UNIVERSITY OF GHANA

DETERMINANTS OF EQUITY MUTUAL FUNDS PERFORMANCE IN GHANA

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DECLARATION

I hereby declare that this submission is the result of my own original work towards a post graduate degree and that to the best of my knowledge, it includes no material previously published by others nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

…… ……..

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CERTIFICATION

We hereby certify that this thesis was supervised in accordance with procedure laid down by the University.

…… ……

DR. LORD MENSAH **DATE:**

(SUPERVISOR)

DEDICATION

This masterpiece is first and foremost dedicated to the almighty God for keeping me save and sound throughout the two-year study in the university of Ghana.

I dedicate this work to my late father Mr. Emmanuel Osafo- Ampomah for his love and care for my education and progress in life, my late uncle Mr. Kwaku Osafo- Ampomah for sponsoring my undergraduate university education. My Grand mother Maame Yaa Amoakoa for my upbringing in the formative years of my life. My siblings and family for their prayers and support. To My CEO Mr. Michael Bozumbil, Head of my Department Mr. Kwasi Zigah for their permission and encouragement throughout my education. I say God bless you all for your love and support.

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ABSTRACT

The main objective of this study is to identify factors that significantly influences the performance of equity mutual funds in Ghana. The Ghana Stock Exchange (GSE) like most other West African Exchanges is not robust. The market is not price sensitive to market information and hence the question how and what factors influence the performance recorded by the market. This uncertainty about the main drivers of performance of equity mutual funds in Ghana motivated the research on the topic "Determinants of Equity Mutual Funds Performance in Ghana"

The variables employed in the study included the Gross Domestic Product (GDP) of Ghana, Sex of the fund manager, Age of the fund, the Ghana Stock Exchange All Share Index and the Size of the fund measured as the total net asset under management (TAUM).

Consequently, Panel data regression method was employed for the formulation of the models to be used in the study and STATA 12 is also employed for the analysis of the data gathered for the period 2010-2017 which is the study period.

The fundamental findings of the study were that the Total Net Asset under Management (TAUM) and the GSE-All Share Index were relevant and significant factors to explain the performance of equity mutual funds in Ghana. However, the Sex of the fund manager, the Gross Domestic Product (GDP) and the age of the fund in operation were not relevant enough to be considered as factors in determining the performance of equity mutual funds in Ghana.

It is recommended that the government should ensure that the macroeconomic variables of the economy are well managed since they have an influence on the performance of mutual funds in Ghana. It is also recommended that Equity mutual fund managers should strive to increase the size of their funds as this is seen to influence performance positively over time.

In conclusion, it is established that the Total Net Asset under Management (TAUM) and the GSE-All Share Index are more significant factors to explain the performance of equity mutual funds in Ghana. The Sex of the fund manager, the Gross Domestic Product (GDP) and the Age of the fund in operation least important in considering factors in determine the performance of equity mutual funds in Ghana.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Equity represents part ownership of an entity. Firms issue shares in an attempt to gather or obtain funds in order to meet the recurrent or capital needs of the firm. The issuance of shares by a firm could take the form of a common stock or a preferred stock. Common stock holders are usually referred to as the real or true owners of the firm or institution, otherwise called the ordinary shareholders. This stems from the fact that, these shareholders are usually the last to be paid in the event of liquidation. The issuance of a common stock entitles the shareholder to certain rights, such as the right to proxy voting, thus entitling the shareholder to delegate his voting right to another, usually through a written authorization to enable the elected person exercise the right on behalf of the shareholder in matters concerning decision making especially in his absence. They also have the right to vote in the election of the board which constitutes the basis upon which the checks and balances of the firm are constituted and further help in the formulation and development of organizational policies. Also the common shareholder has the first opportunity at buying any newly issued shares before it is opened to the public. This is to make room at enabling the shareholder either retain or acquire more shares before dilution through the issuance of new shares. This is referred to as the preemptive rights of the ordinary shareholder. This is usually issued to the ordinary shareholder before a seasoned offering is made by the firm to the general public. The preferred shareholder on the other hand is entitled to be paid first in the event of any liquidation unlike the common shareholder. The preferred stock holder is not entitled to voting rights in the making of organizational rules and the taking of decisions unlike the ordinary shareholder. The preferred shareholder is merely an investor in the firm or organization and is not concerned by the running of the firm. The preference shareholder's dividend payment takes

priority over that of the common shareholder's dividend payment, thus the preferred shareholder in the event of deferment of the payment of dividend, will be entitled to the payment of all accrued dividend when payment resumes before any dividend may be paid to the ordinary shareholder. This is in the fact that; the preferred shareholder has a claim on the firm's assets but are however subordinates to bondholders in relation to the issue guarantees which are usually given to bondholders other than the preferred shareholder.

The mutual fund industry globally is rapidly growing and this is seen in the year on year increase in the total asset under management (TAUM) of the various mutual fund institutions. This is quickly attracting many more investors into the industry due to the notable attributes of the industry. The total net asset of the world's mutual fund industry stands at US$ 49.3 trillion as at the year 2017 (Investment company factbook, 2018) as against the global industry total net asset of US$ 40.4 trillion in the year 2016 (Investment company factbook,2017). This is a clear indication of the consistent growth in the global pool of the industry and the growing investor confidence in the markets. This growth in investor confidence could be attributed to the strong regulator checks and balances. It is very usual to have the regulator of these markets in the respective countries stipulate the publication of annual reports to the fund's shareholders and in some cases regulator requirement to submit a monthly and quarterly report. These measures are all aimed at protecting the investor and providing the investor with adequate information aimed at improving the decision making process. The United States (U S) was a major player contributing to this global pool. The U S contributed about US$ 22.1 trillion to the global pool, thus representing about 44.8%. This then makes the U S mutual fund industry undoubtedly one of the highly patronized financial instruments in the U S economy and a mark for global recognition among market participants.

A mutual fund is a collective investment scheme which involves the pooling of funds from various investors. In a mutual fund investment, the parties that buy shares in the fund are deemed as shareholders of the fund and are entitled to as much information as required by the law in the specified country for which the mutual fund shareholders belong or the fund operates. In Ghana, the Securities and Exchange Commission (SEC), Securities Act 2015 requires mutual funds to publish their annual report. This is aimed at enabling the investor make a well informed decision. According to the U. S Securities and Exchange Commission, a mutual fund is expected to invest majority of the funds of the pool to the area where the name implies, (U. S SEC, pub 182). The risk profile of every investor varies and this has the tendency at influencing the type of interest bearing assets the investor decides to buy into. The equity mutual funds are considered to be very risky and this is due to its dependency on the performance of the selected stocks by the fund manager. As in every robust economy where the stock prices reflect all market available information, the rapid response of stock prices to market conditions has the tendency to render the prices of stock to be very volatile and prediction is unreliable. Hence, equity mutual funds shares are usually issued as long term investments with the prospect of capital gains and dividend distribution to maximize shareholder value. In Ghana, the Databank Epack, SAS Fortune fund, Firstbanc Heritage fund are examples. A mutual fund investment may be structured to be an index fund where the funds of the firm are used in the purchase of selected market indices and this is particularly the case where it is difficult to outperform the market. Such market indices may include the S& P 500, NASDAQ and the GSE all-share index. The managers of such index based mutual funds depend on the performance of the market. Thus, they are usually associated with low investment fees due to the little or no need for large staff numbers and account management. This is particularly of interest to investors with the interest at maximizing return and cutting down on cost associated with mutual funds. Another form of mutual fund is the money market mutual funds

which are considered risk neutral due to the relative stability and minimal default risk associated with money market instruments. They invest in bonds, certificate of deposits, fixed income securities and the like. They are usually considered or recommended to investors who have the short to medium term investment objective in mind. In Ghana, the Databank money market fund, Firstbanc Firstfund and Gold Coast Money market fund are notable examples. Other types of mutual funds include fixed income mutual fund, balanced mutual funds, alternative funds, smart-beta funds, funds of funds and sector fund, (investopedia,2018).

