A Hedge Fund Business Plan:

Investment Theory, Operations, and Capital Raising for Broadgates Capital Management

By

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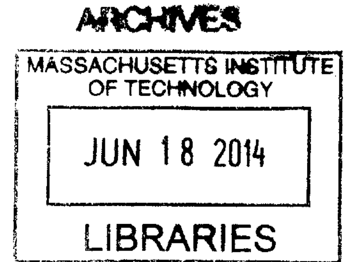
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MASTER OF SCIENCE IN MANAGEMENT STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2014

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Jeffrey David Mills

Submitted to the MIT Sloan School of Management on May 9, 2014 in partial fulfillment of the requirements for the degree of Master of Science in Management Studies

ABSTRACT

Launching a start-up hedge fund is a complex, multifaceted endeavor that requires an understanding of the interconnectivity between capital raising, investment strategy, regulation, and fund operations. The purpose of this document is to explore each of these categories and provide a plan for the launch of a hypothetical new fund (Broadgates Capital Management). In doing so, the key challenges of launching a new fund are uncovered, while clearly identifying how I would think about the fund's investment methodology and process.

The hedge fund industry is increasingly competitive, with over 1,000 new funds launching every year. In addition to these launches, more than 900 funds are liquidated annually. As investor expectations and regulatory guidelines continue to institutionalize hedge funds, managers are challenged with balancing not only the implementation of a value generating investment strategy, but also ensuring the efficient execution of the fund's operating/regulatory infrastructure. In order to successfully attract investors, all three of these critical elements must be in place. This paper argues that active fund management does in fact add value to investor portfolios and proposes a quantitative portfolio sorting strategy with a value-screen overlay. Broadgates Capital Management hopes to generate high risk adjusted returns by focusing on certain market anomalies while also utilizing traditional, value driven, fundamental analysis. An offshore master feeder fund structure will be utilized with the formation of a limited liability corporation as the management company. Finally, in order to raise between $100 and $150 million of investment capital, a meticulously constructed marketing strategy that articulates exactly why investors should choose Broadgates Capital Management is presented.

Thesis Supervisor: Mark Kritzman
Title: A Hedge Fund Business Plan: Investment Theory, Operations, and Capital Raising for Broadgates Capital Management

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ACKNOWLEDGEMENTS

I would like to first thank my thesis advisor, Mr. Mark Kritzman. Being a practitioner in the space, Mark was invaluable and provided critical guidance during the writing process. Specifically, Mark helped me think about the strategy aspect of Broadgates Capital Management. By first encouraging me to think about investment theory from an academic perspective, I was able to incorporate much of my MIT coursework into a robust investment theory discussion while also distilling that information into an actionable process that could be implemented in a real fund.

My family was endlessly supportive during the process, and I would not have been able to successfully complete this journey without them. My wife, Jamie, offered infinite patience and encouragement during the highs and lows of completing this work. As with everything in my life, I could not have accomplished this without her. My young daughter, Harper, has been a constant joy in my life and never failed to make me smile after a long day of class and writing. Thank you both for helping to carry me across the finish line of my academic career.

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I. The Hedge Fund Market Landscape 2013-14

A. Introduction

When beginning to consider the most important aspects of raising capital for the launch of a new hedge fund, a detailed understanding of the current marketplace is critical. Today's financial system offers both investors and fund managers enormous opportunity. However, the ability of fund managers to generate consistent risk adjusted returns is currently intertwined with measurable industry change. Fund managers are grappling with both a rapidly changing regulatory landscape and a shift in what investors require from their hedge fund investments. According to Preqin's most recent Hedge Fund Report (2014), the mantra for hedge funds in the coming year will be "adapt and evolve". As investor preferences change and regulators make efforts to increase transparency within the industry, fund managers are faced with a two-front challenge. Acknowledging these shifts within the industry is a natural foundation for a complete and thorough hedge fund business plan. The remainder of this section will be devoted to developing a detailed view of specific industry shifts and current demographics. In doing so an understanding of how a new fund should be structured, to meet the current standards mandated by both investors and regulators, will be established. It should be noted that the proposed fund, Broadgates Capital Management ("BCM"), will have a domicile in North America and initial offices located in Princeton, New Jersey.

B. Industry Overview: Assets, Geography, and Launches

(i) Assets

Global hedge fund growth has exploded in the past decade. According to EurekaHedge (2012), global assets under management ("AUM") in 2003 were $759.3 billion. Assuming current Preqin estimates of worldwide AUM, the industry has grown 342.4% in the past decade. Hedge funds are coming off a robust 2013 in terms of both asset growth and returns. Richard Baker (2014), the President and CEO of Managed Funds Association, stated that by the end of 2013 the North American hedge fund industry had reached a record level of managed assets. Data provided by Preqin's Hedge Fund Analyst reveals that North America enjoyed the largest asset increase in 2013 accumulating a total of $1.9 trillion

in assets under management. This total included a $300 billion, or 18.75%, increase primarily composed of net investment inflows from institutions and also fund performance. North America now represents 72% of worldwide hedge fund assets (Bensted 2014). For a detailed look at the dispersion of international assets under management, refer to Figure 1.1.

Figure 1.1

Manager Country Location	Assets under Management ($bn)
US	$1,893
UK	$440
Brazil	$51
Hong Kong	$47
Sweden	$39
France	$34
Australia	$33
Canada	$26
Switzerland	$25
Singapore	$21

Source: Preqin Hedge Fund Analyst

In order to understand how the industry further breaks down in terms of assets, it is helpful to review an industry-wide breakdown of assets under management and corresponding fund strategy. According to the BarclayHedge Alternative Investment Database, the top ten strategies, as categorized by AUM, can be found in Figure 1.2.

Figure 1.2 – Asset Dispersion by Strategy

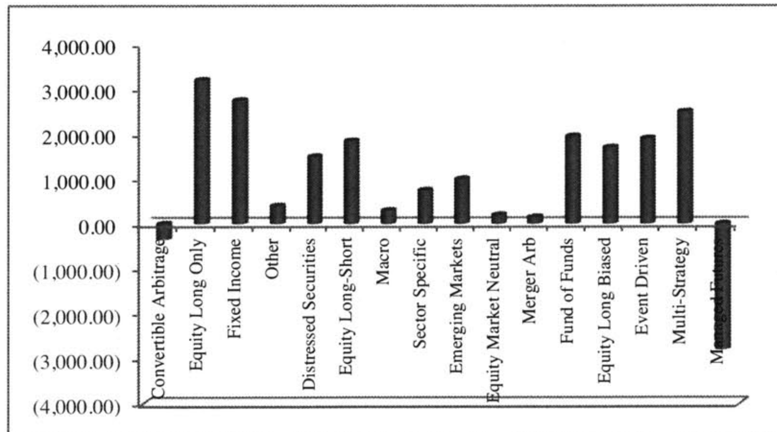
	Q3 2013	Q2 2013	Q1 2013
Fixed Income	$318.3B	$307.5B	$287.5B
Emerging Markets	$253.1B	$261.2B	$232.5B
Multi-Strategy	$225.0B	$230.3B	$241.6B
Event Driven	$202.1B	$188.4B	$174.4B
Macro	$192.0B	$176.0B	$167.6B
Equity Long Bias	$175.1B	$167.8B	$163.8B
Equity Long/Short	$173.5B	$170.0B	$176.9B
Distressed Securities	$151.7B	$146.6B	$142.6B
Equity Long-Only	$87.2B	$73.6B	$59.5B

Source: BarclaysHedge Alternative Investment Database

The flow of assets is also a critical component of the overall hedge fund landscape. Along with performance driven gains, investors have been relatively aggressive in allocating portions of their portfolios to hedge funds over the last 12 months. Another BarclayHedge (2013) study reveals that hedge funds had net inflows in 9 of the first 11 months of 2013. Net inflows peaked in May of 2013 at $18.8 billion, and for the year net inflows totaled approximately $63.7 billion.

Even more useful, is a breakdown of what fund strategies were being targeted by these inflows. According to monthly inflow data provided by BarclayHedge, asset flows by strategy in November 2013, which was the strongest month in the second half of the year, revealed that Equity Long Only funds received just over $3 billion in net inflows; the highest of all strategies tracked. Conversely, Managed Futures funds saw the largest net outflows, totaling approximated $2.5 billion. Refer to Figure 1.3 for a complete breakdown.

Figure 1.3 – Net Asset Inflows by Strategy for November 2013 ($ millions)

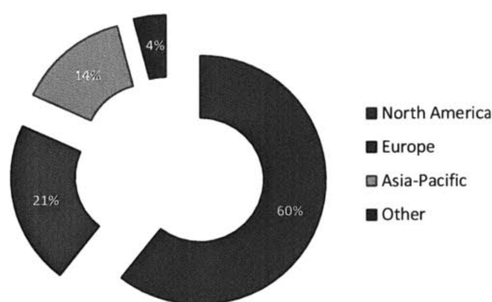


Source: BarclaysHedge Alternative Investment Database

(ii) Geography

As one may suspect, based on AUM, North America also has the largest hedge fund concentration by location. For perspective, there are currently an estimated 10,000 hedge fund managers worldwide (Ritholtz 2013). Refer to Figure 1.4 for a complete high-level geographic breakdown.

Figure 1.4 – Regional Hedge Fund Location Overview

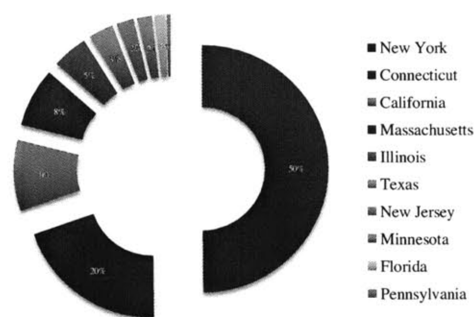


Source: Preqin Hedge Fund Analyst

As previously noted, the proposed fund in this plan would be located in North America, and have an investment focus that would also be concentrated on American companies. Therefore, let us take a deeper dive into that specific region. Generally speaking, the majority (67%) of US-based hedge funds are structured as single manager funds. Fund of funds represent the next largest group (19%), while Commodity Trading Advisors account for another 8%. New York represents the most concentrated hedge fund location in North America measured by AUM (Preqin 2013). Refer to Figure 1.5 for a geographical breakdown of the AUM for the top ten US states as of September 2013.

Figure 1.5 – Top Ten US States Ranked by Aggregate Assets Managed by Funds Located in that State

State Assets under Management ($bn)	
New York	838
Connecticut	334
California	155
Massachusetts	128
Illinois	76
Texas	53
New Jersey	36
Minnesota	31
Florida	22
Pennsylvania	7

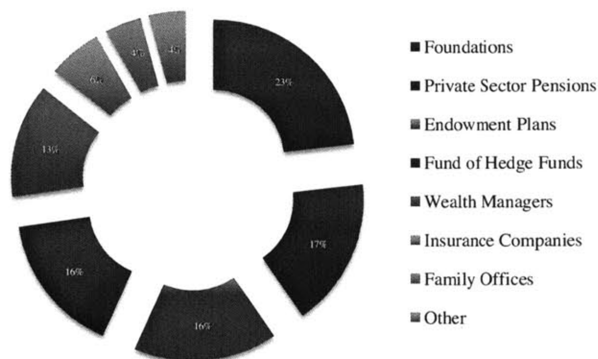


Source: Preqin Hedge Fund Analyst

Within the scope of this business plan, further granularity in terms of geography is useful. The fund's proposed location is Princeton, New Jersey. Therefore, let us take a moment to better understand the specific industry breakdown within that state.

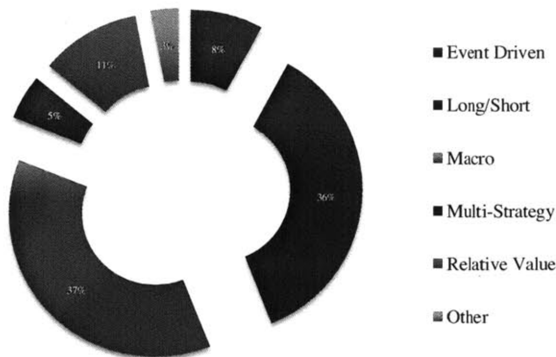
According to a Preqin Special Report (2013), the hedge fund management industry continues to grow within New Jersey. Although not as established as nearby hubs such as New York and Connecticut, the proximity to such locations makes New Jersey a natural setting for industry growth. Currently, 114 hedge fund management groups are located in New Jersey managing a combined $36 billion in assets. This makes the average size of a New Jersey hedge fund approximately $315 million. As a comparison, Massachusetts has over 3.5x the amount of AUM, however the mean assets under management per fund is not much larger, standing at approximately $389 million. Preqin also reports that the New Jersey State Investment Council, the states only public pension fund, has accumulated a portfolio of over 40 hedge funds, totaling $7.9 billion, which makes it the second largest hedge fund investor in the United States. Princeton University Investment Company and the Robert Wood Johnson Foundation round out the top 3 New Jersey hedge fund investors with $3.3 billion and $2.5 billion respectively allocated to hedge funds. Figures 1.6 and 1.7 each display a further breakdown of the New Jersey hedge fund landscape, in terms of both fund investors and fund strategy.

Figure 1.6 – New Jersey Hedge Fund Investor Breakdown in Terms of Number of Investors



Source: Preqin Hedge Fund Analyst

Figure 1.7 - New Jersey Hedge Fund Strategy Breakdown



Source: Preqin Hedge Fund Analyst

(iii) Fund Launches

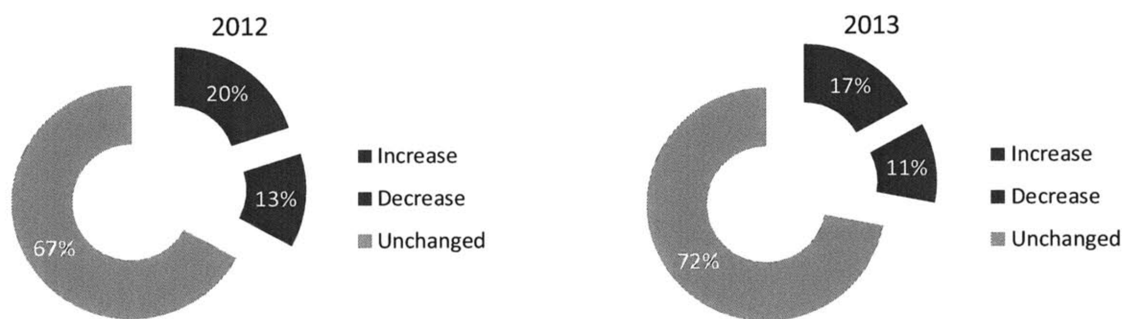
This final section of the industry overview will focus on new fund launches. Whether it is an existing manager raising capital for a new fund or a start-up fund approaching investors for the first time, Broadgates Capital Management must understand the competitive dynamics of the capital raising process. According to a Hedge Fund Research, Inc. 2014 report, new hedge fund launches declined to their lowest level in three years in 2013 (1,060 new launches in 2013 vs. 1,113 in 2012). Equity strategies led the way accounting for 428 of the new launches followed by macro strategies, accounting for 256 new funds. Although launches were down, over a thousand new funds typically launch each year making for an extremely competitive industry. This competition drives a large number of annual fund liquidations; in 2013, 904 funds closed their doors. Interestingly, the liquidation by strategy data aligns with the launch data. Equity hedge funds were the most frequently liquidated followed by global macro strategies.

C. Investor Trends and Hedge Fund Selection

Coming off a strong year of performance, investors are once again expected to allocate large sums of capital to hedge funds in 2014. According to a recent investor survey conducted by Barclays' Prime Services, the hedge fund industry could experience up to $80 billion of net inflows in 2014. This would represent a 25% increase over 2013. From an individual investor perspective, Ernst & Young's

Hedge Fund Survey (2013) found that institutional hedge fund investors allocate an average of 14% of their portfolios to hedge funds and only 11% of those investors planned to decrease their allocation over the next 3 years. Refer to Figure 1.8 for a comparison between 2012 and 2013 allocation expectations. Accompanying this continued strong demand are certain opposing forces coming from a clear shift taking place within the global hedge fund industry. Significant changes in the form of operational expectations, fee pressure, performance scrutiny, and capital raising are driving hedge funds to rethink certain aspects of their business models. The proliferation of tighter regulatory oversight has led to an increased concern on the part of investors relating to the policies and procedures that hedge funds have in place to ensure compliance. Comprehending this evolution is even more important when considering the amount of funds that are competing for a finite amount of capital. With over 10,000 hedge funds currently in operation, and almost 900 closing every year, differentiating your fund through the successful execution of initiatives designed to meet these needs is a key component of successfully attracting capital.

Figure 1.8 – Institutional Hedge Fund Investor Allocations: 3 Year Expectations



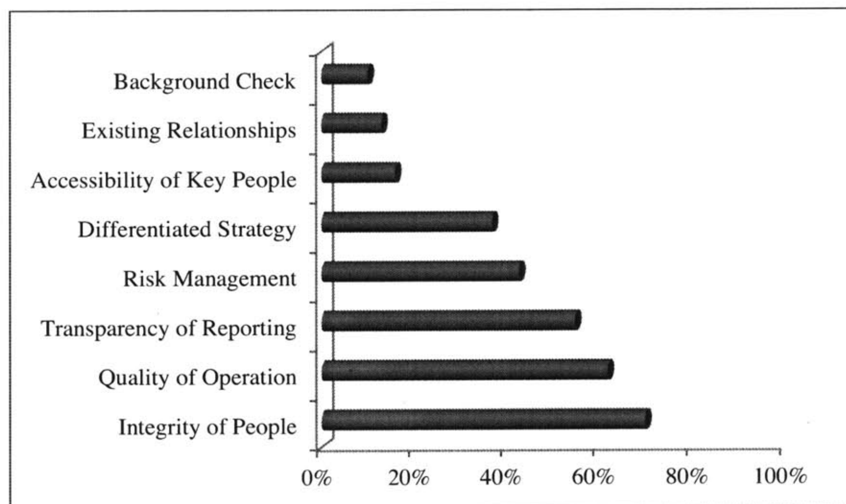
Source: Ernst & Young 2013 Hedge Fund Survey

<u>(i) Evolving Operational Expectations</u>

As capital flows into hedge funds continue to be dominated by institutional investors, a fund's ability to provide high quality operational and administrative functions is growing in importance. An Ernst & Young (2012) survey of 50 of the largest global institutional investors reports that "risk management, policies and oversight" ranks higher than "long-term investment performance" when

selecting hedge fund investments. It is clear that investor preferences are being reflected within the headcount strategies of hedge funds. Ernst & Young reports that between 2012 and 2013, hedge funds increased their full-time equivalent staff devoted to risk management, legal/compliance, and back office functions by 5%. In doing so, hedge funds are equipping themselves to meet the demands of their investors and comply with new regulatory mandates. Figure 1.9 further underlines the elements in which hedge fund investors are placing the greatest value.

Figure 1.9 – The 3 most critical elements when evaluating a fund? (beyond risk/return, volatility, liquidity)



Source: Advent Hedge Fund Investor Survey (% of respondents)

Thinking specifically about risk management as a critical operational component is important, as it comes up time and again in investor surveys. As investors continue to shift to a more institutionalized structure preference, a systematic implementation of risk protocol procedures is becoming necessary. It is no longer sufficient for hedge funds to focus solely on market risk when creating a risk management plan. Along with new regulatory requirements that will be discussed later in this section, investors are demanding a risk mitigation framework that deals with issues such as liquidity, credit, and operations. As put forth by Altarine Partners, a boutique risk management advisory firm, funds must not only become proficient in identifying the risks associated with their investment strategy, but they also must demonstrate to investors a systematic process for both monitoring and measuring the risks once

recognized. What is the rationale for taking relevant risks? What tools and models are being used to measure the risks? Who is responsible for the ongoing monitoring of risk? These questions, among others, are now regular concerns when an investor is evaluating a potential hedge fund investment.

In order to ensure that fund managers are sufficiently meeting regulatory obligations, Schult, Roth, and Zabel (2014) report that most institutional investors and fund-of-funds use a dedicated operational due diligence team to evaluate a manager. Post-investment due diligence in the form of frequent reporting is also becoming more common. It is not unusual for investors' due diligence teams to contact a fund's administrator, prime broker, lawyers, and accountants for further validation of a fund's compliance.

Hedge funds have worked extremely hard to adjust to the continued institutionalization of investor preferences. In fact, according to a Preqin survey, it appears as though investors are becoming more satisfied with the degree to which the industry is evolving. For example, the percentage of institutional investors stating that transparency is a key challenge for the industry has dropped by 12% in the six months ending July 2013. So, although still an important consideration, funds appear to be making the correct modifications. This serves to further underline the importance of having a keen awareness of these relatively new investor mandates. If a start-up fund hopes to raise sufficient capital, it must elevate its operational capabilities to compete with mature funds that are already making the necessary adjustments.

(ii) Evolving Terms and Conditions: Fee Structures and Liquidity

Working towards a more efficient and logical alignment of interests between hedge funds and their investors has been an important topic of debate in recent years. The contractual terms that define the relationship between hedge funds and investors are changing at a measurable pace and continue to evolve quite rapidly.

