EFFECT OF MANAGEMENT OF CASH FLOW ON THE FINANCIAL PERFORMANCE OF MUTUAL FUNDS IN KENYA

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Effect of Management of Cash Flow on the Financial Performance of Mutual Funds in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

This work is dedicated to all persons who desire for Specialized Practice of Finance and to my family.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA   Analysis of Variance

CAPM   Capital Asset Pricing Model

CMA   Capital Markets Authority

EBIT   Earnings Before Interests and Tax

ECM   Efficiency of Cash Management

FICF   Financing Cash Flow

FCF   Free Cash Flow

FE   Fixed Effect

GDP   Gross Domestic Product

LM   Lagrange Multiplier

IAS   International Accounting Standards

IFC   International Finance Corporation

ICF   Investing Cash Flow

NGO   Non Governmental Organizations

NPV   Net Present Value

NSE   Nairobi Securities Exchange

OCF   Operating Cash Flow

OLS	Ordinary Least Squares
PWC	Price Waterhouse Coopers
RE	Random Effect
ROA	Return on Assets
ROE	Return on Equity
SME	Small Medium Enterprise
SPSS	Statistical Package for Social Science
UK	United Kingdom
US	United States
VIF	Variance Inflation Factor

DEFINITIONS OF KEY TERMS

Financial Performance: This is a measure of how a corporation utilizes resources from its principal kind of production and revenue generation. The term also refers to scientific evaluation of profitability and financial strength of any business organization. (Ebben & Johnson, 2011).

Financing Cash Flow management: This refers to money received as equity or debt (bank loans and capital contributions from shareholders). (Joshua & Vera, 2013).

Free Cash Flow Management: is the management of funds accessible to administrators or managers before discretionary capital investment decisions (Joshua & Vera, 2013).

Fund Manager: Refers to a mutual fund or investment advisor or a registered venture capital company or collective investment or who administers a group of securities in surplus of an amount approved by the Authority from time to time (CMA, 2016).

Investing Cash Flow Management: This refers to cash spent on items to be used over multiple years to increase or boost profitability or efficiency for the organization business (examples are the acquisition of assets, new technology, investments in business associates or joint ventures.) Negative cash flows result from the acquisition of assets. Positive cash flows are divestments of, or sale of, these assets (Zimmerer, Scarborough & Wilson, 2008).

Management of Cash Flow: is a process of collecting, investing, projecting, spending, financing and planning for cash a company needs to operate smoothly). Additionally, it refers to a procedure of tracking money coming in and out of the firm's business. This helps in predicting what proportion of money accessible to the firm's dealings within the future. (Zimmerer, Scarborough & Wilson, 2008).

Mutual Funds: are fund managers that bring together money from many people and invests it in stocks, bonds or other assets (Budiono, 2009).

Operating Cash Flow Management: Refers to the net cash received in the form of revenue from sales or service, less cash spent on expenses of running the business. It also means management of cash flows linked to the operation of a company and is important because showing the cash amount which a firm gains during its activity (Ghodrati & Abyak, 2014).

Size of the firm: Company size is computed as the decimal logarithm of total assets of a company (Taani & Banykhaled, 2011)

ABSTRACT

Mutual funds play a fundamental function in Kenya's economy by offering investors the benefits of portfolio diversification and professional management at an occasional cost. This study focuses on the effect of the management of cash flow on the financial performance of mutual funds in Kenya. Specifically, the study sought to assess the effect of operating cash flow management, investing cash flow management, financing cash flow management, free cash flow management and the size of the firm moderating effect in relation to the management of cash flow and financial performance. The study was guided by Agency theory, Baumol Deterministic Theory, Free cash flow theory, Trade-off theory, Financial life cycle theory, and Miller -Orr stochastic cash flow theory. The study employed causal research or explanatory design with secondary panel data which was extracted from the audited financial statements of 22 mutual funds for the period 2011-2016. Descriptive statistics namely; mean, median, minimum, maximum and standard deviation were generated using Eviews software. Diagnostic tests; Multicollinearity test, autocorrelation test, Heteroscedasticity test, normality test, Hausman test, and Granger causality test were carried out. The data was assessed and evaluated using the OLS regression technique. R-square was used to establish the degree to which the predictor variables explain the deviation independent variable. T-tests were used to test the significance of individual variables. F-test was used to verify the significance of the overall model. The p-value at a 5% level of confidence for each t-test was used to make conclusions on whether to accept or reject the null hypothesis. Data was presented in figure and tables. The study found out that operating cash flow management had a significant positive effect on return on assets and insignificant positive effect on return on equity. Investing cash flow management had an insignificant positive effect on return on assets and return on equity. Financing cash flow management had a significant negative effect on financial performance. Free cash flow management had insignificant positive and negative effects on ROA and ROE respectively. While the size of the firm had an insignificant positive effect on ROA and ROE. On the moderating effect of the size of the firm on the effect of management of cash flow on financial performance, it was found out that R2 decreased by 1.17% for the ROA model and 1.26 % for the ROE model when the size of the firm was introduced. It was therefore concluded that the size of the firm had indeed a significant moderating effect. The study concludes that operating cash flow management, investment cash flow management and firm size of the firm influence the financial performance of mutual funds in Kenya positively. The study concludes that financing cash flow management had a significant negative effect on the financial performance of mutual funds in Kenya. The free cash flow management had insignificant positive and negative effects on return on assets and return on equity. The study recommends that managers must come up with the required income policies. The key limitation of the study was that it considered only four independent variables and financial performance whereas might be other variables and non-financial indicators of performance.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Management of cash flow could be a vital component of any company's operational plan (Quinn, 2011). Management of cash flow plays a significant role in an exceedingly company's operations and financial performance (Efobi, 2008). Management of cash flow is that the core of a company's short and long run continued existence for it to attain short and long run financial objectives (Uwonda & Okello, 2013). A company's management of cash flow policy, which manages net assets from cash and bank balances, debtors, stocks and creditors are connected to improved financial performance (Kroes & Subramanyam, 2012).

