5-2017

Active vs. Passive Management: The Elusiveness of Alpha to the Modern Hedge Fund

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By

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Submitted in Partial Fulfillment
of the Requirements for
Graduation with Honors from the
South Carolina Honors College

May 2017

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Thesis Summary

The goal of this thesis stated off with one question: are hedge funds worth the fees? This seemed like it would simple to answer, but the measurement of hedge fund performance turned out to be far more complex than one would imagine. The first complexity that became apparent was the bias to overly weight returns as a measure of performance. This is the simplest metric to comprehend and universally can be understood by investors. It seems like common sense that the fund with the highest return would be the best investment opportunity. But this rush to judgment often overlooks other statistics like standard deviation and correlation.

Before diving into my finance curriculum, I had been trained myself to believe that return is the be-all-end-all evaluation tool of a manager. That is because I was looking through the lens of the media, who argue that poor recent performance is enough reason to completely abandon hedge funds. Media outlets fail to mention the uncorrelated returns and lower standard deviation that hedge funds can provide.

My research of hedge funds led me towards the evaluation of South Carolina’s state pension fund. I heard Curtis Loftis give a speech criticizing the South Carolina Retirement Investment Commission for investing in hedge funds and was curious to find an explanation for the commission’s investments. It turned out that Mr. Loftis was driven by politics to take a stance against the commission and that his argument omitted many key factors to the state’s pension deficit, such as the effect of historically low interest rates on the present value of long-term liabilities.

Furthermore, I was driven to find an answer to the rise of exchange-traded funds and the abandonment of active management. The trend started when statistics began showing that managers could not consistently beat the market. This questioning of active management goes beyond hedge funds and includes financial advisors of many retirement accounts that charge a significantly higher fee

than a passive ETF would charge. Were efficient markets diluting the excess return provided by active management?

One problem of the CAPM model is that it assumes all investors have access to the same information and agree on the expected return and risk of securities. Given human nature, this assumption could never be completely true. Speculation has influenced stock prices since Wall Street's inception but there is less to speculate about today with the growing accessibility of information. Most investors can now agree that there is a risk premium for investing in small-cap stocks or emerging markets. Investors can also easily look up historical data on stocks and can access the latest news to see analyst predictions. Consequently, the assumption of the CAPM model is closer to being true than ever before.

Nonetheless, active management will continue to exist so that the world's markets can remain efficient. The movement towards passive management should begin to slow once prices begin to mirror current market conditions. As the price tag is continually lowered, demand will increase relative to the supply. Reaching an equilibrium will push out managers who aren't using exceptional strategy and leave only those that can justify their fees.

Introduction

Most business students, even finance majors, are relatively clueless to the inner workings of a hedge fund. Managers of these funds claim to have superior market expertise and strategies that generate excess returns, or alpha, with little transparency into their organization. These funds thrive from operating in the shadows, refusing to disclose the trade secrets that make them appealing to investors. But the media has recently begun to attack and expose hedge funds for losing to the S&P index consistently since the financial crisis. It seems like the WSJ publishes a new article every week comparing hedge funds to index funds. These articles often show their rates of return against one other, but what is the media missing?

In addition to lackluster returns, excessive fees have also become a hot topic of hedge fund bashing. With returns commonly falling behind index averages, investors have to wonder why they are forking over the extra cash. Some began wondering this years ago, including Warren Buffet, who made a bet in 2008 that the Vanguard Index Fund would outperform a portfolio of hedge funds over the next decade. Buffet was right, the Vanguard fund gained 66% from the start of the bet until the end of 2015, while his competitor's diverse selection of hedge funds only gained 22%. These statistics leads to another argument between passive and active management. (Friedman) Although Buffett has been wildly successful with his own active management, he is skeptical of the capability of other active mangers being capable to replicate his success.

To navigate through the complex and mysterious world of hedge funds, investors have to be able to assess the capability of managers. The media prefers to strictly base their judgment on return metrics but there are many other factors that investors can use in their assessment. Media misrepresentation is blatantly apparent when they exclude diversification from their discussion and selectively look at recent years instead of historical trends. It is impossible to predict the market but there are hedge fund

strategies that can benefit a portfolio in the long run and provide a more stable return by diversifying risk. This benefit is largely diluted, however, by market efficiency and saturation and is not excessive enough to justify the fees that are charged by the average hedge fund.

Hedge Fund Fee Structure

The average investor can't invest in hedge funds because you must be an accredited investor. An accredited investor is usually defined as someone who has an average income of over $200,000 or $1,000,000 in assets. Accredited investors then pay a two-part compensation package to the hedge fund's manager: an assets under management and an incentive fee, which is a percentage of any profits. Historically, the AUM fee is around 2% and the incentive fee is around 20%, but funds have been reducing fees to keep investors from withdrawing their money. And withdrawals aren't always an option, as many funds restrict their investors to a lock-up period of up to a year.

