

**ASSESSING THE PERFORMANCE OF EQUITY MUTUAL FUNDS: A CASE
STUDY OF SOME SELECTED FUNDS IN GHANA**

**BY
ABENA BOATEMAA POKU**

**A Thesis Submitted To The Department Of Accounting And Finance, Kwame
Nkrumah University Of Science And Technology In Partial Fulfilment Of The
Requirement For The Degree Of**

MASTER OF BUSINESS ADMINISTRATION-FINANCE

SCHOOL OF BUSINESS

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

OCTOBER, 2016

DECLARATION

I declare that this thesis with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

(Student Name&ID)

Abena Boatemaa Poku

(PG2117514)

Signature

Date

Certified by

Daniel Domeher (Phd)

(Supervisor)

Signature

Date

Certified by

Daniel Domeher (Phd)

(Head Of Department)

Signature

Date

DEDICATION

This work is dedicated to my dear husband, family and the memory of my late mother,
Madam Augustina Agyemang.

KNUST



ACKNOWLEDGEMENTS

I thank the Almighty God for His Grace and Mercies throughout the program, Glory be to His name. I express my profound gratitude to my supervisor, Dr Daniel Domeher for his assistance and direction to make this study a success. My appreciation also goes to the management and staff of Databank, HFC and SAS Asset Management for making available all the necessary data used for this work. My gratitude also goes to my family especially my brother Kwaku Gyamfi Ampofo for his invaluable support and encouragement throughout the study of the programme.



TABLE OF CONTENT

DECLARATION.....	ii
DEDICATION	ii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENT	v
LIST OF TABLES	vii
LIST OF FIGURES	ix
ABSTRACT	x
CHAPTER ONE	1
INTRODUCTION	1
1.0 Background of the study	1
1.1 Problem statement	4
1.2 Objective of the Study	5
1.3 Research questions	5
1.4 Justification of the Study	6
1.5 Research Methodology	7
1.6 Scope of the Study	7
1.7 Limitation of the study	7
1.8 Organization of the Study	8
CHAPTER TWO	9
LITERATURE REVIEW	9
2.1 Introduction	9

2.2 Theoretical review	9
2.3 Definition of concepts	11
2.4 Factors Affecting Mutual Fund Performance	13
2.4.1 Expense ratio	14
2.4.2 Management Style	15
2.4.3 Asset size	16
2.4.4 Fund age	18
2.4.5 Turnover ratio	19
2.5 Overview of the Ghanaian mutual fund	19
2.5 Empirical reviews	22
CHAPTER THREE	27
METHODOLOGY	27
3.1 Introduction	27
3.2 Research Design	27
3.3 Population of the Study	29
3.4 Sample and Sampling Techniques	29
3.5 Performance measurement	30
3.5.1 Fund Managers Skill	30
3.5.2 Fund Managers Timing Abilities	31
3.5.3 Return of Fund	31
3.6 Data Collection Procedures	33
3.7 Data analysis	34
CHAPTER FOUR	35
DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS	35
4.0 Introduction	35
4.1 Performance of the Mutual Funds	35

4.1.1 Descriptive Statistics	35
Table 1: Funds Raw Returns	37
Table 2: Summary of Descriptive Statistics	37
Fig 1: Funds Performance against the Ghana Stock Exchange	38
Fig 2: Funds Performance against and the TBR	38
4.2 The Impact of Fund Manager's Skills on Equity Mutual Funds Performance	
44 Table 3: Descriptive Funds Manager's Ability	
46	
4.2.1 Data bank Epack Fund Manager's Skill	46
4.2.2 HFC Equity Trust Fund Manager's Skill	48
4.2.3 SAS Fortune Fund Manager's Skill.....	49
CHAPTER FIVE	53
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	53
5.1 Introduction	53
5.2 Summary	53
5.3 Conclusions	55
5.4 Recommendations	56
References	58
APPENDIX A	64
LIST OF TABLES	v
Table 1: Funds Raw Returns.....	36
Table 2: Summary of Descriptive Statistics	37
Table 3: Descriptive Funds Manager's Ability	45

Tables

Pages

LIST OF FIGURES

Tables

Pages

Fig 1: Funds Performance against the Ghana Stock Exchange 38

Fig 2: Funds Performance against and the TBR 38



ABSTRACT

Mutual funds are investment vehicles made up of a pool of funds collected from many investors for the purpose of investing in securities such as stocks, bonds and money market instruments. Equity mutual funds refer to financial service providers that pool investor monies and invest them in domestic and international equity and fixed income securities. However, equity mutual funds are not allowed to be invested directly in real (tangible) assets thus; real estates, antiquities, commodities. The research measured how the equity mutual funds in Ghana have relatively performed against the Ghana Stock Exchange. Accordingly, the study sought to measure the following objectives; to find out whether the funds outperformed the Ghana Stock Exchange Index within the study period, to establish the impact of fund manager skills on equity mutual funds performance and finally to find out whether investment in mutual fund is better off than investment in a risk free rate fund. All the forty-six mutual funds operating in Ghana including the Government of Ghana 90-days T-bills returns (which acted as the risk-free investment option) and finally the Ghana Stock Exchange return (as the benchmark investment index) constituted the study population. The study employed purposive sampling technique hence the study sample came from Databank Epack investment, SAS Fund and HFC Equity trust fund since they had a complete dataset for the whole eight-year period of the study time interval. It became evident that the mean return for all the three funds ranges from 2.30 to 7.49. The study found out that out of the three funds, HFC Equity trust outperformed both the Ghana Stock Exchange and the interest free rate investment options by a margin of 7.2 and 5.9 respectively. Also the study found out that the other two funds thus Databank Epack investment and SAS Fund performances all fell below the GSE market index and the T-bill rate average annual returns.

CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Equity mutual funds refer to financial service providers that pool investor monies and invest them in domestic and international equity and fixed-income securities (Haslem, 2003). However, equity mutual funds are not allowed to be invested directly in real (tangible) assets thus; real estates, antiquities, commodities, etc. Their portfolios may include money market securities, capital market securities, and derivative market securities. Their restrictions to these equity markets can be attributed to the fact that their investors are predominantly non-professional individuals and for that matter regulatory restrictions are imposed on fund managers in order to safeguard their investment portfolios from venturing into highly sophisticated ventures (London and New York Stock Exchange as cited in Tyson, 2015).

According to Cuthbertson, Nitzsche and O'Sullivan(2010) both the closed and ended opened funds within the world financial markets have witnessed massive stretch in term of its growth in the last 30 years and currently constitute large amounts of household savings. For example statistics available indicates that in the year 2005 investors in the United States economy alone had over \$8.9 trillion of its funds value in both opened and closed ended (Investment Company Institute, 2006). Likewise, it has been reported that between 2008 and June 2015, over \$16.1 billion has been raised for investment in sub-Saharan Africa through the investment trading companies within the continent (Tyson, 2015).

Consequently, within the Ghanaian context it is evident that the number of registered investment schemes most especially mutual funds have increased from as little as just four entities in 2004: the National Trust Holding Company (NTHC), the Fortune Fund by Strategic African Securities Limited and M-Fund and Epack all by Databank to over 46 registered companies as at 2014 (Securities and Exchange Commission annual report, 2014). This number is very impressive looking at where it started years back and where it is now. Nonetheless, the savings and investment culture of Ghanaians is yet to peak up with the numerous investment opportunities within the financial markets.

Hence, it is argued that open ended funds are investment options which provide investors with wide range of options in terms of financial assets which takes into account its investors risk appetite thus, whether they will prefer an aggressive growth investment options or a more sustained growth companies (Wermers as cited in Cuthbertson et al., 2010). Most investment within such options are classified as active form of investing simply because it is been run by an investment team whose function or task is to choose from a portfolio stocks that have the potential to perform better than the market some time to come and because their management operations come with cost they charge their investors for such cost and fees.

However, the rationale for these actively managed funds are that they are suppose to increase its return by relying on their research information and management intelligence in selecting stocks that can return a positive value. According to Cuthbertson and colleagues (2010) there two key areas that actively managed fund have to satisfied;

whether they are able to achieve a positive return and if that is the case there has to be proved that these positive returns are eventually realised or enjoyed by its investors.

Admittedly both closed and open ended funds are view as investment options employed by both the skilful and unskilful investors and it has over the years proven to be one of the important pillars within the financial market. This investment options are most often handled by financial institutions who are licensed to operate as investment companies (Elton, Gruber, Krasny, & Ozelge, 2006; Bodie, Kane & Marcus, 2004). Ever since its inception, its performance measurement continues to be a field of interest to both players and industry watchers and hence academics in the field of finance and econometric studies have explored these areas (Jensen, 1968).

According to Jensen (1968) the reason for such continuous enthusiasm in this area is that, through such performance measurement, one can know how a fund option performed, likewise the capabilities of a fund head to rightfully choose from a pool of assets and double its future returns can be verified and checked in the same direction as well. Therefore, this study attempts to follow the same trajectory by measuring the performance of some selected equity mutual funds within an unexploited area within the financial literature.

1.1 Problem statement

The desire for financial freedom coupled with future uncertainties have increased peoples demand in investing. Nonetheless, the ability for such investment options to address these needs have increased the need to measure these funds performances to ascertain its suitability to achieve such needs (Jensen, 1967).In spite of its wide range

of benefits equity mutual funds provide to the ordinary investor, issues relating to its consistency in terms of performance has been an increasing concern ever since the 1960s till date. Notably, some scholars and works have shown that equity mutual funds are able to outperform the non-actively managed funds or even the market index funds; nevertheless others have posited a contrary view to that.

For instance, Sharpe (1966) and Jensen (1968) who are credited of being the pioneers in measuring equity mutual funds performance over the years established in their report that in general, actively managed funds thus mutual funds cannot in any way outperformed the non-actively managed funds (i.e. selected market indices). Jensen (1968) established in his studies that both open and closed ended funds are in most cases not able to outperform the market index in any way when it is even accepted in principle that the management charges associated with its operations viz; bookkeeping and research expenses will be taken out of its return.

However, within the context of Ghana no single study has been done to assess how the equity mutual funds faired for an extended period of 5 years and above. Admittedly, the works of Adimako (2009) and Yeboah (2009) in a way measured the equity mutual funds performance in their respective works however their work only measured it within one and two year period respectively. Hence, this study will give an empirical evidence to ascertain how the equity mutual funds in Ghana have performed between the periods of 2007-2015. Therefore this research seeks to measure the performance of Databank Epack investment, SAS Fund and HFC Equity Trust fund from the period of 2007-2014.

1.2 Objective of the Study

The primary focus of this research is to measure the performance of Databank Epack, HFC Equity Trust and SAS Fortune Fund as against the Ghana Stock Exchange and Government of Ghana 91-days Treasury bill. Specifically the study hopes to achieve the following:

1. To assess whether the funds outperformed the Ghana Stock Exchange Index and risk free investment (Government of Ghana Treasury Bill) within the study period.
2. To establish the impact of fund manager skills on equity mutual funds performance.

1.3 Research questions

1. How has the funds performed as against the Ghana Stock Exchange Index within the study period?
2. What is the impact of fund manager skills on equity mutual funds performance?
3. How has the mutual funds performed as against the risk free rate investment?

1.4 Justification of the Study

The measured of actively managed funds performance has been a topical issue in the financial circles for some time now. Many studies in a way have measured both open and closed equity mutual funds performance within different markets and economies, using a variety of performance measurement techniques and adjustments for risk. Most research in equity mutual fund performance focused on advanced economies such as

the U.S. markets, such as Jensen (1968), Grinblatt and Titman (1995), Goetzmann, Ibbotson and Elton (1994), and Gruber and Blake (1996).