Uwonda and Okello (2013) assert that management of cash flow is an ongoing challenge for organizations managers as they pay little attention thereto and that they have didn't recognize the effect of money deficiency on the return on assets, equity and operation of the corporate. Kroes and Subramanyam (2012) linked business success or failure to the amount of the online make the most flows and outflows from a firm's activities because the inability to get cash in order to sustain its operations. An organization is forced to source finances from lending institutions or get rid of assets so as to settle financial obligations. Failure to boost funds on time ends up in collapse, bankruptcy and at last closure of business operations of an organization. In line with Ebben and Johnson (2011) management of money flow could be a mechanism accustomed improve financial performance, although the prevalence of educational studies into the link between the management of cash flow and financial performance inspects the difficulty from a stationary benchmarking perception (Ebben & Johnson, 2011). Nerlove (2005) concludes that the stationary approach has resulted in affluence of insight into the importance of efficiency and effective cash flows management and performance.

In Kenya, financial institutions are on record posting billions of shillings in profit and this financial position has been on the increase yet mutual funds which are registered and controlled by (CMA) haven't been performing well and a few even have recorded huge losses (Kibet, Tenai & Mutwol, 2011). Mutual Funds have stagnated with few firms having little or no growth and lots of have focused on the management of money flow. In line with CMA (2015), annual reports from mutual funds, it's evident that a lot of funds don't pay dividends consistently, and once they pay, the amount of payout is incredibly low contrary to shareholders' expectations. The industry currently has degenerated in terms of profits leading many firms making losses or little profit (Nzoka, 2013). In line with Maina and Sakwa (2010) companies have collapsed put into receivership and at last, other closing businesses, hence have to undertake the study.

Thanh and Nguyen (2013) studied the impact of banking relationships on the performance of firms in Vietnam. The study employed multiple correlation in analyzing data collected from 465 companies listed in Vietnam for the amount 2007 to 2010. The study affirmed that for an organization to understand its objective of monetary performance must come up with the most effective strategy in identifying and selecting the most effective income components. Cash flows index decisions may result in corporate failure. Thanh and Nguyen (2013) further stated that because of poor and weak governance in companies in managing cash flows, managers tend to have interaction and put their interest first before the management and shareholder's goals. Thanh and Nguyen (2013) affirmed that the management of money flow and company performance had a big and positive relationship. However, on divergent views Brush, Bromiley and Hendrickx (2007) posit that management of money flow and company performance had significant and positive relationships. The various findings from previous scholars created a spot that needs more observation and further investigation of the phenomenon.

1.1.1 Global Perspective of Management of Cash flow and Financial Performance of Mutual Funds

Globally, the mutual funds' sector was started within the year 1774 by Van Ketwich because of financial catastrophe that affected European Dutch Merchant (Budiono, 2009). The financial crises resulted within the collapse and closure of British banks in Amsterdam and other banks. Following the financial predicament, Van Ketwich came up with the initiative of diversification and initiated to pool funds together to banks by attracting investors. This resulted in countries in South and Central America to come back up with loans for plantation, Swedish, German, Danish, Spanish and Austrian issued bonds as how of mitigating financial crisis (Budiono, 2009). Mutual funds earliest emerged within the US within the 1890s, with the Boston property Trust, established in 1893, is that the earliest?, These early mutual funds were of the closed-end type which meant they'd a predetermined share in quantity which might trade at either markdown or a premium to the online asset worth of the basic portfolio (Burrows, Jones & Leger, 2013).

Mutual funds are investment companies within which investors pool their savings and invested in an exceedingly diverse portfolio of securities under the management by experts to attain the final economic objectives (Qureshi, Qureshi & Ghumro, 2017). Samsul (2015) stated that investment firm could be a pool accustomed compile investor's funds and invest the funds in securities portfolios by the fund manager. Mutual funds pool money from investors and make investment decisions on behalf of their stakeholders. They invest pooled money shackled, stocks, treasury bills and other short market securities (Reilly & Brown, 2011). Mutual funds' main function is to produce liquidity, economies of scale and diversification of portfolio that gives a competitive advantage to fund managers over their competitors within the monetary industry. Moreover, fund managers provide a suitable way designed for investors to put in their funds, track their investment portfolio performance and enable them to fine-tune their venture goal. Also, fund managers are the best and most appropriate investment for the general public because it presents a chance to put in diversified portfolios with lower

costs and managed by experts. These benefits provided by funds have a tendency to attract stakeholders to put in not directly through mutual funds moderately than directly in security companies (Qureshi, Qureshi & Ghumro, 2017).

