# An Investigation into the Effectiveness of Initial Public Offerings (IPOs): A Case for Zimbabwe

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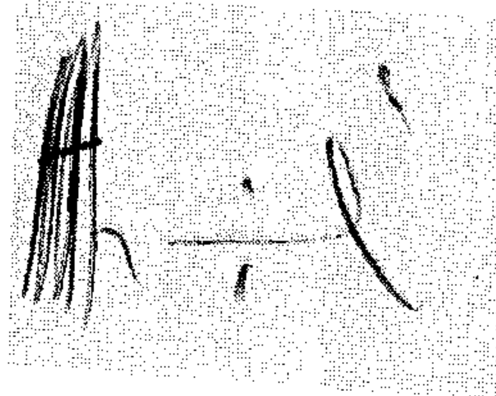
# DECLARATION

With the signature below I, Tinashe Mawere, hereby declare that the work that I present in this dissertation is based on my own research, and that I have not submitted this dissertation to any other institution of higher education to obtain an academic qualification.

Signed: T. Mawere 200297074



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# ABSTRACT

This study sought to investigate the effectiveness of initial public offerings (IPOs) on the Zimbabwe Stock Exchange (ZSE), as an investment option in comparison to their seasoned matching firms and to establish why an investor would prefer buying into an IPO and not into already trading matching firms. The study also sought to determine the extent of IPO underpricing and to establish if there is a relationship between underpricing and the long-run performance of IPOs. This study further sought to establish the reasons behind the investors' over-optimism in IPOs despite their uncertainty as well as to establish the factors governing the success or failure of IPOs.

A matching firm was judgementally selected for each of the IPOs listed on the ZSE during the period 1997 to 2002, for the purposes of comparing the short and long-run buy and hold returns. Returns for the 15 qualifying IPOs and 15 seasoned matching firms were analysed and the share price performance compared in event windows of 30 days, 1 year, 2 years, 3 years, 4 years and 5 years from the respective IPO dates. Questionnaires were also administered on a sample of 50 major stock market investors comprising stockbrokers, mutual funds, insurance companies, pension funds and merchant banks to test various theoretical propositions on these IPOs.

Consistent with Majaya (2002) and Mutsigwa (2004), this study finds that there is substantial underpricing of IPOs in Zimbabwe with an average of 28% underpricing. This paper also finds that IPOs in Zimbabwe leave money on the table as a result of underpricing. The study finds that IPOs offer higher short-run returns than their seasoned matching firms and consistent with Brav and Gompers (1997), that there is no difference between the long-run performance of IPOs and that of their seasoned matching firms. This study finds no evidence of a relationship between underpricing and long-run IPO performance. The study also finds that the market condition, the timing of placement of an IPO and the firm size and age are some of the key factors determining the success or failure of an IPO and that oversubscription of IPOs on the ZSE is attributed to the size of the bourse which is too small, to cope with the demand for IPO shares.

This study concludes that IPOs are risky investment and recommends that investors should carry out detailed analysis on the future prospects of an IPO before buying shares. Ascertaining the true value of a share may help the investor decide whether or not to invest in an IPO. The study recommends that the ZSE management should explore the possibility of setting up an exchange for small capitalisation stocks and that they should remove some of the restrictive listing requirements to enable more companies to list and access capital for expansion and other projects in a country already starved of foreign direct investment due to economic sanctions.

# TABLE OF CONTENTS

**DECLARATION** ..... **I**

**ACKNOWLEDGEMENTS** ..... **II**

**ABSTRACT** ..... **III**

**CHAPTER 1** ..... **1**

INTRODUCTION TO THE STUDY ..... 1
*1.1 Introduction* ..... *1*
*1.2 Background and Context* ..... *2*
*1.3 Problem Statement* ..... *3*
*1.4 Research Objectives* ..... *3*
1.4. 1 Interim Critical Questions ..... 4
*1.5 Research Design* ..... *5*
1.5.1 How the Literature Survey will be Conducted ..... 5
1.5.2 Questionnaire Design and Standardisation ..... 5
1.5.3 Data Collection ..... 5
1.5.4 How the Sample will be Selected ..... 5
1.5.5 How Data will be Analysed ..... 6
*1.6 Importance/Significance of the Study* ..... *6*
*1.7 Preview of the Study* ..... *7*
*1.8 Conclusion* ..... *8*

**CHAPTER 2** ..... **9**

LITERATURE REVIEW ..... 9
*2.1 Introduction* ..... *9*
*2.2 The Zimbabwe Stock Exchange* ..... *10*
2.2.1 Qualifications for a Listing on the ZSE ..... 11
*2.3 Why Companies Go Public* ..... *12*
2.3.1 New Capital/Cash Infusion ..... 13
2.3.2 Realising Part of Investment ..... 13
2.3.3 Liquidity ..... 14
2.3.4 Shares as a Currency ..... 14
2.3.5 Loan Capital Issue Opportunities ..... 14
2.3.6 Estates ..... 14
2.3.7 Mergers and Acquisitions ..... 15
2.3.8 Image ..... 15
*2.4 Disadvantages of a Stock Exchange Listing* ..... *15*
2.4.1 IPO Costly ..... 15
2.4.2 Continuing Costs Once Listed ..... 16
2.4.3 Greater Public Scrutiny and Loss of Privacy ..... 16
2.4.4 Loss of Control ..... 17
2.4.5 Profit Sharing ..... 17
*2.5 The Players in an IPO* ..... *17*
2.5.1 Underwriters ..... 17
2.5.2 Sponsoring Stockbroker ..... 21
2.5.3 Auditor ..... 21
2.5.4 Attorneys ..... 22
2.5.5 Public Relations and Advertising Agents ..... 22
2.5.6 Transfer Agent and the Registrar ..... 22
*2.6 The Procedure for a New Issue* ..... *22*
2.6.1 Due Diligence ..... 22
2.6.2 Letter of Intent ..... 23
2.6.3 Drafting and Filing the Registration Statement ..... 23
2.6.4 Road Shows ..... 23
2.6.5 Finalisation of the Offering ..... 24
2.6.6 Setting the Offering Price ..... 24
*2.7 Risks Associated With IPOs* ..... *25*

*2.8 Underpricing* ..... *28*
2.8.1 Possible Explanations to IPO Underpricing ..... 31
*2.9 Long-Run Performance of IPOs* ..... *39*
2.9.1 Possible Sources of Long-run Underperformance ..... 41
2.9.2 Long-Run Supernormal IPO Performance ..... 42
2.9.3 Why Some IPOs Outperform Others ..... 43
*2.10 Research/Critical Questions* ..... *44*
*2.11 Conclusion* ..... *45*

**CHAPTER 3** ..... **47**

DATA AND METHODOLOGY ..... 47
*3.1 Introduction* ..... *47*
*3.2 Types of Data* ..... *48*
*3.3 The Likert Scale* ..... *48*
*3.4 Design and Analytic Techniques* ..... *49*
3.4.1 Research Design ..... 49
*3.5 Ethical Requirements* ..... *55*
*3.6 Linking the Questionnaire to the Research Questions* ..... *56*
*3.7 Data Analysis* ..... *56*
*3.8 Nature and Form of Results* ..... *56*
*3.9 Strengths and Limitations of the Methods Used* ..... *57*
3.9.1 Strengths ..... 57
3.9.2 Limitations ..... 57
*3.10 Conclusion* ..... *57*

**CHAPTER 4** ..... **59**

DATA ANALYSIS AND RESULTS ..... 59
*4.1 Introduction* ..... *59*
*4.2 Data Analysis* ..... *60*
4.2.1 Number of IPO Companies and Matching Firms in the Study ..... 60
4.2.2 Respondents to the Survey and Investor Categories ..... 60
4.2.3 Sectors/Industries Invested in ..... 61
4.2.4 Extent of Underpricing ..... 62
4.2.5 IPO Over-Subscription ..... 66
4.2.6 Post-IPO Performance ..... 68
4.2.7 Performance of IPOs Relative to that of Seasoned Matching Firms ..... 71
4.2.8 Using Correlations to Analyse Relationships Between Variables ..... 72
4.2.9 Using Analysis of Variance (ANOVA) to Test for Statistical Significance ..... 75
4.2.10 Adequacy of IPO investor information on the ZSE ..... 78
4.2.11 Money Market Returns and IPO over-subscription ..... 79
4.2.12 Factors Influencing Investors to Buy into IPOs ..... 80
4.2.13 Factors to Consider before Buying into an IPO ..... 82
4.2.14 Factors Determining the Success or Failure of IPOs ..... 83
*4.3 Conclusion* ..... *85*

**CHAPTER 5** ..... **87**

CONCLUSION AND RECOMMENDATIONS ..... 87
*5.1 Introduction* ..... *87*
*5.2 Conclusions drawn from the study* ..... *87*
*5.3 Recommendations* ..... *90*
5.3.1 Guidelines to the IPO investor ..... 90
5.3.2 Recommendations to the Zimbabwe Stock Exchange Management ..... 94
*5.4 Limitations of the Study* ..... *95*
*5.5 Directions for Future Research* ..... *95*
*5.6 Conclusion* ..... *96*
GLOSSARY OF TERMS ..... 97
REFERENCES ..... 98

# LIST OF TABLES

Table 2.1: Levels of Underpricing for Different Countries ........ 36
Table 2.2: Underpricing Of New Security Issuance By Type Of Offering ........ 37
Table 2.3: Performance of 12 UK IPOs from 2004 to February 2005 ........ 38
Table 3.1: Population and Sample Size of respondents ........ 55
Table 4.1: Types of Firms (i.e. IPO or Matching Firm) ........ 60
Table 4.2: Sample and response rate to the questionnaire ........ 61
Table 4.3: Initial IPO returns and money left on the table between 1997 and 2002 ........ 62
Table 4.4: Descriptive statistics on the initial returns from IPOs ........ 63
Table 4.5: Investor sentiments on underpricing of IPOs in Zimbabwe ........ 63
Table 4.6: Analysis of number of IPO and initial returns per sector ........ 65
Table 4.7: Top 3 Investor ranking of sectors offering the best IPO returns ........ 66
Table 4.8: Reasons for IPO over-subscription ........ 67
Table 4.9: Performance of IPOs and Matching Firms by Sector ........ 69
Table 4.10: Investor sentiments on short-run returns for IPOs and their matching firms ........ 70
Table 4.11: Unsuccessful IPOs ........ 71
Table 4.12: Descriptive statistics on the performance of IPO and matching firms. ........ 72
Table 4.13: Analysis of significant correlations ........ 74
Table 4.14: Correlation-IPO underpricing and long-run IPO underperformance ........ 75
Table 4.15: Descriptive statistics used for analysis of variance ........ 77
Table 4.16: Analysis of variance (ANOVA) ........ 78
Table 4.17: Investor sentiments on the adequacy/inadequacy of IPO investment information.. 79
Table 4.18: Effect of money market rates on IPO over-subscription ........ 79
Table 4.19: Factors influencing Zimbabwean investors to buy into IPOs ........ 80
Table 4.20: Important characteristics to consider before investing in an IPO ........ 83
Table 4.21: Factors determining the success or failure of IPOs ........ 83

# LIST OF FIGURES

Figure 4.1: Analysis of IPO sectors invested in by the respondents-1997-2002........................61
Figure 4.2: Average amount of money left on the table per sector ............................................64
Figure 4.3: Average initial returns per sector .........................................................................65
Figure 4.4: Comparison of mean holding period returns for IPOs and their matching firms ....70

IPO

STANDS FOR

INITIAL PUBLIC OFFERING

AND NOT

'IMMEDIATE PROFIT OPPORTUNITY'

(Wier, 2000)

# CHAPTER 1

# INTRODUCTION TO THE STUDY

## 1.1 Introduction

The period from 1997 to 2002 saw a number of companies in Zimbabwe successfully listing on the Zimbabwe Stock Exchange (ZSE) through initial public offerings (IPOs), with 16 of the 74 companies listed on the ZSE as at end of 2002, going public between January 1997 and December 2002 (ZSE Handbook, 2004; The Investors and Financial Markets Handbook, 1998). These IPOs have in most cases been oversubscribed as most Zimbabweans have long moved from their traditional way of measuring wealth, that is, in terms of how many cattle they have to shares as another store of value (Zweig, 2002). The Trust Holdings Limited issue caused a stir on the ZSE by shattering several records (Chanakira, 2001). This issue which raised $2.6 billion was listed at $86 from an initial public offer of $15 and was 21.6 times oversubscribed.

Despite the poor performance of the economy with inflation continuing to rise from levels of 144.2% for October 2002 (CSO, 2005), 613.2% for January 2006 to 1204.6% for August 2006 (CSO, 2006) there has been continued investors' interest in the IPOs. The Sokwanele Report (2003), updated 2006, notes that the Zimbabwe economy reached a peak in 1997 when Gross Domestic Product (GDP) rose to ZW$25billion (1990 dollars) and exports exceeded US$3.4 billion, however since then there has been accelerating declines in GDP with a 38% decline from 1998 to 2003. Exchange rates over the period January 1997 to October 2006 have fallen from ZW$12:US$1 in 1997 to ZW$250,000:US$1 (ZW$250-revalued:US$1).Reese (1998) finds that the level of investor interest in an IPO prior to its issue influences its offer price, its initial return and its initial trading volume. In their study of Germany IPOs, Oehler *et al.*, (2004) also find that initial returns are influenced by investor sentiment and uncertainty about the demand concerning the forthcoming IPO, and less by ex-ante uncertainty about the underlying firm's value.

In their study of 8668 new offerings in the United States of America (US) from 1960 to 1987, Ibbotson *et al.*, (1994), noted that at the end of the first-day of trading, the shares of IPOs traded on average at 16.37 % above the offer price. Studies by Welch (1989), Arosio *et al.*,

(2000), Gounopoulos (2003) and Aggarwal *et al.,* (2001) also support the issue of underpricing of IPOs. In most industrialised countries, IPOs seem to underperform both the market and portfolios of comparable firms in the long-run, despite their initial underpricing. The reasons for this phenomenon are not clearly known (Arosio *et al.,* 2001). Whilst IPO studies by Ritter and Welch (2002), Chen *et al.,* (1999), and Ibbotson *et al.,* (1994), as well as studies by Mutasa (2002), Mutsigwa (2004) and Majaya (2002) have focused on the underpricing puzzle, these studies have not considered the position of one of the key players in the IPO-game, the investor and how he can avoid getting caught up in the hype that often comes with an IPO. The other key players in an IPO include the issuer and the underwriter. In addition to considering under pricing, Majaya (2002) and Mutsigwa (2004) also studied the valuation methods used before listing. Whilst he also studied the long-run performance of IPOs against market comparables, Mutsigwa (2004) based his study on only 4 out of 12 IPOs and the comparison of Seed-Co Limited, a company in the agricultural inputs sector and Interfresh Limited, a company in the horticultural sector, did not allow for the comparison of companies with similar operating risks, profitability and growth.

## 1.2 Background and Context

Despite their initial investment performance, IPOs have been poor long-term investments. Byrne and Rees (1994:8) *cite* Aggarwal and Rivoli (1990) as well as Ritter (1991) have previously uncovered that IPOs are on average, poor performers, with many filing for bankruptcy within a couple of years. According to Ritter (1991), underperformance ends at some point between 3 and 5 years of seasoning. Bryne and Rees also *cite* evidence from Loughran and Ritter (1993) showing that in the US, IPOs underperform the market for five years of going public. Ahmad-Zaluki *et al.,* (2004) for Malaysia, Agarwal *et al.,* (2004) for Hong Kong as well as Ma and Shen (2004) also find evidence in support of the long-run under-performance of IPOs. However on the contrary, Chi and Padgett (2002), in their study of Chinese privatisation initial public offerings (PIPOs) found long-run supernormal performance of Chinese PIPOs. Chen and Pan (1998) also note that IPOs are typically more risky than the seasoned securities. They also highlight that through backward induction, no one will purchase IPO shares once he realises that he will suffer losses in the long-run. However, contrary to this assertion, there have been continued and overwhelmingly high levels of investor interest in

IPOs in Zimbabwe. The October 2002 IPO of Nicoz Diamond Limited was over subscribed by 4.3144 times (Muchirahondo, 2002). Whilst there have been comprehensive studies on the long-run share price performance of IPOs in the U.S., United Kingdom (UK), and other developed stock markets, research on the long-run performance of IPOs in Zimbabwe has been limited.

## 1.3 Problem Statement

IPOs, some of which as noted by Tauli and Harmon (2001) often double in value on the first day of issue, are often a disappointment in the end yet many investors want to invest in these IPOs, despite their high levels of uncertainty. Chechile (2004) notes that despite this uncertainty, investors frequently jump at every investment scheme touted as a financial bonanza, especially offerings of new securities typically with catastrophic results. As noted by O'Neill (2000), IPOs often produce high first-day returns but just as the right IPO can deliver once-in-a-lifetime returns, so can a high risk offering self-destruct with little warning. Some IPOs are characterised by poor long-run performance and companies winding up after a few years in operation, which makes investing in IPOs tricky business (Wier, 2000). In Zimbabwe a number of IPOs have not traded for more than 4 years from their listing dates and as a result long-term investors incurred IPO investment losses. With IPOs, for every investor whose stocks produce immediate substantial returns, others are left holding one-day wonders, stocks that eventually slip into penny stock territory or completely out of sight. Tauli (1999) notes that IPOs are investments that truly get the blood pulsing. According to Shambira (2002) IPOs are interesting to investors and entrepreneurs alike. However, whilst they may always be exciting, IPOs are risky and as with most things that have potential for a very high upside, uncertainty is an inextricable variable in IPOs and in the overall investment equation. Profits have certainly been made investing in IPOs, but so have losses. Lajoux (2001) points out that, it is essential to establish how the returns from investing in IPO stocks compare with returns from investing in already trading stocks of comparable firms and why investors buy into a company's IPO rather than buying into a stock that has already been trading on the market.

## 1.4 Research Objectives

The objectives of this study are:

i. To establish if IPOs in Zimbabwe are underpriced and why these IPOs in most cases over-subscribed.
ii. To critically evaluate the possible reasons to the underpricing of IPOs and whether there is a relationship between underpricing and long-run performance.
iii. To establish the long-run performance of IPOs and determine whether IPOs are a disappointment in the end with reference to their initial and long-run investment returns
iv. To compare the investment returns from IPOs and the already trading stocks of comparable firms and establish the motive behind many investors buying into an IPO rather than buying into stocks of seasoned matched firms or market comparables.

**1.4. 1 Interim Critical Questions**

Specifically this dissertation seeks to answer the following questions:

i. Are IPOs in Zimbabwe underpriced and could underpricing be the reason why IPOs so effective at attracting investors resulting in most of them being over-subscribed?
ii. Is there a relationship between under pricing and long run-performance of IPOs?
iii. How have IPOs in Zimbabwe since 1997 performed in the short and long-run relative to established equivalent stocks or matched firms and why should an investor buy into an IPO rather than into a stock that has already been trading on the market?
iv. What critical success factors govern the success or otherwise of IPOs and why are some IPOs often a disappointment in the end?

These questions will be refined and revisited in Chapter 2 as the literature survey will have an effect on them.

## 1.5 Research Design

### 1.5.1 How the Literature Survey will be Conducted

In reviewing literature on the performance of IPOs reliance will be placed on internet searches. Electronic journals, published research articles and working papers will be downloaded from the internet. Newspaper articles on IPOs and books will also be reviewed. The key words to be used in searching for research articles and publications on IPOs include the following: underpricing, initial public offerings (IPOs), new issues, unseasoned equity offerings, IPO underperformance, and IPO long-run performance.

### 1.5.2 Questionnaire Design and Standardisation

A questionnaire will be used to test various theoretical propositions on IPOs. Part 1 of the questionnaire will contain information on the types of investors or the investor categories and sectors or industries they have previously invested in. Parts 2 and 3 of the questionnaire will be made up of closed-ended questions and the likert scale will be used. In order to allow respondents to elaborate on their answers, part 4 of the questionnaire will be made up of open-ended questions. A pilot survey will be conducted for the purpose of pre-testing the questionnaire.

### 1.5.3 Data Collection

The study assumes a quantitative design. Data on the share price performance of the IPOs and their matching firms will be collected from the TechFin Research (Pvt.) Limited and the ZSE. Questionnaires will be hand delivered, emailed or posted to senior executives of stockbroking firms, mutual funds, merchant banks or underwriters, insurance companies and pension funds who snap up most of the shares in IPOs and are experienced in dealing with IPOs. However permission to access respondents will be sought first from the relevant authorities before the questionnaires are distributed.

### 1.5.4 How the Sample will be Selected

For the purposes of comparing the share price performance of IPOs and matching firms, IPOs listed between 1997 and 2002 will be studied in comparison with seasoned matching firms. A matching firm will be selected for each IPO using judgemental (purposive) sampling to allow for the comparison of companies of similar size and with similar operating risks.

Questionnaires will be administered on a sample of 50 respondents from a population of 50 institutional stock market investors comprising stockbrokers, Mutual Funds, Insurance Companies, Pension Funds, and Merchant Banks. All the subjects in each of these investor categories will be included in the sample because of the small population size for each category.

### 1.5.5 How Data will be Analysed

Data collected through the questionnaire will be coded into the statistical package for social sciences (SPSS) to form database 1. Questions on the questionnaire will be copied or typed into the value label slot in SPSS. Data on the share price performance of IPOs and their matching firms will also be coded into SPSS (or Ms Excel) to form database 2, for ease of analysis. Data entered into SPSS will be cross-checked for accuracy. Data will be analysed using SPSS analytical procedures. Results in the form of descriptive statistics, frequencies, cross-tabulation, correlations and analysis of variance (ANOVA) between means will be presented in the form of tables and graphs. The findings of the study will be based on the interpretation of the results.

## 1.6 Importance/Significance of the Study

This study seeks to bring about information that may be of benefit to most institutions, that is, brokerage houses, mutual funds, insurance companies and pension funds as well as the individual investor. The study therefore seeks to ensure that IPOs may be better understood by the investor community in Zimbabwe. This study also attempts to add to the growing body of research and knowledge on IPOs and to the literature in the field of IPO investment, in a country where individuals are increasingly moving from the money market to the stock market in search of better returns on their investments. The purpose of this study is therefore to attempt to explain the IPO underpricing and bring about information that may help investors determine whether a particular IPO is a good investment or not when compared to seasoned stocks. The study also seeks to bring about theory and evidence which may help investors avoid following the notion that everyone is going for IPOs and seek to draw comparison between IPOs and already trading market comparables before buying into an IPO. Whilst this study does not guarantee any magic investment formula for success with IPOs, it seeks to bring about some guidelines that may attempt to help one avoid making an investment mistake. The

study therefore seeks to help minimise the vulnerability of the average IPO investor by highlighting the risks associated with IPOs and the strategies to help mitigate the possibility of investors suffering huge losses. According to Chechile (2004), using appropriate investment tactics can either minimise losses or lock in any gains that may have occurred.

## 1.7 Preview of the Study

The outline of the rest of this paper is as follows: In Chapter 2, the literature review is presented. The chapter starts with a brief outline on the operations of the ZSE because every stock market investor should be aware of the operations of the Stock Exchange, as well as the rules and regulations governing the securities industry. Literature on the decision to go public, the players in an IPO and their responsibilities, the IPO process, risks associated with IPOs, and the short to long-run performance of IPOs is reviewed in Chapter 2.

The methodology to be used in this study is described in Chapter 3. Quantitative data is used in this study. The share price performance of a sample of IPOs listed between 1997 and 2002 is studied and compared to the performance of seasoned matching firms. A questionnaire will also be used to ascertain various theoretical propositions on IPOs. The questionnaire will be administered on a sample of 50 major stock market investors including stockbrokers, Mutual funds, merchant banks, pension funds and insurance companies who are experienced in dealings with both IPOs and seasoned stocks.

The results and discussion of the findings of the study will be presented in Chapter 4. Amongst other findings, Chapter 4 will present the findings of the study on the extent of underpricing of IPOs in Zimbabwe. The chapter will also present the findings of the study on the performance of IPOs in comparison to their seasoned matching firms as well as the factors governing the success or failure of IPOs.

Chapter 5 contains conclusions to the study. The chapter also presents recommendations and guidelines to IPO investors as well as the ZSE management. Limitations to the study will also be presented in Chapter 5. The chapter will conclude by offering directions for future research on IPOs.

## 1.8 Conclusion

This Chapter has given a background to the problem and has outlined the problem statement. The objectives of the study, the research questions, and the importance of the study are also outlined. It has been noted in this chapter that the issue of investing in IPOs is tricky and very risky but many investors want to invest in these IPOs. This triggers several questions on how IPOs perform in the short to long-term and why one would want to invest in an IPO instead of an already trading matching firm with a known track record.

In this Chapter the problem being studied as well as the objectives of the study are highlighted. The envisaged benefit (importance) of the study is also explained. The chapter thus sets the tone for the study and outlines what may happen if the study is not carried out.

Several other studies on IPOs have already been carried out in different countries and it is essential that reference be given to the findings of the various research papers and presentations on the short and long-run performance of IPOs. Chapter 2 presents a review of previous studies on the initial and long-run performance of IPOs. The Chapter starts by looking at the Zimbabwe stock Exchange (ZSE), reasons why companies go public as well as outlining the various players in an IPO and their responsibilities. The procedure for a new issue and the setting of the offering price are also discussed in Chapter 2.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 Introduction

The first public equity issue that is made by a company is referred to as an initial public offering (IPO) or an unseasoned new issue (Ross *et al.*, 1996). It is the first sale of stock (shares) by a company to the public, when it makes the transformation from being privately held to becoming publicly traded. This is done with the expectation of a liquid market (Ritter, 1998). There are two kinds of public issues: the general cash offer and the rights offer. Cash offers are sold to interested investors and the rights offers are sold to existing shareholders. Equity is sold by both the cash offer and the rights offer, though almost all debt is sold by the cash offer. Most firms initially raise equity financing with private placements in the venture capital market from a small number of investor capitalists. If a firm does well and needs more equity financing, it may decide to sell stock with an initial public offering.

According to Tauli and Harmon (2001), IPOs some of which often double in value on the first day of issue, are often a disappointment in the end yet many investors want to invest in these IPOs, despite their high levels of uncertainty. IPOs are risky and as noted by Tauli (1999), IPOs are investments that truly get the blood pulsing. Some IPOs are characterised by poor long-run performance and companies winding up after a few years in operation, which makes investing in IPOs tricky business (Wier, 2000). Tauli (1999) notes that whilst the IPO is the investment vehicle that is getting the most attention these days, one wonders why investors want to buy into an IPO rather than buying into a company that has already been trading on the market.

In searching for relevant literature on the performance of IPOs reliance was placed on internet searches. Electronic journals, published research articles and working papers were downloaded from the internet. Newspaper articles on IPOs and books were also reviewed. The key words used in searching for research articles and publications on IPOs included the following: underpricing, initial public offerings, IPOs, long-run performance, unseasoned equity offerings.

The structure of the remainder of this chapter is as follows. First, some background information on the Zimbabwe stock Exchange, the reasons for going public, the disadvantages of a stock exchange listing, the players in an IPO and the procedure for a new issue are discussed, Second, the underpricing phenomenon in IPOs and the reasons advanced for the underpricing are discussed. Third, the long-run or post issue performance of IPOs is discussed along with the possible sources of long-run underperformance. Fourth, the study focuses on possible supernormal performance of IPOs and the reasons why some IPOs outperform others. The concepts of IPO underpricing or overpricing, long-run underperformance, and possible supernormal performance thus determine the organising framework of this chapter. The chapter as such concludes with a concept matrix.

## 2.2 The Zimbabwe Stock Exchange

According to Chechile (2004), stock exchanges traditionally are auction markets wherein members of the exchange come together at a particular location to exchange securities that have been listed for trading with the exchange. Every potential IPO investor should understand the securities market on which the stock of interest will trade bearing in mind that, the type of playing field in any sporting contest for example, can ultimately influence the outcome of the event. The Zimbabwe Stock Exchange (ZSE) plays an essential role in the raising of capital funds and serves as the link between the entrepreneur and the investing public. The ZSE provides an organised market place for trading under controlled conditions in the stocks and or shares of the companies which have satisfied the requirements laid down by the Stock Exchange Listings Committee (SELC). Though it is small by world standards, in the context of Africa the ZSE has a degree of sophistication unmatched except for the much older and established stock market in Johannesburg, the Johannesburg Stock Exchange (JSE) (Going Public, 2000). Recently the ZSE was rated the second performer in the world's emerging capital markets.

The ZSE operates in terms of and under the authority of the Stock Exchange Act (Chapter 24:18) of 1996. It is an integral part of a highly developed financial market comprising amongst others, the Reserve Bank of Zimbabwe (RBZ), discount houses, commercial banks, merchant banks and large institutional investors. There are 81 listed companies on the ZSE of which 74 were listed as at 31st December 2002. Market Capitalisation

was ZW$108 billion as at the end of October 2000 (Going Public, 2000). Members of the ZSE are subject to a strict code of behaviour towards their fellow members, their clients and the investing public as a whole. Through its rules and regulations, the Stock Exchange instils controls and discipline into the stock market and ensures minimum standards of conduct and reporting by quoted companies in the interests of the shareholder, the company itself and the investor. The ZSE supervises and monitors the trading process to ensure transparency in the market and that no unfair practices are done to manipulate the market. Only stockbrokers and authorised dealers are allowed to transact in shares on behalf of the public.

The existence of the Zimbabwe Stock Exchange makes it possible for; savings of institutional and private investors to be mobilised and channelled into the economic development of the nation, companies to raise substantial capital funds on the best possible terms and for the investor to realise or vary his investments at any time with the minimum expense. It provides a properly constituted and regulated environment that ensures market integrity and fairness among stock market participants (http://www.zse.co.zw).

The ZSE operates under the supervision of a nine member committee comprising two members appointed by the Minister of Finance and not less than four but not more than seven members elected from within the stock broking fraternity, with the ZSE Chief Executive being the Secretary to the Committee. Section 4 of the Zimbabwe Stock Exchange Act (Chapter 24:18), stipulates that the affairs of the Stock Exchange shall, be managed by a committee to be known as the Committee of the Zimbabwe Stock Exchange (CZSE). The committee maintains a watch on the operations of all listed companies, settles disputes between members and examines all applications for listing on the bourse.

### 2.2.1 Qualifications for a Listing on the ZSE

In the developed world, an IPO will in most cases be listed on the Over-the Counter (OTC) market, which is simply a network of computers, for example, National Association of Security Dealers Automated Quotations National Market (NASDAQ NM) (Tauli, 1999). Since most companies are relatively small at the time of an IPO, an OTC distribution makes more sense than exchange trading because exchanges have size and volume requirements that smaller companies cannot meet. Tauli also notes that, the most prestigious listed exchanges are the New York Stock Exchange (NYSE) and the London Stock Exchange (LSE) and that

trading on these exchanges, gives a company instant visibility that translates into increased trading volume.