Likewise, some studies have been conducted in the UK market as well (See for example, Fletcher, 1997; Blake & Timmerman, 1998; Allen & Tan, 1999, etc). Other researches such as Hallahan (1999) and Sawicki and Ong (2000) on their part focused on the Australian market, and Abdel- Kader and Kuang (2007) on the Hong Kong market. With respect to the performance of investment companies in Ghana, no similar studies have been conducted. However, the high rate of the establishment of mutual fund entities in the country provides a better option for investors to invest their monies.

Nonetheless, as to whether they will be better off if they decide to invest in such mutual funds will depend on the performance of these funds. Therefore, this work seeks to provide empirical findings on the performance of some these equity mutual funds that have been operating within the country for some time now. More so, findings from the study will provide insight to the regulators to know how equity mutual funds within the country are performing and therefore come up with strategies that can guarantee the sustainability of these funds.

1.5 Research Methodology

The research employed a mixed research methodology approach viz; both qualitative and quantitative approach will be used to assess the firm's equity mutual funds performance over time. This approach is deemed appropriate for studying equity mutual

funds performance as it provides the researcher more avenues to assess the firm's funds performance over time from both qualitative and quantitative viewpoints (see for example, Cooper & Schindler, 2001). Detailed methodology will be provided in chapter three.

1.6 Scope of the Study

The scope for this work will be Databank Epack and HFC Equity Trust investment division. Fund managers will serve as the population for the study whereas the official reports (quarterly and annual investment performance data) will be used as the secondary source to evaluate the portfolios performance over the study period.

1.7 Limitation of the study

Admittedly, measuring the performance of all the forty-six enlisted mutual funds entities will have been an ideal situation nevertheless, as a result of the time constraints impose on the study, the study will not be able to use all the equity mutual funds entities in Ghana hence, it will adopt a purposive sampling approach as the sampling instruments and a case study approach as the research design for the study. Therefore, the results will not be able to be generalized to other equity mutual funds since the study is context specific. A final limitation is that participants in this study may choose to slant their response to a certain direction will may consciously or unconsciously affect studies results.

1.8 Organization of the Study

The study is organized into five chapters. Chapter One is made up of Introduction which looks at the Background of the Study, Statement of the Problem, and Research Questions. Others include objective of the Study, Limitations of the Study, scope of the Study, and Organization of the Study. Chapter Two deals with the review of the related literature whiles Chapter Three covers the Methodology adopted for the study. Chapter Four focuses on Results and Discussions whiles finally, Chapter Five looks at the Summary of Findings, Conclusions and Recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section discusses the theoretical framework that will guide study in its operation, the concepts and nature of equity mutual funds, determinants of equity mutual funds performance. Likewise empirical review on the measurement of funds performance will also be presented in this section.

2.2 Theoretical Review

This study will be guided by the Jensen (1968) Alpha portfolio measurement theory. The Jensen (1968) Alpha (more commonly, Jensen coefficient or Jensen's differential return measure) have been used to assess fund performance as well as fund's manager's abilities for most performance measure studies. Jensen Alpha is used to measure a fund's real returns against its adjusted risks. Statistically positive alpha values means that the fund manager has superior skills. The skill in this contest means that a fund manager has the ability in choosing or selecting stocks options with higher potential, low management fee charges, the ability to know when to pick. Significantly negative alphas are interpreted as evidence of inferior fund manager abilities. Alphas that are not different and equal to zero suggest the funds risk is the same as the market index. This is said to mean that the alphas here have not been tested for significant differences from the market's zero alphas. It has been established that a more positive alphas the less common ones to be established that an alpha value in an excess o 5. But, as a general guide, positive alphas are proof of good performance (the greater the value the more

reliable the fund performance is), and negative alphas are proof of a weaker performance. Positive alphas are observed less often than negative ones and most often the value of alphas are not a proof of good performance when it is zero. Hence, Haslem (2003) opines that investors ought to give particular attention to funds with alphas in the ballpark of 5 or higher.

According to Haslem (2003) equity mutual fund's Jensen Alpha can be appropriately be ascertain by comparing it to the market index of zero alpha value. The reason is that each asset's beta normally differs in size, which makes performance comparisons among assets with different levels of systematic risk problematic. The market index is the benchmark to which active portfolio managers attempt to generate abnormal returns. Hence, the Jensen Alpha equation is computed in this study as:

$$R_i - R_f = \alpha + B_i (R_m - R_f) + \varepsilon$$

Where R_i is the return of the equity mutual fund, in this case Databank E-pack, SAS Fund and HFC equity Trust fund annual return (from the study period 2007-2014) ; R_f is the return of the risk-free rate, in this case, the Government of Ghana 91-days Treasury bills returns (intervals and years as above for R_i); R_m is the end return of the Ghana Stock Exchange for the study interval, in this case the Ghana Stock Exchange being the market benchmark ; B_i is the systematic risk of Databank E-pack, SAS Fund and HFC equity trust fund as for the defined period (as above for R_i). Therefore, in attempt to assess the performances of Databank E-pack, SAS Fund and HFC equity trust the study will be guided by the Jensen (1968) Alpha performance theory model.

Moreover, the researcher decision to employ this framework in this study was due to the fact that several other related studies (see for example, Cesari & Panetta (2001) employed Jensen's alpha to the performance of equity funds within the Italian financial markets; similarly, Grinblatt and Titman (1989) equally employed the alpha equation to measure the quarterly holdings of some investment options from 1975-1984; Otten and Bams (2002) equally employed Jensen's alpha to study UCITS returns of five entities within the European markets, namely; France, Germany, Italy, UK and the Netherlands; and finally Soongswang and Sanohdontree (2011) also adopted Jensen's alpha for their Thailand study). Therefore, this study will equally adopt this performance measure to assess the performance of Databank Epack, HFC Equity Trust and SAS Fortune fund all in Ghana.

2.3 Definition of concepts

Mutual funds are financial service providers that pool investor monies and invest them in domestic and international equity and fixed-income securities (Haslem, 2003). However, both open and closed ended funds are not permitted to invest directly in real (tangible) assets. Their portfolios may include short term investment options viz; money market investments, capital market securities, and derivative market securities.

Money market securities have a maximum holding term for either a year or much lesser and include Ghana Treasury bills, banks certificates of deposit, commercial paper, Eurodollars, repurchase agreements, and bankers' acceptances. A capital market security are the securities which maturity period does not exceed a year and include US or Ghana Treasury bonds, US agency bonds, municipal bonds, assetbacked securities,

preferred stock, and common stock. Derivative securities derive total or partial value from claims on underlying securities.

Wermers on his part as cited in Cuthbertson, Nitzsche and O'Sullivan (2010) defined mutual funds as a wider investment options which gives much access to investors in terms of its assets base by providing the ordinary investors the chance to have a wide range of options in securities which. Wermers further added that these funds are mostly defined by management philosophy adopted that is whether it will patronize aggressive growth or growth and income or growth and equity-income or small companies.

However, many of these investment options are actively managed in the sense that they have well equipped management teams who through research try to identify stocks that have the potential to grow or have the potential to gain a higher return in the future than its current value. The end result is the management of these funds charge clients the cost associated with its management.

On another breadth the Investment Company Institute (2015) defined mutual fund as fund management firm with the requisite license by its state regulators whose aim is to select investment options guided by the advice of qualified portfolio manager to meet the needs of the less skilled investors. Also, an equity mutual fund can select or choose to invest in an actively run options, where hired professional creates a unique set of options to meet the specific investment objective of a segment. The nonactively investor

on the other hand chooses a portfolio with the objective of mimicking the market index or the benchmark.

The definitions given by Haslem, Wermers and Investment Company Institute all seems to be in agreement as all view it as an investment vehicle that pool monies or investors from different investors with the decision to invest these monies within different instruments with the anticipation that their returns will be more than their initial value. Hence, the researcher seems to agree with the definitions proffer by all the authors hence no attempt will be made to give a varying view or definition in this study.

2.4 Factors Affecting Mutual Fund Performance

The decision to employ either an open or closed ended forms of funds by an investor as alternative form of investing has increased for over three decades now (Asebedo & Grable, 2004). Mutual funds presently managed over \$33.4 trillion of the total worldwide invested assets (Investment company fact book, 2015). Hence, this section seeks to discuss some of the factors that predict the performance of equity mutual funds. Numerous studies (see for example, Droms & Walker, 2001; Ippolitio, 1989; Shukla & Trzcinka, 1994; Walker, 1997; Zera & Madura, 2001) have identified factors such as; expenses, turnover, asset size, fund age, and portfolio composition as some of the main causal factors to mutual funds performance. Hence, some of these factors will be looked at in the preceding paragraphs.

2.4.1 Expense ratio

Investors who invest their assets in mutual funds have two forms of expenses at their disposal viz; ongoing expenses and sales loads (Investment company fact book, 2015).

Ongoing expenses are used to pay expenses related to portfolio management, fund administration, daily fund accounting and pricing, shareholder services, distribution charges and other additional operating costs.

In the work of Gottesman and Morey (2006) management fees was established as the only variable that predicted fund's performance. The authors further assert that importantly the smaller the charges fees, the greater the chances of a mutual fund outperforming the market in developing economies. Similarly, Topkis (1996, p.191), shared the same view espoused by Gottesman and Morey (2006) when his work revealed that in most instances, management charges on mutual funds predicted its future return simply because management were mostly taken out even profits were recorded or not.

Likewise, Malhotra and Mcleod (1997) and Walker (1997) asserted that options with much lower fees had higher returns. Elton, Gruber, and Blake (1996), Gunn (1996), and Hooks (1996) also came to a conclusion in their study that funds with low expenses perform better than funds with higher management charges, and that even load funds with low expenses outperform no-load funds with high annual expenses. These findings corroborate results presented by Gottesman and Morey (2006) with which its results posited a negative and significantly related relationship between the expense ratio and fund performance of all diversified emerging market funds.

However, not all conclusions established that expense ratios are affected mutual funds returns. Droms and Walker (1995) established that in many cases options with better returns are funds with greater risk higher management cost since more research was

required to achieve such higher return. Likewise, Bauer, Otten and Rad (2006), who employ a survivorship-bias controlled sample of 143 New Zealand equity funds over 1990-2003 found that equity mutual funds performance is positively related to the expense ratio. Grinblatt and Titman (1994, p. 438) attributed such higher returns in terms of the fund's performance to the fact that "funds that spend the most time on research and trade the most may, in fact may uncover underpriced stocks". Golec (1996) on his part argued that higher management fees will significant strong management team.

Nonetheless, the empirical evidence available makes the acceptance of Grinblatt and Titman (1994) and the likes difficult to accept because recent statistics still confirmed that high expense ratio affect fund performance and returns (see the works of, Shi, 2013; Singh, 2014).

2.4.2 Management Style

Singh (2014) indentified two forms of strategies for running equity mutual funds. He classified them into actively and passively managed funds. To him, an active managed fund will require a fund manager whose function is to undertake the market research, draw the necessarily forecasts, and base his line of decision on his skills and experience. In contrast, passive mangers role is to replicate or mimic a market index, and not to exactly beat the market. Several studies have reported results both for and against active and passive forms management styles. For instance, Banegas (2010) in his work reported that active fund managers performed better than passively fund managers. Likewise Polwitoon and Tawatnuntachai (2008) established similar results in emerging

markets where active funds performed better than inactive investors. Gottesman and Morey (2006) on their part established diverging views as to whether active funds performed better than passive investors. Their study established that passive fund managers performed better than active managers

In contrast, Jensen (1969) established that passive management strategy is better than active funds in relation to its return. On this call the earlier position supra still hold valid in these times and hence Jensen claimed that funds ought to reduce their management fees and brokerage commissions in order to provide investors with better returns.

2.4.3 Asset size

As Hili, Pace, and Grima (2016, p.6) put it ‘unity creates strength’ to the world’s most popular investment vehicle. Hence, having a big size of a mutual fund, it will keep finding investment opportunities. Indeed, there are several advantages in a large size mutual funds compared with small one from theoretical aspects (Shi, 2013). For instance, funds can collect more opportunities to get the abnormal return, because a fund which has large asset can invest more into stocks or bond in order to diversify their unsystematic risk. Hence, it was not surprising when Shi (2013) postulated that economy of scale can explain that the larger the fund size leads to the better the fund performance.

