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Determinants of Exit Mode for Leveraged Buyouts in South Africa

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A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

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ABSTRACT

The dramatic growth in South Africa's private equity and leveraged buyout market in recent years underlines the increased significance of the asset class and its importance in the asset allocation decision. This growth has equally been accompanied by the emergence of write-offs and unrealized investments carried at cost by private equity funds, eroding returns and generated value. This phenomenon mounts pressure on private equity practitioners to formulate and evolve better exit strategies in the face of an unfavourable exit climate compounded by dwindling arbitrage opportunities. This study therefore seeks to explore and establish the determinants of exit mode in the private equity industry thereby driving the evolution of exit strategy formulation and also contributing to the limited understanding of decision making in the industry. The study employs a mixed methods approach or methodological triangulation to provide empirical evidence supported by qualitative findings to achieve the objectives of identifying factors which predict or impact on the choice of exit mode for leveraged buyouts.

Using a sample of 46 exited investments in the South African private equity industry, the study used various statistical techniques namely; descriptive analysis, independent samples t-tests, one-way analysis of variance (ANOVA), trinomial logistic regression modelling and robustness tests to identify the explanatory factors of exit mode for leveraged buyouts. The study found empirical evidence that the portfolio company's operating performance and size (total investment) can significantly distinguish between choice of initial public offering (IPO) and secondary buyout as exit modes.

The other determinants or predictors of exit mode; investment holding period and industry concentration were found not to have a significant contribution to the choice of exit mode via the quantitative analysis. Elite interviews were conducted with private equity experts selected through a purposive sampling technique. The findings of the qualitative analysis confirmed and supported the empirical findings pertaining to the predictive abilities firm size and operating performance in the choice of exit mode. Respondents to the study confirmed

that investment holding period plays a diminished role as a predictor of exit mode owing to timing, macro-economic factors and the experience of the private equity manager all playing a either a direct, a mediating or moderating role in the choice of exit mode. In the South African context, respondents supported the consolidation hypothesis and justified that South African companies' acquisition strategies are driven by the need to consolidate locally in order to gain access to new markets and improve the parent company's market share. Therefore, portfolio companies in highly fragmented industries are ideal targets for strategic buyers and as such are likely to be exited via trade sales. This study also revealed that the choice of exit mode has no bearing on the ex-post realized exit multiple.

The key findings of this study can be surmised as follows; the portfolio company's operating performance and size are significant predictors of choice of exit mode. Investee companies in highly fragmented industries are likely to be exited via trade sales to strategic acquirers. Despite these findings, a fund manager's competitive position to originate superior deal flow as well as negotiate higher exit multiples is greatly enhanced by the manager's industry experience and his/her professional network in the financial/investor community. Other factors such as the robustness of the mergers and acquisitions markets, pressure from fundraising activities and existence of multiple arbitrage opportunities are also potential key drivers of exit strategy.

DECLARATION

I, Seetsele Seetswane declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Seetsele Seetswane

Signed at Johannesburg

On the …….. Day of June 2014.

DEDICATION

Modimo o tla phimola dikeledi tsotlhe mo matlhong a bone; loso ga lo ne lo tlhola lo nna teng, le bohutsana le selelo le botlhoko ga di ne di tlhola di nna teng; gonne dilo tsa ntlha di fetile.

Tshenolo 21:4

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Ultimately, I give thanks to my *badimo* for affording me the privilege of life and good health for I am only their reflection.

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1 INTRODUCTION

1.1 Purpose of the study

The purpose of this research is to establish and explore determinants of exit mode for leveraged buyouts in South Africa. The research will focus on two major categories of predictive factors namely: i) Extrinsic macroeconomic and capital market factors, ii) Intrinsic fund or firm-specific factors influencing exit mode.

The findings of this research will provide valuable insights into factors which influence exit mode decision-making in leveraged buyouts in South Africa. Successful exit planning is one of the most critical success factors in private equity. A successful choice of exit strategy enables private equity investors to capture generated value and raise funds for subsequent private equity cycles. The research will unmask the relative impact of the determinants on the choice of exit mode, enabling private equity practitioners to set key priorities for improving profitability and performance of leveraged buyouts.

1.2 Context of the study

A Leveraged Buyout (LBO) or private equity refers to the purchase of a controlling equity stake in a target company which normally has strong cash flows using debt financing raised by borrowing against the assets and/or cash flows of the acquired company (Rodden and Lewellen 1995). The LBO and private equity industry in South Africa has grown dramatically over the past two decades with R115.8 billion in funds under management in 2011 (SAVCA 2012). The growth in South Africa's leveraged buyout industry was initially spurred by disinvestments of multinational enterprises in the 1980s using structured finance from the major investment and merchant banks of the time (SAVCA 2011) . Today the growth in funds committed to private equity in South Africa is driven by facilitation of Black Economic Empowerment (BEE) and contemporaneously by the increasing foreign capital inflows into emerging

markets (SAVCA 2012). South Africa's private equity industry has also benefitted from a more recent global trend that increasingly recognises this asset class as an attractive investment vehicle. The recent National Treasury's amendment to Regulation 28 raises the profile of private equity as an attractive asset class and empowers pension funds to allocate up to 10% of their funds to private equity (Stokes 2011). Past research on LBOs confirms that indeed returns to LBOs have historically averaged in excess of 30% compound annual return (S. Kaplan and Schoar 2005; Ljungqvist and Richardson 2003). These high expectations on returns for private equity funds makes it imperative for practitioners to consistently investigate and improve exit success rates in order to strengthen their fund's balance sheet and improve fund performance.

The Development Bank of South Africa affirms that private equity will continue to contribute to key growth targets in areas of unemployment, exports and the overall improved competitiveness of the South African economy (DBSA 2009). Despite the significance of the private equity industry to South Africa's economic prosperity, this industry has remained largely under-researched due to restricted access to data. Unlike publicly listed companies where stock performance and financial statements data is readily available, the private equity industry operates in an environment which normally requires sealed disclosures of fund and deal performance contributing to the relative obscurity of this increasingly important asset class (S. Kaplan and Stromberg 2008).

It is against this backdrop that this study will seek to shed light on the different determinants of exit mode for leveraged buyouts and provide insights into how a well-executed exit mode contributes to value creation and buyout performance.

1.3 Problem statement

1.3.1 *Main problem*

Establish the significant determinants of exit mode for leveraged buyouts in South Africa and assess the contribution of choice of exit mode to leveraged buyout performance. The research will focus on two main categories of

determinants namely: the macroeconomic and capital market factors and the fund/firm specific factors. The relative impact of different determinants on the exit mode will then be assessed to derive an exit mode decision attribution framework. The research will also explore the significance of exit planning through analysis of the contribution of exit strategy to overall fund performance.

1.3.2 *Sub-Problem One*

Establish the significant determinants of exit mode for leveraged buyouts in South Africa based on the macroeconomic and capital market factors and the fund/firm specific factors. Assess the relative impact of different determinants on the exit mode to derive an exit mode decision attribution framework.

1.3.3 *Sub-Problem Two*

Measure and assess the contribution of choice of exit mode to leveraged buyout performance. Recommend key considerations (priorities) for exit mode decision-making based on the constructed decision-making framework.

1.4 Significance of the study

Private equity in South Africa is increasingly becoming a mainstream asset class. The amendment to Regulation 28 provides some regulatory clarity on the categorisation of this asset class and is expected to increase capital commitments as more pension funds turn to private equity for its diversification and strong returns. Despite the phenomenal growth in private equity industry profile and total funds under management, the body of knowledge in South Africa's private equity industry has not advanced at par. For example, in their best attempt to identify sources of superior returns in the South African private equity industry, van Niekerk and Krige (2009: 55) conclude that "Private equity investing is more of an art than it is science". More pertinently, the reported superior returns (alpha) traditionally associated with private equity are now being brought into question with some studies (S. Kaplan and Schoar 2005; Phalippou and Gottschalg 2009) suggesting that private equity has not only

failed to generate premium returns but has dramatically underperformed public equities. The issue at hand is the valuation of unrealized investments which are carried at cost for long periods of time. The authors posit that these “living dead” investments significantly contribute to underperformance highlighting the criticality of exit mode selection and timing. SAVCA (2012) reports that for the first time in reporting history, disclosed valuations of unrealized investments in 2011 were R2.7 Billion below cost. As valuations decline and exit opportunities become scarce, private equity practitioners have to exercise more due diligence in exit mode planning and remain vigilant through the investment lifecycle to ensure a successful exit.

This study represents a further inquiry into identifying factors influencing exit mode selection and value creation and understanding the impact of exit mode on performance. This understanding will be vital for private equity practitioners who seek to enhance value-add for their respective funds through identifying key focus areas which drive fund performance and profitability.

This study will also benefit fund-of-funds managers and other institutional investors who seek to diversify their portfolios (invest in private equity) by serving as a tool for critically evaluating the structure of a private equity fund and therefore its expected performance.

The study extends existing academic research in the area of private equity and leveraged buyouts in South Africa and provides an alternative approach as well as a useful platform for comparing the outcomes of studies already conducted in the field.

1.5 Delimitations of the study

- The research will be limited to exited leveraged buyouts where information on the exit internal rate of return (IRR) of the deal is reported.
- The study focuses on leveraged buyouts and excludes the category of venture capital. Venture capital may include seed capital or early stage risk capital for development of concepts/business before the portfolio

company becomes operational. Exiting ventures can take place at different stages, different times and use different exit modes. This makes it cumbersome to establish entry and exit timeframes, holding periods and performance of the fund. Therefore all venture capital deals will lie outside the scope of this study.

- The study will only be restricted to the three dominant forms of exit mode namely; secondary buyouts, trade sales and initial public offerings. There exists a universe of different forms of disposals including recapitalizations etc., the scope of this research will nonetheless be restricted to the preeminent modes of exit in the South African context. Highly subjective factors such as firm reputation and level of investment skill will not form part of the analysis. Such factors are excluded from the analyses since syndication in private equity makes such factors difficult to determine. This research will restrict factors to be analysed into the two categories of macroeconomic conditions such as credit spread, GDP growth and the intrinsic fund characteristics such as holding period, fund size etc. The selection of factors is predominantly based on previous research and existing body of knowledge in the United States and United Kingdom private equity markets but adopted for the South African context.

1.6 Definition of terms

Alpha: risk-adjusted measure of return on investment. This represents returns in excess of the industry benchmark. (SAVCA 2012)

BEE: Black Economic Empowerment – the economic empowerment of all black people through diverse but integrated socio-economic strategies. (SAVCA 2012)

DBSA: Development Bank of Southern Africa

Herfindahl–Hirschman Index: A measure of industry concentration. (GrantThornton 2011)

Internal Rate of Return (IRR): The rate of return used in capital budgeting to measure and compare the profitability of investments. (SAVCA 2012)

Initial Public Offering (IPO): Selling of a company's equity to investors via listing on an exchange. (SAVCA 2012)

Leveraged Buyout (LBO): Acquisition of shareholding in a company using third party funds, typically in the form of debt finance. The term is used interchangeably with private equity.(SAVCA 2012)

SAVCA: Southern African Venture Capital and Private Equity Association

1.7 Assumptions

- The research relies heavily on the assumption that sufficient data will be obtained from South African private equity firms in order to have a

sample size that will enable the analysis to have the statistical power to find effects and relationships where they exist.

- The research assumes that survey participants will have a sufficient level of understanding of the private equity industry to provide the necessary insights, share required information and not misrepresent any factual data.

2 LITERATURE REVIEW

2.1 Introduction

The first section of the literature review will define private equity and its dynamics including a general overview of the private equity cycle from fundraising, deal structuring, value-add activities and exit planning. The section will incorporate a critical analysis of key research findings, conclusions and empirical evidence of performance and value creation in this industry. A special emphasis in the analysis will be on the valuation of unrealised investments – a matter that is central to exit strategy which is the focal point of this research. The second section is an overview of the South African private equity industry; current trends and challenges relating to exit mode. In the context of South Africa, gaps in the existing body of knowledge in private equity are uncovered and the relevance of emerging issues such as Black Economic Empowerment (BEE) and its relationship to exit mode and performance are evaluated. The third section of the study consolidates and integrates findings and conclusions on different types of exit modes and the determinants of exit mode and their relative significance. The last section takes a holistic view of exit-mode decision making and assesses its effect on performance of private equity funds. Emerging issues and potential gaps in literature are identified in the South African context.

2.2 Background on Private Equity

2.2.1 *Private Equity performance and value creation*

A leveraged buyout is conventionally defined as an acquisition of a target (portfolio) company by an investment firm using a relatively large portion of debt financing and a relatively small portion of equity (S. Kaplan and Stromberg 2008). In a typical South African application, the acquiring firm may usually be an empowerment partner (BEE) or a management team (management buyout). Schmidt, Steffen and Szabo (2010) characterise buyouts as investments in

established firms capable of generating strong cash flows and high financial surplus to free up available liquidity. Leveraged buyouts form part of the broader private equity asset class. The SAVCA annual survey (SAVCA 2012) generally categorises the different stages of private equity investments into the following groupings:

Table 1: Summary of private equity investment stages (SAVCA 2012)

Private Equity Category	Stage of Development	Typical Application
Venture capital	Seed capital	Funding for research, evaluation and development of a concept or business before the business starts trading.
	Start-up and early stage	Funding for new companies being set up or for the development of those which have been in business for a short time (one to three years).
Development capital	Expansion and development .	Funding for growth and expansion of a company which is breaking even or trading profitably.
Buy-out	Leveraged buy-out or buy-in	Funding to enable a management team or empowerment partner, either existing or new, and their backers to acquire a business from the existing owners, whether a family, conglomerate or other. Unlike venture and development capital, the proceeds of a buy-out generally go to the previous owners of the entity. Buy-outs are often leveraged.
	Replacement capital	Funding for the purchase of existing shares in a company from other shareholders, whether individuals, other venture-backers or the public

		through the stock market. Unlike venture and development capital, the proceeds of replacement capital transactions are generally paid to the previous owners of the entity.