There however exist ethical mutual funds for investors concerned with earning returns without any implication on their moral judgment. Ethical mutual funds involve the selection of funds in certain sectors of the economy that do not engage in socially undesirable activities such as the tobacco industry, alcoholic industry or the gambling industry. According to Bauer et al (2005) ethical mutual funds and that of the conventional mutual funds are not different in terms of the fund exposure to risk and its commensurate return over time. Hence it could be concluded that, the ethical mutual fund shareholder is not far from the market risk associated with the conventional mutual fund. According to Basso & Funari (2003), this restraint on management with regards to the selection of industries and companies to invest in has the tendency to affect the overall performance of these ethical mutual funds. In Ghana, the Databank Arkfund is an example of an ethical mutual fund which is primarily concerned with the investment of shareholders' funds in socially desirable sectors of the economy.

A mutual fund may be structure as an open ended, close ended fund or an exchange traded fund. An open ended mutual fund has no limitation to the number of shares permitted to be issued. Such funds buy and sell shares at the prevailing Net Asset Value (NAV) of the fund. The Net Asset Value (NAV) presents the assets of the fund less the existing liabilities, divided by the shares

outstanding. It is the most popular type of investment style with respect to the mutual fund industry. Shares are continually sold and bought and hence an investor, who wishes to redeem or buy in to the fund, must buy or sell at the existing net asset value (NAV) which is usually made available on a daily basis by the firm's analyst. On the contrary, the close ended mutual fund is an investment style which raises funds through an initial public offering and this is usually on a one-time basis. Thereafter, the fund is closed to new investors; however, a member may sell the existing shares to any new member willing to buy into the fund. This type of fund is highly liquid but provides a lower level of security as compared to the conventional open ended mutual fund. A close ended mutual fund is limited to the number of shares to be issued and operated like a listed entity on the exchange.

Performance of Mutual Funds in Ghana

The mutual fund landscape of Ghana is gradually gaining grounds in the light of the establishment of many mutual funds. There are currently over thirty-seven (37) registered mutual funds in Ghana with majority of these funds being money market. This could be partially due to the clarity that exists in money market instrument as against the equity based instrument. Ghanaians on the aggregate gradually understand how the mutual fund industry functions, the products they offer and how they help in liquidity and security of funds. Over the years the Databank Mfund Limited as the first money market mutual fund has recorded significant performance as a pioneer in the money market mutual fund. The First banc first fund in the year 2016 recorded a significant gain to become the best money market mutual fund in Ghana with a year ending yield to date return of 36.7% as against the Databank year ending yield to date of 24.97%. The other market players in the money market mutual fund industry also returned a year ending yield to date comparatively well with returns above the prevailing Government of Ghana Treasury Bill which recorded a least

return of 10.69% and a maximum return of 23.97% between the period 2010 to 2017 The equity mutual funds like the SAS fortune fund also recorded a historic year to end yield of 89.2% in the year 2013 making it one of the best equity mutual fund in that year with respect to its yield. Nevertheless, the Epack of Databank also recorded 83.93% in the same year 2013 closely matching the SAS Fortune fund. In recent times, the capital market at large has not performed well partially due to poor corporate governance measures which has seen a number of listed firms delist and further, some firms losing their license in the industry they operate. Nevertheless, as the equity mutual funds purchase securities across a spectrum of these entities, the effect of the turbulence on a number of these firms had little impact on the performance of the fund at large.

1.2 Problem Statement

After the 2008 global financial crisis, most economies of the world have engaged various stakeholders of the financial market on ways of mitigating that mishap, to foresee and possibly to prevent the future occurrence of the crisis. Thereafter, some economies of the world have not been able to fully recover from the crisis. Many economies saw the injection of capital funds from the state in order to sustain the local institutions which are the backbone of the financial sector. Thus when they break, the financial system also breaks. A key attribute to the cause of the crisis was poor regulation of the various financial markets, (Ramadhan & Naseeb, 2015). This brings to light the relevance of supervision in the financial system. Notwithstanding, the Ghanaian financial market has also experienced some volatility over the period 2016-2018. This period saw the collapse of some banks due to poor cooperate practices and supervision by regulators. The equity market in Ghana provides an avenue for members of society to be part owners of entities. The Ghana Stock Exchange is the market place for the trading of secondary shares. The Ghana Stock Exchange (GSE) like most other West African Exchanges is not robust. The market is not price

sensitive to market information and hence the question how and what factors influence the performance recorded by the market. Thus one may wonder if a listed firm's performance in operational activities is the only factor responsible for the recorded losses or gains. Equity mutual funds purchase shares from a majority of these entities and the primary indicator for an average investor is the question of return. However, it is very well known that the equity mutual fund is characterized by both capital gains and dividend payments which sum up to form the return on the capital invested. Nevertheless, does return alone suffice for the rational investor or are investors only looking at return in Ghana with respect to the equity mutual fund? If the sole aim of the investor is based on return alone, then alternative scheme like the fixed deposit and bonds could have been ideal for an investor of return interest only. However, there are other factors worthwhile to be looked at by the investor by taking into consideration the risk exposure of the fund, thus, did the fund make that return by taking excessive risk with fund selection and timing or it was achieved by proper market research and knowledge into stock selection. These factors thus raise the question of what really are the factors that determine the performance of equity based mutual funds. The composite index is the benchmark of most equity mutual funds in Ghana. Thus it is worthwhile to consider the fact that, equity mutual funds thrive to outperform the market index in order to sell to the market their performance above the average. The Ghana Stock Exchange (GSE) continues to make marginal gains and substantive losses over the period. The composite index of the exchange recorded a negative return of 11.80% in 2015 and a 15.33% in the year 2016, (SEC annual report, 2016). However, the market in the year 2008 saw a record improvement of a gain of about 58% on the Exchange. This brings to light the frailty of the Ghanaian equity market. It is believed, the equity market is the central or the focal point to capital growth and generation for existing and new businesses. In Ghana, the Ghana Alternative Market is an alternative to the Ghana stock exchange. The Alternative market exists to provide small and medium scale enterprises (SME's) with the

opportunity to raise capital other than on the Ghana Stock Exchange. This is because of the high enlisting requirements of the Ghana stock exchange. These improvements strategies were geared at creating an enabling environment and making room for start-ups and enterprises of various shapes and forms to gain interest in the raising of capital through the issuance of shares. This also helps in the overall growth of the capital market. Most mutual fund firms in the country operate equity market funds in accommodation with the other fund types such as the money market funds and ethical funds. The performance of these equity market mutual funds is dependent on certain parameters. With the volatility in the Ghanaian financial system and the seemingly poor performance of the equity market over time, it is prudent for investors who purchase equity based mutual funds to ascertain what factors have the tendency to affect their returns and hence their long term investment share price in an environment where the equity market is held by a few major corporations and the market contribution to the entire Gross Domestic Product (GDP) is minimal.