Indro, Jiang, Hu and Lee (1999) in their study of 683 non-indexed US schemes pointed out that funds must reach a minimum size in an attempt to realise sufficient returns to make up for their costs of acquiring and trading on information. They assert that size mirrors implicit transaction costs and consequently diminishes marginal returns.

Grinblatt and Titman (1989) in examining US collective vehicles find that abnormal performance of mutual funds, based on gross returns, is negatively related to size. Chen, Hong, Huang and Kubik (2004) also underscored that performance, both prior and post controlling for fees and expenses, worsens with lagged fund size. They find that this relationship is most evident amongst mutual funds that place capital in small and illiquid assets, thereby proposing that such adverse scale effect is associated to liquidity constraints.

Ferreira, Keswani, Miguel and Ramos (2011) opined that this negative relationship is present only in the US market and affirm that the positive and significant effect between the size and performance for non-US funds is due to the size difference between US and non-US fund industry. Using European collective vehicles' data, Otten and Bams (2002) work postulated strong significantly relationship between fund risk performance and a mutual fund value, thereby positing that the fund had large asset size. Similarly, Annaert, Van Den Broeck and Vander Venet (2003) also examined the relationship of European fund performance over the period 1995 and 1998 and concluded that fund performance is statistically significant to funds size.

In the emerging world, Prasomsak (2001) (as cited in Suppa-Aim, 2010), understudied 77 Thai mutual funds for the period 1998-2000 and claimed that fund performance is negatively related to size. The results of Suppa-Aim are also in agreement with the study of Prasomsak (2001). Nonetheless, these contrast the conclusions of Nitibhon (2004) (cited in Suppa-Aim, 2010) whose evidence established a positive relationship.

In addition, Shu, Yeh, and Yamada (2002) in examining Taiwan mutual funds finds that larger funds are better able to generate returns than small funds.

2.4.4 Fund age

Fund age could play an essential role in determining fund performance (Shi, 2013). The author again argued that in principle, younger funds may need high costs during their initial establishment period, such as doing the advertisement to attract new investors. This will cause younger fund to have a worse performance compared with a fund with a longer existence in a fund market. Babalos, Kostakis and Philippas (2009) established that risk-adjusted returns are significantly positively related to the fund age, verifying that managers' and firms' experience tends to be valuable for increasing the fund performance in emerging markets. In contrast Otten and Bams (2002) pointed out that there is a significant negative correlation between mutual funds years of existence and its return in developed markets. This means that as funds age increases in developed markets its return or value decreases.

Additionally, Ferreira et al. (2011) work corroborates the earlier works of Babalos and colleagues (2009) when their work revealed that younger funds appear to perform better than mature funds outside the United States. Similarly, Blake and Timmermann (1998) reveal that CISs outperform during their first year of inception.

In contrast to the developed markets studies, Suppa-Aim (2010) presented much lighter evidence that Thai younger funds perform better than older ones. Furthermore, its findings corroborate the words of Chen and colleagues (2004) as well as Ferreira et al. (2011), he finds that fund age cannot explain performance.

2.4.5 Turnover ratio

According to Shi (2012) a fund turnover is defined as the number of times an equity option manager trades during a given time period (Shi, 2013). For theoretical basis, when a fund manager trades frequently it is likely to have more success compared with infrequently trade when investigation of open-end fund. The frequent trade have several issues to deal with such as taxes and transaction costs, and therefore reduces the return. In the recent empirical studies, Wermers (2000), Moskowitz (2000), Kacperczyk, Sialm and Zheng (2005), and Tang, Wang and Xu (2012) documented that the turnover ratio was positively and significant related to fund performance.

Similarly, Cuthbertson et al. (2010) confirmed the earlier results of Wermers (2000), Moskowitz (2000), Kacperczyk, Sialm and Zheng (2005) and the recent works of Tang, Wang and Xu (2012). It became evident in the work of Cuthbertson and colleagues (2010) that with over 5 percent of United Kingdom and United States funds which had positive-alpha values were attributed to the fund turnover ratio.

2.5 Overview of the Ghanaian mutual fund

Databank investment opined that (2008) mutual funds began to commence its operations in Ghana in the year 1994. Databank (2008) indicated that its operations was started Databank (Epack) group with an estimated starting investment of GH¢ 200,000,000,000 cedis with 12, 000 investors. According to Statesman (2005) as cited in Yeboah (2009) mutual fund concept through Epack was only available to the selected few thus, some workers of Bank of Ghana. It is reported that the fund though started

operation in 1998 but as early as 2002 it has transformed to a mutual fund company (Databank annual report, 2008).

However, by 2003, other investment houses began to be caught up with the mutual fund euphoria and therefore decided to be part of this investment signalling a strong performance of the economy (Adimado, 2009). According to the author the funds that emerged afterwards were; The Horizon Fund, managed by NTHC, Strategic African Securities (SAS'S) Fortune Fund, HFC'S Equity Fund and Databank Money Market. Again, a name fund known as Anidaso Mutual Fund was also introduced and it is being run by the New Generation Investment Services who acts as the managers of the fund.

Surprisingly, recent statistics from the Ghana Securities and Exchange Commission indicates that the mutual funds investment schemes in Ghana have increased from four to over 46 registered companies as at 2015 (Securities and Exchange Commission annual report, 2015). This number is very impressive looking at where it started years back and where it is now. Nonetheless, the savings and investment culture of Ghanaians is yet to peak up with the numerous investment opportunities within the financial markets.

Based on the recent upsurge in the fund markets analyst asserts that the emergence of several mutual funds and unit trust is an indication of the development of the country's capital markets and gives investors other alternatives to invest (Adimado, 2009).

In Ghana, the activities of mutual fund are under the auspices of Securities and Exchange Commission guided by the Securities Industry Law, 1993 (PNDCL 333) (KPMG Africa Funds and Fund Management Survey, 2013). The Law stipulates that

anyone who requires to run a unit trust or a mutual fund ought to acquire a licence from the Securities and Exchange Commission after satisfying all the laws identified in the law as well the regulations prescribed by Exchange Commission. The fund has to be run a satisfied board of directors (i.e. when run as organized entity) or board of trustees (if organized as a trust).

Equally the directors are tasked with the job of ensuring that is the fund is properly managed and maintained in the best interests of the fund's beneficiaries and with hiring the fund manager and other service providers to the fund. The fund manager, who in other instances may be called as the fund sponsor or fund management company, is responsible for the running of the fund (i.e. in terms of picking and selling of stocks). The running of the fund should be consistent with the established objectives of the fund. A fund manager should be a licensed Security and Exchange Commission fund adviser (SEM Capital website, 2016).

Also in Ghana there are two types of mutual funds thus, open-end and closed-end mutual funds (SEM Capital website, 2016). The Open-end mutual funds are allowed to purchase their shares from their investors at the end of every business day at the net asset value computed that day. However, open-end funds could also sell shares to the public in every business day; these shares likewise are priced at net asset value. A professional investment manager oversees the portfolio, buying and selling securities as appropriate. The total investment in the fund will vary based on share purchases, share redemptions and fluctuation in market valuation. There is no legal limit on the number of shares that can be issued.

In contrast closed-end funds only open or trade in their shares to the market, when they are created through what is termed as initial public offering (SEM Capital website, 2016). Their shares will then be listed for trading the Ghana Stock Exchange. The difference with the closed ended is that, investors whose once bought a share and may no longer wish to continue holding on to their shares cannot sell their shares back to the fund (as they can with an open-end fund). However, what is available to them is they may sell their shares to an investor who may want to buy; the price they may receive can be at times significantly different from initial price they bought the stock on. It may be at a "premium" to net asset value (meaning that it is higher than net asset value) or, more commonly, at a "discount" to net asset value (meaning that it is lower than net asset value). Most of the Mutual Funds in the Ghanaian market are open-ended funds.

2.5 Empirical reviews

This section seeks to discuss previous works that have examined the performance of equity mutual funds.

Firstly, Bilawal, Khan, Hussain and Akmal (2015) work sought to examine the performance of closed ended and some five closed ended mutual funds in Pakistani equity market for the period of 2009-2012. Ranking measures used in the study included; Sharpe, Treynor, Sortino, Information and Jensen Alpha. Findings from its Treynor and Information measures showed a slightly better performance which other forms of performance measures did not achieve any satisfactory performance.

Admittedly the study objective of Bilawal et al. (2015) is somehow similar to the current study objectives nevertheless, what Bilawal and colleagues (2015) study sought to

investigate was on closed-ended fund. Hence, the current study focus is on open-ended funds which somehow make this work quite unique from that of Bilawal and colleagues. Therefore, findings from this study will give further insight to the literature in relation to the performances of open-ended funds which Bilawal et al. (2015) study did not look at.

Additionally, Chen (2013) also investigated equity mutual funds performance and performance persistence in the Chinese financial market. Firstly, single-index and four-index models were used to evaluate mutual fund managers' selective ability in China. Secondly, Treynor and Mazuy (1966) and Henriksson and Merton (1981) market timing models were equally used to investigate whether mutual fund managers in China could have market timing ability. The results from this study revealed that the equity mutual fund managers in China have selective ability to earn excess returns, but do not have market timing ability. In addition, the non-parametric and parametric tests from the study demonstrated that equity mutual funds in China could perform persistently in the short term but not in the long term.

Likewise, Shi (2013) also examined the performance of 157 equity funds from 1st January 2006 to 31st December 2010 by using two measures of fund performance: market benchmark adjusted return and Jensen's Alpha. Its sample period included bear (2008 and 2010) and bull (2006, 2007 and 2009) market conditions. In addition, this research further investigated the impact of fund characteristics and managerial attributes on the Chinese open-end equity fund performance, through applying the pooled cross-sectional analysis with OLS regression. The explanatory variables

examined include fund size, fund age, expense ratio, turnover ratio, and management structure and managerial education.

The overall results of the study suggested that on average equity funds are able to beat the markets, as indicated by their positive market benchmark adjusted return and Jensen's Alpha. Afterwards, the results indicate that fund age, turnover ratio and expense ratio have significant relationship with fund performance over the whole examination period. More specifically, Shi (2013) posit that an equity fund with shortestablished, high turnover ratio and low expense ratio performed better than the one with long-established, low turnover ratio and high expense ratio.

Though, the studies of Chen (2013) and Shi (2013) were in particular carried out in an emerging market nevertheless, the market capitalization of Chinese market is not similar to that of Ghana. Hence, its study results cannot be regarded to be a true representation to that of Ghana therefore; this study is equally required to establish whether Chen (2013) and Shi (2013) study results can be confirmed or refuted within the context of Ghana.

Thirdly, Cuthbertson et al. (2010) work provided a review of empirical findings on the performance of mutual funds, mainly for the US and UK markets. Results from the review established that merely 0-5% of top performing UK and US equity mutual funds had truly positive-alpha performance (after fees) and 20% of funds on the other hand had poor alpha performance, with the remaining about 75% of active funds which are effectively zero-alpha funds. Key drivers of relative performance (i.e. 0-5% top

performers) were, load fees, expenses and turnover. Also, there was little evidence of successful market timing.

Evidence suggested that past winner funds persisted, when rebalancing was frequent (i.e. less than one year) and when using sophisticated sorting rules (e.g. Bayesian approaches) but transactions costs (load and advisory fees) imply that economic gains to investors from winner funds may be marginal. The US evidence clearly supports the view that past loser funds remain losers.

Again, the study context upon which Cuthbertson et al. (2010) review was carried out was in a developed market specifically US and UK. Hence, findings from this study will provide a fresh insight into the financial literature on how equity mutual funds have been performing in the Sub-Saharan Africa specifically Ghana.

