

INTRODUCTION

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1.1 Hedge Fund History and Evolution

1.1.1 Hedge Fund Defined

There is no uniformly accepted definition of a hedge fund. Many hedge funds today have no true hedge at all, rather they increase risk through leverage, concentration, and by trading in illiquid assets. In this book, we define a hedge fund as a private investment vehicle that charges an incentive fee and (almost always) an asset based fee. This broad definition would also include private equity funds and real estate partnerships that are not generally considered hedge funds. However, we will note in Chapter 15, that a current and future trend is the convergence among many alternative investments and the firms that manage them.

1.1.2 The First Hedge Fund

It is generally reported that A. W. Jones set up the first hedge fund in 1949. Under our definition of hedge funds, there are others that preceded Jones. I had the great pleasure of leading a group of forty Rutgers Business School students on a trip to visit Warren Buffett at his Berkshire Hathaway offices in 2006. Buffett mentioned that he believed

Benjamin Graham operated the first hedge fund since Graham's partnership utilized long and short positions and charged an incentive fee. Graham's partnership, formed in 1926 with Jerome Newman, included a number of hedged and unhedged strategies, such as convertible arbitrage and distressed securities. Over time it evolved to an approach that was primarily net long with a Value bias, while Jones's partnership was more dynamic in its use of leverage and short selling.

There were likely to be several trading and commodity pools in operation before Graham-Newman, some of which are noted in the classic trading tome, *Reminiscences of a Stock Operator*. However, until detailed evidence of their operations comes to light, I would agree with Buffett's belief that Graham-Newman operated the first hedge fund.

1.1.3 Evolution of the Hedge Fund Market

1.1.3.1 Billion Dollar Paychecks Attract the "Best and Brightest"

Hedge funds gained a fair amount of notoriety in the 1960's, subsequent to an article on A. W. Jones by Loomis (1966). In my opinion, two significant events propelled the hedge fund industry to where it is today as one of the hottest areas of finance. First, George Soros' Quantum Fund reportedly earned more than \$1 billion in a single day on September 16, 1992 by shorting the British Pound in advance of the United Kingdom's withdrawal from the European Exchange Rate Mechanism. Soros, dubbed as "The Man Who Broke the Bank of England," became a superstar in financial circles. Eventually, Soros himself did earn more than a billion dollars in a single year. Until that time, most Wall Street professionals did not realize that nine and ten figure paychecks for a single year were possible. Of course they were aware of the rise and fall of Michael Milken in the junk bond market, but virtually creating a new market (i.e. a somewhat liquid and broad high yield bond market) from scratch is beyond the realm of most financial professionals.

Amazingly, there are practically no requirements needed to start a hedge fund. If you can raise capital then you are essentially in business for the *short-term*. In the long run, your fund needs good absolute or risk adjusted returns in order to have a viable business. Hedge fund manager compensation in recent years has continued to skyrocket. **Table 1** lists the compensation of the ten highest paid hedge fund managers in 2007, according to *Alpha*. Incredibly, John Paulson earned a reported **\$3.7 billion** in 2007, due in part to shorting subprime securities through leveraged derivatives.

Table 1: Highest Paid Hedge Fund Managers, 2007

Name	Firm	2007 Compensation
John Paulson	Paulson & Co.	\$3.7 Billion
George Soros	Soros Fund Management	\$2.9 Billion
James Simons	Renaissance Technologies Corp.	\$2.8 Billion
Philip Falcone	Harbinger Capital Partners	\$1.7 Billion
Kenneth Griffin	Citadel Investment Group	\$1.5 Billion
Steven Cohen	SAC Capital Advisors	\$0.9 Billion
Timothy Barakett	Atticus Capital	\$0.8 Billion
Stephen Mandel, Jr.	Lone Pine Capital	\$0.7 Billion
John Griffin	Blue Ridge Capital	\$0.6 Billion
O. Andreas Halvorsen	Viking Global Investors	\$0.5 Billion

Source: *Alpha*, April 2008

1.1.3.2 Hedge Funds Outperform During 2000–2002 Bear Market

The second key event that may have spurred the exponential growth of the hedge fund industry was the bear market in U.S. equities of 2000–2002. Hedge fund returns were nominally positive, while U.S. equities experienced double-digit losses for three consecutive years. These results are shown in **Table 2** below. Value stocks, once thought to provide strong downside protection in the event of a bear market, were also hammered in 2002, losing 15.5% of their capital.

