly equally offset by the institution of Investor level gates by a larger percentage of HFs (twice as many HFs have a 25% Investor level gate vs. before, while the number of HFs without Investor level gates has declined from 79% to 62%)

The interesting takeaway from above is that HF Managers have been very thoughtful in trading off higher redemption frequency and shorter lockups for Investor level gates. This has slowed the overall trend in greater liquidity to the Managers' benefit. Additionally, the swapping of Fund level gates

FIGURE 12: TOTAL TIME TO REDEMPTION BY STRATEGY

Note: All figures refer to Strategic Consulting survey results only

[2] Soft lock means redemption is possible but only after a penalty is imposed, which is typically a percentage of the assets being redeemed
[3] Defined as total time to redeem 100% of investment minus the initial lock period, i.e., accounting for the impact of Investor level gates, and redemption frequency

for Investor level gates has been seen by many Investors as a positive step, resulting in a 'win-win' for Managers.

As a next step, the Strategic Consulting team explored how trends in liquidity potentially differ by the underlying strategy of HFs. As expected, we found that the more liquid strategies such as Equity Long Short, Macro and Relative Value, on average, have a Total Time to Redemption of a year or less, while longer dated strategies such as Credit, Event Driven and Multi-Strategy tend to be at the two year mark or above. Figure 12 depicts both the average Total Time to Redemption as well as the distribution across HFs within each strategy of the Time to Redemption.

What struck us as somewhat odd in the data is the high average Total Time to Redemption for Multi-Strategy HFs (24 months). We feel that any Multi-Strategy HF with a Total Time to Redemption close to this number would likely face pressure from Investors to improve liquidity terms, given that the underlying assets for most Multi-Strategy HFs are unlikely to support such a long Time to Redemption.

E. Trade-Off between Liquidity and Fees

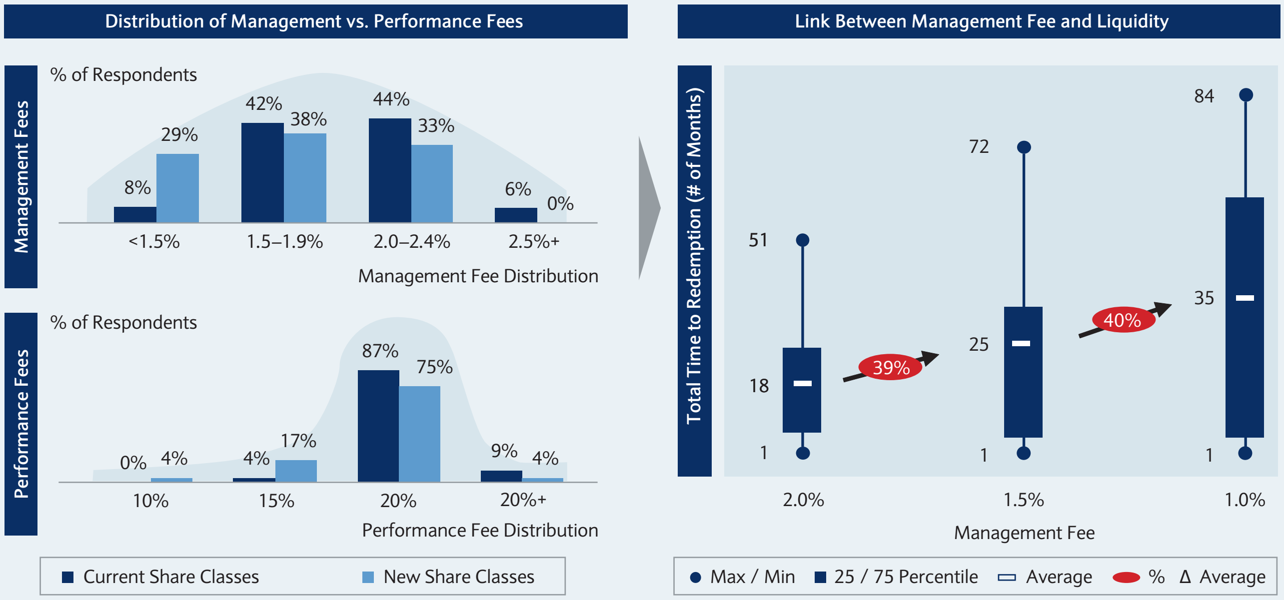
We examined the trade-off between fees and liquidity as one of our hypotheses was that Managers are willing to offer lower fees for longer lockups. We found that the trade-off definitely exists and Investors could expect to see an incremental increase in Total Time to Redemption of 2–3 quarters for a ~50 bps reduction in Management Fees.

Figure 13 highlights on the left the distribution of Management Fees (Top left) and Performance Fees (Bottom left), and the box plot on the right illustrates how the total Time to Redemption changes as the Management Fee charged declines from left to right. Major takeaways:

- The number of HFs in each Management Fee bucket fell for New Share Classes relative to Current Share Classes, except the <1.5% category where the number of HFs rose significantly (from 8% to 29%), indicating that the average Management Fee has declined
- The number of HFs in the 20% Performance Fee bucket fell by 12 percentage points and those in the 15% fee bucket rose by 13 percentage points, pointing to a shift towards lower Performance Fees in the New Share Classes, however, the Performance Fee distribution is much less dispersed than the Management Fee distribution
- As a result of the greater dispersion of the Management Fee distribution, we plotted the Total Time to Redemption (in months) vs. the Management Fee on the right, and found that (going from left to right) there appears to be an average increase of ~40% or 2–3 quarters in the Total Time to Redemption for every 50 bps reduction in Management Fees

A key consideration for HFs from the above findings is that for the standard 2% Management Fees to be palatable to Investors, the liquidity terms need to be fairly tightly centered on the 18 month mark, unless a strong case can be made for why the underlying assets justify a higher Total Time to Redemption. For lower Management Fees, Investors are more willing to accept a wider range of liquidity terms, as evidenced by the much higher vertical height of the 25 / 75 percentile rectangle in the relevant box plot.

FIGURE 13: TRADE-OFF BETWEEN LIQUIDITY AND FEES



Note: All figures refer to Strategic Consulting survey results only

F. Side Pockets

As another bugaboo for Investors, we looked into the use of Side Pockets. We found that in 2008, 45% of the participants indicated they had them. That percentage has declined by a third and only 29% of our participants now report having Side Pockets or the option to create them.

Even those Managers that retain the option to put assets into a Side Pocket have taken the following active steps to make them more acceptable to Investors:

- 55% have applied constraints on the use of Side Pockets by lowering cap limits, changing from a fund level cap to an Investor level cap, or eliminating the use of Side Pockets entirely on new investments
- 33% offer 'opt-in' or 'opt-out' provisions to new Investors
- 25% are putting in place more precise documentation related to the conditions in which HFs can originate or transfer in / out of Side Pockets
- Most Managers charge Performance Fees on assets in a Side Pocket only upon liquidation

V. TRENDS IN HEDGE FUND TRANSPARENCY

HFs have been under pressure to improve the frequency and quality of Investor communications and overall transparency as a result of the Madoff scandal and Investors' concerns that many HFs continue to maintain excessive and undesirable levels of secrecy. The Strategic Consulting team attempted to raise the veil on some current practices to determine what has actually changed since 2008.

A. Investor Communication

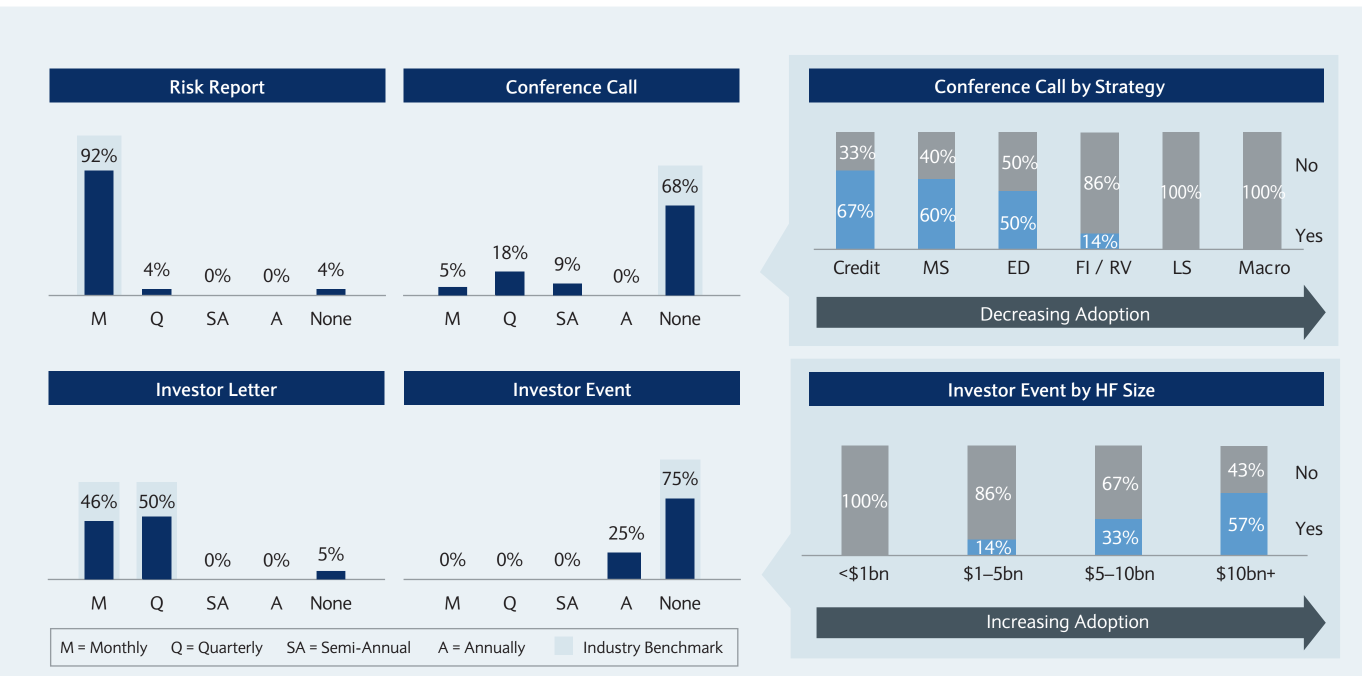
Figure 14 illustrates how while most HFs have accepted the need to provide Risk Reports (92% adoption) and Investor Letters (96% adoption), relatively few conduct regularly scheduled conference calls with Investors (32% adoption) and even fewer hold annual Investor events (25%).

- The adoption of a regularly scheduled conference call is highly strategy dependent – HF Managers that can discuss thematic topics without giving away too much information about underlying positions (e.g., Multi-Strategy HFs and Credit or Event Driven Funds) tend to be more likely to hold regularly scheduled calls
- Investor Events are more likely to be held by larger HFs, reflecting the cost and human resource intensiveness of organizing a large event

Figure 15 highlights specific types of content that is typically communicated to Investors both at the firm level (top panel) as well as the portfolio level (bottom panel). Key points to note:

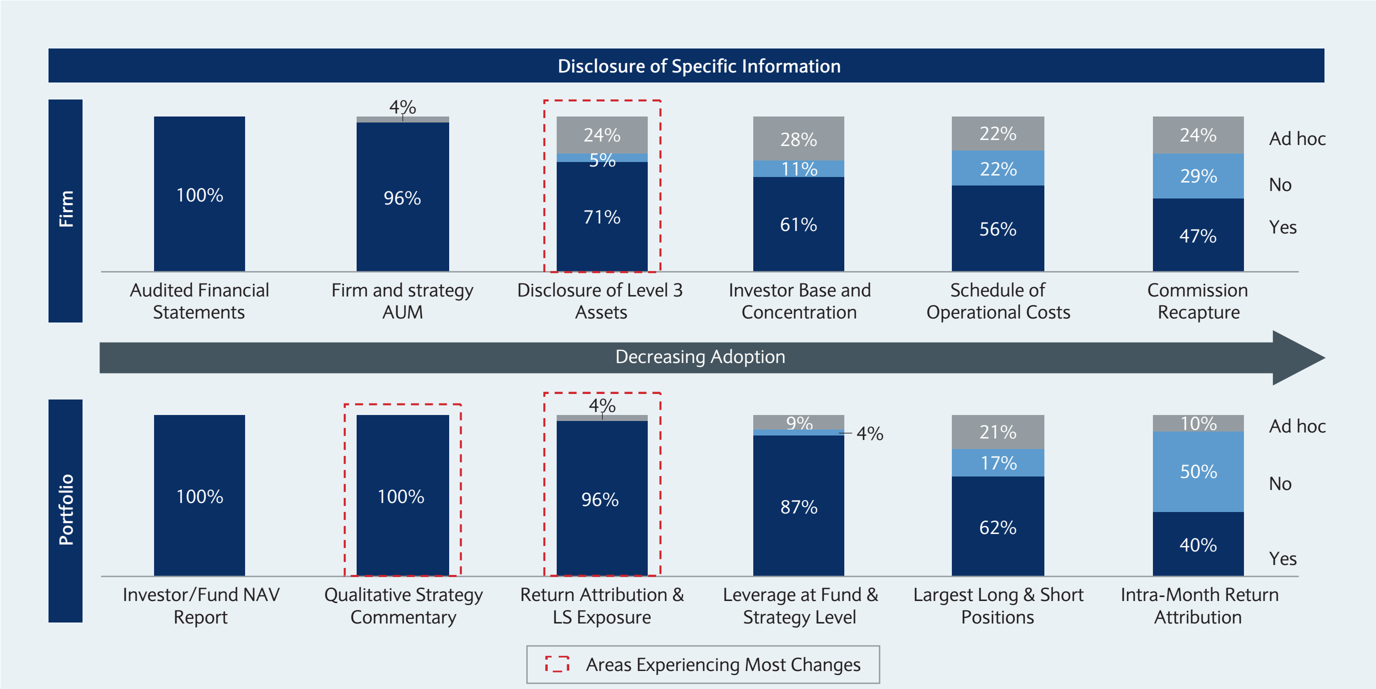
- Provision of Audited Financial statements, AUM and NAV reports, Qualitative Strategy Commentary, and Return Attribution & LS exposure is standard industry practice now
- Provision of Schedule of Operational Costs, Investor Base Composition, Commission Recapture details, Intra-Month Return Attribution, and Largest Long Short positions is still uneven in acceptance

FIGURE 14: SELECT INVESTOR COMMUNICATION TRENDS



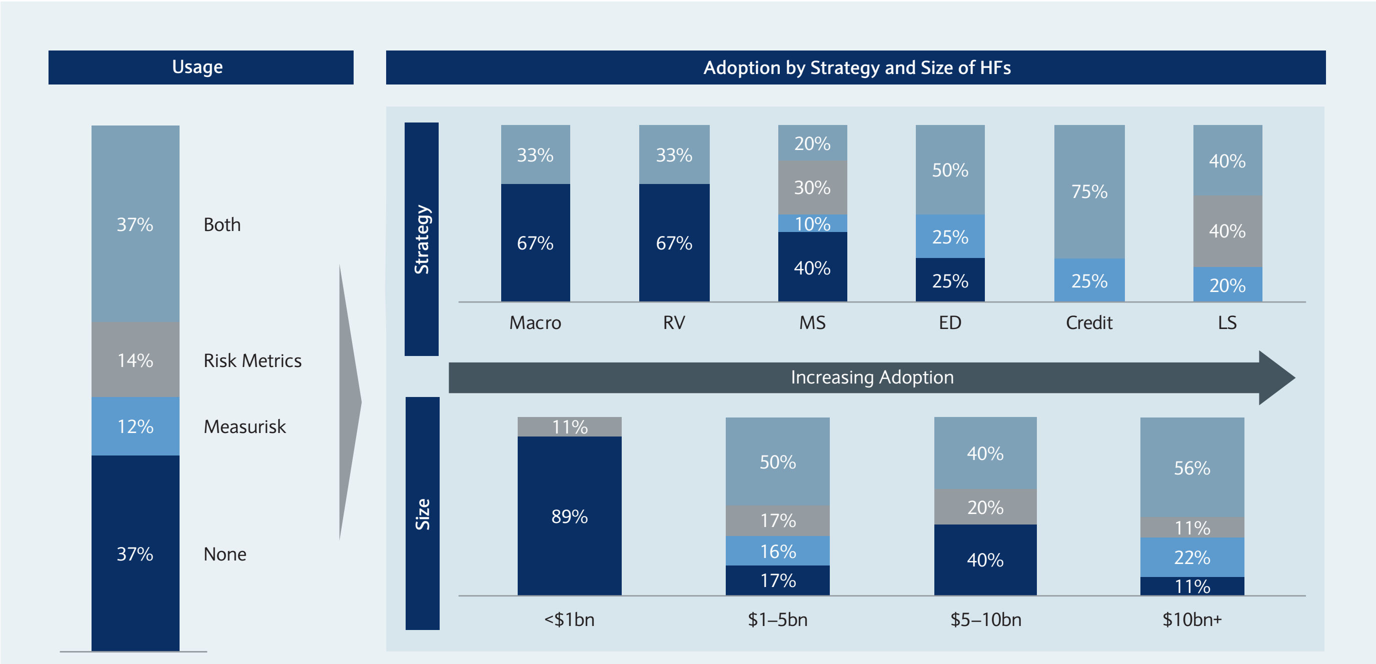
Note: All figures refer to Strategic Consulting survey results only

FIGURE 15: TRENDS IN FIRM AND PORTFOLIO LEVEL TRANSPARENCY



Note: All figures refer to Strategic Consulting survey results only

FIGURE 16: USE OF KEY THIRD PARTY RISK AGGREGATORS



Note: All figures refer to Strategic Consulting survey results only

B. Use of Risk Aggregators

Risk Aggregators are third party service providers usually hired by Institutional Investors to collect portfolio level data from Managers to which they have made allocations, with the intention of receiving aggregated risk information from these service providers. The thesis is that Risk Aggregators are able to assess risk independent of the HF Manager and are also able to aggregate risk information across Investors' holdings at multiple HFs. Two of the most popular Risk Aggregators are Risk Metrics and Measurisk and we found that about two-thirds of HF Managers use at least one of them. Additionally, the use of these Risk Aggregators is both HF strategy and size dependent.

Figure 16 shows on the right that strategies like Macro, Relative Value and Multi-Strategy, that tend to involve multiple asset classes and more diverse sources of risk, tend to not be as big users (67%, 67% and 40%, respectively, do not use either) while more straightforward strategies like Equity Long Short and Credit are much bigger users (100% adoption). Some Managers expressed concern about the ability of Risk Aggregators to provide an accurate picture of the underlying risk to Investors, if the underlying portfolio is particularly complex and / or involves multiple esoteric instruments. Others said they were very mindful about ensuring the safety of their proprietary data when sharing it with Risk Aggregators.

There is a strong correlation evident in Figure 16 between size of HFs and the usage of Risk Aggregators. ~90% of HFs with AUM>$10bn use one or both of these service providers while only ~10% of HFs with AUM<$1 bn do. This is consistent with our expectation that large, Institutional Investors are behind this push to use Risk Aggregators, and these large Investors are much more likely to have allocations to the largest HFs.

C. Sharing Position Level Data

In addition to other types of data requested by Investors discussed above, there has been increased demand from Investors for position level data. Understandably so, many Managers are reluctant to share this information. However, we were surprised to find that 20% of Managers provide this information to Investors in writing, and an additional 40% are willing to give this information verbally, although only based on reverse inquiry and only to some of the larger and / or Institutional Investors. Additionally, of the 20% that offer this data in writing, most require an NDA and about 50% will offer data that is 2–3 months old. Despite the hoopla about position level data, Managers told us that only about 10% of their Investors, on average, ask for this information.

An area of concern from the data above is the 40% of Managers that provide position level data on an ad hoc basis, based on reverse inquiry and most often to larger Institutional Investors. We strongly recommend that Managers consult with their counsel as to whether they should offer this information to all Investors or to none of them, to avoid even the appearance of differential treatment of Investors.

VI. ADDITION TO PRODUCT PORTFOLIOS

Only a third of the HF Managers interviewed have added a new product in the past couple of years. The products these Managers have added tended to fall in three main categories:

- Distressed / Opportunistic funds launched in 2009 to take advantage of market dislocations
- Tail risk products targeted at management of downside risk have been very popular in 2010
- A number of new strategies have been made available to Investors, either as a result of Multi-Strategy funds opening up their constituent Funds to Investors or Managers launching all new Funds to capitalize on opportunities (e.g., Macro funds focused on Emerging Markets or Long Short funds targeted at specific geographic regions such as Europe)

Less than 5% of U.S. based HFs have launched a UCITS III product. A higher percentage of European Managers (~20%) have launched a similar product. Managers cite multiple reasons for not being more aggressive (e.g., liquidity, leverage, and asset class constraints, high distribution costs, risk of cannibalizing existing funds, uncertainty about targeting European and Asian retail Investors).

Approximately, 30% of HFs have launched a separate account since 2008. Larger HFs are much more likely to have done so (40% of HFs with AUM between $5-10bn and 50% of HFs with AUM>$10bn have launched at least one such product). Other notable points:

- 50% of launches are 'Fund of One' structures
- Since 80%+ of separate accounts are not tracking the commingled fund, it appears that Investors are increasingly motivated by the hunger for greater portfolio customization rather than just greater transparency, reduction of co-investor risk, and control

VII. CONCLUSIONS

This study provides a snapshot of how HF Managers have been impacted by the recent financial crisis as well as how they have adapted to the new environment created by it. While many of the findings of the study confirmed long-held beliefs, some definitely challenged them. Overall, the changes reflect a maturing of the Hedge Fund industry and the acceptance by Managers of the greater burden of accountability and transparency they must bear. That most Managers appear to have embraced and responded to these changes in a manner that brings them closer to their Investors is a great development that augurs well for the future of the industry as a whole.

In the spirit of providing some actionable suggestions, we invite HF Managers to consider the following:

1. Continue to pursue intelligent Investor diversification

There continues to be a trend towards more Institutional Investors going 'direct' in making allocations to Hedge Funds. FoHFs have retrenched and now represent a smaller percentage of most HFs' Investor base than before. We expect both of these trends to moderate over time. FoHFs have demonstrated the value they bring to the table for Investors (e.g., by setting up and managing separate account platforms for large Institutional Investors or by helping identify emerging Managers) and have considerable staying power.

HF Managers should continue to pursue a sensible goal of Investor diversification over time. Our analysis suggests that an AUM base that is

~50% Institutional Investor driven is probably ideal for the average HF and, beyond this, Managers should look to grow their AUM from Family Offices, HNWs, and FoHFs (both Institutional and HNW focused).

Geographic diversification continues to make sense, provided regulatory changes do not place an undue burden on HFs trying to meet that goal. Managers whose HF strategy and related liquidity or leverage requirements do not get in the way, should consider launching a UCITS vehicle to tap into European Investors as a way to achieve this diversification. Raising assets in certain European countries (e.g., Germany) may be more difficult without the use of a UCITS vehicle.

2. Be thoughtful about making changes to fees and liquidity terms

While Investors have, on average, won concessions from Managers on fees and liquidity, some of the larger and better performing HFs have successfully resisted this trend and maintained existing terms without a negative impact on AUM. Given where we are in the business cycle, it is unlikely that further concessions on terms will continue to be made because we are close to equilibrium on what Investors want and what HFs are willing to offer. Having said that, HF Managers should continue to respond thoughtfully to Investor demands but be careful about making changes to fee and liquidity terms that may already be in line with peers or may bring little in the way of incremental assets. Our analysis tells us that liquidity changes are more likely to support asset inflows than fee changes. This is predicated on the fact that fee structures tend to be fairly similar at most HFs and therefore, where this is the case, Investors will focus more on getting liquidity terms that are appropriate for the strategy.

Clearly, Managers that have fee structures that are significantly higher than the typical 2/20 arrangement will continue to find it difficult to engage some Institutional Investors. While a higher fee structure may be justifiable based on the business model adopted and may even bring Investors better returns over time, these HFs must address the powerful need to provide Investors with metrics based analyses that prove the point.

HF Managers should continue to give consideration to adding share classes that can help target Institutional Investors. There is a trade-off between liquidity and fees, as demonstrated by our analysis, that can be used to address different Investors' needs. The real question for Managers is – what is the likely negative impact on your current Investors of adding a new share class and would any resulting asset inflows more than make up for this impact? This is a question that all Managers must answer for themselves to see if it makes sense to make such changes.

3. Provide transparency consistently across Investors

It is a fact that Managers have made significant improvements to the quantity and quality of information provided to Investors in the last two years. Much of this change has been driven by increased Investor involvement and by vastly increased sophistication / skill levels of Investor resources that liaise with HF Managers.

While we welcome all the changes that Managers have made to provide greater transparency to Investors, we invite HFs to consider adopting even more formalized protocols to increase the consistency in the information provided to different types of Investors to head off any future scrutiny and criticism of current practices.

Finally, we encourage all Managers to focus on building stronger and closer relationships with their Investors. Highly successful Managers become strategic partners of key Institutional Investors by collaborating with them on customized products or advising them on topics beyond the immediate day to day relationship (e.g., on investing in specific geographies, advice on specific capital markets products, help in presenting specific issues to their board of trustees).

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TOUR D'EUROPE

CAPITAL SOLUTIONS
HEDGE FUND INTELLIGENCE

October 2010

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CONTENTS

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I. OBJECTIVES AND METHODOLOGY

Prompted by questions from Barclays Capital's hedge fund clients, the Strategic Consulting team decided to embark in a Tour of Europe for a diagnostic study of the current landscape and 12-month outlook of European investors in hedge funds. We set ourselves the task of answering the following questions:

- Current landscape:
  - What is the total amount of investable assets held by European investors?
  - How much is allocated to hedge funds (HFs)?
  - What is the distribution of HF assets, by geography and investor type?
  - How much of these assets are invested direct versus funds of funds (FoFs)?
- 12-month outlook:
  - How much European money will be invested in HFs in the coming 12 months?
  - What type of investors are likely to be most active?
  - What type of products (e.g., offshore, UCITS, managed accounts) will attract the most assets?
  - What are European investors' preferences in terms of risk-reward, liquidity, strategy types and manager characteristics?

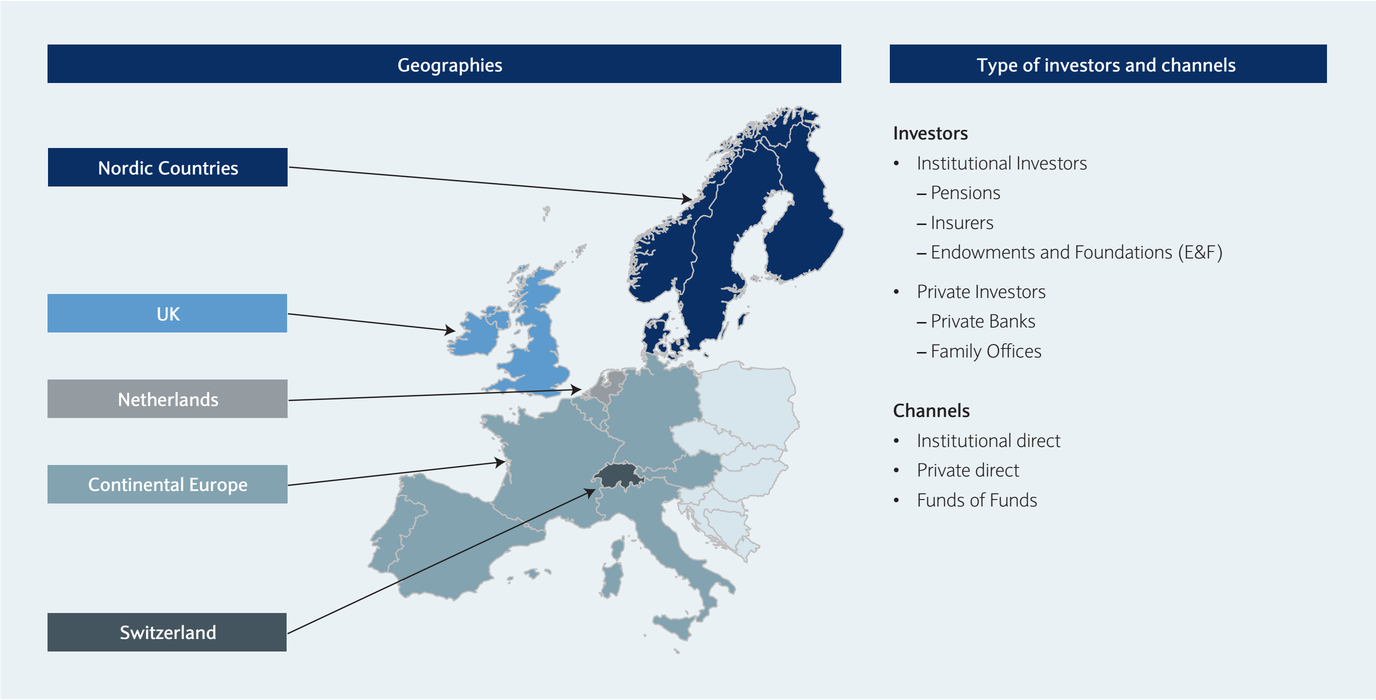
As Figure 1 shows, we segmented the space based on type of investor and geography.

- Five investor types have been considered: Pensions, Insurers, Endowments and Foundations (E&F), Private Banks and Family Offices. The first three types together are considered the "Institutional" segment, with the last two as the "Private" segment
- Four geographies have been analyzed separately: the UK, the Nordics, the Netherlands, and "Continental Europe" (comprising the rest of Western Europe)

We also analyzed separately the three channels through which money from end investors reach HF managers:

- "Institutional direct", where money flows directly from the institutional segment to HF managers. If an institution uses consultants as advisors for its investments, this would still be considered institutional direct channel
- "Private direct", where money flows directly from the private segment to HF managers
- "Funds of Funds", where both private and institutional money

FIGURE 1: PERIMETER OF ANALYSIS



flows to HF managers through discretionary products or services (e.g., funds of funds' products or customized portfolios)

There are some grey areas in these classifications. For example, we considered assets in a private bank-captive funds of funds with limited external money as "private direct" channel.

We adopted a two-pronged approach in order to answer the key questions of the study (see Figure 2):

- Conducted an extensive market sizing research effort across all major investor types and regions in Europe, as per the definitions above
- Conducted in-depth interviews with 40 major investors in Europe, representing 25% of the total HF assets held by European investors

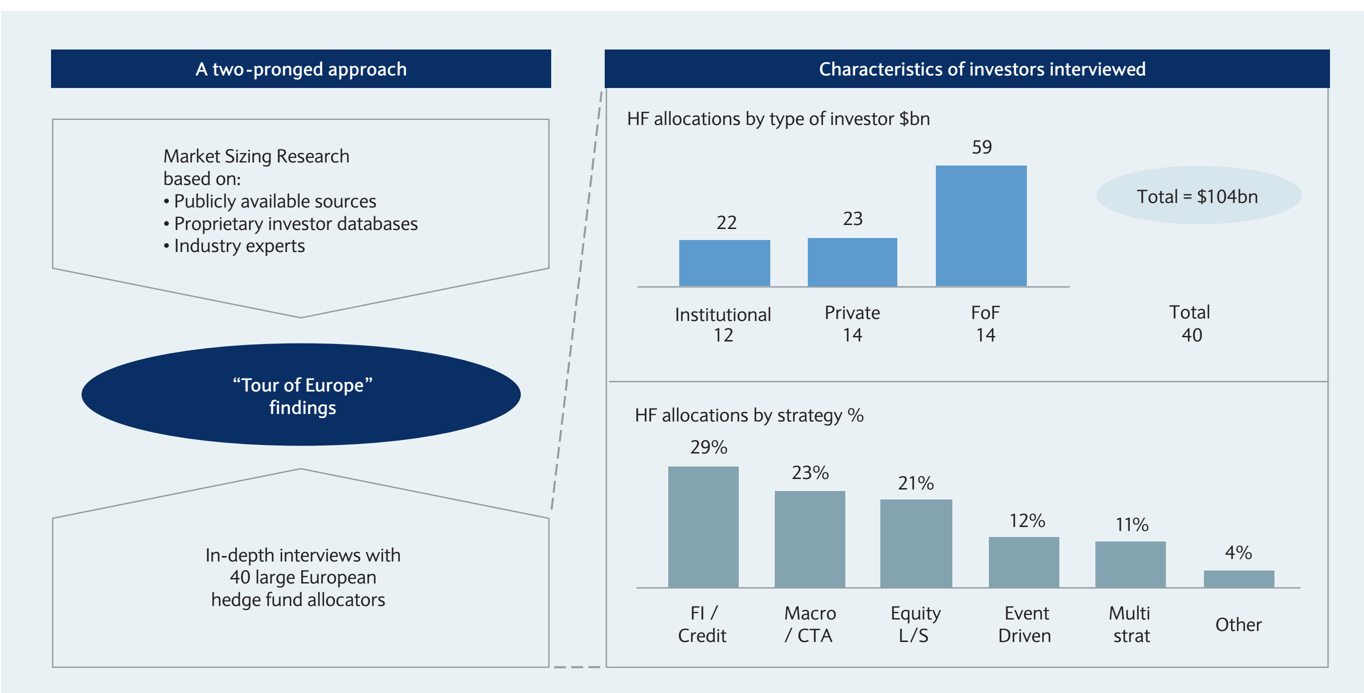
Market sizing research

Over the course of the last three months, Strategic Consulting developed a comprehensive market sizing model aimed at assessing European investable assets and allocation to hedge funds by segment.

We adopted the following steps to estimate the investable assets, allocation to hedge funds, hedge fund assets, and assets by channel:

- European investable assets were assessed by comparing and triangulating estimates from a mixture of publicly available and proprietary sources, including (most notably) OECD[1], CEA[2], Capgemini World Wealth Report (2010) and BCG Global Asset Management Report (2010)
- The percentages of the total investable assets allocated to Hedge funds were estimated on a segment-by-segment basis by comparing four sources:
  - Investors interviews – 40 in-depth interviews specifically conducted for this project (see description of interviews below)
  - In-house investor database – which records data and insights from our continuous dialogue with the investor community
  - Industry information providers – for example, we extensively used Prequin as a source of investor-level data
  - Industry experts – enabling the compilation of up-to-date information from investor specialists within Barclays Capital
- Hedge fund assets were calculated as the product of total investable assets and hedge fund percentage allocation figures

FIGURE 2: METHODOLOGY



[1] OECD: Organization for Economic Cooperation and Development

[2] CEA: Comité Européen des Assurances

- Finally, assets by channel were calculated using the same sources used for hedge fund allocation

Investor interviews

The Strategic Consulting team has conducted 40 in-depth interviews with European hedge fund investors in the period of August 2010 through September 2010. We chose to capture investor sentiment by means of in-depth dialogue with European investors as opposed to a broad, template-based survey in order to deepen our understanding of the core issues faced by investors, specifically focusing on the reasons and constraints underlying their preferences.

Figure 2 depicts the distribution of the study's participants by type in terms of number of investors and total hedge fund assets. It also shows the allocation to different strategies for the cumulative assets held by the interviewed investors. Key highlights to note:

- The 40 investors invest a total of $104bn of assets in hedge funds, representing 25% of our estimate of total HF investment from all European investors
- There is a fairly good distribution of HF assets across each of the different strategies

II. EXECUTIVE SUMMARY

The following are the key findings on the two main topics addressed by the study:

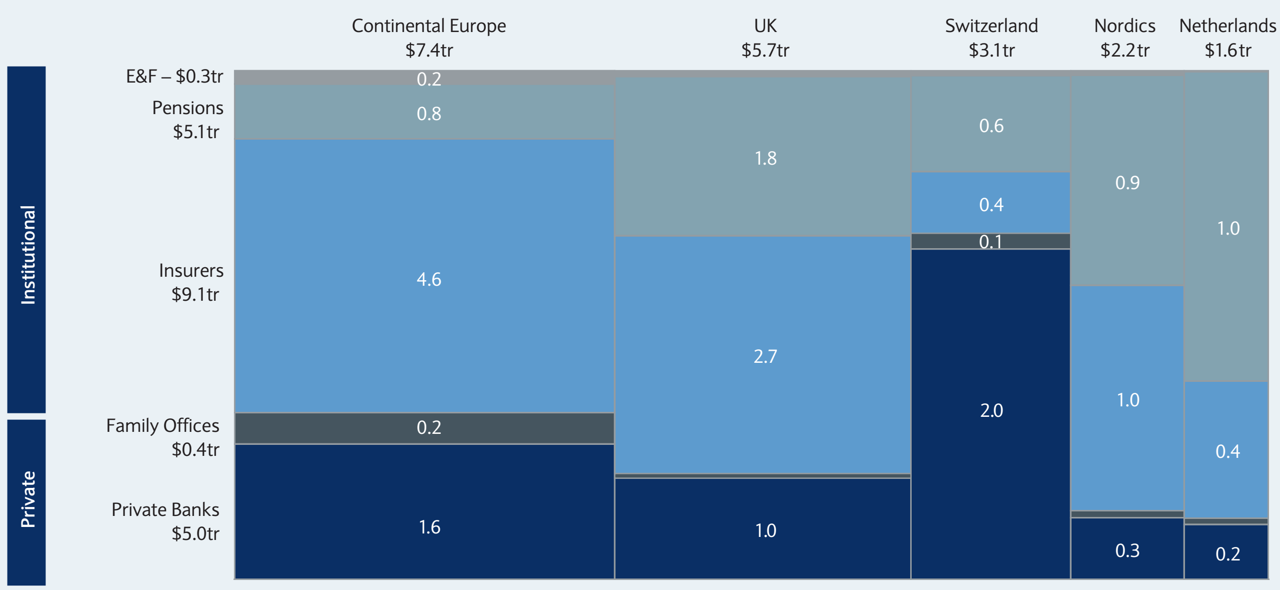
Investor landscape

- European investable assets are estimated to be ~$20 trillion, of which ~$400 billion are invested in hedge funds (~2%)
- Institutional investors hold the majority of investable assets (73%) but have a lower percentage allocated to hedge funds than private investors (1.2% versus 4.4%), due to liability and regulatory constraints. As a consequence, hedge fund assets are split approximately 40%/60% between institutional and private investors
- Private banks (by investor type) and Switzerland (by geography) are the largest investors in the hedge fund industry
- Funds of hedge funds currently capture 40% of total hedge fund assets invested by European investors. This does not include FOFs captive to private banks or family offices, which we classified as "Private Direct" channel

12-month outlook

- We estimate there will be ~$52bn of "money at play" in the next 12 months, of which net flows will represent $12bn

FIGURE 3: EUROPEAN INVESTABLE ASSETS BY SEGMENT – JUNE 2010



Source: OECD, Tower Watson, CEA, Cap Gemini, BCG, Scorpio Partnership, Strategic Consulting proprietary market sizing model

- The institutional direct channel will represent half of the net flows to the industry, driven by institutional investors' higher appetite for hedge funds compared to private investors and by the trend of moving to direct investment
- Funds of Funds that will successfully move towards a service-based (as opposed to a product-based) model in response to investors' demand for more control and customization will be able to consolidate their position in the market
- UCITS products represent only 5% of institutional and private HF assets but will be a key driver of net flows over the next 12 months
- The bulk of institutional and private demand falls under liquid and low risk strategies. However, there is growing demand for directional strategies with a higher risk / reward profile from a growing number of investors who treat HFs as equity substitutes
- Strategies in which our interviewees have expressed most interest are those underpinned by a theme (e.g., Event Driven or Emerging Markets) or those that usually come with high liquidity (e.g., Equity Long / Short, Macro)
- Investors have been reducing the number of HF managers they invest in, although the trend is almost over, and have regained the appetite to invest into mid-sized managers ($500m to $1bn for private investors and $1bn to $5bn for institutional investors) after a few years where only the largest funds ($5+bn) attracted flows

III. INVESTOR LANDSCAPE

We analyzed the investor landscape along four dimensions

A. Total investable assets

B. HF allocations

C. HF assets by segment

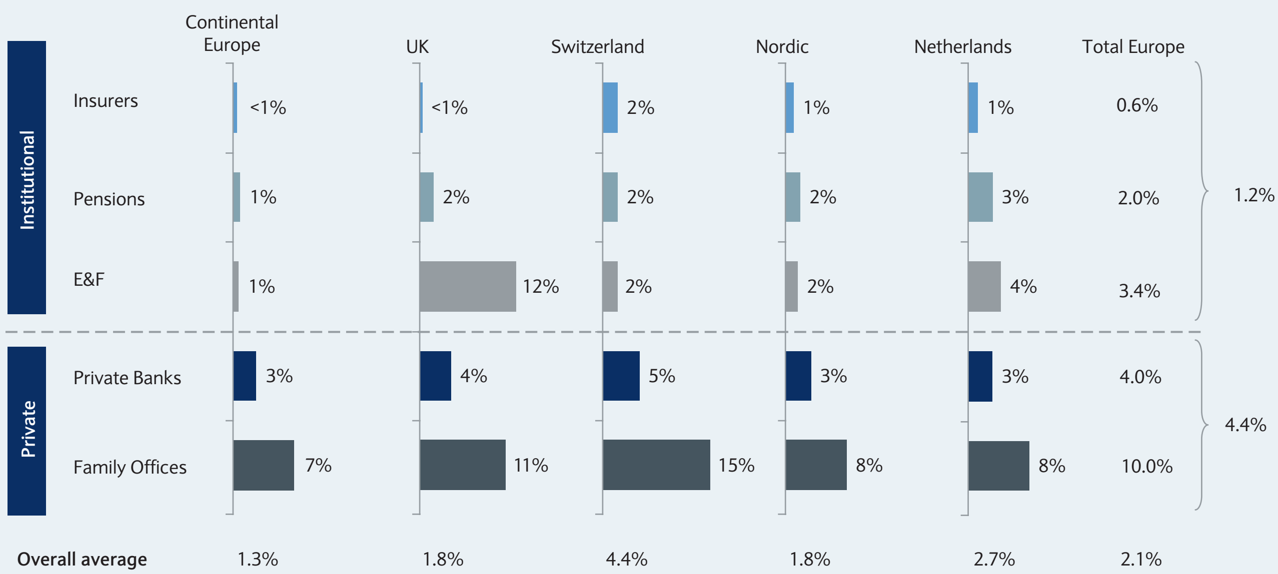
D. HF assets by channel

A. Total investable assets

We estimated that European investors have ~$20 trillion in investable assets. Figure 3 depicts the map of investable assets by investor segment as of June 2010. Key points to note are:

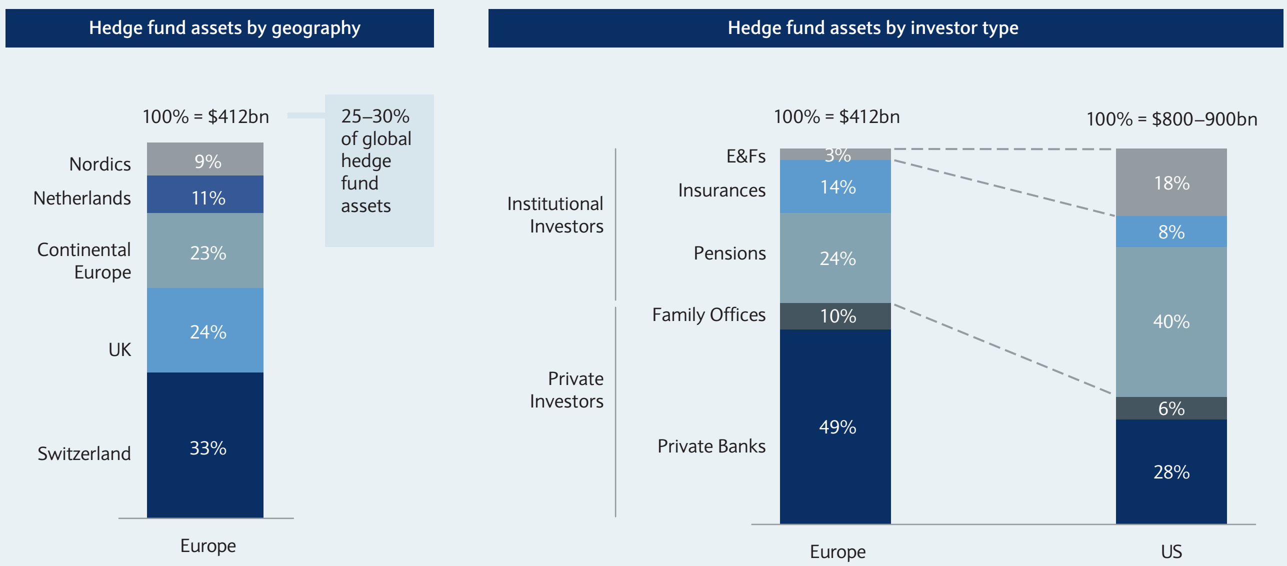
- Institutional investors hold the majority of investable assets (73%), with insurers alone holding 45% of the total
- Continental Europe, not surprisingly, is the area with the majority of the investable assets (37% of total), followed by the UK and Switzerland

FIGURE 4: HF ALLOCATIONS AS A % OF PORTFOLIO – JUNE 2010



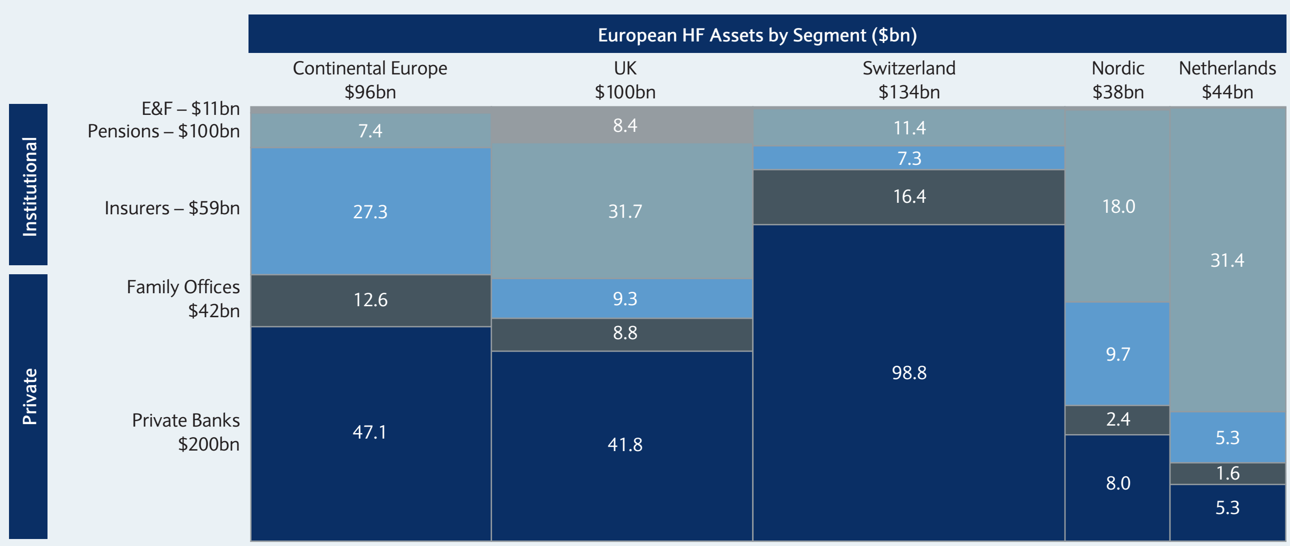
Source: Strategic Consulting proprietary market sizing model

FIGURE 5: TOTAL HEDGE FUND ASSETS HELD BY EUROPEAN INVESTORS – JUNE 2010



Source: Strategic Consulting proprietary market sizing model

FIGURE 6: TOTAL HF ASSETS BY SEGMENT – JUNE 2010



Source: Strategic Consulting proprietary market sizing model

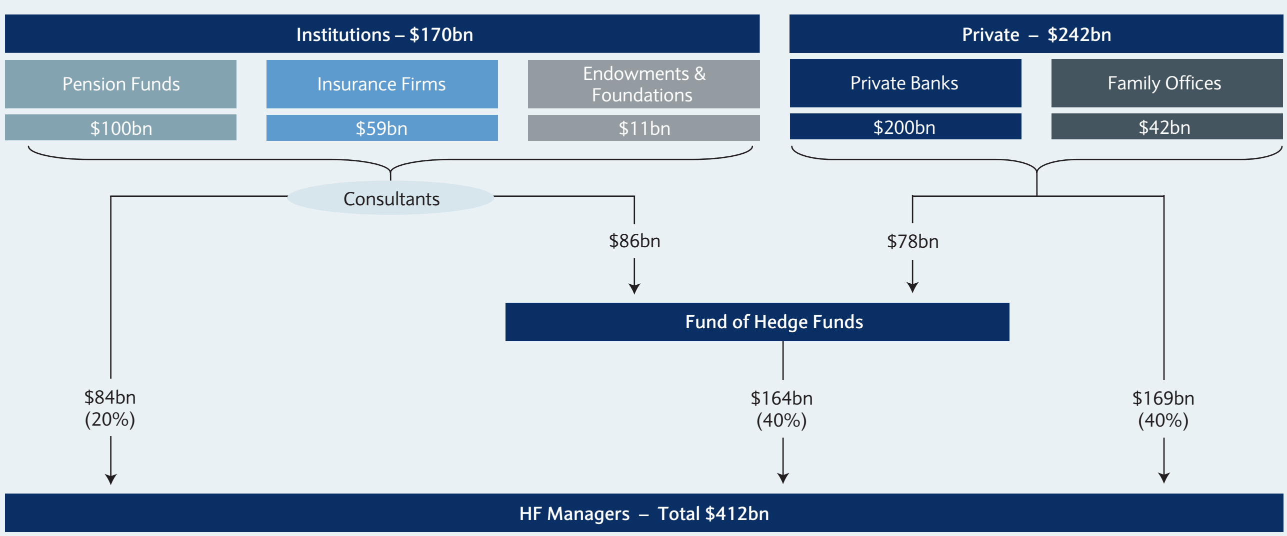
- The composition of investable assets by type of investor is very different for each of the regions:
  - Continental Europe is very insurance-heavy (62% of total investable assets)
  - Swiss assets are very weighted toward Private Banks (65% of total investable assets)
  - Nordic and Netherlands are very institutional-led regions (87% of total investable assets)
  - The UK has the most balanced profile, with 47% of assets held by insurers, 32% by pensions and 18% by private banks (the remainder being held by family offices and E&Fs)

B. HF allocations

Figure 4 shows the allocations by segment to hedge funds as a percentage of investable assets for each geography and investor type. Such allocations do not represent the typical allocation of an investor that invests in hedge funds, but of all investors in that segment. So, for example, UK pension funds investing in hedge funds allocate around 5% of their assets to the asset class. However, less than 50% of UK pension funds do invest in hedge funds at all. Hence, the overall allocation for the industry is ~2%, which is the number appearing on Figure 4. The key points to note are:

- Institutional investors have a much lower percentage of assets invested in hedge funds versus private investors (1.2% versus 4.4%). Insurers in particular, because of liability and regulatory constraints, allocate less than 1% of their total investable assets to HFs
- Endowments and Foundations have a lower allocation to Hedge Funds compared to their counterparts in the US: 3.2% versus ~14%[3]. This is due to foundations in Continental Europe having the majority of their assets locked in strategic holdings. The exception is the UK, where there are some large institutions with allocations greater than 20% to hedge funds
- Private banks have seen their hedge fund allocations reduced in the past couple of years. It is now ~4% compared to an estimated ~6% pre-crisis[4]. Most of the private banks interviewed have seen their redemptions subside and a minority of them are now seeing net inflows
- Family offices are by far the largest allocators to HFs in percentage terms (10%). However, there is still potential to grow their percentage allocation further as the majority of family offices interviewed stated they felt they were currently underweight in HF investments (compared to historic and targeted HF allocations) while being overweight in asset classes such as cash and gold

FIGURE 7: TOTAL HF ASSETS BY CHANNEL – JUNE 2010



Source: Strategic Consulting proprietary market sizing model

[3] See our previous report called "Picking Up the Pieces", published in May 2009

[4] Pre-crisis number based on extrapolations from interviews conducted with Private Banks

C. HF assets by segment

Hedge fund assets held by European investors are determined by taking the total investable assets by segment and multiply it by the hedge fund allocations percentages. Figures 5 and 6 show that, of the ~$20 trillion of European investable assets, $412 billion are currently invested in hedge funds (~2%). This is equivalent to 25–30% of the global hedge fund assets. Figure 5 shows the distribution of hedge fund assets by geography and by investor type, while Figure 6 gives the details on a segment-by-segment basis.

From a geographical perspective, Switzerland is the largest region in terms of hedge fund assets, with $134bn. The UK and Continental Europe follow with $100bn and $96bn, respectively. It is interesting to note that if only institutional assets are considered, the UK is by far the largest market, with ~$50 billion in assets invested in hedge funds.

From an investor type perspective, private banks are the largest investors in hedge funds, holding $200bn out of total $412bn, with half of such assets originating from Switzerland. The second largest segment type is Pension funds, with $100bn in hedge fund assets. More than 60% of these assets are located in the UK and the Netherlands. Finally, insurers are the third largest segment, with $59bn in hedge fund assets.

If we compare the composition of European hedge fund assets with that of the US, we see how Europe is more weighted towards private investors than institutional investors: private investors represent ~60% of Europe's hedge fund investor base versus only ~35% of the US investor base. In particular, Europe is underweight E&F (3% versus 18%) and pensions (24% versus 40%) while being significantly overweight private banks (49% versus 28%).

D. HF assets by channel

Finally, one important question we investigated in the study is how much of the assets from end investors flow to managers directly versus through funds of funds. This is not an easy question to answer: there are data on assets held by Europe-based funds of funds but some of the European investors place their money in non-European funds of funds and, vice versa, non-European investors place money in Europe-based funds of funds. As we treat funds of funds as a channel, we are interested to know the amount of money from European investors going into funds of funds, regardless of the domicile of the funds of funds.

Figure 7 shows the results of our analysis. The key points to note are:

- 40% of European money reaches managers via the funds of funds channel, 20% via the institutional direct channel, and 40% via the private direct channel
- Surprisingly, almost half of the HF investments from European institutional investors reach the managers directly, not via funds of funds. However, for a majority of such assets, pension consultants are key gatekeepers
- There is a geographical bias in the three channels; the majority of the assets in the institutional direct channel comes from the UK and Netherlands; funds of funds are mostly located in Switzerland and the UK; the assets in the private direct channel are uniformly distributed in the five regions

IV. 12-MONTH OUTLOOK

The outlook presented in the following pages is predominantly based on the responses received from the 40 in-depth interviews conducted over the past two months. However, information collected from additional sources was also used in this project to correct for the inevitable sample bias that any interview-based results have. To recap, the key questions we address are:

A. How much money will European investors put to work in the coming 12 months?

B. What types of investors are likely to be most active?

C. What types of products (e.g., offshore, UCITS, managed accounts) will attract the most assets?

D. What are European investors' preferences in terms of risk-reward, liquidity, strategy types and managers?

A. How much money will European investors put to work in the coming 12 months?

We defined the money put to work using three different metrics:

- "Net flows" represent the additional money coming into the industry. If investors withdraw money from managers in aggregate, "net flows" will turn into "net outflows"
- "Turnover" is money invested in a manager that was already invested in another manager. There is no additional money for the industry in aggregate: money is just shifted from one manager to another
- "Money at play" is the sum composed of "turnover" and "net flows", and represents the gross investment in the HF industry

Figure 8 shows our estimates for the money at play, and the components of turnover and net flows for the next 12 months as derived from our interviews. There is both good and bad news here:

- The good news is that European investors are likely to put to work $52bn of assets in hedge funds in the next 12 months

- The bad news is that 75% of such assets are turnover; "re-cycled" assets coming out of a manager and allocated to another manager

Turnover as a percentage of assets is expected to be ~10%, consistent with historical turnover, but lower compared to the 10–15% levels for 2009 and the 20–30% levels seen at the end of 2008 (see "Picking Up the Pieces", the Strategic Consulting report published in May 2009).

Net flows into the industry are the most difficult component to predict as they are quite volatile. Just to give a perspective on this, net flows as a percentage of total assets in the global hedge fund industry in the past 10 years have been in a range from -9% in 2008 to +18% in 2002[5]. Our interviews suggested that net flows in the next 12 months will be around $12bn, equivalent to 3% of the hedge fund assets currently held by European investors. This estimate is not high when compared to pre-crisis levels, but would still mean a reversion of the net outflows experienced by the industry over the last couple of years.