The historical 2% management fee and 20% performance incentive structure has come under great pressure in recent years. Currently, fewer funds have been able to sustain this structure, especially as it relates to the management fee portion of the compensation arrangement. According to the Wall

Street Journal, the average hedge fund now charges a management fee of 1.6% percent of assets and 18% of investment gains. It is becoming common for hedge funds to negotiate attractive fee structures with investors who commit early, invest large amounts ($100 million plus) of capital, or agree to more restrictive liquidity covenants. Part of this pressure is a result of performance concerns, but perhaps an even greater contributor is competition from new funds attempting to attract capital. This is important to note when thinking about raising capital for a new fund. As operational costs continue to rise, revenues will be under pressure as fee structures continue to evolve. It is worth mentioning that hedge fund and investor expectations regarding fees are not necessarily aligned. Ernst & Young's survey (2013) reveals this interesting divergence. When asked the question, "What will be the two biggest trends or developments in the hedge fund industry over the next one to two years?", 15% of investors said downward pressure on fees, versus only 5% of hedge funds. It will be interesting to see how this tension is resolved; however, one can certainly be sure that continued scrutiny in this area will remain for some time.

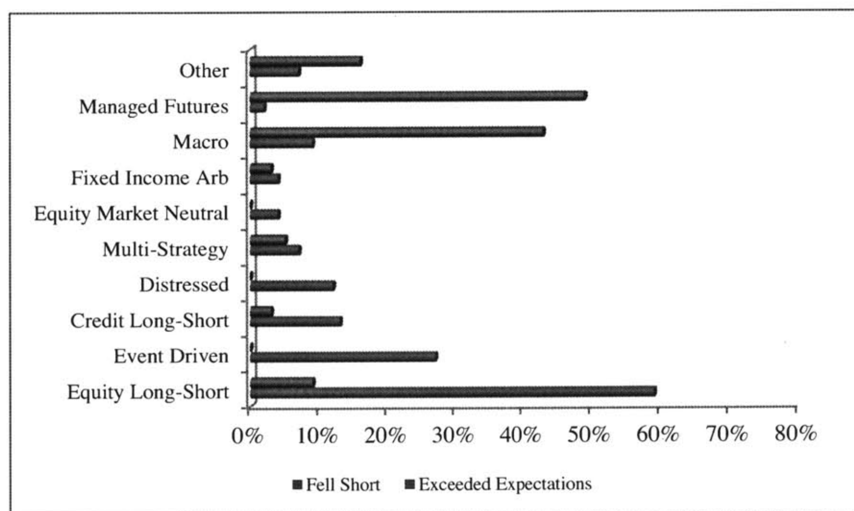
Liquidity is yet another growing concern when investors review a hedge fund prospectus. During the financial crisis, many investors were unable to access their capital as hedge funds initiated the 'gate' provisions within investor contracts. As such, many investors encountered liquidity issues as their money was frozen and the financial markets plunged. According to the Financial Times, by 2009 approximately 30% of hedge funds had enacted some type of liquidity provision. Investors are now more sensitive to such provisions and negotiation surrounding a fund's overall liquidity is now quite typical. In a paper published by SEI (2012), Andrew Beer, CEO of Beachhead Capital Management, said "As managers go to raise capital, they are under pressure to identify how quickly they can get out of every position, as opposed to what they would hold in a down market or buy if volatile markets presented better opportunities." Performance related concerns are particularly interesting as it relates to hedge funds increasing the availability of investor funds. Perhaps as a result of managers foregoing the illiquidity premium they may earn, Investments and Pensions Europe reports that long/short funds with quarterly redemptions have generated cumulative returns that are 22% higher than long/short funds in which

investors have weekly access to their capital. Currently, however, gates continue to be quite prevalent in the market and 1 year capital lock-ups for new funds are returning.

(iii) Trends in Performance Expectations and Strategy Preference

According to a 2014 Preqin survey, only 16% of investors felt that their hedge fund investments fell short of their expectations. This data suggests that hedge funds are in fact meeting the investment targets of their investors, which may explain the continued demand for hedge fund assets even as many funds trail behind passive market strategies. A more detailed discussion of the value added through hedge fund strategies will take place in a later section. Preqin also provides a satisfaction breakdown in terms of strategy which can be found in Figure 2.0.

Figure 2.0 – 2013 Performance Expectation Breakdown by Strategy (as of November 2013)



Source: Preqin Investor Interviews, November 2013

Understanding that expectations are being met is important, but what exactly are investor expectations and how do they break down? Askia, a large New York based hedge fund advisory firm, provides an interesting perspective resulting from their survey of 198 hedge fund managers overseeing over $1 trillion in AUM. According to the company's Hedge Fund Manager Survey (2014), approximately 60% of fund managers believe that investors expect an annualized return between 8-10%. The study reveals that the perceived annualized return needed to avoid net redemptions fluctuates

between varying fund categorizations. Referring to Figure 2.1 will provide an overview of these findings. The magnitude of elevated expectations for younger/smaller funds is particularly interesting when considering a start-up fund, although perhaps not surprising.

Figure 2.1 – Annualized Returns Needed to Avoid Net Redemptions

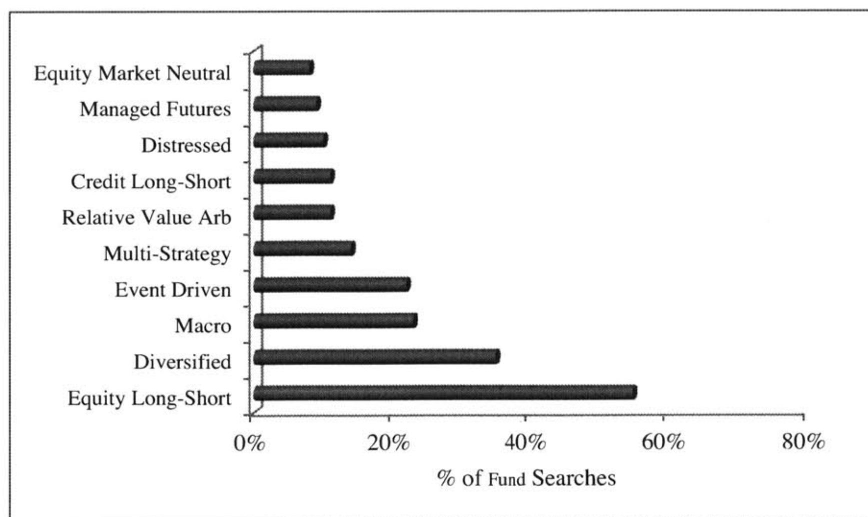
Age	Return	AUM	Return
0 - 4	9.50%	0 - $500M	9.80%
5 - 10	9.25%	$500M - $2B	8.90%
> 10	9.00%	> $10B	8.60%
Strategy	**Return**	**Regional Focus**	**Return**
Long/Short Equity	9.90%	Emerging Markets	10.30%
Event Driven	9.30%	North America	8.90%
Relative Value	8.80%	Europe	8.60%

Source: Askia 2014 Hedge Fund Manager Survey

Of course, it is important to understand that these figures are somewhat anecdotal in the sense that the sample size may not be completely representative of the total hedge fund manager population. However, the study is useful in terms of providing a prospective on the minimum annualized return expectations of hedge fund investors. Clearly, young funds believe that investors require stronger performance when compared to more seasoned managers. The ability of young funds to grasp this reality is important. In order to attract capital, new managers must have a reasonable expectation that they can deliver returns that are perhaps even greater than more experienced competitors.

In terms of pure strategy preference, Preqin's Q3 2013 Hedge Fund Round-Up reported that long/short equity would be the most targeted strategy over the subsequent twelve months. 55% of all hedge fund searches initiated by institutional investors in the third quarter of 2013 included a long/short equity component. Figure 2.2 further breaks down the most sought after strategies.

Figure 2.2 – Strategies Sought by Investors over the next Twelve Months



Source: Preqin Hedge Fund Investor Profiles

(iv) Ongoing Challenges – Performance and Capital Raising

Although investors appear to be reasonably satisfied with their hedge fund allocations, by no means does this imply that fund managers are not facing tremendous challenges. Fundamental changes in the financial markets have led to an evolution in thinking as it relates to things like risk, diversification, and ability to generate true alpha. Growing fund transparency and investor risk aversion is making it more difficult for funds to quietly absorb short-term losses in order to reap the rewards of a longer-term, perhaps more volatile, strategy.

On February 11, 2014 I conducted an interview with the head of trading at a $1 billion long/short merger arbitrage fund. The interview highlights some of the challenges relating to a fund's ability to consistently execute its strategy. From the interview: "Investor attitudes about risk impact a fund's ability to execute their strategy in a very big way. Evolving risk aversion actually underlines one of the harder aspects of investing, away from valuation; balancing what is supposed to be a disciplined investment strategy with what can be an investor's shifting appetite for risk. The ideal scenario is that an investor's "shifting" (notice the emphasis on shifting) attitudes towards risk has no impact on a fund's execution of strategy, because generally a fund's investment strategy by definition should not shift, but be based on a

disciplined approach that can be applied in a multitude of scenarios. But often times a pretty predictable investor psychology takes hold, even in the most sophisticated of investors. Hence, the bias we often see in the market place to become 'more-short' or hedged in periods of market panic rather than use it as opportunities to buy. I see investors and their fund managers are often quick to protect very small profits if it means being slightly up for the year (or in line with their peers) rather than risking very little to make huge profits for fear of showing negative performance. When an investor comes knocking at the door demanding why too much risk/not enough risk is being put on in light of whatever recent market events have occurred, this can impact a fund's ability to execute their strategy properly because it can distract the manager from the larger picture (or more generally the thesis that the fund had in the first place). Trying to keep a longer term (or perhaps just disciplined) perspective towards investments is remarkably in contention often with trying to simultaneously maintain a long term relationship with investors with shifting risk preferences. This can lead to a less than complete execution of a fund's base strategy."

As it relates to diversification and alpha, uncorrelated returns are much harder to generate in today's global financial market where diversifying assets are becoming a rare commodity. Ali Akay, CIO of Carrhae Capital stated, "Correlation is your enemy. So how do you create value when every asset class globally is getting more and more correlated?" An aversion to material fund drawdowns and a growing affinity for capital preservation within an increasingly correlated market is forcing hedge funds to introduce innovative ways to offer their customers true value. Schult, Roth, and Zabel (2014) discuss the exploration of non-traditional products to attract investor capital. Currently, many larger firms are offering specialty funds including elements such as concentrated funds, side-car funds, long-only structures, and even socially responsible funds. In an effort to source a differentiated investment vehicle, many investors are showing measurable interest in such products.

D. Regulation, Compliance, and Associated Costs (US Focused)

Regulation and compliance have been primary drivers of the institutionalization of the hedge fund industry. Within this reality, the complexity and cost of related operational functions are increasing at what most would categorize as a rapid pace. The Securities and Exchange Commission ("SEC") and other regulatory bodies are becoming less and less tolerant of even small transgressions, and a robust compliance system is a qualifier if hoping to raise capital. This industry shift is certainly positive in terms of legitimization and investor protection; however, the cost burden is creating significant barriers to entry for new funds while also squeezing profit margins for existing fund managers.

(i) Recent Regulatory Developments

Supporting the compliance efforts of the Securities and Exchange Commission, the Office of Compliance Inspections and Examinations ("OCIE") has fielded teams across the United States. OCIE's National Examination Program ("NEP") is focused across the financial services industry with an increasing emphasis on investment advisors and investment companies. As presented during the Private Investment Funds Seminar on January 14, 2014, the stated goal of these organizations is to improve compliance, prevent fraud, inform policy makers, and to monitor risk.

As of March 30, 2012, Title IV removed the registration exemption for private advisors. Both hedge funds and private equity funds would fall under that category. As of that date, all investment advisors with over $100 million in AUM were subject to the same SEC oversight requirements that applied to other, previously regulated, investment advisors. Some narrower exemptions still remain. For example, if you advise a private fund, as most hedge fund managers do, the registration exemptions applies up to $150 million in AUM. Nonetheless, this is a large change and will affect a very large percentage of the hedge fund industry. Clearly, this change initiated a large influx of SEC registrations from hedge funds across the country. As such, the NEP has paid special focus to indoctrinating these new entrants and ensuring their compliance with regulatory provisions. Norm Champ, Deputy Director, Office of Compliance Inspections and Examinations, U.S. Securities and Exchange Commission, gave a speech in May 2012 outlining many of these efforts. "Our (the NEP) strategy for these new registrants

will include (i) an initial phase of industry outreach and education (sharing our expectations and perceptions of the highest risk areas), (ii) followed by a coordinated series of examinations of a significant percentage of the new registrants that will focus on the highest risk areas of their business and help us to risk rate the new registrants, and (iii) culminating in the publication of a series of "after action" reports, reporting to the industry on the broad issues, risks, and themes identified during the course of the examinations." The speech also highlights certain key compliance provisions of the Advisers Act that are applicable to hedge funds. "These provisions require adopting and implementing written policies and procedures, designating a chief compliance officer, maintaining certain books and records, filing annual updates of Form ADV, implementing a code of ethics and ensuring that advertising and performance reporting comply with regulatory rules. In addition, once registered, advisors become subject to examinations by the SEC." It is useful to have a more detailed understanding regarding the specific nature of some of the provisions mentioned above.

NEP Examinations: The Private Investment Funds Seminar details the focus of these examinations. The NEP will be most interested in reviewing marketing materials to ensure they do not contain misleading information, portfolio management decision making/trading practices, systems to mitigate conflicts of interest, systems to ensure theft prevention of client assets, valuation procedures, and the calculations of fees and expenses. Additionally, the SEC is now boasting new proprietary analytical capabilities in the form of their Aberrational Performance Inquiry tool. This allows the regulators to systemically monitor returns as compared to certain benchmarks and a fund's stated investments strategy. The use of such analytics is expected to grow dramatically in fiscal 2013, according to the SEC.

Referring back to Norm Champ's SEC speech:

The Compliance Rule: This rule requires hedge funds to furnish written policies that are adopted to prevent violations of the Advisers Act and to conduct an annual review of such policies to ensure their adequacy.

Books and Records Rule: Hedge funds must produce accurate and up-to-date records relating to the firm's business. These records must be kept for 5 years.

Form ADV: Rule 204-1 of the Advisers Act requires the completion of an annual update of Part 1A and 2A of the Form ADV and amendments must promptly be filed whenever certain information contained in the Form ADV becomes inaccurate. This form provides an overview of the firm's business as well as details about the services offered, fees, conflicts of interests, and current disciplinary actions against the firm.

Form PF: Hedge funds with over $150 million in AUM must file this form. The form has two parts, with part 1a requiring information including the fund manager and employees, asset size and fund type. Part 1b requires information relating to investor concentration, leverage, liquidity, and performance. Part 1c must identify significant credit risk and trading practices. For larger funds, over $500 million in AUM, part 2 of this form must be completed. Information in part 2 includes investment concentrations, exposure by asset class and monthly portfolio values.

Code of Ethics Rule: Relatively self-explanatory, this rule states that a registered advisor must adopt an explicit code of ethics which outlines the expected conduct of the fund and its employees.

Advertising Rule: In accordance with section 206 of the Advisers Act, advertising is subject to anti-fraud provisions. No untrue or misleading statements can be present in any advertising materials.

Note that the above rules are referenced directly from various sections of the Dodd-Frank Wall Street Reform and Consumer Protection Act and are only some of the recent regulatory developments in the hedge fund industry. An exhaustive discussion is not appropriate for this paper; however, understanding the proliferation of such rules is extremely important when thinking about launching a new fund.

The implementation of stricter regulatory requirements has led to a meaningful increase in SEC enforcement actions. Shulte Roth and Zabel (2014) report that in fiscal year 2013, the SEC brought a total of 686 enforcement actions totaling $3.4 billion in disgorgements and fines. In total, the SEC opened 908 investigations in 2013 which was a 13% increase over 2012. Within the overall enforcement

landscape, the SEC has reported that it continues to prioritize cases involving investment advisors and hedge funds. The increase in investigative activity can be attributed to SEC initiatives such as the Whistleblower Program and the Broken Windows Strategy. The Office of the Whistleblower received over 3,200 tips in 2013 and paid out over $14 million to individuals providing quality information. In parallel, in order to send a broader deterrent message, the SEC is now strategically targeting smaller transgressions under its Broken Window Policy. The SEC believes that minor violations that are overlooked may promote larger scale breaches of the law. As an example, the SEC will be looking for more technical and compliance related matters, rather than simply fraud and insider trading.

(ii) The JOBS Act

A discussion of important regulatory changes would not be complete without mentioning the Title II modifications to Rule 506(c) of Regulation D, better known as the JOBS Act. Under the JOBS Act, which became effective September 23, 2013, the SEC has approved the removal of the ban on general solicitation and advertising in private securities offerings, including hedge funds.

Bank of America Merrill Lynch ("BAML") recently published a white paper outlining some of the critical elements of the JOBS Act that are directly related to the hedge fund industry and capital raising. According to the paper, hedge fund managers will eventually use these changes to raise their funds' public profiles with both institutional investors and high net worth individuals. The implications will be broad; however, in general, hedge funds will now have the option to actively use marketing to grow AUM. BAML does underscore the fact that increased scrutiny on the US financial markets will dull the impact of the JOBS Act in the short term. To this point, uncertainty surrounding the new regulation has led to few fund managers participating in general solicitation of their funds. Avoiding regulatory risk is a top priority of these managers. Therefore, the true impact of new marketing and advertising capabilities may evolve more slowly over the next 2-3 years as the industry gains further clarification surrounding necessary compliance related issues.

It is worth noting that fund managers do have a choice when completing their Regulation D form filings. Rule 506 has now been divided into 506(b) and 506(c). If a manager chooses to select 506(b),

their fund will be prohibited from engaging in general solicitation. However, the fund's investors may include up to 35 non-accredited participants. Conversely, when electing 506(c), a firm is now able to pursue general solicitation when marketing their fund; however, reasonable steps must be taken to ensure that all investors in the fund are accredited. Once Rule 506(c) is selected, and subsequent general solicitation has taken place, it is very difficult for a manager to amend this selection at a later date. As noted on HedgeFundStarter.com, this is a very important question when considering a start-up fund. A new manager must ask whether the ability to utilize general solicitation to market their fund is more important that preserving the flexibility of including non-accredited investors such as family or friends.

At this point, a high-level review of some of the changes associated with Rule 506(c) is appropriate. Referring back to the BAML white paper, general advertising will be allowed, but fund managers must make a 'reasonable' effort to ensure that all fund investors are accredited. Hughes Hubbard & Reed LLP points out that Rule 506(c) does not outline a required verification process. Instead, the SEC has identified certain elements that hedge fund managers should consider when determining whether their internal verification process is reasonable. These elements include understanding the nature of the purchaser, review of available regulatory filings, review of reliable third-party information, and considerations regarding the terms and type of offering. The adopted rule does, however, specifically note four verification methods that could be used and would be considered reasonable under the new rule. Such methods include the review of income/net worth, legal third party confirmations, and previous participation in the purchase of accredited investor securities. Specifically related to the advertising itself, all materials are subject to Financial Industry Regulatory Authority rules. Further clarity, as it relates to the retention of marketing materials and the use of performance data, is expected over time. As such, it is important that hedge funds file all marketing materials. Also, until specific performance standards are outlined, as in the mutual fund industry, funds will be best served to refrain from including performance data in their advertising materials. Another notable change includes the distinction between the Section 3(c)(7) exemption, which now allows 1,999 Qualified Purchasers to invest, and the Section 3(c)(1) exemption which is still limited to only 100 accredited investors. Finally, Regulation D now includes a

'bad actor' disqualification that precludes individuals, who have committed any of a specified list of bad acts, from participating in the 506(c) general solicitation exemption.

BAML makes some interesting predictions regarding the future of how hedge funds will interact with the changes initiated in the JOBS Act. Once compliance with the new regulations becomes clearer, BAML believes hedge funds will use advertising to build their brands, particularly with high net worth individuals. As has already been done within the mutual fund industry, a focus on event sponsorship (like PGA Tour events) may not become uncommon. It is possible that these changes catalyze an evolution within hedge funds themselves. Over the long term, BAML believes that, "the building out of alternative funds into large asset gatherers with more retail focused products" has the potential to accelerate the transformation of hedge funds into more institutionalized, regulated assets managers.

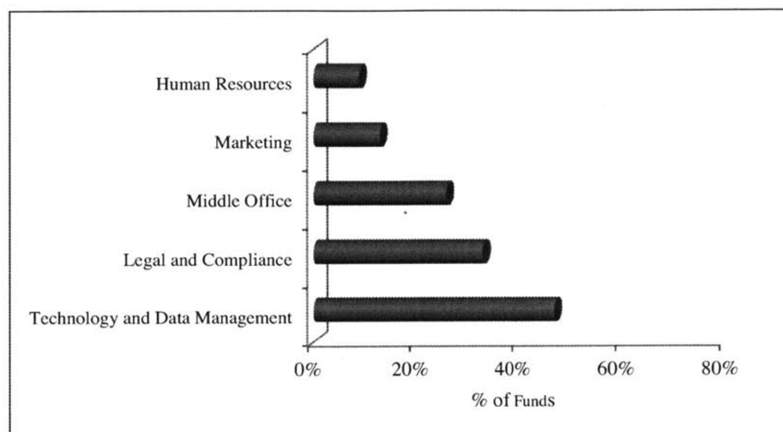
(iii) Costs of Compliance

As the complexity of compliance has exponentially increased across the hedge fund industry, so has the cost. According to an Ernst & Young survey, 'increased regulatory demands' ranked as the most challenging aspect related to data and data management for hedge funds. In KPMG's 2013 Cost of Compliance Global Hedge Survey, a reported $3 billion is being spent on compliance in the hedge fund industry. This represents an average of 7% of total operating costs. Approximately 64% of hedge funds surveyed said that they spend about 5% of their total operating costs on compliance related functions, while another 21% said they spend more than 10%. Due to economies of scale, smaller hedge funds (less than $1 billion AUM) spend a much larger proportion of their total operating budget on compliance. Over a third of significantly smaller funds (under $250 AUM) are spending more than 10% of their operating budget on compliance. For comparison purposes, only 14% of funds with AUM between $1 billion and $5 billion said the same. It is important to note that the increase in compliance costs in primarily being absorbed by the fund managers. At this stage, it is unusual for hedge funds to pass these extra expenses on to their investors.

