The Evolution of Fund of Hedge Funds

Adapting Business Models: Access to Customization

The Understanding Allocators Series

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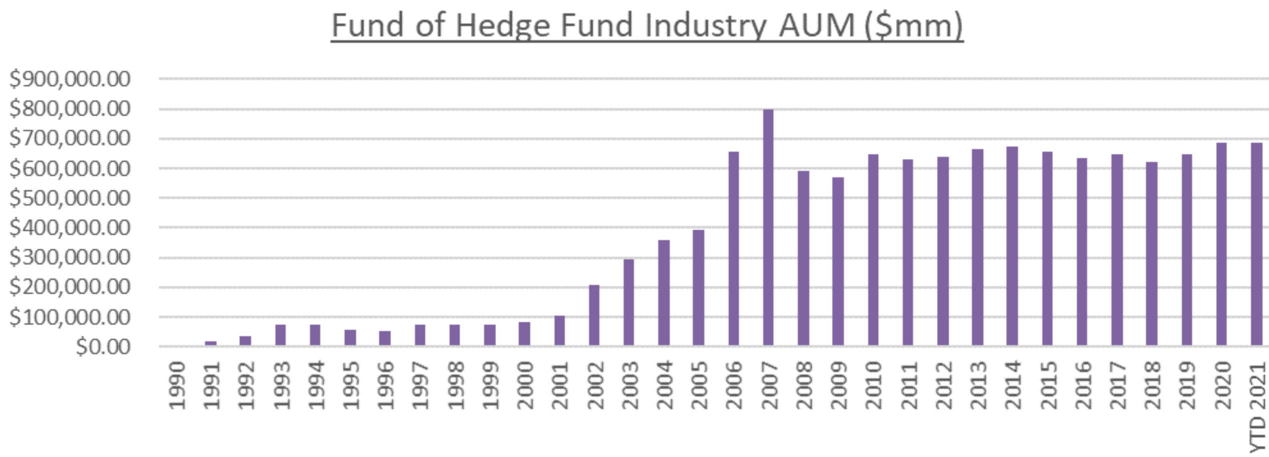
Jefferies

The Evolution of Fund of Hedge Funds

Fund of Hedge Funds (“FoHF”) witnessed exponential growth from $1.9bn in 80 products in 1990 to $800bn across 2,500 products nearly two decades later. Following a precipitous decline post the GFC, FoHF assets have been surprisingly resilient and continue to hover near all-time highs.

Headlines claim the fund of hedge fund allocator segment has been in steady decline. Negative sentiment stems from muted hedge fund performance in the late 2010s, a perceived double layer of fees, and a 10-year period of consolidation post Global Financial Crisis (GFC). In reality, there has been a metamorphosis and stabilization of the fund of hedge fund industry – and it is in fact as strong as it’s been in years.



Jefferies believes that the FoHF channel will continue to be a source of capital for established hedge fund allocations and many times will act as an anchor investment that puts a hedge fund into business. Given the evolution of the FoHF business model, **intermediaries are an important allocator vertical managers should consider exploring.** Hedge funds will recognize the value of partnerships with FoHFs while allocators will better understand where they fit into the new ecosystem that has enhanced traditional fund of hedge fund offerings.

Many managers have shied away from engaging with fund of hedge funds due to concerns around business stability or perceptions about “fast money”. While Jefferies sees the benefit in partnering with a diverse array of allocators, *The Evolution of Fund of Hedge Funds* explores the stabilization of the FoHF vertical, the changing and variant business models, and the value of partnering with FoHFs.

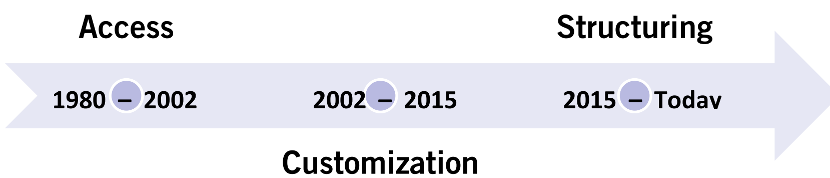
Jefferies interviewed over 50 fund of hedge funds to better understand the evolution of this allocator vertical. About 55% of the respondents are larger blue-chip fund of hedge fund managers that launched before 2003 and the other 45% are smaller, newer, and more niche FoHFs that generally launched after 2003. Fund of hedge funds interviewed ranged from $100mm to $80bn in AUM, but the median respondent size was about $1.6bn.[1] Similarly, ticket sizes ranged from $1mm to $250mm but the median respondent size was about $30mm.[2]

The Evolution of Fund of Hedge Funds builds on *Don't Call It A Comeback*, where we explored fund of hedge fund flows over time and the critical role FoHFs play in the alternatives ecosystem, and encourages managers to engage with FoHFs and further the partnership between these two entities. In addition, this piece will offer valuable insights for allocators to better understand how FoHF businesses have evolved and help guide other FoHFs in where each business can fit within the ecosystem.

A Short History on Fund of Hedge Funds

Three Fund of Fund Eras – Access, Customization, and Structuring

While it is unclear exactly when the first fund of hedge fund launched, most believe it was in the 1970's after there was an increase in hedge fund offerings from the 1950's-1980's. **Since then, there have been three primary eras of the fund of hedge fund business model including: access, customization, and structuring.**



Access

There were only a handful of direct hedge fund investments to be made by FoHFs in the 1980s and 1990s; as such, **FoHFs were primarily used as access vehicles** to underlying investors that could not source hedge fund investments on their own.

Throughout the 1990s, markets became more efficient, and hedge fund manager, stock selection, and trade structuring became more challenging. As more FoHFs came to market, FoHFs needed to demonstrate expertise in manager selection. As more hedge fund products came to market, it was important to select institutional groups with unique and repeatable strategies.