1.3 Significance of the Study

The significance of the study could be analyzed from three distinct points. The study would contribute to literature, to the government decision making process and finally to the mutual fund industry players, especially the fund managers of the various equity mutual funds. There is limited literature in Ghana about the mutual fund industry and precisely, the equity market mutual fund. This study would throw an in-depth light on the factors that influence the performance of equity mutual funds in Ghana and possibly the relevant role that the equity market plays in the mutual fund industry. Literature would be broadened and further knowledge would be added to the minimally discussed area. Further, the government's decision making process and financial impact programs would be further assessed and provide the government with a better understanding of the effect of the various capital market implementation and strategy initiatives. This would then

make a way for the government at better knowing the key indicators at best improve the market and otherwise. Finally, the study would provide fund managers who are key industry players with the factors that impact their fund performance over time. This would provide these industry players with knowledge to enable them better select stocks knowing very well how these factors work for or against them. The study would also enable the fund managers know how impactful certain firm specific factors impact fund performance over time.

1.4 Scope of Study

There are currently seven (7) registered equity mutual funds in the country. However, the study will focus on only five (5) of these equity mutual funds. The study intends to pool data from all these five (5) registered mutual funds in order to provide a better understanding of the factors that influence the performance of equity mutual funds in Ghana. Secondary and primary data would be collected with regards to the study area. The study will pool data from the period 2010-2017.

1.5 Limitations of Study

The study will have only five equity market mutual funds to analyze the performance of the market. This is due to the fact that, there are currently only seven (7) registered equity mutual funds in the country. Although the sample size is not the population, the study would have been extensive had the size of the market been larger than the seven (7) currently registered with the Securities and Exchange Commission and the other two equity mutual funds had been incorporated earlier than the study period. Also, the study period of 2010-2017 will be used to analyze the data. This is due to the fact that, majority of these mutual funds were incorporated recently and extending the period beyond these years would make some years deficient of data.

1.6 Research Objective

1.6.1 Main Objective

To identify factors that significantly influences the performance of equity mutual fund in Ghana.

1.6.2 Specific Objectives

i. To ascertain if age of the fund is a significant factor in the performance of equity mutual funds

ii. To identify if the sex of the fund manager is a significant factor in the performance of equity mutual fund

iii. To ascertain if the Ghana Stock Exchange (GSE) all Share Index is a significant indicator in the performance of Equity mutual fund.

iv. To ascertain if Gross Domestic Product of the economy is a significant factor in the performance of equity mutual funds

v. To ascertain if the total net asset under management (TAUM) of the firm, is a significant factor in the performance of equity mutual funds.

1.7 Research Questions

i. Does the age of the fund form a significant factor in the performance of equity mutual funds

ii. Is the sex of the fund manager a significant factor in the performance of equity mutual fund

iii. Is the Ghana Stock Exchange (GSE) all Share Index a significant indicator in the performance of Equity mutual fund.

iv. Is the Gross Domestic Product (GDP) of the economy a significant factor in the performance of equity mutual funds

v. Is the total net asset under management (TAUM) of the firm, a significant factor in the performance of equity mutual funds.

1.8 Chapter Outline

The research will be organized in five chapters. The first chapter will emphasize the equity market space by looking at the various types of equity ownerships. Further light will be thrown on the global pool of mutual funds then narrowed down to Ghana. The limitations of the study will highlight, the research problem upon which the study is being organized will be discussed and finally the research questions and objectives of the study.

Chapter two will focus on the empirical and theoretical frameworks upon which the study will add to existing knowledge.

Chapter Three will focus on the sampling techniques employed in the study, the methodology and the data analysis technique used in the study.

Chapter four will focus on the processing of the data gathered and the analysis of the data. From the data analyzed, factors outlined in the study will be further discussed in relation to the study area.

Chapter five will focus on the summary and conclusion of the study. Recommendations to the study area will be offered to better the literature in the study area.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The mutual fund industry in Ghana is at a tremendous growth and this even comes at a time where the Securities and Exchange Commission of Ghana put a directive to ban guaranteed returns in the capital market and recommended that, capital market operators who are having issues with operation should resort to the conversion of their funds into mutual funds. Further, the financial crisis experienced in Ghana in the year 2017-2018 among many financial institutions has brought confidence in the operation of mutual funds as these collective investment schemes remained liquid and stable in their operation in the midst of the turmoil and bank panic. Thus more fund operators are resorting to the operation of mutual funds and many more public and institutional investors are patronizing this initiative and this seems to be driving the industry forward.

The aim of this chapter is to shower some light on the empirical and theoretical frameworks and findings that have influenced and enlightened knowledge in the face of the study.

2.2 Return and Performance Theories

A number of theories have shaped the understanding of return and performance of investment portfolios in the financial industry and they include the Capital Asset Pricing Model, Sharpe Ratio, Fama and French three factor Model and the Arbitrage Pricing Model. The underlying factors of these models try to explain the fact that, any exposure in excess of the risk free should be compensated with a risk premium that commensurate the risk exposure. According to Black (1993) the estimation of the expected return on an asset is not easy and hence a longer period of data gathering is prudent to arrive at an accurate expected return on an asset

2.2.1 The Capital Asset Pricing Model

The Sharpe-Lintner- Mossin mean variance equilibrium model of exchange also known as the capital asset pricing model is a model employed to ascertain the relationship between the expected return on an asset and its systematic risk. The model establishes the fact that, an investor needs to be compensated for any additional risk taken up in the course of the investment and also the fact that an investor needs to be compensated for having to keep his money in an investment over time. The model accounts for this by taking into consideration the risk measure of the investment thus the beta over the market premium which is the return in excess of the risk free return in the market. The market beta reflects how risky an asset is compared to the market risk. Although this model has shaped finance and econometrics knowledge in the academia and non-academia spheres, Merton (1973) argues in support of the criticism raised against the model in light of the single period nature of the model coupled with the homogenous expectations assumptions of the model. Also as discussed by Fama & French (2004), the shortcomings of the model could also be attributed to the use of improper proxies for the market portfolio of invested wealth which according to them plays a crucial role in the predictions of the model. This idea by Fama & French is iterated by Banz (1981) where he argues in the light of a misspecification of the model as a possible cause of the many criticism leveled against Capital Asset Pricing Model (CAPM). The unreliability of the market beta which is the systematic risk is also reiterated by Sharma & Mehta (2013). According to Sharma & Mehta (2013), earlier studies from research indicated that, on the average only 70% of the return on a portfolio could be explained by the market beta and the remaining 30% was unaccounted for and hence there existed some other variables that could account for portfolio returns besides the market beta.