In the context of this research the terms private equity and leveraged buyouts may be used interchangeably with private equity primarily referring to buyouts with total acquisition of the portfolio company and excluding early stage and venture capital. In the South African context, recognised exit strategies are predominantly; exit via sale of portfolio company to another private equity firm (secondary buyouts), sale via an initial public offering (IPO) and sale to other strategic buyers (trade sales) (SAVCA 2012).

In 2004 *The Economist* remarked that private equity firms have moved from the outer fringe to the very centre of capitalism, dubbing heads of private equity firms such as Blackstone Group's Steve Schwarzman “The New Kings of Capitalism” (Bishop 2004). The phenomenal growth in private equity over the past two decades has been marked by an astronomical growth in total funds under management and more than a $1 trillion of dry powder (committed capital) which is yet to be deployed (Bain 2012). Despite the growing significance of private equity as a catalyst for economic growth many questions abound on how private equity generates superior returns (alpha) and more fundamentally; whether private equity does indeed generate alpha. Higson and Stucke (2012) opine that returns from the private equity industry remain uncertain - if not controversial- owing to the lack of a transparent market, selection biases and inaccuracy of data. Ljungqvist and Richardson (2003) reported private equity excess returns close to 6% per annum relative to the S&P 500. The findings of Chen, Baierl and Kaplan (2002) corroborated these findings albeit with a premium of a percentage point. Other positive premiums of private equity have been reported by Cao and Lerner (2009) for reverse leveraged buyouts. Notwithstanding, emerging literature (S. Kaplan and

Schoar 2005; Phalippou and Gottschalg 2009) has found that “private equity doesn’t quite live up to expectations” (Grantier 2008: 30).

Kaplan and Schoar (2005) found that on average and net of fees, LBO fund returns have underperformed the public equities (S&P 500). Consistent with this contrarian view, Phalippou and Gottschalg (2009) quantified private equity’s underperformance at 3.5 % less than public equity. However, subsequent and more recent literature (Higson and Stucke 2012) suggests that findings of underperformance might have been influenced by a negative bias in the sample selection criteria. Nonetheless, what is evident is that non-exited investments (residual values) carried at a cost for lengthy periods of time have a negative impact on fund performance (Grantier 2008; Jegadeesh, Kraussl and Pollet 2009). This evidence illuminates the linkage between exit mode and performance and underlines the choice of exit mode as a critical success factor in private equity investments.

Accepting the hypothesis that private equity indeed generates superior returns, there seems to be general consensus in the literature regarding sources or levers of value creation. Loos (2005) broadly classified source of value creation into three distinct classes of financial engineering, operational efficiency and other value-capturing or enhancing drivers such as strong corporate governance. Leslie and Oyer (2009) suggest that increased managerial incentives lead to better discipline, stronger governance and enhanced performance (value creation). Whereas financial leverage initially played a dominant role in value creation this factor is no longer a distinguishing factor. Klier, Welge and Harrigan (2009) allude to “Interventionism” as the modern management model in which private equity firms build industry expertise/talent and create value through active involvement in the strategic-decision making processes of portfolio companies. Value creation in private equity is inextricably linked to choice of exit mode (Loos 2005). Ultimately, exit mode has a direct impact on the exit valuation of a portfolio company and therefore its internal rate of return.

2.2.2 *The South African private equity industry: exit challenges and trends*

The growth in funds under management in South Africa's private equity industry correlates positively with the emergence of secondary buyouts as a preferred exit strategy. SAVCA (2012) reports that in 2011, secondary buyouts or sale of funds to other private equity firms accounted for nearly 72 % of all disposals. What has been traditionally regarded as an exit of last resort is now gaining currency as an exit of choice. A review of existing literature shows that the underlying drivers of exit decision making in the South African context is under-researched. Anecdotal evidence suggests that buyout firms are increasingly using secondary buyouts as divestment strategy owing to weak equity markets which make the IPO exit route less attractive (GrantThornton 2011).

In the South African private equity context, extant literature has largely dealt with drivers of value creation. Moolenschot (2002) through a qualitative study found a strong sentiment that linked good corporate governance to private equity performance. van Niekerk and Krige (2009) attempted to identify sources of value creation in private equity and arrived at the conclusion that sources of value in South Africa's private equity industry cannot be empirically distilled due to the interplay of a myriad of factors which contribute to value creation. Missankov, van Dyk, van Biljon, Hayes and van der Veen (2006) found a performance premium of 18% for private equity relative to public equity and found evidence of diversification benefits for South Africa's private equity. Nonetheless, no published literature could be found on the determinants of exit mode for South Africa's leveraged buyouts. Therefore, this enquiry represents a distinctively unique academic incursion into understanding exit decision-making in South Africa's private equity industry.

2.3 Determinants of exit mode

Despite exit planning being an important aspect of the private equity process, the motivation and determinants of exit choice has received little focus in academic literature (Giot and Schwienbacher 2007). In the extant literature, a

detailed review reveals that the choice of exit mode can be influenced by a myriad of factors including regulatory changes, market volatility, acquisitive appetite in corporate mergers and acquisitions (M&A) and/or the need for the general partners (GPs) to fulfil their fiduciary obligations to their limited partners and raise capital for the next private equity cycle (Sudarsanam and Nwaghodoh 2005). The various factors/drivers of exit decision are discussed in the following subsections.

2.3.1 *Investment holding period*

Modern and sophisticated private equity investors typically employ “buy and build” strategies where the buyout firm requires time to improve the portfolio company’s operating performance and cash flow performance (Cumming and MacIntosh 2002). These operational improvements and other value creation interventions have the effect of increasing the holding period of the portfolio company. Cumming and MacIntosh (2002) found strong evidence that as the fund approaches maturity there is increased pressure from its financial sponsors to realize the investment and return capital to the investors. In this scenario, a secondary sale is the most viable option for a private equity fund. Therefore, longer investment holding period are likely to be positively correlated to exit via secondary buyouts. Sudarsanam and Nwagodoh (2005) also found evidence to support this hypothesis. Using a sample of 104 going concern UK LBOs exited by the LBO sponsors between January 1998 and June 2004, the authors found holding period to be significantly longer in secondary buyouts relative to trade sales and IPOs. Sousa (2009) found a positive relationship between longer holding period and secondary buy-out as an exit mode using a sample of more than 750 European buyouts exited between 2000 and 2007. The author inferred that private equity investors turn to secondary buyouts as a last resort when the preferred exit options are not feasible. Holding period is therefore a potentially significant determinant of exit mode for leveraged buyouts.

2.3.2 *Market sentiment*

Macroeconomic factors such as the liquidity of capital markets influence the relative attractiveness of an exit choice. Market sentiment can be quantified by using factors such as the number of IPOs issued and stock market returns as proxies. Schmidt et al.(2010), using a comprehensive and unique dataset from Center of Private Equity Research (CEPRES) Private Equity Analyzer for the US and European markets, confirmed the cyclical nature of exit decisions and supported the hypothesis that a favourable stock market environment significantly increases the probability of an exit via an IPO. Brau, Francis and Kohers (2003) established that the "hotness" of the IPO market relative to the corporate mergers and acquisitions and private takeover market play an important role in the IPO vs. trade sale choice. The evidence from literature points to an existence of windows of opportunity when private equity firms can take advantage of higher valuations owing to "hot" IPO markets to exit their investments (Ritter and Welch 2002; M Sousa 2009). Schmidt et al.(2010), suggests volumes of M&A deals, IPO issues as useful proxies for capturing market sentiment. Nonetheless, Yrrko, Hyytinen and Liukonnen (2001) in their analysis of the attractiveness of the Finnish market for venture capital exits and the correlation between the M&A and stock market, noted that there could be significant differences in the volatilities and attractiveness of the stock market and the M&A market. In Finland, Yrrko et al (2001)found that the stock market can be highly volatile and unattractive whereas the M&A market can be stable, increasing the acquisitive appetite for strategic trade sales. In addition the M&A market tended to lag behind the stock market. Therefore, based on the above observations, the researcher could not find a reliable and correlated variable or proxy that can adequately capture market sentiment in the extant literature.

2.3.3 *Industry concentration*

The hypothesis that highly fragmented industries are likely to be exited via trade sales (consolidation hypothesis) was confirmed by Brau et al (2003) who found that less concentrated industries present an opportunity for consolidation therefore, increasing the likelihood of exit via a trade sale. Industry

concentration is appropriately captured by the Herfindahl-Hirschman Index (HHI). HHI is defined as the sum of the squared market shares of all enterprises in the industry and it can be used to gauge industry competitiveness and as a warning sign for monopoly (Statistics South Africa 2009). HHI ranges between 0 and 1 and highly concentrated industries such as electricity and water supply will have a higher HHI - typically around 0.6 for South Africa. Highly fragmented industries such as retail, business services and leisure sectors are likely to present opportunities for consolidating support services, distribution infrastructure and other economies of scale benefits. Sousa (2009) found evidence to support this hypothesis using data from the UK market. Specifically, Sousa found strong evidence of consolidation in the information technology industry where the preferred exit route is via a trade sale to a strategic buyer seeking to achieve economies of scale and scope through shared research and development (R&D) efforts amongst other benefits. Pagano, Panetta and Zingales (1998) used a large sample of privately held companies of a similar size and identified a positive relationship between the likelihood of an IPO exit and the market-to-book ratio prevailing in the industry sector. Brau et al (2003) also posited that regulatory scrutiny (competition tribunals and antitrust concerns) prevalent in high concentration industries present further difficulties in implementing takeovers; making it likely for strategic trade sales to occur in low concentration industries. The authors however offer a counterargument to the effect that lower concentration industries may not necessarily pursue higher concentration as an industrial strategy owing to the industry dynamics and prevailing competition forces. Nonetheless, the overall consensus in the literature is that industry concentration is indeed an important determinant of exit mode.

2.3.4 *Operating performance*

The pecking order hypothesis suggests that highly profitable industries will prefer exits via IPOs followed by trade sales and secondary buyouts. Beinz (2005) presents empirical evidence supporting this hypothesis and observes that the mean and median IRR for IPOs (at 123.42 % and 58.39% respectively) are significantly higher than those for trade sales (at 75.32% and 18,32%

respectively) based on a total of 531 observations from the CEPRES database sampled between 1973 and 2003. Beinz provides the rationale for the pecking order and explains that for highly profitable companies, the governance structure requires less control, making IPOs more feasible. Giot and Schwienbacher (2007) used survival analysis and a competing risk model to establish that the likelihood of exit via IPOs initially increases to reach a peak/plateau and then elapses. This implies that as time elapses past the plateau, exits via IPOs will become less likely. Smith and Wall (1998) cited in Sudarsanam and Nwagodoh (2005: 8) report that most venture capital firms view IRR as the "most over-riding factor determining their approach to exit". This further validates the pecking order hypothesis and the significance of operating performance as a critical factor influencing choice of exit mode.

2.3.5 *Firm size*

The decision to take a portfolio company public via an IPO hinges upon whether such a company has the critical mass to meet the onerous regulatory requirements, flotation costs and satisfy specific profitability conditions required to list on a stock exchange (Sudarsanam and Nwaghodoh 2005). Pagano et al(1998) cite firm size as the second most important determinant of exit mode and opines that low quality companies or small companies with little track record and visibility may suffer from the adverse selection problem of IPO under-pricing. Pagano et al. cite this problem as the most serious obstacle to the listing of small firms. Nonetheless, this traditional view is being challenged in the modern era where the rise of mega-funds has led to the prevalence of reverse leveraged buyouts; a phenomenon in which public firms are taken private through financial leverage. The exponential increases in funds committed to private equity funds have made public-to-private deals a common trend (M Sousa 2009). Sousa, using a relatively recent dataset of 1,627 European private equity exits which occurred between 2000 and June 2007 asserted that secondary buyouts are the preferred exit option for large companies. This is in stark contrast with the conventional view in the extant literature. Notwithstanding, the size of the portfolio company is an important factor for consideration in exit planning.

2.3.6 *Black Economic Empowerment*

In the South African context, private equity plays an important role of facilitating BEE transactions (SAVCA 2012). The private equity industry in South Africa has promoted BEE through investor participation and the promotion of BEE in investee companies. Missankov et al.(2006) describes the BEE private equity model as a transaction in which the BEE party takes a direct shareholding stake in the underlying investee or portfolio company in syndication with the GPs. In this model, debt funding is provided to the investee company rather than through a special purpose vehicle (SPV) as is the norm with typical listed BEE models. The relationship between the influence of BEE and choice of exit mode is largely under-researched. Nonetheless, empirical data shows that the rise of secondary buyouts as an exit mode has been accompanied by a rise in funds under management of BEE fund managers. SAVCA (2012) reports that in 2011, 73.2 % of R115.8 billion funds were managed by black companies or BEE empowered/influenced companies. Anecdotal evidence suggests that BEE deals in South Africa are likely to be exited through secondary buyouts owing to the structuring required for the BEE private equity model. However, this assumption needs to be empirically distilled given the varying degrees of BEE ownership in private equity deals. The suitability of BEE ownership as a predictive factor for exit mode is therefore doubtful owing to the limited scope that the existing literature has investigated this phenomenon.

The factors influencing the choice of an exit mode and the motivation behind exit decision-making are all subject to a complex myriad of prevailing conditions and influences. Based on the above analysis the following research questions arise:

2.3.7 *Research Question*

In the South African context, what are the significant determinants in predicting choice of exit mode for leveraged buyouts? How does choice of exit mode affect leveraged buyout performance?

