

The Hedge Fund Industry

The global credit crisis originated from a growing bubble in the US real estate market which eventually burst in 2008. This led to an overwhelming default of mortgages linked to subprime debt to which financial institutions reacted by tightening credit facilities, selling off bad debts at huge losses and pursuing fast foreclosures on delinquent mortgages. A liquidity crisis followed in the credit markets and banks became increasingly reluctant to lend to one another causing risk premiums on debt to soar and credit to become ever scarcer and more costly. The global financial markets went into meltdown as a continuing spiral of worsening liquidity ensued. When the credit markets froze, hedge fund managers were unable to get their hands on enough capital to meet investor redemption requirements. Not until the early part of 2009 did the industry start to experience a marked resurgence in activity realising strong capital inflows and growing investor confidence. Nevertheless, this positive growth has since been slowed as a result of the on-going European sovereign debt crisis affecting the global economy.

The aftermath of the financial crisis has clearly highlighted many of the shortcomings of the hedge fund industry and heightened the debate over the need for increased regulation and monitoring. Nevertheless, it has since been widely accepted that hedge funds played only a small part in the global financial collapse and suffered at the hands of a highly regulated banking system.

Chapter 1 introduces the concept of a hedge fund and a description of how they are structured and managed as well as a discussion of the current state of the global hedge fund industry in the light of past and more recent financial crises. Several key investment techniques that are used in managing hedge fund strategies are also discussed. Chapter 1 aims to build a basic working knowledge of hedge funds, and along with an overview of hedge fund data sources in Chapter 2, arm the reader with the information required in order to approach and understand the more quantitative and theoretical aspects of modelling and analysis developed in later chapters.

1.1 WHAT ARE HEDGE FUNDS?

Whilst working for *Fortune* magazine in 1949, Alfred Winslow Jones began researching an article on various fashions in stock market forecasting and soon

2 Hedge Fund Modelling and Analysis Using MATLAB®

realised that it was possible to neutralise *market risk*¹ by buying undervalued securities and *short selling*² overvalued ones. Such an investment scheme was the first to employ a *hedge* to eliminate the potential for losses by cancelling out adverse market moves, and the technique of *leverage*³ to greatly improve profits. Jones generated an exceptional amount of wealth through his *hedge fund* over the 1950s and 1960s and continually outperformed traditional money managers. Jones refused to register the hedge fund with the Securities Act of 1933, the Investment Advisers Act of 1940, or the Investment Company Act of 1940, the main argument being that the fund was a *private* entity and none of the laws associated with the three Acts applied to this type of investment. It was essential that such funds were treated separately to other regulated markets since the use of specialised investment techniques, such as short selling and leverage, was not permitted under these Acts, neither was the ability to charge performance fees to investors.

So that the funds maintained their *private* status, Jones would never publicly advertise or market the funds but only sought investors through word of mouth, keeping everything as secretive as possible. It was not until 1966, through the publication of a news article about Jones' exceptional profit-making ability, that Wall Street and *High Net Worth*⁴ (HNW) individuals finally caught on and within a couple of years there were over 200 active hedge funds in the market. However, many of these hedge funds began straying from the original *market neutral* strategy used by Jones and employed other seemingly more volatile strategies. The losses investors associated with highly volatile investments discouraged them from investing in hedge funds. Moreover, the onset of the turbulent financial markets experienced in the 1970s practically wiped out the hedge fund industry altogether. Despite improving market conditions in the 1980s, only a handful of hedge funds remained active over this period. Indeed, the lack of hedge funds around in the market during this time changed the regulators' views on enforcing stricter regulation on the industry altogether. Not until the 1990s did the hedge fund industry begin to rise to prominence again and attract renewed investor confidence.

Nowadays, hedge funds are still considered private investment schemes (or vehicles) with a collective pool of capital only open to a small range of institutional investors and/or wealthy individuals and having minimal regulation. They can be as diverse as the manager in control of the capital wants to be in

¹ *Market risk* (or *systematic risk*) is the risk that the value of an investment will decrease due to the impact of various market factors, for example changes in interest and foreign currency rates.

² See Section 1.4.1.

³ *Leverage* is the use of a range of financial instruments or borrowed capital to increase the potential return of an investment (see Section 1.4.2).

⁴ A *High Net Worth* (HNW) individual (or family) is generally assumed to have investable assets in excess of \$1 million, excluding any primary residence.

terms of the investment strategies and the range of financial instruments which they employ, including stocks, bonds, currencies, futures, options and physical commodities. It is difficult to define what constitutes a hedge fund, to the extent that it is now often thought in professional circles that a hedge fund is simply one that incorporates any *absolute return*⁵ strategy that invests in the financial markets and applies traditional as well as non-traditional investment techniques. Many consider hedge funds to be within the class of *alternative* investments along with private equity and real estate finance that seek a range of investment strategies employing a variety of sophisticated investment techniques beyond the longer established traditional ones, such as *mutual funds*.⁶