Table 2: Hedge Fund and U.S. Stock Market Performance, 2000–2002

Year	CS Tremont HF Index	S&P 500	Russell 1000 Growth	Russell 1000 Value
2000	4.85%	-9.10%	-22.42%	7.01%
2001	4.42%	-11.90%	-20.42%	-5.59%
2002	3.04%	-22.10%	-27.88%	-15.52%

Source: CS Tremont, Morningstar Principia

Hedge funds were virtually the only asset class, with equity exposure, that appeared to keep investors' heads above water. Institutional investors with significant allocations to alternative investments, such as David Swenson of Yale, were viewed as brilliant and therefore had their investment philosophies followed by an increasing number of foundations, endowments, pension funds, and family offices.

1.1.3.3 Other Notable Hedge Fund Events

Other notable hedge fund related events include the spectacular blowups of Long Term Capital Management, expertly chronicled in Lowenstein (2001), and Amaranth Advisors. The failure of Long Term Capital leaves an enduring lesson to be learned for all investors. Namely, the smartest people on earth can lose virtually all of their investor's capital when untimely market movements are combined with excessive leverage and illiquid underlying financial assets. The Amaranth failure cast doubt on the superiority of the multistrategy approach, relative to a fund of funds strategy, and resulted in many hedge funds revisiting their risk management systems.

On February 9, 2007, Fortress Investments Group (FIG) became the first publicly traded hedge fund management company in the U.S. FIG started strong, closing its first day at \$31.50 per share, up 67.6% from its \$18.50 per share offering price. In late October 2008, FIG was trading at roughly \$4.90 per share in the aftermath of the subprime fallout and unraveling of the credit bubble. Other publicly traded hedge fund management companies, such as Och-Ziff Capital Management Group

(OZM), have thus far experienced disappointing returns since their initial public offerings (IPOs).

The global bear market of 2008 is shaping up to be the worst year ever for hedge funds, with most broad indexes down close to 20% at the end of October. Clearly, many funds will have to shut down since they will not be able to cover their operating expenses due to a lack of incentive fees. In Chapter 15, we discuss trends in the hedge fund industry and hedge fund performance in 2008, and the fallout from Bernard Madoff's alleged Ponzi scheme, will surely accelerate these trends.

1.2 Types of Hedge Funds

There are dozens of hedge fund strategies and they often don't fall neatly into a single category. In several cases, there is overlap between two hedge fund categories. For example, many statistical arbitrage strategies are also market neutral. Below are some of the more common strategies utilized by hedge fund managers. By no means is the list exhaustive, but it is likely representative of the bulk of assets deployed in the hedge fund investment universe. Within each strategy, there are often sector specific or international versions that some database vendors will categorize as a separate investment category.

1.2.1. *Activist* funds typically purchase a sizeable (i.e. 5% or more) stake in a company and attempt to unlock shareholder value by spurring management or corporate strategy changes. In many respects they operate similar to private equity firms, with the obvious exception that they own a limited amount of shares in publicly traded companies. Carl Icahn was and remains one of the more notable activist investors, that were pejoratively termed "corporate raiders" a couple of decades ago.

1.2.2. *Capital Structure Arbitrage* is a more generalized version of the convertible bond arbitrage trade and is typically executed through the use of complex derivative instruments, such as a credit default swap. As with most arbitrage trades, either side of the position can be taken, but

the typical transaction combination is to be long the bond (through a synthetic position, such as selling short a credit default swap) and short the common stock. The strategy performs well in most circumstances, but has difficulty when there is a divergence between stock and bond prices.

