THE ROLE OF AN ADMINISTRATOR IN

HEDGE FUND OPERATIONAL RISK

MANAGEMENT

By

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DECLARATION

I, Juane Schutte, hereby declare that:

- The work in this research paper is my own original work.

- All sources used or referred to have been documented and recognised.

- This research paper has not been previously submitted in full or partial fulfilment of the requirements of an equivalent or higher qualification at another recognised educational institution.

Signed: _______________________________

Date: _______________________________
It would not have been possible to complete this study without the contributions and support of the following individuals:

- To my promoter, Dr. John Burger, for his dedicated assistance, professional guidance and support throughout the research study;

- To the members of Investment Data Services, especially Ian Hamilton for granting me permission to conduct the research study;

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ABSTRACT

With the financial crisis of 2008 and more retirement funds and insurance companies entering the hedge fund industry, the safety of investor assets has become vital. According to a worldwide study by Kundro and Feffer (2002:42), operational risk factors account for almost half of hedge fund failures. The issues that underlie the operational risk factors relate to valuation of the fund’s assets and liabilities.

Unless certain valuation practices become more widespread, hedge funds face a potential crisis of confidence with institutional and high net worth investors (Kundro and Feffer, 2002:42).

Despite the improvements made by administrators to deal with the complexities of hedge fund investments, the accuracy of some valuations remains open to question (McVea 2008:135). Hedge fund manager inputs into valuations compromise the degree of independence exercised, particularly with regard to complex and/or illiquid instruments. The perception that administrators lack the required technical expertise to value complex and/or illiquid assets exacerbates the issue of administrator’s reliability to provide independent valuations. Therefore, the reliance on administrators to guarantee the quality of valuations of complex instruments is in question.

The aim of the study was to identify ways to improve operational risk management practices, particularly valuations, in hedge funds through identifying ways of promoting effective functioning of independent third-party administrators. This was achieved through a case study approach using a South African leading administrator, Investment Data Services, as the object of study.

The literature highlighted the changing functions of administrators, the challenges facing them and ways of addressing those challenges. The empirical study measured the extent of IDS’ valuation practices in managing operational risk in
hedge funds. Four key members of IDS’ management team and one hedge fund manager with considerable insight were interviewed.

The data obtained was then reduced into meaningful results. The empirical findings were compared with the theory provided in the literature scrutiny to identify ways of improving the valuation function.

The conclusion was that the challenges faced by the administrator were addressed through proper independence, consistency and transparency of the valuation process. A crucial cog in IDS’ wheel is the employment of staff with the required technical skills to understand complex financial instruments. In addition, investment in advanced systems and technology is important in managing the risks involved. Consequently, IDS’ valuation practices can be used as template for other administrators in their efforts to manage the operational risks in hedge funds.
LIST OF KEYWORDS

Hedge Fund
Administrator
Operational Risk
Valuations
Financial crisis
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CHAPTER ONE: INTRODUCTION AND PROBLEM STATEMENT

1.1 INTRODUCTION

The global hedge fund industry continues to grow at an impressive rate and may top US$2 trillion in assets under management by the end of 2009 (Celent Report, 2006). The main driver of this growth is the increased institutional investor base and is hence demanding more stringent operational and investment practices.

With more retirement funds and insurance companies entering the industry, the safety of investor assets becomes even more crucial. Operational risk factors account for almost half of hedge fund failures according to a worldwide study (Kundro and Feffer, 2002:42). The issues that underlie the operational risk factors relate to valuation of the fund’s assets and liabilities.

An independent third-party administrator provides valuations for hedge funds and reduces the likelihood that funds will mis-price their assets. However, there are many challenges with regards to valuing complex or illiquid assets. The 2008 financial market meltdown illustrates the challenges involved and questions the ability of independent administrators to provide reliable valuations for complex and/or illiquid instruments (McVea, 2008:130).

Regulation in the South African industry does not require hedge funds to have their assets independently valued. However, it has become best practice to do so. The South African chapter of AIMA prescribes certain valuation best practices guidelines which help to reduce the likelihood of inaccurate valuations.

This paper assesses the role that administrators play in reducing operational risk in hedge funds, particularly the valuation process. The collapse of the sub prime mortgage market highlights the importance of the administrator’s role with regards
to managing operational risks in hedge funds, specifically the calculation of the Net Asset Value (NAV) of the fund.

1.2 RATIONALE

Valuations problems have been a topic of debate for the past few years. It pertains to the issue of operational risk and as a result can affect the success or failure of a fund. The complexities of the valuations involved are caused by the increase in institutional investors and the quest of hedge funds to deliver superior returns in comparison to the traditional forms of pooled investment vehicles (McVea, 2008:135).

Administrators are also undergoing transformation. The implications of hedge funds investing in complex alternative investments have forced administrators to consolidate and improve their systems and expertise. Despite the improvements made by administrators to deal with the complexities of hedge fund investments, the accuracy of some valuations remains open to question (McVea, 2008:135).

According to the FSA (Financial Services Authority, 2005):

“In respect of assets for which there are no easy or robust valuation methodologies and counterparty quotes are unavailable, administrators usually accept the hedge fund manager’s own valuation. This can sometimes mean that a significant proportion of the fund’s assets are not subject to independent valuation. Hedge fund managers generally perform their own internal valuations of all positions and seek to reconcile these with the administrators at the end of the month. It would appear that the hedge fund managers may wield significant ability to influence the administrators’ independent valuations at this point in the process through their dialogue with administrator staff and the counterparties who are providing the quotes.”

McVea (2008:136) is of the opinion that, consequently, the degree of independence exercised in relation to the valuation of complex and/or illiquid
instruments is seriously compromised. The perception that administrators lack the required technical expertise to value complex and/or illiquid assets exacerbates the issue of administrator’s reliability to provide independent valuations. Such shortcomings result in the hedge fund manager providing input into the valuation process.

Administrators have made improvements through the recruitment of better qualified and more technically expert personnel, greater transparency and uniformity in valuation methods. The administrator’s improvements may hinder the investment manager’s incentives to abuse any input into pricing of the assets.

However, reliance on administrators to guarantee the quality of valuations of complex instruments amounts to wishful thinking. It is a questionable strategy which fools unwary investors into thinking that reliable independent valuations are possible (McVea, 2008:136).

1.3 PURPOSE OF THE RESEARCH

The purpose of this study is to improve operational risk management practices, particularly valuations, in hedge funds through identifying ways of promoting effective functioning of independent third-party administrators.

1.4 RESEARCH QUESTION/PROBLEM STATEMENT

The question this study addresses is:

How can administrators improve operational risk management practices in hedge funds?

In addressing the prime research question the following sub-dimensions emerge as pertinent areas of focus. These areas are comprehensively scrutinised in the following chapter:
• How has the 2008 financial crisis impacted the valuation function performed by administrators?
• In their efforts to bring about improvement in hedge fund operational risk management practices, what challenges do administrators face?
• How can the challenges faced by administrators be addressed?

1.5 DELIMITATION OF RESEARCH

The delimitation of the research reveals how far the research effort extended and where the limits were set. This study is limited to Investment Data Services (IDS) head office in Cape Town, South Africa. The company specializes in providing hedge fund administration services to the alternative investment community. Since 2003 IDS has grown with the industry, and now administers over 70 percent of the hedge fund business in South Africa.

The study concentrates exclusively on interviewing key management employees of IDS on the valuation issues as an important role in managing operational risks in hedge funds.

1.6 ASSUMPTIONS

The researcher states the following key assumptions while conducting this study:
• The improvement in valuation practices will mitigate the operational risks involved in hedge funds
• Current regulatory levels will remain the same for the next year

1.7 RESEARCH METHODOLOGY

The following procedure was followed to solve the main problem and sub problems. This procedure included a literature study and an empirical study.
1.7.1 LITERATURE STUDY

The literature study was conducted to identify the functions performed by administrators, what challenges they face in managing operational risk and how to address the challenges. The required secondary sources included the following:

- Text books, financial journals and theses were consulted and provided by the Nelson Mandela Metropolitan University;
- The internet was used to search financial and management databases for the relevant information; and
- Information was also provided by IDS, through the assistance of Ian Hamilton.

1.7.2 EMPIRICAL STUDY

The primary data was collected through the empirical study using semi structured interview questions that were open ended. The sample size of this study consisted of four key employees of IDS and a client of the firm, a credible hedge fund manager. The data was collected, analysed, interpreted and then presented in order to conclude and to answer the related research questions of this study.

1.8 PROBLEMS AND LIMITATIONS

The researcher experienced a problem during the course of the study which may have influenced the outcome of the research. The stock market downturn placed extra emphasis on manager performance in the last few months of the 2008 year, and subsequently less time was provided to answer the interview questions.

However, respondents did take time in answering the questions but may have limited their responses to focus on work responsibilities. Any issues in interpreting the information provided were dealt with by giving the respondent a telephone call. However, not all respondents were available for confirmation. The researcher ensured responses were kept verbatim to present an unbiased account of the case.
1.9 DEFINITION OF TERMS

In the context of the study, certain key concepts that relate to the main problem statement will be defined.

**Counterparty:** A third party that enters into transactions with a hedge fund.

**Derivative:** This refers to a financial instrument in which the value depends on, or is derived from, the value of an underlying asset, index, rate, or instrument.

**Administrator:** Refers to a third-party service provider offering certain back and front office administrative services to a hedge fund and/or hedge fund Manager. Such services may include maintaining the principal corporate records, communicating with a Hedge Fund’s investors, processing subscription and redemptions, calculation of NAV, etc.

**Illiquid/Complex Asset:** An asset that cannot be liquidated in a short period of time without substantially affecting the asset’s price.

**Hedge Fund:** A pooled investment vehicle that is not marketed to the general public and is limited to high net worth individuals and institutions.

**Net Asset Value:** The fair value of a hedge fund’s assets minus the fair value of its liabilities. NAV is the basis for determining the prices applicable to investor subscription and redemptions.

**Operational risk:** The risk of loss due to system breakdowns, employee fraud or misconduct, errors in pricing methodologies or natural or man-made catastrophes, among other risks. It may also include the risk of loss due to the incomplete or incorrect documentation of trades.

**Over-the-counter transaction:** A transaction between parties that is not executed on an organized exchange, but instead privately negotiated on a bilateral basis.
between the parties. Stocks of smaller companies, forward contracts on physical commodities and currencies, bank and securities loans, repurchase agreements, and derivatives are traded in OTC markets.

**Prime broker:** A brokerage firm providing multiple services to a hedge fund that are beyond the scope of those offered by a traditional broker.

**Valuation:** The process of determining the value of positions in a hedge fund portfolio. Valuation serves two distinct purposes: it provides the base input for both the risk monitoring process and the calculation of a hedge fund’s NAV.

## 1.10 AN OUTLINE OF THE ENVISAGED CHAPTERS

Chapter 1 deals with the background of the study and the research problem is stated. Also included are the demarcation of the research problems, limitations experienced by the researcher and the definition of concepts.

Chapter 2 comprises of the literature study based on the role of the administrator in hedge fund operational risk management. The challenges of operational risk are highlighted and how an administrator can address the challenges involved.

Chapter 3 reviews the research methodology and the data gathering techniques used in the study. A qualitative approach was deemed most suitable where semi structured interview questions were used.

Chapter 4 includes the analysis and interpretation of the results obtained from the empirical study and aims to fulfil the research objectives of the study.

Chapter 5 concludes with a summary of the research study, the recommendations based on the main research findings and opportunities for further research.
1.11 ACRONYMS

AIMA  Alternative Investment Management Association
FSA  Financial Services Authority (UK)
FSB  Financial Services Board (SA)
HFWG  Hedge Fund Working Group
IDS  Investment Data Services
LLP  Limited Liability Partnership
LTCM  Long Term Capital Management
MFA  Managed Funds Association
MME  Money Management Executive
NAV  Net Asset Value
OTC  Over-the-counter
RBC  Royal Bank of Canada
SEC  Securities and Exchange Commission
SFC  Securities and Future Commission
US  United States
US$  United States Dollar

1.12 CONCLUSION

The aim of this chapter was to present an introduction to the study by examining the problem statement, the sub problems, definition of key concepts, the demarcation and significance of the study. The research methodology was also briefly explained.

The next chapter deals with the literature review and outlines the role of administrators in managing operational risk in hedge funds.
CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

A variety of perspectives have been scrutinised to engender a more pragmatic understanding of the role of administrators in operational risk management within hedge funds, paying special attention to the risks associated with valuations.

As shown in the previous chapter, the prime research question can be addressed by investigating four sub-dimensions. These elements are scrutinised in this chapter under the headings, namely:

2.2 Hedge funds
2.3 Functions performed by administrators
2.4 Challenges in operational risk management
2.5 Addressing operational risk challenges

2.2 HEDGE FUNDS

2.2.1 A DESCRIPTION

Although there is no statutory or legal definition of the term hedge funds, there are sufficient descriptions found in literature. A hedge fund is a type of pooled investment vehicle with the aim to deliver positive returns regardless of whether markets are going up or down (Cobbett, 2006:9).

Frush (2007:3) states that hedge funds are “actively managed private investment funds that seek to attract positive returns by employing many different strategies, instruments and tools of the trade.” These funds were originally designed to invest in equity securities and use leverage and short selling to “hedge” the portfolio’s exposure to movements of the equity markets. Currently funds utilise a wider variety of investment strategies and techniques designed to maximise returns for investors.
In the United States, this type of alternative investment operates in a manner that avoids regulation as investment companies under the Investment Company Act of 1940. The act also states that public offerings of hedge fund securities cannot be made. In addition, they are required to allow only “accredited” investors and large institutions to invest in such vehicles, with high investment minimums such as $1 million.

Professional investment managers frequently have a significant stake in the funds they manage and receive a management fee that includes a substantial share of the performance of the fund. They are, therefore, more interested in protecting themselves from any downside risk (i.e. hedging) than the conventional theories of risk and return might suggest (Muller and Ward, 2005: 49).

The Managed Funds Association (MFA, 2007) describes hedge funds as a wide range of investment vehicles that can vary substantially in terms of size, strategy, business model, and organizational structure. Investment managers have the ability to hedge the value of assets through the use of options or the simultaneous use of “long positions” and “short sales”. Some hedge funds may not even engage in “hedging” activities at all and others employ only “buy and hold” strategies that do not involve hedging in the traditional sense.