In Zimbabwe, a company intending to apply for a listing on the ZSE must conform to the listing rules and regulations of the SELC and these include the following:

i. A minimum of ten million shares with a value of not less than fifty million dollars must be offered to the public.

ii. At least 30% of the issued equity capital for which a quotation is being sought must be offered to the public.

iii. The Memorandum and Articles of Association of the company must comply with the requirements of the ZSE whether or not required by law.

iv. The ZSE requires that the spread of shareholders existing at the close of an offer is sufficiently wide to justify the listing. 300 shareholders are regarded as the minimum.

v. The name, history and description of the company's interests and activities.

vi. A report by the company's auditors in respect of the last five completed financial years of the company.

vii. Forecast earnings and dividends, and

viii. Details of share capital structure, loan capital and the borrowing powers of the company (http://www.zse.co.zw).

## 2.3 Why Companies Go Public

Tauli (1999) observed that IPOs bring value to institutional investors in search of new ways to diversify their portfolios. Besides this there are several reasons why companies go public. According to Tauli (1999), there is no single answer as to why companies go public. The initial pubic offering is a significant stage in the development of a firm. It is a major decision that will surely change the character of a company. There are several reasons why the owners and managers of a privately held company may wish to make an initial public offering. Some of the reasons as outlined by the ZSE and by Tauli (1999) include:

### 2.3.1 New Capital/Cash Infusion

According to Ritter and Welch (2002) the primary reason for going public is the desire to raise equity capital for the firm and to create a public market in which the founders and other shareholders can convert some of their wealth into cash at a future date. The single main reason for going public is usually to increase the equity base of a company, thus allowing for future expansion and growth without the burden associated with the use of borrowed funds which require future interest payments as well as capital repayment. An IPO typically raises a lot of cash for the company and this money does not have to be paid back (Tauli, 1999) as is the case with debt finance. An IPO allows the firm to raise funds in excess of those which the original owners would have been able to provide and thus facilitates expansion by creating and selling new shares in future. The funds raised can be used to build new facilities, fund research and development, for acquisitions or to expand the business in general.

In its 2001 IPO, Trust Bank Zimbabwe, raised ZW$2.6 billion from its IPO which was 26.1 times over subscribed (Chanakira, 2001) and Telkom SA also raised R3.9 billion, after issuing 139.3 million shares, that is a quarter of the fixed-line and cellphone group, when it went public in March 2003 following its privatization (Giddy, 2003). The ability to raise funds from outside investors by the issue of shares is perhaps the most valuable of all the benefits that accrue to companies on floatation (Going Public, 2000).

### 2.3.2 Realising Part of Investment

Staging an IPO is one of the best ways for the company principals to get rich. An IPO enables the existing owners, both entrepreneurs and venture capitalists, to realize part of their investment whilst at the same time allowing them to diversify their holdings (Tauli 1999). This is done by selling some of the existing shares and investing in other assets elsewhere. The publicly traded price also provides management with an indication of the firm's value. Tauli (1999) notes that, in 1986 when Microsoft went public at less than US$1 a share nobody cared. If one had bought 1000 shares of Microsoft in 1986, by November 30, 1998, he would have been worth US$8 784 000. Similarly, Christopher Klaus who founded Internet Systems Services (ISS) from his grandmother's guest room was worth a mind-boggling US$160 million when the company went public in early 1998. This 24 year old, owned 26.1 percent of the

shares. However' if the owners wish to realize all of their investment, it may be that, a trade sale of the firm would be more appropriate.

### 2.3.3 Liquidity

An immediate benefit enjoyed by a newly listed company is the considerable improvement in its overall financial position. The injection of substantial equity funds greatly improves the company's gearing and other important balance sheet ratios (Going Public, 2000). Overall, because of the large amount of capital raised from an offering, an IPO gives a company the increased ability to raise even more money. Banks are more willing to lend money and extend credit to publicly traded companies than private ones. Stock can be used as collateral for loans. A portfolio of shares is generally regarded as being a highly liquid asset as the shares may be sold through the Stock Exchange with the least amount of time and inconvenience (Tauli, 1999). For this reason quoted shares are as a result a most acceptable form of security to banks and other financial institutions. The capital reinforcement coupled with good management will result in higher earnings and dividends.

### 2.3.4 Shares as a Currency

Listing a company's shares on the Stock Exchange will enable it to pay for future corporate acquisitions by issuing shares rather than paying cash (Tauli, 1999). Shares are in this case used as currency to purchase other businesses. Private company vendors are often attracted to a sale where quoted shares are offered as consideration (Going Public, 2000)

### 2.3.5 Loan Capital Issue Opportunities

Other types of share capital, such as preference shares (convertible or non-convertible) or loan capital such as debentures and notes which may or may not be convertible can be issued to raise further funds. The issue of such instruments by well-established and profitable concerns can be distinctly advantageous as it allows for expansion in the business without an increase in equity capital. Such opportunities are undoubtedly far easier for a quoted company than for an unlisted one (Going Public, 2000).

### 2.3.6 Estates

By going public, the existing shareholders immediately have the means through their quoted stockholding to properly arrange their assets and to protect their families and other

beneficiaries from unnecessary estate duties. It is documented in the ZSE booklet (Going Public, 2000) that a listing provides the basis for valuation for estate duty purposes.

### 2.3.7 Mergers and Acquisitions

According to Welch (2000) many private firms just do not appear on the "radar screen" of potential acquirers. Being public makes it easier for other companies to notice and evaluate the firm for potential synergies. Merger schemes based on an exchange of shares appeal more to the sellers when the shares they receive are listed on the Stock Exchange and are thus marketable (Going Public, 2000).

### 2.3.8 Image

Welch (2000) notes that, public firms tend to have higher profiles than private firms. This is important in industries where success requires customers and suppliers to make long-term commitments, for example, software requires back-up or training and no manager wants to buy software from a firm that may not be around for future upgrades, improvements, and bug fixes.

An IPO is however not the answer in every case as there are countervailing costs that arise from a Stock Exchange listing. Byrne and Rees (1994), note that the costs to the issuing firm of an IPO are substantial and vary depending on the size of the issue, the issue method and the choice of market.

## 2.4 Disadvantages of a Stock Exchange Listing

### 2.4.1 IPO Costly

The IPO itself is a costly process especially in terms of advisers' fees and senior management time over the lengthy planning process, which in some cases can derail normal operations. Filatotchev and Bishop (2000) note that the move from private to public ownership and to become professional requires a substantial effort particularly on the part of the company's top management team to prepare the IPO firm for the scrutiny of the regulator and investment community. The biggest money pit that comes with an IPO is known as the underwriter's discount and this is a fee of between 5 to 10 percent of the amount raised in an offering (Tauli, 1999). Tauli also notes that whilst the explicit costs of the IPO in the US tend to be around 5 to 10 percent, underpricing should be viewed as another cost of the issue. The costs of a new floatation in Zimbabwe are also in the region of 5% of the capital raised (Going

Public, 2000). IPOs tend to be issued at a significant discount to their aftermarket value and existing owners may be unhappy at this apparent transfer of wealth to the new shareholders. Ritter (1998) and Loughran and Ritter (2002), note that one of the puzzles regarding IPOs is that issuers never get upset about leaving money on the table. Loughran and Ritter note that in the US the average IPO leaves US$9.1m on the table (i.e., twice as large as the fees paid to the underwriters) and this represents a substantial indirect cost to the issuing firm. If the price is set too low the issuer does not realise his full potential to raise capital. Apart from this, there are billable hours of attorney and accounting fees, plus auditor's fees. Printing costs and legal or filling fees, plus other extraordinary expenses push the bill even higher.

### 2.4.2 Continuing Costs Once Listed

Once the company's shares are listed, there will be substantial continuing costs. These will include the costs of maintaining a register of the large number of shareholders, producing annual reports and issuing shareholders circulars. The requirement to produce quarterly, half yearly and annual reports will entail the need for state-of-the-art accounting and information systems. According to Tauli (1999), public companies also need an investors' relations department to deal with shareholders' inquiries. In addition they need to continuously engage attorneys and accountants to handle securities and stock exchange compliance matters.

### 2.4.3 Greater Public Scrutiny and Loss of Privacy

According to Tauli (1999), when a company initiates an IPO it must comply with the myriad regulations meant to protect investors. All material information must be disclosed. In the prospectus (which is the document given to those who want to invest in an IPO), a company must disclose its financial reports, business strategies, customers, executive compensation (for corporate governance purposes), as well as risk factors. Since not much is left to imagination this results in loss of privacy as the company's affairs are subjected to greater public scrutiny even by possible competitors. It is also believed that short-termism, that is, the desire or pressure to deliver year-after-year earnings per share (EPS) growth, can conflict with long-term investment plans (Byrne & Rees, 1994). Byrne and Rees note that, because of these costs, the owners of a company should carefully consider whether an IPO is appropriate for their circumstances or whether consideration should be given to a trade sell or other forms of raising the additional capital to meet requirements (for example, debt financing).

### 2.4.4 Loss of Control

Ritter (1998) notes that the dilution associated with selling shares at an offering price that is on average below the price prevailing in the market shortly after the IPO, is another indirect cost of going public as it reduces the control of existing shareholders. Apart from possible dilution, outsiders could often take control and even fire the entrepreneur (Welch, 2000).

### 2.4.5 Profit Sharing

According to Welch (2000), if a firm is sitting on a gold mine, future gold or profit has to be shared with outsiders. Welch argues that if the price is right, it is worthwhile for existing shareholders to sell some of their shares at the time of the IPO. This however means that future profits (in the form of dividends) will have to be shared amongst an increased number of shareholders. The dividend per share for existing shareholders will be lower because of the increased number of shares at the time of the offering, which have been sold to outside shareholders.

## 2.5 The Players in an IPO

Before a company can be sold to outside investors, it must put its affairs in order and present an appropriate face to investors and this requires long-standing planning (Welch, 2000). Menyah and Paudyal (2002) document that the commencement of an IPO process requires several key decisions to be made by the issuer and its advisors before the floatation of the company on the stock market is completed. Such decisions include the choice of an underwriter, the method of issue to adopt, the amount of money to raise for the company, the proportion of equity to sell to new investors and the price at which the issue is to be sold. Apart from the issuers or company principals, bringing a private company to the stage where it qualifies for an IPO requires the co-ordinated resources of a number of other skilled professionals each of whom brings to the 'Floatation Team' his own particular skills and experience to ensure that the issue is attractive to investors and becomes successful. Some of the major players are:

### 2.5.1 Underwriters

Underwriters are at the heart of new issues (Ross *et al.*, 1996) and they play a pivotal role in executing a successful initial public offering. Their role in the floatation is by far the most

comprehensive among the professional advisors. The managing underwriters are the investment bankers who run the IPO show. They provide advice and underwrite the amount the issue will raise. In addition they have the responsibility of determining the price of the offering, help draft the prospectus and other filling documents, conduct due diligence and most importantly find investors for the offering. In short they play a triple-role, firstly providing the company with procedural and financial advice, then buying the issue, and finally reselling to the public. More than one investment banker usually markets the securities. A lead firm forms an underwriting syndicate of other investment bankers to share the responsibility for the stock issue Bodie *et al.*, (2002). If there is a shareholder's lawsuit, the liability can be dispersed amongst members of the underwriting syndicate.

The underwriter plays an important role that of coordinating the parties involved. It also advises on the appointment of the sponsoring broker, advertising and marketing agents. The relationship between the underwriter and the issuer does not end after the IPO, in many cases underwriters continue to provide services after the IPO is completed. These include advising the newly public company on matters such as mergers and acquisitions or debt offerings (Tauli, 1999).

Corporations engage underwriters by negotiation or by competitive bidding Ross *et al.*, (1996). Negotiation is however far more common. In a competitive offer, the issuing firm can offer its securities to the underwriter bidding highest whereas in a negotiated offer, the issuing firm works with one underwriter. Negotiated deals may however suffer from lack of competition and studies generally show that issuing costs are higher in negotiated deals than in competitive ones. Underwriters act as financial midwives to a new issue. According to Tauli (1999), having the right underwriter can mean the difference between a successful IPO and a failed offering. By underwriting the issue, the investment/merchant bank evidences its support and confidence in the company, which does not go unnoticed by the investing public. Tauli notes that before investing in any IPO, it makes sense to investigate the underwriter.

#### 2.5.1.1 Underwriting Options

There are two alternative forms of underwriting contracts that are typically used in initial public offerings and these are: "best offer" or "firm commitment" (Stern & Chew, 1992).

**Firm Commitment**

In a firm commitment, offering the underwriter guarantees that the agreed upon amount of capital will be raised. Under this method, the investment bank or underwriter buys the securities for less than the offering price and accepts the risk of not being able to sell them. The underwriter may later reduce the public offering price if it cannot sell the issue at the offer price, but nonetheless delivers to the issuer the entire issue price that was previously specified. It is therefore crucial to the underwriter that the price is set appropriately.

To minimise the risk of failure to sell the issue, the investment bankers combine to form an underwriting group (syndicate) to share the risk and help sell the issue. In such a group a lead or principal manager is appointed and typically has the responsibility for all aspects of the issue. According to Ross *et al.,* (1996), the difference between the underwriter's buying price and the offering price is called the 'spread or discount' and is the basic compensation or fee received by the underwriter. Sometimes the underwriter will get non-cash compensation in the form of warrants or stock in addition to the spread. Due to the fact that, the offering price usually is not set until the underwriters have investigated how receptive the market is to the issue, the risk is usually minimal.

**Stabilisation Activity and the Green Shoe Option**

Underwriters typically attempt to stabilize prices around the offer date of a security. In the case of primary equity offers by listed firms, this stabilisation is accomplished by placing a limit order to purchase shares with the specialist on the exchange. According to Stern and Chew (1992), this represents a bonding mechanism by the investment banker or underwriter, one that promises investors that if the issue is overpriced, they can sell their shares into the stabilisation bid, thereby cancelling the transaction. They also note that a firm commitment offering will usually have an over allotment option (also called 'a green shoe'). The Green Shoe option (so named because it was originally used in an offering by the Green Shoe Company) is frequently employed in underwritten equity offers (Stern & Chew, 1992: 214). It gives the underwriter the right to buy additional shares from the firm at the offer price. This means that if there is a tremendous demand for the IPO, the underwriter can issue additional shares; say 10 to 15% of the total stock issued (Tauli, 1999).

The stated reason for the Green Shoe option is to cover excess demand and oversubscription. The Green Shoe option usually lasts for about 30 days and is a benefit to the underwriting syndicate and a cost to the issuer. If the market price of the new issue goes above the offering price within 30 days, the underwriters can buy shares from the issuer and immediately resell to the public at a price higher than the offering price. In February 1998, Double-Click, the on-line advertising network, raised a total of US$51 million. Originally, the company indicated that it would sell 2.5 million shares at between US$12 and US$14 each. However due to intense demand, the company increased the number of shares to 3 million and sold the offering for US$17 per share. On the first day of trading, the stock soared 72 percent (Tauli, 1999). Ross *et al.,* (1996), note that, the principal underwriter is permitted to buy shares if the market price falls below the offering price. The purpose of this is to support the market and stabilise the price from temporary downward pressure.

**Best Efforts**

An alternative to the firm commitment is the best efforts agreement. In the best efforts contract, the issuer and underwriter negotiate an offering price. The underwriter uses its best efforts to raise all the desired capital at the negotiated price, usually receiving a percentage of the capital raised as its fee. Here the underwriter merely acts as an agent, receiving a commission for each share sold. If there is not enough demand at the negotiated price, the offer is withdrawn from the market and the issuer does not raise any capital. It is unlikely that a second offering will be made at a reduced price. The best-efforts offering reduces the risk faced by the underwriter and leaves much of the risk to be borne by the issuer. Bodie *et al.,* (2002) note that the best efforts procedure is more common for the initial public offerings of common stock, for which the appropriate share price is less certain than it is for seasoned issues.

**Self Underwritings**

A company may decide to forgo the services of an underwriter especially in cases where companies go public at earlier stages in their business cycle. Unfortunately there have been very few successful self underwriting offerings. It should be recognised that the distribution channels of an underwriter are extremely valuable and that 'stock is sold not bought'. Investors therefore need to be very careful of any company that does its own underwriting (Tauli, 1999:

233). Apart from the underwriter, the other players in an IPO include; the sponsoring stockbroker, the auditor, attorneys, advertising agents, transfer agents and the registrar.

### 2.5.2 Sponsoring Stockbroker

The stock broking advisor to floatation has a major role to play and works closely with the underwriter in the area of marketing the shares (Going Public, 2000). The stockbroker contributes to the prospectus by ensuring that it contains details concerning a company in a format which is suitable for appreciation by the professional investor. He contributes this critical input in the drafting process. It is also noted in Going Public (2000) that the key area of the stockbroker's involvement will be to assess the best method of marketing a particular company's shares and to liaise with the merchant bank or underwriter on presentations to investors. The investing public normally direct their enquiries on the issue to the sponsoring broker and this gives the issue the best chance of meeting with a well informed and enthusiastic response. The stockbroker plays a prime role in the decision on the appropriate price at which the floatation should proceed and offers post floatation support by providing information and general advice to investors on the listed company. The period after the shares are quoted often determines the success or failure of an issue and it is during this period that the stockbroker is most useful (Going Public, 2000).

### 2.5.3 Auditor

The purpose of an auditor in an IPO process is to vouch for the accuracy of a company's financial statements by ensuring that the company's accounting practices are consistent with generally accepted accounting procedures (GAAPs) (Tauli, 1999), or the International Financial Reporting Standards (IFRSs/IASs). Auditors also help the IPO candidate draft financial reports in compliance with the Stock Exchange Listings Committee requirements. The auditor's report is an essential part of the prospectus as it ensures that all the financial information in this document is recorded properly and in strict accordance with the facts. Auditors may also be consulted on tax and other matters including employee share ownership schemes (ESOPs) and accounting policies.

#### 2.5.4 Attorneys

Going public involves dealing with the many complex listing requirements and laws, which require attorneys to deal with. The role of an attorney is to review existing contracts, deal with matters such as changes to the memorandum and articles of association, share capital, registration and re-organisations that occur when a company transfers to public status as well as attending to other litigation issues.

#### 2.5.5 Public Relations and Advertising Agents

Without good public relations (PR), an IPO can easily be lost as PR is a powerful tool for attracting investors (Tauli, 1999). PR firms that specialise in marketing IPOs know the rules and know how to get the message out to the right brokers, institutions, analysts and market makers and, to the investors. Some PR companies however cloud the facts and it is therefore wise for investors to be sceptical of information contained in press releases. Investors should thus focus on the facts contained in the prospectus.

#### 2.5.6 Transfer Agent and the Registrar

The role of the transfer agent is to maintain shareholder information including handling the physical delivery of stock certificates in every buy and sell transaction. The registrar ensures that the correct numbers of shares are exchanged when there is a buy and sell transaction and also keeps records of destroyed, cancelled or lost stock certificates (Tauli, 1999). Tauli also notes that to be a successful IPO investor, it is imperative to know how the procedure for a new offering works.

### 2.6 The Procedure for a New Issue

Management's first step in any issue of securities to the public is to obtain approval from the board of directors Ross *et al.,* (1996). Following this approval the basic steps that precede an initial public offering include:

#### 2.6.1 Due Diligence

According to Tauli (1999), due diligence has to be performed on a company before an IPO can get rolling. This refers to an extensive investigation of the company to ascertain the nature and status of the company by looking at its assets, activities, history, and future

prospects. Here the underwriters conduct interviews, analyse financial statements, scrutinise the accounting procedures and consult with auditors in order to minimise their legal risk because they are liable for material misstatements in the prospectus, just as the company itself is liable. Tauli, also notes that, once the underwriters are satisfied with the prospectus, a letter of intent will be drafted and signed.

### 2.6.2 Letter of Intent

The letter of intent refers to the understanding between the company and the underwriter, setting forth the tentative terms of the relationship. It also establishes a range for the offering price of the issue. The final underwriting agreement is identical to the letter of intent except for the addition of the final stock price and number of shares to be issued (Tauli, 1999).

### 2.6.3 Drafting and Filing the Registration Statement

Once the letter of intent has been signed the firm must prepare and file the registration statement with the SELC. There are two parts to the registration statement: (a) the prospectus and (b) additional information which includes summaries of expenses, insurance for officers and directors as well as the underwriting agreement (Tauli, 1999). The SELC studies the registration statement during a waiting or 'cooling off period' of a least twenty days (Ross *et al.*, (1996).

### 2.6.4 Road Shows

During the cooling off period, the underwriter surveys the market (Ibbotson *et al.*, 2001) for potential investors. Bodie *et al.*, (2002) note that, once the SELC has commented on the registration statement, and a preliminary prospectus has been distributed to interested investors, the underwriter organises road shows, in which they travel around the country to publicise the imminent offering. Bodie *et al.*, also note that, the road shows serve to:

i. attract potential investors and provide them with information about the offering, and

ii. they collect for the issuing firm and its underwriters information about the price at which they will be able to market the securities. Large investors communicate their interest in purchasing shares of the IPO to the underwriters. These indications of interest are called '*a book*' and the process of pooling potential investors is called 'bookbuilding' (Bodie *et al.*, 2002). Based on the feedback from the investing

community, the underwriters may revise both their initial estimates of the offering price of a security and the number of shares offered.

The preliminary prospectus is known as '*red herring*' because of the statement printed in red that the company is not attempting to sale the security before the registration is approved (Bodie *et al.*, 2002). It is important for investors to note the disclaimer and realise that the information in the red hearing is not yet final and the offering not yet approved.

### 2.6.5 Finalisation of the Offering

When the registration statement is finalised and approved by SELC, it is called a prospectus. The effective date is when the SELC approval is granted and after this date the company is allowed to sell its shares to the public. The final step is the setting of the price and determining the number of shares to be offered and according to Tauli (1999) this final step can be a gruelling process for everyone involved. After this the final version of the prospectus is sent to all the buyers of the offering, thus the company is officially public.

### 2.6.6 Setting the Offering Price

Determining the correct offering price is the most difficult thing an investment banker must do for an initial public offering. IPOs are an interesting special case of security offers. They differ from seasoned new issues in two important ways;

i. the uncertainty about the market clearing price of the offering is significantly greater than for public corporations with claims currently trading.

ii. because the firm has no traded shares, examination of stock price reactions to initial announcements is impossible.

The first difference affects the way these securities are marketed; the second limits the ways researchers can study the offerings (Stern & Chew, 1992). The issuing firm faces potential cost if the price is set too high, it may be unsuccessful and be withdrawn. If the issue is priced below the true market price, the issuer's existing shareholders will experience an opportunity cost or loss. Pricing IPOs is not trivial and not all IPOs turnout to be underpriced. Some issues do poorly after the initial issue and others cannot even be fully sold to the market. It is essential for the price to be consistent with the expectations for acceptance by the investing public as well the amount of capitalisation desired by the issuing firm.

With prices of many new offerings more than doubling on the first day of trading, it is no wonder small investors are trying to muscle in on the action. IPOs can be phenomenal investments, if and only if, you know the ins and outs and invest wisely (Tauli, 1999). The best source of information on an IPO is its prospectus. Knowing what the risks are is important and realising what they mean to your investments is vital. Investors want to know the best investment strategies, the potential risks, and when to get out once an IPO has fizzled. Tauli notes that there are several risks associated with investing in IPO's.

## 2.7 Risks Associated With IPOs

Levitt (2000) notes that, unless investors truly understand both the opportunities and the risks of today's market, too many may fall victim to their wishful thinking as times of unprecedented opportunity and change, demand an even greater commitment to staying disciplined and understanding risk. The situation regarding Zimbabwe from 2003 to 2006, for example presents a lot about the country's economy that even the most savvy investment professionals and economists simply do not know or cannot figure out, as everything appears more nominal than real with inflation levels of 359.8% at the end of September, 2005, 613.2% in February 2006 and 1042% in April 2006 (CSO, 2006). As an IPO investor in this environment, one must always understand a company's real value (its worth), how to determine value, and how to manage risk. At the moment, risk appears very high on the Zimbabwean Stock Market and many other alternative forms of investments in Zimbabwe with issues of expropriation further compounding the risks associated with investments in the country.

By nature, investments are never entirely free from risks and the fact that a prospectus lists risks does not mean that the IPO is a bad investment as this is a requirement for listing. Knowing what the risks are is important and realising what they mean to your investment is vital. According to Tauli (1999), there are several risk factors investors should watch out for and the following are some of the risk factors you might spot in an IPO prospectus that warrant further consideration by the would-be investor:

i. **Inexperienced Management Team**

Running a company requires an experienced management team. Managers who are not qualified will cause major problems for the company. A recently hired team is one risk factor warranting careful consideration as it certainly has a bearing on the performance of any company. One must look for an IPO in which the managers have successful track records (Tauli, 1999).

### ii. Legal Proceedings

A serious litigation pending against the company is another risk worth investigating. Legal disputes can be particularly onerous for small companies and can be a threat to future success. Lawsuits can drain resources and divert the attention of management away from its business operations. Also be wary of any disclosures of legal problems involving the underwriter. In certain countries an underwriter having been banned from financial activities can definitely stunt the offering (Tauli, 1999).

### iii. Market and Customer Base

Reliance on a small number of customers and few products limit the potential for growth and chances to recover in an evolving competitive market-place. Investors should be careful of a company that sells its products to only a few customers or one with a single product which in the event of a slump can lead to overall underperformance for the company and its stock (Tauli, 1999).

### iv. Technology Risk

Tauli also notes that, it is better to stay away from an IPO where the company has a serious technological problem, where the costs of rectifying it are material.

### v. Negative Gross Margins

This means that the company is not likely to make profits for quite sometime, if ever. Tauli notes that investors are advised to think twice before investing in any company that has negative gross margins.

### vi. Limited History of Profitable Operations

Except in the case of internet companies that have huge losses in the early years, be wary of those companies that describe long-term losses (over ten years or more). This is a strong indication that the business may never be profitable (Tauli, 1999).

### vii. Unsuccessful Prior Offering

This means that the company had trouble convincing investors to invest in its previous IPO. Tauli notes that, companies that try repeat IPOs can be very risky investments and investors should be careful of such companies.

### viii. Competition

The presence of competition can be positive because it indicates that there is a market for the company's products. In certain cases, it can however be extremely fierce. According to Tauli (1999), competition from Microsoft Corporation saw the shares of Netscape sell at US$38 from a peak of US$78.98 when it launched its IPO in 1995. He notes that in order to compete with Microsoft, Netscape had to merge with AOL.

### ix. Low Priced Stocks

"Penny stocks" are highly risky and for the most part, not appropriate for individual investors as their chances for long-term success are questionable. Many of these companies have inexperienced management teams, unproved business models, and little capital with which to expand their business (Tauli, 1999).

### x. History of Loan Default

According to Tauli (1999), a history of loan default shows that the company will probably go bankrupt unless it raises money from the IPO. Default on loans is an indication that the company suffers from poor cash management. One should be extremely careful of a company with problems in its debt structure as it is likely to be an investor time bomb.

### xi. Recent Transition to a New Business Model

Tauli also notes that, it can be scary when a company decides to get into a new business, say within a year or so from its IPO. This can mean that the company has lost its focus, and does not have clear goals for the future or that it is moving into a business that it originally was not set up to pursue. He further notes that such change of business is fraught with risks, for the company and for its investors.

Unseasoned new equity issues (IPOs) according to Ibbotson (1975) (*cited* in Ross *et al.*, 1996), typically have been offered at 11% below their true market price. Ross *et al.*, also *cite* the findings of Ritter (1987) who examined 1030 firms that went public from 1977 to 1982 in the United States. He found that the average firm commitment IPO rose in price 14.8% in the first day of trading following the issuance and 47.8% for best efforts IPOs. Both these results are clearly consistent with substantial underpricing. Several other studies on IPOs [as noted in Table 2.1 and in the concept matrix (Appendix 2)] have already been carried out in different countries and it is essential that reference be given to the findings of the various research papers and presentations on the short and long-run performance of IPOs.

## 2.8 Underpricing

Underpricing refers to the difference between a stock's offering price and the closing price on the first day the stock is offered for trading (Filatotchev & Bishop, 2000). The stock price behaviour of IPOs from the time the initial offer price is set until the security first trades in the aftermarket, demonstrates unmistakably that the average issue is offered at a significant discount from the price expected in the aftermarket (Stern & Chew, 1992). Ritter (1998) documents that the best known pattern associated with the process of going public is the frequent incidence of large initial returns (that is, the price change measured from the offering price to the market price on the first day of trading), accruing to the investors in IPOs of common stock. At one time it was considered an embarrassment to have a major price increase on the first day of trading, because it meant that a company could have raised much more money, but it is now standard practice to witness these huge premiums. In November 1998, 3.1 million shares in TheGlobe.Com were sold in an IPO at a price of US$9 a share. In the first day of trading the price reached US$97 before closing at US$63.50 a share. If the company had

sold its shares for the US$63.50 that investors were willing to pay for them, its IPO would have raised US$197million instead of only US$27.9 million that was actually raised (Tauli, 1999). The *'money left on the table'* in this case far exceeded the explicit cost of the stock issue. Arosio *et al.*, (2000), find that issuers of Italian IPOs leave a substantial amount of money on the table.

Welch (2000) notes that it is important for entrepreneurs to hire someone independently who understands IPOs and more so one who understands IPOs in the same industry. He points out that, this is because auditors, lawyers and underwriters all have interests conflicting with the entrepreneur's interests. Auditors want to avoid being sued and bill as many hours as possible. Lawyers want to never state anything in writing for which they may later be held liable and also be paid as many hours as possible. Underwriters want 'the deal' under conditions as favourable to them as possible, including pricing the offering low, so as to minimize their necessary selling effort (Welch, 2000).

When the price of a new issue is set too low, the issue is often oversubscribed, which means that investors will not be able to buy all the shares they want and the underwriters will allocate the shares among investors. In this case the average investor will find it difficult to get shares in an oversubscribed offering because there will not be enough shares to go round. Ibbotson *et al.*, (*cited* in Chew 2001: 310) note that Investors should truthfully reveal their interest (circle their demand) when asked to indicate their willingness to purchase shares at the time the underwriter surveys the market. This is because shares would be allocated in part based on the strength of each investor's expressed interest in the offering. If a firm wishes to get a large allocation when it is optimistic about a security, it needs to reveal its optimism. In turn the underwriter needs to offer the security at a bargain price to these investors to induce them to share their information. Ritter (1998) in his market feedback hypothesis notes the need to underprice in order to induce regular investors to truthfully reveal their valuations. Ritter and Welch (2002) also note the extra underpricing is compensation that is necessary to induce investors to reveal their high personal demand for shares. As such IPOs are commonly underpriced compared to the price at which they could be marketed and this is reflected in price jumps on the date when the shares are first traded in the public security markets. Ibbotson, 1975 (*cited* in Welch 1989: 422) finds that underpricing new issues 'leaves a good taste' with investors so that future underwritings from the same issuer could be sold at

attractive prices. In their study of 8668 new offerings from 1960 to 1987, Ibbotson *et al.*, (1994) find average underpricing of 16.37 percent.