2.2.2 Sharpe Ratio

The Sharpe ratio is a measure of the return earned in excess of the risk free per any additional risk or volatility experienced by the portfolio. This method of risk adjusted return explains the fact that, a risk free asset by virtue of the asset being free of any potential financial shock waves is expected to have a Sharpe ratio of zero as against a portfolio which is exposed to some form of market risk or volatility. The greater the Sharpe ratio of a portfolio, the better the risk adjusted returns of the portfolio. A combination of securities that yields a portfolio with a greater Sharpe ratio than before is deemed a well-diversified portfolio. Thus it increases return with less deduction of return for risk consumption. Hence the greater the Sharpe ratio of a portfolio the better the risk adjusted return. The model is however weakened according to Bailey & Lopez (2012) by the non-normality of expected returns and reduced granularity. This led Ingersoll et al (2007) to recommend a more frequent pooling of return data to reduce the inflationary effect associated with the Sharpe ratio.

2.2.3 Fama and French Multifactor Model

The multifactor model explains the fact that firm specific factors are relevant in explaining the return on a portfolio and contrary to the conventional rule of earlier models; the market is not the only factor to the explanation of the return to a portfolio. Thus explained as, any expected return on a portfolio in excess of the risk free return could be attributed to some three factors and this Fama and French (1996) explain as the difference between the return on a portfolio of small stocks less the return on a portfolio of large stocks, the difference on the return on a portfolio of high book to market stocks and the return on a portfolio of low book to market stocks and thirdly the excess return on a broad market portfolio. Hence this reveals the multidimensional nature of the risk to return relationship. These Fama and French believe would rectify the anomalies associated with the capital asset pricing theory (CAPM) and the arbitrage pricing theory (APT). Malin & Veeraraghavan (2004) highlights the findings of Fama & French (1998) where high book to market

equity outperforms the low book to market equity of 12 out of 13 markets under observation from the periods 1975 to 1995. Despite the immense strengths of the multifactor model stressed out in many research papers, the multifactor model is faced with criticisms as stressed out by Black (1993). Black (1993) explains data snooping as the relative cause of the results associated with the multifactor model.

2.2.4 The Arbitrage Pricing Theory

The arbitrage pricing theory formulated by Stephen Ross (1976) helps explain the risk-return principle as postulated by earlier and later researchers. The arbitrage pricing theory explains the risk return principle from the fact that, the return on an asset can be derived by combining the expected return on that asset; taking into consideration the existence of other common risk factors or risk premium. Unlike the capital asset pricing model that takes into consideration the systematic or market risk as the only possible influencing factor, the arbitrage pricing model includes other independent macroeconomic factors or variables that have the possibility of explaining the average return on the asset. According to Reinganum (1981), the model is based on the assumption of a perfectly competitive market and also upon the fact that, investors always want more to less. The arbitrage pricing theory provides an opportunity for risk free profit to be made by arbitrageurs in the financial markets. This is achieved through capitalizing on mispriced securities in the market. It is argued by Black (1993) that, although the arbitrage pricing theory supports the inclusion of other macroeconomic factors that better explain return, the theory however does not give a vivid way to price these macroeconomic or firm specific factors which are included in the model. Reinganum (1981) further iterates the criticism that, the arbitrage pricing model does not provide an interpretation to the factors employed as discussed earlier by Black (1903) and hence this makes the model a weak one.

2.3 Empirical Review

2.3.1 Total Asset under Management and Performance

The total net asset under management by a mutual fund is the market value of the assets held or managed by the mutual fund on behalf of its investors. Individual investor funds may be pooled into one collective fund which forms the net asset under management of the firm. Fluctuations experienced by the size of the fund may be attributed to the quantum of inflows and outflows to the fund and the degree of fund performance. The asset under management may increase from increased dividend reinvestment, capital appreciation and increase in investor inflows. The fund may also experience a decrease in asset under management from a continuous outflow, capital depreciation and a decline in alternative interest income sources. The management of the fund have the controlling power to buy shares or invest funds according to the objectives of the fund without necessarily seeking approval from individual investors. According to Collins & Mack (1997) economies of scale associated with a level of asset under management helps to ascertain the optimal amount of asset under management of the fund. He also argues that, firms without the optimal amount of assets under management may find it difficult surviving in the mutual fund industry. Perold & Salomon (1991) also argue to the contrary stating that, there are diseconomies of scale in large assets under management due to the fact that, small trade costs are less difficult to execute as compared with small trades. This he argues leads to an erosion of fund performance with fund size. This is reiterated by Chen et al (2004) and argues that returns on funds continually decline as fund size increases. This finding is explained predominantly by the illiquidity problem associated with large funds.

2.3.2 Age and Performance

The age of a fund translates into how long the fund has been in operation. The age of a mutual fund is particularly important because, younger fund is relatively exposed to higher cost of operation from extreme market conditions prevalent in the mutual fund industry upon entry. On the contrary, older funds are expected to display some added advantage over the younger funds due to their relative longer exposure to the market conditions. The age of a fund reveals to an investor the appropriate time to purchase shares in the fund. If research postulates a negative relationship between age and return, then the older the fund, the lesser the aggregated return and vice versa. Hence waiting for a younger fund to mature could lead to the loss of possible positive returns over the awaiting time. According to Webster (2002), there is no significant correlation between the age of a fund and the performance of the fund. He asserts that, there is a negative relationship between return and the age of a fund. Therefore, as the fund increases in age over time, the return associated with the fund decreases. This is reiterated by Peterson et al (2001) that, there is no significant evidence in support of the existence of a relationship between performance and age of a mutual fund. To the contrary, Gregory et al (1997) provide support to the existence of a relationship between age and fund performance and argues that, younger funds performed lesser than matured funds.

2.3.3 Ghana Stock Exchange All-Share Index and Performance

The stock market is an avenue for the trading of secondary shares and bonds. The Ghana stock exchange has over the years been a hub for the mobilization of funds by major corporations in Ghana and this has further been enhanced by the establishment of the alternative market which makes room for smaller enterprises and start-ups to also raise capital at a relatively lower market requirement at compared to that of the stock market. The alternative market was established in the wake of the need to support small enterprises with the potential at being good businesses to the

nation, most especially with the need for the creation of a business friendly environment. Firms listed on the alternative market will enjoy public offering financing and underwriting support, these all aimed at increasing the public interest in the market. The Ghana stock exchange currently has a market capitalization of GHC 62,917 million as at 2018 with about 42 listed entities on the exchange. The all share index is an index which measures the overall performance of the market by taking into consideration the performance of all the listed entities. Thus it may be said that, the index gives the sneak peek into the performance of the Ghana stock market at large. Further insights may be gathered by then looking at stock specific performance. Alexander & Buchholz (1978) found a low and insignificant relationship between the degree of corporate social responsibility and the performance of a stock market. Thus the degree to which firms listed on the exchange may perform has no relationship with their social responsibilities outside their core business.