Institutions had more strategies to choose from in order to meet their investment objectives. While many FoHFs still targeted investment objectives that were equity like returns with 1/3 of the volatility, others started to create products that targeted lower volatility and acted as a fixed income alternative replacement. While the former typically targeted family offices and new entrants in the alternatives space, the latter started to target more institutional endowments, foundations and pensions that needed more consistent returns in addition to diversification benefits. Those underlying LPs were more risk aware and needed to achieve target returns of 5% + inflation but could no longer achieve that with a traditional 60/40 portfolio. For those institutions that did not have the resources internally, FoHFs provided a liquid way to achieve that return target with hopefully lower volatility.

Customization

Throughout the 2000s, a number of FoHFs shut down due to redemption needs of their underlying clients, poor performance and other factors. Even if performance was strong, many believed LPs were using FoHF as a liquidity provider to meet cash obligations (sometimes referred to as "the ATM effect").

In the period following the GFC, there was over $227bn in AUM lost from FoHFs and 300 products shut down; the fund of hedge fund business model changed. Those that did not adapt their business models wound down or sold. Those that survived emerged stronger than ever with stable capital bases. Many fund of hedge funds started to offer **bespoke mandates and customized solutions to absolute return portfolios and diversifications needs,** which led to stronger performance and more developed business models focused on partnerships that harness hedge fund expertise and manager selection.

Structure

Today, it is not enough for FoHFs to simply be good hedge fund selectors. Fund of hedge funds had to become more sophisticated alternatives providers, creating all weather vehicles emphasizing capital allocation and overall structuring, which helped transform traditional fund FoHFs into multi-strategy products with hedge fund and alternatives expertise. As such, we have entered a new era for fund of funds where **structure in conjunction with hedge fund expertise will morph the industry into what it can become.**

Investment Objectives

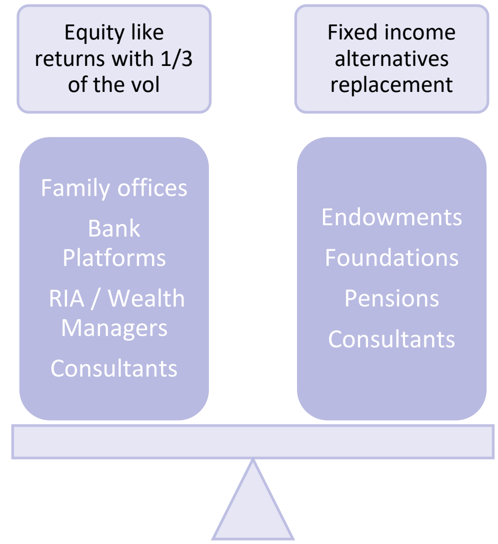
Why were fund of hedge funds created?

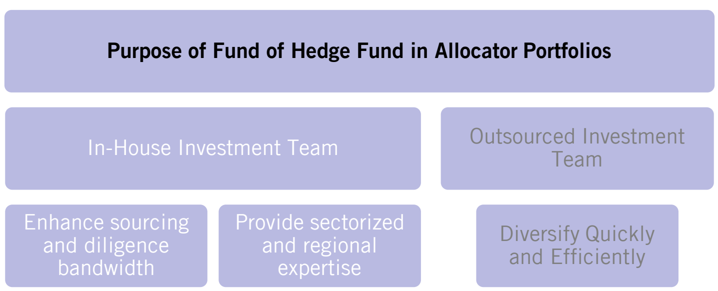
Fund of hedge funds come in all different strategies and packages, and have a variety of underlying clients, but even with customized mandates, most target one of two investment objectives:

1. Equity like returns: 1/3 of the vol (10 - 15% return with 8 - 12% vol)

2. Fixed income alternatives replacements: 6-8% return with a 4% vol

The fund of hedge funds that have survived and been successful are those that have achieved one of those two risk adjusted returns profiles throughout a number of cycles. In our studies, most of the underlying investors in FoHF that are family offices and RIAs target the equity like returning fund of funds while the endowments, foundations and pensions tend to target the fixed income alternative replacement category.[3]





Funds of hedge funds serve a number of objectives for different types of allocators. For those with in-house investment professionals, they can enhance and expand sourcing and diligence efforts, or provide sub-sectorized or regionalized expertise that require more bandwidth (ex. Biotechnology or Asia and Emerging Markets). If there is not a dedicated alternatives investment team, these products can be a very good way to diversify exposure quickly and efficiently.

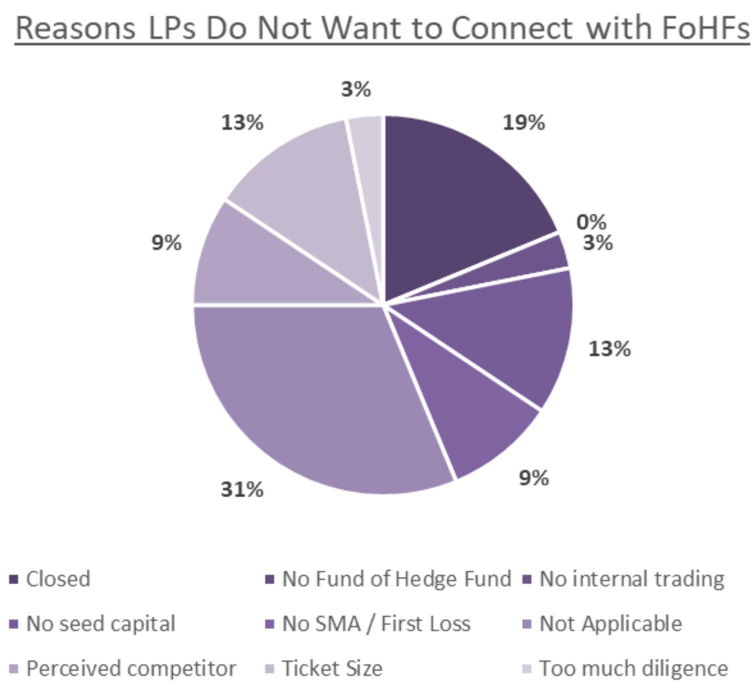
In some cases, the cost of sourcing, diligencing and allocating to a fund of hedge fund might may outweigh the costs associated with hiring an investment team for any investor vertical. Private wealth channels that have clients with smaller ticket sizes and overall AUM will offer fund of funds for "free" to their clients as a tradeoff for fees paid. However, many FoHFs noted that the barrier to the product on a private wealth platform is even higher as many have their own internal funds that could compete with the external FoHF product. Determining whether a fund of hedge fund product could fit within a private wealth channel is dependent on a client's ticket sizes and minimums.