The majority of hedge funds are structured as limited partnerships with the manager acting in the capacity of general partner and investors as limited partners. The general partners are responsible for the operation of the fund, relevant debts and any other financial obligations. Limited partners have nothing to do with the day-to-day running of the business and are only liable with respect to the amount of their investment. There is generally a minimum investment required by *accredited investors*⁷ of the order of \$250,000–\$500,000, although many of the more established funds can require minimums of up to \$10 million. Managers will also usually have their own personal wealth invested in the fund, a circumstance intended to further increase their incentive to consistently generate above average returns for both the clients and themselves. In addition to the minimum investment required, hedge funds will also charge a fee structure related to both the management and performance of the fund. Such fees are not only used for administrative and on-going operating costs but also to reward employees and managers for providing positive returns to investors. A typical fee basis is the so-called *2 and 20* structure which consists of a 2% annual fee (levied monthly or quarterly) based on the amount of Assets under Management (AuM) and a 20% performance-based fee, i.e. an incentive-oriented fee. The performance-based fee, also known as carried interest, is a percentage of the annual profits and only awarded to the manager when they have provided positive returns to their clients. Some hedge funds also apply so-called *high water marks* to a particular amount of capital invested such that the manager can only receive performance fees, on that amount of money, when the value of the capital is more than the previous largest value. If the investment falls in value, the manager must bring the amount back to the previous largest amount

⁵ *Absolute return* refers to the ability of an actively managed fund to generate positive returns regardless of market conditions.

⁶ *Mutual funds* are similar in structure to hedge funds but are subject to much stricter regulation and limited to very specific investments and strategies.

⁷ An *accredited investor* is one with a net worth of at least \$1 million or who has made \$200,000 each year for the past two years (\$300,000 if married with a spouse) and has the capacity to make the same amount the following year.

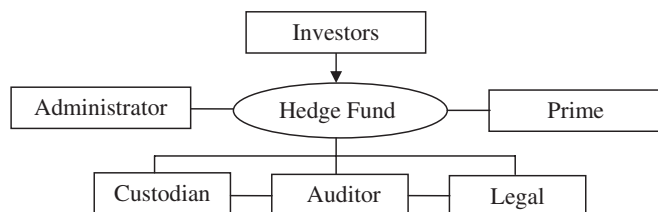


Figure 1.1 A schematic of the typical structure of a hedge fund

before they can receive performance fees again. A *hurdle rate* can also be included in the fee structure representing the minimum return on an investment a manager must achieve before performance fees are taken. The hurdle rate is usually tied to a market benchmark, such as LIBOR⁸ or the one-year T-Bill rate plus a spread.

1.2 THE STRUCTURE OF A HEDGE FUND

In order for managers to be effective in the running of their business a number of internal and external parties covering a variety of operational roles are employed in the structure of a hedge fund as shown in Figure 1.1. As the industry matures and investors are requiring greater transparency and confidence in the hedge funds in which they invest, the focus on the effectiveness of these parties is growing, as are their relevant expertise and professionalism. Hedge funds are also realising that their infrastructure must keep pace with the rapidly changing industry. Whereas in the past, some funds paid little attention to their support and administrative activities, they are now aware that the effective operation of their fund ensures the fund does not encounter unnecessary and unexpected risks.

1.2.1 Fund Administrators

Hedge fund administrators provide many of the operational aspects of the successful running of a fund, such as compliance with legal and regulatory rulings, financial reporting, liaising with clients, provision of performance reports, risk controls and accounting procedures. Some of the larger established hedge funds use specialist in-house administrators whilst smaller funds may avoid this additional expense by outsourcing their administrative duties. Due to the increased requirement for tighter regulation and improved transparency

⁸ LIBOR is the London Interbank Offered Rate, the average interbank interest rate at which a set of banks on the London interbank market are willing to lend to one another.

Table 1.1 Top five global administrators as of 2012

Administrator
State Street Alternative Investment Solutions
Citco Fund Services
BNY Mellon Alternative Investment Services
SS&C GlobeOp
Citi Hedge Fund Services

in the industry, many investors will only invest with managers that can prove a strong relationship with a reputable third-party administrator and that the proper processes and procedures are in place (see Table 1.1).

Hedge funds with offshore operations often use external administrators in offshore locations, to provide expert tax, legal and regulatory advice for those jurisdictions. Indeed, it is a requirement in some offshore locations (e.g. the Cayman Islands) that hedge fund accounts must be regularly audited. In these cases, administrators with knowledge of the appropriate requirements in those jurisdictions would fulfil this requirement.

1.2.2 Prime Brokers

The prime broker is an external party who provides extensive services and resources to a hedge fund, including brokerage services, securities lending, debt financing, clearing and settlement and risk management. Some prime brokers will even offer incubator services, office space and *seed* investment for start-up hedge funds. The fees earned by prime brokers can be quite considerable and include trade commissions, loan interest and various administration charges. Due to the nature of the relationship between the prime broker and a hedge fund, in particular being the counterparty to trades and positions, only the largest financial institutions are able to act in this capacity, for example Goldman Sachs, J P Morgan and Deutsche Bank. For this reason the prime brokerage market is relatively small and each prime broker tends to service a large number of hedge funds and therefore takes on an extremely high degree of risk. Some major restructuring occurred amongst prime brokers in 2008 and 2009, for example the acquisitions of Bear Stearns by J P Morgan and Merrill Lynch by Bank of America, and the takeover of Lehman Brothers by Barclays Capital. This resulted in a shift in market share from some former investment banks to commercial banks and saw the prime brokerage industry begin to consolidate. In order to alleviate investor concerns since the collapse of some major financial institutions, many fund managers are cautious in employing a single prime broker and prefer to subscribe to multiple prime brokers.