1.2.3. *Convertible Arbitrage* funds typically buy convertible bonds and sells short the common stock of the same company. The hedge fund earns the coupon from the bond and the proceeds from the short sales of the common stock, resulting in a “double carry.” The trade is not risk free since dividends may be owed from shorting the common stock and significant losses can be incurred if the bond defaults and the hedge ratio was incorrectly calculated. Liquidity issues can also overwhelm the fundamentals, as evidenced by the drop in convertible bonds in the second half of 2008.

1.2.4. *Distressed / Credit* funds focus on companies that are at risk of default, are in default, or have recently emerged from default. Credit is a more general term for the investment in fixed income securities. For example, credit funds may purchase a pool of loans from a bank, such as Citi or Goldman Sachs, at deep discounts. Both strategies place a heavy emphasis on legal work, financial statement analysis and the identification of the “fulcrum” security, or the one which has the maximum voting leverage in the event of a financial reorganization.

1.2.5. *Event Driven* funds engage in trades based on a specific event such as: merger, special dividend payment, earnings announcement, analyst opinion upgrade, or credit downgrade. Once the event is resolved, favorably or unfavorably, the fund moves on to the next trade.

1.2.6. *Fixed Income Arbitrage* funds purchase fixed income securities that appear to be undervalued and sell short other fixed income securities, with similar risk, that appear to be overvalued. Leverage is nearly always used to increase both the risk and return of the trade. A typical example would be to purchase a basket of mortgage backed securities and sell short a portfolio of Treasury securities with a similar

duration. The fund captures the spread (since Treasuries always sell at a premium to AAA rated mortgage backed securities) times the leverage factor, minus the cost of borrowed funds. The trade may backfire during times of market distress, as in the case of the late 2007 through 2008 time period.

1.2.7. *Global Macro* funds generally do not focus on individual securities, but rather emphasize positions in derivatives and index securities on a global basis. They are often unhedged and utilize leverage, making them one of the higher risk hedge fund categories.

1.2.8. *Long / Short* funds purchase securities perceived to be undervalued while simultaneously selling short those viewed as being overvalued. The long to short, or hedge ratio, variation is based on the manager's outlook for the returns of the broader market. The strategy is typically employed for equity related securities, but is flexible enough to apply to nearly any asset class. The bulk of hedge fund assets are in Long / Short Equity related strategies, making this category the main focus of the examples in this book.

1.2.9. *Managed Futures* funds trade in futures contracts, such as commodities, currencies, metals, or index futures. Some analysts call these funds "commodity trading advisors" (CTAs), but the "managed futures" term better signifies the broad array of instruments these funds can employ.

1.2.10. *Market Neutral* funds balance the market risk of both the long and short side of the portfolio. A common market neutral example is a long position in Ford and short position in General Motors. The term typically applies to equity oriented funds, but it could also apply to fixed income securities where the duration (i.e. effective maturity) of the fund's long and short positions are balanced.

1.2.11. *Merger Arbitrage* funds typically purchase a basket of stocks that is the target of a merger or acquisition. The offsetting trade usually involves a short position in the bidding firms. The main risk of the

strategy is the loss incurred when a deal falls through, effectively forcing the hedge fund manager to absorb the loss of the takeover premium. Leverage is often utilized to increase risk and return.

1.2.12. *Short Biased* funds are either entirely short or have the bulk of their assets sold short. Since the equity and fixed income markets generally trend up over time, few hedge fund managers successfully operate in this category over the long-term. Those that are successful typically focus on small to mid cap firms with company-specific problems.

1.2.13. *Statistical Arbitrage* funds typically employ high frequency computerized trading techniques in order to profit from apparent arbitrage opportunities. True arbitrage opportunities, such as buying IBM in New York and simultaneously shorting it in London for a profit, have no risk and are rare and fleeting if they do exist. The term *statistical* refers to the fact that there may be an arbitrage opportunity according to the fund manager's model; but if the model is not accurate, there remains risk in the trade.

