EFFECT OF AGENCY COSTS ON THE PORTFOLIO RETURNS OF MUTUAL FUNDS IN KENYA

BY

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DECLARATION

This project is my original work and has not been presented in any other University for the award of any degree.

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SUPERVISORS APPROVAL

This work has been submitted for consideration with my approval as the supervisor.

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This work has been submitted for consideration with my approval as the supervisor.

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Dr. Cyrus Iraya Mwangi
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DEDICATION

I dedicate this study to my family, lovely wife Mary Ciakuthi, my daughter Juliet Kagwira and my son Evans Kathenya. A special feeling of gratitude to my parents, Kathenya Mwenda and Mary Gatiria. My siblings, Jeremiah Kithaka, Jeremiah Muriungi, Samuel Njagi, Monica Karimi and late Priscila Kang’aria.
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LIST OF ABBREVIATIONS & ACRONYMS

ANOVA: Analysis of Variance
CIS: Collective Investment Schemes
CMA: Capital Markets Authority
MBA: Master of business studies
MFI: Mutual Fund Industry
ROA: Return on Asset
SPSS: Statistical Package Software of Social Sciences
VIF: Variance Inflation Factor
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ABSTRACT

The objective of this study was to determine the effect of agency costs on portfolio returns of mutual funds in Kenya. The study applied descriptive research design on a target population of 86 mutual funds in Kenya within the period from 2012 to 2016 both years inclusive. A sample size of 30 mutual funds was used and analyzed. The study used secondary data gathered from annual reports of mutual funds approved by CMA. Regression model was used to determine the effect of agency costs on portfolio returns of mutual funds in Kenya. Descriptive statistics on portfolio returns show that there was a mean of 3% in 2012, 3.6% in 2013, 4.5% in 2014, 5.8% in 2015 and 6.5% in 2016. The maximum returns were 24% in 2012, 24% in 2013, 27% in 2014, 36% in 2015 and 37% in 2016. It was established that, there is a positive association on portfolio return (Y) and audit cost since $r = 0.414$ and also a positive association between portfolio return and managerial incentives with $r = 0.364$. There was however, a negative association between portfolio returns and free cash flow with value of $r = -0.132$. The predictor variables influenced variation in Portfolio return as indicated by the adjusted R square statistics of 0.921 implying that 92.1% of the variation in the response variable was explained by the agency costs variables considered in the study. Since the p-value of the F test of 68.607 is less than alpha, which is 0.000 < 0.05 it therefore, implies that the effect of agency costs on portfolio returns in the study model is significant. This study results imply that agency cost statistically influenced the portfolio return of mutual funds listed in CMA in Kenya. The study therefore concludes that agency costs affect portfolio return of mutual funds in Kenya at 5% significant level. Based on this relationship, the study recommends that investor’s decision should take into account implications of the agency costs information for the mutual funds listed in CMA in Kenya. A study can be done to establish the effect of agency costs on portfolio returns of mutual funds in Kenya but covering a period of over 10 years and varying the measurement of variables and sampling method. A study is recommended to be carried out to determine the factors that affect the trends of portfolio returns of mutual funds in Kenya.
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The concept of agency costs dates back to early 19th century in the United States by Berle and Means (1932) basing their argument on the separation of ownership and control in an organization. Separation of control from ownership as a cost identified by Donald and Donald (1932) as executive compensation, or costs necessary to align diverging interests of the agent and the principal. Ross (1973) agrees that, both the agents and the principals have interests which diverge from each other. Jensen and Meckling (1976) in a landmark paper defined agency costs as the total sum of all the direct and indirect costs grouped into three main categories namely; monitoring costs, bonding costs and opportunity cost.

This study was anchored on four theories. William (1964) observed the ability of the theory of the firm to identify costs of detecting and policing the actions of the managers in an organization and suggested it is necessary to avoid these costs if profits saved are less than the costs. Stakeholder’s theory according to Freeman (2004) recognizes the various parties in an organization and points to their roles; directors are to manage resources to the best interest of shareholders failure to which they (shareholders) can bring an action against them (directors) for failure to exercise duty of due care. Jensen and Meckling (1976) argued Agency theory defines the agency costs and classifies them based on the conflict of interests between the principal and the agent. Trade off theory according to Jensen and Meckling (1976) explains the need for an organization to operate at an optimal level of capital structure in order to maintain balanced returns and costs of debt.

Studies on Mutual funds started in Belgium and Netherlands in the 18th century by Rouwenhorst (2004) defining mutual fund as a financial intermediary that receive and pool funds from seekers of general investment with an objective and motive of providing diversification to small investors. In Kenya Mutual fund is also referred to as unit trust or collective investment scheme and the legislative frame work was initially enacted in 1967 under unit trust act (cap 521) followed by Capital Markets Authority Amendment Act (2000). Delloit and Touch (1992) carried out a study and established that no unit trust had been registered five years later even after an enabling mechanism being in place. Mbataru
(2012) observed that Mutual Funds have experienced a slow rate of growth since the year 2002 when the first unit trust was registered and ten years later the number increased to sixteen in the year 2012.

1.1.1 Agency Costs

Agency costs in view of Jensen and Meckling (1976) emerge from the principal (shareholders) - agency (management) relationship. They include the total sum of monitoring, bonding and opportunity costs incurred directly or indirectly by an organization. Ahmad and Arowolo (2016) observed these dissimilarities of interest between the shareholders and the management can be minimized by incurring agency costs in order to restrain inefficiencies’ emanating from agency problems. This entails, as provided in a study by Jensen and Meckling (1976) controlling the behavior of the management through budgetary restrictions, compensation policies and operating rules.

According to Audited accounts of British-American Equity fund (2016), mutual funds in Kenya have various types of costs, management fees, Audit Fee, Trustees fees, custody fees, AGM fees, Licenses fees. The budgetary costs are covered under Trustee’s fees that arise out the CMA regulation requiring trustees to put in place internal controls for the Mutual Fund. The audit fees arise out of the costs incurred on external auditor and Management fees being the managerial incentives/remuneration to the fund managers (Deloitte & Touche, 2016). Free cash flow is cash flow in excess of that required to fund all investments in mutual fund portfolios that have positive net present values when discounted at the relevant cost of capital (Jensen, 1986).

Ang, Cole and Lin (2000) suggest that agency costs can be measured using two alternative efficiency ratios. Asset utilization ratio considers the total revenue earned for every asset owned by the company. This measure compares the company performance over time. Expense ratio is more applicable for this study as it seeks to express each cost as a percentage of income.
1.1.2 Portfolio Returns

Welch (2004) referred Portfolio return as the overall reward that an investor gets from investing in a certain pool of assets or securities within a given environment or market risk. Wiley (2012) defined portfolio return as the growth in the value of any investment over a defined period of time expressed either as a fraction or percentage of the value of that investment at the beginning of the period. Ang, et.al (2000) described an optimal portfolio as one that provides the highest possible returns for any specified degree of risk or the lowest possible risk for a given return. Ang, et, el (2000) further noted that a any market portfolio is completely diversified therefore, subject to systematic risk and no unsystematic risk.