Some people like Howard Wang, however, are challenging the structure that has made billionaires out of many of hedge fund's top managers. Wang was a former analyst at Bridgewater Associates, the world's largest hedge fund, and he believes that hedge fund performance doesn't justify the high fees collected. For his new firm, Convoy Investments, he is only charging a 1.25 percent management fee, which is drastically different than the long-standing norm of a 2 percent management fee and 20 percent of profits. Wang says that managers are tempted to take riskier bets because they are lured by the prospect of high incentive fees. Adding that, "this can be particularly dangerous in a low interest-rate environment where expected returns have decreased." (Bit)

The principal-agent problem must be considered for other manager incentives as well. When hedge funds grow large enough, managers may become complacent with the 2% fee for assets under management. A manager with 10 billion in assets would make 200 million dollars, regardless of his fund's performance. This does incentivize managers to seek out new money, but most would think that managers would continue pushing to add 20% of the profits to their own pockets. However, there could be scenarios where acquiring more assets to manage would be more advantageous to managers than focusing on earning additional profit.

Alternatives do exist for investing in hedge funds without having to pay as large of an initial investment. A fund of funds will research and invest in other hedge funds to give you broader diversification. They also come with a similar pay structure and still require that you are an accredited investor. Many doubt, however, that the staffs at these funds are able to adequately identify superior hedge fund managers. Including David Hseih, a Duke University finance professor, who has found that just 2% of these funds earn enough to justify these fees. (Hulbert)

There are also replication strategies in the market that attempt to replicate hedge fund strategies with greater transparency and lower costs. “Most of these funds use a backward-looking, top-down regression approach to estimate hedge funds’ aggregate exposures to a set of risk factors, such as stock, bonds, currencies, commodities, and volatility.” (Berger, 6) Replication strategies like this suggest that hedge funds make their money from asset allocation and not security selection.

Recent Returns of Hedge Funds vs. the S&P

The goal of hedge funds is to maximize your return on investment and managers will invest in riskier and higher leveraged strategies in order to achieve those returns. So the name may seem counterintuitive, since hedging is thought of as the practice of reducing risk. But hedge funds get their name from taking short positions to hedge against the downside risk of a bear market.

When comparing hedge fund returns to the S&P average, hedge funds have drastically underperformed in the last decade. Performance has lagged behind by as much as 10% in years since 2008. One could blame high correlation between asset classes or the extreme bull market, but there is no wonder why investors have become skeptical.

Even over a longer-term perspective, returns seem to be almost identical to index funds. The exception being 2008, where bearish bets saved hedge fund investors from the monumental losses of the masses. The S&P lost 38.5 percent that year and the average hedge fund only lost 18 percent of its

value, according to Hedge Fund Research. (CBS MoneyWatch) Using the average hedge fund as an indicator can be dangerous, though, because of the various strategies that are encompassed in that statistic and the accompanied equity correlation within those strategies.

Media Misrepresentation of Hedge Funds

Article titles like “A Bright Idea for Hedge Funds: Do Nothing” or “New York Comptroller Slammed By Another State Official Over Hedge-Fund Investments” are common on financial news sites. Media outlets love to bash hedge funds for their “underperformance”. If you dive into articles like this, you will always see a comparison of returns but evaluation of hedge funds should not stop there.

From the New York Comptroller article: “the state pension system paid way too much and has given pensioners nothing except lagging returns.” (Gillers) The article here fails to fairly represent hedge funds because it leaves out any mention of diversification benefits or risk measures. Since the term “hedge fund” is all-inclusive, you are left to wonder what strategy the hedge fund pursued. Hedge fund is used as a buzzword in news article but provides little meaning beyond the general description of a set of strategies that seek excessive return.

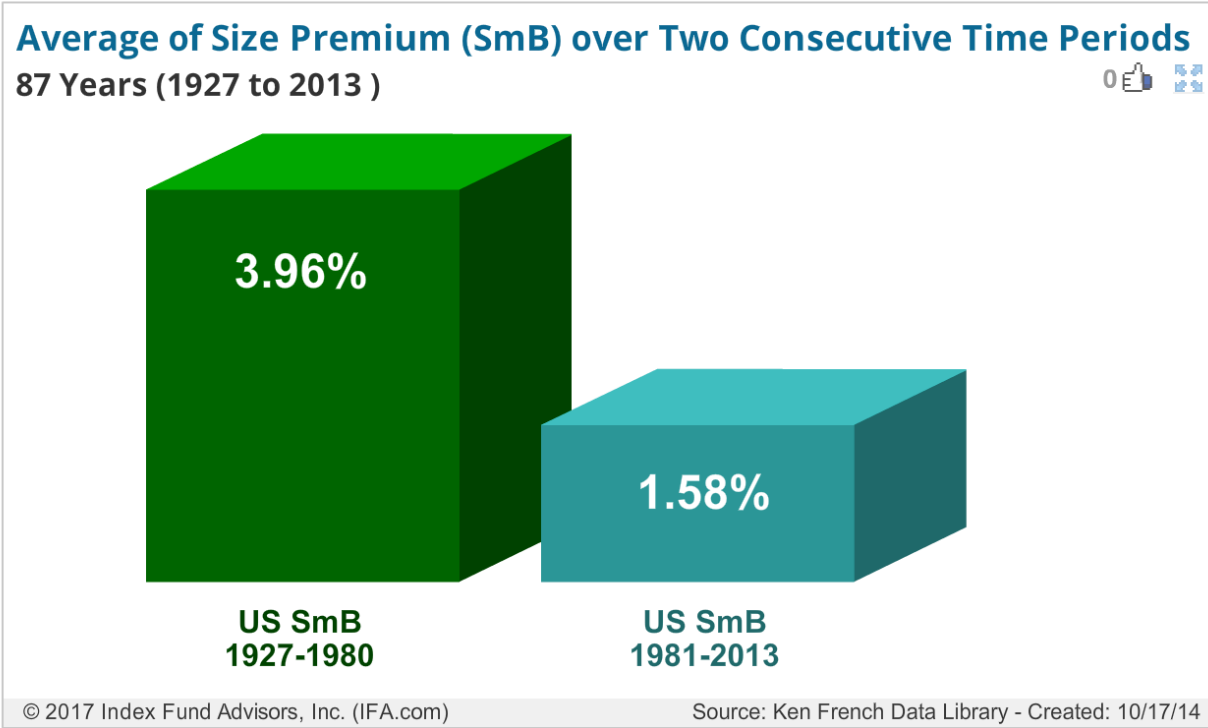
The trend carries over to local newspapers, which argue that cutting edge investments have caused the pension funds, like South Carolina, to lag behind. News outlets want the state to alter their strategy to seek higher returns but leave out the risk associated with that pursuit. An average reader likely doesn’t know about alpha or may not even consider diversification when it is excluded from the article. It certainly doesn’t make sense for a pension, which seeks stable returns, to invest solely in the stock market and be subject to that degree of risk and uncertainty. This means that it is unjustified to compare performance of a pension solely to the S&P benchmark. Furthermore, the S&P benchmark ignores other major asset classes such as bonds or commodities, which hedge funds have performed more favorably against in the past decade.