In summary, the relationships between predictive factors (determinants) and the chosen exit mode are summarized in the table below:

Table 2: Summary of relationships between predictive factors and exit mode

Factor	Predicted Exit Mode	Relationship	Supporting Reference
Investment Holding Period	SBO	Significant and positive correlation between longer holding period and SBO as an exit mode.	Cumming and MacIntosh (2002), Sudarsanam and Nwagodoh (2005), Sousa (2009)
Industry Concentration (HHI)	Trade sale	Significant and inverse correlation between high industry concentration (HHI) and trade sale as an exit mode.	Brau et al (2003), Sousa (2009), Pagano, Panetta and Zingales (1998)
Operating performance (IRR)	IPO	Significant and positive correlation between IRR and IPO as an exit mode.	Beinz (2005), Giot and Schwienbacher (2007), Sudarsanam and Nwagodoh (2005), Smith and Wall (1998)
Firm size	IPO	Significant and positive correlation between firm size (millions) and IPO as an exit mode.	Sudarsanam and Nwaghodoh (2005), Sousa (2009)
Market Sentiment	IPO/Trade sale	No suitable proxy or predictive factor identified	Schmidt et al.(2010), Brau, Francis and Kohers (2003), Yrkko et al(2001)
BEE	SBO/IPO/Trade sale	Not a suitable predictive factor	Missankov et al.(2006), SAVCA (2012)

2.4 Conclusion of Literature Review

Private equity is increasingly becoming a mainstream asset class as evidenced by growth in total funds under management of private equity firms and changes in the regulatory environment. These changes have improved the profile of private equity as a distinct asset class. Investors and portfolio managers imperatively turn to private equity for its diversification effects and strong returns. Despite the growing significance of private equity as a distinct asset class, the industry remains obscure and under-researched due to lack of transparency. Nonetheless, what is evident in the literature is that non-exited investments (residual values) have a negative impact on fund performance. This evidence underlines the importance of exit planning and choice of suitable

exit mode as a critical success factor. The linkage between exit mode and fund performance is well established. The extant literature supports two dominant hypotheses relevant to determinants of exit mode; the pecking order and consolidation hypotheses. The pecking order hypothesis postulates that highly profitable industries are preferably exited via IPOs, identifying operating performance, fund size and holding periods as significant determinants of exit mode. The consolidation hypothesis suggests that fragmented industries lend themselves to exits via trade sales and enunciates industry type (or concentration) as a determinant of exit mode. The consensus in the literature is that exit mode choice, particularly as it relates to IPOs, is driven by market sentiment and hence cyclical in nature. However, there is no suitable correlated proxy or predictive factor to capture market sentiment given the lack of correlation between the stock and the M&A markets. In summary, operating performance, fund size, holding period and industry type (concentration) are identified as possible determinants of exit mode. This study intends to address the existing research gap in identifying determinants of exit mode in the South African context. Based on the above postulations then the following research questions are promulgated:

2.4.1 *Research Question*

In the South African context, what are the significant determinants in predicting choice of exit mode for leveraged buyouts? How does choice of exit mode affect leveraged buyout performance?

3 RESEARCH METHODOLOGY

In the private equity cycle an exit mode is determined, *ex ante*, based on identified relevant factors (determinants). This study primarily employs an empirical analysis to address the research problems and test identified hypotheses. This section provides an overview of the adopted research methodology and is structured as follows: section 3.1 discusses the quantitative-dominant sequential mixed method design used in this study. Section 3.2 discusses the research designs for both phases of this study and sections 3.3 to 3.8 address population and sampling, research instruments, procedures for data collection, data analysis and interpretation, limitations and validity and reliability of data respectively.

3.1 Research paradigm

The scarcity of authoritative references and research in South Africa's private equity industry justifies the adoption of a pragmatic paradigm. Pragmatism offers a method of inquiry that can be relied upon to eliminate doubt and assist the research to derive meaningful answers to the research hypotheses (Johnson and Onwuegbuzie 2004). A quantitative-dominant sequential mixed methods design is used in this research with the intent of developing and testing model using a sample from the general population. The outcomes/results of the quantitative model are balanced with the private equity practitioners' views or insights from the qualitative phase to enrich the research and enhance greater understanding and resolution of the key research questions. The qualitative phase is a complementary enquiry into the explanatory variables influencing exit mode. The results of the qualitative phase are used in an interpretative sense to enhance understanding and interpretation of the quantitative results. This methodological triangulation should enhance the internal validity of the research findings (Faishal and Ng 2002). Despite the improved validity offered by a mixed method analysis, this approach is time and resource intensive (Cameron 2009). This disadvantage is mitigated by a carefully constructed research design in the qualitative phase. The qualitative phase will be limited in scope to only identify or confirm explanatory/predictive variables of exit mode and shall

utilise purposive sampling techniques to achieve corroboration with the theoretical findings.

3.2 Research Design

Creswell, Plano Clark, Guttman and Hanson (2003) posit that a sequential explanatory design with priority given to the quantitative phase is the appropriate design to undertake when a researcher intends to conduct a primarily quantitative study but needs to enhance or clarify the research outcome using results from another method typed (qualitative phase). This study will use the sequential explanatory design characterised by an initial phase of quantitative data collected from private equity firms, followed by a qualitative phase. The qualitative phase will gather data through elite interviews with selected private equity experts. The in-depth interviews will only focus on significant factors influencing exit mode and will exclude relationships or any form of associations between variables. The use of purposive sampling technique coupled with the limited scope of qualitative interviews is intended to mitigate time and resource constraints inherent in the mixed-methods approach. The dominant quantitative phase consists of quantitative data collection, development of a model and analysis and interpretation of model tests. The outcomes of the qualitative analysis will be integrated with the theoretical perspectives and findings from the quantitative phase to concretise explanatory variables of exit mode.

3.3 Population and sample

3.3.1 *Population*

The study seeks to understand determinants of exit mode in the South African context. Therefore, the research population for the qualitative phase will consist of private equity investment professionals who are members of SAVCA. The quantitative data will be drawn from exit transactions from private equity firms.

3.3.2 *Sample and sampling method*

In the quantitative phase, a multinomial logistic regression (MLR) model will be developed to predict exit mode. Hosmer and Lemeshow (2000) recommend a minimum number of 10 cases per independent variable for MLR modelling. Therefore, the quantitative sample will consist of a minimum of 40 samples collected from exit transactions data collected from private equity firms.

A purposive sampling technique will be used to draw a sample consisting of members of SAVCA (listed in the SAVCA directory) who are deemed to have sufficient expertise in exiting or monetising private equity investments. The purposive sample is not intended to be a random representation of the entire population since this technique is inherently non-probabilistic (Teddlie and Yu 2007). Therefore, 5 interview participants are considered sufficient. Information derived from this phase of the study will be specifically used to confirm and refine explanatory variables identified. Such information will not be used to test the research hypothesis or draw any general conclusions about the associations or relationships between variables.

3.4 The research instrument

The quantitative phase of the research draws *ex post facto* data from the exit transactions information collected from the private equity industry. The structure of the data to be collected and filtered is illustrated in Appendix A.

The qualitative research phase uses a depth interview with two main questions. The questions are formulated such that they are open-ended, neutral and clear to the interviewee, allowing for the possibility of explanations to be offered for the initial quantitative findings, whilst also seeking opinion and drawing from the interviewee's experience. This approach enables the instrument to obtain valid and reliable data (Goldstein 2002). The approximate length of the interview is 30 minutes and interviews will be conducted at the offices of the respondents.

3.5 Procedure for data collection

In the quantitative phase, a formal request will be made to SAVCA and Riscura as well as private equity firms to obtain anonymous data for academic research purposes. The high confidentiality requirements of the private equity industry will be considered and the required information shall be anonymous. Contact will initially be made through telephone and a formal letter will be submitted to private equity firms and SAVCA requesting access to exit transaction data covering the past 10 years. The obtained data will be structured such that information on the identified variables; fund size, holding period, IRR and industry type is captured. The HHI will be computed using industry type and a HHI reference table from Statistics South Africa that is in the public domain.

The researcher serves as a primary research instrument in the qualitative phase. Therefore, the researcher will initially contact respondents by telephone to assess whether they will be willing to participate in the research. Where affirmative responses are obtained a formal letter of request will be sent to the respondents with an outline of the questionnaire to assist in preparation. The interview process is important to allow for reflection, assimilation of information and feedback during the process (Faishal and Ng 2002). A second telephone contact will be made to arrange a suitable time for a 30 minute interview at the respondent's office for convenience.

3.6 Data analysis and interpretation

This subsection provides an overview of the different statistical methods and tools that will be applied to analyse collected data and test postulated hypotheses. SPSS™ will be used as a statistical tool for analysis of data.

3.6.1 *Descriptive Statistics*

The frequency of exit modes within the data sample will be reported together with general observations where data will be grouped per explanatory variable such as industry segment, holding period etc. wherever applicable to highlight a specific trend or a predominant exit mode. Measures of central tendency (mean

and median) and dispersion will be reported for metric (continuous) data and such measures will be grouped per exit vehicle i.e. IPO, secondary buyout or trade sales.

3.6.2 *Analysis of Variance (One-way ANOVA)*

The second research question pertaining to the impact of exit mode on performance as measured by IRR will be tested through ANOVA to test/establish if a statistically significant relationship does exist. This research question will be addressed through analysis of variance of exit returns (IRR) between the three exit modes. The results of the Levene's test for homogeneity of variances as well as the significance of the ANOVA F value will be reported and conclusions drawn.

3.6.3 *Independent Samples T-tests*

Independent-samples T-tests are used to analyse the relationship between the continuous variables: operating performance (IRR), fund size, holding period and industry concentration vs. exit mode. The differences between the means of these explanatory variables are analysed for the three groups using combinations of: Secondary buyouts vs. IPOs, Secondary buyouts vs. trade sales, IPO vs. trade sales. The statistical significances (p-values) for the differences as well as the results of Levene's test are reported and conclusions drawn to address the first research question.

3.6.4 *Multinomial Logistic Regression (MLR)*

Wooldridge (2006) states that when a dependent variable (exit mode) is discrete or categorical then normal linear regression models are inappropriate since the models' basic assumptions are violated. A multinomial logistic regression model or specifically a trinomial logistic regression model is suitable for this study since it uses a maximum likelihood estimation to predict membership of exit mode defined by three discrete categories of secondary, buyouts, IPOs and trade sales.

In the South African context, secondary buyouts are the predominant exit modes. This nominal category is used as a baseline category to draw relative comparisons with IPOs and trade sales. In this research the categorical variables are represented by the following notation:

S: secondary buyout

I: IPO

T*:* trade sale

A multinomial logistic regression model then consists of two baseline category logits:

$$\pi'_{I|S}(x) = \ln \frac{\Pr(\gamma = I(x))}{\Pr(\gamma = S(x))}$$

Where x is an explanatory variable, $\mathbf{P_r}$ is the probability of exit mode, and $\boldsymbol{\pi'_{I|S}}$ is the logit transformation for the probability of an IPO relative to the base category secondary buyouts.

Similarly the logit transformation for trade sales is represented by:

$$\pi'_{T|S}(x) = \ln \frac{\Pr(\gamma = T(x))}{\Pr(\gamma = S(x))}$$

Extending the model to the rest of the independent variables ($\boldsymbol{xi}$) then the probability of each exit mode is represented by:

$$\pi'_{I|S}(xi) = \beta_0 + \beta_{1,I|S}\mathrm{HOLD} + \beta_{2,I|S}\mathrm{SIZE} + \beta_{3,I|S}\mathrm{PERF} + \beta_{6,I|S}\mathrm{HHI}$$

And:

$$\pi'_{T|S}(xi) = \beta_0 + \beta_{1,T|S}\mathrm{HOLD} + \beta_{2,T|S}\mathrm{SIZE} + \beta_{3,T|S}\mathrm{PERF} + \beta_{6,T|S}\mathrm{HHI}$$

Where **β** represents the vector of the estimated coefficients and **HOLD, SIZE, PERF, HHI** represents the independent variables holding period, fund size, performance of the fund and the level of industry concentration (HHI) respectively.

The MLR model does not make any assumptions of normality, linearity or homoscedasticity. Nonetheless Starkweather and Morske (2012) caution that like any other regression analysis, multicollinearity and outliers should be investigated. In this study, multicollinearity issues will be investigated by examining standard errors for the b coefficients in the regression output. Outliers will be investigated manually which is a possible weakness in this investigation. The MLR assumptions of independence of categorical variable choices will be tested with the Hausman-McFadden test. The significance value for the model chi-square (χ^2) which investigates relationship between independent variables and categories will be reported as well as the overall model accuracy. Based on these results, the impact of explanatory variables on exit choice will be determined and hypotheses on exit mode decision-making accepted or rejected.

3.7 Limitations of the study

Limitations of this study can be summarised as follows:

- Private equity industry in South Africa is under-researched. The lack of information or references on determinants of exit mode necessitates a sequential mixed methods paradigm which requires time and resources.

- In the qualitative phase, the researcher is the primary research instrument. This possibly introduces bias and affects the validity of this study. The purposive sampling and limited number of respondents in this phase also has possible negative consequences for the model's validity.

- The use of the MLR model with SPSS ™ has weaknesses such as lack of functionality for testing outliers. The manual examination of outliers might introduce human error which might possibly affect reliability of the model.

- Selection of explanatory variables is predominantly based on theory from the US and UK and insights from qualitative phase of this research. The fact that factor analysis or some other deductive model is not used

to identify possible or significant explanatory variables is a weakness of this study since some other variables might have been overlooked.

3.8 Validity and reliability

Golafshani (2003) succinctly defines reliability as pertaining to whether the results are replicable and validity as whether the means of measurement actually measures what they are intended to measure and whether such means are accurate. The chosen sequential mixed methodology design adopted for this study was influenced by the need to enrich the study and improve its internal validity since no cross-validation of determinants of exit mode could be done with any authoritative reference framework in the obscure South African private equity industry. The efforts pursued by the researcher to maximise reliability and validity of this study are elaborated in the following subsections.

