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PRIVATE EQUITY AS AN ASSET CLASS IN AN INSTITUTIONAL PORTFOLIO:
A SOUTH AFRICAN PERSPECTIVE

A RESEARCH STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
DEGREE OF MASTER OF COMMERCE (FINANCIAL MANAGEMENT)

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ABSTRACT

This paper provides evidence about institutional investors' attitudes and perceptions of private equity as an investment asset class in South Africa. In South Africa this plays an important, but not dominant role in the domestic institutional portfolios, representing about a reasonable asset allocation of assets of the institutional portfolio into private equity. Using an email survey of representatives of pension funds, insurance companies, property investment and asset management companies the study analyses the attractiveness of private equity in terms of institutional investment goals. The survey examines the institutional investors' perceptions of private equity investment, namely with respect to its total expected returns, risk diversification, economic upliftment, capital appreciation and liabilities matching. Additionally, the survey looks at the institutional investors' experiences regarding the private equity sector. The survey suggests that investment in private equity is likely to be done through larger portfolios, which tend to invest in private equity directly. Private equity is seen mainly as an earning asset class that is able to provide diversification benefits for investors even when portfolios already include equity and bond investments. The respondents are mainly concerned with shortage of data in the sector; the regulation concern is undoubtedly a less important problem.

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1 Chapter 1: Introduction

1.1 Background of the research

Globally pension funds are beginning to invest via private equity funds of funds, or, occasionally, even in a private equity fund directly. Australian, Canadian and Dutch pension funds may be considered -as leaders in this field (Inderst, 2009). Pension funds are increasingly moving into new asset classes in a search for alpha. According to a recent study by SEI¹ conducted in United States, there has been a significant increase in the percentage of pension portfolios investing in alternative assets when compared to 2008 and 2009. In 2008, 51 percent of pension executives surveyed said their pension portfolio was invested in alternatives. In 2009, that percentage increased to 53 percent. Alternative investments may include real estate, private equity, venture capital, hedge funds and other assets.

National Treasury publishes Regulation 28 of section 36 of Pension Fund Act (no 24 of 1956) in South Africa. This act regulates that a maximum of 10 percent is allowed to be allocated to alternative investments such as a private equity and hedge funds.

Private equity ("PE") as an asset class is regarded as an alternative investment. Most regulating bodies in various countries restrict institutional investors in investing in private equity. In order for institutions to comply with regulated requirements, they must make informed asset allocation decisions towards ensuring that assets are allocated efficiently. Institutional investors with inadequate knowledge of private equity are expected to increase their expertise in order to make wise decisions and achieve expected returns in this asset class which will be discussed later. Chemla (2004) and Ennis and Sebastian (2005) discuss private equity in pension fund asset allocation. Chemla (2004) also reviews United States "US" and Canadian pension funds' investment in private equity and venture capital. During his investigation, the US had almost 50 percent of funds allocated to private equity during the year 2002.

Unfortunately, the majority of institutions with inadequate knowledge of the private equity asset class have inefficient allocation of capital to the asset class. Many investors rely on intuition in their asset allocation decisions (Kaiser, Schweitzer and Wu, 2010). Anson (2006) contends that alternative assets, including private equity, are generally a subset of an existing asset class and that investment in these subsets are simply part of different investment strategies. Though academic research has provided extensive coverage of the traditional asset classes, private equity as an asset class is only in its infancy. The primary reason for this lag is the result of limited data availability; therefore, many notable research questions regarding the private equity industry remain unanswered.

¹SEI is a global provider of asset management, investment processing, and investment operations solutions for institutional and personal wealth management. Quick Poll was completed by 106 pension executives overseeing assets ranging in size from \$25 million to over \$1 billion. Visit <http://www.seic.com> for more information.

1.2 Purpose of the study

In order to measure institutional investors perception towards the private equity as an asset class, the researcher will conduct interviews with institutional investors who have asset allocation decision-making authority in portfolio management of pension funds. This study is to determine whether the institutional investors' attitude correlate with their asset allocation decisions in modern portfolio theory. By learning how institutional investors view private equity, this will provide a context to view issues around investing in private equity related investments.

1.3 Research objectives

The primary aim of this study is to investigate perceptions of private equity by South African institutional investors in an institutional portfolio. Specifically, the research will attempt at accomplishing the following objectives:

1. To conduct in-depth literature research on private equity industry locally and globally, risk and return characteristics of private equity asset class, asset allocation decisions, portfolio management and regulatory environment of private equity locally and global.
2. To understand perceptions of South AfricaN institutional investors towards private equity as an asset class.

The first objective will be attained through literature review and the second will be conducted through qualitative empirical researching.

1.4 Research methodology

Research methods will consist of interpreting and comparing/contrasting primary sources. There will be also use biographical and historical materials in order to establish attitude towards the private equity investment, regulations, asset-allocation decisions, current landscape and perceptions towards this asset class. This study will be conducted towards South African institutional investors who are responsible or managing institutional portfolios. A primary source of research method, the researcher will make use of a survey. A survey gathers data at a particular point in time with the intention of describing the nature of existing conditions can be compared, or determining the relationship that exist between specific events.

1.5 Scope and limitations

This study therefore will be conducted in South Africa to institutional investors. The limitations of this study's approach are considered twofold. Firstly, due to the methodology approach to the study's research design, the overall research model may become unclear at times due to limited responses of

participants. In fact, the author considers the empirical chapter in itself as a potential ground for further research which eventually must be extended through further literature field interpretation and further developed tests.

Secondly, this study does not propose explaining or even giving an educated indication of levels of return to institutional investors in the Private Equity investment asset class, as this analysis would need to be based on an exact, time-sensitive evaluation of performance, adjusted for market and risk factors. Instead, this study is solely concerned with the perception of individual observations of private equity.

1.6 Organisation of research

Following the introductory section to the dissertation topic, the subsequent chapter will provide a literature overview on private equity, focusing (i) on the private equity industry locally and globally, (ii) risk and return characteristics of the private equity asset class, (iii) asset allocation decision literature review, and (iv) a broad overview of portfolio management in the private equity context and regulatory environment of private equity both locally and globally. A closer comparison with public market and industry performance is offered.

Chapter four, represent the chapter of empirical results in this study. For clarity of presentation, this chapter comprises an introduction to the problem, data overview and interpretation.

Finally the last chapter of this study will summarise the findings, highlight key findings and outline shortcomings of the study.

2 Chapter 2: Literature review

This chapter contains a review of literature and research that has been conducted on the topic of private equity industry. The chapter begins with a discussion about the private equity industry highlighting various academic researchers who have given a comprehensive overview of the industry. The chapter also gives a brief history of the private equity industry. Furthermore the chapter discusses key definitions that evolve around private equity, typical structure of a private equity fund and highlights latest trends in the local and global private equity industry. The chapter concludes with a review of private equity risk and return characteristics, performance of this asset class and regulatory framework both locally and internationally.

2.1 Private Equity industry

Various authors and industry associations have given differing sets of definitions of private equity. Private equity itself is part of the wider alternative investment universe, which comprises asset classes such as hedge funds, real estate, physical commodities, currencies and interest rates. *“Private equity is risk capital provided in a wide variety of situations, ranging from finance provided to business start-ups to the purchase of large, mature quoted companies, and everything in between” (Bance, 2002).* Various researchers give a comprehensive overview of private equity².

Private equity investing is often divided into five broad categories, as outlined below:

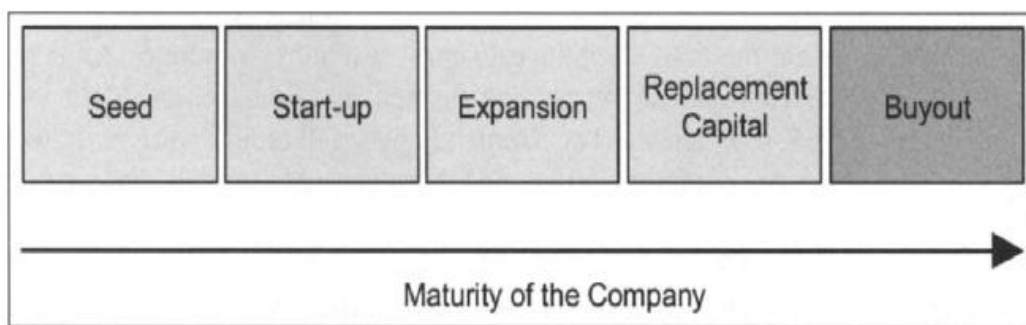


Figure 1 : Areas of private equity investment

Buy-outs are examples of private equity investments in which investors and a management team pool their own money, usually together with borrowed money, to buy a business from its current owners.

² Kaplan and Stein (1993), Gompers and Lerner (1997), Black and Gilson (1998), Gompers (1998), Wright and Robbie (1998), Gompers and Lerner (1999), Lerner (2000) and Cotter and Peck (2001).

2.2 History of private equity

The history of private equity is best described by analysing the developments in the United States during the second half of the 20th century. The first professionally managed private equity investments in the United States date back to the formation of the American Research and Development Corporation (ARD), a publicly traded, closed-end Company, in 1946.

“As the wealth distribution in the U.S. was becoming concentrated in the hands of financial institutions rather than individuals, the ARD founders hoped to (i) create a private institution that attracted institutional investors and (ii) provide capital and managerial expertise to acquired businesses. At the same time, the development of the ARD paralleled the post-war creation of similar professional organisations managing Venture Capital investments of wealthy families. Other private equity investments were funded on a deal-by-deal basis by syndicates of wealthy individuals, corporations, and institutional investors organised by investment managers” (Fenn and Liang, 1996).

According to Loos (2005), as a direct response to the short supply of private equity capital throughout the 1950's, the U.S. Congress undertook several initiatives to remedy this situation. Most importantly, it passed new legislation with the Small Business Investment Act of 1958, which paved the way for the establishment of Small Business Investment Companies.

The boom of private equity during the 1980s was supported by relaxed regulatory changes. The private equity industry took advantage of the U.S. Congress decision concerning registration as investment advisers: registration under the Investment Advisors Act was not necessary when advisors have fourteen or less clients: hence, many partnerships restricted the number of Limited Partners to fewer than fourteen. Soon after, the small Business Investment Incentive Act of 1980 rendered this limitation unnecessary by redefining private equity partnership as business development companies, thus exempting them from the Investment Advisor Act.

2.2.1 Key definitions of private equity terms

For the purpose of this study a private equity as an asset class is based on the relationship between an institutional investor and an intermediary (the PE fund) as per Table 1 below. A PE fund is usually structured as a limited partnership, and is comprised of a management team (the general partner), which manages the investments of the limited partner. The PE fund's investors hold shares of the limited partner.

PE funds invest the institutional money in private (target) companies and these investments are typically structured as equity claims. An investment vehicle is created for each individual transaction, capitalised by the PE fund and other third parties, mainly debt providers and mezzanine investors. This transaction vehicle will later acquire shares in the target company and/or will merge somehow with it, thus creating a unique opportunity to specify its capital structure and to design particular claims and incentive structures.

PE fund investments can be syndicated among other PE funds. The contributing PE funds hold a majority of equity voting rights and hence play a role as active investors. This entails monitoring of the entity, managing the operations and restructuring the target company to create value. In a syndication scenario of PE funds, one of the funds will be the lead investor, joined by further equity investors such as the target company management teams, its employees or the former owners. The PE fund's engagements are terminated at the so-called exit either by being written off or sold. For the purpose of simplicity, VC and PE will be used interchangeably. To justify this, venture capital (VC) investments make up the other strand of the PE asset class. VC investments typically invest in early stages of growth companies while PE investments occur at a later stage.

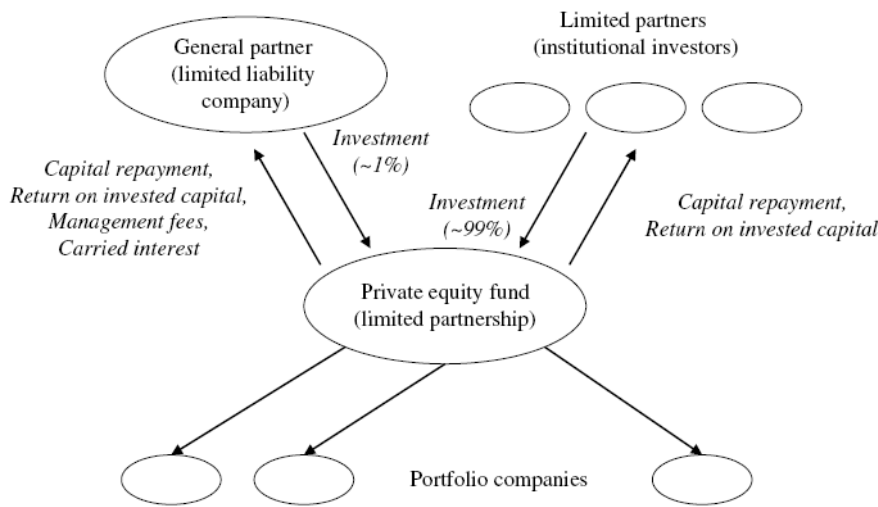
Table 1: Basic definitions

<i>Term</i>	<i>Definition</i>
<i>Private Equity Funds</i>	For the purpose of this study we use the term private equity funds investment program as a generalisation for in-house programs, captive or independent fund-of funds focusing on investments in private equity funds. <u>Private equity funds</u> are unregistered investment vehicles that pool money to invest in privately held companies. Fund management companies – also referred to as private equity firms – set up these funds to attract institutional investors.
<i>General Partner</i>	As used herein, the term <u>general partner</u> refers to the private equity firm as an entity that is legally responsible for managing the fund’s investments and who has unlimited personal liability for the debts and obligations when the fund is set up as a limited partnership.
<i>Fund Managers</i>	<u>Fund managers</u> are the individuals involved in its day-to-day management. The group of fund managers forms the private equity fund management team that will include the carried interest holders, i.e. those employees or directors of the general partners that are entitled to share in the ‘super profit’ made by the fund.
<i>Limited Partners</i>	The term <u>limited partners</u> refers to the private equity fund’s passive investors responsible for the management of a program. Again, we interpret a limited partner as the institution that provides the capital. Investment managers are the individuals that represent the limited partner.
<i>Portfolio companies</i>	The portfolio companies are the companies in which a private equity fund has invested and which an entrepreneur manages.

Source: Basic definitions. Adapted from Inside Private Equity: The Professional Investor's Handbook, by Kocis, M. J., Bachman, C.J., Long, A.M., and Nickels, J., 2009. Wiley Publishers. Adapted with permission.

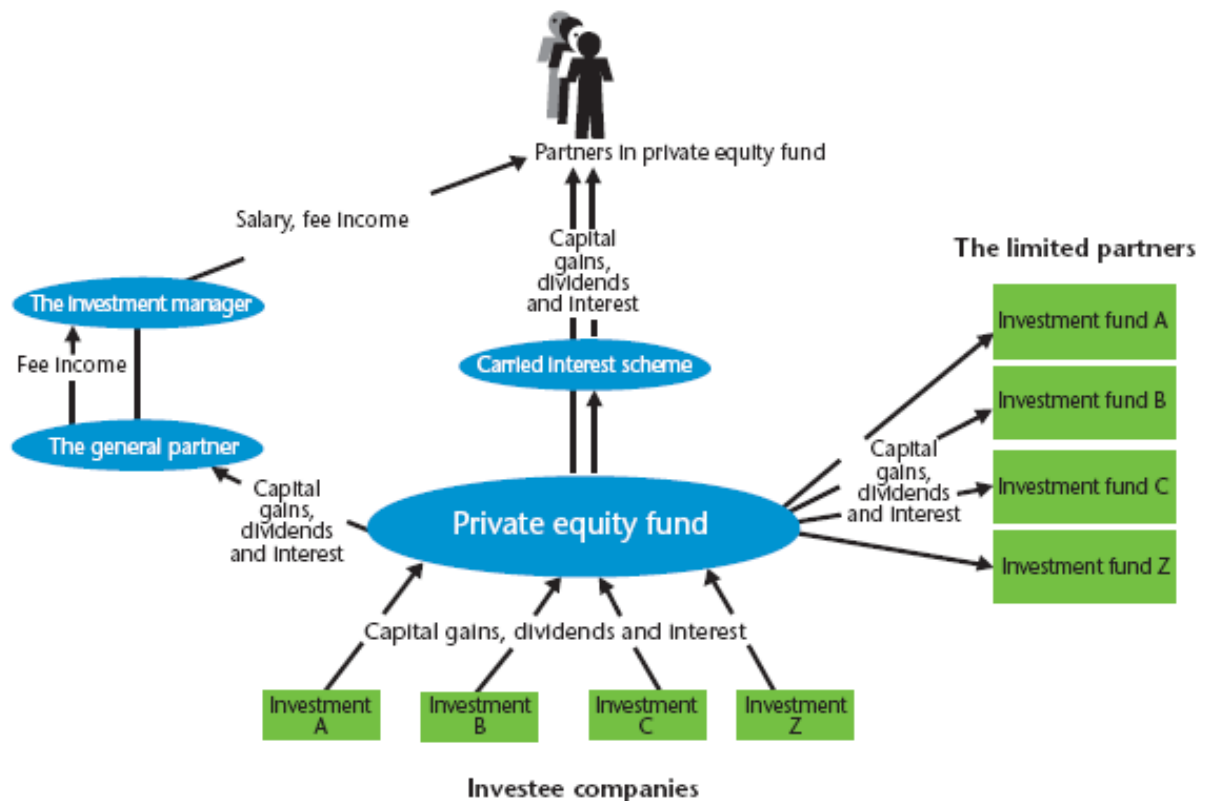
As noted above private equity funds are generally structured as limited partnerships. “A partnership is simply a contract, whereby two or more individuals consent to carry on an enterprise, contribute to it, by combining property, knowledge or management, and to share its profit” (Mathonet and Meyer, 2007). The most basic form of partnership is a general partnership, in which all partners manage the business and are personally liable for its debts, as every partner is both an agent and principal of the firm and may thus bind the firm and the other partners as show on Figure 2 and as explained in detail on Figure 3.