The Global economic predicament between 2008-2009 and the Asian monetary crisis of 1997-1998 trembled investors' assurance and obligated them to look for supplementary secure and sound options on alternative investments. As a result, mutual funds that are differentiated by scale of economies, liquidity, and diversification became the focal point of academicians and practitioners (Qureshi, Qureshi & Ghumro, 2017). The mutual fund sector in the developing countries shifted after the global economic catastrophe and the stock market that resulted in rising of investment patterns. This experience is more distinct for rising economies for the reason that of the fewer market formations and insufficient information mechanisms to facilitate stakeholders.

In European countries, the UK and the USA, the mutual fund sector is used as an indicator of development to determine the contribution cost and complexity of the investors in urbanized economies (Ferreira, Miguel, Ramos & Keswani, 2012). On the other hand, mutual funds in developing economies are at an embryonic phase. Even though the number of fund managers in the US market is exceeding the other economies, the augmentation has however shown an exceptional increase. The total number of fund managers or mutual funds has improved by 100% from the last one and half decades globally from 1998 to 2015. Furthermore, statistics show that mutual fund assets increased worldwide by 211% from 2000 to 2015 and reached up to $37.4 trillion by the end of 2015 (Qureshi, Qureshi & Ghumro, 2017).

 Cao, Chang and Wang (2008) affirmed that mutual funds are the key financial institutions for savings and investment in developed countries. They are also important contributors to the GDPs of countries and an important supply of capital in financial markets (Ong & Amadou, 2014). The study states that fund managers or mutual funds signify a major portion of households and investors. The study noted that households in the US invested their main component of wealth in fund managers or mutual funds. By

the last part of the year 2015 households put in 44% of their possessions in mutual funds. Globally, USA mutual industry reported for in excess of 48% of the whole fund managers of $37 trillion, while Europe accounted 34%, Asia Pacific and Africa accounted for 13% and remaining 5% was accounted by the other economies (Qureshi, Qureshi & Ghumro, 2017).

In Brazil, the mutual funds market is less established when contrasted to US or European markets, with fewer transactions and lower liquidity (Brunnermeier, 2009). Emerging economies had good returns compared to developed economies caused by the high overheads of cash holding (Neumeyer & Perri, 2005). The economical position of US mutual fund firms was considerably affected during the time of the predicament of 2007. Throughout this period, the decline in the worth of property eroded borrowers' net worth quicker than shareholders' gross worth (due to change in cash flow management index), which resulted to decline in profitability and consequent reduction of borrowing amounts (Brunnermeier, 2009).

In the US, Bear Stearns near collapse and failure of Third Avenue Focused Credit Fund are both characterized as cash flow shocks that had a greater impact on the financial performance of fund managers or mutual funds (Robert & Theresa, 2015). The presented findings showed that improvement in cash flows positively affected financial performances. Fan and Addams (2012) studied cash flow and performance of 117 equity funds that had invest outside the United States for the years 2005 to 2009 and they found insignificant perseverance in financial performance.

In the UK, nearly half of Britain's mutual fund businesses were concerned about managing their cash flow that year (Hutchison, 2013). Keswani and Stolin (2008) investigate the smart money effect using United Kingdom data for the years 1991-1999 and contained exact cash inflow and outflow information for organizational and personage stakeholders. They confirmed that both institutional and individual stakeholders are smart, although this is revealed by the inflows of cash rather than the cash outflows of the funds.

In Pakistan, Javid and Ahmed (2009) investigated cash flow management on the performance of non-financial institutions traded in the Stock Exchange of Karachi and revealed that management of cash flow had a significant and positive relationship with performance. A positive relationship effect between cash flow management and performance of firms indicated that firms with superior free cash flow disburse better dividends. In US research by Goldstein, Ng and Jiang (2015) showed that cash flows are more susceptible to reduced performance than good performance and that the relationship is stronger in a situation where there is limited market liquidity. They argued that an illiquid mutual bond market makes the first-mover benefit in fund managers investing in this segment of the market.

Moeinaddin *et al*. (2013) carried research on cash flow on the performance of companies trading at the stock exchange of Tehran (TSE) and they found out too that there was no correlation linking working capital, operating cash flow from operations activities and future cash flows on financial performance. Turcas (2011) studied the cash flow instrument for the company's analysis and forecast in Bucharest and concluded that the flexibility, solvency and the firm's financial performance set on the firm's competence to make significant and positive cash flows from net financing, investing and operating activities. Chen, Goldstein, and Jiang (2010) assert that illiquid funds can effectively transform into costs faced by those investors who remained invested in the fund. Lou (2012) argued that the cash flow effect on performance through the stocks held in the fund is also present in the case of extreme cash outflows where there is a negative effect on the price of the stock in the fund, depressing overall fund performance.

Vahid, Mohsen and Mohammadreza (2012) concluded that Cash flow is critical to the company's financial performance, while In Nigeria Nwakaego, Ikechukwu and Ifunanya (2015) found that cash flows had a negative and significant outcome on corporate performance in the industry dealing with food. In Ghana Northern Region Cash flow management components were positively and considerably correlated to the financial performance of SMEs (Hamza, Mutala & Antwi, 2015). In Zimbabwe, Mauchi, Nzaro,

and Njanike (2011) revealed that the cash flow from operating, investing and financing activities and profitability in Hunyani Flexible Company was positive.

1.1.2 Kenya Perspective of Management Cash Flow and Financial Performance of Mutual Funds.

In Kenya, the finance industry has significantly developed and is integrated into the regional and international economy. The financial industry is guided and regulated by the CBK, RBA, the IRA, and CMA. In the year 2013, the value of GDP was accounted for by the total value of assets under the financial sector posting 108% from 96% excluding capital markets in the year 2012. In the year 2013, equity market capitalization totaled 51% of the country's GDP. Even though the banking industry dominates the financial sector, posting 71% of total assets excluding capital markets fund managers and other funds have grown significantly and are emerging as potential important investors in Kenya (IFC, 2015).