Also, the study of Mahreen and Mirza (2011) sought to measure the performance of mutual fund in an emerging market thus, Pakistan. It became evident that since the Pakistanis market is still struggling to develop its capital market and a regulatory framework, and still experimenting to find the right mix, its study results showed a negative impacts in accordance with their respective benchmarks, which it was not surprising given the evidence from across the world and Islamic funds, the fastest growing fund category and backed by people's religious affiliations are still struggling to find a stronghold and yield a steady return.

The empirical reviews above clearly show that most of the studies enumerated above only sought to measure the performances of closed-ended funds but not open-ended

funds. Besides, the only study which sought to measure the performance of equity mutual funds in an emerging markets were Bilawal et al. (2015), Chen (2013) and Shi (2013) nevertheless, their study contexts is different from that of Ghana hence additional study is required to ascertain whether their findings can be affirm or disaffirm within the context of Ghana.

Finally, the aforementioned empirical review established that most of the studies relating to equity mutual fund performance have been well studied in developed or western environment. Nonetheless, to the best of the researcher knowledge no studies have been conducted in Sub Saharan African specifically Ghana. Hence, this study seeks to fill the paucity within the literature in Sub-Saharan countries.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presented the research design used in this study. It reviewed the basic research approaches available, which include the quantitative, qualitative and mixed methods approach. Thereafter the chapter discussed the method opted for in this study and its justification. The study population, performance measurement and the methods used for data collection were equally presented. The chapter ends with a discussion of data analysis tools employed to analysis the final data results.

3.2 Research Design

The choice of research design in management and social sciences draws its source from a researcher's assumptions about the nature of the social world, the nature of the knowledge to be obtained and methods of gaining knowledge (Creswell & Clark 2007, p.5, pp.21-23, Mingers 1997:1, Saunders, Lewis & Thornhill, 2007). These assumptions or paradigms are important, since a researcher's chosen research design should be most appropriate for a context matching its underlying assumptions.

According to Hesse-Biber and Leavy (2006, p.12), paradigms provide a conceptual framework through which we view the world. Two main paradigms viz., positivism and interpretivist are traditionally and respectively, associated with quantitative and qualitative research methods. The positivism posits that situations that can be studied through our senses (i.e. sight, hearing, touching, taste, etc) really produce knowledge.

Accordingly, the real world can only be studied from the utilization of these senses through experimentation, theory testing and theory creation. Hence, it posits that research ought to be objective rather than subjective statement for that matter objectivity is the only proper domain of science. Interpretivist paradigm nevertheless views the social world as one that individuals create, modify and interpret the environment within which they function. In essence, understanding this interaction of individuals and the environment can produce knowledge of the phenomena under investigation. Direct knowledge of the social world according to the interpretivist/subjectivist view is impossible.

However, this study employed a quantitative research design to examine the performance of Databank Epack investment, SAS fund and HFC Equity trust fund from the period of 2007-2015. Hence, this study will follow the positivist paradigm perspective to measure its research objectives. Bryman and Bell (2007) postulated that quantitative research deals with the collection of data and ascertaining a relationship between theory and research findings. Positivists further argue that quantitative method ensures objectivity, due to the distance maintained between the observer and the observed (McGovern, 2009). As this study seeks to follow positivist view, quantitative methods are best suited. Also, in reviewing previous studies that has been carried out in the area of mutual funds performance, most of the studies reviewed used quantitative methods (see for example, Bertin, & Henker 2004; Karagiannidis, 2010; Moutinho & Hutcheson, 2011).

Besides, as the researcher seeks to analysis the dataset of the fund's performance from 2007-2014 quantitative research is best suited as it can minimises the risk of any possible bias, something which can seriously threaten the validity of any study.

3.3 Population of the Study

The target population is the group of individuals that possess the information required by the researcher and about which inferences are to be made (Malhorta & Birks, 2007). The most important thing in defining the target population is the precise specification of who should and who should not be included in the sample (Churchill & Iacobucci, 2002; Malhorta & Birks, 2007). The target population for this study constituted all the forty-six mutual funds operating in Ghana, the Government of Ghana 91-days T-bills returns (which acted as the risk-free investment option) and finally the Ghana Stock Exchange (as the benchmark investment index). Nevertheless, for many of these mutual funds there were not complete dataset for the whole sevenyear period of the study time interval, since many mutual funds have not published their annual report on their website dating back from 2011 till date. Therefore, to have a consistent sample with data for the interval period the population was restricted to only Databank Epack investment, SAS Fund and HFC Equity trust fund, the Government of Ghana 91-days T-bills returns and the Ghana Stock Exchange.

3.4 Sample and Sampling Techniques

A sample is a portion serving as a basis for estimates of the attributes of the whole (Concise Oxford English Dictionary, 11th Edition). The purpose of sampling is to secure a representative group which will permit the researcher to gain information about a population (Ng'ethe, 2013). However, since a sample would have to have a dataset of his annual report on its website from the period of 2007-2014 before the fund can qualify to be part of the study sample the researcher employed purposive sampling

technique in selecting the samples for the study. Cohen, Manion and Morrison (2007, p, 115) made a compelling argument about when to employ a purposive sampling technique in their book when they posit that there is little benefit in seeking a random sample when most of the random sample may be largely ignorant of the particular or specific issues and as a matter of fact do not possess the needed information which will be of interest to the researcher, in this case a purposive sample is vital. Hence, the decision to use purposive sampling is valid since it provides the researcher the better option in choosing samples that have the right information the study seeks to understudy.

Therefore, the equity mutual funds selected as the study sample were Databank Epack investment, SAS Fortune Fund and HFC Equity Fund. However, the reason for the selecting these samples were informed by the fact that these three funds are among the oldest within the country and for that matter it becomes very important to measure how these funds have performed over time.

3.5 Performance measurement

3.5.1 Fund Managers Skill

Many researchers, amongst others are Jensen (1968), Grinblatt and Titman (1993) and Carhart (1997) have introduced new models for measuring portfolio performance in an attempt to discover a method which could offer accuracy and reliability.

Notwithstanding the different measures put forward they are all intended to offer a suitable approach by which to differentiate superior fund managers. Identifying the appropriate model to be employed may be quite tricky and this led others, such as Lehmann and Modest (1987), Kothari and Warner (2001) and Otten and Bams (2004),

to question which models offer the best evaluation techniques. According to SuppaAim (2010), choosing the best model for measuring performance does not rest entirely on the method itself but also depends on the appropriateness of the measure to the data and the market being evaluated.

According to Hili, Pace and Grima (2016) evaluating performance through nonregression ratios only helps to compare whether a fund has performed superiorly or inferiorly to its competitions. Nonetheless, they further opined that it is therefore unlikely to construe whether such indication represents a better or worse performance as to be either statistically significant or have any financial meaning. Hence, the present work employs regression-based measures. Accordingly, the present work used regression-based measures. The Jensen's alpha or the so-called the Single-Factor alpha, as proposed by Jensen is one of the most popular performance measures. Based on theory of the pricing of capital assets, the Jensen's alpha evaluates how much a fund manager's forecasting talent plays a role in the collective investment vehicle's return. The Single-Factor alpha can be expressed as: $R - R_f = \alpha + \beta_i (R_m - R_f) + \epsilon$ Where R is the expected return on portfolio (fund) at the study time/interval, R_f is the risk-free rate of return, β_i is the systematic risk of portfolio, R_m is the expected return on the market portfolio at time under study, ϵ is a random error term of the portfolio return at time under study and α is an intercept of estimated regression, or the Jensen's alpha. A positive alpha result $\alpha > 0$ suggests that the collective structure has performed better than its benchmark and therefore the fund manager has an ability to predict portfolio prices. The opposite is true in case of a negative alpha $\alpha < 0$. For the reasons that the Single-Factor alpha was employed to measure fund manager skills or talent on fund performance.

Therefore, in order to measure the Jensen alpha in this study all the return of the understudied funds were collected and afterwards the SD and the Beta value of these funds were computed through Excel. Afterwards the line fit model was employed to identify both the alpha value of these funds to ascertain how they performed or fared against the Ghana Stock Exchange.

3.5.2 Fund Managers Timing Abilities

Also, in order to assess fund manager's timing abilities Treynor and Mazuy (1966) model was employed to measure both market timing and security selection abilities of fund managers. The Treynor and Mazuy (1966) market timing model shown in equation:

$$R - R_f = \alpha + \beta_i (R_m - R_f) + \beta_i (R_m - R_f)^2 + \varepsilon$$

Where α is the timing-adjusted alpha, representing the timing-adjusted selective ability of mutual fund managers if α is positive, and a lack of that ability if α is negative. The quadratic term in the equation is the market timing factor and the coefficient of the market timing factor, β_i represents mutual fund manager's market timing ability. If β_i is positive, mutual fund managers have superior market timing ability, which means the investment portfolios of mutual funds are adjusted actively to anticipated changes in market conditions. If the β_i is negative, mutual fund managers do not exhibit market timing ability.

3.5.3 Return of Funds

The return on the fund on the other hand is calculated by dividing the closing Net Asset Value by the original Net Asset Value. The net return is calculated by the return less

management fees and other expenses charged to the fund. Therefore a fund's return is expressed as:

$$RT = \frac{NAV(END) - NAV(start)}{NAV(start)} * 100$$

Where RT is the expected return, NAV (END) is the closing net asset value of the fund on the trading day of the year. NAV (start) is the closing net asset value of the fund on the start of the trading day of the year.

3.6 Data Collection Procedures

Data about the annual returns of the fund's performance were obtained from the funds official website respectively. Also information about the performance and return of the Ghana Stock Exchange and the 91-days T-bills were accessed from the Annual Reports Ghana website and the Ghana Stock Exchange website.

Nevertheless, prior to the release of these reports by Annual Report Ghana a request had to be sent to them through their web portal and the final report was eventually released to the researcher after a two-week period. The data time period for the collection of the mutual funds were based on the beginning value of the funds thus, 31st December of the previous year being the beginning value of the fund and the ending value of the funds will be on value as at the 31st December of the of the same year. However, the data series for the understudied funds were taken from 2007-2014 of the respective funds. The dataset were collected on two times thus on previous years ending value and the current year ending value.

3.7 Data analysis

The empirical analysis for the present study aims at examining the performance of equity mutual funds in Ghana. The data collected were keyed into The IBM Statistical Package for Social Sciences (SPSS) version 20.0 and analysed on the basis of The Jensen alpha (1968) which measures a fund excess returns against the time series of excess returns on the benchmark (i.e. in this case a fund returns against the Ghana Stock Exchange returns).



CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter deals with the analysis of study findings and discussion of the results in line with the study research objectives. The data was analyzed in Jensen Alpha ratio. The first section discusses the result of returns of the mutual funds as against the Ghana Stock Exchange; the subsequent section presents the returns of the funds as against the risk free investment (i.e. 91-days T-bill rate) and the final section discusses the Jensen Alpha of all the funds. Furthermore, the results were discussed in line with the research objectives.

4.1 Performance of the Mutual Funds

4.1.1 Descriptive Statistics

The fund's performance was computed as the difference between the ending value of the fund and the starting value of the fund within the same study period all divided by the starting value multiplied by 100. Therefore a fund's performance is expressed as:

$$RT = \frac{NAV(END) - NAV(start)}{NAV(start)} * 100$$

NAV (start)

Where RT is the expected return, NAV (END) is the closing net asset value of the fund on the trading day of the year. NAV (start) is the beginning net asset value of the fund on the start of the trading day of the year.

Accordingly, Table 1 presents the funds raw returns thus the value they started with at the beginning of the year as well as the ending value the funds recorded at the end of the year. However, the performances of these funds were based on the benchmark thus its performance in reference to the Ghana Stock Exchange performance over the same study time period.

Hence, Table 1 presents the funds raw return for the understudied periods thus from 2007-2014. Table 2 on the other hand will present the descriptive statistics for all the funds; Mean, Standard Deviation of the funds including the GSE and TBR. However, the reason why the T-bill was used as part of the benchmark performance indicator was informed by investors' perception about the various forms of investment options. T-bills are viewed as a less risk investment option whereas equity mutual funds are seen high risk investment options.