Figure 2 : Limited partnership structure



As these liabilities can be significant, another ‘asymmetric’ form for investment vehicle has developed: the limited partnership. In this partnership certain limited partners relinquish their ability to manage the business in exchange for limited liability for the partnership’s debts (Gilligan and Wright, 2010).

Figure 3 : Structure of a private equity fund



Source: Structure of a private equity fund. J-Curve Exposure: Managing a Portfolio of Venture Capital and Private Equity Funds by Mathonet, P. and Meyer, T. 2007. Adapted with permission.

2.2.2 A typical life cycle of a fund

A PE fund is a long-term investment. Typically, investors' capital is locked up for period up to 10 years—the standard term of a private capital limited partnership. During this long investment period, a fund will normally go through five stages of development (Mathonet and Meyer, 2007).

The first stage is the fund raising stage where the venture capital firm raises capital from outside investors. Capital is committed—not collected. This is an important distinction noted above. Investors sign a legal agreement that legally binds them to make cash investments in the fund up to a certain amount. This is the committed, but not yet drawn, capital. The general partner will also post a sizeable amount of committed capital. Fundraising normally takes six months to a year.

The second stage consists of sourcing investments, reading business plans, preparing intense due diligence on start-up companies and determining the unique selling point of each start-up company. This period begins the moment the fund is closed to investors and normally takes up the first five years of the venture fund's existence. During stage two, no profits are generated by the venture capital fund. In fact, quite the reverse, the venture capital fund generates losses because the venture capitalist continues to draw annual management fees (which can be up to 3.5 per cent a year on the total committed capital). These fees generate a loss until the venture capitalist begins to extract value from the investments of the venture fund.

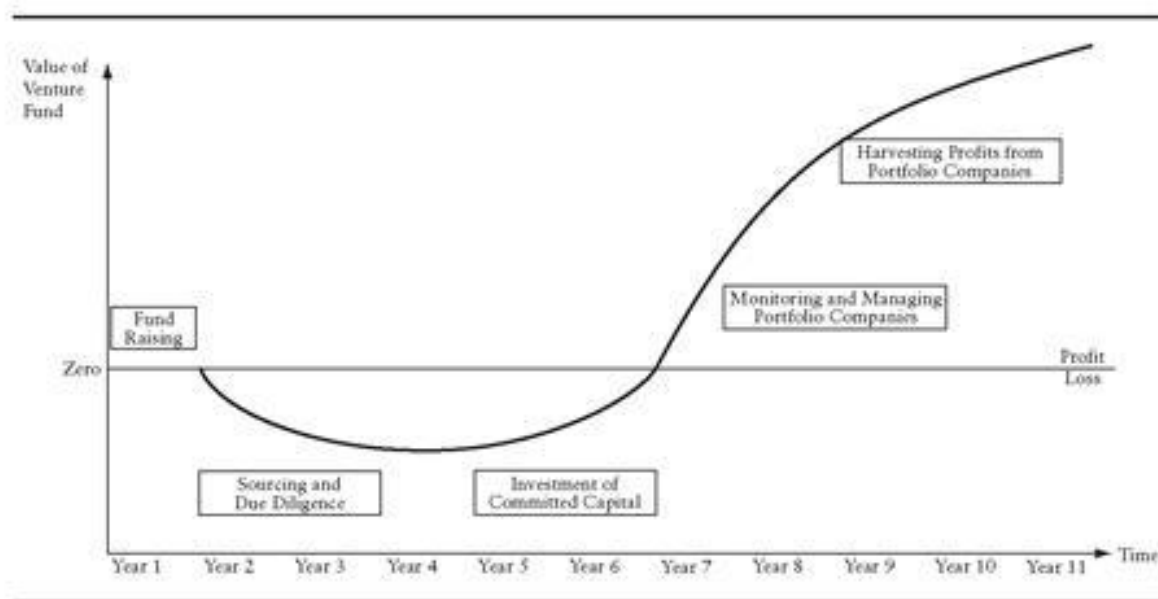
Stage three is the investment of capital. During this stage, the venture capitalist determines how much capital to commit to each start-up company, at what level of financing, and in what form of investment (convertible preferred shares, convertible debentures, etc.). At this stage the venture capitalist will also present capital calls to the investors in the venture fund to draw on the capital of the limited partners. Note that no cash flow is generated yet; the venture fund is still in a deficit.

Stage four begins after the funds have been invested and lasts almost to the end of the term of the venture capital fund. During this time the venture capitalist works with the portfolio companies in which the venture capital fund has invested. The venture capitalist may help to improve the management team, establish distribution channels for the new product, refine the prototype product to generate the greatest sales, and generally position the start-up company for an eventual public offering or sale to a strategic buyer. During this time period, the venture capitalist will begin to generate profits for the venture fund and its limited partner investors. These profits will initially offset the previously collected management fees until a positive net asset value is established for the venture fund.

The last stage of the private equity fund is its windup and liquidation. At this point, all committed capital has been invested and now the fund is in the harvesting stage. Each portfolio company is either sold to a strategic buyer, brought to the public markets in an initial public offering, or liquidated through a bankruptcy liquidation process. Profits are distributed to the limited partners and the general partner now collects incentive and profit sharing fees.

These stages of a venture capital firm lead to what is known as the J-curve effect as shown on Figure 4.

Figure 4 : Life cycle of a private equity fund

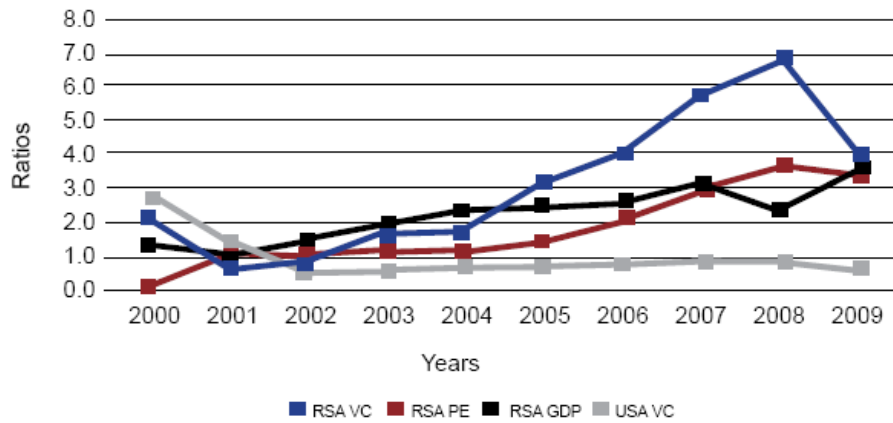


Source: Life cycle of a private equity fund. J-Curve Exposure: Managing a Portfolio of Venture Capital and Private Equity Funds by Mathonet, P. and Meyer, T. 2007. Adapted with permission.

2.2.3 Local and global private equity industry

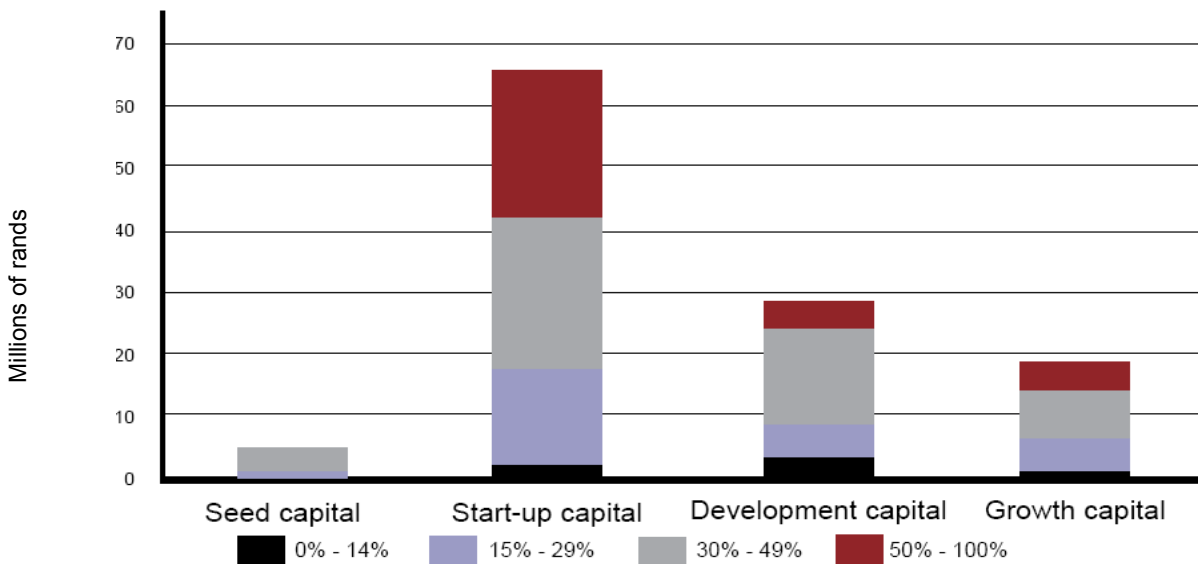
According to the South African Venture Capital Association (“SAVCA”) survey conducted in 2010, investment trends of the South African VC asset class since 2000, compared to the investment trends of the local PE sector, the South African Gross Domestic Product (“GDP”) and investment trends in the United States VC asset class have increased as shown on Figure 6. 2001 was used as the base year for comparison. The data indicates a disproportionate growth in the South African VC asset class between 2005 and 2009 when compared to the relative decline of investment in the US VC asset class. Although this is a positive trend, it needs to be borne in mind that the growth builds off a low base. Figure 6 also depicts investment in the South African VC asset class followed a similar trend as that of the SA GDP with the spike in VC investment activity in 2008 probably matching the spike in the SA GDP in 2007 – VC fund managers spending money in 2008 based on their ability to raise money on the strength of the economy up to 2007.

Figure 5 : Investment trends of the South African Venture Capital



Source: KPMG and SAVCA Survey 2009

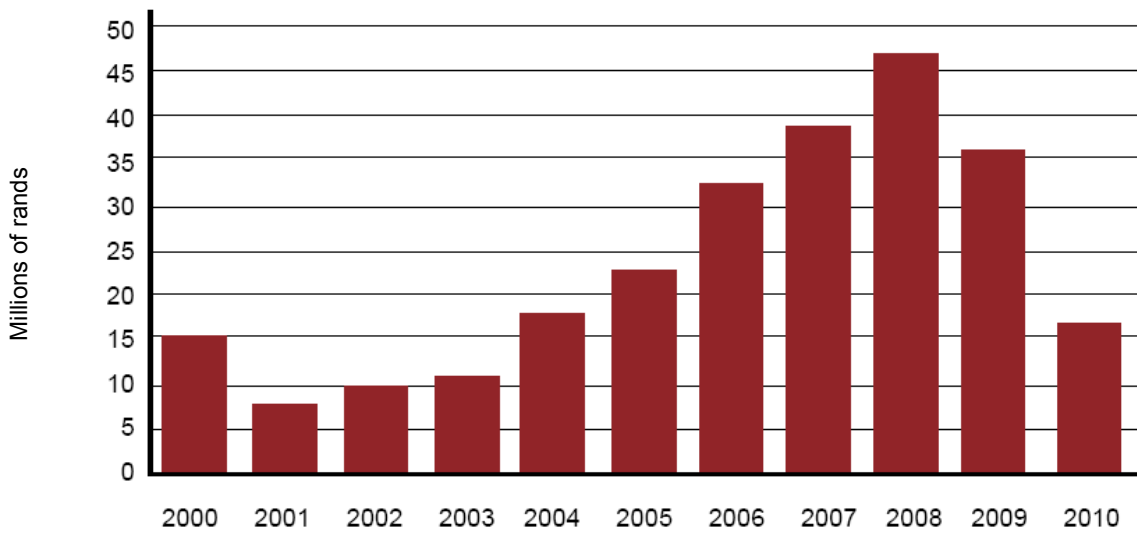
Figure 6 : Stage of investment by equity range



Source: SAVCA 2010

The majority of venture capital investments take place in a start-up phase. VC's are likely to be more interested in companies that are looking for start-up capital as shown in Figure 6.

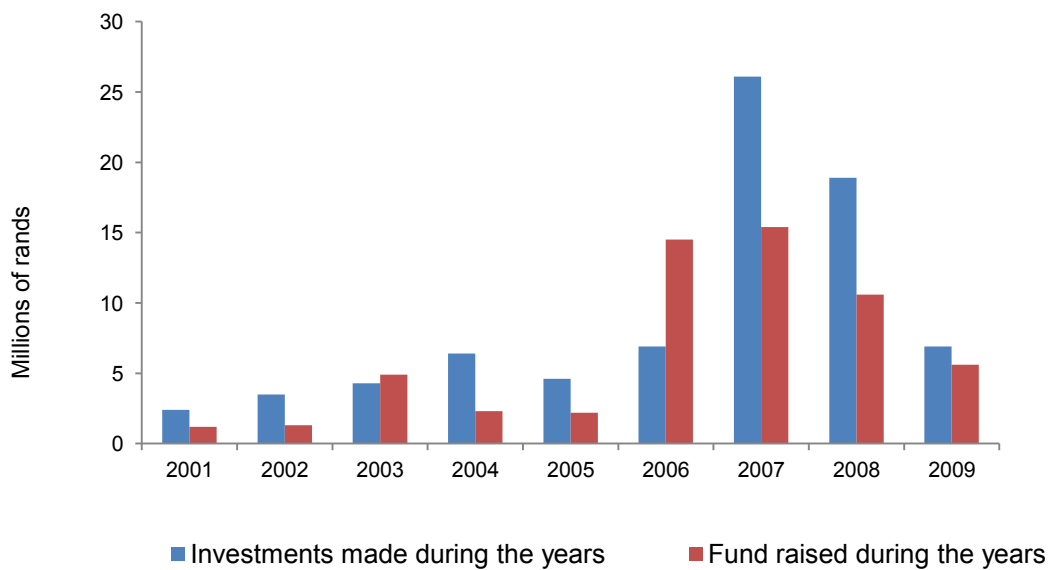
Figure 7 : Investment activity in South African Venture Capital industry



Source: SAVCA 2010

Figure 7 indicates an increase in investment activity starting as far back as 2001 but picking up considerable speed in 2004 with the introduction of government investment and the 2007/2008 launching of a number of private VC fund managers. The question is whether or not this will continue into the future or dwindle in line with the apparent downturn indicating fewer transactions recorded in 2009 and seemingly in the first half of 2010 as depicted on Figure 8.

Figure 8 : Investments and Funds raised in the private equity sector in South Africa



Source: KPMG and SAVCA Survey 2009

2.3 Influence of BEE in private equity

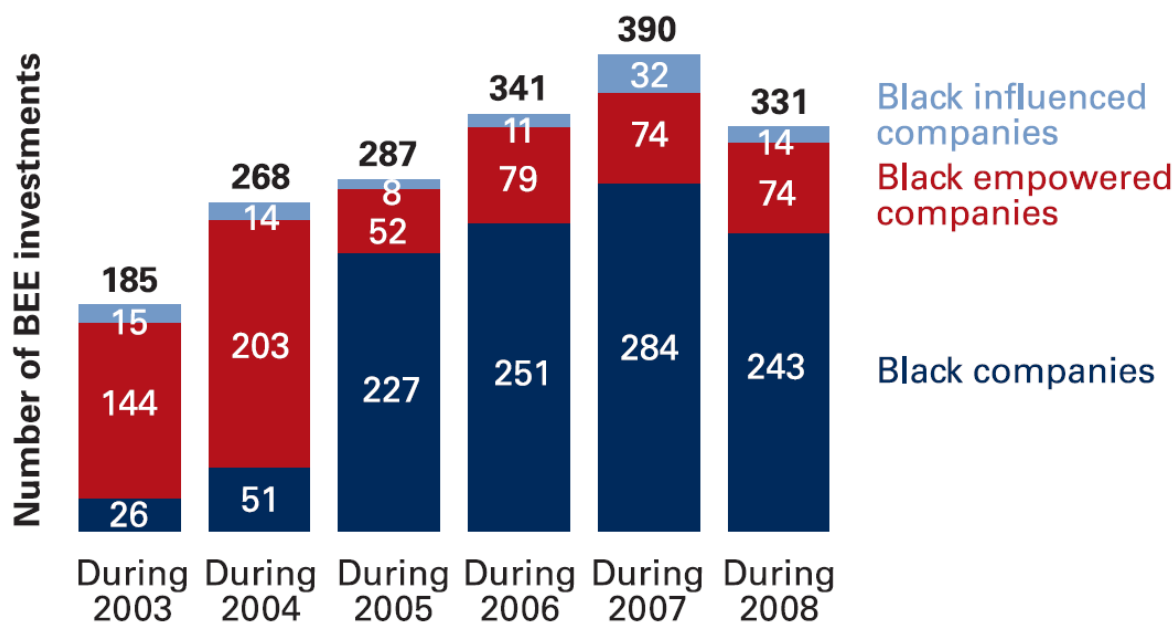
Black Economic Empowerment (BEE), as defined in the Financial Sector Charter of South Africa, means *the economic empowerment of all black people, including women, workers, youth, people with disabilities and people living in rural areas, through diverse but integrated socio-economic strategies*. The definitions used in this survey for BEE companies are stated below:

- 'Black companies' refers to companies that are more than 50 per cent owned and are controlled by black people. Control centres are based on the authority and power to manage assets, the determination of policies and the direction of business operations. 'Black people' refers to all Africans, Coloureds and Indians who are South African citizens and includes black companies.
- 'Black-empowered companies' refers to companies that are more than 25 per cent owned by black people (but not more than 50 per cent) and where substantial participation in control is vested in black people.
- 'Black-influenced companies' refers to companies that are between 5 per cent and 25 per cent owned by black people and with participation in control by black people.
- 'Not empowered companies' refers to companies that are less than 5 per cent owned by black people.