Manager Research Process

How do fund of hedge funds source managers and what does their investment process look like?

Like most allocators, FoHFs must source managers and complete investment due diligence (IDD) and operational due diligence (ODD) before an investment is made. However, manager research teams within FoHFs see more hedge fund flow than the average allocator given their product focus – all they do is assess hedge funds.

Managers are sourced from a variety of different avenues including personal or firm relationships, capital introductions teams, other investors, and conferences, among other channels. Today, most fund of hedge funds have about 25 to 30 managers in any given portfolio (down from 50+ manager relationships).[4] While portfolio construction has concentrated, average annual turnover has remained fairly consistent around 15%.[5] Some fund of funds only turned over their portfolio 5% a year and others were north of 35%.[6]

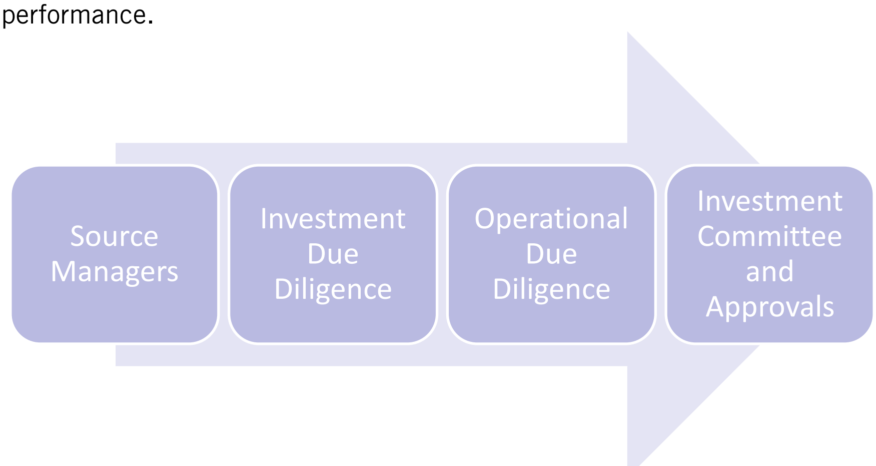


While sourcing is rarely an issue, almost all FoHFs interviewed have experienced situations where a manager does not want to connect with the firm. Almost 27% of fund of hedge funds noted that hedge funds did not want to engage with them because they were a FoHF.[7]

Given the need for monitoring investments and natural turnover in portfolios, manager diligence is constant and investment professionals are always on the hunt for new funds and interesting opportunities. Initial steps include strategy review and engagement with the manager to understand the investment and risk management processes.

Regardless of new launch or established hedge funds, when assessing managers, the investment due diligence team noted that they look for portfolio manager with "entrepreneurial spirit, business acumen, and an understanding of the portfolio manager and the culture of the firm."

While strategy matters, the qualitative metrics of assessing a portfolio manager's integrity was more heavily weighted than the strategy itself.[8] Other FoHFs noted the importance of returns, pedigree and the differentiation and drivers of returns. In addition, FoHF investment professionals noted that hedge fund fees are not as high on the priority list as they are for other allocators.[9] While FoHFs want to get the best deal they can (and tend to negotiate fees), most agree that net returns are what is important, citing a willingness to pay higher fees for stronger performance.



Operational Due Diligence (ODD)

There are two distinct processes that are part of manager approvals including the investment due diligence and operational due diligence. **80% of fund of funds interviewed have separate IDD and ODD teams and 10% of teams outsource their operational due diligence.** Over 50% of FoHFs have the IDD team start the diligence process and the involve the operational due diligence team once a path to funding is visible. **Only 20% of interviewees noted that operational due diligence occurs concurrently with investment due diligence.**[10]

Emerging Managers

Fund of hedge funds will always have an important place in the hedge fund allocator vertical, specifically in the new launch space. The ecosystem for investors who can put people in business have a spectrum ranging from incubator, new launch (seed), acceleration, and buyouts. The spectrum of emerging manager investors from incubators to accelerators and growth investors to more exit opportunity focused investors / buyout strategies. Separately managed accounts platforms have also been an active source of day 1 capital especially to liquid low net and lower volatility strategies.

Spotlight on Outsourcing

Many hedge funds will outsource certain non-investment functions including COO, CFO, trading, and compliance. Many of these hedge funds tend to be new launches that find it more cost effective and eventually bring those resources internally.

Most ODD teams accept outsourcing as long as it's with top service providers in that space. **60% of fund of funds were comfortable investing in managers that outsource a component of their business.** Most LPs have made or would make investments in a manager that outsources non-investment functions, but even those groups would want to see someone in house (COO or CFO) overseeing the functions or to see the path to internalization and want to understand that service provider is highest quality.

Exceptions were noted by fund of funds based on the strategy – for example, most fund of funds noted that outsourcing most functions for long short equity funds with buy and hold strategies were more acceptable as its operationally less intensive and cost effective, but for strategies that are more actively traded or trade a variety of securities, the trading function can become more part of the investment strategy.

Many FoHFs are focused on sourcing and diligencing emerging managers as many underlying clients do not have the breadth of knowledge or time to source new businesses. **About 70% of FoHFs invest in emerging managers**, which was defined as within the first year in business.[11] Most FoHFs that currently invest in emerging managers, have always invested in new businesses, but only a few of them more recently have emphasized it as selling point to the business model or engaged in seeding or acceleration deals. **Another 17% of respondents participate in seed funds or one-off selective seeding opportunities.** When assessing emerging managers, more emphasis is put on the investment strategy, process, and pedigree of the portfolio manager than the non-investment side of the business day 1.