In order to help cope with the cost and complexity associated with the evolving compliance landscape, outsourcing certain compliance functions is becoming a strategic priority for many fund

managers. As service providers continue to enhance their hedge fund solutions, more and more managers are attracted to this option. Refer to Figure 2.3 for an interesting breakdown of the functions that are most often outsourced by hedge funds.

Figure 2.3 – Outsourced Functions – In Whole or in Part (% of respondents)



Source: KPMG 2013 Global Investor Survey

E. Implications

As has been presented, the hedge fund industry is experiencing a period of both extreme growth and unprecedented change. Within this landscape lie a number of very serious challenges for young hedge funds initiating a capital raising campaign. Beyond the difficult process of raising capital, operational complexities have increased tremendously and the successful founding of a start-up fund may be more difficult to execute than ever before. Barriers to entry are rising and success is predicated upon not only superior investment skill, but a myriad of operational and organizational competencies. This does not mean, however, that success in this industry is out of reach. Investor demand for hedge fund assets remains strong and in an industry where objective performance drives success, growing a business is possible. The remainder of this paper will outline a detailed plan for such a business, including both a discussion about investment strategy and a complete operational framework.

II. General Strategy Discussion and Hedge Fund Value

One of the most challenging aspects of money management relates to the complicated interaction between the immediate value proposition offered to investors and the foundational investment principles that will sustain that value into the future. Many fund managers have enjoyed only short-term success (and great *personal* fortunes) due to the inability to derive a sustainable framework within which the fund's strategy can evolve over time. True value in the investment management business should only be measured by long-term value creation. Anything short of such a measure can easily be attributed to something as simple as luck. A discussion of how value is defined more broadly will also be a vital component of this section. It is Broadgates Capital Management's mission to create long-term, sustainable value for its investors by following a systematic framework for business and risk diversification. Before beginning a more specific discussion about strategy, a very simple question should be asked: can investors truly benefit from active management? This is a polarizing question and it is worth covering both sides of the debate.

A. Are Markets Efficient? Do Managers have Skill?

A discussion of this debate cannot begin without considering whether or not markets are efficient. Those who champion the Efficient Markets Hypothesis would clearly assert, as an extension of this core belief, that active fund managers cannot consistently beat the passive market index. They would argue that any outperformance is the result of chance, as the semi-strong efficient markets theory hypothesizes that market prices reflect all publicly available information. Consequently, assets immediately reflect any new information and prices are always correct. If this is true, it becomes impossible for active managers to add any additional value through the execution of skillful investing. In other words, outperformance simply equals luck. I would argue, however, that markets are not efficient within the semi-strong framework. Evidence that opposes efficient markets is not in short supply, and I find certain examples hard to ignore.

Jack Schwager (2013) provides some interesting insights that refute efficient markets. He introduces the concept of negative value assets in a description of 3Com selling a percentage of its

holdings in Palm, mostly through an initial public offering. The offering of Palm shares was well received and the share price was bid up from $38 to $95.06 during the first day of trading. 3Com still owned 95% of Palm, therefore 3Com shareholders indirectly owned 1.5 Palm shares for every 3Com share based on the current outstanding share balances of each company. The subsequent market price level for these two companies was perplexing. As Palm shares rose, 3Com shares plunged 21% the day of the IPO, closing at $81.81. Schwager goes on to assert that based on the implied holding of Palm shares, 3Com should have closed at a per share price of $142.59.

$$Effcient\ Price: \$95.06 * 1.5 = \$142.59$$

Essentially, the market was valuing the portion of 3Com that excluded Palm at -$60.78. Clearly, assigning such a large negative value to all of 3Com's remaining assets did not make logical sense. Finally, 3Com had publicly stated its intention to sell the rest of Palm by the end of that year, which would convert investor's implied ownership of Palm shares to actual ownership within 12 months. In no completely efficient market would investors pay $95 for one share of Palm when they could have paid $81.81 for one share of 3Com which represented an ownership of 1.5 Palm shares. Whether a behavioral bias or some other explanation is most appropriate, one cannot logically argue that these stocks were appropriately priced. In fact, over the next 4 months, prices moved as one may suspect as the spread between the two companies' shares dramatically tightened.

This example begs a very important question from an investment management perspective. Are price anomalies such as this so rare that it is impossible for active managers to exploit them on a regular basis? Schwager (2013) provides an example that may serve to help answer this question. Certainly, fund manager track records have been an important element of this debate: someone points to a long track record of outperformance, and an efficient market proponent rebuts by saying that in a world with so many investors such track records are bound to occur from time to time based purely on luck. Let's look at one example. The Renaissance Medallion Fund, founded by a team of mathematicians and scientists, achieved gross returns of 4.77% a month for 19 years. During this period, 90% of the months had positive returns. Schwager points out that he uses gross returns in this example because he was only

interested in (as I am) understanding the probability of attaining such a record by chance. However, for perspective, Zuckerman (2013) reports that Medallion has achieved an average annual return of about 35%, after fees, since 1988. Perhaps more impressive, the fund had only one losing quarter since 1995. Schwager estimates that if markets were truly efficient, the odds of achieving such a performance record by accident are approximately 10^{-48}. Track records such as this imply that, with a great deal of probability, a small number of very talented managers are able to achieve performance that defies completely efficient markets.

Other more academic studies have also concluded that markets are not completely efficient and that certain skilled managers have the ability to identify value in the market. As it relates to market efficiency, Grossman and Stiglitz (1980) argue that complete informational efficiency in the market is impossible because in a world of expensive information, traders must earn an excess return in order to incentivize them to gather and analyze the very information that is making the markets more efficient. The paper concludes that markets are therefore *mostly* efficient, otherwise analyzing the fairness of prices with available information would be useless. As such, the presence of excess returns can be categorized as economic information rent paid to those who gather information and as a result make markets more efficient. Wermers (2000) provides data supporting the idea that, on average, active managers do in fact have stock picking ability. According to data compiled between January 1, 1975 and December 31, 1994, which combined a CRSP mutual fund database and CDA dataset of mutual fund equity holdings, actively managed mutual funds held stock portfolios that outperform the CRSP value-weighted index by 1.3% annually. However, net of fees, these mutual funds underperform broad market indexes by 1% per year. The 2.3% difference between stock holding returns and net fund returns was composed of non-stock holdings (0.7%) and expenses and transaction costs (1.6%). Thus, active mutual fund management produces excess returns that beat the market by the approximate amount of their costs and expenses. This conclusion is consistent with Grossman and Stiglitz (1980) and also suggests that active managers do have an ability to identify underpriced stocks.

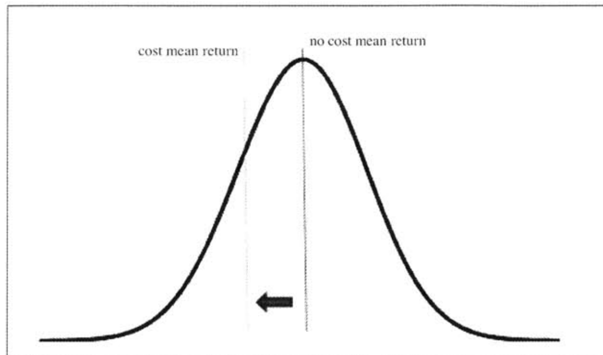
This evidence does not suggest that outperforming the market is easy; in fact I believe exploiting market inefficiencies to be incredibly difficult as a result of markets being *mostly* efficient and the presence of fees and transaction costs. However, I hope these examples serve to dispel the notion of complete market efficiency, and by extension, the implied futility of all active management.

B. A Case for Passive Investing (Even in the Absence of Semi-Strong Efficient Markets)

Even in the presence of *mostly* efficient markets, a case for passive investing can be made. Index, also known as passive, investing is a strategy which seeks to replicate a market benchmark index while minimizing the level of deviation from that target. Consequently, alpha generation is not a focus of this investment methodology. This section will primarily focus on index-investing as perceived by one of the pioneers of this strategy. In a recent white paper, Vanguard (2013) argues that the allure of active management is the potential for beating an associated benchmark and although index funds by nature tend to underperform their benchmark indexes (by the amount of fees associated with the fund) comparatively, the index funds outperform actively managed funds net of fees.

William Sharpe (1991) pointed out that the holdings of every investor in a given market combine to form that market. As such, investors that outperform are paralleled by other investors that underperform, otherwise categorized as a zero-sum game. Market returns are, therefore, normally distributed, and the aggregate of all returns is the mean or benchmark return. In practice, investors are also exposed to certain costs associated with things like trade commissions, management fees, and taxes. Such expenses have attributed to the difficulty active managers face when trying to outperform either an index or their passive strategy counterparts. Market frictions such as cost shift the mean return to the left as seen in Figure 2.4.

Figure 2.4 – Impact of Cost Frictions on Mean Return



Now, market returns are normally distributed around the "cost mean return" line in Figure 2.4. Consequently, taking into account the reality of costs, only the tail of the new normally distributed return curve lies on the positive side of the "no cost mean return" line. Even in the face of some market inefficiencies, costs make alpha generation a difficult proposition for actively managed funds. Vanguard (2013) sums up these findings by stating that, "a much larger portion [of returns] is now to the left of the market line, meaning that after costs, most of the dollar-weighted performance of investors falls short of the aggregate market return". Therefore, costs from this theoretical perspective are a major driver of expected returns and investors who are able to minimize the impact of cost frictions have a greater probability of achieving higher returns than investor who incur high costs.

Academic studies of fund performance have also been able to illuminate the importance of a fund's expense ratio. Vanguard (2013) published some of these research results. For example, Philips and Kinniry (2010) demonstrated that using a fund's expense ratio is significantly more predictive than using a fund's Morningstar rating when attempting to predict future returns. Similarly, Wallick (2011) attempted to predict future fund performance by looking at factors that included age, size, turnover, and expense ratio, concluding that the expense ratio factor was the only statistically significant element in identifying future returns. In all studies, lower expenses led to higher subsequent performance. Of course, when comparing the asset-weighted expense ratios of active and passive funds, the passive strategies have much lower costs. For example, as of December 31, 2012, Morningstar data concluded that the average dollar weighted expense ratio for actively managed US equity mutual funds (including small, mid, and

large cap) is 0.78 higher when compared to index funds. Therefore, a fund's expense ratio can be used by investors as a tool when attempting to understand the most efficient way to allocate capital and generate superior returns. Index fund investing is a great way for investors to deploy their capital in an efficient, low cost way that should increase the probability of achieving higher future returns when compared to actively managed alternatives.

While the idea of minimizing cost can certainly help investors outperform many active funds, one cannot deny the fact that some active managers have been able to outperform a stated benchmark for reasonably long periods of time. The challenge is to identify these managers and allocate capital to their funds in order to achieve outperformance. In fact, Carhart (1997) reported no evidence a fund's performance persists after adjusting for the Fama-French 3 factor model. In other words, often times fund performance is unpredictable, and therefore, it is very hard for investors to identify skilled managers based on their past performance. Within this reality, why is money still being allocated to actively managed portfolios when they are only adding value at comparatively lower probabilities? In the case of hedge funds, perhaps part of the answer lies in the definition of how investors perceive value.

C. A Case for Active Management: A Hedge Fund Perspective

As previously discussed, money continues to flow into hedge fund strategies at a rapid pace. As a reminder, Hedge Fund Research data shows that hedge funds manage almost 30 percent more capital today versus just prior to the financial crisis. Although not directly related to hedge funds specifically, it is interesting that even Vanguard currently has a quarter of their funds invested in active strategies. So the question remains: what is the real value of investing in hedge fund strategies? This question rings even louder in the ears of some investors after a year when most hedge funds lagged behind the Standard and Poor's 500 Index ("S&P 500") return.

In a recent interview on CNBC, Michael Crofton, the President and Chief Executive Officer of The Philadelphia Trust Company, makes a general case for active management by saying that hedge funds have the ability to more effectively and proactively manage risk. I buy into this argument for a number of reasons. Looking at recent data, hedge funds have done this in the form of reduced volatility

and lower drawdowns. Reuters reports that from 2007 to 2012, average annual hedge fund volatility was 9.8 percent according to the HFRI index. Comparatively, the MSCI Global Equity Index was almost twice as volatile at 18.2 percent and volatility in the S&P 500 was 16.6 percent. The story has been similar when looking at performance from a capital drawdown perspective. In 2008, at the height of the financial crisis, the MSCI World Index dropped by more than 40 percent. Over the same period global hedge funds fell less than 20 percent, according to Hedge Fund Research. Perhaps, in the wake of intense market volatility, investors are increasingly defining value in terms of risk management, rather than simply benchmark outperformance; and they are willing to pay for it.

Due to the reality of high fees and liquidity constraints, hedge fund investors rightfully expect a unique value proposition that cannot be found when considering other investment options. Recently, however, the media has run countless stories detailing how the lagging performance of hedge funds does not justify the fees charged to investors. For example, the New York Times published a hedge fund article in October 2013 titled "How to Pay Millions and Lag behind the Market". Although performance scrutiny is a growing concern within the industry, investors have not been deterred from continuing to dedicate capital to this asset class.

In a year when the S&P 500 was up 30 percent, as it was in 2013, the fact that hedge fund performance fell short of the index may not be surprising. During extreme bull markets, investors may lament their hedge fund allocations. However, as stated by Hansen et al. (2013), "capital allocators should not underestimate the positive and long-term impact on portfolios from the smoothing effect of differentiated return streams, capital protection, and reduced volatility". Hedge fund investors seem to understand these benefits. Hansen's paper goes on to assert that each unique fund strategy should serve a specific function within a broader investment portfolio. A fund manager must be clear in how a strategy should perform in certain markets while also detailing elements such as volatility, beta, and upside/downside capture rates. Most often, a fund's value proposition manifests in an asymmetric upside/downside capture percentage. Hansen's report gives the example of a hedge fund dropping 11 percent in a 50 percent down market and rising 28 percent in a 50 percent market increase. Paying a

premium for downside protection is not a phenomenon unique to hedge fund investors. This scenario plays out quite clearly in options markets' "volatility smirks". Significantly out-of-the-money put options are priced relatively higher in the market when compared to the theoretical Black-Scholes pricing model output for the same options for this precise reason. Investors are generally risk averse and will pay more in order to protect against negative tail-risk. Therefore, although many hedge funds may not beat broad benchmark indices during bull markets, the value added is concentrated in the risk side of the risk-reward trade-off paradigm.

D. Additional Value Considerations: Do Hedge Funds Increase Financial Market Liquidity?

As it relates to the efficient operation of financial markets, the proliferation of hedge funds has sparked a new debate about the costs and benefits of a growing number of assets being managed by these types of funds. For example, the provision of liquidity is an often cited advantage of hedge fund activities. This fact is generally accepted within certain financial market conditions; however, recent research focused on the external funding element of hedge funds calls into question the ability of these funds to increase market liquidity during deteriorating market conditions. So the question becomes: What is the net result? Overall, do hedge funds reduce or increase liquidity in the markets? This debate often takes center stage in the discussion of how the propagation of hedge funds is shaping the overall risk landscape of the markets. Although not specific to Broadgates Capital Management or any other hedge fund, an examination of this debate is important when considering the broad impact of hedge funds on the market. An entire paper could be devoted to this discussion; therefore, only a brief overview of the key elements is presented below.

Arbitrageurs, such as hedge funds, are said to often play a key role in less efficient markets by exploiting price anomalies. It is often the case that these inefficiencies exist in less visible, less liquid corners of the market. Sebastian Mallaby, a Fellow with the Council on Foreign Relations stated, "By buying irrationally cheap assets and selling irrationally expensive ones, they [hedge funds] shift market prices until the irrationalities disappear, thus ultimately facilitating the efficient allocation of the world's capital". Jeremy Seigel, Professor of Finance at the Wharton School of the University of Pennsylvania,

agrees that this activity both increases liquidity and improves price discovery within these less efficient markets. KPMG presents a 2012 study conducted by The Centre for Hedge Fund Research at Imperial College London which argues that hedge funds are key liquidity providers within the global financial markets. One particular argument states that hedge funds engage in a large percentage of overall market short-selling, and a certain degree of liquidity and price discovery can be directly attributed to the actions of these funds. For example, Beber and Pagano (2011) report that short-sale bans during the financial crisis from 2007 – 2009 had a significant negative impact on both liquidity and price discovery. These effects were most dramatic for small capitalization stocks. Marsh and Payne (2010) provide specific evidence of this through their study of the short-sale ban on financial stocks imposed in the UK equity markets in late 2008 early 2009. The study demonstrates that although order flows were unaffected (financial stocks were being more aggressively sold than other sectors), trading volume in financial stocks was significantly reduced. As such, the study concludes that the market for financials was much less efficient as the short-selling ban reduced overall price discovery. Once the ban was lifted, trading volumes substantially normalized, reinstituting a more efficient price discovery process through increased liquidity. Another example, presented by Patrick M. Parkinson, former Deputy Director of the Division of Research and Statistics at the Federal Reserve, refers to the stress in the fixed income markets during the summer of 2003. During testimony before a Senate Subcommittee on Securities and Investment, Mr. Parkinson stated, "The willingness of hedge funds to sell options following a spike in options prices helped restore market liquidity and limit losses to derivatives dealers and investors in fixed-rate mortgages and mortgage-backed securities".

In contrast, Cao and Petrasek (2011) quote the Wall Street Journal from November 7, 2008: "Hedge funds are selling billions of dollars of securities to meet demands for cash from their investors and their lenders, contributing to the stock market's nearly 10 percent drop over the past two days". The paper goes on to argue that because of the 1.) short-term funding component of hedge fund leverage 2.) short-term performance horizon of many hedge fund investors, liquidity shocks may cause hedge funds to de-lever by aggressively selling into already illiquid markets. This activity may serve to further pressure

available liquidity in deteriorating markets. The empirical results of the study confirm the model presented by Brunnermeier and Pedersen (2009) where asset ownership by levered hedge funds magnifies liquidity risk. Supporting evidence is presented by their findings that on days with large adverse shocks to market liquidity, there is a negative relationship between abnormal stock returns and the fraction of shares held by hedge funds in the preceding quarter.

The debate of hedge fund liquidity provision versus consumption has no clear answer. One may assume that the answer changes based on market conditions and the individual strategy/terms of a particular fund. Regardless of what the truth may be, it is important to understand the factors that contribute to both sides of the discussion. In doing so, one acquires a perspective on how the introduction of a new fund (and the associated strategy, leverage ratios, lockup terms etc.) may contribute to the overall operational efficiency of the markets.

III. Broadgates Capital Management: Strategy Thoughts and Theory

Some may argue that an active manager's ability to mitigate risk generally relies upon the ability to time down markets; this is an extremely rare ability. For long-only equity managers, this may be true as they have to rely on moving assets into defensive securities at precisely the right time. Additionally, active mutual fund managers that aspire to beat a benchmark are further pressured to hold the right stocks at the right time. Taking a defensive posture too soon could result in underperforming the index and subsequent outflows from the fund. In my mind, the ability to pursue an absolute return hedge fund long/short strategy provides the flexibility to establish a disciplined investment approach that is built to minimize risk, without the need to time unpredictable market movements. Broadgates Capital Management will strive to implement an absolute return long/short (long biased) equity strategy that systematically focuses on specific value fundamentals and risk management controls, while exploiting certain market anomalies that have been rigorously back-tested over long periods of time. In theory, this strategy would be structured with an initial fundamental value screen for potential investments. Then, the fund would use a quantitatively driven approach to sort portfolios based on factors that have been identified as critical in maximizing return and controlling risk. The rest of this section will detail

important elements that Broadgates Capital Management would consider when finalizing the most efficient implementation of its strategy. These general principles will serve as important strategy guidelines while also illuminating key observations that Broadgates Capital Management would rely upon when creating its investment prospectus.

A. Long-Short: Increasing the Information and Transfer Ratios. Controlling Market Exposure

Part of BCM's strategy would be to ensure that the fund is able to fully express its views on the stocks it analyzes while also pursuing specific beta exposure targets. The fund would achieve this objective is two ways. First, both long and short positions would be taken in US equities. Second, the beta of each position would be analyzed in order to control for overall portfolio risk. From a long-term perspective, BCM would like to offer multiple funds that would allow investors to achieve specific goals based on their individual investment mandates. Certain options may include the following strategies:

For investors looking for directional market exposure, BCM could open a 130/30 extension fund. A 130/30 fund strives to achieve a net long position of 100 percent by going 30 percent short and 130 percent long. Initially, such strategies were utilized to increase the return of typical long-only funds by introducing a short element while also keeping beta exposure at 1. Assuming that the fund's talent for identifying alpha opportunities is significant, the ability to efficiently execute BCM's strategy would rely on maintaining a high transfer coefficient. Implementing a strategy that includes a short component allows a fund to increase both its transfer and information coefficients ("TC", "IC"). Even when holding the IC constant among funds, short-selling dramatically increases the TC and, therefore, increases actively managed returns. De Silva (2007) explains that active managers begin their process by forecasting alphas. In the case of BCM, that would be alpha forecasts for individual US equities. These forecasts would then be used to determine the weights of these holdings within the larger portfolio, eventually resulting in the relative return of that portfolio. Performance can be measured, in part, by using an information coefficient. This tool serves as a type of correlation coefficient which measures the linear relationship between the predicted and actual alphas; in other words, how good that manager is at predicting stock returns. Within certain strategies, such as long-only, there is a persistent gap between the signal strength

of the information coefficient and the active weights of the portfolios. This gap is measured by what is known as the transfer coefficient. Essentially, this coefficient measures how efficient a fund manager is able to translate information into actual weights within a portfolio through a calculation of the correlation between a stock's attractiveness and its weight within a given portfolio. Therefore, a simple model can be used to understand how these indicators equate to active portfolio returns $E(R^{active})$.