According to Gachichio (2012) portfolio Returns of mutual funds in Kenya are distributed periodically to investors, either semi-annually or annually. Some mutual funds have an option that allows investors to redeem their funds at any time after giving a notice. The terms guiding investments and the corresponding rates of return vary depending on the type mutual fund and the firm offering them. Gachichio (2012) states that Mutual funds offer each shareholder a certain rate of return or yield in percentage form that is often variable.

Jensen (1986) observes that portfolio performance is measured by computing the Jensen alpha or ratio. This ratio is used to measure how much of the portfolio's rate of return is attributable to the manager's ability to deliver returns that are above-average adjusted for market risk. The higher the ratio, the better the risk-adjusted returns. A portfolio with a consistently positive excess return will have a positive alpha, while a portfolio with a consistently negative excess return will have a negative alpha.

1.1.3 Effect of Agency Costs and Portfolio Returns

There is need to protect Investors from fraudulent behavior of the managers, such as limiting mutual fund managers from the diversion of funds into investments or assets that serve the interest of fund managers at the expense of fund investors (Klapper, Sulla & Vittas 2014). According to Gichana (2012), agency costs are expected to be inversely related to the ownership share of the investor.
Ndeto (2010) established an existence of a relationship between agency costs (represented by management fees, audit, and ownership by directors) and good corporate governance mechanism for an organization. Tufano and Sevick (1997) allude to the existence of the agency issues and corporate governance problems in the mutual fund industry. Abdulrahman (2012) argued that compensation to the managers should be commensurate and contingent on performance and further recommended that Agency costs can be controlled through the presence of large-block shareholders, since they assume and play an active role in monitoring the activities of management.

Jensen and Meckling (1976) agree that external audit expenses fall under monitoring costs since they are borne by the shareholders to protect their interests. An increase in these costs is expected to yield high portfolio returns. Jensen and Meckling (1976) further predicted that as managerial incentives or stakes increase, they motivate them to make investments in projects with positive NPV resulting to high portfolio returns, otherwise they (managers) may receive the full benefits of such incentives that only increase managerial costs not commensurate with the expected portfolio returns. Free cash flow being the excess money that an organization generates after paying out the cash required to finance its asset base (Jensen, 1986). High leverage has the effect of reducing the amount of free cash flow available for use by managers and in turn reduces agency costs between investors and managers (Stulz, 1990). Interest payments to debt holders also decrease free cash flow at the disposal for investments. These decreases in free cash flow also helps in controlling the excess investment problem which results from managers allocating funds to projects with negative NPV (Harvey, et.al, 2004). Since using debt financing enables institutions such as banks to monitor their managers in order to run profitable businesses that can meet maturing obligations (Ang, et.al, 2000).

1.1.4 Mutual Funds in Kenya

Mutual fund is an investment arrangement that allows individual investor(s) to pool their money with that of other individual investor(s) and is managed by a team of investment professionals called fund managers (Wright, 2015). They are very important investment channels in Kenya and according to Wafula (2014) investors from the lower segment of the economy who were initially locked out of investment options are now able to reap
abundantly from the investments in these funds. There are two types of structures of mutual fund; Karau (1996) observed open-end funds meaning that they can issue and redeem units at specified times to meet requests by investors to redeem them, and closed-end funds with no redemption option.

CMA (2016) report indicate that Mutual funds have grown at a slow rate but progressively from one mutual fund first registered in year 2002 to a total of eighty nine funds approved currently. A study by Mbataru (2012) on the financial performance indicate revenue growth from Kshs. 1.9 billion to Kshs.17.6 billion from 2001 to 2011. This is low compared to other financial sector such as pension which indicated a performance improvement from Kshs. 176 billion to Kshs.420 billion in shorter period. Klapper, Sulla and Vittas (2002) compares other financial institutions like insurance companies, banks, and thrifts with mutual funds in Kenya and agrees that relative to these other institutions, Mutual funds offer investors the advantages of professional management, portfolio diversification and high level of operational transparency. It is this professional expertise compensated by agency costs that is expected to generate portfolio returns that exceed what is generated in the market.

Mutual funds in Kenya have varying operating expenses like any other organization, and agency costs are part of these expenses. They incur agency costs such as trustee fees, audit fees and management fees. Trustees fee arise out of the CMA requirement that mutual funds in Kenya should have trustees who are responsible for the formulation of internal controls of the funds. Management fees are costs on rewarding the management for the professional services rendered to the mutual funds for the interest of the investors in form of portfolio returns. Mutual Fund performance in Kenya is evaluated based on the capital growth in respect to capital gains realized from the appreciation of assets invested in and periodical returns in the form of interest and dividends received. The attractiveness of the fund is determined by how it performs in the market, that is, persistent increase in capital gain and constant returns for value funds. As the MFI in Kenya grows, there is need to move the performance dimension away from straightforward performance measures and benchmarking, to style based studies which also avail information in regard to fund characteristics, and timing abilities of managers (Maina, 2011)
1.2 Research Problem

Agency relationship provides explanation and justification as to why firms need to incur agency costs to align the manager’s interest to those of the investor. The need for the investor to limit or not to limit these divergences of interests from the fund manager is therefore an area of concern for the mutual funds, particularly because managerial incentives, monitoring and opportunistic costs are involved (Ross, 1973). Peura (2005) advises investors to safeguard their funds to ensure they are not misappropriated or wasted on projects that are not viable or attractive. It is unclear if incurring of agency costs affects the portfolio returns of mutual funds in Kenya.

Mutual funds are professionally managed and are therefore expected to yield higher rate of portfolio returns than other firms’ portfolio returns in the market (Mbataru, 2012). This view according to Onyinkwa and Ambrose (2013) has led to increased concern among investors on the inability of fund managers to outperform the market as expected. Mwangi (2014) confirmed that over seventy-six percent (76.8%) of mutual funds have a negative Sharpe ratio implying that they are reporting returns that are below the risk free rate approximated by the ninety-one (91) days treasury bills rate. Investor Education Handbook of CMA (2014) cited 11 CIS and only 8 were meeting CMA reporting requirements.

Various studies have been done on agency cost, however, most of the studies sought to establish its relationship with ownership structure, and capital structure. These studies include; Arowolo and Ahmad (2016) investigated the Effect of Agency-Costs and Managerial Ownership on Monitoring Mechanisms. The finding confirmed that; agency costs positively affected the monitoring mechanism. Brewer and Featherstone (2016) examined how agency cost of debt affects the cost structure of a farm. An increase in agency cost of debt was found to be negatively correlated to efficiency of the firm. Slim and Lachheb (2017) examined the impact of free cash flow and agency cost on firm performance. The study did not find any evidence that agency cost and the free cash flow had an impact on the firm performance. There is however, scarcity of knowledge in establishing the relationship between agency costs and portfolio returns in any organization or mutual funds in Kenya. This is the gap that the current study seeks to fill-
by answering the following research question; what are the effects of agency costs on portfolio returns of mutual funds in Kenya?

1.3 Research Objective
To determine the effect of agency costs on portfolio returns of mutual funds in Kenya.

1.3.1 Specific Objectives
i. To determine the effect of Audit fees on portfolio returns of mutual funds in Kenya.
ii. To establish the effect of managerial incentives on portfolio returns of mutual funds in Kenya.
iii. To establish the effect of free cash flow on portfolio returns of mutual funds in Kenya.