3.8.1 *External validity*

Generalizability of research findings to the population is described by Golafshani (2003) as an important reflection of the quality of research and its trustworthiness. Since this research is predominantly quantitative, the collection of an extensive sample of data (60+ observations) from the SAVCA/Riscura database which nearly includes all the private equity players in South Africa (SAVCA 2012) will ensure that conclusions drawn from this study will be a trustworthy account of the entire South African private equity industry.

3.8.2 *Internal validity*

The developed theoretical framework of this study is largely based on findings from the developed US and UK private equity markets. The qualitative phase of this research aims to establish congruence with the South African context and bring into focus factors such as BEE that are unique and relevant to the research context. Winter (2000) observes that the internal validity of a study can also be affected by the research model itself. The researcher aims to verify model assumptions where feasible and ensure that issues such as

multicollinearity and outliers in the multinomial logistic regression modelling are addressed to maximise the validity of this research.

3.8.3 *Reliability*

The use of the researcher as a research instrument in qualitative research may introduce bias and perhaps lead to some findings from depth interviews which might not necessarily be replicable in repeat tests. Nonetheless, the specific focus and defined scope of the research instrument (interviews) in identifying determinants of exit mode is likely to yield similar outcomes. Therefore, this will significantly improve the reliability of the qualitative phase of the research. Reliability in the quantitative phase is maximised through the use of an extensive data sample and a well-defined MLR model where all assumptions are explicitly stated and mitigations where applicable are clearly stated. This will improve the extent to which the research findings can be replicated by a repeated test.

4 PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the results obtained from the research by firstly providing a detailed view of the descriptive statistics from the sample. The summary statistics of the data is presented using tables and figures and primarily shows the differences between the three categories of exit modes; IPO, SBO and trade sales. The observed differences in the statistics are related back to the research question and the significance to the research question and related hypotheses is explained.

The analysis of data involved various statistical techniques because of the complex nature of the multinomial logistic regression technique used to predict the categorical placement in the dependent variable exit mode based on the four identified independent variables. The core objective of each statistical technique employed is explained and the resultant outputs from each technique are related to the core research question. The presentation of results and techniques employed follows the structure outlined below:

- Descriptive statistics and frequency distributions of the independent variables grouped into the sub-categories of the exit modes are used to highlight differences between the exit modes.
- Simple correlations and covariances between the independent variables are assessed to evaluate multicollinearity and ensure model accuracy.
- Independent-sample T-tests are used to investigate statistically significant differences in the means of the exit mode paired samples for the independent variables. The Mann-Whitney U test is similarly used for comparisons of the medians.
- One-way analysis of variance (ANOVA) is used to assess the relationship or the impact of the chosen exit mode on realized returns and the results are presented in relation to the sub-problem of the

research question. The results of the Levene's test of homogeneity of variances are reported.

- Trinomial logistic regression technique is used to assess the parameter estimates of the model and model's predictive accuracy is assessed via a Hausman-McFadden test. The significance of the predictor set is assessed via the global chi-squared result.
- Finally results on the robustness tests are presented with the model being re-estimated using a different predictor set to assess the stability of the logistic regression model.

4.2 Review of dataset

The dataset used for this study consists of 46 private equity investments exited through IPOs, SBOs and trade sales between 1999 and 2009 in South Africa. The initial data was obtained from several private equity firms and reduced to the private equity investments for which the private equity firms willingly disclosed i) the holding period, ii) the realization multiple (or times money), iii) the annualized internal rate of return and the total acquisition funding. The HHI or the industry concentration measure for the different sectors was calculated from the publicly available Annual Financial Statistics releases from Statistics South Africa. As initially expected, the major obstacle in any private equity research is the non-willingness of private equity firms to disclose financial information. Given the prevailing constraints and the limited dataset obtained, the researcher made an effort to obtain additional data in order to have a fairly representative sample of the three exit modes and across different industry sectors. Table 1 below shows the distribution of the sample by exit mode.

Table 3: Distribution of dataset by exit mode

Exit Mode	Frequency(N)	Percent (%)
IPO	20	43.5
Secondary	8	17.4
Trade Sale	18	39.1
Total	46	100.0

The majority of the exits in the sample were via IPOs (43.5%) followed by trade sales at 39.1% and secondary buyouts at 17.4% of the total exits. The sample was drawn from nine different industry sectors with the majority (26.1%) of realized investments being in the transport, storage and communication sector. Table 4 below summarizes the distribution of the sample by industry sector. It's important to note that highly concentrated or monopoly sectors such as electricity, gas and water sectors are not represented in the exit dataset.

Table 4: Distribution of dataset by industry sector

Sector	Frequency(N)	Percent (%)
construction	2	4.3
forestry, fishing and related	4	8.7
manufacturing	10	21.7
mining and quarrying	2	4.3
Other	8	17.4
real estate, financial services	1	2.2
social, personal services	3	6.5
Trade	4	8.7
transport,storage,communication	12	26.1
Total	46	100.0

4.3 Results Pertaining to the Sub-Problem One

4.3.1 *Descriptive Statistics*

The summary statistics are organized into four different panels in Table 5 where Panel A is the analysis of the entire sample and Panels B, C and D refers to exits via IPOs, trade sales and secondary buyouts respectively.

Table 5: Summary descriptive statistics per exit mode

Variable	Sample Size (N)	Mean	Median
Panel A (Total Sample)			
Total Funding (R Mill)	46	63.96	29.00
Annualized IRR	46	.41	.30
Exit Multiple	46	2.88	2.30
Herfindahl-Hirschman Index	46	2.33	1.54

Holding Period (months)	46	45.93	43.96
Panel B (IPOs)			
Total Funding (R Mill)	20	76.15	39.5
Annualized IRR	20	.54	.33
Exit Multiple	20	3.69	3.32
Herfindahl-Hirschman Index	20	2.52	3.60
Holding Period (months)	20	50.25	43.96
Panel C (Trade Sales)			
Total Funding (R Mill)	18	64.00	27.50
Annualized IRR	18	.39	.24
Exit Multiple	18	2.37	1.97
Herfindahl-Hirschman Index	18	1.88	1.19
Holding Period (months)	18	43.51	41.93
Panel D (Secondary Buyouts)			
Total Funding (R Mill)	8	33.38	18.00
Annualized IRR	8	.13	.20
Exit Multiple	8	2.00	1.49
Herfindahl-Hirschman Index	8	2.88	3.77
Holding Period (months)	8	40.59	40.03

Table 5 Panel A shows that the average realized value per exit (total funding/firm size) was R63.96 million. The mean annualized IRR for the exited investments was 41% with a mean exit multiple of 2.88. Portfolio companies were on average held for a period of 45.9 months (3.8 years) and the mean HHI value of 2.3 (2.3%) indicates that in general terms the average exited portfolio company was operating in a sector that is less concentrated or rather fragmented.

Observations from analysis of Panels B, C and D show that exits via IPOs received the highest realized value and were the best performing exits as measured by both the annualized IRR and the exit multiple. The average LBO exited via an IPO was disposed at a value of R76.15 million with a mean exit multiple of 3.69. This was followed by trade sales which were on average disposed at the value of R64 Million with a mean exit multiple of 2.37. In contrast LBOs exited via secondary buyouts seem to perform worse than the

other exit modes with the average exit realizing an average value of R33.38 million and much lower mean exit multiple of 2.00.

Investment exited via IPOs were on average held much longer (50.2 months) relative to investments exited via trade sales at an average of 43.5 months and secondary buyouts held for 40.6 months on average.

In terms of the industry sector classifications, exits via trade sales (strategic sales) were on average in much more fragmented industries as measured by the lowest average Herfindahl-Hirschman Index (HHI) of 1.8% relative to IPOs and secondary buyouts which are pegged at slightly higher but comparable average HHIs of 2.3% and 2.8% respectively.

The above summary of the descriptive statistics makes observations on the differences in terms of realized value, performance, industry concentration and the holding periods between the three exit modes. Nonetheless, it is imperative to assess the statistical significance of the differences observed in the descriptive analytics in order to derive meaningful insights relevant to the research question and to test various postulated hypotheses. This objective is achieved via independent-sample t-tests.

4.3.2 *Results of the Independent-sample t-tests*

The independent-sample t-tests pair the independent samples between IPO vs. SBO, IPO vs. trade sales and SBO vs. trade sales in order to distil any statistically significant differences in the means of the holding period, annualized IRR, HHI and fund size (funding) between the paired exit mode samples. The assumption of equal data variance is assessed via Levene's test for equality of variances and where the levene p-value is greater than 0.05 (i.e. not statistically significant at the 95% confidence interval) the t-value for "Equal variances assumed" is reported with its significance (p-value) to assess whether the differences in the reported means are statistically significant. Comparisons between the independent sample medians are assessed via the non-parametric Mann-Whitney U test. Table 6 below summarizes the results of independent

sample t-tests and statistically significant differences between the paired samples are highlighted.

Table 6: Summary of mean differences between exit modes

Variable	Levene's p-value	Mean	
		t-value	p-value
Panel A (IRR)			
IPO and SBO	.59	-.91	.37
IPO and Trade	.32	.48	.64
Trade and SBO	.73	1.14	.27
Panel B (Holding Period)			
IPO and SBO	.49	-.92	.37
IPO and Trade	.34	.87	.39
Trade and SBO	.98	.34	.74
Panel C (HHI)			
IPO and SBO	.58	.49	.63
IPO and Trade	.40	1.15	.26
Trade and SBO	.38	-1.31	.20
Panel D (Total Funding)			
IPO and SBO	**.06****	-1.94	**.06****
IPO and Trade	.90	.36	.72
Trade and SBO	.40	.69	.50

** denotes significance at 10% ($p \leq 0.1$)

Table 6 shows that all the means' p-values for the independent samples tests are greater than 0.05. Therefore, there are no statistically significant differences (at the 95% confidence interval) in the central tendency measures (means) between the different exit modes across the four independent variables; IRR, holding period, HHI and total funding. The Levene's p-values are all greater than 0.05 and therefore the assumption of equality of variances in the analysis is retained. However, at the 90% confidence interval there is a statistically significant difference between the total funding for IPOs and SBOs. Since the Levene's p-value for this observation at .06 is less than .1, the assumption of

equal variances in total funding between IPOs and SBOs is rejected and the reported t-value and p-value are reported with unequal variances assumed. The p-value of .06 for the reported t-value of -1.94 implies there is a statistically significant difference in the total funding or realized values for investment exited via IPOs and SBOs. The non-parametric analysis of the comparison of medians across the different groups yields the result that the means and distributions across all categories of exit modes are the same. In all instances the null hypothesis which assumes similarity in medians and distributions of the independent variables across all the exit modes is retained. Figure 1 below gives a synopsis of the results observed from the non-parametric analysis.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of TotalFunding are the same across categories of SBO.	Independent-Samples Median Test	.686[1,2]	Retain the null hypothesis.
2	The distribution of TotalFunding is the same across categories of SBO.	Independent-Samples Mann-Whitney U Test	.199[1]	Retain the null hypothesis.
3	The medians of IRR are the same across categories of SBO.	Independent-Samples Median Test	.686[1,2]	Retain the null hypothesis.
4	The distribution of IRR is the same across categories of SBO.	Independent-Samples Mann-Whitney U Test	.438[1]	Retain the null hypothesis.
5	The medians of HHI are the same across categories of SBO.	Independent-Samples Median Test	.678[1,2]	Retain the null hypothesis.
6	The distribution of HHI is the same across categories of SBO.	Independent-Samples Mann-Whitney U Test	.566[1]	Retain the null hypothesis.
7	The medians of HOLD are the same across categories of SBO.	Independent-Samples Median Test	1.000[1,2]	Retain the null hypothesis.
8	The distribution of HOLD is the same across categories of SBO.	Independent-Samples Mann-Whitney U Test	.533[1]	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1]Exact significance is displayed for this test.

[2]Fisher Exact Sig.

Figure 1: Synopsis output of the non-parametric assessment of medians

4.3.3 *Results of correlations and covariances*

The trinomial logistic regression model used to assess the impact of the four independent variables (IRR, holding period, HHI and total funding) on the exit mode decision does not make any assumptions about the homogeneity of variances nor the normality of errors. Nonetheless, the model requires the absence of multicollinearity in the predictor set. Inter-variable correlations are assessed to test for these effects and Table 7 below shows that the only statistically significant observation is the inverse correlation between the holding period and the annualized IRR. However, this correlation at -.39 is relatively weak and deemed not to have any adverse impact on the regression model.

Table 7: Inter-variable correlation matrix

Correlation Matrix				
	1.	**2.**	**3.**	**4.**
1. Total Funding	1			
2. IRR	-.08	1		
3. HHI	.10	.19	1	
4. HOLD	.26	-.39**	.10	1

**. Correlation is significant at the 0.01 level (2-tailed).

4.3.4 *Results of the trinomial logistic regression*

A trinomial logistic regression analysis was used to calculate the likelihood or probability of an LBO disposal via IPO, SBO or trade sale using the predictor set of IRR, holding period, total funding (firm size) and HHI. The ratio of cases to the independent variables was calculated to be 46:4 or 11.5 to 1. This satisfies the 10:1 ratio recommendation of cases to predictor variables for a multinomial logistic regression.

The ability of the model to correctly predict the exit mode given the set of predictors is summarized in the classification Table 8 below. The table shows that the overall predictive accuracy of the regression model is 58.7% i.e. 58.7%

of the cases were classified accurately. The proportional by-chance accuracy of the model is calculated as:

$$Accuracy = \left(\frac{18}{46}\right)^2 + \left(\frac{20}{46}\right)^2 + \left(\frac{8}{46}\right)^2$$

This yields a by-chance of accuracy of 37.2%. The trinomial model improves the overall prediction accuracy by 21.5%.