Proven Hedge Fund Investment Strategies

The S&P index return can serve as a valuable benchmark for hedge fund performance because a hedge fund does seek excess return. Hedge funds represent active management and claim to generate positive alpha, which is excess return relative to a benchmark, to justify fees. In other words, alpha represents the value that a manager adds to or subtracts from a fund's return.

With technology granting easier access to information, a larger percentage of the population can now become knowledgeable about the stock market. This has made markets more efficient and alpha more challenging to obtain. In fact, the availability of research to the public has changed the way that one has to view alpha. A more appropriate definition is that alpha is return that cannot be explained by exposure to common risk factors. (Berger, 2)

Fama and French were the first to publish research on the different returns between large-cap and small-cap stocks. Before their publication, a manager could generate alpha by simply investing in small-cap stocks because other investors didn't understand the value of this classification. The Fama and French research, however, made this alpha-seeking strategy well known to the public, transforming the previous alpha into a beta. In the following chart, you can see how the small-cap risk premium has diminished as market efficiency has increased over two time periods. Although the phenomenon continues to persist, the excess return has not been as strong.



To better understand the implications of this on hedge funds, it is important to cover the well-known strategies that hedge managers use to seek alpha.

Equity Long-Short:

The equity long-short is one of the more simplistic and most common strategies used by hedge funds. In theory, it means buying an undervalued stock and shorting an overvalued stock. To take a short position, you borrow a stock that you don't own and immediately sell it, then hope that the stock declines in value so you can buy back the stock at a lower price and return the borrowed shares.

This concept originated with hedge funds and continues to be a major investment vehicle today. The goal of the long-short is to minimize exposure to the market in general and profit from the spread between stocks. If you think one stock will outperform another, you can long one stock and short the other to capture a return on the spread in their performance. This limits exposure to the market in a downturn where both stocks could potentially lose value. In this case, as long as the stock of your long

position didn't suffer as badly as that of your short position, you could still make a profit. To further decrease the effects of general market conditions, managers can also focus on paired trades within the same industry or region.

Some hedge funds try to remain market neutral with this strategy, where the long and short positions are equal. Market-neutral completely takes the market out of play in an investment, given that your two stocks are also beta neutral. However, most portfolios suffer from some form of beta mismatch, which occurs when two stocks in a long-short position have different betas. A stock with a beta of one typically moves in sync with the market, while a stock with a higher beta tends to be more affected by the market's swings. A short with a larger beta, therefore, will lose more money in a bull market than a long position will gain. Likewise, a long position with a larger beta in a bear market will lose more than a short position will tend to gain.

Convertible Arbitrage:

A type of equity long-short where a hedge fund purchases convertible securities and shorts the same company's common stock. Hedge funds do this to take advantage of a pricing mismatch and as an all weather strategy in a volatile market.

*Global Macro***:**

"One of the most prolific strategies is the global macro strategy, which focuses on investing in instruments whose prices fluctuate based on the changes in economic policies, along with the flow of capital around the globe."(Barclay Hedge) Typically, managers would bet on the overall state of a country's economy by betting against indexes or national debt.