1.2.3 Custodian, Auditors and Legal

Hedge fund assets are usually held with a custodian, including the cash in the fund as well as the actual securities.⁹ The custodian is normally a bank who will offer services, such as safekeeping the hedge fund assets, arranging settlement of any sales or purchases of securities and managing cash transactions.

The general structure of a hedge fund precludes them from the requirement to have their financial statements audited by a third party. However, in order to satisfy investors, many hedge funds have their accounts and financial reviews audited annually by an external audit firm. It is important that the auditing firm is seen to be independent of the hedge fund to give credence to their reports and services.

The legal structure of a hedge fund is designed to provide investors with limited liability, i.e. if a fund suffers a severe loss the maximum amount an investor can lose is the level of capital invested in the fund. They cannot be made liable for losses over this amount or any other outstanding debt or financial obligation. In addition, the legal structure is also chosen to optimise the tax status and legal liability of the hedge fund itself. To facilitate this, there are a small number of standard hedge fund structures, e.g. the master-feeder structure, which is adopted by a large number of funds. These comply with the legal requirements of the various jurisdictions where the hedge funds operate and obtain the optimal tax treatment. The master-feeder structure is a two-tier structure where investors invest through a feeder vehicle which itself invests in the hedge fund. There can be a number of feeder vehicles, located and domiciled in a number of different jurisdictions. Each can have a different legal form and framework. Depending on their tax status, investors can decide which feeder vehicle they wish to invest. As a general rule the tax regime of an investor will depend on the location of the investor, i.e. *on-* or *offshore*.¹⁰

1.3 THE GLOBAL HEDGE FUND INDUSTRY

After exceptional growth since 1998, total assets managed by the hedge fund industry peaked at \$1.97 trillion in 2007. After the credit crunch and financial crisis of 2008, with well-publicised frauds and scandals as well as the collapse of several major financial institutions, the hedge fund industry suffered severe losses and investor loyalty. Not until the early part of 2009 did the industry start to experience a marked resurgence in activity realising strong capital inflows and growing investor confidence as shown in Figure 1.2. Strong rallies in global

⁹ This is true except when the assets are used as *collateral* for gaining leverage. In these cases, the assets used as collateral are held by the prime broker. As most hedge funds use some degree of leverage, it is common for assets to be held by both custodians and prime brokers.

¹⁰ *Onshore* (or *domestic*) locations include the US and UK, and to a lesser degree Switzerland and some other European countries. *Offshore* locations include the Cayman Islands, Bermuda, Bahamas, Luxembourg and Ireland.

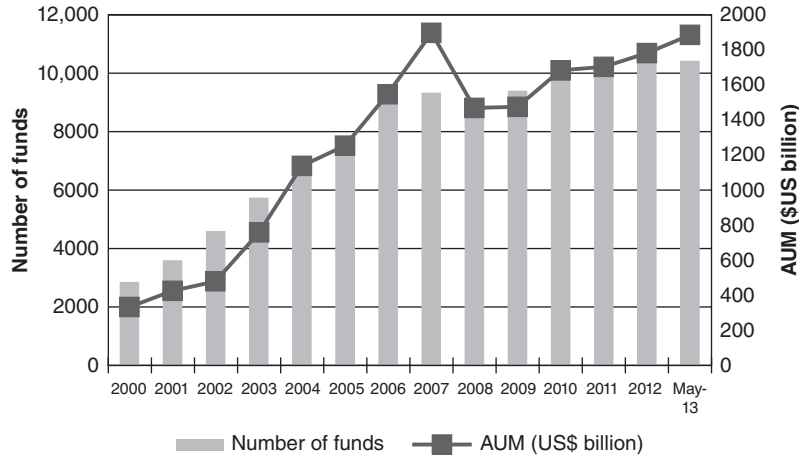


Figure 1.2 Growth in the global hedge funds industry since 2000
 Source: EurekaHedge

markets in the last eight months of 2009 and the subsequent positive asset flows in 2010 aided the industry’s recovery but growing concerns about the state of the global economy and the European sovereign debt crisis slowed down this recovery in 2011 and for most of 2012. It is estimated that the total amount of AuM in the global hedge fund industry at the end of May 2012 stood at \$1.88 trillion.

Of the global hedge fund market, North American funds still remain the prominent market making up around two thirds of the global industry, followed, quite a way behind, by European and then Asian sectors (see Figure 1.3).