1.2.14. *Multistrategy* funds simultaneously engage in more than one of the previously discussed hedge fund strategies. They attempt to diversify risk by holding a range of strategies, rather than placing all of their capital in a single approach. For example, a merger arbitrage fund would have difficulty attracting capital in the event of a slow period for deals. Conversely, a multistrategy fund could allocate capital towards those hedge fund categories that appear to have the best chance of prospering in the current market environment.

1.2.15. *Fund of Funds* purchase positions in a number of individual hedge funds. They attempt to reduce the damage to the portfolio in the event that a specific fund "blows up," such as with Long Term Capital Management. One disadvantage is that their investors incur a second layer of fees, typically one percent of assets under management and ten percent of profits.

1.3 Paths to Alpha

1.3.1 *Is Alpha Possible?*

The list of great investors — Buffett, Cohen, Graham, Lampert, Lynch, Paulson, Robertson, Simons, Soros, and so forth — can be theoretically explained by being the economic equivalent of lucky coin flippers, but the more logical explanation is that they simply have or had an ability to consistently generate alpha (α). Let's briefly discuss some relevant studies on investment performance and the most common sources of alpha, or superior risk adjusted returns. A simple equation of alpha is shown below, where the expected return would be obtained with the assistance of a valuation model, such as the Capital Asset Pricing Model or the Arbitrage Pricing Theory.

$$\alpha = \text{Actual Return} - \text{Expected Return}$$

In *aggregate*, alpha is not possible. Sharpe (1991) demonstrated that the average investor cannot outperform the market average and when transaction costs are taken into account the average investor will actually underperform the average. Nevertheless, several researchers, such as Harri and Brorsen (2004), have found that there is persistence in hedge fund performance. That is, past winning managers have a higher probability of outperforming again and past losers underperform. Losing hedge fund managers that underperform two or three years in a row are likely to be fired or see their fund go out of business. If the fund continues to operate, the departing manager is often replaced with “new blood,” which is, at least initially, less experienced and less talented than the *winning* managers. So alpha *is* likely possible for a subset of skilled managers.

1.3.2 *Superior Investment Mosaic May Lead to Alpha*

I initially came across the Mosaic Theory during my studies in the Chartered Financial Analysts (CFA) program. The theory states that an

analyst can create value by combining bits and pieces of public, and in some cases proprietary, information into a unique picture that the market as a whole cannot easily see. By creating a superior mosaic, alpha may be generated. We will create a sample investment mosaic in Chapter 2, whose topic is Hedge Fund Research. In my opinion, based on the hundreds of hedge funds that I have evaluated, the vast majority use the mosaic approach in their quest for alpha.

1.3.3 Superior Information May Lead to Alpha

There is a well known axiom on Wall Street that states, “Orders = Information.” Despite the recent billion dollar losses in subprime and credit related securities, trading is the most profitable area for many Wall Street firms. According to Tully (2007), the five biggest U.S. investment banks in 2006 — Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley generated \$61 billion from proprietary trading, approximately half their total revenue.

The Tully article, which notes the SEC is investigating Wall Street trading practices, discusses how a trade based on information flow might work.

“Here’s a hypothetical example, gleaned from former Wall Street traders as well as outsiders who work closely with them, of how some people think the Street exploits information. Say a fund company, call it Big Dog, wants to buy a million shares of Intel. A Big Dog trader calls a broker at a Wall Street firm — call it Megabux. The broker enters the order into the Megabux trading system. A dozen Megabux ‘sales traders’ get the info on their computer screens. Their job is to find sellers for the shares. But first they call their top hedge fund clients, giving them the chance to buy Intel before Big Dog pushes up the price. To cover their tracks, the hedge funds don’t buy the Intel shares through Megabux, but

they reward their benefactor with a lot of other big trades and by paying higher commissions than the mutual funds do.”