Strategies and Product Lines

What do fund of hedge funds offer and how has that offering changing?

Now that we understand the investment objectives of fund of hedge funds and appreciate how fund of hedge funds source managers and construct their products, we will dive into how those goals are achieved and what products are currently offered.

The rise of customized and bespoke mandates led the way for fund of hedge funds to re-think their business models and develop new products and structures to enhance business models and diversify revenue streams. About 42% of fund of hedge funds interviewed have one primary product, but most firms had on average 3+ products.[12]

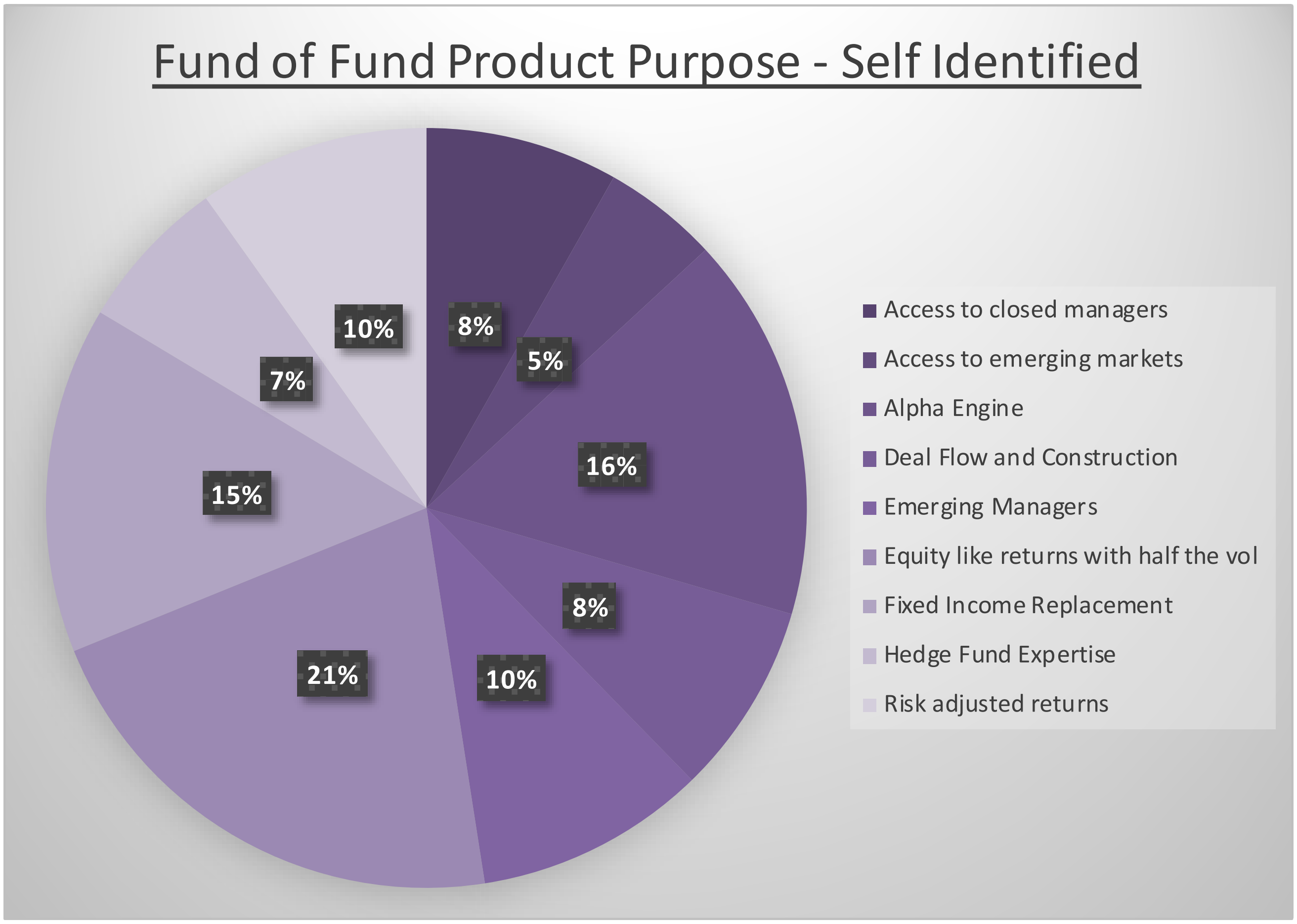
There are a handful of FoHFs that maintain the traditional fund of hedge fund business lines, but most have added advisory businesses. FoHFs have always been hedge fund experts and have adapted their product offerings as such. On average, 31% of capital managed by fund of funds is now from advisory or bespoke mandates.[13] That number is much higher in practice as many fund of funds offer customized or bespoke funds that are run close to pari-passu to its flagship commingled funds.

However, there is a trade-off FoHF businesses need to consider when opting for customization and multiple products over a couple of commingled products. Customization requires more operations and back office personnel but could lead to more clients and assets under management, but single product businesses can run leaner and require lower carrying cost to maintain. Many FoHFs noted that overly customized portfolios felt distracting to the business as the investment team would be trying to do too much and would be spread too thin. If the firm doesn't generate good performance and select funds recommended by the client, the fund of fund isn't working in the fiduciary best interest of the client, but without doing what the client wants, the client may redeem.