2.3.1 BEE participation in private equity

Most Black Economic Empowerment transactions are funded by Private Equity and Venture Capital. According to the KPMG and SAVCA Private Equity and Venture Capital Survey in 2009, government controlled entities and fund managers that are themselves black-owned, empowered or influenced had a record 390 number of BEE investments under private equity under at year end 2007 as per Figure 9.

Figure 9 : Number of BEE investments under private equity in South Africa



Source: KPMG and SAVCA Survey 2009

2.3.2 Economic and social contributions of private equity

A survey done by the Development Bank of Southern Africa (DBSA) and SAVCA in 2010, aimed to provide the market with real data on the changes that portfolio businesses undergo post private equity investment. The study examined the three year period from 2005/2006 to 2008/9 and the achievements undertaken by private equity-backed companies. One of the key highlights that emerged from the study was the fact that over 70 per cent of respondents indicated that post private equity investment their organisations achieved black empowerment, black-ownership or became community broad-based enterprises. Prior to receiving private equity investment, 59 per cent had no empowerment shareholding at all. In addition, the study also highlighted the broader social and economic impact that private equity has had in South Africa as a whole.

In Europe, the European Union Chamber of Commerce conducted a study around social and economic impact in China. *“Firstly, PE-backed companies created more jobs and paid higher wages and salaries. Second, innovation and efficient spending on research and development improved as they are important goals for PE-backed firms. Finally, the study found that PE is a strong contributor to the government’s growth policies”.* (European Union Chamber of Commerce, 2009)

2.4 Performance of private equity

Early papers mainly address the performance on the fund level. Gompers and Lerner (1997) were the first to empirically analyse the return of private equity funds relative to investments in public equity. Prominent examples for research tackling the returns of private equity on the partnership level are Kaplan and Schoar (2005), Ljungqvist and Richardson (2003) and Jones and Rhodes-Kropf (2003). They all conclude that private equity investments do outperform public markets on an aggregate level. Adding a risk-adjustment, as pursued by Ljungqvist and Richardson, supported these findings. Jones and Rhodes-Kropf (2003) explicitly assess the risk premium in private equity investments. Some recent studies, such as Schmidt (2003) and Gottschalg, Phalippou, and Zollo (2004) question the positive alpha returns of private equity investment.

Kaplan and Schoar (2005) analysed private equity performance on the fund level. They calculated Internal Rate of Return (“IRR”), Public Market Equivalent³ (“PME”) and for 746 private equity funds obtained from Venture Economics in the U.S.. They found a huge difference in fund returns. Analysing PMEs based on net cash flows they found *a relative underperformance (outperformance) of PE investments to S&P 500 on an equally (value) weighted basis*. Using average fees and carried interest figures they concluded that on average, *PE outperformed the S&P 500 gross of fees and do not analyse risk adjusted performance measures*. Focusing on dynamics of fund returns, they find *a strong persistence of fund returns and improving returns with increasing management experience of PE funds*.

Ljungqvist and Richardson (2003) studied the returns to investments in 73 private equity funds in U.S. by a large limited partner in funds raised between 1981 and 1993. They calculated IRR, Excess IRR and a Profitability Index for investments on fund level. In their analysis they scaled PE relative to S&P 500 and NASDAQ Composite Index and observed an outperformance³ of 6-8 per cent for PE investments based on IRR. They calculated a risk-adjusted profitability index discounting cash inflows at the cost of capital. The cost of capital is estimated on fund level using Fama and French’s (1997) Industry Cost of Equity figures. On this risk adjusted basis they observed excess alpha returns on the PE fund level. Their focus was on a general analysis of private equity fund’s cash flow patterns, drawdown rates and performance determinants.

L (2005) focused on the individual portfolio company level and work out the aggregate performance of private equity investments. He stressed *the importance of adjusting for survivorship bias, which potentially arises due to the high failure rate of private equity investments*. In his paper he measured the mean, standard deviation, alpha and beta of venture capital investments using a maximum likelihood estimate that corrects for selection bias. He found *that mean log returns of individual portfolio investments are around fifteen percent, though arithmetic mean returns are much higher and generate an arithmetic alpha of 32 per cent*.

³ Kaplan and Schoar (2005) define PME as a ratio of the discounted value of all cash outflows (distributions) and the discounted value of all cash inflows.

Schmidt (2003) analysed the risk-return characteristics of 642 U.S. private equity investments and investigated how this asset class can be used for diversification purposes. He found that *Leverage Buyout returns are less skewed than VC returns, indicating crucial importance of investment selection skills in the VC industry*. To assess the relationship between PE and PM investments he generated cash flow streams of public market investments imitate cash flow patterns of PE investments. Schmidt (2003) performed a bootstrap simulation to observe risk-return characteristics of portfolios comprising PE investments. He showed that *the average portfolio size of 20 to 28 PE investments eliminates over 80 per cent of non-systematic risk and thus can be regarded as balanced. Furthermore, PE investments bare higher levels of non-systematic risk compared to PM investments, with the exception of mezzanine*. Schmidt (2003) concluded that *PE as an asset class offers diversification potential, as correlations factors with public markets are low. The different PE investments categories are very heterogeneous regarding risk, return and correlations with public market investments*.

Gottschalg, Phalippou, and Zollo (2004) analysed returns of more than 500 PE funds, derived from the records of Venture Economics. Based on net cash flows they find that *realised funds underperform public stock-markets. As PE performance is pro-cyclical relative to public markets, desirable hedging properties do not justify low return levels. Computing average CAPM-betas of 1.7 and 1.6 for BO and VC funds respectively, PE funds are exposed to non-negligible risk that should command a return premium over public markets rather than the observed discount*.

The work closest to that presented in this paper is that of Kaserer and Diller (2004), who analysed the risk-return relationship of 794 European PE funds to assess the role of PE in the asset allocation. They measured performance of the PE funds relative to the MSCI Europe and the J.P. Morgan Government Bond Index in terms of IRR based excess returns and PMEs. Results reveal a slight underperformance of the average realised fund relative to the MSCI Europe (PME based). Buy-out funds exhibit consistently higher performance figures than VC funds.

To add a risk adjustment they calculated Sharpe Ratios and found significantly lower ratios for PE funds compared to the MSCI Europe. They estimated correlations between PE and the public benchmarks to be 0.8 (MSCI Europe) and 0.1 (Bond index) based on the PME and Bond Market Equivalent (BME) figures. Using these parameters, they showed that *adding PE to a portfolio comprising MSCI Europe and J.P. Morgan Government Bond Index shares triggers diversification effects*. They conclude that *private equity will have a substantial role in asset allocation*. As indicated above there has been various studies conducted around performance of private equity funds.

2.5 Risk and Return review

Given the volume of literature on venture capital, it may seem surprising that there are only few papers analysing the returns on private equity. The main obstacle to research has been the limited availability of data.

Woodward and Hall (2003) estimated that average performance was 20 per cent per year, abnormal performance was 8.5 per cent per year, and beta was 0.86. Peng (2001) found an average return of 55 per cent per annum (1987-1999) and estimated beta ranges from 0.8 to 4.7. Finally, Cochrane (2005) reported a 59 per cent annual average (arithmetic) gross return and a corresponding alpha of 32 per cent. Ljungqvist and Richardson (2003) used a proprietary data set to analyse the investment behaviour of PE funds in the U.S. MacIntosh (2003) presented data on exits and returns in Canada and the U.S. Manigart *et al.* (1996, 2000, 2002a,b), Hege, Palamino and Schwienbacher(2003), and Schwienbacher (2003) had similar data that compares Europe and the U.S.

2.5.1 Measuring risk and return

RisCura Fundamentals⁴ launched a comprehensive quarterly performance report in 2010 for South African private equity that highlights the impressive track record of the local industry over the past ten years. The rigour, frequency and methodology of the survey bring performance measurement in line with global best practice and is expected to advance interest and participation in local private equity investing.

Preparation for the performance report has taken the best part of a year. The initiative arose from a need within the industry for a benchmark against which to measure performance. Since the majority of investible South African private equity funds in the mid to upper end of the industry are tracked by the survey, comprehensiveness is assured.

The enhanced information flow on private equity is consistent with the trend in the industry of increased transparency, which in turn underpins investor relations, helps to manage investors' expectations, and reduces the perceived risk of the asset class by giving account of historical performances.

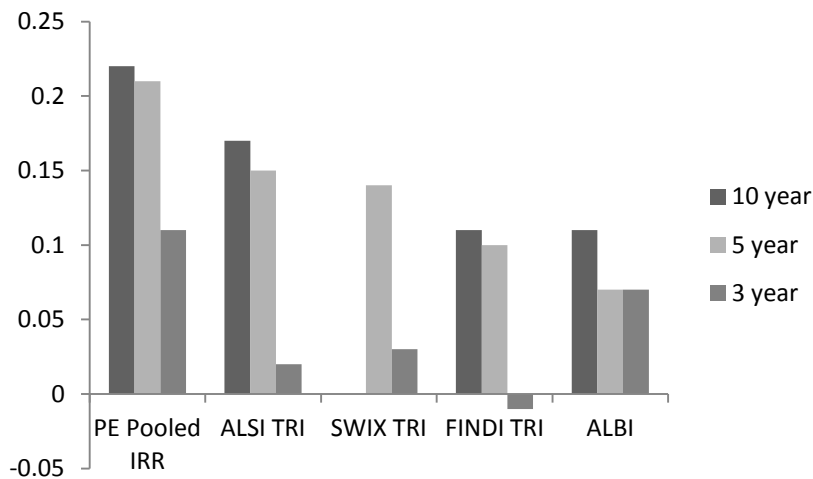
Returns are presented as pooled net IRRs, which reflect aggregate performances for the private equity industry, taking account of cash flows into and out of the industry. This method has the benefit of implicitly giving larger funds a greater relative weighting and thus creates comparability with ALSI-returns. Returns are measured net of fees, expenses and carried interest.

The findings from the first performance survey are positive for the industry. The pooled net IRR for private equity beats the compound annual growth rate from the FTSE/JSE All Share Index (ALSI), the FTSE/JSE

⁴RisCura provides investment advisory and implementation services to some of Africa's largest institutional asset owners

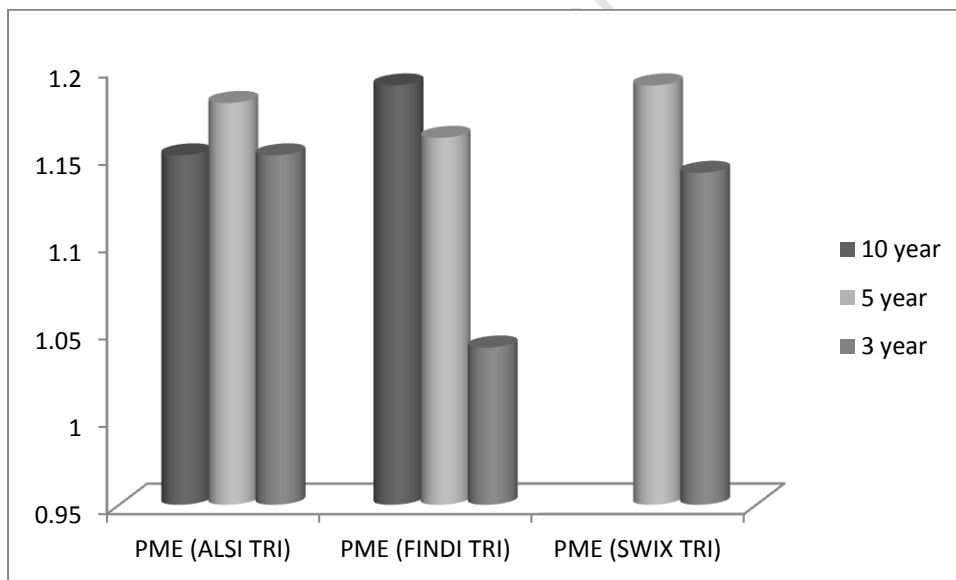
Financial and Industrial Index and the BEASSA All Bond Index (ALBI) on a three-year, five-year and a ten-year view as per Figure 10.

Figure 10 : Private Equity outperforms listed index in South Africa



Source: Private Equity outperforms listed index in South Africa. Riscura South Africa Private Equity Performance Report by RisCura Fundamentals, 2010. Adapted with permission

Figure 11: Public Market Equivalent performance vs. listed index



Source: Public Market Equivalent performance vs. listed index. Riscura South Africa Private Equity Performance Report by RisCura Fundamentals, 2010. Adapted with permission

The PME calculation confirms that private equity outperforms the ALSI total return index over all three-time horizons as per Figure 11. The survey findings are similarly positive for the South African private equity industry relative to its developed-market peers. In aggregate, local private equity funds

outperformed US and UK private equity over a three-year, five-year and ten-year period as shown in Table 2.

Table 2: SA and UK private equity over a three-year, five-year and ten-year period

	10 year	5 year	3 year
SA Pooled IRR*	21.7%	21.2%	11.5%
UK Pooled IRR#	13.1%	17.3%	4.40%
US Pooled IRR #	8.1%	9.1%	1.30%

*Source: RisCura Fundamentals

#Source: British Private Equity and Venture Capital Association Private Equity and Venture Capital Performance Measurement Survey 2009.

The general conclusion from these papers regarding private equity performance is mixed and these differences can be partly attributed to the quality of the data.

Another approach to comparing asset class returns is the PME measure, which invests private equity cash flows in a public index to determine out/under performance. A value greater than 1 implies outperformance by private equity.

Kaplan and Schoar (2005) have exclusive access to the (albeit anonymised) fund-by-fund data from which Venture Economics derive their published aggregate private equity performance data. This is a valuable improvement on the use of aggregated data, though the fund-by-fund return data remain subject to the limitations of self-reporting and accounting treatment noted earlier. These limitations can create substantial variation at the individual fund level which Kaplan and Schoar, to their credit, fully acknowledge. To this point, they document large differences in performance across funds. These excess returns, however, do not take into account the timing of the cash flows (which is not available) or the risk profile of the portfolio companies (due to anonymity).

As an alternative strategy, Cochrane (2005) and Quigley and Woodward (2002) performed a study in U.S. that focused on the individual portfolio company (rather than fund) level, and then, using various assumptions, assume the aggregate performance of private equity investing. These papers are important and document interesting facts about private equity investments. Using different assumptions, Quigley and Woodward (2002) report lower returns for private than for public equity. They report a method for building an index of venture capital that can be used in much the same manner that the NASDAQ and the S&P500 are used as indices of the prices of common stocks.

Because venture capital is traded infrequently in thin markets, the technique uses a repeat-sales approach plus a correction for the selection bias present in the observations on value for private equities. The approach is used to estimate an index for venture capital using the Sand Hill database, a comprehensive database of pricing events for venture companies' private rounds of funding and ultimate disposition. The estimated price index was rather flat in nominal terms between 1987 and 1995, after

which it rose steadily until 1998, and abruptly through 1999. It falls sharply in the last half year, 1999 II. The confidence interval widens considerably in 1999.

2.5.2 Establishing a benchmark

Comparing investment performance is essential for private equity investors and fund managers alike, but the lack of reliable tools often make it difficult to establish consistent and comprehensive benchmarks. Many financial data providers are competing to offer in-depth comparison tools for other investment classes but data is very limited for private equity. There is enough regular information on for publicly traded holdings, quantitative performance evaluation is straightforward. Standard indices, such as the S&P500 and All Share Index, provide measures of overall market returns. For non-traded holdings, such as venture capital, investors have no similar benchmark.

Frei and Studer (2004) highlighted various reasons why performance measurements for PE investments are more complicated than for traditional financial investments. *First, most private equity investors make a capital commitment which is eventually called on by general partners at his discretion when an interesting investment opportunity is found. Thus limited partners usually provide capital to the fund in numerous tranches over the investment period, the precise timing of which is not determined at the time of commitment. Despite that realisation of investment occurs over time it may take up to 10 years in building a portfolio and liquidating it. Therefore this may yield irregular cash flow streams both from the investor to the fund and back to the investor from the fund. Timing of these cash flows at the time is unknown.*

Frei and Studer (2004) continued that private equity investments are not only long-term but illiquid by nature. *Even though net asset value of private equity investments is usually stated on a quarterly basis, the sale achieved in a secondary transaction can be different from general partner's valuation. Lastly, the performance attributed to private equity investments in their early years is not meaningful as an indicator of final performance, and actual performance is only known with certainty once nil investments are realised and the fund is fully liquidated. It should be clear that this can lead to some severe obstacles in performance measurement.*

There are a number of methodologies that can be used to measure the performance of private equity investments. The author will review some of the methodologies used by private equity investors to measure performance.

2.5.2.1 Internal Rate of Return (IRR)

The private equity industry's de facto standard for measuring returns is the internal rate of return (IRR). In fact, Meyer and Mathonet (2005) point out those Venture Capital associations, the Association for Investment Management and Research, and the CFA Institute consider the IRR to be the most appropriate return measure for private equity.

IRRs can be calculated from the inception of a fund to any point in time during the fund's life up to and after termination. The IRR *represents a percentage rate of return at which the net cash flows of a fund over time can be discounted back to zero at the present. In practical terms, the IRR is the average "work-rate" of a limited partner's investment* Metrick (2007).