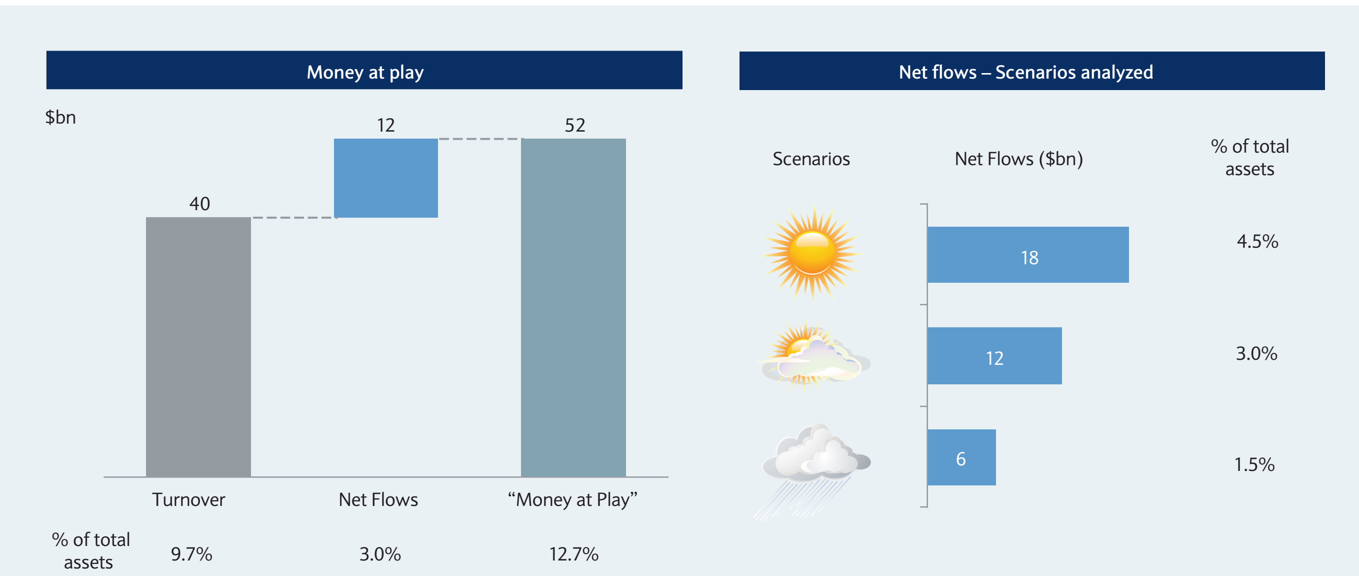
Given the difficulty in predicting net flows, we also ran two alternative scenarios. Investors interviewed told us that one of the main reasons of limited net flows to (or outflows from) the hedge fund industry during 2010 was hedge funds' disappointing performance. The two alternative scenarios are therefore based on the relative performance of hedge funds versus other classes. In the pessimistic scenario, net flows will be only $6bn, equivalent to 1.5% of total assets. It is important to note that this is only a relatively pessimistic scenario: it is just based on a relative underperformance of hedge funds, particularly versus fixed income indices; it excludes potential liquidity and reputational crises, which could easily put net inflows into reverse. In the optimistic scenario, net inflows could reach $18bn, equivalent to 4.5% of total assets.

It is also interesting to note that the composition of net flows by investors will be very different in each of the scenarios. Although both private and institutional investors are influenced by the relative performance of hedge funds, private investors are more sensitive than institutional ones. Therefore, we would expect the share of net flows coming from institutional investors to be much larger in the pessimistic scenario than in the optimistic scenario.

B. What types of investors are likely to be most active?

Figure 9 shows the net flows to hedge funds in the next 12 months as a percentage of current hedge fund assets, split by investor type, by geography, and by channel:

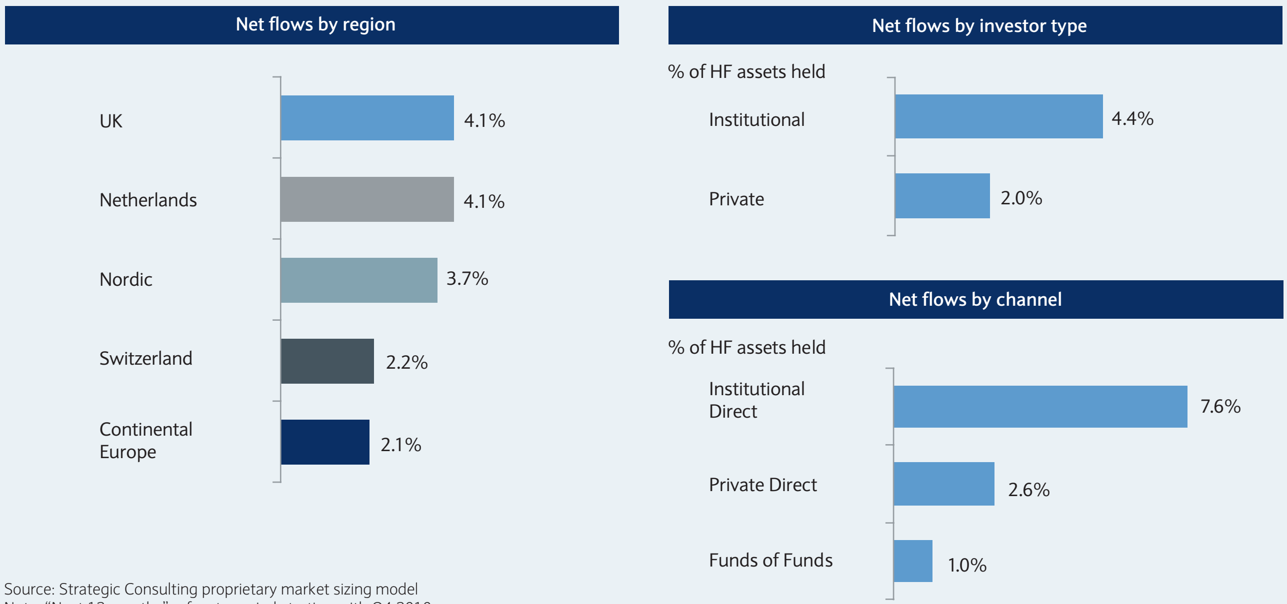
FIGURE 8: MONEY AT PLAY AND NET FLOWS – NEXT 12 MONTHS



Source: Strategic Consulting proprietary market sizing model
Note: "Next 12 months" refers to period starting with Q4 2010

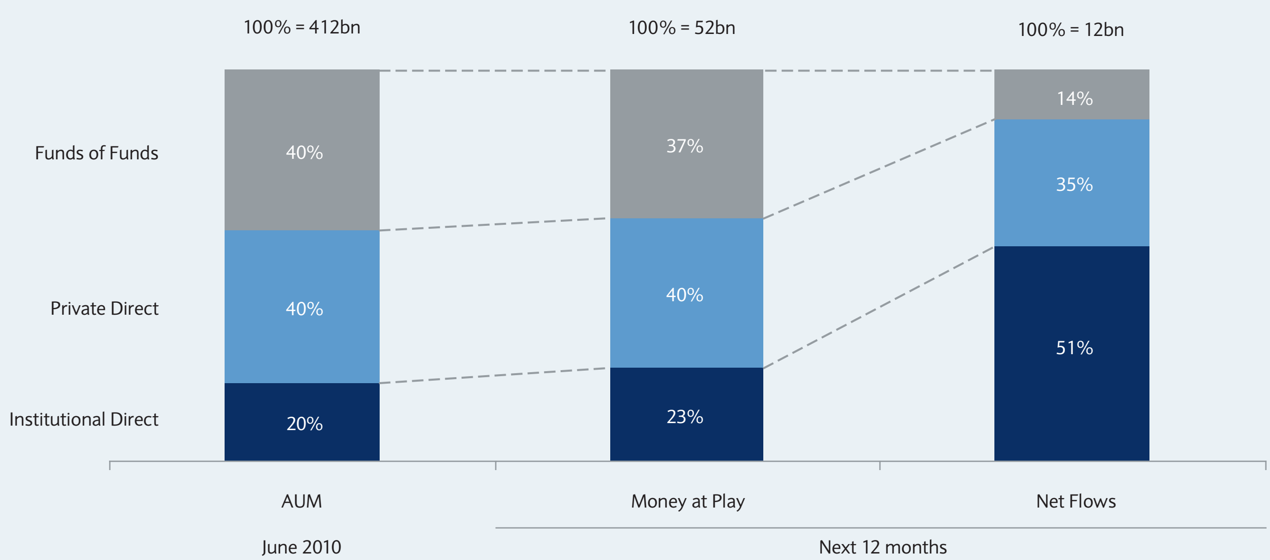
[5] Source: HFR

FIGURE 9: BREAKDOWN OF NET FLOWS BY REGION, INVESTOR TYPE, AND CHANNEL – NEXT 12 MONTHS



Source: Strategic Consulting proprietary market sizing model
Note: "Next 12 months" refers to period starting with Q4 2010

FIGURE 10: ASSETS UNDER MANAGEMENT, MONEY AT PLAY AND NET FLOWS BY CHANNEL



Source: Strategic Consulting proprietary market sizing model
Note: "Next 12 months" refers to period starting with Q4 2010

- Based on our interviews, we estimate that the net flows as a percentage of the current hedge fund assets for the institutional segment in the next 12 months will be 4.4%, as opposed to 2.0% for the private segment. There are also marked differences within the institutional segment, with pensions showing the highest propensity to increase allocations compared to insurers and E&Fs
- From a geographic point of view, the UK, the Nordics and the Netherlands are the top three regions for increased allocations to hedge funds in the next 12 months. This is mostly driven by the fact that these three regions have a higher proportion of institutional investors. Having said that, institutional investors in the UK showed a higher propensity to increase allocations than institutional investors in other geographies
- Finally, the institutional direct channel will experience the highest level of net flows (7.6%) compared to the private direct channel (2.6%) or the funds of funds channel (1.0%). This is due to the combination of two effects:
  - Institutional investors' higher appetite to increase allocations compared to private investors
  - The trend by institutional investors to move to a direct investment model

As a consequence of this, the institutional direct channel will represent approximately half of the net flows to the industry in the next 12 months, while only representing 20% of the current assets (Figure 10).

The trend towards a direct investment model, coupled with the demand from investors for more customization and control in their investments, is forcing the funds of funds industry to move away from a product-based offering towards a service-based model. The two key services in this model are:

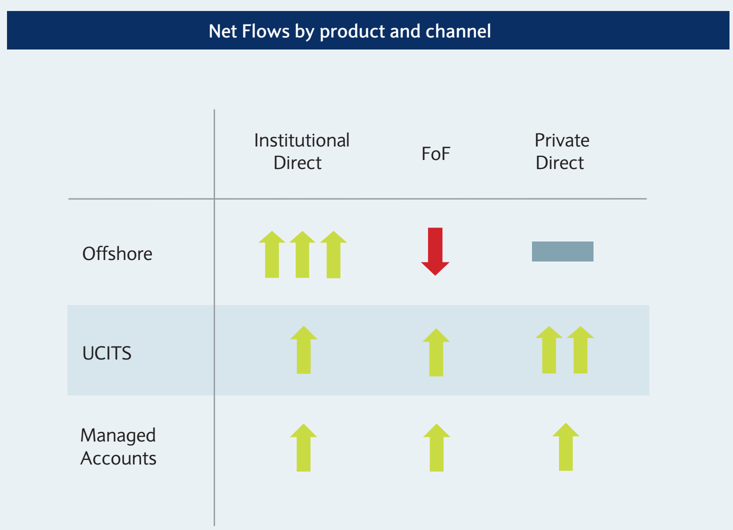
- Customized discretionary services. This means working with institutions to customize a portfolio that fits the requirements of a particular institution. This service is especially popular in Continental Europe where institutions seek control over the choice of the underlying assets while giving to a third party the fiduciary responsibility of manager selection and portfolio management
- Advisory services. These are services to institutions that prefer to go direct, but value the high-touch advisory services that a funds of funds can provide compared to consultants. Advisory services are currently a key battleground space between consultants and funds of funds in Europe

The need for customization and control is also pushing some

FIGURE 11: MONEY AT PLAY AND NET FLOWS BY PRODUCT – NEXT 12 MONTHS

Money at play by product

Product	% of total money at play
Offshore	75–85%
UCITS	10–15%
Managed Accounts	5–10%



Source: Strategic Consulting proprietary market sizing model
Note: "Next 12 months" refers to period starting with Q4 2010

of the largest funds of funds to managed accounts. This will be discussed in the next section.

The discretionary and advisory services that funds of funds are offering blur the line between the typical fund of fund product and the pure direct investment model. We believe that, in this grey area, there is plenty of space for a successful fund of fund industry. However, not all funds of funds will be able to cope with such changes, resulting in more consolidation in the industry.

The trend towards a direct investment model is certainly a positive development for managers. However, it will also pose its own challenges. Institutions' need for control and customization will affect managers too, as they will need to provide the same service levels that investors will receive from funds of funds. This will put more pressure on managers targeting the direct institutional channel to become real strategic partners to investors.

C. What types of products will attract the most assets?

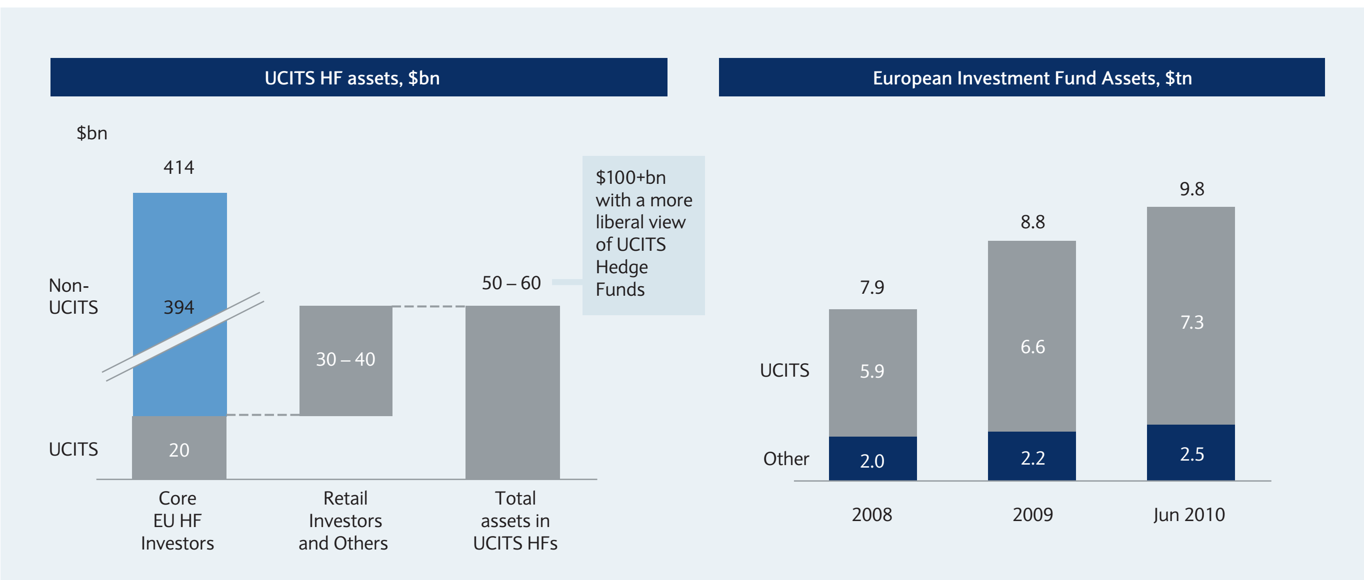
We tested the appetite of investors for three different product types: offshore funds, UCITS products, and managed accounts. The objective was to assess which product will attract the greatest amount of assets in the next 12 months.

As depicted in Figure 11, the majority of the money at play (75–85%) will be in offshore funds, vs. 10–15% for UCITS funds and 5–10% for managed accounts. This is hardly surprising, as the large majority of hedge fund assets are held offshore. However, the picture for net flows looks different and more difficult to quantify. In the past year, offshore funds had net outflows from European investors while UCITS funds and managed accounts had net inflows. Our interviews suggest that net inflows will return in the next 12 months into offshore funds, while UCITS and managed accounts will continue to attract net inflows.

Which product overall will attract more inflows is anybody's guess. What is clearer though is that product preferences differ significantly by investor channel:

- Net flows from the institutional direct channel will go mainly into offshore funds. A small number of large investors (minimum of $1 bn invested in hedge funds) consider managed accounts as their preferred vehicle and are still in the process of moving assets from offshore funds to managed accounts. Customization and control are again the main drivers for this move. There is also some demand for UCITS, particularly from investors in Continental Europe. However, at least part of such demand is a temporary phenomenon, driven by regulatory uncertainty (more on this topic later)

FIGURE 12: UCITS MARKET SIZING



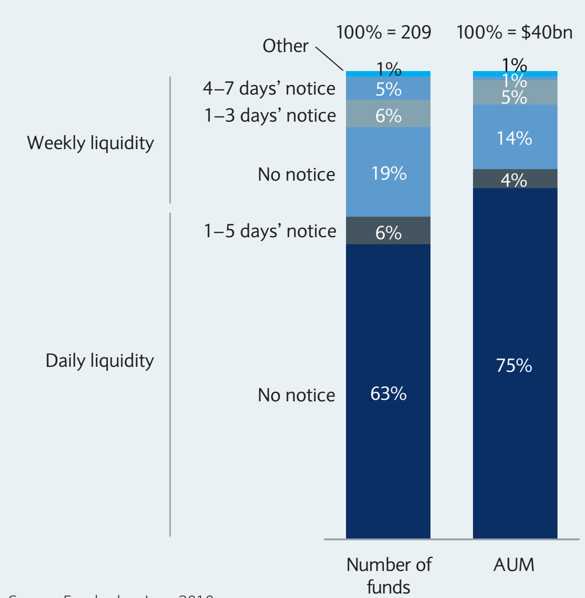
Source: Strategic Consulting proprietary market sizing model, EFAMA
Note: Sizing as of June 2010

- Net flows from funds of funds to managers over the next 12 months will be in UCITS and managed accounts, while we expect slight net outflows in traditional offshore funds. A number of large funds of funds are moving assets from offshore to managed accounts as a value proposition for clients looking for better control, liquidity, customization and transparency. Funds of funds are also moving assets to UCITS, either as a means to increase the liquidity profile of their portfolio, or because of the launch of specific funds of UCITS funds, which they believe will gain more and more interest over time
- Net flows from the private channel are expected to be mostly into UCITS

The UCITS hedge fund market, while growing, is still in its infancy and is still very small compared with the offshore hedge fund market. Estimates as of June 2010 range widely, from $40bn to $100+bn and are a function of what exactly is included. Between the pure hedge fund strategies replicated in UCITS format and the traditional long only funds, there is indeed a grey area, which includes, for example, "130/30" funds. Using a more conservative approach on what to include, we estimated the overall market at $50–60bn (see Figure 12).

From an investor perspective, the UCITS market can be broken down in three components:

FIGURE 13: UCITS HEDGE FUNDS LIQUIDITY TERMS



Source: Eurohedge, June 2010

[6] European Fund and Asset Management Association

- Core European hedge fund investors (the ones analyzed in this study). These currently only have an estimated 5% of their assets in UCITS funds, representing around $20bn
- European retail investors. These are investors who could not invest in offshore hedge funds but, thanks to UCITS, can be exposed to hedge funds for the first time
- Non-European investors. It is unclear how much of the HF UCITS are held by non-European investors, but anecdotal evidence points to increasing interest from Asia and South America. EFAMA[6] reckons that 40% of total UCITS funds are held by non-Europe-based investors

The case for retail investors to invest in UCITS hedge funds is very straightforward. Packaging hedge fund strategies in the UCITS format will give them the opportunity to invest in an asset class that they were precluded from. The potential is huge. There are currently $9.8 trillion in assets in European investment funds, of which $7.3 trillion in UCITS format. Given the low returns expected on fixed income funds and the volatility of equity funds, UCITS hedge funds have the potential to grow well beyond the insignificant share they have today in this market.

However, for managers trying to jump on the UCITS bandwagon, it is important to consider the following:

- To reach retail clients, distribution is paramount. Large established asset managers have an advantage over more boutique firms as they already have a distribution force focused on Independent Financial Advisors (IFAs), fund platforms, and retail banks in Continental Europe, sometimes with pre-existing agreements that could be extended easily to UCITS hedge funds
- The retail market is a higher volume / lower margin business than the offshore hedge fund business, meaning that scale becomes a very important success factor. Again, a boutique hedge fund needs to significantly transform itself to be successful in this market
- Pricing might be an issue. Managers launching a replica of their flagship fund in UCITS format will not want to have lower fees charged for the UCITS fund, to avoid cannibalization. However, the retail market is not used to the high fee structures of typical offshore hedge funds

The case for traditional hedge fund investors to switch to UCITS funds is less straightforward. Let's discuss private investors and institutional investors separately.

UCITS demand from private investors is partly a reaction from the 2008 crisis and the consequent "liquidity trap" a lot of private investors found themselves in. Daily or weekly liquidity, regulator "stamp of approval", less perceived risk (due to limitations on leverage and concentration levels) and more transparency are the critical ingredients that private investors require right now. Although part of the demand is a reaction to the 2008 events, we believe the strong preference for liquidity is here to stay.

For a manager targeting this segment with a UCITS product, it is essential to establish a clear distribution strategy. Partnering with private banks or funds of funds with strong distribution networks before launching any product could be an effective way to secure distribution. Bank-led UCITS platforms could also help gather assets.

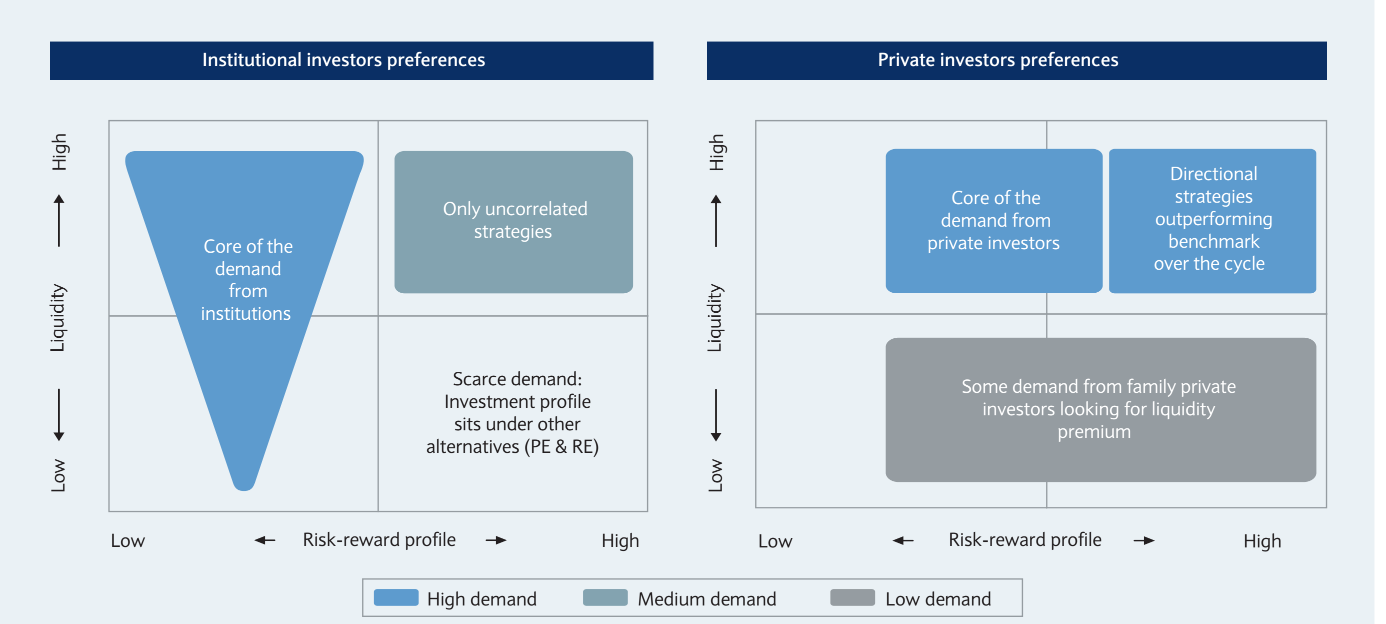
Moving to institutional investors' motivations for UCITS, they can essentially be brought down to three:

- Regulation uncertainty. The uncertainty around the AIFM directive and the overall political climate against hedge funds makes them prefer to invest in regulated structures (i.e., UCITS). This should be only a temporary driver for UCITS demand
- Easier integration with core assets. There has long been a debate as to the best way to categorize and manage hedge funds within the overall portfolio of an institution, i.e., as a distinct asset class or integrated and managed within traditional asset classes, depending on the underlying investments (e.g., equity L/S managed within the equity "bucket"). Although the integrated approach is more appealing from a theoretical perspective, European institutions primarily treat hedge funds as a separate bucket. This is mainly due to different product types (onshore versus offshore), different skills required in selecting the investments and different levels of internal approval requirements. UCITS hedge funds (as, in a different way, managed accounts) present investors with an opportunity to move towards an integrated approach, a structural reason that could underpin significant flows to UCITS hedge funds in the future, provided that UCITS funds deliver a performance comparable to their offshore equivalents
- Tactical liquidity parking. Some institutions view UCITS hedge funds as liquidity vehicles, likening them to "enhanced money market" funds. This is a tactical driver, and unlikely to drive significant flows in UCITS in the future

Given the above, we believe there is currently not enough demand to justify launching a UCITS fund to target institutions, unless existing clients ask for it. The situation could change if the approach of integrating a UCITS hedge fund in the traditional allocation really takes off.

Finally, managers considering joining the UCITS race should ask themselves whether their strategy fits within the UCITS

FIGURE 14: INVESTORS PREFERENCES – LIQUIDITY AND RISK-REWARD PROFILE



Source: Strategic Consulting interviews with investors framework. There are a series of well documented restrictions for UCITS funds (e.g., on leverage, concentration, physical shorting), and most of these can be worked around. However, there is no working around the fact that 63% of the UCITS funds (and 75% of the assets) offer daily liquidity with no notice period (Figure 13). If the levels of liquidity required by UCITS investors do not make sense for the strategy run, it is better to avoid launching a UCITS fund. Beyond the potential reputational issues should any liquidity event happen, the UCITS product will necessarily become a different product than the offshore one. Leveraging performance off the offshore fund to market the UCITS version would therefore become very difficult, and the UCITS fund will have to gain a few years of good performance before being able to gather significant assets.

D. What are European investors' preferences in terms of risk-reward, liquidity, strategy types and managers?

Risk-reward and liquidity

During the 40 in-depth interviews, we tested investors' preferences in different areas. Their risk-reward and liquidity preferences emerged early on as the two most important characteristics of discrimination when making investments. Figure 14 shows the preferences of institutional and private investors in a matrix where the two axes are liquidity and risk-reward profile.

The core of the institutional demand sits in the two left quadrants, with a bias towards the top left quadrant. This means that institutional investors have a conservative risk-reward profile and a preference for liquidity (although they are selectively open to less liquid strategies). More specifically:

- The preferred risk-reward profile is libor +400–600bps with a volatility of 4–6%, optimally with no / limited correlation with equity indices. This profile is consistent with the most common view of hedge funds: alternative assets delivering "absolute return". Some institutional clients will accept higher risk / volatility but only for strategies considered a good hedge to the rest of the portfolio. Here the key test for investors is whether the strategy made money in 2008. Some CTA and macro strategies pass this test. We did not find significant differences in preferred risk-reward profile across the regions in Europe, while, from an investor type point of view, E&Fs tend to have a higher tolerance for risk than pensions and insurers
- The liquidity preferences are more diverse. Institutions in Continental Europe (particularly insurers) are biased towards high liquidity (typically, monthly +30), while pension funds in the UK, the Netherlands and the Nordics are more willing to accept less frequent redemptions (quarterly, with a few Nordics going for semi-annual) if the strategy commands it

In contrast, the core of the private demand lies in the top two quadrants. This means liquidity is the most important dimension for private investors.

- The preferred liquidity profile still reflects the wounds left by the 2008–9 crisis:
  - Monthly liquidity; quarterly (or monthly +90) only if really required by the strategy
  - No hard locks
  - No mandatory side pockets
  - Low appetite for investor-level gates, in particular if driven by size of fund – which is a key difference from US investors, who are more open to them
- In terms of risk-return, the demand falls into two distinct groups:
  - The first group, which represents the majority of the demand, considers hedge funds as "uncorrelated" absolute return products with limited downside and seeks them mostly for the purpose of wealth preservation as opposed to wealth accumulation. However, hedge funds have greatly disappointed this group of investors in 2008 as they did not deliver on their promise of "absolute return"
  - The second is a smaller but growing group of private investors who evaluate HFs not as "low risk absolute return" assets but as equity-substitute risky assets whose objective is to beat an underlying index over the cycle with less volatility. These investors were not disappointed by the hedge fund performance during the crisis (they were for their unexpected lack of liquidity), and therefore are currently the group most interested in investing (in liquid strategies). They generally look for directional strategies (less concerned about beta exposure) targeting 10%+ returns with single digit volatility
- There is limited demand for strategies in the bottom two quadrants, mostly coming from few family offices or private banks seeking liquidity premia
- There is not a significant difference between these preferences by region and investor type (family offices versus private banks)

Strategy preferences

There are a lot of surveys showing strategy preferences for managers. What our interviews allowed us to do is to understand the main two drivers of the current strategy preferences:

- Expected performance: event driven and emerging markets are two strategies managers are interested in as they believe they will outperform in the next 12 months
- Underlying liquidity: macro and equity long / short will draw demand because of their liquidity profile. Liquid strategies also benefit from the advantage of being easily replicable in UCITS format (and can be easily integrated onto a managed account platform), therefore drawing additional flows

At the other end of the spectrum, a strategy like convertible arbitrage that has limited liquidity and no expectations of outperformance in the next 12 months, and a risk-reward profile out of line with what most investors require, will have difficulties attracting significant flows

Manager preferences

We tested three preferences regarding managers: location, size and number.

Location

- The majority of the managers in which European investors have invested are based in the US (47%), with Europe (40%) a close second. The remainder (13%) is mostly Asia. This is hardly surprising: the overweight of European managers compared to the global distribution of managers is simply due to home advantage. Going forward, the increasing appetite for Emerging Markets and Asia exposure may drive assets to local managers, provided they address three key concerns from investors:
  - Sub-par operational setup/infrastructure
  - Home-based mentality (investments generally long in home markets)
  - Limited access to local talent

Size

Over the past year, we have seen most of the money flowing into large managers. In Q2 2010 for example, HFR reports that 92% of the flows went to managers with $5bn+, highlighting that the bias towards large managers has not gone away. However, from our interviews, it appears that we are now at a turning point as investors have regained the appetite to invest also in mid-sized managers: most institutional investors interviewed have identified the $1–5bn range as their "sweet spot" for the next 12 months, while most private investors and funds of funds have declared their "sweet spot" as being between $500mm and $1bn. The top three reasons cited for investors' preference for mid-sized managers were:

- The improving economic environment, which gives investors confidence to look beyond the "safe bets"
- Greater possibilities to negotiate on fees with less established managers
- Higher expected performance from mid-sized managers

Number

Investors have been reducing the number of HF managers they invest in since the crisis. While the trend has decreased, it is not yet completely over. Excluding the reduction of managers due to redemptions / declining assets, the main reasons for the reduction given by investors are:

- More time spent to control / monitor fund
- Longer due diligence than in the past
- A desire to become more relevant to each manager

V. CONCLUSIONS

This study provides a comprehensive snapshot of the current European investor landscape, their allocations to hedge funds and the potential path forward in the next 12 months. Here are some key takeaways and implications for HF managers:

- European investors are coming back. Overall, it appears we are at a turning point for the European hedge fund market. After a couple of years of net outflows from the industry, investors are ready to increase their exposures to hedge funds. We estimate that in the next 12 months, European investors will put to work $52bn of assets in the hedge fund space. More importantly, after a couple of years of net outflows for the industry, the next 12 months should see positive net inflow of ~$12bn
- Investors are looking for something different to what they were pre-crisis, and might have changed their investment philosophy. While managers will be glad to see increased interest from investors, they will be required to adapt to the new environment if they want to raise assets:
  - Institutional investors want more control and customization
  - Private investors hurt by the events of 2008 are now very focused on liquidity
  - Funds of Funds are heavily increasing their service offering to investors. This will put significant pressure to managers targeting the institutional direct channel to increase their service levels as well
- The institutional direct channel will be pivotal to raising assets in the next 12 months. This is due to the increased appetite for hedge funds by institutional investors and the trend towards a direct investment model

- UCITS funds will continue to raise a significant amount of assets, in particular from retail and private investors. However, UCITS funds also present a dilemma for managers as they require significant investments in distribution capabilities
- Marketing needs to be targeted to the right investors. Investors have come out of the crisis with stronger opinions on what they are looking for when investing in hedge funds. They now have clearer preferences for risk-return, liquidity, product types, level of service/transparency, etc. This requires, for a manager, an approach to marketing which is targeted to those investors most likely to appreciate the overall manager value proposition

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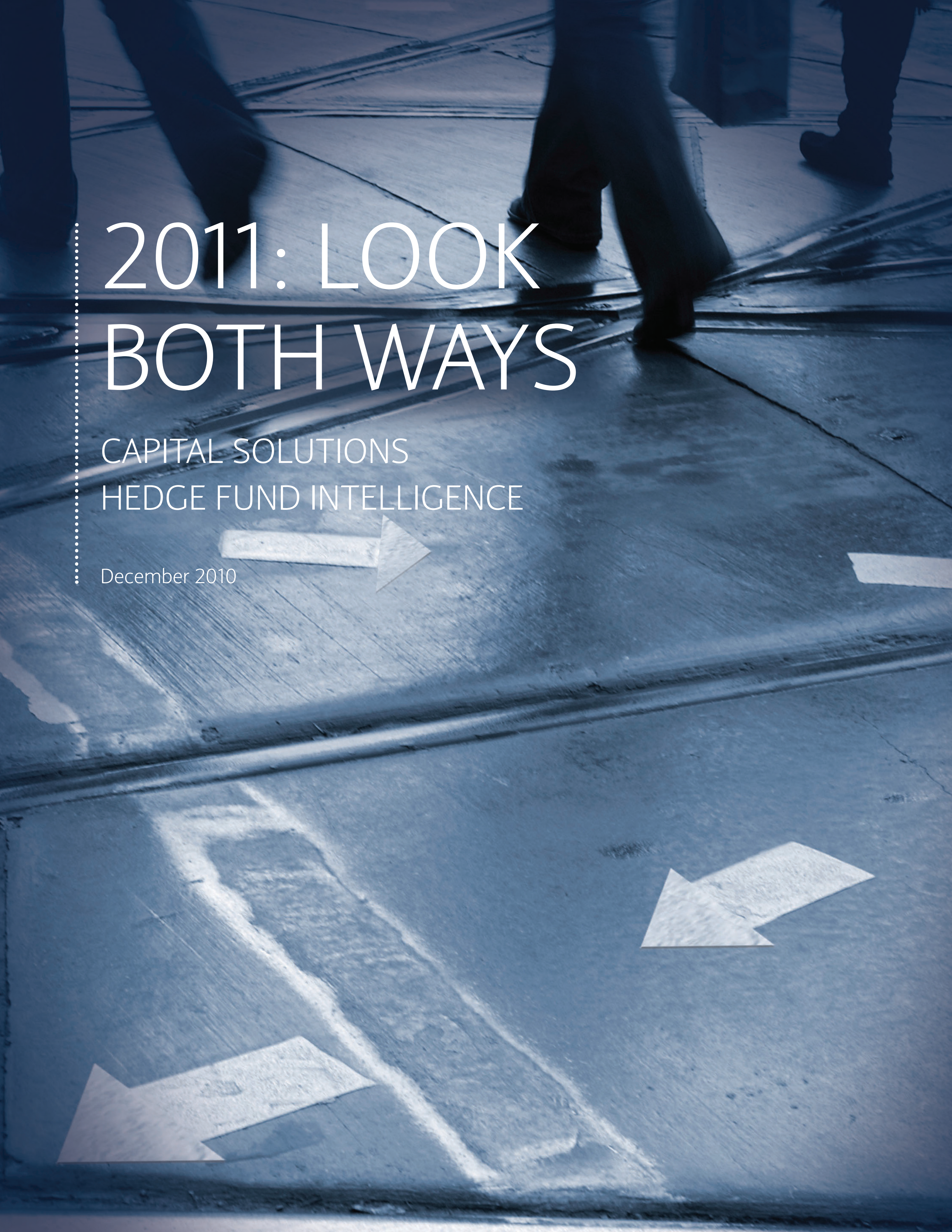
2011: LOOK BOTH WAYS

CAPITAL SOLUTIONS
HEDGE FUND INTELLIGENCE

December 2010



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CONTENTS

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I. INTRODUCTION

Barclays Capital held its inaugural Prime Services Hedge Fund Symposium in New York from October 18–20, 2010. There were 275 individuals from 221 Investor entities that attended the event. We had a diverse set of hedge fund (HF) managers attend the event and participate in panel discussions in which they expressed views on the events of 2010, as well as their expectations for 2011. Adding to our lineup of distinguished guest speakers from the investment field were several prominent public officials, including the Honorable Governor of Delaware Jack Markell, Mayor of the City of New York Michael Bloomberg, and Former Florida Governor and Barclays Capital Senior Advisor Jeb Bush. The attending hedge fund managers (Managers) and hedge fund investors (Investors) participated in surveys conducted by the Strategic Consulting team to gauge their sentiment on multiple topics related to the current state of, and likely future developments in, the HF industry.

As we, in the Strategic Consulting team, sat back and looked at the treasure trove of information we had access to as a result of the success of this event, we decided it made sense to package it and share it with the broader readership of our content pieces.

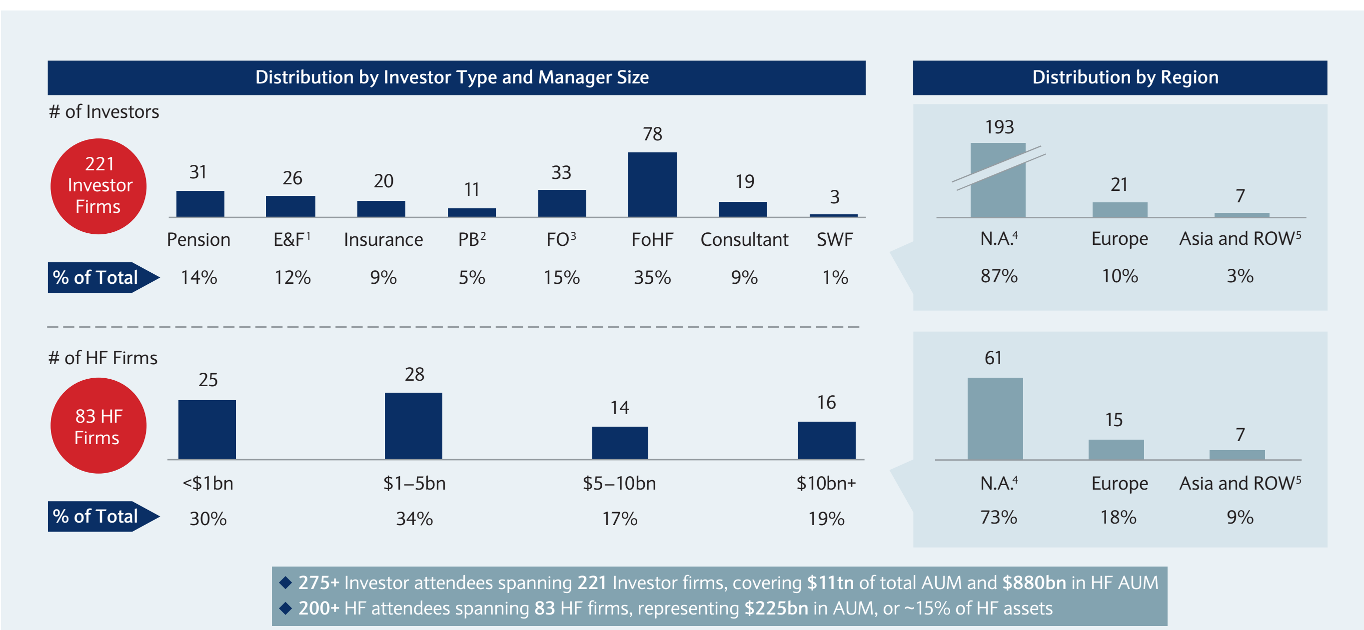
To that end, this last quarterly piece of 2010 aims to provide our readers with a commentary on some of the key events and developments of 2010, as well as expectations for 2011 – based on the opinions expressed by some well known Managers and Investors in the HF industry. The three key themes we address are as follows:

- Macroeconomic issues and the investment environment
- HF investment themes and opportunities
- Trends in Investor sentiment

Our data sources for this piece consist of the following:

- A survey of Investors and Managers at the Hedge Fund Symposium
  - Figure 1 depicts demographics of Investor and Manager attendees.
    - Total of 221 Investor firms represented by 275+ individuals, covering $11 tn of total AUM and $880bn of HF AUM
      - Institutional Investors, including Pensions, Endowments and Foundations (E&Fs), Insurance Companies, and Sovereign Wealth Funds (SWFs) accounted for more than one-third of the total number of participating Investors, while Fund of Hedge Funds (FOHFs) accounted for an additional 35% – broadly in

FIGURE 1: PARTICIPANT DISTRIBUTION



Note: All figures refer to Strategic Consulting survey results only
1. Endowments and Foundations 2. Private Bank 3. Family Office 4. North America 5. Rest of World

line with the share of HF industry assets attributable to these Investor groups.

  - Total of 83 HF firms represented by 200+ individuals, covering $225bn in AUM or ~15% of HF assets
    - Representation across all AUM size buckets by HF count
    - Geographic breakdown of Managers' domicile broadly consistent with industry averages

- Views expressed during panel discussions at the same event by the following Investor and Manager panelists and speakers
  - Keynote
    - Lee Ainslie, Founder, Maverick Capital
  - Past, Present, Future – 2011 Outlook
    - Richard Quigley, Global Head of Portfolio Construction and Advisory, Albourne America (Moderator)
    - Cliff Asness, PhD, Managing and Founding Principal, AQR Capital Management
    - Brian Higgins, Managing Member and Co-Portfolio Manager, King Street Capital
    - Daniel S. Loeb, Founder and Chief Executive Officer, Third Point
    - Ian Wace, Chief Executive Officer and Chief Risk Officer, Marshall Wace
  - New Approaches to Risk Management
    - Jeffrey Scott, Chief Investment Officer, Alaska Permanent Fund
  - Credit Strategy Investing
    - Mario Therrien, Senior Vice President, Funds Group, Caisse de Dépôt et Placement du Québec (Moderator)
    - Lawrence Clark, Managing Director and Director of Investments, Harbinger Capital Partners
    - Andrew Feldstein, Managing Principal and Senior Portfolio Manager, Blue Mountain Capital Management
    - Michael Hintze, Chief Executive Officer and Senior Investment Officer, CQS Management
    - Donald Morgan, Founder and Co-Portfolio Manager, Brigade Capital Management
    - Rick Rieder, Chief Investment Officer of Fundamental Fixed Income, Lead Portfolio Manager of R3 Fund, BlackRock
  - Global Macro Investing
    - Matthew Strube, Director of Hedge Funds, Teachers Retirement System of Texas (Moderator)
    - Jamil Baz, Chief Investment Strategist, GLG Partners
    - Jason Cummins, Head of Economic Research, Brevan Howard Asset Management
    - Ayman Hindy, Partner and Senior Portfolio Manager, Capula Investment Management
    - Kenneth Tropin, Founder, Chairman and Principal, Graham Capital Management
  - Multi-Strategy Investing
    - Ryan P. Parham, Chief Investment Officer, Public Safety Personnel Retirement System of the State of Arizona
    - Dawn Fitzpatrick, Co-Chief Investment Officer, UBS O'Connor
    - Henry Kenner, Chief Executive Officer and Chief Risk Officer, Arrowgrass Capital Partners
    - Michael Litt, Founding Member and Chief Investment Officer, Arrowhawk Capital Partners
    - Aaron Yeary, Partner and Portfolio Manager, Pine River Capital Management
  - Quantitative Strategies Investing
    - Steve Shepherd, Portfolio Manager, External Portfolio Management for Quantitative Strategies, Canada Pension Plan Investment Board (Moderator)
    - Jean-Philippe Bouchaud, Chairman and Chief Scientist, Capital Fund Management
    - Ross Garon, Managing Director of Quantitative Strategies, SAC Capital Advisors
    - David Hoey, Vice Chairman and Chief Operating Officer, ABC Arbitrage Asset Management
    - Dr. Tao Huang, Director of Research and Portfolio Management, Ortus Capital Management
    - Alain Sunier, Managing Director, Highbridge Capital Management

II. EXECUTIVE SUMMARY

- Managers are concerned about the uncertainty surrounding recent and future regulations – they are spending far more time following the actions of policy makers and making this an integral part of their investment process.
- Globally, Managers also expect to see opposing forces of inflation and deflation in 2011, with inflation risks more concentrated in emerging market countries and deflationary pressures in continental Europe.
- Many Managers are cautious about the rapid shift of capital into emerging markets, and have concerns about the prospect of 'asset bubbles' in these markets.
- Most Managers are cautiously optimistic about 2011 performance, with approximately two-thirds expecting to deliver gross returns between 10% and 15% and over one-half planning to hire staff.
- The most attractive investment opportunities by region and strategy in 2011, according to Managers, are:
  - Fixed Income – North America, Pan-Asia, Eastern & Central Europe
  - Macro – Asia Ex-Japan
  - Long/Short – Japan and Europe
  - Credit – North America, Asia and Africa
  - Multi-Strategy – North America and Latin America
- 2011 investment themes/opportunity sets considered attractive by Managers include Event Driven, Distressed, correlation plays, fundamental Equity Long/Short, Asian convertibles, structured credit, CLOs and leveraged loans.
- Net inflows into HFs from institutional Investors are expected to accelerate in 2011 as a majority of E&Fs, Insurance firms and Pensions plan to increase their current allocations.
- Net flows into FoHFs are expected to stabilize in 2011, as a majority of Investors plan to maintain their current allocations to FoHFs.
- Outlook for small and emerging Managers is likely to improve in 2011, as Investors chase potentially higher returns and gain confidence in investing with these Managers.
- Investors favor Event Driven, Emerging Markets, Macro and Equity Long/Short strategies for new allocations in 2011.
- Fixed Income Arbitrage and Quantitative Strategies are expected to maintain current level of Investor interest while Credit could potentially see a waning of Investor interest.

III. MACROECONOMIC OUTLOOK AND THE INVESTMENT ENVIRONMENT

Managers expressed a deep sense of unease about the macroeconomic environment, particularly in the US and Europe. While there is no doubt that the investment environment is much better than it was 24 months ago, there is still significant uncertainty that HFs and Investors are grappling with. Most Managers acknowledged the need for governments to take a more interventionist role in capital markets. On the other hand, they expressed concern regarding current and future regulation and its likely impact on the investment landscape. On the prospect of rising inflation vs. deflation, Managers were evenly split across the two camps. They broadly agreed that emerging markets would continue to grow in importance. While emerging markets look attractive to Managers, given the continuing economic uncertainties facing the developed world, they also acknowledged a real risk of overheating in emerging markets. Selected comments from our panelists across key themes included:

- Continued importance and impact of role played by government and policy makers on the investment process:
  - *"Looking ahead, we are caught between a large debt burden and slow economic growth, which is a devastating combination; the question is whether we address this through bigger government, redistribution and regulation, or a more free economy."*
  - *"Fiscal policy in the US is 180 degrees from what it should be, monetary policy is where it should be directionally but is behind the curve."*
  - *"Following what is going on in DC has become an integral part of our process, not only for individual stock selection but also in helping us to define what direction the market is going in and what sectors we should be long or short."*
- Unease/uncertainty around announced regulations
  - *"In the US, there is a strict seniority structure that is followed during the bankruptcy process but if you start to create randomness in how different categories of creditors are treated like some other countries and jurisdictions, Investors will hit the road as soon as there is trouble; this will dramatically impact the stability, for example, of financials' balance sheets."*
  - *"Regulation that forces people to buy an asset class that becomes overvalued like a tulip[1], despite endless supply, worries me."*

[1] Reference to 'Tulip Mania,' a period in the Dutch Golden Age during which contract prices for bulbs of the newly introduced tulip reached extraordinarily high levels and then suddenly collapsed.

- ▸ *"Most of Dodd-Frank is not self-implementing. Hundreds of studies need to be done, hundreds of provisions need to be written by regulators to implement the broad mandate of Dodd-Frank; A lot of it hinges on politics and lobbying."*
- ▸ *"In the short term, we are in the age of deferral, which means we are deferring the day of coming to grips with structural problems."*

- Seesawing of risk between inflation and deflation
  - ▸ *"It is a complicated world for policy makers with emerging economies potentially overheating and developed economies stuck in a slowdown, or even deflation."*
  - ▸ Case for inflation
    - *"Lots of people want inflation – governments, central banks, and the private sector."*
    - *"Some argue that inflation can reduce paper debt in the US because 90% of the debt in US is nominal and only 10% is inflation linked – what this does not address is the fact that much of the actual debt of the US is the net present value of Medicare liabilities and it's all inflation linked."*
  - ▸ Case for deflation
    - *"The EU decision to not participate in global rebalancing will be a very deflationary force."*
    - *"Even economies that are under inflationary pressure can contribute to deflation – China has enough excess capacity in steel, cement and aluminum to meet the needs of US, Europe, Japan and India combined, which is very deflationary."*
- Shift of Investor and Manager focus and flows to emerging markets
    - *"The shift makes sense when you think about potential breakdown in Washington, enormous deficits at the federal, state and municipal levels, and huge debt problems in Europe."*
    - *"Continued intolerance of illiquidity (e.g., bank loans) is also driving flows into emerging markets through a reduction in the money multiplier effect in developed markets; capital going into emerging markets is finding a high monetary velocity environment that could easily result in asset bubbles."*
    - *"There is a real danger of overheating in emerging markets – we are all going to go there, inflate their assets then withdraw quickly, leaving a trail of destruction behind as an unintended consequence of our QE2."*

[2] Strategic Consulting estimate

IV. 2011 HEDGE FUND THEMES AND OPPORTUNITIES

As part of the Hedge Fund Symposium, we polled HFs about their plans for 2011 to get a sense of their sentiment as they look ahead. Our overall conclusion, based on the responses we received to our questions, is that Managers are cautiously optimistic about the year ahead. The highlights of the Manager responses that led us to that conclusion are as follows:

A. Overall Outlook

Returns

Managers are bullish in their expectations regarding their returns in 2011. Figure 2 depicts these expected returns.

- Two-thirds of Managers expect to deliver the typical target returns of 10–15%, while ~30% expect to deliver outsized returns of 15% or higher.
- Many of those who expect returns of 15%+ are Macro Managers.

Leverage and Cash Levels

Figure 4 depicts the trends in leverage and cash levels expected by Managers in 2011. Current gross leverage, based on observation of published external data, lies between 1.8 and 2.1 times[2]. Consistent with the story on returns, the statistics below point to the expectation of a slightly more optimistic investment environment in 2011.

- Average HF leverage is expected to remain at current levels in 2011 or slightly increase – a majority of Managers (56%) plan to maintain current leverage levels, 33% plan to increase it and 11% plan to reduce it.
- Cash levels at HFs are expected to remain stable or go down marginally – a majority of Managers (76%) plan to maintain their current cash position, and the remaining 24% plan to bring it down.

Hiring Plans

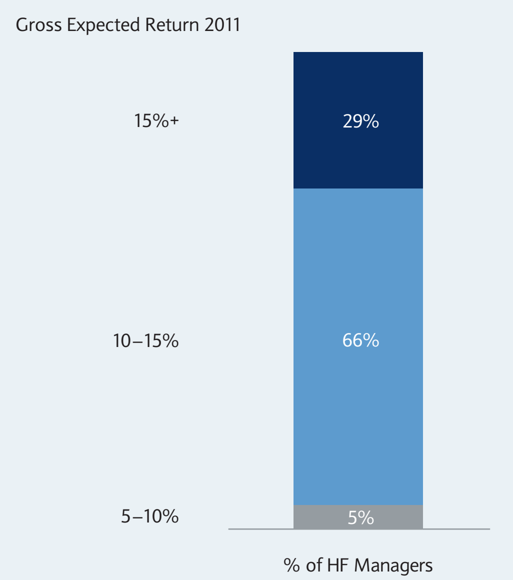
Figure 5 shows hiring plans at HFs. More than half (60%) of the Managers polled said they plan to increase headcount in 2011. The emphasis is more on hiring of Investment rather than non-Investment professionals.

New Products

Figure 6 shows that two-thirds of Managers plan to launch new products in 2011, with almost half (45%) of new launches expected to focus on emerging markets. This is consistent with the theme that there is a shift in focus from developed to emerging markets.

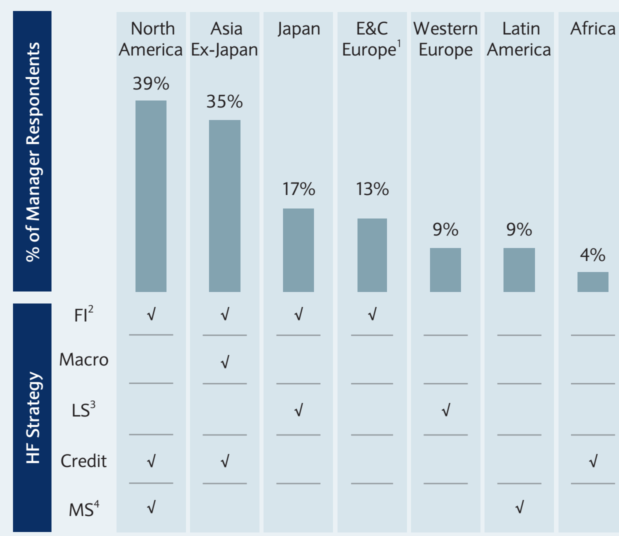
With regard to new product launches, Managers on one panel

FIGURE 2: GROSS EXPECTED RETURN 2011



Note: All figures refer to Strategic Consulting survey results only

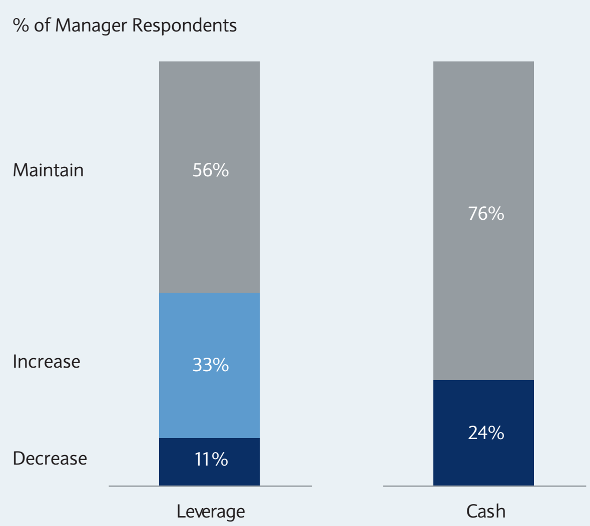
FIGURE 3: REGIONS EXPECTED TO GENERATE THE BEST RETURN IN 2011



1. Eastern and Central Europe 2. Fixed Income 3. Long Short 4. Multi-Strategy

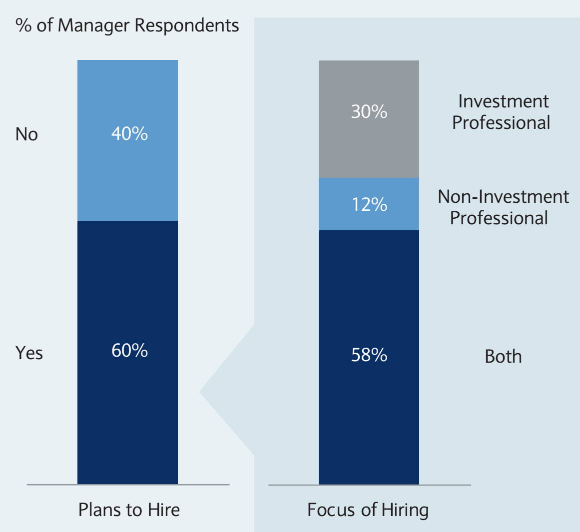
Note: Data for Middle East is not shown due to the limited number of responses received.
Note: Figures do not add up to 100% as respondents were allowed to select more than one answer. All figures refer to Strategic Consulting survey results only.

FIGURE 4: LEVERAGE AND CASH



Note: All figures refer to Strategic Consulting survey results only

FIGURE 5: ORGANIZATION/STAFFING



Note: All figures refer to Strategic Consulting survey results only

cautioned against the headlong rush towards the launch of and investments into 'Tail Risk' or long volatility products that appear to offer modest returns in normal markets and outsized returns in down markets. One Manager said that such products 'do not exist.' Another Manager said, *"Insurance is never free and the cost of this kind of protection has gone up so much recently that I am now taking the other side of that trade,"* implying that the price for downside protection is now so much higher because of Investor demand that it is more profitable to be selling it than to be buying it.