Table 8: Model's classification accuracy

	Predicted Classifications			
Observed	**IPO**	**Secondary**	**Trade sale**	**Percent Correct**
IPO	13	1	6	65.0%
Secondary	2	5	1	62.5%
Trade sale	8	1	9	50.0%
Overall Percentage	50.0%	15.2%	34.8%	58.7%

A test of the model's fitting information is summarized in Table 9 below. The results show that the model's Chi-square (χ^2) is 12.21 with a p-value of .14. The regression model therefore does not provide a statistically significant improvement over the constant-only model. Overall, the model's predictor set cannot reliably distinguish between the different choices of exit (exit modes). The null hypothesis that there is no difference between the model without independent variables and the model with independent variables is retained.

Table 9: Model Fitting results

Model Fitting Information				
	-2 Log Likelihood	**Chi-Square**	**df**	**Sig.**
Intercept Only	95.08			
Final	82.87	12.21	8	.14

The McFadden R-square of .13 in Table 10 indicates that the predictor set only accounted for about 13% of the variance of the dependent variable (exit mode). This result further demonstrates a very weak relationship between prediction and the exit mode category.

Table 10: Model's R-square summary

Model Summary (R-square)			
	Cox and Snell	**Nagelkerke**	**McFadden**
Pseudo R-Square	.23	.27	.13

The overall relationship between each predictor and contribution to exit mode is summarized in Table 11. The significance (p-values) of the predictors' chi-square values indicate that only the predictor IRR (p = .04) is statistically significant in terms of contributing towards the choice of exit mode. HHI is only statistically significant at the 90% confidence interval.

Table 11: Likelihood ratios of predictors

Likelihood Ratio Tests				
	-2 Log Likelihood of Reduced Model	**Chi-Square**	**df**	**Sig.**
Intercept	84.62	1.74	2	.42
HOLD	85.48	2.61	2	.27
Total Funding	86.51	3.64	2	.16
IRR	89.32	6.44	2	.04
HHI	88.49	5.61	2	.06

In order to assess the contribution of the independent variables to the prediction, the category IPO is used as a reference category and the contribution of each variable is assessed in relation to the reference category

e.g. the variable IRR is assessed to test whether it contributes to the choice of secondary buyout or trade sale as exit modes over IPO. Results summarized in Table 12 below show that the standard errors of the B coefficients do not indicate any multicollinearity issues or numerical problems. The Wald criterion shows that the only statistically significant relationship with a p = .04 is the contribution of IRR towards predicting the choice between SBO and IPO as exit modes. The related Exp(B) value of .08 indicates that if the value of IRR increases by a single unit (by 1 %) then the likelihood of choosing a secondary buyout as an exit choice over the IPO drops by 8 %.

Table 12: Trinomial logistic regression model summary

Parameter Estimates

ExitMode[a]		B	S.E.	Wald	Df	Sig.	Exp(B)
Secondary	Intercept	.91	1.33	.46	1	.50	
	Total Funding	-.02	.02	2.14	1	.14	.98
	IRR	-2.52	1.24	4.13	1	.04	.08
	HOLD	-.04	.03	2.00	1	.16	.97
	HHI	.55	.33	2.75	1	.10	1.73
Trade sale	Intercept	1.26	1.01	1.56	1	.21	
	Total Funding	.00	.00	.00	1	.98	1.00
	IRR	-.33	.47	.48	1	.49	.72
	HOLD	-.02	.02	.98	1	.32	.98
	HHI	-.17	.21	.70	1	.40	.84

*The reference category is: IPO

The observation from Table 12 implies that leveraged buyouts with higher annualized IRR are likely to be exited via an IPO listing as opposed to being sold to another private equity investor (SBO). Nonetheless, the statistically significant relationship identified by the Wald criterion as well as the Likelihood ratio tests cannot be conclusive since the overall model's fit as indicated by the chi-square (χ^2) and the McFadden tests described earlier and summarized in Tables 9,10 point towards a poor overall fit.

4.4 Results Pertaining to Sub-problem Two

In order to assess the contribution of exit strategy (mode) to performance, a one-way ANOVA with three levels was employed as a suitable technique. The exit multiple was used as the dependent variable and the three exit modes (IPO, SBO and trade sale) as the independent categorical predictors. Paired multiple comparisons were conducted using the Tukey-Kramer test. The results of the Tukey-Kramer test are summarized in Table 13 below.

Table 13: Comparisons of mean differences of exit multiples between modes

		Mean Difference		
(I) ExitMode	**(J) ExitMode**	**(I-J)**	**Std. Error**	**Sig.**
IPO	Secondary	1.70	1.34	.42
	Trade sale	1.31	1.04	.43
Secondary	IPO	-1.69	1.34	.42
	Trade sale	-.38	1.36	.96
Trade sale	IPO	-1.31	1.04	.43
	Secondary	.38	1.36	.96

Table 13 shows that all the p-values for the comparisons were greater than .05 i.e. there are no statistically significant differences in the exit multiples of the different exit modes. These results are in congruence with the results obtained from the independent-samples t-tests for the annualized IRR which is a derivative of the exit multiple. Table 14 below provides further results on the univariate analysis of the different exit modes and impact on the realized exit multiple.

Table 14: Univariate analysis: exit mode impact on exit multiple

Effect on Exit Multiple				
	F	Sig	Partial Eta Squared	Observed Power
Corrected Model	1.16	.32	.05	.24
Intercept	27.34	.00	.39	1.00
Exit Mode	1.16	.32	.05	.24
R - Squared	.05			
Adjusted R-Squared	.01			
alpha	.05			
Levene's Test F	1.01			
Levene's Test Sig	.37			

The difference between the exit multiples of the different exit modes has a p-value of 0.32 and the observed power is 0.24. Whereas the p-value might suggest no statistically significant differences between the exit multiples of the exit modes, it is imperative for this determination to be made with reference to the ability of the univariate test to find or locate effects. The observed power of 0.24 means if the difference between the multiples realized by the different exit modes does indeed exists there is only a 24% chance of finding that effect. Owing to the low power observed, there is a high likelihood of encountering a Type II error in the analysis and therefore no conclusive results can be drawn from the analysis of the p-values. The overall ANOVA has an R-squared and partial eta squared of .05 and this implies that exit mode as predictor variable has very low explanatory power to explain the variance in the exit multiple (the dependent variable). Nonetheless, the Levene's p-value of .37 ($p > .05$) suggests that the equality of the variances in the exit multiple between the different exit modes is not violated and the null hypothesis is therefore retained. The assumptions of homogeneity are further cemented by the residual plot shown in Figure 3 which shows homogeneity of variances in the dataset.

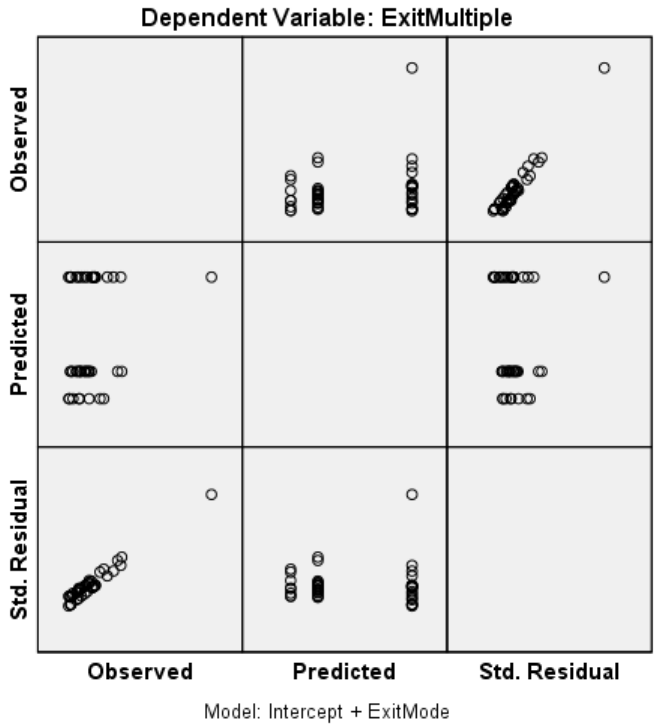


Figure 2: One-Way ANOVA residual plot

4.5 Results of the Robustness Tests

Robustness tests were conducted to re-estimate the logistic model under a different set of assumptions. The re-estimation of the model was carried out to achieve an equitable balance in the frequencies of observations by using IPOs as the reference category and grouping exits via trade sales and secondary into the 'Other' category. In essence, the re-estimated model tests the predictive ability of the predictor set to distinguish between IPO and Other exit modes. The new re-estimated dependent variable (exit mode) is dichotomous and the binomial logistic regression analysis is conducted to assess the predictive ability of the binomial model relative to its trinomial substitute.

Table 15 shows that the re-estimated model's chi-square has significance p = 0.45 and therefore the null hypothesis that the model with predictors does not significantly improve accuracy of prediction relative to the constant only model is retained. The re-estimated model cannot reliably distinguish between selections of IPO versus Other exit modes.

Table 15: Tests of Binomial logistic Model Coefficients

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3.71	4	.45
	Block	3.71	4	.45
	Model	3.71	4	.45

The Nagelkerke's R-square value summarized in Table 16 shows that the model only accounts for 10.4 % of the variance of the exit mode.

Table 16: Binomial logistic regression model R-Square

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	59.28[a]	.08	.10

Prediction accuracies are classified into the constant-only Step 0 classification and Step 1 with the predictors in Table 17. The constant only accuracy is interpreted as "by chance" accuracy and results show that the re-estimated model only improves the overall accuracy rate by 6.5% (63% – 56.5%) over the by chance constant only model.

Table 17: Binomial logistic Model Classifications

Classification Table[a]

	Observed		Predicted		
			ExitMode		Percentage Correct
			IPO	Other	
Step 0	ExitMode	IPO	0	20	0
		Other	0	26	100
	Overall Percentage				56.5
Step 1	ExitMode	IPO	7	13	35
		Other	4	22	84.6
	Overall Percentage				63

The results of the Wald test which assesses the individual contribution of each predictor to the variance of the exit mode are summarized in Table 18.

Table 18: Wald tests summary statistics

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	HOLD	-.02	.02	1.88	1	.17	.98
	IRR	-.60	.50	1.40	1	.24	.55
	TotalFunding	-.00	.00	.18	1	.68	1.00
	HHI	-.03	.18	.02	1	.88	.97
	Constant	1.71	.94	3.33	1	.07	5.53

The results show no statistically significant relationship (all p values > .05) between the four predictors and exit mode when using the re-estimated binomial model.

4.6 Summary of the results

This study finds a statistically significant difference between total funding (firm size) for LBOs exited via IPOs and those exited via SBOs. This finding implies that large portfolio companies are likely to be exited via an IPO listing as opposed to a secondary buyout also at a 90% confidence level.

The trinomial logistic regression model used to analyse the predictive ability of the predictor set on exit mode offers an improvement over the prediction accuracy achieved by pure chance (by chance accuracy). Nonetheless, the regression model doesn't provide a good fit overall. This means overall, the predictor set cannot reliably distinguish between the different choices of exit (exit modes). The null hypothesis that there is no difference between the model without independent variables and the model with independent variables is retained. The McFadden test results supports this overall lack of fit for the model showing that the predictor set only accounts for a low percentage of the variance of the dependent variable (exit mode). In summary the results reveal a very weak relationship between prediction and the exit mode category.

The relationship between individual predictors and exit mode shows that IRR is the only statistically significant independent variable that has an impact on exit mode. HHI is only significant at the 90% confidence interval. However, the assessment of the predictor set's impact on choice of exit mode cannot be conclusive since the overall model fit was found to be poor.

When the contribution of the individual independent variables to the prediction of exit mode is assessed in relation to IPO as a reference category, the only statistically significant relationship established is the contribution of IRR towards predicting the choice between SBO and IPO as exit modes. The related odds ratio indicated that if the value of IRR increases by a single unit (by 1 %) then the likelihood of choosing a secondary buyout as an exit choice over the IPO drops by 8 %. This finding implies that leveraged buyouts with higher annualized IRR are likely to be exited via an IPO listing as opposed to being sold to another private equity investor (SBO). However, the results pertaining to the individual predictor's contribution to the exit mode cannot be conclusive since as a predictor set the collective has a poor overall fit.

The univariate analysis of the impact of chosen exit mode on the realized exit multiple shows no statistically significant differences in the exit multiples of the three different exit modes. The differences observed between the exit multiples of the different exit modes, though statistically insignificant, have a low observed power. The low observed power means if the differences between the multiples realized by the different exit modes do indeed exist there is only a low chance/capability of finding that effect. Owing to the low power observed, a high likelihood of encountering a Type II error is noted in the analysis and therefore no conclusive results can be drawn from the analysis. The overall analysis of variance shows that the choice of exit mode has a very low explanatory power in explaining variance of the exit multiple.

In order to test the stability of the trinomial logistic model, a new model is re-estimated with exits via trade sales and secondary grouped into the 'Other' category in order to achieve an equitable balance between the exit mode frequencies. The binomial logistic regression analysis shows that the model with predictors does not significantly improve accuracy of prediction relative to the

constant only model. Therefore, the re-estimated model cannot reliably distinguish between selections of IPO versus Other exit modes. The model with predictors accounts for a low percentage of the variance of the exit mode. The re-estimated model slightly improves the prediction accuracy relative to the constant-only model and there exists no statistically significant relationships between the predictors and exit mode. The re-estimated model's results are in congruence with the trinomial model which finds no statistically significant relationship between the collective predictor set and the exit mode.