1.4 Value of the Study
The findings of this study provide additional knowledge in the field of agency costs in the context of mutual funds. The existing agency theory will benefit from the contributions of the study.

The results of this study assist mutual funds managers to understand the relationship between agency costs and portfolio returns. Shareholders can then determine the extent to which they can engage agents in managing their portfolios across industries so as to reap maximum returns at any given level of risk. In the long-run achieve efficient portfolios in the mutual funds they are managing on behalf of investors. Findings from the study will help financial analysts to provide appropriate advice to investors to make sound investment decisions.

This study is a source of reference material for future researchers and academicians who would study on related topics hence it formulates a basis for further research. Industry regulators would benefit from this study by making reference as they formulate regulatory policies.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction
The chapter covers the study of theoretical review based on theory of the firm, stakeholder’s theory, agency theory and trade-off theory. It also covers the empirical review, conceptual framework and the research gap of the study.

2.2 Theoretical Review
The research was guided by the four theories whose foundation will provide a theoretical argument on the variables under study.

2.2.1 Theory of the Firm
Jensen and Meckling (1976) established this theory as the dominant theoretical framework of the Corporate Governance literature. In the year 1980’s the adoption of agency logic increased replacing corporate logic of managerial capitalism with the perception of managers as agents of the shareholders (Zajac 2004).

The theory explains why independent auditors are engaged by shareholders to testify to the accuracy, correctness of financial reports and why investors often place restrictions on the activities of funds managers of funds invested in (Jensen & Meckling, 1976). This theory further posits that, failure by the managers to maximize the value of the firm is perfectly consistent with their level of efficiency (Jensen & Meckling, 1976).

Coase (1937) criticized this theory by observing that, firms have a range of exchanges over which the market system are suppressed and resource allocated without regard to authority and direction of the investors. Williamson (1976) was also critical about this theory arguing that it is not adequate in explaining managerial behavior in large corporations. Instead and in order to address the inadequacy, it only attempts to modify other models by substituting them for profit or value maximization.

Jensen and Meckling (1976) States that, focusing on property rights is important because it identifies and specifies individual rights which determines how agency costs and rewards (portfolio returns) will be allocated among the managers and the investors in any organization or mutual funds in Kenya. This specification of individual rights generally affects contracts both implicit as well as explicit. The individual behavior in
organizations, including the behavior of managers, will depend upon the nature of these contracts. The theory also clearly defines and categorizes agency costs in three main categories the monitoring costs by the principal, the bonding expenditures by the agent, and the residual loss (Jensen & Meckling, 1976).

2.2.2 Stakeholder Theory

Ansoff (1960) derived the stakeholder concept and defined a stakeholder as any group or individual who can affect or is affected by the achievement of the organization’s objectives. Freeman (2004) further, defined stakeholders as those groups who are vital to the survival and success of the corporation. Freeman (2004) added a new concept called the principal of stakeholder recourse, which now reflects a new view in stakeholder theory. Under this concept the perspective of the shareholders activities in the management of companies was introduced stating that Stakeholders may bring an action against the directors for failure to perform the required duty of care” (Freeman, 2004).

This theory places emphasis on value creation in the organizations and posits that there is need to know the working relationship between the stakeholders in order to manage this relationship and create value for the firm (Parma, 2010). Secondly, managing stakeholder relationships effectively helps in averting possible losses by rightfully aligning interests of both parties resulting to benefits on both small and large group of investors (Phillips, 2003). Thirdly, stakeholder relationships equips practitioners better and helps them to avoid failures by describing what management should focus attention on in order to create value to the firm, (Parma, 2010).

Jensen, Marcoux and Sternberg (2000) criticized this theory because he viewed it as primarily concerned about the party that receives the allocation of resources in the organization, posing a conflict between stakeholders in regard to who gets what. Again, if stakeholders begin from the idea of the firm making profits and distributing them using the different scheme provided by the theory then sharp contrast between stakeholders may emerge. The theory also lacks clarity when it advocates that all stakeholders must be treated equally, critics have concentrated on the idea of treating stakeholders equally, especially around the language of balance what it means (Sternberg, 2000).
However, stakeholder theory is able to encompass a variety of normative cores which are an explicit effort to provide answers to pertinent questions facing all organizations inclusive of Mutual funds in Kenya. First, what is the purpose of the Mutual funds in Kenya? And second, to whom does mutual fund management have an obligation to? These questions may be answered by stakeholder theory (Parma, 2010).

2.2.3 Agency Theory

Berle and means (1932) suggested this theory which states that conflicts arise due to the possible divergence of expectations between investors and managers of organizations. The main duty of any manager is to make decisions which earn high returns to shareholders by increasing the profit figures (Elliot & Chiber, 2002). Jensen and Meckling (1976) came up with a landmark paper on this theory stating that managers do not at all times run the firm with an interest to maximize returns to investors. As a result of this, managers sometimes allocate resources to non-profitable projects, even when the results are likely to bear losses for investors. Additionally, they use free cash flow available to invest in ventures of their personal interest instead of investing in projects that have positive net present value and beneficial to the shareholders.

This theory posits that, firstly, where a contract between the investor and manager is outcome or performance based, the manager is more likely to align his behavior to serve the interests of the investor. Secondly, in situations when the investor has more information and can verify manager’s behavior, then he is more likely to behave in the interests of the investor. Thirdly, Information systems have a positive relationship with behavior-based contracts and negative relationship with outcome-based contracts.

Schulze, Lubatkin, Dino and Buchholtz (2001) disagreed and criticized this theory arguing that since agent ownership of the shares in an organization minimizes agency costs but in turn self control problem arise can harm them.

This theory supports that leverage firms are better for investors as debt level in the organization can be used for monitoring the activities of managers. Thus, higher leverage is expected to lower agency costs by reducing inefficiency that could arise by investing available cash in non profitable investment and thereby leading to an improved firm’s portfolio performance (Akintoye, 2008). Agency relationships provide explanations as to
why firms need to incur agency costs. The major justification of agency cost in this study is to align investor’s interest to those of the mutual funds in Kenya.

### 2.2.4 The Trade-off Theory

This theory is dominated by capital structure literature authored by Modigliani and Miller the traditional trade-off theory, states that organizations select optimal capital structure by comparing among other factors the tax benefits of the debt finance, the costs of bankruptcy and agency costs (Cotei & Farhat, 2005).

The trade-off model suggests that organizations usually seek to operate at an optimal level of capital structure to maintain balanced returns and costs of debt. In this case the returns include the tax shield, free-cash-flow reduction and any other potential conflicts between managers and investors, on the other side the costs include expected financial distress, expenses aligned with under investment and assets substitution issues. The theory clearly explains that organizations have an optimal capital structure level which adjusts to their leverage toward the optimum over time (Cotei et al., 2011).

Myers (1984) disagrees with this theory arguing that these adjustments of costs are not a prime factor or of major interest in the context of the theory because they are rarely mentioned. Further, to adjust these costs and obtain result require time to attain the optimal ratio. Cotei and Farhat (2009) criticized the theory arguing that, if an organization decides to use it, they may deviate from the objective of the organization in the short-run due to the other related pecking order theory factors since the two are not mutually exclusive.