The article discusses an additional example where the information of the block trade is passed onto the proprietary trading group. It would be illegal for them to trade in advance of the 1 million share order being completed, but it is very likely that there will be follow up orders at Megabux or elsewhere and the proprietary trader may be able to take a position in advance of a subsequent order. For example, the trader can look at the initial trade size and compare it to a normal full position size of the portfolio manager to get an imprecise estimate of the number of follow up orders in Intel. Wall Street firms state that they have compliance procedures in place to ensure that no front running activity is taking place, but the area is somewhat murky. In the Intel example discussed above, the proprietary trading desk of the Wall Street firm could not be prohibited from trading in Intel forever, leaving a window to execute the trade at some point after receiving the block trade information.

The superior information flow path to alpha is most likely utilized by the largest hedge funds, due to the large commissions that they generate. They often receive the “first phone call” from sell side analysts and traders. In no way do I condone insider trading or any violation of SEC rules. It is merely my wish to point out that, unlike in traditional economic theory, information flow is not instantaneously available to all prospective investors. In many cases there is a time sequence to the dissemination of important information and those at the front of the information chain may have the opportunity to earn alpha.

1.3.4 Superior Execution of Strategies May Lead to Alpha

The rise of electronic communication networks (ECN) and alternative trading systems, such as Liquidnet, have driven down the costs of trading substantially. However, the fragmented nature of the financial markets has created certain pockets or dark pools of liquidity that might not be

apparent to the traditional investor. Consider a trade of shares in IBM. Should it be executed on the New York Stock Exchange, Instinet, Tokyo Stock Exchange, Frankfurt Stock Exchange, Liquidnet, or some other venue?

Leinweber (1995) analyzed the “paper” versus actual performance of a mutual fund that attempted to replicate a portfolio of Value Line’s highest rated stocks. The “paper portfolio” had an annual return of 26.2% over the 1979–1991 period, but the actual fund, based on the same stock picks, earned only 16.1% per year. Perold (1988) has called the gap between “paper” and real returns the “implementation shortfall.” Part of the implementation shortfall in the Value Line study may have been due to the time lag between the publication of the rankings and the date a trade was submitted. Other components of the shortfall are likely related to commissions, bid-ask spreads, and market impact.

The takeaway from the fragmented nature of financial markets and the existence of the implementation shortfall is that superior execution of a strategy may result in alpha. Best execution strategies are especially important for statistical arbitrage and other high turnover strategies. We devote an entire chapter to best execution of hedge fund strategies in Chapter 8.

Of course, some combination of the aforementioned and other techniques may lead to the highest alpha. In sum, alpha is difficult to achieve, but surely possible. The primary purpose of this book is to give hedge fund managers and analysts a framework for generating and understanding it through an analysis of its components — investment research, trade execution, and portfolio management.

Hedge Fund Alpha Tear Sheet — Chapter 1

- There is no uniformly accepted definition of a hedge fund.
 - If we define a hedge fund as a private investment vehicle that charges an incentive fee and (nearly always) asset management fee, then, contrary to popular opinion, A. W. Jones did not start the first hedge fund.
- According to Warren Buffett, Benjamin Graham ran the first hedge fund, since the Graham-Newman Partnership utilized long and short positions and charged an incentive fee.
 - Others may have operated hedge fund like investment partnerships before Graham, but the details of these operations are currently sketchy.
- New hedge fund categories are created each year. Common ones include:
 - Activist, Capital Structure Arbitrage, Convertible Arbitrage, Distressed / Credit, Event Driven, Fixed Income Arbitrage, Global Macro, Long / Short, Managed Futures, Market Neutral, Merger Arbitrage, Short Biased, Statistical Arbitrage, Multistrategy, and Fund of Funds.
- Alpha, or the achievement of superior risk adjusted returns over the long term, is difficult to achieve and sustain, but possible.
 - Alpha equals the actual return of a security or fund, minus its expected return.
 - In aggregate, alpha is not possible, but it is possible for a subset of investors.
 - Several studies have found persistence in performance; that is, winners keep winning and losers keep losing (until they go out of business).
- Common sources of alpha include the following techniques:
 - Creation of a superior investment mosaic.
 - Access to superior information.
 - Superior execution of investment strategies
 - Some combination of the above and other techniques.

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