Such underpricing and the favouring of institutional investors could be minimised by applying W.R. Hambrecht & Company's 'Dutch Auction'. In this procedure dubbed the 'OpenIPO', investors submit a price for a given number of shares. The bids are then ranked in order of bid price, and shares are allocated to the highest bidders until the entire issue is absorbed. All shares are sold at a price equal to the highest price at which all the shares will be absorbed by investors and those investors who bid below that cut-off price get no shares (Bodie *at al.*, 2002). Bodie *et al.*, note that in the US, the most dramatic case of underpricing was in December 1999 when shares in VA Linux were sold in an IPO at US$30 a share and closed on the first day of trading at US$239.25, a 698% one-day return. In Zimbabwe, this was noted in the case of Eastern Highlands Plantations Limited (EHPL) in 1994, when the shares were issued at a price of ZW$1.20 on the first day of trading, the shares closed at ZW$9.30 a 675% initial return (http://www.zse.co.zw).

While the underwriter has a short-run incentive to price high, it has a long-run incentive to make sure that its customers do not pay too much for they might desert the underwriter in future deals if they lose money on this one. As long as the investment banker or underwriter plans to stay in the business of IPOs over time, it is in their self-interest to price fairly. According to Ross *et al.*, (1996) each investment banker has a reservoir of 'reputation capital'. 'Mispricing' of new issues as well as unethical dealings are likely to reduce its reputation capital.

Mispricing might result in investors opting for money market investments. According to Saziwa (2006) the Zimbabwean equities market which started the year 2006, on a bullish note took a nosedive, triggered by an increase in money market investment rates. Saziwa notes that whilst companies' financial performances have not been disappointing, this did not have a positive impact on the stock market performance largely ignored by investors with the focus squarely on developments on the money market. Mberi (2006) also notes that the first part of the second quarter of 2006, was one of tight money market liquidity and high rates on the money market, which meant equities fell in the immediate term. Kadzere (2006), on the other hand notes that investors were expected back on the equities market as interest rates on the

money market were projected to soften due to easing liquidity positions on the market. Saziwa (2006), notes that in March 2006, the 30-, 60- and 90-day money market instrument rates were quoted firm, proving irresistible to investors, thus dampening activity on the stock market.

Underpricing does not imply that an investor can expect to become wealthy by purchasing unseasoned stock from the underwriter, for if the issue is attractive, the underwriters will not have enough stock to go around. In order to get stock at the issue price, investors would have to be prepared to pay for it indirectly, for example by allocating more brokerage business to the underwriters than they otherwise would. Therefore underpricing helps underwriters. Welch (1989) notes that underpricing reduces the risk of underwriting and gains for the underwriters, the gratitude of investors who buy the issue.

### 2.8.1 Possible Explanations to IPO Underpricing

According to Ibbotson, 1975 (*cited* in Byrne and Rees, 1994: 2), a considerable body of evidence has emerged to suggest that IPOs are on average underpriced. IPO underpricing manifests itself in the large initial returns that are often observed in IPOs. Ibbotson *et al.*, (Chew, 2001:314) note that, most of the theories put forward to explain this IPO underpricing rest on the assumptions about differences of information between parties (information asymmetries) about the value of the new issue. One such theory is built on the assumption that the underwriter has significantly better information than the issuer. In a firm commitment offering the underwriter has the incentive to set a relatively low price to ensure that the entire issue sells at the predetermined price.

An alternative explanation developed by Rock (*cited* in Chew, 2001: 315), emphasises the asymmetry of information among potential investors. Some investors become informed about the true value of a new issue, while others remain uninformed because it is more difficult or costly for them to become informed. Ritter (1998) also notes that, if some investors are at an informational disadvantage relative to others, some investors will be worse off. Rock finds that, this information asymmetry causes a "winner's curse" problem where uninformed investors end up primarily with the less successful IPOs and keeping them in the market requires an additional premium in terms of IPO underpricing. The underwriter in this case is assumed to know for certain how much the market would be willing to pay for the issue. Thus the underwriter and the issuer generally err in setting the price as some stocks are overvalued

while others are undervalued. Ibbotson *et al.*, (*cited* in Chew 2001:315) and Ritter (1998) note that, because issuers must continue to attract both uninformed as well as informed investors, new issues must be underpriced on average to provide uninformed investors with an acceptable rate of return. Ritter (1991) finds that, the average investor wins and gets his allocation because those who knew better avoided the issue.

To counteract the winner's curse and attract the average investor, underwriters underprice issues. Connelly *et al.*, (2004) note that, the degree of information asymmetry is typically very high in emerging markets. Welch (1989) also finds that firms are forced to underprice their IPOs in order to compensate uninformed investors for any adverse selection. Baron (Ritter & Ritter 2002: 16) offers a different, agency-based explanation for underpricing. He argues that, to induce the underwriter to put in the requisite effort to market shares, it is optimal for the issuer to permit some underpricing, because the issuer cannot monitor the underwriter without cost. Ritter and Welch also *cite* the study of Habib and Ljungqvist (2001), who argue that underpricing is a substitute for the costly marketing expenditures. Using a dataset of IPOs from 1991-1995, they report that an extra dollar 'left on the table' reduces other marketing expenditures by a dollar. Gounopoulos (2003)'s investigation of factors influencing the initial performance finds that market conditions, demand multiple, cold-hot issue periods, and offer price independence are significant determinants of underpricing. They find that Greek IPOs are underpriced by 63.92% with 13.3% being overpriced.

According to Filatotchev and Bishop (2000), signalling research suggest that initial owners underprice at the IPO to signal their quality or favourable private information about the firm's value to uninformed investors and to obtain a higher price at a seasoned equity offering (SO). Welch (1989) finds that a higher price at a seasoned offering eventually compensates the firm for the intentionally low price. Ritter (1998), notes that issuing firms may intentionally underprice their shares in order to generate excess demand and so be able to attract a large number of small shareholders. This disperse ownership will make it more difficult for outsiders to challenge current shareholders. Ritter (1998) named this, the ownership dispersion hypothesis. In what he termed the bandwagon effect, Ritter notes that if potential investors pay attention not only to their own information about a new issue, but also to whether other investors are purchasing, bandwagon effects may develop. Ritter also notes that an issuer may want to underprice an issue to induce the first few potential investors to buy and induce a

bandwagon, or cascade in which all subsequent investors want to buy irrespective of their own information.

The theories of IPO underpricing based on information asymmetries are fairly recent, and have met with partial acceptance by most financial economists. Some of the more traditional explanations for underpricing, all of which are viewed with scepticism and as suggested by Ibbotson, 1975 (*cited* in Chew, 2001: 315) are as follows;

i. Securities regulations may be such that underwriters are required to price IPOs below their expected value (Byrne & Rees, 1994). Regulations in some countries like Korea and Japan require underwriters to set the offering price below the expected value. There is however no explicit regulation that seems to require underpricing in Zimbabwe and such is also the case in the USA;

ii. Underwriters collude to exploit inexperienced issuers and to favour investors. The large numbers of underwriters make collusion seem unlikely at best. However a single prestigious underwriter might conceivably be able to achieve a somewhat monopolistic position with respect to a single issuer if there were high fixed costs of search on the part of the issuer;

iii. It may be that firms deliberately underprice new issues in order to 'leave a good taste in the investors' mouths' and thus be able to make subsequent issues at attractive prices. Welch (1989) describes this as a signalling model in which high-quality firms underprice at the initial public offering in order to obtain a higher price at a seasoned offering (SO). Welch provides empirical evidence that many firms raise substantial amounts of additional equity capital in the years after the IPO. Filatotchev and Bishop (2000) note that the firm must first convince its advisor or broker that it represents a good investment and should also signal its value to outside investors. They argue that these agency relationships create costs that manifest themselves in terms of underpricing;

iv. 'Firm commitment' underwriting spreads do not cover all of the risks, so the underwriter underprices new issues to compensate or reduce the risk the underwriters bear;

v. There may be some undisclosed mechanism by which investors compensate issuers for the discount on the issue price. Through tradition or some other arrangement, the underwriting process consists of underpricing offerings with full or partial compensation via side payments from investors to underwriters and then to issuers.

vi. The issuing corporation and underwriter perceive that underpricing constitutes a form of insurance against legal suits by investors in case of misinformation as was noticed in the collapse or failure of China Life. The China Life IPO, the world's largest IPO in 2003 at US$3.5 billion was hit by a series of lawsuits related to the IPO (Denlinger, 2004). China's state auditors uncovered accounting irregularities worth about 5.4 billion Yuan (US$652 million) involving China's predecessor firm http:www.chinadaily.com.cn/en/doc/2004-02/04. If there is misinformation, but a cushion of safety in the underpricing, then the probability of losses followed by a lawsuit is diminished.

Issuers should disclose as much information as possible about their firm (without divulging valuable competitive secrets) at the time of the issue. The less uncertainty investors have about the value of the firm, the lower the amount of underpricing necessary to attract them.

None of the possible explanations of IPO underpricing, taken alone is entirely satisfactory. Ibbotson, 1975 (*cited* in Chew, 2001: 316), concludes that all of the above explanations are unsatisfactory as they involve unknown legal constraints, needlessly complicated indirect compensation schemes, or irrational behaviours due to speculation bubbles and market "fads" as highlighted by Aggarwal and Rivoli (1990) to noisy trading activities as noted by Chen *et al.*, (1999) to naïve investors (Arosio *et al.*, 2000: 5). Thus underpricing of IPOs remains a 'mystery'. Ibbotson *et al.*, (*cited* in Chew, 2001: 316), note that, one is left to wonder why in a competitive market where it is reasonable to believe that most stocks are fairly priced is there persistent and systematic underpricing of IPOs. Ritter (1998) also notes that the underpricing phenomenon has persisted for decades with no sign of its imminent demise.

There are also theories of underpricing that do not rely on asymmetric information that is resolved on the first day of trading. Ritter and Welch (2002, p. 17), cite Tinic (1988), and

Hughes and Thakor (1992), argue that issuers underprice to reduce their legal liability. Ritter and Welch also *cite* the findings of Drake and Vetsuypens (1993) who on the contrary find that sued IPOs had higher not lower underpricing, that is underpricing did not protect them from being sued. Ritter and Welch (2002) argue that leaving money on the table appears to be a cost effective way of avoiding subsequent lawsuits. Loughran and Ritter (2002), note that in the US the average IPO leaves US$9.1 million on the table and that this represents a substantial indirect cost to the issuing firm. Ljungvist *et al.,* (2002) document that underpricing can emerge as underwriters attempt to maximize issue proceeds by extracting surplus from exuberant investors. According to Loughran *et al.,* (1994, updated 2000), the United States is not the only country in which IPOs are underpriced. Chen *et al.,* (1999), also note that the underpricing of IPOs is not simply a phenomenon in the US but also an international phenomenon. They note that, the phenomenon exists in every country with a stock market. Ritter (1998) also notes that the underpricing phenomenon exists in every nation with a stock market although the amount of underpricing varies from country to country, as can be seen in Table 2.1 below:

| Country | Reference | Time Period | Sample Size | Average Initial Return % |
|---|---|---|---|---|
| Australia | Lee *et al.,* (1999) | 1976-1994 | 328 | 15.2% |
| Austria | Aussenegg (2000b) | 1984-1999 | 76 | 6.5% |
| Belgium | Rogiers *et al.,* (1993), Manigart | 1984-1999 | 69 | 15.7% |
| Brazil | Leal (1998) | 1979-1992 | 66 | 74.1% |
| Canada | Jog and Srivastava | 1971-1992 | 258 | 5.4% |
| Chile | Aggarwal *et al.,* Maturana | 1982-1997 | 55 | 8.8% |

| China | Datar and Mao<br>Su and Fleisher (1999) | 1990-1996<br>1987-1995 | 226 (A-shares)<br>57 (B-shares) | 388.0%<br>37.1% |
|---|---|---|---|---|
| Denmark | Jakobsen & Sorensen (1999) | 1984-1998 | 117 | 5.4.% |
| Finland | Kelharju (1993), Rimpi (1998) | 1984-1997 | 102 | 9.9% |
| France | Derrien and Womack (1999) | 1983-1998 | 448 | 9.5% |
| Germany | Ljungqvist (1999) | 1978-1999 | 407 | 27.7% |
| Greece | Kazantzis and Thomas (1996) | 1987-1994 | 129 | 51.7% |
| Hong Kong | Zhao and Wu | 1980-1996 | 334 | 15.9% |
| Hungary | Jelic and Briston (1999) | 1990-1998 | 25 | 44.0% |
| India | Krishnamurti and Kumur (1999) | 1992-1994 | 386 | 72.3% |
| Indonesia | Hanafi (1997) | 1989-1994 | 106 | 15.1% |
| Israel | Kandel et al., (1999) | 1993-1994 | 28 | 4.5% |
| Italy | Giudici and Paleari (1999) | 1985-1998 | 135 | 20.3% |
| Japan | Fukuda *et al.*,, Hamao *et al.*, | 1970-1996 | 975 | 24.0% |
| Korea | Dhatt *et al.*, Choi and Heo | 1980-1996 | 477 | 74.3% |
| Malaysia | Isa and Yong | 1980-1998 | 401 | 104.1% |
| Mexico | Aggarwal *et al.*, (1993) | 1987-1990 | 37 | 33.0% |
| Netherlands | Wessels, Jenkinson *et al.*, | 1982-1999 | 143 | 10.2% |
| New Zealand | Vos and Cheung | 1979-1999 | 201 | 23.0% |
| Nigeria | Ikoku | 1989-1993 | 63 | 19.1% |
| Norway | Emilsen *et al.*, | 1984-1996 | 68 | 12.5% |
| Philippines | Sullivan and Unite | 1987-1997 | 104 | 22.7% |
| Poland | Aussenegg (2000a) | 1991-1998 | 159 | 33.1% |
| Portugal | Almeida and Duque (2000) | 1992-1998 | 21 | 10.5% |
| Singapore | Lee *et al.*, | 1973-1992 | 128 | 31.4% |
| South Africa | Page and Reyneke (1997) | 1980-1991 | 118 | 32.7% |
| Spain | Otero and Fernandez (2000) | 1985-1997 | 58 | 12.8% |
| Sweden | Holmen and Hogveldt (1999) | 1979-1997 | 233 | 29.3% |
| Switzerland | Ogna *et al.*, (1999) | 1985-1994 | 55 | 34.6% |
| Taiwan | Lina and Sheu | 1986-1995 | 241 | 34.6% |
| Thailand | Wetyavivorn and Koo-Smith | 1987-1997 | 292 | 46.7% |
| Turkey | Kiymaz (1997) | 1990-1995 | 138 | 13.6% |
| United Kingdom | Loughran *et al.*,(2000) | 1959-1999 | 2802 | 13.9% |
| United States | Ibbotson *et al.*, | 1960-1999 | 14376 | 17.4% |

Table 2.1: Levels of Underpricing for Different Countries – Adapted from Arosio et al, (2000) p. 37

Whilst underpricing has been noted even in the case of seasoned equity issues, the levels of underpricing are much less than they are for IPOs (Stern & Chew, 1992: 213). Seasoned new equity issues have been found to be underpriced by only 0.6 percent while seasoned equity issues by utilities appear to be underpriced by 0.3. Presented in Table 2.2 below is a summary of estimates of the underpricing of new securities at issuance by type of offering.

| **Type of Offering** | **Study by:** | **Sample Period** | **Sample Size** | **Estimated Underpricing** |
|---|---|---|---|---|
| Initial Public Equity Offering | Ibbotson (1974) | 1960-69 | 120 | 11.4% |
| Initial Public Equity Offering | Ibbotson/Jaffe (1975) | 1960-70 | 2650 | 16.8 |
| Initial Public Equity Offering | Ritter (1984) | 1960-82 | 5162 | 18.8 |
| | | 1977-82 | 1028 | 26.5 |
| | | 1980-81 | 325 | 48.4 |
| Initial Public Equity Offering: | Ritter (1985) | 1977-82 | | |
| *Firm commitment* | | | 664 | 14.8 |
| *Best Efforts* | | | 364 | 47.8 |
| Initial Public Equity Offering | Chalk/Peavy (1985) | 1974-82 | 440 | 13.8 |
| *Firm commitment* | | | 415 | 10.6 |
| *Best Efforts* | | | 82 | 52.0 |
| Equity Carve-Outs | Schipper/Smith (1986) | 1965-83 | 36 | 0.19 |
| Seasoned New Equity Offering | Smith (1977) | 1971-75 | 328 | 0.6 |
| Seasoned New Utility Equity Offering: | Bhagat/Frost (1986) | 1973-80 | 552 | -0.30 |
| *Negotiated* | | | 479 | -0.25 |
| *Competitive Bid* | | | 73 | -0.65 |
| Primary Debt Issue | Weinstein (1978) | 1962-74 | 412 | 0.05 |
| | Sorensen (1982) | 1974-80 | 900 | 0.50 |
| | Smith (1986) | 1977-82 | 132 | 1.6 |

Table 2.2: Underpricing Of New Security Issuance By Type Of Offering – Adapted from Stern and Chew (1992): 213.

In the UK according to Smith and Saigol (2005) IPOs outperformed the market in 2004, with an average rise of 29 per cent, compared with an equivalent overall market gain of 8 percent. 16 out of 17 trading company IPOs showed gains from their issue date, with Cambridge Silicon Radio the best performer trading at 95 per cent above the issue price. Eircom, the Irish telecommunications group was up 38 percent, Dignity the funeral directory group was up 51 percent and Premier Foods was sitting on a 33 percent improvement. The full details are as shown the Table 2.3 below:

| Name | Date of IPO (Year 2004) | FTSE sector index | Share price: At IPO | Share price 15 Feb 2005 | Share price change (%) | FTSE sector index change (%) |
|---|---|---|---|---|---|---|
| Cambridge Silicon Radio | Mar 2 | Electronics | 200.0 | 390.0 | 95.0 | 1.7 |
| Ark Therapeutics | Mar 8 | Pharmaceuticals | 133.0 | 96.3 | -27.6 | -0.1 |
| Eircom | Mar 19 | Telecommunications | 155.0 | 214.0 | 38.1 | 9.3 |
| Dignity | Apr 4 | Support Services | 230.0 | 347.5 | 51.1 | 1.5 |
| Pinewood Shepperton | May 12 | Media & Entertainment | 180.0 | 216.5 | 20.3 | 8.1 |
| Umbro | Jun 3 | Household Goods & Textiles | 100.0 | 115.5 | 15.5 | -0.02 |
| Halfords Group | Jun 8 | General Retailers | 260.0 | 334.5 | 28.7 | 5.7 |
| Premier Foods | Jul 23 | Food Producers | 215.0 | 285.8 | 32.9 | 11.3 |
| Virgin Mobile | Jul 26 | Telecommunications | 200.0 | 234.3 | 17.1 | 23.2 |
| Admiral Group | Aug 28 | Insurance | 275.0 | 339.5 | 23.5 | 11.6 |
| Jessops | Nov 3 | General Retailers | 153.0 | 165.3 | 8.0 | 3.8 |
| Armorgroup | Dec 14 | Support Services | 149.5 | 210.5 | 40.8 | 8.3 |

Table 2.3: Performance of 12 UK IPOs from 2004 to February 2005 – Adapted from Financial Times February 21 2005 p. 23.

**Note:** *16 out of 17 trading company IPOs show gains from IPO date.*

*The best performing stock in the table is Cambridge Silicon Radio at 95% above its issue price.*

*IPOs outperformed the market with an average rise of 29% compared to an equivalent figure for the market of 8%.* Adapted from Financial Times, February 21, 2006, p. 23

In some denationalisations, or privatisations, there has been another motive for underpricing. An example of this was seen in 1979, when Margaret Thatcher became Prime Minister of Britain. Amid a wave of strikes and a declining economy, there were more union members than stockholders in Britain. To give the British voters a positive experience with capitalism, as the government denationalised several government-owned businesses, it intentionally sought to both underprice the shares and to allow as many voters as possible to buy them. As a result of this strategy, by the mid 1980s there were more shareholders than union members in the country (Ross *et al.*,1996: 529). Similarly the long-delayed privatisation of South Africa phone utility Telkom included an unusual pricing scheme. Public Enterprises Minister, Jeff Radebe pointed out that the listing made a significant contribution to the deracialisation of the securities environment (Giddy, 2003). Giddy notes that, members of a group of South Africans classified as 'historically disadvantaged individuals' were offered a

20% discount to the offering price on the shares. The discount, known as the '*Khulisa offer*', was made to those individuals (especially the black majority) who were denied the right to vote or otherwise discriminated under apartheid. All other South African citizens were allowed to buy shares at a 5 percent discount to the offering price. Aussenegg (1999) also finds that the Polish government builds up reputation for its privatisation policy overtime by underpricing IPOs and selling a higher fraction at the initial offer. Aussenegg also notes significant negative long-run aftermarket performance of the shares of mass privatisation program in Poland.

## 2.9 Long-Run Performance of IPOs

Ritter (1998) notes that apart from underpricing, one of the patterns associated with IPOs is the poor stock price performance in the long-run. He finds that IPOs underperform non-issuing firms matched by market capitalisation by 5.2% per year in the five years after going public. Ahmad-Zaluki *et al.,* (2004) find that while IPOs with low initial returns provide high raw returns, they underperform their matching companies. Bodie *et al.,* (2002), note that despite their high initial investment performance, IPO's have been poor long-term investments. They further point out that, the year-by-year underperformance of IPO's is dramatic in most cases, suggesting that on average, the investing public may be too optimistic about prospects of these firms which in most cases are oversubscribed. According to Bodie *et al.,* (2002), TheGlobe.Com, which enjoyed one of the greatest first-day price gains in IPO history, is a case in point. Within the first year after its IPO its stock was selling at less than one-third of its first-day peak.

Byrne and Rees (1994) in their study on IPOs in the United Kingdom (UK), note that apart from the focus on underpricing and the cyclical nature of IPO returns which lead to 'hot issue markets' as characterised by above average returns, academic interest on IPO's has shifted to long-run performance of these IPO's. The stock price performance of IPOs in the years after the offering is the facet of IPOs that has attracted the most interest from academics in recent years. Byrne and Rees (1994) *cite* the evidence from Aggarwal and Rivoli (1990), Ritter (1991), Loughran and Ritter (1993), for the US, Rydqvist (1993) for Sweden, Ljungqvist (1993) for Germany, Hin and Mahmood (1993) for Singapore and Levis (1993b) for the UK, who find that over periods of up to three years, IPO's tend to under perform both the market as a whole and the shares of comparable firms whose initial public offering was more distant.

Byrne and Rees argue that, this provides an alternative interpretation of the large initial IPO returns which, have conventionally been attributed to deliberate underpricing. They further state that the initial returns may actually be the result of temporary overvaluation of the issuing firms' prospects by investors in the early after market due to optimism, a phenomenon referred to by Aggarwal and Rivoli (1990) as 'fads'.

Ritter (*cited* in Byrne & Rees, 1994: 8) finds that over a three year holding period, every US$1 invested in US IPOs at the closing market price on the first day of trading yields a return of US$1.34. This compares unfavourably with US$1.62 return available over the same period from investment in the shares of a similar sample of firms distinguished only by the longer trading history of their shares. He suggests that this finding of apparent underperformance could be due to risk mismeasurement, bad luck, or fads and over optimism in the IPO market. Ritter also finds that, underperformance ends at some point between three and five years of seasoning. Byrne and Rees also cite the findings of Levis (1993b) who, replicating Ritter's study and using data from the UK IPO market finds that the pattern of returns on UK IPOs is remarkably similar to that of the US issues. After an initial return of 14.3%, the issues in his sample significantly under perform the FTA All-Share-Index (FTA) and other benchmarks closely matched to the capitalisation of the sample, such as the Hoare Govett Smaller Companies Index (HGSC). On average the three-year return on IPOs from the issue price was 55.7%, whilst the corresponding returns for the FTA and HGSC were 62.5% and 69.4% respectively.

Ritter (2005), in his study of US IPOs from 1970-2003, finds that IPOs underperformed other firms of the same size (market capitalisation) by an average of 4.1% during the first five years after issuing. Using accounting returns as an alternative measure (instead of BHRs), Balatbat (2002) finds further insights on poor long-run performance of IPO firms. According to Welch (2000), in the long-run IPO shares have significantly underperformed to the tune of 30-50% below comparable companies over 3-5 years. Teoh *et al.*, (1998), found the reason why some IPOs are often a disappointment in the end, to be that issuers frequently manipulate their reported earnings to look as good as possible to induce potential share buyers. Brav and Gompers (1997), established that underperformance is however not necessarily an IPO effect. "Similar size and book-to-market firms, which have not issued equity, perform as poorly as IPOs". As Ritter (1991) observed, three years after an IPO, the stock price of firms doing IPOs

has typically fallen below the initial price. According to Ritter (1991), this is a *'puzzle'* and several reasons have been put forth to explain it.

### 2.9.1 Possible Sources of Long-run Underperformance

According to Ritter and Welch (2002) there are two semi-rational explanations for the long-run underperformance of IPOs. They cite the explanation of Miller (1977) who assumes that there are constraints on shorting IPOs, and that investors have heterogeneous expectations regarding the valuation of a firm, with the most optimistic investors buying the IPO. Over a period of time, as the variance of opinions decreases, the marginal investor's valuation will converge towards the mean valuation, and prices will fall. According to Ritter and Welch this argument works better when the float is small and not too many investors are required and is consistent with the drop in share price at the end of the 'lockup period'. Secondly, they note the second explanation offered by Schultz (2001) who argues that more IPOs follow successful IPOs and that as such, the last large group of IPOs would under perform and be a relatively large fraction of the sample. Ritter and Welch also cite studies by Heaton (2001) and Teoh *et al.,* (1998). Heaton argues that managers tend to be overoptimistic and thus prone to overinvestment if the funds are available.

Foster-Johnson *et al.,* (2000), also note that investors are insufficiently pessimistic about the business prospects of some IPOs and apparently purchase shares assuming that all IPOs will survive. Teoh *et al.,* attribute some of the poor post-IPO stock performance to "optimistic accounting" early in the life of the firm. It is not surprising that firms are eager to look good when they conduct their IPO (as in the case of China Life, referred to earlier), and that the market has difficulties in disentangling carefully hidden warning signals. According to Welch and Ritter, this suggests that at least part of the poor long-run performance is due to a market that is unduly optimistic and unable to properly forecast tougher times ahead. Purnanandum and Swaminathan (2002) find that, IPOs that are priced high relative to public market comparables tend to perform worse in the long-run, even though they show higher first-day returns. Purnanandam and Swaminathan also find that overvaluation coupled with investor over-reaction is the likely source of the long-run underperformance of IPOs. The level of oversubscription is thus an indication of over confidence on the part of the investor on the

prospects of the IPO. Most investors seem to base their buy-decisions on the prior performance of the company without properly determining the company's future growth potential.

Mudambi *et al.*, (1999) also document that long-run performance of IPOs is a function of pre-IPO factors including managerial decisions, and the firm's performance prior to going public. They argue that the manner in which a company is run before it is listed on the stock exchange gives a signal of how its shares will perform in its first few years of coming to the market. They also note that the degree of multinationality is a key predictor of IPO performance. Arosio *et al.*, (2000) find that initial returns contain almost all the underpricing, while the buy-and-hold performance of 'hot' IPOs does not sensibly change after listing. They also verify that, underwriters manage over-allotment and green shoe options and buy IPO shares in the aftermarket in order to avoid negative returns. Schlag and Wodrich (2004) also find evidence of price stabilisation in German IPOs. They also document that when price support is finally withdrawn, prices will adjust downwards towards market equilibrium and the performance of IPOs will thus deteriorate when measured over long-term periods. Schlag and Wodrich also note that as more information on the company becomes available, investors adjust their initial over-valuation, which causes share prices to drop in the long-run.

Whilst it also leads to high initial returns by creating artificial demand, Houge *et al.*, (2001), find that a high flipping ratio is associated with poor long-run returns. Recent evidence from studies in China has however shown that some IPOs show supernormal returns.

### 2.9.2 Long-Run Supernormal IPO Performance

Chan *et al.*, (2001), find that there is no stock price underperformance for either A-Share (reserved for Chinese nationals) or B-Share (reserved for foreign nationals) IPOs in China. According to Schuster (2003) positive long-run IPO performance is a function of a country's ability to attract new economy. Schuster also documents that long-run underperformance is a time-varying phenomenon and is sensitive to the measurement technique and benchmark adjustment. Mudambi and Treichel (2004) find that top management team (TMT), the financial position, the network, the location, and agency effects are related to the performance of a new venture. They also find that floating a low percentage of equity, limiting the sale of equity by top management team, obtaining venture capital backing, associating with established underwriters and having a shorter rather than longer time between filing and the actual IPO, are

all signals presaging higher future performance. These and other factors on why some IPOs outperform others are discussed below:

### 2.9.3 Why Some IPOs Outperform Others

Brav and Gompers (1997), find that venture capitalist (VC) backed IPOs marginally outperform non-venture backed IPOs. They also find evidence of a relationship between VC board membership and long-run performance. Ritter (1998) notes that venture capitalists do not make passive financial investments in young firms and that they insist on board membership and provide advice. Kraus and Burghof (2002) however find that, the positive effect of VC backing on aftermarket performance can be reversed when venture capitalists seek exit from their investment. They note that, VC backed IPOs outperform their counterparts before the expiration of the lock-up period but underperform around and after the expiration date. Jog (2003) documents that, Canadian IPOs followed by financial analysts significantly outperform those that do not receive any coverage. This effect of analysts' coverage is also documented by Rajan and Servaes (1996). The degree of insider ownership is one other factor that determines the success of an IPO. Liu (1999), notes that corporate control theory argues that the higher the insider ownership the poorer the performance. Higher outside ownership may help improve control systems, ensure good corporate governance thus better performance Khurshed *et al.*, (1999), note that long-run performance of IPOs is a function of pre-IPO factors, including managerial decisions and the firm's performance prior to going public. The document that the manner in which a company is run before it is listed on the stock exchange gives a signal of how its shares will perform in its first few years of coming to the market. They further note that the degree of multinationality is a key predictor of IPO performance. According to Dolvin and Pyles long-run performance is positively influenced by underwriter reputation. Field and Lowry (2004) find that IPOs with larger institutional shareholdings outperform those with smaller institutional shareholdings. They also find that individuals invest the most in the worst firms meaning they experience the greatest IPO underperformance.