Jensen and Meckling (1976), accepted that trade off theory and agency costs share a relationship based on the common knowledge that debt existed even before the existence of subsidies tax on interest payments and given positive bankruptcy costs, he noted that there must be other important determinants of capital structure that have not been identified. According to the subject of capital structure, and agency costs are identified.
2.3 Determinants of Portfolio Returns of Mutual Funds

The drivers of portfolio returns of mutual funds in Kenya are varied and range from Agency costs, Average age of the Fund, Average Net Assets of the Fund, Regulations of Fund Industry, and Demographic Characteristics.

2.3.1 Agency Costs
Jensen and Meckling (1976) defined agency costs as the total sum of the monitoring costs by the principal, the direct/ (bonding) costs by the agent and the opportunity cost/ (residual loss). Costs such as budgetary expenses and Free Cash inefficiencies are examples of monitoring costs; with bonding expenditures being audit fees and executive perks. Residual loss is characterized by drops in productivity and the reduction in the value of the firm and that arises when the entrepreneur dilutes his ownership (Jerzemowsk, 2006).

2.3.2 The Age of the Fund
According to Mwangi (2014) Mutual fund’s age is determined by the number of years the fund has been in operation Webster and Fok (2000), states that mutual funds may perform better in the later age of its life cycle due to accumulated experiences and resources as well as better understanding of the market.

2.3.3 Size of the Fund
The size of the fund is determined by total assets under management and according to Mwangi (2014) this is represented by either the money the fund owns or the total value of the fund Assets. According to Amunga (2013), the issue of the persistence of fund performance depends crucially on the scale-ability of fund investments.

2.4 Empirical Review
Empirical review is divided into two parts foreign and local evidence. Foreign evidence covers five studies that have been done internationally while local evidence covers five studies which have been conducted in Kenya.

Pinteris (2002) carried out a study to determine the effects of agency costs, ownership Structure on Performance of Argentine Banking. The study confirmed that ownership concentration was inversely related to the performance of Argentine Banking. The results
further established that investors and the management of banks had a conflict because of the asymmetric information. This study concluded that banks characterized by high ownership concentration are likely to suffer high risk on bank’s loan portfolio because of high agency cost compared to banks with low level of ownership concentration.

Sato (2002) conducted an empirical study which analyzed the impact of corporate finance and governance structure in Malaysia for the periods before and after the financial crisis of the year 1997. The study established that a link existed between corporate governance mechanism, corporate ownership structure and the role of banks considering the historical background and institutional framework of the Malaysian financial system. A population of 375 non-financial KLSE listed companies was used and primary data collected and analyzed for a period of five (5) years from 1995 to 1999. The empirical test results indicated that the commitments of banks to provide debt finance as well as lending obviously increased debt ratios.

Pandey (2004) conducted a study to determine the relationship between leverage and market structure and used secondary data from 208 Malaysian companies for the period of seven years from the year 1994 to 2000. The study provided new insights on the way in which firms leverage, market power and profitability are related. To measure Leverage and market power- Tobin’s Q, was used. The study established a relationship existed between leverage and profitability, due to the complex interaction of market conditions, the effects of agency costs and costs of external finance which provide tax shield.

Pratomo and Ismail (2006) carried out a study on the effects of leverage on Islamic bank performance. The study used a sample of 15 Malaysia Islamic Banks and Secondary data covering a period of seven (7) years from 1997 to 2004 from Annual financial Reports was used. The choice between debt and equity financing was considered with a view to find out the leverage level that is optimal. Under the hypothesis of agency costs, firms that are high geared tends to performance better, although Modigliani and Miller in their theorem proved that leverage has no effect on the value of the firm. The study set the profit efficiency of banks as one of the indicators to signify the need for reduction of agency costs to the equity ratio of bank leverage. The findings were the higher or lower
the leverage of equity capital ratio the lower or higher the profit efficiency as per and in consistent with the agency hypothesis.

Mustafa (2006) conducted a study on how to measure agency costs; he found a new way of measuring agency cost of ownership represented by risk-related irregularities to the company. It is a model used to interpret agency cost by using two groups one represented by causes and determinants behind agency cost arising between investors and managers, and the other determinant being the impact of financial policies on agency cost. The study had two other variables which were identified as the company size and the field of company's activity. A sample of forty (40) Egyptian organizations was drawn and multiple regression analysis used to explore the accounting data for the five years period from the year 2000 to 2004. The results were in favor of the integrity of the model, and the study also confirmed the importance of information asymmetry and debt financing to increase agency cost of ownership.

McKnight and Weir (2009) carried a research to examine the relationship between ownership structures; corporate governance and agency costs in UK publicly traded organizations. Three proxies namely the free cash flow, ratio of sales to total assets and the firm growth prospect were used to measure the agency cost. The analysis confirmed a significant negative relationship between the free cash flow and the debt existed. These results were in agreement with the theory of free cash flow given by Jensen in 1986 which states that the increase in debt reduced the free cash available to the organisation and consequently reduced the agency costs.

Byrd (2010) conducted a study to investigate the effects of financial policies of oil organizations on the agency costs of free cash flows. He found that there exists a conflict between the interest of manager and shareholders regarding the allocation of the free cash flow. The results of the study further established that an inverse relationship between leverage and agency cost was evident. He therefore concluded that free cash flow theory had emphasized the need and importance of the firm dividend policies and capital structure for controlling the problem free cash flow where, unlevered firms with free cash flow bore higher agency costs than the levered firm.
Abdulrahman (2012) carried out a research to establish relationship between agency costs and financial performance of firms listed in Nairobi securities exchange. The study utilized secondary data from companies which are listed in Nairobi Securities Exchange and the results indicated that agency costs significantly influenced financial performance of these firms.

Atumwa (2013) conducted a study to investigate the relationship between leverage and agency cost. The study adopted a cross sectional approach with secondary data that covered a period of four (4) years from 2008 to 2011. The researcher analyzed data using multiple regression analysis to determine if a relationship existed between agency cost and leverage at the NSE. The results indicated that agency cost significantly influence leverage level variability of firms’ listed in the NSE.

Onyinkwa and Ambrose (2013) did a study in Kenya on The Framework for Index Funds. Primary data was collected using a questionnaire targeting a sample of unit trust companies, Central Depository and Settlement Corporation (CDSC), investment banks, authorized depositories, venture capitalists, and stockbrokers/investment advisors/fund managers in the Kenyan Capital market listed in NSE. The findings were that Index funds perform well in efficient markets because opportunities for outperforming the market are available unlike in inefficiency market which creates mispriced securities that offer opportunities for above-market returns. These portend negatively on the marketability of Index funds.

Ayako (2015) conducted a study on determinants of the Performance of organizations Listed at the NSE the data was analyzed using descriptive statistics, correlation analysis, and panel multiple regression analysis. Consistent with previous studies, the study concluded that board size had a significant effect on firm performance. Hence, firms with big board sizes are more likely to report higher return on assets compared to firms with small board sizes.