Therefore, it is expected that the high risks investment will provide better returns than the less risk form of investment. Therefore, comparing the two forms of investment against the other will assist the study to confirm which form of the investment option performed better on a risk adjusted basis. Likewise, other similar studies equally added the T-bill investment options as part of their studies benchmark indicators to see how the actively managed funds performed over times as against the less risk investment options (see for example, Bilawal et al., 2015; Chen, 2013).

Table 1: Funds Raw Returns

Data Bank	Beginning Value	Ending Value	HF C	Beginning Value	Ending Value	1SA S Fortu	Beginning Value	Ending Value
			Equit					

2007	4,018,392	6,060,758	2007	-93,359	-54,460	2007	-6,913	87090
2008	6,060,758	8883058	2008	-54,460	124,907	2008	87090	247,742
2009	8,883,058	10,505,390	2009	124,907	-355,203	2009	247,742	-49,592
2010	10,505,390	14,697,732	2010	-355,203	-329,312	2010	-49,592	376,904
2011	14,697,732	17,893,424	2011	-329,312	-317,864	2011	376,904	207,874
2012	17,893,424	17,182,220	2012	-317,864	16,927	2012	207,874	433,244
2013	17,182,220	22,568,164	2013	16,927	1,160,397	2013	433,244	1,459,529
2014	22,568,164	9,340,033	2014	1,160,397	2,400,192	2014	1,459,529	1,696,622

Source: computation from the Funds Annual report

Table 2: Summary of Descriptive Statistics

Variables	Observation	Mean	SD	Minimum	Maximum
Data Bank	8	0.182578	0.356926	-0.58614	0.508255
EPACK	8	7.488323	24.32771	0.007256	67.55302
HFC	8	-2.29833	5.712973	0.000863	2.368838
Equity Trust	8	0.224937	0.38424	0.009862	0.788083
SAS	8	1.543854	0.5362	0.002635	2.149167
Fortune Fund	8				
GSE	8				
TBR	8				

Source: computation from the Funds Annual report and GSE Annual report
Funds Performance against the Ghana Stock Exchange and TBR

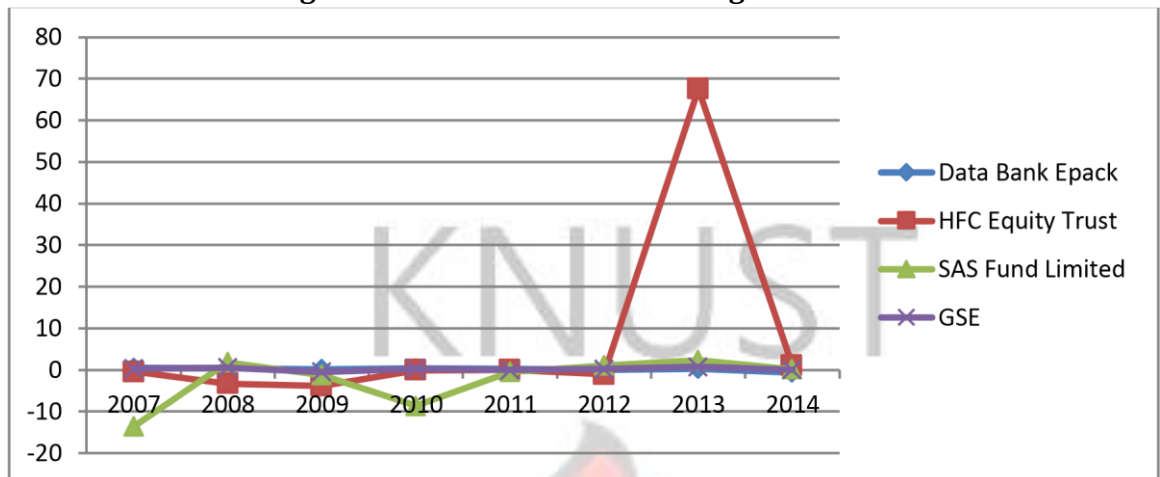


Fig 1: Funds Performance against the Ghana Stock Exchange

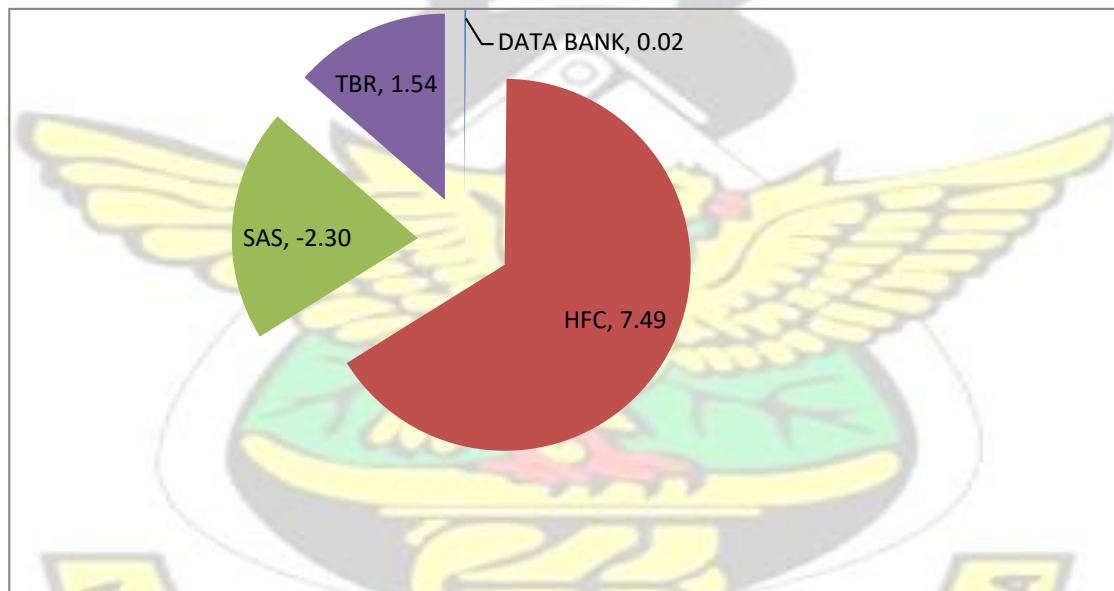


Fig 2: Funds Performance against and the TBR

Results from Table 1 show that among all the understudied funds, Databank Epack had the highest in terms of the amount invested and the returns gained. For instance, within the first year of the study period, Databank Epack invested or started its fund with a

total value of ₦4,018,392 and likewise ended the year with a positive return of ₦6,060,758. In contrast HFC Equity Trust and SAS Fortune Fund started their first understudied year with a negative value and likewise ended the year with a negative value as well (see Table 1).

Subsequently, within the next year, Databank Epack still maintained its positive value in terms of its starting and ending value whereas HFC Equity Trust started with a negative value but ended the year on a positive outlook of ₦124,907. However, SAS Fortune Fund started with a positive value hence improving upon its 2007 performance.

Additionally, within 2009 Databank Epack continue to maintain their positive outlook in terms of its ending value. In contrast, HFC Equity Trust from its positive return recorded in 2008 went on to end the year with a negative value of ₦355,203. However within that same year SAS started the year with a positive outlook but ended the year on a negative outlook (see Table 1).

Also in 2010 Databank Epack continues to maintain its positive return performance and similarly HFC Equity Trust on the other hand also maintained its negative outlook performance. However, within the same year SAS Fortune Fund started with a negative value but ended the year with a positive.

Additionally, a clear look at the fund's performance clearly shows that Databank Epack had a positive value in relations to its return from 2011-2014 but same cannot be said about the other funds. On the part of the performance of SAS Fortune Fund, results from Table 1 show that it began to see a positive value in its return from 2011-2014.

Equally on the part of HFC Equity Trust it began to see a positive outlook in its return from 2011-2014.

Findings from the study suggest that Databank Epack performance was very consistent throughout all the study periods. However, same cannot be said about the other funds. Nonetheless, HFC Equity Trust and SAS Fortune Fund began to see some positive return starting from 2011-2014. For instance, SAS positive return began from 2011-2014 whereas HFC Equity Trust started theirs from 2012-2014.

In relation to the funds mean value, it became evident that the mean values for all the funds together with the GSE market index and 91 days T-bills rate ranged from -2.3 to 7.5. The highest mean value was recorded by HFC Equity Trust and the least mean value was recorded by SAS Fortune Fund. This suggests that with the exception of HFC Equity Trust which had a higher mean value than both the GSE market index and the risk free rate thus TBR all the other funds had a mean value below the GSE and TBR.

Also Databank Epack Fund had a minimum return value of -0.59 and a maximum value of 0.51 and a SD of 0.36. HFC Equity Trust on the other hand had a minimum value of -3.8 and a maximum value of 67.5 and a SD of 24.3. Likewise SAS Fortune Fund had a minimum value of -13.6 and a maximum value of 2.4. Again GSE on the other had a minimum value of -0.47 and a maximum value of 0.79 and a SD of 0.22.

Finally, the 91-days T-bill had a minimum value of 0.88 and a maximum value of 2.14 and a SD of 1.54.

Results from the descriptive statistics show that HFC Equity Trust had the highest maximum mean of a value of 67.5. Hence, overall HFC Equity Trust obtained the highest mean in terms of its return for the understudied periods. However, one would

argue that since HFC Equity Trust witnessed in most cases negative value in most of its returns it was expected that it would not have accumulated such a mean value.

Nonetheless, the reason for this could be attributed to its long run impressive performance which was recorded in 2012 when the fund started with negative value of ₵317,864 but ended the year with a positive outlook of ₵16,927. Likewise it continued with the positive outlook it recorded in 2012 ₵16,927 and ended the year with huge return of ₵1,160,397 and further continued with that impressive till the last year thus 2014.

Also in relation to Databank Epack, results from the funds raw data show that it had the highest amount of funds from the starting year to the ending year hence, it was expected that its ending value should have been higher than the reported value but this was not the case.

For instance, within the first year of the study period, Databank Epack investment fund outperformed other funds in terms of its return (i.e. it had a return of 0.51 thus 51%). Again apparently it even outperformed the GSE by a relative margin of 0.2.

Nevertheless, in term of its mean value return for the 8 years period, the Ghana Stock Exchange Market index outperformed the Databank Epack investment by a margin of 0.2.

Findings, from the study suggest that with the exception of HFC Equity trust which performed better than the market index fund thus, in terms of its mean value for the study period, all the other two remaining funds fell short in terms of its mean value for the 8 years study period against the GSE. Interestingly, a critical look at the study results

reveal a certain trend, HFC Equity trust over the period of 2007-2012 performed very poorly among all the other funds. However, it began to improve its performance from 2013 and continued to 2015. Hence, this raises some questions about their investment strategies they were employing from 2007-2012 where their returns were most at times negative.

Evidence from the study suggests that even with all the resources at the disposals of these funds in terms of their research departments and logistics yet two of these funds still could not outperform the passively managed funds thus the market index.

Also it is important to note in this study that the returns of these funds were not calculated on their net returns but rather on their gross returns. Hence, taking out their management charges and fees from their returns will suggest that most of the funds will have negative returns afterwards.

This results from this study suggests that with share luck an investor could still put his investment into a passively managed funds which are void from management charges and still beat the actively managed funds or if not possible just mimic the market. Admittedly, this is not to say it will be wise for an investor to redraw his investment from an actively managed fund and simply put it in a passively managed fund and go to sleep because as the researcher will like to paraphrase from the words of the world greatest investor Warren Buffet, 'rule number 1, never lose money and rule number 2 do not forget rule number 1''. This suggests that investment is very intensive and laborious and requires a diligent analysis of work before one can achieve his or her long term goals.