Two critical decisions must be made when calculating an IRR. The first is whether to use cash flows that are gross or net of fees and carried interest to the limited partners. This decision can have a great impact on the calculation of the IRR, especially late in the fund cycle when the majority of disbursements are made by the fund. If calculated gross of fees, the IRR will overstate the true IRR of the fund to limited partners. Second, Metrick (2007) illustrates the importance of the decision of whether or not to include residual values in IRR calculations. In practice, the majority of participants in the private equity industry consider the residual value reported by the general partners to be the terminal value when calculating IRR. However, Phalippou and Gottschalg (2006) reason the majority of residual values reported by funds after the ten year point should be written off as "living dead"⁵.

The standard calculation for the IRR since inception is that which satisfies the following equation:

$$\sum_{i=0}^n \frac{CF_i}{(1 + IRR)^i} + \frac{RV_n}{(1 + IRR)^n} = 0,$$

Equation 1: Internal rate of return

where:

CF_i = Net Cash Flows to the Fund;

RV_n = Residual Value (can be written off); and

IRR = Internal Rate of Return.

Meyer and Mathonet (2005) illustrate how a private equity fund IRR follows a J-Curve or hockey stick pattern over the fund cycle. The early years of a fund are generally the period of capital calls from limited partners to finance a fund's investments in portfolio companies. As a result, the IRRs of funds early in their life cycles are generally negative or close to zero. This period of low returns is exceptionally bad for venture capital funds and has been termed the "Valley of Tears." As a fund progresses through its cycle, *the IRR generally increases at an increasing rate before levelling off close to the end of the fund cycle.*

The major advantage of using IRR is that it makes the appropriate adjustments for the time value of money when dealing with the heterogeneous nature of fund cash flows. Specifically, the IRR represents a cash-weighted rate of return where all relevant cash flows are weighted accordingly. That is, those cash

⁵ "Living Dead" means residual value is the value of non-exited investments reported by funds on a quarterly basis.

flows that take place early in the fund cycle are given greater weight than those taking place later. One other advantage of IRR is that it is intuitive to investors. This is an advantage because IRR is simply calculated as a percentage rate of return, unlike other measurement techniques such as the value multiple which is calculated as a ratio. Another advantage is that IRR can be compared to a hurdle rate in order to judge the success of the fund.

An effective measurement technique, IRR is not without its disadvantages. When examined in isolation, the interpretation for the IRR is very subjective. What constitutes a superior performance by a fund varies from individual to individual. In addition, the mathematics of solving for the IRR within the quadratic equation can present several problems. The first is that a fund could have multiple IRRs if there are numerous sign changes during the fund cycle. The findings of Ljungqvist and Richardson (2003) suggest that the majority of sign changes can occur between years four and eight; therefore, interim IRRs could be over or understated.

However, most private equity funds follow a negative-to-positive cash-flow pattern so this normally is not a major problem. In addition, Meyer and Mathonet (2005) point out those general partners must decide whether to realize short-term gains on investments to optimize IRR or to wait for longer periods of time to optimize return multiples and/or realized returns. Furthermore, if follow-on fundraising is dependent on current fund performance as suggested by Kaplan and Schoar (2005), then managers of struggling funds have a disincentive to keep performing. Simply, because IRR weights earlier performance greater than later performance, fund managers of underperforming funds have a low probability of improving performance. Therefore, fund raising ability will be quite diminished.

Ljungqvist and Richardson (2003) point out that a major weakness of the IRR is that it assumes that capital calls and distributions are discounted at the same rate. They argue that capital calls should be discounted at a lower rate than distributions. They argue that capital calls should be discounted at the risk free rate while distributions should be discounted at a rate equal to the return of public equity securities. Therefore, IRRs overstate the performance of the fund relative to its risk profile.

The question remains as to how one should use IRR in fund performance evaluation. In order to eliminate the subjectivity of the IRR, one should compare it to a hurdle rate. Grinblatt and Titman (2002) state that the appropriate hurdle rate for comparison of IRRs should be a rate that makes the sum of a fund's discounted cash flows equal the current value of a tracking portfolio of cash flows of an appropriate peer group.

Grinblatt and Titman (2002) stated that the appropriate hurdle rate for comparison of IRRs should be a rate that makes the sum of a fund's discounted cash flows equal the current value of a tracking portfolio of cash flows of an appropriate peer group. According to Pearce and Barnes (2006), this peer group should encompass several areas to be considered accurate. First, the peer group should include funds with the same vintage year as the fund being evaluated. It is not logical to compare a fund raised in 1980 to a fund raised in 1990 or 2000 because each is exposed to different market conditions that affect their

decisions. Second, the peer group should be comprised of funds from the same industry sector as the fund being evaluated. This allows the fund to be compared to other funds facing similar market conditions as well as funds with similar risk compositions. In order to control for differing levels of competition among funds, the peer group should be made up of those funds located within the same region as the fund being evaluated.

Phalippou and Gottschalg (2006) point out that the major error made by those using IRR is to compare it with the return on public markets, such as, but not limited to, the S&P 500 index. Because indexes are time-weighted measurements and the IRR is a cash-weighted measurement, the two should not be compared. Furthermore, Metrick (2007) cautions that investors should not try to deduce the amount of money a fund made for them by using the IRR. Though the IRR is not without limitations, it proves an accepted and important measurement for private equity fund performance.

2.5.2.2 Modified Investments IRR

Some analysts prefer to use modified IRR measures. Fred and Studer (2004) points out that to calculate the Modified Internal Rate of Return (MIRR), one assumes that a single contribution is made to the private equity fund at the initial investment date instead of multiple contributions over time.

$$\text{MIRR} = \sqrt[n]{\frac{FV(\text{positive cash flows, reinvestment rate})}{-PV(\text{negative cash flows, finance rate})}} - 1.$$

Equation 2 : Modified Internal Rate of Return

Where;

n is the number of equal periods at the end of which the cash flows occur (not the number of cash flows),

PV is present value (at the beginning of the first period),

FV is future value (at the end of the last period).

Modified internal rate of return (MIRR) is a similar technique to IRR. Using the formula, MIRR is quicker to calculate than IRR. MIRR is invariably lower than IRR and some would argue that it makes a more realistic assumption about the reinvestment rate. Despite this IRR is the most preferred and widely used measure for private equity performance.

2.5.2.3 Public Market Equivalent

An alternative measure to assess investment performance of PE relative to public benchmarks is the PME. Basically, the PME determines how many dollars one would need to invest in the chosen benchmark to generate a return equal to that of a one-dollar investment in PE on a present value basis. It assumes that intermediate cash flows are reinvested in the public benchmark and determines the value of the cash flows accordingly. There are several ways to calculate the PME. The author follows the definition of Kaplan and Schoar (2005), where PME is the ratio of the discounted value of all cash

outflows (distributions) and the discounted value of all cash inflows. The discount rate is equal to the return of the benchmark investment. For investment, i the PME is defined as:

$$PME_i = - \frac{\sum_{t=0}^T \left(CFO_{it} \cdot \prod_{n=0}^t (1 + r_{bn})^{-1} \right)}{\sum_{t=0}^T \left(CFI_{it} \cdot \prod_{n=0}^t (1 + r_{bn})^{-1} \right)}$$

Equation 3 : Public Market Equivalent

CFO_{it} = cash outflow (distribution) of investment i in period t

CFI_{it} = cash inflow (distribution) of investment i in period t

r_{bn} = total return of benchmark b in period n

According to Ljungqvist and Richardson (2002), if PME exceeds one, the private equity investment outperformed the public benchmark, while a PME of less than one reveals underperformance. The PME concept resolves some of the deficits related to IRR. A key advantage of PME is the modified reinvestment hypothesis. It is at least feasible that investors reinvest cash distributions in public benchmark investments. In general it is possible to assign different reinvestment assumptions (benchmarks) to specified investment periods or cash flows. Ljungqvist and Richardson (2003) and Gottschalg et al (2004), for example assumed that cash inflows are debt financed and thus are discounted using risk-free rates, while cash outflows are invested in public equity.

Frei and Studer (2004) used BO as a benchmark of venture capital against the NASDAQ Composite index. Both buyout and All PE investments are benchmarked against the S&P 500 index (Bloomberg Ticker SPTR Index) for U.S. investments and the MSCI Europe Total Return Index for European investments.

Fred and Studer (2004) concluded that Private Equity did, on average, outperform public equity markets by around 5 per cent in Europe and around 3 per cent in the U.S. As stated *geometric average return of the chosen benchmark index for the European investments (8.7 per cent) over the 15-year period from 1988 until 2002 was 2.7per cent lower than the return of the chosen benchmark index for the U.S. investments (11.5per cent).*

2.5.2.4 South Africa and performance measurements

However there is little research that has been done in South Africa that highlights returns due to lack of substantial data available. Missankov, van Dyk, van Biljon, Hayes, van der Veen (2006) did investigate the returns of private equity benchmarking this with different indices.

Missankov et al (2006) calculated absolute returns and annualised deviation of returns for all funds and Aggregate Portfolio (aggregate return to South African private equity funds). These are compared with the returns of various indices for the period until March 2006. The indices used for comparisons were;

- the FTSE/JSE Africa All Share Index for South African listed equities;
- the FTSE/JSE Africa All Share Index;
- the FTSE/JSE Africa Small Cap Equity Index;
- the All Bond Index;
- the FTSE/JSE Real Estate Index and Property Loan Stock Index;
- the Alexander Forbes Short-Term Fixed-Interest Index (STeFI);
- the MSCI World Index;
- the JP Morgan Global Government Bond Index;
- the US Dollar 3-month Treasury Bill;
- the Hedge Fund Research Index (a funds of funds index);
- the Consumer Price Inflation ("CPI") index.

The private equity funds' performance was compared to SA Equity, SA Small Cap Equity, SA Bonds, SA Property, SA Cash, Foreign Equity, Foreign Bonds, Foreign Cash and Foreign Hedge Funds of Funds, using the benchmarks listed above. The maximum private equity outperformance of listed SA Equity was 33.6 per cent per annum, but the poorest fund underperformed by 3.3 per cent per annum. The average premium over the different time periods was 13.1 per cent per annum while the Aggregate Portfolio outperformed listed equities by 18.0 per cent per annum.

Furthermore the results until March 2006 concluded that FTSE/JSE Africa Small Cap Index outperformance was 33.4 per cent per annum but the poorest fund underperformed small caps index by 5.3 per cent per annum. The average outperformance was 8.3 per cent per annum and the Aggregate Portfolio outperformed by 16.8 per cent per annum. The maximum outperformance of 71 per cent per annum occurred relative to foreign (US Dollar) cash, while the maximum underperformance of 9.3 per cent per annum was relative to SA property. These results are illustrated in Figure 15 below.

Figure 12 : Relative performance of the sample set to other asset classes

Fund	Vintage Year	No of Months	Equity	Small Cap Equity	Bonds	Money Market	Property	Foreign Cash	Foreign Bonds	Foreign Equity	Foreign Hedge FoF
Fund 1	1992	132	28.3%	30.0%	24.6%	27.5%	28.2%	27.4%	24.9%	23.9%	22.0%
Fund 2	1995	125	15.9%	14.4%	16.7%	20.5%	13.2%	24.0%	22.5%	19.0%	18.7%
Fund 3	1996	118	13.6%	11.7%	12.7%	17.3%	8.1%	22.4%	20.5%	18.3%	17.8%
Fund 4	1997	103	-3.3%	-3.4%	-1.9%	2.6%	-9.3%	7.6%	5.3%	4.5%	4.0%
Fund 5	1999	87	0.7%	1.0%	8.3%	15.2%	-1.6%	22.0%	20.9%	21.2%	16.4%
Fund 6	1999	85	33.6%	33.4%	41.1%	47.0%	27.6%	54.4%	52.5%	53.4%	48.7%
Fund 7	1999	79	0.9%	-2.7%	6.2%	13.2%	-3.7%	20.0%	17.4%	19.9%	15.1%
Fund 8	2000	69	7.5%	-1.9%	13.8%	20.4%	3.3%	29.2%	25.6%	30.5%	26.0%
Fund 9	2001	54	9.9%	-5.3%	23.6%	27.2%	9.4%	43.2%	38.6%	35.2%	38.0%
Fund 10	2003	33	24.2%	6.1%	50.8%	56.2%	33.9%	71.0%	67.6%	51.1%	64.4%
Aggregate Portfolio	1992	164	18.0%	16.8%	19.2%	22.5%	19.1%	24.7%	22.3%	19.1%	19.3%
Minimum		33	-3.3%	-5.3%	-1.9%	2.6%	-9.3%	7.6%	5.3%	4.5%	4.0%
Maximum		132	33.6%	33.4%	50.8%	56.2%	33.9%	71.0%	67.6%	53.4%	64.4%
Average		88.5	13.1%	8.3%	19.6%	24.7%	10.9%	32.1%	29.6%	27.7%	27.1%

It was observed that the Aggregate Portfolio had returned 18.0 per cent per annum and 16.8 per cent per annum more than SA Equity and Small Cap Equity over the studied period. The calculated average outperformance of funds over the same period is 13.1 per cent per annum and 8.3 per cent per annum respectively relative to SA Equity and Small Cap Equity.

Private Equity is a long-term investment they cannot disinvest during the life of the fund which can be up to 13 years. For this reason, it is reasonable to expect that investors will command a significant liquidity premium when comparing a private equity investment with an investment in the listed stock market.

Missankov et al. (2006) highlights that low correlation of private equity returns to other asset classes indicates that there are diversification benefits to investing in private equity.

2.6 Asset Allocation decision in private equity context

2.6.1 Background of asset allocation

In most developed countries, the four major asset classes are (1) common stocks, (2) bonds, (3) cash equivalents, and (4) real estate. The first is in terms of the investment attributes that the members of an asset class have in common. These investment characteristics include (a) the major economic factors that influence the value of the asset class and, as a result, correlate highly with the returns of each member included in the asset class; (b) have a similar risk and return characteristic; and (c) have a common legal or regulatory structure. Based on this way of defining an asset class, the correlation between the returns of different asset classes would be low.

Kritzman (1999) offered a second way of defining an asset class based simply on a group of assets that is treated as an asset class by asset managers. He wrote

... some investments take on the status of an asset class simply because the managers of these assets promote them as an asset class. They believe that investors will be more inclined to allocate funds to their products if they are viewed as an asset class rather than merely as an investment strategy. (Kritzman 1999, 79)

The term “asset allocation” means different things to different people in different contexts. Arnott and Fabozzi (1992) divide asset allocation into three types: (a) policy asset allocation, (b) dynamic asset allocation, and (c) tactical asset allocation. The policy asset allocation decision can loosely be characterised as *a long-term asset allocation decision, in which the investor seeks to assess an appropriate long-term “normal” asset mix that represents an ideal blend of controlled risk and enhanced return.*

Arnott and Fabozzi (1992) pointed out that once the policy asset allocation has been established, the investor can turn attention to the possibility of active departures from the normal asset mix established by policy. That is, suppose that the long-run asset mix is established as 60 per cent equities and 40 per cent bonds. A departure from this mix under certain circumstances may be permitted. If a decision to deviate from this mix is based upon rigorous objective measures of value, it is often called tactical asset allocation.

Ennis and Sebastian (2005) state that private equity returns have a high correlation of 0.9 to the US equity market. Therefore, diversification benefits occur primarily in equity portfolios, and private equity is included only in those portfolios with 60 per cent or more in equity. Portfolios with 100 per cent equity are found to allocate approximately 5 per cent to private equity. The authors conclude that portfolio allocations as large as 10 per cent are appropriate only for moderately sized equity-oriented funds and that private equity is not appropriate for portfolios with 30 per cent or more in bonds.

There are many types of regulatory constraints. These involve constraints on the asset classes that are acceptable and limits on investments. Moreover, in making the asset allocation decision, consideration must be given to any risk-based capital requirements. For depository institutions and insurance companies, the amount of statutory capital required is related to the quality of the assets in which the institution has invested. For example, for regulated investment management companies, there are restrictions on the amount of leverage that can be used.

2.6.2 Review asset allocation decision making by institutional investors

Since there has been an industry association, SAVCA, in South African private equity, there has been a remarkable progress in asset allocation towards private equity in South Africa. General partners and assistance from the industry association have made significant impact in attracting assets. Despite the significant progress in South Africa, asset allocation is still at its initial stages. Moreover, few research studies have indicated private equity is suitably defined as an appropriate asset class for pension funds (Missankov et al., 2006; Chemla, 2004 and Ennis and Sebastian, 2005).

Shoven (1999), Shoven and Sialm (1998), and Reichensten (2001) examined asset location decisions and approach portfolio optimisation in a sequential two-step procedure: choose the allocation of weights of the assets first and then decide upon the asset allocation of assets. Comparison of the ending wealth of the retirement portfolios with the same asset allocation but different allocation decisions determines the allocation strategy as optimal.

The subject of optimal asset location was introduced in Shoven (1999) and Shoven and Sialm (1998), who compare the simulated distributions of wealth levels at retirement for different experience-based techniques of portfolio locations and allocations. The issue was subsequently revisited by Reichensten (2001), who utilizes mean-variance optimisation to compare optimal location decisions, for three types of investors (a trader, an active investor, and a passive investor) and argues that asset allocation and asset location decisions must be solved jointly.

According to Ennis and Sebastian (2005) private equity's share of the investable capital markets is both useful information and a good starting point for investors considering the appropriate allocation to the asset class. In their study, they examined that investors who are particularly optimistic about the prospects for private equity can reasonably be expected to have allocations greater than 0.7 per cent of their assets. An implication of this fact is that all investors cannot maintain, say, a 5 per cent allocation to private equity unless the value of private equity interests increases tenfold relative to the value of all other assets. This could happen if investors bid up the prices of private equity assets, i.e., increased demand for them. This would lead to the formation of more venture and buyout partnerships and, in turn, the funding of a greater number of individual start-ups and leveraged buyouts. A material increase in the proportion of private equity, however, could not reasonably be expected to occur overnight. This identity of the value of assets that exist and investors' aggregate portfolio allocation is important to bear in mind in formulating investment prophecy for any asset class.