Musyoka, Kalui and Kalio (2015) conducted a study on The Effects of Ownership Structure on Financial Performance of Unit Trusts in Kenya. The population targeted all fund managers and Portfolio managers in the eleven (11) registered Unit Trusts in Kenya. The study findings led to the conclusion that, a significant proportion of the unit trusts
were non-bank owned. Further, the equity fund, money market fund, balanced fund and bond market fund were the most popular investment fund types among the unit trusts. Diversity in ownership structure of mutual funds was established and found to positively affect financial performance among mutual funds.

2.5 Conceptual Framework/Model

The conceptual framework given below illustrates the relationship between the independent variables and the dependent variable of the study. It seeks to establish how agency costs variables namely audit fees, managerial incentives and free cash flow directly or indirectly affect portfolio returns of mutual funds in Kenya.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agency Costs</strong></td>
<td></td>
</tr>
<tr>
<td>- Audit Fees</td>
<td></td>
</tr>
<tr>
<td>- Managerial Incentives</td>
<td></td>
</tr>
<tr>
<td>- Free Cash Flow</td>
<td></td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
</tr>
<tr>
<td>- Age of the Fund</td>
<td></td>
</tr>
<tr>
<td>- Size of the Fund</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author (2017)

2.6 Summary of Literature and Research Gap

Studies across the globe have well elaborated how agency costs affect the performance of the firm and other aspects of the organization. Most of the studies sought to establish agency costs and the relationship with ownership structure, and capital structure, Effect of Agency-Costs and Managerial Ownership on Monitoring Mechanisms, the impact of
free cash flow and agency cost on firm performance and determine the relationship between leverage and market structure but failed to give a direct link between agency costs and portfolio returns of firms, specifically mutual funds.

The contextual gap arises from the fact that mutual fund and agency costs concept from the researcher perspective is limited in knowledge in Kenya and at a level addressed by this study. There is also lack of agreement as to whether the concept of agency cost indeed affect performance. Specifically, Event studies done locally, have not managed to bring out the relationship between agency costs and portfolio returns, a gap that the current study seeks to fill.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction
This chapter covers the research design, target population, sample and sampling design, data collection methods and data analysis techniques.

3.2 Research Design
This is a conceptual structure within which the research will be conducted and it consists of the blue print for the collection, measurement and analysis of data (Kothari, 2004). The research adopted a descriptive research design in order to describe the effects of agency costs and portfolio returns of mutual funds in Kenya.

Descriptive research design has the ability to cast more light on relationships through a method of data collection that enables them to describe the characteristics of the sample more accurately (Ethridge, 2004)

3.3 Target Population
The target population for this study was all the CMA approved types of mutual funds in Kenya as at the year 2016. There are 86 registered Mutual Funds under the management of 22 mutual fund managers also known as Collective Investment Schemes (CMA, 2016).

These funds fall into different categories which were all represented in the current study.

3.4 Sample and Sampling Design
Stratified sampling was used, fund categories namely Money fund, Equity Fund, Balanced Fund, managed, Fixed Fund will form the strata’s then simple random sampling will be done to pick a sample of 30 mutual funds for this research.

A sample of, 7 equity fund, 7 money fund, 5 balanced fund, 6 fixed funds, 3 Bond Fund, 1 Managed Retirement, and 1 Growth fund will be taken to be a representative of the population. Gill and Johnson (2010) argue that the adequacy of a sample size depends on various factors based on the composition of the population. A sample size of 30 out of 86 represents 35% of the population and according to Mugenda and Mugenda (2003) a sample of 10% is considered adequate and representative for a descriptive study.
3.5 Data Collection Methods
Secondary data was used in this study. Quantitative analysis will be performed on audited data available from the individual mutual fund’s financial statements for a period of 5 years from year 2012 to 2016. This is considered an appropriate period that covers the economic cycle and current. Where five year data is not available, then the average returns for the available months was calculated or interpolated (Mwangi, 2014).

The secondary data was sourced from mutual funds monthly reports, annual reports, pamphlets, Capital Market Authority, Central Bank of Kenya and Central Bureau of Statistics.

3.6 Diagnostic Tests
Diagnostic tests were used to make a diagnosis, so we can know the probability that the test will give the correct results.

3.6.1 Test for Linearity
This study used coefficient of determination $R^2$ to test for linearity. The coefficient of determination was useful for this test because it represents the percentage of the data that is the closest to the line of best fit, such that as the coefficient tends to one it denotes linear association between the study variables.

3.6.2 Test for Multicollinearity
This study used the VIF to tests for Multicollinearity which is a situation that occurs when two or three predictor variables are highly correlated making it difficult to establish the contribution of each predictor variable. Garson (2012) suggested the Multicollinearity assumption has a VIF value of a maximum 10. This study used this prescribed scale.

3.6.3 Test for Autocorrelation
The presence of independence in residue from multiple regressions will be tested for by means of the Durbin-Watson d statistic: specifically, these tests for the existence of dependence between successive residuals arrayed in order of temporal or spatial sequence and derived by the application of ordinary least-squares methods.
3.7 Data Analysis

Data collected was analyzed using descriptive statistics tools to describe the data. This was Statistical Package for Social Sciences used to generate quantitative reports, presented in the form of tabulations, percentages, mean and standard deviation.

3.7.1 Analytical Model

The model that was used to investigate the effect of agency cost on the portfolio returns of mutual funds listed at CMA was based on the models of (Hameed & Lim, 1998). A multiple regression analysis between portfolio returns and three determining variables will be performed by estimating a linear regression as indicated by the regression equation below:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \]

Y = Dependent variable

\( \alpha \) = Constant (The intercept of the model)

\( \beta \) = Coefficient of the X variables (independent variables)

\( X_1 \) = Audit Fees

\( X_2 \) = Managerial incentives

\( X_3 \) = Free cash flow

\( X_4 \) = Age of the Fund

\( X_5 \) = size the Fund

\( \varepsilon \) = Error Term

3.7.2 Operationalization of Study variables

Mwangi (2014) defined operationalization as the process of explicit specification of study variables in a way that it is possible to measure. The variables in this study namely portfolio returns, Audit fee, managerial incentives, free cash flow, age the fund and size of the fund were operationalised in accordance to the past studies carried out.
Table 3.1 Operationalization of variable table

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Variable</th>
<th>Measurement</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Portfolio Return</td>
<td>Return on Assets</td>
<td>Net Income/Total Assets</td>
</tr>
<tr>
<td>X₁</td>
<td>Audit Fee</td>
<td>Expense Ratio</td>
<td>Audit Fee/Net Income</td>
</tr>
<tr>
<td>X₂</td>
<td>Managerial Incentive</td>
<td>Asset Utilization Ratio</td>
<td>Revenue/Total Assets</td>
</tr>
<tr>
<td>X₃</td>
<td>Free Cash Flow</td>
<td>Sales/(Revenue) Ratio</td>
<td>Cash Flow/ Revenue</td>
</tr>
<tr>
<td>X₄</td>
<td>Age of the Fund</td>
<td>Fund age Ratio</td>
<td>No. of years the mutual fund has been in operation/Total cumulative No. of years the Mutual Funds have been in operation.</td>
</tr>
<tr>
<td>X₅</td>
<td>Size of the Fund</td>
<td>Fund size Ratio</td>
<td>Fund Assets/Total Fund Assets</td>
</tr>
</tbody>
</table>

Source: Author (2017)

The dependent variable of the study portfolio return was measured by return on Asset to gauge how the company is performing profitably relative to its assets (Lachheb & Slim, 2017). Independent variable audit fee was measured by expense ratio according to Khan, et.al (2016), who equated the measure as a proxy for agency costs being the expense to income to measure how effectively the management controls operating expenses. Managerial incentive was measured based on Iskandar et.al. (2012) who said Asset utilization ratio measures how resources contribute in the generation of revenue in a company. Khan et.al (2016) argued that, it is necessary to measure cash flow against growth opportunity and agreed sales ratio would suffice. According to Mwangi (2014) age of the fund and size of the fund were measured by fund age ratio and fund size ratio respectively.
3.7.3 Test of Significance

The strength of the model was tested using $R^2$ and F-test. The significance tests were conducted at 5% level of significance. Significance of regression coefficients was tested using the Z-test.
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction
This chapter covers the analysis of data, presentation of results detailing the nature, effect and strength of the relationship, regression analysis, and interpretation of the research findings, and tests of significance.