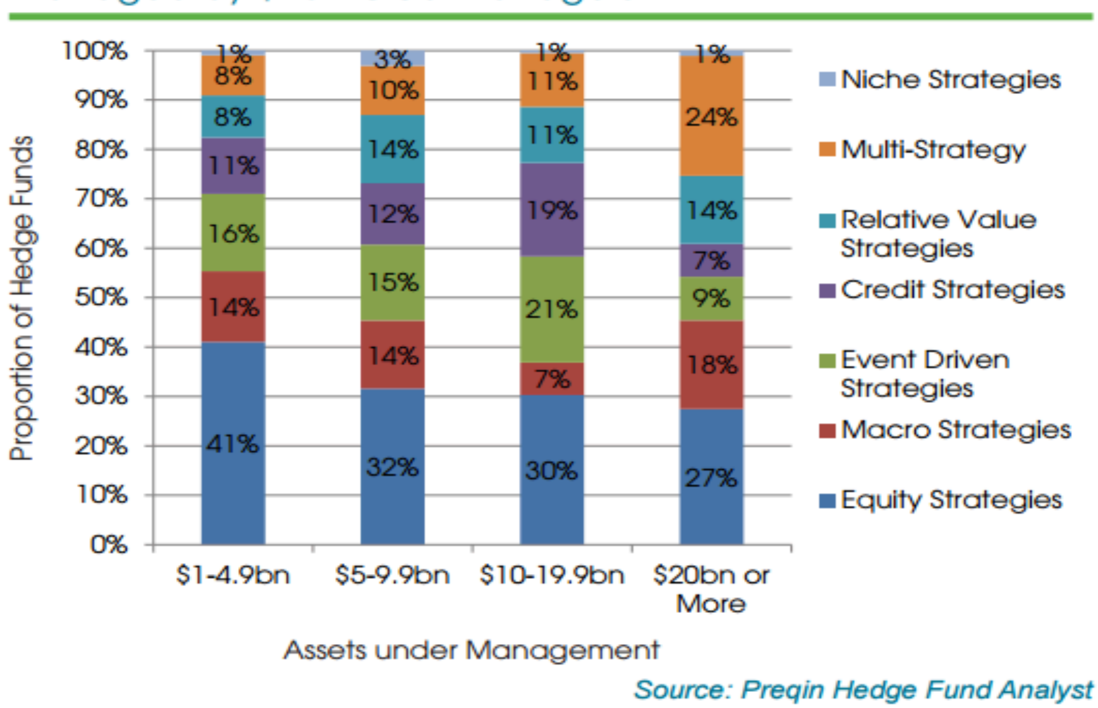
Emerging Markets:

This strategy focuses on security and currency investments in emerging markets: ones that typically have low-middle incomes and are moving from a closed to an open market. These markets are not as regularly analyzed and transparent and present more opportunity for managers to spot inefficiencies.

Event Driven:

The idea is to exploit short-term pricing inefficiencies that occur around a corporate event, such as a bankruptcy, merger, or spinoff. An example of an event-driven opportunity is the uncertainty built into the stock price of a recent merger announcement that hasn't yet been approved by the board of directors. A hedge fund would analyze this type of event with their resources and expertise to try to correctly predict the outcome. This presents risk as corporate restructurings don't always go as planned.

Fig. 3: Breakdown of Strategies Used by Hedge Funds Managed by $1bn Club Managers



Do these strategies generate alpha? No, they do not when using the economic definition of alpha. These excess returns can be explained by exposure to common risk factors. This doesn't shrink returns but instead attempts to reclassify alpha by showing that the return can be explained. Managers may choose to invest in different stocks, mergers, or emerging markets, but the underlying strategy is what increases the average return. Making this distinction is important because it removes the opaqueness and elusion of sales pitches that cite alpha generating as their own personal trade secret.

In addition to common hedge fund strategies, four other relevant styles exist among other active managers and are utilized by many hedge funds: value, momentum, carry, and defensive. Backed by research, these styles can produce unique long-term positive returns, with low to zero correlation with long-only asset class. (Asness, 28) And these styles exist in assets classes beyond equities and include currency, bonds, commodities, etc.

Value investing is similar to equity long-short and can be explained by behavioral biases, such as delayed overreaction to information. Momentum is the tendency of securities to continue their relative performance over some period of time. A typical approach is to look at the past 12 months of returns to then long the outperforming stocks and short the underperforming ones. This may seem too obvious but statistical evidence has consistently shown this to be true. Theories explaining the momentum phenomenon center around risk, high momentum stocks may be more susceptible to shocks, and behavioral, delayed reaction and inattention.

Carry is a style that involves borrowing from a lower yielding market and investing in an asset that provides a higher rate of return. "The economic motivation behind carry is the process of balancing out supply and demand for capital across markets." (Asness, 32) Finally, the defensive strategy is a low-beta/low risk strategy that could be beneficial to hedge funds to protect against downside risk. Essentially, lower-risk assets may offer higher risk-adjusted returns because leverage is required to hold them.