2.4 Chapter Summary

The performance of mutual fund from literature is seen to be influenced by factors such as the net asset under management, sex of the manager, the age of the fund and other macroeconomic factors such as the Gross Domestic Product and the market indices. However, literature holds various views on the outright factors that influence the performance of mutual funds and the exact relationship that exists between those factors and performance over time. It is expected that all the stated factors would have a positive relationship with performance as measured by the proxy; Sharpe ratio.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter will focus on the techniques employed in the gathering of relevant data and the method for the study. It will also focus on the approach for the analysis of the data gathered by explaining the variables both independent and explanatory for the purposes of the study. There are currently about thirty-four (34) mutual funds registered with the Securities and Exchange Commission of Ghana. Some of which are the Databank money market mutual fund, Firstbanc first fund, Firstbanc heritage fund, Databank Epack, Databank Arkfund, Databank balanced fund, SAS Fortune fund, Anidaso mutual fund, TTL income haven fund, Omega income fund, Omega equity fund. Out of the registered thirty-four (34) mutual funds with the Securities and Exchange Commission, there are currently only seven (7) registered as equity-based funds. Some of which are SAS fortune fund, Databank Epack, Firstbanc heritage fund, Omega equity fund, NTHC horizon fund, Anidaso fund and Republic equity. The study however limits the scope to five of these registered equity mutual funds and they are SAS fortune fund, Databank Epack, Firstbanc heritage fund, Omega equity fund and NTHC horizon fund. This is because, most of these equity funds were incepted recently and thus there is a deficit in the availability of information for the period 2010-2017 for the purposes of this study. Panel data will be employed for the formulation of the models to be used in the study and STATA 12 will be employed for the analysis of the data gathered for the period 2010-2017 which is the study period.

3.2 Data Sources

This section of the chapter discusses the sources from which data will be gathered. The research gathered data from primary and secondary sources due to the nature of the objectives for which

the research was to be conducted. Primary data refers to the data collected from the persons directly involved in the observation for which the research is to be conducted. The study will collect primary data pertaining to the sex of the fund manager of the firms sampled. Also the age of the fund and the total asset under management will be gathered using primary data. The sex of the fund manager was categorized as male or female. The total net asset under management of the firm, measures the quantum of funds available to the fund for management for which they account to shareholders. The age of the fund tells of the period for which the fund has been in operation. Secondary data on the other hand is a method of data collection, in which data is collected from already gathered sources such as annual reports, publications and private or government statistics which is then made available for use. The study will gather secondary data from annual reports of the respective mutual funds, Bank of Ghana and the Ghana stock exchange. Information such as the yield to date of the Ghana Stock Exchange all share index and Gross domestic product (GDP) will be collected from secondary sources for the period 2010-2017.

3.3 Analysis of Data

STATA 12 will be employed for the analysis of the data gathered for the period 2010-2017 which is the study period.

3.4 Model Specification

The study employs panel data regression in the analysis. Panel data regression is a method of data regression which combines the characteristics of the time series and the cross sectional data analysis. The panel data regression pools data from a wide category of selected variables across a span of selected time. It thus, provides the study with an array of characteristics which is not easily

detectible under a cross sectional or time series data. The panel data varies from the time series and the cross sectional data by the subscript associated with the variables in the model.

The general equation of the panel data could be specified as;

$Y_{it} = \alpha_i + \beta x_{it} + \mu_{it}$ .....eqn (1)

The subscript t denotes the time series dimension captured in the data analysis whilst the *i* denotes the cross sectional dimension. The Y_{it} represents the dependent variable in the equation, which in our analysis is the Sharpe ratio of the firm. The α_i is constant over time *t* and specific to the individual cross sectional unit *i*. Further the βx_{it} contains the set of explanatory variables in the estimation model and μ_{it} all the noise as a result of the estimation of the model.

3.5 The Empirical Model

As per the researcher's own explanatory variables the empirical model to examine the determinants of equity mutual fund performance in Ghana is specified as;

$$Perf_{it} = \beta_o + \beta_1 AGE_{it} + \beta_2 SIZE_{it} + \beta_3 SEX_{it} + \beta_4 GSE - ASI_t + \beta_5 GDP_t + e_{it}$$

Where:

Performance is measured by the formulae;

$$SR_{it} = \frac{R_{it} - RF_t}{\delta_{it}}$$

Where:

Sharpe ratio (SR_{it}) is defined as the annualized excess return divided by the standard deviation of firm *i* in time *t*

R_{it} is the portfolio returns for firm *i* in time *t*

RF_t is the risk free return at time *t*

δ_{it} is the portfolio standard deviation for firm *i* in time *t*

AGE_{it} is the fund age measured in years from the inception of the fund to the study period of firm *i* at time *t*

$SIZE_{it}$ is the log of the total assets under management by the fund

SEX_{it} is the sex of the fund manager, where 1 denotes a male and 0 denotes a female of firm *i* at time *t*

GDP_t is the log of the Gross Domestic Product at time *t*

$GSE - ASI_t$ is the Ghana Stock Exchange all share index yield to date at time t

ε_{it} is the remaining noise. This varies with the individual firms and time; it can be considered as the usual disturbance in the regression also known as the idiosyncratic term or white noise.

3.5.1 Dependent Variable

The dependent variable for the study will be the Sharpe ratio and will be the yardstick for the measurement of performance. The Sharpe ratio is a widely accepted measure of risk in excess of the risk free and it is the most preferred because of its ease of use and understanding. It provides information on the extra return earned for every extra risk taken in an asset allocation decision

making. Thus the Sharpe ratio tells of the risk associated with each return and provides to an extent whether it is worth taking the risk by looking at the risk adjusted return. The measure stipulates that, one needs to be compensated for every risk taken. If that not be the case, then it would be proper to invest in the risk free asset which promises a zero default. The risk free asset is usually the government Treasury bill and this is due to the fact that, the government has little or no incentive to default on payment and in the event of repayment issues, it is believed the government has the tendency to print money to defray debts. The Sharpe ratio is mostly relevant when the returns are normally distributed. Thus returns that exhibit kurtosis tend to violate the efficiency of the model and render the Sharpe ratio less reliable.

The Sharpe ratio is ideal for the study because, it is a widely accepted method of ascertaining the performance of mutual funds. Also, the Sharpe ratio will make it possible to identify the overall performance taking into consideration the various volatility associated with the asset under consideration thereby enabling the study to ascertain if performance is as a result of excessive risk taking by the fund manager or out of prudent stock selection.

3.5.2 Explanatory Variables

The explanatory variables also known as the independent variables help explain the changes associated with the dependent variable of the study. The explanatory variables are the variables that help draw a link between the dependent and what the researcher may want to know. The study will employ the following explanatory variables and they are explained below;

3.5.2.1 Age of Fund

The age of a fund refers to the length of time a fund has been in operation. The age of a fund informs investors of the degree to market exposure a fund has had over time. As investors and in particular Africa, investors are particularly concerned of the experience the fund has gathered as a way of measuring trust, endurance and sustenance. This may be the result of the several financial

crises some countries on the continent have experienced over time that has had investors lose money. In Ghana, the financial crisis has seen many firms collapse and others in the face of severe panic withdrawals.