4.2 Descriptive Statistics Analysis
The descriptive statistics summarizes the sample characteristics of the effect of agency costs on portfolio returns of mutual funds in Kenya. The data collected from 30 mutual funds in Kenya for a period of 5 years from 2012 to 2016 was subjected to descriptive analysis to provide for mean, maximum, minimum and standard deviation.

4.2.1 Agency Costs
The table 4.1 below shows descriptive statistics for the study variables which were Audit Fee, Managerial incentives, Free Cash Flow and control variables of age of the fund and size of the fund. The results show, audit fee had an expense ratio mean of 0.044, with minimum of 0 and maximum of 0.51. Managerial incentives had a asset utilization ratio mean of 0.377, minimum of 0.03 and a maximum of 2.17. Free cash flow with a sales ratio mean of 0.8123, minimum of 0 and a maximum of 5.94. Age of the fund had a fund age ratio mean of 0.033, minimum of 0.01 and a maximum of 0.05. The size of the fund ratio mean was 0.0337, minimum of 0 to a maximum of 0.48.

Table 4.1 Descriptive statistics of Agency costs and control Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Fee</td>
<td>30</td>
<td>.00</td>
<td>.51</td>
<td>.0443</td>
<td>.10817</td>
</tr>
<tr>
<td>Managerial Incentives</td>
<td>30</td>
<td>.03</td>
<td>2.17</td>
<td>.3773</td>
<td>.62484</td>
</tr>
<tr>
<td>Free Cash Flow</td>
<td>30</td>
<td>.00</td>
<td>5.94</td>
<td>.8123</td>
<td>1.37366</td>
</tr>
<tr>
<td>Age of the Fund</td>
<td>30</td>
<td>.01</td>
<td>.05</td>
<td>.0330</td>
<td>.01489</td>
</tr>
<tr>
<td>Size of the Fund</td>
<td>30</td>
<td>.00</td>
<td>.48</td>
<td>.0337</td>
<td>.09754</td>
</tr>
</tbody>
</table>

Source: Author (2017)
4.2.2 Portfolio returns

The descriptive statistics in Table 4.2 below show the descriptive characteristics of portfolio returns of mutual funds by minimum, maximum, mean and standard deviation. The results show that there was a mean of 3% in 2012, 3.6% in 2013, 4.5% in 2014, 5.8% in 2015 and 6.5% in 2016. The maximum returns were 37% in 2016. This has been a progress increase in portfolio returns may be due to continued awareness and investors making use of the information available in the public to prefer to invest in this industry.

Table 4.2 Descriptive Statistics of portfolio returns

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>30</td>
<td>.00</td>
<td>.24</td>
<td>.0300</td>
<td>.05305</td>
</tr>
<tr>
<td>2013</td>
<td>30</td>
<td>.00</td>
<td>.24</td>
<td>.0367</td>
<td>.06194</td>
</tr>
<tr>
<td>2014</td>
<td>30</td>
<td>.00</td>
<td>.27</td>
<td>.0457</td>
<td>.06852</td>
</tr>
<tr>
<td>2015</td>
<td>30</td>
<td>.00</td>
<td>.36</td>
<td>.0587</td>
<td>.08228</td>
</tr>
<tr>
<td>2016</td>
<td>30</td>
<td>.01</td>
<td>.37</td>
<td>.0650</td>
<td>.08811</td>
</tr>
</tbody>
</table>

**Source:** Author (2017)

The figure 4.1 below shows line graph of the portfolio return increases from the year 2012 to the year 2016. However, there was a sharp rate from the year 2014 and 2015, the study recommends a study on portfolio returns trends to establish the reason to this sharp increase.

**Figure 4.1 Portfolio returns**

**Source:** Author (2017)
4.3 Diagnostic tests

The following diagnostic tests were done to ascertain the probability that the test gives the correct results.

4.3.1 Test for linearity

This study used coefficient of determination $R^2$ to test for linearity. This coefficient of determination from table 4.4 show 0.935 implying that 93.5% of the data is close to the line of best fit hence denoting linear association between the study variables.

4.3.2 Test for Multicollinearity

The study used VIF to test for Multicollinearity. The agency costs (variables) were tested using variance inflation factor (VIF) and from table 4.6 the following results were obtained for Audit fees (1.493), managerial incentives (1.500), free cash flow (1.106), Age of the Fund (1.106) and Size of the Fund (1.035) Multicollinearity was not in existence since all the VIF were less than 10.

4.3.3 Test for Autocorrelation

Durbin-Watson was used to test for autocorrelation. The results in the table 4.3 below shows a Durbin-Watson value of 0.967 which tested for autocorrelation is within the scale of ranges between zero to four implying that autocorrelation was not in existence.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.967$^a$</td>
<td>.935</td>
<td>.921</td>
<td>.1001469</td>
<td>.967$^a$</td>
</tr>
</tbody>
</table>

Source: Author (2017)

4.4 Correlation Analysis

Table 4.5 below indicates there is a positive association on portfolio return (Y) and audit cost since $r = 0.418$. It also indicates a positive association between portfolio return and incentives with $r = 0.957$ There is however a negative association between portfolio returns and free cash flow with value of $r = -0.109$. The control variable age of the fund shows a positive association with $r=0.019$ and size of the fund negative association with a $r=-0.156$. Except the association of free cash flow, age the fund and size of the fund
which are insignificant all the other variables have an association with portfolio return that are significant.