All these styles have been extensively researched and discussed throughout the finance community, transforming them into a beta. An identifiable alpha like these can be reclassified as beta since it is no longer elusive to the knowledgeable investor. This can be replicated and should be fundamental to an investor seeking uncorrelated returns. Styles begin to demystify hedge funds and show that managers using these strategies are not generating true alpha. "Styles add significant explanatory power for hedge fund returns across all types of hedge fund categories." (Asness, 55)

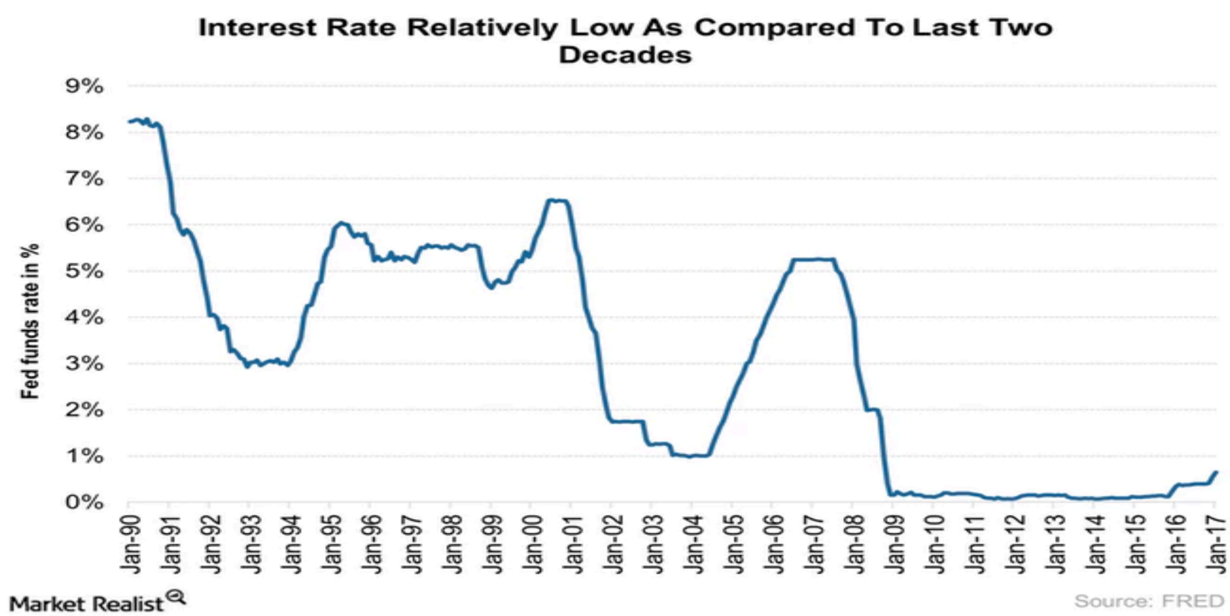
Since these styles are proven to work, why haven't more investors embraced them in their portfolios? A simple explanation is that many investors still lack awareness, but large institutions like pension funds should not fall into this category. A more likely explanation is that institutions are not willing to break from the pack.

South Carolina Retirement System Investment Commission and their Hedge Fund Strategy

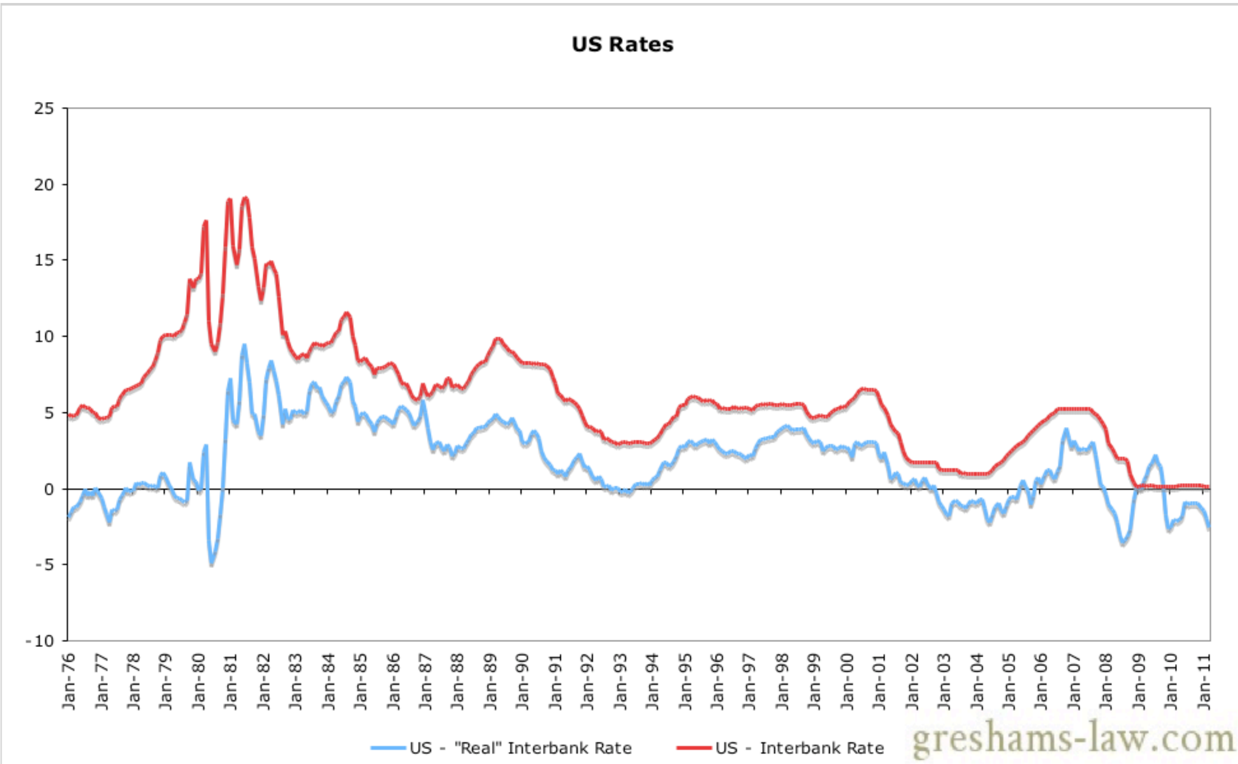
Hedge funds do provide uncorrelated returns and this reasoning has long been used to justify allocating large portions of pension plans to hedge funds. State pensions seek out uncorrelated returns to provide a more stable return for their defined benefit plans. But hedge fund investing comes at a price to the state, which they willfully pay based on the belief that they can successfully identify alpha producers.