A positive correlation between the age and performance of the equity mutual implies the longer a fund has been in operation or stays in operation, the better the performance of the fund. Thus a younger fund cannot outperform a mature fund as age plays a role. On the contrary, a negative correlation implies as a fund grows over time, the poorer the performance. Thus the younger the fund, the better the performance of the fund and vice versa with regards to the age of a fund.

A systematic study by Peterson et al (2001) showed that, there is no supportive and conclusive evidence in support of the existence of a direct relationship between the age of a fund and its performance. However, a study by Gregory et al (1997) provided evidence in support of the existence of a relationship between age and fund performance and that matured funds performed better than younger funds. According to Bauer et al (2002) this could be attributed to the fact that younger funds are exposed to market risk due to the amount of limited securities they have access to on the securities markets.

3.5.2.2 Sex of fund Manager

The sex of the fund manager will be modeled as male or female. The sex of the fund manager will provide information on whether there is a link between the performance of the fund and the gender identity of the fund manager. There is a general hypothesis that, women are less risk preferring and have the tendency to trade less than males do and also have a conservative investment style. According to Niessen, A., & Ruenzi, S. (2006), male managed funds perform better than female managed funds and the performance of female managed funds is more persistent over time than the male managed funds. They also postulate that female managed funds experience lower fund

inflows and this adversely affects the revenue of the funds. This is especially the case where fund front and exit load are heavily dependent on the total fund inflows over time.

3.5.2.3 Total Asset under management

The total asset under management refers to the total funds at the disposal of the fund manager. The fund manager may then decide with the appropriate authorization of the respective shareholders invest these funds to the general benefit of the shareholders. Funds are usually channeled to the area specified in the prospectus. As postulated by Perold, A. F., & Salomon Jr, R. S. (1991), increase in the total asset under management by a fund, leads to a decline in the overall portfolio return. Thus diseconomies of scale are associated with larger funds due to increased cost which are associated with huge transactions. In Ghana, the mutual fund industry is gaining grounds quite fast especially with the inducement of the Securities and Exchange Commission (SEC) requiring institutions running fixed deposit with guaranteed returns to either convert them into mutual funds or return the funds to their respective investors. Hence funds may have the potential to grow in size with this directive.

3.5.2.4 Gross Domestic Product

The Gross Domestic Product (GDP) is the measure of the overall productivity of an economy. It provides an indication of the extent of growth of the various productive sectors such as the services, agricultural and manufacturing. The gross domestic product is the single measure that gives a comprehensive trajectory to the direction of an economy in one figure. It gives the chance for comparison among other countries by taking into consideration the purchasing power parities (PPP). The purchasing power parity is a measure that eliminates the bias associated with the overall economic growth measure by taking into account the inflation in the country under consideration and the relative cost of local goods and services. Equity is part ownership of an entity. Thus entities are part and parcel of an economy and the various economic factors and policies have the

tendencies to influence the overall performance of the entities of an economy. Hence the GDP of an economy should directly or indirectly have an impact on the productivity of the industries.

3.5.3.5 Ghana Stock Exchange all share index

The Ghana stock exchange all share index also known as the composite index is a measure of the growth of the entirety on the market over a period of time. An index can be formed by any party with the requisite knowledge in the measurement of the average prices of stocks. Thus to say, the indices of the world acknowledged brands like the S & P 500 and the Dow Jones are due to their well-known reputation in the stock market. Indexes are a representation of a small but sometimes the entire stocks in the market and are therefore not actively managed. Hence investing in an index reduces the chance of loss of funds since the investor moves with the market in favorable times and down in poor times. A change in an index performance represents a change in the various stocks that form the index. The growth of the index is measured by considering the yield to date. Thus the overall growth of the market measured as a percentage. The yield to maturity is expected to provide an indication to the general performance of the equity mutual funds for this study. It is expected that, the yield to maturity will have a positive relationship with the performance of the equity mutual funds since the stocks are usually part of the index market which forms part of the Ghana stock exchange all share index.

CHAPTER FOUR

RESULT AND DISCUSSION

4.0 Introduction

This chapter focuses on the rigorous discussion and interpretation of the data gathered and analyzed using the methods specified for the analysis. The chapter will focus on the descriptive statistics of the various variables concerned with the study, the standard deviation and Sharpe ratio of the respective funds and the correlation matrix. Finally, the study will interpret the result obtained from the regression of the variables and offer some insights into the meaning of the findings in relation to the objectives highlighted.

4.1 Descriptive Statistics

The descriptive statistics a summary of the data used for the study which takes into consideration the dependent and independent variables of the study.

Table 4.1 Descriptive Statistics

	SHARPE	SEX	AGE	GDP	TNA	GSE-ASI
MEAN	0.0011	0.722	8.63	9.60	6.59	20.373
MIN	-1.6684	0	1	9.507	4.699	-15.33
MAX	2.238	1	22	9.679	8.255	79
SD	1.039	0.507	6.17	0.053	0.928	31.460
N	36	36	36	36	36	36

Table 4.1 provides a summary of all the data set used in the study with their corresponding mean, standard deviation, maximum and minimum values in the data gathered and the number of

observations gathered for each data set used for the study period 2010-2017. The study had a total of 36 observations spanning across all the dataset used in the study.

The Sharpe ratio which measures the return in excess of the risk free return per unit of volatility the fund is exposed had an average performance measure of 0.0011 with a minimum fund performance of -1.6684 and a maximum of 2.238. Thus certain funds experienced poor performance whilst others performed quite well. The Sharpe ratio experienced a volatility of 1.039 which explains the fact that, the performance of the mutual fund under study experienced a volatility of 103.9% over the study period of 2010-2017. It was important to incorporate the performance index thus the Sharpe ratio because, it provides a provides an insight as to whether the return on the fund was as a result of excessive risk in management investment activities or carefully selected and fund accepted risk methods. A fund with a Sharpe ratio of greater than one is better managed and shows signs of a well-diversified portfolio with a good risk adjusted return of the fund under management whilst a fund with a negative Sharpe ratio or a Sharpe ratio of less than one reveals poor diversification of the fund's assets.

The sex of the fund manager was measured as 1 for male and 0 for female had a maximum number of 1 and minimum of 0 with males representing about 72.2% of all fund managers. Thus male managers in the equity mutual fund market are predominantly males. The age of the fund under operation was also measured in years of operation with the oldest fund recording an age of 22 and the least age of a fund being a year old. The average age in the equity mutual fund market was 8.63 years

The natural logarithm of Gross domestic product (GDP) of the economy which measured the total output of the Ghanaian economy had a minimum record of 9.507 and a maximum of 9.679 with

an average output of 9.60 representing the average value of goods and services produced in Ghana thus the productivity of the country.