Various other studies have been carried out on the initial and long-run performance of initial public offerings and a number of concepts to have been developed on the performance of IPOs. The major concepts which revolve around the initial and long-run performance of IPOs are that:

i. IPOs are underpriced (leave money on the table)

ii. IPOs underperform existing matching firms in the long-run

iii. There is supernormal long-run IPO performance (IPOs out perform matching firms in the long-run)

iv. The performance of IPOs is neutral or similar to that of matching firms (no under or over performance)

For each concept various studies have outlined the reasons for or factors associated with the concept (for example, several reasons have been advanced for the underpricing and poor long-run performance of IPOs and a number of factors also advanced in cases where IPOs have been found to out-perform matching firms or to out-perform other IPOs). In addition to the studies already referred to in the literature review above, several other studies on IPOs have also established or come out in support of the concepts outlined above and these are as shown below using the Klopper and Lubbe (2005) concept-matrix. The concept matrix (Appendix 2) is structured in such a way that under each main concept the various reasons or factors associated with the concept are outlined.

A number of questions have emerged from this literature review. In addressing these questions the study hopes to bring about information that may help investors better understand the performance of IPOs in Zimbabwe.

## 2.10 Research/Critical Questions

i. Are IPOs in Zimbabwe underpriced?

ii. Why are IPOs often but not always underpriced?

iii. Why are IPOs in most cases oversubscribed?

iv. Is there a relationship between underpricing and long run-performance of IPOs?

v. How have IPOs in Zimbabwe since 1997 performed in the short and long-run relative to established equivalent stocks or matched firms?

vi. Why should an investor buy into an IPO rather than into a stock that has already been trading on the market?

vii. Which characteristics are most important to the investor when considering an IPO?

viii. Is there adequate information on the ZSE on investing in IPOs? If not, how can the Zimbabwe Stock Exchange increase awareness on stock market investments?

ix. Is there a relationship between money market returns and investors' interest in IPOs?

x. What critical success factors govern the success or otherwise of IPOs and why are some IPOs often a disappointment in the end?

## 2.11 Conclusion

This chapter focused on the reasons for going public, the players in an IPO, the procedure for a new issue and also focused on the main areas of current research on IPOs, underpricing phenomenon and the reasons advanced for the underpricing, the long-run or post issue performance of IPOs. The study also focuses on possible supernormal performance of IPOs and the reasons why some IPOs outperform others. Various concepts revolving on underpricing and long-run performance are outlined in the concept matrix.

Although several studies have investigated the short and long-run performance of IPOs in Zimbabwe, this study examines the performance of IPOs relative to existing market comparables and the factors that govern the success or failure of IPOs. This information helps ensure that IPOs are better understood by the investor community. The underpricing phenomenon, the poor long-run performance of IPOs and the sources or reasons for each phenomenon are also explained. The risks associated with IPOs are also highlighted for the benefit of the IPO investor.

The main conclusions from this literature review are that IPOs are underpriced and that underpricing helps all the major players in an IPO. Issuers are able to signal the quality of an IPO for future equity issues while underwriters want to leave a good taste in the investors mounts in order that they subscribe to future issues by the same underwriter. Investors on the other hand benefit from this deliberate underpricing through high initial returns. It is also concluded from this literature review that IPOs are poor performers in the long-run relative to market comparables.

The next chapter presents the research methodology used in the study. The choice of an appropriate methodology is the backbone of every research for it ensures that the research

problems as well as the critical questions are addressed and that the objectives of the study are met.

# CHAPTER 3

# DATA AND METHODOLOGY

## 3.1 Introduction

This chapter presents the methods used by the study to achieve its objectives. The chapter outlines the procedures and techniques adopted for the quantitative research. It outlines the research design. A research design is the blueprint for fulfilling research objectives and answering questions (Cooper & Schindler, 2001). This chapter specifies the methods and procedures for the collection, measurement, and analysis of data. This chapter therefore gives details on how this study was planned and conducted. In this study, quantitative techniques were employed to analyse the underpricing phenomenon and to compare the share price performance (buy and hold investment returns) of IPOs against matching firms. The chapter also presents research techniques that were used to test the theories advanced in Chapter 2 on underpricing and long-run performance of IPOs, as well as determine the various factors governing the performance of IPOs in the short to long-term.

The application of quantitative techniques helps to address the research objectives and answer the research questions developed in Chapter 2 (section 2.10). By applying these techniques, the study seeks to come up with answers on whether IPOs in Zimbabwe are underpriced, why IPOs leave a lot of money on the table and how they perform in the long-run compared to the returns from matching firms. The questions on why IPOs are often (but not always) oversubscribed and the factors that govern the success or failure of IPOs are also addressed through administration of the questionnaire.

Information used in this study was gathered from various international research articles on IPOs. The study involved the review of existing secondary data on IPOs. Journals such as the Journal of Finance and Journal of Economics were reviewed to gather articles and information on previous research on IPOs in various countries. Internet publications on IPOs were also used and so were some research papers on this topic from the University of Zimbabwe library. Data on the performance (share prices) of IPO companies in Zimbabwe was obtained from the ZSE and TechFin Research, a reputable research organisation that maintains

a system known as 'Bardnet'. Field research was also carried out to address most of the theoretical issues on the performance of IPOs in Zimbabwe.

The rest of this chapter is organised as follows; first the types of data used in the study are discussed. Second, the scaling techniques used are outlined. Third, the chapter outlines the design and analytic techniques. The quantitative design outlines the methods for measuring initial returns (underpricing) and money left on the table and details how the post-IPO (i.e. aftermarket) and long-run performance is measured. It also outlines the data collection method, types of questions, questionnaire validation as well as the population and sample size. The chapter then outlines the ethical requirements and issues to do with the informed consent of respondents. Lastly the chapter then outlines how data will be analysed, the nature and form of results, the strengths and limitations of the methods used and ends with concluding remarks.

## 3.2 Types of Data

This study involved the collection of quantitative data. The quantitative data used in this study comprises of the share prices obtained from the ZSE. This data was used in determining the level of underpricing, short and long-run price performance of IPOs in Zimbabwe. Most of the quantitative data was obtained through the questionnaire administered on key stock market investors with most of the question responses classified using the Likert scale.

## 3.3 The Likert Scale

The study uses the Likert Scale to evaluate statements about the subject under study. Originated by Renis Likert, the Likert Scale consists of a number of evaluative statements concerning an attitude object (Dillon *et al.*, 1994). Dillon *et al.* note that an even number of favourable and unfavourable statements should be used as this reduces the likelihood of acquiescence bias (the tendency to agree or disagree with a set of questions), which is more likely if all of the statements are in the same direction. They further note that scale items selected should possess three qualities: (1) they should capture all relevant aspects of the attitude object, (2) they should be unambiguous, and (3) they should be sensitive enough to discriminate among respondents with respect to the attitude object under investigation.

## 3.4 Design and Analytic Techniques

The research design used in this study is quantitative. Quantitative techniques were applied to measure the level of underpricing of IPOs in Zimbabwe, the amount of money left on the table as well as the comparison of the long-run IPO returns against the returns of matching firms. The quantitative issues on the performance of IPOs in Zimbabwe are determined through the suggested research design.

### 3.4.1 Research Design

The quantitative research design outlines how the extent of underpricing of IPOs in Zimbabwe and the amount of money left on the table in each of the IPOs sampled will be measured. The short and long-run buy and hold returns and the performance of IPOs relative to their matching firms is also determined through the application of quantitative techniques.

#### 3.4.1.1 Sample Selection and Sample of IPOs

This study considers the 16 IPOs listed on the Zimbabwe Stock Exchange between 1997 and 2002 in only those sectors or industries where there was an existing market comparable (seasoned matched firm) at the time of the IPO. The IPOs made between 1997 and 2002 are identified from the ZSE Handbook of 2004 and The Investors and Financial Markets Handbook, issue number two of 1998. Overall there were 16 IPOs during this period. Nevertheless, not all of them are considered because others did not meet the requirements of this study. Out of the 16 IPOs, one had no matching firms in the sector at the time of its listing. Econet Wireless Holdings Limited became the only listed company in the Technology sector upon its listing on 17 September 1998 and as a result there was no matching firm against which its share price performance could be compared.

#### 3.4.1.2 Basis of Selection of IPO Companies and Matching Companies

To be included in the final sample, IPO companies had to belong to a sector where there was an existing or seasoned matched firm that is, matched in terms of size or market capitalisation as in Ahmad-Zaluki *et al.*, (2004), at the time of listing. Fifteen IPOs met this requirement and were included in sample of IPOs to be studied. Secondly 15 matched firms were also selected from each of the corresponding sectors where the 15 IPOs have been drawn, using *judgemental sampling*. Unlike random sampling which may result in the selection of

companies in different sectors for comparison with the IPOs, the use of the judgemental sampling method allowed for the selection of a sample representative of the population of interest and met the specific needs of this study. This method ensures comparison of IPOs to matching firms with similar operating risks, profitability and growth (Purnanandum & Swaminathan, 2002). Matching firms were selected on the basis of firm size, the sector or industry, type of business or product line and market capitalization.

#### 3.4.1.3 Measuring the Extent of Under or Overpricing [Positive/ (Negative) Initial Returns]

The initial return (IR) for each IPO was measured as the percentage return from the stock's offering price to the closing bid price on the first day the stock was offered for trading as follows:

$$IR = \frac{P_1 - P_0}{P_0}$$

Where: IR= Initial return of an IPO

$P_1$= Closing price of IPO at the end of the first trading day

$P_0$= IPO offer price as per the prospectus of the company

Source: Ritter (1998)

The average (mean) initial return for the IPOs in the sample is used to indicate the extent of any possible underpricing of IPOs in Zimbabwe. Apart from the mean, computations of the variance and standard deviation will also be done. The offering prices and first trading day closing prices are obtained from the Zimbabwe Stock Exchange.

#### 3.4.1.4 Measuring Money Left on the Table

For each of the IPO companies in the sample, the amount of 'money left on the table' is computed. The amount of money left on the table is analysed for each of the IPOs in the sample and an average computed for each sector and for all the 15 companies in the sample. This is the difference between the offer price and the closing market price on the first day of trading multiplied by the number of shares offered as follows:

$$MLOT = (P_1 - P_0)\ Ns$$

Where: MLOT = Money left on the table

$P_0$= IPO offer price as per the prospectus of the company

$P_1$= Closing price of IPO at the end of the first trading day

Ns= Number of shares offered and taken up in the IPO

Adapted from Arosio *et al.*, (2000: p. 14)

#### 3.4.1.5 Measuring the Short to Long-run Performance of IPOs

Each of the 15 IPO companies in the sample is tracked for the first five years after the IPO to determine the short and long-run performance measured on the basis of the buy-and-hold return (BHR) or raw returns to the investor. The post-IPO buy-and-hold returns are computed on a one month, one year, three years and five year timeline or up to the de-listing or suspension date, whichever comes first. The same analysis is applied to the corresponding market comparable for each IPO starting with the share price on the date the IPO was listed, to the share price after a month, a year, three years and five years from the matching IPO listing date. This is because raw returns are not sufficient for measuring over-or- underperformance of an IPO. Any comparison with respect to risk and return usually requires an appropriate benchmark. To ensure comparability of returns (share price movements) over the 5-year period in view of the hyper-inflationary economic situation in Zimbabwe where inflation reached levels of 1184.6% and 993.6% for June 2006 and July 2006 respectively (Central Statistical Office, 2006), all figures were discounted to July 2006 real dollars. This is in compliance with International Accounting Standard 29 (IAS 29) on accounting for hyper-inflationary economies. Guidelines provided by the Zimbabwe Institute of Chartered Accountants (ICAZ) were used to make the inflation adjustments. Discounting was done using the Consumer Price Index (CPI) figures obtained from the ICAZ website http:www.icaz.org.zw/CPI/cpi.htm. The '1995=100 Base at all items level' is used and the new base (2001=100) figures are divided by a factor of 0.12384622 to convert them back to the old series, for instance the new July 2006 CPI of 198559.7 at the 1995 base is 1,603,276.2 (198,559.7/0.12384622).

In determining the success or failure of a firm, the subsequent outcomes within the five-year period are reviewed. In this regard consideration is given to whether the firm was acquired or merged with another and is still showing good stock return performance and is thus

classified as successful. Success or failure in the post IPO period is also measured by giving reference to the rise or fall in share value over the five year period from the offering price, which is reflective of the buy-and hold return to the investors. The rise or fall in share value is analysed from the share price movement from the IPO date.

Consistent with Loughran and Ritter (1995) (*cited* in Ahmad-Zaluki *et al.*, 2004: p13), the buy-and-hold return difference (BHRD) is used to enable comparison of the returns from IPOs to the returns from matching firms. The buy-and-hold return difference ($BHRD_t$) between the IPO and Matching Firm is calculated using the formula adapted from Loughran and Ritter (1995) cited in Ahmad-Zaluki *et al.*, as follows:

$$BHRD_t = r_{it} - r_{mt}$$

A positive (negative) value of $BHRD_t$ indicates that IPOs outperform (underperform) a portfolio of benchmarks or seasoned market comparables.

Where: $BHRD_t$ = the difference between the return from the IPO and the matching firm or market comparable.

$r_{it}$ = the monthly raw return on IPO company at time t, and

$r_{mt}$ = relevant monthly return of matching firm (market comparable return)

t = time period for which the buy-and-hold return (BHR) is being determined;

and where the monthly raw buy-and-hold return (BHR) on company i at time t, ($r_{it}$) is calculated as follows:

$$r_{it} = \frac{P_{it} - P_0}{P_o}$$, for the IPO raw returns, and

$$r_{mt} = \frac{P_{mt} - P_{mo}}{P_{mo}}$$, for the matching firm raw returns, and

Where:

$P_{it}$= share price of IPO company *i* at time t.

$P_{mt}$= share price of seasoned matching company *m* at time t.

$P_o$= IPO offer price as per the prospectus of the company

$P_{mo}$= Price of seasoned matching firm (market comparable) on the listing date of the IPO company.

The mean buy-and-hold return difference is calculated as:

$$\overline{BHRD} = \frac{\sum r_{it}}{N} - \frac{\sum r_{mt}}{N}$$

Where: N is the number of IPOs or Matching firms.

Adapted from Loughran and Ritter (1995) (*cited* in Ahmad-Zaluki *et al.*, 2004: p13)

#### 3.4.1.6 Data Collection Method

Data is obtained through the use of a self-administered questionnaire. The mail survey was used for data collection. Questionnaires were hand-delivered, emailed or posted to the respondents. Self administered questionnaires were used instead of interviews in order to minimise cost and avoid biased results which may grow out of three types of error: sampling error, non-response error, and response error. Telephone calls were made to the executives of major stock market investors who in most cases were also the intended respondents to request for their permission to participate in the study and to advise that a questionnaire would be delivered, e-mailed or posted. This enabled the researcher to obtain some of the respondents' names and thus personalise the cover letters accompanying the questionnaire.

In addition to being less costly than interviews, mail surveys are also cheaper where the sample is geographically more dispersed. Another value in using the mail survey is that it enabled the researcher to contact some of the executives who may otherwise have been inaccessible. Since the targeted population all have offices in Harare (The capital city of Zimbabwe where the researcher is also based), delivery of questionnaires went on smoothly with only a few questionnaires being e-mailed or posted. The mail survey was used because it allows the respondent more time to collect facts, consults with work mates or fellow professionals in the field than is possible with personal interviews. The mail survey is more impersonal, thus provides more anonymity than the other communication modes.

However, the major weakness of the mail survey is non-response error (Dillon *et al.*, 1994). Dillon *et al.*, also note that another limitation of the mail survey is that the information obtained may be limited because one cannot probe deeply into questions. The preliminary

telephone calls helped ensure a high response as some respondents opted to complete and return the questionnaire at the time of delivery. Personal delivery of questionnaires enabled the researcher to deal with the problem of inaccurate mailing lists. The researcher was able to be advised where the intended respondent company had moved offices and thus obtain the new address. Self-addressed return envelopes were also attached to the questionnaires to simplify questionnaire return. Follow-ups were made by telephone and email and this helped improve the response rate. The questionnaire enabled the collection of data to help ascertain investor sentiments on IPOs. The data also helped outline some of the reasons behind the high levels of IPO over-subscription, and answer some of the issues outlined in the research questions.

#### 3.4.1.7 Types of Questions

The first part of the questionnaire asked respondents to specify their investor category and to specify the sectors they had invested in between 1997 and 2002. In Parts 2 and 3, the questionnaire was made up of itemised (closed-ended) questions. The advantages of closed-ended question formats relate to their ease of use in the field, their ability to reduce interviewer bias and finally they are relatively simple when it comes to coding and tabulation. To avoid the possibility of bias associated with and corroborate the results of closed-ended questions, Part 4 was made up of open-ended questions to allow respondents to write elaborate answers.

#### 3.4.1.8 Questionnaire Validation

After obtaining ethical clearance from the faculty's Ethics Committee, a pilot survey was conducted for the purposes of pre-testing the questionnaire. There were no major amendments and the comments made were incorporated before the actual survey was carried out. In question 1, the box denoted "Other Categories" was removed and replaced with the other major stock market investor category that is underwriting banks. Question 3 was re-phrased to seek to establish the average initial returns as opposed to the highest initial returns from IPOs in Zimbabwe. This was done to incorporate valid suggestions put forward to the effect that in measuring whether IPOs are underpriced the focus should be on average initial returns. In Question 4 the ranking of sectors offering the best IPO returns was amended from 1$^{st}$ to 5$^{th}$ to only 1$^{st}$ to 3$^{rd}$.

#### 3.4.1.9 Population and Sample Size

Questionnaires were administered on executives of stock broking companies (brokerage houses), mutual funds, insurance companies, pension funds and underwriting banks who invest in IPO stocks on behalf of their employer companies. The population is shown by investor category in table 3.1 below. The questionnaire was administered on a sample of 50 respondents made up of stockbrokers, mutual funds, insurance companies, pension funds, and underwriters. All the investors in each category were included in the sample because of the small population size for each investor category as shown in Table 3.1 below:

| RESPONDENT CATEGORY | POPULATION | SAMPLE SIZE | SAMPLE AS PERCENTAGE OF POPULATION |
|---|---|---|---|
| STOCKBROKERS | 18 | 18 | 100% |
| MUTUAL FUNDS | 9 | 9 | 100% |
| INSURANCE COMPANIES | 7 | 7 | 100% |
| INDUSTRY PENSION FUNDS | 5 | 5 | 100% |
| UNDERWRITERS/MERCHANT BANKS | 11 | 11 | 100% |
| TOTAL | 50 | 50 | |

Table 3.1: Population and Sample Size

### 3.5 Ethical Requirements

Letters were sent to the executives and in some cases telephone calls were made to the executives of major stock market investors (who in most cases were also the intended respondents) asking for permission to access respondents. Respondents were informed of the benefits of the study as well as their rights and protections. The informed consent of the respondents was also obtained. The questionnaire itself contained a note to the respondents outlining the reasons behind and the benefits of the study. A clause was also included, emphasising that completion was voluntary and that responses would remain private and confidential and no one would be able to trace anyone's opinions back to them individually. Because stock market information and the stock price performance of individual companies is public information that is available in the business press and financial news, there were no major ethical problems encountered in obtaining and using the stock prices for the purposes of

this study. Email addresses of stockbrokers were extracted from The Zimbabwe Stock Exchange Handbook which, was obtained from the ZSE.

## 3.6 Linking the Questionnaire to the Research Questions

In order to ensure that all the research questions developed in Chapter 2 are addressed, it is essential to ensure that there is a link between the research questions and the questionnaire. Questions 1 to 4 of the questionnaire deal with the identification of investor categories, sectors invested in and sector ranking based on initial returns. Question 5 of the questionnaire seeks to address research question (i) relating to the underpricing of IPOs in Zimbabwe, while questions 6, 12, and 13 seek to provide answers to research questions (ii) and (iii). Question 11 of the questionnaire seeks to answer research question (iv). Questions 7 to 10 seek to address research question (v) while questions 14, 15, 16, 17, 18, and 19 are intended to address research questions vi to ix.

## 3.7 Data Analysis

Tables of statistical data and linear graphs are presented in a manner that is intended to enable the reader and other users to easily understand the extent of IPO underpricing in Zimbabwe, the short to long-run performance and to compare the IPO investment returns with returns from market comparables. Data analysis was performed using SPSS package as well as MS Excel for the spreadsheet presentation and assessment of initial and long-run performance of IPOs based on the daily share price movements. All information solicited through the questionnaire was coded into the SPSS database (database 1), with most of the questions being typed into the value label slot in SPSS or copied from the electronic version of the questionnaire and pasted into SPSS. The information regarding the share price performance of IPOs and matching firms was also coded into SPSS (database 2) to make statistical analysis easier. Linear Graphs and Pie-Charts on the initial returns per sector, the distribution of IPOs amongst the various sectors between 1997 and 2002, and the 'money left on the table' per sector are also presented.

## 3.8 Nature and Form of Results

Short-term and Long-term IPO investment strategies are developed, and Tables showing the initial returns, 'money left on the table' and the comparison between the percentage returns

from IPOs and market comparables are produced. Recommendations are made on the following:

i. Investing in IPOs through mutual funds, how to deal with fad offerings, determining the right times to get into and out of an IPO and the sector(s) whose IPOs investors should target or avoid.

ii. How investors can spot IPOs with the best chances for dramatic increase and what they should consider before investing in an IPO, in order to minimise investment losses.

## 3.9 Strengths and Limitations of the Methods Used

### 3.9.1 Strengths

The use of quantitative techniques is intended to ensure that the objectives of the study are met and seeks to ensure that all the research questions are addressed. The mail survey enabled contact with otherwise inaccessible investment sector executives and allowed for high quality and unbiased responses as respondents had more time to think through questions.

### 3.9.2 Limitations

The quantitative measurement of the long-run performance of initial public offerings is sensitive to the method and benchmark employed (Ahmad-Zaluki *et al.*, 2004). They further note that it is important to use an appropriate methodology to calculate returns and compare these to a meaningful benchmark for a particular firm. Out of the 18 sectors into which the companies listed on the ZSE are classified, some sectors for example Technology had only one listed company at the end of 2002 and in some cases no existing quoted company with comparable activities, to allow for comparison as required for the purposes of this study. Though the period under review saw an increase in IPO activity by Zimbabwean standards, some of the IPOs have only traded for a few years thereby limiting the analysis of their individual long-run performance. Stock prices for some months in a few isolated cases could not be obtained from both the ZSE and the BardNet system of Tech-Fin Research.

## 3.10 Conclusion

This chapter presented the methodology applied in this study. It explained the quantitative methods of calculating the mean underpricing, the money left on the table and how

to compare the long-run performance of IPOs against the performance of matching firms through the buy-and-hold return method. A questionnaire was also used in addressing the issues raised in the research questions. The mail survey was used, with questionnaires being hand-delivered, posted or emailed.

The response rate to the questionnaires was very high (72%) showing the importance of preliminary notification and follow-ups. The mail survey allowed respondents time to think about the questions resulting in good quality responses. It also enabled the researcher to obtain responses form the otherwise inaccessible executives.

This chapter has shown that it is essential to develop or choose an appropriate research method. A good research method impacts on the significance of findings and on the level of responses. The chapter has also shown the importance preliminary notification and personalisation of cover letters in improving the response rate.

The next chapter presents the results of the analysis of the level of underpricing as well as the amount of money left on the table. The findings of the study on the reasons behind the oversubscription of IPOs and the factors governing the success or failure of IPOs are also outlined. The performance of IPOs in Zimbabwe against that of matching firms is also analysed.

# CHAPTER 4

# DATA ANALYSIS AND RESULTS

## 4.1 Introduction

This chapter presents the findings of the study on the performance of IPOs in Zimbabwe. In this chapter, various statistical calculations will be performed to provide a means through which numerical data on the performance of IPOs in Zimbabwe may be made easy to comprehend. The chapter concerns itself with the analysis and presentation of the share price movements for IPOs and their respective matching firms. The objective of this analysis is to provide insights into the extent of underpricing and the short to long-run performance of IPOs in Zimbabwe. The analysis compares the performance of IPOs to that of matching firms over a period of up to 5 years from the IPO date, to establish how IPOs perform in the long-run and to determine their effectiveness as an investment option. The reasons given by the respondents to the questionnaire for the persistent underpricing are also analysed. This analysis also highlights the factors that have been advanced by the respondents as the determinants of the long-run share price performance of IPOs.

The analysis is intended to ensure that all the critical questions outlined in Chapter 2 (item 2.10) are answered. Some of the critical questions include the following: (i) are IPOs in Zimbabwe underpriced? (ii) how have IPOs in Zimbabwe since 1997 performed in the short and long-run relative to established equivalent stocks or matching firms? (iii) why should an investor buy into an IPO rather than into a stock that has already been trading on the market? (iv) is there a relationship between underpricing and long run-performance of IPOs? and (v) what critical success factors govern the success or otherwise of IPOs?

As discussed in Chapter 3, the study examines the performance of a sample of 16 companies that listed for the first time on the Zimbabwe Stock Exchange between 1997 and 2002, through an initial public offering. Firstly all the 16 IPOs are considered in determining the extent of IPO underpricing as shown in Table 4.3. However, only 15 of the 16 IPOs met the requirement for the comparison of the long-run investment returns of IPOs with the returns from existing matching firms. The stock price performance of the 15 qualifying IPOs was thus compared with the performance of seasoned matching firms. The study also employed a survey

on a sample of 50 major stock market investors to investigate various theoretical propositions on the performance of IPOs.

## 4.2 Data Analysis

In this section the results are reported on the extent of IPO underpricing in Zimbabwe, the reasons for underpricing, the short and long-run performance of IPOs in comparison with their matching firms, the factors influencing investors to buy into IPOs including the reasons for IPOs oversubscription in Zimbabwe, and factors to consider before buying into an IPO. This section also presents results of the analysis on the effect of money market returns on investors' interest in IPOs. The findings of the study on the factors determining the success or failure of IPOs are also presented in this section.

### 4.2.1 Number of IPO Companies and Matching Firms in the Study

For the purposes of determining the effectiveness of IPOs as an investment option, in comparison to their seasoned matching firms, 15 IPOs and 15 matching firms were studied. The share price performance was compared for the short and long-run. Table 4.1 below shows the number of firms studied and these were classified into two groups or firm types as shown below:

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | IPO | 15 | 50.0 | 50.0 | 50.0 |
| | Seasoned Matching Firm (Market Comparable) | 15 | 50.0 | 50.0 | 100.0 |
| | Total | 30 | 100.0 | 100.0 | |

Table 4.1: Type of Firm (i.e. IPO or Matching Firm)

### 4.2.2 Respondents to the Survey and Investor Categories

Out of the sample of 50 discussed in Chapter 3 (section 3.4.2.4), there were 36 responses in total from the five investor categories. Of the 36 respondents, 15 (42%) were stockbrokers, 6 (17%) were mutual funds, 4 (11%) were insurance companies, 3 (8%) were pension funds, and 8 (22%) were merchant banks (underwriters). Overall a 72% response rate was achieved. The stockbrokers' category had the highest response rate, with the least response rate being noticed in the insurance category. The results of this analysis are as shown in Table 4.2 below:

| Respondent Category | No. of Responses | Response Rate % |
|---|---|---|
| Stockbrokers | 15 | 83.3% |
| Mutual Funds | 6 | 66.7% |
| Insurance Companies | 4 | 57% |
| Industry Pension Funds | 3 | 60% |
| Underwriters/Merchant Banks | 8 | 72.7% |
| **Total** | **36** | **72%** |

Table 4.2: Sample and response rate to the questionnaire (by investor category).

### 4.2.3 Sectors/Industries Invested in

In order to understand investors' sentiments on the performance of IPOs in Zimbabwe this study sought to first establish the sectors or industries which the respondents had invested in between 1997 and 2002. IPOs during the period 1997-2002 were issued in 9 of the 19 sectors into which companies listed on the ZSE are classified. The nine sectors included Agricultural inputs, Agri-processing, Conglomerate, Financial, Healthcare, Insurance, Retail, Technology, and the Tourism sector. There were no IPOs in the Construction, Consumer goods, Horticultural, Industrial, Motor, Mining, Printing and Packaging, Textiles, Transport, and Real Estate sectors. All the respondents indicated that they had invested in a financial sector IPO and the least preferred was the Healthcare sector. The analysis shows that the financial sector IPOs were most the preferred. Figure 4.1 below illustrates the sectors or industries in which stocks were picked by investors between 1997 and 2002:

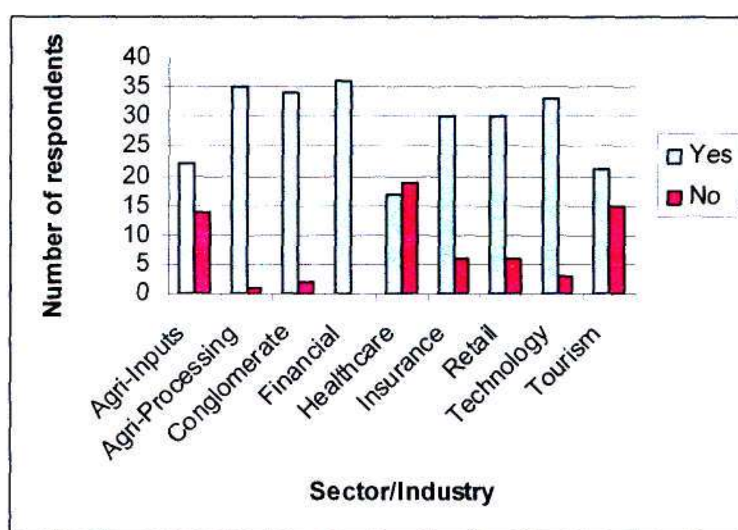


Figure 4.1: Analysis of IPO sectors invested in by the respondents-1997-2002

### 4.2.4 Extent of Underpricing

This study shows that the investigated IPOs in Zimbabwe are underpriced by 55.8 %, with a variance of 12965% and a standard deviation of 114% from the mean as shown in Tables 4.3 and 4.4 below. The variance was attributed to the dispersion of scores with the minimum initial return of -6.7% for Rainbow Tourism Group and a maximum of 473.3% for Trust Bank Ltd (Trust Bank). This resulted in a range of 480%. The results of the quantitative analysis of initial returns are shown in table 4.3 below. Table 4.3 also presents results of the calculation of the amount of money left on the table and this is discussed in item 4.2.4.2.

| SECTOR AND NAME OF FIRM | Date Listed | Shares Issued | Offer Price | First Day Closing Price | % Initial Return | Money Left on the Table ZW$ |
|---|---|---|---|---|---|---|
| COTTCO | 1/12/1997 | 752,000,000 | 1.10 | 1.10 | 0.0% | 0 |
| DAIRIBORD | 15/9/1997 | 336,613,179 | 1.20 | 2.20 | 83.3% | 336,613,179 |
| CFI | 17/3/1997 | 51,500,000 | 1.50 | 2.15 | 43.3% | 33,475,000 |
| RANDALLS | 7/4/1997 | 50,000,000 | 1.30 | 1.45 | 11.5% | 7,500,000 |
| NMBZ | 17/4/1997 | 14,290,696 | 23.30 | 33.00 | 41.6% | 138,619,751 |
| FIRST BANKING CORP. | 11/6/2001 | 1,358,478,000 | 1.10 | 1.60 | 45.5% | 679,239,000 |
| TRUST BANK LTD | 11/7/2001 | 380,397,550 | 15.00 | 86.00 | 473.3% | 27,008,226,050 |
| CBZ-(JEWEL BANK) | 29/6/1998 | 400,000,000 | 1.60 | 2.30 | 43.8% | 280,000,000 |
| CENTURY | 19/3/2001 | 1,131,039,058 | 1.10 | 1.60 | 45.5% | 565,519,529 |
| MACMED | 24/8/1998 | 66,666,666 | 1.50 | 1.75 | 16.7% | 16,666,667 |
| ZIMRE | 22/11/1999 | 421,666,667 | 1.50 | 1.60 | 6.7% | 42,166,667 |
| NICOZ DIAMOND | 28/10/2002 | 267,857,143 | 2.80 | 3.45 | 23.2% | 174,107,143 |
| ZIMNAT LION | 24/5/2001 | 1,281,818,182 | 1.10 | 1.65 | 50.0% | 705,000,000 |
| OK ZIMBABWE LTD. | 17/10/2001 | 3,123,940,000 | 1.00 | 1.05 | 5.0% | 156,197,000 |
| ECONET | 17/9/1998 | 290,000,000 | 1.00 | 1.10 | 10.0% | 29,000,000 |
| RTG | 1/11/1999 | 423,507,020 | 1.50 | 1.40 | -6.7% | -42,350,702 |
| **Total** | | | | | | **30,129,979,283** |
| **Mean** | | | | | **55.8%** | **1,883,123,705** |
| **Excluding Trust Bank Ltd. To remove the effects of its extremely high initial returns of 473.3%** | | | | | | |
| **Mean** | | | | | **28%** | **208,116,882** |

Table 4.3: Initial IPO returns and money left on the table between 1997 and 2002

Considering that the mean and the standard deviation are affected by extreme scores, when the initial return of 473.3% for the Trust Bank IPO is excluded, it is noted that the remaining IPOs in the sample are underpriced by 28%, with a variance of 610% and a standard deviation of 24.6% from the mean. The descriptive statistics are presented in Table 4.4 below. A comparison of the 28% level of underpricing with the initial returns of other countries as

noted in Chapter 2, Table 2.1, shows that the level of IPO underpricing in Zimbabwe is comparable to that of Germany (27.7%), Japan (24%), Mexico (33%), Poland (33.1%), Singapore (31.4%), South Africa (32.7%), and Sweden (29.3%). Consistent with Loughran *et al.*, (1994), Chen *et al.*, (1999), and Ritter (1998) this study finds that underpricing is an international phenomenon.

| | | Incl. Trust Bank Ltd. | Excl. Trust Bank Ltd. |
|---|---|---|---|
| N | Valid | 16 | 15 |
| | Missing | 0 | 0 |
| | | % | % |
| Mean | | 55.794 | 27.960 |
| Std. Deviation | | 113.8634 | 24.6996 |
| Variance | | 12964.883 | 610.073 |
| Range | | 480.0 | 90.0 |
| Minimum | | -6.7 | -6.7 |
| Maximum | | 473.3 | 83.3 |

Table 4.4: Descriptive statistics on the initial returns from IPOs before and after the exclusion of Trust Bank Ltd return (473.3%).