Business Model	Customization	Traditional
# of Products	Multiple Products	Single Product
Employee Needs	More Operations and Back Office and Potentially Manager Researchers	Leaner Team
Cost to Operate	Higher Carrying Costs	Lower Carrying Costs

Fund of hedge funds have launched a variety of products to leverage the extensive hedge fund knowledge and diversify their investable offerings – some products include best ideas funds, separately managed account (SMAs) platforms, co-investment vehicles as well as sectorized or regionalized fund of funds usually in the healthcare, technology, and Asia or Emerging Markets spaces. Some firms are flexing into more non-traditional hedge fund strategies on both sides of the liquidity spectrum. On the more liquid side, firms have explored 40 Acts fund of funds, UCITS products (if the LP has a large European client base), 13F systematic trading strategies, and hedge fund replication investable indices. On the more illiquid side, fund of hedge funds have raised blind pool equity vehicles, private credit, and drawdown / capital call structures.

There are a handful of fund of hedge funds that have launched internal portfolio manager teams and have constructed products around those portfolio managers (only 4% of those interviewed).[14] Many of those businesses are structured through separately managed accounts and tend to invest in lower net equity strategies.

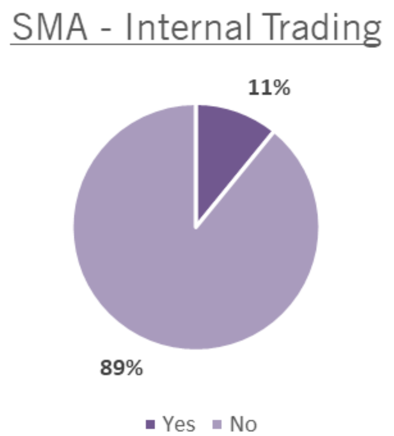


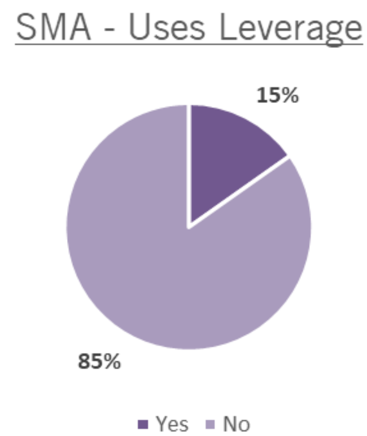
The rise of co-investments and SMAs

Two of the more common fund of hedge fund product offerings have been **the rise of SMAs and co-investments**. In different ways, **both products leverage hedge fund expertise but offer structural advantages that help to optimize fund of fund performance.**

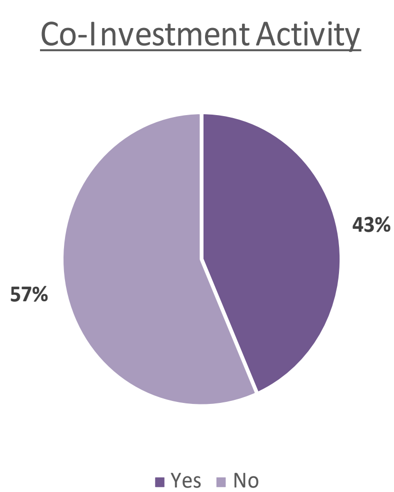
SMAs are structures that enable a portfolio of assets to be managed by another group; the structure has flexible investment choices and are held separate from commingled fund assets. Many fund of hedge funds invest in hedge fund managers through SMAs and their assets are held by the fund of fund but give trading discretion to the hedge fund. These structures create daily transparency for the fund of hedge fund and its underlying clients to better understand what they own on a daily basis, which allows the FoHF to optimize performance by trading around those positions internally or adding additional turns of leverage. While 90% of the FoHFs with SMA platforms have internal trading and hedging capabilities, only 11% can trade internally.[15] Some FoHFs will choose to add leverage on top of the invested capital or by levering up that capital before it is given to the manager in the hopes of increasing returns. Only about 15% of fund of hedge funds use additional turns of leverage[16], and when they do, it tends to be allocated to lower volatility, relative value strategies.

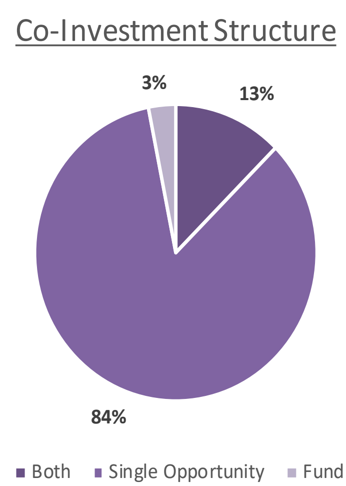
While SMAs tend to enhance returns through the use of leverage or trading, FoHFs have identified that concentrated and best ideas portfolios are another way to enhance returns. Like hedge funds, fund of hedge funds have identified a large portion of hedge fund attribution stems from the top 5 to 10 names in the manager's portfolio (particularly long short equity strategies).

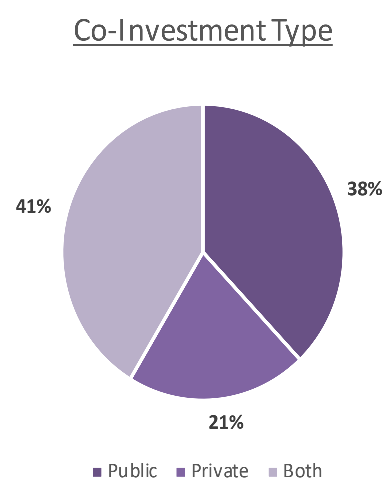




As such, FoHFs have launched thematic and co-investment funds to offer the manager's best ideas to clients – this can be in part because the hedge fund manager has reached position level capacity within the fund, but also could be due to the opportunity the FoHFs sees. Over 57% of fund of hedge funds interviewed have offered an underlying client a co-investment opportunity, but only 21% of the time is it a single stock equity.[17] Most of the co-investments fund of hedge funds are offering clients are private opportunities that are being sourced by hedge fund partners that are starting to see more late stage private deal flow due to higher return targets, broader mandates and SPAC involvement (finding a target company to acquire). Almost 84% of the time fund of hedge funds are offering these investment opportunities as single opportunities[18], but more FoHFs are starting to structure dedicated fund vehicles and build out entire co-investment programs, teams, and operations to accommodate the demand.