$E(R^{active})$ = TC x IC $\sqrt{N\sigma^{active}}$, where N = number of securities, σ^{active} = active risk target

Clearly, the transfer coefficient plays a critical role in determining the outcome of active portfolio returns. As mentioned, certain strategy constraints can have a significant effect on the TC. Harvard Business School (2008) published a case that clearly demonstrates this idea in practice considering the passive weights associated with a broad market index. For an index such as the Russell 1000, typically a small number of stocks accounted for a large percentage of the index value. For example, at the time of the case, 91 percent of the stocks in the index had a weight less than 50 basis points. A long-only manager, therefore, could only express an intensely bearish view by not owning the stock, which equated to an underweight position equal to the stock's very small benchmark weight. Consequently, although this manager may have strong conviction about the troubled security, the TC is quite small which will put measurable pressure on returns and as an extension on the IC. As not to belabor the point, Clarke (2005) demonstrated that active investment strategies that use a shorting ratio between 20 – 30 percent are able to optimize these coefficients while controlling for things like tracking error. BCM would like to use the idea of a 130/30 fund as a fundamental design element when thinking about a potential fund strategy that offers a beta exposure of 1, while utilizing short-selling to bolster overall returns. That being said, the fund would reserve the right to vary the short ratio over time while also introducing a ceiling on the percentage of short positions in order to control risk.

Like any strategy, however, investors need to carefully consider the strategic objective of a 130/30 fund and how that translates to relevant risk and reward. The attraction of such a strategy is that an investor can take advantage of a skilled manager's ability to increase the information and transfer ratios of

his/her stock picking ideas (or quantitative methodology) by exploiting both positive and negative views on various companies. Clearly, an investor must consider how confident they are in the manager's ability to structure such a portfolio. Besides this fundamental consideration, investors should think about:

Taxes: Especially in the case of endowments and other tax-exempt investors that typically invest in such funds, 130/30 structures do not generate additional tax burdens due to the levered nature of strategy. Therefore, if looking for additional long exposure through leverage, avoiding "acquisition indebtedness" associated with traditionally borrowed funds is an important thing to consider when evaluating the appropriateness of this strategy. For taxable investors, a 130/30 fund may have higher tax consequences because of the separate tax treatment for short positions and additional taxes associated with higher portfolio turnover.

Costs: Investors should be aware of the additional costs associated with shorting/borrowing stocks. As quoted in the above referenced HBS case, this is typically 50 to 75 bps on the value of the short sale proceeds. The trading costs are also higher due to the greater turnover rate when compared to long only portfolios (roughly 60 percent higher in a 130/30 fund).

Risk: The risk management process associated with a 130/30 fund is critical. When short selling, there is the possibility of unlimited loss. Therefore, an investor should consider whether the fund has certain mitigation procedures in place to hedge against the price of a short position moving dramatically higher. The strategy may also be a bit more volatile in the short-term and a higher tracking error should be expected. Investors may also want to consider the fact that the 130/30 strategy is relatively new and although back testing data is available, actual historical trading performance is limited.

Using short positions to more completely express market views can also be applied to a market neutral strategy. For investors looking for absolute returns, regardless of market direction, BCM could offer a long/short market neutral fund. Thinking about the Capital Asset Pricing Model, systemic risk should be the primary concern of investors because it cannot be diversified away. By creating offsetting beta positions using short-selling, a fund can be created that is only exposed to the idiosyncratic risk

associated with the alpha factor of the equation. From a risk perspective, the strategy attempts to achieve beta exposure of zero and a correlation coefficient with the market that is not significant. The result is a fund with exposure to a select group of stocks with little need to time macro market factors that drive systemic portfolio risk. From a mathematical model perspective see Figure 2.5 (betas and alphas are assumed for illustrative purposes):

Figure 2.5 – Net Exposure Market Neutral Model

$Portfolio_{long}$	$E[r] = \alpha + \beta(Rmarket - R_f) + \varepsilon$
$Portfolio_{short}$	$E[r] = \alpha + \beta(Rmarket - R_f) + \varepsilon$
$Portfolio_{long}$	$E[r] = .03 + 0.8(Rmarket - R_f) + 0$
$Portfolio_{short}$	$\underline{E[r] = .01 + 0.8(Rmarket - R_f) + 0}$
$Portfolio_{aggregate}$	$E[r] = .02 + 0.0(Rmarket - R_f) + 0$

In this stylized example, the fund has constructed two portfolios with similar beta exposure; one with a higher alpha than the other. By going long the higher alpha portfolio and short the lower alpha portfolio, exposure to systemic market risk is reduced to zero and the expected return is driven purely by the alpha factors.

B. Hedge Funds' Ability to Achieve Alpha: An Empirical Study

Much of the above strategy discussion is predicated on the assumption that BCM will have the ability to add real alpha to the portfolios it constructs while also effectively controlling market risk. As the answer to this question cannot yet be determined for BCM specifically, it is important to acquire a perspective as it relates to the overall hedge fund industry's track record for adding alpha and controlling beta. In order to derive the required data, a regression was run using monthly return data from both an aggregate US stock market index and the Dow Jones Credit Suisse Hedge Fund Index for the period 12/31/1993 – 12/31/2010. The risk free rate used was the corresponding 1 month US Treasury Bill for each month in the time series. The resulting model is below:

$$R_{HedgeFund} - r_f = alpha + \beta(R_{market} - r_f) + epsilon$$

This regression will help to statistically quantify the extent to which hedge fund returns are driven by alpha, while also understanding the degree to which hedge fund returns can be explained by the overall return patterns of the market.

The resulting regression output provides for the following data:

Regression Statistics	
Multiple R	0.624579736
R Square	0.390099846
Adjusted R Square	0.387080538
Standard Error	0.017311327
Observations	204

	Coefficients	*Standard Error*	*t Stat*
Intercept	0.003525092	0.00121916	2.891410217
Market Risk Premium	0.293330713	0.025806157	11.36669489

R Square of .39: the hedge fund index returns have a very low R Square. According to the Dow Jones Credit Suisse Hedge Fund Index data, only 39% of hedge fund returns can be explained by the market. In other words, 39% of hedge fund risk is associated with systematic, or market, risk.

Beta of .29: the hedge fund index returns also have a low beta. Therefore, hedge fund returns are not greatly affected by market movements assuming the single factor CAPM model. This is important for investors because risk associated with the market cannot be diversified away.

Alpha of .003: this number represents the excess returns hedge funds generate after taking into account returns associated with simply bearing market risk. The higher this number, the more additional value an investment is adding.

Overall: with low market exposure and 30 bps of alpha per month, these numbers suggest that hedge funds are capable of generating alpha within low beta constructions. Additionally, it should be noted that the market premium t-stat is quite high representing the significant nature of the results.

For comparison purposes, the same methodology was used to contrast hedge fund monthly returns with mutual fund monthly returns. Due to data restrictions, the time series data includes monthly returns from 12/31/2000 to 12/31/2010. The models include:

$$\text{Mutual Fund Index: } R_{MutualFund} - r_f = \text{alpha} + \beta(R_{market} - r_f) + \text{epsilon}$$

$$\text{Hedge Fund Index: } R_{HedgeFund} - rf = \text{alpha} + \beta(R_{market} - r_f) + \text{epsilon}$$

Mutual Fund Results

Regression Statistics			
Multiple R	0.983676936		
R Square	0.967620314		
Adjusted R Square	0.967348216		
Standard Error	0.007244891		
Observations	121		
	Coefficients	*Standard Error*	*t Stat*
Intercept	0.00135511	0.000659222	2.05562005
Market Risk Premium	0.798958303	0.01339783	59.63341135

Hedge Fund Results

Regression Statistics			
Multiple R	0.700928185		
R Square	0.491300321		
Adjusted R Square	0.487025533		
Standard Error	0.011577378		
Observations	121		
	Coefficients	*Standard Error*	*t Stat*
Intercept	0.003789507	0.001053441	3.597266819
Market Risk Premium	0.229524511	0.021409809	10.7205304

A comparison of these results offers some very clear conclusions. Mutual funds are much more sensitive to market risk and movements with a very high R Square of .96 and a beta of .79. The hedge fund R Square tells us that 49% of hedge fund returns for the time period can be explained by systemic risk, while 51% of the risk is idiosyncratic. Employing a 130/30 extension strategy would produce figures that more closely resemble mutual fund data, while a market neutral fund would look more like the hedge fund output in this analysis.

Researchers have also documented systematic market biases that are certainly worth discussing at this stage. The Carhart Four Factor Model extends the CAPM by introducing three additional factors that drive expected return. Adding three additional factors to the single factor CAPM is a way to discover what efficient market theorists would call "hidden beta". By deconstructing beta into additional factors

that are responsible for returns, a more detailed picture of alpha emerges. Market return anomalies associated with size, value/growth, and momentum strategies, comprise the three additional factors of the model. Now, the return output captures the risk/return associated with investing in small versus large stocks, value versus growth stocks, and momentum strategies. The model is as follows:

$$R_{HedgeFund} - r_f = alpha + \beta(R_{market} - r_f) + epsilon + S(R^{SMB}) + H(R^{HML}) + M(R^{MOM})$$

The regression results are as follows:

Regression Statistics	
Multiple R	0.708426754
R Square	0.501868466
Adjusted R Square	0.491855772
Standard Error	0.015762393
Observations	204

	Coefficients	*Standard Error*	*t Stat*
Intercept	0.001924869	0.00117183	1.64261783
Market Risk Premium	0.319658351	0.026130513	12.2331449
Gross SMB	0.092787434	0.033204445	2.79442814
Gross HML	0.020489787	0.035216431	0.58182465
Gross MOM	0.116064665	0.021041416	5.51601029

One can conclude that some of the alpha in the single factor model was in fact "hiding as beta" within the SMB, HML, and MOM factors. Therefore, hedge fund beta exposure is larger than the single factor model suggests. An R Square of .50 suggests that 50% of the risk in hedge fund returns can be attributed to exposure to the four factors.

From this analysis, I would conclude that, on average, hedge funds are able to capture alpha while also limiting systematic risk exposure. Additionally, it is important to note the significance of the additional three factors of the Carhart Model. I believe these factors to be significant, in that persistence over the mid-term is likely. Although these factors are said to reduce true alpha, the embedded impact on returns is a phenomenon that should not be ignored. Therefore, within the framework of BCM's overall strategy implementation, establishing exposure to these factors (particularly HML) would be a consideration when constructing the fund's portfolios.

C. Additional Market Anomaly

In addition to the Carhart factors, one additional market anomaly is of interest when considering the most efficient implementation of BCM's strategy. Clarke (2006) identifies a risk anomaly in the US equity market associated with minimum-variance portfolio constructions. Basic portfolio optimization theory suggests that riskier asset classes, such as stocks, experience greater returns than less risky asset classes, such as bonds, in order to compensate investors for bearing additional risk. However, at the individual equity level, the traditional risk-reward paradox may not be operating as expected. Clarke's study of the 1,000 largest market capitalization weighted stocks in the US from 1968 to 2005 revealed that minimum variance portfolios achieved the same return as a market weighted portfolio with approximately 75 percent of the risk. As reported by Harvard Business School, the "Unconstrained Minimum-Variance Bayesian Shrinkage" portfolio in this study, for example, achieves a 6.5 percent excess return over T-bills with an annualized standard deviation of 11.7 percent. By comparison, the market had an average excess return over T-bills of 5.6 percent with an annualized standard deviation of 15.4 percent. As a result, a fund could lever the Unconstrained Minimum-Variance Bayesian Shrinkage portfolio 1.3x and achieve an 8.5 percent excess return with the same volatility as the market. A disadvantage associated with this strategy is the high turnover necessitated by monthly rebalancing (143 percent annual turnover). However, by reducing the rebalancing to annually (56 percent annual turnover), monthly volatility only increases 14 basis points and monthly returns fall by a relatively small 12 basis points. Thus, reducing portfolio cost by reducing the rebalancing frequency still outperforms the market. BCM would like to consider investing in low beta stocks (low volatility) when constructing its strategy. Martingale Asset Management in Boston is presently championing a similar approach, although they currently do not have any outside money in the strategy.

D. Fundamental Valuation Considerations and Strategy Execution Ideas

Within the scope of this general, more theoretical strategy discussion, considerations of fundamental value can be thought about in two ways. First, as has been proposed thus far, BCM would consider introducing a value component as the initial security screen delineating the universe of potential

investment targets. By including these key value driven elements, select stocks can then be sorted by factors like low-beta or momentum to create more quantitatively driven portfolios. This, however, is not the only potential application of fundamental research. If deemed appropriate, BCM could construct portfolios driven purely by fundamental value analysis. The basic value principles for each approach are similar, with divergences in the final execution of the portfolio constructions. BCM would include value factors to help determine if a company had sustained growth in revenue/earnings, demonstrated solid and improving profitability, generated free cash flow, and had a sensible valuation.

Quant-Value Approach (a low-beta portfolio): The application of this idea would include a combined value screen on the universe of all US equities. Using such an approach would open up the strategy to stocks of different capitalizations and sectors, while systematically exposing the portfolio to the value (HML) factor. The result of the screen would be a list of stocks ranked using a composite score methodology based on the outcome of metrics such as price/earnings, price/book value, forward price/earnings, price/cash flow, enterprise value/EBITDA, and operating margin calculations. The scoring methodology could resemble that of the multiple discriminant analysis ("MDA") used in the Altman Z-Score model. MDA models were initially introduced to compare firms that had gone into bankruptcy with healthy firms. A large number of ratios would be calculated for each group and the model would select a small subset of ratios that best discriminate between the two groups. The MDA output would also pair each discriminant ratio with a coefficient based on its signal strength. The final result would be a single score calculated by weighting each ratio by its coefficient and summing the results. A single "value-score" could be calculated in a similar fashion by using historical data to separate US equities into "high outperformance" and "high underperformance" stocks. The resulting MDA model could help determine both the most critical ratios and the associated coefficients needed to calculate a single score. The stocks would then be ranked based on their value scores. At this stage of the execution process, the top decile or quartile could then be re-sorted based on volatility (low-beta), for example. Finally, long and short positions could be constructed based on the outcome of the value screen and the low-beta sort, creating a quantitatively assembled portfolio that includes a rigorous value screen.

Pure Fundamental Value: A strategy based on a primarily quantitative methodology is certainly not the only option for BCM when making its initial strategy decisions. Additionally, there are no rules against running multiple funds with very different approaches. Therefore, it is worth discussing how BCM would think about the execution of a purely fundamental-based strategy. The general themes would be very consistent with the principles introduced above: growth in revenue/earnings, demonstrated solid and improving profitability, free cash flow generation, and a sensible valuation. In fact, price/earnings, price/book value, forward price/earnings, price/cash flow, enterprise value/EBITDA, and operating margin would all be critical elements when making decisions within this strategy. Other useful financial statement ratios that could be used can be found in Figure 2.6. These figures would be calculated over a 3 year period and compared to a selected group of company peers.

Figure 2.6 – Key Fundamental Ratios

Fundemental Value Considerations	
	Profitability
ROA	how well firm uses assets to generate earnings. Ignores amount of debt/equity and their costs
ROE	how well firm uses equity capital to generate earnings
Return on Sales (Profit Margin)	ability to market profitable products and control costs
	Activity
Total Asset Turnover	asset usage efficiency. Amount of sales generated per dollar of assets
Receivable Turnover	used to quantify a firm's effectiveness in extending credit as well as collecting debts. Higher is better
Days Receivable	ave length of time a firm waits to get paid. Is this increasing in an effor to stimulate sales? (that is bad)
Inventory Turnover	speed in which invetory moves through operations: want it to be fast, but also want to be well stocked
Days Inventory	length of time goods sit in inventory
Accounts Payable Turnover	degree to which credit is being extended to the company. Really (purchases/accounts payable)
Days Payable	ave length of time a firm waits to pay
	Leverage
Capital Structure Leverage	extent to which company relies on borrowing. The larger this ratio the greater the liabilities
CF from ops. to Total Liabilities	is the company generating free cash flow and how does that cash compare to the firm's liabilities
Interest Coverage	does the company have a cushion in terms of current debt liabilities
	Liquidity
Current Ratio	measures liquidity as current assets can be used to measure current liabilities
Quick Ratio	stricter liquidity test as numerator is more strictly "liquid"

The evaluation of portfolio companies within this strategy is much more complex and goes beyond statistical calculations. For this fund, BCM would strive to acquire a detailed understanding of each business, the industry in which it operates, and the associated risks to long-term growth potential.

For example, after the idea generation phase, which may simply be an initial value screen, the fundamental research stage would include a detailed review of the sustainability of the business as it relates to market share and pricing power, industry growth rates and barriers to entry, customer trends, strength of management, a review of the regulatory landscape, and critical risks.

The following is an abridged example of how Broadgates Capital Management would try to think about such a fundamentally driven analysis for Goldman Sachs ("GS"):

Company Overview: Goldman Sachs is a global financial services company that works with corporations, financial institutions, governments and high-net-worth individuals. The company breaks its operations down into 4 business sectors including Investment Banking, Investment Management, Trading/Principal Investment, and Investing/Lending. Goldman Sachs is run by chairman and chief executive officer Lloyd C. Blankfein.

Strengths of the Company: Best in Class Franchise: Goldman Sachs has positioned its brand as the top provider of investment banking, investment management, market-making, trading execution, and investing in the industry. As such, the company is extremely well positioned to capitalize on improvements in capital markets activity. Therefore, I believe that if the outlook on the investment banking and brokerage industry is positive, Goldman Sachs will have the ability to use this industry recovery to drive future revenue growth. Even in 2012 when overall market equity trading volumes were down, Goldman Sachs was able to achieve net revenue growth of 19%. As investor confidence begins to strengthen, Goldman Sachs is one of the most attractive companies in the sector because of its position as a market leader. Diversity of Business and Revenue Streams: I believe Goldman Sachs has a competitive advantage over some of the more specialized players in this industry. Although not completely specific to Goldman Sachs, the company is able to offer its clients a full suite of financial services and serve as a one stop shop for everything from M&A advisory to Sales and Trading. Additionally, as the markets continue to globalize at a rapid pace, Goldman Sachs' worldwide footprint allows the company to compete internationally and provide clients with the type of global financial services that are becoming increasingly more critical. Top Management and Top Talent: As with any business, quality management

and top level employees are the bedrock of any competitive strategy. Prudent management has the ability to set the proper strategic course, and the execution of these strategies is driven by the employees. Goldman Sachs has the advantage of being able to attract the best talent available. In the face of challenging financial regulation and efforts to cut expenses, the ability to hire talented individuals is a clear advantage when trying to maintain strong client relationships.

Weaknesses of the Company: Strong Reliance on Economic Recovery: Goldman Sachs' profitability and ability to drive revenue growth is directly linked to a sustained economic recovery. If capital markets activity softens and investor risk appetite wanes, Goldman Sachs' core business will be immediately impacted. Although an extreme example, one can see the sensitivity of Goldman Sachs' business to economic conditions when looking at the impact of the financial crisis. Net income dropped just about 80% from 2007 to 2008. We have seen some of this manifest more recently in weaker M&A Advisory for Goldman Sachs. As reported in the Goldman Sachs third quarter earnings report, "Net revenues in Investment Banking were $1.17 billion… 25% lower than the second quarter of 2013. Net revenues in Financial Advisory were $423 million, 17% lower than the third quarter of 2012, reflecting a decrease in industry-wide completed mergers and acquisitions." Regulation and Capital Requirements: Weakness in earnings and the ability of Goldman Sachs to execute its strategic plan could be driven by onerous regulations. In Goldman Sachs Q3 earnings report, expense reductions were in part offset by fees associated with regulatory proceedings. Additionally, as reported by Credit Suisse, the Fed stated that Goldman Sachs exhibited weakness in their capital planning process. Scrutiny such as this has the potential to drag on the ability of the company to focus on its primary business objective of servicing its clients and creating shareholder value. Revenue Stagnation: Linked to the first weakness mentioned, it is worth specifically targeting overall revenue stagnation as a primary weakness of Goldman Sachs' current business. Q3 revenues showed a 20% decline in overall revenue. Fixed income revenues, typically a company strength, declined most dramatically with a 49% drop from the previous quarter. More worrisome is the fact that this drop is more than double the declines experienced by JP Morgan and Citi. Future revenue growth is predicted to be flat in the coming year, so earnings growth must be driven

through expense reductions and buybacks. Of course, the quality of earnings would be greatly improved with revenues serving as the main driver.