#### 4.2.4.1 Respondents Views on Underpricing

Two thirds (66.7%) of the respondents indicated that the highest initial return they obtained from an IPO between 1997 and 2002 ranged between 25% and 49%, whilst 16.7% obtained initial returns of over 100% during the same period. This is in line with the results in Table 4.3 above which shows mean underpricing of 28% when the high initial returns (473.3%) from Trust Bank are excluded. The analysis of responses to question 5 of the questionnaire also shows that 100% of the respondents agreed that IPOs in Zimbabwe are underpriced with 66.7% of the 36 respondents indicating that they strongly agreed with the proposition while the other 33.3% mildly agreed. This is in line with the theories on IPO underpricing in various countries as shown in Table 2.1 (Chapter 2) and confirms the findings of the analysis of the offer price and first trading day's closing price (initial returns) as shown in Table 4.3 above. The results of this analysis are presented in Table 4.5 below:

| **Source Q.5** Are IPOs in Zimbabwe underpriced? | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 24 | 66.7 | 66.7 | 66.7 |
| | Mildly agree | 12 | 33.3 | 33.3 | 100.0 |
| | Total | 36 | 100.0 | 100.0 | |

Table 4.5: Investor sentiments on underpricing of IPOs in Zimbabwe

#### 4.2.4.2 Money Left on the Table

The total wealth losses as shown in the analysis in Table 4.3 (Column no. 7) amounted to ZW$30,129,979,283 (US$587,851,275)[1] for the IPOs issued between 1997 and 2002. The largest wealth losses as shown in Table 4.3 were noticed for Trust Bank Limited where the money left on the table (MLOT) amounted to ZW$27,008,226,050 (US$490,612,644) in July 2001. On average, the financial sector had the highest MLOT with ZW$5,734,320,866 followed by the Agri-Processing and Retail sectors. The Tourism sector is the only sector that did not leave money on the table. The huge average amount of money left on the table also supports the fact that IPOs are in most cases underpriced and that issuers never get upset about leaving money on the table. The money left on the table shows that it was possible for the issuers of the various IPOs in Table 4.3, to have raised more money for the company than was raised at the IPO especially in the case of an oversubscribed IPO. Figure 4.2 presents a pie chart showing the average MLOT per sector.

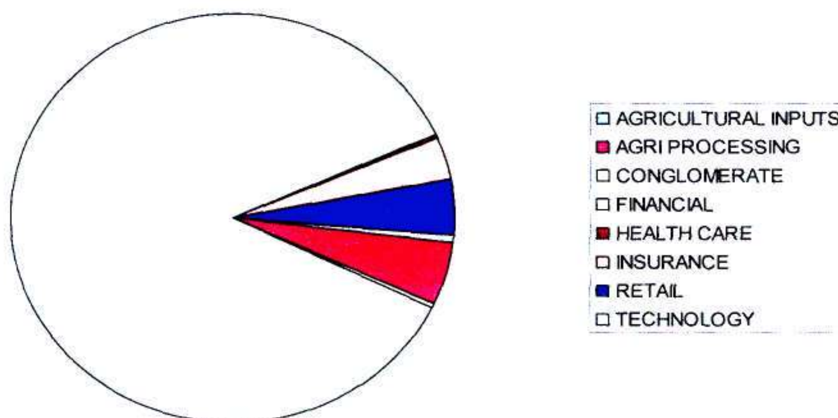


Figure 4.2: Average amount of money left on the table per sector.

#### 4.2.4.3 Sectors/Industries Offering the Highest and Lowest IPO Returns

This study finds that the financial sector offers the highest short-term IPO returns with an average initial return of 129.9%. This is followed by the Agri-Processing and conglomerate sectors with initial returns of 83.3% and 27.4% respectively as shown in Table 4.6 below. The

[1] The Zimbabwean dollar to US dollar exchange rates from 1997 to 2006 were: 12.11:1 (1997), 23.68:1 (1998), 38.30:1 (1999), 44.42:1 (2000), 55.05:1 (2001), 55.04:1 (2002), 824:1 (2003), 5730:1 (2004), 84588:1 (2005) and 250 revalued:1 or 250000:1 (2006). Adapted from Wikipedia-the free encyclopedia.

Tourism Sector is the only one which was overpriced. The sector had a negative initial return of -6.7%. This shows that investors who bought into the RTG IPO paid more for the shares. At the end of the first day of trading, these shares were trading below their offer price, closing at 140 cents a share from an offer price of 150 cents a share. Table 4.6 shows the number of IPOs and mean initial returns per sector and Figure 4.3 depicts the performance of IPOs per sector.

| SECTOR/INDUSTRY | Number of IPOs | Initial Return-% |
|---|---|---|
| AGRICULTURAL INPUTS | 1 | 0.0% |
| AGRI-PROCESSING | 1 | 83.3% |
| CONGLOMERATE | 2 | 27.4% |
| FINANCIAL | 5 | 129.9% |
| HEALTH CARE | 1 | 16.7% |
| INSURANCE | 3 | 26.6% |
| RETAIL | 1 | 5.0% |
| TECHNOLOGY | 1 | 10.0% |
| TOURISM | 1 | -6.7% |

Table 4.6: Analysis of the number of IPOs and initial returns per sector

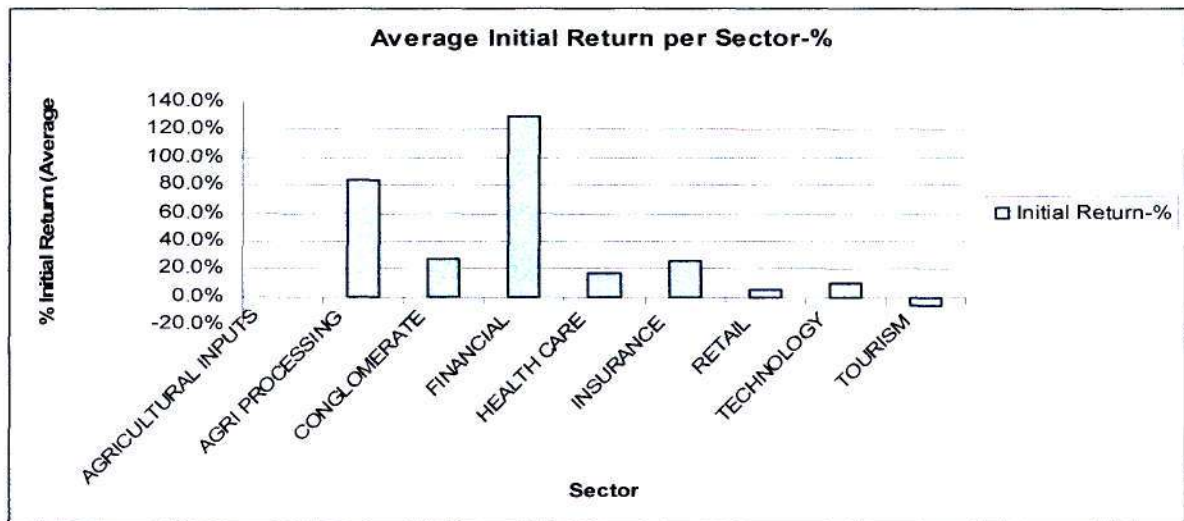


Figure 4.3: Average initial returns per sector

Respondents to the questionnaire also ranked the financial sector as the best performing sector (sector offering higher returns than others) with mentions coming from 100% of the respondents of which 86.1% ranked it first. The Technology and Conglomerate sectors were ranked 2$^{nd}$ and 3$^{rd}$ with mentions from 88.8% and 52.7% respectively as shown in Table 4.7 below:

| Sector/Industry | No.1 Mentions | No. 2 Mentions | No. 3 Mentions | Share of Respondents (36) | Not mentioned |
|---|---|---|---|---|---|
| Agricultural Inputs | 0 | 0 | 0 | 0% | 36 |
| Agri-Processing | 0 | 4 | 7 | 30.5% | 25 |
| Conglomerate | 0 | 12 | 7 | 52.7% | 17 |
| Financial | 31 | 4 | 1 | 100% | 0 |
| Healthcare | 0 | 0 | 0 | 0% | 36 |
| Insurance | 0 | 5 | 3 | 22.2% | 28 |
| Retail | 0 | 0 | 2 | 8.3% | 34 |
| Technology | 5 | 11 | 16 | 88.8% | 4 |
| Tourism | 0 | 0 | 0 | 0% | 36 |

Table 4.7: Top 3 Investor ranking of sectors offering the best IPO returns

#### 4.2.4.4 Reasons for Underpricing of IPOs

Three major reasons were advanced on why IPOs reward investors with underpricing. All the respondents mentioned that IPOs are underpriced to ensure success of the offering, thus avoid the wrong image and embarrassment associated with a failed offering. Investors may not be interested in buying into an IPO with a prior history of a failed offering. One may view as risky, an IPO that failed in its initial bid to listing on a stock exchange, and as a result issuers underprice to ensure that the IPO succeeds. Other reasons were also advanced for underpricing of IPOs. Forty-seven percent of the respondents also argued that underpricing was meant to ensure that the company gained a positive market perception and this is consistent with the findings of Ritter (1998), Filatotchev and Bishop (2000), Welch (1989), and Ritter and Welch (2002) who find that underpricing is meant to ensure that the company gains a positive market perception for future offerings (signalling future potential for high returns). Twenty eight percent of the respondents mentioned that IPOs were underpriced to compensate investors for the high risk associated with IPOs. Underwriters know that IPOs are perceived to be risky investments and they underprice to attract investors and to compensate them for the high risk.

### 4.2.5 IPO Over-Subscription

All the respondents agreed with the propositions that IPOs in Zimbabwe are in most cases over-subscribed and a number of reasons were advanced to support the case for the persistent underpricing of IPOs. The study finds that the low prices (share prices) at which these IPOs start trading at, in comparisons with the huge amounts required to buy some of the seasoned stocks, play a huge role in the oversubscription phenomenon as investors scramble to buy the shares whilst they are still at their perceived lowest price. Ninety four percent of the respondents indicated that it is cheaper to buy IPO shares at the offering price than buying the

IPO shares once they have appreciated in value. This study notes that, the shares of First Banking Corporation (for example), were offered at 110 cents per share but after 30 days they were trading at 380 cents a share, an increase of 282%. An investor into this IPO would have been better off buying the shares at the offer price than buying the shares after 30 days.

Eight-one percent of the respondents indicated that the bourse is very small and that there are few companies listing on the ZSE each year resulting in a scramble for the shares of the few companies going public each year. Five IPOs listed in 1997 followed by three in 1998, two in 1999, no listing in 2000, five in 2001 and one company listing in 2002. This (relatively small number of listing each year) coupled with the growing interest from the individual investor in the stock market, accounts for the high levels of IPO oversubscription. It also emerged that there are limited hedging options given the high levels of inflation[2] and the persistent devaluation of the Zimbabwean dollar, which erodes investment returns. Forty-four percent of the respondents attributed the high rates of IPO oversubscription to high liquidity on the market. In Zimbabwe almost everyone is a 'millionaire' and as their millions continue to lose value due to high inflation in a country where inflation in July 2006 and August 2006 was at 993.6 and 1204.6% respectively (Central Statistical Office, 2006), people are turning to the stock market to try and add value or maintain value in their money given the low money market rates. When there is a new listing (IPO), individuals finds it easy to buy more shares at a low offer price. Table 4.8 presents the factors behind IPO over-subscription in Zimbabwe.

| **Source Q.12** Factors behind IPO over-subscription | **Mentions** | **Share of Respondents (36)** | **Not mentioned** |
|---|---|---|---|
| 1. It is cheap to buy shares at the IPO. | 34 | 94.4% | 2 |
| 2. The bourse is too small given the increased awareness of Zimbabweans on IPOs. | 29 | 80.6% | 7 |
| 3. Too few hedging/investment options given the high levels of inflation and unstable currency. | 17 | 47.2% | 19 |
| 4. High liquidity in the market. | 16 | 44.4% | 20 |

Table 4.8: Reasons for IPO over-subscription

[2] The inflation rate rose from 20% in 1997 to 139% in 2002, 1,204.6% in August 2006 and 1023% in September 2006. Adapted from Wikipedia-the free encyclopedia

### 4.2.6 Post-IPO Performance

In analysing the post-IPO performance this study focuses on two patterns associated with IPOs, that is high short-run returns and poor stock price performance in the long-run as noted in Chapter 2 (sections 2.8 and 2.9). The analysis of the share price performance of IPOs in comparison with their matching firms is determined for each period starting with the closing price on the first day of trading and then the price after 30 days, 1 year, 2 years, 3 years, 4 years and 5 years from the IPO date with July 31 2006 being the cut off date. Firstly the share prices are shown in nominal terms and are then discounted to July 2006 real dollars to ensure comparability. As noted earlier (section 3.4.1.5), this is because Zimbabwe is a hyperinflationary economy with inflation levels of 1184.6% and 993.6% for June 2006 and July 2006 respectively (Central Statistical Office, 2006). Inflation rates rose from 7% at independence (1980) to 20% in 1997 and 1023% in September 2006 as shown in Appendix 6. First Banking Corporation for example, listed at an offer price of 110 cents on 11 June 2001 and on 11 June 2006, the share price had risen to 320,000 cents, an increase of 290809% in nominal terms. When discounted prices are used to account for the effects of inflation, the increase in real terms was only 74%. Appendices 4 and 5 show the analysis of short and long-run returns before and after discounting (adjusting for the effects of inflation).

The analysis of share price performance in Appendix 4 (column 9) above makes it appear as if the Zimbabwe stock Exchange is the best performing stock market in the world with returns of over a 1000% a year for year 5 for some IPOs and their matching firms. The nominal figures in Appendix 4 show that all returns in year 5 (except for Trust Bank and Randalls) were positive and this makes it appear as if the share price performance of IPOs and the investment returns were very good. This study however finds that when discounted (inflation adjusted figures) are used as shown in Appendix 5, only three IPOs and two matching firms had positive returns in year 5, with the rest producing negative BHRs to the investor. The study also finds that whist they offered negative returns on average, in five of the eight sectors, IPOs outperformed their matching firms. The study finds that whist the financial sector offered the best short term returns it is not necessarily the best performing sector in the long-run. The retail sector, though it had average initial returns of only 5 percent compared to 130% for the financial sector, had the highest average real return of 101% after five years compared to -55% for the financial sector.

Table 4.9 below presents evidence of the inflation adjusted share price performance per sector for both IPOs and their seasoned matching firms.

| Sector | Type of Firm | Initial Return | 30 Day Return | 1 Year Return | 2 Year Return | 3 Year Return | 4 Year Return | 5 Year Return |
|---|---|---|---|---|---|---|---|---|
| AGRICULTURAL INPUTS | A | 0% | -31% | -39% | -31% | 320% | 296% | 4% |
| | B | 0% | -37% | -58% | -48% | -35% | 76% | -38% |
| AGRI PROCESSING | A | 83% | 65% | -43% | -38% | -25% | 17% | -28% |
| | B | 0% | -3% | -63% | -66% | -75% | -36% | -70% |
| CONGLOMERATE | A | 28% | 14% | -55% | -71% | -67% | -78% | -53% |
| | B | 0% | -1% | -52% | -65% | -82% | 57% | -68% |
| FINANCIAL | A | 130% | 146% | 0% | -70% | -25% | 120% | -55% |
| | B | 0% | 8% | 13% | 4% | 9% | 12% | -44% |
| HEALTHCARE | A | 17% | -29% | -47% | -90% | -95% | -69% | -59% |
| | B | 0% | -13% | -8% | -61% | -69% | -58% | -26% |
| INSURANCE | A | 27% | -7% | -22% | -42% | -40% | -55% | -78% |
| | B | 0% | -20% | -57% | 305% | 679% | -50% | -63% |
| RETAIL | A | 5% | 36% | 172% | 80% | -16% | 41% | 101% |
| | B | 0% | 14% | 62% | 134% | 0% | 78% | 96% |
| TOURISM | A | -7% | -2% | -76% | -73% | -47% | -74% | -32% |
| | B | 0% | -8% | -76% | -71% | -52% | -86% | -45% |

Table 4.9: Performance of IPOs and Matching Firms by Sector

**Note:** A denotes the IPO companies and B the seasoned matching firms

### 4.2.6.1 Short-run IPO Performance

The short-run quantitative analysis of investment returns in Appendices 4 and 5 show that IPOs in Zimbabwe on average produce high returns in the early aftermarket. This makes IPOs a good investment option for the short-term investor out to make a quick profit. Returns for the first day, 30 days and year 1 are positive and are higher than returns from matching firms when using unadjusted (nominal) share prices. The analysis of discounted returns also shows high and positive returns on the first day and after 30 days from the listing date. Whilst the discounted mean IPO return after 1 year was negative (-15%), IPOs outperformed their matching firms which had a mean return of -23%. However the study finds that IPOs underperform their matching firms in years 2 and 3 when negative mean returns of -51% and -15% are noticed, compared to 46% and 113% respectively for matching firms, using discounted figures. The negative returns for IPOs in years 2 and 3 shows that IPOs are overvalued and that after the first year of trading when the excitement about the future prospects of the IPO have ended, the share price gravitates towards its true value. This explains the negative returns after years 1, 2, and 3. The analysis also suggests that from years 4 and 5

the difference in the performance of IPOs and their matching firms starts narrowing down. Figure 4.4 depicts the results of the analysis.

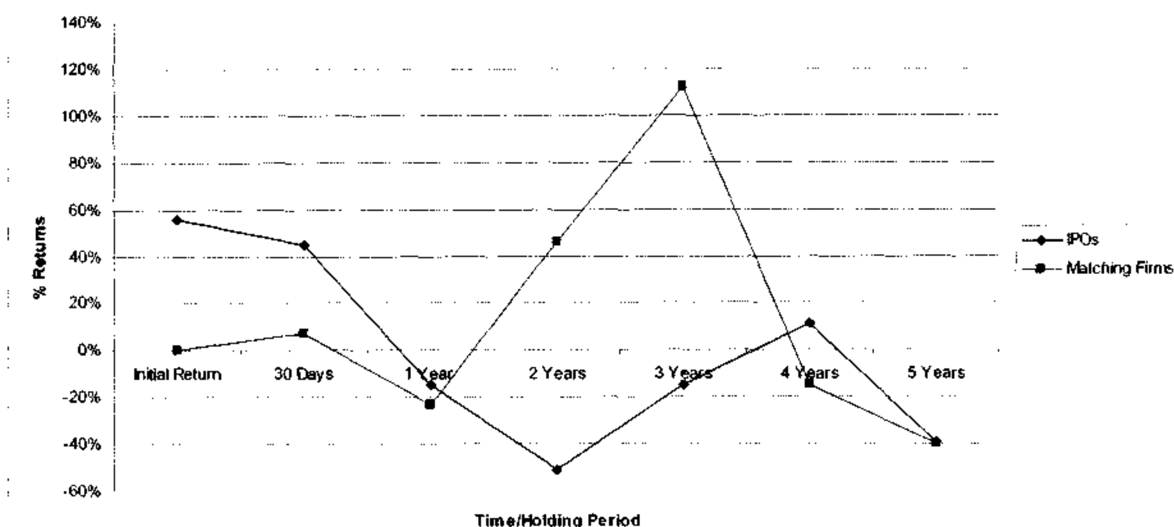


Figure 4.4: Comparison of mean holding period returns for IPOs and their matching firms

All the 36 respondents to the questionnaire agreed with the proposition that short-run IPO returns are higher than returns from seasoned matching firms. Newly listed firms' share prices tend to rise in the short-run as the demand for shares may exceed supply. When demand exceeds supply, prices tend to rise and as share prices rise, this ensures better returns to the investor. The short-term IPO returns are also high because IPOs are offered at prices below their intrinsic value. Table 4.10 below shows the results of the analysis by investor category. Fifty-five percent of the respondents strongly agreed with the proposition while forty-five percent mildly agreed. None of the respondents were in disagreement.

| **Source Q. 9** | | Short-run returns from IPOs are higher than returns from matching firms | | Total |
|---|---|---|---|---|
| | | Strongly Agree | Mildly agree | |
| Investor Category | Stockbroker | 10 | 5 | 15 |
| | Mutual Fund | 3 | 3 | 6 |
| | Insurance Company | 2 | 2 | 4 |
| | Pension Fund | 1 | 2 | 3 |
| | Underwriting/Merchant Banks | 4 | 4 | 8 |
| Total | | **20** (55.5%) | **16** (44.5%) | **36** |

Table 4.10: Investor sentiments on short-run returns from IPOs and their matching firms

#### 4.2.6.2 Long-run IPO Performance

This study finds evidence of poor returns to the investor in years 1, 2, 3 and 5 with negative mean IPO returns of -15%, -51%, -15% and -39% respectively. The investment losses for the IPO investor in each of these years is attributed to overvaluation in the early aftermarket and failure to properly forecast future IPO potential. The analysis in Appendices 4 and 5 shows that IPO returns are very high on the first day of trading and after 30 days from the listing date. However, when the excitement on the prospects of the IPO finally ends prices start falling in the aftermarket to the appropriate levels. This self-adjustment in the share price indicates the drop in the performance of the IPO suggesting that investors tend to overvalue IPOs and offer unnecessarily high prices during the first few days of trading. Even Trust Bank Limited whose IPO had the highest initial return of 473.3% during the period under review, and was 21.6 times over-subscribed, was suspended from the ZSE after 3 years from its listing date. This shows that the hype associated with an IPO at the time of its listing has no bearing on its long-run performance. Those investors who bought into the IPO with the view of holding their shares for over three years got 'burnt' (suffered losses). The study finds that 19% of the IPOs that listed on the ZSE during the period under review were unsuccessful as they were either suspended or de-listed within a few years of their IPO date and these are shown in Table 4.11 below:

| Company Name | Listing Date | Date de-listed/suspended | Period traded |
|---|---|---|---|
| MacMed | 24/10/98 | Suspended 10/10/00 | 2 Years |
| Randalls | 07/04/97 | De-listed 30/11/01 | 4.5 Years |
| Trust Bank Ltd | 11/07/01 | Suspended in July 2004 | 3 Years |

Table 4.11: Unsuccessful IPOs

### 4.2.7 Performance of IPOs Relative to that of Seasoned Matching Firms

The comparison of the performance of IPOs to their matching firms or comparable seasoned stocks in Table 4.12 below shows that IPOs outperform their matching firms by 2.5% (with a mean -39% compared to -40%) after 5 years from the listing date. However, both IPOs and their matching firms had negative mean real returns (BHRs) after 5 years and this is attributed to the high inflation in Zimbabwe. Consistent with Gompers (1997), the study finds that underperformance or the issue of negative returns is not necessarily an IPO effect as

seasoned matching firms' returns were also negative and even lower than IPO returns in the long-run. Whilst IPOs in Zimbabwe outperform their matching firms in the long-run, this study finds that they offer negative long-run returns. As shown in Appendix 5, of the 15 IPOs eleven had negative returns after five years from their respective listing dates, with only three showing positive long-run returns. The other IPO (Nicoz Diamond) had only traded for four years at the time of writing (September 2006) having listed on 28 October 2002 and as a result its performance for year 5 could not be analysed. Table 4.12 presents the descriptive statistics on the performance of IPOs relative to that of their seasoned matching firms.

| | N | Range | Minimum | Maximum | Mean | Std. Deviation | Variance |
|---|---|---|---|---|---|---|---|
| IPO 30 Day Return | 14 | 283.0 | -31.0 | 252.0 | 44.857 | 88.8697 | 7897.824 |
| Matching Firm 30 Day Return | 14 | 196.0 | -37.0 | 159.0 | 7.357 | 46.5215 | 2164.247 |
| IPO Year 1 Return | 14 | 248.0 | -76.0 | 172.0 | -14.929 | 67.4394 | 4548.071 |
| Matching Firm Year 1 Return | 15 | 150.0 | -76.0 | 74.0 | -23.267 | 57.3192 | 3285.495 |
| IPO Year 2 Return | 15 | 179.0 | -99.0 | 80.0 | -51.467 | 44.0760 | 1942.695 |
| Matching Firm Year 2 Return | 15 | 1151.0 | -93.0 | 1058.0 | 46.000 | 290.4878 | 84383.143 |
| IPO Year 3 Return | 14 | 417.0 | -97.0 | 320.0 | -15.429 | 108.2431 | 11716.571 |
| Matching Firm Year 3 Return | 15 | 2280.0 | -96.0 | 2184.0 | 112.533 | 577.7768 | 333825.981 |
| IPO Year 4 Return | 14 | 396.0 | -100.0 | 296.0 | 10.786 | 121.7457 | 14822.027 |
| Matching Firm Year 4 Return | 15 | 274.0 | -95.0 | 179.0 | -15.333 | 81.0596 | 6570.667 |
| IPO Year 5 Return | 14 | 201.0 | -100.0 | 101.0 | -39.143 | 64.0479 | 4102.132 |
| Matching Firm Year 5 Return | 14 | 182.0 | -86.0 | 96.0 | -40.214 | 50.2535 | 2525.412 |
| Valid N (listwise) | 12 | | | | | | |

Table 4.12: Descriptive statistics comparing the performance of IPO and their matching firms.

#### 4.2.8 Using Correlations to Analyse Relationships between Variables

In order to understand the performance of IPOs, it is essential to analyse relationships between variables. Covariance measures the degree to which two variables covary, that is, the extent to which the variables display some degree of positive or negative association (Dillion *et al.*, 1994). This study uses the Pearson's (Product Moment) correlation coefficient *r*.

##### 4.2.8.1 Pearson's (Product Moment) Correlation Coefficient

Cooper and Schindler (2001), note that the product moment correlation coefficient represents an index of the magnitude of relationships and its sign governs the direction. The magnitude is the degree to which variables move in unison or opposition. Pearson's correlation coefficient varies over a range of +1 through to -1, where +1 represents perfect positive

correlation, -1 represents perfect negative correlation and zero represents no correlation. The designation *r* symbolizes the coefficient's estimate of linear association based on sampling data (Cooper & Schindler, 2001). Correlation coefficients reveal the magnitude and direction of relationships. The direction of the coefficient's sign (+/-) tells us whether large values on one variable are associated with large values on the other and small values with small values. When the values correspond in this way, the two variables have a positive relationship. Other variables are inversely related (that is, large values on the first variable are associated with small values on the second and vice versa). Significance tests like the Pearson's correlation allow one to sift out insignificant correlations, and to focus one's analysis and interpretation only on factors that relate to one's research problem.