In Kenya, mutual funds begun after the endorsement of the CMA that is authorized to register and regulated fund managers under Section 30 of the CMA,2001 (PWC,2015). The numeral of mutual funds grew from virtually zero in 2001 to twenty-five in 2015 while the asset portfolio had grown by an average of Ksh. 1.9 billion annually to Ksh.38.1 billion in the past 14 years. However, the total assets under management held by unit trust Fund Managers (mutual funds) declined slightly, by 0.7%, to Kshs 56.1 billion in 2017, from Kshs 55.5 billion recorded in 2016. This was due to the outcome of rising in share prices, soaring bond assessment and more funds into unit trusts from investors (IFC, 2015).

A study by Nzoka (2013) focused on factors influencing the growth strategies of fund management firms in Kenya. The study covered 20 members of the Association of Fund Managers. The findings indicated that fees charge, education level, product diversification, investment market influenced growth strategies of fund management firms in Kenya. A study from Onyinkwa (2013) assessed the institutional and regulatory

framework for index funds in Kenya and concluded that there was the existence of factors that form the indicators of index funds. Gitagia (2013) studied essentials that forecast mutual's fund performance and the results indicated a positive and significant effect between fund characteristics, investment style, capabilities of managers and fund's performance. The study also established a negative correlation linking the performance of the fund and behavioral patterns.

Kenya research by Ndung'u and Oluoch (2016) investigated the effect of cash flow management on the market performance of public construction companies in Kenya and established that cash flow management had a significant connection with market performance. The mutual fund market is greatly unexploited in Kenya and research on their performance is greatly deficient. Kimonge (2011) studied the effect of cash flow management on the Financial performance of Non-Governmental Organizations in Kenya and found an insignificant effect of cash flows management on the performance in financials of NGOs. Further, Gitagia (2013) observes that the current literature on fund markets, though growing, is still not sufficient. It is not in favor of this backdrop that the research was undertaken with the sole objective of studying management of cash flow and institutions' performance in financials and comparing the findings with other global fund managers or mutual market.

The result of operations and policies in monetary terms of the firm is referred to as financial performance. Common examples of financial performance include operating cash flow, earnings before interest and taxes, and net asset value (Duncan, Njeru & Memba, 2016). Organizations should have financial performance measurement one at a time to generate financial reports at the right time and provide statistical information on scheme performances in improving that performance (Ebben & Johnson (2011). Cash flow management indicates an institution's capability to finance the addition of assets and obligations settlement on time.

The theories that support this study are; Agency theory, Baumol deterministic theory of cash management, Trade of theory, Free cash flow theory, Financial life cycle theory, and Miller -Orr Stochastic Cash flow Theory. Agency cost theory examines how management's activities could be directed at a shareholder's interest by dropping agency costs. The cash flow management theory hypothesizes that firms attempt to minimize the costs of holding cash & the cost of converting marketable securities to cash. Jensen's (1986) free cash flow theory put forward that managers have a motivation to put up cash to boost the number of resources under their control and to gain mandatory power over the organization's decision on investment. Brush, Bromiley, and Hendrickx (2007) state that agency theory holds founded on; the goal of management is to maximize personal wealth instead of stockholder's wealth, management interests encourage mismanagement and waste of resources in the existence of free cash flows. Dickinson (2011) states that life cycle theory has five stages; Introduction, Growth, Maturity, Shake-Out and Decline stages.

1.1.3 Mutual Funds in Kenya

Kenya's Vision 2030 envisions a vivacious and internationally aggressive financial sector that creates jobs and promotes a higher savings rate. Establishing the country as a regional financial hub is a key strategic objective for the government, as articulated in the country's 2nd Medium Term Plan (MTP), blueprint document, and capital market authority's strategic plan. Pushing for inclusive capital and financial markets will help the country meet these goals and sustain regional leadership over the long term. Kenya's financial system plays a fundamental role in allocating and apportioning of capital to ensure fair distributions, more comprehensive wealth and creating awareness about this shift (ICF, 2015).

In the year 2015 mutual funds recorded 9.3 percent returns from 12.2% in 2014 showing a decline in annualized returns of 2.9 percent (CMA, 2016). Nyabwanga, Ojera, Alphonce, and Otieno (2011), describe cash flow management as the procedure of forecasting and controlling inflows and outflows of an entity, internal cash flows and

outstanding cash balances at whichever particular position in time. In order to achieve efficient cash management, one must consider the optimal cash to hold by determining the opportunity cost of holding excessive cash (Ross *et al*., 2008). Mutual funds play an exceptionally imperative role in Kenya's economy by offering investors the advantages of portfolio diversification and professional management at low cost (CMA, 2016).

In Kenya, the expansion of the local mutual fund industry has evidently contributed towards the augmentation of local securities and derivatives markets, which has been had been fundamental in attracting overseas investment cash inflows. More significantly, the better strength and liquidity of local markets has reduced dependence on outside funding. Mutual funds in up-and-coming markets encompass a predisposition to invest locally, as they are, in many cases, captive due to investment limits or are simply reluctant to investing offshore. Mutual funds in Kenya use money from investors to invest in newly issued securities such as equity or debt, hence they finance new investment by firms that results in job creation. They also invest in debt or equity securities already held by investors, hence transferring ownership of the market securities among investors. Because mutual funds typically have shillings in billions to put in market securities, they use substantial resources in investment decisions.