Hedge funds are simply pooled investment vehicles that generally meet the following criteria (MFA, 2007):

- not marketed to the general public (i.e. is privately-offered);
- limited to high net worth individuals and institutions;
- not registered as an investment company under relevant laws (U.S. Investment Company Act of 1940, as amended);
- assets are managed by a professional investment management firm that shares in the gains of the investment vehicle based on investment performance of the vehicle; and
- periodic but restricted or limited investor redemption rights.
Having discussed major features of hedge funds, a list of their most important characteristics can be compiled. This is illustrated below in Figure 2.1.

Figure 2.1: Defining characteristics of Hedge Funds

Source: Frush (2007:194)

2.2.2 A SYNOPTIC HISTORY OF HEDGE FUNDS

Alfred Winslow Jones is attributed with starting the first hedge fund. In 1952 Winslow changed his general partnership fund into a limited liability partnership (LLP), where it was then exempt from Securities and Exchange Commission (SEC) regulations and consequently was able to transact using a wider selection of investment instruments. Jones realized that this could provide him with a better way to manage money and achieve abnormal returns over time.

His investment partnership produced returns that “bested even the top performing mutual fund by 44 percent and the top five-year performing mutual fund of the day by 85 percent, returns net of fees” (Frush, 2007:32). The stellar performances over the years resulted in a rush toward hedge funds.
With more players entering the market because of attractive returns and greater flexibility, the legendary investor Warren Buffet started his hedge fund and achieved an annualized return of 24 percent for the 13 years of its existence. Buffet acquired Berkshire Hathaway with the proceeds and transformed it from a run down textile company to a financial services giant.

Over the ensuing years, the number of similarly structured hedge funds grew, and more made the news headlines; none so much as the Long Term Capital Management (LTCM) fund. LTCM was founded by John Meriwether and two partners Myron Scholes and Robert Merton in 1993. The fund used an array of different quantitative techniques to minimize downside risk and by 1998, LTCM managed more than $120bn on a capital base of only $4,8bn through leveraged positions (Maslakovic, 2004).

In September 1998 the Russian debt crisis resulted in LTCM losing 90 percent of its market capitalization. The US Federal Reserve coordinated an unprecedented bailout of LTCM in an effort to stabilize global financial markets.

Although the LTCM dilemma slowed the growth of hedge funds, the effect was temporary. Muller and Ward (2005:49) claim that hedge funds continued to attract individual investors impressed by the risk/return performance, and by 2002, 30 percent of assets in hedge funds were from pension funds, endowments and foundations. The above transpired despite constraints such as their inability to directly solicit funds; high fee structure; poor transparency and disclosure; and “lockup” requirements.

2.2.3 THE INTERNATIONAL HEDGE FUND INDUSTRY

The trend toward regulation of hedge funds is proving imminent. The American and European markets are currently undergoing regulation in the industry. The Asian markets promote a less regulated approach in the hope that funds will be withdrawn from more regulated areas to more relaxed and investor friendly areas.
The Asian market phenomenon raises the question of whether regulation will sustain a thriving industry or whether it will deter investors and asset managers from the increased red tape. In the USA, regulations would have brought managers exceeding $25 million under management or over 15 investors under stricter management by the SEC. The industry challenged the rule and is at present still debating on what extent to regulate the industry.

There is a move towards self regulation in America where prominent figures in the SEC have expressed support for a self regulatory scheme. If the hedge fund industry is able to realize that the benefits of self-regulation outweigh their costs, for a few dollars more the industry can protect itself from unwelcome government intervention. Harvey Pitt, who headed the SEC between 2001 and 2003, commented on hedge funds, saying “absent any concrete suggestions from hedge funds, legislators and regulators will be happy to propose their own solutions, no matter how impractical” (Chasan, 2007).

In England, the primary regulatory organization is the Financial Services Authority (FSA). This body focuses on overseeing the marketing of hedge fund products and regulates hedge fund managers themselves. In addition, the FSA is concerned with the valuation by hedge fund managers of their own instruments, particularly when they are highly complex.

In response to regulatory issues, the Hedge Fund Working Group (HFWG) was established by an ad hoc group of 14 hedge funds to develop a set of best practice standards for the industry. A set of standards focusing on investor protection, systemic risk and corporate governance was published on January 22, 2008 (Horsfield-Bradbury, 2008).

The governance standards ensure that valuation arrangements are in place so that conflicts of interest are minimized and that hard to value assets are fairly and consistently valued.
The standards also address concerns that arise from the knock-off effects of systemic risk. Systemic risk stems from problems of valuation and risk assessment and disclosure. If LTCM had adequately valued the risk of the Russian devaluation, or disclosed its high leverage, it is possible that their counterparties would have realised the risk of their investments (Horsfield-Bradbury, 2008). Self regulation might have prevented the collapse of this large hedge fund.

In the Asian markets, specifically Hong Kong, hedge funds are obliged to register with the Securities and Future Commission (SFC). These fund managers have to submit proof of experience and operation manuals and are subjected to random audits. In Japan, all persons giving investment advice are required by the Investment Advisory Business Law to register with The Financial Services Agency, which is the regulatory body.

2.2.4 THE SOUTH AFRICAN HEDGE FUND INDUSTRY

The hedge fund industry in South Africa is characterised as self-regulated. Approximately 60 percent of all hedge funds report data to an independent risk manager on a daily basis (Grey, 2008).

Figure 2.2: Growing Fast - Assets under management in SA hedge fund industry

![Bar chart showing assets under management in the South African hedge fund industry from Jun-02 to Dec-05.](source: Novare Hedge Fund Survey (2005))

The local industry association, known as AIMA (Alternative Investment Managers Association), sets out principles in terms of fiduciary responsibility. Once hedge fund managers subscribe to the code, AIMA will perform a due diligence on the
fund and will be in a position to attract more capital since there is something formal in place. The landscape is slowly changing as the local regulator, the Financial Services Board (FSB), now requires hedge fund managers to apply for a license to prove that they have the necessary experience and expertise to manage a hedge fund (and the specific strategy involved).

Because hedge fund techniques fall outside the concern of the Collective Investment Schemes Control Act, both individual and institutional investors are therefore left without regulatory protection. Consequently, investors prefer to invest through fund of hedge funds and benefit from their due diligence capabilities.

The greater supervision on fund managers from the regulator will have both positive and negative implications. Those that are supporting increased regulation believe that it will help raise awareness and improve the image of hedge funds. It may give private clients and independent financial advisers more comfort if the FSB has some sort of control over who becomes a hedge fund manager (Grey, 2008).

The issue of regulation is a double edged sword. If the FSB imposes policies that limit managers on what they can do and how they can trade, it will "stifle the current flexibility of the industry and will challenge the very nature of hedge funds" (Betsalel, 2006:1). Resultantly, the level of regulation is very important. Ensuring that managers are properly trained, certain industry standards are applied and dishonest business practices are dealt with - all of which are necessary for the industry to move forward. This cannot transpire at the expense of the hedge fund manager’s wider array of creative investment techniques. Conflicts emanating from such issues will need to be addressed.

Grey (2008) argues that the because of the lack of any prior regulation, fund of hedge funds have been the driving force behind the growing use of independent third-party administrators in South Africa. The small funds mainly outsource their administration, while the larger and established funds keep the administration in-house. 63 percent of funds outsource to an administrator, as depicted in figure 2.3.
Figure 2.3 Administration in SA hedge funds

Source: Novare Investments Survey (October 2004)

Fiford (2004) makes mention of key findings where the South African institutional market took part in a survey conducted by the University of Pretoria. It appears there is keen appetite for hedge fund products. Below is a snapshot of the survey results:

- Of those institutions that had no exposure to hedge funds, 62 percent would consider investing in them;
- 68 percent had poor to average knowledge of the industry while a large percentage of the institutions relied solely on the financial press for information.
- 50 percent of the respondents expected returns on hedge funds to be lower than other strategies. 20 percent expected returns on hedge funds to be higher than other strategies.
- In excess of 50 percent of the respondents did, however, view hedge funds as having less risk than traditional portfolios.

The survey results indicated that hedge funds are a permanent fixture in South Africa and that there is a strong need for AIMA to play a bigger role as an educator.
Product providers and various consultants should actively educate the market on these complex products.

### 2.2.5 THE GROWTH OF HEDGE FUNDS

As a consequence of institutional involvement, there are currently in excess of 8000 hedge funds worldwide with more than a trillion dollars in assets under management. This represents a tenfold growth since a decade previously. “Hedge funds are said to account for 30 percent of trading volume in U.S. stocks and (at times) even higher proportions in more specialized instruments such as convertible bonds and credit derivatives. Their trades can move markets” (Jickling and Raab, 2006).

There are six main institutional players involved in hedge funds. Foundations and endowments are amongst the largest investors:

- Foundations and Endowments
- Pension Funds
- Insurance Companies
- Banks and related financial institutions
- Fund of Hedge Funds
- Corporations (Frush 2007:36)
Figure 2.4: Institutional Capital Allocations to Hedge Funds, Year end 2003


There has been a large increase of retirement funds into the industry. Investors of such funds demand transparency and prefer to invest in more established funds that are able to reduce business risk.

Figure 2.5: Hedge Funds by investor type

Putting the growth of hedge funds into perspective, Deloitte Research (2007) claim that as of June 30, 2006, the total assets under management of around $1.2 trillion was approximately 25 percent more than the combined book equity of 7480 United States commercial banks. This increase in growth has fuelled competition in the industry, where institutional investors are more demanding than the individual “high net worth” investor. Firms that can proactively respond to the market demands, such as improved risk management systems and valuation practices, will be in a far better position to take advantage of such a thriving trade.

Figure 2.6: Number and assets under management of hedge funds


2.2.6 REASONS WHY HEDGE FUNDS FAIL

Although some hedge funds employ very conservative investment strategies, they can generally be characterized as high-risk, high-return operations. They require trading activities that are considered less conventional than the “long only” universe of mutual funds. Examples of such activities are investments in complex and illiquid securities such as derivatives and over-the-counter (OTC) contracts.
With the development of an increased institutional investment base, such as pension funds, more and more money from retirees and others will be unwittingly exposed to hedge fund losses. Giraud (2005) alludes to approximately 350 hedge fund closures per year. This emphasises the importance of identifying the reasons why such funds fail.

According to a study published in a report for Congress, Jickling and Raab (2006) cite three reasons for hedge fund failures:

- Financial issues, or losses stemming from unfavourable market moves;
- Operational issues, such as errors in trade processing or mispricing complex, opaque financial instruments; and
- Fraud or misbehaviour by fund management.

Another study by Kundro and Feffer (2002:42) analysed the failures of hedge funds and found that 56 percent of the collapses (i.e. funds that have ceased operations with or without returning the capital to their shareholders) are directly related to a failure of one or several operational processes. The operational risk therefore greatly exceeds the risk related to the investment strategy. Figure 2.7 illustrates the analysis.

Figure 2.7: Analysis of Hedge Fund Failures

Although the concern of a hedge fund manager and investor is usually the financial risk, risks associated with operational weaknesses are growing in importance. When operational issues are the root cause of a failure, it is associated with preventing a fund from managing a crisis situation appropriately in an unexpected financial context (Giraud, 2005).

Kundro and Feffer (2002:42) identified a number of operational risk factors that together seem to account for approximately half of all hedge fund collapses. These factors included misappropriation of funds and fraud, misrepresentation, unauthorized trading or trading outside of guidelines, and resource/infrastructure insufficiencies.

The issues that underlie the operational risk factors mentioned above are related to the valuation of the fund’s assets. Valuation is a process of determining the fair-market-value for all the positions that constitute the fund. With the case of fraud and misrepresentation, failure originates from dishonesty regarding the value of the assets held. In addition, the resource/infrastructure issues are derived from the inability to accurately price or risk the funds book.

Because valuations play an important role in operational risk management, the issue has become very topical in hedge funds. Issues related to valuation of portfolios will likely become the next major “black eye” for the hedge fund industry. Unless certain practices become more widespread, hedge funds face a potential crisis of confidence with institutional and high net worth investors (Kundro and Feffer, 2002:42).

2.2.7 THE VALUATION ISSUE

Both investors and regulators are concerned with the valuation of the fund’s assets. The concern is derived from the difficulty of valuing complex or illiquid assets, and from the potential conflict of interest between the manager and investors in the fund. When these are interrelated, such as when the hedge fund
manager has input into the valuing of the hard to value assets, the concerns are amplified.

Because hedge funds invest in securities that trade infrequently, where transaction pricing is not readily available on major wires and feeds such as Bloomberg, bids and offers are not easy to come by. Broker quotes must be sought to get a sense for what the position is worth. Some quotes of mortgage backed securities, for example, can easily vary by 20-30 percent. Such securities are highly complex and may be difficult to value without the use of a mathematical model. The models make use of assumptions and forecasts that are subjective and open to question (Kundro and Feffer, 2002:42).

Since hedge fund managers often invest their own money in the funds, they have a powerful incentive to show strong (or hide weak) performance. The inherent difficulty to price complex or illiquid investments exacerbates the issue. All these factors occur in an environment with minimal regulatory supervision and internal controls.

The urgency to resolve the hedge fund valuation issue is intensified because of the following macro-economic developments:

- The increasing sophistication of financial instruments cause pricing difficulties;
- A broadening investor base that includes institutional investors, demanding more transparency and operational risk measures, resulting in increased regulatory and media scrutiny; and
- The collapse of the sub prime mortgage market resulting from entire portfolios being mispriced (Kundro and Feffer 2002:44).

According to the AIMA (2007), in and around 20 percent of hedge fund strategies are in “hard to value” securities such as distressed debt, emerging markets, convertible bonds, credit default swaps, and fixed income arbitrage. McVea (2008:134) is of the viewpoint that if such securities are incorrectly valued, there are three major implications. Firstly, margin levels will be incorrectly calculated, thus exposing prime brokers to an increased risk of hedge fund default. Secondly,
the minimum capital requirements will not be determined to absorb any unforeseen losses. Thirdly, reporting certain trades to regulatory authorities will be inaccurate.