Near Term Growth Forecast: I agree with S&P Capital IQ's assumption that 2014 will bring flat to low single-digit revenue growth in 2014. As stated above, Goldman Sachs will depend on overall economic growth to propel revenues forward. Headwinds such as continued high unemployment, waning consumer confidence, fiscal discord in Washington, and an uneven European recovery will weigh on global growth and dampen capital markets activity to a degree. Investors have shown a propensity for skittishness and a dependence on accommodative Fed policy. For example, perceived hawkish language has, in the recent past, driven dramatic market sell-offs in both equities and fixed income. Real economic growth is needed to sustain a strong market. I would predict US GDP growth between 1.5% and 2.00% in the coming 6-8 months and I do not believe that this level of growth is enough to drive aggressive revenue expansion at Goldman Sachs. 2015-16 will bring an acceleration of revenue growth as the economy begins the stand on its own, employment levels normalize, and investors continue to add risk. Earnings may be stronger in the near term as Goldman Sachs moves to improve risk adjusted ROE by reducing RWAs and expenses. Additionally, cash and cash equivalents have grown dramatically on the company's balance sheet. Although capital must be preserved under new government regulations, share buybacks may also drive EPS growth during 2014 and beyond, especially as revenue begins to accelerate.

Investment Recommendations: In valuing the company I would start by looking at certain ratio measurements and then evaluate those statistics based on comparable companies. For example, Goldman Sachs has a P/E of 10 when compared to Morgan Stanley (P/E 45) and Nomura (P/E 14). Clearly, Goldman is providing a reasonable value in terms of the cost of $1 of earnings. Looking at Goldman Sachs' Price to Tangible Book value also displays favorable levels. This ratio has been 2.3x on average since 2000 and currently sits near historic lows at 1.1x. Using the language of a Credit Suisse analyst report, these valuation levels suggest low future return expectations. For these reasons, I believe that Goldman Sachs is a buy. Accommodative monetary policy will provide for an environment that supports earnings even though revenue growth may be slower to recover. I believe Goldman Sachs is well

positioned to take advantage of improvements in the economy and financial markets as risk appetite continues to grow within client strategies. As conditions improve, Goldman Sachs will be on the strong end of the industry in terms of earnings strength and stock price appreciation. For a more detailed example of such an analysis, refer to Appendix A for a fundamental review of VF Corp.

This type of valuation is time intensive and should result in high conviction ideas for a relatively small number of companies. Therefore, the resulting portfolio would be more concentrated, built stock by stock, with weights determined by the overall risk/reward perception of each position. This fund would have very low turnover as the strategy would seek to identify businesses that would outperform over longer time horizons. Benefits of a long-term approach include lower trading costs and the fact that trading less means having to make fewer good decisions.

E. Risk Controls

Whether applying a quantitative or fundamental based strategy, maintaining an appropriate level of risk relative to the fund's return expectations is critical. From a fundamental perspective, potential downside should be assessed starting at the security level all the way to the firm level. Within a fundamental value based strategy, the risk associated with each portfolio company should be analyzed by considering factors such as operational risks, competitive pressure, product demand risk, currency risk, and potential changes in the regulatory environment. These are the most basic factors that will contribute to the overall risk of such a fund, and they should be monitored on an ongoing basis. To ensure a baseline level of systematic risk diversification, Broadgates Capital Management would consider instituting controls such that no one stock could make up more than 5 percent of the overall portfolio holdings. Therefore, the idiosyncratic risk associated with each company is relegated to a reasonably small portion of the fund. Moving to the portfolio level, risk controls apply to both quantitative and fundamental based strategies. Broadgates Capital Management would implement a daily review of sector, geographic, and industry exposures. This review would analyze the changing conditions of the market within each of these categories in order to understand how these elements are affecting the risk of the overall portfolio. If deemed necessary, adjustments to the portfolio could be made to protect the fund from significant

changes to the risk landscape. At the firm level, there would be regular, process driven, compliance reviews to ensure adherence to client investment mandates and regulatory guidelines. The process would include trade reviews, analysis of the investment decisions process, and profit and loss reviews for all portfolio managers.

Risk associated with the fund's investment portfolio warrants further discussion. Managing portfolio risk is a complex endeavor and BCM would suggest employing specific tools when thinking about systematizing risk controls. First, tracking Value at Risk ("VaR") would allow the fund to continuously quantify the probability of losing a specified amount of portfolio value within a certain confidence interval over a specified time horizon. Broadgates Capital Management would use VaR calculations at different levels of aggregation in order to compile a complete picture of portfolio risk. For example, VaR would be calculated for asset classes, sectors, geographies, and individual managers/traders. BCM's preferred method for measuring VaR would be through a Monte Carlo simulation. A paper published by The Stern School at NYU offers a description of the procedure. After identifying the market risks that affect the securities in the portfolio, probability distributions and risk co-movements would be estimated and assigned to each risk variable. One advantage of this method is that the probability distributions don't necessarily have to be normal so appropriate adjustments can be made if necessary. After thousands of simulations, different values of the market risk variables will begin to paint a picture of portfolio value based on the outcome of different scenarios. The example given in the NYU paper supposes 10,000 simulations. These values can be ranked from highest to lowest, and the 95th percentile Value at Risk would correspond to the 500th lowest value and the 99th percentile to the 100th lowest value. Broadgates Capital Management would be most concerned with VaR time-series data. Identifying patterns in VaR overtime can produce key insights into how exposed the fund is to varying environments. Finally, incremental VaR could be used to understand how individual positions are affecting overall fund risk.

Monte Carlo VaR calculations are not without their shortfalls. As with most predictive models, Monte Carlo VaR outputs are only as good as the market risk distribution assumptions. Additionally, as

the number of risk factors included in the model increases, the measurement of co-movement between these factors becomes more complex. The model necessitates probability distribution estimates for each additional risk and the number of simulations needed to generate an accurate picture of VaR grows exponentially with each additional variable. Without the proper computing power, running these simulations can be a painfully slow process. However, when compared to other VaR calculation methods, like the variance-covariance approach, the Monte Carlo method does not require the sometimes inaccurate assumption of normal returns. Consequently, the Monte Carlo approach is more adaptable in calculating VaR across different assets and portfolio constructions that may not lend themselves to the simplifying assumptions of normally distributed returns. According to Dr. Lars Jaeger of Partners Group, a €30 billion investment fund, "Monte Carlo simulation is most reliable for the nonlinear and complex positions present in most hedge fund portfolios".

Dr. Jaeger goes on to present stress testing as a valuable compliment to measurements of VaR. By conducting portfolio simulations based on a variety of assumed market conditions, Broadgates Capital Management could ascertain how its portfolio value would be affected under a variety of scenarios. Jaeger breaks down stress tests into three primary buckets: historical scenarios (2008 Financial Crisis), specific market scenarios (20% market move in either direction), and portfolio specific stress (perhaps a dramatic change in the regulatory landscape of a specific industry). Using these different categories to robustly measure how exposed the fund is to specific tail-risk events will allow for a more effective and thorough risk mitigation methodology. Within the context of all risk controls, it would be important for Broadgates Capital Management to maintain a high degree of transparency. This would allow its investors to perceive their exposure to various risks, while also helping them to understand how those risks are being controlled by the fund managers.

F. Fundamental Valuation Considerations and Strategy Execution Ideas

The preceding discussion of hedge fund strategy theory illuminates the important fact that in order to construct a robust and diversified portfolio, investors must consider their hedge fund allocations as only part of their overall investment approach. By understanding important realities like the cost

advantage of passive strategies and the systematic risk protection offered by hedge funds, investors can use each as valuable tools when considering the most effective way to achieve certain investment goals. By constructing a diversified portfolio of both traditional and alternative strategies, investors have the opportunity to enhance their overall portfolio risk/return construction. Consistent with the regression results reported earlier in this section, KMPG published a 2012 report that documented, "a low correlation of hedge fund returns with other asset classes such as bonds, equities, and commodities over the business cycle". By comparing metrics including performance, VaR, and Sharpe ratios, KPMG concluded that, on average, allocating capital to hedge funds has the potential to provide significant diversification and performance benefits when compared to a conventional 60/40 stock-bond allocation strategy.

IV. Performance Characteristics and Long-Term Survival

The relationship between certain hedge fund characteristics and alpha generation is an area worth covering when considering the formation of a new fund. Outside of the implementation of a successful investment strategy, certain key characteristics have been identified that seem to measurably impact a skilled manager's ability to consistently perform and consequently survive over the long-term. With an annual hedge fund liquidation rate of 7.10% according to Getmansky (2005), being aware of the elements that tend to put pressure on performance can serve as a useful guide when making decisions about how to best launch and grow an investment business. This section will review some of the fundamental components that have been most closely linked to performance and sustainability.

A. Fund Size and Fund Flows

Growth of assets under management is a consideration faced by every successful fund manager. If a manager is able to execute an effective strategy and attract new investors, most likely the fund will grow in size. Interestingly, Berk and Green (2004) present a performance model that states young funds will receive a quicker inflow of investment capital for every additional year of good performance when compared to more mature funds. "For more mature funds with longer return histories, each successive period's return is proportionately less important in assessing performance. Hence, young funds with strong past performance will receive significant capital inflows". The paper goes on to assert that at some

stage these younger funds grow to a size that adversely affects performance. Perhaps the talent of the manager is spread too thin, or the sheer size of the trades begins to have an outsized impact on market prices. It is also conceivable that growth in AUM can increase transaction costs to a point where performance is pressured. Agarwal and Naik (2004) present regression results that empirically demonstrate this phenomenon. The analysis examines how fund size and flows in the prior time period affect returns in the current period. The regression output shows that the size coefficient is negative and significant, proposing that larger funds are associated with lower future returns. In terms of flows, the regression output shows that the flow coefficient is also negative and significant, suggesting that larger flows are associated with lower future returns. The conclusion is that fund size has a more significant negative effect on future performance than fund flows. After analyzing an increase from the 25th to 75th percentile for both fund size and fund flows, the increase in size is associated with a 2.6 percent decrease in t+1 returns, while the same increase in fund flows is still performance eroding, but only by 0.6 percent during the same time period.

Based on these findings, it becomes critical for Broadgates Capital to consider this documented phenomenon when building its business. Getmansky (2005) analyzes how factors such as size and fund flows impact the life-cycle and liquidation probabilities of hedge funds. According to this more detailed research, the relationship between fund size and performance is actually concave, suggesting that funds benefit from an increase in AUM until the fund grows beyond a certain optimal level. As fund size begins to erode returns, the liquidation probability of a fund begins to increase. Therefore, as Broadgates Capital Management grows its AUM, close attention must be paid to the relationship between growth and returns. Determining the optimal size can be a difficult undertaking, and no one specific formula exists to ensure that a fund is operating at this theoretical point of maximum efficiency. However, being aware of the documented propensity for hedge funds to exhibit diseconomies of scale is critical when considering the appropriate time to close a fund to new investors. Doing so at the proper time will hopefully diminish the size factor as a drag on returns and serve to increase the long-term survival probability of the fund. It should be noted that the specific effects of size/fund flows on returns may vary amongst different hedge

fund strategies and the precise cause of the effect is not well documented. A number of explanations have been postulated, including the likelihood that smaller hedge funds will pursue more risky strategies to boost returns and increase AUM. Within such an explanation, funds with larger amounts of assets tend to pursue strategies more focused on capital preservation and are able to diversify amongst non-correlated assets. This reduces the variance of such funds, but may also put pressure on returns as alpha opportunities are limited.

B. The Importance of Strategy Evolution

Getmansky (2005) also underscores the idea of strategy positioning as it relates to a fund's survival probability. Broadly, it becomes disadvantageous for a hedge fund to be part of a highly concentrated strategy group for reasons of increased competition and increased risk. First, Getmansky (2005) proposes that being in the right strategy category at the right time can significantly decrease a fund's liquidation probability. However, this becomes a dangerous game. Due to the fact that favorable strategy categories (ones demonstrating positive return characteristics) will attract new entrants and increase competition, the liquidation probability for each fund will increase in the category once competition reaches a certain level. BCM must, therefore, take a fluid view of its strategy position and weigh the risk-reward of being associated with a favorable strategy category, understanding that the liquidation probability of the fund will likely increase as more funds enter the space over time. The research shows, perhaps quite obviously, that small funds entering the strategy category have a much smaller impact on average fund survival. Additionally, marginal funds are much more likely to be liquidated when compared to high performing funds. Keeping all this mind, Broadgates Capital Management would be best served to constantly monitor the concentration of funds playing in associated strategy categories and manage risk by ensuring that the fund is always working to evolve its own strategy through new and innovative approaches. Sticking with what has worked in the past for too long is risky and will most likely result in diminishing returns and perhaps eventual liquidation.

Khandani and Lo (2008) provide an interesting case study for the elevated level of risk that can be associated which high concentration strategy groups. In August of 2007, some of the most successful

equity hedge funds experienced unprecedented losses. The important fact is that the losses were concentrated within a very specific strategy category: quantitatively managed equity market-neutral funds. As suggested by a Khandani and Lo (2007) hypothesis, the losses were initiated by the forced liquidation of a small number of large equity market-neutral portfolios. This sudden liquidation caused other similarly appointed portfolios to experience large losses. A negative feedback loop began within this strategy category as increasing losses led to more deleveraging, which led to more losses and so on. Referred to as the Unwind Hypothesis, Khandani and Lo (2008) assert that the heavy losses experienced by the quantitatively managed equity market-neutral funds underscore how strategy commonalities can increase risk for the funds participating in such strategies. They believe that such evidence may point to, "a new financial order in which the "crowded trade" phenomenon now applies to entire classes of hedge-fund strategies, not just to a collection of overly popular securities". Consequently, Broadgates Capital Management should think about how this phenomenon affects the fund's portfolio construction and risk management systems. In the absence of constant strategy evolution and proper risk controls, overexposure to a particular strategy category could have devastating consequences and jeopardize the long-term viability of the fund.

C. Fund Age and Performance Deterioration

A stated goal of Broadgates Capital Management is to create value for its investors over the long-term. However, recent academic research has proposed that emerging managers tend to add more value than more established, older funds. After controlling for size and backfill bias, Aggarwal and Jorion (2008) find evidence that emerging managers (defined as the first 2 years of operation) generate an abnormal performance of 2.3 percent when compared to later years. Linear regression results reveal that each additional year of age has an average effect of reducing returns by 48 basis points. By understanding what may be driving these results, it is possible that Broadgates Capital Management could avoid performance eroding behavior and maintain the characteristics of a high performing fund for a longer period of time. Besides considerations of strategy evolution and size effects that have already been discussed, one could argue that there is an "incentive effect" that may contribute to the erosion of returns

as a fund ages. Aggarwal and Jorion (2008) argue that performance fees should have a greater incentive effect on emerging managers because they are presumably starting with less wealth. "The marginal utility of the same dollar amount of fees should progressively decrease as the manager gets richer". So, although the incentive structure is not systematically concave in nature, in that fees decrease with fund size or age, an implied concavity results from the diminishing returns associated with incentive fees for successful managers. To combat this effect, Broadgates Capital Management could work to constantly introduce young, fresh analysts and portfolio managers to the fund. As such, a measurable percentage of the fund would always be composed of individuals not affected by the diminishing marginal utility of incentive fees. Another option would be to structure the incentive fees for analysts and portfolio managers such that consistency of performance over much longer periods is what primarily drives compensation.

I would also propose that emerging managers are driven to perform in order to develop a track record and attract additional capital to the fund. Consistent with improper incentive alignment, high management fees may incentivize managers to quickly grow AUM. In order to do so, they must demonstrate superior performance in the early stages of their fund in order to attract new investors. Once a certain level of assets has been reached, the incentive to perform may erode as the manager is able to collect large management fees regardless of performance. Consequently, as a fund ages, the likelihood of diminishing performance may increase. In order to reverse this effect, Broadgates Capital Management would propose a much smaller, 1 percent, management fee with higher performance based compensation. Agency theory suggests proper incentives should induce effort by managers, and under this structure wealth could only grow through sustained performance.

V. Broadgates Capital: Start-up Procedures and Considerations

This section will focus on the process for launching a new hedge fund. Operationally, launching a new fund is a complex undertaking which includes the intersection of a large network of professionals and service providers. Before raising capital and making that first trade, Broadgates Capital Management must carefully navigate the process of properly setting up its new business. In today's hedge fund market,

a professional operation is equally as important as a strong investment strategy when marketing the fund to potential investors. It is important to note that other choices exist outside of the ones offered below; however, the framework presented is thought to be the best path forward for Broadgates Capital Management.

A. Selecting Legal Counsel

The very first step for Broadgates Capital would be to hire an outside legal counsel. In order to ensure the proper execution of all subsequent steps, the fund's legal counsel would be involved in all relevant conversations about the fund structure, registration requirements, document drafting, and compliance. Initially, Broadgates Capital would retain Cott Law Group, PC ("CLG"). CLG is a boutique law firm with a sole focus in the investment management industry. The firm specializes in hedge fund structuring and compliance advisory services with extensive experience counseling onshore and offshore entities. A smaller, more specialized, firm will give Broadgates Capital the advantage of not being charged extremely high fees, while also receiving the necessary expertise to ensure a successful launch. An initial interview was conducted with Kevin Cott, founder of CLG, and Broadgates Capital is confident in the firm's offerings.

B. Fund Name

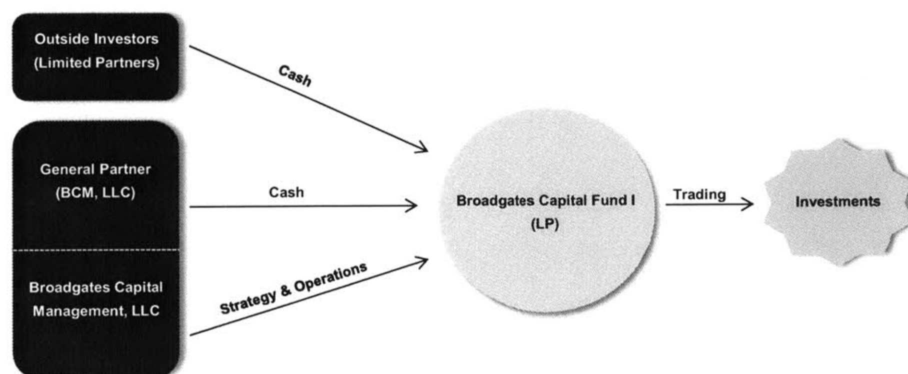
This may seem trivial, but legal counsel should be part of this process. Ensuring that the name is available for registration is important. Additional considerations would be website availability and email addresses including the name. According to Citi Prime Finance, legal counsel can run an intellectual property search to ensure there are no restrictions on using the name. After a brief search of the United States Patten and Trademark Office, Broadgates Capital Managements appears to be without restriction.

C. Fund Formation, Structure, and Domicile

Considering a US/taxable investor base, the fund structure would be a general partnership with the creation of a limited liability company as the general partner. Broadgates Capital Fund I, L.P. would serve as the investment vehicle, receiving investments from both Broadgates Capital Management, LLC ("BCM") (the general partner) and outside investors (the limited partners). Broadgates Capital

Management, LLC would also serve as the manager of the fund, making all strategic decisions and undertaking all operational duties. For a visual depiction of this type of structure, refer to Figure 2.7.

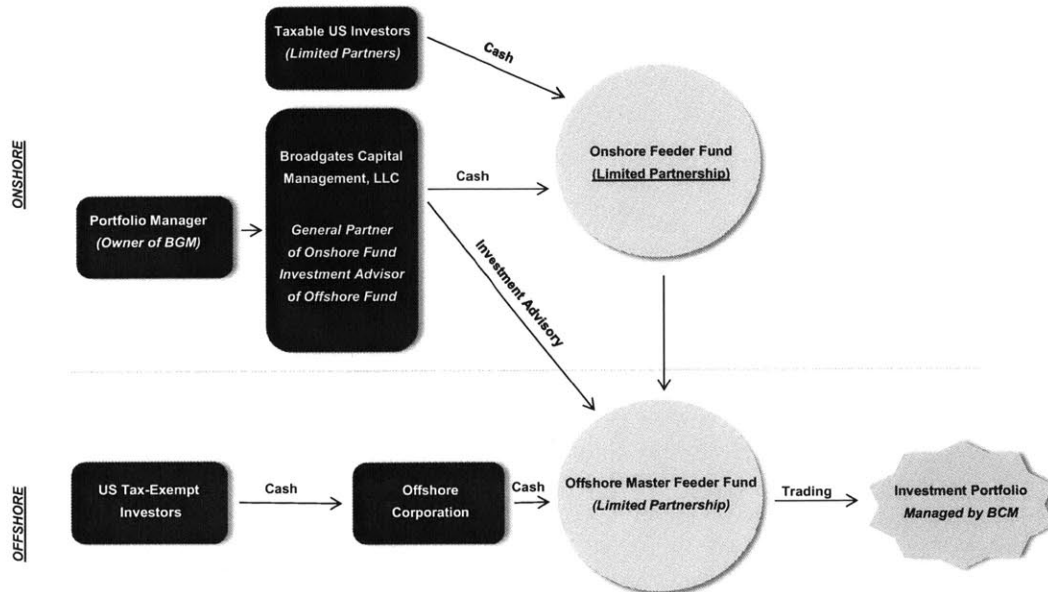
Figure 2.7 – Broadgates Capital Management, LLC Basic Structure



In reality, BCM does not anticipate introducing non-US investors to the fund for some time. However, tax-exempt US investors, such as pension plans and endowments, would certainly be targeted. Therefore, BCM would choose to complicate the structure introduced in Figure 2.7, by introducing an offshore component in the form of a master feeder structure. This will give BCM the flexibility to accept non-US investors in the future and also provide tax benefits to US tax-exempt investors by helping them avoid the Unrelated Business Taxable Income associated with the purchase of securities on margin. According to Margolin, Winer and Even LLP, "an offshore fund which is set up as a corporation blocks the Unrelated Business Taxable Income that would otherwise be taxable to a United States tax-exempt investor". Within this structure, two feeder funds would be created, one offshore corporation and one onshore limited partnership. Taxable US investors and BGM would funnel capital through the onshore limited partnership feeder, and tax-exempt US investors would funnel capital through the offshore corporation feeder. All capital would collect in the offshore master fund limited partnership and be managed as one portfolio by the onshore management company, BCM. By filing Form 8832 with the Internal Revenue Service, BCM would choose to designate the offshore master fund to be taxed as a partnership for US tax purposes. In doing so, the onshore feeder would be treated as a flow-through entity relating to its share of the master fund's gain or loss, simplifying the tax treatment for taxable US investors in the onshore feeder.