1.2 Statement of the Problem

Mutual funds play a fundamental function in Kenya's economy by offering investors the advantages of portfolio diversification and professional management at a low cost (CMA, 2016). Globally, many mutual funds use the management of cash flow in an attempt to improve financial performance. Regardless of this popular initiative, the question of the effect of management of cash flow on financial performance remains important but principally unsettled empirically (Gill, Biger & Mathur, 2011).

Vahid, Mohsen, and Mohammadreza (2012) cited management of cash flow as a determining success of the firm in business financial performance as a result of its effect on the firm's profitability. Theoretically, management of cash flow is initiated to

improve the firm's performance. The empirical literature on the effect of management of cash flows on the firm's financial performance gives mixed evidence (Alexandridis, Petmezas & Travlos, 2010).

Globally, nearly all of the studies have generally focused on different sectors. The results of these studies are conflicting, for example, Robert and Theresa (2015) found that the improvement in cash flows positively affected return on assets of fund managers in the US. A study by Turcas (2011) found that the solvency, flexibility and financial performance of the Bucharest firm are set on the firm's ability to generate positive cash flows from investing, operating, and financing. Javid and Ahmed (2009) revealed that cash flow management had significant and positive relationship performance on non-firms traded at the stock exchange of Karachi. In Zimbabwe, Mauchi, Nzaro, and Njanike (2011) found a positive relationship between operating cash flows, investing cash flows, financing cash flows and the company's financial performance. Mirfakhraldini, Moeinaldin, and Ebrahimpour (2013) found no correlation linking operating cash flow from operations activities and future cash flows on financial performance of companies traded in Tehran.

On the divergent, a study carried out by Nwakaego, Ikechukwu and Ifunanya (2015) on the effect of cash flow statement on the company's performance of food and beverage companies in Nigeria, indicated that investing cash flows had a significant negative relationship with corporate performance, measured by ROE. Further findings carried out by Zhou, Yang and Zhang (2012) indicated that cash flow management had a negative and significant relationship with corporate performance on companies dealing with real estate. The conflicting results depending on the industry, market environment and methodology disparities in the empirical studies.

In Kenya; Ndung'u and Oluoch (2016) studied the effect of cash flows management on the financial performance of Kenya's companies dealing with public construction and concluded that cash flow management had a considerable correlation on market performance. Kimonge's (2011) findings displayed an insignificant effect on cash flow

management and NGOs' financial performance operating in Nairobi. The evaluated studies, however, focused on predictor variables without moderating variable which therefore seems simplistic.

Although the existing literature contains many studies that examined the correlation linking management of cash flow and firm's financial performance, it shows that management of cash flow is a challenge in rising economies in general and Kenya, in particular, did not address the effect of management of cash flow on the financial performance of mutual funds. In addition, the previous studies did not give in-depth evaluation of the effective management of cash flow on financial performance. In summary, the existing literature is not clear on how the management of cash flow affects the performance of mutual funds in Kenya and similar regulatory environments. The current study sought to fill up the knowledge gap by establishing the effect of management of cash flow on the financial performance of mutual funds in Kenya for years 2011 to 2016 as the period is deemed suitable because Kenya realized significant economic growth and a significant increase in the number of mutual funds registered by CMA.

1.3 Research Objectives

The objectives were categorized into general and specific objectives of the study.

1.3.1 General Objective of the Study

The general objective of this study was to examine the effect of management of cash flow on the financial performance of mutual funds in Kenya.

1.3.2 Specific Objectives of the Study

The following were specific objectives of the study.

1. To evaluate the effect of operating cash flow management on the financial performance of mutual funds in Kenya.

2. To examine the effect of investing cash flow management on the financial performance of mutual funds in Kenya.

3. To analyze the effect of financing cash flow management on the financial performance of mutual funds in Kenya.

4. To evaluate the effect of free cash flow management on the financial performance of mutual funds in Kenya.

5. To assess the moderating effect of the size of the firm on the relationship between cash flow management on the financial performance of mutual funds in Kenya.

1.4 Research Hypotheses

H_{01}: Operating cash flow management does not affect the financial performance of mutual funds in Kenya.

H_{02}: Investing cash flow management does not affect financial performance in mutual funds in Kenya

H_{03}: Financing cash flow management has no significant effect on financial performance in mutual funds in Kenya.

H_{04}: Free cash flow management does not influence the financial performance of mutual funds in Kenya.

H$_{05}$: The size of the firm has no moderating effect on cash flow management and the financial performance of mutual funds in Kenya.

1.5 Significance of the Study

The study was conducted on mutual funds registered by the capital market authority. Therefore, this study contributes to the body of knowledge and adds on the existing literature on the effect of management of cash flow on mutual's funds' financial performance. The study establishes the joint effects of the management of cash flow and financial performance on mutual. This study improves the previous studies by examining the overall effect of the management of cash flow on mutual's funds' financial performance. The study also improves the methodologies used by previous scholars, who had used simple regression analysis by using ordinary least square multiple panel regression analysis. The earlier studies had only examined the casual effect while this study has establishes the linear equations of the relationships.