Over-inflated asset valuations also have an impact on the redemption and subscription rates of the hedge fund. This can adversely affect investors’ confidence in the accuracy of valuations and can result in the payment of unjustified performance fees to hedge fund managers. In a global survey by AIMA (2005), almost one third of asset managers identified the pricing of illiquid instruments as the most significant challenge with regard to portfolio valuations. With the implications mentioned above and the turmoil in the sub prime mortgage market, there is heightened concern for the challenges involved in valuation.

2.3 FUNCTIONS PERFORMED BY ADMINISTRATORS

Administrators of hedge funds deal with all aspects of the day to day operations of the fund, except for the investment decision making process. The latter is ultimately the sole responsibility of the fund’s investment manager. The functions carried out by the administrator are governed by the contractual arrangements entered into by the hedge fund’s investment manager with the administrator. These duties are found in the service level agreement where the exact standards to which the administrator intends to execute its responsibilities are set out.

McVea (2008:130) maintains that although the exact nature of the functions carried out by the administrator depends on the terms of the agreement, administrators provide a variety of “back room” or operational functions such as:

• maintaining the hedge fund’s accounts and other financial records;
• liaising with the hedge fund’s custodian bank, auditor, and prospective clients (sending out prospectuses and other offering documentation);
• performing anti-money laundering checks on investors;
• ensuring that the fund complies with any investment restrictions and diversification requirements outlined in the offering memorandum;
• calculating Net Asset Value (NAV), whether daily, weekly, monthly or quarterly; and
• confirming and arranging the payment of all subscriptions, redemptions, fees and expenses.

The responsibilities of administrators are similar those of company executives such as a Chief Financial Officer. Administrators help to demystify complex bureaucratic red tape by simplifying tasks and other issues which require extensive resources to handle. They bridge the gap between hedge fund management companies and the general investors in the fund (Oranika, 2007).

The tasks that administrators are willing to take on board are increasingly moving towards an array of services, including full valuation of the funds, reporting to investors and provision of risk monitoring services (Giraud, 2005). However, the most important role that administrators play is in the asset valuation process. While in some cases administrators calculate the fund’s NAV on the basis of the information provided, increasingly administrators provide full valuation themselves (McVea, 2008:133). The administrative function of calculating the NAV will be the focus of discussion in the research. Below is an outline summarising the function and the emerging trends.

2.3.1 INDEPENDENT NAV CALCULATION

Regulations in America do not require hedge funds to have their assets independently valued by a third party. The Deloitte Research (2007) study found that it has nevertheless become standard industry practice, especially in Europe, for NAV assessments to be carried out by independent administrators or other independent third parties.
The study highlighted that 61 percent of respondents use administrators to calculate their official NAV, while another 17 percent use other third parties. The trend towards independent valuations is partly explained by the growing presence of institutional investors in the hedge fund sector. Institutional investors require that funds have independent checks in place protecting their investment (and ultimately their investors) (McVea, 2008:133).

Institutional investors require a specialised quality administrator. The administrator needs to provide the hedge fund with the necessary industry connections, strength and experience. In addition, the administrator must have appropriately qualified staff with the required experience, practice independent pricing and valuation procedures, and have the technology to support this enhanced role (Report of the Alternative Investment Group Managing Servicing and Marketing Hedge Funds in Europe, 2006).

2.3.2 MODERN TRENDS

Industry forces are calling for more timely and accurate valuation of assets. Monthly and quarterly valuations have been the industry norm and for this reason,
administrators provide NAV to hedge funds three or four weeks after month end. Money Management Executive (MME, 2005) found that there was mounting pressure for more frequent and timely delivery of NAV, with regulators and industry critics pushing for daily asset valuations.

A New York based company, PlusFunds, launched a website in 2000 that provides real time NAV and risk data with the ability to trade hedge fund shares. The participating hedge funds provide portfolio data to a system that generates the NAV and risk measures together with the rating agency Standard & Poor's. Improved transparency in the NAV calculation process will give investors and credit providers added confidence, thus creditors will be more willing to improve their lending terms (Cass, 2000).

In contrast, the Royal Bank of Canada (RBC) Special Report (2005) established that very few administrators can produce daily NAV and consequently funds are doing the valuations themselves. As the fund’s assets under management grow, they prefer to “in-source” administration to save millions of dollars. Technological advances result in prices falling and an improvement in the quality of information available. Keeping administration in-house thus makes more sense. For administrators to continue adding value, they need to work on minimising costs, for instance, reducing the amount of manual processing.

Administrators are pressured into offering more of a full range of services, from middle office functions such as trade processing, data management, risk management, reconciliations and corporate actions to back office functions such as custody, fund accounting, fund administration, shareholder servicing and Web-based reporting (MME, 2005). The increased services of administrators help the hedge fund manager to focus on expanding his/her product offerings, maintain brokerage relationships and meet the reporting needs of institutional investors.

Van Dam (2008:44) draws attention to the fact that the trend for middle office services is a result of the high costs of developing complex IT systems. Outsourcing is an attractive option for those hedge fund managers who require
modern systems and a robust infrastructure that large administrators can provide. Administrators enlarged middle office services also allow greater transparency to investors and assists with better operational risk management. This trend has investors approaching service providers directly for ideas to limit their own operational risk.

The collapse of the sub prime mortgage market is testament to the valuation difficulties arising from the inability of US homeowners to meet their mortgage repayments. Mortgages that were provided to low income or poor credit borrowers demonstrate the vulnerability of the securities that were backed by these mortgages (McVea, 2008:136). Essentially, bonds were repackaged and sold on to investment banks and hedge funds through the creation of asset backed securities known as collateralised debt obligations (CDOs). Credit rating agencies awarded the bonds with investment grade status through a process where the bonds’ features were separated according to their high, low and mid level risk profile.

When house prices plunged in the U.S., investment banks and hedge funds realized their CDO assets were over valued. Because of margin and other financing requirements, hedge funds were forced to liquidate such securities (McVea, 2008:137).

Tighter regulation in the hedge fund industry seems inevitable as a result of the heightened criticism against the use of complicated financial instruments. The U.S. Congress has scheduled hearings examining the role of hedge funds in the financial crisis. Ritter (2008:41) advises that greater transparency which includes disclosing risk to investors could restore shaken confidence in the industry.

A “culling” of the hedge fund industry could be healthy in that undercapitalised or poorly managed funds will forced out, causing remaining funds to consolidate (Ritter, 2008:41). This could have far reaching effects where the administrators of such hedge funds will also come under pressure.
Van Dam (2008:44) is of the opinion that the financial crisis has had little impact on the ability of administrators to perform the NAV calculation function. A key reason for this is that administrators do not price complex assets with a “mark to model” methodology. Alternatively, they derive the prices from a combination of sources such as broker quotes and independent pricing specialists. If a broker is able to provide market prices, then the administrator is able to price a portfolio.

The quality of a fund’s operational infrastructure is the most important non-investment factor for investors evaluating hedge funds. While there is ongoing regulatory scrutiny and demand for higher operational practices, administrators will continue to add value to the investment process.

2.4 CHALLENGES IN OPERATIONAL RISK MANAGEMENT

Kundro and Feffer (2002:42) showed that the operational risk of a hedge fund exceeds the risk related to the investment strategy, with at least 56 percent of hedge fund collapses resulting from failure of one or more operational processes (see Figure 2.7). Yet, managers and investors are concerned with the financial risks while operational weaknesses prove more costly. Consequently, more attention is needed by industry stakeholders to address challenges in operational risk management.

Below is a table detailing the root causes of the 10 most widely publicised failures of hedge funds. Information in the table is based exclusively on public disclosed information.
Table 2.1 Details of the 10 most publicised hedge fund failures

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Loss (estimates)</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTCM</td>
<td>1998</td>
<td>$4,000m</td>
<td>Strategy failed to absorb post Russian debt Management (LTCM) default shock. Uncontrolled leverage, absence of transparency to prime brokers, conflicts of interest, model bias in the risk management process.</td>
</tr>
<tr>
<td>Tiger Management</td>
<td>2000</td>
<td>$2,000m</td>
<td>10% loss on a single day on trading activity, followed by a 23% loss in the value of the fund resulted in large redemptions bringing the total size of the fund from $20,000m down to $8,000m.</td>
</tr>
<tr>
<td>Everest</td>
<td>1998</td>
<td>$1,300m</td>
<td>Unfavourable market conditions and post Russian debt default shock.</td>
</tr>
<tr>
<td>Fenchurch Capital</td>
<td>1995</td>
<td>$1,264m</td>
<td>Change in investment strategy, absence of adequate Management risk management system for the new strategies.</td>
</tr>
<tr>
<td>Princeton</td>
<td>1999</td>
<td>$1,000m</td>
<td>Ponzi scheme, conflicts of interest and collusion with prime broker.</td>
</tr>
<tr>
<td>Beacon Hill</td>
<td>2002</td>
<td>$1,000m</td>
<td>Losses on directional bets, Mortgage Backed Securities pricing issues and lack of liquidity resulting in the need to stop redemptions and liquidate the fund.</td>
</tr>
<tr>
<td>Vairocana</td>
<td>1994</td>
<td>$700m</td>
<td>Directional bets instead of market neutral strategies, highly complex portfolios leading to difficulties in calculating the NAV.</td>
</tr>
<tr>
<td>Morgan Grenfell</td>
<td>1997</td>
<td>$600m</td>
<td>Unauthorised holdings of unlisted securities and pricing irregularities.</td>
</tr>
<tr>
<td>Manhattan Investments</td>
<td>1999</td>
<td>$500m</td>
<td>Trading losses and misrepresentation of fund performance.</td>
</tr>
<tr>
<td>Askin Capital Management</td>
<td>1994</td>
<td>$420m</td>
<td>Crash in the CMO market and weaknesses in the risk management system, very high leverage.</td>
</tr>
</tbody>
</table>

Source: Edhec Risk and Asset Management Research Centre (2003)

Giraud (2005) established that in eight out of ten above cases, operational flaws are the root cause of hedge fund failure or have prevented a fund from managing a crisis situation appropriately. A weak operational environment will increase the impact of an outside event on a hedge fund; such as volatile trading and financial conditions.

Operational risk is defined by Thom (2006) as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Therefore, there are four elements of operational risk that Thom highlights:

- processes;
- people;
• systems; and
• external events.

Processes and systems are related to errors in trade execution and settlement. In addition, inadequate systems may result in the inaccuracy of valuations and may therefore create a false or misleading impression of the success or value of a fund.

The people element of operational risk deals with the lack of succession planning of employees, governance frameworks for roles and responsibilities and inability to recruit or retain the best employees (Thom, 2006). These people risks, as well as fraud and market abuse on behalf of an individual within a hedge fund, all threaten the life of the fund.

Lastly, Thom (2006) describes risks resulting from external events as inadequate quality of services from a supplier, administrator, IT support facility or any outsourced service provider. Coupled with the possibility of terrorism, theft, and natural disasters, fund managers must mitigate the wide range of operational risks present in hedge funds.

Although operational risks can be mitigated by an appropriate and professional due diligence process, institutional investors are looking at hedge funds to employ more stringent operational practices. With the lack of maturity of the industry and limited regulatory constraints, Giraud (2005) highlights the following operational areas of concern:
• Compliance controls;
• Position pricing and NAV calculation procedures;
• Client reporting procedures;
• Risk management infrastructure; and
• Reconciliation capabilities.
Figure 2.9 Percentage of hedge funds potentially open to specific operational issues

Source: Giraud (June 2005)

Since pricing and NAV calculation is one of the main sources of operational failures (58 percent), this component will be the focus of challenges occurring in operational risk management. Figure 2.9 illustrates the specific issues.

Hedge funds invest in non traditional securities, consequently, the pricing and valuation of these securities have led to some confusion. Strategies, such as arbitrage trading and distressed investments, employed by funds rely solely on the existence of price inefficiencies in the market. Giraud (2005) is therefore not surprised that hedge funds deliberately invest in illiquid or difficult-to-value instruments. This situation is not an issue in itself and should be compared to a similar situation in, for example, the private equity world rather than being compared to “long-only” investment strategies.

According to Kundro and Feffer (2002:44) some funds are more prone to the valuation problem than others. The reason being the instruments they invest in are complex and illiquid. Below is a list of such instruments and their valuation issues:
• **Convertible bonds.** These can be extremely complex to value and have limited liquidity. Broker quotes can vary significantly for the same issue, with the difference between highest and lowest bid varying by about 5 and 20 percent.

• **Mortgage-backed securities.** These are also subjected to both liquidity and valuation problems. A separate system usually books, values and processes these securities and then requires manual intervention to consolidate with the rest of the portfolio.

• **Credit default swaps.** These derivatives are utilised to hedge a portfolio and depending on the specific circumstances, mark-to-market quotes are difficult to obtain or unwind.

• **Over-the-counter derivatives.** Complex options and hybrids are being developed constantly, with hedge funds using highly customised instruments in their portfolios.

• **Distressed debt.** These are difficult to price, even with complex modelling systems and requires significant credit expertise.

• **Emerging markets.** Securities in some emerging markets are difficult to value and are subjected to liquidity concerns.

• **Highly concentrated positions and positions that make up a large proportion of a single issue.** These positions may require adjustments or discounts to reflect the true liquidation value of the position. When disposing of such positions, the impact on the market may be significant.

The Deloitte survey in 2007 revealed that 40 percent of the 244 hedge funds relied solely on broker quotes to value complex instruments, such as a credit default swap. Another 40 percent relied on broker quotes in combination with one or more other valuation methodology, and 20 percent did not use broker quotes at all but relied on third party vendors, either alone or in combination of a model.
Using broker quotes alone raises some serious issues (Deloitte Research, 2007):

- Is the broker counterparty to the transaction?
- Would the broker be ready to close the position at the quoted value?
- Does the firm solicit multiple broker quotes, as it should?
- Is the broker rotation followed, so that the fund gets a variety of views?
- Are prices back tested to check for reasonableness and systematic bias?

The lack of proprietary pricing models was also highlighted in the survey. The lack of pricing models is not only an issue for valuation, but also for risk management. Without the use of models that predict how price changes as market conditions change, correlation testing and stress testing will be difficult to perform. The models help to determine liquidity and leverage levels.