5 DISCUSSION OF THE RESULTS

5.1 Introduction

This chapter presents an interpretation of the quantitative results obtained from the various techniques employed in the study to analyse determinants of exit mode for leveraged buyouts in South Africa. Due to the mixed methods design approach used in the study, the subsequent qualitative findings obtained from interviews with private equity experts were analysed within the context of the quantitative findings to enhance, explain and clarify the research outcomes. The common themes identified in the qualitative analysis were integrated with the theoretical perspectives and findings from the quantitative phase to address the underlying research question and to also strengthen and concretise the explanatory variables of exit mode in South Africa's private equity industry.

This chapter is structured such that the research findings from the quantitative phase are interpreted and the findings explained first. Findings related to the robustness of the logistic regression model are explained. Then the qualitative findings or the common qualitative themes identified are integrated into the research findings to strengthen the depth and richness of the analysis. Finally, the resultant mixed methods findings are compared and contrasted with the literature review. Where the research has unearthed an emergent theory, idea of a hypothesis, further assessment of the literature was conducted to ascertain if the emergent theory, idea or hypothesis carries any currency in the extant literature.

5.2 Demographic profile of respondents

Tables 3 and 4 show the distribution of the dataset used in the study. The data was obtained anonymously from private equity firms in order to meet the high confidentiality requirements typically required in the private equity industry. The total number of observations was reduced to 46 exits between 1997 and 2007 after eliminating all the transactions in which incomplete data was supplied. An effort was made to achieve an equitable distribution of exited investments

across the different industry sectors as well as balance between the three exit modes being investigated. The private nature of private equity investments means that the general absence of material public information is a major impediment in any research conducted in this field. This quantitative limitation manifested itself through a small sample size since some of the private equity firms were not willing to disclose information on the performance of their exited investments. Therefore a subsequent in-depth qualitative analysis was imperative to enrich the research. In-depth elite interviews were conducted with seven industry experts selected through a non-probabilistic purposive sampling technique. The selected experts were at the helm of major private equity firms and had the requisite experience of exiting private equity investments.

5.3 Discussion pertaining to Research Question 1

5.3.1 *Operating performance*

Observations from analysis of the descriptive statistics in Table 5 shows that exits via IPOs received the highest realized value and were the best performing exits as measured by both the annualized IRR and the exit multiple. IPOs were followed by trade sales in terms of performance. In contrast LBOs exited via secondary buyouts seemed to perform worse than the other exit modes with the lowest average realized value and the lowest realized exit multiple. This finding appears to be in consonance with the pecking order hypothesis which suggests that there is a pecking order in the choice of private equity exits with IPOs being at the summit of that pecking order followed by trade sales and secondary buyouts (Beinz 2005). Beinz observed the pecking order using data from the German market. Sudarsanam and Nwagodoh (2005) arrived at a similar conclusion using data from the UK albeit with a contrast that still prefers flotation (IPOs) but relegates trade sales to the bottom of the order. Findings from this study using South African data seem to conform to similar findings in the German market and support the pecking order hypothesis. The trends in terms of the descriptive analysis points towards supporting the pecking order theory, however results from the independent samples t-tests reveal the

differences in operating performance as measured by IRR between the different exit modes to be statistically insignificant. Discussions with industry experts reveal support for the pecking order theory in the South African context. Respondents indicated that large and established portfolio companies with solid performance and predictable cash flows are generally valued at a premium by the public markets. Therefore, such portfolio companies are generally associated with higher returns and are likely to be exited via a listing/IPO. Guo, Hotchkiss and Song (2011) found that improvements in the operating performance of portfolio firms are a source of value creation in private equity investments. Therefore, firms with high operating performance as measured by IRR are less likely to be exited via a secondary buyout since the opportunities of creating value through instituting operational improvements in these firms are diminished. This theory finds credence in the extant literature as well as the quantitative and qualitative results of this study.

5.3.2 *Firm size*

The only statistically significant difference (at the 90%) confidence interval was observed in the average size of the exited portfolio companies (total funding) between secondary buyouts and IPOs. This finding suggests that the only conclusive finding that can be drawn from the analysis via the interdependent samples t-test is that large companies tend to be exited via flotation or listing in the stock market as opposed to being exited via secondary buyouts or sale to another private equity firm. The average exit via IPO realized a value R76.0 million compared to R64.0 million and R33.4 million for trade sales and secondary buyout respectively. A common theme that emerged amongst the respondents in the qualitative analysis was that public markets are best placed to raise the required funding for the acquisition of large portfolio companies. This explains the phenomenon observed from the analysis that large portfolio companies as measured by total funding (or firm size) are generally exited via an IPO. The macroeconomic factors as measured by the performance of the mergers and acquisitions market and the stock market seem to have a mediation effect in the observed relationship between firm size and exit mode.

In a distressed market you are likely to see deal sizes shrinking. The debt that is raised has to be backed by as much equity assuming a 50/50 leverage and in the current climate big transactions are likely to be a thing of the past. (Respondent from private equity firm)

This response further supports the statistically significant findings of this study that large firms are likely to be exited via an IPO as opposed to a secondary buyout. Nonetheless, this observation could also be a reflection of the fundraising abilities of South Africa's private equity firms as well as the overall recognition of private equity as a distinct asset class in South Africa. Internationally, pension funds are allowed to allocate as much as 30% of their capital towards private equity as an asset class with some markets placing no restrictions on allocations (French, Myburgh and Dicks 2012). In South Africa, despite changes to Regulation 28 allowing pension funds to allocate a regulatory maximum of 10% towards the asset class (inclusive of hedge funds and other unlisted equities), the actual allocations towards private equity remain depressed at less than 5 % (Missankov*, et al.* 2006). This impinges negatively on the ability of private equity firms to raise capital for mega transactions and explains the lower probability of large portfolio firms being exited via a sale to another private equity investor (secondary buyout).

5.3.3 *Investment holding period*

Investment exited via IPOs were on average held much longer (50.2 months) relative to investments exited via trade sales at an average of 43.5 months and secondary buyouts held for 40.6 months on average. The results of the holding period are consistent with the findings of van Niekerk and Krige (2009) in the literature relevant to the South African private equity market. The previous discussion on operating performance also indicated that investments exited via IPOs posted much higher operating performance relative to the other exit modes. Once can surmise that in general, private equity investors tend to hold on to better performing investments (high flyers) much longer and maximise their returns by awaiting a favourable macroeconomic climate or better stock market valuations to exit their investments via flotation. Nonetheless, results

from the independent-samples t-tests showed that the differences in the average holding periods were not statistically significant implying that the holding periods of investments exited via the three exit modes are statistically indistinguishable. Discussions with experts from the private equity industry reveal that the private equity cycle and its timing plays an important role in exit decision making and the investment holding period in particular. A typical private equity cycle in South Africa takes 5-7 years and at the end of the cycle, investment managers have to realize their investments and raise capital for the next cycle. It's important to note that in addition to raising capital from institutional investors and other funders, limited partners (LPs) typically also commit their own capital or take up equity in the acquired firms i.e. they have a "skin in the game". The response below further demonstrates that PE investors are constantly and opportunistically looking for favourable exit conditions to realize their investments.

Valuations are subjective. A prudent PE manager must rely on his/her experience and industry relationships to determine and/or negotiate a fair valuation to exit an investment. That must be balanced with the urgency to raise capital and reach final close for the new fund. (Respondent from a private equity firm)

The above sentiment expressed by one of the respondents shows that the timing of the private equity cycle, the prevailing macroeconomic climate or stock market (or M&A) conditions as well as the PE manager's skills and experience in monetizing their investments are potential mediating and/or moderating variables in the relationship between the investment holding period and choice of exit mode. Strandberg (2010) suggests that the investment holding period is potentially also an indication of the existence of multiple arbitrage opportunities in the market. Strandberg reckons that as the Nordic private equity market emerged in the 90s it was possible for PE firms to buy cheap firms, increase financial leverage but otherwise do minimal changes to turn-around the firms before selling. Such multiple arbitrage opportunities become scarce as the PE market matures and much more active intervention and enhancements in the operational capacities of the firm are required in accordance with the

"Interventionism" model expounded by Klier, Welge and Harrigan (2009). Based on this concept, it is conceivable that in the South African context, the findings of this study do indeed confirm that the investment holding period plays a diminished role as a predictor of exit mode.

5.3.4 *Industry concentration*

Interestingly, observations from the descriptive statistics tend to support the consolidation hypothesis which proposes that highly fragmented industries (with lower HHIs) are likely to be exited via trade sales as strategic buyers seek to unlock economies of scale or scope through consolidating or incorporating these fragments into a larger firm with synergies realized. In terms of the industry sector classifications, exits via trade sales (strategic sales) were on average in much more fragmented industries as measured by the lowest average Herfindahl-Hirschman Index (HHI) of 1.8% relative to IPOs and secondary buyouts which had average HHIs of 2.3% and 2.8% respectively. The independent-samples t-tests results however discredit the consolidation hypothesis since the observed differences in the means of the HHIs between the different exit modes are not statistically significant. The findings of the study in this respect are in contrast with the findings of Berger, Demsetz and Strahan (1999) and Sudarsanam and Nwagodoh (2005) who all found the levels of industry fragmentation to influence choice of exit mode.

The results of the qualitative analysis pertinent to industry concentration seem to contradict the quantitative findings from the study. Respondents generally confirmed that small firms in highly fragmented industries such as the Information Technology sector were prone to acquisition by their larger established counterparts. In South Africa indications are that information on trade sales is distorted by international funds that want exposure to South Africa's resources sector. Nonetheless, discussions with industry experts confirm that most of the strategic buyers with "deep pockets" typically consolidate their positions in the market through acquisition of portfolio companies which either helps them to reach new markets, new segments or give the parent company access to low cost production. This view in the South

African context is confirmed by Steven Kilfoil, director of Grant Thornton Corporate Finance in Johannesburg who was quoted saying that South African companies' acquisition strategies seem to focus on consolidating the companies' local positions before embarking on riskier cross-border acquisitions (Fin24 2011). Wilson, Wright, Siegel and Scholes (2012) using data from the United Kingdom private equity market, found evidence that portfolio companies in highly fragmented industries are relatively less profitable. This finding supports the consolidation hypothesis that posits that aggregation of fragments in an industry sector unlocks synergies and economies of scale improving long term profitability.

One can surmise that the disparities in the quantitative and qualitative findings can be explained by the fact that quantitative analysis in this study was generally impeded by the reluctance of private equity firms to disclose critical information on exited transactions resulting in a small sample size. The small sample size necessarily implies that even where effects do exist, such effects cannot be unearthed due to a low power problem. Therefore, the qualitative analysis results are more plausible.

5.3.5 *Predictor set contribution to Exit Mode*

The impact of the predictor set consisting of the four independent variables; IRR, holding period, HHI and total funding/firm size on the exit mode decision was assessed using a trinomial logistic regression model. The results of the analyses yielded a prediction accuracy of 58.7%. This result implies that the ability of the model to accurately predict the correct exit mode given a set of the specified predictors was only a 21.5% improvement over the by-chance accuracy of 37.2 %. The McFadden test further revealed that the model only accounted for 12.8% of the variance of exit mode indicating a weak relationship between the predictor set and the dependent variable exit mode. In contrast other international studies notably by Schmidt et al (2010) and Sudarsanam and Nwagodoh (2005) have demonstrated much stronger relationships between the predictors and the exit mode with their models accounting for 16.3 % and 18% respectively. The regression model also does not provide a statistically

significant improvement over the constant-only model meaning that overall, the predictor set cannot reliably distinguish between the different choices of exit mode. The model's poor fit further justifies the need to triangulate the empirical findings with the qualitative analysis results.

The overall relationship between the individual predictors' contributions to exit mode shows that only operating performance as measured by IRR is statistically significant (at 95% confidence interval) in predicting choice of exit mode between IPO and SBO. A percentage increase in IRR reduces the likelihood of exit via a secondary buyout by 8%. This result is consistent with the pecking order hypothesis and the earlier finding that high-flyers are likely to be exited via a listing/flotation. Investors with high performing portfolio companies seem to prefer an IPO listing rather than a secondary buyout in order to leverage from the better valuations offered by the equities market to realize better returns. This general sentiment was endorsed by the qualitative findings with the respondents also cautioning that the macroeconomic factors expressed through the robustness of the stock market and the mergers and acquisitions market still plays an important role in the choice to go public.

Under the global financial crisis, investors have been holding on to their investments a bit longer. IPOs are not always a viable exit option because of the declining valuations and you will begin to see synergistic bidders playing a more prominent role. (Respondent from a private equity firm)

The findings of this study in this aspect is also consistent with the recent findings in the emerging literature of Bayar and Chemmanur (2011) and Sousa and Jenkinson (2012) who established that high performing portfolio companies are likely to receive higher public market valuations and therefore private equity investors will prefer to exit such investments via an IPO listing.

The other noteworthy finding from the results of the trinomial logistic regression is that HHI as a predictor is statistically significant at the 90% confidence interval in distinguishing the choice of exit mode between secondary buyouts and IPO. In essence, this result means that companies in fragmented industries are 1.7 times likely to be exited via an SBO as opposed to an IPO. This result

cannot be conclusively interpreted considering the statistical significance as well as the overall poor fit of the regression model. The overall poor fit of the model is a reflection of the interdisciplinary nature of private equity investing with a myriad of factors converging almost stochastically in the exit decision making process. This was succinctly captured in one of the respondents' surmising that:

There is no formula for realizing investments. At times fundraising puts pressure on investors to monetize their investments and that tends to spike secondary buyouts. PE practitioners have to be on a constant lookout for favourable exit conditions but also leverage from their expertise, relationships and knowledge of the market to make that giant leap. Ultimately it's a leap of faith. Timing is very critical because even a good investment exited at the wrong time will erode the value realized by our LPs and shareholders. (Respondent from a private equity firm)

This response concurs with the findings of this study that besides identifying the firm's operating performance as a differentiator of exit mode, the other explanatory factors cannot be concisely distilled owing to an interplay of a myriad of factors relevant to the choice of exit mode. This finding is supported by emergent literature which reveals other factors at play which can influence exit strategy. Wang (2012) found that firms are likely to exit via secondary buyouts if the debt markets are favourable, the stock market is "cold" and when investors are under pressure to raise funds in anticipation of a new round of the private equity cycle. Sousa and Jenkinson (2012) found that the firms' operational efficiencies also play a determining factor in the choice of exit mode. Sousa and Jenkinson explain that firms held for a longer period of time offer new investors limited opportunities to enhance the operational efficiencies of such firms rendering them unsuitable for exit via secondary buyouts. DeTienne and Cardon (2012) suggest that private equity firms with an entrepreneurial outlook may base their exit strategies on the risk propensity of the PE firm. These host of potential predictors identified in the literature have a cumulative effect of making the exit mode decision appear to be more of an art than a decision that can be empirically distilled.