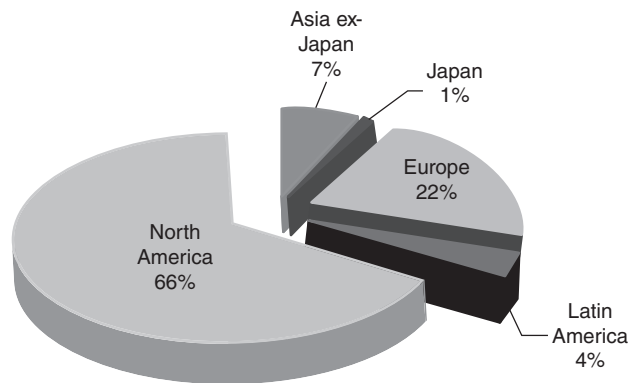


Figure 1.3 Geographical locations of hedge fund
 Source: EurekaHedge

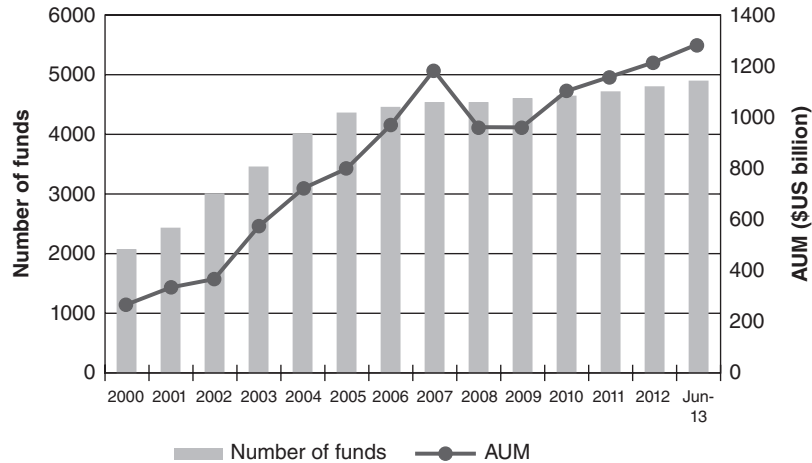


Figure 1.4 Growth of the North American hedge fund industry since 2000
 Source: EurekaHedge

1.3.1 North America

Despite periods of high volatility and market swings, North American hedge funds have consistently posted record returns since reaching their lowest point in early 2009. The total size of the industry at the end of 2012 was estimated at \$1.15 trillion, managed by over 4800 funds (see Figure 1.4). This is a clear indication of the confidence investors began to show in North American funds after the fallout from the global financial crisis of 2008 when billions of dollars were redeemed and funds suffered massive performance-based losses. Since then, hedge fund managers have provided significant protection against market downturns as well as addressing investors' concerns over counterparty risk by engaging multiple prime brokers instead of the usual singular relationship. Moreover, managers have increased redemption frequencies allowing investors better access to their capital, allowed for more transparency across investment strategies and implemented more stringent risk management controls. Such changes, together with a much improved outlook on the US economy and the introduction of *quantitative easing*,¹¹ has led to increased investor confidence and substantial asset flows into North American hedge funds which looks set to continue well into 2014.

¹¹ *Quantitative easing* is a monetary policy that has been employed by the US, the UK and the Eurozone, especially, since the financial crisis of 2008. When a country's interest rate is either at, or close to zero, normal expansionary monetary policy fails so the central bank creates new money which it uses to buy government bonds and increase the money supply and excess reserves of the banking system. A further lowering of interest rates follows and it is anticipated that this will lead to a stimulus in the economy.

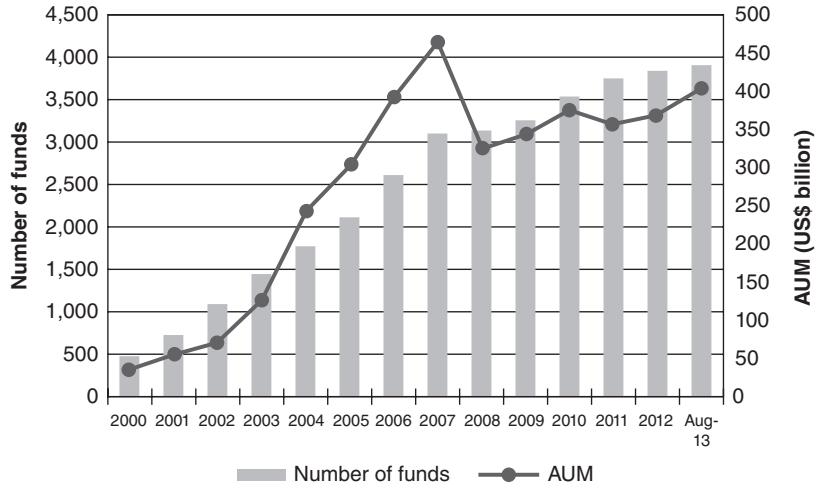


Figure 1.5 Growth of the European hedge fund industry since 2000
Source: Eurekahedge

1.3.2 Europe

The rapid growth of the European hedge fund industry over the first seven years of the last decade was eventually slowed by the onset of the financial downturn in 2008. As with North American hedge funds, the European sector experienced huge losses and increased pressure for redemptions from investors which continued until early 2009 when the global economy began to see a recovery (see Figure 1.5).

The European region has shown some interesting trends with regards to fund launches since the market began to rebound in 2009. However, in 2010, the fortunes of European hedge funds were hit again as a result of the on-going European sovereign debt crisis. Although attrition rates have been relatively high, launches have gained strength on the back of the new UCITS III regulation.¹² The popularity of UCITS III has seen the launch of many new start-ups seeking investment capital in the increasingly competitive hedge fund arena. Many new hedge fund launches have suffered from the investment bias towards allocating to much better-known and larger-based hedge fund names. However, it is anticipated that this trend is likely to change as a result of the increased diversification offered by European hedge funds and a new regulatory environment over the coming years.