For a more clear depiction of this more complex structure, refer to Figure 2.8. The diagram is an adaptation of a diagram presented by Citi.

Figure 2.8 - Broadgates Capital Management, LLC Master Feeder Structure



As a final option, BCM would consult with legal counsel about a mini-master feeder structure. Within this structure, there is no onshore feeder and the offshore master fund is structured so that BCM is the general partner. Theoretically, BCM could then receive its incentive fee as an allocation from the offshore master fund and have this allocation benefit from capital gains tax treatment rather than being taxed as ordinary income. Whether choosing the master or mini-master structure, BCM should understand that these structures can create a tax conflict as it relates to the funds strategy. For example, according to CLG, the US limited partnership (taxable investors) will benefit from long-term capital gains tax treatment. As these considerations are of no concern to the US tax-exempt investors funneling cash through the offshore corporation, a conflict may arise if BCM chooses to continue to hold a security only to generate long-term capital gains. For the US tax-exempt or foreign investors, this may not make sense. Other considerations include the fact that the offshore feeder fund would be subject to a 30 percent tax on US dividends. All considerations would be reviewed with legal counsel before completely finalizing a fund structure.

To finalize the initial formation of the fund, certain documents must be drafted and completed. A Limited Partnership Agreement would be drafted and signed to detail the rights and obligations of the limited and general partners of the fund. Then, an Operating Agreement is executed by each of the general partners in order to detail governance and fund oversight issues. BCM would register the management company onshore in the state of Delaware. Incorporation in Delaware is conventional because Delaware generally offers the most business friendly laws in the country. According to Capital Management Service Group, Delaware courts have a reputation for being pro-management when resolving disputes between investors and hedge funds. Therefore, the Certificate of Limited Partnership is filed with the Delaware Secretary of State and forms the fund. The Certificate of Formation is filed with the Delaware Secretary of State and forms the general partnership. Finally, form SS-4 is used to obtain an Employer Identification Number ("EIN") from the Internal Revenue Service ("IRS") for the Fund and the General Partner.

D. Fund Offering and SEC Requirements

As mentioned in a previous section, as of March 30, 2012, Title IV removed the SEC registration exemption for private advisors. If you advise a private fund, as most hedge fund managers do, the registration exemption applies up to $150 million in AUM. This exemption falls under the Private Fund Advisor exemption. BCM would target an initial capital raise for the fund of between $100 and $150 million. Therefore, BCM would be exempt for federal SEC registration, and would only have to consider registering in its state of operation, New Jersey. However, New Jersey has a state exemption and hedge funds generally do not need to register with the New Jersey Bureau of Securities. As with some other states, such as New York, New Jersey has a de minimis exemption for hedge funds that operate within the state. As long as BCM has less than 5 New Jersey clients over a 12 month period, the managers would not need to register as investment advisors. According to Cole-Frieman & Mallon LLP, "While there is no specific definition of what the term "client" means, the general definition at the federal level and with many states is that a hedge fund counts as a single client and there is no need to "look through" to count

the underlying investors in the fund as clients". As such, the initial assumption is that BCM would be exempt from both SEC and New Jersey state registration requirements.

The Securities Act of 1933 ("Securities Act") and the Investment Company Act of 1940 ("Company Act") would govern registration of the fund and fund offering. Both laws have certain exemptions that BCM would utilize as registration generally makes operating the fund more costly. First, under Section 3 of the Company Act, the master feeder fund would be exempt from registration under the 3(c)(1) private investment pool exemption. This would allow BCM to avoid registration under the Company Act by restricting the limited partners to no more than 100 accredited investors. The definition of accredited investor is detailed by the Advisers Act (as a performance fee will be charged) and by Rule 501 of the Securities Act. The Securities Act will primarily govern the offering registration process. Regulation D of the Securities Act would exempt BCM from registering the offering of the fund, as the fund would be offered as a Private Placement. In order to qualify for exemption, Form D and Form U-2 must be filed with the SEC and with each state in which BCM's limited partners reside. Prior to filing, BCM would apply for EDGAR Codes so the fund can file its Form D with the SEC within 15 days of the initial fund closing. BCM would choose to select a 506(b) classification filing under Regulation D. Consequently, the fund would be prohibited from engaging in general solicitation. However, the fund's investors may include up to 35 non-accredited participants. For a young fund trying to raise capital, this opens the universe of initial investors to include a wider sampling of friend and family. When preparing the Private Placement Memorandum and the Subscription Agreement, BCM must ensure compliance with all full disclosure and anti-fraud provisions outlined by Section 12 of the Securities Act. Final considerations of how to best identify the Directors of the offshore corporation would be discussed in detail with BCM's legal counsel as regulatory scrutiny has increase in this area.

E. Fund Terms and Conditions

Important consideration must be given to key terms and conditions of the Private Placement Memorandum. According to Citi Prime Finance Business Advisory Services, fees, liquidity/lock-ups, account structure, and early investor incentives should be in place prior to the fund offering.

Fees: BCM would propose a 1% management fee and a 25% performance fee. In order to more closely align the interests of the fund and its investors, BCM would adjust the standard 2/20 structure by introducing a higher performance compensation combined with a much lower management fee. BCM believes that this will give the fund a competitive advantage when offering the fund to new investors. The performance fee would be paid to BCM as long as the fund's current asset value was above the original net asset value of the fund. BCM would propose that the performance fee be paid at the end of each calendar year, with the management fee paid monthly based on the current net asset value of the fund at the end of each month. So, each month a management fee of 0.08% would be owed by the limited partners. Again, the timing of the management fee payout incentivizes BCM to create value through performance. If BCM is able to grow the asset value of the fund by generating positive monthly returns, the fund will be able to earn an annualized management fee greater than 1 percent of the beginning year asset value. The Private Placement Memorandum would also include a clause stating that during the first year of the fund, the management fee would be paid annually in advance, in order to equip the fund with needed operational capital.

Capital Lock-Up: Based on the relatively liquid nature of the anticipated investments, BCM would propose a lock-up period of 90 days for fund investors. Therefore, limited partners must give BCM 90 days' notice before withdrawing capital. This would be structured has a hard lock-up period, meaning capital withdrawal without this notice period is strictly prohibited.

Account Structure: The fund will be composed of a co-mingled account, where each investor is a separate limited partner of the partnership. Capital of each limited partner will remain adjacent to that of other limited partners, each purchasing a shared interest in the profit and loss of the fund for a fixed capital investment. As the fund grows, BCM would anticipate offering separately managed accounts in addition to the co-mingled structure.

Early Investor Incentives: In order to attract capital to the fund, BCM would offer two initial share classes that would carry a reduced performance fee. In compensation for being early investors in the fund, BCM would offer an institutional share class and a friends and family share class. Both categories of shares

would include a reduced performance fee of 20%, while still carrying the already low 1% management fee. However, initial fund investors would also be burdened with reduced liquidity. BCM would institute a 2 year lock-up provision for investors in these share class categories. After the initial 24 months, the lock-up for these investors would convert to the 90 day notice period.

Minimum Investment: Chang (2013) describes the typical investment minimum for start-up hedge funds. "For open-ended, privately offered funds, probably the most common minimum subscription amount is $1 million, but the range that we most commonly see is $100,000 to $5 million". More specifically, 70 percent of new funds maintain an investment minimum of $1,000,000. Reflecting the typical positive correlation between AUM and minimum investments, BCM would set an initial investment minimum of $300,000 and would also set a follow-on investment minimum of $100,000. It seems logical for BCM to sit towards the bottom of the usual range because the initial fund size will be quite small. A lower minimum should make marketing the fund to early investors, especially the friends and family share class, more productive.

F. Fund Infrastructure

Personnel Breakdown: The original team would include four members. In terms of function, the fund would be composed of one CIO/senior portfolio manager, one portfolio manager/head trader, and two advisors. The advisors would serve as chief financial officer/chief operating officer and chief marketing officer/investor relations, respectively. Advisors would also have input into the investment process, with the final decision lying with the CIO. Each member has a specific skill set that would provide targeted expertise. For a detailed breakdown of the team, refer to Appendix B.

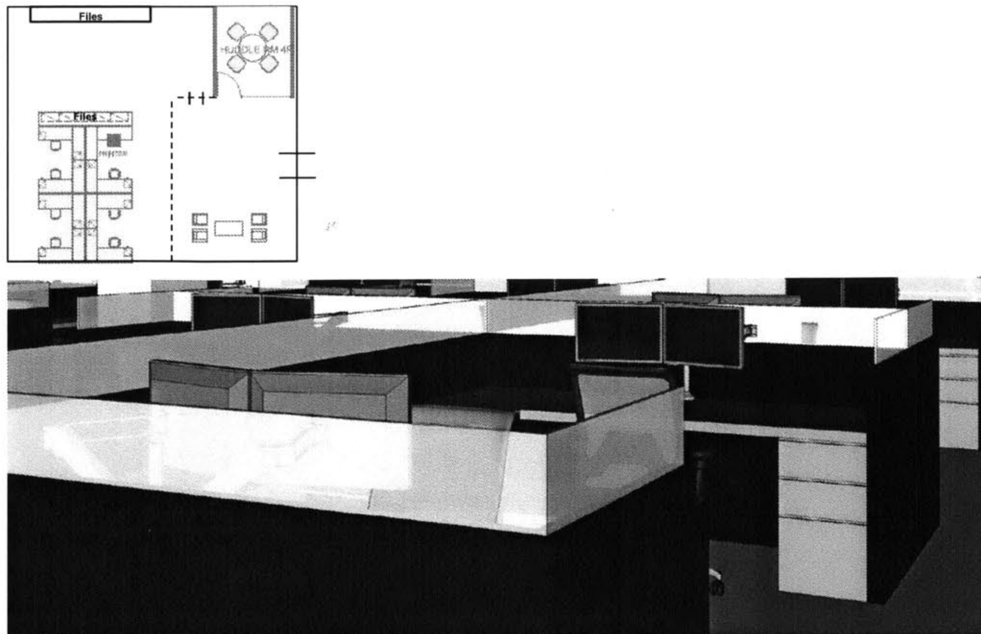
Real Estate: Selecting appropriate office space would be an important first step in building out the infrastructure of the fund. The location of the fund would be in or around Princeton, New Jersey. This is the most desirable location for the fund managers and it gives BCM easy access to the larger New York hedge fund community while also taking advantage of the active investor interest in New Jersey. As mentioned previously, New Jersey State Investment Council, the states only public pension fund, has accumulated a portfolio of over 40 hedge funds, totaling $7.9 billion, which makes it the second largest

hedge fund investor in the United States. Other large local hedge fund investors include Princeton University Investment Company and the Robert Wood Johnson Foundation with $3.3 billion and $2.5 billion respectively allocated to hedge funds. The original team size and mid-term growth plans would be an important factor in selecting the right space. It would be BCM's intention to keep the team as lean as possible for as long as possible; however, within the first 5 years, as assets grew, BCM would anticipate the team growing to include between 6 to 8 professionals. Based on an interview BCM conducted with the chief operating officer of a publicly trade US company with extensive real estate experience (a BCM advisor), the following estimations have been made assuming a projected 8 person staff over the next 5 years.

- 1,500 total square feet of office space needs based on a 150 square feet per person (8) estimate, plus a small cushion for any additional needs
- 48 square feet per work station: projected 384 square feet of desk space for 8 employees
- Assuming 5 foot walkways, 320 square feet of pass through space around the work stations
- Small private meeting room: 150 square feet
- Small lounge at entrance with 4 chairs and a table: 100 square feet
- Remaining 546 square feet for files, printers and additional expansion needs

Based on these initial estimations, refer to Figure 2.9 for an architect's rendering of such a space.

Figure 2.9 – Rendering of Proposed BCM Office Space



Source: Images provided by TPG Architects in New York via Assured Guaranty

Based on our initial consultation with the above mentioned BCM advisor, the initial raw real estate costs are projected in Figure 3.0. Considerations for additional system expenses, hardware, insurance, and other related infrastructure costs will be considered in later sections.

Figure 3.0 – Raw Real Estate Related Expenses

1,500 Square Foot Space (monthly expense)	
Rent based on $35/sq ft	4,375
Operation and Maintenance	500
Ongoing expense sub-total	**4,875**
Up-front expenses	
Furniture and Office Supplies	75,000
Total Month 1 Real Estate Costs	**79,875**
Total Ongoing Monthly Real Estate Costs	**4,875**

BCM would propose working with local New Jersey real estate agents familiar with finding such office space for small businesses. BCM would lease this space, and projects signing a 3-5 year commitment. Using the above forecast, annual real estate expenses would amount to $58,500, or 5.85% of the funds single year management fee. This assumes a $100 million capital base and no net asset value appreciation

on the proposed monthly 0.08 percent management fee, resulting in $1,000,000 in gross year 1 management fees.

Insurance: Insurance is extremely important and also quite complicated. Having a thorough understanding of the policy structure is extremely important when establishing an institutional quality fund. Below, is a full policy outline provided to BCM by the Simkiss Agency.

INSURANCE PROGRAM
MAY 1, 2014 – MAY 1, 2015

PROPERTY-CASUALTY

	Coverage	Insurance Company	Annual Premium
A	Business Owners Package • Office Contents - $250k • General Liability - $1M	CNA	$2,500
B	Automobile • Hired & Non-Owned Liability • $1M Limit • No Owned Vehicles	CNA	750
C	Workers' Compensation • Statutory Benefits • Estimated annual payroll = $2M	CNA	6,000
D	Umbrella • $5M Limit • $10K Self-Insured Retention • Excludes Professional Liability	CNA	3,500
E	Professional Liability • $5M Limit • $250K Retention (Deductible) • Assets Under Management - $4B	CNA	108,000
F	Financial Institution Bond • $5M Limit	Liberty Mutual	17,500
	Total Estimated Annual Property-Casualty Premium =		$138,250

Note: The cost of E&F varies, depending on the Assets Under Management. If the AUM is assumed to be $100M, the premium for E would be $25K, and F would be $4k.

Workers' Compensation varies proportionate to payroll.

EMPLOYEE BENEFITS

	Coverage	Insurance Company	Annual Premium
A	Health Insurance	Blue Cross & Blue Shield	$20,000
	• 10 Employees • Single & Family Coverage • Unlimited Major Medical • Includes Dental • Prescription Drugs - $30 co-pay • Annual maximum out-of-pocket expense per family $2K		
B	Short-Term & Long-Term Disability	UNUM	4,500
	• 60% of salary - maximum of $150K • 10 Employees		

Total Estimated Annual Premium – Employee Benefits = $24,500

Total Estimated Annual Insurance Expense = $162,750

Based on potential fluctuations in employee count, salaries, and assets under management, an annual insurance premium of $100,000 to $150,000 has been assumed when forecasting BCM's 5-year income statement in Section VIII.

Technology Systems: After securing the fund's physical office space, building out a practical and robust information technology ("IT") management system would be a critical next step. An initial step would be to create a domain name for the fund's website and register that name with an appropriate host. The site would include very basic information about BCM and provide contact information for investors. BCM would like to implement cloud-based outsourcing for the majority, if not all, of its IT needs. According to a 2012 survey conducted EzeCastle Integration, 79 percent of participating asset management firms were already using, or had plans to use, cloud services in the near future. In the same survey, 68 percent of firms with under $1 billion of AUM were using the cloud for basic business services compared to 50 percent of firms with over $1 billion in AUM. Of all respondents, 24 percent are currently outsourcing their fund's entire IT infrastructure to the cloud. BCM would follow this model as it is the best way for a

start-up fund to provide the necessary technology robustness and security with a low cost, less complex IT management solution. BCM would use an externally hosted private cloud structure. A cloud service provider would construct a private cloud only for use by BCM. This would guarantee privacy and also provide for a more tailored solution based on BCM's size, security requirements, and investment strategy. The private cloud option provides much greater security when compared to cheaper, public cloud alternatives. Also, most public cloud solutions do not incorporate the compliance characteristics that would comply with state and federal regulations of hedge funds. BCM would propose hiring EzeCastle integration as their technology provider for cloud services and IT management. EzeCastle has specialized in providing these services to the investment management industry for over 20 years. Recent awards include the HedgeWeek 2013 award for best technology platform and recognition as a FinTech Top 100 technology provider for the sixth straight year.

EzeCastle provides a solution they call a "hosted IT environment". BCM would propose purchasing this solution for its entire IT management system. As directly quoted in the company's Guide to Technology Outsourcing for Hedge Funds whitepaper: The term "hosted IT environments" encompasses cloud computing, as well as the enterprise-wide solutions known as managed services. Designed specifically for smaller hedge funds and investment advisors, managed services deliver a comprehensive, turnkey IT infrastructure to support daily operations including phone services, office applications, e-mail servers, file services and access to market feeds—all in a vendor-hosted and managed environment. For a fund that wants to focus on investment strategies rather than its technology, this approach offers several advantages:

- Low startup costs: There is no need to purchase equipment or build a data center. Hedge funds pay per-user monthly fees.
- Fast ramp up: A fund can get up-and-running quickly with a hosted solution.
- Security: In addition to user-facing applications, managed services also provide behind-the-scenes protection in the form of firewalls and anti-virus and anti-spam technology, as well as data center monitoring.

- Built-in disaster recovery: A Tier II or Tier III vendor data center offers the redundancy needed for disaster recovery as well as business continuity.
- Agility: IT infrastructure can be scaled in any direction, adding storage, processing power or new applications, including custom applications as needed.
- Continuous support: Few smaller funds can afford around-the-clock IT coverage. A managed services vendor can provide support 24/7, 365 days a year.

In order to be confident, according to EzeCastle, a new fund manager must: 1) confirm the SAS certification of the vendor's data center; 2) be comfortable with the vendor's own disaster recovery and business continuity planning and testing; 3) evaluate the physical and technical security of equipment; and 4) cstablish how the hedge fund's proprietary data will be isolated from data belonging to other managed services clients. BCM believes that EzeCastle has the capabilities to provide a full suite of technology services in a way that fits the needs of a start-up fund. EzeCastle's track record and reputation for quality would give potential investors the confidence that BCM is partnering with companies that would ensure the security of their data and uphold a high standard of operations.

Considering the specific steps for the technology system build-out and integration is also critical. EzeCastle recommends thinking about the build-out in 3 broad categories:

- Telecommunications and Connectivity: within this category, the necessary services can be broken into 3 subcategories including internet, phone/voicemail, and market data feeds. Quality internet service is critical and a number of different options are available. BCM would opt for Ethernet connectivity as it provides fast speeds with competitive prices. Ethernet is becoming the most common choice for hedge fund internet connectivity. A company like Cisco could provide such a service along with a full suite of monitoring and security features. It is often recommended to hire two such service providers and to install an automatic switch-over if one experiences a problem. For phone and voicemail service, BCM would use a Voice over Internet Protocol or VoIP system. This is an inexpensive way to provide BCM with the necessary voice features such as call routing, voicemail, and caller ID.

It is recommended that a Service Level Agreement be signed between BCM and the service provider to ensure the quick resolution of any quality issues. For real-time market data, BCM would choose Bloomberg as it provides the flexibility to initiate services such as real time pricing, trade execution, research, and other functions based on what BCM feels is appropriate considering the fund's growth, strategy, and client needs.

- Disaster Recovery and Continuity Planning: great care would be taken in creating a thorough plan for disaster recovery and business continuity in order to give investors and regulators the necessary confidence that such adverse events would not negatively impact the fund's operations. BCM's disaster recovery plan would support all critical infrastructure elements such as email, trading, telecommunications, and critical financial information. All essential information, systems, and documents would be backed up electronically (in a non-similar geography) and be accessible remotely in the event of a problem.
- Filing and Archiving: BMC would institute a strict policy surrounding the archiving of communications and documentation. In compliance with the Federal Rules of Civil Procedure, BCM would archive all electronic communications, financial models, and other documentation through a Write Once, Read Many ("WORM") system. Data will be searchable and stored offsite within its own accessible system. Section 24(b) of the Investment Company Act of 1940 also requires hedge funds to file all client communications and advertising within 10 days of its presentation. Due to the ambiguous nature of some of the rules surrounding communication on social media, BCM would initially ban all business related social media communications by its employees.

All of these considerations would be reviewed annually in order to ensure that BCM is operating in a way that is compliant with current expectations. The advent of new technology and ever changing regulatory landscape means that BCM must constantly evolve its overall technology infrastructure, and continue to update best practices within the firm.