Most stocks and bonds are being “market to market” because of availability of daily market prices. However, the complex or thinly traded instruments above are
“market to model” where mathematical models are used to calculate value. At times the accuracy of these models is in question since the correct variables and inputs are not decided upon at the outset. In addition, if hedge funds rely on broker quotations for valuing complex instruments, the bid ask spreads of 20 percent can also exacerbate valuation difficulties. Therefore, valuations attributed to thinly traded assets can be very different to the prices available in real market conditions (McVea, 2008:137).

Although the thinly traded instruments are more likely to have pricing issues, actively traded securities may also be susceptible to “stale” prices Kundro and Feffer (2002:45). Bad market feeds, human error or other issues may be the reasons for inaccurate third party valuations. Such challenges are not only found in hedge funds, but also in mutual funds.

The development of independent third party administration has been a positive step toward better operational risk management. However, AIMA (2005) found that a mere 27 percent of hedge funds still provide prices to the administrator for NAV purposes. In addition, 36 percent of the funds happen to override prices provided by the administrator. Such practices are not satisfactory if the hedge fund manager is involved in the marking of hard to value assets, and should be a major concern to all investors.

Kundro and Feffer (2002:43) proclaim that the valuation problems at a fund are generated by one of three main causes. They are:

- fraud or misrepresentation;
- mistakes or adjustments; and
- processes, systems or procedural problems.

### 2.4.1 FRAUD OR MISREPRESENTATION

In some instances, hedge funds will deliberately attempt to inflate the value of the fund. This is done to either to hide unrealised losses or to cover up the practice of theft or fraud. This was the case of the Bayou hedge fund where the SEC found
that management knowingly misappropriated investors’ capital (Harris, 2005). The owners, Samuel Israel and Daniel Marino, pleaded guilty to fraud in 2005 after the hedge fund lost $450 million. Harris (2005) states the investigators charged Israel and Marino for embarking on a scheme to defraud investors by fabricating financial, account and performance summaries soon after the fund’s inception.

To conceal any losses, the two owners fabricated the fund’s independent audit reports by creating a fictitious accounting firm known as Richmond-Fairfield Associates (Donahue, 2007:240). The fund also executed its trades through a broker-dealer, Bayou Securities, which was owned by Israel. The brokers earned large profits on trades while the fund continued to suffer severe losses. The fake auditors and affiliated brokers proved to be the foundation for investor losses of approximately $350 million of the invested $450 million (Donahue, 2007:240).

In a similar case, the SEC brought sanctions against parties involved in calculating valuations for certain hedge funds managed by Lipper and Company. Although the investment manager was registered with the SEC, the manager inflated the valuations of four of the firm’s convertible hedge funds between 1998 and 2002. The manager was convicted with a prison sentence and fined $89 million for fraud. Legal action against the external auditor of the fund also proceeded, for relying on a valuation process that was significantly flawed. The valuation misstatements became evident only after the manager left Lipper, when senior management began reviewing prior valuations (Doherty, 2006).

2.4.2 MISTAKES OR ADJUSTMENTS

The positions that make up a large proportion of a single issued security require an adjustment or discount to reflect the market impact when liquidated. An adjustment is also necessary when large issues require public disclosure and the position cannot all be sold anonymously (Kundro and Feffer, 2002:43). This poses certain challenges such as having the required expertise and knowledge of the market to maintain accuracy of valuations.
In certain instances, a fund will mis-mark the position in one period and will have to be corrected or reversed the next period. The reversal may cause a sudden or unexpected impact to the fund. Mistakes can also be initiated from which “correct” price is to be used. The bid, offer or mid-point price can vary significantly especially on complex instruments.

2.4.3 PROCESSES, SYSTEMS OR PROCEDURAL PROBLEMS

Even if a hedge fund follows its own policies consistently and accurately, the fund may still find itself mis-marking the book. This problem is due to a flaw in the valuation procedures or processes. This is most common in cases where a fund invests in instruments that cannot be handled by its regular processing systems and some kind of workaround is required which later proves to be flawed (Kundro and Feffer, 2002:43).

As previously mentioned, mortgages, bank loans, OTC derivatives and convertible bonds are all prone to being incorrectly captured on the fund’s books and records. In some cases, total positions may be completely excluded in error if the underlying systems do not fully support the complexity of the instruments involved. In addition, prime brokers have unique reporting systems which make it difficult for administrators to automate the reconciliation process. This issue is compounded with investments in complex derivatives and the maintaining of multiple brokerage relationships by hedge fund managers.

Thom (2006) describes systems as the IT aspect of the business where hardware or software failure could lead to an inability to execute trades, access key market information and communicate with investors. Additionally, fund managers are battling an increase of on-line problems that relate to hacking and manipulating of private data.
2.5 ADDRESSING OPERATIONAL RISK CHALLENGES

Several techniques surrounding the topic of addressing operational risk will be discussed. To mitigate the challenges above, an administrator needs to perform the following practices.

2.5.1 INDEPENDENCE AND SEPARATION OF DUTIES

Since the calculation of NAV is the focus of operational risk, an independent valuation process is critical for a hedge fund. The most effective way to ensure independence in the valuation process is for funds to appoint a leading independent third-party administrator who is responsible for supervision of the month-end valuation process (Bank of New York and Amber Partners, 2006).

Funds that do not appoint third party administrators should have compensating controls where there is no independent oversight over the calculation of NAV. In addition, the manager's reasons for not appointing an administrator need to be provided to investors.

If valuations are prepared by the fund manager themselves, an independent third-party should check the accuracy of the valuations. Kundro and Feffer (2002:46) recommend having financial or accounting staff independent of the portfolio management team to prepare and validate marks-to-market practices. An auditor should also be employed to test valuations. However, auditors examine valuations infrequently and only after the figures have been reported. Therefore, an external third party should verify the portfolio valuations before the results are reported to investors.

The administrator obtains prices by consulting with various sources such as brokers, price vendors and third-party valuation agents. These sources also need to be independent of the investment manager, especially for complex instruments.
The person who performs checks or approves valuations should not receive incentives or inducements based directly on the performance of the investment being valued. These people should also not report to managers who do receive incentives directly related to fund performance (Kundro and Feffer, 2002:46).

2.5.2 CONSISTENCY IN THE VALUATION PROCESS

Price consistency requires that similar securities should be valued the same way both at a point in time and over time. The Bank of New York and Amber Partners (2006) recommend having procedures in place when a fund bases month-end valuations for certain instruments on multiple broker quotes. Procedures should not allow quotations to be chosen according to how favourable they might be, for example, the highest mark or the source that most softens portfolio performance.

In addition, multiple quotes should be averaged in the same way across all funds managed by a hedge fund. This practice ensures “consistent sampling of market price dispersion month-to-month” (Bank of New York and Amber Partners, 2006). Multiple broker quotes should be sourced consistently and accessed by the administrator independently without intervention by the investment manager (MFA, 2007).

Complex or illiquid securities that require broker quotes for final value should be combined with another source, such as a third party pricing vendor. Where a security can be modelled, such as a swap, it should be modelled (Deloitte Research, 2007). These models assist with risk management practises such as leverage and liquidity requirements.

A Valuation Policy Document should be drawn up by the fund’s governing body that specifies workable valuation practises, procedures and controls. The document should outline the hierarchy of pricing sources used for each type of instrument, such as which source is primary and which is secondary (MFA, 2007). Tolerance levels for variances of each security type need to be outlined as well.
Hedge funds therefore use a wide array of sources, methods, rules and models to assist with the valuation process. Such practices have to be applied consistently, with any deviations or unusual circumstances clearly noted and documentation saved (Kundro and Feffer, 2002:46). When application of the pricing policy is not consistent, approval from the fund’s governing body is required before the formal release of NAV (MFA, 2007).

2.5.3 SUPERVISION AND GOVERNANCE

A set of clearly documented valuation policies and procedures need to be in place, as well as ensuring that those policies and procedures are actually followed in practice. A fund can test whether the policies are applicable through external validation, testing, and audit (Kundro and Feffer, 2002:46). Pricing models should also be tested independently and then approved by the governing body.

Management should review valuations and there should be evidence that pricing discrepancies have been brought to the hedge fund management’s attention. If this is the case, the appropriate action needs to take place such as a resolution procedure for managing exceptions (MFA, 2007). Resolving pricing issues for illiquid positions and exotic instruments should remain the ultimate responsibility of the fund’s governing body. However, the final NAV should be addressed directly to investors by the administrator and any NAV produced by the investment manager should be justified.

When a fund invests in the problem-prone instruments mentioned above, a certain number of honest valuation discrepancies are inevitable (Kundro and Feffer, 2002:46). But the management oversight is critical to ensuring the safety of investor assets in the fund. A fund manager should acknowledge that the discrepancies occur, how they handle them, and whether they document the results. Such recognitions can go a long way in addressing the operational risks involved.
In the case of Lipper, simple checks and balances were not present in the compliance process. The lack of management oversight and separation of duties increased the operational risks of the fund. Senior management should have been more actively involved in the valuation process, hindering the manipulation of asset prices for such an extended period of time (Doherty, 2006).

2.5.4 ROBUST INTERNAL CONTROLS AND PROCEDURES

Although Giraud (2005) believes that the investor needs to receive an indisputable commitment that price inefficiencies will not be used against his or her own interest, internal controls need to support the commitment. A pricing policy for hard to value instruments should be depicted in the offering memorandum or the Valuation Policy Document. The policy ought to explain whether a valuation committee is dedicated to fair value pricing or valuations are derived from statistical methods or through a consensus among third parties.

The MFA (2007) realises that in some cases the investment manager has the best insight for valuing particular instruments. In this instance, the administrator needs to be supplied with sufficient supporting information from the manager.

Robust internal controls and procedures should be in place over each stage of the trading cycle: trade authorisation, execution, confirmation, settlement, reconciliation and accounting (Bank of New York and Amber Partners, 2006). Given the incidences of fraud involving the theft of fund assets, such as the Bayou hedge fund, both wire transfers and other asset movements must be tightly controlled. The management of a fund should not allow assets to be moved outside the fund on a single signature and there should be effective segregation of duties over cash movements.

2.5.5 VALUATION TRANSPARENCY

The concept of transparency addresses the extent to which the fund manager clearly communicates to investors the specific methods and processes used to
value securities when determining NAV (Bank of New York and Amber Partners, 2006). One way of communicating the methods used to value each type of instrument is the development of a “pricing matrix”. The pricing policies should be maintained by the third-party administrator and can be made available to investors by the manager’s direction.

Best practice transparency standards also relate to the application of pre-determined policies and thresholds to challenge and override prices. Formal documentation of valuation exemptions should be kept. Equally, the valuation committee needs to record changes to any policy, pricing or exemptions with regard to NAV calculation (Bank of New York and Amber Partners, 2006).

2.5.6 QUALITY SERVICE PROVIDERS

The Bank of New York and Amber Partners (2006) suggest that failure to appoint well-known, proven and independent service providers may be a warning sign to investors.

The auditors of a fund should be one of the “big four” or a specialised audit firm with the market reputation for auditing hedge funds. Prime brokers and other counterparties should be high quality financial institutions. The fund manager and administrator need to also display transparency in the identities of the counterparties.

2.5.7 TECHNICAL EXPERTISE

Although the functions performed by administrators vary, anything less than full service fund administration, such as preparation of a complete set of accounting records, increases operational risk of a hedge fund (Bank of New York and Amber Partners, 2006). Accordingly, funds should hire firms that have the adequate capital resources to invest in IT systems, high calibre staff and training programmes.
The workforce is required to have the level of knowledge and expertise to carry out the calculation of complex instruments such as derivatives. Such specialists need to understand the underlying investment strategies and pricing options. Traditional pricing vendors cannot provide such specialised services, hence the need for derivative experts who have experience in developing and running pricing models for these complex instruments (MME, 2005). Teams that are dedicated to the valuation function can provide timely support to the manager's requests and ensure operational efficiency.

Although there are various business valuation certifications, standards and guidelines, the National Association of Certified Valuation Analysts website provides a detailed credentials chart. The certifications provided help to ensure that the individuals are fitted with the right skills to value complex instruments.

A good relationship with the hedge fund manager improves the reputation of the administrator and ultimately enhances the marketability of the hedge fund. This bodes well for both existing and potential investors who look for integrity, accuracy and timeliness of the valuation process (Hamilton, 2006).

2.5.8 ADVANCED SYSTEMS AND TECHNOLOGY

Administrators should invest in systems which utilise straight through processing capabilities to the accounting systems. The systems need to handle an increasing number of listed instruments and automatically reconcile and price portfolios. Such systems reduce the need for manual intervention and help manage operational risks (Bank of New York and Amber Partners, 2006).

To meet the need for timely and accurate valuations, administrators are hiring people with expertise in pricing complex derivatives. In addition, they are establishing procedures and modelling systems for determining final value where public information is not available (MME, 2005).
Consequently, the following requirements of an administrator support the NAV calculation role:

- A solid business infrastructure is required to support the investment process as well as the increased levels of reporting. As more investors begin to invest in alternative investments, greater demands are being placed on fund managers. These demands require a more complex administration infrastructure than that which the manager alone is able to set up (Hamilton, 2006).

- To provide the supporting infrastructure, advanced technology is required to automate the administration process. Since the administrator is the main channel between the manager and prime broker, automated reconciliation with the prime broker is essential. An administrator can only calculate a reliable NAV once all the transactions of the hedge fund reconcile with the administrators records and third parties, such as a prime broker. Therefore, the software and systems in place need to calculate the value of the fund accurately and on a timely basis. The systems need to also handle different types of asset classes.

Furthermore, the systems need to allocate income locally and offshore and capture multiple incentive and management fees. For these reasons, the technology platform should perform the following tasks:

- take trades in automatically;
- reconcile to prime brokers and other counterparties in a timely and automated manner;
- perform all pricing and net asset calculations within the same system, including derivatives; and
- allocate income to investors (MME, 2005).

Internationally renowned software provide for these requirements.

Although daily pricing for illiquid instruments were once thought of as an impossible feature, technological innovation in the software industry makes daily NAV possible. Thornton (2007) agrees with the fact that a trading desk knows the profit
and loss every day, therefore a hedge fund should as well. The technology exists to produce daily prices, however, the offshore administration world and older hedge funds need to undergo major technology upgrades.