According to Ennis and Sebastian (2005) investors need to be cognizant of their own particular circumstances in arriving at a decision to invest in private equity. They identify several factors that potential investors should consider.

2.6.2.1 Access and Skill

The question Ennis and Sebastian (2005) would pose to any investor contemplating embarking on private equity investing is this: *How good do you expect to be at it?* Costs are extremely high and the assets themselves are volatile and illiquid. Consequently, one of the most important ingredients for success is having highly skilled professionals with access to the best funds operating in a discretionary capacity in all aspects of managing the private equity portfolio. Furthermore they added that some pension and endowment funds have been able to attract and retain expert managers to their staff, but providing competitive compensation and the proper environment are problems for many funds. Others turn to investment management firms specialising in the field. Excellent firms of this type exist, but they add to the cost of private equity investing, and this must be taken into account.

According to Kocis, Bachman, Long and Nickels (2009) one of the principal traits that made deals possible is judgment. It is still the most valuable skill that anyone brings to the investment process. Kocis et. al (2009) highlighted that even the demands of transparency, the prominence of private equity, the complexity of the regulatory environment, and the mantle of fiduciary responsibility, today's professionals are required to research, document, and justify their investment decisions with increasing rigor. The skill sets required for these scales of operation are the same, but as teams become bigger, one job gets more complicated and becomes two or four.

2.6.2.2 Risk Tolerance

Generally private equity investing is a risky business, and investors should take account of their tolerance for risk as part of their decision to invest. Ennis and Sebastian (2005) added that an investor's allocation to equity investments is frequently taken as an indication of risk tolerance. They highlighted that there a direct relationship between overall equity percentage and the optimal allocation to private equity. If bonds make up more than about 30 per cent of the portfolio, a private equity allocation may be inappropriate.

2.6.2.3 Liquidity Requirement

According to Ennis and Sebastian (2005) illiquidity of private investments is another area that deserves attention. The less an investor needs liquidity, the greater is the tolerance for private equity investments. This rules them out for participant-directed defined contribution plans, but some give-up in liquidity need not be a significant barrier for many defined benefit pension plans, endowments, or foundation funds. While most of an investor's assets will be able to be sold fairly easily on the market at a fair price, private equity investments may not be able to be sold at all, and if they are it will usually be at a significant

discount. Private equity investment is essentially illiquid (Sahlmann, 1990, Lerner and Schoar, 2003). In addition to the illiquidity, an investment in a private equity fund has a long time horizon. The typical fund lasts up to 10 years, and it is usually many years before the committed capital is returned. In fact, the return on most funds is negative in its beginning stages, as early losses are taken before significant gains, a phenomenon known as the J-curve. A study funded by the National Bureau of Economic Research (NBER) estimates that it usually takes funds between 7 and 8 years to return the committed capital⁶. This was on funds originating between 1981 and 1993, and while there was a contracting of the time period during the boom, many believed it will return to historic averages.

2.6.2.4 Portfolio Size

According to Ennis and Sebastian (2005), they also noted that the market for private equity investments is very small in the context of the investable capital markets. All else the same, and given a finite quantity of investment opportunities to go around—at least at prices investors currently consider attractive—investors with smaller portfolios have a comparative advantage over investors with larger portfolios. This has become apparent as mega-size public funds seeking to establish private equity portfolios have wound up tilting heavily toward buyout funds, as opposed to the smaller venture funds, and toward the larger buyout funds.

2.6.2.5 Internal Resources for Supervision

The investor should have knowledgeable staff resources dedicated to supervising private equity investments on behalf of the fund. These are more labour-intensive than public market portfolios. Some staff resources are required regardless of whether the private equity portfolio is managed internally or externally.

2.6.2.6 Capacity for Confidential Dealing

Recently, another factor has arisen that may prove to further define investor compatibility with private equity investing. Owing to their public nature, Ennis and Sebastian (2005) noted that some institutional investors have faced legal challenges to their keeping confidential some of the information they possess as private equity investors. As general partners of private equity funds determine what information they are prepared to release to the public domain, some public funds may find themselves excluded from certain investment opportunities. It is difficult to generalize about the relative importance of these factors. A particular factor may be more important for one investor than another, and strength in one area may compensate for a limitation elsewhere. It is best to go over the factors one by one and make a judgment concerning their collective impact, a field that needs further research study.

⁶Ljungqvist and Richardson (2003), *The Cash Flow, Return, and Risk Characteristics of Private Equity*.

2.7 Portfolio Management in a private equity context

In this section the author will turn our attention to the portfolio management of private equity on a fund's investment strategy. The section begins by reviewing the general theory of portfolio selection. Thereafter the author reviews modern portfolio management of a private equity portfolio.

2.7.1 Theory of Portfolio Selection

Fabozzi (2009) argued that portfolio selection is underpinned for the management of portfolios: portfolio theory and capital market theory.

Portfolio theory deals with the selection of portfolios that maximise expected returns consistent with individually acceptable levels of risk. Using quantitative models and historical data, portfolio theory defines "expected portfolio returns" and "acceptable levels of portfolio risk," and shows how to construct an optimal portfolio. Capital market theory deals with the effects of investor decisions on security prices. More specifically, it shows the relationship that should exist between security returns and risk if investors constructed portfolios as indicated by portfolio theory (Fabozzi, 2009: 15).

Together, portfolio and capital market theories provide a framework to specify and measure investment risk and to develop relationships between expected security return and risk (and hence between risk and required return on an investment). Moreover, these theories provide a framework for measuring the performance of managed portfolios.

According to Klier, Welge and Harrigan (2009), *today's private equity landscape is characterised by two very different management models: the traditional form of private equity, maintaining a strong focus on financial engineering and selective changes in the governance model of portfolio companies; the other, a modern form of private equity with active involvement in decision making and a focus on value creation through active ownership.*

Traditional Investors concentrate largely on value creation through financial engineering and improvements to a firm's governance model by introducing strong financial incentives. The model they use is based mainly on a passive management model that attempts to create value at the time of the deal rather than during the holding period [see also Cotter and Peck (2001); Kaufman and Englander (1993); and Palepu (1990)]. The firms use substantial amounts of debt to acquire a target that consequently has to be paid down by the portfolio company. Through the aggressive use of leverage, private equity firms essentially create a long option on the business they acquire, with only limited equity investments as potential downside risk. The de-leveraging of the firm is supported by additional measures on the balance sheet such as the sale of non-core assets and reductions in working capital (see also Baker and Wruck, 1989; and Zong, 2005). The aggressive use of leverage furthermore provides a solution to the free-cash-flow problem observed in traditional multi-business firms (Jensen, 1986). The pressure of high leverage

and the resulting obligations to make interest and principal payments imply that management has less latitude to invest the firm's funds in inefficient projects or for excess cash waiting around to be spent (see also Cotter and Peck, 2001; and Lowenstein, 1985). In addition, private equity investors transform the incentive systems in the companies they acquire by requiring top management to invest substantial amounts of their own funds in the company and introducing a stronger link between performance and compensation. The interests of management are aligned with the interests of the private equity firm and its investors, as compensation is ultimately linked to the value created between the entry and exit of the PE investor [see also Nikoskelainen and Wright (2007) and Phan and Hill (1995)].

The traditional private equity model is complemented by the active portfolio management approach of PE investors.

2.7.2 Modern portfolio management of private equity

The modern management model, on the other hand, takes an approach of active ownership within a relatively related diversified portfolio. While building on the fundamentals of traditional private equity investors, modern private equity investors actively influence the strategic decision-making process and start to leverage the scale of a related diversified portfolio in order to exploit the advantages of knowledge and market power (Klier, Welge and Harrigan, 2009).

Active managers of private equity firms build considerable industry expertise with mostly dedicated industry teams. Professionals bring a diverse background from banking, consulting, and industry positions to enable value creation during the entire holding period of an investment. All intervention happens informally and businesses remain independent to secure the tradability and accountability of management. The active management approach builds on the strengths of financial engineering, governance engineering, and active portfolio management but is broadened to include so-called active ownership (Fabozzi, 2009).

2.8 Regulatory framework

Institutional investors impose contractual restrictions or covenants on the fund manager in order to mitigate the “agency problems” associated with the investment of their capital, i.e. to ensure that the fund manager, as their agent, acts solely in their interests. As the contracts governing the management of the fund are privately negotiated between the institutional investors and fund managers, they are specifically designed to manage the incentives and control the potential for opportunistic behaviour not only among the fund managers, but even among the limited partners themselves. There are five main categories of such restrictions, as discussed in Gompers and Lerner (1996, 1999) and Cumming and Johan (2005b):

2.8.1.1 Category 1: Authority of Fund Manager Regarding Investment Decisions

The restrictions on investment decisions limit the agency problems associated with the investment of the institutional investor’s capital (Gompers and Lerner, 1996). This is important, since the institutional investors cannot (as limited partners they are legally prohibited from interfering, otherwise they lose their limited liability status) interfere with the day-to-day operations of the fund. These restrictions include, first, restrictions on the size of investment in any one portfolio company because otherwise a fund manager might lower his or her costs associated with diversifying the institutional investors’ capital across a number of different entrepreneurial firms. Second, there are restrictions on the ability of a fund manager to borrow money such as in the form of bank debt and reinvest that borrowed money alongside the institutional investors’ capital. That type of behaviour would increase the leverage of the fund and increase the risks faced by the institutional investors. Third, there are restrictions on co-investment by another fund managed by the fund manager, as well as restrictions on co-investment by the fund investors. Those restrictions limit the conflicts of interest in the allocation of opportunities to different institutional investors of the fund, as well as limit the incentive by a fund manager to bail out the poor performing investments of a companion fund operated by the same manager. Fourth, there are restrictions on the reinvestment of capital gains obtained from investments brought to fruition. Some fund managers might otherwise pursue a strategy of “fame not fortune” in terms of trying to get as many IPO successes as possible, at the expense of a risk of losing the profits of one investment into a new unproven venture. Fifth, there are restrictions on the overall ability and independence of the fund manager to make investment decisions. Finally, there are other less common covenants on other types of investment and divestment decisions (such as limits in terms of timing of investment with drawdowns, and timing of exits).

2.8.1.2 Category 2: Restrictions on Fund Manager’s Investment Powers

The covenants in the class of restrictions on investment powers also limit the agency problems in the separation of ownership (i.e., by the institutional investors) and control (i.e. by the fund managers) in the investment process. The first restriction in this class involves co-investment of the Fund Managers themselves. This is similar to co- investment by the fund’s institutional investors and co- investment of

prior funds (as described above in Category 1), but instead involves the personal funds of the Fund Managers. This restriction limits the incentive problems associated with the allocation of attention by the fund managers to different entrepreneurial firms in the fund portfolio. If the fund manager were able to coinvest personal funds, there would be distorted incentives for the fund manager to spend most of their time allocating effort to the firms in which the manager is personally invested, instead of trying to maximize the value of the overall portfolio (as would be expected by intuitional investors). Second, there are covenants pertaining to the sale of fund interests by the fund managers, since the institutional investor's financial interest will be compromised by the addition of new institutional investors, and more significantly the loss of commitment of the fund manager who is usually also the general partner or most active fund shareholder. Third, key person provisions and limits of the additions of investment principals regarding the fund managers, since the contract is made with specific fund managers and the institutional investors do want the management of their capital to be in the hands of specific people with whom they have contracted. Finally, there could be other types of restrictions on other actions of fund managers.

2.8.1.3 Category 3: Covenants Relating to the Types of Investment

Covenants pertaining to the types of investment ensure that the institutional investors' capital is invested in a way that is consistent with their desired risk/return profile. Restrictions include investments in other venture funds, follow on investments in portfolio companies of other funds of the fund manager, public securities, leveraged buyouts, foreign securities, and bridge financing. Without such restrictions, the fund manager could pursue investment strategies that better suit the interests of the fund managers regardless of the interests of the institutional investors.

2.8.1.4 Category 4: Fund Operation

Covenants on fund operation are designed to oversee the administrative aspects of a fund, and include the sale of fund interests by fund investors, restrictions against the fund manager on raising a new fund, public disclosure of fund matters to investors, and provisions to allow fund investors to vote to remove the fund manager without cause (no fault divorce clauses). The covenant restricting the sale of fund interest by fund investors (in this category 4) is differentiated from the covenant restricting the sale of interest by fund manager (as specified in category 2) because the specific fund manager action of selling pertains to things fund managers cannot do, whereas this category 4 pertains to administrative aspects of all investors. Recall that the fund manager is also the general partner or most active shareholder of a fund, unlike all other fund investors; hence, the different categorizations for seemingly related actions.

2.8.1.5 Category 5: Limitation of Liability of the Fund Manager

While categories 1-4 considered covenants constraining the activities of fund managers, this last category of covenants pertains to favourable awards of limited liability for the fund managers. Fund manager liability can be limited in the event of disappointing returns from investments made, limited if the

fund manager fails to invest committed capital within the agreed time, and/or limited if the fund manager is found to be mismanaging the fund.

2.8.2 Policy Considerations

Cumming and Johan (2006) points out that there are three broad areas where the public policy framework governing the private equity market can be considered: regulation of institutional investor's portfolio allocation; reporting and disclosure requirements of the private equity fund; and tax.

2.8.2.1 Regulation of institutional investor's portfolio

Before looking into the regulation of the funds, Cumming and Johan (2006) looks at the regulations that affect the flow of institutional funds into the private equity arena. Institutional investors are subject to stringent regulatory oversight in view of the nature of the products they offer and their customer demographics. Customers of pension funds, insurance companies and banks are more vulnerable than regular retail investors in financial institutions as they entrust a significant fraction of their income and accumulated wealth to these institutions, in the hope that such institutions not only protect their wealth, but also enlarge it. Regulations are therefore in place to address not only the funding of these institutions, but also the investments of such funds to ensure that the institutions do not take advantage of the customers and provide the proper products that are not only appropriate for each type of customer, but also structured properly to meet their expectations. It is known that institutional investors' capital allocation decisions are made across a range of available investments, including but not limited to, equities, bonds, cash/currencies, index funds, derivatives, and various forms of alternative investments (including hedge funds, commodities, private equity, and property/real estate). In Cumming and Johan (2005a), they looked at the proposed new regulation affecting the current, and especially the future, asset allocation of institutions. The institutions sampled in that study deemed the new regulation as the most important regulatory development in private equity market. In addition, they found that the new regulation that compels institutions to rethink their investment strategy, and especially one that encourages diversification into alternative investments such private equity funds, is in fact a significant factor in the reported potential increase in private equity investments by the same institutions. It is interesting to note that unsophisticated pension fund holders, insurance policy holders and bank depositors will increasingly fund an area of finance that was deemed to be mainly comprised of sophisticated institutional investors and wealthy private individuals. With such increase in levels of "public" funding directed towards the less regulated private equity market, it will be increasingly important that there also be public policies in place to protect such funds.

2.8.3 Reporting and Disclosure by private equity funds

The most basic reporting issue is whether private equity funds should be subject to registration requirements. It is common international practice that investment vehicles have at a minimum a registration requirement, and at a maximum an annual licensing and compliance requirement, with a

regulatory body such as Financial Services Board (FSB). Such registration or licensing enables regulators to obtain additional financial and operational information. In addition to that, they are required to be submitted by funds to the relevant incorporating bodies (such as the annual audited accounts). Registration or licensing however would also indirectly certify the ability of the fund managers to value investments and manage institutional investor capital, as proven by the license or registration, and would be beneficial to fund manager incumbents. As this form of certification signals a minimum quality standard to institutional investors and increases the confidence level of institutional investors, which would in turn increase the flow of funds from institutional investors to private equity funds, increased regulatory oversight can be achieved by requiring fund managers to include information which will allow investors to not only determine the “quality” of the manager, but also enable disgruntled investors with access to some form of independent recourse in the event of mismanagement of funds.

At present, private equity funds are inclined to exaggerate returns or valuations of unexited investments (see Cumming and Walz, 2004). Firstly, more stringent accounting rules would reduce significantly the incentives (and possibilities) to exaggerate valuations of unexited investments and even the calculation of IRRs. This, in turn, would make the valuations more transparent and informative, thereby benefiting the industry as a whole. In a sense, *it would avoid a “negative equilibrium” with over reporting*. Furthermore, the survey data (and econometric analysis reported by Cumming and Johan (2005a), are consistent with the view that institutional investor confidence in private equity funds would be higher (and therefore more capital would flow from institutional investors to private equity funds) if disclosure standards required annual statements for overall fund portfolio valuations to be made public.

Secondly, the recent “public disclosure” debate centres on the extent to which such financial information should be made “public”. Cumming and Johan (2005a) believed however that such additional, more informative disclosure of performance results should not be an issue of argument among private equity fund managers and their institutional investors as the “public” dissemination of such information will be limited to the extent that the “public” has a legal right to the information. The “public” who invest in a certain insurance company should have access to the details of that insurance company’s investments. The “public” who are required to place their pension fund with a certain company should have access to the financial details of that company. The “public” however will not have a right to access the financial report provided by a private equity fund to its wealthy private limited partner. This is also the case for a limited partner which is also an institution utilizing only private funds. Thus to say that the financial information will be made totally public will be an overstatement. This does not mean that specific investment details would be made public, as that level of detail would likely be detrimental to the private equity fund as well as its investee companies.

However, annual aggregate portfolio valuations of a private equity fund do not disclose any individual investment details, and yet such aggregated valuations would enable institutional investors to make more informed decisions about whether to invest in private equity. In turn, as mentioned earlier, institutional investors should also be required to disclose the “valuation” of their private equity investments in their

annual accounts, to allow their own “public” investors to make informed decisions about their investments in that institution.