¹² UCITS III is the *Undertakings for Collective Investment in Transferable Securities*, an EU investment regulation for the creation and distribution of pooled investment funds, such as mutual funds and hedge funds (see Section 1.5.1).

10 Hedge Fund Modelling and Analysis Using MATLAB®

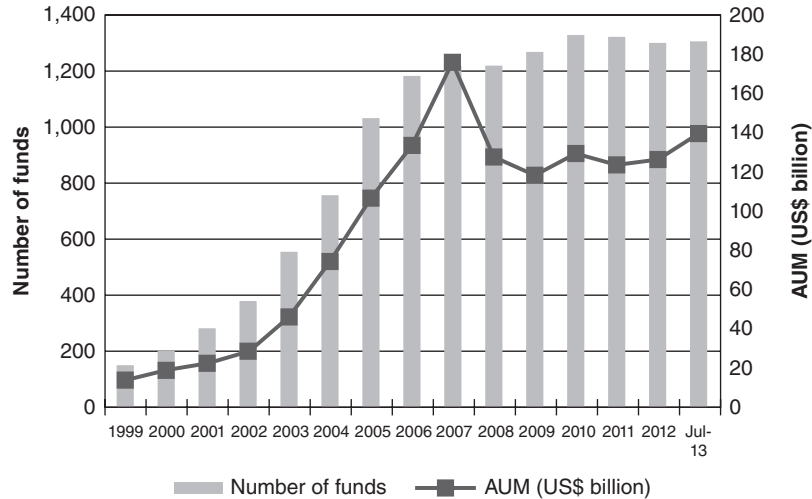


Figure 1.6 Growth of the Asian hedge fund industry since 1999
 Source: EurekaHedge

1.3.3 Asia

Like the European hedge fund sector, Asian funds saw tremendous growth over the last decade up until the slowdown during the financial crisis starting in 2008. After the second half of 2009, the Asian sector has shown a steady improvement, with over 1300 active funds, however, the sector has not seen the growth experienced pre-2008. This is mainly due to speculation that the Asia markets may suffer from a possible double-dip recession as a result of the debt contagion passing from Europe (see Figure 1.6).

In the Asian sector, hedge fund managers have struggled to generate asset flows and this, together with the highly volatile markets, has led investors to be extremely cautious about investing in the current climate. However, the desire for Asian governments to attract global hedge fund managers to the region, reductions in hedge fund set-up costs compared to other western locations, the availability of a growing range of financial products and the easing of access and market restrictions in regions such as China and India, should see an increased growth in the sector through 2014 and beyond.

1.4 SPECIALIST INVESTMENT TECHNIQUES

1.4.1 Short Selling

A *short sale* is the sale of a security that a seller does not own or that is completed by delivery of a borrowed security. The short seller borrows the securities from

a prime broker in return for paying a daily fee, and promises to replace the borrowed securities at some point in the future. The transaction requires the prime broker to borrow the shares from a securities lender and make delivery on behalf of the short seller. Prime brokers can borrow securities from custodians who hold large institutional investments, e.g. mutual and pension funds or from their own proprietary trading accounts. The cash from the transaction is held in an *escrow account*¹³ until the short seller is in a position to replace the borrowed shares (or they are called back by the lender). Since the short seller borrows the securities from the prime broker and has a future commitment to replace them, collateral must be posted in the form of cash, securities or other financial assets. The collateral, in addition to the fee for borrowing the securities, provides the prime broker with additional income in the form of interest until the shares are returned.¹⁴ In addition, the short seller must cover any dividends paid on the shares during the period of the loan and in the case of any stock splits, e.g. two-for-one, the short seller must pay back twice as many shares.

The eventual buyer of the shares from the short seller is usually unaware that it is a short sale so the seller must make arrangements to cover the delivery obligations. The shares are transferred to the buyer with full legal ownership, including voting rights which can pose a severe problem for the short seller if the prime broker requires the securities back (or *called-away*), for example if the original securities lender requires them for a company shareholder meeting. Although this rarely happens in practice short selling does carry a great deal of risk, especially if the shares are held over a long period of time and the stock fails to decline as expected causing them to have to post further margin and eventually forcing the short seller to close out their position at a significant loss. However, when stock prices fall, short sellers make a profit from the short sale, and also between 60–90% of the interest income charged by the prime broker on the cash deposit (i.e. the *short rebate*).

It is often the case that hedge funds do not disclose the names of companies they are selling short to investors for fear of a *short-squeeze*. Unexpected news on short selling activity can cause share prices to suddenly rise due to potential price manipulation through long investors buying additional shares or forcing securities lenders to recall loaned shares. In this case, short sellers' demand for stocks to cover their short positions can cause a mismatch between the availability of shares and thus drive prices up further. To avoid short-squeezes, hedge funds employing short selling only normally invest in large cap companies which have a greater amount of liquidity and volume of shares available from prime brokers. In the US, hedge funds are only allowed to engage

¹³ An *escrow account* is an account set up by a broker for the purpose of holding funds on behalf of the client until completion of a transaction.