Table 4.4 Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Portfolio Returns</th>
<th>Audit Fee</th>
<th>Managerial Incentives</th>
<th>Free Cash Flow</th>
<th>Age of the Fund</th>
<th>Size of the Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1</td>
<td>Pearson</td>
<td>1</td>
<td>.418*</td>
<td>-.109</td>
<td>.019</td>
<td>-.156</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.022</td>
<td>.022</td>
<td>.000</td>
<td>.568</td>
<td>.923</td>
<td>.410</td>
</tr>
<tr>
<td>X2</td>
<td>Pearson</td>
<td>.418*</td>
<td>1</td>
<td>.540*</td>
<td>-.049</td>
<td>-.229</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.022</td>
<td>.002</td>
<td>.796</td>
<td>.223</td>
<td>.428</td>
<td></td>
</tr>
<tr>
<td>X3</td>
<td>Pearson</td>
<td>.957*</td>
<td>.540*</td>
<td>1</td>
<td>-.131</td>
<td>.034</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
<td>.002</td>
<td>.490</td>
<td>.858</td>
<td>.515</td>
<td></td>
</tr>
<tr>
<td>X4</td>
<td>Pearson</td>
<td>-.109</td>
<td>-.049</td>
<td>-.131</td>
<td>1</td>
<td>-.033</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.568</td>
<td>.796</td>
<td>.490</td>
<td>.308</td>
<td>.864</td>
<td></td>
</tr>
<tr>
<td>X5</td>
<td>Pearson</td>
<td>.019</td>
<td>-.229</td>
<td>.034</td>
<td>.192</td>
<td>.250</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.923</td>
<td>.223</td>
<td>.858</td>
<td>.308</td>
<td>.183</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author (2017)

4.5 Regression Analysis

Regression analysis was conducted on portfolio return against audit fee, managerial incentives and cash flow. The regression equation was as follows:

\[ Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \]

Data to be used for the variables was collected from 30 mutual funds registered with CMA within a period of 5 years for the year 2012 to 2016.

The data was subjected to regression analysis and the findings were discussed below.
Table 4.5 Regression coefficients of the model

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.077</td>
<td>.052</td>
<td>1.472</td>
<td>.154</td>
<td></td>
</tr>
<tr>
<td>Audit Fee</td>
<td>-.537</td>
<td>.214</td>
<td>-.163</td>
<td>-2.507</td>
<td>.019</td>
</tr>
<tr>
<td>Managerial Incentives</td>
<td>.596</td>
<td>.037</td>
<td>1.046</td>
<td>16.210</td>
<td>.001</td>
</tr>
<tr>
<td>Free Cash Flow</td>
<td>.008</td>
<td>.014</td>
<td>.029</td>
<td>.536</td>
<td>.597</td>
</tr>
<tr>
<td>Age of the Fund</td>
<td>-1.315</td>
<td>1.499</td>
<td>-.051</td>
<td>-.877</td>
<td>.389</td>
</tr>
<tr>
<td>Size of the Fund</td>
<td>-.138</td>
<td>.201</td>
<td>-.038</td>
<td>-.687</td>
<td>.499</td>
</tr>
</tbody>
</table>

**Source:** Author (2017)

The above table indicates existence of an association between dependent variable and the explanatory variable. The equation below show the identified relationship

\[ Y = 0.077 - 0.537X_1 + 0.596X_2 - 0.008X_3 - 1.315X_4 - 0.138X_5 \]

The above equation indicates that when audit cost increases by one unit, the portfolio return decreases by 0.537 units. When managerial incentives increases by one unit, portfolio return increases by 0.596 units and when free cash flow increases by one unit, portfolio return reduces by 0.008 units. The control variables of age of the fund decreases portfolio return by 1.315 units. Similarly the size of the fund shows a decrease effect on portfolio return of 0.138 units. However, the effects that are significant include, audit fee and managerial incentives. All the other variables effects are insignificant as shown in table 4.5 above.
### Table 4.6 Regression model

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3.440</td>
<td>5</td>
<td>.688</td>
<td>68.607</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>.241</td>
<td>24</td>
<td>.010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.681</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author (2017)

The table 4.6 above indicates the usefulness of the overall regression model at 5% level of significance. Since the p-value of the F test of 68.607 is less than alpha, which is 0.000 < 0.05 it therefore, implies that the effect of agency costs on portfolio returns in this model is significant.

### 4.6 Test of Model Reliability

Correlation analysis (Table 4.4) was used to establish the inter-relationships between the variables in the study and regression Coefficients (Table 4.5) used to determine the goodness of fit of the model, a t-test was used to determine the significance of the regression coefficients. The coefficients were interpreted to establish how each of the independent variables affects portfolio returns of mutual funds in Kenya. The strength of the model was tested using R² and F-test at 5% significance level and the results are provided in Table 4.7 below.

### Table 4.7 Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.967(^a)</td>
<td>.935</td>
<td>.921</td>
<td>.1001469</td>
<td>.967(^a)</td>
</tr>
</tbody>
</table>

Source: Author (2017)

The table 4.7 above shows a summary of the model where adjusted R Square between the observed and modeled data values of the portfolio return was seen. The predictor variables influenced 92.1% of variation in Portfolio return as indicated by the adjusted R
square statistics which implies that, 92.1% of the variation in the response variable can be explained by the agency costs variables in the study.

4.7 Discussion of Findings

The study findings show that there was a positive association between study variables and portfolio return. According to the study results, one unit increase of audit fee there is a corresponding decrease of -0.537 units of portfolio returns. This effect is statistically significant at 0.019 and therefore, can be interpreted to mean that; audit fee affects portfolio returns negatively. These results are in conformity with the findings of Arowolo and Ahmed (2016) who established that monitoring mechanism (external auditing) significantly affected performance of non financial listed companies in Nigeria.

Statistically, one unit increase of managerial incentives in the study results to a corresponding increase of 0.597 units of portfolio returns at significance level of 0.001. This is statistically significant and therefore the study interprets this to mean that managerial incentives positively affect portfolio returns. Mbataru (2009) also confirmed that fund managers are able to efficiently use resources to offset their expenses in research and acting on new information mutual fund managers allocate resources efficiently to generate high gross returns sufficient to offset expenses involved.

Free cash flow positively affects portfolio returns but insignificantly since the statistical significance level is above 0.05 at 0.597. The age of the fund positively affects portfolio returns, and size of the fund negatively affecting the portfolio returns as supported by the study results but statistically insignificantly for both. Abdulrahman (2012) established that there exists a relationship between agency costs and financial performance.

The predictor variables influenced 92.1% of variation in Portfolio return as indicated by the adjusted R square statistics which implies that, 92.1% of the variation in the response variable can be explained by the agency costs variables and 7.9% can be explained by the term error in the study.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter entails summary, conclusion, recommendations, Limitation of the study and suggestions for further study

5.2 Summary of the Findings

Before running the regression analysis, descriptive statistics analysis was conducted. The results show, audit fee had an expense ratio mean of 0.044, with minimum of 0 and maximum of 0.51. Managerial incentives had a asset utilization ratio mean of 0.377, Free cash flow with a sales ratio mean of 0.8123. Age of the fund had a fund age ratio mean of 0.033 and size of the fund ratio mean was 0.0337. The results on portfolio returns show that there was a mean of 3% in 2012, 3.6% in 2013, 4.5% in 2014, 5.8% in 2015 and 6.5% in 2016. The maximum return was 37% in 2016. Portfolio returns increased progressively over the period of study. Diagnostic tests were done to ascertain the probability that the test gives the correct results.

This study used coefficient of determination $R^2$ to test for linearity. The coefficient of determination ($R^2$) was 0.935 implying that 93.5% of the data lies close to the line of best fit hence denoting linear association between the study variables. The study used VIF to test for Multicollinearity. The agency costs (variables) were tested using variance inflation factor (VIF) and from the results obtained for Audit fees (1.493), managerial incentives (1.500), free cash flow (1.106), Age of the Fund (1.106) and Size of the Fund (1.035) Multicollinearity was not in existence since all the VIF were less than 10. Durbin-Watson was used to test for autocorrelation. The results show a Durbin- Watson value of 0.967 which is within the scale of ranges between zero to four implying that autocorrelation was not in existence.