B. Geographic Outlook

Figure 3 shows that Managers expect the most attractive investment opportunities in 2011 to be in North America and Asia Ex-Japan. More than one-third of Managers (39% and 35%, respectively) believe these two regions will generate the best returns in 2011. The bottom of Figure 3 depicts the best opportunities by region for each strategy according to our surveyed Managers. Overall, Managers expect North America and Asia Ex-Japan to be the best regions for Fixed Income and Credit investing in 2011, Japan and Europe for Equity L/S, and Asia Ex-Japan for Global Macro. Selected comments from our panelists on specific opportunity sets by geography:

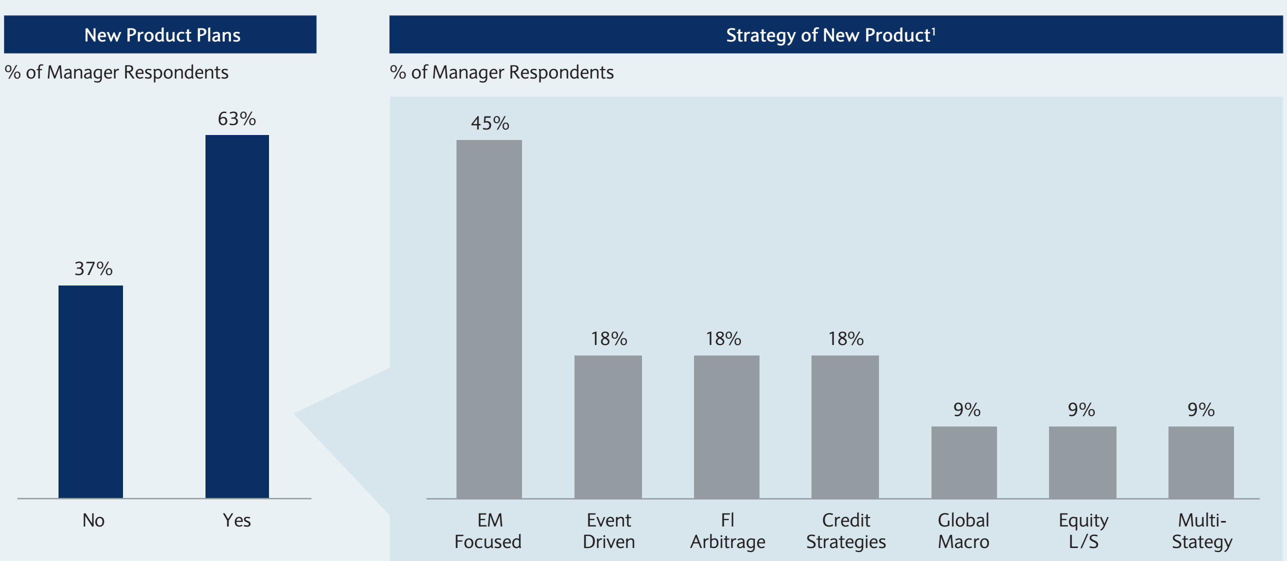
United States

- *"The US is a simpler jurisdiction to do business in and more liquid than Europe or Asia."*
- *"One specific opportunity is the giant $11tn residential mortgage market – we see tremendous opportunities especially with Fannie and Freddie gone."*

Europe

- *"The fundamental equity HF community in Europe was more decimated than the US community due to their higher beta exposure. This reduction in competition in Europe and the secular move out of equities into fixed income in the US makes fundamental equity investing more attractive over there."*
- *"Distressed debt opportunities in Europe look attractive partly because of cultural differences between continental Europeans and their US counterparts in terms of entrepreneurial organization and skill sets that make Europe a less competitive landscape. You won't get the same human capital formation to exploit these opportunities and that door is going to stay open for a decade."*
- *"There will be opportunities in Europe as banks start to crash their balance sheets and sell certain assets they can no longer hold, accompanied by opportunities around contingent capital*

FIGURE 6: MANAGER PLANS TO INTRODUCE NEW PRODUCTS IN 2011



1. Percentages do not add up to 100% as respondents were allowed to select more than one answer
Note: All figures refer to Strategic Consulting survey results only

where banks will issue debt that will convert to equity if their capital ratio drops below a certain level."

Asia

- *"Asian markets are great for relative value trading in convertibles as the asset swap market is more developed there than anywhere else. Also, the Asian new issue calendar is on fire and that will help create a better relative value market."*
- *"There is potentially an opportunity for equity long/short investing in 3–5 years if the Asian currency wall starts to come down, creating much more consumer oriented growth."*

C. Opportunities and Challenges for Specific HF strategies

Our Hedge Fund Symposium featured four strategy-specific panels: Global Macro, Multi-Strategy, Credit and Quantitative Strategies. The panelists discussed key trends, investment themes and 2011 outlook of their respective strategies. Figure 7 depicts the AUM change, net flows, and performance of each strategy for each of the past three years. Key findings:

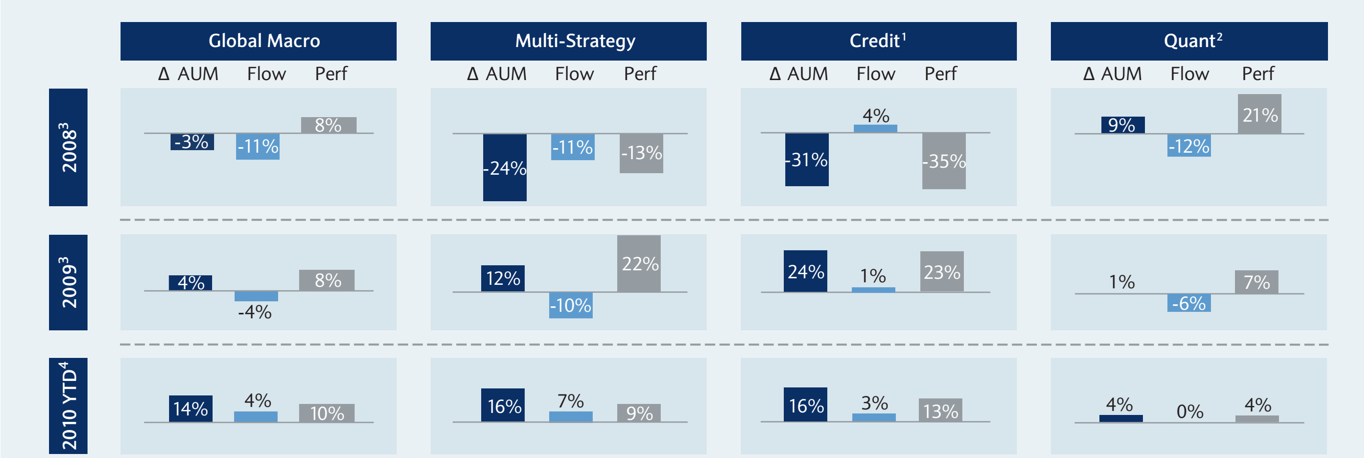
- All four strategies saw an increase in AUM in the first three quarters of 2010. While the primary driver for the increase continues to be performance, net flows have also increased across all four strategies from prior years on a percentage basis (net inflows of 4%, 7% and 3% into Global Macro, Multi-Strategy and Credit, respectively, in 2010).
- AUM recovery in the past two years has been largely symmetrical with declines that occurred in 2008 – the two strategies with the most AUM declines in 2008, Multi-Strategy and Credit, also saw the greatest upturn in 2009 and YTD 2010.
- AUM in Quantitative strategies has remained stable in the past three years post the 2007 decline in performance.
- Global Macro has demonstrated the greatest momentum in AUM growth since 2008, driven by consistent returns and growing net flows.

Selected comments from Manager panelists on the different strategies:

Global Macro

- Key Attractors
  - *"This strategy tends to be a great diversifier. It tends to do best when most asset classes are doing poorly, by taking directional views in multiple asset class."*

FIGURE 7: AUM CHANGE, FLOWS AND PERFORMANCE FOR GLOBAL MACRO, MULTI-STRATEGY, CREDIT, QUANTITATIVE STRATEGIES



Source: HFR Database, BarclayHedge, HFN, Credit Suisse Tremont, Barclays Capital Global Capital Solutions Analysis

1. Consists of data from HFR Relative Value Fixed Income Corporate, Asset Backed, Sovereign, and Event Driven Private Issue / Reg D

2. AUM calculated by combining BarclayHedge CTA Systematic Traders and HFR Equity Hedge Quantitative Directional; Net Flows calculated by combining HFR Macro Systematic Diversified, Currency Systematic and Equity Hedge Quantitative Directional.

3. Between January 1 and December 31 4. As of September 30, 2010

Note: Figures are ballpark approximations. AUM and Net Flows are calculated from HFR database unless noted otherwise. Performance is calculated as the difference between AUM Change and Net Flows. All estimates are then triangulated with additional databases including The Barclay Group, HFN and Credit Suisse Tremont to ensure validity and soundness.

- *"This strategy is a chameleon of correlation. It typically has positive equity correlation in bull markets and a low or negative correlation in bear markets."*
- *"Highly liquid – most Macro HFs trade liquid assets."*

- Investment themes
  - *"US policy is very constrained due to limited fiscal and monetary policy options available, bounded as these are by the almost zero interest rate and ~10% unemployment."*
  - *"The exchange value of the US dollar has to go down so the US can restore some equilibrium."*
  - *"The Fed is expected to be on hold for a long time and is encouraging people to take risks with interest rates at zero. Different ways to express this from a trading point of view would be to go long equities/equity indices, long corporate credit, long commodities, being long a steepening yield curve and short dollars."*

Multi-Strategy

- Key Attractors
  - *"Correlations between different asset classes are expected to mean revert in 2011."*
  - *"Multi-Strats are better at tactical asset allocation than Fund of Hedge Funds as evidenced by 2008 returns – more Multi-Strat HFs are above their High Water Mark than FoHFs."*
  - *"Pre 2008, you could fund all asset classes at the same cost; post 2008 funding cost is segmented by asset class. If a multi-strat can borrow against large cap equity at 35 basis points and fund a convertible bond position that would have cost 135 basis points to fund, that's pure alpha to the Investor."*
  - *"Dismantling of investment bank proprietary desks creates a favorable environment because this reduction of competition will benefit multi-strategy funds."*

- Investment Themes
  - *"With large cash holdings and limited revenue growth opportunities, US companies have only a few options: they can start paying large dividends for which the tax structure is not great now, they can buy back more stock, or they can make acquisitions – we are betting on the last option to boost our event driven strategy."*
  - *"Fundamental long/short equity strategies make moderate returns in a high correlation regime but when correlations mean revert, returns are going to be outsized, especially if you maintain a disciplined bottom up stock picking bias."*
  - *"Asian convertibles are seeing record issuance and provide an exciting opportunity."*

Credit Strategies

- Key Attractors
  - *"Good opportunities still exist for those who do the fundamental work of issuer and instrument selection. The difference between something good and something bad is now 200 basis points vs. 20 basis points in 2007, so there are some rich pickings to be had in pursuing relative value opportunities."*

- Investment Themes
  - *"We see opportunity in double Bs relative to high grade, structured credit, in both debt and equity securities of CLOs, and in leveraged loans."*
  - *"You need to address macro risk through portfolio construction and through greater investments in risk management, which most credit funds have made."*
  - *"We are a little concerned on the long side, and we see that the value opportunity for the kinds of return we want to earn over the next 12 months probably is much more robust on the short side."*

Quantitative Strategies

- Key Attractors
  - *"We still see a big place in our portfolio for quantitative strategies because we still believe in the premise that it is good to have a systematic and repeatable process."*
  - *"There are a number of alphas, even some of the most basic ones, that still seem to persist because of behavioral inefficiencies in the market."*

- Investment Themes
  - *"Quantitative Managers are averse to building a strategy that requires one to predict the right regime to apply one's insights. By design, we look for a consistent steady source of alpha that is difficult to find in any environment regardless it is unusually good or bad."*

V. INVESTOR SENTIMENT TOWARDS HEDGE FUNDS

Our 2011 outlook for the Hedge Fund industry would not be complete without a scan of the Investor landscape and sentiment. Therefore, we polled Investors regarding their plans for 2011. In our content piece *"It Takes Three to Tango"* that we published in the second quarter of 2010, we explored Pension Funds' governance structures, their interaction with, and the role of, Investment

Consultants as part of the HF allocation process, their preferences for specific HF strategies, and requirements in terms of length of track record, AUM, transparency, etc. What is different about the analysis that follows is that this is based on the responses of a broader set of Investors beyond just Pensions.

Allocations Levels

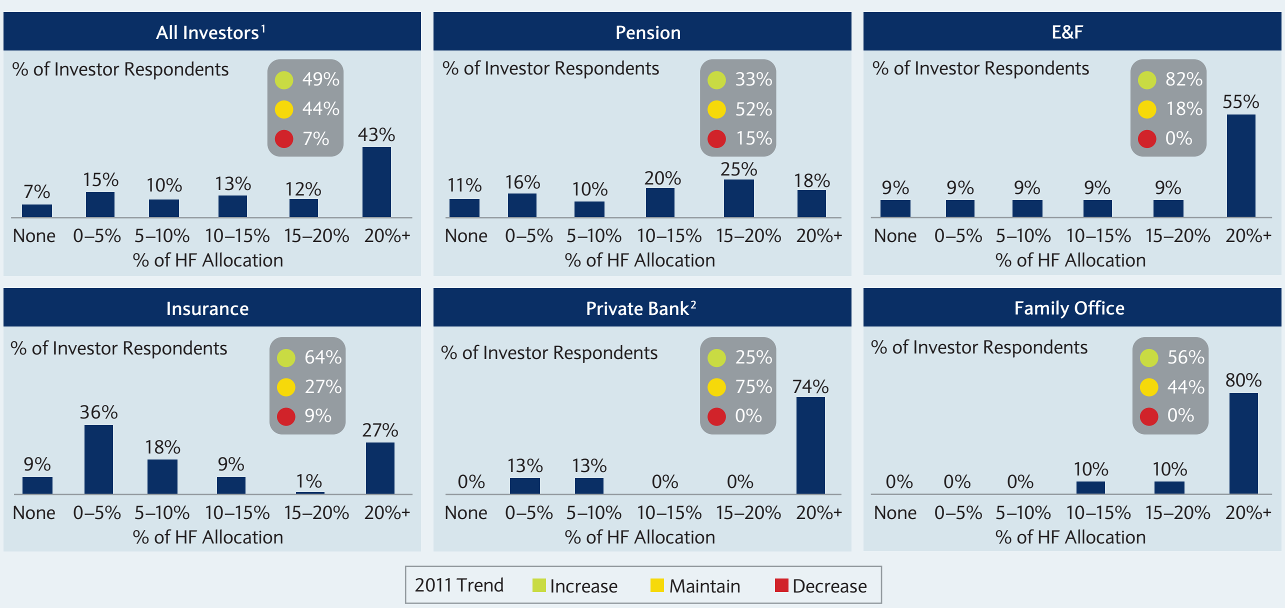
Figure 8 shows current HF allocation by Investor type along with expected allocation changes in 2011, according to our Investor respondents. The overall sentiment is positive towards HFs, with nearly half (49%) of Investors expecting to increase allocations in 2011. Some highlights:

- Primary sources of Private capital (Private Bank and Family Office) currently have the highest allocation to HFs in terms of percentage of their total portfolio, with most (74%+) having allocated more than 20%.
- Between a one-quarter to one-half of Private Banks and Family Offices expect to further increase HF allocations in 2011, while the remainder expect to maintain their current allocation.
- Among institutional Investors, E&Fs have the highest allocation to HFs on average, with a majority (55%) having allocated 20% or more to HFs.
- Additionally, after sitting on the sidelines for the past two years, 2011 looks like the year when E&Fs may get back to making incremental HF investments. Most (82%) of them told us they plan to increase their current allocations.
- Insurance firms also appear to be keener to invest in HFs than they have been in the past with approximately two-thirds (64%) of Insurance Investors telling us they plan to increase allocations in 2011 from the current average of ~5%.
- Finally, we expect inflows from Pensions into HFs to continue in 2011 with one-third of Pensions planning to increase their current allocations.

Figure 9 depicts the average number of Managers that Investors currently allocate to and the expected change in this number in 2011. Key takeaways:

- Currently, excluding FoHFs, a majority (54%) of Investors are invested in 20–50 Managers, nearly one-third (32%) are invested in less than 20, and 14% invested in more than 50 – the last group consisting mostly of large institutional Investors such as Pensions and Insurance companies.
- Going forward, E&Fs appear to be the most enthusiastic about increasing the number of Managers they are allocated to, in step with the expected growth in the percentage of their portfolio allocated to HFs.

FIGURE 8: CURRENT HF ALLOCATION BY INVESTOR TYPE AND EXPECTED ALLOCATION TRENDS FOR 2011



1. Excluding FoHFs 2. The results presented here are from a relatively small number of respondents and therefore may not reflect industry trends
Note: All figures refer to Strategic Consulting survey results only

- Public Pensions, on the other hand, are likely to hold their number of Managers steady or even reduce them further – one-quarter of surveyed Public Pensions said they plan to reduce the number of Managers on their platform vs. one-quarter who plan to increase them (data not shown in Figure).
- Expectedly, FoHFs generally have a more diverse Manager platform, with nearly one-half (40%) allocated to more than 80 Managers (data not shown in Figure) – which raises the question: At what point does the benefit of diversification across Managers in the portfolio start to be outweighed by the complexity of closely monitoring such a large number of them?

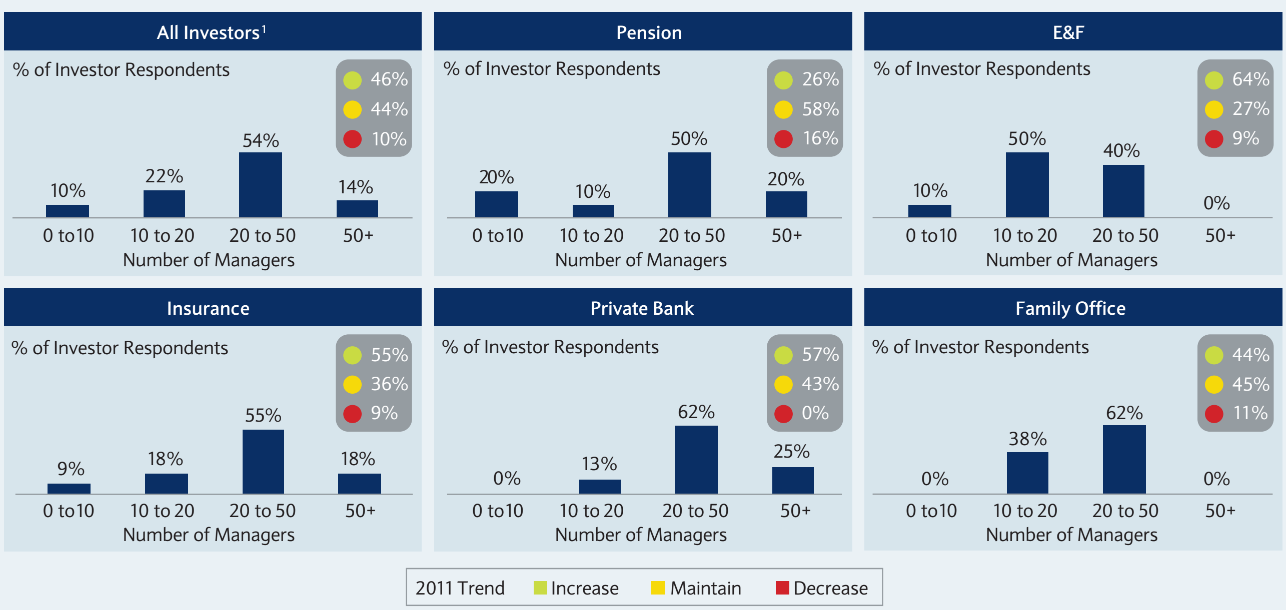
Allocation Approach

Much has been said and written about how institutional Investors are bypassing FoHFs and increasingly investing directly in HFs (including by Strategic Consulting in our second quarterly piece, *"It Takes Three to Tango"*). It was also fashionable in 2008 and 2009 to talk about the demise of the FoHF business model. We took the stand early on that the FoHF model has certainly evolved after coming under a lot of stress but FoHFs play a number of very important and unique roles in the HF industry and rumors of their demise are gross exaggerations.

Along that same theme, Figure 10 illustrates current HF allocations that are intermediated by FoHFs and expected change in these allocations in 2011 by Investor type.

- Across most Investor types, a majority (55%) of Investors expect to maintain their allocations to FoHFs, while the rest are split evenly between those who plan to increase vs. decrease it. This leads us to the conclusion that flows into FoHFs may have stabilized.
- Nearly two-thirds (62%) of Public and Private Pensions plan to maintain their current mix of direct and indirect (through FoHFs) HF investments, and about one-third of Public Pensions plan to increase their allocations through FoHFs.
- One potential contributing factor for this trend is the shift of capital into emerging markets, which is an area of expertise of FoHFs.
- Large Pensions appear to be currently balanced between the direct and indirect channels of investment into HFs at ~80%:20%.
- It appears that the next category of Investors likely to forego the intermediated route to 'go direct' is Insurance firms, with 43% of Insurance Investors planning to reduce allocations to FoHFs vs. only 14% that are planning to increase them.

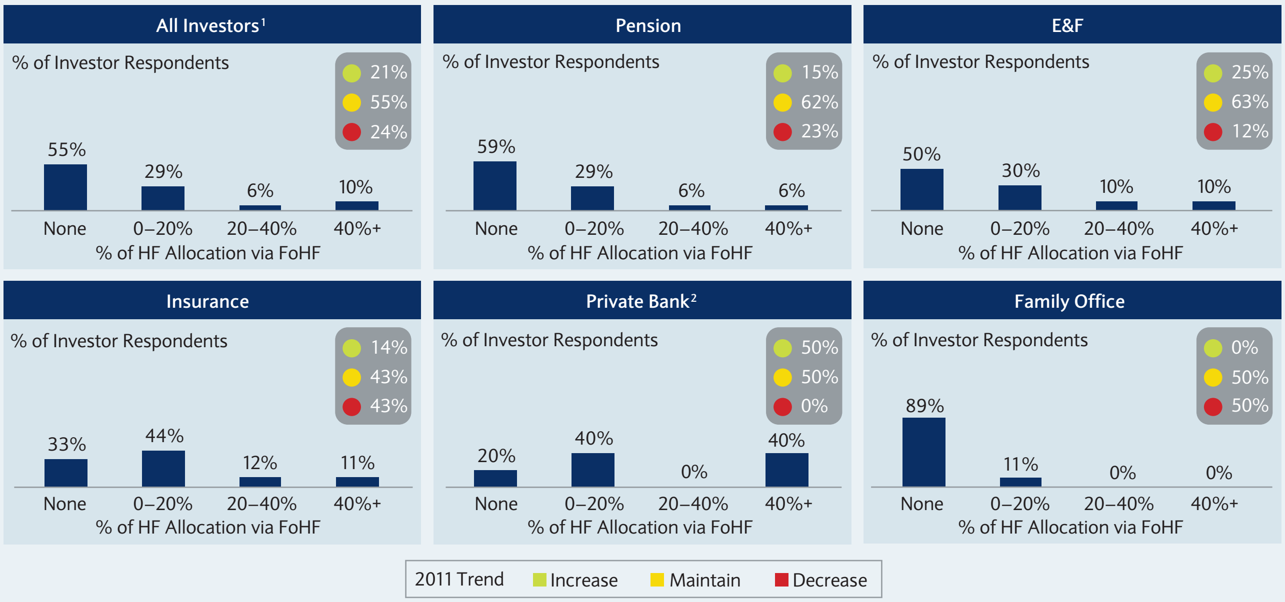
FIGURE 9: CURRENT NUMBER OF MANAGERS INVESTED IN AND EXPECTED TREND FOR 2011



1. Excluding FoHFs

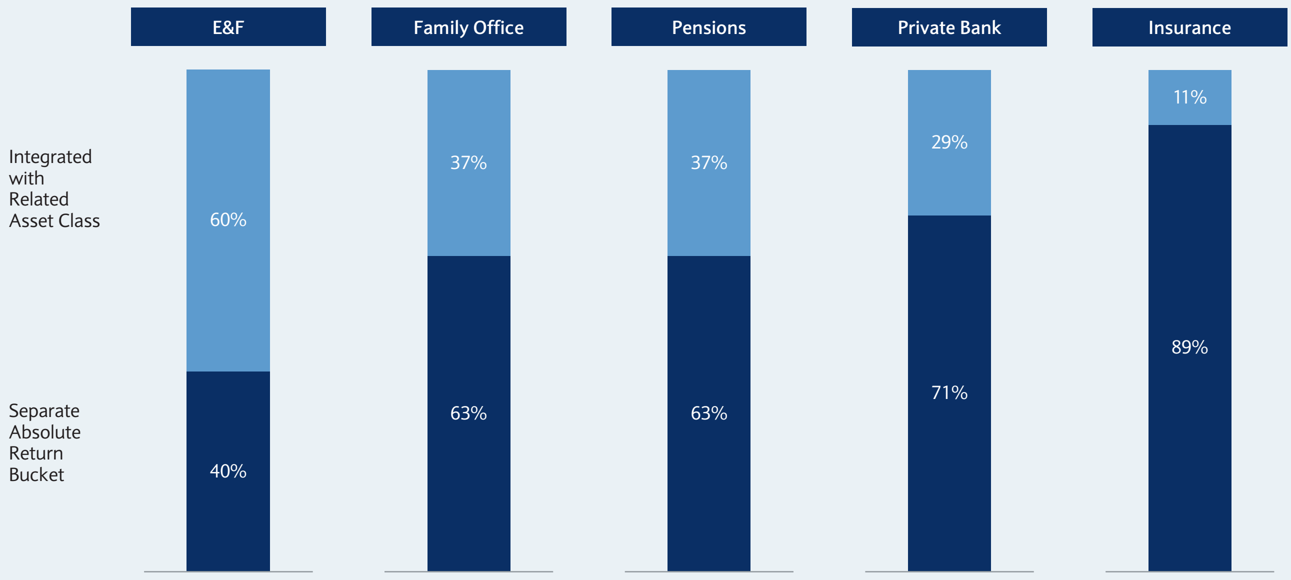
Note: All figures refer to Strategic Consulting survey results only

FIGURE 10: CURRENT HF ALLOCATION INTERMEDIATED BY FOHFS AND EXPECTED OUTLOOK



1. Excluding FoHFs 2. The results presented here are from a relatively small number of respondents and therefore may not reflect industry trends
Note: All figures refer to Strategic Consulting survey results only

FIGURE 11: HF INVESTMENT CLASSIFICATION



Note: All figures refer to Strategic Consulting survey results only

Figure 11 illustrates the approach Investors take to classify and manage their HF investments. We found a growing number of Investors are adopting the integrated approach where they bundle at least some of their HF investments along with the related asset class (i.e., manage HF Equity Long/Short investments along with the rest of the equity investments in their portfolio).

- E&Fs are leaders in this regard in that 60% of E&Fs favor the integrated approach.
- About one-third of Pensions follow the integrated approach, although of these, almost all are Private Pensions. Most Public Pensions still follow the traditional approach of managing their HF investments as an absolute return asset class.
- A key driver behind this change is the trend towards portfolio allocation and management by risk/return profile of the underlying assets.
- This is a positive step for Managers because it potentially opens up the share of Investor portfolio they can target (e.g., an Equity Long/Short Manager can potentially target the ~40% equity allocation, rather than just the 10% allocation to HFs in an Investor's portfolio).

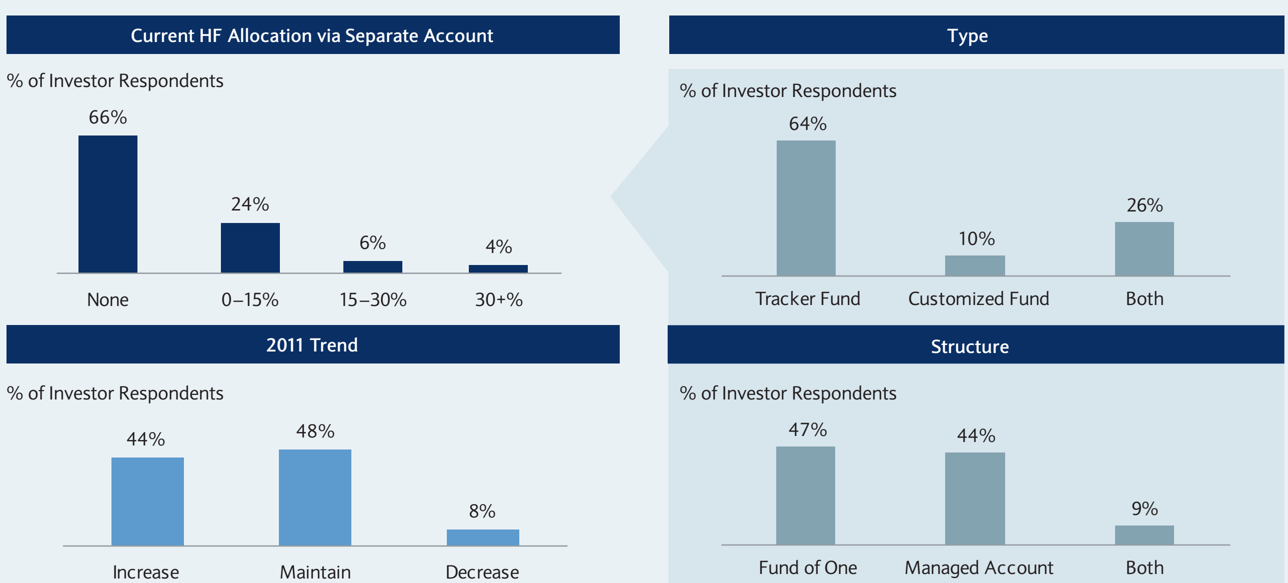
Separately Managed Accounts (SMAs)

Figure 12 shows Investors' current thinking regarding SMAs.

- Approximately two-thirds (66%) of Investors do not allocate at all via SMAs.
- Of those who do, a majority (24% of the 34%) have <15% of their current HF allocation in SMAs.
- As expected, the most avid users of SMAs are Pensions, with about one-half of all them having some allocation via SMAs. It helps that most of them are able to write the large tickets typically associated with SMAs.
- Of the Investors who are currently allocated to SMAs, approximately one-third (36%) have demanded customized products (vs. a tracker vehicle of the Manager's commingled fund), and a majority of the most recent SMAs are customized products (also highlighted in our *"28 Months Later"* publication).
- ~50% of SMAs are structured as 'Fund of Ones.'
- 44% of Investors expect to increase their allocation via SMAs in 2011.

Looking ahead, we expect more SMAs to be launched by Managers in response to continued demand from large Investors (e.g., Pensions and Insurance) for customized solutions.

FIGURE 12: SEPARATELY MANAGED ACCOUNTS: CURRENT AND EXPECTED ADOPTION



Note: All figures refer to Strategic Consulting survey results only

Minimum Size Requirement

One question that we encounter often from Managers is 'What is the minimum AUM required to attract investment from Investors?' Figure 13 summarizes Investors' responses to that question. Overall, the data suggests a sanguine outlook for small and emerging Managers in 2011. Here are the main takeaways:

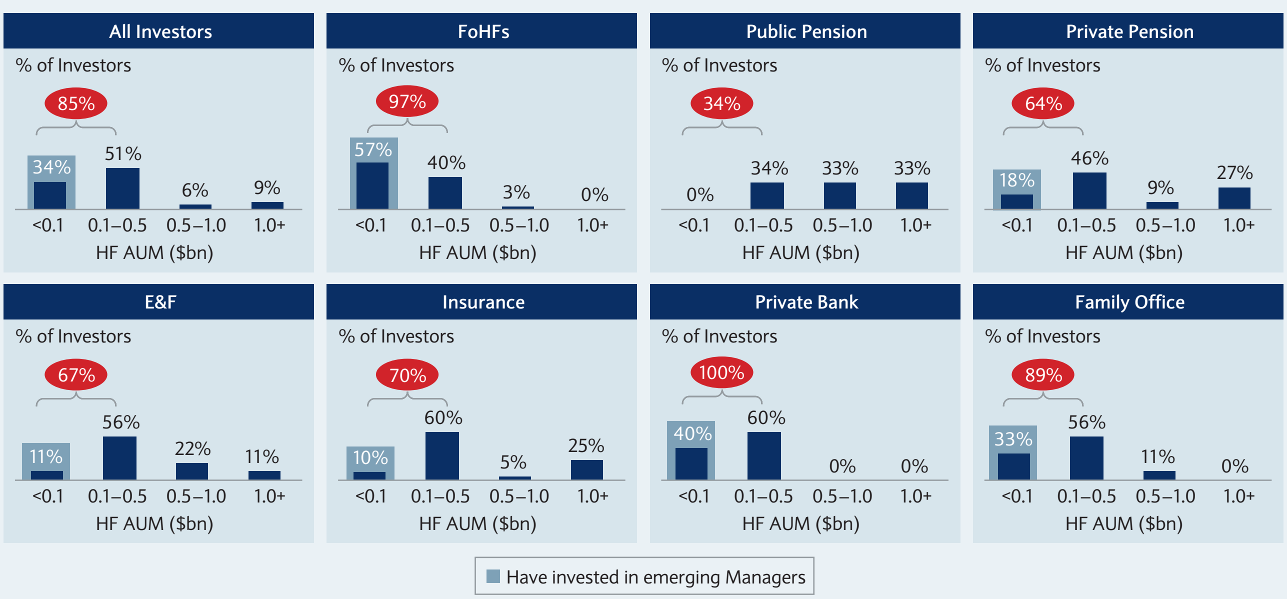
- On average, about one-third (34%) of Investors have invested in Managers with <$100mn in AUM over the past two years, with a majority of these Investors falling in the FoHF category.
- 57% of FoHFs report having invested in emerging Managers and almost all FoHFs (97%) have invested in Managers with AUM<$500mn, highlighting a differentiated approach.
- Sources of private capital such as Private Banks and Family Offices are also key providers of capital to emerging Managers. One-third of this group of Investors has seeded Managers in the past two years.
- One-third of Public Pensions have invested in Managers with AUM of $100–500mn, and two-thirds of Public Pensions have invested in Managers <$1bn in the past two years, which is again encouraging news for smaller Managers.
- In terms of Manager track record, more than one-third of Investors (mostly FoHFs) have invested in Managers that have less than a one-year track record and another 40% said they require one to three years' track record. Very few (4%) of Investors require five plus years' track record as a minimum condition.

Term Concessions

Figure 14 shows concessions received by Investors from Managers over the past two years. As highlighted in our third quarterly piece of 2010 *"28 Months Later,"* Investors polled have received a number of concessions (e.g., on fees, liquidity, transparency) and have built this negotiation into their Manager selection process. Some key highlights:

- A vast majority (71%) of Investors reported receiving greater transparency from their Managers in 2010, while approximately two-thirds reported receiving better liquidity and fee concessions (we do not believe that all Managers have uniformly offered these concessions, one of the key findings of *"28 Months Later"*).
- E&Fs and Insurance Companies appear to have focused predominantly on getting better liquidity terms while Public Pensions appear to have focused on getting more fee concessions than other Investor types.
- Only 12% of Investors reported receiving no concessions.

FIGURE 13: AUM OF THE SMALLEST HF ALLOCATED TO IN THE PAST TWO YEARS



Note: All figures refer to Strategic Consulting survey results only

- Comment by a Manager on communications between Investors and Managers:
  - *"The dialogue between Managers and Investors has ramped up as it should. Both sides deserve some criticism for the quality and quantity of dialogue before the financial crisis. Some Managers may not have been as forthcoming with information as they should have been and some Investors were just not asking enough questions."*

Strategies of Interest

As part of our exploration of Investor biases, we gauged the interest of Investors in specific HF strategies. Figure 15 depicts the strategies that Investors expressed interest in increasing or decreasing allocations to. The chart on the extreme left shows a crude estimate of potential net Investor interest in each strategy (calculated as a difference between the Investor responses across the middle and the right chart). The chart in the middle of the Figure shows the percentage of Investors who plan to increase allocations to specific strategies. The chart on the right shows the percentage of Investors who plan to decrease allocations to certain strategies. Key takeaways:

- Investors appear most interested in adding allocations to Event Driven strategies (67% of Investors), Emerging Markets (50%), Global Macro (54%), and Equity L/S (51%).
- Investors seem most interested in reducing allocations to Credit (44% of Investors), Fixed Income arbitrage (31%), and Multi-Strategy (29%).
- On a net basis, Event Driven, Emerging Markets, Macro, and Equity L/S appear to be positioned to obtain the most new allocations from Investors, at least in early 2011.
- FI Arbitrage and Quant Strategies are expected to, on balance, maintain their current level of Investor interest.
- Credit could potentially see a waning of Investor interest.

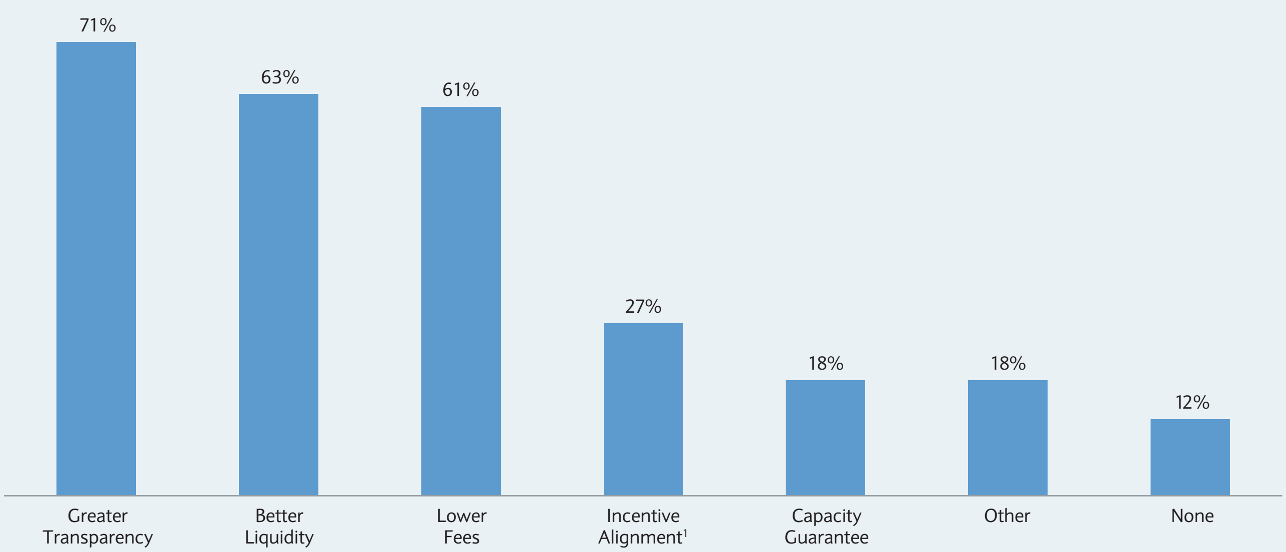
VI. CONCLUSIONS/CONSIDERATIONS FOR HEDGE FUND MANAGERS AND INVESTORS

Based on what we heard from Managers and Investors, we have a few observations that we would like to put forward for consideration by industry participants:

Managers

- While institutional Investors' share of AUM at the average HF seems to hit equilibrium around levels of ~50%, there appears to be room for HFs to grow share of AUM from Private Banks and Family Offices.

FIGURE 14: TERM CONCESSIONS RECEIVED BY INVESTORS IN THE PAST TWO YEARS



1. E.g., clawback, deferred compensation

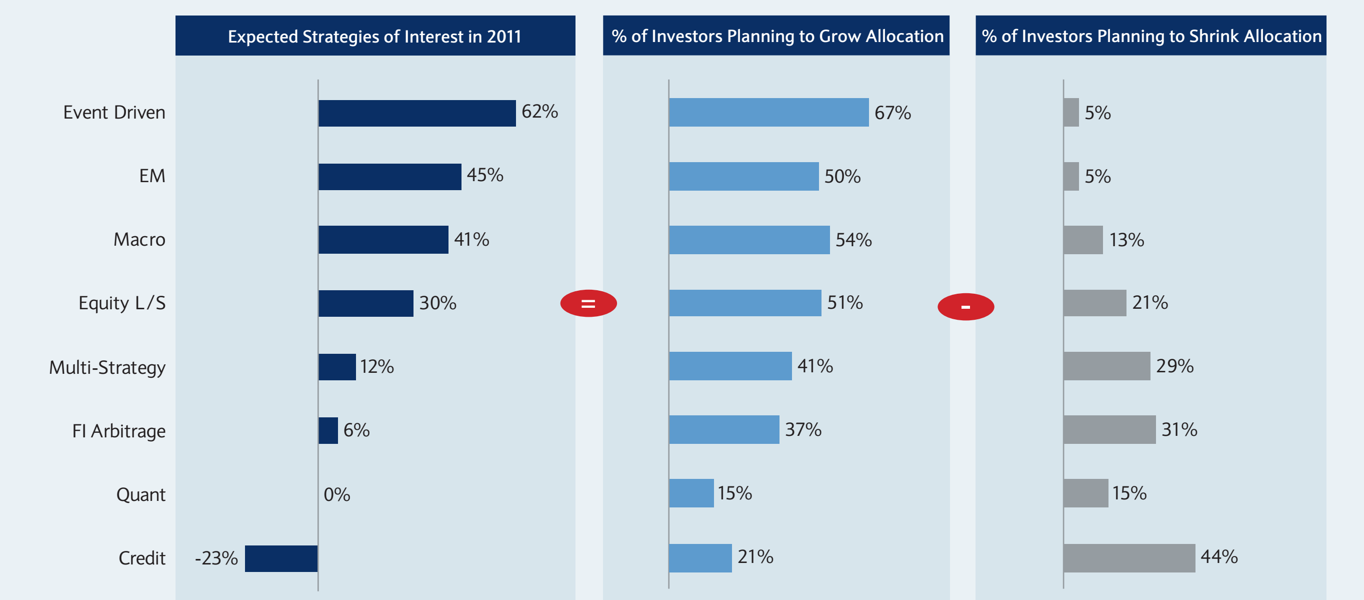
Note: Figures do not add up to 100% as respondents were allowed to select more than one answer. All figures refer to Strategic Consulting survey results only.

- Another possible opportunity area lies with E&Fs and Insurance companies, both of these Investor types having expressed interest in growing their HF allocations.
- There is significantly greater Investor focus on emerging markets and on seeding promising new Managers than before. FoHFs should consider grabbing the opportunity presented by these themes to raise their profile with Investors because they are probably better positioned than others to leverage these new opportunities.
- Managers may benefit from actively identifying those institutional Investors that take an 'integrated approach' to managing their HF assets alongside the relevant asset class (e.g., equity long/short with the rest of the equity investments in the portfolio), and making an effort to get closer to the individual(s) directing the broader equity or fixed income allocations to be able to target a much larger share of the portfolio.

Investors

- The appeal of tail-risk funds is understandable. However, weigh the benefits of the downside protection against the ongoing cost to determine an acceptable tradeoff. Also, understand exactly how your HF is providing the tail-risk protection and whether that protection will still be good in extreme stress scenarios.
- Consider managing your HF investments in appropriate risk/return buckets, rather than artificially as an absolute return category.
- Be realistic about the return expectations you have vs. the risks you feel comfortable taking. If capital preservation is a priority, there is a limit to the range of returns you can expect.
- A shift in investment flows from the developed world to emerging markets has become a very popular theme – be cognizant of the assumption that liquidity is always available in a high monetary velocity environment and be sure to manage for the scenario in which 'hot money' in an overheated market departs quickly and abruptly.

FIGURE 15: STRATEGIES OF INTEREST FOR INVESTORS IN 2011



Note: Figures do not add up to 100% as respondents were allowed to select more than one answer. All figures refer to Strategic Consulting survey results only.

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HEDGE FUND PULSE

THE ASIAN HEDGE FUND LANDSCAPE

January 2010

The Asian Hedge Fund Landscape

Driven by client demand, the Strategic Consulting team of Barclays Capital's Prime Services division will issue – starting this month – a new monthly series titled 'Hedge Fund Pulse'. It will focus on key trends and themes affecting participants in the Hedge Fund industry. The series aims to offer unique insights and perspectives to those who operate within the HF[1] industry and provide them with a competitive edge. Our theses – while leveraging publicly available industry data – leverages the unique perspectives of the operators within our division and the extensive ongoing dialogue our group has with HF Managers and Investors.

Hedge Fund returns are rebounding and it is time to look for growth opportunities

Last year finished as of one of the five best performing years for the Hedge Fund industry. The HFR index returned +20.12%, compared to the previously recorded best of +31.29% of 1999. Doubts about the survival of the Hedge Fund industry are fading and the industry is poised for growth again.

During 2008, Asian equity markets fell more sharply than North American and European markets, only to rebound stronger in 2009. It also prompted Investors to reconsider their traditionally high allocations to developed economies where uncertainty remains high, massive reforms are being drafted, unemployment is at historically high levels and return projections are mild. Against this backdrop, Asian economies offer a more intelligible and classical growth story that is rooted in expanding manufacturing, improving production, and increasing domestic infrastructure investments.

Investigating the value proposition offered by Asian HFs

Against the case for an increased allocation to Asia – especially from the perspective of institutional Investors – stands the historically high volatility of Asian markets. Two core questions therefore emerge

- Are HFs the solution to gain access to Asian returns while managing the downside risks?
- What is the HF landscape and what are key themes affecting HF investing in the region?

To answer these questions, we analyzed

- Key statistics on the HF landscape as provided by Eurekahedge[2]
- HF Investor and Manager sentiment as assessed during Barclays Capital's Prime Services event held in Singapore during the fall of 2009. Key event highlights included
  - 50 attendees in total
  - Four prominent panelists who expressed the institutional Investor view on HFs
    - Richard Johnston, Albourne Partners Asia
    - Ravi Bulchandani, Barclays Wealth
    - Shirin Ismail, Fullerton
    - David Bridge, PAAMCO
- Approximately 30 one-on-one meetings with HF Investors and Managers in the region

[1] Hedge Fund
[2] Multiple sources as provided by Eurekahedge

Asian HFs refer to funds whose investment mandate focuses on Asia regardless of domicile

From here onwards, we will use the term 'Asian HFs' to indicate HFs whose specific mandate focuses on investments in the Asian region, regardless of the HF Manager domicile. Within Asian HFs, we will denote 'Asia domiciled HFs' as those funds whose HF Management Company is domiciled in Asia.

Key Findings

- While the AuM of Asian HFs grew faster and fell more sharply than the global HF AuM, the number of Asian HFs declined modestly, indicating unexpected resilience
- Asian HFs are as effective at reducing the volatility of their underlying equity markets as their European and North American counterparts
- Within Asian HFs, Asia domiciled Managers delivered higher cumulative returns compared to non-Asia domiciled Managers, indicating a potential 'location' advantage
- Given the life cycle of the Asia domiciled HF industry, growth opportunities exist for classical FoHF[3] offerings, i.e., sourcing, due diligence and portfolio construction
- Compared to peers in North America and Europe, the Investor composition of Asia domiciled HFs is more diversified by Investor type (e.g., Pensions vs. FoHF) and region
- Investors are bullish on China, India and Indonesia; while China- and India-focused HFs have flourished in the last two years, there is room for growth in Indonesia-focused HFs
- None of the Investors surveyed presently invest in more than ~25 HF Managers (vs. ~35 in North American and Europe); suggesting room to add HF Managers to the portfolio[4]
- Fees are being negotiated aggressively, but rarely both components at the same time – it is either management fee discounts or performance fee discounts

Asian Hedge Fund Landscape

Asian HFs' AuM grew faster than global HFs' AuM during the period 2000-2009[5]

- Asian HFs' AuM grew at a compound annualized growth rate of 24% p.a. vs. 16% p.a. (a positive spread of 800 bps) for Global HFs during the period 2000 - mid 2009
- Excluding Japan for the two years preceding the downturn (2005-2007), the gap is even more significant with Asian HFs' AuM growing at 45% vs. 23% p.a. for their global peers

However, AuM also fell more markedly

- During 2007-2009, Asian HFs' AuM fell -18% p.a. vs. -11% (a negative spread of 700 bps) for their global peers, almost identical to the 800 bps spread during growth period[5]

Interestingly though – despite the more marked decline in AuM – less HFs disappeared from the Asian HF universe compared to their global peers, showing a higher resilience

- When excluding Japan, the number of Asian HFs only declined by 1% in the period 2007-2009, compared to a 4% decline for global HFs

[3] Fund of Hedge Funds
[4] According to 2009 Barclays Capital survey data
[5] The Eurekahedge Report, September 2009

Asian HFs had higher inflows and capital gains but less capital to begin with

Several arguments explain the higher resilience of Asian HFs. Firstly, Asian HFs enjoyed significant rapid inflows and capital gains, which have allowed them to accumulate significant profits (and cash buffers) without necessarily having expanded the cost basis. Secondly, given that Asian HFs generally start with significantly less capital than their global peers (the average Asian HFs launch starts with about 2/3 of the capital of an analogous global peer), they are more accustomed to run with leaner operations.

Asian HFs are as effective at reducing the volatility of their underlying equity markets as their European and North American counterparts. Figure 1 compares – for a given region – the monthly volatility of the Equity markets returns vs. their comparable HF returns. Volatilities were calculated by taking the standard deviation of the monthly returns during the period 2000-2009. For equity market returns, the MSCI indexes were used. For HFs, the Eurekahedge index returns were used.

Figure 1: Regional Volatility of Returns

Region	MSCI Volatility	Hedge Fund Volatility	Volatility Ratio[6]
Europe	4.9%	2.2%	0.44
North America	4.7%	1.7%	0.35
Asia	5.4%	2.2%	0.40
Japan	6.5%	1.9%	0.28
Global	4.9%	1.6%	0.32
Average	5.3%	1.9%	0.36

Source: Bloomberg, Eurekahedge

Asian HFs are as effective as European and North American HFs in dampening volatility

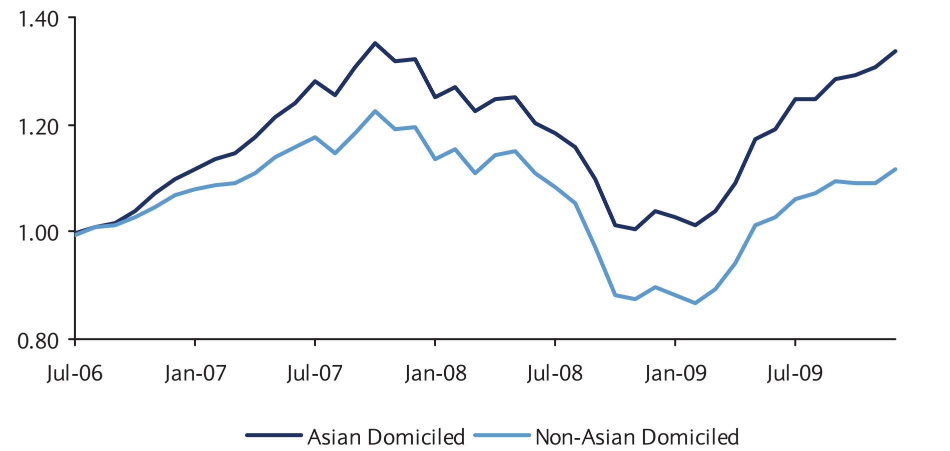
By looking at the ratio between the volatility of HF returns and the volatility of their respective equity market returns, one concludes that HFs dampen the volatility of their underlying equity market by approximately 36%. Asian HFs are as effective as other regional HFs at achieving this objective.

In particular, one notices that Asian HFs are as volatile as European HFs (2.2% for both), but Asian HFs are much better at dampening the volatility of the underlying equity markets. In fact, Asian HFs' volatility is 40% of their underlying equity markets' volatility - four percentage points lower than the respective ratio for European HFs.

Interestingly, Asia domiciled Managers seem to outperform their non-Asia domiciled counterparts. As one would expect, returns for both are highly correlated. This can be seen in Figure 2, where cumulative returns for Asia domiciled Managers vs. non-Asia domiciled Managers are plotted for the period Jul 2006 – Dec 2009. Interestingly, Asia domiciled Managers outperformed their non-Asia domiciled peers throughout the economic cycles. Asia domiciled Managers outperformed consistently through upturns and downturns, delivering the highest returns during Jul 2006 – Oct 2007 by outperforming non-Asia domiciled Managers by 1,300 bps.

[6] Derived by dividing Hedge Fund Volatility by MSCI Volatility

Figure 2: Asia Domiciled vs. Non-Asia Domiciled Manager Cumulative Returns



Source: Eurekahedge database encompassing 300+ Asian HFs (obsolete funds excluded from the sample)

Figure 3: Asia Domiciled vs. Non-Asia Domiciled Manager Returns over Time Periods

Period	Up/Down-turn	Asia Domiciled	Non-Asia Domiciled	Spread (bps)
Jul 06 - Oct 07	Upturn	36%	23%	1,300
Oct 07 - Nov 08	Downturn	-26%	-29%	300
Feb 09 - Dec 09	Upturn	32%	29%	300

Source: Eurekahedge database encompassing 300+ Asian HFs (obsolete funds excluded from the sample)

Investor and Manager Sentiment

More of the classic FoHF services would be well received

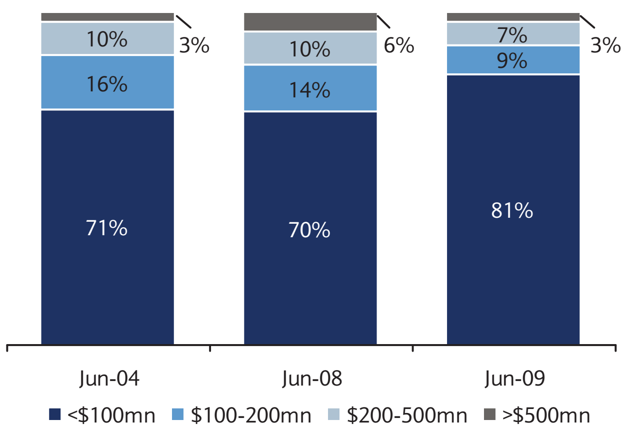
There is evidence indicating that Asia would likely benefit from classic FoHF services such as HF Manager sourcing, due diligence and portfolio construction.