To regulatory institutions, it enlightened in a bid to make policies involving to the management of cash flow. The study also enables the regulatory institutions i.e. Ministry of National Treasury, Capital Market Authority, Central Banks of Kenya, etc to ascertain the level of liquidity and financial buoyancy of the mutual funds in Kenya. Furthermore, the management of cash flow is an excellent performance indicator of the firm's healthy nature. In-Depth knowledge of the management of cash flow on companies can be of immeasurable help to the government and its agencies in terms of decision making.

This study shall have policy implications and recommendations which can be used by government policymakers in structuring policies to create a conducive environment to mutual funds operations in the country. Researchers and theorists shall find this study quite of interest due to the gaps for further research. The study will assist them as a basis in pursuing further research on the same issue, particularly with different variables.

To depositors, potential and existing, they require general information regarding the organization's cash flows management on the financial performance of an inclusive for them to put together a well-versed investment decision. The findings enable financial consultants to offer proper services to their clients relating to the management of cash flows where the financial performance of their firms can be maximized. It also provides consultants of the firms with valuable information that aids in assessing financial performance.

Empirically the study help clarifies the effect of management of cash flows on the financial performance of mutual funds. Theoretically, the study helped to clarify the explanatory power on the link involving management of cash flows and financial performance of the various existing theories notably; Agency theory, Baumol deterministic theory of cash management, Trade-off theory, Free theory cash flow, Financial life cycle theory, and Miller -Orr stochastic cash flows theory.

1.6 Scope of the Study

The main objective of this study was to examine the effect of management of cash flow on the financial performance of mutual funds in Kenya. The scope was limited to the stated specific objectives of the study which pointed out the dependent (financial performance) four independent variables (operating cash flow management, investing cash flow management, financing cash flow management, and free cash flows management) and moderating variable (size of the firm) studied. In analyzing the effects of management of cash flow and financial performance the study adopted a panel regression model. The population of the study complied with all the 25 mutual funds registered by Capital Market Authority as of 31st December 2016 as shown in appendix I (CMA, 2016). The choice of the registered mutual funds is dictated by the accuracy of data (Mwangi, Muturi & Ngumi, 2016). Secondary data for the study was collected over the six years (2011 to 2016) period. This period is considered appropriate because Kenya realized significant economic growth and a significant increase in the numeral of

mutual funds registered by CMA. This favorable situation was therefore expected to be reflected in the financial reports of the mutual funds.

1.7 Limitations of the Study

The study focused on mutual funds in Kenya and also considered only four (4) independent variables (OCF, ICF, FICF, and FCF) effect on the financial performance of mutual funds in Kenya. There could be other relevant variables. Also, the study measured only financial performance (dependent variable) of the fund managers, while, there could be non-financial indicators of performance. This was mitigated by relying on empirical studies done in rising and developed or urbanized economies whose study independent variables are different. Obtaining data from CMA and the specific mutual fund's websites due to the slow response rate by the CMA staff and internet downtime. This was mitigated by continuous follow up through physical attendance, emails and phone calls to the CMA office and working late at night when the internet was free from many users.

The study gathered data from twenty-two (22) mutual funds registered by CMA; thus it may be difficult to replicate it other monetary organizations in other sectors may have different. To mitigate this limitation studies researched in a similar sector in urbanized and rising economies relied on the comparison. Secondary data gathered from published annual financial reports of selected mutual funds were used in this study. Therefore, the researcher acknowledges that secondary data gathered from published financial statements and annual reports of the twenty-two (22) mutual funds could have undetected errors; thus, the study results were subject to the innate limitations of mutual funds published financial reports as reported to stakeholders.

The other constraint was regard to incomplete data; sometimes the data from some mutual funds were incomplete. This limitation was mitigated by using the missing data the same as omitted values in the regression analysis with the intention that the sample remains twenty-two. Also, the study was unable to sample mutual funds but instead, the

census method was used. Since the entire population was enumerated, the census technique was very time-consuming in data collecting, data processing and analyzing. Owing to the limitation, care was taken to make sure that the data collected was accurate so as to come to reliable generalizations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two provides the following; the theoretical model and literature review underlying the study. This chapter begins by reviewing the key theories underlying the management of cash flow and financial performance, the theoretical framework that illustrates the connection involving the dependent and predictor variables. The study then proceeds to present the critique of the reviewed literature, the research gaps, and the chapter summary.

2.2 Theoretical Review

A theory is an arrangement of the following constructs heuristic value, explanatory power, parsimony, testability, descriptive ability, integration, comprehensiveness, clarity, and delimitation (Gelso & Samstag, 2008). It is an explanation of trends and the relations that predict predictor variables and the dependent variables (Stam, 2010). Davies (2008) concluded that a hypothesis ought to be appraised in line to be used for prediction or in explaining an occurrence rather than the ability to utilize it to illustrate actuality. Kombo and Tromp (2009) posit that theories provide a generalized explanation of an occurrence. Therefore as put by Smyth (2004) one should be familiar with the theories applicable to his area of study. The theoretical framework thus guides research on what variables to be measured and the statistical relationship to consider in the contest of the problem under study (Trochim, 2006).

In this study, theories of measuring management of cash flow and financial performance of mutual funds in Kenya are addressed. In particular Agency cost theory, Financial Life Cycle Theory, Baumol deterministic theory of cash management, free cash flow theory, Trade-off theory, and Miller -Orr stochastic cash flow theory are reviewed since all of

them support both the dependent and predictor variables as shown in the conceptual framework.