In South Carolina, their state pension plan is currently underfunded by an estimated $24 billion. Put another way, for every dollar that should be in the pension fund, the state has roughly 46 cents. (Slade, “Looming Pension Crisis”) Curtis Loftis, South Carolina’s state treasurer, recently said, “This is the single largest issue of our generation.” One has to wonder how a state pension could reach such critical underfunded levels and Gov. McMaster recently gave this explanation. “The unfunded liability in our pension system is the result of a combination of factors created, occurring and neglected for over fifteen years: the 28-year retirement eligibility; the Teacher and Employee Retirement Retention Incentive (TERI); continued cost of living adjustments (COLAs); and lower than expected rates of return on investments.” (Post and Courier)

A common source of pension liabilities across the country is historically low interest rates. Many pension funds have set expected returns based on past interest rates and have not adjusted their expected returns to reflect the current rate environment. Consequently, funds have fallen short of their expectations and have not increased their contributions to make up the difference.



Low rates force pensions to use a low discount rate, which has raised the present value of their long-term liabilities. Additionally, interest rates have struggled to keep up with inflation and real rates have been dipping into the red. If inflation continues to keep up with interest rates, the real dollars paid out to retirees will be much higher than plans have anticipated.



In South Carolina, Curtis Loftis has been a known hypocrite of their Retirement Investment Commission, which should not come as a surprise since he is a public official running for reelection. Loftis said, “Our attitude from 2006 to 2013 was, we wanted to be on the cutting edge of (investment) diversification and financial theory, but we were on the bleeding edge." (Slade, “Looming Pension Crisis”) If you were to listen to Loftis give a speech, you would consider South Carolina’s pension to be the most inept organization in the country. He makes the organization sound like they throw money at Hedge Fund big shots with little due diligence or planning but this is far from the truth.

There is actually an extensive process to assess strategy, returns, beta, regression, internal control, default risk, manager reputation, and fee structure. An investment is not made until this process is completed and it typically takes around 5-6 months. And Loftis, ultimately, approved these decisions to pursue alternative investments. He is simply shifting blame to try to appeal to constituents. But it is becoming more apparent that even the savviest analysts have difficulty identifying alpha producers. “The reality is that the pursuit of alpha is very difficult, and even if identified, is expensive.” (Asness. 56)

In an attempt to alleviate the finger pointing and pension deficit, the South Carolina Retirement Investment Commission (RSIC) has made major changes in 2017. The first action taken was a removal of Loftis from the pension system’s oversight, limiting his power to choosing a representative for the committee. This decision came after an external audit showed that the RSIC had not been overpaying in fees relative to its peers, but instead had been more transparent with the reporting of fees. The second step was a reform that is slated to increase taxes to fund the pension deficit and a decrease in the expected return to 7.25% to represent a more realistic goal. (Slade, “Reform Plan”) The 7.5% previously set was based on promises that were not delivered by alpha pursuing managers and was hard to achieve in a low interest rate environment. Yet, pensions across the country continue to set lofty assumptions, assumingly because of the accounting benefits they receive for discounting their liabilities.

Curtis Loftis’ solution would have been to pursue more “conservative” investments, but frankly equity risk alone serves as a riskier prospect for the fund. Conservative to Loftis means traditional and the return to traditional may seem like an easy solution to an uninformed voter. The most important metric for pensions, however, is stability in an uncertain world. South Carolina’s state pension has been using hedge funds to provide this stability.

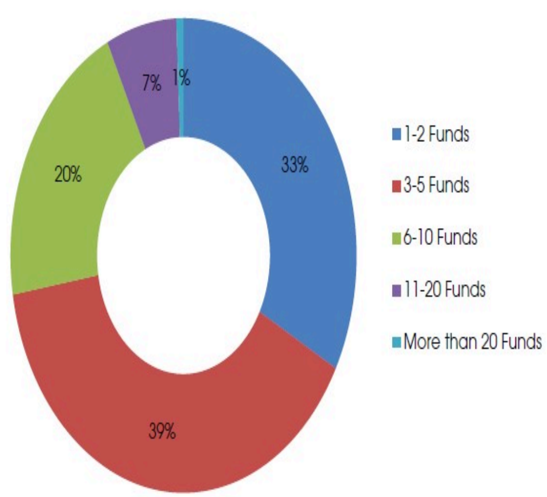
Pension Funds are Starting to Leave Hedge Funds