2.5.9 MANAGED ACCOUNTS

Cunningham (2005) believes that hedge fund investments made through separately managed accounts have become the structure of choice for investors seeking to minimize the risk of fraud and operational risk. The same investment management services are provided to investors, but in a separately managed account. The manager replicates the trading strategy outside of the funds books through an account that remains in the name of the investor (Giraud, 2005).

The investor may add specific investment guidelines to the separately managed account such as prohibiting investments in illiquid securities. The investor receives better liquidity terms, lower expenses, full transparency and monthly (sometimes daily) validation of the investment value (Cunningham, 2005).

However, Giraud (2005) is of the opinion that assessing positions on a daily basis requires extensive understanding of the instruments traded and might result in an operational “headache”. The representative of the account will have to price every single security, which can require a level of operations similar to a back office processing centre.

The most secure environment would be advanced management account platforms that provide an array of back and front office services, together with independent valuation and risk monitoring. Additionally, contractual arrangements supporting strict control over the manager's operations will preserve the security of investor's assets (Giraud, 2005). Only then can the benefits of liquidity, transparency, fraud controls, and controls over cash movements outweigh the costs or challenges associated with separately managed accounts (Cunningham, 2005).
According to Duetsche Bank’s Alternative Investment Survey (2005), 29 percent of the 650 investment firms responded to using managed accounts. This is an increase of 9 percent from the previous year with foundations constituting the highest percentage (50 percent) and insurance companies the lowest (10 percent). Clearly, there is a trend toward the use of separately managed accounts.

2.5.10 SIDE POCKETS

Side pockets are an attractive solution for valuing illiquid assets. The hedge fund keeps difficult to value assets into a side pocket until the liquidation of the asset occurs. In most cases, no trading and market data will be available until the anticipated trigger event occurs. Investors in the fund at the time which the relevant asset is acquired will participate in any gains or losses attributable to that asset (HFWG, 2007).

This mechanism protects investors against adverse timing of withdrawals, and effectively reduces the risk of illiquidity issues for limited partners. A drawback with side pockets is that they raise disclosure issues since their use must be included in the organisational documents and marketing materials of the fund. In addition, accuracy of diversification numbers may be in question causing the nature of the portfolio to be inaccurate (Doherty, 2006).

2.6 CONCLUSION

This chapter served to create a basic understanding of what operational risk is and why it is important to manage the risks involved. An independent third party administrator is the best solution for managing the risks associated when calculating the NAV of the hedge fund.

The chapter explored the changing functions of administrators, the operational risks involved when performing valuations. The latter part of the chapter examined more specifically how to address the challenges experienced by administrators when managing operational risk.
In chapter three, the research methodology and the empirical study will be outlined in more detail.
CHAPTER THREE: DESIGN OF THE EMPIRICAL STUDY

3.1 INTRODUCTION

This chapter focuses on the research approach applied to resolve the main and sub-problems as identified in chapter one. It includes an outline of the research design and chosen research methodology, and then details the two data gathering tools, interviews and document analysis.

Finally, the validity and reliability of the study is explained to ensure the researcher did not have error in the measurement instruments.

3.2 RESEARCH DESIGN

Welman & Kruger (1999:2) refer to research as the process in which scientific methods are used to expand knowledge in a particular field of study. It is a process that involves the application of various methods and techniques to create scientifically obtainable knowledge by using objective methods and procedures. Leedy and Ormrod (2005:2) describe research as a systematic process of collecting and analysing information or data to increase understanding of the phenomenon about which the research is concerned or interested.

Eight characteristics of research projects are identified below. Research:

• originates with a question or problem;
• requires a clear articulation of a goal;
• follows a specific plan or procedure;
• usually divides the principle problem into more manageable sub problems;
• is guided by the specific research problem, question, or hypothesis;
• accepts certain critical assumptions;
• requires the collection and interpretation of data in an attempt to resolve the problem that initiated the research; and
• is cyclical or, more exactly, helical (Leedy and Ormrod 2005:2).
Leedy and Ormrod (2005:85) indicate that research design provides the overall structure for the procedures followed, the data collected and analysed by the researcher. They highlight that the design is key to the success of the research project.

The research design for this study was adopted to address the main and sub problems.

3.2.1 PROBLEM STATEMENT

As discussed in chapter one, the main problem is identified as how administrators can improve operational risk management practices in hedge funds, particularly the valuations function?

The following three sub-problems were identified to resolve the main problem. These are:

• **Sub problem one**
  How has the 2008 financial crisis impacted the valuation function performed by administrators?

• **Sub problem two**
  In their efforts to bring about improvement in hedge fund operational risk management practices, what challenges do administrators face?

• **Sub problem three**
  How can the challenges faced by administrators be addressed?
3.2.2 PROBLEM STATEMENT AND SUB-PROBLEM RESOLUTION

The main problem and its sub dimensions were resolved through analysis and interpretation of the results obtained from the empirical study as outlined in chapter four.

3.2.3 PURPOSE OF THE STUDY

In this study, the objective of the research is to improve the role of the administrator in hedge fund operational risk management, paying special attention to the valuation process.

3.2.4 USE OF THE RESEARCH

The results from this study will be used by the executive management team of Investment Data Services (IDS) to improve the administrator’s function of performing valuations and better managing the operational risks involved in hedge funds. Administrators and hedge fund managers will benefit as the improvement in operational risk management practices assist in ensuring the safety of investors’ assets.

3.2.5 TARGET POPULATION

The target population is defined as the collection of constituents that posses the information sought by the researcher and about which inferences are to be made (Malhotra, 1993: 352).

The target population of this study was restricted to the management team of IDS. Four employees were interviewed while the fifth respondent was a hedge fund manager who was included in the population because of his extensive experience in the hedge fund industry. The detail of each respondent is shown in Table 3.3 under section 3.4.1.
3.3 CHOOSING AN APPROPRIATE RESEARCH APPROACH

3.3.1 QUALITATIVE VERSUS QUANTITATIVE DATA

Mariampolski (2001:22) points out that a qualitative as opposed to a quantitative research strategy generally depends on the kinds of questions being addressed, the nature of the population being studied and the overall objective of the research.

According to McMillan and Schumacher (1993:372), qualitative research is concerned with understanding participants’ feelings, beliefs, morals, thoughts and actions. The qualitative researcher therefore realises that the issue has many dimensions and layers, and so they depict the issue in its multifaceted form (Leedy and Ormrod 2005:133).

Quantitative research, on the other hand, involves seeking explanations and predictions that will generalise to other persons or places. Leedy and Ormrod (2005:95) refer to the researcher’s intent to establish, confirm, or validate relationships and to develop generalisations that contribute to theory. The researcher is compelled to remain detached from the participants to draw unbiased conclusions.

Hair et al. (2006:172) summarise the key differences between qualitative and quantitative methods. These are shown in the following table:
Table 3.1 Differences between qualitative and quantitative methods

<table>
<thead>
<tr>
<th>Factors/Characteristics</th>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research goals / objectives</td>
<td>Discovery and identification of new ideas, thoughts, feelings</td>
<td>Validation of facts, estimates, relationships, predictions</td>
</tr>
<tr>
<td>Type of research</td>
<td>Normally exploratory designs</td>
<td>Descriptive and causal designs</td>
</tr>
<tr>
<td>Type of questions</td>
<td>Open-ended, semi structured, unstructured, deep probing</td>
<td>Mostly structured</td>
</tr>
<tr>
<td>Time of execution</td>
<td>Relatively short time frames</td>
<td>Usually significantly longer time frames</td>
</tr>
<tr>
<td>Representativeness</td>
<td>Small samples, limited to the sampled respondents</td>
<td>Large samples, normally good representation of target population</td>
</tr>
<tr>
<td>Type of analyses</td>
<td>Debriefing, subjective content, interpretive, semiotic analyses</td>
<td>Statistical, descriptive, causal predictions and relationships</td>
</tr>
<tr>
<td>Researcher skills</td>
<td>Interpersonal communications, observations, interpretive skills</td>
<td>Scientific, statistical procedure and translation skills; and some subjective interpretive skills</td>
</tr>
<tr>
<td>Generalisability of results</td>
<td>Very limited; only preliminary insights and understanding</td>
<td>Usually very good; inferences about facts, estimates of relationships</td>
</tr>
</tbody>
</table>

Source: Hair et al. (2006:172)

3.3.2 THE RESEARCH METHOD ADOPTED

The research method selected should be based on research problem addressed and the skills of the researcher (Leedy and Ormrod, 2005:105). Below is a table that helped guide the researcher in adopting the chosen method.
Table 3.2 Choosing an appropriate research method

<table>
<thead>
<tr>
<th>Use this approach if:</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You believe that:</td>
<td>There is an objective reality that can be measured</td>
<td>There are multiple possible realities constructed by different individuals</td>
</tr>
<tr>
<td>2. Your audience is:</td>
<td>Familiar with/supportive of quantitative studies</td>
<td>Familiar with/supportive of qualitative studies</td>
</tr>
<tr>
<td>3. Your research question is:</td>
<td>Confirmatory, predictive</td>
<td>Exploratory, interpretive</td>
</tr>
<tr>
<td>4. The available literature is:</td>
<td>Relatively large</td>
<td>Limited</td>
</tr>
<tr>
<td>5. Your research focus:</td>
<td>Covers a lot of breadth</td>
<td>Involves in-depth study</td>
</tr>
<tr>
<td>6. Your time available is:</td>
<td>Relatively short</td>
<td>Relatively long</td>
</tr>
<tr>
<td>7. Your ability/desire to work with people is:</td>
<td>Medium to low</td>
<td>High</td>
</tr>
<tr>
<td>8. Your desire for structure is:</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>9. Your skills in the area/s of:</td>
<td>Deductive reasoning and statistics</td>
<td>Inductive reasoning and attention to detail</td>
</tr>
<tr>
<td>10. Your writing skills are strong in the area of:</td>
<td>Technical, scientific writing</td>
<td>Literary, narrative writing</td>
</tr>
</tbody>
</table>

Source: Leedy and Ormrod (2005:106)

The researcher found that the amount of literature available was not extensive, but rather limited since the financial crisis effects were not fully realised. The researcher also wanted to focus on an in-depth study on how an administrator can improve operational risk management practices in hedge funds. The research question therefore needed to be exploratory in nature and required inductive reasoning.

For these reasons, and that there could be multiple possible realities created by the different respondents, the researcher decided that a qualitative methodology would be most suited to this particularly area of study.
Cresswell (1994) highlights the five main qualitative research types:

- The Biography;
- Phenomenology;
- Grounded Theory;
- Ethnography; and
- Case Study.

The Biography, Phenomenology, Grounded Theory and Ethnography methods were discounted on the grounds of inappropriateness because the role of administrators are not clearly defined within the industry and require more learning about the poorly understood situation. For this reason, the research focus area lends itself toward a Case Study approach.

The research focused on a single case, IDS, where the firm’s circumstances can promote understanding or inform practice for similar situations. The approach is useful because it generates or provides preliminary support for the research outcomes. However, a disadvantage is that the findings may not be generalisable to other situations (Leedy and Ormrod 2005:135).

3.4 THE EMPIRICAL STUDY

3.4.1 SAMPLING METHODS

With descriptive research, a random selection process is used to choose a segment of the population that will be representative of the sample. Each sample is chosen in such a way that each member of the population has an equal chance of being selected (Leedy and Ormrod 2005:199). This sampling method was not considered appropriate as the researcher required a sample of high credibility that would provide the best information.

The “purposeful sampling” approach, which is a non-random selection process, was used to select the sample group. This approach was decided on because it
allowed the researcher to select those “individuals that will yield the most information” (Leedy and Ormrod 2005:145) about the role of the administrator in operational risk management.

The chosen sample was presumed to be representative of the population, since inferences were drawn from the entire IDS body. The five people interviewed were:

- **Ian Hamilton – Executive Chairman**
  Qualifications: B.Com, LLB. MBA
  Hedge Fund experience: 25 years
  Ian has many years of experience in the investment industry through investment research, investment management and in more recent years as an executive director of a number of leading South African Investment groups. He has served as a director of the South African Association of Unit Trusts and on the Fund Management Committee of the South African Retirement Fund Association. He is also a founder Member of the South African Chapter of Alternative Investment Management Association (AIMA SA). Ian was appointed in June 2001 by the Minister of Finance, the Honourable Mr Trevor Manuel, to the Advisory Board of the FSB and has been reappointed in this position in October 2008. He has been involved in the discussions and drafting of the Regulations for the South African Hedge Fund industry.

- **Tony Christien - Director**
  Qualifications: B. Com, CAIB (SA)MIAC
  Tony has had a long career in banking, including corporate banking, with FNB, formerly Barclays. He has also spent a number of years as an independent accountant, under the designation JAC Consulting Services. Tony oversees Treasury, Custody, New Business and Client Relations.

- **Peter Hartmann - Head: Fund Accounting**
  Qualifications: B.Compt (Hons), CA (SA)
  Hedge Fund experience: 5 years
Peter has worked in the financial services industry since 1994 having first gained exposure at Firstcorp before moving to Syfrets, Nedcor Investment Bank, Franklin Templeton NIB and later Nedcor Wealth Management. He joined Bank of Bermuda’s (later HSBC) South African joint venture, Global Fund Services (SA), in 2003 and spent time in Dublin training on their Fund Administration system as part of the initial set-up of what is now the IDS Cape Town office. Peter headed the IDS Fund Accounting function until the end of 2007 when he moved into a specialist supporting role.

- Craig McIver - Manager: Group Risk and Compliance
  Qualifications: BA, LLB.
  Hedge Fund experience: 5 years
  Since 1986, Craig has been working in the insurance and asset management industries. In addition to fund administration, he has been involved in remuneration structuring and pension fund accounting. He is a member of the Compliance Institute of South Africa.

- Andy Pfaff - Founding partner: Trendline.
  Hedge Fund experience: 10 years
  Andy has worked in the South African financial markets since 1987. He has worked on the buy side, sell side & proprietary trading desks, in the money, bond, equity & derivatives markets. He has served as Deputy Chairman of the South African Institute of Financial Markets, and also on the board of the Hedge Fund Association of South Africa; both of these positions were resigned to concentrate exclusively on Trendline. He was a founding employee at a bank startup in 1987, founded an independent member of Safex in 1992, and founded Trendline Funds in 2007.