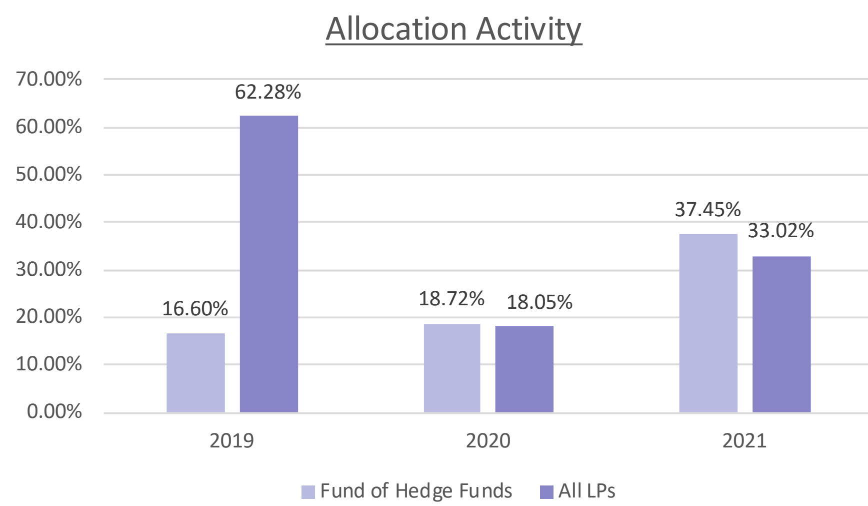
Changes to Fund of Hedge Fund Portfolios

In addition to new products and business lines, the business models have also changed. Fund of hedge funds have continued to concentrate their portfolios, discount fees, and make additional hires to accommodate the business changes.

Activity – are FoHFs allocating?

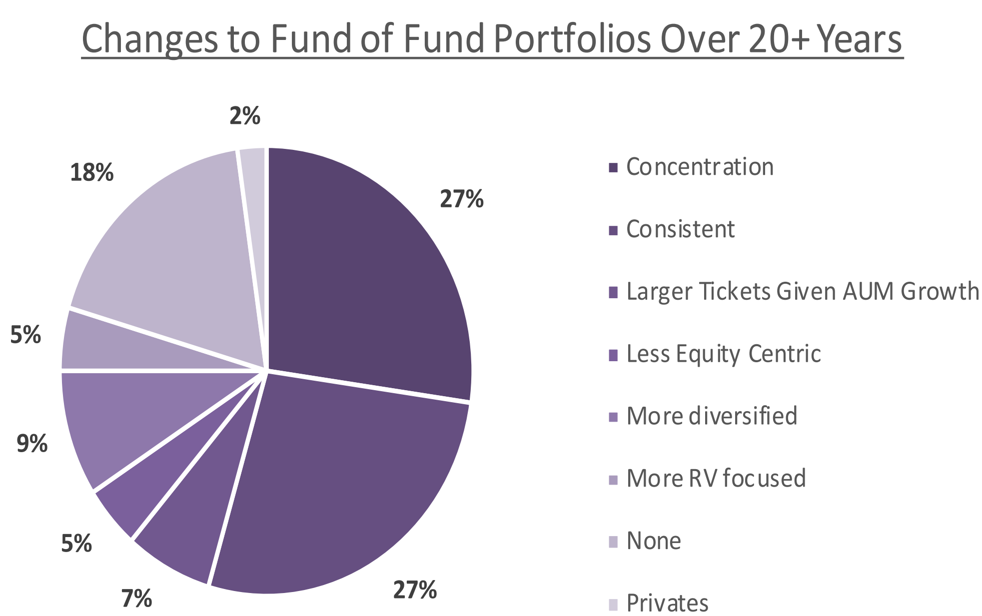
Fund of hedge funds investment activity has been fairly consistent over the past three years. Of the 1000+ conversations we have with LPs annually, about 30% are with fund of hedge funds. Compared to all investor types, fund of hedge funds tend to have similar activity level to all other verticals.

While many fund of hedge funds will be opportunistic about new investments and are "always open to meeting with new managers and best ideas", over the past year, it seems that fund of hedge funds are more "actively allocating". In 2019 and 2020, about 18% of FoHF allocations were "active", while 2021 YTD it is a little over 37% and the year is not yet over.[19]



Concentration – how do you improve returns?

Many fund of hedge funds felt that throughout the "access era," portfolios got overly diversified and too broad with too many allocations that contributed to a diminishing level of returns. After the GFC, FoHFs needed to think about how to improve performance – in addition to manager selection, **performance can be enhanced through portfolio construction by increasing the use of leverage or concentrating the number positions in the portfolio.**



Not only did FoHFs concentrate the number of managers in their portfolios, but some FoHFs also noted that their underlying hedge fund investments have also been concentrating the number of positions in their portfolios. Additionally, many of these fund of hedge funds moved to portfolios with less generalist managers and added to funds with more market directionality and more specialized investable universes. For the fund of hedge funds that are focused on **generating equity like returns**, managers are focused on adding more concentrated, directional, and high returning strategies. For the fund of hedge funds that are more **fixed income return oriented**, there was more of a bias towards multi-risk taker, multi-strategy, event driven, and other uncorrelated opportunities within the relative value and quant spaces. The hope is not just that concentration benefits returns absolutely, but also by investing in less managers, the investment professional within the fund of hedge funds can better manage the line items in their portfolio and understand what is owned.

Fees – what is market today?

Like hedge fund fees, fund of hedge fund fees have changed overtime. Pre-crisis, most fund of hedge funds charged 1/10 (sometimes with a hurdle) over the traditional 2/20 fees offered by hedge funds. Post-crisis, as hedge fund manager fees started to compress and so did FoHFs and other intermediaries. In a world of business consolidation and fee compression during the customization era, larger pools of capital have turned asset management into a volume distribution business across a variety of services.