The norm for the last decade had begun to reverse. Media and government officials alike have begun questioning the conventionality of hedge fund allocation. The pensions currently moving away from hedge funds mostly attribute their decisions to ludicrous fees and mediocre returns. “But in criticizing hedge fund fees, performance, and transparency, critics almost never answer the more fundamental question: What’s the alternative?” (Teitelman)

Pensions not heavily invested in hedge funds have been reaping the benefits of the stock market but are exposed to a greater degree of volatility. And low-cost ETFs may work for the average investor but won’t fit the objectives of a hedge fund. In other words, there is no perfect solution. The state has an obligation to make good on the retirement promises they made to employees. They can’t go back and change to a defined contribution plan or change the investment decisions that have already been made.

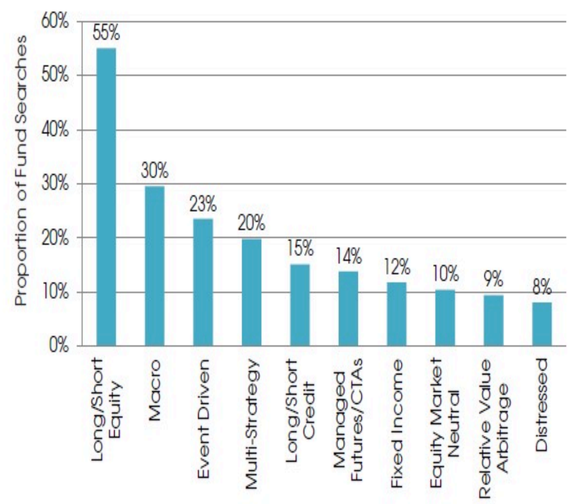
South Carolina should look to find more investment vehicles that implement style investing and provide lower exposure to the equity risk that comprises 45% of their portfolio. The graph below depicts that an abnormally high amount of new investments nationwide have been expected to go towards hedge funds that utilize equity long/short strategies. Equity long/shorts are inherently more correlated to traditional equity risk than other hedge fund strategies and may not be the best way for plans to meet their objectives. The RSIC in South Carolina explicitly has looked to remove funds with high levels of equity risk and seeks an overall zero to negative hedge fund correlation to equity markets.

Fig. 3.6: Number of Hedge Funds Institutional Investors Expect to Add to Their Portfolios over the Next 12 Months



Source: Preqin Hedge Fund Investor Profiles

Fig. 3.7: Breakdown of Hedge Fund Strategies Sought by Institutional Investors over the Next 12 Months



Source: Preqin Hedge Fund Investor Profiles

The Argument for Passive Management

Seeking out lower fees has been a trending movement across the investment world in the past decade. Pension funds and individuals alike have realized that alternatives exist for low cost investing. For example, the Vanguard 500 Index Fund can be held for a slight .05 percent fee and Fidelity Investments cut their commission on U.S. stocks and exchange-traded funds to $4.95 this year. (Krouse)

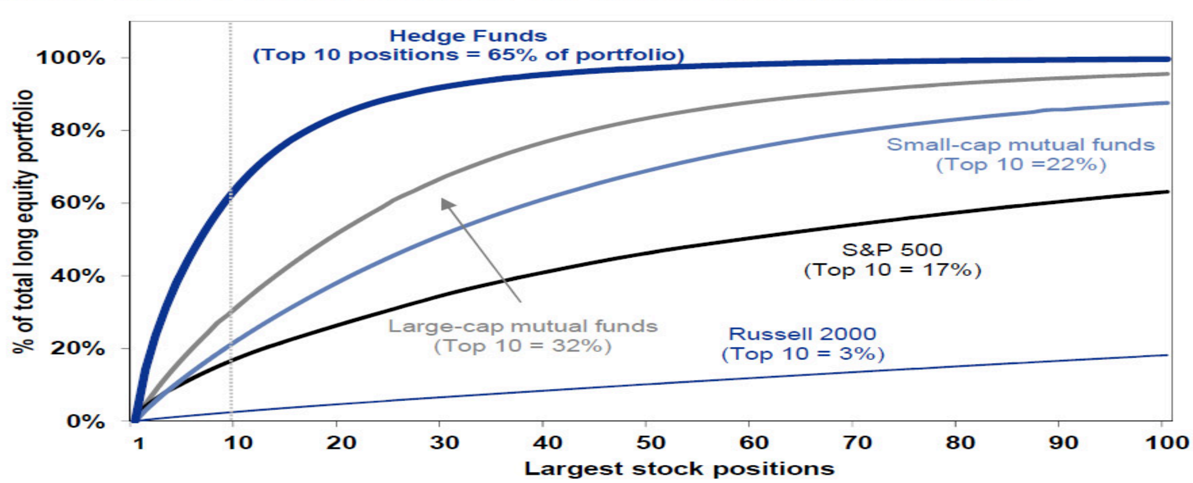
While hedge fund managers who may make hundreds of uncorrelated decisions can't be directly compared to equity managers, the two are both affected by passive management alternatives. Morningstar research has shown that, on average, passive funds charge .18 percent in fees and active funds charge .78 percent. (Poppick) The vast majority of actively managed funds, though, fail to make up for their higher fees with excess returns. The explanation for this in most cases is high efficiency in today's stock market. Actively trading large corporate stocks will fail to add value when thousands of other investors are also trading on the latest news.