Table 4.13 below, presents the results of the correlations or relationships between variables based on the share price performance of IPOs. Significant correlations were noticed between initial returns (underpricing) and the first 30 trading days' return from IPOs. The correlation was found to be significant at the 0.01 level (2-tailed test). The analysis also shows that whilst there is positive correlation between the age of a firm prior to listing and underpricing, the relationship is not significant as the p-value (.378) is greater than 0.05. The analysis also shows negative correlation between the age of a firm prior to listing and long-run performance, but the relationship is however not significant at the 95% confidence interval as the p-value is greater than the alpha (0.05). It was also noticed that there is no significant relationship between the year of listing and long-run performance.

| | | Sector or Industry | Year of IPO | Age of IPO | IPO Initial Return | IPO 30 Day Return | IPO Year 1 Return | IPO Year 2 Return | IPO Year 3 Return | IPO Year 4 Return | IPO Year 5 Return |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sector or Industry | Pearson Correlation | 1 | .187 | -.029 | -.189 | -.163 | .212 | .202 | -.429 | -.450 | .091 |
| | Sig. (2-tailed) | | .323 | .878 | .483 | .578 | .466 | .471 | .126 | .106 | .758 |
| | N | 30 | 30 | 30 | 16 | 14 | 14 | 15 | 14 | 14 | 14 |
| Year of Initial Public Offering | Pearson Correlation | .187 | 1 | .710(**) | .276 | .351 | .646(*) | .169 | -.366 | -.197 | .202 |
| | Sig. (2-tailed) | .323 | | .000 | .300 | .219 | .013 | .546 | .199 | .499 | .488 |
| | N | 30 | 30 | 30 | 16 | 14 | 14 | 15 | 14 | 14 | 14 |
| Age of IPO firm prior to listing | Pearson Correlation | -.029 | .710(**) | 1 | .237 | .359 | -.140 | -.305 | .110 | .415 | -.032 |
| | Sig. (2-tailed) | .878 | .000 | | .378 | .208 | .634 | .269 | .709 | .140 | .912 |
| | N | 30 | 30 | 30 | 16 | 14 | 14 | 15 | 14 | 14 | 14 |
| Initial Return for IPOs | Pearson Correlation | -.189 | .276 | .237 | 1 | .729(**) | .126 | -.035 | -.264 | -.253 | -.286 |
| | Sig. (2-tailed) | .483 | .300 | .378 | | .003 | .667 | .900 | .362 | .384 | .322 |
| | N | 16 | 16 | 16 | 16 | 14 | 14 | 15 | 14 | 14 | 14 |
| IPO 30 Day Return | Pearson Correlation | -.163 | .351 | .359 | .729(**) | 1 | .407 | .002 | -.302 | .082 | .145 |
| | Sig. (2-tailed) | .578 | .219 | .208 | .003 | | .148 | .995 | .293 | .781 | .637 |
| | N | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 13 |
| IPO Year 1 Return | Pearson Correlation | .212 | .646(*) | -.140 | .126 | .407 | 1 | .716(**) | -.094 | .204 | .759(**) |
| | Sig. (2-tailed) | .466 | .013 | .634 | .667 | .148 | | .004 | .749 | .483 | .003 |
| | N | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 13 |
| IPO Year 2 Return | Pearson Correlation | .202 | .169 | -.305 | -.035 | .002 | .716(**) | 1 | .225 | .180 | .565(*) |
| | Sig. (2-tailed) | .471 | .546 | .269 | .900 | .995 | .004 | | .439 | .538 | .035 |
| | N | 15 | 15 | 15 | 15 | 14 | 14 | 15 | 14 | 14 | 14 |
| IPO Year 3 Return | Pearson Correlation | -.429 | -.366 | .110 | -.264 | -.302 | -.094 | .225 | 1 | .711(**) | .174 |
| | Sig. (2-tailed) | .126 | .199 | .709 | .362 | .293 | .749 | .439 | | .004 | .571 |
| | N | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 13 |
| IPO Year 4 Return | Pearson Correlation | -.450 | -.197 | .415 | -.253 | .082 | .204 | .180 | .711(**) | 1 | .471 |
| | Sig. (2-tailed) | .106 | .499 | .140 | .384 | .781 | .483 | .538 | .004 | | .104 |
| | N | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 13 |
| IPO Year 5 Return | Pearson Correlation | .091 | .202 | -.032 | -.286 | .145 | .759(**) | .565(*) | .174 | .471 | 1 |
| | Sig. (2-tailed) | .758 | .488 | .912 | .322 | .637 | .003 | .035 | .571 | .104 | |
| | N | 14 | 14 | 14 | 14 | 13 | 13 | 14 | 13 | 13 | 14 |

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 4.13: Analysis of significant correlations

#### 4.2.8.2 Relationship Between Underpricing and Long-Run Performance

One of the main objectives of this study was to establish if there is a relationship between underpricing and long-run performance. The correlation analysis in Table 4.13 above shows negative correlation (-.286) between IPO initial returns (underpricing) and the year 5 returns. However the relationship is not significant at the 95% confidence interval. This is indicated by the p-value (.322) that is greater than 0.05., which shows that there no relationship between underpricing and long-run performance of IPOs. The correlations of variables based on responses to the questionnaire also confirm this finding. Results of the Pearson (product moment) correlation in Table 4:14 below also show that there is a negative correlation between IPO underpricing and long-run underperformance. This is shown by the negative values of the Pearson's *r* (-.055). However this relationship is not significant at the 95% confidence level as indicated by the p-value (.750) that is greater than 0.05.

| | | IPOs in Zimbabwe are underpriced | IPOs Underperform in the Long-Run |
|---|---|---|---|
| IPOs in Zimbabwe are underpriced | Pearson Correlation | 1 | -.055 |
| | Sig. (2-tailed) | | .750 |
| | N | 36 | 36 |
| IPOs Underperform in the Long-Run | Pearson Correlation | -.055 | 1 |
| | Sig. (2-tailed) | .750 | |
| | N | 36 | 36 |

Table 4.14: Correlation-IPO underpricing and long-run IPO underperformance

### 4.2.9 Using Analysis of Variance (ANOVA) to Test for Statistical Significance

To determine if the IPO and matching firms mean returns differ significantly the researcher used the analysis of variance (ANOVA). Cooper and Schindler (2001), note that the statistical method for testing the null hypothesis that the means of several populations is equal is analysis of variance (ANOVA). The basic idea of the analysis of variance is to express a measure of the total variation in a set of data as a sum of terms, which can be attributed to specific sources, or causes, of variation. One-way analysis of variance uses a single-factor, fixed-effects model to compare the effects of one factor on a continuous dependent variable. ANOVA uses squared deviations of the variance so computation of distances of the individual data points from their own mean or from the grand mean can be summed. The total deviation

of any particular data point may be partitioned into between-groups variance and within-groups variance.

The differences of between-group means imply that each group was treated differently and the treatment will appear as deviations of the sample means from the grand mean. The within groups variance describes the deviations of the data points within each group from the sample mean. This results from variability among subjects and from random variation and is often called error. The test statistic for ANOVA is the *F* ratio and a significant *F* ratio indicates that, at least two-group means differ. If the null hypothesis is true, there should be no difference between the population and the ratio should be close to 1. If the population means are not equal, the numerator should manifest this difference and the *F* ratio should be greater than 1.

In this study One-Way ANOVA is used to test the null hypothesis that there is no difference between the performance of IPOs and their matching firm in the short and long-run. The population means on the first trading day, after 30 days and in year 2 are not equal. The *F* ratios for these periods are greater than 1. The null hypothesis is thus rejected in the short-run. This shows that in the short-run the difference in the mean buy and hold returns between IPOs and their matching firms is statistically significant. Mean IPO returns on the first trading day, after 30 days, and after 1 year from the listing date are higher than mean returns from the matching firms. This means that investors buying into IPOs would be in a position to realize high returns should they dispose of their IPO shares within a year from the IPO listing date.

The *F* ratios for year 4 and year 5 are however close to 1. The null hypothesis holds true in the long-run. The analysis shows that when analyzing the long-run performance, one cannot reject the null hypothesis. This shows that the difference between the long-run performance of IPOs and that of their seasoned matching firms is not statistically significant (that is, there is no difference in the long-run performance of IPOs and that of their matching firms). This means that an investor whose intended holding period is long-term can invest in either IPOs or matching firms as there is no statistically significant difference between their long-term returns. This finding on the long-run performance of IPOs is contrary to the findings of Ritter (1991), Ritter (1998), Ahmed-Zaluki *et. al.* (2004), Byrne and Rees (1994), Ritter (2005), Balabat (2002), and Welch (2000), who find that IPOs underperform their matching firms in the long-run. Tables 4.15 and 4.16 present the descriptive statistics and ANOVA results.

**Descriptives**

| | | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound | | |
| First day/Initial Return | IPO Firm | 15 | 58.847 | 117.1801 | 30.2558 | -6.045 | 123.739 | -6.7 | 473.3 |
| | Matching Firm | 15 | .000 | .0000 | .0000 | .000 | .000 | .0 | .0 |
| | Total | 30 | 29.423 | 86.7434 | 15.8371 | -2.967 | 61.814 | -6.7 | 473.3 |
| 30 Day Return | IPO Firm | 14 | 44.857 | 88.8697 | 23.7514 | -6.455 | 96.169 | -31.0 | 252.0 |
| | Matching Firm | 14 | 7.357 | 46.5215 | 12.4334 | -19.504 | 34.218 | -37.0 | 159.0 |
| | Total | 28 | 26.107 | 72.1754 | 13.6399 | -1.880 | 54.094 | -37.0 | 252.0 |
| Year 1 Return | IPO Firm | 14 | -14.929 | 67.4394 | 18.0239 | -53.867 | 24.010 | -76.0 | 172.0 |
| | Matching Firm | 15 | -23.267 | 57.3192 | 14.7998 | -55.009 | 8.476 | -76.0 | 74.0 |
| | Total | 29 | -19.241 | 61.4193 | 11.4053 | -42.604 | 4.121 | -76.0 | 172.0 |
| Year 2 Return | IPO Firm | 15 | -51.467 | 44.0760 | 11.3804 | -75.875 | -27.058 | -99.0 | 80.0 |
| | Matching Firm | 15 | 46.000 | 290.4878 | 75.0036 | -114.867 | 206.867 | -93.0 | 1058.0 |
| | Total | 30 | -2.733 | 210.0747 | 38.3542 | -81.177 | 75.710 | -99.0 | 1058.0 |
| Year 3 Return | IPO Firm | 14 | -15.429 | 108.2431 | 28.9292 | -77.926 | 47.069 | -97.0 | 320.0 |
| | Matching Firm | 15 | 112.533 | 577.7768 | 149.1813 | -207.429 | 432.495 | -96.0 | 2184.0 |
| | Total | 29 | 50.759 | 420.2232 | 78.0335 | -109.086 | 210.603 | -97.0 | 2184.0 |
| Year 4 Return | IPO Firm | 14 | 10.786 | 121.7457 | 32.5379 | -59.508 | 81.080 | -100.0 | 296.0 |
| | Matching Firm | 15 | -15.333 | 81.0596 | 20.9295 | -60.223 | 29.556 | -95.0 | 179.0 |
| | Total | 29 | -2.724 | 101.7026 | 18.8857 | -41.410 | 35.961 | -100.0 | 296.0 |
| Year 5 Return | IPO Firm | 14 | -39.143 | 64.0479 | 17.1175 | -76.123 | -2.163 | -100.0 | 101.0 |
| | Matching Firm | 14 | -40.214 | 50.2535 | 13.4308 | -69.230 | -11.199 | -86.0 | 96.0 |
| | Total | 28 | -39.679 | 56.4919 | 10.6760 | -61.584 | -17.773 | -100.0 | 101.0 |

Table 4.15: Descriptive statistics used for analysis of variance

**Note:** The initial return of 58.8% in the table is slightly different from the 55.8% in table 4.3 because of the exclusion of the Econet Wireless IPO which had no matching firm in the Technology sector at the time of its listing.

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| First day/Initial Return | Between Groups | 25971.976 | 1 | 25971.976 | 3.783 | .062 |
| | Within Groups | 192236.377 | 28 | 6865.585 | | |
| | Total | 218208.354 | 29 | | | |
| 30 Day Return | Between Groups | 9843.750 | 1 | 9843.750 | 1.957 | .174 |
| | Within Groups | 130806.929 | 26 | 5031.036 | | |
| | Total | 140650.679 | 27 | | | |
| Year 1 Return | Between Groups | 503.448 | 1 | 503.448 | .129 | .722 |
| | Within Groups | 105121.862 | 27 | 3893.402 | | |
| | Total | 105625.310 | 28 | | | |
| Year 2 Return | Between Groups | 71248.133 | 1 | 71248.133 | 1.651 | .209 |
| | Within Groups | 1208561.733 | 28 | 43162.919 | | |
| | Total | 1279809.867 | 29 | | | |
| Year 3 Return | Between Groups | 118572.148 | 1 | 118572.148 | .663 | .422 |
| | Within Groups | 4825879.162 | 27 | 178736.265 | | |
| | Total | 4944451.310 | 28 | | | |
| Year 4 Return | Between Groups | 4940.103 | 1 | 4940.103 | .469 | .499 |
| | Within Groups | 284675.690 | 27 | 10543.544 | | |
| | Total | 289615.793 | 28 | | | |
| Year 5 Return | Between Groups | 8.036 | 1 | 8.036 | .002 | .961 |
| | Within Groups | 86158.071 | 26 | 3313.772 | | |
| | Total | 86166.107 | 27 | | | |

Table 4.16: Analysis of variance (ANOVA)

### 4.2.10 Adequacy of IPO investor information on the ZSE

Investing in IPOs may be easy for the informed investor but may be very complex for the uninformed investor. The investor should be fully informed about the pros and cons of investing in an IPO and should be able to determine the best time to sell. This calls for the availability of information that can easily be accessed by the IPO investor or potential investor. When asked to comment on the adequacy or inadequacy of IPO investment information on the ZSE, 55.6% of the respondents felt that there is adequate information on the ZSE on investing in IPOs, while 44.4 % felt the information was insufficient. Respondents noted that investors, especially individual investors could access such information through stockbrokers. Respondents also noted that investors should also browse the internet for IPO investment information since the advice offered on IPOs is generally the same. Whilst the ZSE has managed to develop an electronic system for the buying and selling of shares, investors do not only seek for information on the best performing and least performing stocks but may want more information on the general prospects of a particular sector or industry. Such information should always be available for the benefit of the less informed investor in

order to do away with problems associated with information asymmetries among potential IPO investors (the winner's curse problem due to information asymmetries between informed and uninformed investors) as outlined in Chapter 2 (section 2.7.1). Table 4.17 below presents the analysis of responses by investor category.

| **Source Q.16** | | Is there adequate information on the ZSE on investing in IPOs | | Total |
|---|---|---|---|---|
| | | Yes | No | |
| Investor Category | Stockbroker | 8 | 7 | 15 |
| | Mutual Fund | 4 | 2 | 6 |
| | Insurance Company | 2 | 2 | 4 |
| | Pension Fund | 2 | 1 | 3 |
| | Underwriting/Merchant Banks | 4 | 4 | 8 |
| Total | | 20 | 16 | 36 |

Table 4.17: Investor sentiments on the adequacy/inadequacy of IPO investment information

### 4.2.11 Money Market Returns and IPO over-subscription

Consistent with Saziwa (2006), Mberi (2006) and Kadzere (2006), this study finds that the level of money market rates has an influence on investors' interest in IPOs. High money market rates may see investors deserting the stock market whilst low money market rates may see investors opting for the stock market. This means that when money market rates are very low and a company lists on the ZSE through an IPO, it is likely that the IPO will be over-subscribed. All respondents indicated that the level of returns on the money market has an influence on investors' interest in IPOs. Table 4.18 below presents the results of this analysis:

| **Source Q.18** | | The level of money market returns has an influence on investors interest in IPOs | Total |
|---|---|---|---|
| | | Yes | |
| Investor Category | Stockbroker | 15 | 15 |
| | Mutual Fund | 6 | 6 |
| | Insurance Company | 4 | 4 |
| | Pension Fund | 3 | 3 |
| | Underwriting/Merchant Banks | 8 | 8 |
| | Total | 36 | 36 |

Table 4.18: Effect of money market rates on IPO over-subscription

### 4.2.12 Factors Influencing Investors to Buy into IPOs

This study finds that apart from the underpricing, there are other factors influencing investors to buy into IPO stocks. Respondents' mentions of the first three factors in the table below were very much in line with research literature. These factors include growth prospects of the IPO Company, the quality of the management team and the IPO Company's long-term strategy. Investors in most cases look for increases in dividends and growth in share value. A company showing potential for growth is likely to offer good returns to the investor. Consistent with Mudambi and Treichel (2004), this study finds that the quality of the management team may signal whether a company is likely to succeed or fail and so does the company's strategy as outlined in the prospectus. This study finds that in addition to these factors, there are several other factors influencing Zimbabwean investors to buy into IPOs and these are shown in Table 4.19 below:

| **Source Q.14** | **Mentions** | **Share of Respondents (36)** | ***Not Mentioned*** |
|---|---|---|---|
| 1. Quality of management team | 32 | 88.9% | 4 |
| 2. Growth prospects | 34 | 94.4% | 2 |
| 3. IPO company's long-term strategy | 23 | 63.9% | 13 |
| 4. Increased public awareness on stock market investments | 18 | 50% | 18 |
| 5. Negative real money market returns | 34 | 94.4 | 2 |
| 6. Shift from full-time employment to business ownership culture | 15 | 41.7% | 21 |
| 7. Diaspora Effect-Increased liquidity for Zimbabweans working abroad and investing back home | 31 | 86.1% | 5 |
| 8. Mob Influence | 22 | 61.1 | 14 |
| 9. Portfolio diversification | 18 | 50% | 18 |
| 10. Upside potential on a low price offering | 13 | 36.1% | 23 |

Table 4.19: Factors influencing Zimbabwean investors to buy into IPOs

Some of the explanations offered by respondents on the above factors are captured below;

i. **Growing realisation on the part of Zimbabwe population on the need to own shares and buy them cheaply at the IPO stage**

Half of the respondents indicated that there is a growing realisation on the part of the Zimbabwean population on the importance of owning shares. Consistent with Zweig (2002), this study finds Zimbabweans have long moved from cattle, goats and money market investments to shares as a store of value. Respondents also indicated that investors rush to buy IPO shares at the offering price whilst they are still cheap.

ii. **Negative returns on money market due to high inflation**

This study notes that high inflation rates of 1184.6% for June 2006 and 993.6% for July 2006 compared with money market rates of 350% and 261% per annum respectively have resulted in negative money market returns. The inflation rate is more than three-fold the money market (interest) rates and this left the investor community with only the stock market as the investment vehicle through which they could obtain positive short-term returns.

iii. **Shift in culture from full-time employment to business ownership**

Major stock market investors indicated that there is generally a shift in culture on the part of many skilled Zimbabweans, that is, from full-time employment to business ownership. Whilst this has been reactive in that it is due to increasing levels of unemployment, it has resulted in an increase in the demand for shares as Zimbabweans attempt to grab IPO shares whilst they may be at their lowest price.

iv. **The Diaspora-effect in Zimbabwe**

Eight-two percent of the respondents were of the view that whilst the economic crisis has brought with it serious problems to the ordinary Zimbabwean, to some it has been a blessing in disguise. Under pressure to make ends meet a lot of skilled Zimbabweans have migrated to other countries (the 'Diaspora'), with many finding jobs in South Africa, Botswana, United Kingdom, USA, Canada, Australia, New Zealand, Dubai, Cayman Islands, and Bermuda where they are earning and sending back home their hard earned foreign currency savings. This money is being converted at parallel market rates which are more than double the official rate of US$1=ZW$101195.54 at end of July 2006. This has resulted in increased liquidity enabling them to buy shares cheaply.

v. **Mob influence**

Sixty-one percent of the respondents indicated that investors were investing in IPOs due to mob influence. this is consistent with Ritter (1998)'s 'Bandwagon hypothesis'. IPOs and stock market investments appear to be the 'in-thing' for investors given the low money market rates, high inflation rates and the uncertainty regarding investments in property following the compulsory land acquisitions. Some investors especially individuals invest in IPOs or on the stock market simply because that is where the rest of the people are investing, without carrying out the necessary analysis on the expected future performance of the IPO.

vi. **Portfolio diversification**

This study also finds that some investors buy into an IPO in order to diversify their investment portfolios especially in order to avoid losses given the uncertainty associated with investments in Zimbabwe in the aftermath of the land reform.

vii. **Upside potential on a low price offering**

This study finds that investors believe that the shares in Zimbabwe are undervalued due to the perceptions based on the current political and economic crisis. Respondents expressed optimism about the future earnings potential and high upside potential of shares once the political impasse has been resolved. The study finds that for any first time investor on the stock market, buying into an IPO allows for the purchase of a huge number of cheap shares as opposed to the few shares one would obtain from buying into seasoned companies, whose shares may already be trading at relatively high price levels. When Rainbow Tourism Group (RTG) went public on 1st November 1999 at $1.50 per share, the shares of its matched-firm Zimbabwe Sun Limited (ZimSun), were trading at ZW$3.00 (twice the price of RTG shares). A first time investor with expectations of a subsequent rise in value of RTG shares with ZW$ 1.5 million at that time, would have purchased 1 000 000 RTG shares as opposed to buying only 500 000 ZimSun shares. The RTG shares rose from the offering price of ZW$1.50 to ZW$3700 after four years while the shares of the seasoned market comparable (Zimsun) rose from ZW$3.00 to only ZW$2600 over the same period. In this case the investor earned ZW$3,698.50 per share (for 1 000 000) as opposed to ZW$2,597.00 per share (for 500 000 shares) that he would have earned from buying ZimSun shares on the RTG IPO date.

### 4.2.13 Factors to Consider before Buying into an IPO

This study finds that it is essential to consider the following factors or characteristics in relation to the IPO before investing in the newly listed company. An investor should consider fundamentals of the industry or sector, the price of shares at the time of listing (IPO date), the product type, and the nature of competition in the industry. It is essential for an investor to consider the stage of growth in an industry. An IPO in a new and growing industry such as the Technology sector in Zimbabwe is likely to yield good investment returns, whilst investing in a mature and heavily regulated industry like the banking sector (where financial institutions are now considering mergers to meet the new Reserve Bank of Zimbabwe minimum capital requirements in the aftermath of the 2004 banking crisis in Zimbabwe) may yield negative returns.

The type of product being offered by the IPO Company may also signal the potential for success. An IPO company offering a product such as cement in a developing country where the product is in short supply is likely to do well and produce good returns for the investor. The nature of competition in an industry is also a key factor to consider before buying into an IPO. Unless the company has a strong competitive edge over its competitors or has a unique generic strategy, a highly competitive industry may not be a good sector for one to buy IPO shares. Table 4.20 presents the factor advanced by respondents as the key factors to consider before subscribing or buying IPO shares.

| Source Q.15 | Mentions | Share of Respondents (36) | Not mentioned |
|---|---|---|---|
| 1. Type of industry/sector | 29 | 80.6% | 7 |
| 2. Price of shares at IPO | 14 | 38.9% | 22 |
| 3. Product (s) type | 33 | 91.7% | 3 |
| 4. Competition in the industry | 32 | 88.9% | 4 |

Table 4.20: Important characteristics to consider before investing in an IPO

### 4.2.14 Factors Determining the Success or Failure of IPOs

Respondents to the questionnaire outlined eight factors that determine the success or failure of initial public offerings and these include: presentation of the IPO, the offer price, level of money market rates, the timing of placement of the IPO, the market condition at the time of the IPO, firm size and age, the reputation of the underwriter, quality of the management team, the promotion or marketing of the IPO, industry potential for growth, the stock exchange (s) on which the IPO is listed, and the percentage ownership retained by existing shareholders. The analysis of factor mentions by respondents is as shown in Table 4.21 below and some of the factors are also explained:

| Source Q.19 | Mentions | Share of Respondents (36) | Not mentioned |
|---|---|---|---|
| 1. Market condition | 34 | 94.4% | 2 |
| 2. Timing of placement of the IPO | 32 | 88.9% | 4 |
| 3. Firm size and age | 28 | 77.8% | 8 |
| 4. Money market rates | 27 | 75% | 9 |
| 5. Offer price | 24 | 66.7% | 12 |
| 6. Underwriter reputation and quality of the management team | 23 | 63.9% | 13 |
| 7. Promotion of the IPO | 17 | 47.25% | 19 |
| 8. Presentation of the IPO | 13 | 36.1% | 23 |
| 9. Industry/Sector potential for growth | 17 | 47.25% | 19 |
| 10. Stock exchange on which company is listed/degree of multinationality | 15 | 41.67% | 21 |
| 11.Percentage of ownership retained by existing shareholders | 14 | 38.9% | 22 |

Table 4.21: Factors determining the success or failure of IPOs

i. **Market Condition**

Ninety-four percent of the respondents highlighted that, the market condition at the time of offering of an IPO is of great importance. Consistent with the findings of Gounoplulos (2003), this study finds that because of the volatile market condition in Zimbabwe especially from the late 1990s to 2006, underwriters tend to propose an offer price below the 'intrinsic value', in order to protect the issue from failure and to avoid the embarrassment associated with a failed offering. Another factor related to this is the timing of placement of the IPO. It may be essential to ensure that the timing of an IPO does not coincide with that of other IPOs in more lucrative sectors.

ii. **Firm size and age**

This study notes that large and established company IPOs are expected to have lower uncertainty than smaller and newly established company IPOs, thus firm size and age have effects on stock returns. A longer operating history for a firm prior to going public may reduce the level of uncertainty associated with the firm because old firms have more publicly available information compared to recently established firms.

iii. **Underwriter Reputation**

This study finds that having a good underwriter can mean the difference between a successful and failed offering. Sixty-nine percent of the respondents indicated that prestigious underwriters are associated with successful IPOs.

v. **Promotion of the IPO**

Whilst Habib and Ljungqvist (2001) (*cited* in Welch & Ritter, 2002: 16), argue that underpricing might be considered a substitute for costly marketing expense, 47.25% of the respondents indicated that the success or failure of an IPO depends on its promotion. Underpricing an IPO therefore does not eliminate or render unnecessary the marketing or promotion of the offering.

iv. **Retained Ownership**

The best information about a company's future prospects is shown by the fraction of shares retained by owners after the IPO. Consistent with Leland and Pyle (1977) (*cited* in Gounopoulos, 2003) 39% of the respondents noted the percentage ownership retained by

existing shareholders is a key factor in the success or failure of an IPO. Leland and Pyle note that a high level of retained ownership by the issuer conveys evidence of a high quality firm.

v. **The Stock Exchange on which the company is to be listed.**

Forty-two percent of the respondents indicated that the stock exchange on which the company is listed also determines the success of an IPO. Some of the top performing counters in Zimbabwe are in addition to being listed on the ZSE also listed on other exchanges. These include Old Mutual (listed on the LSE, JSE, NSE and MSE), Meikles (listed on LSE) and PPC Ltd. (listed on the JSE).

## 4.3 Conclusion

This chapter has presented the findings on the extent of underpricing of IPOs in Zimbabwe, the amount of money left on the table, the long-run performance of IPOs, the effect of money market returns on IPO over-subscription and investors interest in IPOs. Returns from all the sectors were also reviewed to establish the sectors that offer the highest IPO returns. In this chapter, the study also looked into the factors determining the success or failure of IPOs.

This chapter establishes that IPOs in Zimbabwe are underpriced and that they leave a lot of money on the table. The study also establishes that the high over-subscription rates are due to underpricing and investors wanting to obtain a stake in the newly listed company whilst the shares are still lowly priced. It is also concluded that issuers permit the persistent underpricing of IPOs in order to ensure success of their IPO and avoid the bad reputation associated with a failed offering. The study also finds that there is no difference between the long-run performance of IPOs and their matching firms. However returns from both IPOs and their seasoned matching firms were negative due to high inflation levels.

This chapter synthesises the findings of the study and presents the findings in a manner that can be easily understood by the investor and other readers. Tables of statistical data were clearly presented in a manner that can easily be replicated in future studies on the topic. Explanatory notes were also given to ensure that the statistical tables and findings of the study are easily understood by the reader.

In an attempt to minimise the risks associated with investing in IPOs this study comes up with some guidelines intended to help the IPO investor or potential IPO investor better understand how to minimise risk and maximise returns. Chapter 5 contains a conclusion to the study based on the

findings in this chapter and recommendations or managerial guidelines (guidelines to IPO investors and ZSE management). The researcher concludes the next chapter by suggesting directions for future research on IPOs.

# CHAPTER 5

# CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

The purpose of this study has been to establish the short to long run performance of IPOs in Zimbabwe and thus their effectiveness as an investment option in comparison to their seasoned matching firms. The paper also sought to establish the extent of underpricing of IPOs in Zimbabwe, the factors which investors should consider before investing in an IPO as well as the factors governing the success or failure of IPOs. Literature on the key concepts regarding IPOs, the reason for going public, the players in an IPO, the IPO process, reasons behind the persistent underpricing and the risks associated with IPOs was also reviewed in Chapter 2 (sections 2.3 to 2.7). In addition, this study sought to shed some light on the reasons or factors influencing investors into buying IPO shares despite their uncertainty when there are already existing matching firms with a known track record.

The rest of this chapter is organised as follows; first, the limitations to the study are discussed, second, conclusions to the study are drawn based on the findings in Chapter 4 and with reference to the literature review in Chapter 2. Third, recommendations are made and managerial guidelines provided to the IPO investor and the Zimbabwe Stock Exchange management. The study concludes by offering guidelines for future research on initial public offerings in view of the continued over-optimism in IPOs on the part of both issuers and investors. The recommendations are based on the conclusions drawn from the study. However it should be noted that as with any other research project, this had its own limitations.

## 5.2 Conclusions drawn from the study

This study concludes:

i. That IPOs in Zimbabwe are underpriced and as a result leave money on the table which shows that the issuer could have raised more capital from their IPOs than what they actually got as the proceeds from the offering. The study also concludes that issuers deliberately underprice their IPO shares in order to ensure success of the offering and thus avoid the embarrassment associated with a failed offering. This study also concludes that underpricing is not due to misevaluation (unintended undervaluation) of the true firm

value but that issuers choose to undervalue with the aim of later selling more shares in the market at prices which are above (higher than) those prices obtaining at the time of the offering. Positive or high short-run returns may increase investors' confidence on future seasoned equity offerings by the same company. Underpricing therefore ensures some form of compensation to the investors for the risk associated with investing in these newly listed companies.

ii. That for the short-term investor, it is better to buy into an IPO than buying into a matching firm at a time when there is a new company that has listed for the first time on the Stock Exchange.

iii. That whilst IPOs offer short-run returns which are above or higher than those of their seasoned matching firms, these short-run IPO returns are due to overvaluation of the future prospects of the IPO and demand for IPO shares exceeding supply. With so much demand on the first trading day, IPO share prices may not be indicative of the company's intrinsic value but rather over-valuation due to oversubscription. Overall, IPOs in Zimbabwe experience a drop in the share price performance after the first trading day especially after two to three years from the listing date(s).

iv. That whilst IPOs outperform their matching firms in the short term, there is no difference between the long-run performance of IPOs in Zimbabwe and that of their seasoned matching firms. Unlike underpricing which has been found to persist in every country with a stock market, it cannot be generalised that IPOs underperform their matching firms in the long-run.

v. That both IPOs and their matching firms produce positive nominal returns in the long-run. However when these are discounted to take into account the effects of inflation the returns turn out to be negative. The study therefore concludes that the long-run real returns for both IPOs and their matching firms in Zimbabwe are negative due to hyper-inflationary conditions. The results of this study suggest that investors measuring their buy and hold return from IPOs, using nominal share prices would conclude that they earn positive returns in the long-run but if they employ the discounted approach they would conclude that they in fact earn negative real returns. The study thus concludes that the issue of whether IPOs in Zimbabwe offer positive or negative long-run returns depends on the methodology used. This study also concludes that the issue of whether IPOs offer

good long-run returns also depends on the benchmark used (holding period returns for IPOs only or comparison of IPO returns with matching firm returns).

vi. That the rate of IPO oversubscription alluded to by respondents to the questionnaire (section 4.2.5) is among other factors due to the small size of the Zimbabwe Stock Exchange as well as small number of IPOs listing on the ZSE each year. The study also concludes that there is a shift in culture and the mindset of most skilled Zimbabweans from wanting to occupy high positions in the public and private sector to business ownership.

vii. Increased or high liquidity on the market caused by those in or those returning home (to Zimbabwe) from the 'Diaspora' [section 4.2.12 (iv] has also led to an increase in the demand for investment in both the stock market and the property market. Zimbabweans who migrated into various countries due to the prevailing economic hardships in the country have been sending their hard earned savings back home through the parallel market resulting in increased liquidity for most households. This has also led to an increase in the demand for IPO stocks as confidence in the revival of the economy after the removal of sanctions is a view held strongly by Zimbabweans.

viii. The study also concludes that some investors are investing in IPOs due to mob influence [section 4.2.12 (v)]. In most cases such investors simply follow the direction of the wind without carrying out any analysis on the growth prospects of the IPO.

ix. That the level of money market rates has an influence on investors' interest in IPOs. When interest rates are high, that is above average stock market returns, investors desert the stock market for the money market. As outlined in section 4.2.11, a fall in interest/money market rates will see more investors going back to the stock market though others may want to take cover in the less risky money market instruments like treasury bills.

x. That there is a relationship between underpricing and short-run IPO performance and that there is no relationship between underpricing and long-run performance

xi. That IPOs are only more effective than their matching firms in the short-run.