5.4 Results Pertaining to Sub-problem One

The ex-post univariate analysis of the effect of choice of exit mode on deal performance measured by the realized exit multiple was conducted through a one-way ANOVA test. The one-way ANOVA test yielded no statistically significant differences in the exit multiples realized by three exit vehicles; IPO, SBO and trade sale. These results are in congruence with the results obtained from the independent-samples t-tests. Nonetheless, the ability of the analysis to find or locate any effect was impeded by a low observed power of 0.24. This means with a 24% chance of finding an effect in the analysis, there is a high likelihood of encountering a Type II error where an existing effect cannot be unearthed due to the model's low power. Considering that the results of the analysis cannot be conclusive due to the low power observed, the results of the one-way ANOVA still revealed that exit mode has a very low explanatory power in relation to explaining the variance in the realized exit multiple. This finding concurs with the findings from Sudarsanam and Nwagodoh (2005) who also found no significant differences in the exit multiples between the three exit modes. The authors explain that the choice of exit mode is rather influenced by factors such as the feasibility of the deal, opportunistic exploitation of the prevailing investor sentiment and how much value can be extracted from the disposal as opposed to the realizable exit multiple. This finding however, contrasts with the findings of both Loos (2005) and Beinz (2005) who found that IPOs generally realize a valuation premium over the other exit modes and are exited at a higher exit multiple.

A common sentiment emerging from the qualitative analysis is that a fund manager's competitive position to originate superior deal flow as well as negotiate higher exit multiples is greatly enhanced by the manager's industry experience and his/her professional network in the financial/investor community. This sentiment supports the empirical findings that the right combination of industry and professional experience, coupled with the right investor network and superior negotiation skills, fund managers should be able to extract favourable exit multiples regardless of the choice of exit mode. Therefore, it's

conceivable that choice of exit mode should have no impact on the realized exit multiple *centeris paribus*.

5.5 Results of the Robustness Tests (binomial logistic model)

The trinomial logistic regression model was re-estimated using IPOs as the reference category and grouping exits via trade sales and secondary into the 'Other' category. This was intended to achieve an equitable balance in the frequencies of observations between IPOs and Other exit modes. The re-estimated model essentially tested the predictive ability of the predictor set to distinguish between IPO and Other exit modes. With the dependent variable being dichotomous, the results of the binomial model did not yield any significant improvement over its trinomial version. The binomial model slightly improved the prediction accuracy by 6.5% but the overall explanatory power or the prediction accuracy of the binomial model was poor. The re-estimated model could not reliably distinguish between IPO and Other categories of exit mode. The overall model's fit as measured by the chi-square test remained poor.

In summary, the results confirmed the findings of the trinomial logistic regression model and supported by the qualitative analysis which determined the predictor set to lack overall explanatory power to explain the variance of exit mode.

5.6 Conclusion

The results of this study find that the portfolio company's operating performance is a significant determinant of exit mode. Specifically, the study finds that operating performance can significantly distinguish between choice of IPO and secondary buyout as an exit mode. The qualitative results affirm the empirical findings in this regard and lend credence to the pecking order hypothesis which posits that high-flyers are likely to be exited via an IPO. The qualitative analysis found that fundraising is perhaps the most critical phase in the private equity cycle and this finding explains results of the quantitative analysis which found

firm size to be another statistically significant determinant of exit mode or to at least distinguish between choice of IPO and secondary buyout as an exit mode.

The other determinants or predictors of exit mode; investment holding period and industry concentration were found not to have significant contribution to the choice of exit mode via the quantitative analysis. Nonetheless, the common theme amongst respondents in the qualitative analysis supported the finding in relation to investment holding period but contrasted the results pertaining to industry concentration. Respondents to the study confirmed that investment holding period plays a diminished role as a predictor of exit mode owing to timing, macro-economic factors and the experience of the private equity manager all playing a either a direct, a mediating or moderating role in the choice of exit mode. In the South African context, respondents supported the consolidation hypothesis and justified that South African companies' acquisition strategies are driven by the need to consolidate locally in order to gain access to new markets and improve the parent company's market share. Therefore, portfolio companies in highly fragmented industries are ideal targets for strategic buyers and such are likely to be exited via trade sales. The emergence and support of the consolidation hypothesis in the qualitative discussions was in contradiction with the quantitative findings. Nonetheless more credence had to be given to the qualitative findings since the quantitative analysis in this study was generally impeded by the reluctance of private equity firms to disclose critical information on exited transactions resulting in a small sample size. The small sample size necessarily implies that even where effects do exist, such effects cannot be unearthed due to a low power problem.

The findings of the study in relation to sub-problem 1 reveal that the choice of exit mode has no bearing on the ex-post realized exit multiple. This finding was also supported by a common sentiment emerging from the qualitative analysis that inferred that a fund manager's competitive position to originate superior deal flow as well as negotiate higher exit multiples is greatly enhanced by the manager's industry experience and his/her professional network in the financial/investor community. Therefore, private equity managers should be able to extract favourable exit multiples based on a combination of industry

experience, superior negotiation skills and the right investor network regardless of choice of exit mode.

Besides identifying the firm's operating performance and firm size as differentiators of exit mode, the other explanatory factors could not be concisely distilled owing to an interplay of a myriad of factors relevant to the choice of exit mode. Factors identified in the emergent literature and the qualitative findings include the robustness of the mergers and acquisitions markets, pressure from fundraising activities and existence of multiple arbitrage opportunities as potential key drivers of exit strategy. The study finds that the overall predictor set has a very weak explanatory power and poor fit requiring the assessment of determinants of exit mode to be based on a careful methodological triangulation to find convergence between the quantitative and the qualitative findings.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The key findings of the study are briefly summarised in this chapter in relation to the research question and the sub-problem. Useful insights drawn from the relationship(s) established between the predictive factors or explanatory variables and choice of exit mode are articulated as recommendations to the relevant stakeholders in the South African private equity industry. Further recommendations are made regarding how the private equity practitioners can leverage from the findings of this study to formulate better exit strategies and improve the overall value creation of the asset class. The chapter concludes with suggestions for potentially fruitful further research but also proposes a pragmatic approach on how the South African private equity research landscape can be reconfigured to advance not only the interests of researchers but also to benefit the entire industry.

6.2 Conclusions of the study

The exiting of investments which enables value realisation by private equity firms is undoubtedly a very important phase in the private equity cycle. This study sought to identify the determinants of exit mode i.e. identify the key drivers of exit strategy in South Africa's private equity industry through a mixed-method approach. The study found evidence that the portfolio company's operating performance is a significant differentiator between choice of IPO and secondary buyout as an exit mode. This finding concurs with the pecking order hypothesis that is nearly ubiquitous in the literature and has been observed in most developed private equity markets. Qualitative findings affirm the pecking order hypothesis in the South African context. The study also showed that the public markets (IPOs) are better placed as a suitable exit option for larger firms relative to secondary buyouts. This finding is in consonance with the existing theory in the extant literature which posits that large firms are likely to be exited

via an IPO with the exception that the finding of this study was made relative to secondary buyout as reference category.

Investment holding period and industry concentration as explanatory variables were found not to have any significant contribution to the choice of exit mode. The finding in relation to investment holding period converged with the common theme emanating out of the qualitative results confirming this factor as having a diminished role as a predictor of exit mode. In contrast, there was evidence of divergence between the quantitative and qualitative results with regard to industry concentration being a determining factor in choice of exit mode. Respondents supported the consolidation hypothesis which purports that portfolio firms in highly fragmented industries are likely to be exited via trade sales to strategic buyers. Emergent literature supported this common theme amongst respondents and found that South African companies' acquisition strategies are driven by the need to consolidate locally in order to gain access to new markets. The divergence in the findings was attributable to a small sample size and the trinomial logistic regression model displaying a poor overall fit and low power and hence inconclusive findings.

The choice of exit mode was found to have no bearing on value creation or performance of the portfolio company measured by ex-post realized exit multiples as a proxy. Respondents in the South African private equity industry inferred that factors such as the experience of a fund manager, his/her superior negotiation skills and professional network in the investor community play a more pronounced role in the ability of that manager to extract value from exiting an investment. Therefore, the value realized through a suitable exit strategy should be independent of choice of exit mode.

The study found evidence through the sequential mixed methods approach to the effect that the overall predictor set initially identified from the extant literature as determinants of exit mode has a very weak explanatory power and poor overall fit. This was owing to a myriad of factors some identified in the emerging literature which cumulatively reduced the determination of exit mode to be more of an art than rather than a science with empirical and quantifiable underpinnings.

6.3 Recommendations

The purpose of this study was to identify the determinants of exit mode for leveraged buyouts in the South African private equity industry. Declining valuations and scarcity of exit opportunities compounded by among other factors the global financial crisis, effects of quantitative easing and the deteriorating economic outlook makes it imperative for private equity practitioners to exercise a lot more due diligence in exit planning to successfully monetize their investments. A successful exit strategy enables practitioners to set key priorities for improving profitability and performance of leveraged buyouts. The following key recommendations are made in respect of the findings of this study and are intended to assist practitioners in the formulation of optimal exit strategies as a source of value creation in the private equity industry:

- Exit high-performing portfolio companies via IPO (flotation) as opposed to a secondary buyout. This recommendation stems from the finding that operating performance as measured by the annualized IRR is a significant determinant of exit mode and/or can reliably distinguish between IPO and secondary buyout as an exit choice. High performing portfolio companies in South Africa are likely to receive favourable valuations from an IPO listing, everything else being held constant. This recommendation assumes that the macroeconomic climate and the stock market conditions are conducive to such an exit. The timing of an exit is an equally important factor since the deterioration in valuations and scarcity of exit opportunities makes it imperative for practitioners to exercise more due diligence in exit planning.
- Exit large investments via an IPO as opposed to SBO. This study found that companies valued in the region of R76 million or more are best exited via an IPO as opposed to a SBO. This finding is explained by the fact that most private equity firms are not able to fundraise the required capital to participate in megadeals making the public market a suitable exit option. Related to this recommendation, private equity firms should explore the potential of syndication to enable the firms to participate in

more attractive mega transactions. Understandably, megadeals are more attractive to investors since they present more opportunities for value creation, unlocks more synergies for strategic buyers and the value they generate is amplified by economies of scale. Syndication allows private equity firms to form an alliance in which they can jointly invest in a portfolio company with the pay-off being shared upon realization of the investment. This not only gives the syndicate better leverage to negotiate favourable exit multiples but it also allows for an amalgamation of skills in the alliance, diversifies risk and enhances overall value creation in the leveraged buyout. In South Africa the phenomenon of syndication has grown at a low rate. For example, in 2010 none of the top ten largest reported transactions were syndicated. In 2011 only 20% of the top ten largest reported transactions were syndicated (SAVCA 2012). Nonetheless, syndication or 'club-deals' requires that information asymmetries and potential conflict of interests between the alliance firms be properly managed in order for value to be created for the investors.

- Target strategic buyers for disposal of investee firms in highly fragmented industries. This finding emanates from the finding in this study that strategic buyers consolidate their market positions by acquiring domestic firms with the potential to give the parent company access to new markets or low cost production. Therefore, by targeting strategic buyers or trade sales as an exit option, private equity fund managers are likely to receive better valuations from the strategic acquirers with a much better appreciation of the potential of the investee firm and its strategic value to the parent organisation.
- Leverage from professional experience, investor network, firm reputation and superior negotiation skills to achieve favourable exit multiples and realize more value. The qualitative findings of this study suggested that factors such as experience, firm reputation, negotiation skills and investor network are critical in the exit decision making process. It is recommended that even private equity firms which lack these features should consider forming alliances or syndication in order to access these competitor-specific resources. Established firms endowed with these

resources should leverage from them to achieve favourable exit multiples and superior returns to equity capital.

- Focus on operational improvements and good corporate governance prior to exit. As per the first recommendation discussed above firms with good operating performance are likely to receive favourable valuations. In essence, an optimal valuation at exit is a reflection of the operating performance of the portfolio firm. Therefore, it is important for private equity practitioners to place a special emphasis on improving the profitability of the investee firm, eliminate unproductive assets in the firm and also ensure efficient utilization of the firm's assets and working capital. These improvements coupled with the implementation of well-functioning corporate governance structures have been found to improve the exit valuations of the investee firm and ultimately create value for investors. The careful consideration of choice of exit mode upon realization only serves to protect the generated value from being eroded by wrong decision making.
- Monitor the external macroeconomic climate constantly to identify favourable exit conditions. Despite this study finding that investment holding period was of no significance to choice of exit mode, macroeconomic indicators such as GDP growth, performance of the stock market, liquidity and robustness of the mergers and acquisitions markets and changes in market concentration (HHIs) were identified in the qualitative analysis as having a direct impact on the timing of exits. Investors were found to opportunistically hold-on to their investments until such a time the exit conditions were favourable. Private equity practitioners should therefore constantly monitor these conditions and also identify which of these factors are leading or lagging indicators in order to identify the windows of opportunity to exit their investments.
- Empower private equity fund managers through appropriate training interventions, proper succession planning and development of management practices, key performance areas and metrics linked to overall firm performance. This study found that that the skill and the experience of fund managers have an effect on realized exit multiples

and value creation dictates that private equity firms should ensure that they deploy merit-based recruitment systems, skill up their employees and have proper succession plans and knowledge management systems in place to ensure that the intellectual capital generated by the firm is safeguarded.