- After the set back suffered by the industry during 2008-2009, the Asian HF industry fragmentation went back to pre 2004[7] levels
  - As Figure 4 indicates, the number of HFs in excess of USD 200mn grew from 13% in June 2004 to 16% in June 2008, only to fall back to 10% in June 2009…
  - …putting emphasis on the need to select HFs delivering sustainable performance – size is not a viable shortcut for sustainable businesses in this region anymore
- As the Asian HF industry is diversifying away from classical Equity L / S[8] and new strategies emerge, more focus will have to be paid to select emerging / start-up HFs
  - As Figure 5 indicates, the proportion of Equity L / S strategies as a share of the Asian HF industry has declined from 61% to 43% in the period June 2004 - June 2009…
  - …to the favor of Multi-strategy and Event Driven HFs, which increased from 10% and 9% in June 2004 to 14% and 18% in June 2009 respectively

[7] The Eurekahedge Report, September 2009
[8] Equity Long / Short

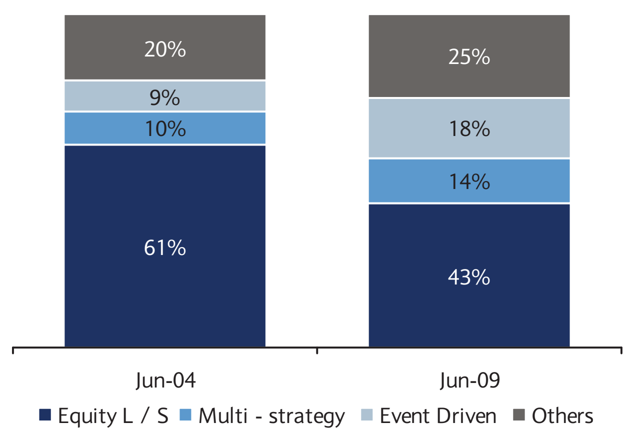
- The performance of Asian FoHFs has somewhat disappointed, highlighting an opportunity for those FoHFs whose processes have proven their worth in the region to gain an edge versus the competition
  - FoHFs were among the worst performing strategies in the three year period up until July 2009, outperformed by all other strategies except Distressed Debt

Figure 4: Breakdown of Asian HFs by Fund Size



Source: Eurekahedge database encompassing 300+ Asian HFs (obsolete funds excluded from the sample)

Figure 5: Strategy Mix of Asian HFs



Source: Eurekahedge database encompassing 300+ Asian HFs (obsolete funds excluded from the sample)

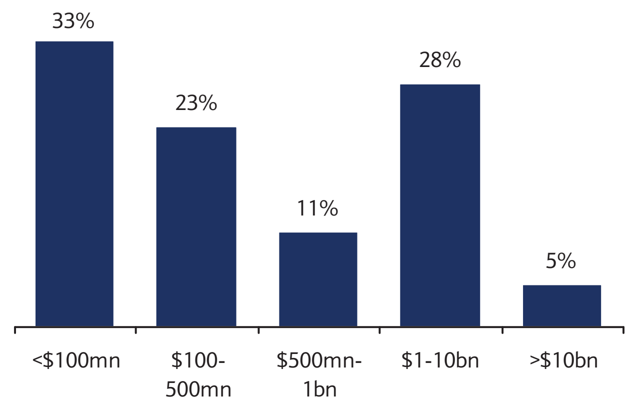
Asian HFs boast a diversified investor base breakdown

Compared to their peers in North America and Europe, the Investor composition of Asia domiciled HFs is more diversified, both by Investor type (e.g., Pensions vs. FoHF) and region. The demographics of the HF Manager population are depicted in Figure 6 and Figure 7, broken down by firm size and strategy employed. Figure 6 and 7 show that ~1/3 of HF Managers have an AuM of less than USD 100mn and ~1/4 employ Macro strategies. Compared to the demographics of Asia domiciled Managers depicted in Figure 2, our population is slightly skewed towards larger Managers. Figures 8 and 9 depict the Investor base of Asia, US and Europe domiciled Managers by type and region. A few interesting observations emerge

- FoHF and Private Clients seem to flip roles when comparing Asia domiciled HF Managers with their US and European counterparts
  - Private clients represent ~40% of the Asia domiciled Managers' client base compared to ~25% for their US and European counterparts
  - Conversely, FoHFs only represent ~19% of the Asia domiciled Managers' client base compared to an average of ~45% for US and European Managers
- Investor diversification by region is much more uniform for Asian Managers
  - 'Domestic' capital – i.e., capital raised from Investors in the same region – only represents 36% for Asia domiciled Managers…
  - … vs. ~60% for US and Europe domiciled Managers

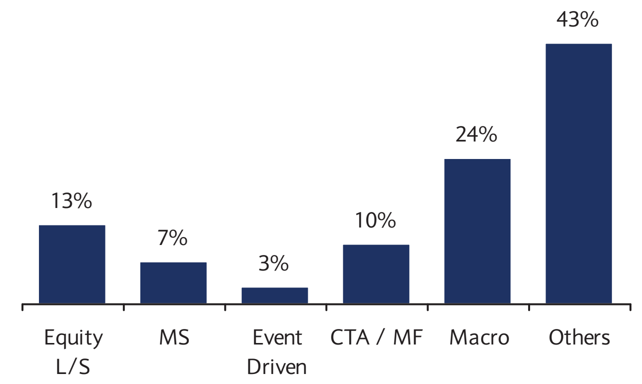
– The largest regional group only represents 40% of the Investor base for Asia domiciled Managers vs. ~60% for both US and Europe domiciled Managers

Figure 6: Surveyed Managers Breakdown by Size



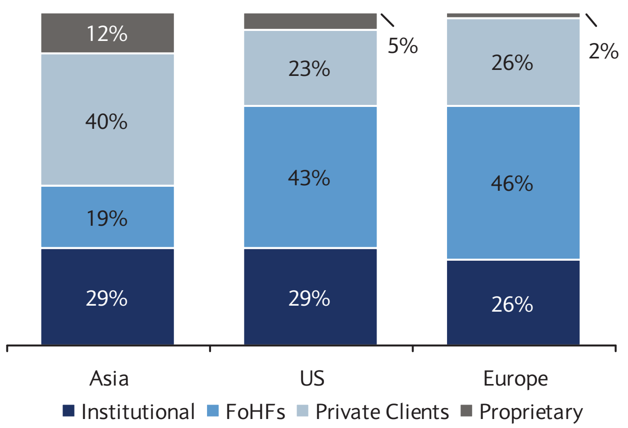
Source: 2009 Barclays Capital Strategic Consulting Manager Survey

Figure 7: Surveyed Managers Breakdown by Strategy[9]



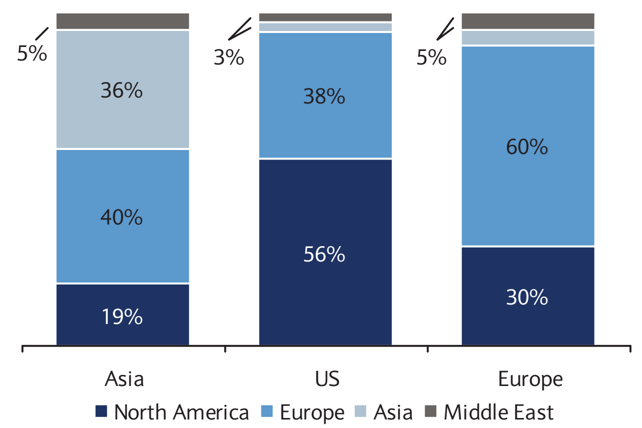
Source: 2009 Barclays Capital Strategic Consulting Manager Survey

Figure 8: Investor Base by Type[10]



Source: 2009 Barclays Capital Strategic Consulting Investor Survey

Figure 9: Investor Base by Region



Source: 2009 Barclays Capital Strategic Consulting Manager Survey

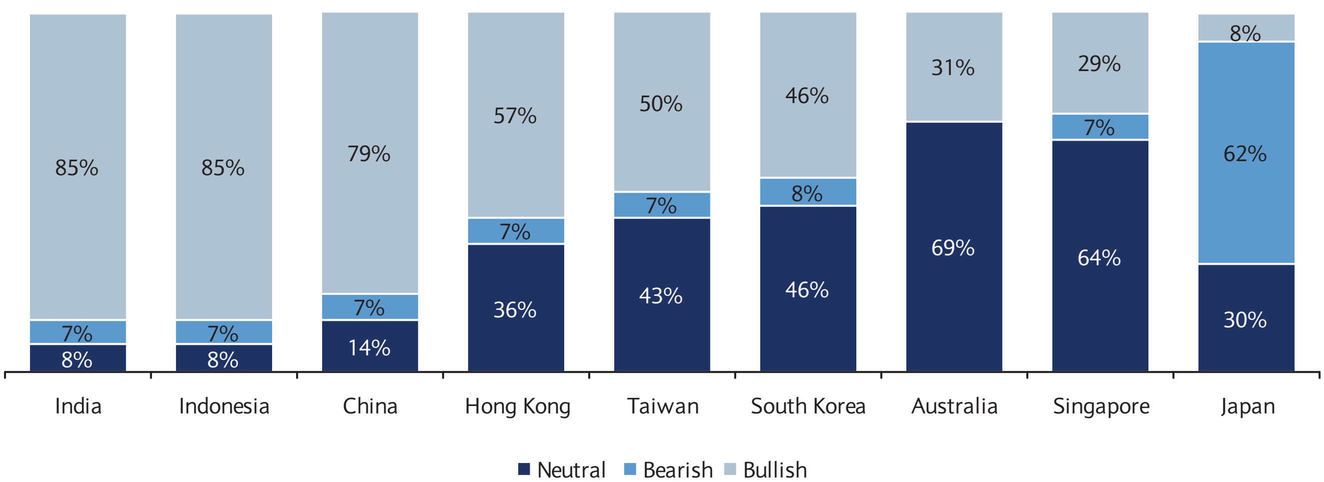
The first observation – about the relative importance of FoHFs vs. Private Clients – is even more surprising when considering the relatively smaller size of Asia domiciled Managers compared to their US and Europe domiciled counterparts, which would make them a more suitable target for FoHF Investors. This is additional evidence supporting the thesis that FoHFs face an opportunity to increase the breadth and depth of their reach in the region. The second observation – as it relates to the geographical composition of the Investor base – puts Asia domiciled Managers ahead of their US and Europe domiciled counterparts in terms of how globally diversified their Investor base really is. Asia domiciled Managers have

[9] Note: MS = Multi Strategy, MF = Managed Futures
[10] Note: Private Clients = High Net Worth Individuals, Family Offices, Private Banks, Asset Management Firms; Institutional = Pension Funds, Insurance Companies, Endowments and Foundations

been forced right from launch to seek capital outside of their region – given that about 80% of global HF Assets are held by Investors in EU and US.

We polled Managers on sentiments towards key Asian economies. Figure 10 depicts – for every country in the sample – the degree of bullishness / bearishness and neutrality expressed by Managers. Countries that Managers were heavily bullish towards include India and Indonesia; while Japan harboured fairly bearish sentiments.

Figure 10: Manager Sentiment on the Region



Source: 2009 Barclays Capital Strategic Consulting Manager Survey

As shown in Figure 11, the share of India and China focused HFs has increased five- and two-fold respectively over the course of the last five years, jointly accounting for 8.5% of all Asian HFs. Over the same time period, Japan focused HFs have halved their relative importance, accounting for only 12% of the Asian HFs, down from 25% in 2004. As far as Indonesia goes, fund development does not yet seem to mirror investor sentiment, which is perhaps an interesting leading indicator of upcoming product development opportunity.

Figure 11: Geographic Mix of Asian HFs

Region	Jun-04	Jun-09
Global	27%	37%
Emerging Markets	6%	8%
Australia / New Zealand	7%	4%
Asia	19%	19%
Japan	25%	12%
Asia ex. Japan	13%	11%
India	0.3%	1.5%
Greater China	3%	7%

Source: Eurekahedge database encompassing 300+ Asian HFs (obsolete funds excluded from the sample)

There is potential for Asian Investors to increase the number of Managers in their portfolio

Our data indicates that there is room – among Asian Investors – to add new Managers to their portfolio. Figure 12 illustrates the Investor population that was part of our discussions, including Fund of Hedge Funds, Family Offices, Endowments, Foundations, and Private Banks. Over 50% of the Investors represented FoHFs and Private Banks. However, a fair representation of all organization types is reflected.

Our investor sample truly represents global players, as ~44% of their portfolios are invested in Asian economies and ~30% are invested in other global economies. Also, while they seem to have diametrically opposite approaches to risk taking, their views on allocations to Fixed Income and Equities converge. In fact,

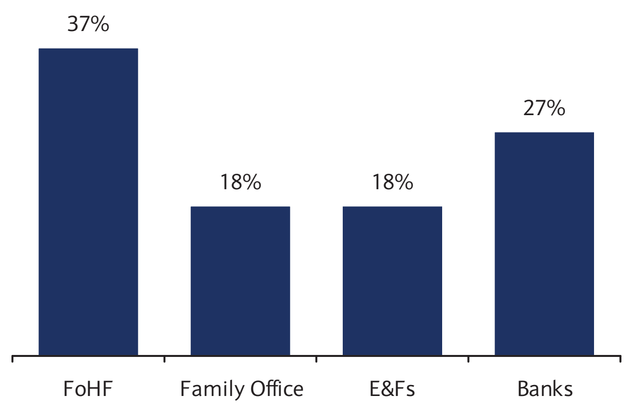
- Greater than 80% of Investors have a large risk appetite, and allocate 10-20% or less to cash, while 14% are extremely risk averse and allocate over 80% to cash
  - None of the Investors surveyed choose to allocate a median amount to cash indicating that Investors in the region tend to adopt either extreme
- Most Investors choose to allocate 20-40% of their assets to equities and fixed income

HFs prove to be the most popular alternatives asset class

Distribution of assets becomes fairly widespread when it comes to the alternatives space (defined as Hedge Funds, Private Equity and Real Estate). For those Investors that invest in alternatives, Hedge Funds are the most popular asset class, a thesis that holds true even when excluding FoHF from the mix of investors. Also, all of the Investors surveyed (excluding FoHFs) allocate to less than 25 Managers, vs. an average of 35 for their North American and European peers – suggesting room to add HFs to the portfolio.

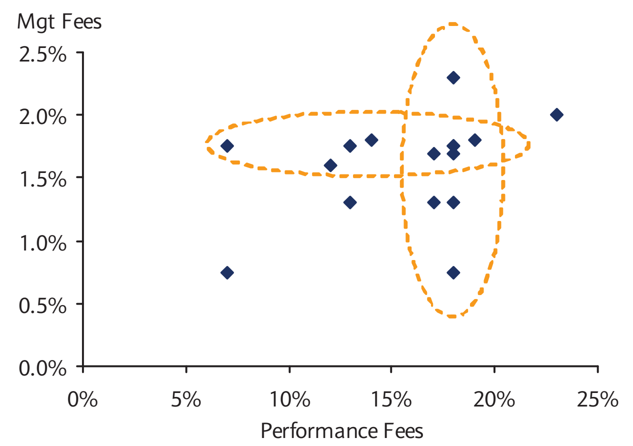
After polling Managers / Investors for fund fee terms, it emerged that fees are being negotiated aggressively, but never both components at the same time. As Figure 13 depicts, where we displayed management vs. performance fees, a "cross" shaped distribution emerges. This indicates that it is either the management fee that is being negotiated (while the performance fee is 'anchored' around 20%) or the performance fee (while the management fee is 'anchored' around 2%). Only in 2 out of 15 cases, both terms were negotiated. If this thesis held true for a larger sample size, it would indicate that the 2 / 20 model, while subject of negotiation, still retains its validity as 'anchor' or starting point.

Figure 12: Surveyed Investors Breakdown by Type[11]



Source: 2009 Barclays Capital Strategic Consulting Investor Survey

Figure 13: Asian HFs Fees



Source: 2009 Barclays Capital Strategic Consulting Investor Survey

[11] Note: E&Fs = Endowments and Foundations

Acknowledgments

We would like to thank Kamen Sim and Farhan A. Mumtaz from Eurekahedge for the exceptional level of support and service provided in performing ad hoc analyses on the Asian HF market. Without their help, some of the theses expressed here would not have had the benefit of the validation provided by the large data set in their possession.

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WAS IST DAS – DER 'LEVERAGE'?

February 2010

Was Ist Das – Der 'Leverage'?

This is the second issue of 'Hedge Fund Pulse', the monthly publication issued by the Barclays Capital Strategic Consulting team focused on the key themes shaping the Hedge Fund (HF) industry. In this issue, we focus on 'Leverage', a word that is often used, poorly understood, and almost never properly defined.

A worrisome aspect of the whole matter is that often the interaction around Leverage is limited to the question *"What's the Leverage?"*, to which a number is given, without consideration for how it is defined, let alone how it is used in the context of portfolio management.

The title we gave to this piece is inspired by Martin Heidegger's renowned treatise *"Was ist das – die Philosophie?"*, published in 1955. One might wonder why – after more than 2,000 years of philosophical debates – an esteemed Philosophy professor like Heidegger felt the urge to revisit the fundamental definition behind the word. Heidegger felt that 'Philosophy' had undergone a significant process of vulgarization and one had to go back to its root causes to find the essence of its meaning. We feel the same about 'Leverage'. Also, note how Heidegger chose to title his treatise (literally, *"What is this, the Philosophy?"*) as opposed to the simpler *"Was ist die Philosophie?"* (literally, *"What is Philosophy?"*), to emphasize in a very powerful way how the word 'Philosophy' – because of its repeated and unjustified broad usage – had grown to an amorphous, vast object that had lost touch with the principles of its original definition. Again, we feel the same about 'Leverage'.

In this issue, we will first review the two basic categories of Leverage definitions – balance-sheet based vs. risk-based – highlighting the challenges around the lack of a uniform definition. Second, we will present three very intuitive concepts, which provide – in a simple but rigorous way – our understanding of Leverage as 'an amplifier' of the inherent risks associated with the instruments in a portfolio. Third, we will introduce a framework for the definition of Leverage that has the potential to unify the principles behind the balance-sheet based and risk-based definitions. Fourth, we will conclude by offering additional reading material and suggestions for future research.

There are a number of other, very important considerations that are associated with the use and procurement of Leverage, first and foremost of which is around the selection of the lender (e.g., the prime broker), and the contractual agreements under which Leverage is extended. Also, one should consider the relationship between Leverage and other sources of risk beyond market risk, most notably liquidity risk. In this issue though, our primary focus remains on Leverage metrics.

Key Findings

- There are many definitions available for Leverage, all of which can be categorized as either balance-sheet based vs. risk-based
- Leverage measures the sensitivity of relative changes in the Equity of a portfolio to the changes in the market value of a portfolio itself
- As such, Leverage is not an independent source of risk but rather a factor that must be taken into account in estimating other sources of risk, such as market or liquidity risks

- It can be shown that both categories of Leverage metrics (balance-sheet based and risk-based) stem from the same underlying principle / equation

Leverage Definitions and Challenges

In this section, we will first review the most frequently highlighted challenges around understanding Leverage and its usage. As we will observe, most of the difficulties arise from the lack of a unifying definition.

Second, we will introduce a model balance sheet structure, which – without having any ambition of accurately representing all accounting circumstances – can provide an intuitive way to capture the salient elements of an investment portfolio and an easy way to calculate its associated balance-sheet Leverage metrics.

Third, we will introduce the most commonly adopted definitions of Leverage, categorizing them into balance-sheet based vs. risk-based metrics.

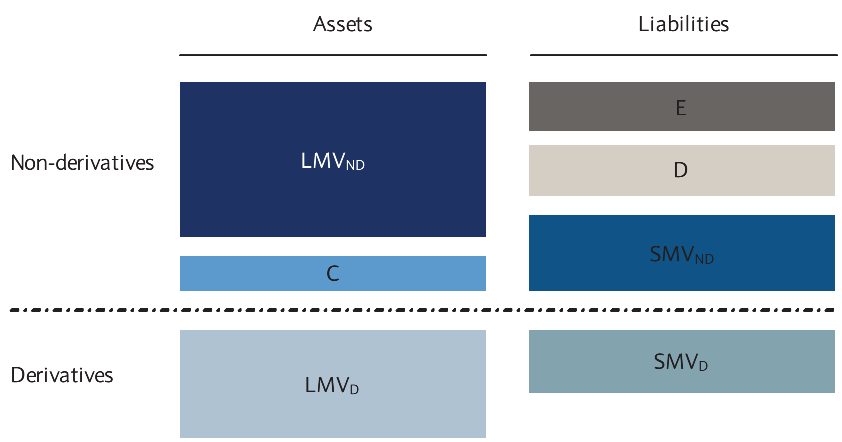
Fourth, we will introduce sample portfolios, which we will use to exemplify the calculation of Leverage metrics that we will have introduced by then.

Challenges around Leverage Definitions

Most of the HF industry organizations (for the purposes of this piece, we deem these organizations to be the Hedge Fund Standard Board, the Managed Fund Association and the President Working Group) that define best-practice standards agree that the metrics to measure Leverage are not unique and that – as a consequence of this – HF practitioners should take care in selecting the metric(s) that is(are) most representative of their investment strategy, and make appropriate disclosure of such a selection.

- In the report titled *"Hedge Fund Standards: Final Report"* (retrievable at *http://www.hfsb.org/sites/10109/files/final_report.pdf*), the Hedge Fund Working Group speaks of *"several drawbacks that complicate the use or comparison of Leverage numbers"*, warning *"Leverage numbers must be considered carefully"* & *"may not always contain meaningful information"*

Figure 1: Model Balance Sheet



Source: Strategic Consulting analysis

- The report, *"Sound Practices for Hedge Fund Managers"* by The Managed Fund Association (MFA) (retrievable at *http://www.managedfunds.org/files/pdf's/MFA_Sound_Practices_2009.pdf*), also highlights that *"a single Leverage number may not contain very much information"*

Model Balance Sheet

Figure 1 depicts the model balance sheet that we will use as reference throughout this article. Note that the dash-dotted line separates the non-derivative portion of the balance sheet from the derivative portion.

In Figure 1, we observe that:

- 'E' denotes the Equity in the account and relates to the Investors' assets in a fund[1]
- 'D' is the debit balance in the account and indicates the amount of money that the fund is borrowing to increase its market exposure[2]
- 'LMV_{ND}' and 'LMV_D' represent the dollar amount of the long market value exposure achieved with non-derivative and derivative instruments respectively
- 'SMV_{ND}' and 'SMV_D' represent the dollar amount of the short market value exposure achieved with non-derivative and derivative instruments respectively
- 'C' is cash

All numbers referring to the symbols above are positive. We will denote LMV = LMV_{ND} + LMV_D and SMV = SMV_{ND} + SMV_D, the total long and short market exposures respectively. Further, note that the cash component 'C' was introduced without further specification. That is, we are neither interested here in the portion of 'C' that resulted from the short sale of certain instruments (such resulting cash is often denoted as 'Short Sale Proceeds'), nor in the portion of 'C' that represents the margin required to sustain derivatives positions.

LMV_D and SMV_D represent the market exposure implied by derivative instruments on a delta-adjusted basis. For example:

- 1 Futures contract on Gold bought on CME (Product Symbol = 'GC') corresponds to a LMV_D of $110,000 (1 Future x 100 troy ounces / Future x $1,100 / troy ounce)
- 1 Long Call option on IBM with Delta = 0.40, Strike = $150 while IBM trades at $130 corresponds to a LMV_D of $5200 (1 Call x 100 Shares / Call x $130 / share x 0.40)

The representation introduced in Figure 1 for derivatives on a delta-adjusted basis is necessary to accurately reflect the degree of Leverage introduced in the portfolio. In fact, a futures instrument – if not represented on a delta-adjusted basis – would be displayed by an infinitesimally narrow line on the balance sheet. This is because one does not pay anything for the future contract, and since this means that it has no value, it has no 'thickness' in the ordinary balance sheet. For sake of simplicity, we will assume that all derivatives from now onwards are futures (i.e., with Delta 1).

For items on the balance sheet (i.e., all non-derivatives), the following holds:

$$LMV_{ND} + C = E + D + SMV_{ND} \qquad (1)$$

[1] It would coincide with Investors' assets if the Hedge Fund used only one prime broker (whose balance sheet is represented in Figure 1) and if all Investor assets were kept in the custody of the prime broker.
[2] Depending on the type of instrument that the fund seeks exposure to, 'D' can take the form of a debit balance in a margin lending account of e.g., a repo transaction. Regardless of its form, it represents a liability.

Leverage Definitions

Figure 2 summarizes the most commonly adopted balance-sheet based Leverage metrics. For each metric, a 'Gross' and 'Net' version are presented, to account for exposure 'netting'. The following can be observed:

- Market Leverage metrics (Adjusted and non) provide an indication of the portfolio's total exposure to the aggregate value of market instruments
- Adjusted Market Leverage and Market Leverage only differ by the inclusion (in the former) of the derivatives exposure on a delta-adjusted basis
- Gross Balance Sheet Leverage only measures the 'height' of the non-derivatives portion of the balance sheet
- Gross Accounting Leverage sums all elements (both derivatives and non-derivatives) on the asset side, all non-derivatives elements on the liability side (except for Equity) and subtracts the derivative portion on the liability side (SMV_D)

In the way described earlier, Gross Accounting Leverage extends Gross Balance Sheet Leverage in two ways:

- First, it accounts for derivatives elements on the asset side (LMV is used as opposed to LMV_{ND} only)
- Second, it accounts for liabilities beyond Equity on the liability side but reduces the value of those by the amount of derivative instruments on the liability side

Figure 2: Balance-sheet-based Leverage metrics

Metric	Gross	Net
Market Leverage (ML)	$GML = \frac{LMV_{ND} + SMV_{ND}}{E}$	$NML = \frac{LMV_{ND} - SMV_{ND}}{E}$
Adjusted Market Leverage (AML)	$AGML = \frac{LMV + SMV}{E}$	$ANML = \frac{LMV - SMV}{E}$
Balance Sheet Leverage (BSL)	$GBSL = \frac{LMV_{ND} + C}{E}$	$NBSL = \frac{LMV_{ND} + C - SMV_{ND}^{*}}{E}$
Accounting Leverage (AL)	$GAL = \frac{LMV + C + D + SMV_{ND} - SMV_D}{E}$	$NAL = \frac{LMV + C + D + SMV_{ND} - SMV_D - SMV_{ND}^{*}}{E}$

Source: Strategic Consulting analysis

Finally, we observe that

- Net Balance Sheet and Net Accounting Leverage are obtained from their respective Gross versions by further subtracting the portion of the non-derivative liabilities that are 'matched', i.e., can be considered as a direct, on-balance sheet hedge for a long position on the asset side

Matched positions were denoted by an asterisk superscript, i.e., SMV^{*}. We can therefore partition SMV_{ND} into its matched vs. un-matched portion (denoted as SMV^{**}) as follows

$$SMV_{ND} = SMV_{ND}^{*} + SMV_{ND}^{**} \qquad (2)$$

Matched positions are established by combining a long position (i.e., 100) and a short position (i.e., -20) in the same asset (this would yield in a matched position in the 20 that is both long and short). We can provide two examples of when such a scenario would take place:

- A firm might maintain a long position in restricted stock, and therefore need to establish short positions in the common stock as a hedging strategy
- A firm might have many trading desks in which some hold long positions and others hold short positions in the same asset, creating matched positions at the firm level

The following three are commonly adopted risk-based Leverage metrics:

- VAR / E
- Portfolio Volatility / E
- Stress VAR / E

It is interesting to note that all metrics – both balance-sheet based and risk-based – are expressed as fractions where the Equity in the portfolio (E) serves as the denominator, further highlighting the interpretation of Leverage as the market risk to which the portfolio is exposed per unit of Equity available.

Also, note how the numerators of all risk-based metrics above share one thing in common. They are all aggregate metrics derived from the same distribution of total returns.

Sample Portfolios

In Figure 3, we have compiled a collection of nine sample portfolios to illustrate the calculation of balance-sheet based vs. risk-based Leverage metrics.

This approach is heavily borrowed from the discussion on Leverage metrics contained in the MFA's *"Sound Practices for Hedge Fund Managers"*, Appendix III. Given the extraordinary clarity of the discussion contained therein, we decided to reproduce the structure of their presentation, attributing to them full credit for the concept. We took the liberty of complementing it with the addition of two sample portfolios and adding to it by adopting a more step-by-step approach to the calculation of Leverage metrics. However, we would like to note that the MFA paper seems to have assumed a correlation of -0.3 in the VAR calculations; even though they explicitly state that they have assumed a correlation of +0.3.

$100 of Investor Equity is placed into each portfolio. Further, the portfolio is made up of two hypothetical securities – Asset 1 and Asset 2, as well as two futures contracts – Future on Asset 1 and Future on Asset 2. Asset 1 has an annualized historical volatility of 30% and Asset 2 of 25%. The futures contracts have the same volatility as their respective underlying assets. The exposure to futures is expressed on a delta-adjusted basis. For the risk-based Leverage metrics, we calculate VAR / E, Stress 1 VAR / E and Stress 2 VAR / E. Furthermore,

- VAR is estimated at 1-day, 95% confidence interval
- The correlation between all asset pairs is -0.3
- Stress 1 VAR / E is calculated by increasing the volatility of each asset by 50%, i.e.,
  - Asset 1 has a volatility of 45%

   – Asset 2 has a volatility of 37.5%

- In addition, for Stress 1 VAR / E, the correlation between assets was increased to 0.9
- Stress 2 VAR / E is calculated by using the same volatilities for the assets that were used in Stress 1 VAR but with a correlation between all the assets of 0

Matched positions are denoted with a comma between the long and short position in the same asset e.g., 100, -20. Matched positions are present in portfolios 6, 7 and 9.

Figure 3: Sample Portfolios

Portfolio	1	2	3	4	5	6	7	8	9
Equity	100	100	100	100	100	100	100	100	100
Asset 1	80		120	120	120	100, -20		130	130, -20
Asset 2				-60				-20	
Futures on Asset 1		80					100, -20	100	100, -20
Futures on Asset 2					-60			-20	
Cash	20	100	10	40	10	20	100	20	20
Debit Balance			30		30			30	30
LMV_{ND}	80	0	120	120	120	100	0	130	130
LMV_{D}	0	80	0	0	0	0	100	100	100
LMV	80	80	120	120	120	100	100	230	230
SMV_{ND}	0	0	0	60	0	20	0	20	20
SMV_{D}	0	0	0	0	60	0	20	20	20
SMV	0	0	0	60	60	20	20	40	40
SMV^{*}_{ND}	0	0	0	0	0	20	0	0	20
Standard VAR (Asset Correlation = -0.3)	2.50	2.50	3.76	3.61	3.61	2.50	2.50	6.96	5.95
Balance-sheet based Leverage									
GML	0.8	0.0	1.2	1.8	1.2	1.2	0.0	1.5	1.5
NML	0.8	0.0	1.2	0.6	1.2	0.8	0.0	1.1	1.1
AGML	0.8	0.8	1.2	1.8	1.8	1.2	1.2	2.7	2.7
ANML	0.8	0.8	1.2	0.6	0.6	0.8	0.8	1.9	1.9
GBSL	1.0	1.0	1.3	1.6	1.3	1.2	1.0	1.5	1.5
NBSL	1.0	1.0	1.3	1.6	1.3	1.0	1.0	1.5	1.3
GAL	1.0	1.8	1.6	2.2	1.0	1.4	1.8	2.8	2.8
NAL	1.0	1.8	1.6	2.2	1.0	1.2	1.8	2.8	2.6
Risk-based Leverage									
VAR / E	2.50%	2.50%	3.76%	3.61%	3.61%	2.50%	2.50%	6.96%	5.95%
Portfolio Volatility / E	1.53%	1.53%	2.29%	2.20%	2.20%	1.53%	1.53%	4.24%	3.63%
Stress 1 VAR / E	3.76%	3.76%	5.63%	7.82%	7.82%	3.76%	3.76%	12.23%	8.92%
Stress 2 VAR / E	3.76%	3.76%	5.63%	6.10%	6.10%	3.76%	3.76%	10.91%	8.92%

Source: Strategic Consulting analysis, MFA's *"Sound Practices For Hedge Fund Managers"*

Leverage as Risk Amplifier

In this section, we first present our intuitive definition of Leverage and contrast it with the definitions provided by HF best practice standards organizations. Then, we will introduce three simple concepts which support our intuitive definition.

Intuitive Definition

For a simple long portfolio, Leverage is what allows a dollar of Equity to buy more than its worth. Generalizing for long / short portfolios, we can extend by saying that Leverage is what allows a dollar of Equity to be exposed to a market value (long and / or short) that is more than its worth. In order words, Leverage allows you to 'lever' up the market reach of your Equity.

We will show examples that – as a consequence of the former statement – Leverage ought to be seen as a risk amplifier rather than an independent source of risk.

In that respect, our views echo those of some best practice organizations. In fact,

- In the Final Report titled *"Hedge Fund Standards: Final Report"* (retrievable at *http://www.hfsb.org/sites/10109/files/final_report.pdf*), the Hedge Fund Working Group says that *"Leverage is the sensitivity of the portfolio to changes in risk factors such as market prices"*
- In the report *"Sound Practices for Hedge Fund Managers"* by The Managed Fund Association (retrievable at *http://www.managedfunds.org/files/pdf's/MFA_Sound_Practices_2009.pdf*), the MFA defines Leverage *"as a factor (rather than an independent source of risk) that influences the rapidity with which changes in market risk, credit risk or liquidity risk change the value of a portfolio"*

While in full agreement with the principles behind the two definitions presented above, we would suggest that the aforementioned statements could be slightly refined if – in describing the sensitivity to market prices – Equity (E) was used rather than the whole portfolio. The fact that Equity appears as the denominator of all Leverage metrics as presented in the previous section supports the point.

Other best practice organizations tend to see Leverage as an independent source of risk or an independent category of risk, a view that we don't share:

- In the report titled *"Best Practices for the Hedge Fund Industry" (*retrievable at *http://www.amaicmte.org/Public/AMC%20Report%20-%20Final.pdf*), The President Working Group discusses Leverage as *"a separate category of risk*[3]*"*

We would support this view if by Leverage it was meant the risk of Leverage being pulled by the counterparties extending it, most notably prime brokers. In this case it would indeed be a risk because such an occurrence may trigger a portfolio sell-off, which most likely would result in losses. However, such a view is not supported, since liquidity risk – which includes the risk of Leverage being pulled by those who extend it – is also present in the best-practice document as an independent source of risk.

[3] They define 'Leverage risk' as one among four other risk categories identified, i.e., 'liquidity risk', 'market risk', 'counterparty credit risk' and 'operational risk'

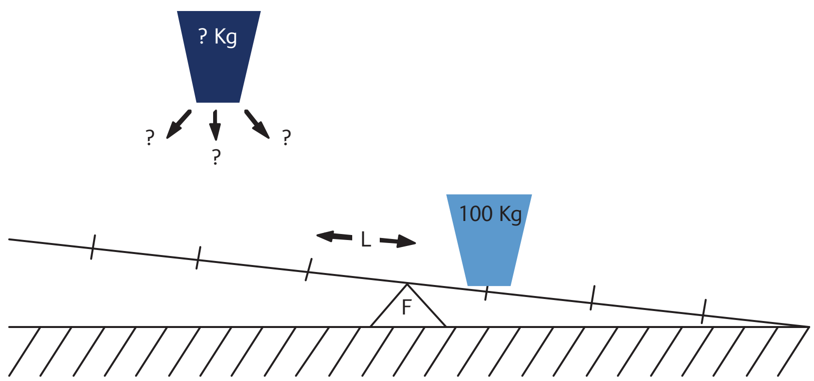
Concept I – Leverage in Physics

Archimedes – who is thought of as the one who first discovered the mathematical principles behind levers – was quoted as saying *"Give me a fulcrum, and I shall move the earth"* when speaking of the power of levers.

Consider Figure 4, where a weight of 100 Kg is placed at a distance L from the lever's fulcrum. Assuming that you can only put weights at multiples of distance L left of the fulcrum.

Figure 5 summarizes the weight one must put in order to achieve equilibrium depending on the distance from the fulcrum F.

Figure 4: Lever Example



Source: Strategic Consulting analysis

Figure 5: Equilibrium Weights

Distance	Weight (Kg)
L	100
2L	50
3L	33
4L	25

Source: Strategic Consulting analysis

Now think of the 100 Kg weight on the right side of the fulcrum as the market exposure you seek to achieve and the left weight as the Equity at your disposition. The more Leverage you can get (measured as the distance between the place where you put the weight at your disposition and the fulcrum), the less Equity (the weight at your disposition) you will need to 'sustain' the same market exposure.

Concept II – Leverage as Risk Amplifier

Consider the simple portfolio represented in Figure 6. It is a levered long portfolio without derivatives.

Let's write the balance-sheet equilibrium equations at two different points in time (not too distant from each other) t and t+1. We have

$$LMV_t = E_t + D_t \tag{3}$$

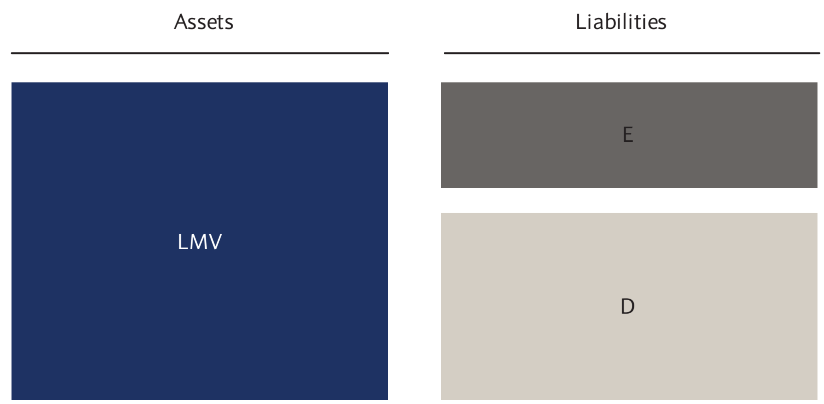
and

$$LMV_{t+1} = E_{t+1} + D_{t+1} \tag{4}$$

Assuming that the time interval between t and t+1 is long enough for market changes to impact the value of Equity but too short for any material changes in D to occur, we can use the fact that $D = D_t = D_{t+1}$ and – taking the difference between Eqs (3) and (4) side by side – we obtain:

$$\Delta LMV = \Delta E \tag{5}$$

Figure 6: Levered Long Portfolio



Source: Strategic Consulting analysis

In Eq. (5) we denoted with the symbol Δ the difference between a quantity at time t+1 minus the same quantity at time t. Define Leverage L = (D + E) / E (this definition is equivalent to ML, AML and BSL as reported in Figure 2). Dividing both sides of Eq. (5) by LMV_t and rearranging we obtain:

$$\frac{\Delta LMV}{LMV_t} = \frac{\Delta E}{LMV_t} = \frac{\Delta E}{E_t} \cdot \frac{E_t}{LMV_t} = \frac{1}{L} \frac{\Delta E}{E_t} \tag{6}$$

By indicating with %ΔLMV and %ΔE the percent variation of the asset value LMV and E respectively, one obtains:

$$\%\Delta E = L \cdot \%\Delta LMV \tag{7}$$

Eq. (7) shows how the percent change in the value of Equity E is a multiple of the percent change in the market value LMV, whereby the multiple is the Leverage L. Since risk can be measured in terms of standard deviations, we can apply the standard deviation operator on both sides of Eq. (7). Assuming that L is kept constant, we obtain

$$\sigma_E = L \cdot \sigma_{LMV} \tag{8}$$

Eq. (8) highlights the concept of Leverage as a multiplier (or amplifier) of the impact of market risk (σ_{LMV}) into Equity risk (σ_E).

Concept III – Multiplier Effect for Long / Short Portfolios

Consider the Long / Short portfolio represented in Figure 7.

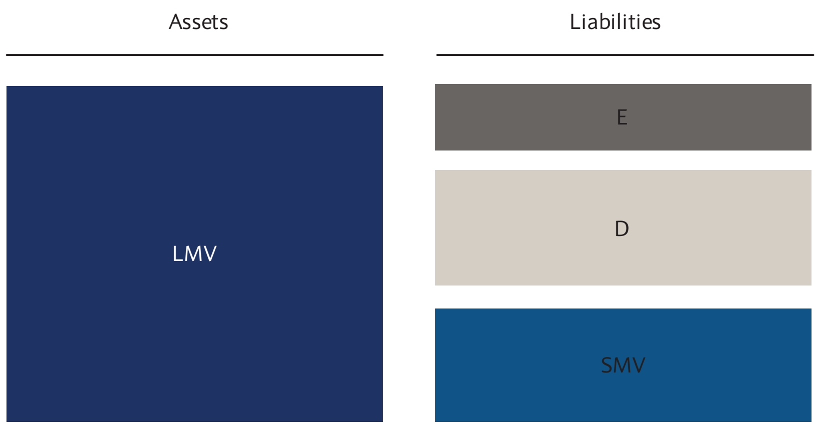
We will try and see here if we can extend the considerations made in the previous subsection about Leverage being a multiplier to a portfolio with a short exposure.

By writing the two balance-sheet equilibrium equations at times t and t+1 we have

$$LMV_t = E_t + D_t + SMV_t \tag{9}$$

$$LMV_{t+1} = E_{t+1} + D_{t+1} + SMV_{t+1} \tag{10}$$

Figure 7: Levered Long / Short Portfolio



Source: Strategic Consulting analysis

By taking the difference side by side and using the assumption that D = D_t = D_{t+1}, we have

$$\Delta LMV = \Delta E + \Delta SMV \tag{11}$$

By rearranging Eq. (11) to factor out the percent variation in the Equity value %ΔE we have

$$\frac{\Delta E}{E_t} = \frac{\Delta LMV}{LMV_t} \cdot \frac{LMV_t}{E_t} - \frac{\Delta SMV}{SMV_t} \cdot \frac{SMV_t}{E_t} \tag{12}$$

By factoring out (LMV + SMV) / E from the right side of Eq. (12) we obtain

$$\%\Delta E = \frac{LMV_t + SMV_t}{E_t} \cdot \left(\%\Delta LMV \cdot \frac{LMV_t}{LMV_t + SMV_t} - \%\Delta SMV \cdot \frac{SMV_t}{LMV_t + SMV_t} \right) \tag{13}$$

Define now fractional long and short exposures as f_L = LMV / (LMV + SMV) and f_S = SMV / (LMV + SMV) respectively. Note that $f_L + f_S = 1$. Also, note that the factor before the parentheses on the right of Eq. (13) represents GML and AGML as defined in Figure 2. Finally, let us re-define %ΔSMV as -%ΔSMV. In doing so, we agree that if the short book makes money (i.e., %ΔSMV is negative), we will report it as a positive, which is intuitive. We then have

$$\%\Delta E = GML \cdot (f_L \cdot \%\Delta LMV + f_S \cdot \%\Delta SMV) \tag{14}$$

Eq. (14) highlights that the percent variation of the Equity in the portfolio is proportional (where the proportionality is represented by the Leverage metric GML or AGML) to the weighted average of the percent variations in the Long and Short portfolios. The weights in the average are represented by the fractional long and short market exposures f_L and f_S.

Starting from Eq. (11), one can show – using a different set of manipulations – that a relationship similar to Eq. (14) can be derived, which links %ΔE to the 'Net' equivalents of ML and AML. Precisely, one can show that the following holds

$$\%\Delta E = NML \cdot \left(\frac{\%\Delta LMV}{n_L} + \frac{\%\Delta SMV}{n_S} \right) \tag{15}$$

In Eq. (15), we set n_L = (LMV – SMV) / LMV and n_S = (SMV – LMV) / SMV. At times, n_L and n_S are defined as net long and net short exposures respectively.

Unifying Leverage Definitions

In this section we will show how balance-sheet based and risk-based Leverage metrics stem from the same concept, i.e., modelling changes in portfolio Equity as a function of changes in the independent variables that affect the value of a portfolio, for example prices.

Let us observe that – for a generic portfolio as represented in Figure 1 – the following holds

$$\Delta E = \Delta LMV - \Delta SMV \tag{16}$$

In other words, the variation in the Equity of the portfolio can be thought of as the difference between the increment in the portfolio's long market value exposure and the increment in its short market exposure.

We derived Eq. (16) earlier in this article (See Eq. (11)). However, in this case we do not have to assume that Eqs. (9) and (10) hold for Eq. (16) to be true.

When normalizing Eq. (16) by the Equity level E, we obtain

$$\%\Delta E = \frac{1}{E} \cdot (\Delta LMV - \Delta SMV) \tag{17}$$

Eq. (17) represents the equation from which both balance-sheet-based and risk-based Leverage metrics can be derived.

Deriving Balance-Sheet-Based Leverage Metrics

If we manipulated Eq. (17) in the same way that Eq. (11) was manipulated from Eq. (12) up until Eq. (15), we would arrive again at the ML and AML metrics.

Deriving Risk-Based Leverage Metrics

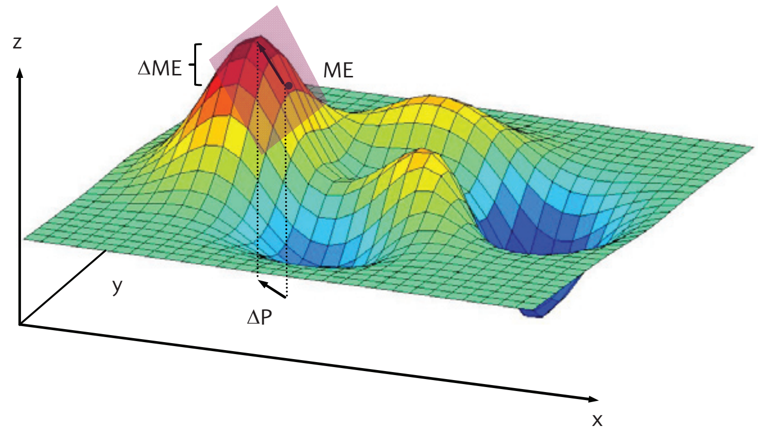
Let's re-consider the right part of Eq. (17). In deriving balance-sheet based Leverage metrics, it's like if we assumed that LMV and SMV were two variables with their own prices and volatility. The assumption is true if LMV and SMV are each made up by exposure to a single security.

Let's define ΔME = ΔLMV – ΔSMV as the variation in Market Exposure ME. For complex portfolios, one may wish to model ΔME as a function of multiple variables like for example the prices of the underlying securities that make up the portfolio. That is:

$$\Delta ME = \Delta ME(\Delta P_1, \ldots, \Delta P_n) \tag{18}$$

If that is the case, there will be a potentially different value of ΔME for every way in which the underlying variables will be modified. To illustrate this, consider for example Figure 8, where ME (on the vertical, z-axis) is represented as a function of the prices of underlying securities (on the horizontal, x- and y-axes).

Figure 8: The ME Surface



Source: Strategic Consulting analysis

For every movement in the price of securities (represented by the vector ΔP) in the (x,y) plane) there will be a corresponding movement in the value of ME (represented by the arrow on the surface). As one can see, ΔME can be very different depending on the choice of ΔP.

But we are looking for a single Leverage number that is indicative of an 'aggregate' movement of ΔME across multiple choices of ΔPs. Hence, one must define an operator Ω that is capable of consolidating a spectrum of possible choices of ΔPs in one single number. That will be the Leverage metric we are after. In other words, we define:

$$L = \frac{1}{E} \underset{\Delta P}{\Omega}(\Delta ME) \tag{19}$$

It is up to us to define Ω as we best see fit. Here are three choices that will end up transforming Eq. (19) in some of the previously introduced risk-based Leverage metrics:

If Ω meant that we would have to take a large enough sample of daily price moves, plot the resulting distribution of ΔMEs and take the 5th percentile, we could re-write Eq. (19) as

- L = VaR / E

If Ω meant that we would have to take a large enough sample of daily price moves, plot the resulting distribution and take the standard deviation we could re-write Eq. (19) as

- L = Portfolio Volatility / E

If Ω meant that we would have to take a severe set of price movements (chosen arbitrarily) and consider the corresponding ΔEs, we could re-write Eq. (19) as

- L = Stress Scenario Loss / E

In the last case above, the 'stress' may correspond to a particularly severe selection of price moves, but one can choose changes in other variables that affect the value of the portfolio and be considered 'independent'. For example, one can choose changes in the volatility of the underlying instruments and the correlation among their returns. In such case, we would re-create the Stress VAR scenarios that were calculated for the sample portfolios earlier.

Additional Reading and Future Research

A number of simplifications have been made in this article to keep the discussion as simple as possible. The most significant simplification has been to limit the example of portfolios with derivative to delta-one instruments such as futures. It would be interesting – in the context of future research – to establish how much of the concepts expressed herein can be extrapolated to account for non delta-one instruments such as options.

Also, the whole concept of dynamic Leverage has been purposefully neglected for sake of simplicity and yet is of fundamental importance to assess how Leverage is adjusted depending on various market conditions. Again, this can be subject of valuable, future research.

The following sources have been extensively consulted to prepare this article and are highly recommended to Hedge Fund Managers and Investors in order to establish a common ground of understanding around Leverage, most specifically its definitions and usage.

- The Alternative Investment Management Association Limited (AIMA), *"Guide to Sound Practices for European Hedge Fund Managers"*, 2007
- DE Shaw & Co., *"Lessons from the Woodshop: Common Sense in Managing and Measuring Leverage"*, The D.E. Shaw Group Market Insights, Vol. 2, No. 1, 2010
- Hedge Fund Working Group, *"Hedge Fund Standards: Final Report"*, 2008
- Technical Committee of the International Organization of Securities Commission, *"Hedge Funds Oversight"*, 2009
- A. Blundell - Wignall, *"An Overview of Hedge Funds and Structured Products: Issues in Leverage and Risk"*, 2007
- J. E - Dunn III, *"Leverage in Hedge Funds and Leveraging Hedge Fund Portfolios: The Alpha and the Omega and the 'in between' "*
- Managed Funds Association, *"Sound Practices for Hedge Fund Managers"*, 2009
- The Asset Managers' Committee, *"Best Practices for the Hedge Fund Industry"*, 2009

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HAS THE GAME BEEN RAISED?

March 2010

Has the Game Been Raised?

We decided to conduct a study to address the multiple follow-up questions that our last quarterly piece 'Raising the Game' triggered in the Hedge Fund (HF) community. To that end, we surveyed Investors and HF Managers[1] to distill their views on four issues.

First, we explore Investor preferences towards HFs' IR[2] / Marketing teams. We structure this section by first addressing the characteristics that Investors mostly dislike, followed by those that Investors mostly like. The characteristics expressed focus on organizational models and the traits of individuals in the IR / Marketing teams.

Second, we provide a staffing update on IR / Marketing team sizes. We investigate if current staff sizes are bigger or smaller than staff sizes in September 2009.

Third, we share an analysis on the evolution of the total compensation paid to IR / Marketing teams over the course of the last two years. To do so, we break down total team compensation by compensation / headcount and total headcount number, to explore which of the two factors is mostly responsible for the changes in total compensation. Also, we share how total compensation is split by salary, bonus (discretionary), commission and equity in the HF Management firm.

Fourth, we determine whether 2008 performance was a key determinant for 2009 allocations. To do so, we categorize the HFs surveyed based on 2008 performance data and evaluate if such performance positively correlates with 2009 net flows. Furthermore, we determine if there is an average time lag between when firms experience good performance and subsequent net flows. Lastly, we analyze if performance volatility during the years 2008 to 2009 affected the firms' net flows during the same period.

Methodology

To conduct this study, we collected data from two sources

- Meetings / calls held with 24 Investors
- Data received from 38 HF Managers

All data received from HF Managers were aggregated and then averaged within three size buckets (<$1bn, $1-10bn, $10bn+) in order to preserve the participants' confidentiality. Please note that, given that certain HFs provided only subsets of data, the data sets used for each section of this piece may include responses from a different number of respondents than the totals highlighted above.

Key Findings

- No Investor performs deliberate due diligence on IR / Marketing teams, however, over 50% of Investors have a view on the 'best organizational model' & 'best-in-class' traits
- The three characteristics Investors value most in IR / Marketing teams are accessibility of personnel, fluency with investment processes, and frequency of communication

[1] Of the participating firms, some are 'Raising the Game' participants and some are new participants
[2] Investor Relations

- Planned hiring activity has not yet taken place as IR / Marketing team sizes have remained roughly flat since September 2009, indicating slow recruitment cycles
- Firms with AUM[3] $1-10bn dedicate a significant portion of their IR / Marketing teams to prospecting (71% of total time) compared to firms with AUM <$1bn and $10bn+
- Firms with AUM <$1bn have decreased IR / Marketing total compensation since 2007 by 46%, while keeping team sizes constant, indicating lower compensation / headcount
- Firms with AUM $1-10bn first decreased and then increased total compensation for IR / Marketing teams over the last two years, while increasing headcount by 60%
- Firms with AUM $10bn+ cut total compensation for IR / Marketing teams by 40% between 2008 and 2009, decreasing both compensation / headcount and headcount
- Across all firm sizes, formulaically driven compensation[4], specifically 'Commission' and 'Equity', does not exceed 25% of total compensation for IR / Marketing teams
- Firms which returned 20%+ in 2008 saw average 2009 net flows of 51%, indicating that 2008 performance was a significant driver behind 2009 allocations
- There is no clear time lag between when firms deliver good performance and when they receive net flows, however, flows seem to pick-up three quarters after high performance
- The lower volatility[5] a firm experienced during the period 2008 to 2009, the higher net flows[6] they received in the same period, confirming Investors' desire for stable returns

[3] Assets Under Management
[4] Formulaically driven compensation is defined as the portion of total compensation that is either Commission or Equity, since both are usually awarded by means of a formula
[5] Calculated as the difference between maximum quarter performance and minimum quarter performance during the years 2008 to 2009
[6] Defined here as the difference between the maximum minus the minimum quarterly performance in 2008-2009

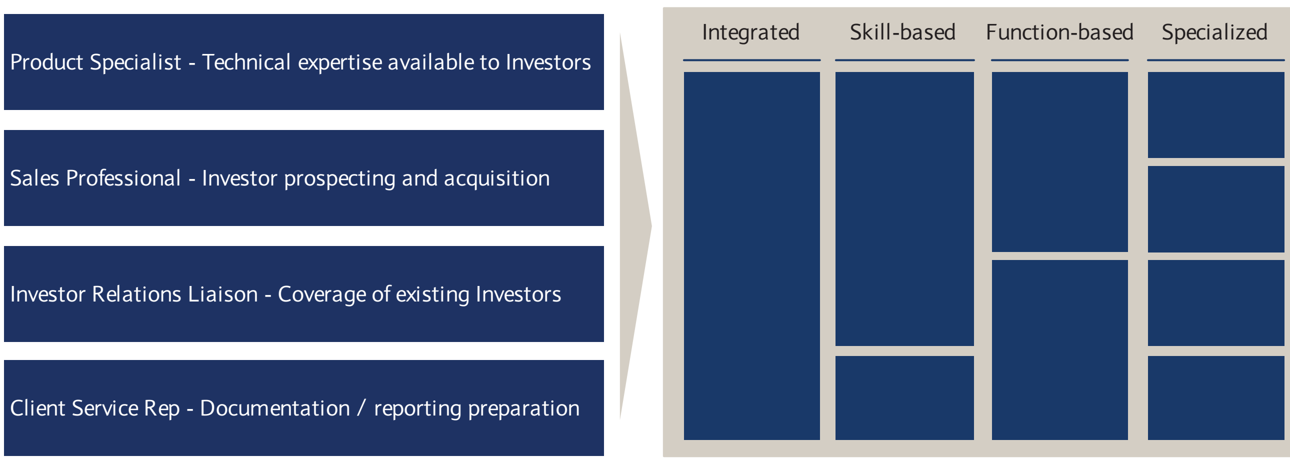
Investor Preferences for IR / Marketing Teams

Investors do not perform due diligence, but have preferences

None of the Investors surveyed perform deliberate due diligence on IR / Marketing teams. However, over 50% of the Investors have a view on either the 'best organizational model' or the key traits that professionals in the IR / Marketing teams should have for the team to be considered 'best-in-class'. Across both dimensions, Investors expressed three strong 'dislikes' and five strong 'likes'.

For reference, Figure 1 recaps the four organizational models for how IR / Marketing teams are structured, as discussed in 'Raising the Game'.

Figure 1: IR / Marketing Organizational Models



Source: Strategic Consulting analysis

Dislikes

The lack of an IR / Marketing team is a concern

Firstly, the absolute lack of an IR / Marketing team is a red flag for many Investors. The presence of an IR / Marketing team assures Investors that post-allocation they will always have a 'go-to' source for any inquiries or concerns. Also, the thought of the PM[7] shifting his / her focus from managing the portfolio to managing IR / Marketing duties is often worrisome for Investors. It is understandable that for smaller firms – e.g., with AUM <$1bn – the IR / Marketing function may not be heavily staffed. However, allocation of some personnel to IR / Marketing is important, even if this function represents only a portion of an individual's responsibilities.

Investors dislike being 'handed-off'

Secondly, Investors indicate a dislike towards 'Function-based' models as depicted in Figure 1. In this model, a group covers prospective Investors, while another distinct group covers existing Investors. The reason Investors do not like this model is because their relationships are essentially 'handed off' once an allocation is made and the continuity of the relationship is often not preserved. We had highlighted such drawbacks in the original study, 'Raising the Game', and received confirmation from our dialogue with Investors that such concerns are valid.

[7] Portfolio Manager

To a lesser extent, Investors also do not like the 'Specialized' model. In the 'Specialized' model, individuals specialize in one of the four core competencies – product speciality, sales, IR and client services. This model creates a further divergence in the minds of Investors between pre-allocation and post-allocation staff.

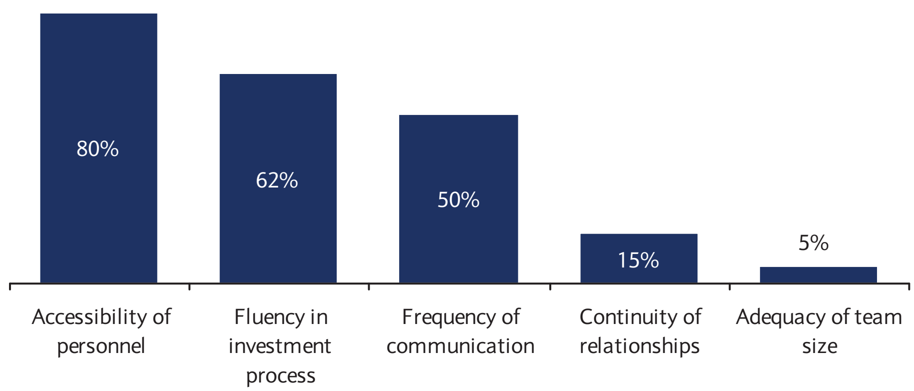
Third party marketers regarded with skepticism

Thirdly, links with third party marketers seem to be viewed in a negative light, notwithstanding the fact that many highly skilled and reputable third party marketing firms presently operate in the marketplace. Communicating with HFs that know and understand their client base is of fundamental importance to Investors.

Likes

There are five key characteristics that Investors like in IR / Marketing teams, as depicted in Figure 2.

Figure 2: Top Five 'Likes' for IR / Marketing Teams



Source: Barclays Capital Strategic Consulting Proprietary Database

Accessibility and prompt responses are key

Firstly, as can be noted from Figure 2, 80% of Investors consider the accessibility of IR / Marketing professionals to be the most important factor when evaluating the team as a whole. The accessibility of personnel alludes to the IR / Marketing staff being a resource to Investors and answering questions / following up on inquiries promptly. Positive experiences highlight dealings with IR / Marketing professionals that are informed and responsive.

'Speaking like the PM' is a winning trait

Secondly, 62% of the Investors surveyed cited the IR / Marketing professionals' fluency in the investment process as integral. This includes the ability to be able to speak about the nuances of the portfolio as well as keeping abreast of key developments in the HF industry. For example, several Investors cited that they consider an IR / Marketing professional 'superb' if *"speaking to him / her is as good as speaking to the PM directly"*. Investors value the ability of the IR / Marketing teams to explain complicated strategies and processes with ease, as well as the ability to handle a wide range of questions without having to revert back to investment professionals for answers. An example of an experience that an Investor cited as 'dreadful' was interacting with a professional who had very little product knowledge, and when asked about a recent news article published about the firm he / she represented, he / she replied "*I'm not sure – looks like you know more than me*".

Regular dialogue without over-communicating

Thirdly, 50% of Investors deem frequent communication with IR / Marketing teams to be important. It is essential not to confuse this with excessive persistence or overwhelming the Investor with data / publications. Rather, Investors noted that they appreciate IR / Marketing professionals that are proactive e.g., setting up regular meetings between the Investor and investment team and sending monthly updates on the firm. Another tool that Investors were positive about is Web-Ex demos that IR / Marketing personnel can set up, in which Investors can receive, say, a live feed from the PM's desktop to gain insight into investment processes.

Lastly, 15% and 5% of Investors mentioned that the continuity of relationships and the team size of IR / Marketing teams, respectively, were important factors. This again indicates that Investors prefer it if there is one professional who handles their account both pre- and post-allocation, if they have one focal point of contact on the IR / Marketing team, and if there is low turnover. In terms of team size, there is no clear indication that Investors have a view on what an adequately sized IR / Marketing team is, based on the firms' AUM.

Staffing Update on IR / Marketing Team Sizes

Significant hiring plans were in place in Sep. '09…

When interviews were initially conducted for 'Raising the Game' in September 2009, firms provided headcount numbers for their IR / Marketing teams with an indication that significant hiring would take place in the coming months. As a follow up, we reached out to the original participants of 'Raising the Game', as well as some new participants, to compare IR / Marketing team sizes now to what they were six months ago.

…but only a few new hires have been on-boarded so far

Figure 3 depicts average IR / Marketing team sizes in September 2009 and March 2010 respectively across the three size buckets. As can be noted from Figure 3, no substantial hiring activity has occurred. Team sizes have remained roughly constant, with minimal changes such as the reduction of one headcount, and the addition of one (on average) for firms \$10bn+ and \$1-10bn, respectively. No changes have taken place for firms <\$1bn.