Additionally the study sought to measure how the three funds performed against the risk free investment options thus, the 91-days Treasury bill investment. Accordingly, the fund's performance against the risk free investment is presented in this paragraph.

Results from Table 1 shows that in terms of the funds mean return for the understudied period, HFC Equity trust performed relatively well than the Treasury bill thus, interest free investment (see Table 1). Nonetheless, the other two funds thus Databank Epack and SAS fund performed below the risk free investment. Findings from the study suggest that if one would have invested in HFC Equity trust the investor would have received a higher return than just investing in the risk free instrument. However, the researcher would like to say this as well, though the return of HFC Equity was higher than the return of the risk free investment within the study period. Nevertheless, a careful look at the performance of HFC Equity from 2007-2012 show that the risk free investment performed better than the HFC fund within these study periods. However, within its overall returns it was higher than the risk free investment option.

Equally, same cannot be said about the other funds, this affirms the earlier works of Jensen (1967) which posited that mutual funds on average do not perform well against risk free investment options in terms of its overall return. Nevertheless, the returns of HFC Equity trust is inconsistent with the views of Jensen within this same context since evidence in this study shows that HFC Equity Trust performed relatively well as against the risk free fund. This suggests that managers of the HFC Equity performed well than the risk free and also against the other funds.

Although results from the study showed that Databank Epack had a positive return of 0.02 however in comparison with the risk free option its return were still less than the risk free investment. The evidence on mutual fund performance discussed above indicates that not only were Databank Epack and SAS Fund mutual funds on unable to predict security prices well enough to outperform the market index, but also there was very little evidence that these two funds outperformed the risk free investment. Therefore with the exception of HFC Equity Trust which relatively performed well against the GSE and T-Bill (risk free investment), the remaining two funds did not performed well against these performance indicators.

4.2 The Impact of Fund Manager's Skills on Equity Mutual Funds Performance

This research objective sought to measure how a fund manager skill affected their funds performance within the understudied period. Hence, Jensen Alpha performance measurement was used to ascertain this claim. Accordingly the Jensen Alpha equation was computed as:

$$R_i - R_f = \alpha + B_i (R_m - R_f) + \varepsilon$$

According to Jensen (1968), alpha is the difference between a portfolio's actual return and its expected return given the portfolio's systematic risk and the CAPM. The author further added that improved positive alphas are viewed as evidence of superior portfolio manager skill. The Jensen alpha equation is computed as the difference between the return of the fund under investigation as against the risk free form of investment (i.e 91 days T-bill) and in to the systematic risk of the fund (i.e. its Beta value) multiply by the

difference between the return of the market as against the risk free form of investment (i.e. T-bill).

This skill may portray several managers' capabilities, such as the capacity to select securities, low expenses, and/or market timing. Nonetheless, negative alphas are seen as an evidence of inferior portfolio manager performance. Alphas that are not different than zero thus equal to zero (the market index alpha) suggest the fund's performance equal to the market index on a risk-adjusted basis.

Equally, Jensen (1968) posited that if a portfolio manager has an ability to forecast security prices, the alpha value will be positive. In another words if a manager is not doing very well the alpha value of its fund will be negative. Hence, in this study it was expected that the alpha value for all the three funds ought to be greater than the alpha value of the market index since the market will always have an alpha value of 0 (i.e. $\alpha=0$). Table 3 presents the descriptive statistics of alpha value of all the three funds. Also the regression analysis for all the three funds managers' skills will be presented accordingly.

Table 3: Descriptive Funds Manager's Ability

Fund	Observations	Mean	Minimum	Maximum	SD	Alpha	Beta	R ²
Data bank Epac	8	0.018	-0.854	0.508	0.488	0.289	1.0476	0.6695

HFC s	8	7.48	-3.844	67.553	24.3	-	0.00	0.03
Equity		8			3	1.18	76	35
Trust						25		
SAS	8	-2.3	-13.598	2.369	5.71	-	-	0.51
Fortune					3	1.66	0.13	69
Fund						09	63	

Source: computation from the Funds Annual report

4.2.1 Databank Epack Fund Manager's Skill

The Beta value in the quadratic equation is computed as the ratio of the Standard Deviation of the fund multiplied by the R square of the fund all divided by the SD of the market index (i.e. Ghana Stock Exchange as against the risk free rate). Therefore,

mathematically it is written as:
$$\text{Beta} = \frac{\text{SD of Fund} * \text{R square}}{\text{SD of Benchmark}}$$

However, the R square which is also known as the square of correlation is computed as covariance between the market index and the understudied fund all divided by the SD of the of the fund and the market. Therefore, mathematically it is written as:

$$\text{R square} = \frac{\text{Covariance between Market index and Fund}}{\text{SD of Fund} * \text{SD of Market Index}}$$

The alpha value is computed as the excess return of the thus, the difference between the fund and the risk free investment to the relative return of the benchmark index thus, the Ghana stock exchange. Accordingly, the fund manager's skill of the three funds have been presented thereafter and discussed thoroughly.

The fund manager skill is presented algebraically as: $\text{Beta}_x \text{Alpha}$

Therefore, Epack Fund manager's skill = $1.0476x + 0.289$

$R^2 = 0.6695$

Results from the Jensen Alpha shows that Databank Epack fund had an alpha value of 0.289 and a correlation coefficient of 0.6695. This suggests that there is a significant relationship between Data bank Epack fund manager's skills and fund performance. Additionally, the positive alpha value of 0.289 showed that the fund's managers had a strong selective ability and market timing abilities skills. Although Databank Epack fund had a positive alpha value but to Haslem (2003) investors only have to give adequate attention to funds with alphas around the value of 0.5 or higher.

The positive alpha established in this study is consistent with the studies of McDonald (1974), Carlson (1970), Mains (1977), and Ippolito (1989) where their studies posited a positive alphas value in mutual funds performance in both the United States and the Canadian mutual equity mutual funds market. Mains's work (1977) reported a positive alpha on a value of 0.09%. Similarly, Carlson (1970) work confirmed a positive alpha of 0.06% within a year and Ippolito (1989) study likewise showed an alpha of 0.81% per year. In this study the alpha value for the Data bank Epack was 0.28% for the understudied years.

In contrast, results from the study is inconsistent with the works of Bilawal et al. (2015) which established negative alpha value for mutual funds in Pakistan for the period of January 2009 to December 2013. Likewise findings from this study are consistent with

the studies of Chen (2013) which posited that mutual funds managers in China had selective ability due to the positive alpha value reported in their studies.

Also, the Beta value is used to measure the systematic risk of a portfolio against the market index thus in this case the Ghana Stock Exchange. The market index is always known to have a beta value or systematic risk of 1 meaning it holds less risky investments or assets.

However results from the descriptive statistics revealed that Databank Epack Fund had a systematic risk of 1.0476. This suggests that Databank Epack Fund level of risk was quite higher than the market risk by a margin of 0476. This was not surprising at all since results from Databank Epack Fund revealed that the funds invested in stocks which operated in Ghana as well as across the sub regions. Hence, it was expected that its return should have been higher than the GSE in order to compensate its investors nonetheless the results suggested otherwise (see Table 2).

4.2.2HFC Equity Trust Fund Manager's Skill

The fund manager skill is presented algebraically as: $\text{Beta}_x\text{Alpha}$

Therefore, HFC equity Fund manager's skill= $0.0076x-1.1825$

$R^2= 0.0335$

Results from the Jensen Alpha equation shows that HFC Equity Trust had an alpha value of -1.1825. This shows that the fund manager's of HFC Equity Trust did not possess much superior skills as their counterparts from Databank Epack. The correlation coefficient was 0.0335. This suggests that there was a weaker relationship between HFC Equity Fund manager's skills and its funds performance. The negative

alpha value of HFC Equity Trust is inconsistent with the earlier views shared by McDonald (1974), Carlson (1970), Mains (1977), and Ippolito (1989) where their studies established a positive alphas value for mutual funds which worked in both the United State and the Canadian equity mutual funds markets. Likewise the negative alpha is consistent with the studies of Bilawal et al. (2015) which established negative alpha value for mutual funds operating in Pakistan equity markets.

The negative alpha value established here came as no surprise to the researcher since under the funds raw returns for the under studied periods, it became evident that from the periods of 2007, 2009, 2010 and 2011 HFC Equity Trust received a negative returns throughout its ending values for all these periods.

Also in terms of HFC Equity Trust systematic skills, it became evident that HFC Equity Trust invested in less risky investments since its Beta value was less than 1. This even goes to suggest that HFC Equity Trust mirrored the market index by investing in less risky investment options. This was no surprise to the researcher since a look at HFC Equity Trust annual report shows that the fund invested mostly in companies listed on the Ghana Exchange and risk free investments options such as the Government of Ghana bonds as well as the money markets.

4.2.3 SAS Fortune Fund Manager's Skill

The fund manager skill is presented algebraically as: $\text{Beta}_x \text{Alpha}$

Therefore, SAS fortune Fund manager's skill = 0.1363×-1.6609

$R^2 = 0.5169$

Results from the Jensen Alpha equation shows that SAS Fortune Fund managers did not have any selective ability skills since the alpha value of their fund was a negative. The correlation coefficient value on other hand was 0.5169. This suggests that there is a significant relation between SAS Fortune Funds manager's skills and their funds performance.

However, in comparing all the funds alpha values, it became evident that SAS fund managers had the least selective ability skills since SAS Fortune fund recorder the lowest alpha value of negative 1.6609.

Results from Table 3 also showed that of all the three funds Databank Epack fund had the highest alpha value of 0.2894 and equally was the fund with the only positive alpha value. This was not quite surprising at all since results from Table 1 showed that in terms of Databank Epack raw returns, its performance was very consistent from 2009-2011 than all the other two funds. The positive alpha value of Data bank Epack shows that its funds managers' had higher selective ability skill. Hence their skill ability impacted on their fund's performance.

Likewise, the positive alpha value of Databank Epack could equally suggests that the fund's managers had a strong timing ability thus, knowing when to pick a particular stock and when to sell or keep a particular stock within its portfolios.

However, when it came to HFC Equity Trust and SAS Fortune fund it became evident that these funds managers had weaker skills compared to their Databank Fund managers' alpha value. The negative alpha value recorded by HFC Equity Trust and

SAS Fortune funds suggest that their fund managers did not have any selective skills and market timing abilities as well.