2.2.1 Agency Cost Theory

The theory was instigated and developed by Jensen (Jensen & Meckling, 1976). According to Jensen (1986), the intention of managers is typically not aligned with those of shareholders and if managers have plenty of cash at their disposal, they use these assets to gain personal benefits rather than raise the significance of the institution. Therefore, in the model managers have an agenda of accumulating assets in sequence to gain discretionary have power over a firm's investment decisions (Jensen & Meckling, 1976). In this setting, the management of the firm settles on whether cash is held by the firm or paid to its investors. Consecutively for managers to pursue their individual interests, cash constitutes the most suitable form of financing, as having to raise external funds usually requires that the firm provides the lender with insights into how the funds are going to be used.

The safest way of managing cash is by separating it from operating revenue followed by a separate appraisal of the cash. A good number of managers have the first choice to keep hold of cash more willingly than increase shareholder pay-outs when the organization lacks good investment opportunities (Kalcheva & Lins, 2007). The agency theory presupposes that large-scale preservation of incomes gives confidence behavior by managers that do not capitalize on investor value. Managers acquire control over corporate resources either from outside contributions of debt or equity capital or from earnings retentions (Bates, Kahle & Stulz, 2009).

One benefit of raised capital leads to additional monitoring, due to shareholders are not forthcoming with finances at attractive prices if they believe that manager's policies merit low valuations of ROE and are not subject to the same going stringent discipline. Therefore, when a firm's capital is largely present a possibility of higher potential agency problems, because the more firm finances itself through retained earnings, the

less the company is subjected to disciplinary issues by capital markets regulators. A firm with superior capability to self-finance its ventures that trim down shareholders' wealth are companies with better ability to generate and internal funds its activities (Foley, Titman, Hartzell, & Twite, 2007).

Agency theory predicts that companies with higher free cash flow result in to increase in a firm's cash holdings. The explanation of the agency is largely inconsistent with the changes or adjustments in the cash holdings of the firm. Harford (1999) results put forward that firms that hold excessive funds are an attempt to acquire other firms. These acquisitions are likely to be diversifying and result in declines in operational performance and destruction of depositor value. Harford, Jarrad, Mansi, and Maxwell (2008) concluded that firms with surplus money and poor governance lead to occurring of wasteful investments. Cunha (2013) finds that cost destroying purchases due to excess cash is significantly less likely when firms raise cash from financing sources such as debt issuance.

Operating cash flows is free cash flow plus capital expenditure, inventory cost, and dividend payment (Jensen, 1986). The explanation is criticized to be short of accounting preciseness. Dittmar (2000) explained free cash flow as net cash flows that management has discretion in utilizing without affecting corporate operating activities. Dittmar (2000) further stated that operating cash flows consist of net profit after tax, stock dividends, and interest expenditure but depreciation, change in net current assets. and scaled by net sales. Cash holdings that are vigorously raised by institutions are additionally expected to be the consequence of most favorable liquidity dependable with the management decisions. In divergent opinion, Legn and Poulsen (1989) stated that excess cash accumulated through operational surpluses lead to value-destroying acquisitions, cash flow management argument (Lehn & Poulsen, 1989). According to Grigore and Stefan-Duicu (2013), agency theory remains insufficiently studied with empirical verification difficulties mainly due to the difficulty of measuring the agency costs. This theory is informed of the independent variable operating management of cash flow by mutual funds in Kenya.

2.2.2 Financial Life Cycle Theory

Financial lifecycle theory by Mueller (1972) states that the agency costs of free cash flows are not transitory problems but are a frequent issue once companies get to an assured stage in their life cycle. In particular, as companies' investment opportunities decline while organizations grown-up their cash flows increase significantly. The financial lifecycle theory predicts that the tradeoff involving benefits and costs of raising new capital in relation to investment prospect set establish changes in cash flows. Life cycle theory holds that organizations get conceived/introduction, grow into adulthood and then die (Anil & Zenner, 2005).

According to Dickinson (2011), life cycle theory has five stages; conceived/introduction, growth, maturity, shake-out and decline. The life cycle classification approach is founded on the proposition that corporate cash flows capture the financial outcome of the distinct lifecycle phases and each phase has an attribute pattern of net cash flows. At introduction firms lack established customers, unexploited economies of scale and a deficit of knowledge about potential costs and revenues (Jovanovic & MacDonald, 1994) suffer from negative net operating cash flows. In contrast, organizations are projected to make large investments to provide or renew the foundation for its operating activities and to take benefit of existing growth opportunities, leading to negative investing cash flows.

In contrast, according to Wernerfelt (1985) to introduce firms, growth-stage firms maximize their profit margins by optimizing their investment activity and increasing operational efficiency. Operating cash flows are projected to become positive. Similar to the preceding lifecycle stage, investment cash flows are still expected to be significantly negative. Entering maturity, firms are projected toward increasing efficiency. Both maximized profit margins and the big client base of mature firms provide high operating cash flows. By their definition, established firms have done in their positive net present value (NPV) projects, so that they have fewer investment opportunities. Therefore, investments are reduced relative to the preceding stages. However, full-grown

organizations are anticipated to maintain capital, still resulting in negative investing cash flows during the maturity stage (Spence, 1981).