As the FoHF business model morphed into more advisory and customized lines of business, the fee structure changed as well and many FoHFs moved to the flat management fee structure. **While some firms still have both a management and incentive fee, most have moved to a flat or tiered management fee based on assets under advisement.** Some firms still have products with an incentive fee and if so, there is also usually a performance hurdle. Many of those structures had incorporated a hurdle that was either set to a benchmark based on a sector / region or was a flat 6% return hurdle.

Many FoHFs also have fairly liquid terms – 66% of all fund of hedge funds interviewed had quarterly liquidity or better and over 50% of funds also had a 95-day notice period.[20] Most hedge funds have quarterly or annual liquidity with 60 to 90 days' notice, some fund of funds like to have an additional 5 days' notice period to manage the liquidity needs of the portfolio. About 57% of all respondents did not have a lock on the fund of fund.[21] When firms did, it was usually a 1-year hard lock. Only 5 managers had an investor level gate, which was structured as 25% quarterly liquidity so the underlying client would be able to fully redeem in a year. All 5 of those managers had a privates or co-investment component to their portfolio.

Summary of Fund of Fund Terms

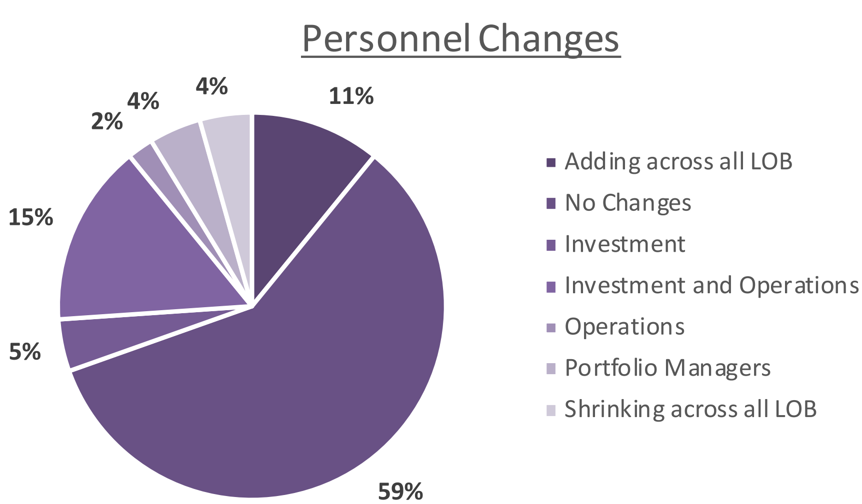
Redemption
Quarterly or better

Days' Notice
95

Liquidity
Most have no locks,
If so, it was 1 year hard
And very few gates

Personnel – what new hires have fund of hedge funds made to sustain the new business model?

While fund of hedge funds have been concentrating their portfolios and fees have been coming down, personnel at firms has generally been growing.



Headlines tell a story of consolidation in the hedge fund space, but fund of hedge funds businesses have stabilized and seem to be hiring across a variety of lines of business. Only 4% of FoHFs interviewed downsized personnel and it was across all lines of business.[22]

Most new hires mentioned were around investment and operations roles in addition to portfolio managers for the internal portfolio manager roles. Interestingly, while almost all fund of funds are looking to grow in size and raise capital, none of the current or prospective hires were on the marketing and distribution side.

The Future of Fund of Funds

Where are we going?

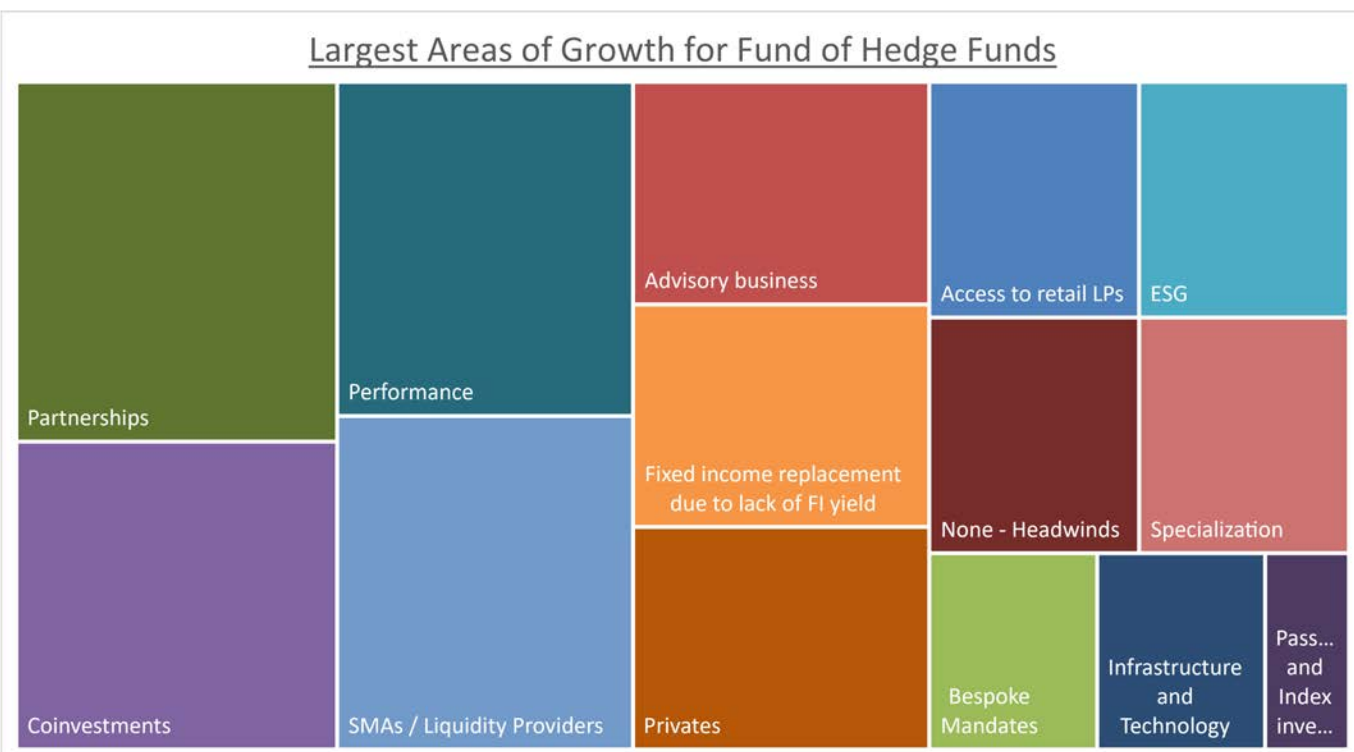
Given assets hover near all-time highs and that these firms continue to innovate and perform, we believe the future of fund of hedge funds is as bright as it has been in over a decade. Consolidation of the industry has stabilized, and the industry remains focused on delivering differentiated customization (but not too customized!), advisory services and bespoke mandates. In addition to the intricate manager diligence process and portfolio construction, fund of hedge funds have transitioned their business models and created structural edges in order to survive and thrive.