Third, private equity funds should be required to disclose the details of the auditors used in their valuations (these auditors are usually the same used to audit the fund itself, but may differ in certain circumstances). Auditors themselves would have to be certified with the securities regulatory body and follow the standards set for uniform valuation standards in private equity (such as those provided by the Private Equity Industry Guidelines Group or by the European Venture Capital Association).

Fourth, private equity fund information disclosure quality (and as such the quality of reporting by their respective auditors) should themselves be assessed by regulators over time in a way that compares the differences between un-exited expected valuations in prior years to be reported and actual valuations of realized investments in subsequent years. A perceived pattern of massive differences in such valuations should result in investigations, and possibly a revocation of the license to operate as private equity fund or de-registration (and likewise as an auditor for private equity funds) in the event it is found that such discrepancies are a result of serious misconduct and mismanagement of funds or gross negligence. Regulators should disclose and inform the market of such disciplinary action in the event of problems.

Regulators should also inform the market that they are undertaking such “back-testing” to increase confidence in the marketplace. Fifth, the private equity funds should have to disclose their management fees and their carried interest fees to both the investors and also to the relevant registration or licensing body, as this information directly affects the institutional investors’ beneficiaries and returns.

This will allow current and potential investors in an institution to make informed decisions as institutional investors should have to disclose this information to such persons. Also, any other non-participating institutions will have access to such data from the regulators to also allow them to make informed investment decisions when making comparisons against funds competing for their investment. These details in no way compromise the private information of the investee companies of the private equity funds, but do directly relate to the returns of the institutional investors’ beneficiaries.

2.8.4 Taxation and Other Legal Standards

In respect of capital gains taxation and other regulatory standards that affect private equity and venture capital markets, it is consistent with the view that the benefits of encouraging entrepreneurship and innovation outweigh the forgone tax revenues, etc; however, these costs and benefits are themselves very difficult to precisely quantify⁷.

⁷For U.S. evidence, see, e.g., Poterba (1989a,b); Gompers and Lerner (1999, 2001). For international evidence, see Jeng and Wells (2000). For European evidence, see Armour and Cumming (2005).

The most recent European evidence is provided by Armour and Cumming (2005). Based on aggregate industry venture capital and private equity data spanning the period 1990–2003 from Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, The Netherlands, Portugal, Spain, Sweden and the UK (as well as Canada and the US), Armour and Cumming (2005) showed that the legal environment is of paramount importance in measuring the supply of and demand for venture capital. Favourable tax and legal environments facilitated the establishment of venture capital and private equity funds and increase the supply of capital.

Similarly, liberal bankruptcy laws stimulate entrepreneurialism and increase the demand for venture capital. These results have significant policy implications. The prevailing wisdom has been that deep and liquid stock markets are the most important determinant of venture capital investment (Black and Gilson, 1998). It was therefore thought that policymakers wishing to foster venture capital markets could only do so indirectly, by implementing legal measures that are conducive to the development of liquid stock markets, such as disclosure laws, minority shareholder protection, and anti-director rights (La Porta, Lopes-de-Silanes, Shleifer and Vishny, 1997, 1998; Black, 2001). An alternative route would be for governments to supply capital themselves, through publicly-funded schemes that would seek to stimulate the growth of private equity markets, with the success of such schemes being highly contingent on the appropriate design of incentives (Gilson, 2003). The results of Armour and Cumming (2005) cast doubt on both aspects of this wisdom. Armour and Cumming's results imply that a range of legal factors may affect venture capital investment directly, and that a liberal personal bankruptcy law increases demand for venture capital finance. Consistent with theoretical work by Keuschnigg (2003) and Keuschnigg and Nielsen (2003a, 2004), Armour and Cumming's results also imply that legislators may successfully stimulate venture capital markets by reducing direct taxation, particularly capital gains taxation.

2.8.5 Related issues

The ability of private equity to attract funding is not only affected by the regulatory framework applying to the funds themselves but also by the framework applying to investors in private equity and to the businesses in which they invest. For example, countries with more entrepreneur-friendly bankruptcy laws and lower start-up costs thereby encouraging entrepreneurship, risk-taking and innovation tend to have significantly larger venture capital markets relative to the GDP of that country (Armour and Cumming, 2005).

The survey of Dutch institutional investors that will be described later touched on their attitudes in this regard. While the results, are not directly relevant to the issue of how to regulate private equity they are nonetheless of interest. Indeed, it is noteworthy that some of the regulations having wide applicability rank as more important for attitudes toward investment in private equity than the lack of regulation of the industry itself.

Overall the analysis provides support for the view that changes that tend to harmonise the regulatory environment facilitate investment in private equity, as well as international investment in private equity. In

particular, the data support the propositions that harmonization of standards from the International Financial Reporting Standards (regulation of reporting standards and transparency), the Financieel Toetsingkader (Dutch regulation of portfolio management standards such as of matching assets and liabilities), and Basel II (international regulation of risk management and disclosure standards), all facilitated clarity and certainty for institutions that desired to invest in private equity. These regulatory changes are expected to give rise to changes in (1) an institutional investor's asset allocation decisions in private equity, (2) the geographic region in which the institutional investor invests, and (3) to changes in the mode of investment (direct private company, direct fund, and fund-of-fund investments). While an examination on this basis of the question as to whether there could exist better regulatory harmonization measures that would better facilitate private equity investment is not possible, this evidence is nevertheless consistent with the view that the IFRS, FTK and Basel II are steps in the right direction. Cumming and Johan (2006) argue that more regulation on private equity fund disclosure lowers returns to private equity investing. By analogy, one might similarly argue that greater transparency in corporate governance lowers stock market returns, which is known to be untrue (La Porta et al., 1997, 1998) Similarly, Cumming and Walz (2004) show that based on more than 5000 private equity investments in 39 countries, better legal and accounting standards enhances private equity returns around the world.

2.8.6 Influence of government and regulatory bodies in South Africa

National Treasury and the Financial Services Board are publishers of Regulation 28 of section 36 of the Pensions Fund Act (no 24 of 1956) that governs the pension industry in South Africa. It regulates the investments allowed by South African retirement funds.

The National Treasury is responsible for coordinating macroeconomic policy and promoting the national fiscal policy framework. Its role is defined by the Constitution of the Republic of South Africa and in the Public Finance Management Act. The National Treasury coordinates intergovernmental financial relations, manages the budget preparation process and exercises control over the implementation of the annual national budget, including any adjustments budgets. It also performs functions assigned to it in other legislation. On the other hand, the FSB supervises the exercise of control over the financial services industry in terms of several acts of Parliament that entrust regulatory functions to registrars of long-term insurance, short-term insurance, pension funds, collective investments schemes, financial services providers, exchanges and financial markets. The FSB provides information to users of financial products and services.

Regulation 28 to the Pension Funds Act imposed limits on the investments of retirement funds. These were intended to protect funds against making imprudent investments once the requirement to invest in prescribed assets had fallen away. Over the past few years, the investment avenues available to retirement funds have become significantly more complicated with the incorporation of derivatives, structured products and foreign investments over which the trustees may have no control in terms of the sectors in which the foreign investment manager invests. Many of these new types of investment are not included in Regulation 28 as it stands today.

The investment of the assets of the fund is one of the most critical of all the management functions carried out by the trustees. Particularly now that most members belong to defined contribution funds in which the investment risk is carried by members, most members will experience, directly, any losses suffered, or lower than average returns earned, by the fund.

In South Africa, a wide range of retirement funds measured in many different ways: by size of assets, by type of fund, by number of members, and by the financial sophistication of trustees and their advisors. Many trustees are newly appointed and have received only modest education on their duties.

A strong argument can, therefore, be made that such trustees should be guided in the investment of funds. It is however best to do this that is contentious.

2.8.6.1 The current regulation

Regulation 28 prescribes maxima for various types of investment that may be made by a retirement fund. They are intended to guide funds which invest in their own name. The maxima relate to the fair value of the assets of the fund under the direct control of the trustees, and exclude from consideration insurance policies that provide any form of guarantee, or where performance is linked to the performance of underlying assets and the investment of the underlying assets conforms to the requirements of regulation 28, and unit trusts which conform to the requirements of regulation 28.

The maxima are broadly:

- No more than 75 per cent may be invested in equities
- No more than 25 per cent may be invested in property
- No more than 90 per cent may be invested in a combination of equities and property
- No more than 5 per cent may be invested in the sponsoring employer
- No more than 15 per cent may be invested in a large capitalisation listed equity, and 10 per cent in any single other equity
- No more than 20 per cent may be invested with any single bank
- No more than 15 per cent may be invested off-shore
- No more than 2,5 per cent may be invested in "other assets". Derivative instruments are not defined, leaving them to fall within this "other assets" category.

There is provision for the Registrar to exempt funds from some or all of these maxima on prior written application.

2.8.6.2 Problems with the current regulation

Institutional investors are not told how to go about determining what they should do, in their particular circumstances, in order to achieve their objectives. There is no requirement to consult anyone, much less an expert. In many cases, there is no independent check on whether their selected strategy is appropriate to their objectives. Institutional investors can adopt a completely inappropriate investment strategy provided the maxima in the regulation are not exceeded. In fact, using the innovative products developed by insurers and others they can bypass the regulations with impunity. If any member wanted to challenge the investment decisions of the trustees, the member would have a difficult task to establish their failure to exercise their fiduciary duties.

South Africa is opened up to international financial services organisations. Structured products may convert income into capital gains.

2.8.6.3 Advantages of such regulations

These kind of government regulations prevent certain investments being invested in any single asset.

2.8.6.4 An alternative approach

The institutional investors must be encouraged to consider the risks involved and develop a prudent overall philosophy for the fund's assets regardless of the type of investment manager. It is essential, therefore that the "gaps" are filled, and any revised regulation includes investments with insurers within comparable regulations to investments registered in the name of the fund. The revised regulation must be flexible to allow for (very rapid) new product development, as well as individual fund and member circumstances. Individual investment choice must be covered.

There should be scope to accommodate the small fund which will invest in a pooled portfolio either with an insurer or a unit trust. After considering the issues, the sub-committee has recommended replacing the existing regulation with a process. This has been embodied in the attached draft regulation in place of the existing faulty regulation 28.

The above mentioned concerns probed for the amalgamation of Regulation 28 and expected to remove foreign limits removed from the regulation, increase limit on debt issued by banks significantly, recognise commodities as an asset class with a 10 per cent limit, recognise hedge funds as an asset class with a 10 per cent limit and furthermore recognise private equity funds as an asset class with a 10 per cent limit. The new Draft Replacement of Regulation 28 Act is shown in the table below;

Table 3 : Draft of Regulation 28 published end July 2011

8.	HEDGE FUNDS, PRIVATE EQUITY FUNDS AND ANY OTHER ASSET NOT REFERRED TO IN THIS SCHEDULE		15%
8.1	Inside the Republic and foreign assets		
	(a)	Hedge funds	10%
		(i) Fund of hedge funds	5%, per fund
		(ii) Hedge funds	2.5%, per fund
	(b)	Private equity funds	10%
		(i) Fund of private equity funds	5%, per fund
		(ii) Private equity funds	2.5%, per fund
	(c)	Other assets not referred to in this schedule and excluding a hedge fund or private equity fund	2.5%

Source: Financial Services Board

2.8.7 Review of Institutional Investors' Attitudes to Private Equity Fund Regulation

To examine attitudes of market participants to these issues, Cumming and Johan (2005a) carried out a survey of Dutch institutional investors in 2005. The survey data comprise information from 100 Dutch institutions (pension funds, insurance companies and banks), 29 of which are currently investing in private equity and 35 of which plan on investing in private equity over the period 2006-2010. The data comprise extremely specific details on the institutions' portfolio management practices, as well as their perceptions of the importance of various economic, legal and institutional factors that influence their portfolio allocation decisions. Institutional investors' positions regarding their objectives in their strategic asset allocation were sought. More significantly, views regarding the perceived risks and hurdles faced by such investors were sought to determine main concerns in adding private equity as a type of asset.

In their study, they list main risks and hurdles perceived by those institutions that intend to invest in private equity in 2006 – 2010. On average, the most important risk faced by institutional investors is the illiquidity of the investment and lack of performance transparency (both ranked an average of 3.7 on a 1 – 5 scale where 5 is the highest). Private equity investments can take many years to bring to fruition (typically at least 2 years) in an exit event. Other important risks associated with private equity investment include risk of default, lack of know-how, and governance costs. As a related matter, there are legal and contractual issues with establishing private equity funds, and writing these contracts is viewed as a major hurdle to private equity investment (ranked an average of 3.4 on a scale of 1 – 5).

3 Chapter 3: Methodology

This chapter describes the methods used to conduct this study. The chapter begins with reintroduction of methods used and explains with relevant literature the use of these tools. It continues to discuss data sampling. Thereafter the chapter concludes with a description of the data collection methods, with information about the instrument used, and an explanation of the data analysis methods. Finally, the chapter gives a summary of the population that was studied.

3.1.1 Introduction

In this research study, we will use a survey based research design. Hofstee (2006) defines a survey based research design as a way to essentially elicit information from a limited number of individuals who are presumed to have information that is sought, who are able and willing to communicate, and who are intended to be representative of a larger group. Surveys can range from highly structured questionnaires to unstructured in-depth interviews. He states that one has to be careful of type of questions asked, how you ask the questions, the sample size, how representative the sample, time and cost factors and ethical questions.

Due to the nature of this study, structured questionnaires will be used to gather the information required. Structured questionnaires ask all respondents the same questions and give them the same options in answering. Unstructured interviews ask different questions of different interviews and allow digression from a set format, either in the questions or the answers, depending on circumstances.

Mouton (2001) recommends using structured questionnaires as a tool to for investigative studies. He points that there are various advantages of using structured questions namely; ease of interpretation, ability to control interviewees, offer confidentiality to respondents and easily turn into quantitative results. However, Mouton (2001) highlights the disadvantages of not allowing the researcher to interact, or often even to observe respondents. Respondents are also limited in the depth to which the researcher is able to probe any particular respondent and do not allow digression from the set format.

The study aims to investigate perceptions of private equity as an asset class in an institutional portfolio within a South African institutional environment. As the data required for performing the study is not publicly available, data collection was accomplished through a survey instrument.

3.1.2 Data Sample

Sampling refers to the process of selecting participants for a study (Gay, Mills & Airasan, 2006). A sampling plan will vary depending on the research question and design of the study. The sampling procedure that was used by the researcher was purposive sample, a non-random sample. A purposive sample refers to a non-random sample where a researcher selects participants who are available and that meet a certain criteria (Creswell, 2003). The participants were restricted to those at the researcher's database who are currently investors classified under institution and participant's willingness to partake in the study. The participants selected were also chosen based on the value of assets they were currently holding on other different asset classes. Sample size of this research study included **367** institutional investors in South Africa. In this study, an institutional investor is classified as an investor who is managing pension funds, property portfolios, asset manager and other consultants that represent institutions.

3.1.3 Data collection and techniques

The section deals with how the data was collected. It further explains the identification of potential respondents. Thereafter, it explains the categorisation of sections within the questionnaire.

3.1.3.1 Data collection

The questionnaire was distributed to the participants as follows:

Institutional investors were first telephoned to enlist their participation. Some of them were either travelling on business, on leave or not interested in taking part into the survey.

Those institutional investors identified and showed interest were sent a questionnaire by email with an attached letterhead from University of Cape Town. The letter was emailed with a cover letter requesting participation in this study along with a signature, indicating the nature of the researcher.

The cover letter requested that if recipients were not actively involved in managing their firm's investment portfolio that they give the survey to someone in their company who was involved. The survey contained a code number to avoid potentially including duplicate responses in the analysis. The cover letter informed potential respondents that we would report the results in summary form and would not disclose any information involving individual companies.

A second email of the survey to non-respondents to increase the response rate and to reduce potential non-response bias. As an inducement to increase the response rate, all interested parties were offered to receive an executive summary of the results after completion.

It was crucial to ensure majority of the largest institutions are included in the survey. The likely difficulties in this regard were the following;

- Confidentiality – even though confidentiality was assured by the researcher, the researcher was an employee in South Africa and might have been seen as a competitor. Despite this drawback, participants were assured in writing that they would not be identified individually or as an institution in the thesis (or otherwise) and they would receive a copy of the final thesis if interested.
- Time and interests in completing the questionnaire, or other personal, or policy issues. Respondents were assured that a copy of the results would be made available to them.

3.1.3.2 Identification of potential respondents

The nature of private equity or venture capital funds originated from accredited individual investors who have substantial net worth and had expectation that such funds will continue to increase. Over the years, there has been a noticeable increase by institutional investors to invest in this asset class. In this study, institutional investors are classified as pension funds, provident funds, asset managers and or insurance company funds.

The researcher identified 367 institutional investors at the time of sending the questionnaire that were appropriate for the study. Among the participants identified, they were either managing a provident fund, pension fund or insurance fund. A profile of the respondents and their firms were obtained. The survey asked respondents to indicate their general opinion with closed-end statements.

3.1.3.3 Questionnaire categorisation of sections

The final questionnaire was divided into several conceptual areas:

Assets under management. This area was used to identify the size of the institutional portfolio.

Asset classes under portfolio. This area was used to understand asset classes that these respondents manage and have responsibility of making investment decisions.

Investment in private equity. The respondents were asked whether they invest in the asset class.

Goals or objectives of private equity investments. This area required respondents to select their primary goals in making a private equity investment.

Benchmark on private equity returns. Respondents were asked to identify their typical benchmark index for their private equity returns.

Problems regarding private equity investments. This area listed all the problems that any investments would encounter. Respondents were asked to select their most identified concerns in private equity investments.