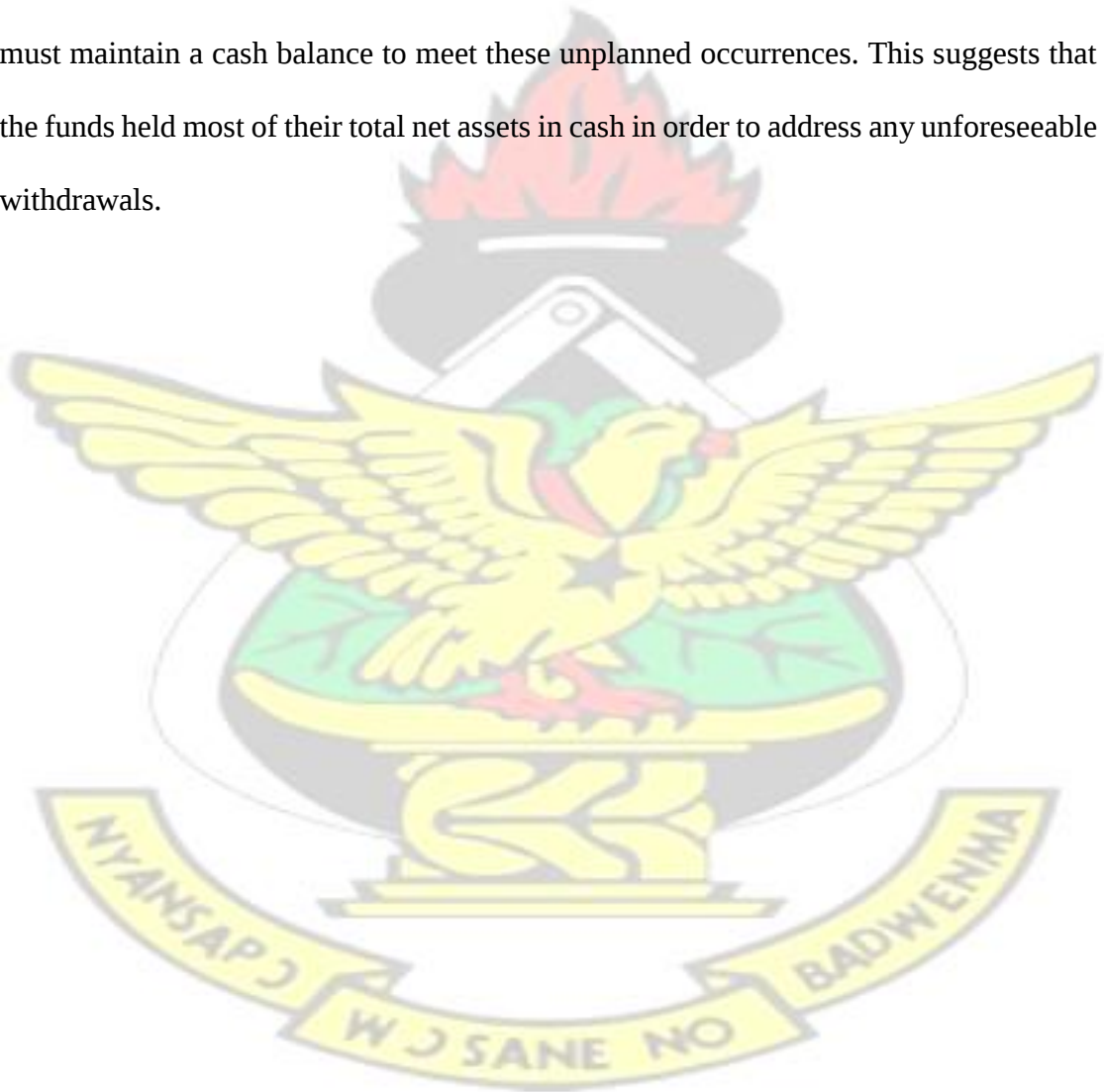
However, in terms of the funds systematic risks, Findings from the study showed that Data bank Fund held much risky investments than the market index. In contrast the other two funds thus, HFC Equity Trust and SAS Fortune held less risky investment than both the Databank Epack and the market index. This suggests that on average HFC Equity Trust and SAS Fortune held portfolios which were less risky than the market portfolio.

This confirms the category of investors who normally invest in mutual funds. The London and New York Stock Exchange asserts that most of the investors within mutual funds institutions lacks the necessarily investing skill set hence it is expected that mutual funds managers become overly cautious when investing funds on their behalf. Likewise per mutual funds investors' characteristics, mutual funds entities are restricted to hold less risky assets simply because their investors are predominantly non-professional individuals and for that matter regulatory restrictions are imposed on fund managers in order to safeguard their investment portfolios from venturing into highly sophisticated ventures (London and New York Stock Exchange as cited in Tyson, 2015). Therefore, the decision of the fund's managers of HFC Equity Trust and SAS Fortune to invest in less risky assets confirms the position of the London and New York Stock Exchange.

Hence it came as no surprise, when most of the funds held huge part of their assets in short term investments in order for the funds to able to address their stochastic inflows

and outflows characterised by its investors. For instance, from the 2014 financials of HFC Equity Trust it became evident that HFC had a total of GH¢1,844,645 million of their total asset in short term funds likewise Databank Epack equally held GH¢18,069,707 of its total assets in cash and short term investment.

Equally, findings from their financial reports affirm the earlier views of Friend (1962) which postulated that mutual funds face stochastic inflows and outflows hence they must maintain a cash balance to meet these unplanned occurrences. This suggests that the funds held most of their total net assets in cash in order to address any unforeseeable withdrawals.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study as guided by specific objectives and conclusions reached based on the findings as well as recommendations for enhancing the performance of mutual funds.

5.2 Summary

The main problem of the study was to assess the performance of Databank Epack investment, SAS Fortune Fund and HFC Equity trust fund from the period of 2007-2014. The target population for this study consisted of all the forty-six mutual funds operating in Ghana, the Government of Ghana 91-days T-bills returns (which acted as the risk-free investment option) and finally the Ghana Stock Exchange (as the benchmark investment index). Accordingly, the population of the study became Databank Epack investment, SAS Fortune Fund and HFC Equity trust fund since they had a complete dataset for the whole eight-year period of the study time interval. However, since a sample would have to have a dataset of his annual report on its website from the period of 2007-2014 before the fund can qualify to be part of the study sample the researcher employed purposive sampling technique in selecting the samples for the study.

The study sought to provide empirical evidence to answer the following research questions thus; firstly, to measure how the funds have performed as against the Ghana Stock Exchange Index within the understudied period?

Secondly, to ascertain the impact of fund manager skills on equity mutual funds performance and lastly to measure how the mutual funds have performed as against the risk free rate investment.

With the first research question, it became evident that the average return for all the three funds ranges from -2.30 to 7.49. Concurrently, among all the three funds HFC Equity trust had the highest returns. Thus, within the understudied period HFC Equity trust had an average return of 7.49. However, in terms of all the three understudied funds, SAS Fortune Fund Limited had the least average return. It even performed worst against the Ghana Stock Exchange market index.

Additionally it became evident that Databank Epack investment fund raw returns were higher than all the other funds. Nevertheless, in term of its mean return for the 8 years period, the Ghana Stock Exchange Market index outperformed the Databank Epack investment.

Findings, from the study established that with the exception of HFC Equity trust which outperformed the market index fund thus, GSE the other two remaining funds all fell short in terms of its average return for the 8 year study period in reference to the GSE market index.

The next research question sought to measure was to find out the impact of fund manager skills on the mutual funds performance. Findings from study showed that Data bank Epack was the fund with the only alpha value. Again of all the three funds SAS Fortune Fund had the least alpha value of negative 1.6609 followed by HFC Equity

Trust with a negative alpha value of 1.1825. The positive alpha values of Data bank Epack showed that its funds managers' had higher selective ability skill than HFC Equity Trust and SAS Fortune Fund. The findings from the study confirmed that the managers of these funds skills impacted on the performance of their respective funds.

The final study research question was to find how has the mutual funds performed as against the risk free rate investment. Findings from the study showed that in terms of the funds average return for the understudied years, HFC Equity trust received higher returns than the Treasury bill thus, interest free investment. In contrast, the other two funds thus Databank Epack and SAS fund performed below the average returns of interest free investment. Findings from the study suggest that if one would have invested in HFC Equity trust the investor would have received a higher return than just investing in the risk free instrument.

5.3 Conclusions

The study established that out of the three funds, HFC Equity trust was the only fund that outperformed both the Ghana Stock Exchange and the interest free rate investment options. Nonetheless, the other two funds performances fell short as against the both the GSE market index and the T-bill rate average annual returns. This suggests if an investment would have held his or her investment option with either the GSE market index or the government risk free investment thus the T-bills his returns would have performed relatively well or better than just given it to an actively managed fund to manage.

Also, it was observed that with the exception of Databank Epack which somehow had some of their investment options outside the scope of Ghana the remaining funds held most of their investment options within the Ghanaian equities.

Additionally, it became evident that Data bank Epack was the only fund which funds managers had high selective and market timing abilities. In contrast SAS Fortune fund managers had the least timing and selective abilities among all the other funds.

5.4 Recommendations

The study confined itself to three mutual funds within Ghana so findings from this study could not be generalized to all the mutual funds in Ghana. A comparative study should therefore be carried out to measure the performance of other mutual funds in order to validate whether the findings can be generalized to mutual funds companies in Ghana. Also, other study should adopt other performance measures such as Sharpe ratio, Treynor ratio, Treynor and Mazuy since this study focused mainly on Jensen Alpha as its performance measure.

Secondly, on the part of management, it became evident in the study that most of the funds held their investment options solely within the Ghanaian equity markets. This therefore reduced other equity markets the funds could have relatively invested in order to ensure higher returns for their clients' investment. This would have enabled their investors enjoyed much greater impact since returns from other markets would have ensured that economic downturns from a certain market could be minimize or cancelled by the returns from other markets as well. Based on this, the researcher would like to

recommend to the managers of these funds to likewise invest in other African markets in order to diversify their portfolios to address any unforeseeable market short falls.

Also, findings from the study established that most of these funds underperformed the market index and the interest free rate investment option, on this score it is recommended that the managers of these funds should build their research departments in order to ensure that their forecasting ability improve in order to beat the market index and likewise actualize a positive returns for their investors. Equally on this score it is recommended that the Security and Exchange Commission of Ghana should enforced its regulatory requirement a fund is required to have a professional fund manager who will played the active role in its fund management.



REFERENCES

- Abdel-Kader, M.& Kuang, Y. (2007). Risk-Adjusted Performance, Selectivity, Timing Ability and Performance Persistence of Hong Kong Mutual Funds. *Journal of Asia-Pacific Business*, Vol. 8, No. 2, pp. 25-58.
- Adimado E. Y. (2009). Performance of mutual funds in Ghana: A case of Anidaso mutual funds investments. Unpublished CEMBA Dissertation School of Business, College of Arts and Social Science, KNUST, Kumasi, Ghana.
- Asebedo, G. & Grable, J. (2004). Predicting mutual fund over-performance over a nine-year period. *Financial Counselling and Planning Volume 15* (1), 2004.
- Babalos, V., Kostakis, A., & Philippas, N. (2009). Managing mutual funds or managing expense ratios? Evidence from the Greek fund industry. *Journal of Multinational Financial Management*, 19, 256-272.
- Banegas, A. (2010). Emerging market mutual fund performance and the state of economy. Working Paper, University of California, San Diego, USA.
- Bauer, R., Otten, R., & Rad, A.T. (2006). New Zealand mutual funds: measuring performance and persistence in performance. *Accounting and Finance*, Vol.46, pp.1-17.
- Blake, D. & Timmermann, A. (1998). Mutual Fund Performance: Evidence from the UK, *European Finance Review*, 2, pp 57-77.
- Bilawal, M., Dilawar, M., K., Hussain, M., Y., & Akmal, U. (2015). Performance evaluation of closed ended mutual funds in Pakistan. *International Journal of Management and Business Research*, 6 (1), 65-71, winter 2016.
- Bodie, Z., Kane, A. & Marcus, A.J. (2004). *Investment*, 6th ed. McGraw-Hill/Irwin.
- Bryman, A., & Bell, E. (2007). *Business Research Methods*. 2nd edition. Oxford: Oxford University Press.