Many interviews with lots of talent slowing recruitment

Hiring has proved to be a slower process than most anticipated. Many firms are actively interviewing up to a hundred candidates each for IR / Marketing position due to the enormous amount of talent in the marketplace. As a result, this is also decelerating the hiring process as firms are conducting extensive searches in hopes to settle for nothing less than the best.

Figure 3: Average IR / Marketing Team Sizes

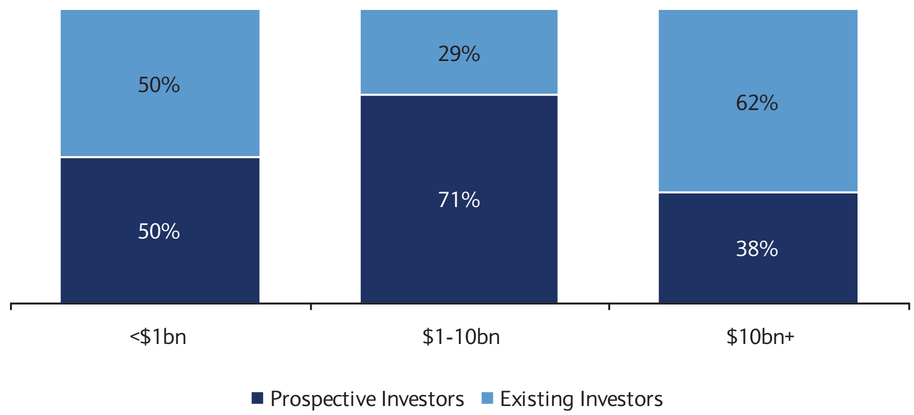
AUM	Sep - 09 team size	Mar -10 team size	Delta
<\$1bn	3	3	0
\$1-10bn	6	7	1
\$10bn+	12	11	-1

Source: Barclays Capital Strategic Consulting Proprietary Database

Firms with AUM \$1-10bn are geared towards prospecting

In Figure 4, we analyze the portion of the IR / Marketing team that is focused on prospective Investors vs. existing Investors as of March 2010. Interestingly, firms with AUM \$1-10bn have IR / Marketing teams that are heavily geared towards prospecting for Investors when compared to firms <\$1bn and firms \$10bn+, since 71% of their resources appear to be dedicated to prospecting.

Figure 4: IR / Marketing Team Focus



Source: Barclays Capital Strategic Consulting Proprietary Database

Firms with AUM <$1bn & $10bn+ geared toward existing Investors

For firms with AUM <$1bn and $10bn+, the percentage of the total team that is focused on prospective Investors vs. existing Investors is equal to or less than 50%. The reason for this is two-fold. Firstly, many firms in these two size buckets seem to be fairly focused on maintaining the current size of their AUM. They are not looking to grow or shrink their AUM, and have purposely chosen to be 'small and agile' or 'large and at-scale'. Therefore, it makes sense for their efforts to be fairly balanced and unbiased across prospective and existing investors. Secondly, for firms with AUM <$1bn there often is a resource constraint. The PM or the CEO of the firm is often spending a significant portion of time marketing the firm along with the IR / Marketing team, which increases the constraint on the amount of time that can be spent prospecting in absence of the PM. In our minds, this reinforces the need for dedicated resources in the IR / Marketing function.

Firms with AUM $1-10bn are eager to grow & staffed to do so

On the other hand, firms with AUM $1-10bn spend a majority of their time prospecting new Investors vs. focusing on existing Investors. We suggest two main reasons for this. Firstly, firms in this size bucket are predominantly 'growing' firms trying to surpass the $10bn threshold. Secondly, the resource constraint that firms <$1bn often face is not there. The IR / Marketing team here does not have to rely on the PM or CEO to market to new Investors and the team is able to focus on prospecting to help the firm achieve its AUM goals.

Compensation Analysis of IR / Marketing Teams

We analyzed how the total compensation for IR / Marketing teams has evolved over the last two years based on the underlying changes in compensation / headcount and headcount numbers.

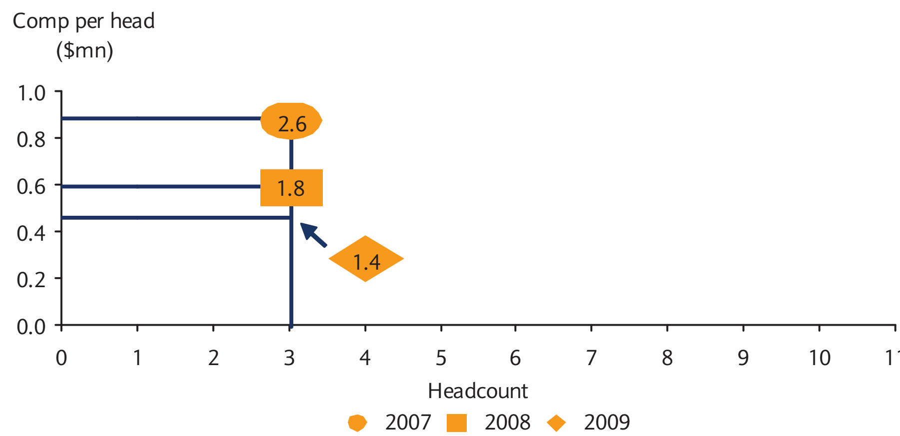
Total comp as a product of comp / head and headcount

Figures 5, 6 and 7 illustrate the evolution of the IR / Marketing total compensation from 2007 – 2009 for firms with AUM <$1bn, $1-10bn and $10bn+, respectively. In each figure, the x axis represents the average headcount number across all respondents and the y axis represents the average compensation per headcount. The orange symbols represent the total compensation for the team denominated in millions of dollars, calculated as the product of average headcount and the average compensation per headcount.

For firms with AUM <$1bn, headcount has stayed constant

For firms with AUM <$1bn, the average headcount has remained constant at approximately three people from 2007 – 2009. However, as can be noted in Figure 5, the compensation per head and consequently the total compensation paid to the IR / Marketing team has steadily decreased over the past two years. The total average compensation decreased by 46% from $2.6mn to $1.4mn during the period 2007 – 2009. The reason for this trend can be explained in just one word – distress. As firm performance eroded (especially over the period 2007 to 2008) firms were simply not able to pay existing staff 2007 level compensations. However, it is important to note that these firms responded to distress by reducing compensation per headcount rather than reducing headcount.

Figure 5: IR / Marketing Total Compensation for Firms with AUM <$1bn

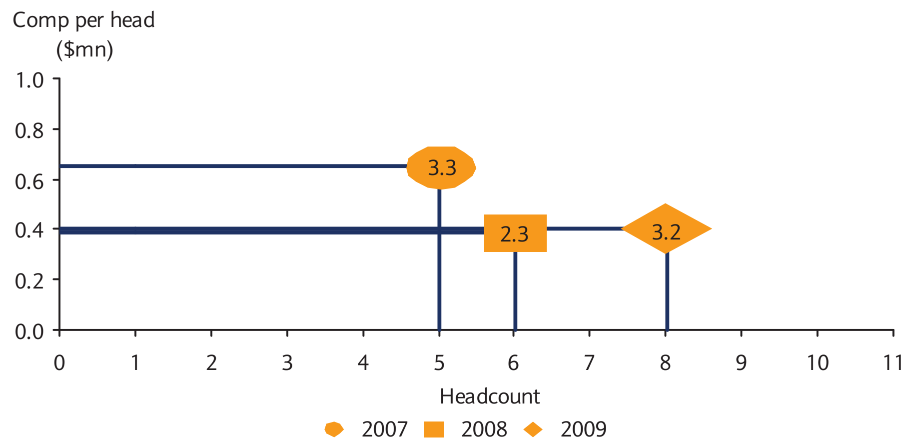


Source: Barclays Capital Strategic Consulting Proprietary Database

For firms with AUM $1-10bn, headcount increased since '07

Figure 6 shows how total compensation has changed from 2007 – 2009 for firms with AUM of $1-10bn. These firms drastically decreased total compensation from 2007 to 2008 from $3.3mn to $2.3mn. Headcount was increased from five to six people from 2007 to 2008, while compensation per headcount was cut by 40%. From 2008 to 2009, compensation per headcount remained fairly constant but the average size of IR / Marketing teams grew to eight people. The total compensation paid in 2009 remained slightly lower than 2007 levels due to significantly lower compensation per headcount despite a 60% increase in headcount between 2007 and 2009 (from five to eight people). These firms appear to be focusing their hiring efforts on more junior candidates, causing average compensation per headcount to decrease.

Figure 6: IR / Marketing Total Compensation for Firms with AUM $1-10bn

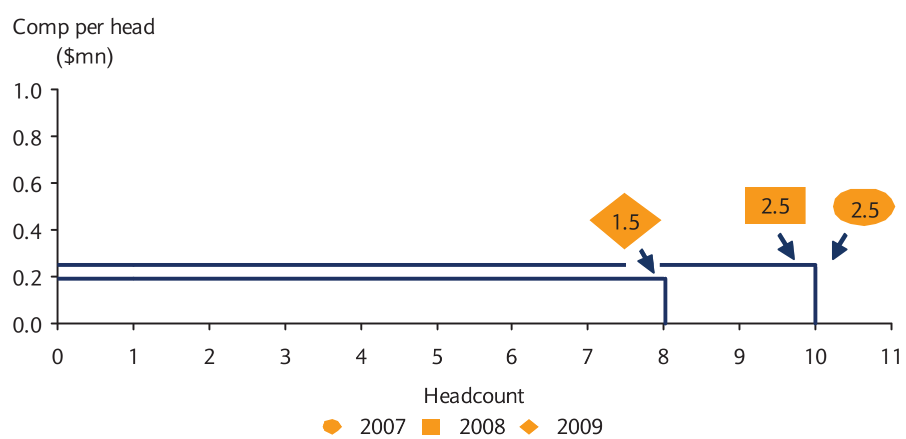


Source: Barclays Capital Strategic Consulting Proprietary Database

For firms with AUM of $10bn+, total comp decreased in '09

Figure 7 displays the total compensation for firms with AUM of $10bn+ during the period 2007 – 2009. For these firms, total compensation remained constant from 2007 to 2008 at $2.5mn, only to experience a massive cut in 2009 when total compensation was reduced to $1.5mn. As can be seen in Figure 7, compensation per head and the headcount number both decreased in 2009, resulting in a 40% decrease in total compensation from $2.5mn to $1.5mn. The reason for this seems to be two-fold. Firstly, headcount was cut in 2009 due to extremely poor performance in 2008. Secondly, average compensation per headcount seems to have decreased due to the departure of senior personnel from the team.

Figure 7: IR / Marketing Total Compensation for Firms with AUM of $10bn+



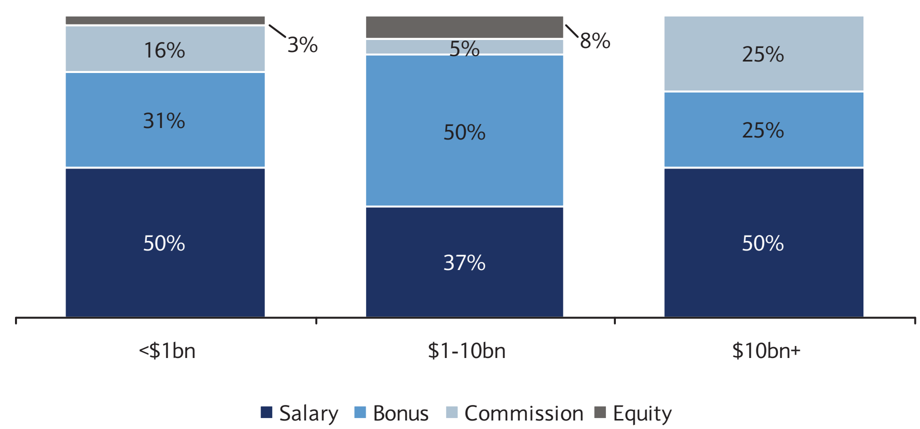
Source: Barclays Capital Strategic Consulting Proprietary Database

Figure 8 highlights the average compensation structure for IR / Marketing professionals for firms in each size bucket split by salary, bonus, commission and equity. 'Commission' refers to the portion of compensation paid as a percent of assets raised or a percentage of the fees generated by the assets raised. ‘Equity’ refers to the portion of compensation paid either as a stake in the equity of the HF Management firm or as profit participation in the same.

Formulaically driven comp is highest where AUM is $10bn+

Interestingly, for IR / Marketing professionals at firms with AUM <$1bn and $10bn+, salary makes up 50% of the total compensation, while it is only 37% for professionals at firms with AUM $1-10bn. The formulaically driven portion of the compensation – i.e., both ‘Commission’ and ‘Equity’ – also seem to be the largest for firms with AUM of $10bn+, making up 25% of total compensation.

Figure 8: Compensation Structure



Source: Barclays Capital Strategic Consulting Proprietary Database

2008 Performance vs. 2009 Allocations

Lastly, we analyzed the effects of 2008 performance on the net flows[8] firms experienced in 2009. We conducted this analysis to verify whether 2008 performance was a significant factor in explaining 2009 allocations.

In Figure 9, we display the relationship between 2008 full year performance vs. 2009 full year average net flows. On the x axis, we bundle firms that experienced performance <0%, 0-20% and 20%+ in 2008, respectively. We then plot this against the average 2009 net flows experienced by firms in those performance categories.

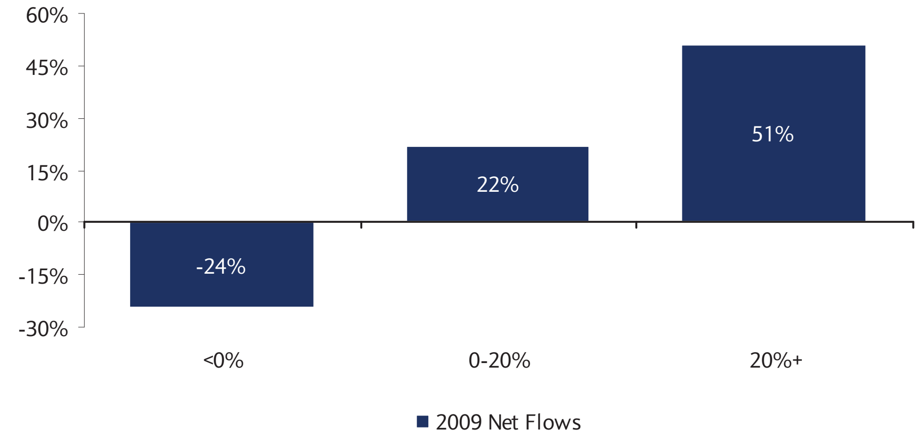
Investors allocated to firms in ’09 based on ’08 performance

As can be noted from Figure 9, Investors clearly allocated to firms in 2009 based on 2008 performance, therefore putting a premium on the firms who delivered positive results during a 2008 that was challenging for capital markets. Specifically,

- Firms with negative performance in 2008 had average net flows of -24% in 2009
- Firms with performance 0-20% in 2008 had average net flows of 22% in 2009
- Firms with performance higher than 20% in 2008 had average net flows of 51% in 2009

[8] Net flows are calculated as a percentage of the Net Asset Value as of year end 2008

Figure 9: 2008 Performance versus 2009 Net Flows



Source: Barclays Capital Strategic Consulting Proprietary Database

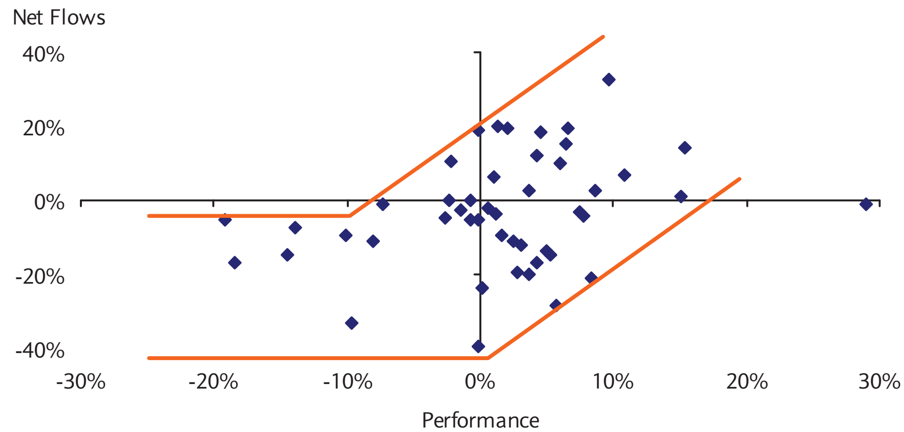
There is a three quarter lag between perf[9] & net flows

In Figure 10, we further test whether there is a consistent average time lag (in quarters) between performance, and net flows[10]. In other words, we ask ourselves how many quarters after a quarter of good performance one must wait to see the resulting benefit of positive net flows, if any. To analyze this, we ran several regressions in which we plotted quarterly performance data vs. quarterly net flows in the same quarter, in the next quarter, and so on, up to a year of time lag. From this analysis, no specific time lag between when firms deliver good performance and experience net flows emerges. However, we observe that there is a trend that indicates that net flows tend to pick up three quarters after the firm exhibits high performance.

In Figure 10, on the x axis we plot quarterly performance during the periods 2008 to 2009, and on the y axis we plot net flows that lag each quarterly performance data-point by three quarters. For example, a point in the chart may represent Q108 performance vs. Q408 net flows. When excluding one outlier represented by the data point on the right side of Figure 10, which had negligible net flows despite strong performance, the data-points lie below a linear upward sloping line (as shown by the orange lines). This indicates that there has been – during the period 2008 to 2009 – a three quarter lag between when good performance occurs, to when firms witness higher net flows. That said, such a correlation – despite being the strongest among all lags considered – is still very weak.

[9] Performance
[10] Net flows are calculated as a percentage of the Net Asset Value

Figure 10: Performance versus Net Flows with a Three Quarter Lag



Source: Barclays Capital Strategic Consulting Proprietary Database

Investors award firms based on performance consistency

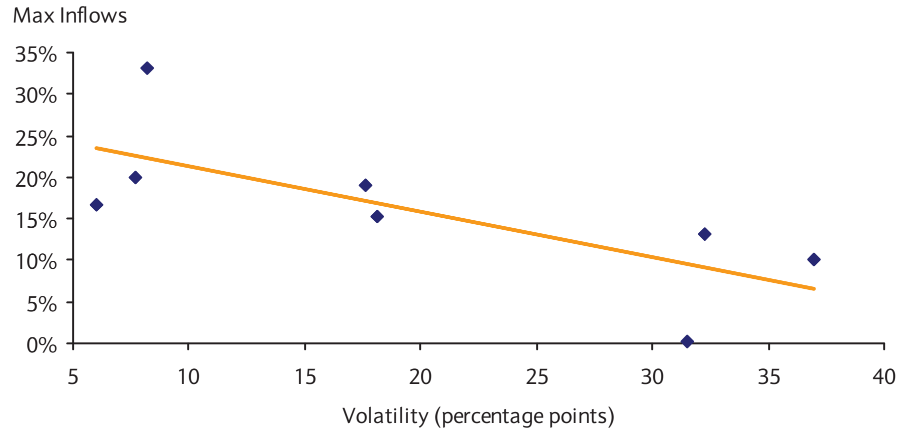
In the spirit of continuing to identify performance metrics that could explain allocations, in Figure 11 we analyze the relationship between performance volatility on the x axis and maximum net flows[11] on the y axis during the period 2008 to 2009. As an estimate for volatility, we took the difference between the maximum minus the minimum quarterly performance during the years 2008 and 2009. We take net flows to be the maximum quarterly net flows that firms received during the same time period.

The attentive reader might object that maximum net flows might have been received somewhere at the beginning of 2008, therefore invalidating the choice of the variable. In fact, should that be the case, how could maximum net flows in 2008 be attributed to an event that happens in the future (i.e., the maximum minus the minimum performance up until 2009)? To ease these concerns, we note that maximum net flows were almost always witnessed in the latter part of 2009, therefore validating the somewhat simplistic – and yet intuitive – choice of variables.

The result is a downward sloping linear line (as depicted by the orange line) showing the direct, negative correlation between volatility and maximum net flows. Firms with higher volatility (on the right side of the plot) experienced lower maximum net flows and vice versa. This reaffirms the validity of an old 'adage' in the HF industry that Investors seek out firms that exhibit consistency and stability, not necessarily the highest performance.

[11] Calculated as a percentage of the Net Asset Value

Figure 11: Maximum Firm Volatility versus Maximum Net Flows



Source: Barclays Capital Strategic Consulting Proprietary Database

Acknowledgements

We thank all Investors and Hedge Fund Managers that took the time to participate in this study. We appreciate their patience in providing us with the necessary data to compile this analysis, at times even seeking a dialogue to explain the specific circumstances of their firms.

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REVVING THE EVENT DRIVEN ENGINE

April 2010

Revving the Event Driven Engine

The Barclays Capital Strategic Consulting team decided to focus on Event Driven (ED) strategies for this monthly piece as these strategies seem to be coming back into favour with Investors. We believe this is due to multiple factors. One factor is the resumption of AUM flows into Hedge Funds (HFs) as a whole, not just to ED strategies. Another is the resurgence of Mergers and Acquisitions (M&A) activity, a key focus of ED strategies, after having declined in the last two years. Also, an upcoming corporate debt maturity cliff from 2012-16 and expectation of continued financial distress provide a rich environment for non-M&A driven ED strategies. Finally, the competitive landscape for ED HFs has changed significantly resulting in surviving ED HFs facing much less competition than they did before the recent financial crisis. As a result of all these changes in the last two years, both Investors and HFs are looking at ED strategies to exploit significant market opportunities going forward.

Exploring the market opportunity for Event Driven Hedge Funds

Looking at the resurgent Investor interest in ED strategies, we addressed three broad questions:

- How has the market environment changed for ED HFs?
- What are the lessons for ED HFs and Investors from the events of the last two years?
- What does the opportunity landscape for ED strategies look like, going forward?

To address these questions, we analyzed the following:

- Statistics on the evolution of the ED HF landscape from HFR (Hedge Fund Research)
- Developments in the M&A landscape using Dealogic data
- Debt issuance calendar for Corporates as well as the U.S. federal government
- Views expressed by some of the following ED Managers at a panel discussion sponsored by Prime Services Capital Solutions at Barclays Capital on March 15, 2010, titled ‘Revving the Event Driven Engine’
  - Matthew Halbower, CEO/CIO at Pentwater Capital Management
  - Richard Hurowitz, CEO/CIO at Octavian
  - Ben Pass, Portfolio Manager at GLG
  - Michael Pitts, Manager, ED Arbitrage Group at BBT Capital Management, Inc.
  - Howard Shainker, Portfolio Manager at Third Point
- Investor interviews conducted by Strategic Consulting on ED strategies

Key Findings

- ED strategies have experienced the highest net AUM inflows recently of all HF strategies, amounting to 3.61% of existing AUM in the past six months
- ED and Macro strategies are the only two strategies where Pensions plan to increase allocations

- Two market developments point to a supportive environment for ED in the near future
  - Strong recent growth in M&A activity, especially in the U.S. and Asia, that is expected to get stronger over the next 2-3 years
  - Corporates need to refinance / rollover $329bn of debt maturing in 2014, at the same time as record U.S. government deficits, likely creating favourable conditions for Special Situations and Distressed Debt strategies
- Competitive landscape for ED Managers has thinned considerably, with ~16% of ED HFs out of business since 2007 and proprietary desks at investment banks with considerably less capital than before

What Are Event Driven Strategies?

ED Hedge Funds encompass a broad array of strategies

We start our analysis by reviewing what ED strategies are[1]. At a very high level, ED HFs take positions in companies that are currently involved in or are likely to be involved in one or more of a number of corporate transactions or events. Types of transactions typically include mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuances or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure, therefore, includes a combination of sensitivities to equity markets or credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative ones).

Within the broad ED category are a number of sub-strategies that are fairly distinct from one another and worthy of brief description[2]:

- Activist: Aim to obtain representation on a company's board of directors in order to influence the strategic direction or policies, and in some cases to advocate activities (e.g., sale of assets or divisions, dividends or share buybacks, change in management)
- Credit Arbitrage: Focus on attractive opportunities in corporate fixed income securities (e.g., senior and subordinated claims as well as bank debt and other obligations) that are liquid and use fundamental credit analysis to evaluate the likelihood of improvement in credit worthiness of these securities
- Distressed / Restructuring: Invest in corporate fixed income securities trading at a significant discount to their value at issuance or par value at maturity due to formal bankruptcy proceedings or market expectation of near-term proceedings
- Merger / Arbitrage: Involves taking positions in the equity and equity related securities of companies currently engaged in a corporate transaction. Typically involves limited or no exposure to situations in which no formal announcement is expected to occur and usually requires minimal exposure to corporate credits
- Private Issue / Regulation D: Focused on equity and equity related instruments of companies that are primarily private and illiquid in nature with the expectation that a

[1] Based on HFR definitions
[2] Based on HFR definitions

catalyst such as a new security issuance or emergence from bankruptcy proceedings will occur

- Special Situations: Focused on opportunities primarily in equity and equity related securities of companies currently engaged in corporate transactions, security issuance / repurchase, asset sales, division spin-offs, etc. These involve both announced transactions as well as situations in which no announcement is expected to occur. The investment process could be focused on distressed, bankruptcy and post-bankruptcy issuance, announced acquisitions, asset sales, etc., that would result in realization of value through the occurrence of an identifiable catalyst

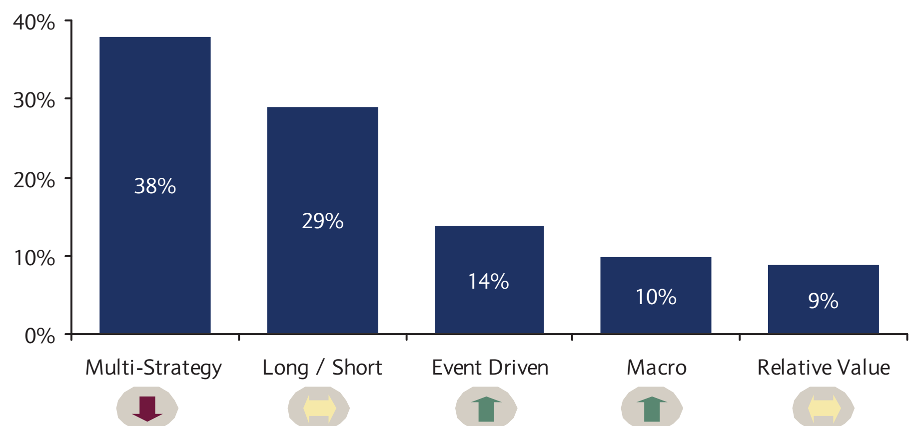
- Multi-Strategy: Managers typically have no greater than 50% of their portfolio focused on any one of the distinct ED strategies described above

Event Driven Fund Landscape and Future Outlook

Investor interest in ED strategies appears to be strong

ED strategies are attracting strong Investor interest. In recent one-on-one interviews conducted by Strategic Consulting with 50 pensions for our first quarterly piece of 2010, 'It Takes Three To Tango', a majority of Pensions showed strong interest in ED and Macro strategies in the coming year. Figure 1 shows that although Multi-Strategy and Long / Short funds currently have the greatest percentage of HF portfolios allocated to them (38% and 29% respectively), on average, Pensions are most bullish on ED and Macro strategies (depicted by the direction of arrows) in the near future.

Figure 1: Pension Plan HF Allocations and Biases Towards HF Strategies



Source: Barclays Capital Strategic Consulting Survey Results

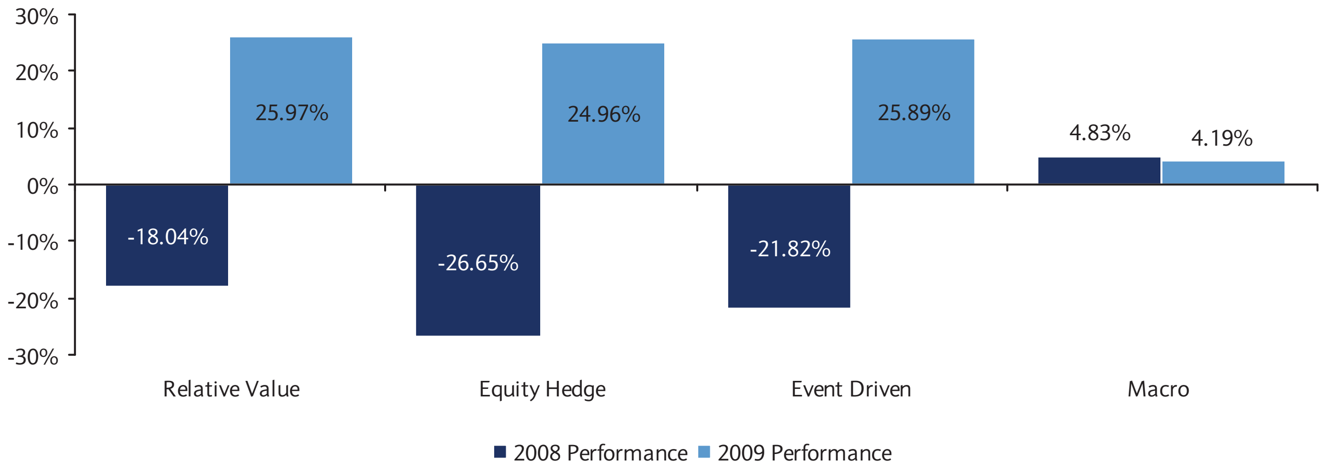
ED Strategies: 'Middle of the pack' on performance & flows…

This following data describes how ED strategies have broadly performed in line with other strategies, both on returns as well as net flows over the last two years

- As Figure 2 depicts, ED HFs returns over the last two years were broadly in line with other strategies, losing 22% in 2008 and rebounding 26% in 2009

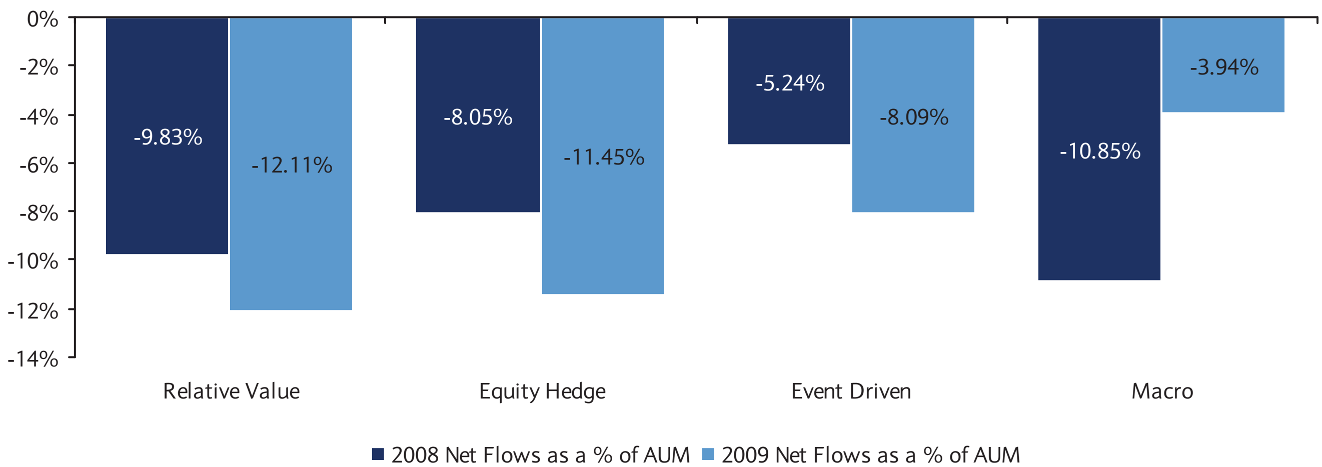
- As Figure 3 shows, ED strategies saw significantly less net outflows as a percentage of AUM in 2009 (-8.09%) than both Equity Hedge and Relative Value strategies (-11.45% and -12.11% respectively) but more than Macro (-3.94%)

Figure 2: HF Strategy Performance in 2008 and 2009



Source: HFR

Figure 3: HF Net Flows by Strategy for 2008 and 2009 (as a % of AUM)



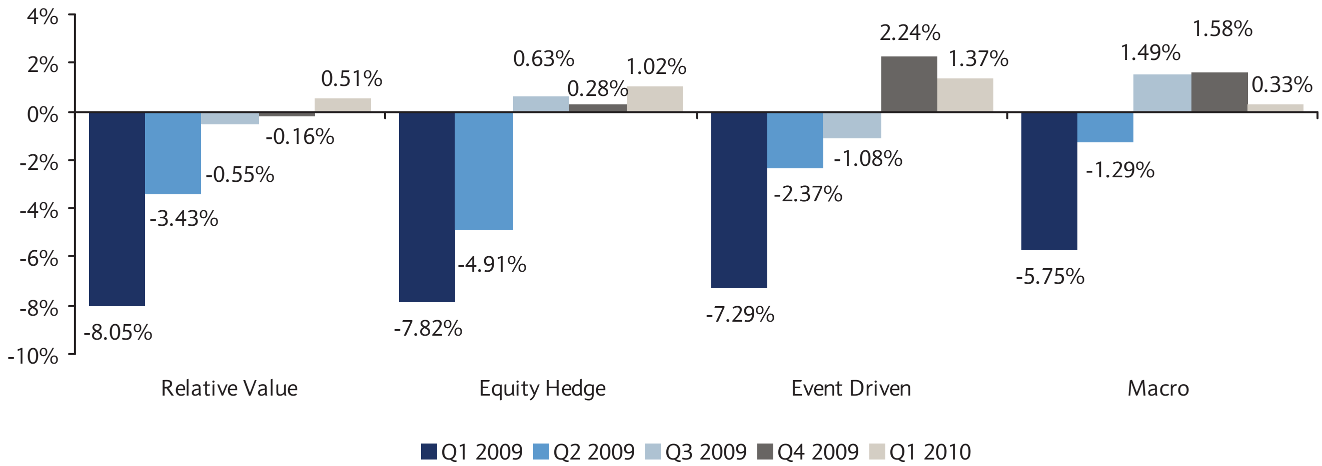
Source: HFR (note that Net Flows are calculated as a percentage of the Strategy's AUM at the end of the previous year)

…but experienced strongest relative inflows recently

Recent growth in inflows into ED relative to other strategies indicates that Investors recognize a more favourable environment for ED strategies

- Figure 4 shows that combined Q4 '09 and Q1 '10 inflows into ED strategies, as a percentage of AUM, were higher than all the other broad strategy categories (3.61% vs. 1.3% for Equity Hedge, 1.91% for Macro, and 0.35% for Relative Value)
- Additionally, net flows into ED in Q1 '10 ($5.7bn) were 41% of total HF inflows ($13.8bn), significantly higher than the ED share of total HF AUM (~ 26%) in Q1 '10

Figure 4: HF Net Flows by Strategy by Quarter (as a % of AUM)



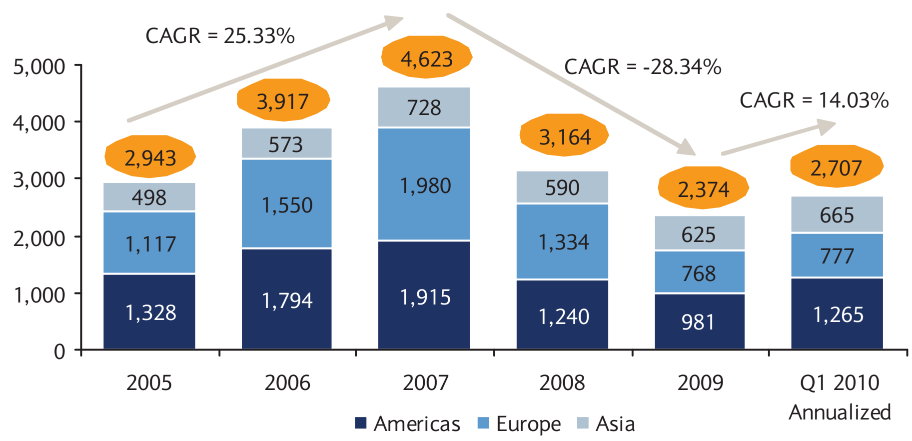
Source: HFR (note that Net Flows are calculated as a percentage of the Strategy's AUM at the end of the previous quarter)

Market developments point to strong future growth for ED

Our discussions with Investors suggest that they do not see ED strategies as an 'evergreen' investment option. Rather, they feel ED strategies perform really well in certain macroeconomic environments. We agree with this assessment of Investors and think that a 'perfect storm' of factors appears to be coming together now that will likely make for a very attractive environment for ED Managers and Investors in 2010 and, perhaps, even a few years beyond

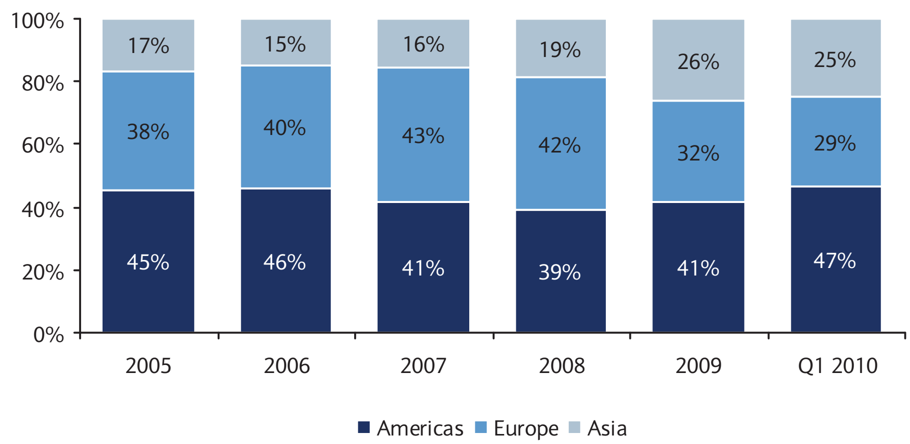
- The M&A landscape has improved significantly in 2009 and looks even more promising in 2010
  - 2010 projected M&A in dollar terms (based on annualized Q1 '10 announced transactions) is expected to be 14% higher than announced transactions in 2009, as depicted in Figure 5
  - There is significant room for the global M&A business to grow before reaching levels seen in 2007 and 2008…
  - …with projected 2010 deal values likely to be 14% and 41% lower against global M&A announcements in 2008 and 2007 respectively
- The Americas and Asia are growing their share of the global M&A pie
  - As Figure 5 shows, projected 2010 M&A transactions in the Americas are on course to be 29% higher than last year in dollar terms ($1.27tn vs. $0.98tn) while Europe is expected to stay more or less flat
  - The Americas and Asia now collectively account for almost three-quarters of the global M&A market, as depicted in Figure 6

Figure 5: Total Global Announced M&A Volumes ($bn)



Source: Dealogic

Figure 6: Share of Global M&A Announcements by Geography

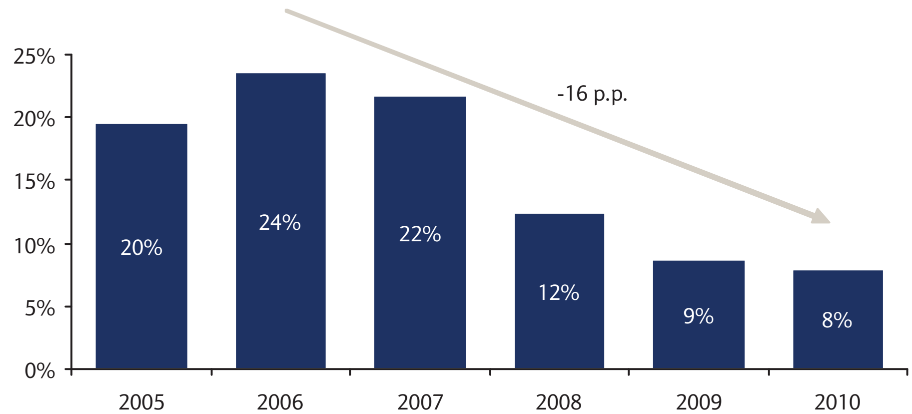


Source: Dealogic

- When looking to further characterize the upcoming M&A environment, it appears likely to be driven by attractive credit spreads, more Strategic buyers (as opposed to Sponsors), and a higher percentage of very large and hostile deals:
  - Credit spreads are lower although not back to pre-crisis levels, and the IPO market has seen a 40% increase in 2009 over 2008[3]
  - Figure 7 shows the fall in the importance of Sponsors that had grown their share of the global M&A market from a formidable 24% in 2006 to a projected 8% in 2010

[3] McKinsey Quarterly, *"A Strong Foundation for M&A in 2010"*

Figure 7: Global M&A Announcements Attributable to Financial Sponsors (by $ value)



Source: Dealogic

- Hostile deals have grown as a percentage of global M&A, going from 3% of the total in 2005 to 18% in Q1 '10[4]
- Mega deals (defined as the largest 10 deals in each regional market) continue to grow their share of the overall market with such deals accounting for 28% of global M&A transactions in Q1' 10 vs. 17% and 13% in 2009 and 2008 respectively[5]

■ Corporates have more 'dry powder' as well as greater motivation to pursue acquisitions

- Cash balances with Corporates are up significantly and not earning enough – U.S. non-financial companies have $1tn in liquid assets, including $580bn in cash that is probably earning close to zero[6]
- Dividends for S&P 500 constituents likely to be down 17% in 2010 vs. two years ago and may not get back to 2008 levels until 2012 or 2013[7]
- Shareholders may pressure companies to do share buybacks if cash not put to use, and, with stock prices up significantly in the last year, Corporates have more currency for acquisitions

■ Investment opportunities for non-M&A ED strategies are also expected to be plentiful in the next few years, specifically:

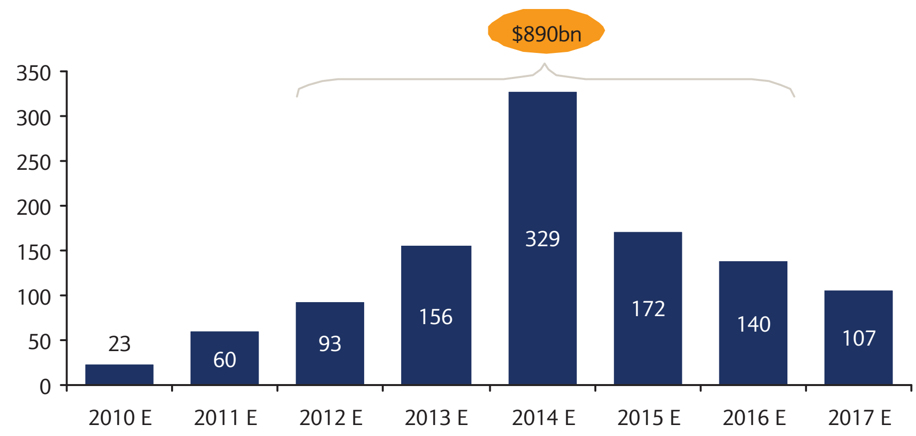
- Both Credit and Equity opportunities resulting from the recent financial crisis and dislocation are expected to continue, e.g., spin-offs, split-offs, government intervention, holding companies, anti-trust action, spread trades, post-reorganization equity, orphan equity, 'busted' converts, credit arbitrage opportunities within capital structure
- Fixed income markets are expected to be flooded by a massive supply of corporate loans, bonds and sovereign debt in the coming years, throwing up opportunities for

[4] Data from Dealogic
[5] Data from Dealogic
[6] Wall Street Journal, *"Why You Should Get a Bigger Slice of Earnings?"*, March 13, 2010
[7] Wall Street Journal, *"Why You Should Get a Bigger Slice of Earnings?"*, March 13, 2010

distressed investments and M&A, as well as restructuring plays and relative value trades

- Figure 8 shows that unprecedented levels of almost $890bn in corporate HY bonds and loans will mature from 2012 to 2016 and will need to be rolled over
- Several large, highly leveraged companies that were the targets of private equity buyouts have large debt payments coming due, e.g., HCA (Hospital Corporation of America) has $13.3bn coming due between 2012 and 2014, TXU has $20.9bn that needs to be refinanced in the same period[8]
- U.S. business bankruptcies are at the highest levels in 17 years, having grown at a CAGR of 46% between 2006 and 2009 to reach over 60K filings in 2009[9]
- According to Barclays Capital estimates, U.S. federal debt outstanding is likely to grow at a CAGR of 18% from 2008 to 2012, potentially crowding out private capital raising in the debt markets and making it more expensive for companies to refinance / rollover debt

Figure 8: Corporate High Yield Bonds and Loan Maturities ($bn)

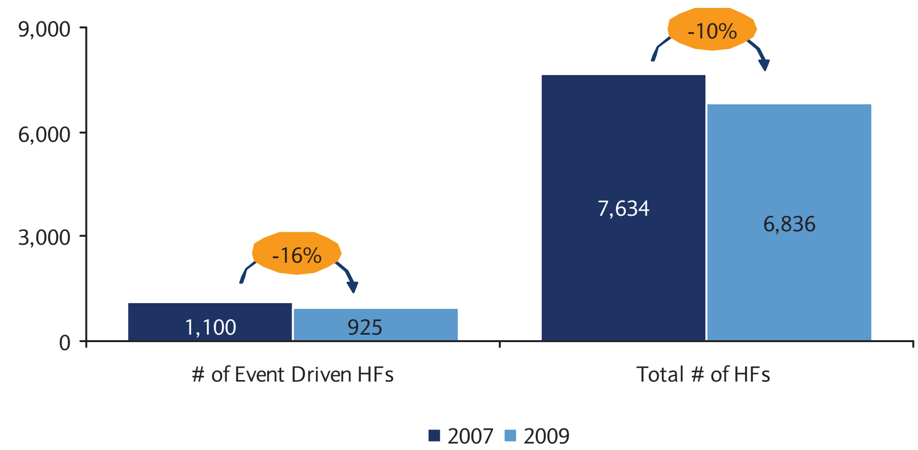


Source: Strategic Consulting analysis

- Surviving ED Managers' competition for opportunities appears to be less fierce than before
  - Figure 9 shows that 6% more ED HFs have gone out of business between 2007 and 2009 than HFs overall, taking the competitive landscape back several years
  - Banks, as competitors, have exited this business or have much lower capital to deploy due to both the market stresses of the last two years as well as the anticipation of tougher regulation of banks' ownership of HFs – a view that has been confirmed by our panel of ED Managers

[8] New York Times, *"Corporate Debt Coming Due May Squeeze Credit"*, March 15, 2010
[9] U.S. Bankruptcy Institute

Figure 9: Total Number of ED Managers



Source: HFR

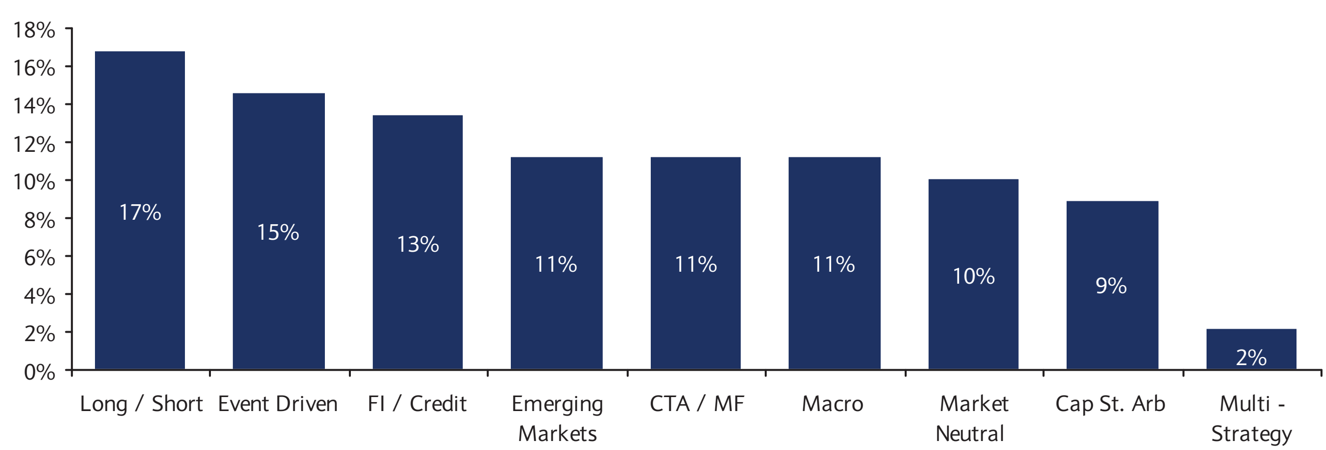
Investor Sentiment

Investors are bullish about prospects for ED Strategies

HF Investors are bullish about the future prospects of ED strategies and expect their ED allocations to grow

- Strategic Consulting surveyed HF Investors to get their perspectives on ED strategies. These Investors had the following profile, on average:
  - Investors were well distributed across AUM size segments, with 31% having AUM less than $1bn, 31% with AUM between $1 and $5bn, and 38% with $5bn+ in HFs
  - Figure 10 shows that ED strategies come in second only to Long / Short strategies in terms of HF strategies that surveyed Investors currently have allocations to
  - Figure 11 shows close to three-quarters have 10%+ allocated to ED strategies

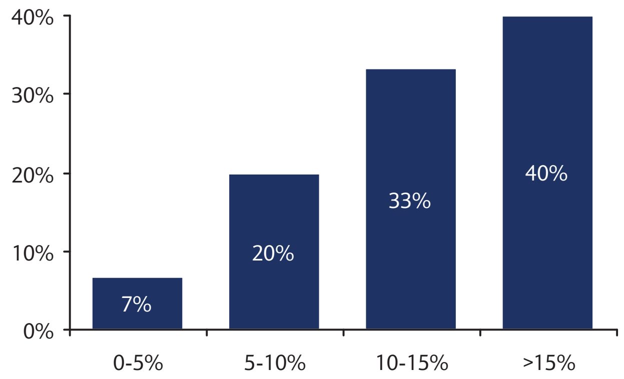
Figure 10: Hedge Fund Strategies Invested In



Source: Barclays Capital Strategic Consulting Survey results

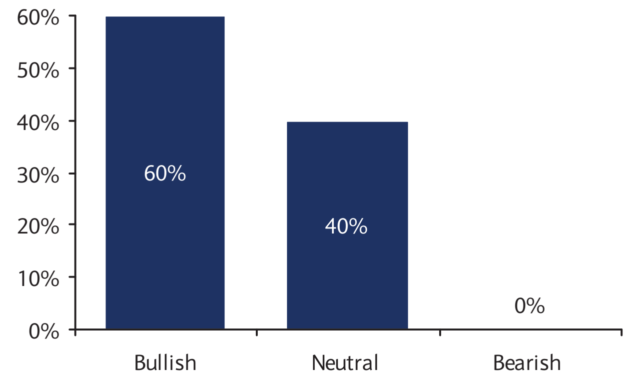
- Highlights of what we heard from these Investors:
  - Two-thirds plan to add 5 to 20 Managers in 2010, on average
  - Figure 12 shows that 60% are bullish about the outlook for ED strategies and the rest are neutral, with none expressing bearish sentiments
  - Figure 13 shows that the three ED sub-strategies Investors are most interested in are Restructuring / Distressed, Special Situations and Merger Arbitrage with 29%, 27% and 16% of Investors choosing them respectively

Figure 11: Percentage of HF AUM Allocated to ED Strategies



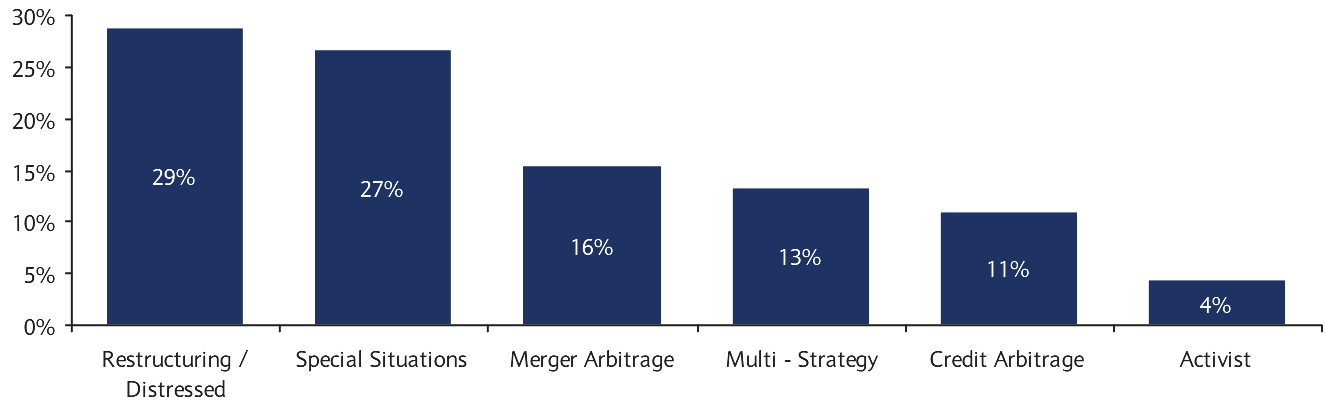
Source: Barclays Capital Strategic Consulting Survey results

Figure 12: Investor Outlook on ED Strategies



Source: Barclays Capital Strategic Consulting Survey results

Figure 13: ED Sub-strategies that Investors are Most Interested In



Source: Barclays Capital Strategic Consulting Survey results

Managers' Views

ED Managers find current environment very favorable

In the panel discussion on ED strategies held on March 15th, 2010, we heard the views of the following HF Managers:

- Matthew Halbower, CEO / CIO, Pentwater Capital Management manages a $1.2bn fund with investments across North America, Asia and Europe in four ED strategies (Merger Arbitrage, Distressed Investments, Equities Special Situations, Catalyst driven), with ~25% of the portfolio in Credit/Distressed investments. Matthew highlighted four key issues:
  - Developing economies provide attractive opportunities as drivers of M&A in their search for natural resources to fuel growth (*"China, India, South Korea need coking coal, iron ore, oil – this is why Asia is bigger in our portfolio than Europe."*)
  - Large, strategic deals provide profitable arbitrage opportunities at tolerable risk levels, at least partly because of pressure to consummate the deal *("As a CEO, how do you explain to your board a $20-30bn acquisition you could not pull off?")*
  - There is less competition for ED Managers from bank proprietary trading desks now, which relieves some of the pressure on deal spreads
  - The biggest lesson from the Lehman bankruptcy is on the importance of liquidity
- Richard Hurowitz, CEO / CIO at Octavian manages a $900mn fund across two strategies (ED and Distressed) with 70% capital in ED, 85% of assets outside the U.S. (~40 countries), and ~35% of the book in distressed assets. Richard described five trends he sees as being supportive of ED HFs:
  - Competitive landscape is very favourable *("Set back by 10 years or more.")*
  - Hostile bids are more attractive than friendly bids and they are up as a percentage of all M&A announcements *("Hostile bids are complicated, often mispriced by the market, and many Investors stay away from them.")*
  - International markets are less competitive, and their environment for M&A is better *("In Europe, it is virtually impossible and culturally unacceptable to get out of deals.")*
  - Sovereign distress will inevitably lead to significant corporate restructurings (e.g., in Greece, Portugal, Spain, Japan)
  - Opportunities outside Merger Arbitrage also very attractive (e.g., government intervention, spin-offs, holding company, anti-trust intervention, likely distressed due to upcoming huge corporate debt maturities)
- Ben Pass, Portfolio Manager at GLG, a multi-strategy fund with ~50 funds, manages a book, which uses ED as an overlay on Fixed Income and Equities strategies. Ben outlined the following issues:
  - Strategic buyers are preferable to Financial Sponsors in Merger Arbitrage ("Reputation risk matters to strategic buyers, which is why they tend not to be in litigation over broken M&A deals.")

- Companies will move aggressively on strategic acquisitions *("SEC filings show deliberations by boards on acquisitions and what we see makes us pretty optimistic for 2010.")*
- Multiple opportunities exist within ED beyond Merger Arbitrage (*"Example- Owner / CEOs with strong incentive to sell ownership stake before new capital gains tax laws kick in."*)

- Howard Shainker, Portfolio Manager at Third Point – a $3bn AUM fund focused on global ED with a value bias, and 60% of portfolio in credit, suggested ED strategies are coming into a very favourable business environment:
  - Companies will need to put their hoards of cash to work, and a significant portion will go towards M&A ("Shareholders will put pressure on corporate Managers to either do share buybacks with their cash or do acquisitions – We know Managers prefer acquisitions.")
  - There are still many attractive M&A targets out there ("Many targets on M&A wish lists are still trading at ~60% of valuations about two years ago.")
  - There is a lot of opportunity, even outside of traditional Merger Arbitrage ("Reorganization equity, orphan equity and a lot of traditional distressed opportunities are yet to come.")

Acknowledgements

The Strategic Consulting team would like to thank our Event Driven panel participants for their views and comments, and their willingness to share them with the broader reader base of the Hedge Fund Pulse.

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MULTI-STRATEGY: MAXIMIZING OPPORTUNITIES

May 2010

Multi-Strategy: Maximizing Opportunities

For this edition of the Hedge Fund Pulse, we decided to focus on Multi-Strategy (MS) Hedge Fund (HF) Managers due to the evolution of the value proposition that they offer to Investors. To that end we explore five key facets of the current MS environment, and outline them below.

First, we analyze the MS landscape by reviewing MS HFs historical performance, net flows and Assets Under Management (AUM). We also discuss the two broad segments of MS HFs as we see them today.

Second, we discuss Investor sentiment towards the strategy in the context of the strategies to which Investors plan to allocate in the next six months. This includes Investors' current and target allocations to MS HFs. We also share our findings on what Investors feel is the optimal number of underlying funds / strategies within a MS HF.