Correlation analysis shows a significant positive association on portfolio return (Y) and audit cost since $r = 0.418$. The results also show a significant positive association between portfolio return and incentives with $r = 0.957$. The results however, show an insignificant negative association between portfolio returns and free cash flow with value of $r = -0.109$. The results on age of the fund show an insignificant positive association
Regression coefficients of the model, results show that when audit cost increases by one unit, the portfolio return decreases by 0.537 units. When managerial incentives increases by one unit, portfolio return increases by 0.596 units and when free cash flow increases by one unit, portfolio return reduces by 0.008 units. Age of the fund decreases portfolio return by 1.315 units. Similarly the size of the fund shows a decrease effect on portfolio return of 0.138 units. However, the effects that are significant include, audit fee and managerial incentives while all the other variables effects are insignificant. The usefulness of the overall regression model at 5% level of significance show the p-value of the F test of 68.607 is less than alpha, which is 0.000 < 0.05. This implies that the effect of agency costs on portfolio returns in this model is significant. The strength of the model was tested using adjusted $R^2$ and F-test at 5% significance level and the results show the predictor variables influenced 92.1% of variation in Portfolio return in this study.
5.3 Conclusion

All the sample of mutual funds analysed had the agency costs elements needed for the study indicating that this are essential costs for every mutual fund in Kenya. This was the case in all the respective fund categories, Money Fund, Equity fund, Balanced Fund, Bond Fund and Fixed Fund.

The descriptive statistics show that Portfolio returns increased over the period of study. This could be attributed to continued awareness and availability of information in the public influencing investors to invest in mutual funds but a study is recommended to analyze this trend.

Statistically Audit fee negatively affects portfolio returns of mutual funds. Managerial incentives positively affect portfolio returns of mutual funds. Free Cash Flow positively affects portfolio returns of mutual funds. The age of the fund negatively affects portfolio returns of mutual funds in Kenya similarly for the size of the fund. The effect of the audit fee and managerial incentives on portfolio returns is significant while the effect of free cash flow, age of the fund and size of the fund are insignificant. The study findings and the results confirms existence of significant association of agency costs and portfolio returns. This leads to the conclusion that, Agency costs positively affect portfolio returns of mutual funds in Kenya.

5.4 Recommendations for Policy

Since agency costs will always be part of mutual fund portfolio expenses this study proposes that fund manager should on regular periods of time evaluate these costs on the basis of their contribution and strive to keep them at optimal levels. While audit fee and managerial incentives are recommended to be incurred optimally, free cash flow is advised by this study to be avoided due to its effect of reducing portfolio returns. It is recommended that the regulators of mutual fund industry consider making it mandatory for all mutual funds to make annual reports with full disclosure of agency costs and this compliance to be reinforced.
Based on this relationship, the study recommends that existing investors should be allowed to access this information of agency costs for the mutual funds listed in CMA in Kenya so that they can make informed decision on how best to control them.

5.5 Limitations of the Study

This study was not without limitations, but efforts were made to overcome any limitation that would significantly affect the findings of the study. Longitudinal research design would have been preferred as it incorporates all changes and practices that may have taken place in the entire period. However, Cross-section research design was adopted in place and the study obtained and analyzed data from 30 mutual funds out of 86 mutual funds approved by CMA in Kenya for a period of five year from 2012 to 2016 due to time constraint. Additionally, not all factors that would affect portfolio returns of mutual funds were analyzed and only limited to agency costs.

Although the international financial reporting standards harmonizes how the annual accounts are presented there were limitations in instances where only consolidated total costs were published and in the absence of additional notes to show distribution to relevant cost centre’s, the researcher had to call the organization for clarifications.

5.6 Suggestions for Further Study

Further research can be done to establish the effect of agency costs on portfolio returns of mutual funds in Kenya but covering a period of over 10 years and varying the measurement of variables and sampling method. Since mutual funds fall under different categories it is my suggestion that a study can be carried out on the effect of agency costs on Individual portfolio returns in Kenya.

A study on Trend analysis on portfolio returns is recommended based on the pattern experienced in this study on sharp increase of portfolio returns between year 2014 and 2015. Such a study can serves to explain the reasons for the portfolio returns variations in Kenya.
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APPENDIX: 1

APPROVED COLLECTIVE INVESTMENT SCHEMES
CMA APRIL 30TH 2016.

1 African Alliance Kenya Unit Trust Scheme
   African Alliance Kenya Shilling Fund
   African Alliance Kenya Fixed Income Fund
   African Alliance Kenya Managed Fund
   African Alliance Kenya Equity Fund

2 Amana Unit Trust Funds Scheme
   Amana Money Market Fund
   Amana Balanced Fund
   Amana Growth Fund

3 Stanbic Unit Trust Scheme
   Stanbic Money Market Fund
   Stanbic Fixed Income Fund
   Stanbic Managed Prudential Fund
   Stanbic Equity Fund
   Stanbic Balanced Fund

4 Pan Africa unit Trust Scheme
   Pan Africa Money Market Fund
   Pan Africa Dividend Plus Fund
   Pan Africa Balanced Fund

5 British - American Unit Trust Scheme
   British - American Money Market Fund
   British - American Income Fund
   British - American Balanced Fund
   British - American Managed Retirement Fund
   British - American Equity Fund

6 Commercial Bank of Africa Unit Trust Scheme
   Commercial Bank of Africa Money Market Fund
   Commercial Bank of Africa Equity Fund

7 CIC Unit Trust Scheme
   CIC Money Market Fund
   CIC Balanced Fund
   CIC Fixed Income Fund
<table>
<thead>
<tr>
<th>8</th>
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<td>Co-Op Equity Fund</td>
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<td>Co-Op Bond Fund</td>
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<td>Dyer and Blair Diversified Fund</td>
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| 15 | Old Mutual Unit Trust Scheme |

42
Old Mutual Equity Fund
Old Mutual Money Market Fund
Old Mutual Balanced Fund
Old Mutual East Africa Fund
Old Mutual Bond Fund

16 Dry Associates Unit Trust Scheme
Dry Associates Money Market Fund (KES)
Dry Associates Money Market Fund (USD)
Dry Associates Balanced Fund

17 Standard Investment Trust Fund
Standard Investment Equity Growth Fund
Standard Investment Fixed Income Fund
Standard Investment Balanced Fund

18 UAP Investments Collective Investment Scheme
UAP Money Market Fund
UAP High Yield Bond Fund
UAP Enhanced Income Fund
UAP Dividend Maximizer Fund

19 Zimele Unit Trust Scheme
Zimele Balanced Fund
Zimele Money Market Fund

20 Madson Asset Unit Trust Scheme
Madson Asset Equity Fund
Madson Asset Balanced Fund
Madson Asset Money Market Fund
Madson Asset Treasury Bill Fund
Madson Asset Bond Fund

21 Apollo Unit Trust Scheme
Apollo Money Market Fund
Apollo Balanced Fund
Apollo Aggressive Growth Fund
Apollo Equity Fund
Apollo East African Fund
Apollo Bond Fund