¹⁴ Borrowing money to purchase securities is generally known as *buying on margin*. It is usually necessary for a hedge fund to open a margin account with a prime broker and maintain the margin with available cash reserves when market prices move adversely in order to meet a *margin call*.

in short sales with those securities whose recent price change was an upward movement.¹⁵ Such restrictions are used to prevent hedge funds investing in stocks that are already declining so as to avoid the possibility of sending the market into free fall. However, short sellers are often thought of as providing efficient price discovery as well as market depth and liquidity. It is important to investors that they are confident that prices represent fair value and that they can get easy access to liquid markets in which they can readily convert shares into cash. Hedge funds through short selling provide this level of confidence by forcing down overvalued stocks and generating liquidity within the markets.

1.4.2 Leverage

Leverage is using borrowed cash, or a margin account, to increase the purchasing power and exposure to a security (or investment) with the aim of generating higher returns. Financial instruments, such as options, swaps and futures (i.e. derivatives) are also used to create leverage. A premium is paid to purchase a derivative in the underlying asset which gives them various rights and obligations in the future. This premium is far less than the outright price of the underlying asset and thus allows investors to buy an economic exposure to considerably more of the asset than they could otherwise.

Although generally misunderstood, leverage is an extremely widespread investment technique, especially in the hedge fund industry. A great deal of confusion often arises from the various definitions and measurements of leverage. In terms of hedge fund leverage, the debt-to-equity ratio or percentage is often the preferred indicator. For example, if a hedge fund has \$50 million equity capital and borrows an additional \$100 million, the fund has a total of \$150 million in assets and a leverage of $2 \times \text{equity}$ or 67% (=100m/150m). Leverage ratios are typically higher than traditional investments and generally more difficult to measure due to the sophisticated use of certain financial instruments and strategies. Since adding leverage to an investment inherently increases risk, investors often equate a highly leveraged hedge fund with a high risk investment. However, this is not normally the case since hedge funds often use leverage to offset various positions in order to reduce the risk on their portfolios.¹⁶ For this reason, it is not advisable for investors to solely rely on leverage ratios as proxies for hedge fund risk. It makes more sense to correctly

¹⁵ The *up-tick* rule was introduced in the US by the Securities and Exchange Commission (SEC) in 1938 to restrict the short selling of stocks unless there was an upward movement in the price. The restriction was lifted in 2007, but there has since been a growing debate on reinstating the ruling to prevent the potential for market manipulation through short selling (see Section 1.5.3).

¹⁶ The amount of leverage that hedge funds can take on is usually limited by margin supplied by the prime broker and on certain restrictions set by regulators or other organisations. In circumstances where the amount of leverage rises above a certain limit, the lender can take possession of the hedge fund investments, sell them and use the proceeds to offset any losses on the debt financing.

analyse the nature of the strategy in more detail before making a decision on the riskiness of the hedge fund.

1.4.3 Liquidity

Although hedge funds can generate abnormal returns by exploiting the value from investing in *illiquid*¹⁷ assets, there is always a need to access market liquidity. Liquidity is the degree with which an asset can be bought or sold without adversely affecting the market price or value of the asset.¹⁸ Liquidity plays a critical role in the financial markets providing investors with an efficient mechanism to rapidly convert assets into cash. During the recent financial turmoil, hedge funds experienced an unprecedented number of requests from investors to withdraw their capital creating a serious liquidity problem.

The global credit crisis originated from a growing bubble in the US real estate market which eventually burst in 2008. This led to an overwhelming default of mortgages linked to subprime debt to which financial institutions reacted by tightening credit facilities, selling off bad debts at huge losses and pursuing fast foreclosures on delinquent mortgages. A liquidity crisis followed in the credit markets and banks became increasingly reluctant to lend to one another causing risk premiums on debt to soar and credit to become ever scarcer and more costly. The global financial markets went into meltdown as a continuing spiral of worsening liquidity ensued.

Hedge funds that had assets linked to the subprime debt disaster and other related securities suffered huge losses. Problems were amplified further when investors tried to withdraw capital from their funds and it became apparent that there was a liquidity mismatch between assets and liabilities. When the credit markets froze, hedge fund managers were unable to source sufficient capital to meet investor redemption requirements. This forced managers to restructure their liquidity terms and impose further *gate provisions*,¹⁹ increase the use of *side-pocketing*²⁰ and enforce *lock-ups*.²¹ Not only did this negatively affect investor relations but this was further damaged by the selective and insufficient disclosure of performance being made by hedge fund managers. For example, many managers were seen to be reporting side-pocket performance only to investors while relaying much better liquid performance in publications with

¹⁷ *Illiquid* assets include low volume traded stocks, real estate and other capital holdings.

¹⁸ A highly liquid market can also be considered a *deep* market.

¹⁹ *Gated provisions* are a restriction on the amount of capital that can be withdrawn from a fund during a redemption period. Such provisions are subject to management discretion and normally referred to in the hedge fund prospectus.

²⁰ A *side-pocket* (or *designated investment*) is an account used by hedge funds to separate illiquid assets from more liquid ones. Holding illiquid assets in a hedge fund can cause a great deal of complexity when investors try to withdraw their capital.