- Develop an industry-supported national database of private equity transactions to enable private equity research and analysis of the private equity industry. The dearth of data evidenced by a small sample size obtained in this study remains a major impediment to private equity research and the overall analysis of the performance of the private equity industry in South Africa. The development of a database that provides anonymous data on transactions and guarantees the highest levels of data security and confidentiality will assist the industry and SAVCA in achieving its objectives of promoting private equity as a distinct asset class with attractive risk-return characteristics. An exemplary model in Europe is the Center for Private Equity Research (CEPRES) database which aggregates anonymised data from private equity transactions in the European markets. This level of disclosure meets the confidentiality requirements of the industry whilst enabling analysis and research of the asset class to be conducted. This recommendation is particularly relevant to the South African context considering that there is no conclusive evidence of private equity value creation in South Africa. The growing trend of “living dead” investments or portfolio companies being written off further exacerbates the perception that the private equity business model is unstable and doesn’t quite live up to its promise of premium returns. Harford and Kolasinski (2014) for example, investigated whether the US private equity firms do indeed create value or their realized high returns are simply a product of wealth transfers and a focus on short-term profits at the expense of creating long term value. The implementation of this recommendation will possibly enable quantitative analyses to be conducted in the industry and also improve overall perceptions of the industry and achieve increased capital commitments from pension funds and other institutional investors.

- Diversify portfolios through investment in private equity fund-of-funds rather than direct investment in private equity funds. This study found that private equity fundraising plays an important role in the timing of exiting investments. Therefore, this recommendation is targeted at banks, pension funds and other institutional investors who might want to consider private equity for its diversification benefits. Investing in a fund-of-funds, despite this attracting additional management fees, achieves diversification (minimises risk of loss) and reduces uncertainty (volatility) whilst also easing pressure on the fund managers to exit investment at an inappropriate time to achieve fundraising objectives. The fund-of-fund acts as an intermediary between the fund managers and the investors and therefore this configuration may fund managers to appropriately time their exits without undue duress from the financiers.

6.4 Suggestions for further research

This study demonstrated that the interaction of factors or determinants which influence choice of exit in South Africa's private equity industry is very complex. Owing to scope limitations and the achieved sample size, the study could not test potential determinants of exit mode such as firm reputation, the experience and skill levels of private equity practitioners and how these factors impact on the realized exit multiples and value creation for exited investments. Suggestions for further research include:

- Assessing the post-exit performance of portfolio companies to determine whether the choice of exit mode has any effect on long term value creation for private equity investments.
- The sample data used in this study was through a period in which conceivably there were notable changes in the robustness, performance and liquidity of the mergers and acquisitions market and the stock market. Future research can unveil useful insights in identifying statistically significant correlations between the choice of exit mode and these macroeconomic conditions. Nonetheless, such an assessment will

ideally require an extensive sample size covering transactions over 15-20 years for the effects to be properly distilled.

- The annualized IRR formula used in this study assumed no intermediate cash flows such as dividends to the shareholders. A much more accurate analysis would factor in
- Granted that data is available, researchers should explore the other potential determinants of exit mode such as firm reputation, experience and skill levels of fund managers and other moderating/mediating factors emerging from the literature and assess the impact of these factors on the choice of exit mode.
- Further research can develop an exit mode attribution framework showing the relative impact or significance of each determinant/factor in the choice of exit mode. This attribution framework can reveal useful insights enabling practitioners to set priorities when formulating exit strategies.

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APPENDIX A

Actual Research Instrument

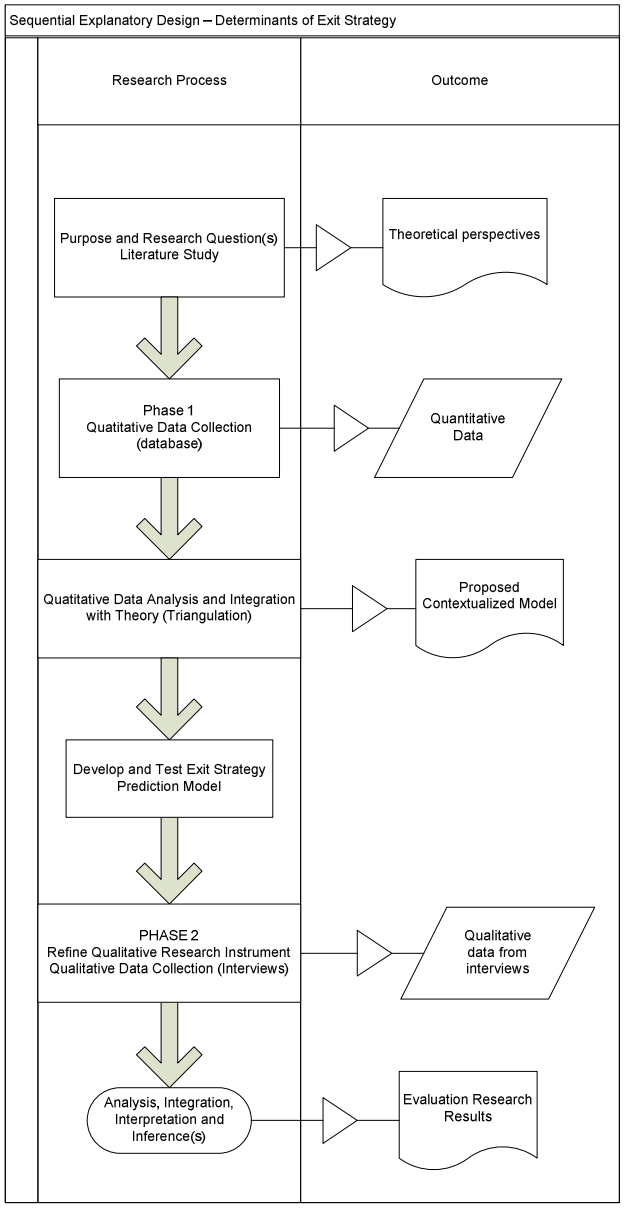


Figure 3: Conceptual framework of the sequential explanatory design

Table 19: Interview questionnaire

Interview Questionnaire		
Part 1: Participant Information:	Response	
1. Name 2. Company 3. Position 4. Estimate of # of exited investments		
Part 2: Open-ended depth interviews	Response	
Q1: What are the most important considerations in exit planning and exit strategy (mode) decision making? Probes or prompts: 1. Conducive macroeconomic or public market conditions (stock market performance/returns)? 2. Long holding periods and potential pressure to raise finance for new cycles? 3. Portfolio-company specific traits: performance, size? **Q2:** Given the South African context, how significant is the role of private equity in facilitating empowerment deals? Further probe: 1. Do empowerment deals (BEE) specifically influence your exit mode decision?		

Table 20: Quantitative data structure with illustration

Deal No.	Name	Total Funding (R, Mill)	Holding Period (months)	BEE Status (Y/N)	IRR (%)	HHI	Market Returns (%)	Exit Type
1	Tracker	3900	52	Yes	0.37	0.34	0.12	IPO
…	…	…	…	…	…	…..	…	…
60	Teraco	157	64	No	0.27	0.11	0.03	Trade sale

APPENDIX B

Letter to Respondents

Dear Respondent,

I am completing an MBA at the University of Witwatersrand, Johannesburg (Wits). The purpose of my study is to establish determinants of exit strategy for leveraged buyouts in South Africa.

Towards gathering data on this subject, I would be grateful if I you could allow me some of your precious time to conduct an interview on this subject. The interview is expected to last not more than 30 minutes.

I understand you are busy and your agreement to contribute to my research is greatly appreciated.

I would like to assure you that confidentiality will be observed throughout the thesis process and your name or your company's name will not be connected to any publication resulting from this study. The final report will be for academic purposes only.

I will be available to meet with you at a location and time of your convenience for the process of conducting the interview.

Thank you for your kind assistance.

Yours sincerely,

Seetsele Seetswane

SA Mobile: +27 78498 5658

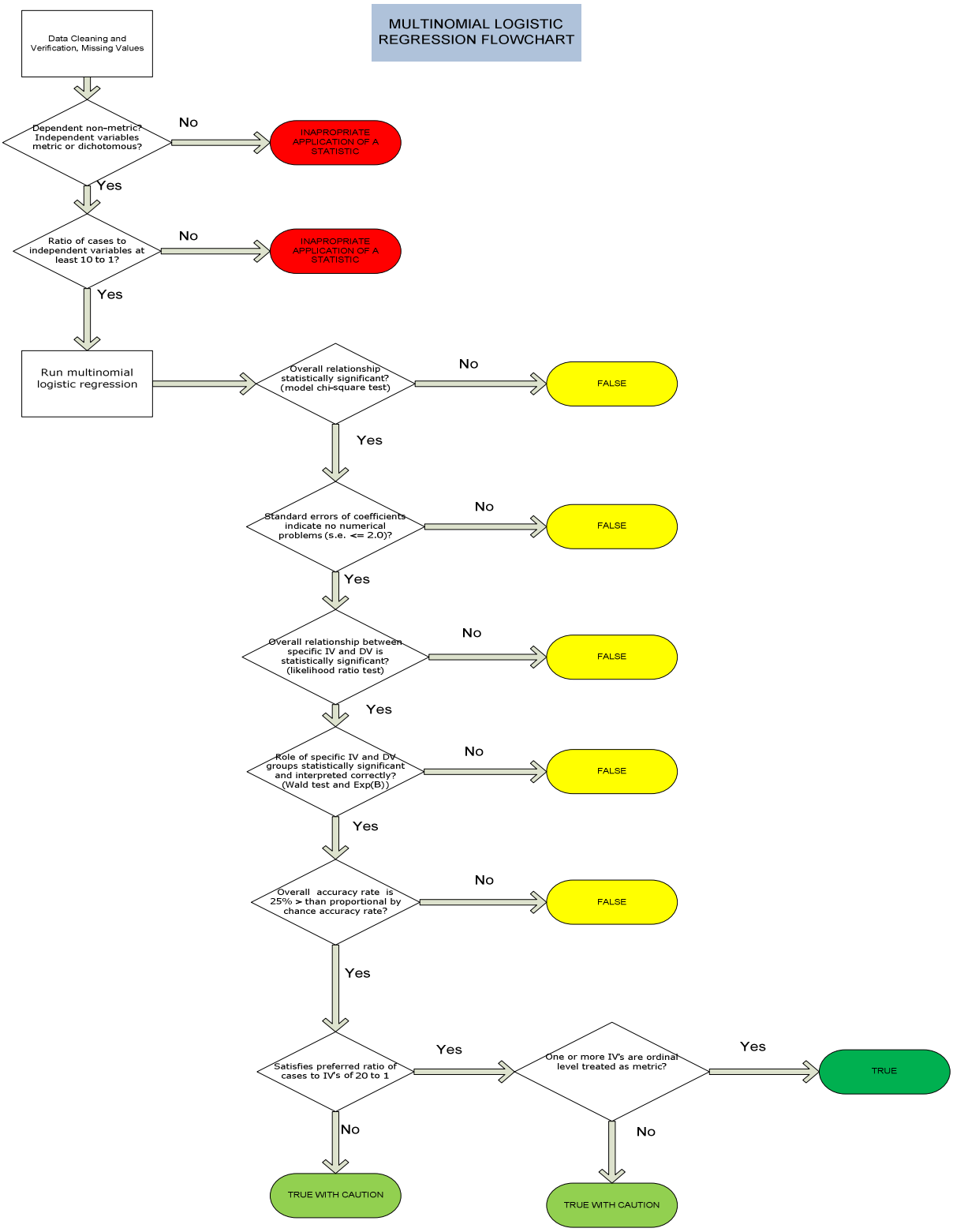


Figure 4: Multinomial Logistic Regression flowchart

APPENDIX C

Consistency matrix

Establish the significant determinants of exit mode for leveraged buyouts in South Africa					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
Identify determinants of exit mode based on extrinsic and intrinsic predictive factors. Measure the relative impact of different determinants on exit strategy and construct an exit decision attribution framework. Recommend key considerations (priorities) for exit strategy decision-making based on the constructed decision-making framework	(Kaplan, S. and Schoar, A. 2005) (Kaplan, S. and Stromberg, P. 2008). (Missankov, I.,van Dyk, R.,van Biljon, A.,Hayes, M. and van der Veen, W. 2006). (Schmidt, D.,Steffen, S. and Szabo, F. 2010). (Sudarsanam, S., & Nwaghodoh, U. 2005)	What is the relative importance/significance of determinants (holding period, firm size, industry concentration and operating performance) in predicting or influencing choice of exit mode for leveraged buyouts?	Open in-depth interviews with a selected sample of experts. Quantitative data will be collected by the researcher from private equity firms.	Qualitative data will be descriptive narratives of determinants from industry experience in the first phase. Quantitative data will both be ordinal, nominal (continuous, categorical).	Interpretive analysis of narratives. Quantitative analysis will be through: Descriptive statistics. One-way ANOVA, Independent-samples testing and Multinomial logistic regression

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Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
Analyse the relationship between exit mode and fund performance.	(Guo, S.,Hotchkiss, S. and Song, W. 2011). (Higson, C. and Stucke, R. 2012) (Loos, N. 2005).	How does choice of exit mode affect buyout performance as measured by the exit multiple? Is the variance of buyout performance (exit multiple) as explained by the exit mode decision statistically significant?	Quantitative data will be collected by the researcher from private equity firms.	Quantitative data will both be ordinal, nominal (continuous, categorical).	Descriptive statistics. One-way ANOVA