3.4.2 INTERVIEWS

Qualitative researchers gather data from multiple sources in any single study such as observations, interviews, objects, written documents, audiovisual materials, electronic documents, etc (Leedy and Ormrod 2005:143).
The first source from which primary data was collected was through the process of interviewing. Following an unstructured approach to the interviews was deemed unsuitable. The rational being that the researcher gets different information from different people and may not be able to make comparisons among the interviewees (Leedy and Ormrod 2005:146).

The interview was semi structured in nature where the researcher followed a standard set of questions with one or more individually tailored questions. This method was adopted to achieve clarity and to probe the reasoning of interviewees. The researcher allowed the questions to be answered in an open-ended format, where the researcher raised the topic and indicated the kind of answer but the actual answers were entirely up to the interviewee (Gillham, 2000:41). The open-ended method allows the respondent maximum flexibility over how to outline their answer.

To optimise the interviewing process, the researcher used the following guidelines as suggested by Leedy and Ormrod (2005:147). These are replicated below:

- identify some questions in advance;
- make sure the interviewees are representative of the group;
- find a suitable location;
- get written permission;
- establish and maintain rapport;
- focus on the actual rather than the hypothetical;
- don’t put words in people’s mouths;
- record responses verbatim;
- keep your reactions to yourself; and
- remember that you are not necessarily getting the facts.

The interview questions were emailed in a Microsoft Word document to Ian Hamilton, the Chief Executive Officer of IDS, for redistribution to the management team. The respondents were then allowed to take their own time in responding to the questions and emailing it back to the researcher. Thus, flexibility was allowed
by conducting the interviews electronically through the use of emails. The responses were recorded verbatim and accurately reflect the interviewee’s thoughts.

3.4.3 DOCUMENT ANALYSIS

The second method of collecting the data was through documents analysis. An article written during the 2008 financial crisis by two management employees of IDS was used as a discussion base. The article, titled “A well oiled cog”, provided a thorough synopsis of the challenges facing IDS as an administrator and how they are addressing those challenges.

The second document of which data was gathered was from an official roundtable discussion. Experienced stakeholders in the South African hedge fund industry gave their viewpoints on the effects of the financial crisis on each of their businesses.

3.4.4 PILOT STUDY

The interview questions were sent to Harry McVea, a senior lecturer at the University of Bristol who specialises in financial services law and policy. The individuals viewpoint on the interpretation and clarity of the interview questions posed was sought. A local hedge fund manager, Siegfried Lokotsch was also contacted to gain insight into the challenges facing hedge funds in managing operational risk.

The pilot work was done to ensure that the questions posed to respondents were feasible and that the responses obtained would be of sufficient quality to help answer the research question.
3.4.5 VALIDITY

Leedy and Ormrod (2005:97) highlight two basic questions to determine the validity - “accuracy, meaningfulness and credibility” of the research project as a whole:

- Does the study have sufficient controls to ensure that the conclusions drawn are truly warranted by the data?
- Can the researcher use what was observed in the research situation to make generalisations about the world beyond that specific situation?

To address the first question, the strategy called triangulation was employed to eliminate other possible explanations for the results observed. Two data sources, namely in-depth interviews and document analysis, were used to ensure a convergence of the data.

In addressing the second question, the study focused on the executive management team of IDS as a representative sample to learn more about the firm and then draw conclusions about the firm as a whole.

The conclusions drawn at the end of the study were taken back to the participants for verification and validation. Questions such as the following were asked:

- Do you agree with the conclusions?
- Do they make sense based on your own experiences?

3.4.6 RELIABILITY

Reliability is the “consistency with which the measuring instrument yields a certain result when the entity being measured hasn’t changed” (Leedy and Ormrod 2005:29). These authors propose three ways to enhance the reliability of a measurement instrument:

- The instrument should always be administered in a consistent fashion, thereby being standardised;
- To the extent that subjective judgements are required, specific criteria should be established that dictate the kinds of judgements the researcher makes; and
• Research assistants who are using the instrument should be well trained so that they obtain similar results.

Standardisation was adopted when using the measurement instrument. The same interview questions were given to all respondents in the sample. A pilot study helped determine:
• the relevance of the questions posed to respondents; and
• the format, syntax and structure used to compile them.

The feedback received from Harry McVea and Siegfried Lokotsch indicated that the respondents would be able to understand all the questions and be able to articulate their responses.

3.5 CONCLUSION

The purpose of this chapter was to outline the research design, the different data gathering techniques and show the rational used by the researcher in making application decisions. This chapter provided the theoretical base upon which the empirical results can be applied in solving the main problem and its three sub-dimensions.

The following chapter deals with the analysis and interpretation of the empirical study findings.
CHAPTER FOUR: ANALYSIS AND INTERPRETATION OF THE RESULTS

4.1 INTRODUCTION

The previous chapter dealt with the methodology and research methods used in this study. The data collected by means of interviews and document analysis are now analysed and interpreted.

The information provided by the respondents is considered proprietary and remains confidential. The empirical findings from the five respondents are presented in a disguised format as follows: respondent 1, respondent 2, respondent 3, respondent 4 and respondent 5.

By categorising the data according to the research questions, the main themes during the analysis process became evident. By using a composite data source more specific themes and patterns emerged than if a unitary source were used. Categorisation simplified the data reduction process and aided the researcher to see which ideas kept on reoccurring.

In essence, this chapter explores the voice of operational practitioners with regard to the major them and sub dimensions of this research endeavour. The viewpoints which emerged were further correlated with theory pertaining to the issues under scrutiny.

4.2 CHANGES WITH REGARD TO THE VALUATION FUNCTION

Sub problem one
How has the 2008 financial crisis impacted the valuation function performed by administrators?
What follows is a verbatim transcript if the various questions posed, together with the responses articulated.

Who do you think is in a better position to address the issue of timely and accurate valuations — hedge fund managers or IDS? Why?

Respondent 1: “IDS because fund managers should rather concentrate on managing money. From a best practise view a fund manager should not be involved in the valuation process at all as there is a temptation to adjust figures to enhance performance.”

Respondent 2: “IDS as we are the fund accounting specialists who employ suitably qualified staff. The workforce has the necessary skills to calculate the overall NAV of a fund including all necessary accruals and fee computations.”

Respondent 3: “IDS because the hedge fund manager’s main focus is performance.”

Respondent 4: “What is the issue? Everyone wants the same thing and that is the right price promptly and real-time, if possible. However, different parties want valuations for different reasons, e.g. the manager for risk or profit management and an administrator for performance calculation or investments and withdrawals. These timeframes required for final value do not necessarily coincide, so both might be the correct answer.”

Respondent 5: “IDS because our systems are geared to deal with this issue. In addition we are also more independent in their assessment of their monthly NAV due to not being a part of the fund.”

Documented commentary: “IDS since we protect investor’s assets due to the independent calculation of NAV. However, there is added responsibility to build the required organisational capability to deliver against these requirements.”
The common theme that resonates throughout these responses is that the administrator is the best party to perform the valuation function. Their independence assists with reducing the likelihood of fraudulent practices on the hedge fund manager’s behalf. The findings corroborate with the Deloitte Research (2007) study that found it becoming standard industry practice to have NAV assessments independently valued. The hedge fund manager can then focus on managing the portfolio itself while IDS focuses on the valuations.

However, respondent four highlights another important issue. The hedge fund manager requires a quicker valuation for risk monitoring reasons and cannot rely on the administrator who provides final value at month end, for instance. Thus, the need for more frequent and timely delivery of valuations by the administrator is critical. This is supported by the findings of Money Management Executive (MME, 2005).

**What do you think is driving the shift to more timely, accurate net asset valuations in IDS?**

Respondent 1: “*Institutional investors such as the retirement industry.*”

Respondent 2: “*IDS itself is driving this shift as we have defined reporting timelines based on service level agreements in place with clients. Furthermore, IDS is liable to correct any NAV mis-statements. It is therefore in our best interests to ensure proper processes are in place to enable the delivery of accurate valuations.*”

Respondent 3: “*Investors are becoming more educated and demanding. The increase in institutional investors is also driving the shift.*”

Respondent 4: “*Investors are driving administrators to provide accurate pricing sooner. Managers have always done it for their internal management purposes.*”
Respondent 5: “There are a number of reasons, namely improved investor education and better risk analysis.”

McVea (2008:133) found that the increase in institutional investors is driving the shift as they require more funds to have independent checks in place protecting their investment. IDS expect the same pressures from institutional investors such as the retirement industry. In addition, the company found the improvement in investor education about hedge funds has also played a role in delivering timelier and accurate valuations.

Because IDS is liable for accuracy of valuations, the firm feels that it is “in their best interests” to ensure the delivery of accurate NAV. For that reason, IDS finds themselves also driving the shift towards timely and accurate valuations.

How are the valuation functions performed by IDS changing, i.e. what trends do you think there are?

Respondent 1: “Better sourcing for values of unlisted securities and better understanding of the valuation of unlisted securities. More emphasis is placed on mark to market.”

Respondent 2: “No noticeable trends.”

Respondent 3: “I am not an administrator, and therefore not able to comment convincingly on that.”

Respondent 4: “It is apparent that IDS will need to improve on their product offerings. NAV is processed more speedily but IDS still needs to be seen as adding more value.”

Documented commentary: “Expanding of services that include a complex range of back office services, investor relations and secretarial services. Delivery of more accurate services within contracted time frames to clients.”
The responses indicate that IDS are continuing to expand their product offering by means of increased middle and back office services. The findings back up MME (2005) conclusions that increasing pressure for full range of back and middle office services such as trade processing, data management, risk management, custodianship, shareholder servicing and Web-based reporting are inherent. As IDS expands their services, the company will have to deliver superior value for their customers.

The changes in the valuation function experienced at IDS are improvements in the understanding of complex financial instruments, such as better sourcing of values and the practice of “mark to market”. The accuracy of mathematical models may be in question when “marked to model” (McVea, 2008:137), hence IDS are placing more emphasis on “mark to market”.

**How do you see the recent financial crisis affecting IDS’ valuations in hedge funds?**

Respondent 1: “Emphasis is being placed on third party valuations through administrators. A better understanding of the valuation of unlisted securities and also how to deal with seldom traded investments.”

Respondent 2: “There has been an increase in the number of funds exiting the industry as managers try and accommodate investors who have requested redemptions within their notice periods.”

Respondent 3: “A reduction in investments and more opportunities will unveil in volatile markets.”

Respondent 4: “Investors will insist on independent third party valuations and prefer exchange-traded products which provide public pricing. CDS’, who were partly blamed for the financial crisis, will be put onto a well regulated central
clearinghouse or exchange to promote transparency and reduce risk to the financial system.”

Respondent 5: “Initially, the redemptions values have decreased. But the hedge fund managers have limited the effects of the financial crisis and in 2009 the redemptions will level off.”

The financial crisis has placed more emphasis on the independence of valuations in hedge funds. A third party administrator provides the best opportunity for independence but will have to better understand the complexities of unlisted financial instruments. Investors have preferred to invest in exchange traded products where there are readily available prices in the market. IDS has also experienced an increase in the number of funds exiting the industry as a result of investors requesting redemptions within their notice periods.

Respondent four draws attention to the valuation of Credit Default Swaps. As the U.S. moves toward listing such complex assets on regulated exchange, the valuation of these instruments will be straightforward. IDS will therefore use those readily available prices to value such instruments and will demonstrate improved transparency to investors.

How might expanded regulations as a result of the crisis affect IDS, especially the valuation function?

Respondent 1: “More transparency will be required. South Africa is at the forefront with most regulations already in place or best practise already followed. The US is going to have the biggest change through the introduction of regulations which we already have. While we follow AIMA guidelines they are for IDS a bench mark only. We strive to improve upon them and many processes we follow are unique and most probably will be adopted in time as best practise.”

Respondent 2: “The playing field will be levelled and increased guidance regarding hard to value investments.”
Respondent 3: “It is important to distinguish legislation versus regulation. The increased regulation will continue to insist on independent third party valuation and custodianship.”

Respondent 4: “The SA hedge fund industry has over the years implemented significant self-regulations which should go a long way to limit proposed future regulations.”

Documented commentary: “Independent outsourced administration remains a cornerstone of the self regulation that has become evident in the local industry. It is therefore imperative that IDS remain at the cusp of, and in some cases ahead of, international global best practice.”

Documented commentary: “The new 2A license is a world first. We are the first country in the world that actually has distinguished between normal fund managers and hedge fund managers, that there is a higher criteria required for hedge fund managers. There are disclosure issues for hedge fund managers; we really have upped the game as to who can come into this space, the qualifications of the people in the industry and so on. The local industry has actually said for many years that we actually want to operate in a regulated environment. It makes things it a lot easier if you know the ground rules.”

IDS offers its services to hedge funds under the guidance of AIMA and the FSB who have implemented regulations far more extensively than in the U.S. The local hedge fund industry is characterised as self regulated where independent administration has become best practice. However, guidance on how to value complex and/or illiquid financial instruments will continue to be evident.

Increased regulation will affect IDS in that more transparency will be required. The responses confirm Ritter’s (2008) conclusions that greater transparency could restore shaken confidence in the industry by improving risk disclosure to investors. Tighter regulation and improvement in transparency will level the playing field as
undercapitalised or poorly managed funds will be forced out. The “culling” of the industry results in fewer hedge funds and a smaller amount valuations performed by administrators.

4.3 CHALLENGES FACED BY ADMINISTRATORS

Sub problem two
In their efforts to bring about improvement in hedge fund operational risk management practices, what challenges do administrators face?

In addressing this issue, the following questions were posed. Responses are provided verbatim.

What do you believe are the current top valuation challenges for IDS?
Respondent 1: “Valuation of complex and seldom traded instruments.”

Respondent 2: “Unlisted instruments which include OTC, stale prices, non standard incentive fee calculations and sub-standard prime broking information.”

Respondent 3: “Consensus on value of suspended or rarely traded securities.”

Respondent 4: “Valuing OTC or non-exchange-traded assets.”

Respondent 5: “Keeping up with new instrument valuations, especially in the fixed income space.”

Documented commentary: “Increased complexity of financial instruments demands stronger compliance and comprehensive internal controls and procedures.”