G. Service Partner Considerations

The next important step would be to build-out a solid network of professional service partners to provide BCM with critical operational capabilities. It is important that this network is professional and reputable as BCM must create institutional quality service partner relationships in order to effectively raise capital and ensure compliance with all fund regulations. The primary service partner relationships would include the following:

Lawyer: As previously mentioned, BCM would retain Cott Law Group, PC ("CLG"). CLG is a boutique law firm with a sole focus in the investment management industry. The firm specializes in hedge fund structuring and compliance advisory services with extensive experience counseling onshore and offshore entities. CLG would provide for the drafting of all documentation and fund structure advisement.

Accountant: In partnership with BCM's chief financial officer and chief compliance officer, a third party accounting firm with significant hedge fund experience would be selected to provide audit services, form K-1 preparation, and also to review all legal documentation drafted by CLG. BCM's accountants would review all documentation and fund structuring decisions for tax considerations and also work with the fund's other service providers to coordinate efficient fund operations. Audit services are perhaps most critical as it relates to this relationship. BCM's accountant will review all financial information for completeness and accuracy, ensuring proper procedures are being followed for all essential fund operations.

Execution and Prime Broker: After the 2008 financial crisis, common practice is shifting to multiple prime broker relationships. Partnering with more than one prime broker provides the benefit of spreading counterparty risks across multiple brokers; however, it also spreads business across more than one broker. If business is spread too thin, prime brokers may not pay enough attention to the fund, or even drop the fund as a client all together. In terms of initially selecting at least one broker, BCM would need to consider the services the fund needs to be successful and what each available prime broker is offering. According to HedgeWeek, prime brokers can provide margin finance, security lending, trade clearing and settlement, and even some administrative and custodial services. Prime brokers also often provide more

advisory based services such as capital introduction and service provider selection. BCM would look for a prime broker that could provide all these services within a packaged multifaceted prime brokerage agreement. In order to properly negotiate the terms of this agreement, BCM must clearly articulate its strategy implementation plans (anticipated leverage, trade volume, and position turnover) in order to provide an accurate picture of how the prime broker and BCM would interact once the fund is launched. BCM would target a larger, bank-owned prime broker. Although it may be more difficult to negotiate certain fees within the prime brokerage agreement, planning for the growth of the fund is essential. BCM would rather spend more upfront in order to ensure a relationship with a long-term partner that has all the necessary capabilities. Fund administration could also be provided by such a partner, making for a more integrated provision of necessary functions.

Fund Administration: According to the results of the 2013 Global Custodian Hedge Fund Administration Survey, Credit Suisse is a top rated administrator for both funds under $100 million and for larger $1 billion plus funds. BCM would, therefore, strongly consider working with Credit Suisse as a prime broker and fund administrator. Credit Suisse received high ratings across all ranking categories including client service, value, and middle office support. BCM would also consider engaging Bank of America Merrill Lynch for these services considering the previous relationship established by BCM's head trader and security analyst. Fund administrators typically offer services that include fund accounting, bank account services, reporting services, and investor services. BCM would also consider engaging their administrator for middle office function outsourcing. According to Citi Prime Finance's Hedge Fund Start-Up Guide, "middle office services include trade matching and settlement, affirmation and confirmation of trades, margin call and collateral management, trade and position valuation, and all aspects of market data management required to support the portfolio. It is now more commonplace for funds to outsource these aspects of the post-trade life cycle as the set of outsourced services becomes more comprehensive and delivers at efficient cost levels".

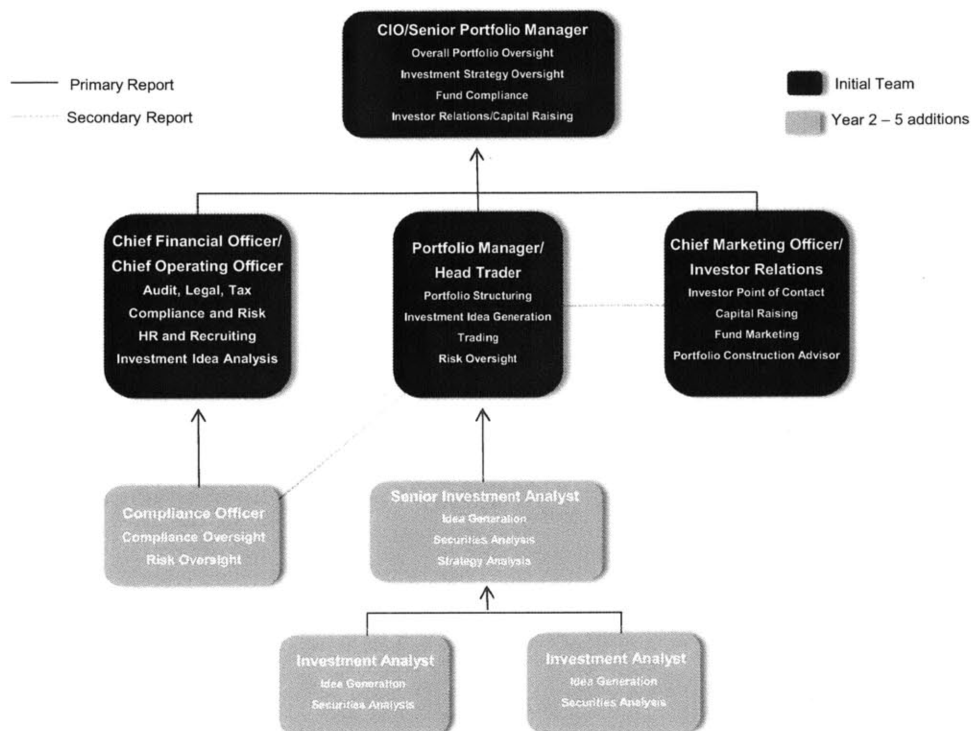
Final Integration: Once the relationship with BCM's prime broker and administrator has been finalized, the on-boarding process begins. A full list of fund documentation, including marketing materials and tax

information must be sent to BCM's prime broker to initiate the process. Legal agreements will also be completed with the prime broker. Citi Prime Finance details that a trading agreement, prime brokerage agreement, securities lending agreement, administrative agreement, and middle office service agreement are usually all executed in order to formalize the relationship. In addition, BCM's infrastructure would be integrated into the systems of the selected prime broker/administrator, with preliminary testing conducted to ensure proper functionality.

VI. Broadgates Capital: Organizational Structure and Culture

In order to create an efficient reporting structure and decision making process, BCM must identify the organizational structure of the company. Clearly identified roles and reporting paths are essential elements to ensure that investors know how the fund will operate and who the ultimate decision makers will be. BCM is starting with a small number of employees, each of whom is responsible for a number of mission critical functions. Below, is an integrated organizational chart, including both year 1 and growth elements (Figure 3.1). BCM believes it is important to understand not only the current organizational structure but also how that structure is proposed to evolve as the fund grows.

Figure 3.1 – Proposed Organizational Structure



BCM would consider utilizing a committee framework in order to institutionalize the decision making process. BCM would propose the use of an Investment Committee, a Risk and Compliance Committee, and a Management Oversight Committee. Each of these committees would be composed of all or a select number of company members. Refer to Figure 3.2 for an overview of such a structure.

Figure 3.2 – BCM Committee Structure

Committee	Purpose	CIO	Portfolio Manager	CFO/COO	CMO/IR Head
Management Oversight	Overall fund strategy Business Developmet Compensation Hiring	Chair	Member	Member	Member
Investment	Investment Strategy Key Investment Decisions	Chair	Member		
Risk and Compliance	Annual risk audit Compliance issues Regulatory considerations	Member	Member	Chair	

A. Culture and Values

Managing the expectations of clients and employees all starts with a clearly identified set of values which will drive the overall culture of BCM. BCM's culture and underlying values are what would drive the firm through both successes and failures and should dictate decision making and employee interaction. BCM expects professional behavior from its staff at all times. Understanding that the job of the fund is to help its investors achieve their financial vision should drive this professionalism. Nothing should be above this mission. Success within BCM would be 100 percent driven by performance. BCM would foster a meritocratic environment within a flat organizational structure. Although certain reporting lines are drawn and responsibilities outlined, BCM would never have individual offices in order to promote a collaborative and open-door culture. In this setting, BCM's culture would promote open dialogue among employees that like working together as a team. One could not survive within BCM unless they are willing to genuinely participate in this team approach. Although professional at all times, the culture within the office should be informal, encouraging interaction between all employees at all times. Finally, BCM would define success through the eyes of its investors. If fund investors are continuously achieving their investment goals, success is being realized.

VII. Broadgates Capital: Capital Raising and Marketing Considerations

In order to preside over a successful fund launch, BCM would need to attract the appropriate amount of capital. BCM's goal is to raise between $100 million and $150 million for its first fund. In such a highly competitive market, a clearly articulated pitch is absolutely critical. Throughout the sale of the fund, it is BCM's job to distinguish the fund's approach on a number of different levels by explaining the investment approach and demonstrating a scalable/repeatable process.

A. Marketing Philosophy

Investors are increasing the robustness of their due diligence process because it is increasingly difficult to identify hedge funds that will truly add value. The proliferation of new hedge funds has diluted the talent within the industry and investors understand that in order to protect themselves, a

thorough vetting process must take place when selecting a new manager. Investors, especially on the institutional side, may sponsor as low as 1 to 2 percent of the funds that pitch for capital. Therefore, a meticulously constructed marketing strategy that articulates exactly why investors should choose BCM is essential. SEI Investments, in their 6th annual global hedge fund survey, lays out some key marketing considerations that BCM would like to integrate into their strategy.

Proof of Concept: Being able to relay the complexities of BCM's eventual strategy in a simple, easy to understand manner is the most important element when marketing the fund. Helping investors understand how BCM's process is systematic, repeatable, and scalable would be the first step in attracting prospects. In SEI's recent survey, the second most important factor in hedge fund manager selection was "clarity of investment philosophy". Although seemingly simple, the articulation of the precise alpha generating methodology may, in reality, be quite difficult and include certain elements that may not be conducive to black and white descriptions. Refining this message would take time, and developing an efficient method of delivery is critical. Towards this end, BCM would consider using a marketing consultant with experience in hedge fund capital raising. If money is going to be spent upfront, BCM believes a clean, professional set of marketing materials is a good place to spend it.

Ongoing Communication: Once an investment is made, the marketing to that client should not end. BCM understands the importance of ongoing client communication and would make efforts to ensure that current investors are not forgotten in terms of the fund's marketing objectives. Regular performance updates, strategy considerations, market commentaries, and risk discussions must be part of an ongoing dialogue with both prospective AND existing investors.

The BCM Brand: Building a cohesive brand will be an underlying principle of BCM's marketing approach. Brand may become a bigger consideration in the hedge fund community as funds begin to take advantage of the JOBS Act by engaging in general solicitation of the fund. Although BCM will not initially be afforded that option due to registration choices, awareness of the fact that as the fund presents its capabilities to potential investors, a brand is being formed. SEI's survey results say that the "quality of a firm's investment team" is the number one consideration in manager selection. As such, BCM must

present a high quality team, both in terms of talent and character. Building such a reputation takes time; however, the formation of such a reputation starts during the marketing process. Helping investors understand that BCM's investment approach is unique will also drive the brand formation of the fund. This can only be achieved through a clear and consistent marketing message.

B. Process

BCM would use a combination of in-house marketing resources and third-party consulting services. The in-house marketing team would be led by the firm's chief marketing officer who would leverage personal networks and also work with BCM's prime broker/administrator to explore the potential for capital introductions. A third-party consultant would be used to help craft professional marketing materials such as a fund overview, investor due diligence questionnaire, and pitch books. The consultant could also provide research related to the best ways for BCM to raise the profile of the fund. For example, speaking engagements at industry conferences and inclusion in often used hedge fund databases should be considered. In terms of the actual presentation of the fund, BCM would propose that the chief marketing officer/head of IR take most initial meetings. As investors become interested and additional due diligence is conducted, BCM would grant full access to the rest of the team in all future meetings or conversations.

C. Target Investors

Most hedge fund investors will allocate of portion of their hedge fund capital to emerging managers. According to Richard Taglianetti, senior managing director of hedge funds at Corinthian Partners, 85 percent of hedge fund inflows are going to larger, more established, managers. However, when talking about such big numbers, the remaining 15 percent is quite significant, and institutional investors are looking for talented emerging managers with whom to invest and diversify. As previously mentioned, successful small managers tend to provide greater alpha as they are able to exploit niche opportunities in the market more efficiently than some of the larger funds. Therefore, although BCM would be a small fund, pursing larger institutional players, like the New Jersey State Investment Council, Princeton University Investment Company, and the Robert Wood Johnson Foundation, would certainly be

part of the marketing strategy. Single and multi-family offices are other typical hedge fund investors that usually allocate a portion of their capital to new managers. BCM would also like to aggressively target friends and family, other high net worth individuals through the financial advisor channel, and funds of hedge funds. These investor categories tend to move more quickly when allocating capital, so special attention would be paid to this segment during initial marketing efforts. After the initial push into this segment, BCM believes it would be important to cast a sufficiently wide net, so pursuing one particular segment does not fit within the fund's longer term marketing approach. BCM would promote a simple and consistent message across all potential investors. Tailoring the fund's message to specific investors is dangerous and risks the propagation of unclear investment ideals. All materials and investor communication would be reviewed by BCM's legal counsel and chief operating officer. Ensuring compliance with all regulations must be a primary consideration during this process.

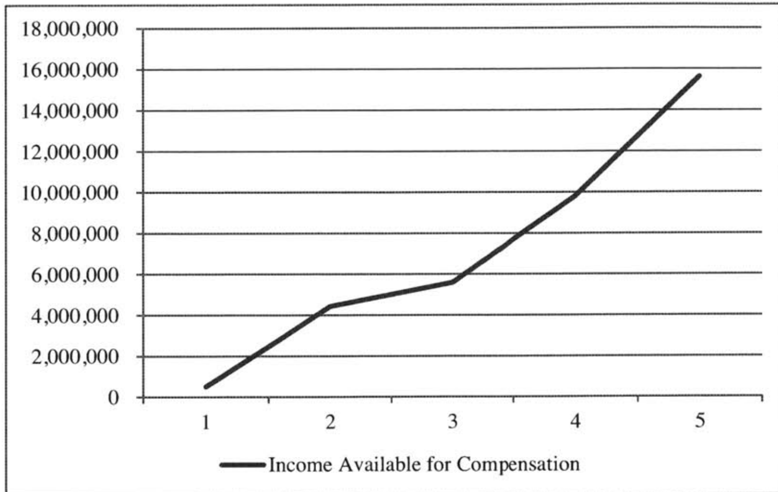
VIII. Budget Forecast

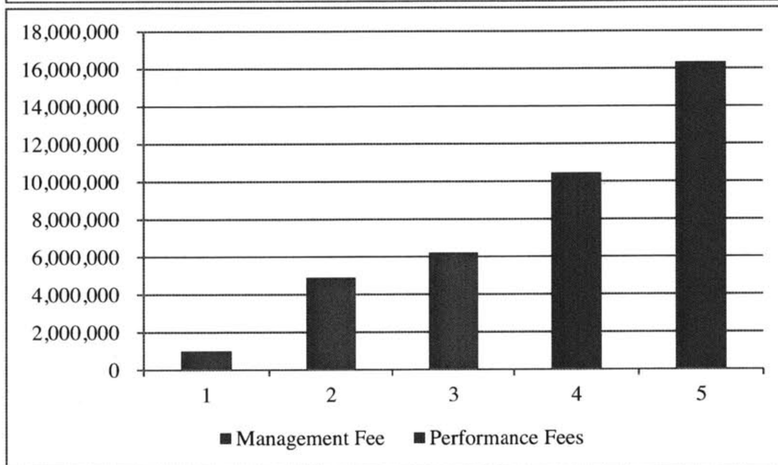
Figure 3.3 – BCM Income Statement Forecast

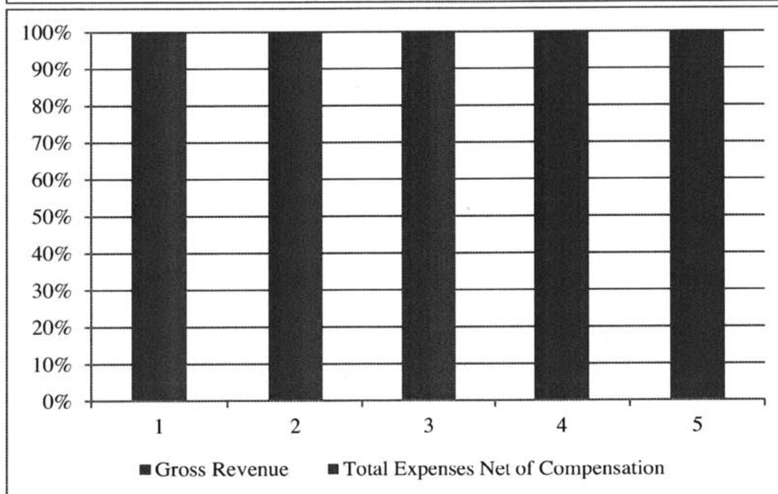
Year	1	2	3*	4*	5
AUM	$100,000,000	$115,000,000	$189,750,000	$333,212,500	$383,194,375
Revenue					
Management Fee	1,000,000	1,150,000	1,897,500	3,332,125	3,831,944
Performance Fee	0	3,750,000	4,312,500	7,115,625	12,495,469
Gross Revenue	**1,000,000**	**4,900,000**	**6,210,000**	**10,447,750**	**16,327,413**
Expenses					
Data Management Service	38,400	48,000	57,600	67,200	76,800
Legal Services	50,000	50,000	75,000	75,000	75,000
Outside Audits	25,000	25,000	25,000	25,000	25,000
Performance Audits	25,000	25,000	25,000	25,000	25,000
Additional Administrator Fees	12,000	12,000	12,000	12,000	12,000
Consulting Services	18,000	18,000	35,000	35,000	35,000
Data Subscriptions (Bloomberg)	63,000	84,000	105,000	126,000	168,000
Insurance	100,000	100,000	150,000	150,000	150,000
Office Equipment	75,000	20,000	20,000	20,000	20,000
Regulatory/Compliance Fees	12,500	12,500	30,000	30,000	30,000
Rent	58,500	58,500	58,500	58,500	58,500
Utility/Maintenance	6,000	6,000	6,000	6,000	6,000
Travel/Entertainment	10,000	10,000	17,500	20,000	24,000
Total Expenses	**493,400**	**469,000**	**616,600**	**649,700**	**705,300**
Income Available for Compensation	**506,600**	**4,431,000**	**5,593,400**	**9,798,050**	**15,622,113**

**assumed additional capital of $50 million raised*
***assumes additional capital of $100 million raised*

Figure 3.4 – BCM Operating Forecast Graphs







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Appendix A

A Fundamental Value Analysis of VF Corp

Company Description

VF Corp is an $11 billion apparel and footwear company with an international portfolio of brands. The company is a wholesaler of lifestyle clothing brands that include The North Face, Vans, Wrangler, Lee, Timberland, Nautica, Reef, and many others. These brands are sold internationally through a variety of channels. Consumers can purchase these brands in department stores, independent retailers, and specialty chains. In terms of product revenue breakdown, VF Corp attributes 54% of revenue to Outdoor and Action Sports, 26% of revenue to Jeanswear, 10% of revenue to what they call Imagewear, 5% of revenue to other sports, and 4% of revenue to Contemporary Fashion.

Regarding the company's overall strategy, the combination of powerful lifestyle brands, global penetration, and a culture of innovation are what will steer the future direction of the company. Additionally, the company hopes to drive growth with a direct to costumer model which they hope to build out over the next 5 years. This strategy will focus on the development of retail stores with a strong focus on international locations and a significant push to increase activity through ecommerce sales. The company predicts these direct sales channels will comprise 25% of the company's revenue by 2017.

I think the company's push into China with its North Face brand is a great example of the way management is willing to utilize innovative growth strategies to expand its brand awareness and presence. China is not your typical market for the North Face brand. A culture of outdoor sports does not really exist, therefore it seems like an odd market for VF Corp to try and penetrate with one of its flagship outdoor sport brands. However, management believed that with the correct strategy this culture could be cultivated and a huge new market would emerge for the brand. By organizing events promoting the spirit of outdoor activities, such as a climb to the summit of Haba Mountain, VF Corp was able to successfully ignite interest and is beginning to penetrate what could be a huge growth market. Although strategies like this may seem risky, I believe the growth potential greatly surpasses any risks associated with a failed marketing campaign. In general, Asia will be a large growth area for the company as a reported $1.1 billion is revenue expansion by 2017 was announced last year.

Briefly turning to management, I like the fact that many individuals at the top have been with VF Corp for quite some time. As an example, Eric C. Wiseman Chairman, President and Chief Executive Officer, has been with VF Corp since 1995, holding numerous leadership roles within the company. From an investment perspective, this is a positive. I want someone running the company who understands the brands and the strategic direction and vision. Perhaps tenure like this can be seen as a negative if the company is displaying signs of innovation stagnation, however this is clearly not the case with VF Corp. Generally speaking, the power of the company's brands and the commitment to growth are attracting top level talent both from a retention standpoint and from other parts of the industry.