Third, we present the top value propositions that surveyed Investors expect MS HFs to deliver. We then further delve into these value propositions by sharing what some Managers had to say about them.

Fourth, we present what surveyed Investors view as the key hurdles to investing in MS HFs. We further elaborate on these points by sharing some Managers' views that address these hurdles.

Fifth, we share the core opportunities that MS Managers are seeking to exploit in the coming year, as expressed by Managers during a panel discussion we recently hosted at Barclays Capital.

Methodology

To conduct this study, we collected data from five sources

- Surveys results from ~70 Institutional Investors
  - These include FoHFs[1], Family Offices, Endowments, Foundations, Private Banks, Insurance Companies, Pensions & Consultants
- The Lipper TASS Asset Flows Reports
- The Credit Suisse Tremont Index (CS HF Index)
- Data from ongoing dialogue the Capital Solutions group has with HF Managers & Institutional Investors
- Views expressed by the following MS HF Managers at a panel discussion sponsored by the Capital Solutions team on May 12, 2010, titled 'Multi-Strategy: Maximizing Opportunities'
  - Neil Chriss, Founder and CEO / CIO at Hutchin Hill
  - Greg Hayt, President at Paloma Partners
  - Basil Williams, CEO at Concordia

[1] Fund of Hedge Funds

– Aaron Yeary, Partner at Pine River Capital

Key Findings

- MS HFs have performed in line with the CS HF index, however, they have outperformed the index by a greater degree in 'up' years than underperformed in 'down' years
- Compared to industry flows, MS HFs gathered more inflows[2] than other HF strategies during '00-'02, were at 'par' during '03-'08, and have since fallen behind
- MS assets as a percentage of total HF assets gradually increased from '00-'08, but experienced a drop of ~4 p.p. between '08 and '09 to pre '08 levels
- MS HFs can be clustered in two segments – Focused vs. Diversified, depending on the relatedness of the strategies and number of the strategies they offer
- Looking ahead, MS appears to be out of favour, since the top three strategies that surveyed Investors plan to allocate to are Equity Long Short, Event Driven & Macro
- ~2/3 of the Investors surveyed have <20% of their portfolios invested in MS HFs, which may be an indication that MS as a "Core" strategy is being reconsidered
- More than half (~55%) of the Investors surveyed plan to maintain their allocation to MS HFs in the next six months
- Over 2/3 (~71%) of the Investors surveyed believe that the ideal number of funds / strategies in a MS HF is <10, which may indicate a preference for Focused MS HFs
- The top two value propositions that Investors expect MS HFs to deliver on are the MS HFs' ability for "Dynamic Allocation" and the "Potential for Diversification"
- The top two key hurdles that Investors believe they face when investing in MS HFs are "Limited Transparency" and "Restrictive Liquidity"
- The core opportunities that our panelists deem most compelling this year include "Quantitative Equity", "Asian Convertibles", & "Munies" strategies

The Multi-Strategy Landscape

MS HFs are typically single HFs that run several different strategies simultaneously in-house. All the strategies eventually contribute to the final performance of the HF. In further understanding MS HFs, we now turn our attention to how the strategy has performed over the last decade as compared to the broad HF index, the flows the strategy has experienced and MS assets as a percentage of total assets.

Performance

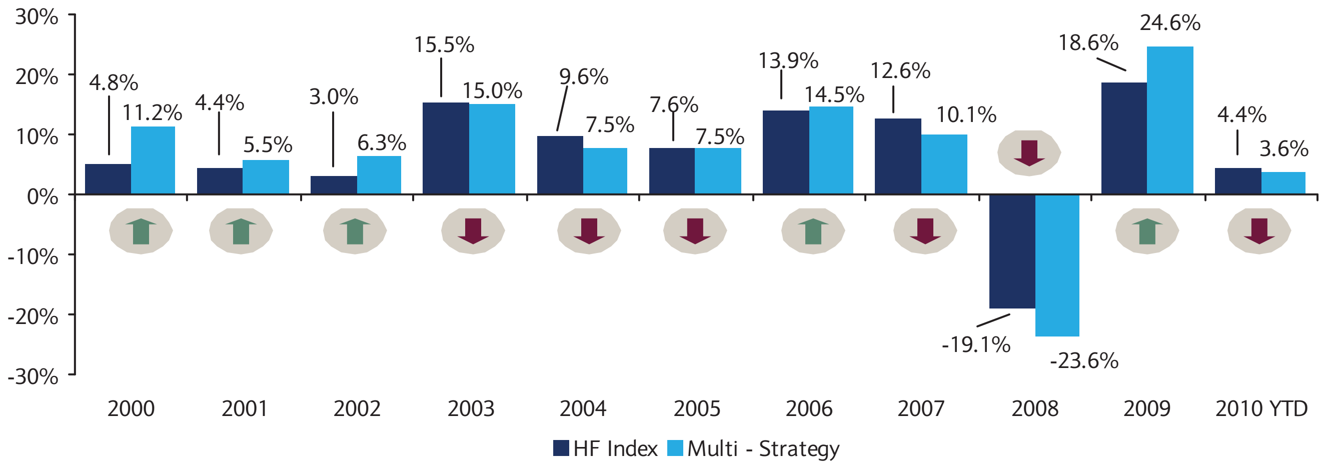
MS performance has been roughly in line with the index

Figure 1 displays MS performance vs. the CS HF index from the period 2000 – 2010. As can be noted from the graph, MS HFs have performed roughly in line with the broader HF index. The downward maroon arrows denote years when MS performed worse than the HF index, while the green upward upward arrows denote years when MS performed better than the HF index. Excluding 2010 YTD (January – April 2010), MS strategies have performed better

[2] Calculated as a percentage of total assets

than the HF index five times, and worse than the HF index five times – roughly evening out the difference. However, MS performance has differed from the HF index minimally on the downside, but significantly on the upside. For example, the year in which there was the greatest difference between MS and the HF index was the year 2000, when MS strategies outperformed the broad index by 6.4% (4.8% return for the HF index vs. 11.2% for MS). If one were to sum the performance difference between MS and the HF index since 2000, MS has outperformed the index by a cumulative 6.9%.

Figure 1: Multi-Strategy Performance vs. the HF Index



Source: Credit Suisse Tremont Index

Note: Past performance is not indicative of future results

Flows

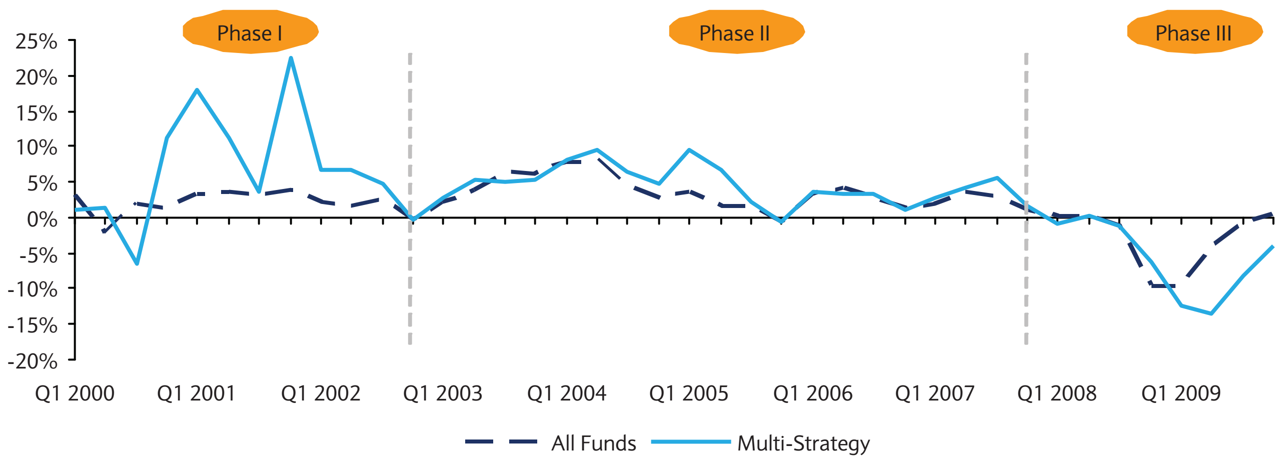
MS net flows can be distinctly divided into three phases

We now turn our attention to net flows, measured as a percentage of total assets. As can be seen from Figure 2, when comparing the flows 'All Funds' have experienced vs. the flows MS HFs have experienced on a quarterly basis between 2000 – 2009, three distinct phases can be identified.

- In Phase I, which lasted from Q1 2000 – Q4 2002, MS HF flows outperformed 'All Funds' on the whole
- In Phase II, which lasted from Q1 2003 – Q2 2008, MS HF flows remained roughly 'at par' with those of 'All Funds'
- In Phase III, which lasted from Q3 2008 – Q4 2009, MS HF flows began to deteriorate at a faster pace than 'All Funds'

This segmentation of phases clearly illustrates a gradual decline in flows that MS HFs have experienced over the last decade. Expectedly, these three phases can be partially explained by the performance that MS HFs exhibited in the last decade as shown in Figure 1. In other words, the out-performance that MS HFs delivered during Phase I was reflected by superior flows during the same period. A similar reasoning can be made for Phase II. However, under-performance alone does not explain the lower flows into MS HFs during Phase III, since the performance differences between MS and the HF index somewhat even out during that period. We believe this is due to MS HFs having used gates and other restrictions on Investor redemptions more so than other HFs, a point we analyze in the next section.

Figure 2: Quarterly Net Flows as a Percentage of Total Assets from 2000 – 2009



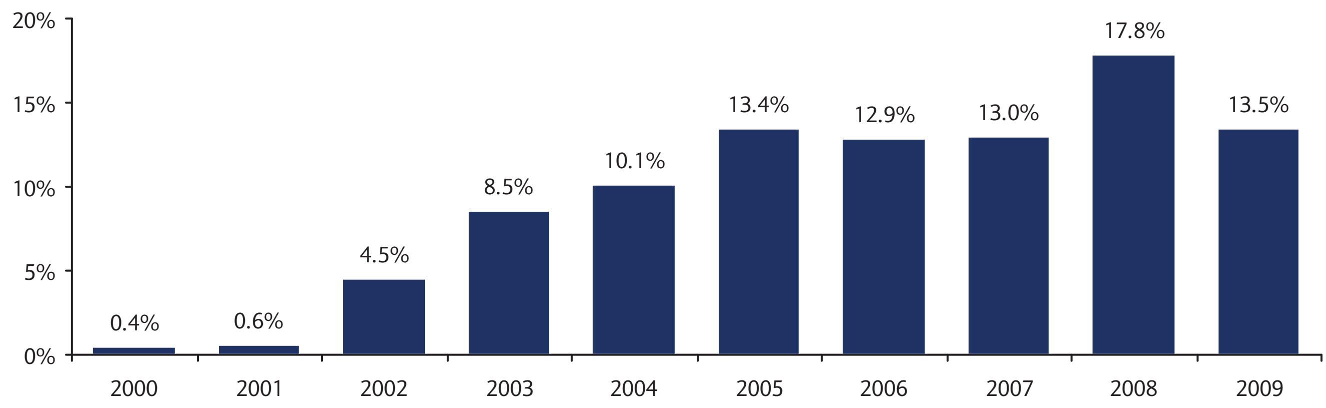
Source: Lipper TASS Asset Flows

Assets Under Management

MS assets as a percentage of the total HF industry peaked in 2008

As part of assessing the broad MS landscape, Figure 3 illustrates the evolution of MS assets as a percentage of total HF assets from 2000 to 2009. MS assets gradually increased from 2000 to 2008. However, in 2009 MS assets experienced a drop of ~4 percentage points bringing the level of assets back to pre 2008 levels. This drop in assets can be traced back to the -23.6% performance that MS HFs experienced in 2008 (refer to Figure 1), as well as the decline in net flows that started to become evident in 2008 (refer to Figure 2). Furthermore, one possible reason that MS assets as a percentage of total assets peaked in 2008 was because in the midst of the financial crisis, many more MS HFs imposed gates on Investors than other HFs did – thereby causing MS assets as a percentage of the total to be higher.

Figure 3: MS Assets as a Percentage of Total HF Assets from 2000 – 2009



Source: Lipper TASS Asset Flows

Segments of Multi-Strategy Hedge Funds

MS HFs can be broken down into two distinct segments

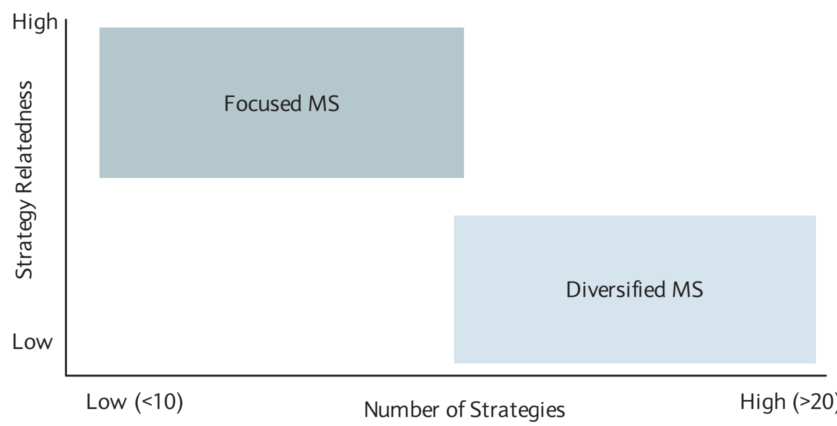
In our analysis of the MS landscape, we see two broad segments of MS HFs – Focused vs. Diversified. Figure 4 illustrates that we define these segments across two dimensions:

- Strategy Relatedness
- Number of Strategies

In Focused MS HFs, a distinct core competency is expressed through complementary strategies. Therefore, not only is the number of sub-strategies in the HF low, but there are also high interdependencies among strategies that express variations of the same core expertise, leading to high strategy relatedness.

In Diversified MS HFs, the HF boasts an efficient and dynamic asset allocation process across a high number of strategies with low inter-relatedness. The low correlation among strategies typically leads to increased diversification.

Figure 4: Focused vs. Diversified MS HFs



Source: Barclays Capital Strategic Consulting Analysis

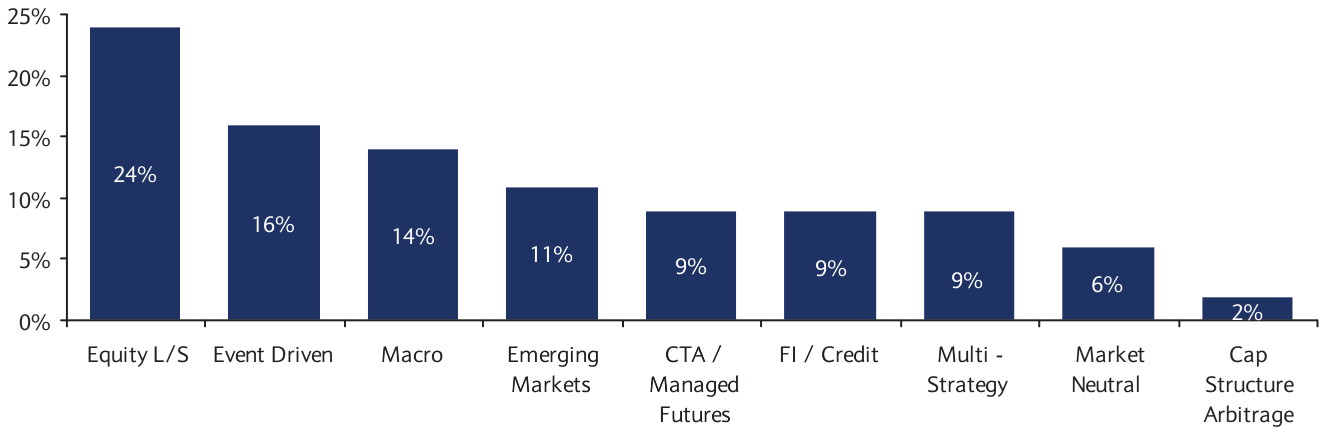
Investor Sentiment

We surveyed ~70 Investors to ascertain their current and target allocations to different HF strategies, and in particular MS HFs. In order to provide a holistic view of Investor sentiment, we surveyed a variety of organization types.

- Figure 5 displays which HF strategies Investors plan to allocate to in the next six months. Equity L / S[3], Event Driven and Macro strategies proved to be the top three strategies Investors plan to allocate to. Only 9% of the Investors surveyed plan to allocate to MS in the coming months.

[3] Equity Long Short

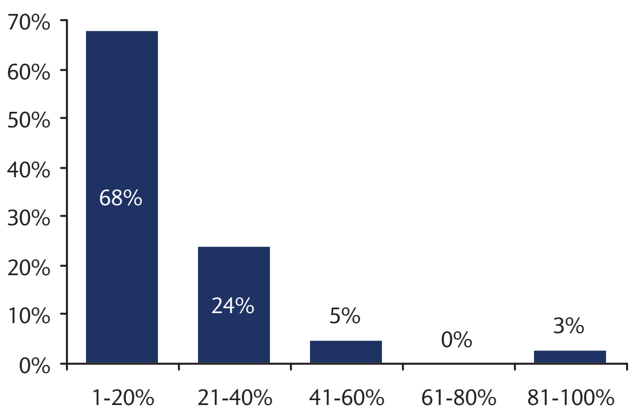
Figure 5: HF Strategies Investors Plan to Allocate to in the Next Six Months



Source: Barclays Capital Strategic Consulting Survey Results

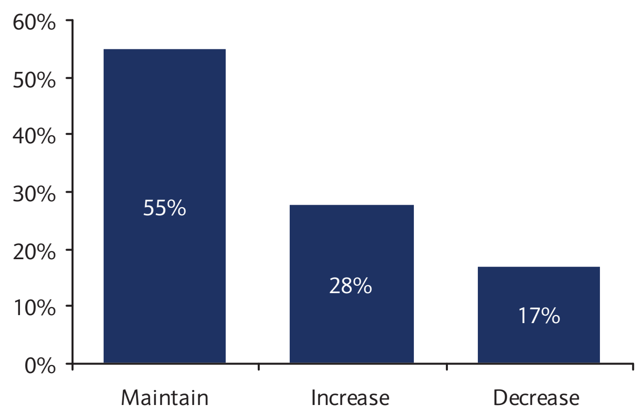
- Figure 6 displays that approximately 2/3 of Investors (68%) have <20% of their portfolios currently invested in MS, indicating clear room for growth, or a threat to the classical role for MS to be a "Core" element of an Investor's portfolio
- Figure 7 shows a fairly scattered response in terms of the number of Investors that plan to maintain, increase or decrease their allocation to MS HFs (55% plan to maintain, 28% plan to increase, and 17% plan to decrease). Approximately half of the respondents planning to maintain their allocation to MS indicates indecisiveness on the part of Investors about the role they expect MS HFs to play in their portfolios.

Figure 6: Percentage of Investor Portfolios Invested in MS



Source: Barclays Capital Strategic Consulting Survey Results

Figure 7: Investor Target Allocations to MS

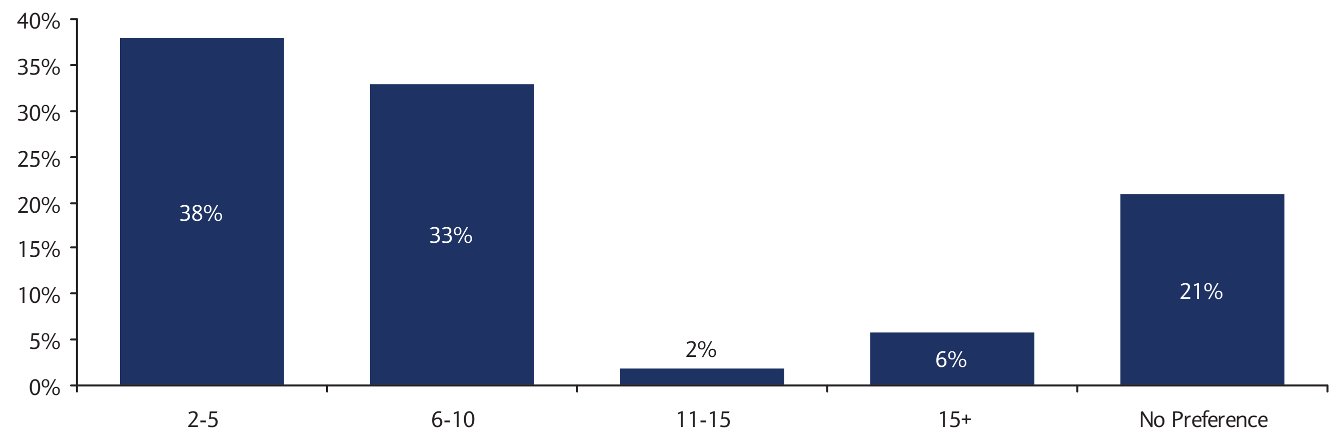


Source: Barclays Capital Strategic Consulting Survey Results

- Figure 8 displays Investors' responses regarding the ideal number of funds / strategies in a MS HF. As can be noted, ~71% of Investors prefer MS HFs with 10 or fewer funds / strategies.

Figure 8 alludes to the segmentation that was introduced earlier, specifically related to bucketing MS HFs as either Focused or Diversified. The Investor survey shows a clear trend towards Investors preferring Focused MS HFs, which they perceive as being more streamlined and deliberate in their approach. One could also infer this to mean that Investors opt for Focused MS HFs because they choose to achieve broader diversification on their own.

Figure 8: The Ideal Number of Funds / Strategies within a MS HF



Source: Barclays Capital Strategic Consulting Survey Results

Multi-Strategy Value Propositions

Investors value dynamic allocation & diversification

At the MS event that Barclays Capital hosted on May 12, we asked Investors to identify the key value propositions that they believed MS HFs have to offer. As a result, Figure 9 shows that the two clear value propositions that Investors expect MS HFs to deliver are dynamic allocation and diversification. Our panelists shared their views on these value propositions.

Figure 9: MS Value Propositions to Investors

Source: Barclays Capital Strategic Consulting Survey Results

Dynamic Allocation

Dynamic allocation refers to a Manager's ability to be able to move in and out of a broad range of strategies quickly. In turn, the Manager is able to take advantage of different opportunity sets in different markets. Below is a summary of how all the panelists view dynamic allocation within their portfolios.

Hutchin Hill's approach is based on their ability to reallocate the portfolio regularly and make adjustments real time. They accomplish this by looking at strategies, evaluating risks, studying opportunity sets, and keeping track of the performance of the investment professionals on a daily basis. Subsequently, they are able to make adjustments and have a balanced portfolio at all times.

Pine River's approach is based on a business model in which teamwork is encouraged and partners have long tenures. This allows there to be continuity, and it also allows the individuals that run the sub-strategies to have a view of the business as a whole. Communication across the sub-strategies is important, as this allows the investment professionals to efficiently and intelligently move capital across strategies.

Paloma's approach hinges on their ability to adapt quickly and take advantage of opportunities before they get overcrowded. Greg Hayt specifically suggested that "*Multi-Strategy Managers are frequently well-positioned to dynamically allocate capital across strategies, for example, building positions when strategies are less in favor and unwinding when they are over-crowded and expected returns are diminishing.*" The key part of it is to not get locked in, and have optimum information flow.

Basil Williams, from *Concordia*, said that the key for them is the measurement of the opportunity set. Understanding opportunity sets, finding factors to measure them consistently over time, and correlating those factors to performance when the opportunity set changes is the most critical task of a PM[4]. He also alluded to the fact that timing is everything, so when strategies fall out of favour is when the opportunity set tends to get

[4] Portfolio Manager

pretty good. That is when one wants to be allocating capital as opposed to when the trailing 12 month or 24 month return looks favourable.

Diversification

In terms of the diversification value MS HFs offer, there are two components. The first is the diversification contribution of the MS HF in the overall Investor portfolio. The second is the diversification proposition within the MS HF where there exists a multitude of strategies and PMs. The panelists addressed a specific question about diversification, relating to the fact that savvier Investors often feel that investing in an array of single strategy HFs should be able to offer the same diversification as investing in a MS HF. This, in fact, is often not the case as the panelists explained. This is due to three main reasons.

Firstly, the Fund Manager who runs a MS is better able to view the opportunity set and take advantage of it on a timely basis than someone who is one step removed from the opportunity. They were cautious to say that this is not because the Investor cannot see the opportunity or cannot understand it, but they are often not able to take advantage of it because of restrictions in the ability to move capital quickly.

Secondly, if an Investor were to look at four different strategy buckets, they could invest in them in some fixed or variable ratio over time, but they would be missing one key element – overlay trading. Overlay trading often refers to an umbrella fund that is 'overlaid' over numerous single strategy funds, or it can also refer to hedges implemented by using instruments such as futures that are 'overlaid' on the underlying fund's portfolio to reduce the risk. It is another dimension that Managers often add to their portfolios to either reduce the composite risks of the positions, or enhance the opportunities of those positions. Over time, it has become a meaningful alpha contributor.

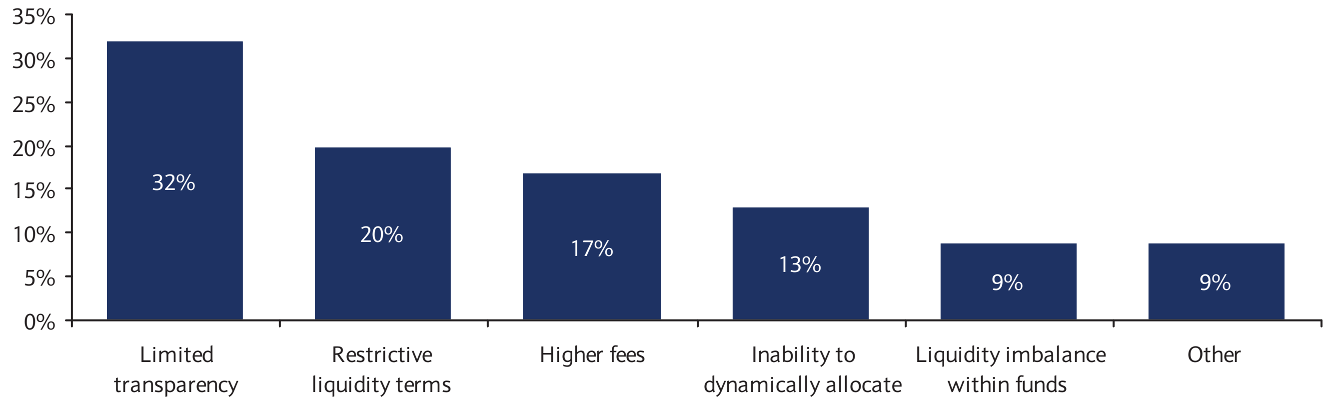
Thirdly, the panelists emphasized that MS Managers have a certain expertise, and they add value by thoughtfully piecing different strategies together. A combination of different single strategy funds is often a very different product than a MS HF because of points that have previously been mentioned, such as dynamic allocation and overlay hedging. It was also noted that a MS HF is a simple way to get instant diversification for a first time Investor to HFs.

Multi-Strategy Key Hurdles

Limited transparency & liquidity terms are viewed as top hurdles

As a follow up question to the value propositions MS HFs had to offer, we also asked Investors to indicate the key hurdles they face when investing in MS HFs. Figure 10 illustrates that the two key hurdles Investors face when investing in MS HFs are limited transparency and restrictive liquidity terms. We turned towards our panel of distinguished Managers to hear what they had to say about what Investors perceive as the key hurdles.

Figure 10: Key Hurdles to Investing in MS HFs



Source: Barclays Capital Strategic Consulting Survey Results

Limited Transparency

The panelists' responses regarding transparency to Investors were extremely positive, and conflicted with the idea that MS HFs as a whole offer limited transparency. Rather, the challenge from an Investor's point of view is to find a Manager who will meet the Investor's transparency requirements. Key points from the panelists' discussion are provided below:

- Position level transparency can be provided, however, it is often difficult for an Investor to make sense of details of 1,000+ individual positions. It takes a significant investment in infrastructure on the Investor's side to be able to make use of position level details
- Monthly risk reports, monthly reports with exposure breakdowns and an attribution of performance by major trading categories, Investor letters and top positions are examples of what is typically provided to Investors
- Phone calls and office visits to examine risk systems and exposures are welcomed by the Managers
- An interesting point that one of the panelists mentioned was that an Investor can choose to run a shock scenario to see how the MS HF correlates with other parts of the Investor's portfolio

In order to quantify the type of transparency that Managers offer to Investors, we analyzed the monthly risk reports of our panelists. Figure 11 displays the findings. In order to preserve the confidentiality of our panelists, we denoted the four panelists randomly as 'Hedge Fund 1', 'Hedge Fund 2', 'Hedge Fund 3' or 'Hedge Fund 4'. The tick marks indicate which metric is made available to Investors in the monthly report. The metrics are listed in order of the most commonly reported to the least commonly reported. We can see that 100% of the panelists provide MTD[5] and YTD[6] Performance, Return Attribution by Strategic Area as well as Capital Allocation by Strategic Area. Additionally, 75% of the Managers also provide some type of Portfolio Commentary and Geographic Exposures.

[5] Month to Date
[6] Year to Date

Figure 11: Monthly Risk Report Transparency Comparison

Metrics	Hedge Fund 1	Hedge Fund 2	Hedge Fund 3	Hedge Fund 4
MTD & YTD Performance	✓	✓	✓	✓
Return Attribution by Strategy	✓	✓	✓	✓
Capital Allocation by Strategy	✓	✓	✓	✓
Portfolio Commentary		✓	✓	✓
Geographic Exposures	✓	✓		✓
Number / Market Value of Long & Short Positions	✓			✓
Industry Commentary		✓	✓	
Portfolio Correlation to Indices (HFRX, S&P 500, or MSCI)	✓			✓
Sector Exposure	✓			✓
Historical Capital Allocation by Strategy	✓			
Scenario Analysis (e.g., 1987 Black Monday)				✓
Organizational Updates			✓	

Source: Barclays Capital Analysis derived from the Concordia, Hutchin Hill Capital, Paloma and Pine River monthly risk reports

Restrictive Liquidity Terms

Moving away from restrictive liquidity terms also proved not to be an issue with the panelists, with some having changed terms in order to better suit their Investors. For example, some of the panelists mentioned that no changes had been made to liquidity terms because it had never proved to be a problem. On the other hand, one of the panelists present discussed how they had established a new share class with shorter notice periods and better liquidity terms so that Investors could self select to the share class which better suited them. One of the panelists also chose to increase the notice periods incrementally to ensure that the HF would be able to give the Investors their capital back in time if and when they chose to redeem.

Emerging Themes

To conclude our May 12th event, we asked our panelists what they felt would be key emerging themes and strategies to focus on in the coming year. We have summarized their answers below.

Greg Hayt, President at Paloma Capital

“We have been increasing capital to quantitative equity strategies for a while, so we think there are opportunities there. We also think event driven opportunities are still going to be good for the coming years.”

Aaron Yeary, Partner at Pine River Capital

“The dislocation in the convertible bond market in the US was extraordinary, but it was much worse in Asia. There were full scale teams that were completely disbanded and banks retreated. We are moving more personnel that way. We have increased Asian convertibles within our Multi-Strat, we think we have a lot of edge in that space.”

Basil Williams, CEO at Concordia

"We think one of the most overlooked and least understood spaces with a large barrier to entry is municipal bonds, and we think there are opportunities to make money trading relative value in municipal bonds with one or two times leverage."

Acknowledgements

We would like to thank our Multi-Strategy panel participants for their views and comments, and their willingness to share them with the broader reader base of the Hedge Fund Pulse.

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OPERATIONAL DUE DILIGENCE: KNOWN UNKNOWNS

June 2010

Operational Due Diligence: Known Unknowns

In this edition of the Hedge Fund Pulse, we examine the Operational Due Diligence (ODD) process followed by Investors and Consultants prior to making or recommending allocations to Hedge Fund (HF) Managers. We also highlight what has changed in the recent past. It is common knowledge that the ODD process has gained in importance over the past two to three years. A major trigger for a renewed focus on ODD has been the Madoff scandal that exposed the downside risk of undertaking a less than extensive ODD process prior to making investments in HFs. Additionally, in 2008 the distress situation several large Broker Dealers found themselves in highlighted the importance of greater diversification of Prime Broker (PB) relationships, as well as the need to examine more closely HFs' relationships with multiple external counterparties from an ODD perspective.

To trace the evolution of ODD practices, we asked industry players for their perspective on the ODD process and have outlined in this document what we heard from them regarding recent changes that impact both HFs and Investors / Consultants.

First, we present topics that HF Managers told us are typically covered during the ODD process by Investors and Consultants. Second, we share Investor / Consultant perspectives on the current ODD process, the priorities that appear to have changed, and the related reasons. Third, we analyze the ODD requirements that HF managers told us they typically agree / don't agree to submit themselves to, along with their perspective as 'subjects' of the ODD process. Fourth, we share our participants' expectations regarding potential changes to the ODD process going forward.

Methodology

For this study, we collected data from four sources[1]

- One-on-one interviews with ~35 Hedge Fund Managers
- One-on-one interviews with ~10 Investment Consultants and Investors
- Data from the ongoing dialogue the Capital Solutions group has with Institutional Investors
- Views expressed by individuals within Barclays Capital Prime Services and Credit Risk Management

Please note, given that certain respondents provided only subsets of data, the data sets used for each section of this piece may include responses from a different number of respondents than the totals highlighted above.

Key Findings

- Most HF Managers are reconciled to a much greater level of focus on operational risk issues, now and in the future

[1] The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information are derived directly from respondents, and we do not pass on the accuracy of such information.

- There is significant overlap in the different operational Due Diligence Questionnaires (DDQs) sent to HF Managers by different Investors / Consultants and the pre-filled one proactively sent out by many HF Managers to Investors / Consultants; yet, there is no movement towards making different DDQ formats consistent for greater time efficiency

- Investors and Consultants have significantly grown their ODD teams by hiring experienced resources from banks' operations units, auditors from large accounting firms, and others with a background in operational risk management, fund accounting, or product structuring

- Despite this, several HF Managers feel that the quality of ODD performed by Investors / Consultants is uneven, largely because of the lack of adequate knowledge / experience to guide which questions to focus on for specific strategies / products, and the collection of ever larger amounts of information that is not even verified or confirmed

- Lack of trading experience is a handicap not just for the ODD process but also for the Investment Due Diligence (IDD) process with the latter process being even more adversely impacted by presence of junior people and high turnover in the IDD role

- At many Investors, ODD teams now have veto power with the Investment Committee and are no longer just 'checking the box' on ODD

- Both Consultants and Investors typically use a rating scale to describe their overall assessment of a Manager after the ODD process is complete

- Non-Disclosure Agreements (NDAs) have become much more common in the last two years as HF Managers are providing more detailed information to potential Investors

- Transparency with both Investors and financing providers (Prime Brokers) is key for HFs. Many HFs have triggered termination events in their ISDA agreements in the past two years but banks have stayed with them because these HFs routinely provided a higher level of transparency than peers.

- While Prime Brokers and Investors are generally aligned in what they expect from HFs (e.g., low leverage, high transparency, good performance), they have conflicting expectations on Liquidity (PBs want HFs to have longer lock ups and higher penalties for early redemption while Investors want the exact opposite)

- One worrying trend is that some participants in the industry are taking aggressive steps, through the use of revised legal agreements, to limit their legal liability in case they do not or are not able to perform their duties, e.g., Fund Administrators, Independent (Professional) Directors and their duty to ensure independent price verification of assets

- Fund Administrators are starting to step into the role of 'risk consolidators' by taking on the responsibility of aggregating positions across multiple HFs (and their Fund Administrators) and providing a consolidated report to Institutional Investors

- The most progressive Managers see the ODD process as a free benchmarking / consultative service that provides them with valuable inputs on what they might be missing relative to their peers' / the industry's best practices around infrastructure, and use Investor / Consultant feedback to drive change

- While some aspects of recent changes in the ODD process are unlikely to reverse (e.g., greater transparency required by Investors), other changes (e.g., margin increases, tightening of ISDA terms) will likely be undone to an extent by market forces

Areas Typically Covered in Operational Due Diligence Process

AIMA's Due Diligence Questionnaire (DDQ) includes the following sections (typical focus areas for ODD in bold):

- **Investment Manager information** (e.g., Company, Ownership, **Organization, HR, Administration**)
- Investment Research
- **Execution and Trading (includes Trade Allocations, Trade Errors and Technology)**
- **Compliance (e.g., Personal Trading, Soft Dollar arrangements)**
- **Legal**
- **Anti-Money Laundering**
- **Insurance (i.e., E&O, D&O)**
- **Business Continuity**
- **Fund Information (i.e., Fees, Prime Broker, Fund Administrator, Liquidity Terms)**
- **Data Overview (i.e., Fund Assets, Withdrawals, Draw downs, Investor Base, Capacity Management)**
- Investment Strategy (i.e., Portfolio Construction)
- **Risk (i.e., Leverage, Hedging, Diversification)**
- **Investor Service / Reporting (includes outsourcing)**
- **Taxation**

The above illustrates the large overlap that exists between the ODD and the IDD processes. Both sets of teams at an Investor or at an Investment Consultant look at the same issues, just from a slightly different perspective, and must work together to come up with a comprehensive view on a HF Manager. Another point to note is that there is significant overlap in the content of DDQs put out by Investment Consultants. However, many, if not all Consultants, try and differentiate from their competitors by tweaking their own to look different from the others. This results in significant time spent by HF Managers answering the same questions, albeit in different formats, and is value destructive.

Investor and Consultant Perspectives

An investment in Hedge Funds may, by definition, be a risky proposition. What the due diligence process is expected to do is provide Investors with an appreciation of exactly what risks they are taking on and the ability to turn down an investment opportunity if the associated types or level of risks are unacceptable. Investors and Consultants we spoke to both expressed and appreciated this point of view. They see the ODD process as a cooperative initiative where they work with HF Managers to arrive at a good understanding of operational risks to be able to make an informed decision about the merits of the overall investment opportunity. Historically, this was not always the case and prior to 2008, according to a specialist ODD Consultant we spoke to, some Investors and Consultants approached the ODD almost 'as an afterthought' or as a 'check-the-box exercise'. We all live and learn though, and the ODD process has become profoundly more important than before over the last 2-3 years. Most Investors either have a dedicated Head of ODD or rely on an outside Consultant that has a full fledged ODD organization. They have also beefed up their ODD capabilities by hiring experienced professionals, e.g., from Banks and Audit firms.

In most cases, the ODD process is only kicked off after the IDD process is already well underway and the Investor / Consultant feels positive about the HF's investment strategy and performance. The challenge with this sequential approach is that, in some cases, the IDD team may feel frustrated when a HF they have been following closely for months and that they feel very bullish about is rejected by the ODD team. This risk is sometimes minimized by performing ODD in parallel with the IDD or doing a high level checklist of the most likely reasons why a HF might not pass the ODD test and providing feedback to the IDD team before they get too deep into the IDD process. There is often significant overlap in the IDD and the ODD processes in terms of the topics addressed.

Initial ODD Information Gathering Process

A two step ODD approach is most commonly taken by both Investors and Consultants.

- The first step is to gather information about the HF through the HF's own Due Diligence Questionnaire ("DDQ") (often based on AIMA's recommended DDQ), typically including financial statements, prospectus, and marketing presentations. Additionally, the Investor / Consultant may also ask for their own DDQ to be completed. In some cases, these DDQs will have as many as ~200 questions that must all be answered, even if the response is Not Applicable ("N/A") to many questions.

- The second step is to take all the information provided by the HF to both the ODD and the IDD teams and to identify a series of follow up questions regarding specific areas to be explored in greater depth, based on an assessment of risks. These follow on questions will typically be addressed to the HF in a series of calls or meetings. In most cases, the ODD team will visit the HF for a day, or a day and a half, and will schedule meetings with specific individuals at the HF to get answers to these questions. The second step typically involves the following:
  - Meetings with key individuals at the HF (e.g., CFO, Compliance Officer)
  - Desk-side meetings with staff in Operations, IT and Risk management and demonstration of related systems (e.g., Trade Capture, Order Management, Risk)
  - Review of policies, documentation and manuals (e.g., SAS 70 certification, Compliance Manual, Valuation Policy, Disaster Recovery and Business Continuity Plans)

Non-Disclosure Agreements (NDAs) are increasingly required by HF Managers to be signed by potential Investors when asking for information beyond the initial DDQ, the marketing presentation, etc., given the much higher level of transparency being offered.

The ODD team will typically provide preliminary feedback to the HF right after the on-site visit to enable the HF Manager to respond to specific comments, as well as to address concerns that fall in the 'low hanging fruit' category.

Areas of Focus / Key Concerns

In our conversations with Investors / Consultants, the following emerged as key focus areas during the ODD process:

- Background checks on all key personnel
- 3rd party relationships (e.g., Prime Broker, Fund Administrator, other service providers)
  - Typical concerns regarding Prime Brokers include:
    - Type and length of relationship
    - Individuals at the HF that have authority to move cash
    - Number of signatories required to wire funds
    - Location and clauses regulating assets under custody (e.g., Tri-Party vs. Sub-Custodian)
    - Asset segregation and location of excess cash
    - Level of re-hypothecation and stock lending arrangements
    - Level of Balances, Equity at a specific point in time
    - Instances, if any, when delays or defaults in margin or other payments occurred
    - Frequency and types of reports provided
  - Typical questions about Fund Administrators
    - Is the Administrator an independent third party?
    - Is daily reconciliation with the Administrator and Custodian performed?
    - How independent is the pricing process?
    - How are illiquid positions valued?
    - Is there a pricing committee?
    - Are pricing decisions documented if judgment is exercised?
    - Is a shadow accounting system in place at the HF?
    - Does the Administrator reconcile across multiple Prime Brokers?
  - Typical questions about other service providers will often revolve around their hiring process (RFP or not), selection criteria, contractual obligations and performance
- Governance Structure

  - The number of independent Directors on the Board is a key metric. Investors prefer to see a significant number of such independent directors that can be counted upon to raise any concerns they might have with the General Partners
  - Many Consultants have developed a list of outside Directors that they will recommend to a HF if they feel that the HF's board composition is not appropriate
  - Investors / Consultants will also look to see if key non-trading personnel have the authority and ability to make decisions and stand their ground before the principals of the HF, if necessary (e.g., CFO, COO). This is obviously a subjective judgment Investors / Consultants make, based on their perception of the interaction between the CFO / COO and the principals of the HF, as well as in-depth interviews with the CFO / COO about the decision making process at the HF
  - Key Man provisions
  - Additionally, for smaller HFs, a road map may need to be agreed that describes the organizational changes that the HF will need to make as it hits key milestones in its growth (e.g., hiring a new Operations person or a new Director at a certain level of AUM)
- Leverage / Financing
  - Most Investors / Consultants have leverage ranges they feel comfortable with, by Strategy and Products traded, and will question anything that falls outside the range
  - They will also typically question how Leverage is calculated and how frequently it is reported to investors
  - Investors / Consultants also have concerns around financing arrangements through the Prime Brokers but cannot typically verify quality of agreements with PBs and must rely on the HF Manager to have done that
    - Typical concerns center around financing rates, covenants in financing arrangements, and definitions of 'trigger events' in the ISDA documents signed between PBs and HFs
    - Investors / Consultants want PB terms that protect the HF and give it liberal cushions to avoid defaults
    - The ISDA terms are a particular concern because PBs have used recent events to renegotiate tighter ISDA terms with HFs
    - The list of ATE (Additional Termination Events) in ISDA documents has typically been expanded to include triggers such as monthly, quarterly and annual NAV, as well as an annual NAV floor which makes asset flows a factor – not just performance, a Key Person Trigger, a tax related ATE, etc.
- Counterparty risk exposure (e.g., extent of book financed by PB, Hypothecation arrangement, where assets are held, asset availability in case of PB bankruptcy)
  - Does the CFO understand all the risks the HF is exposed to? Does the HF have controls around management of key risks?

- Do the Compliance and Legal personnel attend industry conferences and undergo periodic training on new industry developments?

- How much of the book is self financed vs. financed with the PB? Does the Fund know where assets are held and what its positions are at any given point in time? How are fully paid assets segregated?

- Are Fund Administrator incentives aligned with Investors, i.e., do they have significant liability in case they do not perform their duties or have they managed to limit their legal liability through revised legal agreements?

■ Liquidity

- Are liquidity terms consistent with the underlying strategy and the products traded?

- What are the terms on soft and hard lock ups, associated penalties, notice requirements, side pockets, gates, etc., and are they consistent with underlying strategy and products, and peers?

■ Investor Composition

- Breakout of Investors by type and associated AUM, as well as duration for which current Investors have been invested with the HF

- Top 5, Top 10 Investors as a % of Fund AUM

- If concerns about a type of Investor being dominant, will look at both the liquidity terms and the co-investor profile to assess redemption risk

- May ask for a side letter that would provide protection, for example, if a key seed Investor might be exiting soon

Timeline / Decision Process

It typically takes an Investor / Consultant ~4-6 weeks from beginning to end of the ODD process. The process can be a lot longer for some Institutional Investors but typically tends not to be much shorter for the average Investor. Most Investors and Consultants will prepare a comprehensive report that includes a peer analysis, the IDD review, as well as a Risk and ODD review. Investors and Consultants appear to be divided in how they rate HFs, with some using a rating scale (e.g., from 1 to 5 with 5 being the lowest or 'not recommended' rating), some using a qualitative, though binary, scale (i.e., Recommended vs. Not Recommended), and the remainder providing just a report highlighting potential risks but not necessarily recommending or not recommending investment allocation. The first two approaches both provide a 'veto' power to the ODD team and tend to be followed by Investors (e.g., Wealth Management units at banks, FoHFs, Pensions) while the latter approach is most often adopted by Consultants. The Investors and Consultants that use a rating scale typically provide ratings for each section in their DDQ as well as to the HF overall. Regarding the veto power, the Head of ODD at a large FoHF told us that he has a pre-agreed list of ~15-17 items / issues that would automatically result in a HF being rejected in the ODD process (e.g., if the background check of a key person reveals 1-2 inconsistencies that cannot be explained). There is an additional list where a combination of 2-3 items / issues would result in immediate rejection of the HF. Getting approval of this list up front from the Investment Committee reduces the risk of miscommunication or misunderstanding later in the process.

Once the overall recommendation is finalized, it is typically brought before an Investment Committee ("IC"), although a HF allocation proposal will usually not be presented to the IC unless the likelihood of the HF being approved is fairly high. Most IC members are available on an informal basis and will already have been sounded off regarding the plan to present an investment proposal (documents related to the presentation to the IC / Board will have been sent out in advance). Different members of the IC typically retain the right to effectively veto a recommended HF investment on any grounds. An investment allocation decision, therefore, requires unanimity among IC members.

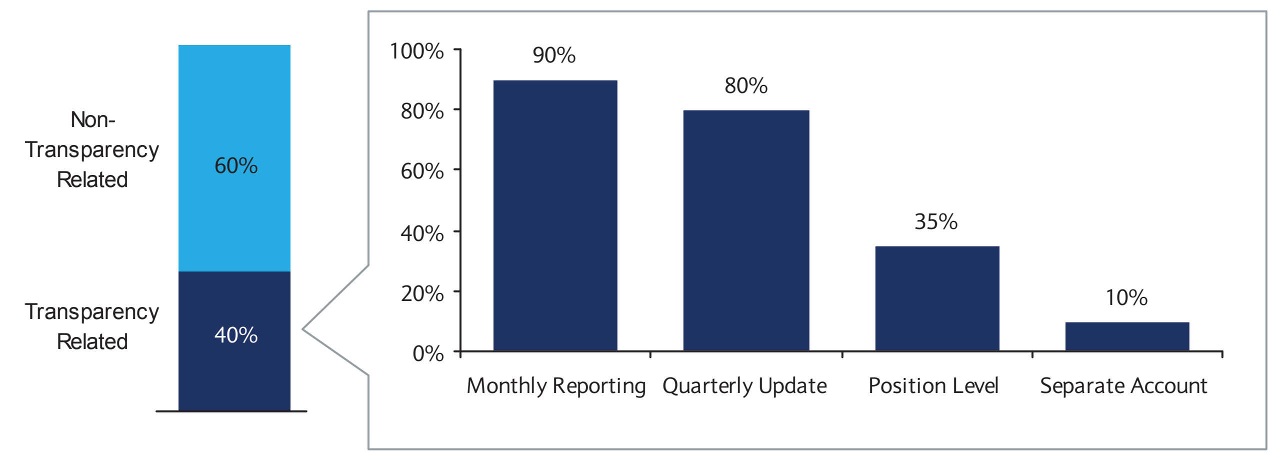
Ongoing Review

Once an investment allocation is approved, the Investor / Consultant typically develop a list of monitoring items for review with the HF Manager on a regular basis. What gets placed on the list is guided by the initial rating of the HF, as well as the strategy and products traded. The list of review items can change if there is a lot of change, either at the HF (e.g., triggered by the exit of key personnel or large redemptions) or in the environment (e.g., market volatility). The frequency of review can vary, with one large Investor telling us that they do a review every month on an informal basis. There is usually a quarterly, semi-annual or annual review of all HFs in the portfolio that tends to be more formal and comprehensive, and is presented to the Investment Committee. Reviews are staggered over the course of the year so as to best utilize the ODD team. Additionally, a site visit is required as part of the ongoing review and will be done as often as twice a year for HFs rated as high risk to as infrequently as once in two years for HFs that are considered relatively low risk.

Considerations for HF Managers

As Figure 1 shows below, transparency related reasons account for a large number of Pensions not making investment allocations to HFs. We pointed this out in our quarterly piece titled 'It Takes Three to Tango' that was published in April 2010. This is a consistent theme across Investor types. The takeaway for HFs on transparency appears to be that they need to be more forthcoming with information requested by Investors as this is not a trend that will reverse itself.

Figure 1: Transparency Related Reasons Pensions Cited for Not Investing in Certain HFs



Source: Barclays Capital Strategic Consulting Survey Results

Other comments we heard from Investors are as follows:

- *"HFs should not get frustrated that we tend to ask the same questions on our on-site visits that are already addressed in the DDQ. Consistently hearing the same things from multiple people in multiple meetings reinforces the institutionalization of principles – we find that reassuring."*
- *"Overreliance on the DDQ and other materials is not good. We focus on conversations – Understanding the culture at a HF allows us to predict how it will act under stress."*
- *"Many HFs have the right infrastructure – its just not being used the right way. We encounter Managers that still rely on Excel spreadsheets although they have more appropriate tools in-house."*
- *"Outsourcing of certain functions is inevitable and not a bad thing for Investors. What we look for is if the Manager is still in control or not. For example, an Administrator will never have a great understanding of your strategy – that's why you have to stay on top of what they are doing."*
- *"A single Prime Broker is not always a bad thing. For a certain sized Manager it may be OK as long as the PB is reputable and there is a good understanding of where assets are held, options in terms of a PB bankruptcy, etc."*

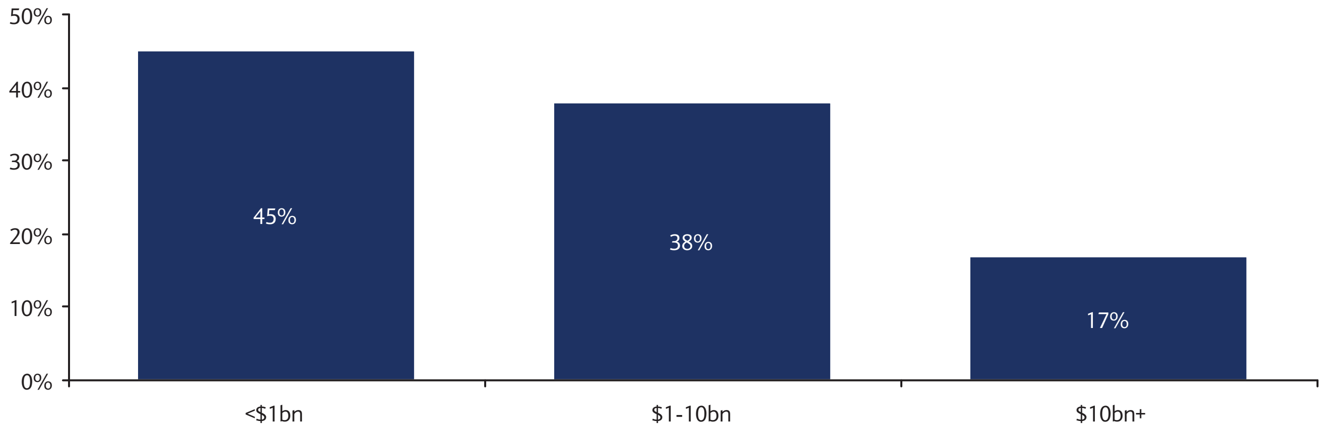
Hedge Fund Managers' Point of View

In order to get HF Managers' perspectives on the ODD process, Strategic Consulting interviewed ~35 Hedge Fund Managers. Described below is the profile of Managers we spoke to along with a summary of their perspective on the current ODD process.

Demographics of HF Managers Interviewed

Figure 2 displays the distribution of interviewed HF Managers across three AUM buckets (i.e., <$1bn, $1-10bn and $10bn+). Our sample of HFs is fairly representative of the HF Manager universe, with 45% falling in the <$1bn AUM bucket, 38% in the $1-10bn bucket and 17% in the $10bn+ bucket.

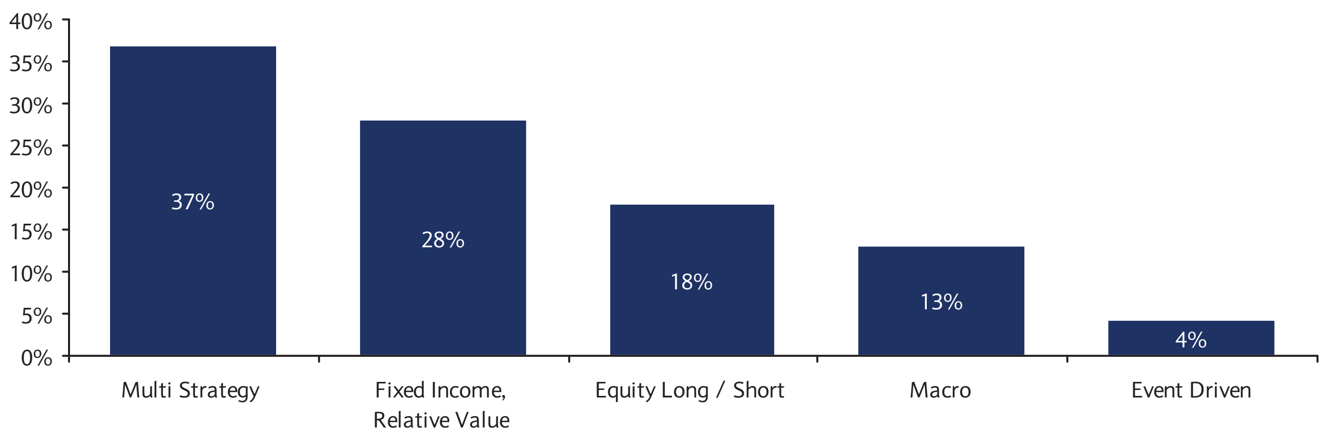
Figure 2: Distribution Across AUM Buckets



Source: Barclays Capital Strategic Consulting Survey Results

Figure 3 shows the distribution of these Managers by Strategy. Multi Strategy and FI Relative Value funds account for approximately two thirds of the HFs interviewed.