## 5.3 Recommendations

The ZSE which has been described by eight-one percent of respondents in section 4.2.5 as very small (considering the increasing interest by the Zimbabwean investor on the stock market) has seen increased (high) levels of IPO oversubscription as investors scramble for shares in the few IPOs listing on the ZSE each year. The low level of interest rates on the money market as outlined in 4.2.11, has also contributed to the increase in demand for shares as investors try to avoid below inflation (negative) returns on the money market in view of the inflation rate which reached a level of 1184.6% in June 2006. This calls for investors to be clear on the performance of IPOs in order to help minimise investment losses. Previous studies on IPOs have focused on the underpricing, long-run performance, and IPO valuation methods, but no investment guidelines have been offered on how investors' can minimise investment losses. This study outlines some IPO investment strategies or guidelines to the investor and also offers other general recommendations on dealing in IPOs.

### 5.3.1 Guidelines to the IPO investor

As noted in section 2.7, there are several risks associated with IPOs. It was also noted in 2.6.6 that apart from knowing the potential risks associated with IPOs, investors want to know the best IPO investment strategies. There are several investment strategies which may help investors minimise IPO investment losses and maximise returns. The following are some of the strategies that may be applied by those considering investing in an IPO:

i. It is a good idea to invest in the industries that you understand best because analysis becomes relatively easier. An investor should use the knowledge of business gained over the years to spot IPOs with the most potential. As noted in 2.7.4 investors should stay away from an IPO where the company has serious technological problems and where one knows that the costs of rectifying the problem are material.

ii. The risks outlined in section 2.7, may require that investors should also follow the expert knowledge of analysts or fund managers because if portfolios are good for the investment experts they may be good for the investor as well. However it is important to maintain healthy scepticism regarding their buy recommendations. Brokers sometimes give 'buy' recommendations on a particular IPO or counter because they make their money by getting clients to buy shares and may want to establish a future business relationship with the issuing company. Investors should consider investing in IPOs through IPO mutual

funds instead of picking their own stocks. Apart from the convenience of not investing in IPOs directly this enables investors to diversify their portfolios and access professional management.

iii. The drop in share price performance in the early aftermarket, as noted in section 4.2.6.2 shows that IPOs are overvalued. It is essential to note that overvaluation of the issuing firm's prospects by investors in the early aftermarket results in 'fads' and there are a number of 'Sell Signals' to watch for. Such signals may be found by reviewing published accounts or following news in the business press and these include:

a. Mounting Competition-this is perhaps the biggest indicator that it is time to sell IPO shares. It was noted in section 4.2.13 that an investor should consider the nature of competition in the industry before investing in an IPO. As competitors flood the market, it may actually collapse and so will the shares.

b. A drop in earnings after a poor earnings report indicates that a drop in the stock price is probably not far behind and this is usually a good time to sell before things get worse.

c. Drop in prices - unless it is due to a change in the generic strategy, an announcement by a company to drop its prices is a danger sign, as it may mean the company has amounts of inventory (stock) it cannot sell.

iv. As noted in sections 2.9.1 and 2.9.3 of this study, share prices drop at the end of the lock-up period. Where the lock-up period is not applicable (where there is no restriction on founders selling their shares immediately after the IPO), investors should be wary of founders selling a large amount of stock (that is significantly more than they usually sell) at the time of an IPO. This is known as a 'bail out' and may be an indication of a bad offering (one that is likely to produce negative returns) as the sale of huge amounts of shares might be an indication that he/she is jumping ship. As long as the insiders retain the majority shareholdings, that is more than 50% shareholding, their incentives will be more closely aligned with those of outside equity holders.

v. In selecting IPO stocks and in deciding whether or not to buy IPO shares, investors should look for stocks that have strong brand names (that is. associated with a successful product), substantial market share, and top-notch management. It was noted in section 2.7.3 that reliance on a small number of customers and few products limit the potential for growth and

chances to recover in a competitive market place. It was also noted in 2.7.1 managers who are not qualified and are inexperienced cause problems for the company. Investors should therefore consider IPOs in companies who managers have successful track records. It was also noted in 2.9.2 and 4.2.12 that the quality of the top management team is one of the key factors determining the success or failure of IPOs.

vi. Investors should note that because there is no significant relationship between the age of a firm prior to listing and long-run performance (section 4.2.8.1), it is better to consider an investment based on its expected future returns and not on its past trading history. It was noted in 2.9.1 that firms are eager to look good when the conduct their IPOs and that the part of the poor long-run performance of IPOs is due to a market that is unduly optimistic and thus unable to properly forecast tougher times ahead. Investment returns are to be obtained in the future and not in the past so the decision to buy into an IPO should be based on its future earnings potential and not trading history.

vii. Whilst buying an IPO on its first trading day may enable one to buy more shares at a cheap price (section 4.2.5), in most cases it is risky to purchase an IPO on the first day of its offering. There tends to be a frenzy of trading activity and price fluctuation. Rationality can go out of the window as investors bid on a limited number of shares. It is thus safer for investors to wait several months and let the dust settle before buying the IPO shares. As noted in 2.9.1 and 2.9.3 share prices start falling after the expiration of the lock-up period and it is therefore better for the investor to consider buying into an IPO after the lock-up period.

viii. As noted in section 2.6.4, after 'bookbuilding', when investment bankers find unanticipatedly strong or weak demand, they adjust the offering price, but only partially. If they adjust the offering price upwards, it is because they have found exceptionally strong demand. But since they only adjust partially, there seems to be a probability of a positive initial return when the offering price is increased from the range indicated in the preliminary prospectus. Similarly, if the offering price is lowered, it is very likely that there will be a low or even negative initial return. Investors should therefore pay attention to the direction of the price change in deciding whether or not to submit a purchase order for shares in any IPO.

ix. As noted in section 2.7, one must always understand a company's real value. Investors should always do an analysis of the relation between the offer price and the firm's underlying value. Ascertaining the true value of the company may help the investor decide whether or

not to invest in the IPO. It was noted in 4.2.6.2 that investors tend to overvalue IPOs and offer unnecessarily high prices during the first few days of trading.

x. Considering that in Zimbabwe as noted in section 2.2, only stockbrokers and authorised dealers are allowed to transact in shares on behalf of the public, it is essential for investors not to only rely on advice from the stockbrokers but to also search the World Wide Web for information on investing in IPOs. Websites such as http://www.IPOresources.org, offer a lot of valuable information on investing in IPOs. This enables one to evaluate IPOs on their own, and to appraise the advice offered by stockbrokers for it may be possible for a stockbroker to give a 'buy' recommendation in order for him to get future business from the issuing company.

Since it has been established that IPO's are always risky investments (section 2.7), patience is the most important trait and research on the offering is the single most vital task for success in IPO investing. Whilst there is always a rush to grab IPO shares, the first day of an offering is not always the best time to purchase an IPO. This is especially so if the investor is looking for long-term investment as the excitement in the offering can lead to wild price volatility in the first days of trading. As noted in 4.2.6.1, newly listed firms' shares prices tend to rise in the short-run as demand exceeds supply. Investors should, avoid getting caught in the hype that often comes with an IPO. As noted in 4.2.6.2, the hype associated with an IPO has no bearing on its long-run performance. The media heralding of the explosive first day's price appreciation may attract the risk-seeking type personality as well as the unassuming individual investor who may be astounded at the instant wealth being generated. Many investors are easily lured by the potential for huge gains and end up with huge losses. It is therefore essential for the investor to note that IPO does not stand for '*Immediate Profit Opportunity*' and that the only way to get rich overnight is through lottery or inheritance.

As noted in section 1.3 IPOs can produce catastrophic results. Investors should thus avoid investing in an IPO without carrying out the necessary analysis and have to avoid the overconfidence in any IPO which may result in poor forecasts of tougher times ahead. Whilst the first trading day's and first 30 days price increase may result in IPOs being perceived as the best type of investment security to achieve nearly instant wealth by the individual investor. This view is usually generated by the intense media hype of these short term price increases and investors should note that the belief that all IPOs behave this way is a fallacy. With IPOs, patience is the key as the investor should do

his/her research, study the fundamentals and wait for the hype to subside. IPO investors should avoid falling pray to an urge that tells one that it is okay to suspend good judgement and invest with eyes closed and fingers crossed. Analysis of future earnings potential of the IPO Company is critical.

### 5.3.2 Recommendations to the Zimbabwe Stock Exchange Management

i. The levels of oversubscription of IPOs as outlined in 4.2.5 are due to too many investors chasing too few IPOs indicates that there is need for the ZSE to investigate the possibility of setting up or establishing a small-medium capitalisation stocks (small-caps) or small to medium scale enterprises (SMEs) exchange. Apart from saving potential IPO investors the embarrassment of failing to secure IPOs shares, this will help ensure development in a country where small companies find it difficult to raise capital due to high (lending rates in Zimbabwe are over 300%) interest rates and also due to the failure to meet ZSE listing requirements which were outlined in section 2.2.1.

ii. Alternatively the ZSE should consider reviewing its listing requirements to ensure that they are not a deterrent to those small companies wishing to list but failing to meet the current requirements. This is likely to ensure an increase in the number of IPOs and reduce the rate of over-subscription noted in section 4.2.5. The listing of more companies on the ZSE will mean better access to equity capital which is less risky compared with debt financing. Such access to capital by small companies may ensure growth in a country now starved of foreign direct investment due to sanctions and perceived risk of appropriation in the aftermath of a land reform process that has been perceived by the international community to have been chaotic. The review of listing requirements may see more companies listing thus ensure the growth of a bourse (the ZSE) that has been described by respondents to this study as too small (section 4.2.5).

iii. The ZSE and the listed companies on the ZSE should explore the possibility of trading in IPO stocks as well as seasoned stocks (shares) through the internet. The ZSE as the regulatory authority should explore the possibility of setting up or enhancing its website to allow for the trading of shares without going through the stockbrokers and authorised dealers (section 2.2) as their charges increase costs to the informed investor who may not require their services.

The issue of stringent listing requirements being a contributory factor to the few listings on the ZSE and probably on other African stock markets is motivation for future research. This study notes

that despite the plethora of research on IPOs in Zimbabwe and various other countries, a number of issues remain unresolved. To understand Zimbabwean as well as other African countries' IPOs in more detail, further studies should be carried out. This study therefore offers directions for future research on IPOs.

## 5.4 Limitations of the Study

The study's main limitation was that some of the sectors, for example Agricultural Inputs, Agri-Processing, Healthcare, Retail, and Tourism had only one IPO during the period under review compared to two, five and three listings in the Conglomerate, Financial, and Insurance sectors respectively. This had an effect on the comparison of average initial returns per sector and on the ranking of sector performance as the performance of only one IPO in those sectors may not be a correct reflection or be truly representative of the sector performance and thus its ranking. Secondly only nine (9) of the nineteen sectors issued IPOs during the period under review. The conclusions in this study are therefore based on the comparison of only the IPOs and matching firms in these nine sectors.

## 5.5 Directions for Future Research

As noted in this study (section 4.2.4) investors purchasing IPOs at the offer price earn initial returns averaging 55.8% which, results in the IPOs being in most cases oversubscribed. This oversubscription raises several allocation issues and the issue of whether there is a level playing field (fairness) in the allocation of IPO shares is motivation for further research. The study notes that underwriters prefer lower prices because lower prices make selling IPO shares a lot easier and it allows the underwriter to reward his/her best customers by giving them share allotments. This further strengthens the need for further research on whether there is fairness in the allocation of over-subscribed IPOs.

In reviewing the allocation issues future research should thus focus on the selling procedures in IPOs that is fixed price offer, bookbuilding and the auction-like method or the 'Dutch Auction' (OpenIPO) referred to in 2.8 to establish a method that will ensure fairness in the allocation of over-subscribed IPOs. Considering that the offer price at which the IPO starts trading must remain fixed, the future studies should investigate whether according to conventional economics should be or can be adjusted to equate demand with supply. This may help reduce the amount of money left on the table (wealth losses to the issuers).

Studies should also be carried out on whether the stringent listing requirements that may have led to very limited listings on the ZSE are not also prevalent on other African countries' stock markets. This is also in view to the fact that a number of African countries either have a very small stock market or do not have a stock market of their own thereby restricting companies' access to capital. This may stifle development and economic growth in Africa.

## 5.6 Conclusion

This study examines the performance of IPOs listed on the Zimbabwe Stock Exchange between 1997 and 2002 and establishes that there is no significant difference between the long-run performance of IPOs and that of their seasoned matching firms (market comparables). This study concludes that IPOs are only more effective than matching firms in the short run.

This study concludes that investors should carry out detailed analysis on the future prospects of an IPO before buying shares. The study also concludes that the IPO underpricing phenomenon also exists on the Zimbabwe Stock Exchange. The study did not find evidence of a relationship between underpricing and long-run IPO negative returns (IPO underperformance). A number of factors emerged as contributing to the increased demand for IPOs in Zimbabwe. Amongst others, the market condition at the time of the IPO emerged as the key factor determining the success of an IPO.

The study has attempted not only to add to the growing literature on the field of IPOs but also sought to inform prospective IPO investors on how to maximise IPO investment returns and minimise losses. In addition to outlining the risks associated with IPO, the study has also come up with a number of recommendations and investment guidelines. One of the recommendations of this study is that in view of the restrictive listing requirements, the ZSE should consider a move to a two-tier equity market by setting up an exchange for small capitalisation stocks to help small companies' access less risky equity capital and ensure growth in a country whose economy is facing decline and in which debt financing is highly risky (lending rates in July and September 2006 for example, were pegged at 850% and 250% respectively). This study has also been able to offer a critique of existing research and has provided directions for future research on IPOs.

# GLOSSARY OF TERMS

**Aftermarket performance -** An indication of how well the stock of a company has performed after it has gone public. The gain or loss is measured against the offering price.

**Bourse -** A stock exchange (An exchange where merchants meet for business).

**Bookbuilding -** The process of polling potential investors.

**Due diligence -** An investigation of an issuer by the underwriter to determine the value of the company.

**Fad -** a huge trend that sweeps the nation, if not the world

**Fad IPOs -** these are IPOs that offer very high initial returns (being of questionable value) but eventually fizzle out.

**Flipping** -The selling of IPO shares by investors, shortly after the stock starts trading on the open market in order to make a quick profit.

**Initial Public Offering (IPO) -** The offering of shares in the equity of a company to the public/outside investors for the first time.

**Hot Issues**, also called blow out issues, are determined when indications of interest show that there is public interest for more shares than the amount being offered. and the price can be expected to skyrocket in the market place after the effective date.

**Lock-up period -** The 180 days (six months) after a company goes public during which officers and insiders are restricted from selling their shares.

**Market Comparables -** Existing quoted companies with comparable activities. Such companies allow comparison of their prospects and track record with those of the floated company.

**Money left on the table -** The number of shares issued times the change from the offer price to the first day closing price.

**Oversubscribed -** When an IPO has more buyers than there are shares. (when the demand for shares in an IPO exceeds supply or the shares on offer).

**Risk** - the probability of a loss in an attempt to achieve a certain goal.

**Stagging** -The strategy of buying into new issues and selling immediately in order to reap a quick profit.

# REFERENCES


*About the Zimbabwe stock Exchange,* (Online), Available at http://www.zse.co.zw accessed 21/09/2005.

*Accounting Problems Found at China Life Predecessor Company,* 2004. (Online), Available at http://www.chinadaily.com.cn/en/doc/2004-02/04/content_303131.html, accessed 21/09/2005.

Agarwal, S., Liu, C., and Rhee, S. G., 2004. *Investor Demand for IPOs and Aftermarket Performance: Evidence from Hong Kong Stock Market,* (Online), Available at http://papers/ssrn.com accessed 02/02/2006

Aggarwal, R. K., Krigman, L., and Womack, K. L., 2001. *Strategic IPO Under pricing, Information Momentum, and Lockup Expiration Selling,* Working Paper, Babson College and Dartmouth College-Tuck School of Business.

Ahmad-Zaluki, N. A., Campbell, K., Goodacre, A., 2004. *The Long-run Share Price Performance of Malaysian Initial Public Offerings (IPOs),* Department of Accounting, Finance and Law University of Sterling.

Alvarez, S., Gonzalez, V. M., 2005. *Long-Run Performance of Initial Public Offerings (IPOs) in the Spanish Capital Market* (Online), Available at http://papers.ssrn.com. Accessed 26/4/2006

Ang, A., Gu, L., Hochberg, Y., 2005. *Is IPO Underperformance a Peso Problem?* (Online), Available at http://ssrn.com/abstract=527642, accessed 26/4/2006

Arosio, R., Giudici, G., and Paleari, S., 2000. *What Drives the Initial Market Performance of Italian IPOs? An Empirical Investigation on Under pricing and Price Support,* Working Paper *Politecnico di Milano* Department of Economics and Production.

Aussenegg, W., 1999. *Going Public in Poland: Case by Ccase Privatisations, Mass Privatisations and Private sector Initial Public Offerings,* Working Paper no.292, (Online) , Available at Http://www.bus.umich.du/kresgeLibrary/Collection/WorkingPapers/wdi/wp292.pdf#.

Bachmann, R., 2004. *A Theory of IPO Underpricing, Issue Activity, and Long-Run Underperformance,* (Online), Availablre at http://ssrn.com/abstract=642324, accessed 26/4/2006

Bai, Z., Zhang, D. W., 2004. *Empirical Study on Post-IPO Long-run Performance in the Chinese Stock Market,* (Online), Available at http://ssrn.com/abstract=2004, accessed 26/4/2006

Balatbat, M. C. A., 2002. *Operating Performance of Australian IPOs, Its Association with Share returns and Effects of Delisting Bias on operating Returns* (Online), Available at http://www.ace.unsw.edu.au/conference/ipors20002B. accessed 26/4/2006

Bessler, W., 2002. Initial Public Offerings, *Subsequent Seasoned Equity Offerings, and Long-Run Performance: Evidence from IPOs in Germany* (Online), Available at http://papers.ssrn.com

Bodie, Z., Keane, A., Marcus, A. J., 2002. How Firms Issue Securities, *Investments,* International Edition, McGraw-Hill Irwin.

Brealey, R. A., Stewart, C. M, 1996. The Initial Public Offering, *Principles of Corporate Finance*, Fifth Edition, McGraw-Hill.

Brav, A., Gompers, P. A., 1997. Myth or Reality? The Long-run Underperformance of Initial Public Offerings: Evidence from Venture and Non-Venture Capital-Backed Companies, *Journal of Finance,* Vol. 52 No. 4, December 1997.

Byrne A., Rees, W., 1994. *Initial Public Offerings in The United Kingdom*, ACCA Certified Research Report number 36.

Chahine, S., 2001. *Long Run Underperformance after IPOs and Optimistic Analysts' Forecasts*, (Online), Available at http://ssrn.com/abstract=264573, accessed 26/4/2006

Chan, K., Wei, J. K. C., Wong, J., 2001. *Underpricing and Long-Term Performance of IPOs in China* (Online), Available at http://repository.ust.hk/dspace/handle/1783.1/366, accessed 26/4/2006

Chan, K., Cooley, J. Jr., Kim, J., Singh, A., 2003. *The IPO Derby: Are There Consistent Losers and Winners on This Track?* (Online), Available at http:ssrn.com/abstract=392002, accessed 26/4/2006

Chanakira, N., 2001. *Money Market Awash With Cash* (Online), Available at http://www.dailynews.co.zw/daily/2001/July/July 16/12295.html, accessed, 26/10/2002.

Chechile, R. A., 2004, *The ABC of IPOs*, Investment Strategies and Tactics for New Issue Securities, IUniverse Inc., available at http://www.ebookmail.com, accessed 02/02/2006.

Chen, A., Pan, K., 1998. *An Answer to the Long-Run Performance Puzzle of IPOs in Taiwan: An Application of the Fama-French Model,* Working Paper, National Sun Yat-Sen University Department of Business Management, Taiwan (Online), Available at http://ssrn.com, accessed 26/4/2006

Chen, A., Hong, C. T., Wu, C., 1999. *The Under pricing and Excess Returns of Initial Public Offerings Based on Noisy Trading: A Stochastic Frontier Model,* (Online), Available at http://papers.ssrn.com accessed 26/4/2006

Chi, J., Padgett, C., 2002. *The Performance and Long-Run Characteristics of the Chinese IPO Market*, Working Paper, Massey University - Department of Finance, Banking and Property Studies and University of Reading-ICMA Centre.

Coakley, J., Hadass, L., Wood, A., 2004. *Market Timing*, (Online), Available at http:ssrn.com/abstract=623227, accessed 26/4/2006

Cooper, D. R., Schindler, P. S., 2001. *Business Research Methods,* Seventh Edition, McGraw-Hill Irwin

Connelly, J. T., Loughran, T., Suchanek, G., Yan, X., 2004. *Ownership Concerntration and Initial Public Offering Performance: Evidence from Thailand* (Online), available at http://www.set.or.th/th/products_services/research/files/thaiipo112004v4 accessed 26/4/2006

*Consumer Price Index (CPI),* (Online), Available at http:www.icaz.org.zw/CPI/cpi.htm accessed 25/8/2006

Denlinger, P., 2004. *China Life IPO Under SEC Investigation* (Online), Available at http://www.china-ready.com/news/April 2004, accessed 21/09/2005.

Derrien, F., 2003. *IPO Pricing in 'Hot' Market Conditions: Who Leaves Money on the Table?* (Online), Available at http://ssrn.com/abstract=386420, accessed 26/4/2006

Dillon, W. R., Madden, T. J., Firtle, N. H., 1994. *Marketing Research in a Marketing Environment,* Third Edition, Irwin Inc.

Dolvin, S. D., Pyles, M. K., (undated). IPO *Long-Run Returns, Who Wins, Who loses, and Why* (Online), http://blue.butler.edu/~dolvin/longrun.pdf accessed 26/04/2006

Eckbo, B. E., Norli, O., 2000. *Leverage, Liquidity, and Long-Run IPO Returns,* (Online), Available at http://ssrn.com/abstract=217108, accessed 26/4/2006

Field, L. C., Lowry, M., 2004. *How is Institutional Investment in Initial Public Offerings Related to the Long-run Performance of the Firms,* (Online), Available at http://www.binghamton.edu/some/research/financeseminarpapers/fall 2004

Filatotchev, I., Bishop, K., 2000. *Resource and Strategy Roles of Corporate Governance and Stockmarket Response: An Investigation of Initial Public Offerings in the UK*, 1999-2000, (Online) Available at http://www.ssrn.com. Accessed 11/09/2002

Fishe, R. P. H., 1999. *How Stock Flippers Affect IPO Pricing and Stabilization*, (Online), Available at http://ssrn.om/abstract=191552, accessed 26/4/2006

Foster-Johnson, S. D., Lewis. C. M., Seward, J. K., 2000. *Busted IPOs and Windows of Misopportunity* (Online) available at http://www2.owen.vanderbilt.edu/fmrc/pdf/wp2000-22 accessed 26/4/2006

Giddy, I., 2003. *The IPO of Telkom South Africa* (Online), Available at http://www.giddy.org, accessed 21/09/2005.

*Going Public*, 2000. A Guide to Stock Exchange Listings, Zimbabwe Stock Exchange

Gounopoulos, D., 2003. *The Initial Performance of IPOs: Evidence from Athens Stock Exchange*, (Online), Available at http://papers.ssrn.com/so13/papers.cfm?abstract_id=406702 accessed 21/09/2005

Guo, R. J., Lev, B., Shi, C., 2005. *Explaining the Short- and Long-Term IPO Anomalies in the US by R&D*, (Online), Available at http:ssrn.com/abstract=795005, accessed 26/4/2006

Houge, T., Loughran, T., Suchanek G., Yan, X., 2001. *Divergence of Opinion, Uncertainty and the Quality of Initial Public Offerings* (Online), Available at http:www.nd.edu/~tloughra/Divergence_of_Opinion.pdf#. accessed 26/4/2006

Ibbotson, R. G., Sindelar, J. L., Ritter, J. R., 1994. The Market's Problems with the Pricing of Initial Public Offerings, *Journal of Applied Corporate Finance* (Spring 1994).

Ibbotson, R. G., Sindelar, J. L., Ritter, J. R., 2001. Initial Public Offerings, *The New Corporate Finance, Where Theory Meets Practice*, Third Edition, McGraw-Hill. pp.309-317

Jegadeesh, N., Weinstein M. 1992. 'An Empirical Investigation of IPO Returns and Subsequent Equity Offerings', *Journal of Financial Economics* (Online) Vol. 34 (1993). pp. 153-175.

Jog, V., 2003. *Analysts Coverage and Long-term Performance of Initial Public Offerings* (Online), available at http://www.fsa.ulaval.ca/nfa2003/papiers accessed 27/4/2006

Kadzere, M., 2006. Investors Expected Back on Equities Market, *The Business Herald*, Monday 10 April, 2006, p. B2.

Kraus, T., Burghof, H., 2002. *Post-IPO Performamce and the Exit of Venture Capitalists* (Online) Available at http://www.sociolpolitik.org/tagungsps/2003/papers/Burghof.pdf# accessed 27/4/2006

Krigman, L., Shaw, W., Womack, K. L., 1997. *The Persistence of IPO Mispricing and The Predictive Power of Flipping*, (Online), Available at http://ssrn.com/abstract=36141, accessed 26/3/2006

Krishman, C. N. V., Singh, A. K., 2004. *Venture Capitalist Reputation and IPO Returns.* (Online), Available at http:ssrn.com/abstract=520362

Lajoux, A. R., 2001. *Investor's Perspective on IPOs*, (Online) available at http://www.amazon.com/exec/obidos/tg, accessed 11/09/2002

Levitt, A., 2000. *Investing With Your Eyes Open,* (Online) available at http://www.sec.gov/news, accessed 03/07/2004

Liu, L., 1999. *Ownership Structure and the Long-Run Performance of IPOs in Taiwan* (Online), Available at http://etd.nsysu.tw/etd-db/etd=D620100-143031 accessed 26/4/2006

Liu, T., 2003. *Investment without Risk: An Empirical Investigation of IPO Underpricing in China,* (Online), Available at http:ssrn.com/abstract=515742, accessed 26/4/2006

Ljungqvist, A. P., Nanda, V. K., Singh, R., (2002). *Hot Issue Markets, Investor Sentiment, and IPO Pricing,* Working Paper, (Online) Available at http://papers.ssrn.com/abstract=263927 accessed 27/10/2002.

Loughran, T., Ritter, J. R., 2002. Why Don't Issuers Get Upset About Leaving Money on the Table in IPOs, (Electronic), *Review of Financial Studies* 2002, Vol. 15, no. 2. pp. 413-443

Ma, T., Shen, Y., 2004. *Prospect Theory and the Long-Run Performance of IPO stocks*, Working Paper, University of Utah - Department of Finance and University of Texas at Dallas - School of Management.

Majaya, L., 2002. *A Study of the Initial Performance of New Issues on the Zimbabwe Stock Exchange*, Graduate School of Management, University of Zimbabwe.

Mberi, R., 2006. Investors Clueless-Gono Keeps Them Guessing, *The Financial Gazette,* March 30-April 5, 2006.

Menyah, K., Paudyal, K., 2002. *IPO Decisions and the Costs of Going Public* (Online) available at http://ssrn.com/abstract=302331 accessed 27/4/2006

Muchirahondo, L., 2002. Nicoz Diamond Allotment Results, *The Business Herald*, 23/10/2002.

Mudambi, R., Treichel, Z. M., 2004. Cash Crisis in Newly Public Internet-based Firms: An empirical Analysis, *Journal of Business Venturing* (Electronic) Vol.20 (2005) pp. 543-571, Available at http://www.sciencedirect.com accessed 27/4/2006

Mudambi, R., Khurshed, A., Goergen, M., 1999. *On the Long-run Performance of IPOs,* (Online), Available at http://astro.temple.edu/~rmudambi/Publication/Long-run_IPO.doc, accessed 26/4/2006

Mutasa, R. N. J., 2002. *A study of the Valuation methods used by Zimbabwean Companies Before Listing on the Zimbabwe Stock Exchange for the Period Since the Introduction of the ZimPrest, January 1996-31 July 2002*, Graduate School of Management, University of Zimbabwe.

Mutsigwa, P. S., 2004. *Aftermarket Performance of Initial Public Offering Firms: Evidence of Zimbabwean Experience 1995-2000*, Graduate School of Management, University of Zimbabwe.

Oehler, A., Rummer, M., Smith P. N., 2004. *IPO pricing and the Relative Importance of investor Sentiment – Evidence from Germany*, Working Paper, Bamberg University , University of Oxford - Saïd Business School and University of York (UK) - Department of Economics and Related Studies.

O'Neill, W. J., 2000. *24 Essential Lessons for Investment Success*, (Online), Available at http://www.amazon.com/exec/obidos/tg, accessed 11/09/2002.

Pukthuanthong, K., Walker, T., 2004. *Stock Options and Long Term IPO Performance*, (Online), Available at http:ssrn.com/abstract=497286, accessed 26/4/2006

Purnanandum, A. K., Swaminathan, B., 2002. *Are IPOs Underpriced* (Online) Available at http://papers.ssrn.com, accessed 29/10/2002.