Institutional background. This enabled appropriate categorisation of the respondent ensuring the right respondent completed the questionnaire.

4 Chapter 4: Presentation and analysis of data

This chapter provides a presentation and analysis of the data that were collected through the study. The section examines the respondent population and subsequent individual factors such as type of respondents and total value of institutional portfolio. Furthermore, analysis is presented on the type of asset class the institutional investors hold and whether they invest in private equity. The section also present goals of respondents when they invest in private equity and also concerns they have regarding private equity as an asset class.

The intent of this study was to examine the attitudes and perceptions towards private equity as an asset class in an institutional portfolio.

4.1 Sample

The sample consisted of a total of 19 institutional investors from South Africa only. From a total potential institutional investor population of 367 identified, this represented a response rate of just over six percent.

4.2 Presentation of data

4.2.1 Respondents characterisation

Data on demographic factors were collected on the respondents regarding the organisation type to which the respondents belong. Majority of the respondents that represent pension fund as institutional investors was 47 per cent represented in Figure 13.

Figure 13 : Type of respondents

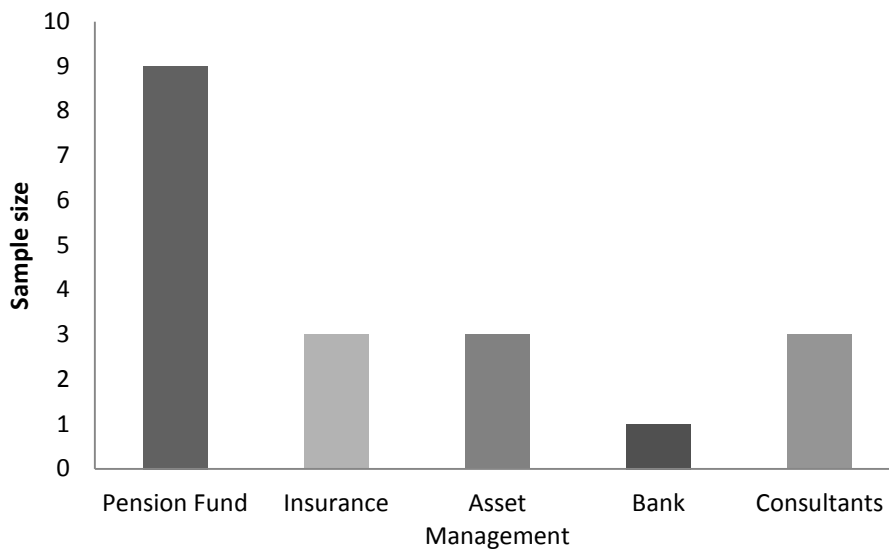
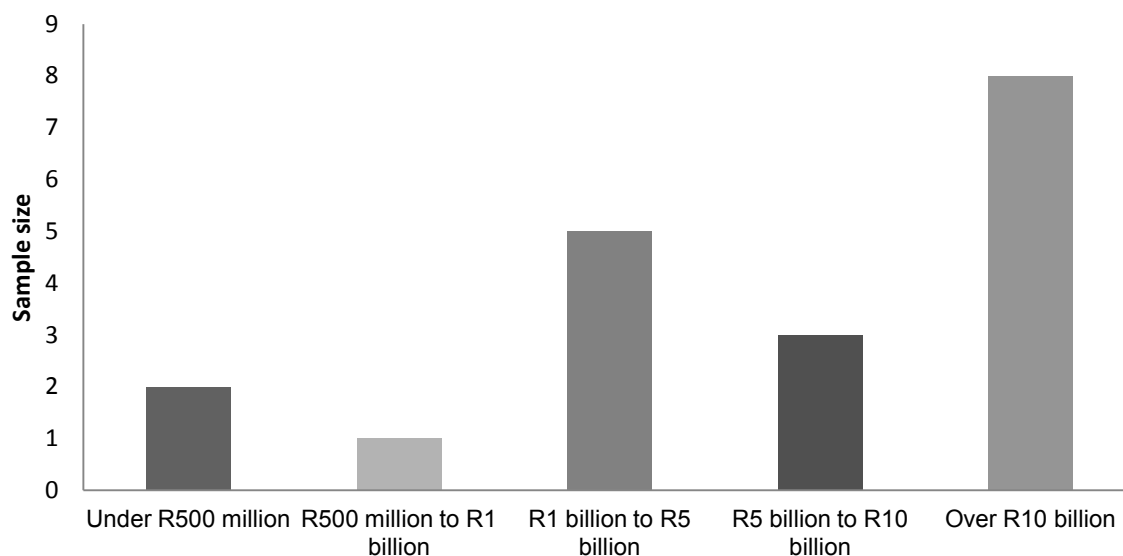


Figure 14 provides a histogram of the size of the total fund portfolio of the respondents in South Africa. Over 42 per cent of the total institutional portfolios had portfolios of over 10 billion rands. Over 26 per cent of the respondents' portfolios were between R1 – 5 billion. The distribution of the size of the institutional portfolio is skewed to the right. The distribution shape is more likely related to the fact that the sample size is biased towards large portfolio size. On the other hand, this shape could also indicate that most of the respondents currently investing in the private equity sector tend to have large portfolios.

Figure 14 : Value of total fund portfolio



4.2.2 Asset class in an institutional portfolio

Table 4 contains the type of asset class by those respondents that currently have in their portfolios other than private equity as an asset class (19 respondents). Not surprisingly, 100 per cent of respondents invested in equities and bonds. South African Cash was the second most popular type of asset class with 89 per cent of respondents holding investments in this asset classes. Since questionnaire was targeted at organisations with a higher probability of having these three common asset classes in their portfolios this bias would be expected. Again, the selection of respondents makes the sample even more biased towards portfolios holding SA Equities, SA Bonds and SA Cash. SA Hedge funds was the least popular asset class with 21 per cent of respondents holding this asset class. Foreign Equities was also one of the most popular asset class with 84 per cent of respondents holding this asset class as.

It is not alarming that SA Hedge Funds are the least popular asset class. As part of SA Regulation 28 Act, hedge funds are classified as an alternative asset class with a maximum of 10 per cent asset allocation allowed by institutional investors. According to Hood and Nofsinger (2007), institutional investors tend to allocate no more than 5 per cent of their portfolio to hedge funds and they are mostly limited to sophisticated institutional investors.

Table 4 : Type of asset class in an institutional portfolio

	Frequency	% of respondents
SA Equities	19	100
SA Bonds	19	100
SA Property	13	68
SA Cash	17	89
SA Hedge Funds	4	21
Foreign Equities	16	84
Foreign Bonds	12	63
Other ⁸	6	32

Ennis and Sebastian (2005) stated that investor circumstance should play a role in determining whether an allocation to private equity is appropriate and how large it should be. *Skill, risk tolerance, liquidity requirement, portfolio size, internal resources, board experience, and capacity for confidential dealing can all come into play in making the decision. Upon careful consideration, some thoughtful investors will rightly decide to exclude private equity from their portfolio.*

4.2.3 Investments in private equity

Respondents were asked about the percentage of their investments held in the private equity as an asset class. According to the Regulation 28 Act, Table 5 shows consistency with regard to asset allocation of alternative investment to portfolios. The table also shows that 43 per cent of respondents invest in private equity. Between four and five per cent, there was only 11 per cent of respondents that invest in private equity. Interestingly, 37 per cent of respondents indicated that they did not hold investment in private equity.

Table 5 : Investments in private equity

Percentage of asset allocation	% of respondents
0 – 2%	42
2% - 3%	0
3% - 4%	5
4%- 5%	11
Over 5%	5
None	37

⁸Two institutional investors indicated that they hold derivatives in their portfolios

Table 6 : Percentage of investment in private equity by size of institutional investor portfolio

	Under R500 million	R500 million to R1 billion	R1 billion to R5 billion	R5 billion to R10 billion	Over R10 billion
0 – 2%:	0%	13%	25%	25%	38%
2% - 3%:	0%	0%	0%	0%	0%
3% - 4%:	0%	0%	0%	0%	13%
4%- 5%:	0%	0%	0%	0%	25%
Over 5%:	0%	0%	0%	0%	13%
None:	25%	0%	13%	13%	38%

Table 6 indicates that asset size was a statistically significant factor to invest in private equity. A significant number of respondents with over R10 billion of assets indicated that they hold investment in private equity. According to Chemla (2004) large private equity funds were more likely to invest in private equity than small funds. Interestingly, the funds smaller than R1 billion that invested in private equity allocated less than two per cent of their assets to this asset class.

Chemla (2004) obtained US pension fund asset allocation data from Pensions and Investments magazine as of September 2001. The 1000 pension funds in the data had total assets of US\$4,795 billion, including US\$3,611 billion in defined benefit plans. The data indicated that the 913 funds that had a defined benefit component invested on average 1.4% of their assets in private equity, including 0.4% in venture capital. Total private equity investment accounted for 3.4% of the total assets of the funds that invested in private equity, including 0.8% in venture capital. Out of these 913 funds, 257 invested on average 4.9% of their assets in private equity, including 1.9% in venture capital. Total investment in private equity amounted to US\$108.1bn, including \$27.8bn in venture capital.

Furthermore, Chemla (2004) noted that asset size appeared to be an important determinant of the decision to invest in private equity. Specifically, large funds were more likely to invest in private equity: About 68% of the funds with assets worth more than \$10 billion invested in private equity, but only 12% of the funds with assets that were below \$1 billion invested in this asset class. Funds that had defined benefit assets worth more than US\$10bn invested on average 4.4% of their assets in private equity, but this percentage only dropped to 0.5% for funds with defined benefit assets smaller than \$1 billion. Among the funds that invested in private equity, asset size is also important. The funds with assets worth more than \$10 billion invested 6.6% of their portfolio in this asset class, while funds smaller than \$1 billion invested 4.5% of their assets.

Chemla (2004) also did find that among the funds that invest in private equity, the small funds invest more in venture capital than the others. This illustrated that large funds tend to invest a larger fraction of their assets in other forms of private equity, most of which represents investment in buyout funds.

4.2.4 Objectives of investor private equity holdings

The institutional investors were asked about what goals they had for their private equity holdings. Their answers (see Table 7) show that they expect private equity investment to perform primarily as most important goal and secondly as a portfolio diversification asset, with cash flow, tax benefits and portfolio regulations as less important goals. The highest goal, with 68 per cent of institutional investors, was primarily seeking total expected return, followed by risk diversification which had 53 per cent and third was social responsible investment with 47 per cent. Cumming and Johan (2005c) focus on institutional investor private equity allocations and provide comparisons to public equity and show similarities in the determinants of socially responsible investment for different asset classes. In their study, they show that socially responsible investment was more common among institutional investors with a greater international investment focus in Europe and the United States relative to domestic Dutch investment and investment in Asia.

Table 7 : Goals of institutional investors for their overall portfolio in private equity

	% of respondents
Potential for capital appreciation	37
Cash flow	0
Total expected return	68
Risk diversification	53
Match against liabilities	11
Tax benefits	0
Other governmental subsidies	5
Lack of other investment opportunities elsewhere	5
Portfolio regulations	0
Socially responsible investment	47
Economic upliftment	26

Furthermore, potential for capital appreciation appeared to be more influential in the institutional investors' decision regarding private equity with 47 per cent of institutional investors indicating it as their fourth primary goal. Moreover, government subsidies and tax benefits did not appear to be incentive in investing in private equity.

It is interesting to note that 26 per cent of respondents in the present survey nominated economic upliftment as the most important reason to hold private equity. This validated a survey done by the DBSA and SAVCA that highlighted the broader social and economic impact that private equity has had in South Africa as a whole. Lack of other investment opportunities elsewhere factor appeared to be less influential in the institutional investors' decisions regarding private equity.

4.2.5 Benchmark of private equity returns

Institutional investors were also asked about what benchmark they had use for their private equity investments.

Figure 15: Benchmark of private equity returns

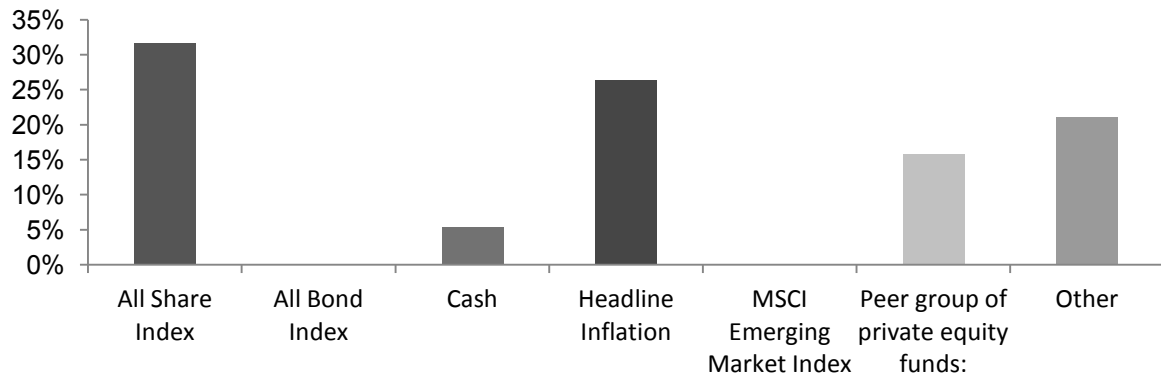


Figure 15 shows that All Share Index is the most important benchmark measure of private equity returns by institutional investors followed by Headline Inflation as a second preferred benchmark. Standard indices, such as the S&P500 and All Share Index provide measures of overall market returns and tend to act as benchmark for private equity returns as previously mentioned in the literature section.

According to Frei and Studer (2004) highlighted various reasons why performance measurements for PE investments are more complicated than for traditional financial investments. Frei and Studer (2004) used listed indices such as NASDAQ Composite index. All PE investments were benchmarked against the S&P 500 index for U.S. investments and the MSCI Europe Total Return Index for European investments. Their study concluded that Private equity did, on average, outperform public equity markets by around 5% in Europe and around 3% in the U.S. Note, however, that the geometric average return of the chosen benchmark index for the European investments (8.7%) over the 15-year period from 1988 until 2002 was 2.7% lower than the return of the chosen benchmark index for the U.S. investments (11.5%). However investors should be aware of shortcomings from listed indices as all these asset classes are different in nature.

4.2.6 Institutional experiences regarding private equity

In order to gain a better understanding of the investors' perception regarding the problems associated with the private equity sector, the respondents were asked to rank what they considered to be the top problems in order of importance. These rankings are shown in the frequency Table 8.

The rankings in Table 8 seem to indicate that the majority of respondents perceive lack of liquidity issues as being the key problems associated with investing in the private equity sector. Shortage of data, with 53 per cent of institutional investors, was the second most problem in investment in private equity. Concerns surrounding poor market information and lack of transparency with 47 per cent respectively come as a third factors associated with problems in private equity sector. Unsurprisingly, the respondents referred to the regulatory, political and social risks are to be a much less important problem associated with investing in private equity.

Lack of liquidity seems to have a significant influence over the respondents' investment strategy. Private equity investment is essentially illiquid (Sahlmann, 1990, Lerner and Schoar, 2003). Most pension fund managers that responded to our survey agreed with the fact that liquidity was a problem that could restrict private equity investment. According to Ennis and Sebastian (2005) illiquidity of private investments is another area that deserves attention. The less an investor needs liquidity, the greater is the tolerance for private equity investments. This rules them out for participant-directed defined contribution plans, but some give-up in liquidity need not be a significant barrier for many defined benefit pension plans, endowments, or foundation funds. While most of an investor's assets will be able to be sold fairly easily on the market at a fair price, private equity investments may not be able to be sold at all, and if they are it will usually be at a significant discount. In fact, the return on most funds is negative in its beginning stages, as early losses are taken before significant gains, a phenomenon known as the J-curve.

Table 8 : Problems regarding private equity investment

	Responses	Percent
Shortage of data	10	53
Lack of transparency	9	47
Poor market information	9	47
Low returns	0	0
Tenancy regulation	1	5
Amount of profit they take (fees)	7	37
Integrity of investors	2	11
Lack of liquidity	14	74
Lack of fund management expertise	5	26
Regulatory, political and social risks	2	11
Small universe of investment	9	47
Other	3	16

Cumming and Johan (2005a) carried out a survey of Dutch institutional investors in 2005. The survey data comprise information from 100 Dutch institutions (pension funds, insurance companies and banks), 29 of which are currently investing in private equity and 35 of which plan on investing in private equity over the period 2006-2010. On average, the most important risk faced by institutional investors is the illiquidity of the investment and lack of performance transparency (both ranked an average of 3.7 on a 1 – 5 scale where 5 is the highest). Private equity investments can take many years to bring to fruition (typically at least 2 years) in an exit event.

With regard to lack of transparency, Cumming and Johan (2005a) believed however that such additional, more informative disclosure of performance results should not be an issue of argument among private equity fund managers and their institutional investors as the “public” dissemination of such information will be limited to the extent that the “public” has a legal right to the information. The “public” who invest in a certain insurance company should have access to the details of that insurance company’s investments. The “public” who are required to place their pension fund with a certain company should have access to the financial details of that company. The “public” however will not have a right to access the financial report provided by a private equity fund to its wealthy private limited partner. This is also the case for a limited partner which is also an institution utilizing only private funds. Thus to say that the financial information will be made totally public will be an overstatement. This does not mean that specific investment details would be made public, as that level of detail would likely be detrimental to the private equity fund as well as its investee companies.

However, annual aggregate portfolio valuations of a private equity funds do not disclose any individual investment details, and yet such aggregated valuations would enable institutional investors to make more informed decisions about whether to invest in private equity. In turn, as mentioned earlier in the literature section, institutional investors should also be required to disclose the “valuation” of their private equity investments in their annual accounts, to allow their own “public” investors to make informed decisions about their investments in that institution.