The Ghana stock exchange all share index recorded an average return of 20.373 over the study period of 2010-2017 with the maximum return being 79 and a minimum return of -15.33. the year in which the index recorded its minimum of -15.33 was in the year 2016 when the equity market suffered a shock from a number of factor economic factors such as the declining competitiveness of the Ghana Cedi against other international currencies such as the dollar euro and the pound, the introduction of a new regime of corporate taxes and the introduction of the taxes on returns which reduced investor confidence in the stock as market it was not entirely clear how the market was expected to compute and effectively apply this tax. The natural logarithm of the total asset under management of the fund measured an average fund under management of 6.59 with a maximum fund of 8.255 and a minimum fund of 4.699.

4.2 Sharpe Ratio & Standard Deviation

The measure of performance which is the Sharpe ratio and the risk exposure from the mean which is measured by the standard deviation are discussed in this section.

Table 4.2 Sharpe Ratio of Selected Equity Mutual Funds in Ghana.

MUTUAL FUND	**SHARPE RATIO**								**STD DEV. OF RETURNS**
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	2017	
EPACK	0.619	-0.730	-0.0402	1.979	0.498	-0.710	-0.903	0.710	31.32
SAS		-0.620	0.310	2.031	-0.288	-0.712	-0.477	0.902	33.11

NHTC	0.755	-0.024	0.515	1.041	-0.989	-1.298	-0.682	2.23	12.69
HERITAGE	-0.463	-0.895	0.098	1.571	-0.504	-0.812	-0.97	1.22	22.98
OMEGA EQUITY				-1.184	-0.105	-1.537	-1.668	1.090	18.34

The standard deviation provides an insight into the deviations of the various mutual funds from their mean. It measures the risk exposure of the fund by taking into consideration the risk-free rate. The rule of thumb is that, the fund with the least standard deviation could be considered the safest in the context of risk and return. It could be observed that, on the average the funds experience relatively higher standard deviations which could be described as normal because of the risk and volatility associated with equity investments. Among the sampled mutual funds, the NTHC horizon fund recorded the least deviation from the mean with 12.69% as against the SAS Fortune fund with the highest deviation of 31.32%. Hence it could be concluded that, the SAS Fortune fund is the riskiest equity mutual fund whilst the NTHC Horizon fund is the safest equity mutual fund.

The performance measure which is the Sharpe ratio provides information about the fund after making adjustments for the risk exposure of the fund. The rule of thumb is that, when a comparison is being made between two funds, the fund with the highest Sharpe ratio is most desired and considered a better performer as against the other. However, it is considered that, any fund with a Sharpe ratio greater than one is very good and hence performed well in the market. From table 1.2 it is observed the NTHC Horizon fund from the period 2010, 2011 and 2012 consistently performed better than all the registered equity mutual funds for the period with 0.755, -0.024 and 0.515 respectively although below the benchmark of 1. However, the year 2013 the SAS Fortune

fund performed best with a Sharpe ratio of 2.031 and the other funds recording performance well over the benchmark of 1 with the exception of the Omega Equity mutual fund. This exception of the Omega equity fund could partly be due to the fact that, 2013 marked the first year of the operation of the Omega equity mutual fund with the other existing funds recording several years in operation. The yield of the SAS Fortune fund indicates the fund performed well over the market performance of 79% with a record of 89.2%. The period 2015 and 2016 saw the entire sampled equity funds record negative in their performance with a least value of -1.668 and the highest value of -0.477. During the same period of 2015 and 2016, the market index also recorded a negative return of -11.77 and -15.33 respectively which is well in line as an indicator and confirmation of the performance recorded by the various equity mutual funds for the periods. A combination of the standard deviations and the performance indicates that, the NTHC Horizon fund performed better on the average than the other equity funds by recoding the least standard deviation and on the average, the consistent market performance well above or within the average market performance.

4.3 Model Diagnostics

Table 4.3 Model Diagnostics

Test	Test Statistic (P-Value)
Hausman	0.016

The Hausman test is a well-known test usually conducted in panel data regression to ascertain which estimation is most appropriate for use by the study. The appropriate estimation used in the study was achieved by estimating the fixed effect model and the random effect model. The

Hausman test was conducted to select the appropriate among the two estimates. The rule of thumb being the null hypothesis (Ho) that, random effect estimation is appropriate for the study and the alternative hypothesis (Ha) being the fixed effect is more appropriate for the estimation of the model. A p-value less than 0.05 implies we reject the null hypothesis. Hence we accept the alternative hypothesis and vice versa. From Table 1.3, the Hausman test produced a p-value of 0.016 which implies we reject the random effect estimation and accept the estimation of the fixed effect. Therefore, the fixed effect estimation was employed for the study.

4.4 Correlation Analysis

Table 4.4 Correlation Analysis

	SHARPEPERF	**GDP**	**AGE**	**GSE-ASI**	**InTNA**	**SEX**
SHARPEPERF	1.00					
GDP	0.4610	1.00				
AGE	0.1607	0.0722	1.00			
GSE-ASI	0.7845	0.5586	-0.0300	1.00		
InTNA	0.2636	0.1871	0.8333	0.0459	1.00	
SEX	-0.1908	-0.0998	-0.0957	-0.2057	-0.0631	1.00

The correlation matrix above reveals the relationship that exists between two variables in the study.

From table 4.4 the dependent variable thus the Sharpe ratio exhibits a positive relationship with all the independent variables with the exception of the Sex of the fund manager and this is at a value of -0.1908. The Total Assets under Management (TAUM) and the Age of the fund under consideration exhibited the strongest relationship at a value of 0.8333 and this is followed by the

relationship that exists between the dependent variable Sharpe ratio and the Ghana Stock Exchange All Share Index at a value of 0.7845. Also, the Ghana Stock Exchange All Share Index exhibits a negative correlation with the age of the fund under consideration.

From the model in table 1.4 it is evident there is no multi collinearity in the model and hence the model is fit for running the regression intended to be used for the study without raising any concern for further analysis of the study.

4.5 Regression Results

Dependent Variable: Sharpe Ratio

Table 4.5 summarizes the output results upon regressing the dependent variable thus the Sharpe Ratio on the independent variables thus GDP, Age, Sex, GSE-ASI and the Total Net Asset under management.

Table 4.5 Regression Results on the Determinants of Equity Mutual Fund Performance in Ghana.

INDEPENDENT VARIABLES	Coefficient	Std Err	t	P-Values
GDP	-.0980699	3.117386	-0.03	0.975
AGE	-.0755414	.0776038	-0.97	0.339
InTNA	.8011201	.2706873	2.96	0.006
GSE-ASI	.0240063	.0040642	5.91	0.000
SEX	.1033921	.3448204	0.30	0.767
Observations	36			
Groups	5			
Prob> F	0.000			

F(5,26)	18.14			

In order to ascertain the determinant factors that influence the performance of equity mutual funds, the regression model was employed. This was done to ascertain the relationship that exists between the Sharpe ratio which is the dependent variable and the other independent variables of the study. The estimation was done using one equation structured in the form of a panel regression equation. The F-statistics of the output with a probability value of 0.000 provided grounds for fitness of the model and hence the model was valid to help achieve the set objectives.