Rajan, R., Servaes, h., 1996. *Analyst Following of Initial Pblic Offerings* (Online) Available at http://gsb.www.uchicago.edu/fac/raghuram/henri2.pdf# accessed 27/4/2006

Reese, W. A., Jr., 1998. *IPO Under pricing, Trading Volume and Investor Interest*, Working Paper-Tulane University - A.B. Freeman School of Business

Rindermann, G., 2002. *Venture Capitalist Participation and the Performance of IPO Firms: Empirical Evidence from France, Germany, and the UK*, (Online), Available at http:ssrn.com/abstract=425080

Ritter, J. R., 1991. The Long-Run Performance of Initial Public Offerings, *Journal of Finance*, (March 1991).

Ritter, J. R., 1998. Initial Public Offerings, *Contemporary Finance Digest*, Vol.2, No.1 (Spring1998), pp.5-30

Ritter, J. R., 2005. *Returns on IPOs during the Five Years After Issuing, for IPOs from 1970-2003* (Online), Available at http://bear.cba.ufl.edu/ritter/IPOs2005-5years.pdf accessed 26/04/2006

Ritter, J., Welch, I., 2002. 'A review of IPO Activity, Pricing and Allocations', *Journal of* Finance (Online) Vol. LVII, No. 4. pp. 1795-1823.

Ross, S. A., Westerfield, R. W., Jaffe, J., 1996. Issuing Equity Securities to the Public, *Corporate Finance*, Fourth Edition, Irwin McGraw-Hill.

Sapusek, A., 2000. *Benchmark-Sensitivity of IPO Long-Run Performance: An Empirical Study for Germany*, (Online), Available at http:ssrn.com/abstract=311020, accessed 26/4/2006

Saziwa, P., 2006. Firm Rates Chill Equities, *The Business Herald,* Kingdom Market Report, March 16-22, 2006 p. 32.

Schlag, C., Wodrich, A., 2004. *Has There Always Been Underpricing and Long-run Underperformance? IPOs in German Before World War 1* (Online), Available at http://www.univ-orleans.fr/deg/GDRecomofi/Activ/ipo accessed 26/4/2006.

Schultz P. H., 2003. *Pseudo Market Timing and the Long-Run Underperformance of IPOs,* (Online), Available at http://ssrn.com/abstract=416654 , accessed 26/4/2006

Schuster, J. A., 2003. *IPOs: Insights From Seven European Countries* (Online), Available at http://fmg.ac.uk/upload_file/449_dp461.pdf# accessed 26/4/2006

Sentis, P., 2005. *Merging Activity as Rational Explanation of Long-run Underperformance of IPOs*, (Online), Available at http://ssrn.com/abstract=710922, accessed 26/4/2006

Shambira, S., 2002. Companies Resort to IPOs to Raise Capital, *Business Herald,* Thursday 5 December 2002.

Smith, P., Saigol L., 2005. Robust Start Rekindles Hopes for New Issues, *Financial Times,* February 21 2005.

*Sokwanele Report, 2003* Economic Analysis of the Zimbabwe Economy: 1997 to 2003, (Online), available at http://www.ita.doc.gov/TD/Industry/OTEA/usfth/aggregate/H04t34.pdf# , accessed 15/10/2006

Stern, J. M., Chew, D. H. Jr., 1992. A Special Case: Initial Public Offerings, *The Revolution in Corporate Finance,* Second Edition, Blackwell Finance.

Su, D., Fleisher, B. M., 1997. *An Empirical Investigation of Underpricing in Chinese IPOs,* (Online), Available at http://ssrn.com/abstract=2124, accessed 26/4/2006

Tauli, T., 1999. *Investing in IPOs, New Paths to Profit with Initial Public Offerings,* First Edition, Bloomberg Press.

Tauli, T., Harmon, S., 2001. *Investing in IPOs* (Online), Available at http://www.cyberhaven.com/businessbooks/investing, accessed 11/02/2002.

Teoh, S. H., Welch, I., Wong, T. J., 1998. Earnings Management and the Long-Run Performance of Initial Public Offerings, *The Journal of Finance* (Electronic) Vol. LIII, No. 6. pp 1935-1956.

Welch, I., 1989. 'Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings', *Journal of Finance* (Electronic) Vol. XLIV. No.2. pp. 421-449.

Welch, I., 2000. *IPO-The Initial Public Offerings Resource Page* (Online), Available at http://www.iporesources.org/ipopage.html accessed 26/10/2002.

Wier, M., 2000. Investing in IPOs Can be Tricky Business, *Birmingham Business Journal* (January 14, 2000).

Wikipedia, the free encyclopedia, *Zimbabwean Dollar*, (Online), Available at http://en.wikipedia.org/wiki/Zimbabwe_dollar, accessed 15/10/2006.

Wolfgang, B. 2002. *Initial Public Offerings, Subsequent Seasoned Equity Offerings, and Long-Run Performance: Evidence from IPOs in Germany*, Working Paper, Justus-Liebig-University Giessen, Centre for Banking and Finance.

Zweig, J., 2002. *Master of Disaster* (Online), Available at http://www.assetpub.com/archive/gc/92-94, accessed 26/10/2002.

**STOCK EXCHANGE PUBLICATIONS, LEGISLATION AND STATISTICAL BULLETINS**

Central Statistical Office (CSO) Consumer Price Index (CPI) Bulletin, 10 November 2005.

Central Statistical Office (CSO) Consumer Price Index (CPI) Bulletin, 13 September 2006

Going Public, 2002. A Guide to Stock Exchange Listings: Zimbabwe Stock Exchange.

The Investors' Financial Markets Handbook, Issue number 2, 1998

The Investors' Financial Markets Handbook, Issue number 5, 2001

The Zimbabwe Stock Exchange Handbook, 2004

# APPENDICES

## Appendix 1: Ethical Clearance

RESEARCH OFFICE (GOVAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 – 2603587
EMAIL : ximbap@ukzn.ac.za

1 AUGUST 2006

**MR. T MAWERE (200297074)**
**MANAGEMENT STUDIES**

Dear Mr. Mawere

**ETHICAL CLEARANCE APPROVAL NUMBER : HSS/06320A**

I wish to confirm that ethical clearance has been granted for the following project:

> **"An investigation into the effectiveness of initial public offerings (IPOs): A case for Zimbabwe"**

Yours faithfully

**MS. PHUMELELE XIMBA**
**RESEARCH OFFICE**

**PS: The following general condition is applicable to all projects that have been granted ethical clearance:**

THE RELEVANT AUTHORITIES SHOULD BE CONTACTED IN ORDER TO OBTAIN THE NECESSARY APPROVAL SHOULD THE RESEARCH INVOLVE UTILIZATION OF SPACE AND/OR FACILITIES AT OTHER INSTITUTIONS/ORGANISATIONS. WHERE QUESTIONNAIRES ARE USED IN THE PROJECT, THE RESEARCHER SHOULD ENSURE THAT THE QUESTIONNAIRE INCLUDES A SECTION AT THE END WHICH SHOULD BE COMPLETED BY THE PARTICIPANT (PRIOR TO THE COMPLETION OF THE QUESTIONNAIRE) INDICATING THAT HE/SHE WAS INFORMED OF THE NATURE AND PURPOSE OF THE PROJECT AND THAT THE INFORMATION GIVEN WILL BE KEPT CONFIDENTIAL.

cc. Faculty Officer (Post-Graduate Studies)
cc. Supervisor (Prof. S Lubbe)

# Appendix 2 : Concept Matrix

| References \ Concepts | **IPOs are Underpriced/ High Positive Initial Returns** | -To Leave a Good taste in Investors Mouths/ Underpricing is Intentional & Strategic | -To Reducing Legal Liability | -To Signal the Quality of a Firm for Future Equity Issues | -As a Substitute for Costly Marketing Expenses | -Above Average returns due to Investors' Over-Optimism | -Above average returns due to Underwriter Stabilisation | -High returns due to Pre-IPO Profitability & Market Condition | - Above Average Returns because Flipping Creates Artificial demand | -Due to Information Asymmetries/Winner's Curse | **Poor Long-Run IPO performance** | -Due to Existence of Speculative Bubbles/Exuberant Investors | -Due to Optimistic Accounting Early in the Life of the Firm | -Unduly Optimistic Market unable to forecast Tougher Times Ahead | -Due to Market Misvaluation or Mispricing of IPOs | **Long-overperfomance of IPOs** | -Due to Degree of Multinationality | -Due to Venture Capitalist Backing | -Firm Size, Age of Company & underwriter Quality (Reputation) | -Due to Equity retention (Insider Ownership) and or Stock Options | -Financial Analysts Coverage | -Due to Institutional Ownership | **Neutral performance (no over or underperformance of the IPOs)** | **Underperformance not an IPO effect** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Agarwal *et al.*, (2001) | ✓ | | | | | | | | | | | | | | | ✓ | | | | | ✓ | | | |
| Agarwal *et al.*,(2004) | | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Ang *et al.*, (2005) | | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Ahmad-Zaluki *et al.*, (2004) | | | | | | | | | | | ✓ ✓ | | | | | | | | | | | | | |
| Arosio *et al.*, (2000) | ✓ | | | | | | | | | | | | | | | | | | | | | | | |
| Bachmann (2004) | ✓ | | | | | | | | | ✓ | ✓ | | | | | | | | | | | | | |
| Bai & Zhang (2004) | ✓ | | | | | | | | | | | | | | | ✓ | | | | | | | | |
| Balatbat (2002 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brav & Gompers (1997) | | | | | | | | | | | | | | | | | | | | | | | | ✓ |
| Brav & Gompers (2004) | | | | | | | | | | | | | | | | | | | | | | | | |
| Byrne and Rees (1994) | ✓ | | | | | | | | | | | | | | | | | | | | | | | |
| Chahine (2001) | | | | | | | | | | | ✓ | | | | ✓ | | | | | | | | | |
| Chan *et al.*, (2003) | ✓ | | | ✓ | | | | | | | ✓ | | ✓ | | | ✓ | | ✓ | | | | | | |
| Chi & Padgett (2002) | ✓ | | | | | | | | | | | | | | | ✓ | | | | ✓ | | ✓ | | |
| Coakley *et al.*, (2004) | | | | | | | | | | | | | | | | ✓ | | ✓ | | | | | | |
| Connelly *et al.*, (2004) | | | | | | | | | | ✓ | | | | | | | | | | | | | | |
| Derrien (2003) | | | | | | | | | | | ✓ | | | ✓ | | | | | | | | | | |
| Ducharme *et al.*, (2001) | ✓ | | | | | | | | | | | | | | | | | | ✓ | | | | | |
| Eckbo & Norli (2000) | | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Filatotchev and Bishop (2000) | ✓ | | | ✓ | | | | | | | | | | | | | | | | | | | | |
| Fishe (1999) | ✓ | | | | | | ✓ | | ✓ | | | | | | | | | | | | | | | |
| Foster-Johnson *et al.*, (2000) | ✓ | | | | | ✓ | | | | | ✓ | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gounopoulos (2003) | ✓ | | | | | | | ✓ | | | | | | | | | | | | | | | | |
| Guo *et al.*, (2005) | | | | | | | | | | ✓ | | | | ✓ | | | | | | | | | | |
| Houge *et al.*, (2001) | | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Khurshed *et al.*, (1999) | | | | | | | | ✓ | | | | | | | | | ✓ | | | | | | | |
| Kraus & Burghof (2003) | | | | | | | | | | | | | | | | ✓ | | ✓ | | | | | | |
| Krishnan & Singh | ✓ | | | | | | | | | | | | | | | ✓ | | ✓ | | | | | | |
| Krigman *et al.*, (1997) | ✓ | ✓ | | | | | | | ✓ | | | | | | | | | | | | | | | |
| Liu (1999) | | | | | | | | | | | ✓ | | | | | | | | | ✓ | | | | |
| Liu (2003) | ✓ | | | ✓ | | | | | | ✓ | | | | | | | | | | | | | | |
| Ljungqvist (2002) | ✓ | | | | | | | | ✓ | ✓ | | | | | | ✓ | | | | | | | | |
| Loughran & Ritter (2002) | ✓ | | | | | | | | | | | | | | | | | | | | | | | |
| Ma & Shen (2003) | | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Majaya (2002) | ✓ | | | | | | | | | | | | | | | | | | | | | | | |
| Mutsigwa (2004) | ✓ | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Oehler *et al.*, (2005) | ✓ | | | | | ✓ | | | | | | | | | | | | | | | | | | |
| Pukthuanthong & Walker (2004) | ✓ | | | | | | | | | | | | | | | ✓ | | | | ✓ | | | | |
| Rindermann (2002) | | | | | | | | | | | | | | | | | | ✓ | | | | | | |
| Riiter (1991) | | | | | | | | | | | | | | | | | | | | | | | | |
| Reese Jr. (1998) | | | | | | ✓ | | | | | | | | | | | | | | | | | | |
| Ritter (1998) | ✓ | | ✓ | | | | | | | | ✓ | | | | | | | | | | | | | |
| Ritter (2005) | | | | | | | | | | | | | | | | | | | | | | | | |
| Ritter and Welch (2002) | ✓ | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | | | | | |
| Ross *et al.*, (1996) | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | |
| Sapusek (2000) | | | | | | | | | | | | | | | | | | | | | | | ✓ | |
| Schultz (2003) | | | | | | | | | | | ✓ | | | | ✓ | | | | | | | | | |
| Schuster (2003) | | | | | | | | | | | | | | | | ✓ | | | | | | | | |
| Schlag & Wodrich (2000) | ✓ | | | | | | ✓ | | | | ✓ | | | | ✓ | | | | | | | | | |
| Sentis (2005) | ✓ | | | | | | | | | ✓ | ✓ | | | | | | | | | | | | | |
| Smith and Saigol (2005) | | | | | | | | | | | | | | | | ✓ | | | | | | | | |
| Su & Fleisher (1997) | ✓ | | | ✓ | | | | | | | | | | | | | | | | | | | | |
| Teoh *et al.*, (1998) | | | | | | | | | | | ✓ | | ✓ | | | | | | | | | | | |
| Weir (2000) | | | | | | | | | | | ✓ | | | | | | | | | | | | | |
| Welch (1989) | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | |
| Welch | ✓ | | | | ✓ | | | | | | | | | | | | | | | | | | | |

Note: This Concept Matrix was developed using a Concept Matrix template adapted from Prof. Rembrandt Klopper and Prof. Sam Lubbe© 2005

## Appendix 3: Questionnaire

**An Investigation into the Effectiveness (Performance) of Initial Public Offerings (IPOs): A Case for Zimbabwe**

*FOR OFFICE USE ONLY Respondent code............*

| Voluntary questionnaire for companies that deal with or in invest in initial public offerings (IPOs) and seasoned companies on the Zimbabwe Stock Exchange (ZSE) |
|---|
| Graduate School of Business |
| University of Kwazulu Natal |
| Research Topic: An Investigation into the Effectiveness of Initial Public Offerings (IPOs). A case for Zimbabwe |
| Supervisor: Prof. Sam. Lubbe |

**Note to respondent**

This study seeks to establish the level of underpricing of IPOs in Zimbabwe, why IPOs are in most cases underpriced, the factors behind the high IPO oversubscription rates and how they perform in the long-run in comparison to seasoned matching firms.

- Whilst the survey is voluntary, your input would be extremely valuable
- Your response to this questionnaire will remain private and confidential. No one will be able to trace your opinions back to you individually or to your organisation.

This questionnaire consist of four parts

- Part 1 asks for permission to use your response for an academic research;
- Part 2 asks for the category into which your organisation falls and its dealings in IPOs;
- Part 3 asks for information about your opinion on the performance of IPOs; and
- Part 4 deals with or asks open ended questions in which you are requested to give reasons in support of your answer

**How to complete the questionnaire**

- Please answer all questions by ticking (√) the appropriate box and or writing in the space provided. Where the space provided is not adequate please feel free to use and attach an extra sheet.
- Please answer the questions as best as you can and be sure to read and follow the instructions for each part.

The results of the study will be made available to the participating organisations on request. Your prompt response, no latter than 31 August, 2006 would be highly appreciated.

Thank you very much for taking your time to complete this questionnaire.

Student: Tinashe Mawere MBA Student UKZN

Supervisor: Prof. Sam Lubbe

*If you have any queries or would like further information about the project, you can contact me Tinashe Mawere on 091 315632 Mobile or 04 610663 or email: tinashemawere@yahoo.com. Or contact my supervisor Prof. Sam Lubbe at 031-260 7280 or email: Slubbe@ukzn.ac.za*

**Part 1** Permission to use response

**I....................................................... (name) hereby give permission that my response may be used for research purposes provided that my identity and that of my organisation is not revealed in the published records of the research.**

Postal address (for mailing results purposes):.........................................................

Contact numbers: Work: ........................

Cell: ...........................

**Part 2** Please complete the following information about the organization and their investments in IPOs in Zimbabwe:

1. What category of investor do your organisation fall in (Tick (√) appropriate)?

☐ Brokerage house ☐ Mutual Fund ☐ Insurance Company ☐ Pension Fund ☐ Underwriter/Merchant Bank

2. In respect of the investments in IPOs on behalf of the employer or clients, which sectors did you invest in (Tick (√) all that applies)?

☐ Agricultural Inputs ☐ Agric-Processing ☐ Conglomerate ☐ Financial ☐ Health Care
☐ Insurance ☐ Retail ☐ Technology ☐ Tourism

3. Which return category best describes the average initial returns you obtained from IPO investments between 1997 and 2002?

☐ 0 to <25% ☐ 25 to <50% ☐ 50 to <75% ☐ 75 to <100% ☐ over 100%

4. Of the sectors invested in, which three would you say offer the best IPO investment returns in Zimbabwe (in order of the returns received)?

1st.......................................2nd.......................................3rd.......................................

**Part 3** Please give your opinion and experience on the performance of IPOs. Please show your rating on each of the questions by ticking (√) the appropriate box.

5. IPOs in Zimbabwe are underpriced

☐ Strongly Agree ☐ Mildly Agree ☐ Neither Agree nor Disagree ☐ Mildly Disagree ☐ Strongly Disagree

6. Issuers permit high levels of underpricing in order to ensure success of the IPO and avoid the embarrassment associated with a failed offering.

☐ Strongly Agree ☐ Mildly Agree ☐ Neither Agree nor Disagree ☐ Mildly Disagree ☐ Strongly Disagree

7. How do you rate short-run investment returns from IPOs?

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very poor

8. How do you rate long-run investment returns from IPOs?

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very poor

9. Short-run returns from IPOs are higher than the returns from already trading matching firms.

☐ Strongly Agree ☐ Mildly Agree ☐ Neither Agree nor Disagree ☐ Mildly Disagree ☐ Strongly Disagree

10. IPOs are poor performers in the long-run (i.e. existing quoted companies offer better long-run returns than IPOs)

☐ Strongly Agree ☐ Mildly Agree ☐ Neither Agree nor Disagree ☐ Mildly Disagree ☐ Strongly Disagree

11. High short-run IPO returns are a result of IPO underpricing.

☐ Strongly Agree ☐ Mildly Agree ☐ Neither Agree nor Disagree ☐ Mildly Disagree ☐ Strongly Disagree

**Part 4** Please fill in the following information, giving reasons where necessary in support of your answer.

12. IPOs in Zimbabwe are in most cases over-subscribed.

☐ Yes ☐ No

If YES what would you say are the possible reasons behind this investor over-optimism in IPOs?

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13. In your opinion why do IPOs reward first-day investors with considerable underpricing?

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14. Apart from possible underpricing what other factors influence investors buying into an IPO?

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15. Which characteristics are most important to you when considering investing in an IPO (state the characteristics)?

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..................................................................................................................................

16. In your opinion is there adequate information on the Zimbabwean stock market on investing in initial public offerings?

☐ Yes ☐ No

If NO give suggestions on what the Zimbabwe Stock Exchange should do to increases awareness and make available the required information..........................................................

..................................................................................................................................

17. Short-run returns from IPOs are higher than returns from most money market instruments.

☐ Yes ☐ No

Give reasons for your answer..........................................................................................

..................................................................................................................................

18. In your opinion does the level of money market returns have an influence on the investors' interest in IPOs?

☐ Yes ☐ No

Give reasons for your answer..........................................................................................

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19. In your opinion what critical factors govern the successful performance or failure of IPOs?

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..................................................................................................................................

Thank you very much for your time and cooperation. Please return the completed questionnaire in the attached postage-paid envelope by 31 August, 2006 to: **Tinashe Mawere P. O. BOX 365 HARARE**

**Appendix 4: Comparison of Buy-and-Hold Returns (BHRs) from IPOs and Matching Firms in Nominal Terms (before adjusting for the effects of inflation).**

| Sector | Firm Type | Name of Firm | Date Listed | Initial Return | 30 Day % change (BHR) | 1 Year % change (BHR) | 2 Year % change (BHR) | 3 Year % change (BHR) | 4 Year % change (BHR) | 5 Year % change (BHR) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Agricultural Inputs** | A | Cottco | 1/12/1997 | 0% | -27% | -11% | 59% | 1400% | 2900% | 2264% |
| | B | Seed-Co | | 0% | -33% | -38% | 20% | 133% | 1233% | 1300% |
| **Agri Processing** | A | Dairibord | 15/09/1997 | 83% | 67% | -25% | 39% | 171% | 692% | 1067% |
| | B | Hippo Valley Estates Ltd | | 0% | -3% | -52% | -25% | -12% | 326% | 378% |
| **Conglomerate** | A | CFI | 17/03/1997 | 43% | 30% | -23% | -23% | 60% | 100% | 650% |
| | B | Delta Corporation Ltd | | 0% | 6% | -26% | -51% | -45% | -6% | 165% |
| | A | Randalls | 7/04/1997 | 12% | 0% | -62% | -62% | -62% | -100% | -100% |
| | B | TSL | | 0% | -4% | -51% | -14% | -48% | -38% | 154% |
| **Financial** | A | Nmbz | 17/04/1997 | 42% | 42% | -50% | -36% | 170% | 1145% | 27% |
| | B | Kingdom | | 0% | -11% | -60% | -7% | 171% | 1200% | 1278% |
| | A | CBZ/Jewel Bank | 29/06/1998 | 44% | 56% | -3% | -38% | 631% | 906% | 1463% |
| | B | Barclays Bank Of Zimbabwe | | 0% | 15% | 120% | 580% | 1060% | 1160% | 940% |
| | A | First Banking Corporation | 11/06/2001 | 45% | 245% | 282% | 264% | 1127% | 36264% | 290809% |
| | B | Abc Holdings Limited | | 0% | 24% | -2% | 320% | 95% | 600% | 24900% |
| | A | Trust Bank Ltd | 11/07/2001 | 473% | 273% | 167% | 487% | 33% | -100% | -100% |
| | B | Zimbawe Financial Holdings | | 0% | 14% | 286% | 1157% | 7900% | 22186% | 102757% |
| | A | Century (Cfx) | 19/03/2001 | 45% | - | - | -91% | - | - | 627% |
| | B | Kingdom | | 0% | 172% | 272% | 179% | 319% | 830% | 55714% |
| **Healthcare** | A | Macmed (Medtech) | 24/08/1998 | 17% | -27% | -10% | -73% | -77% | 233% | 2233% |
| | B | Caps Holdings Ltd | | 0% | -10% | 55% | 2% | 43% | 352% | 4067% |
| **Insurance** | A | Nicoz Diamond | 28/10/2002 | 23% | -18% | 614% | 761% | 6150% | 46329% | - |
| | B | Zimnat | | 0% | -20% | 54% | 41% | 910% | 12021% | - |
| | A | Zimre | 22/11/1997 | 7% | 5% | -7% | 220% | 867% | 2900% | 833% |
| | B | SARE/FBCH W.E. 26/8/2004 | | 0% | - | -59% | 3580% | 19900% | 1660% | 9500% |
| | A | Zimnat Lion | 24/05/2001 | 50% | 14% | 36% | 136% | 309% | 1173% | 58991% |
| | B | Old Mutual Zimbabwe Plc | | 0% | -2% | 76% | 332% | 2062% | 12062% | 20981% |
| **Retail** | A | Ok Zimbabwe Limited | 17/10/2001 | 5% | 40% | 564% | 2650% | 3850% | 33900% | 299900% |
| | B | Meikles Africa Limited | | 0% | 18% | 296% | 3471% | 4614% | 42757% | 292757% |
| **Tourism** | A | Rtg | 1/11/1999 | -7% | 0% | -63% | -13% | 367% | 1567% | 10567% |
| | B | Zimbawe Sun Limited | | 0% | -7% | -63% | -7% | 317% | 767% | 8567% |
| | | | **Mean A** | **56%** | **50%** | **101%** | **285%** | **1071%** | **9854%** | **51487%** |
| | | | **Mean B** | **0%** | **11%** | **54%** | **639%** | **2495%** | **5352%** | **40266%** |
| | | Difference in Mean % Return Between A and B | | 100% | 77% | 47% | -124% | -133% | 46% | 22% |

**Note:** 1. A denotes IPO Companies and B, the Matching Firms. 2. Year 5 returns for Nicoz Diamond and its matching firm were not analysed because the company had only traded for 4 years by the time this study was finalised.

**Appendix 5: Comparison of Buy-and-Hold Returns (BHRs) from IPOs and Matching Firms in Real Terms (using figures discounted to July 2006 real dollars).**

| Sector | Firm Type | Name of Firm | Date Listed | Initial Return | 30 Day % change (BHR) | 1 Year % change (BHR) | 2 Year % change (BHR) | 3 Year % change (BHR) | 4 Year % change (BHR) | 5 Year % change (BHR) |
|---|---|---|---|---|---|---|---|---|---|---|
| Agricultural Inputs | A | Cottco | 1/12/1997 | 0% | -31% | -39% | -31% | 320% | 296% | 4% |
| | B | Seed-Co | | 0% | -37% | -58% | -48% | -35% | 76% | -38% |
| Agri Processing | A | Dairibord | 15/09/1997 | 83% | 65% | -43% | -38% | -25% | 17% | -28% |
| | B | Hippo Valley Estates Ltd | | 0% | -3% | -63% | -66% | -75% | -36% | -70% |
| Conglomerate | A | CFI | 17/03/1997 | 43% | 26% | -40% | -61% | -46% | -56% | -5% |
| | B | Delta Corporation Ltd | | 0% | 2% | -43% | -75% | -81% | -26% | -61% |
| | A | Randalls | 7/04/1997 | 12% | 1% | -70% | -80% | -87% | -100% | -100% |
| | B | TSL | | 0% | -3% | -60% | -55% | -82% | -87% | -75% |
| Financial | A | Nmbz | 17/04/1997 | 42% | 43% | -60% | -67% | -9% | 167% | -87% |
| | B | Kingdom | | 0% | -10% | -68% | -52% | -9% | 179% | 38% |
| | A | CBZ/Jewel Bank | 29/06/1998 | 44% | 57% | -38% | -75% | 80% | 15% | -61% |
| | B | Barclays Bank Of Zimbabwe | | 0% | 15% | 42% | 175% | 185% | 44% | -74% |
| | A | First Banking Corporation | 11/06/2001 | 45% | 231% | 78% | -64% | -75% | 179% | 74% |
| | B | Abc Holdings Limited | | 0% | 19% | -54% | -58% | -96% | -95% | -85% |
| | A | Trust Bank Ltd | 11/07/2001 | 473% | 252% | 19% | -47% | -97% | -100% | -100% |
| | B | Zimbawe Financial Holdings | | 0% | 8% | 73% | 13% | 55% | 22% | -49% |
| | A | Century (Cfx) | 19/03/2001 | 45% | - | - | -99% | - | - | -99% |
| | B | Kingdom | | 0% | 159% | 74% | -60% | -91% | -91% | -49% |
| Healthcare | A | Macmed (Medtech) | 24/08/1998 | 17% | -29% | -47% | -90% | -95% | -69% | -59% |
| | B | Caps Holdings Ltd | | 0% | -13% | -8% | -61% | -69% | -58% | -26% |
| Insurance | A | Nicoz Diamond | 28/10/2002 | 23% | -29% | 14% | -55% | -37% | -24% | - |
| | B | Zimnat | | 0% | -31% | -75% | -93% | -90% | -80% | - |
| | A | Zimre | 22/11/1997 | 7% | 3% | -40% | 1% | 10% | -52% | -94% |
| | B | SARE/FBCH W.E. 26/8/2004 | | 0% | - | -74% | 1058% | 2184% | -72% | -39% |
| | A | Zimnat Lion | 24/05/2001 | 50% | 5% | -39% | -73% | -92% | -89% | -62% |
| | B | Old Mutual Zimbabwe Plc | | 0% | -9% | -21% | -51% | -56% | 2% | -86% |
| Retail | A | Ok Zimbabwe Limited | 17/10/2001 | 5% | 36% | 172% | 80% | -16% | 41% | 101% |
| | B | Meikles Africa Limited | | 0% | 14% | 62% | 134% | 0% | 78% | 96% |
| Tourism | A | Rtg | 1/11/1999 | -7% | -2% | -76% | -73% | -47% | -74% | -32% |
| | B | Zimbawe Sun Limited | | 0% | -8% | -76% | -71% | -52% | -86% | -45% |
| | | | **Mean A** | **56%** | **45%** | **-15%** | **-51%** | **-15%** | **11%** | **-39%** |
| | | | **Mean B** | **0%** | **7%** | **-23%** | **46%** | **112%** | **-15%** | **-40%** |
| | | Difference in Mean % Return Between A and B | | 100% | 84% | 53% | -190% | -647% | 236% | 2.5% |

**Note:** 1. A denotes IPO Companies and B, the Matching Firms. 2. Year 5 returns for Nicoz Diamond and its matching firm were not analysed because company had only traded for 4 years by the time this study was finalised.

## Appendix 6: Inflation in Zimbabwe

**Zimbabwean inflation rates since Independence**

| Date | Rate | Date | Rate | Date | Rate | Date | Rate | Date | Rate | Date | Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1980 | 7% | 1981 | 14% | 1982 | 15% | 1983 | 19% | 1984 | 10% | 1985 | 10% |
| 1986 | 15% | 1987 | 10% | 1988 | 8% | 1989 | 14% | 1990 | 17% | 1991 | 48% |
| 1992 | 40% | 1993 | 20% | 1994 | 25% | 1995 | 28% | 1996 | 16% | 1997 | 20% |
| 1998 | 48% | 1999 | 58% | 2000 | 56% | 2001 | 132% | 2002 | 139% | 2003 | 385% |
| 2004 | 624% | 2005 | 586% | 2006 | 1023% | | | | | | |

Note: Rampant inflation and the collapse of the economy have severely devalued the currency, with many organisations using the US dollar instead. Inflation in 1997 was 20% and early in the 21st century Zimbabwe started to experience hyperinflation. Inflation reached 624% in early 2004, then fell back to low triple digits before surging to a new high of 1,204.6% in August 2006. If policies do not change, the IMF has predicted an inflation rate of over 4000% for the year 2007 from 1023% in September 2006. Adapted from Wikipedia-the free encyclopedia.