Smaller companies, emerging markets, and complex events are less tracked and efficient in the market. This is why exceptionally good managers can generate excess returns in these scenarios. The reality of the situation, though, is that most financial managers simply don’t do this and most hedge fund managers are not outstanding enough at this analysis to justify their fees.

What is the reason so many investors favor active funds? "In short, it is because it is gambling, and gambling leads to various degrees of addictive behavior." (Brown) All investments are truly a gamble but there is a certain allure to an exceptional gambler (manager) that persuades investors to go all in on their expertise. “The problem is how do you know which top-performing managers were smart, and which were just lucky?” (Brown)

While most hedge fund investors, including pensions, don’t devote themselves solely to hedge fund allocation, it should be noted that many hedge funds don’t diversify their top holdings. A single bad bet could have a large impact on the overall returns of funds that aren’t well-diversified, especially activist funds. Hedge funds try to reduce this impact through analysis, shorts, and asset allocation. But high premiums are essentially paid to chase alpha, a pursuit that is a gamble on the expertise of the fund’s managers.

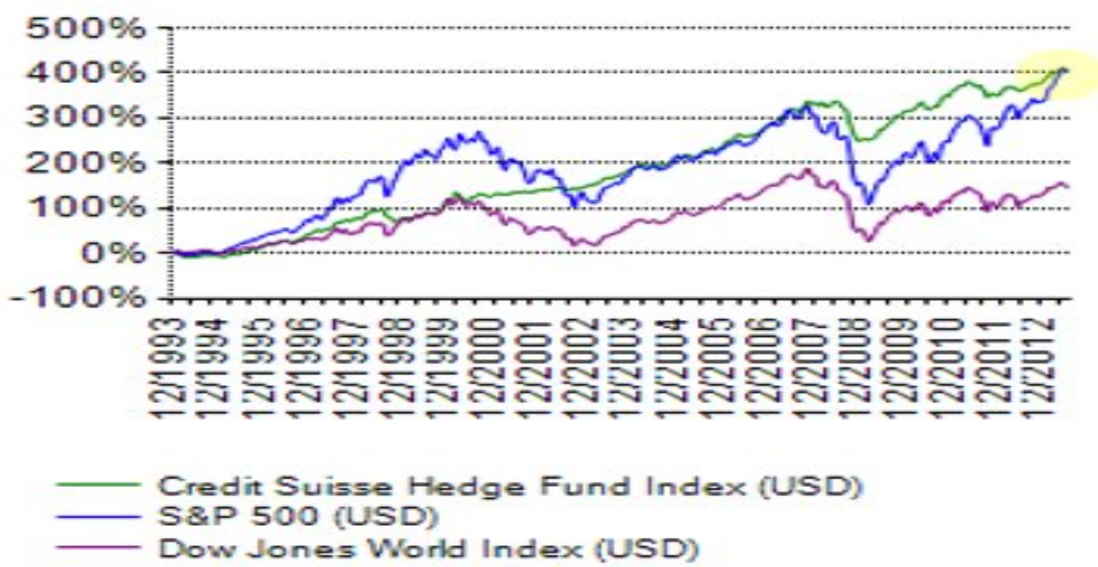
Exhibit 23: Top 10 holdings account for 65% of assets in hedge fund portfolios



Source: Compustat, and Goldman Sachs Global Investment Research.

Conclusion

There is clearly a bias to look at recent trends in hedge fund performance. A study, though, conducted in 2013 looked to overcome this bias and analyze 20 years worth of returns. The results showed an astonishing similarity between the S&P and hedge fund performance, where both averaged an 8.6% return over a 20-year period. (Kurtz) The correlation of returns was at .6, which shows that hedge funds do have their greatest exposure to equity risk but are still relatively uncorrelated to traditional fund returns. The main difference between the two was stability, with the hedge fund performance averaging a beta of .33 over the course of the study. (Kurtz)



What this shows is that hedge funds do meet their objectives over the long run. When stocks go nowhere but up, however, a fund's hedging becomes lost money. It can be tempting to have your opinion swayed by the recent trends and think there is no reasonable explanation for exorbitant hedge fund fees. It can also be tempting to say that active management is dying. Neither is true. Active management has to continue to exist in some form to provide market efficiency and this analysis will always come at a premium. The problem today is that there is a surplus of supply in the market. The saturation of analysis and extensive research on strategy has unveiled what was previously elusive to

obtain. The price, therefore, has to find an equilibrium point before investors become willing once again to pay for active management.

State pensions like South Carolina are increasingly shrewd to these market conditions and have taken steps towards finding more reasonable fee structures. A small percentage decrease in fees could produce monumental compounded savings over the long run. The focus of the future should be on style premiums and funds that reduce equity exposure, without the elusion of alpha and excessively high fees. But if interest rates remain low, it will still be difficult to meet lofty return expectations on a consistent basis to bridge the underfunded gap. The reality is that increased contributions to pension plans will become necessary if low interest rates persist.

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