The Gross Domestic Product (GDP) of a country and the age of the fund were found to have a negative and insignificant relationship with the performance of an equity mutual fund in Ghana. However, the Sex of the fund manager exhibited a positive but insignificant relationship with the performance of the fund. Also, the total asset under management by a fund and the Ghana Stock Exchange All Share Index exhibited a positive and significant relationship with the performance of the fund.

The results attained from the study revealed that, as the fund grows in age, the performance of the fund declines and this is however not a relevant factor in the determinant of equity mutual funds' performance in Ghana. This implies that, waiting to buy from a fund when it is older would not yield any positive returns and hence it is worthwhile investing into a fund from inception. This finding is in line with the findings of Otten & Bamsin (2001). This finding is however inconsistent with the studies and findings of Gregory et al (1997), where matured funds were found to perform better than younger funds.

The total net asset under management (TAUM) of a fund is seen to have a significant and positive effect on the performance of the fund. From the regression output, the greater the fund under management, the greater the fund is to perform. This is to say that, as the inflows into the fund

increases, the fund performs better and hence could be concluded that, larger funds perform better than smaller funds. This could be attributed to economies of scale in terms of operational efficiency that comes with cost effective mechanisms employed by larger fund managers and activities that larger mutual fund firms are able to engage in as against smaller funds. This according to the result is a relevant factor and predictor of mutual fund performance in Ghana. This is consistent with the findings of Indro et al (1999). However inconsistent with the findings of Sharpe, W. F. (1966), where size of the fund is an unimportant factor to predict fund performance.

The Ghana Stock Exchange All Share Index was found to be a significant factor to the performance of equity mutual funds in Ghana and exhibited a positive effect on performance. This implies as the market in its entirety performs well, the funds selected by the various equity fund managers also performs well. This further reveals that, most equity mutual fund managers purchase majority of their equity instruments from the Ghana Stock Exchange as opposed to private equity tradings by corporations in Ghana. Thus a general market overview may suggest to investors that, their equity mutual funds are also performing well with their fund managers.

The sex of the fund manager was found to be an insignificant predictor of equity mutual fund performance in Ghana. From the results obtained, when the fund manager is a male, the expected performance is higher than when the manager is a female.

Finally, as the GDP of the country increases, the performance of the equity mutual funds decreases and this is however not a relevant factor in determining performance of the funds under consideration. This could likely be due to the fact that, the Ghanaian economy is heavily dependent on agriculture which does not directly translate into the well-being of corporations in the country after the major boost in the economy arising from agriculture.

4.6 Chapter Summary

In a summary it was found that, the Total Net Asset under Management and the GSE All Share Index were relevant and significant factors to explain the performance of equity mutual funds in Ghana. However, the Sex of the fund manager, the Gross Domestic Product (GDP) and the age of the fund in operation was not relevant enough to be considered as factors in determining the performance of equity mutual funds in Ghana.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The study was undertaken to find out the determinants of equity mutual fund performance in Ghana. The variables employed in the study included the Gross Domestic Product (GDP) of Ghana, sex of the fund manager, age of the fund, the Ghana Stock Exchange All Share Index and the size of the fund measured as the total net asset under management (TAUM).

The mutual fund industry in Ghana is comprised of 37 mutual funds as at 2018 with only seven (7) being equity established funds. The objective of a fund may influence the investment style of the fund manager and this may consequently affect the performance of the fund over time. The study sampled five (5) equity mutual funds for the purposes of the research. The Sharpe ratio is a widely accepted measure of performance. This measure of risk adjusted return was employed to measure the performance over the period 2010-2017.

The study found a negative relationship between fund performance and the age of the fund. This relationship however was not significant. That is, as the fund matures over time, the performance of the fund erodes. Also a negative relationship was established between the Gross Domestic Product of the country and its performance. This factor was also not a significant variable at explaining the performance of mutual funds in Ghana. The Sex of the fund manager also showed a negative relationship with performance. This factor employed in the study was a not significant factor at explaining fund performance. Finally, the GSE all-Share Index and the total net asset under management revealed a positive relationship with performance. These were significant factors at explaining equity mutual fund performance. Thus as the Total Assets under management increases, the performance of mutual funds also improves. This is also the case for the Ghana Stock

Exchange all share index. Thus as the entire market performs well, it is an indication of the general well-being of the selected stocks of equity mutual funds also. Therefore, it could be said that, equity mutual funds in Ghana with larger pool of funds are likely to enjoy better performance over the period.

5.2 Conclusion

Equity mutual funds are gradually gaining market attention in Ghana and this is evident from the number of equity mutual funds registered by the regulator that is the Securities and Exchange Commission of Ghana (SEC). The players in the industry globally are constantly on their heels to identify major factors that impacts the performance of their funds. Board members devise strategies to mitigate the agency associated problems of the servant master relationship which the mutual fund industry is not immune to. These are all in attempt to increase shareholder and investor wealth in the long run whilst reducing unwarranted risk. The study identified factors that played a key role in the performance of equity mutual funds in Ghana. Although the factors are enormous, this study selected some firm specific and macroeconomic factors generally associated with all equity mutual funds to assess their impact on performance over time.

From the research, the GSE all-Share Index was identified to be a significant factor in explaining performance over time and also established a positive relationship with performance over time. Thus, as the market performs well, the respect equity mutual funds also perform well.

The total net asset under management of an equity mutual fund reflects the quantum of funds a mutual fund has been able to pool over a period. From the research, as the assets under management of an equity mutual fund increases, the performance of the fund also increases over

time. This brings to bare the undisputable fact that, pooling of funds by equity mutual funds is very crucial to their performance over time and this factor is significant to performance.

Furthermore, the age of the fund under consideration was an insignificant factor to explaining the performance of equity mutual funds in Ghana. The study revealed that, as a fund grows over time, the performance erodes. This finding is consistent with the findings of Indro et al (1999).

From the study, as the Gross Domestic Product of the country increases, the performance of the fund declines over time. However, this is not a significant factor at explaining performance over time.

The sex of the fund manager was also found to be an insignificant factor to explaining the performance of mutual funds in Ghana.

5.3 Recommendation

From the above conclusion, the following recommendations are put forward for consideration by the relevant stakeholders of the equity mutual fund industry:

The government should ensure that the macroeconomic variables of the economy are well managed since they have an influence on the performance of mutual funds in Ghana. A key consideration should be the GDP mix being geared toward all aspects of the economy and not just the growth sustained through traditional exports of agricultural produce. Attempts should be made at ensuring the services and manufacturing sectors are robust enough to have a fair share in the GDP so that, growth in the GDP may reflect in the growth of those sectors also and not solely on the agricultural sector.

Equity mutual fund managers should strive to increase the size of their funds as this is seen to influence performance positively over time. This could be achieved through prudent marketing strategies and dedicated employees.

As funds increase in age over time, the performance also decreases. Therefore, young equity mutual funds should strive to pool in a lot more funds in their earlier years as it will contribute to their utmost performance.

The study employed the Sharpe ratio for the measurement of performance. It is recommended that, further studies be carried out in this subject area in Ghana using other methods such as the Sortino and Alpha ratios.

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