Like many other industries and as part of that growth, fund of hedge funds have been disrupted and needed to invest in technology, infrastructure, and risk management in addition to client reporting capabilities. In order to manage the portfolio as efficiently as possible, fund of hedge funds have also needed to think about their financing and investment strategies. By taking advantage of the benefits of capital efficiency (ex. Cross margining, hedging overlays, direct investments), fund of hedge funds can not only survive but thrive.

Underlying intermediary clients are also requiring more transparency from *all* partners and counterparties, requiring many to build systems to automate data collection and distribution. Fund of hedge funds do not need to build this functionality from the ground up – there are client reporting software and managed account programs that will offer access platforms for a fee.

It is important for fund of hedge funds to hold onto what made the business great (their deep product knowledge), but if the firm wants meaningful growth, it will need to try some new things – structural or opportunity set (high degree of failure to innovate). This takes a lot of messaging, resources, and internal buy in. Most allocators believe that **the biggest areas of growth were through broader firm to firm partnerships with hedge funds, fund of fund performance, co-investments and building out separately managed account offerings** and acting as liquidity providers.

Instead of thinking about fund of funds as a derivative of the hedge fund product with an additional layer of fees, **the industry should take a step back and think about best way to create a product with hedge fund expertise.** What is the most efficient way to invest? Is it more efficient to do one-off investments or aggregate managers and investment opportunities to get the benefits of scale? Why build an investment team in house when you could buy it and outsource it?



Takeaways and Predictions

Takeaways

- Throughout fund of hedge fund history, there have been **three primary eras including Access, Customization, and now Structuring**. FoHF consolidation has stabilized and total industry assets and number of products have plateaued such that only the best have survived.
- **Most FoHFs fall into one of three of businesses**: those that continued to offer customized solutions and innovative structures to their underlying clients (11%), those who have remained the same high performing access vehicles of the 1990s (43%), and those who maintain a flagship product with customization (46%).
- **Most products seem to generate one of two risk adjusted return streams**: equity like returns with 1/3 of market volatility (10% to 15% return with 8% to 12% vol) and fixed income alternative replacements targeting lower volatility (6% to 8% return with about 3% to 5% vol).
- **Changes to product offerings:** continued to concentrate their portfolios, discount fees, and make additional hires to accommodate the business changes.

Misconception	Reality	Prediction
Fund of hedge fund industry is dying – margins are compressing and will continue to consolidate until there are no businesses left.	In 1990, $1.9bn was invested in FoHFs across 80 products and by 2007 there was almost $800bn across 2,500 products. Today, FoHF assets are close to peak, hovering around $688bn in AUM across 1,000+ products	FoHFs will be a key staple of the alternatives community offering diversification to portfolios that need to hit certain risk adjusted returns. There will always be a value associated to products that add value through access, portfolio construction and performance.
Fund of hedge funds are not high-quality allocators and should be thought of as "fast money".	• Almost 27% hedge funds did not want to engage with FoHF because, the LP is a FoHF • About 70% of FoHFs invest in emerging managers.	As hedge funds begin to understand the underlying client base and business model and value proposition of FoHFs, they will start relying more heavily on fund of hedge funds as key partners, especially for new launches.
Fund of hedge funds that offer advisory and bespoke services or multiple products including co-investments and SMAs are lower quality businesses.	• 58% of FoHFs have over 3+ products. 31% of capital managed by FoHFs are advisory or bespoke. • 57% of FoHFs offer co-investment opportunities. 84% are offered as single opportunities. • More FoHFs are offering SMAs to increase leverage, transparency, or internally trade / hedge the investment.	FoHFs transitioned their business models and created structural edges in order to survive and thrive. Some of those include customized products, co-investments and SMAs. FoHFs will continue to invest in technology, infrastructure, and risk management in addition to client reporting capabilities that enable the businesses to be more cost effective and marketable.

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[1] Jefferies proprietary database and interviews – conducted Q3 2021
[2] Jefferies proprietary database and interviews – conducted Q3 2021
[3] Based on the data provided by the fund of funds surveyed, about 33% of underlying clients are family offices and RIA / wealth advisors and the other 67% is more institutional clients like endowments, foundations, and pensions and many of those clients had internal alternative diligence teams.
[4] Jefferies proprietary database and interviews – conducted Q3 2021
[5] Jefferies proprietary database and interviews – conducted Q3 2021
[6] Jefferies proprietary database and interviews – conducted Q3 2021
[7] Jefferies proprietary database and interviews – conducted Q3 2021
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[18] Jefferies proprietary database and interviews – conducted Q3 2021
[19] Jefferies proprietary database and interviews – conducted Q3 2021
[20] Jefferies proprietary database and interviews – conducted Q3 2021
[21] Jefferies proprietary database and interviews – conducted Q3 2021
[22] Jefferies proprietary database and interviews – conducted Q3 2021