- Carlson, R. (1970). Aggregate Performance of Mutual Funds, 1948-1967. *The Journal of Financial and Quantitative Analysis*, Vol. 5, No. 1, pp. 1-32.
- Chen, D. (2013). An empirical study on mutual funds performance and performance persistence in China. Unpublished Master of Commerce and Management Submitted to Lincoln University.
- Chen, J., Hong, H., Huang, M. & Kubik, J. (2004). Does fund size erode performance? Liquidity, organizational diseconomies and active money management. *American Economic Review*, 94 (5), pp. 1276-1302.
- Churchill, G. A., & Iacobucci, D. (2002). *Marketing research: Methodological foundations (8th ed.)*. Mason, Ohio: South-Western/Thomson Learning.
- Cohen, L., Manion, L. & Morrison, K. (2007). *Research Methods in Education (6th ed)*. Routledge, NY: New York.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Cuthbertson, K., Nitzsche, D. & O'Sullivan, N. (2010). Mutual fund performance: Measurement and evidence. *Journal of Financial Markets, Instruments and Institutions (2010)*, 19(2), 95-187.
- Droms, W.G., & Walker, D.A. (1995). Determinants of variation in mutual fund returns. *Applied Financial Economics*, 5, 383-389.
- Droms, W.G., & Walker, D.A. (2001). Persistence of mutual fund operating characteristics: Returns, turnover rates, and expense ratios. *Applied Financial Economics*, 11, 457-466.
- Elton, E. J., Gruber, M. J., & Blake, C. R. (1996). The persistence of risk-adjusted mutual fund performance. *Journal of Business*, 69 (2), 133-157.
- Fama, E. F., & French, K. R. (2010). Luck versus Skill in the Cross-Section of Mutual

- Fund Returns. *Journal of Finance*, 65, 1915-1947.
- Ferreira, M., Miguel, A., & Ramos, S. (2011). The determinants of mutual fund performance: A cross-country study. *Review of Finance*, 17, 483-525.
- Golec, J. H. (1996). The effects of mutual fund managers' characteristics on their portfolio performance, risk and fees. *Financial Services Review*, 5, 133-148.
- Gottesman, A., & Morey, M. (2006). Manager education and mutual fund performance. *Journal of Empirical Finance*, 13, 145-182.
- Grinblatt, M. & Titman, S. (1989). A study of monthly mutual fund returns and performance evaluation techniques. *The Journal of Financial and Quantitative Analysis*, 29, 419-444.
- Grinblatt, M., & Titman, S. (1994). A study of monthly mutual fund returns and performance evaluation techniques. *Journal of Financial and Quantitative Analysis*, 29, 419-444.
- Haslem, A.J. (2003). *Mutual funds: Risk and performance analysis for decision making*. Oxford: OX, Blackwell Publishing.
- Henriksson, R., D. & Merton, R., C. (1981). On market timing and investment performance II: Statistical procedures for evaluating forecasting skills, *Journal of Business* 54, 513-534.
- Hili, J., Pace, D. & Grima, S. (2016). "Equity Mutual Fund Performance Evaluation: An Emerging Market Perspective" *In Contemporary Issues in Bank Financial Management*. Published online: 29 Feb 2016; 93-132. Permanent link to this document: <http://dx.doi.org/10.1108/S1569-375920160000097009>
- Indro, D.C., Jiang, C.X., Patuwo, B.E. and Zhang, G.P.(1999). "Predicting mutual fund performance using artificial neural networks", *Omega*, 27, 373-380.

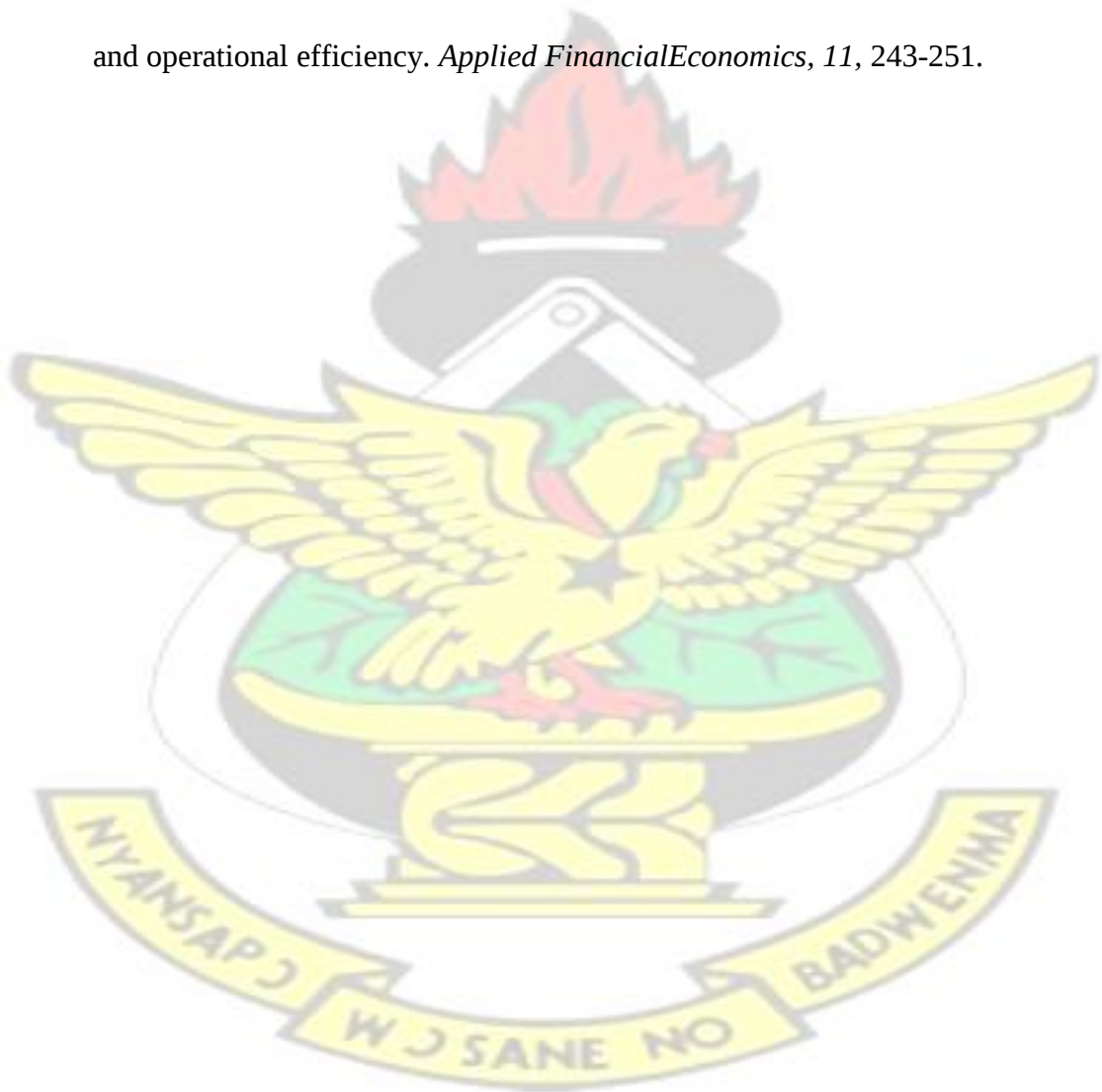
- Ippolito, R.A., (1989). Efficiency with costly information: A study of mutual fund performance. *Quarterly Journal of Economics*, 104, 1-23
- Investment Company Fact Book, (2015). A Review of Trends and Activities in the U.S. Investment Company Industry, 55th edition. Accessed on 15/04/2016 at www.icifactbook.org.
- Investment Company Institute (2015).
- Jensen, C.M., 1968, "The Performance of Mutual Funds in the Period 1945-1964", *Journal of Finance*, 23, 389-416.
- Jensen, M. C. (1969). Risk the pricing of capital assets, and the evaluation of investment portfolios. *Journal of Business*, 42, 167-247.
- Kacperczyk, M., Sialm, C. & Zheng, L. (2005). On the industry concentration of actively managed mutual funds, *Journal of Finance*, LX (4), 1983-2011.
- KPMG Africa funds and fund management survey, (2013). November report.
- Malhotra, D. & McLeod, R. (1997). An empirical analysis of mutual fund expenses. *The Journal of Financial Research*, 175-190.
- Otten, R., & Bams, D. (2002). European mutual fund performance. *European Financial Management*, Vol. 8, Issue 1, pp. 75-101.
- Polwitoon, S., & Tawatnuntachai, O. (2008). Emerging market bond funds: A comprehensive analysis. *Financial Review*, 43, 51-84.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students (5th ed.). Harlow: Pearson Education Limited.
- Shi, Q. (2013). Equity mutual fund performance: Evidence from China. Unpublished Master of Science in Management (Finance) Submitted to Goodman School of Business Brock University, St. Catharines, Ontario.
- Shukla, R. & Trzcinka, C. (1994). Persistent performance in the mutual fund market:

- Tests with funds and investment advisors. *Review of Quantitative Finance and Accounting* 4, 115–135.
- Singh, A. (2014). Assessing the performance of emerging market mutual funds in Canada. Unpublished Master of Science in Business Administration Submitted to School of Management and Governance University of Twente.
- Soongswang, A., & Sanohdontree, Y. (2011). Open-ended equity mutual funds. *International Journal of Business and Social Science*, 2(17), 127_136. Retrieved from http://ijbssnet.com/journals/Vol_2_No_17/18.pdf. Accessed on December 9, 2014.
- Suppa-Aim, T. (2010). Mutual fund performance in emerging markets: The case of Thailand. Doctor of Philosophy. The University of Birmingham, Birmingham.
- Tang, K., Wang, W., & Xu, R. (2012). Size and performance of Chinese mutual funds: The role of economy of scale and liquidity. *Pacific-Basin Finance Journal*, 20, 228-246.
- Topkis, M. (1996, December 23). Getting wise to mutual fund fees. *Fortune*, 191.
- Treynor, J.L. & Mazuy, K.K., 1966, “Can mutual funds outguess the market”, *Harvard Business Review*, (July/August), 131-136.
- Tyson, J.E. (2015). Sub-Saharan Africa and International Equity Policy approaches to enhancing its role in economic development. September, 2015 Working paper 424.
- Walker, G. A. (1997). Testing the predictability of mutual fund returns. *Review of Business*, 4, (18), 10-15.

Wermers, R. (2000). Mutual fund performance: An empirical decomposition into stockpicking talent, style, transactions costs, and expenses. *The Journal of Finance*, Vol.55, Issue.4, pp. 1655-1703.

Yeboah, A. (2009). The role of mutual funds in Ghana challenges and prospects, case study of Data bank. Unpublished MBA Dissertation School of Business, College of Arts and Social Science, KNUST, Kumasi, Ghana.

Zera, S.P., & Madura, J. (2001). The empirical relationship between mutual fund size and operational efficiency. *Applied Financial Economics*, 11, 243-251.



APPENDIX A

HFC EQUITY FUND

HFC BANK	2007	2008	2009	2010	2011	2012	2013	2014
BALANCE AT THE BEGINNING	-93,359	-54,460	124,907	- 355,203	-329,312	- 317,864	16,927	1,160,397
BALANCE AT THE END	-54,460	124,907	-355,203	- 329,312	-317,864	16,927	1,160,397	2,400,192

DATA BANK EPACK

DATA BANK	2007	2008	2009	2010	2011	2012	2013	2014
BALANCE AT THE BEGINNING	4,018 ,392	6,060 ,758	8,883, 058	10,505,3 90	14,69 7,732	17,89 3,424	17,18 2,220	22,56 8,164
BALANCE AT THE END	6,060 ,758	8,83, 058	10,50 5,390	14,697,7 32	17,89 3,424	17,18 2,220	22,56 8,164	9,340, 033

SAS FUND

SAS BANK	2007	2008	2009	2010	2011	2012	2013	2014
BALANCE AT THE BEGINNING	-6,913	87090	247,74 2	- 49,592	376,90 4	207,87 4	433,244	1,459,52 9
BALANCE AT THE END	87090	247,74 2	- 49,592	376,90 4	207,87 4	433,24 4	1,459,52 9	1,696,62 2

GSE Performance
31.21%
58.16%
-46.58%
32.25%
-3.10%
23.81%
78.81%
5.40%
-11.77%

YEARS	DATA BANK	HFC	SAS	TBR	GSE
2007	0.51	-0.42	-13.60	0.88	0.31
2008	-0.85	-3.29	1.84	2.06	0.58

2009	0.18	-3.84	-1.20	1.88	-0.47
2010	0.40	-0.07	-8.60	1.02	0.32
2011	0.22	-0.03	-0.45	0.89	-0.03
2012	-0.04	-1.05	1.08	1.91	0.24
2013	0.31	67.55	2.37	1.57	0.79
2014	-0.59	1.07	0.16	2.15	0.05
mean	0.02	7.49	-2.30	1.54	0.22
SD	0.488285	24.32771	5.712973	0.5362	0.38424
alpha	0.2263	0.1539	0.2263		
Beta	-0.0761	0.0095	0.0039		