All the respondents indicated that the pricing of complex and/or illiquid financial instruments is the top valuation challenge for IDS. Kundro and Feffer (2002:44) also found that OTC and rarely traded securities are prone to valuation problems.
System demands and having required technical expertise from investing in such securities are a challenge.

In addition, IDS faces the challenge of stale prices, non standard incentive fee calculations and sub-standard prime broking information. Experiencing stale prices for actively traded securities were just some of the challenges included in Kundro and Feffer’s (2002:45) findings, however non standard incentive fee calculations were not included.

According to the Financial Services Authority (2005):
“In respect of assets for which there are no easy or robust valuation methodologies and counterparty quotes are unavailable, administrators usually accept the hedge fund manager’s own valuation. This can sometimes mean that a significant proportion of the fund’s assets are not subject to independent valuation. Hedge fund managers generally perform their own internal valuations of all positions and seek to reconcile these with the administrators at the end of the month. It would appear that the hedge fund managers may wield significant ability to influence the administrators’ independent valuations at this point in the process through their dialogue with administrator staff and the counterparties who are providing the quotes.”

What is your opinion of the degree of independence being compromised?

Respondent 1: “This may be the case in the UK and the U.S. IDS’s own standards are such that we would seek the assistance of an independent party in reaching a valuation that is satisfactory to the administrator. IDS may be unique in that we contract with the fund, not the manager. Thereby our obligation lies with the investor, not the fund manager.”

Respondent 2: “Independence can be severely compromised if the administrator merely accepts a manager’s valuation without question or without sufficient information regarding the basis of such valuation. If deemed necessary, another
third party valuation should be sought to ensure the reasonability of the manager's value.”

Respondent 3: “Depends on materiality. If material there should be some form of independent valuation by the administrator. Also if more than one fund has the same/similar asset a similar value must be used, i.e. administrator wide consistency.”

Respondent 4: “All Trendline’s assets are exchange-traded and are thus easy to value, and that will remain the case in the future. It is entirely inappropriate for administrators to rely on their client for valuations, if they are providing independent third party valuations. However, if it is disclosed in the offering documentation that a fund invests in difficult to value assets and that the administrator relies on the manager for pricing, then it might be tolerable.”

Respondent 5: “This is not as apparent in South Africa. Where a valuation is not available from an external third party, the valuation methodology is agreed between the parties and signed off by Price Waterhouse Coopers, our auditors. Should the percentage of unlisted securities be material then a comment relating to this is placed on the client’s monthly statements.”

A major challenge in the valuation process occurs when the administrator's independence gets compromised. If hedge fund manager influences the administrator's valuation, reliance on administrators to guarantee the quality of valuations of complex instruments amounts to wishful thinking (McVea, 2008:130). The respondents clarified that this is not apparent in the local hedge fund industry. If the hedge fund manager does provide input, independence is still retained as IDS seeks the assistance of another independent third party for hard to value instruments to ensure the reasonability of the manager’s value. Additionally, a quality and well known auditing firm, PWC, performs audits on the funds IDS administer.
IDS provides transparency to investors by inserting a comment in the client’s monthly statements on the material involvement of the hedge fund manager in the valuation process. Respondents believe that additional transparency in the offering documents as to disclosing what pricing methodologies are followed go a long way in managing the valuation risks involved. Giraud (2005) confirms that such internal controls support the commitment that inefficiencies won’t be used against his or her own interest.

**What is your perception of the challenges associated with valuing complex assets such as mortgage backed securities and OTC derivatives?**

Respondent 1: “Complexity only happens when there is no transparency. The sub prime crisis was created by smoke and mirrors with people readily accepting valuations that they did not understand.”

Respondent 2: “Fund administrators rarely have the skills within their organizations to price these and therefore have to place reliance on counterparties, prime brokers and independent pricing specialists to value such instruments.”

Respondent 3: “Non disclosure of methodology and assumptions.”

Respondent 4: “Administrators will probably be behind the curve on obtaining the technology to price these instruments, and may also not have access to information required to derive the prices or valuations.”

Respondent 5: “The problem with a lot of these instruments is that they are evolving continuously and this creates challenges from the valuation perspective.”

Complex and/or illiquid assets are subjected to both liquidity and valuation problems. A separate system books, values and processes these securities and then requires manual intervention to consolidate with the rest of the portfolio (Kundro and Feffer, 2002:44).
Operational risk results from inadequate or failed internal processes, people and systems or from external events (Thom, 2006). The risks associated with pricing complex assets at IDS are as follows:

- Failed internal process could result from improper disclosure of pricing methodology and assumptions.
- People risk is initiated from the lack of skills to price the complex instruments and having to rely on counterparties, prime brokers and independent pricing specialists for information.
- The risk of inadequate systems results from not having the technology to price the complex assets or to automatically reconcile prices with the prime brokers.
- Risks from external events are derived from the sub standard prime broker information and the continuous evolvement of complex assets.

4.4 ADDRESSING THE CHALLENGES FACED BY ADMINISTRATORS

Sub problem three
How can the challenges faced by administrators be addressed?

In addressing sub problem three, the following questions were posed. Responses are provided verbatim.

What pricing sources does IDS use to value complex/illiquid assets?
Respondent 1: “The Market Data Team would gather data from multiple sources such as broker quotes and independent pricing specialists.”

Respondent 2: “Independent pricing specialists.”

Respondent 3: “Trendline does not trade them.”

Respondent 4: “There are a number of areas, SAFEX, BONDEX and BLOOMBERG for listed instruments. Where there are no official independent
prices available then our pricing committee would first agree on pricing methodology.”

IDS relies on broker quotes and independent pricing specialists for the pricing of complex/illiquid assets. A combination of sources is sound practice because the Deloitte Research (2007) survey found that using broker quotes alone raises serious issues. These were previously discussed under the challenges in operational risk management, section 2.4.

How does IDS provide investors with sufficient confidence that valuing illiquid assets are done in a fair, dependable and consistent manner?

Respondent 1: “We place a warning on statements as to what percentage falls into these classes. This should be a standard industry practise.”

Respondent 2: “Independent pricing specialists are used to price such instruments if these form a material portion of the fund’s NAV. To ensure consistency, the pricing models don’t vary from one valuation to the next without valid reason.”

Respondent 3: “Disclosure on methodologies and assumptions, consistency of the valuation process.”

Respondent 4: “Demonstrate pricing methods and information sources to clients i.e. transparency and consistency of policy and process. The use of mathematical models would require disclosure upfront, and agree upfront to methodology and inputs. The agreement needs to be between the administrator and hedge fund manager and should be in writing and placed in policy.”

Respondent 5: “While each asset would need to be reviewed independently, the general trend is to follow a recognised and agreed protocol and then ensure that the resultant process is performed consistently and reviewed regularly.”
The literature study exposed several practices that an administrator needs to perform to address the challenges involved in managing operational risk. IDS performs the following practices to ensure that investors are provided with sufficient confidence that valuing illiquid assets are done in a fair, dependable and consistent manner.

- **Transparency**: valuation methodologies and assumptions are disclosed to the investor and warnings are placed on statements highlighting the percentage market value of illiquid and/or complex assets.

- **Independence**: each instrument is reviewed independently through the use of third party pricing specialists. Kundro and Feffer (2002:46) emphasise that sources need to be independent of the investment manager, especially for complex instruments.

- **Consistency**: IDS' agreed set of rules is consistently followed and reviewed regularly. Additionally, the pricing models do not vary from one valuation to the next without valid reason. The firm follows the recommendations made by the Bank of New York and Amber Partners (2006), of which is that price consistency requires similar securities to be valued the same way both at a point in time and over time.

**To what extent do you think that managed accounts and side pockets assist IDS in addressing the challenges associated with valuing complex assets?**

Respondent 1: “They obfuscate issues. Managed accounts are also going to come under scrutiny given what has transpired in the US, unless they are independently valued.”

Respondent 2: “Depends on materiality and proper disclosure. I would be concerned if the entire fund was valued on this basis.”
Respondent 3: “Managed accounts and side-pockets have their respective benefits, and assist in providing portfolio transparency, but do not assist specifically in valuing the specific assets.”

Respondent 4: “They are probably the only fair method to ensure that no investor is unduly prejudiced. However, it does make the valuation process more difficult as mini fund valuations are required for each side pocket.”

Managed accounts and side pockets assist IDS in providing transparency of the portfolio and help ensure that investor’s assets are protected from fraudulent practice. However, the valuations of such mechanisms are far more difficult and complicate issues. The findings support Giraud’s (2005) opinion that the mechanisms require extensive understanding of the instruments traded and might result in an operational “headache”.

The HFWG (2007) consider side pockets as an attractive solution. However, IDS believe they do have their respective benefits, but do not specifically assist in valuing the particular instruments.

How are the following operational challenges in IDS being addressed?
• A hedge fund manager overrides prices of an administrator

Respondent 1: “A disclaimer would be published on all investor statements reflecting the lack of independence on the pricing of such instruments and their percentage market value of the total NAV.”

Respondent 2: “There is a valuations committee that must approve any non standard price. Investor statements are sent directly to the investors in PDF.”

Respondent 3: “Insist on independent third party instrument pricing and portfolio valuation. Pricing methodologies and policies must be agreed on prior to taking on clients.”
Respondent 4: “Should we not be able to back the valuations for any reason with sufficient supporting information, we should either not continue with the valuation, or heavily endorse the client statements to this effect.”

AIMA (2005) found that 36 percent of hedge funds override prices provided by the administrator. The responses obtained from the above-mentioned question indicate that IDS would publish a disclaimer on investor statements highlighting the percentage market value of manager input into the valuation process. Final NAV is also addressed directly to investors, which concurs with the best practice guide of the MFA (2007).

A hedge fund manager may in some cases have the best insight for valuing particular instruments (MFA, 2007). IDS realises this by means of not approving their client’s statements if sufficient supporting information is not provided by the hedge fund manager.

IDS therefore displays transparency in the valuation process and exhibits evidence of robustness in their internal controls and procedures.

- Fraudulent attempts by the hedge fund manager to inflate/deflate the value of fund

Respondent 1: “Inform the investors.”

Respondent 2: “Ensure adequate information is available to prove such allegation before advising the FSB.”

Respondent 3: “We will not accept this. On checking, if we are convinced that the intent is fraudulent we will ask the client to find another administrator plus advise his compliance officer.”

Respondent 4: “Fire the client and advise investors of termination of service to fund.”
Since IDS addresses the final statements directly to investors, a hedge fund manager cannot attempt to inflate/deflate the value of the fund. In the literature study, the researcher found two owners of the Bayou hedge fund fabricated the independent audit reports by creating a fictitious accounting firm known as Richmond-Fairfield Associates (Donahue, 2007:240). IDS is a credible and independent administrator who is responsible for the supervision of the month end valuation process. Manager attempts to alter the value of a fund are therefore removed.

- Adjustments or discounts on the value of the asset to reflect the market impact when liquidated

Respondent 1: “We practice mark to market.”

Respondent 2: “If adequate information is available to prove such impact, then the values should in certain circumstances be adjusted accordingly to reflect the true liquidation price.”

Respondent 3: “The internal pricing committee approves any non standard price.”

Respondent 4: “Agree on policies and procedures at initiation of relationship.”

Respondent 5: “Refer to the internal pricing committee.”

Positions that make up a large proportion of a single issued security require an adjustment or discount to reflect the market impact when liquidated (Kundro and Feffer, 2002:43). This problem is exacerbated when prices are marked to model. The findings demonstrate that IDS’ internal pricing committee practices mark to market to maintain accuracy of valuations. The firm utilises a variety of independent sources to value such instruments (as described in section 4.4) which assist in obtaining the most accurate market value.
• **Software failure, hacking or manipulation of data**

Respondent 1: “Extensive investment on IT software. Manipulation of data would require the cooperation of a number of people but we have checks and balances that would deter this behaviour.”

Respondent 2: “We have extensive precautions in place to prevent these as well as business continuity/disaster recovery.”

Respondent 3: “The obvious techniques such as backups, passwords etc.”

Respondent 4: “This would need to be dealt with on an ad hoc basis.”

Thom (2006) found that the valuation process faces the challenge of online problems that relate to hacking and manipulation of private data. IDS addresses this challenge through extensive investment in technology. In addition, internal controls and proper governance help to deter the manipulation of data.

**How do you think IDS is addressing the challenge of “stale” prices, resulting from bad market feeds, human error or other issues, even for actively traded instruments?**

Respondent 1: “We monitor stale prices and discuss the valuations of these with third party. We correct errors from mistakes that could occur through the issues mentioned above.”

Respondent 2: “Obtain periodic valuation from reputable independent pricing specialists. In addition, obtain confirmation of prices from another pricing feed (i.e. use of Reuters/INET in conjunction with Bloomberg).”

Respondent 3: “There is a Valuations Committee that must approve any non standard price. We insist on using only one price for instruments held by different funds.”
Respondent 4: “IDS should reconcile portfolio valuations to prime brokers and fund manager. All three prices should confirm each other.”

Respondent 5: “This would depend on materiality.”

Even actively traded securities are susceptible to “stale” prices in the case of IDS. The firm overcomes the challenge by obtaining prices from multiple sources such as independent pricing specialists and pricing feeds known as Reuters and Bloomberg. IDS requires confirmation of prices from all the sources and monitors any stale price consistently. One price is then used for the same instrument held by different funds that IDS administers.

The Bank of New York and Amber Partners (2006) suggest that failure to appoint well-known, proven and independent service providers may be a warning sign to investors. Respondent two alluded to the reputation of pricing specialists, as a quality service provider assists with the accuracy of valuations. Additionally, IDS’ system capabilities mentioned below allow for the reduction in human error through automated reconciliation from prime brokers, feeds and pricing specialists. The advanced systems help to address the “stale” price challenge.

Technology plays a vital role in hedge fund administration. What are some of the "must-have" systems capabilities IDS employs to address the valuation issues?

Respondent 1: “A proper accounting system that allows for best practise and has as few manual interventions as possible.”

Respondent 2: “World class standard software for all valuation critical systems, i.e. independently written and supported by reputable suppliers.”
Respondent 3: “The main valuation system, PAXUS in our case, plus the automated reconciliation of feeds from independent pricing sources, prime brokers, etc.”