Figure 3: Distribution By HF Strategy

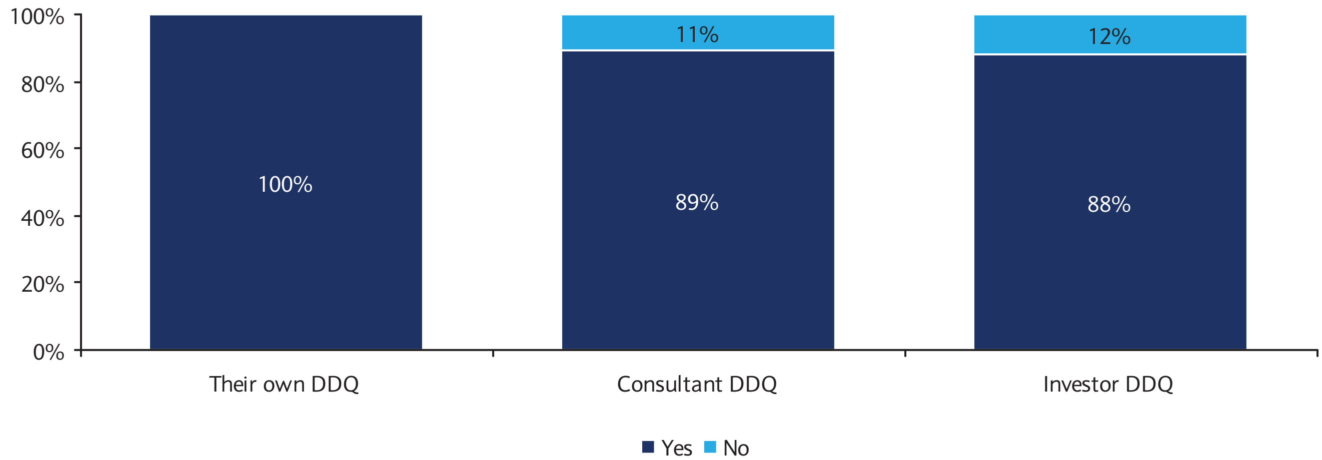


Source: Barclays Capital Strategic Consulting Survey Results

What Managers Are Willing to Share as Part of ODD Process

- In Figure 4, one can see that 100% of Managers said they had their own DDQs that they proactively send out to potential Investors and Consultants
- Figure 4 shows that almost 90% of Managers interviewed said that they fill out Consultants' DDQ even if there is overlap with the information already provided in their own DDQ, while just over 10% do not do so
- Figure 4 also shows that a similar percentage of Managers will fill out an Investor DDQ on request, while around 10% of Managers decline to do so

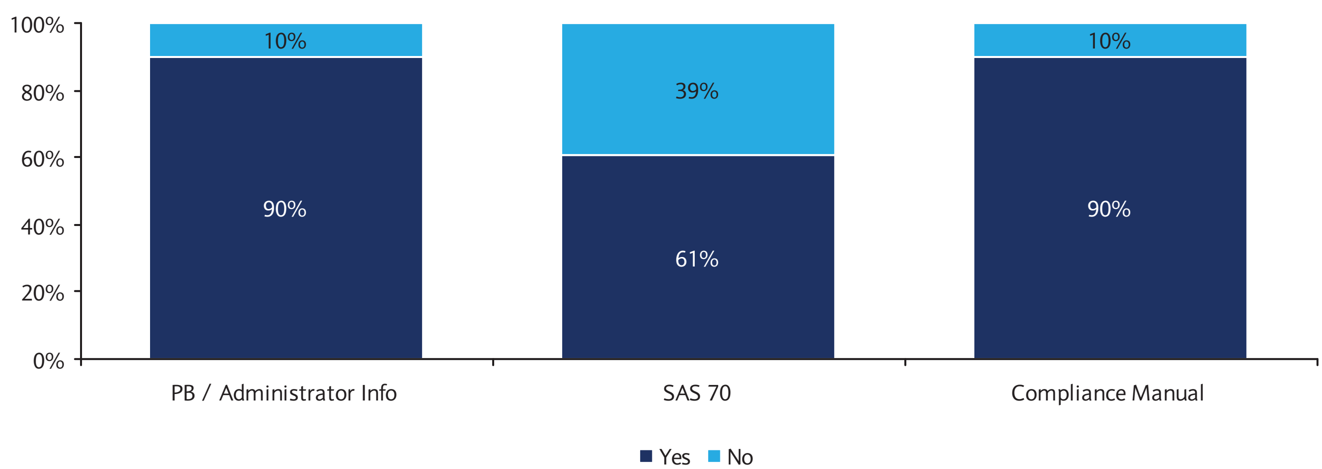
Figure 4: Willingness to Provide DDQs



Source: Barclays Capital Strategic Consulting Survey Results

- Figure 5 shows that 90% of Managers actively address detailed questions regarding their Prime Broker relationships while 10% do not. Most Managers said they will provide PB / Administrator names but not discuss fee arrangements or share details of how much business is routed to which PB (in case of multi-Prime arrangements). Managers also said, overwhelmingly, that they do not share ISDA documents but will discuss broad ISDA terms verbally when asked to do so
- Figure 5 highlights the fact that just under two-thirds of Managers currently share SAS 70 certification documents, while over a third either do not have the certification or do not share this information on request
- Figure 5 also shows that 90% of HFs will share their Compliance Manual. Of these Managers ~65% will share the entire Manual only on their premises and provide the Table of Contents via email or as a takeaway. HFs we spoke to said that only a handful of Investors / Consultants ask to see a full copy of the Compliance Manual. Others only ask for a table of contents

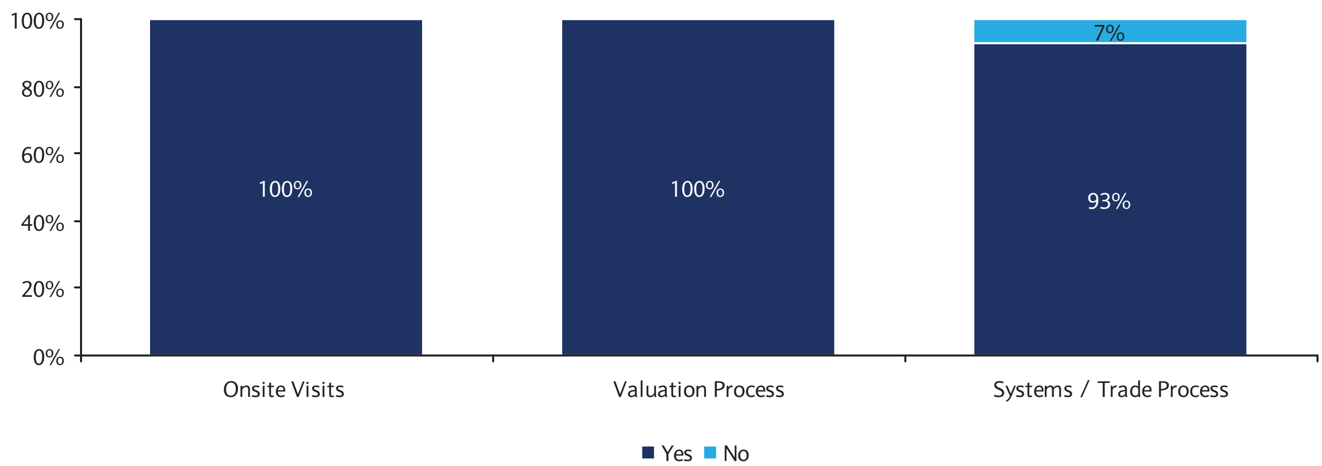
Figure 5: Willingness to Share PB / Administrator Information, SAS 70 Documents and Compliance Manual



Source: Barclays Capital Strategic Consulting Survey Results

- In Figure 6, one can see that all Managers provide details regarding their valuation policies
- Figure 6 reflects that 100% of Managers said they currently entertain on-site visits by ODD teams and plan to continue to do so (On-site visits typically include meetings with Operations, Marketing, IR, CFO, Compliance and Chief Compliance Officers)
- Figure 6 also highlights that about 90% of Managers share details of their system and process flows with potential Investors / Consultants while about 10% decline to do so

Figure 6: Willingness to Entertain Onsite Visits, Share Valuation Policies and Trade Processes



Source: Barclays Capital Strategic Consulting Survey Results

- Most Managers do not share Auditor engagement letters, Board meeting minutes, or position-level data in writing
- Administrators will provide Asset / Pricing policy verification on the Managers' request

Managers' Perspective on the ODD Process of Different Investor Types

- *"Hard to generalize but some Pensions and Family Offices have a very simple process as opposed to some Consultants and FoHFs that have a much longer and more intense process."*
- *"Each Investor type has some individuals who are thoughtful and others who are boneheads. Consultants tend to have a very robust process because their staffs tend to very specialized."*

What Managers Find Most Onerous / Painful About the ODD Process

- *"The time it takes- it's a very lengthy process."*
- *"The fact that some people doing ODD do not understand our strategy because all they have dealt with before is long-only or long-short equity."*
- *"When you publish a 50 page detailed document, people not taking the time or trouble to read it."*
- *"Repeated meetings where Investors ask the same question over and over again."*

- *"Answering questions already in the DDQ."*
- *"Some of the level of detail that Investors want to get into, e.g., one Investor wanted to see a PM's university exam certificates after he had been in the industry for 25 years."*
- *"Some meetings can be long and painful, but there is nothing that Investors are asking for that they shouldn't."*

Potential Evolution of ODD Process in the Future

Like much else that is market driven, some facets of the recent changes demanded by Investors and Consultants from Hedge Funds may be watered down over time. Some Investors will be unable to get discounts on fees or liquidity that they are currently able to extract. Most Investors do realize this and are attempting to get as many concessions as they can while the balance of power is still tilted in their direction, recognizing that it will not remain this way for long. Additionally, larger and more successful HFs will be able to potentially withhold their business from certain PBs unless they back down on some of their requirements, as there will be other PBs that are willing to dilute their terms to get business from these HFs. Both HF Managers and Investors agree, however, that transparency related changes that have occurred in recent times will not be rolled back, even with changes in the business cycle.

Acknowledgements

We would like to thank the HF Managers, Investment Consultants and Investors who spoke to us for their views and comments, and their willingness to share these with the broader reader base of the Hedge Fund Pulse.

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EQUITY LONG SHORT: THE LONG AND SHORT OF IT

July 2010

Equity Long Short: The Long and Short of It

In this edition of the Hedge Fund Pulse, we examine the Equity Long Short (Equity LS) strategy that continues to enjoy a dominant position within the Hedge Fund (HF) industry – Equity LS is the largest strategy segment in the HF industry by percentage of total industry assets. In this piece, we delve into four key facets of the Equity LS environment.

First, we analyze the Equity LS landscape by reviewing historical performance, net flows and Assets Under Management (AUM) of Equity LS HFs. We also discuss how the HF industry's distribution of assets across strategies has evolved over time.

Second, we explore three key questions that are often on the minds of Investors relative to Equity LS HFs. We present our findings and views on these questions, and also discuss considerations for Equity LS Investors and HF Managers.

Third, we discuss Investor sentiment surrounding the strategy based on our survey results. We address both current allocations to Equity LS, as well as Investor plans to increase, decrease or maintain current allocations.

Fourth, we present Equity LS Manager views on their strategy, as expressed by Managers during a panel discussion that we recently hosted at Barclays Capital. We also share some core opportunities that these Equity LS Managers are hoping to exploit in the coming year.

Methodology

For this study, we collected data from five sources[1]

- Survey results from 56 Institutional Investors
  - These include FoHFs[2], Family Offices, Endowments, Foundations, Private Banks, Insurance Companies and Consultants
- Survey Results from ~40 Hedge Fund Managers
- HFR (Hedge Fund Research) Reports
- Views expressed by the following Equity LS HF Managers at a panel discussion sponsored by the Prime Services Capital Solutions team at Barclays Capital on June 10, 2010, titled 'The Long & Short of It: Fundamental Equity Opportunities'
  - Michael Aronstein, President and PM[3] at Marketfield Asset Management
  - Matthew Grossman, CEO and CIO at Plural Investments
  - Chris McHugh, Senior PM at Turner Investment Partners
- Data from ongoing dialogue our group has with HF Managers and Institutional Investors

[1] The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information are derived directly from respondents, and we do not pass on the accuracy of such information.
[2] Fund of Hedge Funds
[3] Portfolio Manager

Key Findings

- Over the last decade, the HFRI Equity LS index has outperformed the HFRI composite HF index in five calendar years, and underperformed the index in the other five years
- Equity LS annual net flows have almost always been less than industry net flows over the past decade – except for the years 2000, 2005 and Q1 2010
- While Equity LS is still the dominant strategy in terms of AUM in the HF industry, Equity LS's share of industry AUM has declined from ~56% in 2000 to ~32% in Q1 2010
- Some may argue that many Equity LS HFs are leveraged beta plays because even though they provide higher returns than the S&P 500, the correlation to the S&P is high
- Equity LS HFs, as a whole, tend to perform better than the S&P 500 during periods of high volatility, offering Investors protection on the downside through volatile markets
- Equity LS is one of the most liquid strategies with average total time to redemption being ~6 months and the typical redemption frequency being monthly or quarterly
- ~40% of Investors surveyed have 20-40% of their portfolios invested in Equity LS HFs, and ~66% plan on maintaining their allocation to Equity LS in the next six months
- Some opportunities that our panelists consider compelling this year include "US economic risk", "large cap outperformance of small cap", & "natural gas equities"

The Equity Long Short Landscape

As the name suggests, Equity LS HFs maintain long and short positions in equity / equity derivative securities, and have typically attracted strong Investor interest over the years. However, when examining the performance, flows and AUM evolution of Equity LS HFs, we notice a trend towards increased pressure on the strategy.

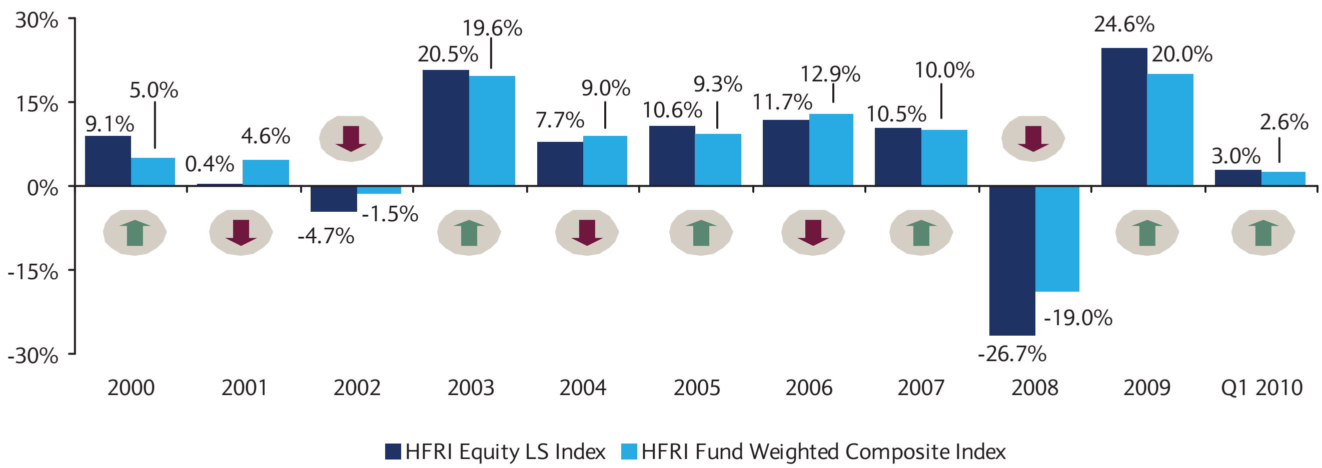
Performance

Figure 1 illustrates performance for the HFRI Equity LS index vs. the HFRI Composite HF index on an annual basis during the period 2000 – Q1 2010. The green upward arrows indicate the years when Equity LS outperformed the HF index, and the red downward arrows indicate years when Equity LS underperformed the HF index. In the years 2000 to 2009, Equity LS HFs outperformed the index five times, and underperformed the index five times. However, if one had invested a dollar each in the HFRI Equity LS HF index and the HFRI Composite HF index in 2000, the realized returns by end of year 2009 would be ~55% for Equity LS vs. ~77% for the Composite index. This relates to the point noted in the introductory paragraph, that there is increasing pressure on the strategy to boost performance.

From this, it would appear that Investors have historically preferred to allocate to Equity LS over other HF strategies for more than just superior performance. Rather, it is due to a myriad of other factors such as the perception that Equity LS is a strategy that is much easier to understand, it is less complex than other HF strategies or that it is often the only alternative to a direct allocation to equities. For institutional Investors such as pension funds, it is also a relatively easier way to convince the pension's board of trustees to first enter the HF industry. From a recent survey that we conducted across Investor types, 54%

of the Investors surveyed indicated that they take an integrated view of their Equity LS HF allocations and other equity investments. Therefore, the 'barrier to entry' to invest in HFs is reduced by first investing in Equity LS HFs. However, as the HF industry matures, and HF Investors become more sophisticated, there is increased pressure on Equity LS Managers to boost performance in order to maintain Investor appetite for the strategy. Later in this piece we also address concerns Investors have regarding the "quality" of Equity LS returns.

Figure 1: HFRI Equity LS Performance vs. the HFRI Fund Weighted Composite Index Performance

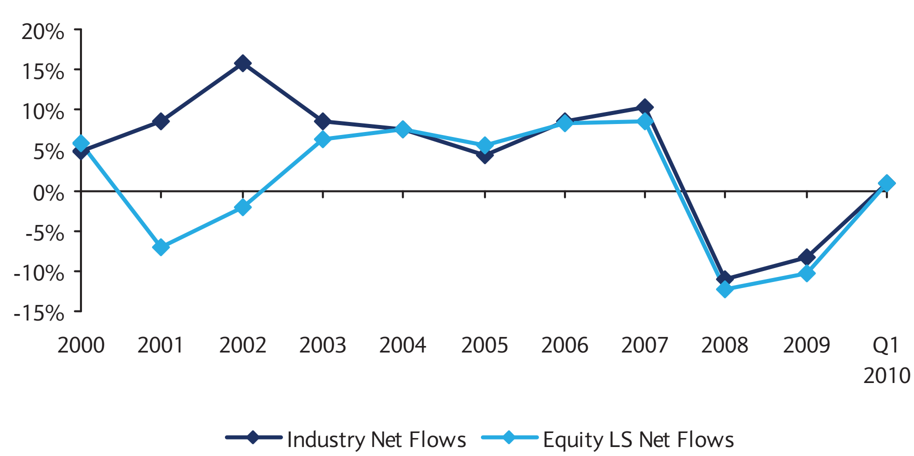


Source: HFR

Flows

Figure 2 displays annual net flows of Equity LS HFs versus the broader HF industry, calculated as a percentage of total assets, during the period 2000 – Q1 2010. One key takeaway from these figures is that Equity LS net flows have almost always been less than industry net flows since the beginning of the decade, except for the years 2000, 2005 and

Figure 2: Annual Net Flows as a Percentage of Total Assets



Source: HFR

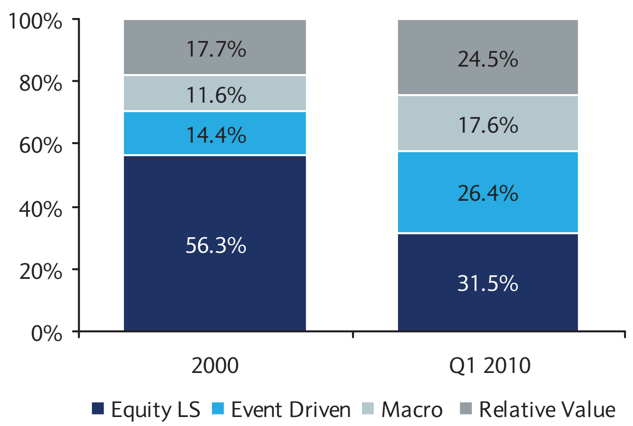
Q1 2010. Equity LS net flows were especially significantly lower than the HF industry during the years 2001 and 2002. Interestingly, this coincides with the time when the equity markets were bearish. This may demonstrate Equity LS Investors' knee jerk reaction at the time in redeeming their money from the strategy. This coupled with the easier liquidity terms of Equity LS HFs, adds more 'pressure' on Equity LS HF Managers to provide a steady stream of superior returns in order to gain 'immunization' from 'quick to flee' Investors during bear markets. However, in the second bear equity market which occurred from 2007 to 2009, Investors reacted against HFs as a whole rather than just Equity LS HFs, since Equity LS net flows were only slightly lower than industry net flows. This demonstrates a learning curve effect on the behaviour of Investors, wherein, in the second bear market, Investors kept the proportion of Equity LS HF allocations more or less constant, indicating that Investors were more aware of the importance of Equity LS HFs in their portfolios.

Assets Under Management

Figure 3 depicts the change in HF industry AUM distribution by strategy from 2000 to Q1 2010. As can be seen, Equity LS representation has declined from 56.3% to 31.5%. While Equity LS is still the dominant strategy by AUM in the HF industry, the strategy's presence has significantly declined over the years.

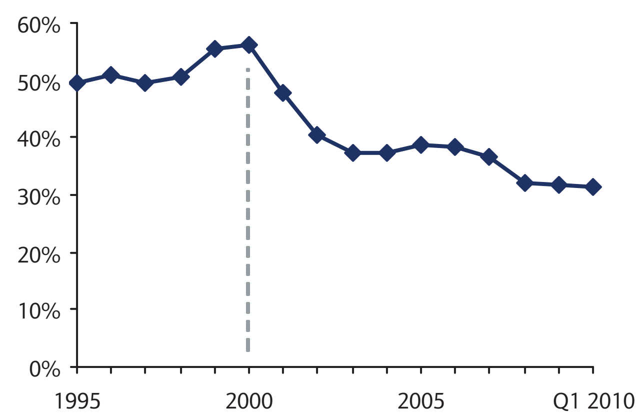
Figure 4 further highlights the evolution of Equity LS assets as a percentage of industry assets on an annual basis during the period 1995 to Q1 2010. In this time period, the peak of assets was reached in the year 2000 (illustrated by the dotted line); however, Equity LS assets have been declining since 2000. This again illustrates the increasing pressure on Equity LS HFs.

Figure 3: HF Industry Strategy Composition by AUM



Source: HFR

Figure 4: Equity LS Assets as a Percentage of Industry Assets



Source: HFR

Note: Any data on past performance, modelling or back-testing contained herein is no indication to future performance

The Strategy Begs the Question

We now turn our attention to the key questions that are on every Equity LS Investor's mind, as well as those that every Equity LS Manager should seek to address when speaking with Investors.

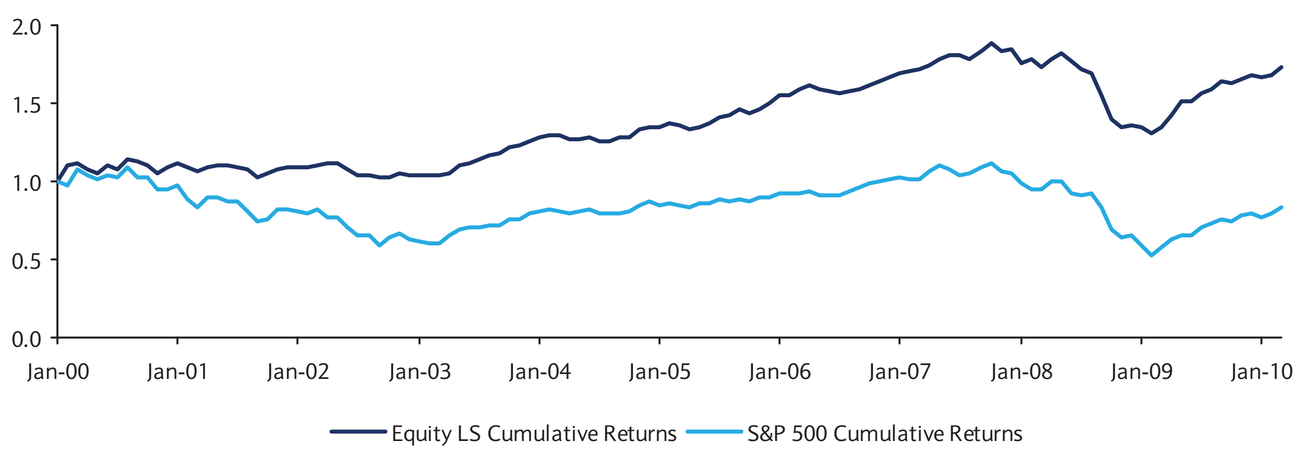
Is Equity LS merely a beta play?

Investors often question the incremental 'value' that they would receive from investing in an Equity LS HF versus directly investing in the stock market or in an ETF. In other words, are Equity LS HFs merely beta plays? In order to address this question, we use the S&P 500 as a proxy for the equity markets and investigate two key points:

- Firstly, we compare the returns of Equity LS HFs vs. the S&P 500 over time, and more specifically during 'bull' and 'bear' markets
- Secondly, we analyze the correlation of returns between Equity LS HFs and the S&P 500

In Figure 5, we have plotted the monthly cumulative returns for Equity LS HFs and the S&P 500 from January 2000 to March 2010. The outperformance of Equity LS HFs is clear. Figure 6 also compares the performance of the Equity LS HF index vs. the S&P during bull and bear markets in the last decade. We picked the turning points of the 'bull' and 'bear' markets to be the peaks and troughs of the S&P 500 from January 2000 to December 2009. Interestingly, during bear markets, the returns Equity LS HFs provide are not as low as the S&P 500. On the other hand, during bull markets, the returns that Equity LS HFs typically provide are lower than the S&P 500 (e.g., Mar 09 – Dec 09), or only marginally higher (e.g., Apr 03 – Jun 07). This highlights the potential for Equity LS HFs to be 'volatility dampeners' in an Investor's portfolio, without sharply reacting to upturns and downturns in the market.

Figure 5: Equity LS vs. S&P 500 Monthly Cumulative Returns (2000 – March 2010)



Source: HFR

Note: The Equity LS performance depicted is net of fees

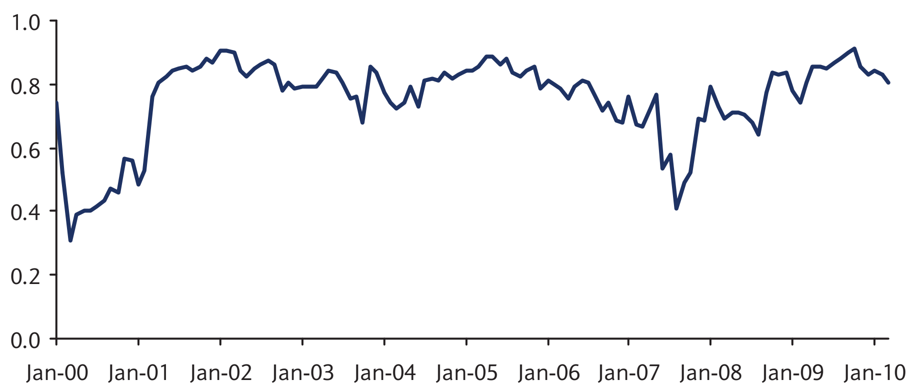
Figure 6: Equity LS vs. S&P 500 Returns during Bull and Bear Markets (January 2000 – December 2009)

Period	Bull / Bear Market	Equity LS Returns	S&P 500 Returns	Spread (bps)
Jan 00 - Mar 03	Bear	3%	-39%	4200
Apr 03 - Jun 07	Bull	71%	64%	700
Jul 07 - Feb 09	Bear	-27%	-49%	2200
Mar 09 - Dec 09	Bull	25%	40%	-1500

Source: HFR, Strategic Consulting analysis

Figure 7 plots the rolling 12 month correlation of the returns between Equity LS HFs and the S&P 500 from January 2000 to March 2010. As of March 2010, the rolling correlation between the Equity LS index and the S&P 500 was ~0.81. From the graph, it is also clear that average correlation has increased over the last two years. The peak was reached in October 2009 with a correlation of ~0.91. Therefore, even though the cumulative performance of Equity LS HFs is noticeably superior (even though some of this is due to leverage), the average correlation to the S&P 500 is quite high.

Figure 7: Rolling 12 Month Correlation between the Equity LS index and S&P 500



Source: HFR, Strategic Consulting analysis

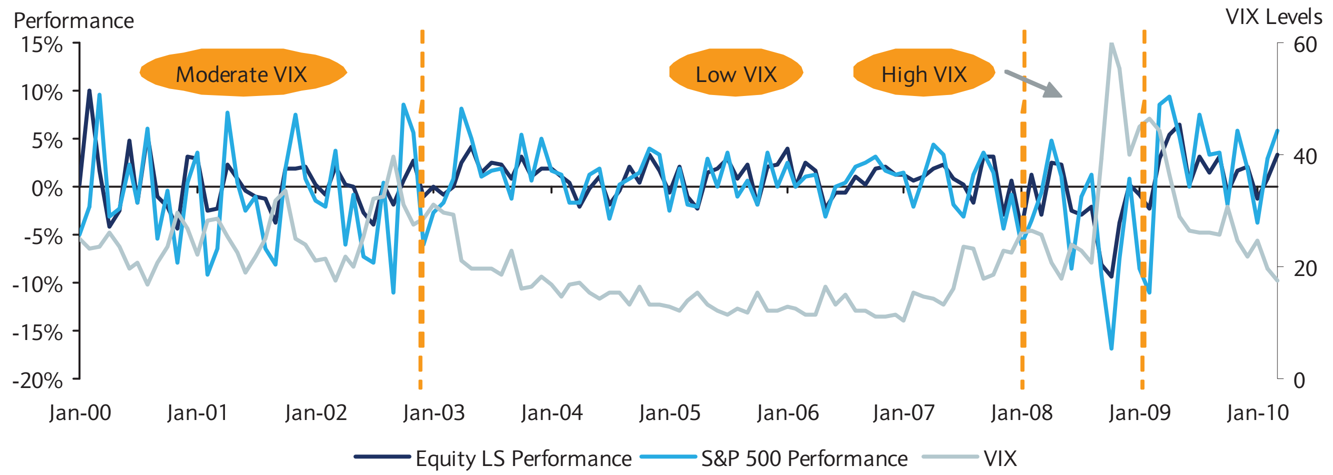
There is one key implication that we would like to highlight regarding Equity LS HFs through this analysis. Despite the higher average returns, some Investors may shun Equity LS HFs as a 'beta play' due to the high correlation of these HFs to the equity markets. Potential considerations for Equity LS HFs are as follows:

- Equity LS HFs that are able to outperform indices while staying relatively market neutral are likely to continue to attract Investor interest
- HF Managers may need to look towards emerging markets or niche areas to preserve their edge and differentiate themselves to Investors

How have Equity LS HFs handled volatility?

The second key question we would like to address is the ability of an Equity LS HF to handle volatility. Figure 8 overlays monthly performance for Equity LS HFs and the S&P 500 with monthly VIX levels during the period January 2000 to March 2010. To better understand how both react to different levels of volatility, we have broken down this time period into three different stages – moderate average monthly VIX, low average monthly VIX, and high average monthly VIX (as can be noted in the graph)[4].

Figure 8: Equity LS and S&P 500 Performance vs. VIX



Source: HFR

Figure 9 tabulates returns during the moderate, low and high VIX phases that are illustrated in Figure 8. Interestingly, for periods when the monthly average VIX was 'moderate', average monthly returns for Equity LS HFs were slightly higher than the S&P. This is the same for periods when the monthly average VIX was 'low'. However, for periods when the monthly average VIX was high, Equity LS HFs provided substantially better returns than the S&P 500. Therefore, not only did Equity LS HFs outperform the S&P across all levels of volatility, but they were especially able to perform better during periods of high volatility in offering protection to Investors on the downside.

Figure 9: Average Monthly Returns Across Time Periods (January 2000 – February 2009)

	Average Monthly VIX	Average Monthly S&P Returns	Average Monthly Equity LS Returns	Spread (bps)
Moderate VIX	25.2	-1.3%	0.2%	1500
Low VIX	16.0	0.9%	1.0%	10
High VIX	34.3	-4.6%	-2.3%	2300

Source: HFR, Strategic Consulting analysis

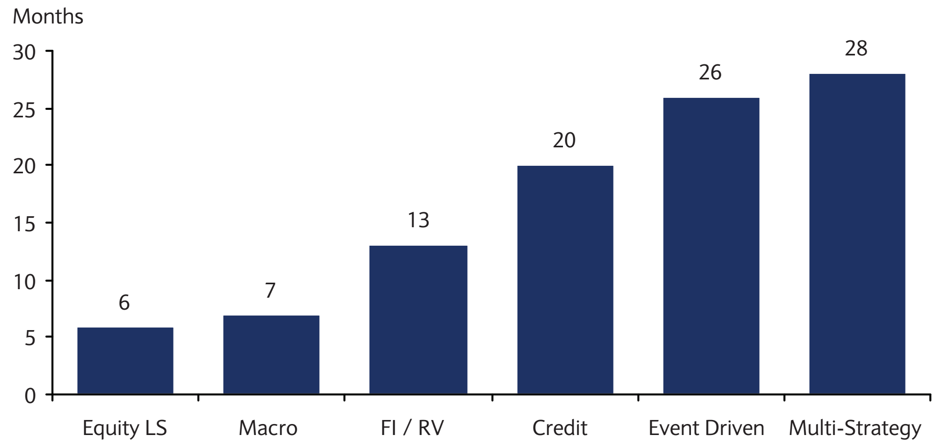
Is Equity LS a more liquid strategy compared to others?

The third key question we would like to address is if Equity LS HFs do in fact provide favorable liquidity characteristics to Investors since this is often cited as a strong draw to

[4] Please note that we partitioned time into the three stages through a subjective assessment of VIX levels

the strategy. In a recent study conducted by Barclays Capital titled "28 Months Later", we interviewed 42 Hedge Fund Managers to better understand how their fee and liquidity structures have changed over the past few years. The release date for the publication is August 31, 2010. Figure 10 displays some of the results of this study. Displayed is the average total time to redemption by strategy. Total time to redemption is defined as the time an Investor would require to fully redeem their investment, which includes initial lock up and redemption frequency. Equity LS has the lowest average total time to redemption of six months.

Figure 10: Total Time to Redeem by Strategy



Source: Barclays Capital Strategic Consulting Survey Results

According to our study, the redemption frequency that Equity LS HFs typically offer is monthly or quarterly, which appears to be more frequent than any of the other strategies. Furthermore, approximately 81% of the Equity LS HFs surveyed have no initial lock in place.

It is clear that Equity LS is one of the most liquid strategies in the HF industry. However, this has both positive and negative implications for HF Managers and Investors. For Investors, on a positive note, the ability to invest in a strategy that is liquid allows them to be nimble. However, it also presents a risk for long-term "sticky" institutional Investors. Since the strategy is so liquid, it is Equity LS that will often be the strategy that Investors are quick to redeem from whenever they are under pressure to find liquidity quickly. Therefore, Investors should be careful to examine the Equity LS HF's Investor base before investing, to make sure their investment horizons are aligned. Similarly, Equity LS HF Managers should be careful in Investor selection, in order to avoid outflows / redemptions whenever there is turbulence / short-term underperformance.

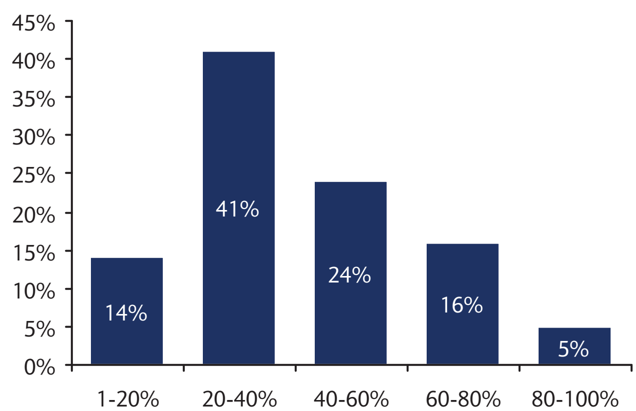
Another exercise that Investors may consider conducting is a liquidity shock analysis of the Equity LS HF's portfolio that they are thinking about investing in. This comes into play when an Equity LS HF has to meet numerous redemption requests, for which they have to sell a sizable number of securities quickly. If these securities are fairly liquid, it should only marginally, if at all, affect the remaining Investor's Net Asset Value (NAV). However, if the securities are not liquid, the selling off of the securities will cause the price of the securities to plummet, and as a result, the NAV of the remaining Investors will be reduced. To avoid such situations, an Investor should model liquidity shock scenarios by asking Managers to divulge to them the likely market impact of the divestment of given percentages of the AUM.

Investor Sentiment

We surveyed ~56 Investors to ascertain their current and target allocations to different HF strategies, and in particular, Equity LS strategies. In order to capture a holistic view of Investor sentiment, we surveyed a variety of organization types.

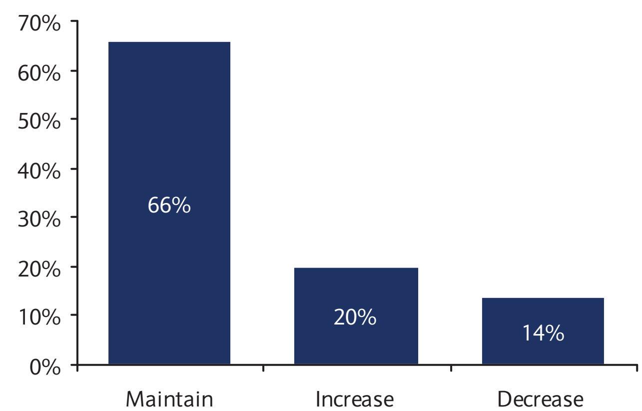
- Figure 11 displays that approximately 40% of Investors have 20-40% of their portfolios invested in Equity LS HFs
- Figure 12 shows a fairly focused response, with approximately 66% of Investors planning to maintain their current allocation to Equity LS HFs over the next six months, while approximately equal numbers are looking to increase vs. decrease allocations

Figure 11: Size of Investor Portfolios Invested in Equity LS



Source: Barclays Capital Strategic Consulting Survey Results

Figure 12: Investor Target Allocations to Equity LS



Source: Barclays Capital Strategic Consulting Survey Results

Manager Views

In the panel discussion on Equity LS strategies held on June 10th, 2010, the following are some of the comments made by our panelists:

- Michael Aronstein, President and PM at Marketfield Asset Management
  - *"We are favoring US economic risk. We think that the US corporate sector is still extremely well positioned, with these companies being able to deliver reasonable rates of growth. We've put some more money into sectors like software and consumer staples, and our short book is dedicated to the non-US global theme."*
  - *"US corporate earnings are going to be the surprise of the entire cycle. It's the sector globally that has really restructured the most aggressively in the last decade. There is a structural underweighting of US stocks generally."*

- *"I think this is a transition period, which is going to get us into an environment where the overall opportunity for growth is going to be limited globally"*

- Matthew Grossman, CEO and CIO at Plural Investments
  - *"Looking at the first four months of the year, what has really stood out is how low correlation and volatility were. During periods like this, people tend to increase their gross and net exposures. This is the 'escalator' phase – very slow and consistent. Then all of a sudden some shock comes, and in May, this shock was out of Europe. The increase in correlation and volatility then causes everyone to rip down their exposures in what we can call the 'elevator' phase. We try to position our business by being underexposed during the escalator phase, so that we can take advantage when the elevator has forced everyone else to bring down their exposures"*
  - *"We embrace volatility. It's not the enemy, it's a friend. Volatility creates opportunities. The metric that we use internally, is relating the return expectation of the stock to the volatility of the stock. From my perspective, volatility is key because it provides intellectual honesty from the idea generation process all the way through to the portfolio construction process."*
  - *"The theme I am most confident about right now is large cap outperformance of small cap. Large caps are at as big of a valuation discount to small caps as they have been in the last decade. Another example of undervalued stocks right now are cell phone tower companies that really stand out because of their good growth dynamics, predictability and US centric focus."*

- Chris McHugh, Senior PM at Turner Investment Partners
  - *"There is a better opportunity now to short stocks because of fundamentals, which wasn't the case earlier in the year when stocks were going up regardless of fundamentals"*
  - *"Coking coal, which is a significant input into global steel production, is a very interesting area. There are only a few quality players that have evolved in this space, and some of these companies are likely undervalued by as much as 20 – 30%."*
  - *"Areas where we are in the accumulation stage include natural gas. There are some really interesting deals that have been done in shale properties, and we think there is more to come. On the short side, we are concerned about some technology areas, in particular, hard disc drives. Notebooks and PCs are losing share to tablets. We are also concerned about consumer spending on a global basis, and think that the consumer side is poised for some downside."*

Acknowledgements

We would like to thank our Equity Long Short panel participants for their views and comments, and their willingness to share them with the broader reader base of the Hedge Fund Pulse.

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HEDGE FUND SEEDING: GREAT EXPECTATIONS

September 2010

Hedge Fund Seeding: Great Expectations

For the September edition of the Hedge Fund Pulse, we decided to analyze the current state of the Hedge Fund (HF) seeding business and developments that are likely to influence this business in the near future. In this paper, we share our findings on six aspects of the seeding business, each of which is outlined below.

First, we assess recent developments in the seeding environment and the competitive landscape, as well as on the overall availability of seed capital to emerging HF Managers.

Second, we summarize the value provided by Seeders to emerging HF Managers and to Investors looking to put capital to work.

Third, we analyze different seeding business models that exist, as well as the related sources and types of seed capital that can be raised. More specifically, we examine the unique characteristics of different business models and the factors that make them more or less likely to succeed in the current environment.

Fourth, we examine terms offered by Seeders to both their Investors as well as to the HFs into which they invest seed capital. We analyze the impact of these terms on the economics of Seeders and their Investors.

Fifth, we describe the characteristics that are likely to make a Seeder successful. From the perspective of a Manager looking for seed capital, we assess what would make a certain Seeder and related set of terms more or less attractive to a HF Manager.

Sixth, we summarize recent regulatory changes and their potential impact on the seeding business, from both a demand as well as a supply perspective. In particular, we explain the likely impact of the 'Volcker Rule' on the demand for seed capital and the capital raising options available to proprietary traders looking to spin out of Banks.

Finally, we conclude with a set of observations for both Managers and Investors impacted by the continued evolution of the HF seeding business.

Methodology

For this study, our findings are based on data which we collected from several sources:

- Hedge Fund Research (HFR)
- Ongoing dialogue our group has with HF Managers and Investors
- In-depth interviews with ~10 well known Seeders with significant experience and track records in identifying and seeding HFs (all quotes in the piece are from these interviews)
- News articles and analyses (e.g., on Financial Regulatory Reform)

Key Findings

- Several key players that were active in providing seed capital have exited this business in the last 2-3 years, chief among them being Banks and several Fund of Hedge Funds (FoHFs), resulting in a sharply reduced supply of seed capital

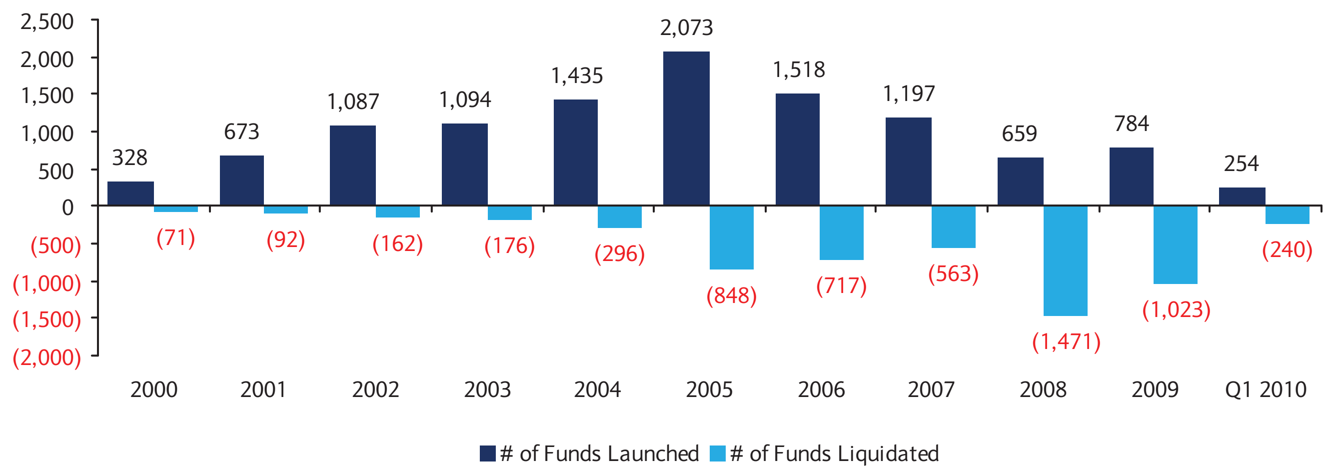
- Investors continue to be attracted to seed opportunities due to potential for higher returns, getting in at the 'ground level' with the highly successful HF Managers of tomorrow, access to guaranteed 'capacity', and the ability of Seeders to protect seed investments with much tougher levels of transparency and control than most Investors are able to negotiate on their own
- Investors have become more reluctant to commit long-term capital, requiring many Seeders to reconsider the liquidity structure of new funds being launched
- A small number of Seeders that continue to be active are seeing much greater demand for their seed capital, allowing them to be much more picky than before
- As a result of the greater demand-supply imbalance than before, Seeders are also getting more attractive terms from seeded Managers than before
- Five most common Seeder models exist: The hybrid FoHF model with a relatively short lock period for capital, the dedicated Seeding 'blind pool' with a somewhat longer lock period, the true 'Private Equity blind pool' with a much longer lock up, 'One-Off' and 'Club Deals' that are negotiated on a deal-by-deal basis with Investors having full transparency into the Manager being seeded, and the Multi Manager platform
- Typical terms agreed with seeded Managers include a lock-in period for seed capital, revenue share, performance, investment and risk guidelines the breach of which allow the Seeder to trigger redemptions, full daily or weekly transparency, calls / puts on revenue share as well as potential 'Tag-along' rights in the event of a sale of part / all the HF's General Partnership (GP)
- Some Seeders offer ancillary services such as support for distribution and infrastructure support etc. for an explicit fee; some consider these services a part of the overall partnerships, while others do not offer these services at all
- There are usually three sources of return for Seeders and their Investors: return on invested capital, carry on other Limited Partnership (LP) Investors' capital, and potentially some type of monetization of the revenue share at some point in the seeding relationship
- The recently proposed regulatory reform in the U.S. and especially the 'Volcker Rule' is likely to further constrain the supply of seed capital by locking Banks out of this business, and is likely to substantially increase the demand for seed capital coming from proprietary (prop) traders looking to leave Banks and start their own HFs

Recent Developments and Current State of Seeders

"Right now, capital is rich and talent is cheap"

As is common knowledge, post 2007, the HF seeding business went into a significant decline. This decline has been due to two main reasons. One, many firms where seeding was a peripheral activity found their core business under threat and pulled back from their seeding activity (e.g., Investment Banks such as Lehman Brothers and Bear Stearns, and FoHFs more generally). Two, the overall investment landscape deteriorated significantly and the seeding business became too risky even for seasoned Investors. In the face of increasingly volatile markets, reduced availability of financing, and Investors' need for liquidity, small Managers became increasingly vulnerable and many vanished as a result of massive redemptions (See Figure 1). With the pullback from seeding activity at Banks, Investment Banks and many FoHFs, the supply of seed capital has dwindled. While the number of new HF launches has declined recently, the latent demand for seed capital is much greater than in the recent past. There are three main reasons for the increase in pent up demand. One, a significant number of HFs are still below their high water mark[1] resulting in their inability to pay their portfolio managers as well as they could before. Two, tax changes recently have made it more difficult to defer recognition of income, such as Section 457A – this has adverse implications for HFs looking to offer deferred compensation as an incentive to retain employees. Finally, the 'Volcker Rule' is putting pressure on proprietary traders at Banks to consider launching their own funds (more on this later). As a result of the increased demand, only the best Managers are currently able to raise seed capital and usually only by offering more favorable terms to Seeders than they needed to in the past.

Figure 1: Hedge Fund Launches and Liquidations



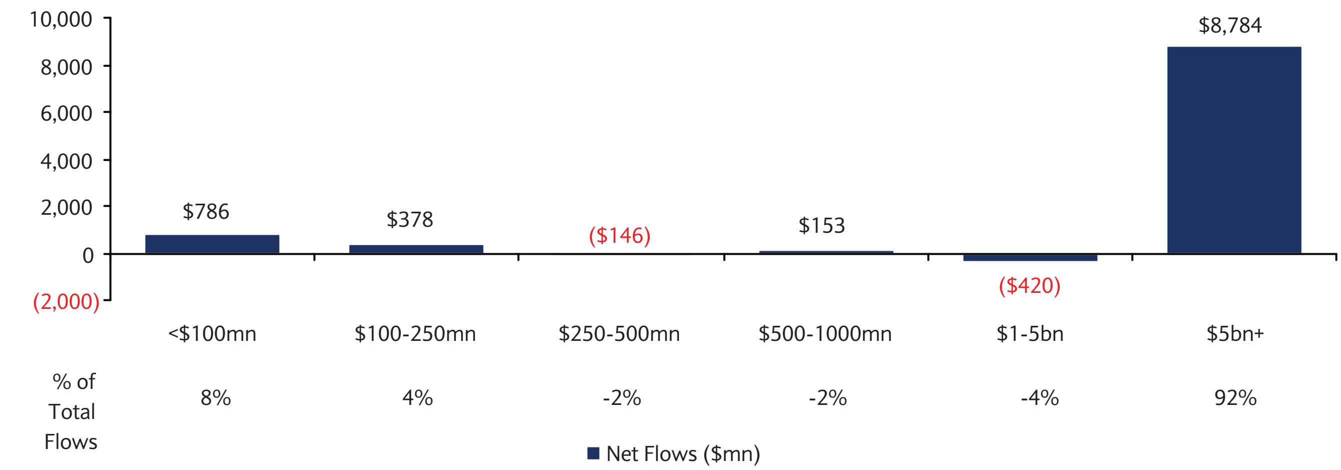
Source: Hedge Fund Research

In recent months, the market environment for HFs has become a lot less unfavorable as markets have stabilized. However, Investor bias towards larger and more institutional HFs persists. This bias is perpetuated by two factors: One, larger HFs may be much more likely to survive a period of market stress than smaller HFs, partly because they will typically have created a robust institutional framework to support their business (non-investment related) processes, especially risk management. The second and related factor has to do with incentives: there is a lesser possibility that an allocator of institutional capital to HFs will be charged with a lack of due diligence or poor decision making if a large, well established HF is selected and then the HF subsequently fails. If however, you invest in a Manager who has a great investment thesis but little in the way of assets or a track record, there is a greater risk to your reputation or even your career. In summary, the risk reward for most institutional Investors does not encourage them to back promising emerging Managers. This is backed up by the fact that about 92% of the $9.5bn of net inflows into the HF industry in Q2 2010 went to HFs with AUM>$5bn (See Figure 2).

[1] According to the HFR Q2 2010 report, 45.6% of constituent funds are below their high water mark

On the flip side, a number of studies (e.g., from HFR) have shown that newer and smaller Managers usually outperform larger and older HF Managers. This represents a conundrum for Investors – while they are hungry for the additional alpha generated by emerging Managers, they are worried about the higher perceived risk. In a nutshell, that is the chief raison d'être for Seeders and the seeding business – to seek higher returns and capacity from Managers they identify who will become very successful over time, while managing downside risks.

Figure 2: Distribution of Net Asset Flows by Firm AUM (Q2 2010)



Source: Hedge Fund Research

There have been very few high profile entrants into the seeding business over the past two years. Some family offices have entered the market to seed Managers opportunistically. Large institutions such as CalPERS, U.K. pension fund Railpen and New York State Common Retirement Fund are all relatively new entrants (NY Common has invested $250mn with London-based Finisterre's emerging market HF)[2]. Despite the expression of interest in seeding from a few such large institutions, it is not clear that they can get over their aversion to the 'headline risk' of the potential failure of a seeded HF. Consequently, it is hard to say whether they are committed to this business in any meaningful way, beyond meeting some policy requirements to invest in women or minority owned HFs. Some family offices are opportunistic Seeders (e.g., The Koffler Group, Parly Company). Other players[3] that are active include Julian Robertson (Tiger Management), Reservoir Capital, Blackstone Strategic Alliance, Investcorp, Skybridge Capital, New Alpha, Larch Lane Advisors / PineBridge Investments, Revere Capital Advisors, Reyl Asset Management, Alternative Asset Management (AAM), FRM Capital Advisors and CYAN Management Group, among others. Large Hedge Funds that provide seed capital to new Managers include Citadel Investment Group, Millennium Management, and SAC Capital Advisors.

[2] Simonkerrhfblog.blogspot.com
[3] Infovest 21, Alternative Investment News, The Wall Street Journal, Financial Times

Our analysis suggests that the seeding business is potentially at a point of inflection and that, for seasoned Investors, the opportunities in the months ahead may be the best they have ever seen. This is because of the seed capital demand-supply imbalance, and a large pool of talent looking to launch new HFs.

Benefits to Seeded Managers and Investors

The value provided by Seeders to emerging HF Managers continues to be significant. Our discussions suggest that a well respected Seeder acts as a stamp of approval, providing institutional validation to Managers and Investors on two fronts:

- Managers selected for seeding are likely to have proven records in delivering returns / controlling risk
- To be selected, Managers also need to demonstrate the ambition, skills and determination required to run their own businesses and achieve institutional-quality standards in all areas of their operations

Additionally, for early stage Managers, many Seeders will provide advice and support with business issues (e.g., finding office space, recruitment, marketing help and advice, operational and legal support).

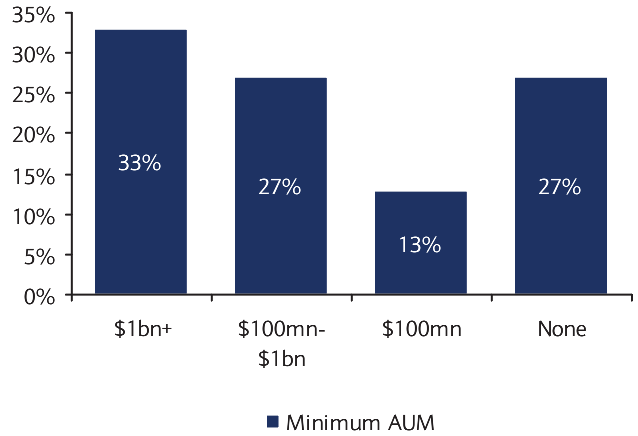
Investors in seed funds are typically motivated by a combination of the following:

- Higher and more diversified returns
  - Combination of performance, revenue participation and / or potential return from some type of monetization event
  - Ability to negotiate favorable investment terms with Managers at a critical point in their lifecycle
  - Diversification of investment risk across multiple seeded Managers (if seeding ten Managers, one needs only one or two 'home runs' and two or three 'singles' and 'doubles' in order to get target returns)
- Higher transparency and greater control (similar to a separate account)
  - Better risk controls through single position transparency, customized investment guidelines and exit covenants / termination clauses
  - Option to terminate investment in underperforming funds
  - Ability to recycle freed-up cash to seed new funds
- Other
  - Securing capacity in attractive funds that may close quickly

"The seeding business has not been a very good business for the vast majority of players. Backing one Manager or two that did well is little more than luck"

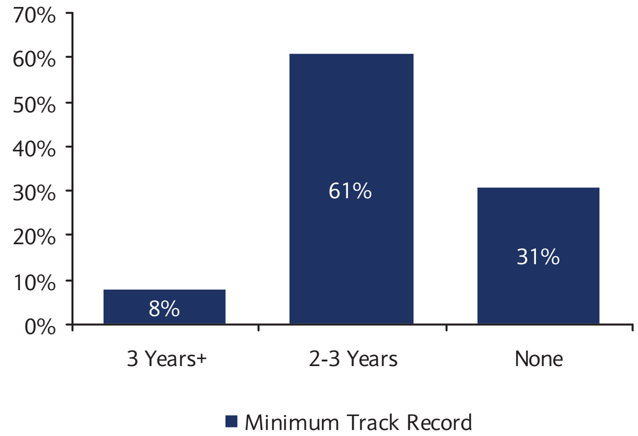
Many institutional Investors are now looking to access the HF in potentially innovative ways and some have asked their consultants to look at seeding opportunities. This is partly also driven by a desire to fund minority and women owned firms. Since the seeding business model often tends to be part PE and part HF, many consultants did not look closely at Seeders before. As shown in Figures 3 and 4, despite the interest expressed in emerging Managers, institutional Investors appear to be quite risk averse and seem to prefer to allocate to those Managers who have a great pedigree and have passed a significant AUM (e.g., $100mn) and track record milestone (e.g., >3 years). We would also caution our readers against taking an optimistic view of those Pension funds that do not have an explicit requirement of a minimum AUM level and have a track record for Managers to whom they would consider allocating capital. The fact remains that, for multiple reasons (chief among them being driven by minimum ticket size and concentration limits), institutional Investors seem not to be inclined to invest in new and emerging HFs.

Figure 3: HF Size Requirement of Pension Funds



Source: Strategic Consulting Interviews with 50 Pension Funds ('It Takes Three to Tango')

Figure 4: HF Track Record Requirement of Pension Funds



Source: Strategic Consulting Interviews with 50 Pension Funds ('It Takes Three to Tango')

Seeding Business Models

There are, essentially, four different business models based on the menu of services provided that exist today along with a number of their hybrids:

- Pure seed capital providers with some strategic advice (e.g., on capital raising) thrown in for free
- Seeders that provide not just seed capital but also significant additional support (e.g., with setting up infrastructure, marketing) but may either charge a separate fee for these services or just take a much higher share of the revenue, if structured as part of broader partnership. Some of these Seeders may treat the seeding relationship as a true joint venture (JV) and co-brand the HF, take responsibility for key business functions (e.g., marketing), etc.
- Incubators provide the entire infrastructure to set up and run a HF and may also invest capital, but often only on the achievement of a successful track record of 6-8 months
- Platforms – aka Multi Manager Funds that will provide seed capital and the entire plug-and-play infrastructure required to start business as a HF. These platforms will usually offer compelling compensation terms to Managers but no ownership stake in the

platform. There may or may not be the option to raise additional, external capital at a later date. Capital is committed for a specific period of time and may grow or shrink, depending on the relative performance of the Manager over time

Each of the above business models relies on raising seed capital from Investors in some form or another. There are five typical avenues available to Seeders to raise capital, along with hybrids of these:

- Dedicated Seeding 'Blind' Pool
  - Raising a 'blind pool' of capital is often the preferred route for Seeders ('blind pool' implying Investors do not have the ability to make decisions regarding individual seed investments)
  - These pools typically have a lock period of about 2-3 years, and redemption is expected thereafter either from an exit / monetization event or from the raising of another fund
- Hybrid FoHF Model
  - In this model, the lock period for capital is much shorter (typically 1-2 years)
  - More reputable FoHFs will take steps to avoid 'double-dipping', i.e., charging their Investors a fee for investing in a new HF that they have provided seed capital to (and that they are earning a revenue share on)
- Private Equity 'Blind Pool'
  - Involve raising long lock up capital (could be 5 years or more)
  - This model for raising capital is under some stress right now with few, if any, Investors showing any appetite for locking up capital for that long, resulting in only the most reputable seeders being able to raise this type of capital
- One Off / Club Deals
  - In this model, the Seeder finds a Manager it would like to seed and then it approaches its short list of Investors that are looking to invest seed capital
  - This approach is also amenable to 'club deals' where there may be 2-3 Seeders that provide capital, and there may be a distribution of responsibilities among them (e.g., one of the Seeders may perform the monitoring of the seeded Manager on behalf of the group to make sure performance, investment, risk and other guidelines are being adhered to)
  - Typically, the originating Seeder has the ability to determine how the revenue share is distributed and may keep a richer share of the economics for itself
- Multi Manager Platform
  - Multi Manager platforms typically already have access to a pool of capital they have raised with the objective of seeding new Managers

While Seeders continue to reserve the right to make 'side pocket' seed investments in PE and / or buy stakes in the GP of HFs in the secondary market, this has been a harder sell in recent times. Some Seeders offer different share classes targeted at institutional and individual Investors.