²¹ A *lock-up* is a period of time designated by the hedge fund manager in which an investor may not withdraw any investment in a fund.

only a passing note of disclosure about the exclusion of side-pockets. In the case of lock-ups, there exists a clear conflict of interest between locking up investors' capital and continuing to charge management fees. Investors have since argued that it would be more acceptable for gate provisions and the issue of involuntary side-pockets to be tied to deferrals or a reduction in management fees until the fund returns to an appropriate liquid position. The aftermath of the financial crisis has clearly highlighted many of the shortcomings of the hedge fund industry and heightened the debate over the need for increased regulation and monitoring. Nevertheless, it has since been widely accepted that hedge funds played only a small part in the global financial collapse and suffered at the hands of a highly regulated banking system. Indeed, many prominent institutional and economic bodies argue that their very presence provides greater market liquidity and improved price efficiency whilst aiding in the global integration of the financial markets.

1.5 NEW DEVELOPMENTS FOR HEDGE FUNDS

1.5.1 UCITS III Hedge Funds

One of the major developments in the hedge fund industry over the past several years has been the exceptional growth in UCITS III hedge funds in comparison to the global industry. As of the end of 2012, the UCITS hedge fund industry stood at an estimated \$215 billion managed by over 900 individual funds (see Figure 1.7). UCITS is a set of directives developed by the EU member

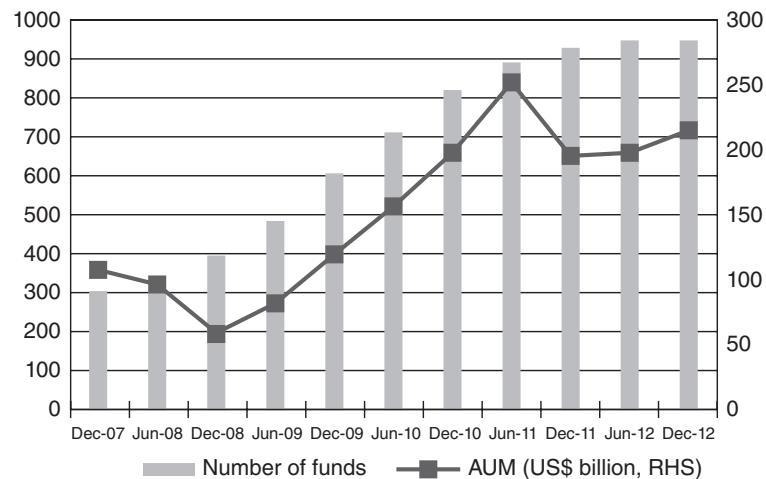


Figure 1.7 Growth in number of UCITS III hedge funds since December 2007
Source: EurekaHedge

states to allow cross-border investments. The aim of the directive is to improve the financial opportunities offered to UCITS-compliant hedge fund managers whilst addressing the needs of investors in terms of effective risk management procedures, increased transparency and liquidity, especially in light of the recent financial crisis.

The original version of the directive was introduced in 1985 with the goal of establishing a common legal framework for open-ended funds investing in transferable securities set up in any EU member state. That is, to develop a pan-European market in collective investment schemes. Unfortunately, the framework suffered from many obstacles, such as the extent of different marketing rules and taxation allowed across member states. Not until December 2001 was a directive formally adopted under the UCITS III banner which has since undergone several further amendments with a view to including the use of additional asset classes (e.g. hedge fund indices) and a more diverse range of derivative products (see Figure 1.8). Such inclusions have allowed UCITS III funds to pursue a number of different investment possibilities, such as absolute return strategies, in ways that were simply not possible under previous UCITS frameworks.

The increased number of eligible asset classes and available use of derivatives has led to a greater number of multi-strategy funds being launched in the UCITS III sector in comparison to that of the European multi-strategy industry. Despite

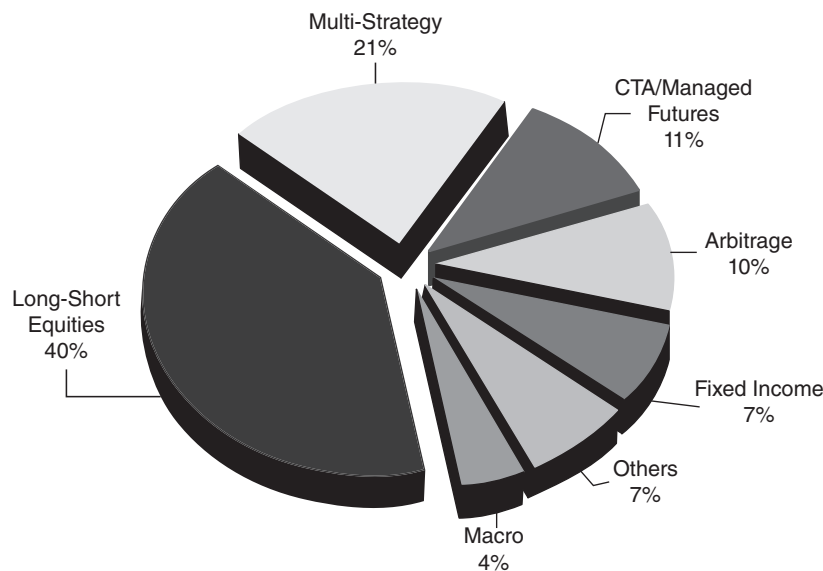


Figure 1.8 UCITS III hedge funds by investment strategy
Source: EurekaHedge

this, however, almost half of UCITS III funds over the last two years have adopted the Long-Short Equity strategy for several reasons:

1. Long-Short Equity is by far the largest global hedge fund strategy and therefore those existing managers launching new UCITS III vehicles would naturally prefer this strategy.
2. Operating the Long-Short Equity strategy under the UCITS III framework is relatively straightforward.
3. The simplicity of the Long-Short Equity strategy lends itself well to marketing and liaising with retail investors who may not have the knowledge and understanding of the markets like a typical hedge fund client.