It is evident that IDS invests in systems and technology that utilise straight through processing to the accounting systems. The firm’s automated reconciliation of feeds from various sources reduces the need for manual intervention and helps manage operational risks (Bank of New York and Amber Partners, 2006). Their accounting system and software are also internationally recognised which can perform the required technological tasks as described by MME (2005). Paxus integrates into one system all the processes that were previously performed on multiple systems. The benefits of this approach are increased efficiency, reduced risk of error and quicker valuations.

**What do you think are some of the other core strengths that IDS has?**

Respondent 1: “IDS has expert staff. IDS’ administration is 50 percent systems 50 percent staff. Normal administration is 90 percent system and 10 percent staff.”

Respondent 2: “A robust IT infrastructure, good fund accounting system supported by a reliable vendor, highly skilled staff and sound processes.”

Respondent 3: “Independence. IDS drives industry changes – i.e. help set industry norms and standards.”

Respondent 4: “IDS does the job and I’m happy with that. One business can’t do everything, because then there would not be independent third party verification.”

Respondent 5: “Technology is good, but the core team of people and expertise are equally as important.”

Documented commentary: “Investment in technical skills training, the development of employee’s capacity for personal growth and provide them with confidence to
manage complex situations. Employee commitment is derived from the development of employees, the recognition of employee accomplishments and the fostering of individual and team initiative. “

The strengths articulated by IDS are independence, robust systems and technological infrastructure and highly skilled staff. It is clear from the above that the firm takes pride in employing specialist staff that have the required level of knowledge and expertise. Understanding underlying investment strategies, pricing options and derivatives and running pricing models for complex instruments are some of the requirements of the administration workforce (MME, 2005). IDS furthermore displays commitment in developing the skills of its staff through its training programmes and culture of teamwork.

Some funds prefer to in-source administration to save millions of rands, and because very few administrators can provide daily NAV. How do you think IDS is addressing this trend?

Respondent 1: “We do daily valuations. In-house is a licence to fraud on the investor and is likely to be regulated against. Frankly, most companies do not have the systems or the core competency to do in-house valuations and save money.”

Respondent 2: “IDS has the capability to provide daily pricing.”

Respondent 3: “IDS does daily NAV’s for appropriate funds. Requests for daily’s can indicate an unhealthy trend towards retailing of hedge funds.”

Respondent 4: “Get faster and reduce prices. Economies of scale at IDS should make them competitive with in-house administration, apart from the corporate governance benefits.”

Respondent 5: “IDS is moving towards daily NAV’s and process more than just the general administration functions.”
Documented commentary: “Provide error free products and services and delivery of these services within contracted time frames.”

The RBC Special Report (2005) discovered that very few administrators can produce daily NAV. Consequently, funds are doing the valuations themselves to and are saving millions of dollars by keeping the costs “in-house”. The findings reflect that IDS does provide daily pricing for its clients and because of economies of scale, their services are competitive. As a result of the financial crisis, more emphasis will be placed on independent valuations. In sourcing the administrative activities will therefore be regulated against.

4.5 CONCLUSION

This chapter focused on the analysis and interpretation of the results obtained from the empirical study. Comparisons of the data obtained were related to the contemporary literature with regard to an administrator’s role of managing operational risk in hedge funds. The analysis and interpretation of the results was approached with the specific aim to resolve the research questions described in chapter one.

Chapter five will focus on the conclusion and recommendations based on the findings of this chapter. Opportunities for further research will also be discussed.
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

In chapter four, the results of the empirical study were presented and analysed. The results obtained were compared with the contemporary literature reviewed in chapter two of this study.

In this chapter, the study is summarised and the main findings are related back to the core issues addressed initially. Recommendations will be made based on the main findings of the research and will be followed by opportunities for further research. The chapter concludes with a chapter summary.

5.2 SUMMARY OF STUDY

The summary of the study will include an outline and resolution of the main and sub-problems of the research. A summary of the main findings will then be identified from the previous chapter.

5.2.1 MAIN AND SUB PROBLEMS

The main problem of the study was identified in chapter one as:

How can administrators improve operational risk management practices in hedge funds?

Three sub-problems were identified as an appropriate solution to the main problem of the study. These were:
• **Sub problem one**
How has the 2008 financial crisis impacted the valuation function performed by administrators?

• **Sub problem two**
In their efforts to bring about improvement in hedge fund operational risk management practices, what challenges do administrators face?

• **Sub problem three**
How can the challenges faced by administrators be addressed?

The sub-problems were resolved through the analysis and interpretation of the results obtained from the empirical study as outlined in chapter four.

**5.2.2 SYNOPSIS OF EMPIRICAL STUDY**

A summary of the main findings of the study will be described under the following sub-headings:

• changes with regard to the valuation function;
• challenges faced by administrators; and
• addressing the challenges faced by administrators.

• **Changes with regard to the valuation function**

The function of calculating the NAV continues to be the responsibility of the administrator. The administrator provides the required level of independence requested by the institutional investor base. Such practice makes good sense in achieving the most accurate NAV possible. However, Investment Data Services (IDS) is facing pressure to improve on the timely delivery of NAV for the risk monitoring purposes of the hedge fund manager.

Not only is the shift for faster NAV being driven by the institutional investor, it is also driven by the administrator themselves. IDS are liable for the accuracy of its
valuations and are therefore introducing processes for the efficient calculation of NAV.

Emerging trends concerning the valuation function are the expansion of product offerings which included middle and back office services. Another trend is the improvement in understanding unlisted instruments through better sourcing of values and practicing "mark to market".

The financial crisis has placed more emphasis on the independence and transparency of the valuation process. The complexities involved in thinly traded instruments are forcing investors to rather spend their money on exchange listed products where public information is available. In the US, Credit Default Swaps will be placed on a listed exchange and would help IDS' valuation in those securities and provide improved transparency to investors.

Regulation as a result of the crisis is certain in many jurisdictions around the world. However, the South African industry has been far more proactive in regulating hedge fund managers by means of the 2A license. Independent valuation is the industry norm and disclosure issues have since been abated. Self regulations will therefore limit proposed future regulations.

• **Challenges faced by administrators**

The most important challenge faced by IDS in the valuation process is the pricing of complex and/or illiquid instruments. Such instruments are over the counter derivatives and credit default swaps. Complex instruments are continuously evolving and getting consensus on the value of such instruments is also a challenge.

Other challenges faced by IDS are stale prices, non standard incentive fee calculations and sub standard prime broker information.
The literature study drew attention to the degree of independence being compromised when the hedge fund manager has input into the valuation process. This does not happen in the case of IDS. Any participation in the NAV calculation by the manager would require another independent pricing specialist to confirm the values. In addition, a disclaimer is placed on investor statements as to the lack of independence into the valuation process.

- **Addressing the challenges faced by administrators**

To address the challenge of valuing complex and/or illiquid instruments, IDS gathers prices from multiple sources, such as broker quotes and independent pricing specialists. Their valuation methodologies and assumptions are disclosed to the investor and warnings are placed on statements highlighting the percentage market value of illiquid and/or complex assets. IDS’ agreed set of rules is consistently followed and reviewed regularly. The pricing models do not vary from one valuation to the next without valid reason. IDS therefore displays independence, consistency and transparency in the valuation process.

The findings suggested that managed accounts and side pockets confuse the valuation of unlisted instruments. They have their respective benefits such as improved transparency but do not assist in specifically valuing these assets.

IDS addresses the challenge of stale prices by obtaining values from a combination of sources and feeds. Prices are then confirmed by the pricing committee and one price is used for the same security across all funds IDS administers. The company’s systems allow for automated reconciliation of prices from the various sources which limit the amount of manual intervention in the valuation process. PAXUS, which is their primary system, is internationally recognised and boasts increased efficiency, reduced risk of error and quicker valuations.

One of the core strengths of IDS is its staff. The firm employs specialists with the required level of knowledge and expertise to understand complex instruments. IDS
also displays commitment in developing the skills of its staff through its training programmes and culture of teamwork.

The quality of IDS' service providers help the company achieve efficient and accurate valuations of its instruments. Reputable pricing specialists are consulted and one of the "big four" audit firms, Price Waterhouse Coopers, is commissioned to perform annual audits.

The trend of hedge funds to keep administration activities in-house is addressed by IDS through delivery of daily pricing for more of its clients. Because of economies of scale, the firm's services are competitive. The financial crisis has placed more emphasis on independent valuations and performing valuations in-house will therefore be regulated against.

5.3 CONCLUSIONS

The findings indicate IDS' business model can be used as a template of how a hedge fund administrator should perform the valuation function. The company displays independence, consistency, proper governance, robust internal controls and transparency in the valuation process. The quality of the firm's technical expertise and IT systems as well as its service providers help to address the challenges in operational risk management.

It can be concluded that IDS provides a good representation of how an administrator should address the challenges faced in managing hedge fund operational risk. The role of an administrator will be enhanced as future regulations are imminent. IDS has placed itself in a prominent position to grow its market share in a dynamic and opaque hedge fund industry.
In conducting a literature scrutiny, obvious disparities arose between IDS practice and published information. This void acted as a springboard for in-depth academic review. The following represents the recommendations to this study:

- As the hedge fund industry succumbs to the pressures of increased regulations, IDS will find itself in a position to take advantage of the increased valuation responsibilities. The firm’s established market share of 70 percent put IDS in good stead for future business as a result of regulations, hence adapting to the changing trends in hedge funds. However, continuing to ensure that IDS adds value to its services needs to remain a priority. Ways of doing this are by:
  - calculating NAV faster;
  - minimising the costs of its services; and
  - reducing the amount of manual processes.

- Although IDS places more emphasis on “mark to market” for the valuation of it instruments, the company will encounter instances where “mark to model” is appropriate. With the use of mathematical models, IDS should ensure that the model inputs are agreed upon with the hedge fund manager from the outset. Pricing can run smoothly thereafter. In addition, disclosing the methodology upfront will assist with IDS’ extent of transparency to investors as investors are then aware of appropriate positions.

- The challenge of stale prices and sub standard prime broker information can be addressed at IDS as follows:
  - reconcile portfolio valuations to prime brokers and fund manager, with all three prices confirming each other;
  - ensure the broker is counterparty to the transaction;
  - ensure the broker would be ready to close the position at the quoted value;
  - ensure that broker rotation is followed to get a variety of views;
  - solicit multiple broker quotes from the prime broker; and
➢ prices should be back tested to check for reasonableness and systematic bias.

5.5 OPPORTUNITIES FOR FURTHER RESEARCH

It is envisaged that this study can lay the foundation for further research. Areas for further research in respect of the valuation function may be regarding:

• What extent do South African hedge funds invest in complex and/or illiquid financial instruments?

• How effective are side pockets and managed accounts in assisting administrators manage valuation risks?

• What the effect of the financial crisis is on “mark to model” practices since their accuracy has been in question?

• How effective will a standardised approach be to the valuation methodologies of complex and/or illiquid instruments?

5.6 CHAPTER SUMMARY

This chapter focused on concluding the study by reviewing the main problem and resolving each of the identified sub-problems. The main findings of the empirical study were summarised. The research has shown that IDS strives to be a benchmark for the hedge fund administration industry.

Three areas of the valuation process were then reiterated and assisted the researcher in developing recommendations provided. The recommendations could be used by IDS to further enhance its management of operational risk in hedge funds. The study concluded with opportunities for further research.
REFERENCE LIST:


01 December 2008
Attention: Ian Hamilton, CEO
IDS, Cape Town

Dear Sir,

**QUESTIONNAIRE ON HEDGE FUND ADMINISTRATOR’S ROLE**

This survey represents the partial fulfilment of the requirement to complete my studies towards a Master’s degree in Business Administration.

The purpose of the study is to improve operational risk management practices, particularly valuations, in hedge funds through identifying ways of promoting effective functioning of independent third-party administrators.

As your views and comments are important in achieving to the objectives of this study, care has been taken to make the process of answering the questions with minimum inconvenience and should not take longer than 30 minutes of your time. All your responses will be treated as confidential.

I thank you for the time and effort taken in filling out this questionnaire.

Regards

Juane Schutte
NMMU MBA Student
APPENDIX B

THE INTERVIEW QUESTIONS

SECTION A

Who do you think is in a better position to address the issue of timely and accurate valuations — hedge fund managers or IDS? Why

What do you think is driving the shift to more timely, accurate net asset valuations in IDS?

How are the valuation functions performed by IDS changing, i.e. what trends do you think there are?

How do you see the recent financial crisis affecting IDS’ valuations in hedge funds?

How might expanded regulations as a result of the crisis affect IDS, especially the valuation function?

SECTION B

What do you believe are the current top valuation challenges for IDS?

According to the Financial Services Authority (2005):

“In respect of assets for which there are no easy or robust valuation methodologies and counterparty quotes are unavailable, administrators usually accept the hedge fund manager’s own valuation. This can sometimes mean that a significant proportion of the fund’s assets are not subject to independent valuation. Hedge fund managers generally perform their own internal valuations of all positions and seek to reconcile these with the administrators at the end of the month. It would appear that the hedge fund managers may wield significant ability to influence the administrators’ independent valuations at this point in the process through their dialogue with administrator staff and the counterparties who are providing the quotes.”
What is your opinion of the degree of independence being compromised?

What is your perception of the challenges associated with valuing complex assets such as mortgage backed securities and OTC derivatives?

SECTION C
What pricing sources does IDS use to value complex/illiquid assets?

How does IDS provide investors with sufficient confidence that valuing illiquid assets are done in a fair, dependable and consistent manner?

To what extent do you think that managed accounts and side pockets assist IDS in addressing the challenges associated with valuing complex assets?

How are the following operational challenges in IDS being addressed?
• A hedge fund manager overrides prices of an administrator

• Fraudulent attempts by the hedge fund manager to inflate/deflate the value of fund

• Adjustments or discounts on the value of the asset to reflect the market impact when liquidated

• Software failure, hacking or manipulation of data

How do you think IDS is addressing the challenge of “stale” prices, resulting from bad market feeds, human error or other issues, even for actively traded instruments?

Technology plays a vital role in hedge fund administration. What are some of the "must-have" systems capabilities IDS employs to address the valuation issues?
What do you think are some of the other core strengths that IDS has?

Some funds prefer to in-source administration to save millions of rands, and because very few administrators can provide daily NAV. How do you think IDS is addressing this trend?