The types of Investors that traditionally have been most inclined to support new and emerging HF Managers have included FoHFs, Endowments, Foundations, Sovereign Wealth Funds, and select Family Offices, Insurance funds and Pensions[4].

Aside from seed capital, the typical Seeder will offer access to their expertise in running HFs, raising capital, their relationships with myriad service providers, industry participants, etc. Some Seeders will charge for these services explicitly via a service agreement. Others will build the cost of providing these services into the overall relationship.

Assessing the likelihood of future success of any of the above mentioned models is difficult. As Figure 5 shows, each of these models has both pros and cons. However, only those models that have access to and can offer longer locked up capital to Managers have the ability to ride out tough years (and even good Managers may have bad years). The provision of additional services is less of a differentiator for Seeders, unless the additional services include being able to leverage deep industry relationships and credibility built up over 5, 10 or more years of successfully seeding HF Managers to help seeded Managers raise stage II or 'Acceleration Capital' (i.e., capital that takes the Manager over the minimum size threshold requirement of most institutional Investors). That is not a description that fits the vast majority of Seeders who are in that business today.

Figure 5: Avenues Available to Seeders to Raise Capital

Avenues Available to Seeders	Pros	Cons
1. Dedicated Seeding 'Blind' Pool 2. Hybrid FoHF Model	- Easier to raise capital with shorter lock - Room for error (shotgun approach)	- Short lock could pose a challenge to Managers (even good Managers may have bad years)
3. PE 'Blind' Pool	- Access to long lock capital - Room for manager selection error (shotgun approach to seeding Managers)	- Hard to raise PE style pools today, except for very select Seeders with outstanding track records and pedigree
4. One Off / Club Deals (Promoting one Manager at a time to Investors and other Seeders)	- Can show Investors each individual Manager, which raises confidence - Originating Seeder can negotiate terms on a deal-by-deal basis with other Seeders	- Mgr may prefer to go to a Seeder who has capital in hand - Different Investors have different investment objectives, tax issues etc., which could potentially lead to conflicts - Little room for manager selection error (rifle-shot approach)
5. Multi Manager Platform	- Ready access to capital - Existing infrastructure may attract Mgrs who do not want start-up issues	- May turn off talented Mgrs who want ownership of fund - Investors balking at high fee structures and netting risk

Source: Strategic Consulting Analysis

Terms Offered to Seed Capital Providers and Seeded Managers

Our discussions suggest that Seeders usually charge a management fee of 1-1.5% and a performance fee of 10-15% respectively to their Investors. The performance fee is sometimes levied on the excess returns generated over a hurdle rate (typically 5-6%). Some funds will offer a stake in their own GP to strategic Investors. Investors will also receive a percentage of the gross revenue of the seeded Manager on top of the returns generated by the seeded Manager.

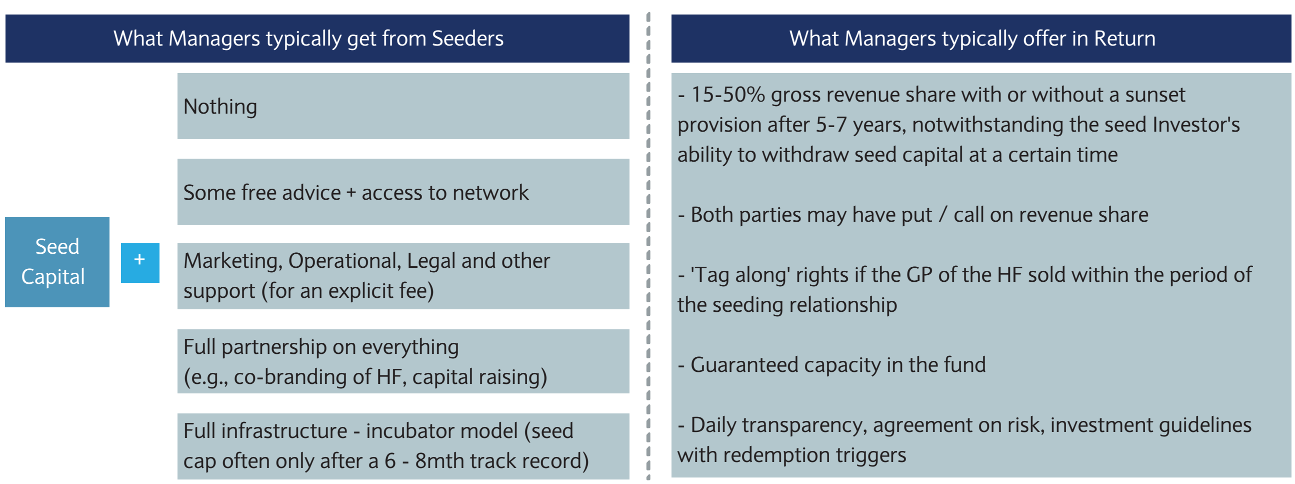
[4] Reuters

There has been a move in the last two years towards taking a share of the revenue of the GP of the seeded fund rather than an equity stake. This has been driven by liability concerns as well as doubts about the ability of Seeders to monetize GP equity stakes. Additionally, with an equity stake in the GP, there is a need to monitor the operational and other expenses of the HF, which gets Seeders into messy governance issues. Most Seeders feel much more comfortable taking a cut of the gross revenue of the GP and leaving the day-to-day running of the HF to the Manager. Some Seeders continue to have a provision in their agreement with the Manager that allows them to receive a structured payout if the Manager sells a significant stake in the GP during a specified period of time.

The revenue share is usually anywhere between 20-50% of gross revenues (both management and performance). It may start low, rise as AUM grows, and decline again after a specific number of years. In other instances, the revenue share may remain constant. While, at one extreme, the revenue share may end after a period of 5-8 years, it is often perpetual in nature unless the two parties can come to an agreement on how and when to end the relationship. Oftentimes, the Seeder can withdraw seed capital after a pre-determined period of time (usually after 2-3 years or when certain AUM targets are met) but the revenue share continues in perpetuity, subject to put / call provisions. Seed ticket sizes tend to be $20-100mn (most in $20mn-30mn range). Most Seeders use leverage of 1-2 times.

Figure 6 describes the range of what seeded Managers can expect to receive from a Seeder and what they typically need to pay in return.

Figure 6: Menu for HF Managers



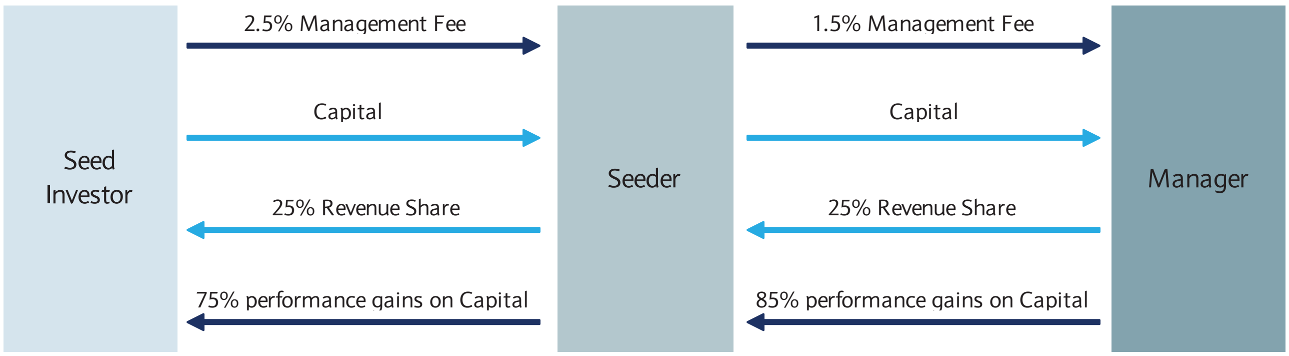
Source: Strategic Consulting Analysis

Figure 7 lays out the typical arrangement between a Seeder, its Investors and seeded Managers. In summary, there are three sources of returns for seed Investors:

- Return on own invested capital
- Carry earned on capital invested in seed Manager by other Investors

- Some type of monetization of the revenue share (e.g., in the form of a structured equity-like payout when a stake in the HF GP is sold or the Manager buys back the revenue share arrangement)

Figure 7: Example of a Seeding Arrangement



Note: The Seeder also may have the option to sell the 25% Revenue Share at the time a stake in the GP is sold by the Manager

Source: Strategic Consulting Analysis

Related costs that Seeders may include:

- Opportunity cost of locking up capital for relatively long period of time
- Reputational risk that the Seeder is taking (a credible reputation for identifying and backing HFs that will go on to be highly successful is a key asset that a good Seeder brings to the table)
- Time and effort spent in making sure the seeded Manager has the advice, guidance and support needed to be successful (leveraging business skills and industry contacts)
- Explicit costs related to marketing, use of own infrastructure, etc.

Many active Seeders will see 200-400 prospective Managers each year. This number has grown substantially over the last two years (one large Seeder told us that the number of Managers they see annually has gone up from about 50 to about 200 over the past two years). Typically, 1-2% of these prospects are eventually seeded and the process usually takes about 6 months from the introduction to the subscription.

"Often, it's the operational due diligence that will determine if a Manager gets seeded. The investment due diligence process has a probabilistic outcome but, on infrastructure, 99% is a failing grade"

Our discussions suggest that what Seeders are looking for in HFs they will potentially seed are two things. One, the Manager has to meet all the requirements of the investment and operational due diligence process. This usually includes passing the test for entrepreneurial ambition and drive. Second, the HF strategy should both fit the requirements of the Seeder's portfolio (in terms of diversification) as well as fall into the category of strategies considered desirable now and likely into the future by Investors. Once a HF has met all these requirements, the only stumbling block to a deal being consummated is the two parties not being able to get to a mutually acceptable set of terms.

Figures 8 and 9 outline the economics of a typical seed transaction. Assumptions we made for the purposes of the example are as follows:

- Returns and AUM growth are those of a real HF (we have no knowledge if this HF ever received any seed capital – we just randomly chose to use their numbers for our model)
- Seeder invests $50mn of capital at the launch of the HF
- HF charges 1.5% management fee and 15% performance fee to the Seeder (passed through to seed Investors)
- Seeder additionally charges 1% / 10% to seed Investors
- Seeder receives 25% share of HF's gross revenue (assumed to pass through to Investor)
- Seeder withdraws 50% of capital at the end of the third year but continues to receive revenue share until the eighth year, when the remaining capital is withdrawn
- Seeder exercises the right to 'put' the revenue share back to the Manager at the end of 8 years and receives three times the previous year's gross revenue in return

Figure 8: Economics of a Typical Seeding Relationship

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	IRR
Assets Under Management ($mn)	72	236	438	443	588	839	965	1043	1302	
Performance	0.00%	27.31%	19.36%	-7.89%	25.90%	28.78%	12.80%	5.20%	16.38%	
Return on Seed Capital ($mn) (includes revenue share on own capital)	0.0	9.7	6.6	-1.1	4.6	5.1	2.0	0.5	2.7	
Carry from Other LPs' Capital ($mn)	0.0	2.2	3.7	1.7	6.9	10.4	7.7	5.7	11.6	
Monetization of Revenue Share ($mn)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	142.2	
Total Return including Capital Flows ($mn)	-50.0	11.8	10.3	25.6	11.5	15.5	9.7	6.2	181.4	35%

Source: Strategic Consulting Analysis

Figure 9: Attribution of Seed Investor Return

Source	Share of Total Return	Comment
Return on Seed Capital (includes revenue share on own capital)	19%	Lower than comparable LP Investor returns due to fee drag
Carry from Other LPs' Capital	25%	Correlated with asset growth, duration of revenue share
Monetization of Revenue Share	56%	Very hard to structure fairly / may never occur

Source: Strategic Consulting Analysis

Based on this analysis, the following key insights regarding the relative importance of the three sources of returns emerge:

- Return on own capital (including revenue share on own capital) for Seed Investors is typically lower than comparable straight LP return due to the higher burden of fees; this does not account for the much higher transparency and control the Seed Investor enjoys (through separate account like terms) which might provide a better risk-adjusted return

- Return based on the carry on other LPs' capital is higher than the return on Seeders' own capital – this is, of course, predicated on the HF and Seeder collectively being able to raise significant third party capital
- Return based on the monetization of revenue share provides the largest boost to total returns but comes with two important caveats: One, the monetization event has to be structured very thoughtfully if it involves the Manager buying out the Seeder, since a buy back can impose a significant financial burden on the HF and threaten its financial viability; Two, this type of a monetization is very hard to pull off successfully and, therefore, rarely seen in practice

Overall, the IRR from the above seed investment is a very healthy 35% compared to a Day One LP Investor's IRR of 13%.

Drivers of Success

"How many Seeders today can point to a 10-15 year successful track record, and more than 1 HF they seeded that today has over $10bn in AUM – very few"

To be considered successful in the seeding business, a Seeder must ideally have seeded not just one or two but several HFs that have gone on to produce stellar returns and become fairly large (at least $2-5bn in AUM) as a result. That is a very high bar that only a handful of Seeders are able to meet (Tiger Management's Julian Robertson, Reservoir Capital's Dan Stern, Investcorp and Protégé Partners' Jeffrey Tarrant are a few that come to mind). The reason why such few Seeders have had great success is because the seeding business is a tough business. It requires a complex set of capabilities, demonstrated consistently over a long period of time, to be successful. The following are some key elements of what it takes to be successful:

- A 'Partner' mindset with a long-term horizon
- Ability to source Manager referrals
- Extensive investment and operational due diligence capability
- Seed deal structuring and negotiation capability
- Deep industry experience and analytical skills
- Ability to raise capital by dint of seeding track record and a solid reputation
- Established business networks and ability to market funds
- Ability to offer operational, investment, risk management advice, as well as help with a business plan, hiring service providers and creating an institutional level infrastructure
- Ability to ensure sustainable alignment of interests between Seed Investors and Managers (including helping seeded Managers become independent at the appropriate time, if that's what the business model requires)
- Last but not least is the ability to identify, attract and retain talent at the seeded HF, by fostering the right culture and environment, and ensuring the right incentives exist

"Seeding a Manager and getting them to the point where they are broadly considered successful is harder and takes longer than most people think"

While HF Managers looking for seed capital will probably evaluate all of the above factors in arriving at a decision regarding which Seeder to initiate a relationship with, there are probably only one or two factors that do or should drive the final decision. Ultimately, it seems that access to long lock up capital is and should be the primary driver of the decision to go with a particular Seeder. Secondarily, the extent of experience the Seeder has in the business, and the institutional credit and industry relationships they bring to the table, are and should be quite important in framing the choice of the Seeder. Everything else, including access to operational infrastructure, legal support, etc. are 'nice-to-haves', but may not be crucial determinants of Seeder choice. The rationale for this suggestion is as follows: it takes many years for a seeded HF to establish itself and gain the respect of Investors, and even the best Managers may have at one or more 'down' years. It is only the Seeders that have long duration capital, as well as years and years of experience that will have the vision, ability and willingness to stay invested through a rough patch. The specific terms offered by Seeders are secondary to the factors highlighted above.

"Never forget, seeding is a necessary but not sufficient condition for a HF's success"

In a seeding relationship, both the Seeder and the seeded Manager are betting on the other's ability to help them be successful. From the Managers' point of view, the real question is whether they are confident that a particular Seeder can help them grow and get to a significant size. The specifics of the economics that need to be shared back with the Seeder are important but should not be the key driver of which Seeder to partner with.

Recent Regulatory Changes and Impact on Seeding Business

"Frankly, we are more likely to seed a prop trader who acknowledges he does not know everything he needs to know about running a HF, than someone who thinks they do"

Recent regulatory changes and the 'Volcker Rule' in particular are already having a significant impact on Banks. There are frequent press articles that outline some of the steps Banks are taking to be compliant with requirements related to the presence of prop trading groups within their organizations. While there is still a need for greater clarity on all of the implications of the 'Volcker Rule', it is safe to say that, broadly speaking, ring-fenced prop trading groups at Banks in their current avatar will probably have to be divested from the Banks. Additionally, the rule seems to preclude Banks from being significant sources of seed capital for their own or other Banks' prop traders looking to start their own HF. From a supply standpoint this is clearly a significant negative for the seeding business.

Let's now look at the demand side of the seeding equation. Figure 10 depicts the choices facing prop traders at Banks as they adjust to the requirements of the 'Volcker Rule'.

Figure 10: Prop Traders' Options under the Volcker Rule

	Options	Comments
Exit Bank	Raise Equity or Debt Financing	- Equity: Must raise 100% of own equity by 2014; Post 2012, no equity / partnership / investment allowed if the HF is independent (Bank seed investment must be <3% of ownership interest within 1 year and permitted only if the Bank organizes or offers the fund) - Debt Financing: Must be done at arm's length on market terms, and not be subordinated to Equity interest
Exit Bank	Join Multi Mgr Platform	- Obviates need to set up own HF or raise capital when required by platform
Stay at Bank	Merge into client flow business	- Potentially unfeasible / unattractive
Stay at Bank	Relocate to jurisdictions where prop activities are permitted	- Potentially unfeasible / unattractive
Stay at Bank	Become part of Asset Management business	- Must raise 97% of own equity by 2014; Bank's seed investment must be <3% of ownership interest within 1 year of seeding, and aggregate of all stakes <3% of Firm Tier 1 capital

Source: Strategic Consulting Analysis

"No disrespect to prop traders, but we would rather back a second or third generation HF portfolio manager who has interacted with Investors, knows what do if the Bloomberg does not come on or the coffee machine does not work"

While there are some available options, the most attractive ones inevitably require prop trading groups to either raise their own capital or join an existing Multi Manager platform. Either option would be part of a seeding discussion, regardless of the source of seed capital. This indicates there is a likelihood that demand for seed capital will be even greater than it has been in the recent past. We in Strategic Consulting were also curious about Seeders' perception of prop traders spinning out of Banks relative to other candidates for seed capital. We know already, anecdotally speaking, that Multi Manager platforms may be more willing to seed prop traders coming out of Banks. Most other Seeders, on the other hand, are less optimistic about the outlook for prop traders looking to raise seed capital. Their chief concern is that most prop traders, while potentially very successful at their respective Banks, have no idea what it takes to start and successfully run their own HF. It is this lack of business acumen and experience at a HF that makes many Seeders more predisposed to back 2nd or 3rd generation HF Portfolio Managers rather than prop traders.

While the above points to a generally tough environment for prop traders looking to start their own HFs, it also points to much greater availability of talent for Seeders in the weeks and months to come. Based on this high level analysis, it could be that some prop traders may be better off merging into the asset management businesses at their respective Banks where they could receive substantial support on infrastructure, marketing, potential access to internal pools of capital (e.g., from wealth management or private banking), and initial seed capital. It is quite unlikely that a majority of prop traders will have this option, given the constraints imposed by the regulations. In fact, Banks will likely be quite selective and may only offer this option to those traders who they are confident will be successful in building a good track record and in attracting capital from third party Investors (including Seeders).

Acknowledgments

We would like to thank the Seeders that we interviewed for their views and comments, and their willingness to share them with us, as well as the broader reader base of the Hedge Fund Pulse.

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QUANTITATIVE STRATEGIES: THE NEXT GENERATION

November 2010

Quantitative Strategies: The Next Generation

In this edition of the Hedge Fund Pulse, we examine the Quantitative Hedge Fund landscape, which continues to be a topic of interest for Investors, regulators and the media. With recent headlines such as "Shrinking Quant Funds Struggle to Revive Boom" and "Bruised Quant Funds Seek a Human Touch," we felt the need to examine the validity of such statements, and delved into six key facets of the Quantitative strategy landscape which we outline in this piece.

First, we define the scope of Quantitative trading strategies, since this is a critical question. Sources of differentiation across Quant funds include frequency of trading, the markets that Quant Hedge Funds (HFs) span, and how Quant funds typically interact with their Prime Brokers.

Second, we share historical performance and Assets Under Management (AUM) for a subset of Quant HFs. This analysis is difficult because of the multitude of Quantitative strategies and the challenge of accurately identifying, tracking and aggregating data for Quant funds.

Third, we analyze how the Quant landscape has evolved over the last three years. Here, we specifically discuss six key changes that have taken place.

Fourth, we present Quant Manager views on their strategy, as expressed by Managers who participated in Quantitative strategy panels recently hosted by Barclays Capital Prime Services. The Managers addressed issues regarding the role of technology, the research process, as well as capacity issues with which Quant funds often have to contend.

Fifth, we address regulation and how this could potentially impact Quant funds. We also share Managers' views on potential new regulation.

Finally, we discuss Investor sentiment surrounding Quant funds based on a recent survey of Investors conducted by Barclays Capital Prime Services. This includes current allocations to Quant Managers, as well as Investor plans to increase, decrease, or maintain current allocations to Quant funds.

Methodology

For this study, we collected information from the following sources:

- Views expressed by the following Quant HF Managers at The Barclays Capital Prime Services Hedge Fund Symposium, which took place October 18 - 20, 2010
  - Jean-Philippe Bouchaud, Chairman and Chief Scientist at Capital Fund Management S.A.
  - Ross Garon, Managing Director of Quantitative Strategies at SAC Capital Advisors
  - David Hoey, Vice Chairman and COO at ABC Arbitrage Asset Management
  - Dr. Tao Huang, Director of Research and Portfolio Management at Ortus Capital Management
  - Alain Sunier, Managing Director at Highbridge Capital Management

- Views expressed by the following Quant HF Managers at a panel discussion sponsored by Barclays Capital on September 9, 2010, titled 'All Systems Go: Opportunities in Quantitative Strategies'
  - Kai Chen, Founding Partner and CEO at Asperatus Capital LLP
  - Peter Ho, PhD, Co-Founder and Partner at Altiq LLP
  - David Hoey, Vice Chairman and COO at ABC Arbitrage Asset Management
  - David Khabie-Zeitoune, Portfolio Manager at GSA
- A survey of Institutional Investors[1] conducted by Barclays Capital Prime Services
  - These include FoHFs[2], Family Offices, Private Banks and Insurance Companies
- Ongoing dialogue with HF Managers and Institutional Investors
- News articles, research reports / commentaries and books

Key Findings

- Quant strategies, also referred to as "systematic", "algorithmic" or "black box" strategies, are not limited to any particular investment thesis, asset class or geography. Rather, what differentiates a Quant fund from other HFs is the systematic investment process with few or no discretionary elements
- Trading in Quantitative strategies can range from low frequency to ultra-high frequency. We define low frequency Quant HFs as those that have average holding periods greater than a month; high frequency HFs as those that have average holding periods between two to five days; and ultra-high frequency HFs as those that have a maximum of a two day average holding period
- Quant funds trade across, but are not limited to, Equities, Futures, Foreign Exchange, Fixed Income and Commodities. They trade these assets directly or through indices, ETFs, mutual funds etc. Quant funds also have a global footprint with presence in US, European and Asian markets
- Quant funds use their Prime Brokers for financing, custody and clearing. However, leading Prime Brokers also offer their Quant clients customized execution and risk management services by providing them with OMS (order management systems) / EMS (execution management systems) and / or DMA (direct market access)
- Over the last five years, Quantitative HFs have exhibited a range of return profiles due to the diversity of strategies that Quant funds encompass. Furthermore, our estimates of Quant HF AUM show a 304% increase in the assets managed by Quantitative firms from 2000 through the third quarter of 2010
- There are six key ways in which the Quant HF landscape has evolved over the last three years – the commoditization of technology; the increased search for new data; the increased incorporation of behavioral finance; the shift towards higher frequency

[1] The results presented are from a relatively small number of respondents and therefore are indicative only and not meant to reflect conclusive industry trends. Data and other information are derived directly from respondents, and we do not pass on the accuracy of such information
[2] Fund of Hedge Funds

trading; the increased diversification across funds in the space; and the emergence of a more knowledgeable and sophisticated Investor base

- Quant Managers believe that technology contributes to the Quant investment process in numerous ways, offering more than just the reduction of latency. Just like any other business, Quant HFs have evolved to utilize technology for increased business efficiency and to stay relevant to Investors
- For Quant funds, the research process is extremely significant and acts as a key differentiator among funds. Research is also closely integrated with technology and cutting edge sources of data – a combination of research, technology and data often provides firms with an 'edge' against peers
- Many believe that there is a 'capacity dilemma' for Quant funds, in which firms have to strike a fine balance between having enough scale and AUM to invest in a robust research process, but also be small and nimble enough to tactically take advantage of opportunities in the market. While this is true to some extent, the capacity of a Quant fund is really dependent on three key factors – the structure of the fund's staff, the frequency of trading that the fund undertakes and the markets (asset classes and geographies) in which the HF operates
- While the Dodd-Frank financial reform bill in the U.S. does not specifically address Quant funds, U.S. based Quant funds will be affected by the bill just like any other U.S. based HF. Partly in response to the 'Flash Crash' that occurred on May 6, 2010 in the U.S. equity markets, the SEC is also likely to target high frequency traders with new rules. In one of the most recent rules adopted in early November, the SEC has already limited 'naked access' to the securities markets
- The majority of the Investors surveyed (~75%) have less than 10% of their HF allocation invested in Quant funds, and ~70% plan to maintain this allocation for the next six months. Investors cited limited transparency, difficulty in communicating the strategy, Quant performance and / or the environment as key hurdles to investing in Quant funds

The Scope of Quantitative HFs

Quantitative strategies, also referred to as "systematic", "algorithmic" and "black box" strategies, are often misunderstood by the broader HF community. Therefore, our first task is to define exactly what a Quant fund is.

What are Quant strategies?

Quant funds are systematic, research driven firms

The definition of Quantitative strategies is broad – not limited to any particular investment thesis, asset class or geography. Rather, what differentiates a Quant fund from any other HF is the approach and process that Quant funds follow to identify trades. A Quant fund pursues alpha through a systematically implemented investment strategy that is heavily reliant on a robust research process. There are two key words in this statement that are particularly significant to Quant funds – "systematic" and "research."

Quant funds adopt a systematic approach to developing an investment thesis and ultimately executing trades. This is done through the development of programs, microstructures and models. In his book titled Inside the Black Box, author Rishi Narang (Founder and Portfolio Manager of Telesis Capital LLC), makes identifying a Quant fund extremely simple – "if both the questions of *what positions* to own and *how much* of each to own are usually answered systematically, that's a Quant. If either one is answered by a human as standard operating procedure, that's not a Quant." However, Narang also emphasizes that "Quants are not robots." While it is true that Quant investment strategies are conceived and implemented through systematic models with very little (if any) discretionary intervention, the production of these models is carried out by an exhaustive research process put in place by humans.

The reason why Quant funds must always maintain a robust research process is because in order to make a model or a computer implement a strategy, the developer must set highly detailed guidelines down to the precision of each and every word for everything from assumptions to risk guidelines. Quant funds have to formulate every part of their strategy in a very detailed manner – Quantitative models are merely tools, and are useless without precise instruction.

What is the relevance of frequency of trading for Quant funds?

The Quant space encompasses low to ultra-high frequency HFs

HFs in the Quant space range from low frequency to ultra-high frequency firms. Low frequency Quant funds have longer average holding periods which we define as lasting greater than a month. These funds also often utilize fundamental analysis to a greater degree, and trade based on factor models with themes such as value, growth, momentum and earnings quality. High frequency Quant funds have average holding periods which can last from two to five days. Ultra-high frequency funds on the other hand, have a maximum of a two day horizon with their trades. Many high frequency funds employ a mean-reversion-based statistical arbitrage strategy with technical inputs such as price, volume, liquidity, depth of market, etc. Many market neutral strategies also rely on Quant trading. While it is ultra-high frequency traders that usually make the headlines in the media, these traders only represent a sub-segment of the Quant world.

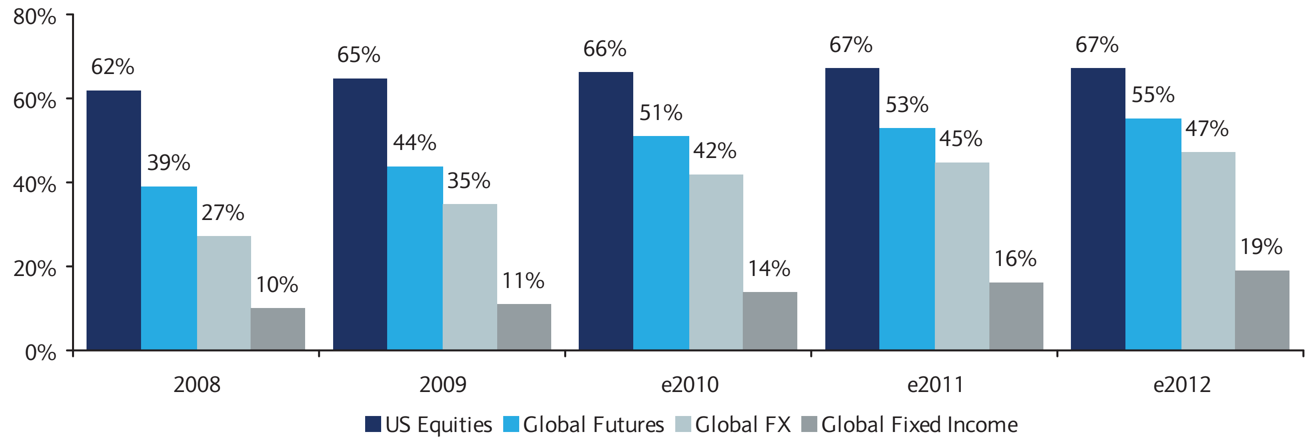
What are the markets that Quant funds trade in?

Prominent markets for Quant funds are Equities, Futures, FX and Fixed Income

Quant funds apply their systematic approach to a variety of markets and strategies. As Figure 1 depicts, the domain of Quant funds is spread across (but not limited to) Equities, Futures, Foreign Exchange (FX), Fixed Income, Options and Indices / Mutual Funds. Figure 1 displays the share of trading volume that high frequency trading represents in each market. However, it is important to keep in mind that this chart displays only the market share for high frequency trading, which is a subset of Quantitative trading. Quant funds are also extremely prominent in the CTA[3] market. The Barclay Group estimates that over 85% of the AUM across all CTAs is managed by Quantitative trading firms[4].

[3] Commodity Trading Advisor
[4] Inside the Black Box by Rishi Narang

Figure 1: High Frequency Trading – Historical and Projected Share of Trading Volume



Source: Aite Report, "Commoditizing Low Latency Trading: Managed Services Makes a Splash", October 2010

The global trading volume share of quantitative traders is increasing

Figure 2 displays the market share that high frequency trading represents across regions. Here again, it is important to keep in mind that this only represents one subset of the Quant fund universe, and not all Quant trading. The share of Quant funds, therefore, is likely to be higher. The chart below not only shows the growing importance of Quant funds across global markets, but also how crucial the strategy is to the functioning of global markets as a provider of liquidity.

Figure 2: High Frequency Trading – Geographic Share of Trading Volume

Geographic Market Representation	
Geography / Market	**Percent of Trading Volume from High Frequency Trading**
US Equities	~66%
Europe Equities	~35% and growing fast
US Futures	~35-40%
Europe Futures	~30-40%
Canada Equities	~25-30% and growing fast
US Options	~10-20% and growing
Brazil	~5-10% and growing
Foreign Exchange	~10% or less
Asian Equities	~5-10% and growing slowly

Source: Rosenblatt Securities – via a TABB Group webinar (April 2010)

What are some critical services Prime Brokers offer Quant funds?

PBs provide execution and risk management, financing solutions, custody and clearing

Just like any other type of HF, Quant funds utilize their Prime Brokers (PBs) for various services e.g., financing, custody and clearing. However, there are certain services provided by PBs that are tailored towards Quant funds, due to the systematic way in which Quant funds function. These services broadly fall into the category of execution and risk management.

PBs can provide Quant funds with an OMS (order management system) / EMS (execution management system) or DMA[5] (direct market access) for executing and managing orders. This essentially takes the HF's orders, and routes them to various liquidity centers including exchanges and dark pools[6]. PBs sometimes incorporate functionalities such as:

- Smart routing, where execution metrics such as the cost of liquidity, latency and fill rate are selected and customized to the fund
- Risk monitoring, where the PB provides real-time surveillance of the risk parameters that are necessary for executing the strategy. For example, sector concentration, the liquidity profile, and the market neutrality of the executed positions and un-executed orders (since orders are seldom executed at once, rather, they are 'worked' over a period of time) are actively managed
- Algorithmic strategies, where PBs provide Quant HFs with the option to utilize algorithms to execute orders. An example of a plain vanilla algorithmic strategy used to work an order over a period of time is VWAP (volume weighted average price). Not all Quant funds will utilize such functions because many will already have these algorithms built into their own strategy
- Cross margining or netting agreements, where the PB offers the client the ability to cross margin across asset classes and regions
- Global connectivity, where the PB is able to provide access across multiple markets, asset classes and geographies

PBs offer services such as colocation, a low latency FIX gateway and sponsored access to latency sensitive clients

Many sophisticated Quant funds access the market through DMA. FIX (financial information exchange) is a globally accepted protocol among exchanges, algorithmic providers and market data feeds to facilitate DMA. Quant funds, especially those applying ultra-high frequency strategies, are latency sensitive. Latency is defined as the amount of time it takes for a message to travel from one server to another. Therefore, PBs provide colocation, a low latency FIX gateway and sponsored access as methods to reduce overall latency. In colocation, the client's trading server is placed in an exchange or data center to reduce the distance the trade has to travel. Sponsored access, with exchange provided pre-trade controls, is when clients are able to connect directly to exchange matching engines. There are three components to latency – propagation / network latency, processing latency and exchange latency:

- Propagation / network latency is the delay incurred when FIX messages pass through network infrastructure such as cables and switches. Colocation is a way to reduce propagation latency
- Processing latency is the delay associated with risk and compliance checks that PBs have to conduct on each client order before sending it to an exchange. Some PBs have invested resources to have systems with very low processing latency measured in microseconds. Sponsored access is also a way to reduce processing latency
- Exchange latency is caused by the exchange's processing of orders, and is a common exposure for all clients

[5] DMA is when the client connects directly to the exchange via standardized or native messaging protocol, e.g., FIX
[6] A dark pool is a liquidity venue which does not display the order book like an exchange does; rather, buyers and sellers interact 'silently' without exposing their trading intentions

Quantitative HF Performance and AUM

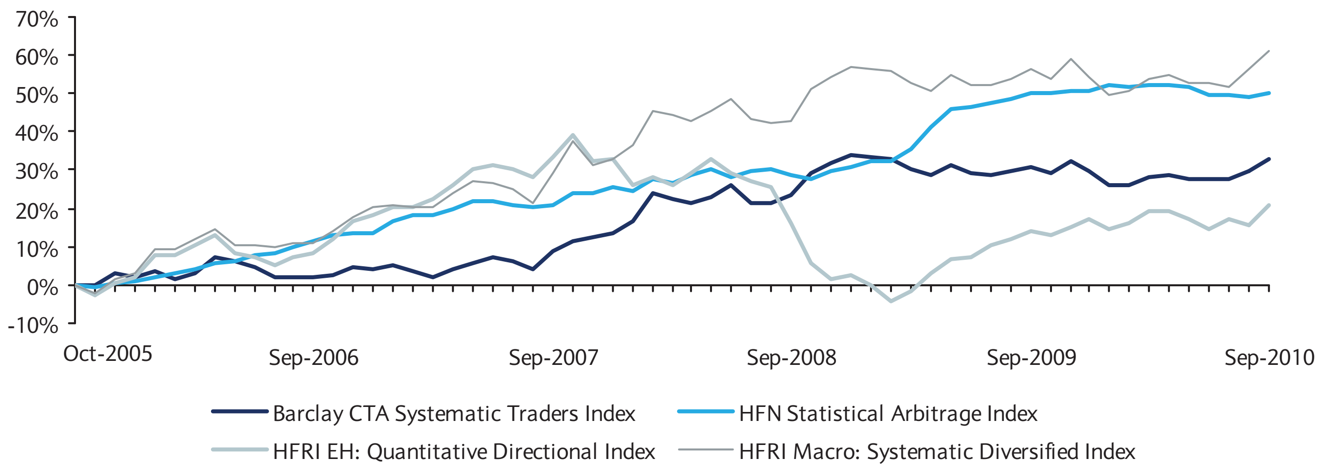
With the realm of Quantitative strategies spanning across numerous markets, geographies and asset classes, analyzing performance and AUM is a difficult task. Therefore, while there is no uniform index which tracks Quant funds' performance and AUM, below we present data from a combination of sources which provides directional estimates for the group.

Performance

Quant HFs deliver a range of return profiles, depending on the investment strategy

Figure 3 illustrates the cumulative performance over the past five years of various Quant-based investment strategies. While no single HF index encompasses all types of Quant Managers, the four shown here describe important parts of the Quantitative universe: the Barclay CTA Systematic Traders Index, the HedgeFund.net (HFN) Statistical Arbitrage Index, the HFRI Equity Hedge: Quant Directional Index, and the HFRI Macro: Systematic Diversified Index.

Figure 3: Cumulative Performance of Quantitative Based Investment Strategies (October 2005 – September 2010)[7]



Source: Hedge Fund Research, The Barclay Group, HedgeFund.Net

As noted earlier, Quant funds pursue a range of investing strategies, so it is not surprising to see that they also exhibit a range of return profiles. The HFRI Macro: Systematic Diversified Index fared best over the five years, amassing a cumulative return of 60.9% (10.0% annualized), followed by the HFN Statistical Arbitrage Index with 50.4% (8.5% annualized) and the Barclay CTA Systematic Traders Index with 33.1% (5.9% annualized). With a cumulative return of 21.1% (3.9% annualized), the HFRI Equity Hedge: Quantitative Directional Index was the only one of the four Quant strategy indices to lag the overall HF industry, as reflected by the HFRI Fund Weighted Composite Index, which generated a 28.8% gain (5.2% annualized) over the period. The S&P 500 returned a cumulative 3.2% over the same time period (0.6% annualized). A point worth noting from the graph above is that the changing market environment in 2007 and 2008 heavily affected the Quantitative Equity traders as can be seen from the HFRI Equity Hedge: Quantitative Directional Index. The three other Quantitative strategies illustrated proved to be strong performers through the meltdowns of 2007 and 2008.

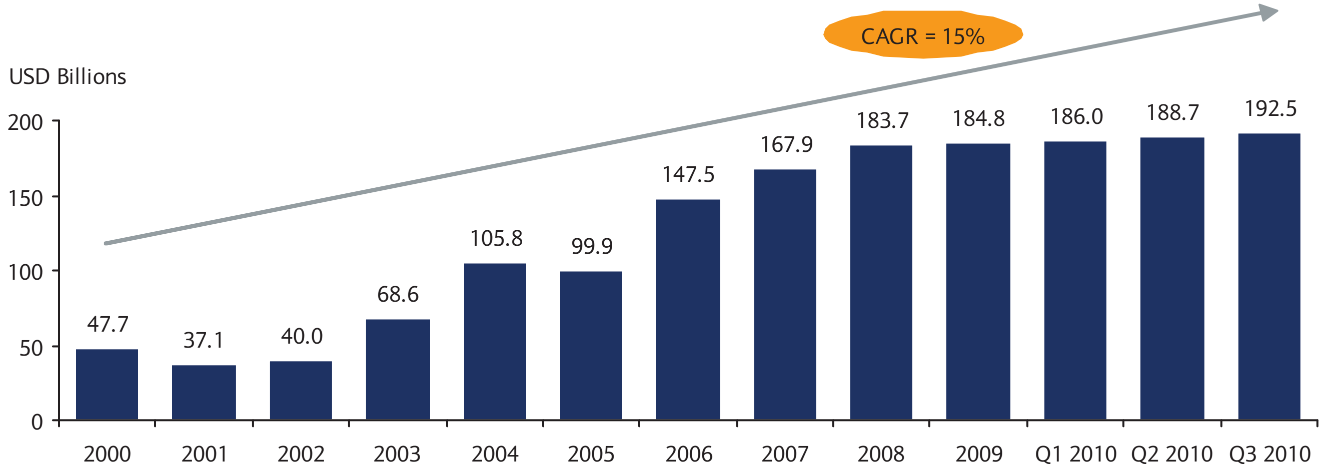
[7] Any data on past performance, modeling or back-testing contained herein is no indication as to future performance

Assets Under Management

Quant HF AUM has increased by an estimated 304% between 2000 and Q3 2010

Figure 4 illustrates the growth of the Quant universe from 2000 until now. The data reflects estimated AUM as of the end of each year or quarter shown, and is based on a combination of figures reported by Hedge Fund Research and The Barclay Group. With the exceptions of 2001 and 2005, Quant funds have added assets every year over the past decade, growing from $47.7bn at the end of 2000 to $192.5bn at the end of Q3 2010, an increase of 304%. In comparison, estimated AUM for the overall HF universe, as reported by Hedge Fund Research, increased just 261% over the same period.

Figure 4: Quantitative Strategies Assets Under Management (2000 – Q3 2010)



Source: Hedge Fund Research, The Barclay Group, Barclays Capital Strategic Consulting Analysis

How Have Quantitative HFs Evolved in the Last Three Years?

"It is the end of the age of innocence for Quant strategies"
Quant Manager

In the last three years, the Quantitative HF landscape has truly experienced a transformation. From the great Quant meltdown in August 2007, to massive redemptions in 2008, to a painful recovery in 2009, a new generation of Quant funds are now positioned to actively raise assets and re-brand their reputation. There are six key ways in which the Quant landscape has evolved over the last three years:

- Commoditization of technology
  - The technology related barriers to entry to a number of quantitative strategies that trade liquid instruments have never been lower. In other words, if one wanted to start a HF focused on systematic multi-day equity trading strategy today, the related technology and tools are more easily available than ever before. A Manager would not have to build these tools from scratch unlike in the past
- Increased pressure to find new data
  - Quant Managers are searching for more specialized and more proprietary sources of data. It could be argued that those HFs that have access to these sources of data have a more sustainable 'information edge' over competitors who are leveraging more generic types of data. However, there is a thin line that divides what is a legal

and legitimate use of proprietary data and what is not, as demonstrated by recent SEC actions against some HFs

- Increased incorporation of behavioral finance into models
  - There has been a shift with an increasing number of Quant Managers incorporating principles of behavioral finance into models. Due to the events of 2007 and 2008, Managers have become increasingly mindful of what they perceive as 'hidden assumptions' embedded in models that assume rational markets and informational efficiency
- Shift towards higher frequency trading
  - With massive data inflows and optimized execution capabilities, many Quant funds have transitioned from low frequency to high frequency trading. This is evident from the graphs earlier in this piece that show how the share of high frequency trading has grown substantially in recent years. This is driven partly by the events of 2007 which negatively impacted those Quant funds that held similar positions with longer-term trading horizons, as they faced Investor redemptions and decreased liquidity
- Greater diversification among Quant funds
  - The Quant crunch of 2007 shed light on the homogeneity and overcrowding of trade ideas that existed within the Quant community. It highlighted the fact that Quant funds needed to take into account the actions of other players in a detailed way, and incorporate these in their models. Additionally, Quant funds now have access to a greater number of markets, in turn diversifying their portfolios
- Emergence of a more knowledgeable and sophisticated Investor base
  - With the redemption of much of the hot money that had flowed into the space in 2006 and 2007, the Quant Investor base as it stands today is considerably more mature. Investors are now seeking increased transparency on the investment process at Quant funds. They also want to understand better what differentiates one fund from another, the inherent risks associated with models, and the risks in the external environment that might influence the performance of the strategy. There is a clear demand to see that the Manager has thought through the interaction of all of these moving parts, and incorporated the implications into their investment process. On the other hand, Quant Managers are still hesitant to give Investors (especially potential Investors) access to their models and processes. This continues to be a point of negotiation for Investors and Managers

Manager Views on Technology, Research and Capacity

There are three factors that are considered critical to the success of Quant HFs – technology, research and capacity. Below we discuss why these three factors are of such significance to Quant HFs. We also share the views of our Quant Manager panelists.

Technology

Technology touches the Quant investment process in numerous ways, beyond just execution

There is a perception that for Quant funds, "success is about reducing latency," and that having the fastest, most powerful computer available will provide the ultimate edge. We asked our panelists at the Barclays Capital HF Symposium in New York and our Quant event in London to share their views on this subject.

- *"There is absolutely no difference between the use of technology in the Quant space versus any other industry. Automobile makers have also had to constantly evolve over time to be ahead of their competitors. Quants are doing the same thing, just at a different level. Technology does require a huge level of investment, but it is the same investment that would have been made ten years ago in hiring people"*
- *"Technology touches the Quant investment process in numerous ways, many of which are more important than pure speed considerations. For example, technology creates a platform to enhance research capabilities, that goes far above and beyond its application to pure latency gains"*
- *"The focus on the latency issue and various technology issues in some sense presupposes that one's trades have no intrinsic alpha. Our focus is yes, to make sure we have very competitive systems, in terms of research capabilities and data systems. But the most important thing is that when you trade, you trade because of alpha"*

Research

Research is a Quant fund's bread and butter, as well as a key differentiator from other funds

Quant funds live and breathe research, and many argue that it is the research process that differentiates one Quant fund from another. We present Manager views from the Barclays Capital Quant panels below on how they view the research process within their own firms.

- *"An ongoing research process is absolutely key to keeping one's edge in the business. The ideas that go into the research process, whether they are generated from academia or from acquiring new proprietary expensive data sets, are particularly valuable. You have to have a real commitment to honouring the independence of individual researchers in order to ensure that you don't miss out on opportunities, and eke out the most out of every new data set and data source that is available"*
- *"As a Quant fund, you are always looking to evolve, rebound, innovate and reinvent in a constantly changing world. This means having a heavy research effort and keeping smart people at the company for as long as possible. It is about the company culture - we try to foster cross-fertilization of ideas across different asset classes, and research groups. If one person or group has a good idea, we share it internally"*
- *"I believe that the optimal research set-up for a Quantitative fund consists of small collaborative teams led by relatively experienced researchers / traders. I believe it works best when these researchers have full responsibility and ownership for the end-to-end process of their particular strategies, rather than de-coupling or separating out components of the investment process and handing responsibility for each of these to different teams"*
- *"We all recognize that it is important to dedicate a lot of effort to research. It's the nature of this style of investing that you continually have to plough back in and improve your process and find new ideas in order to maintain that edge. How people do that varies tremendously across firms"*

Capacity

The organization structure, frequency of trading and markets of operation determine the optimal capacity of a Quant fund

The issue of capacity is often brought up by Investors in the Quant world. Research and development, essential elements for the success of a Quant HF, require scale as well as AUM. However, some believe that if a fund gets too big, it loses its nimbleness and ability to trade tactically. We asked our panelists to address this perceived trade-off, and how they view the capacity issue of a Quant fund.

- *"People have solved this dichotomy in different ways. Some people have solved it by running significant proprietary operations alongside their research, which ensures that they have more than enough income to support other strategies. Others have solved it by running very large capacity and lower sharpe ratio strategies to pay the bills and support their higher sharpe ratio and limited capacity strategies"*
- *"Capacity is less of an alpha issue and more of a business issue. It is about how to manage research teams and the best way of organizing them. For example, if one has a very large organization in order to manage a large AUM base, it could be very hard for senior people to have a good understanding of what is going on within the firm"*
- *"It depends on the market you operate in and the instruments that you use to express your views. In a deep market like FX, capacity is usually not an issue. For a program that trades G7 currencies, it could manage billions of dollars, which would still be a small percent of daily turnover. However, for emerging currencies and high frequency programs, capacity is more constrained. Being original and diversified across different currencies, drivers and time horizons helps you to avoid overcrowded positions"*

High frequency strategies face greater capacity constraints than lower frequency strategies. Higher frequency strategies often cannot accommodate large investments, because they take advantage of numerous small opportunities in the marketplace, rather than making sizable, long-term investments. These funds are also extremely cautious when taking large positions that might move the market, as this could potentially expose their positions and 'secret sauce'. If a fund is diversified across ideas, markets, alpha drivers and time horizons, there is less of a reason why capacity would be an issue. In summary, there are three main drivers of determining the capacity in a Quant fund: 1) the structure of the organization, 2) the frequency of trading, and 3) the markets of operation.

Potential Impact of Regulation on Quantitative HFs

Impending regulation in the U.S. brings with it challenges as well as opportunities

While Dodd-Frank[8] does not directly address Quant HFs, it has many indirect implications that will affect all HFs. For example, the bill will widely affect the Broker Dealer community upon which Quant funds, like all other HFs, rely. The bill is also likely to affect HFs by requiring registration of many Managers, creating additional reporting obligations and compliance burdens, and possibly increased transactional costs for HFs (e.g., exchange fees for swaps). The Volcker rule will also have an indirect impact on Quant funds. With proprietary trading desks being dissolved at some Banks, there is likely to be a reduction in liquidity in the marketplace. This is likely to impact Quant funds in a significant way, especially high frequency Quant funds. Another likely side effect is increased competition for Quant funds as prop traders exit banks and create their own HFs.

[8] The Dodd-Frank Wall Street Reform and Consumer Protection Act

There are also some potential opportunities that will be created. For example, while the Volcker rule may decrease liquidity in the market, the exit of proprietary traders at banks is similarly likely to reduce the crowding of sources of alpha and competition for trades that Quant funds often face. In addition, regulation such as more of the OTC market becoming exchange traded will have positive side effects. It will essentially expand the range of markets in which Quant funds can operate. From the perspective of a Quant Manager – the more asset classes that can be traded using their tools, the better.

The Flash Crash in May has caused regulators to turn their attention to high frequency traders

The SEC is also likely to step outside of Dodd-Frank and implement regulation that will directly address Quant funds, primarily in response to the 'Flash Crash' that occurred in May of 2010. On May 6th, 2010, the Dow Jones Industrial Index fell 600 points in less than six minutes, and then recovered in an event now known as 'The Flash Crash'. The SEC and CFTC recently issued a joint report on the incident.

The events of May 6th have caused regulators to look more closely at the activity of high frequency traders. Mary Schapiro, Chairman of the SEC, recently appeared on '60 Minutes' to speak about the 'Flash Crash' and the impact on high frequency traders. One of the activities of high frequency traders that is under scrutiny is known as 'quote stuffing'. Quote stuffing refers to placing and then immediately cancelling large numbers of trading orders, in turn overwhelming the market and trading systems. Regulators dealing with this issue may look to enforce rules such as putting a limit on the number of cancellations a day, or a minimum time period for which a buy or sell order would have to remain valid.

The SEC is now targeting naked sponsored access to markets

In the first week of November, the SEC also voted to bar Broker Dealers from allowing high frequency traders unfiltered access to exchanges, in turn trying to protect the markets from 'bad trade' disruptions. 'Naked Access' essentially allows traders to buy / sell stocks on an exchange using their Broker Dealer's computer code. It does not require them to go through any pre-trade checks or approvals.

Many Quant Managers view impending regulation with optimism

Managers from our Quant panels are much more optimistic about looming regulation than we had expected. Perhaps this is part of the DNA of Quant traders – every change only brings opportunity to exploit different areas of the market. Below are views of our Quant panelists on the impending regulation.

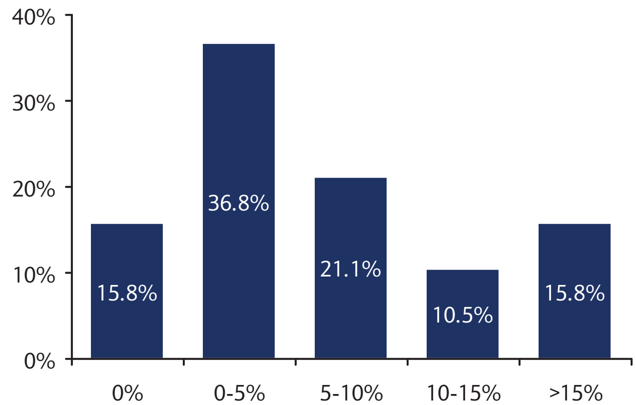
- *"It is really important to have multiple strategies or multiple models so that you don't depend on just any one thing. You need to have models that adapt, or facilitate shifting your money to other strategies if regulatory changes make some of them unprofitable"*
- *"My business perspective is that we should openly embrace new regulation – we are eager for regulation because while it may shut down one set of opportunities, it will open up something completely different"*
- *"I think regulators are pragmatic and sensible. From a business point of view, we need to be pragmatic as well. We need to try and create a lot of diversified strategies with different time scales and models so that you are not hit by any one restriction"*

Investor Views on Investing in Quantitative HFs

We surveyed Investors to ascertain their current and target allocations to different HF strategies. In order to capture a holistic view of Investor sentiment, our survey included a variety of Investor types.

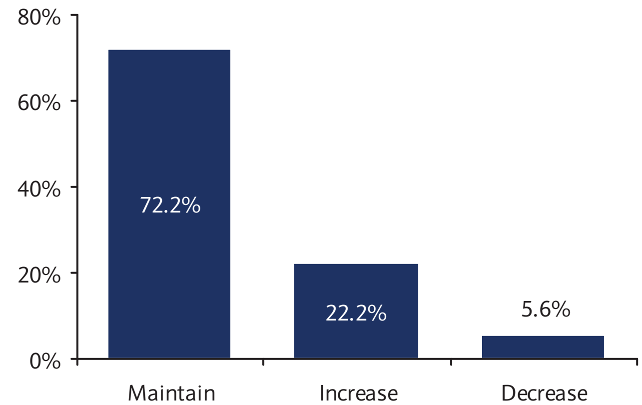
- Figure 5 displays Investor HF allocations to Quant strategies. Over half of the Investors surveyed have less than 5% of their HF portfolios allocated to Quant funds
- Figure 6 shows that roughly 70% of Investors intend to maintain their allocation to Quant strategies in the next six months. Only about 6% of Investors plan on reducing their allocation to Quant funds in the same time period

Figure 5: Current Investor Allocation to Quant Strategies



Source: Barclays Capital Strategic Consulting Survey Results

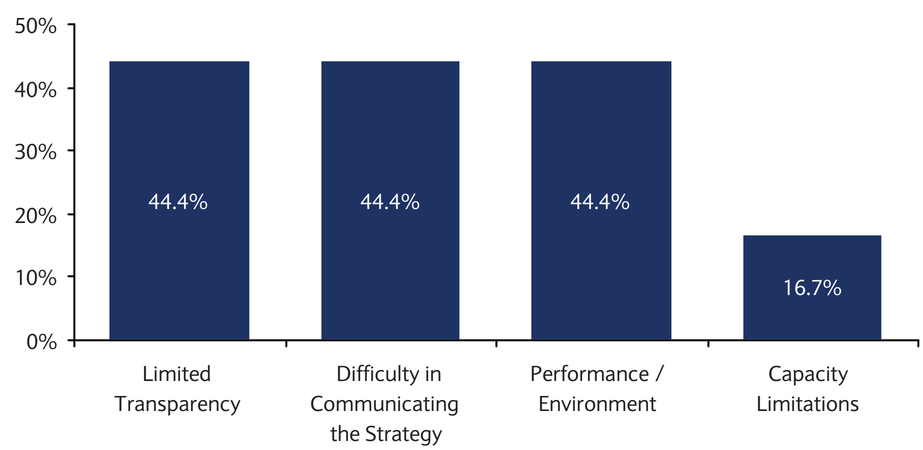
Figure 6: Investor Plans for Quant in the Next Six Months



Source: Barclays Capital Strategic Consulting Survey Results

- Figure 7 illustrates the key hurdles Investors face when investing in Quant HFs. Limited transparency, difficulty in communicating the strategy and performance / environment are all equal determinants in preventing Investors from investing in Quant funds

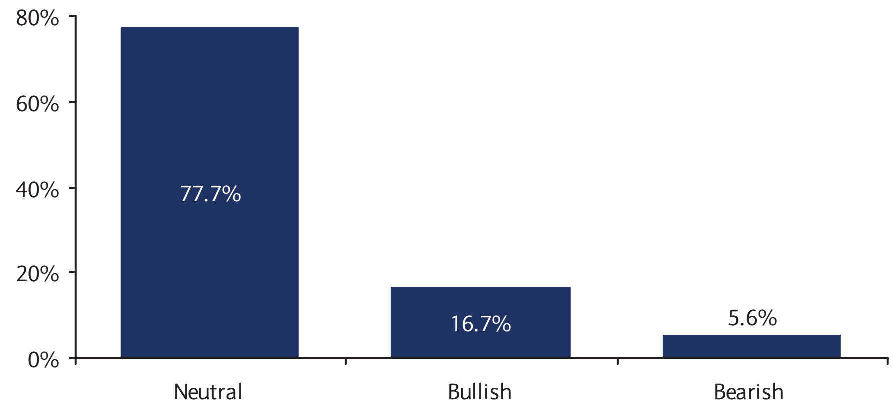
Figure 7: Key Hurdles to Investing in Quant HFs



Source: Barclays Capital Strategic Consulting Survey Results

- Figure 8 shows that approximately 80% of Investors have a neutral outlook on Quant funds for 2011. This is also largely in line with one of the findings above that roughly 70% of Investors plan to maintain their allocation to the strategy in the coming months

Figure 8: Investor Outlook on Quant for 2011



Source: Barclays Capital Strategic Consulting Survey Results

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