Despite the strong link in the use of the Long-Short Equity strategy, the regulatory constraints within the UCITS III framework mean there are very few similarities elsewhere across industry sectors. For example, there are very few event-driven UCITS III hedge funds and practically no distressed debt-based funds primarily due to the liquidity restrictions placed on UCITS III-compliance. Nevertheless, a major advantage of UCITS III funds is the ability of managers to utilise their experience in a proven investment strategy whilst offering potential investors the added incentive of investing in a regulated market. Some of the key features of UCITS III hedge fund regulation and fund structure include the following:

1. Only investment in liquid securities is permitted, i.e. those that can be sold within 14 days without substantial loss of value.
2. Funds cannot have exposure to more than 10% in one stock.
3. Managers can utilise leverage up to 100% of the *Net Asset Value*²² (NAV) of the fund.
4. Managers can employ shorting techniques through the use of derivatives.
5. The ease of marketing such funds across the EU and registering them in member states.
6. The implementation of effective risk management procedures and processes.
7. Funds must be domiciled in an EU member state as opposed to offshore locations.

The development of UCITS III funds has also opened up the sector to new sources of capital, for example, from retail investors wishing to make use of the alternative investment market but with the assurance of stricter regulatory controls. In addition, improved redemption rules and transparency have helped in building investor confidence, especially after the much debated issue surrounding the use of gated provisions that stopped investors withdrawing large amounts of capital from their funds during the period of huge losses following

²² Net Asset Value (NAV) is used to put a value on a hedge fund and is the total of all the hedge fund assets minus all the hedge fund liabilities.

the financial crisis in 2008. The release of UCITS IV in mid-2011 and the development of other European directives, such as the new EU Passport, which will give hedge funds marketing rights throughout the EU, will broaden the investment appeal of UCITS-compliant funds even further. UCITS IV provides investors with more transparency, facilitates cross-border hedge fund distributions, reduces costs and achieves regulatory alignment.

1.5.2 The European Passport

In November 2010 the European Union passed a new set of laws governing the use and regulation of the alternative investment industry, named the Alternative Investment Directive (AID). The AID aims to provide hedge funds (and private equity funds) with a so-called *passport* to allow funds that meet EU standards access to all EU markets. The passport gives hedge funds the opportunity to market to investors throughout the EU with only a single authorisation. In addition, the directive will subject hedge funds to increased supervision, regulation and transparency providing pan-European investors with the confidence to invest and operate in a stable European financial market.

The newly formed Paris-based European Securities and Markets Authority (ESMA) will act as the EU financial supervisory authority and issue passports, especially to non-EU funds that wish to operate in the EU markets under a single authorisation. The ESMA will also demand non-EU funds to grant the same rights that their funds will enjoy in the European markets. However, the controversial passport scheme will not come into effect for EU funds until late 2013, and even later for non-EU funds, so the established framework that allows each EU country to decide which funds they will allow access to their market will remain in place until then.

1.5.3 Restrictions on Short Selling

Short selling can result in unlimited losses if the hedge fund incorrectly anticipates the direction of movement of share prices. Moreover, short selling can also be used to manipulate market prices. It has been argued for some time that hedge funds can engage in collective short selling to create an imbalance in supply and force down the price of a security. During the recent financial turmoil and substantial falls in stock prices, hedge funds were often accused of short selling to exacerbate and profit from the declining markets. During 2008 and 2009, regulators announced several actions to protect against abusive short selling and to make short sale information more readily available to the public.

One of the main methods of market abuse was the use of *naked* short sales, i.e. the activity of selling short without having borrowed or arranged to borrow the securities to make delivery to the buyer. Such a *failure-to-deliver* is a gross

violation of ethical market practice and something the regulators were determined to address. New temporary rulings forced prime brokers to first ascertain, before undertaking a short sale transaction, if the securities were available for short selling or could be borrowed against delivery. Market participants were also required to provide detailed information on short sale activity and their overall short positions. Although the rulings curbed short sale abuses during the financial crisis of 2008 many hedge fund managers have since argued that such regulation hinders the efficient workings of the financial markets and causes a negative effect on liquidity. Restrictions and other regulation on short sales is a contentious area of debate amongst market professionals and regulators and under continual review. Nevertheless, regulators are keen to address issues associated with short selling and the provision of detailed information on short sale activity for public disclosure and may certainly impose further restrictions on the practice in the near future.

In this chapter we have provided an introduction to the concept of a hedge fund, how they are structured and the key players within such an investment vehicle. Each of the major markets within the global hedge fund industry has been reviewed with focus on the current financial crisis and how hedge funds have performed over this period. In fact, it has been publicly stated that hedge funds have played only a minimal part in the global financial collapse and have instead suffered at the hands of a highly-regulated financial system. Nevertheless, some of the specialist investment techniques employed by hedge fund managers have since come under increased scrutiny and regulatory pressures.