5 Chapter 5: Summary

5.1 Summary overview of the study

This research study analysed the institutional perceptions of private equity as an asset class in an institutional portfolio. In order to understand private equity history, characteristics and aspects evolve around private equity have been discussed. This section will discuss the conclusion and recommendations based on the literature review and results.

Chapter one discussed the background to the study, followed by the problem statement and research objectives.

Chapter two concentrated on literature review and presented history, definitions and characteristics of private equity.

The chapter also looked at influence of Black Equity Empowerment as a major player in private equity in South Africa.

The chapter reviewed literature on performance of private equity. There have been numerous studies conducted around return of private equity funds relative to investments in public equity. Interestingly, private equity in South Africa has performed better than public equity. In Europe and United States, this has also been a trend according to the studies conducted.

The chapter touched on risk and return of private equity in institutional portfolios. Various studies suggest that there are various measures one can apply to measure associated risk and return of private equity. Most studies suggest use of Internal Rate of Return as the most appropriate measure of benchmark. Public Markets Equivalent is a common measure among institutional investors to measure private equity.

Portfolio management together with asset allocation decision is also reviewed. Institutional investors who have large portfolios are more comfortable allocating assets to private equity and illiquidity is not a major concern as there are available assets.

Regulatory framework of private equity was also discussed. The chapter touched on South African regulatory framework and international regulatory studies conducted around this asset class.

Chapter three focused on the research design and methodology used in the research.

Chapter four presents the results of the research obtained from empirical investigation conducted regarding perception of private equity as an asset class in an institutional portfolio.

5.2 Key findings

With regard to goals of investing in private equity, higher returns and potential for capital appreciation appeared to be more influential in the institutional investors' decision regarding private equity. It is also interesting to note that a number of respondents in the present survey nominated economic upliftment as the most important reason to hold private equity.

Most importantly, a benchmark measure of private equity returns by institutional investors was the public market index followed by Headline Inflation as a second preferred benchmark.

The study found that illiquidity is a major concern which agrees with literature. According to Ennis and Sebastian (2005) illiquidity of private investments is another area that deserves attention. The less an investor needs liquidity, the greater is the tolerance for private equity investments. While most of an investor's assets will be able to be sold fairly easily on the market at a fair price, private equity investments may not be able to be sold at all, and if they are it will usually be at a significant discount. In addition to the illiquidity, an investment in a private equity fund has a long time horizon. The typical fund lasts up to 10 years, and it is usually many years before the committed capital is returned.

Overall, the development of pooled investment vehicles, such as funds of funds, may encourage small pension funds to invest in private equity. They may reduce the cost of investing in this asset class as well as the illiquidity that is inherent to private equity.

Large funds were more likely to invest in private equity than small funds. Specifically, funds with assets that exceeded R10 billion invested in private equity, while only small funds with assets worth less than R500 million have not invested in this asset class. Asset size was a statistically significant factor to invest in private equity.

Shortage of data is a second major concern with regard to investing in the private equity sector. The enhanced information flow on private equity can help to manage investors' expectations and reduces the perceived risk of the asset class by giving account of historical performances.

5.3 Limitation of the study

A number of limitations were identified whilst conducting the research study. Institutional investors were reluctant to give information about management of their portfolio and their involvement in private equity due to sensitivity of the subject.

Another limitation concerns the common method bias, which arises when a common method (such as a survey instrument) is used to gather data. Some of the institutional investors were unable to open the survey link due to security firewalls used by their corporations.

5.4 Further research

Relatively little research has been done on private equity in South Africa so far. The most comprehensive research on the topic is probably the paper by Missankov et al., (2006). There is ample opportunity for further research in the field.

The study's findings open multiple avenues for research concerning the influence of perceived risk on the decision-making process of institutional investors. Another intriguing opportunity for further inquiry relates to assessing the relationship between institutional investors' risk perceptions and their subsequent investment decision making within a behavioural decision-making framework in their portfolio.

Other research areas;

- How illiquidity setback can be solved to encourage flows into this asset class?
- Overcoming shortage of data as a major setback in investing into private equity?

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7 APPENDIX

7.1 Ethics letter of approval

UNIVERSITY OF CAPE TOWN



Faculty of Commerce Ethics in Research Committee

Courier: Room 2.21 Leslie Commerce Building Upper Campus University of Cape Town
Post: University of Cape Town • Private Bag • Rondebosch 7701
Email: Irwin.brown@uct.ac.za
Telephone: +27 21 650-2311
Fax No.: +27 21 689-7570

28 November 2011

Ms Akhona Ngwane
Department of Accounting
University of Cape Town
angwane@investec.co.za

Dear Ms Ngwane

Project title: Private equity as an asset class in an institutional portfolio

This letter serves to confirm that the project entitled, "**Private equity as an asset class in an institutional portfolio**", as described in your final submitted protocol dated 4 July 2011, has been approved. You may proceed with the research.

Please note that if you make any substantial change in your research procedure that could affect the experiences of the participants, you must submit a revised protocol to the Committee for approval.

Best wishes for great success with your research.

Regards,

I BROWN

Prof Irwin Brown
Commerce Faculty Ethics in Research Committee

"OUR MISSION is to be outstanding teaching and research university,
educating for life and addressing the challenges facing our society."

7.2 Letter to respondents



UNIVERSITY OF CAPE TOWN

Department of Accounting

Leslie Commerce Building
Engineering Mall - Upper Campus
OR Private Bag X3 - Rondebosch 7701
Telephone: (021) 650-2269
Fax No: (021) 589-7582
<http://www.commerce.uct.ac.za/accounting>

Dear Sir/Madam

Survey on investment in private equity

I am currently studying towards a Masters degree in Financial Management at the University of Cape Town. My thesis is on the understudied area of investment in the private equity sector by South African funds.

I contacted your company telephonically and asked for the contact details of the fund manager; thus this email reaching you. Please note that individual firms, funds or persons will not be identified in the thesis. All responses will be treated confidentially and anonymously. Upon completion, results will be made available to you at your request.

Your participation is crucial to the success of the study and is greatly appreciated.

Yours sincerely,

Akhona Ngwane

Masters in Financial Management Candidate

University of Cape Town

Mobile: 082 720 1942

7.3 Questionnaire

1. What is the approximate value of your total fund portfolio?
 - Under R500 million
 - R500 million to R1 billion
 - R1 billion to R5 billion
 - R5 billion to R10 billion
 - Over R10 billion

2. For what types of asset classes are you currently holding on your portfolio:
 - SA Equities
 - SA Bonds
 - SA Property
 - SA Cash
 - SA Hedge Funds
 - Foreign Equities
 - Foreign Bonds
 - Other (specify) _____

3. What is the approximate percentage of your investment in the private equity sector?
 - 0 – 2%
 - 2% - 3%
 - 3% - 4%
 - 4%- 5%
 - Over 5%
 - None

4. Please select below typical primary goals in investing into private equity investment
 - Potential for capital appreciation _____
 - Cash flow _____
 - Total expected return _____
 - Risk diversification _____
 - Match against liabilities _____
 - Tax benefits _____
 - Other governmental subsidies _____
 - Lack of other investment opportunities elsewhere _____
 - Portfolio regulations _____
 - Socially responsible investment _____
 - Economic upliftment _____
 - Other (please specify) _____

5. Your typical benchmark index on your private equity returns:
 - All Share Index
 - All Bond Index
 - Cash
 - Headline Inflation
 - MSCI Emerging Market Index
 - Peer group of private equity funds
 - Other _____

6. Please choose the following items regarding problems in private equity investment
 - Shortage of data
 - Lack of transparency
 - Poor market information

- Low returns
- Tenancy regulation
- Amount of profit they take (fees)
- Integrity of investors
- Lack of liquidity
- Lack of fund management expertise
- Regulatory, political and social risks
- Small universe of investment

Optional:

Organisation name: _____

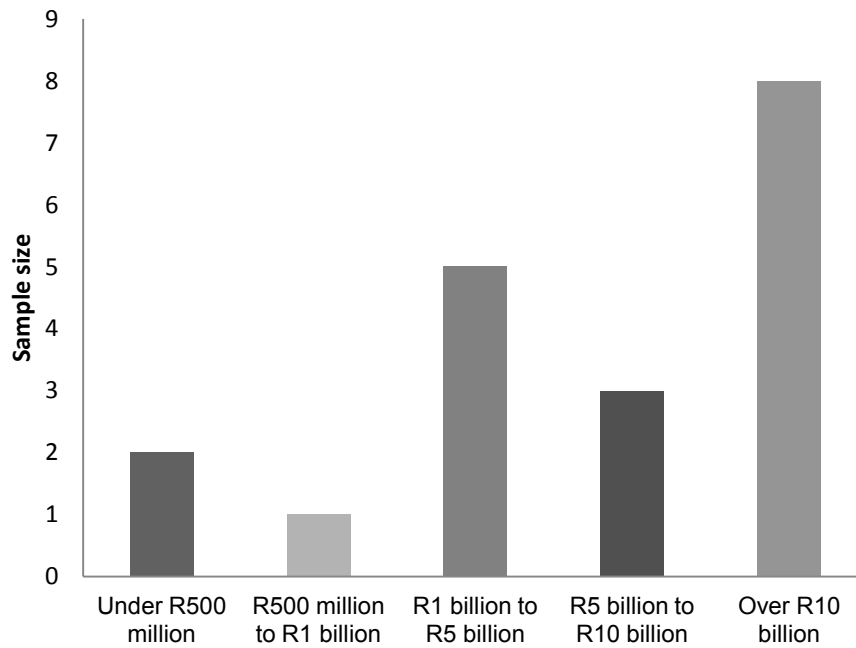
Interviewee's position within the organisation: _____

Email to send the research results: _____

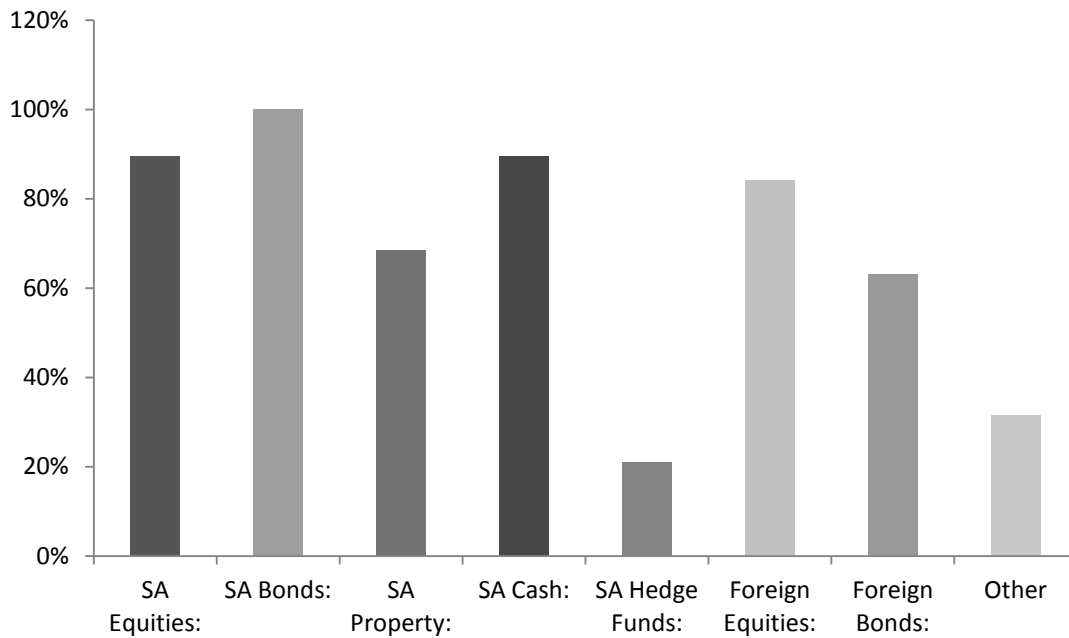
University of Cape Town

7.4 Standard results

7.4.1 What is the approximate value of your total fund portfolio?



7.4.2 For what types of asset classes are you currently holding on your portfolio



7.4.3 What is the approximate percentage of your investment in the private equity sector?

Percentage of asset allocation	% of respondents
0 – 2%	42
2% - 3%	0
3% - 4%	5
4%- 5%	11
Over 5%	5
None	37

University of Cape Town

7.4.4 Please select below typical primary goals in investing into private equity investment

	Responses	% of respondents
Potential for capital appreciation:	7	37%
Cash flow:	0	0%
Total expected return:	13	68%
Risk diversification:	10	53%
Match against liabilities:	2	11%
Tax benefits:	0	0%
Other governmental subsidies:	1	5%
Lack of other investment opportunities elsewhere:	1	5%
Portfolio regulations:	0	0%
Socially responsible investment:	9	47%
Economic upliftment:	5	26%

7.4.5 Your typical benchmark index on your private equity returns

	Responses	% of respondents
All Share Index	6	32%
All Bond Index	0	0%
Cash	1	5%
Headline Inflation	5	26%
MSCI Emerging Market Index	0	0%
Peer group of private equity funds:	3	16%
Other	4	21%

7.4.6 Please choose the following items regarding problems in private equity investment

	Responses	% of respondents
Shortage of data	10	53%
Lack of transparency	9	47%
Poor market information	9	47%
Low returns	0	0%
Tenancy regulation	1	5%
Amount of profit they take (fees)	7	37%
Integrity of investors	2	11%
Lack of liquidity	14	74%
Lack of fund management expertise	5	26%
Regulatory, political and social risks	2	11%
Small universe of investment	9	47%
Other	3	16%

7.5 Regulation 28 Act, Financial Services Board

	Column 1	Column 2	
Item	Categories or kinds of assets	Maximum percentage of aggregate fair value of total assets of fund	
		Per issuer/entity, as applicable, unless otherwise stated	For all issuers/entities
1.	CASH		
1.1	Inside the Republic	25%	100%
1.2	Foreign assets	5%	An amount as prescribed
2.	DEBT INSTRUMENTS, INCLUDING MONEY MARKET INSTRUMENTS AND ISLAMIC DEBT INSTRUMENTS		100% for debt instrument issued by or guaranteed by the Republic, otherwise 75%
2.1	Inside the Republic and foreign assets		
	(a) Debt instruments issued by, and loans to, the government of the Republic, or any bond or loan guaranteed by the Republic		100%
	(b) Debt instruments issued or guaranteed by the government of a foreign country	10%	An amount as prescribed
	(c) Debt instruments issued or guaranteed by a South African bank against its balance sheet:-		75%
	(i) with a market capitalisation of R20 billion or more, or an amount or conditions as prescribed	25%	
	(ii) with a market cap of between R2 billion and R20 billion, or an amount or conditions as prescribed	15%	
	(iii) with a market capitalisation of less than R2 billion, or an amount or conditions as prescribed	10%	

	(d)	Debt instruments issued or guaranteed by a wholly owned state owned entity, provincial government or local government in the Republic.	5%	25%
	(e)	Other debt instruments		25%
	(i)	Listed on an exchange	5%	25%
	(ii)	Not listed on an exchange	5%	15%
3.	EQUITIES			75%
3.1	Inside the Republic and foreign assets			
	(a)	Preference and ordinary shares in companies, excluding shares in property companies, listed on an exchange: -		75%
	(i)	with a market capitalisation of R20 billion or more, or an amount or conditions as prescribed	15%	
	(ii)	with a market capitalisation of between R2 billion and R20 billion, or an amount or conditions as prescribed	10%	
	(iii)	With a market capitalisation of less than R2 billion, or an amount or conditions as prescribed	5%	
	(b)	Preference and ordinary shares in companies, excluding shares in property companies, not listed on an exchange		10%
	(i)	Incorporated in the Republic	2.5%	10%
	(ii)	Not incorporated in the Republic	2.5%	5%
4.	IMMOVABLE PROPERTY			25%
4.1	Inside the Republic and foreign assets			
	(a)	Preference and ordinary shares in property companies, or units in a Collective Investment Scheme in Property, listed on an exchange:-		25%
	(i)	with a market capitalisation of R10 billion or more, or an amount or conditions as prescribed	15%	
	(ii)	with a market capitalisation of between R3 billion and R10 billion, or an amount or conditions as prescribed	10%	
	(iii)	with a market capitalisation of less than R3 billion, or an amount or conditions as prescribed	5%	
	(b)	Immovable property and claims secured by mortgage bonds thereon, preference and ordinary shares in property companies not listed on the exchange,	5%	15%

		secured loans and debentures		
5.	COMMODITIES			10%
5.1	Inside the Republic and foreign assets			
	(a)	Kruger Rands and other commodities listed on an exchange, including exchange traded commodities		
6.	INVESTMENTS IN THE BUSINESS OF A PARTICIPATING EMPLOYER INSIDE THE REPUBLIC IN TERMS OF: -			
	(a)	section 19(4) of the Pension Funds Act		10%
	(b)	To the extent it has been allowed by an exemption in terms of section 19(4A) of the Pension Funds Act		5%
7.	HOUSING LOANS GRANTED TO MEMBERS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 19(5)			95%
	(a)	Loan granted to member by the fund		5%
	(b)	Guarantee given by the fund for a housing loan given to member by a South African bank		95%
8.	HEDGE FUNDS, PRIVATE EQUITY FUNDS AND ANY OTHER ASSET NOT REFERRED TO IN THIS SCHEDULE			15%
8.1	Inside the Republic and foreign assets			
	(a)	Hedge funds		10%
	(i)	Fund of hedge funds	5%, per fund	
	(ii)	Hedge funds	2.5%, per fund	
	(b)	Private equity funds		10%
	(i)	Fund of private equity funds	5%, per fund	
	(ii)	Private equity funds	2.5%, per fund	
	(c)	Other assets not referred to in this schedule and excluding a hedge fund or private equity fund	2.5%	5%