The competition can be broadly defined as those companies that are involved in the sale of active wear and lifestyle brands. Companies that sell through retail channels, like department stores and specialty stores, as well as direct to consumer businesses, can be considered competition to VF Corp. Specifically,

the most commonly cited competitors include The Gap, Inc. and Columbia Sportswear. The Gap, for example, markets a number of different brands to consumers. I would categorize The Gap as more of a fashion brand; however, and VF Corp as more active lifestyle. That being said, The Gap is clearly a natural competitor. Columbia Sportswear more directly ticks the active brand box and competes most directly with VF Corp's North Face brand. Any company such as The Gap or Columbia Sportswear is worth considering as competition. I think of companies like Under Armour, Inc. and PVH Corp as other good examples of additional competitors to VF Corp. As VF Corp begins to focus on growing its presence in Asia, it may be worth considering companies like Bosideng International Holdings Ltd. as more direct competition. Bosideng has a strong presence in China with its flagship Bosideng brand being offered within a portfolio of other leading Chinese Brands.

Strength and Weakness Commentary

The VF Corp strengths I will focus on are margins, strong revenue across brands, and momentum in Asian markets and direct to consumer sales:

Margins: Expanding gross and operating margins are reflective of a positive and sustainable trend taking place within the VF Corp business. As reflected in the most recent third quarter earnings call, gross margins have increased to 47.6%, which is a 90 bp increase. Driving this increase was a shift in consumer preferences to the higher margin businesses. As an example, the Outdoor and Action Sports segment (representing a higher margin business) increased to 60% of total VF Corp revenue in the third quarter. This segment, along with other higher margin segments, like international and direct to consumer, is trending up and is in line with management's stated five year goals. I do not believe this is the end of the gross margin expansion as management has reiterated its 49.5% target for 2017. Additionally, VF Corp continues to manage inventory very tightly. Over the years, the company has always displayed a keen interest in maintaining low levels of inventory. This discipline has continued even as revenue has continued to grow. Specifically, inventory levels have been flat to last year despite the revenue growth. This translates into better margins as fewer markdowns are required to move product into consumer hands. In terms of operating margin, VF Corp saw a 10 to 20 bp increase due to lower product costs.

Strong Revenue across Brands: VF Corp's business is protected by a portfolio of brands that are all contributing to the company's growth. I believe that generally speaking this is the result of a company that has strong brand recognition across its portfolio. Whether we are talking about North Face, Vans, or Wrangler, people know these brands and look for them when they shop. For example, in the third quarter of 2013, Vans apparel was just reported to be a top 10 men's brand by ActionWatch. Not only is the company's revenue stream diversified through brand mix, but geographic diversity also adds strength to the business. Again, as reported in the most recent earnings call, 14 out of the company's 15 brands reported revenue growth on a global basis in the third quarter. Additionally, the brand that missed was only due to a shift in the retail calendar. The North Face brand is a good example of the geographic consistency of the company's brands experiencing 3% growth both in the Americas region and globally. The Vans brand is also another greater example of this constancy in performance across brands and geographies. The Americas region experienced revenue growth of 16% in the third quarter and Europe saw revenue of 25% during the same period. VF Corp's ability to penetrate multiple markets with multiple brands so effectively not only protects the company's revenue from unanticipated shocks in

certain areas, but it also opens up massive opportunities for growth and expansion. As will be discussed below, this growth includes both penetration in Asia and also an expansion of sales channels.

Momentum in Asian Markets and Direct to Consumer Sales: VF Corp continues to pursue growth both from a market expansion strategy as well as a product distribution strategy. In both cases, the company has demonstrated the ability to successfully execute. First let me focus on the expansion in Asia. The company has invested heavily in marketing efforts in this region, and these investments have paid off. Also, with the expansion in margins, the company is expected to invest even further in this international expansion. It has been reported that an estimated $30 million will be invested in the fourth quarter and 70% of that investment will be targeted outside of the US. In the third quarter of 2013, VF Corp saw 11% revenue growth in the Asia Pacific region led by mid teen growth in China. The company has identified a strategy of supporting local initiatives to ensure the brands remain relevant to the youth culture in that region. So far this strategy has worked well, and I believe that with the additional marketing capital available through the expansion in margins, additional campaigns in these regions will produce positive results. The ability to sell directly to the consumer is also a growing strength for VF Corp. Essentially, this strategy allows VF Corp to segment the demand curve and target their customers with different pricing. By directly selling to consumers, they are able to charge one segment of their customer base more. Of course, when compared to wholesale prices, margins in this segment are larger because of the ability to charge more for the same products. In the third quarter 2013, company revenue grew 5%, which also reflected 19% of total revenue coming from the direct to consumer channel. Cultivating this channel will allow a stronger brand connection with consumers, and management recognizes that this is a key component to the business's long term success. In the fourth quarter of 2013, the company reported 14% growth in direct to consumer sales. This has been trending upwards, and I believe it will continue to do so. Looking specifically at some of the company's stronger brands, North Face D2C sales rose 25% in the third quarter. Within this D2C framework, the company is extremely focused on innovations. For example, a new point of sale checkout system is being rolled out in 2014, and improvements to the ecommerce platform are well underway. All of these efforts should further enhance the relationship between the brands and the customers. In general, thinking innovatively about new challenges seems to be a strength of VF Corp.

The VF Corp weaknesses I will focus on are exposure to external factors such as a weakening global retail environment, high costs of developing a D2C retail network, and a consumer preference shift away from outdoor and lifestyle brands:

Weakening Global Retail Environment: Within the first few minutes of the most recent earnings call, VF Corp's Chairmen and CEO, David Wiseman, acknowledged that consumer buying behavior has been a bit inconsistent across all of the company's markets. As economies across the world still try and find solid footing, VF Corp is certainly at the mercy of the strength of the consumer. If large markets fall back into recession, or even grow more slowly for a prolonged period, the company's revenues could slow. Taking the US as an example, GDP growth, high unemployment, and uncertainty surrounding both the Fed and officials in Washington are all meaningful economic headwinds that may affect the behavior of consumers. This situation is not much different from what is happening globally, and VF Corp is clearly exposed to macroeconomic trends that will trickle down to impact consumer behavior and spending.

High Costs of Developing a D2C Retail Network: VF Corp is pursuing this strategy as a way to positively impact price as well as develop a stronger connection with the consumer. Although I believe this to be a reasonable goal, certain risks are present. The costs of developing this type of retail strategy are not insignificant, and it will be important for VF Corp to monitor these costs against the forecasted benefits of the strategy. If costs are not controlled and D2C demand is not realized, a significant drag could develop affecting the bottom line. In addition to potential cost concerns, other important behavioral shifts should not be ignored. The numbers from Black Friday and Cyber Monday sales show a clear shift to online shopping. With this in mind, a significant investment in brick and mortar retail locations may be a mistake. I understand that VF Corp is also highly focused on their ecommerce plans; however, it will be critical to strike the proper balance between the two D2C channels.

Consumer Preference Shift Away from Outdoor and Lifestyle Brands: This is an obvious risk, but it cannot be overlooked. Although VF Corp has a powerful portfolio of brands, they are in fact quite concentrated in terms of consumer preference. If preferences move away from active lifestyle products, VF Corp would have serious issues. I look at the actual probability of something like this happening in two ways. Let me start off by saying the following commentary focuses on the Outdoor and Action Sport segment because that makes up 60% of company revenues. One could argue that it has only been over the last 10 years or so that these types of products have become trendy. Is this push towards an active, outdoor lifestyle here to stay or is it simply a trend that will wane over time? I would argue that this trend will persist. I think that the healthy living, exercise, eat well movement will only intensify in the mid-term. Therefore, I would not be too concerned about preferences changing in this category as long as the company can follow the micro trends within the space that will evolve over time. That being said, it is a risk that must be mentioned.

Short and Long-term Stock Price Drivers

Short-term: When looking at very short-term drivers, I believe that weather is a very interesting consideration. The North Face brand, for example, is currently quite focused on cold, adverse weather type clothing. Winters in some of the company's major markets are important. Weather that is milder than expected could actually impact sales, hurt quarterly results, and consequently impact the short-term stock price. For example, the company sights an early start to winter this year in some areas as a driver for strong Timberland boot sales. Weather also affects inventory planning. If company buyers get it wrong on either side, an opportunity to optimize profit could be missed. Of course, these fluctuations should have no bearing on the longer term stock price as weather conditions will average themselves out over time. That being said, along with moving into regions with more consistently wet/cold weather, the company is trying to develop some products that will diversify their climate exposure. So although this factor is primarily a short-term concern as it relates to stock price, it is affecting some of the company's long-term strategies.

I would also look to the consumer as a major factor that will affect short-term sales and stock price. As mentioned above, because VF Corp relies heavily on consumer spending and trends, movement in either direction will clearly have an immediately identifiable impact on revenue. In the US, as the labor market continues to present challenges to personal income levels, consumer confidence feels measurable pressure. In a report by Bloomberg, November represented a 7 month low in consumer confidence. If retailers are competing for fewer available consumer dollars, pressure to match competitors' pricing could

also impact company margins. If these trends continue, weakness from the consumer could have a direct impact on the stock price of VF Corp.

Long-term: I think the trend in margins in an important consideration for the company's long-term success and stock price. As I have already mentioned, we have seen improvements in both gross and operating margins. Gross margin improvements are being driven by a longer term trend of consumer preference shift toward higher end goods. Ultimately in this case, it is the longer term trends of consumer preferences that will drive this metric. Over the long-term, it will be critical to the strength of VF Corp that the consumer continues to be interested in their higher margin brands. If this trend persists, margins may continue to expand toward management's 2017 goal. Clearly, it will take a few years for this to materialize, and the directions of margin growth over that time period will have a significant impact on where the stock trades in 4 to 5 years.

The company's ability to expand both geographically and into the D2C space is going to be an important driver of the long-term stock price. This strategy has its clear advantages if it can be executed properly; however, there are significant costs associated with achieving both goals. VF Corp is spending huge amounts of money on advertising and establishing this new distribution network. The fruits of these investments will be realized slowly over the next few years, and until then, it will be unclear as to whether the expense was worth it in terms of revenue growth. The company's leverage and exposure to associated risks is changing with this new strategy, and that evolution will certainly impact the company's stock price over the long-term.

Lastly, the integration and associated costs of the Timberland acquisition will continue to play out over the next few years. Thus far, the company seems optimistic about the developments that have taken place with this brand. Revenue grew 2% as expected, and management believes that the operational aspects of the integration are on target. However, the integration is not yet complete, and the longer term growth prospects of the brand will surely impact the future stock price.

Income Statement Projections

VF Corp
Income Statement

	2008	2009	2010	2011	2012	2013E	2014E	2015E
Total revenues	7,642,600	7,220,286	7,702,589	9,459,232	10,879,855	11,423,848	12,109,279	13,078,021
Growth (%)	*0.00%*	*-5.53%*	*6.68%*	*22.81%*	*15.02%*	*5.00%*	*6.00%*	*8.00%*
Gross Profit	3,358,920	3,195,164	3,597,388	4,330,630	5,061,975	5,369,208	5,842,727	6,375,535
Margin (%)	*43.95%*	*44.25%*	*46.70%*	*45.78%*	*46.53%*	*47.00%*	*48.25%*	*48.75%*
Operating Income (EBIT)	938,995	736,817	820,860	1,244,791	1,465,267	1,643,970	1,838,823	2,056,771
Margin (%)	*12.29%*	*10.20%*	*10.66%*	*13.16%*	*13.47%*	*14.39%*	*15.19%*	*15.73%*
Net Income	602,847	458,458	573,512	890,393	1,086,138	1,216,829	1,400,342	1,611,531
Margin (%)	*7.89%*	*6.35%*	*7.45%*	*9.41%*	*9.98%*	*10.65%*	*11.56%*	*12.32%*

In creating these projections, I of course, needed to make certain assumptions about the VF Corp business over the next few years. In order to understand my projections, it is important to understand my assumptions.

Revenue: For my 2013E figure, I have assumed a 5% growth from 2012 actual revenue. When reviewing the 9 Month Ended September figures, I was able to conclude that the 9 month 2012 vs. 2013 comparison revealed a 3.61% growth in revenue. My initial thought was to take Q4 2012 revenue and use that figure

as my base for Q4 2013, simply growing that number by 3.61%. However, I do believe that Q4 2013 growth will be slightly more robust as the figure reflects the loss in revenue in Q3 2013 from the recalibration of the retail calendar that led shipments to fall in Q4 rather than Q3. Therefore, I adjusted my overall growth rate for 2013 revenue to 5%. That reasoning is reflected in the 2013E revenue figure. In 2014E and 2015E, I expect revenue growth to accelerate further. I believe this increased growth will be driven by successful execution of the D2C strategy and further growth in the Asian markets which is being propelled by innovative advertising spending.

Gross Profit: As reflected in Q3 results, gross margins continue to expand. Primarily this has been driven by a continued consumer preference shift to the higher priced Outdoor Sportswear category. Management also cited lower product costs as driving this trend. To come up with my 2013E figure, I used a 47.0% gross margin number. This assumes margins continue to improve in Q4, bringing the full year 2013 margin close to Q3 levels. The company projects gross margins of 49.5% by 2017, and I believe the margins will continue to trend in that direction. I think the consumer preference shift is a real phenomenon that will remain an important driver over the next few years.

Operating and Net Income: To compute my 2013E numbers, I used the 9 Month stub period numbers. When reviewing the 9 Month Ended September operating income figures, I was able to conclude that the 9 month 2012 vs. 2013 comparison revealed a 12.2% increase in operating income. I took the Q4 2012 operating income and used that figure as my base for Q4 2013, simply growing that number by 12.2% and adding it to the 9 month 2013 total. The same methodology was applied to calculate the 2013E net income. I decided to grow operating income in 2014 and 2015 based on the CAGR from 2008 through 2013E. The CAGR during this period is 11.8%, and I used this percentage as my driver for operating income growth. Similarly, I used the CAGR from 2008 through 2013E for net income to drive my projections. The CAGR during this period is 15.0%, and I used this percentage as my driver for net income growth. I believe these projections are reasonable and provide for margins that are achievable given the company's strategy.

Further Financial Statement Commentary

Growth: Focusing on the statement of cash flows, we notice that the company is clearly growing. Operating activity has led to a 12% increase in net income. The company is also investing in growth with increases in CAPEX steadily appearing over the last few years. The company is also investing in new capabilities in the form of software, which I am assuming is partially made up of their new point of sale technology that they are introducing into their retail locations. The company continues to finance growth by increases in short-term borrowing while it also has made efforts to reduce long-term debt, repurchase common stock, and increase its dividend. As it relates to these figures, the company is strong and continuing to grow.

Free Cash Flow: Below is a calculation of the firm's free cash flow.

VF Corp
Free Cash Flow Analysis

	2010	2011	2012
Operating Income (EBIT)	820,860	1,244,791	1,465,267
Add Dep and Amort	*375,134*	*198,735*	*237,956*
EBITDA	1,195,994	1,443,526	1,703,223
Subtract CAPEX	*-111,640*	*-170,894*	*-251,940*
Change in Net Working Cap	*-179,812*	*194,673*	*-195,459*
Subtract Taxes	*-176,700*	*-274,350*	*-335,737*
FCF	727,842	1,192,955	920,087

As we can see from this analysis, VF Corp does generate substantial free cash flow. Although we see a dip in 2012, this can be attributed to increases in CAPEX as the company attempts to grow and build out its D2C strategy. In the long-term, this strategy should help continue to expand margins and add to free cash flow. Again, I would conclude that this analysis shed light on another positive aspect of the company's current situation and future prospects.

Earnings per Share: Let me briefly focus on earnings per share. The company has been able to increase EPS from 2010 to 2013. On a diluted basis, EPS has grown from 1.30 to 2.71 through a combination of strong top line growth and share repurchases. While also increasing its cash dividend each of these years, shareholder value continues to be a focus of the company.

Valuation

In terms of valuation, let me start off with some general commentary. When I invest in a company, I am looking for some key things. For me, VF Corp exemplifies many, if not all, of the traits I look for in a stock; however, the valuation results are not overly compelling. The company has good margins that are increasing, the company is able to deleverage a bit due to operational success, revenues and expenses have been predictable over the past 5 years, sales are diversified both geographically and by brand, and indicators like ROE and ROC are quite strong.

First, a comparable analysis based on P/E seems appropriate as VF Corp has some clear competition with similar business models.

	Current P/E
VF Corp	22.13
The Gap, Inc	14.35
Columbia Sportswear	24.17
PVH Corp	48.01

From these comparable P/E ratios, I would conclude that on a relative basis VF Corp is within a reasonable range. The Gap, Inc. has a significantly lower ratio, but I believe that is justified considering the stagnation of the company's brand and lack of clear strategy to reignite a buzz surrounding their products.

Another technique that could be employed is a DCF analysis. I acknowledge that my numbers below are a bit quick and dirty, but the results are consistent with my other interpretations of the data; a strong, perhaps undervalued company, but not compelling enough to buy. In terms of assumptions, I used 10%

as my WACC (discount rate) and I put a 20x multiple on my 2015E net income for my terminal value calculation.

VF Corp
Free Cash Flow Analysis

					1	2
	2010	2011	2012	2013E	2014E	2015E
Operating Income (EBIT)	820,860	1,244,791	1,465,267	1,643,970	1,838,823	2,056,771
Add Dep and Amort	*375,134*	*198,735*	*237,956*	*300,000*	*325,000*	*300,000*
EBITDA	1,195,994	1,443,526	1,703,223	1,943,970	2,163,823	2,356,771
Subtract CAPEX	*-111,640*	*-170,894*	*-251,940*	*-270,000*	*290,000*	*200,000*
Change in Net Working Cap	*-179,812*	*194,673*	*-195,459*	*-195,459*	*-195,459*	*-195,459*
Subtract Taxes	*-176,700*	*-274,350*	*-335,737*	*-361,673*	*-404,541*	*-452,490*
FCF	727,842	1,192,955	920,087	1,116,837	1,853,823	1,908,823

PV of FCF					1,685,294	1,577,539
Terminal Value					26,636,877	
Present Value (Total)					29,899,710,146	
Value per Share					$67.90	

Based on the stock price as of March 17, 2014, of $62.07, my valuation is not different enough to warrant investment action. Based on the analysis of the business, industry, and current valuation, this would be a pass.

Appendix B

Broadgates Capital Management Team (names intentionally have been left out)

Chief Investment Officer /Senior Portfolio Manager

Past Experience: Six years working as a fixed income investment banker at PNC Capital Markets. As a Director in PNC's Capital Markets practice, gained experience analyzing client capital structures and determining the most efficient mix of debt financing. Structured new bond issues and restructured existing portfolios to achieve most efficient mix of risk and cost. Experience integrating interest rate derivatives into overall debt portfolio structures in order to minimize/maximize desired levels of risk exposure.

Went on to receive an MBA from the University of Oxford and an advanced Master of Science from MIT with a strict focus on equity investment structuring and portfolio management. Has experience with quantitative portfolio and security modeling. Examples of research include regression modeling to understand the average level of alpha produced by US hedge funds and mutual funds. Went on to use Carhart four-factor model to analyze any 'hidden beta' effects on alpha and track hedge fund beta exposure to detect true diversification benefits of hedge funds. Has worked extensively with portfolio optimization models to recommend optimal asset allocations among different asset classes.

Co-founder of an investment firm at the University of Oxford that made equity investments in private companies. Received an undergraduate degree from the University of Pennsylvania.

Portfolio Manager/Head Trader

Past Experience: Began his career on Bank of America Merrill Lynch Global Equities floor as a Algorithmic Sales Trader with a focus on hedge fund accounts. Throughout his time on this desk, he focused on executing customer orders across equities options and futures as well as educating customers on proper algorithmic usage. Later transferred to Bank of America Merrill Lynch's Cash Sales Trading team where he covers the same client segment. On the desk he is in charge of the team's effort to initiate hybrid coverage, algorithmic and high touch, across all customers.

Moved on to work at a $2 billion New York hedge fund with a fundamental long/short equity focus. At the fund, he served as a trader and securities analyst supporting the portfolio managers of the fund.

Graduate of Loyola University in Maryland where he graduated with honors. Enjoys scuba diving, traveling and Justin Bieber concerts.

Advisor I: Chief Financial Officer/Chief Operating Officer

Past Experience: Chief Operating Officer of Assured Guaranty Ltd. Joined Assured Guaranty in 2004 as Chief Financial Officer. Prior to joining Assured Guaranty, served as Managing Director, Chief Financial Officer and Operating Officer of UBS for the Americas Region and a member of the Board of Directors of the UBS Investment Bank. Joined UBS in 1994 as Chief Financial Officer of the Union Bank of Switzerland prior to its merger with Swiss Bank Corp. in 1998.

Was previously with KPMG Peat Marwick for 23 years as a partner and the National Practice Director for Investment Banking and Capital Markets.

Graduate of Niagara University. He is a member of the American Institute of Certified Public Accountants and a member of the Advisory Board of the University of Pennsylvania's Wharton School,

Financial Institutions Center. He also serves as a member of the Board of Trustees and Chairman of the Finance Committee of the LaSalle College High School.

Advisor II: Chief Marketing Officer/Investor Relations

Past Experience: President of the Philadelphia and South Jersey region of PNC Financial Services Group, one of the largest diversified financial institutions in the country. Responsible for over 7,000 employees in that region.

Joined PNC in 1989 as bank treasurer and president of PNC Funding Corp, later becoming senior vice president and managing director of fixed income investments for PNC Investment Management and Research. In 1993, became executive vice president in charge of capital markets and the bank's asset liability committee, then becoming executive vice president of PNC Advisors Wealth Management.