Firms entering the shake-out stage exhibit declining or downbeat expansion rates. Arguably, this leads to declining prices, re-increasing inefficiencies attributable to a larger firm size that lead to an extended cost structure over the life-cycle (Wernerfelt, 1985). Both effects result in decreasing (or negative) operating cash flows. Shake-out firms may continue to invest for maintenance reasons. In contrast, they may dispose of assets to service existing debt obligations and to support operations. Decline firms suffer from a deteriorating dilution of earning comparatively to the shakeout stage. Increased costs of monetary distress are expected to further depress corporate results. By definition decline firms lack appropriate investment opportunities, but are likely to liquidate assets to support operations rather than expanding their capital budgets (Gort & Keppler, 1982)

Prior studies argue that firms go through life-cycle stages. These phases show discrepancies in restructuring activity and investment (Vojislav & Gordon, 2008). Vojislav and Gordon (2008) argue that firms experience the conversion of the corporate life cycle when competitive advantages for the firms are changing. Additionally, Owen and Yawson (2010) and Miller and Friesen (1984) posit that companies have a diversity of strategies and investment activities and organizational structures when companies are categorized as dissimilar lifecycle phases. Despite the fact that studies have been carried out in this area, the criteria for classifying life cycle stages are not precise and hence varied stages (Castro, Tascón & Tapia, 2011). This varied number of phases is the grounds for lack of consistency in results across studies, despite the wide number of works performed. In addition, there is an extremely tiny theory to explain the discrepancies in the financing choices across the phases (Fluck, 2000). For these reasons, empirical evidence shows different financing patterns while organizations are mature, as the development impact is linked to debt capability or affordability (Bulan & Yan, 2010). This theory is informed of the independent variable investing cash flow management by mutual funds in Kenya.

2.2.3 Baumol Deterministic Theory of Cash Management

Baumol (1952) was the first person to provide a formal model of cash management. Brokerage fees and clerical work form order costs while foregone interest and cash-out costs from the costs of holding cash. According to Ross (1977), Baumol's deterministic theory of cash management is however probably the simplest, most stripped-down and sensible model for predicting the optimal cash position. According to Erkki (2004), Baumol's model applied the economic order quantity (EOQ) to cash. Brigham and Houston (2007) posit that Baumol's deterministic theory of cash management enables prediction and achievement of the required levels of cash and marketable securities, constant with the objectives and the business nature of operations.

Lockyer (1973) and Gibbs (1976) incorporated overdraft facilities that resulted in a modified Baumol's model of cash management. Lockyer's (1993) and Gibbs (1976) stated that the total annual cash policy cost credited to the use of overdraft facilities is equal to the total annual cost of cash transfer, holding cost and overdraft cost that results in annual cash policy cost. However, Erkki (2004) criticized Lockyer's model for assuming overdraft facilities, which are not automatic especially for firms with poor credit rating. Lockyer's (1973) model assumed that disbursements of the overdraft facilities are even over the planning period.

Archer (1966) recognized the nature of cyclical cash balance to be used for purposes of transactional and for precautionary purposes especially unpredictable seasonal activities. In Archer's (1966) approach, the optimal point was arrived by comparing the overdraft facilities costs and costs of capital of precautionary outstanding balances. The advantage of this approach is that it recognizes the net cash flow nature of many firms. In approach by Gibbs (1976), the optimal cash balance is determined by financial and investment decisions. In this approach, a combination of short term and long term credits or borrowing are used to avoid using long term funds in order to cover peak arising from idle cash outstanding balances periods. The approach puts emphasis on short and long

term credits, cash holding cost and investment cost in marketable securities (Erkki, 2004).

Marsh (2009) acknowledged that although the model is simple to use and understandable, it might be difficult to accurately predict cash required over future periods as the model assumes that a firm faces a constant demand for cash. He is also of the opinion that the model provides no allowance for a buffer of cash and that if the company runs out of cash, it could be expensive and damaging to the business. The model concludes that there is a correlation between holding cash and transaction cost. On the contrary, whenever there is an increase in cost per transaction and required funds, the optimal cash balances may end up increasing.

Despite having a positive application, the theory's major disadvantages are that it does not allow the cash flows fluctuation, an overdraft is not considered and there are uncertainties of future cash flow patterns (Pandey, 2010). Da Costa, Moraes and Nagano (2014) posit that Baumol's deterministic theory of cash management disadvantage is that it tends to create uncertainties of future cash flows and does not consider overdraft. Baumol's deterministic theory of cash management is relevant in this study because it substantiates the research variables under investigation. For example, the model indicates that it is imperative for the firm to hold an optimal level of cash flow but they should do so by taking into consideration holding cost and transaction cost. The optimal level of cash can be maintained by buying and selling marketable securities and hence supporting the variable of cash flow from investing activities as used in this research. This theory is informed of the independent variable financing cash flow management by mutual funds in Kenya. This theory is informed of the independent variable financing cash flow management by mutual funds in Kenya.

2.2.4 Free Cash Flow Theory

According to the free cash flow theory of Jensen (1986), managers have a preference to hold a high cash level to enhance the volume of total assets in their control. Managers

furthermore tried to put on the distinguishing powers in the organization's financing and investing decisions. Jensen (1986) Companies generating excess cash required to finance projects with positive returns face greater agency problems as the free cash flow exacerbates discrepancy of benefit amongst stakeholders and managers (Jensen, 1986). The implication of free cash flow theory by Jensen is that companies with high levels of free cash flow are additionally expected to commence investments and takeovers that are value declining.

The free cash flow theory predicts that organizations with free cash flows will have superior abnormal profits upon the pronouncement of a repurchase program than organizations that do not have free cash flows. According to Jensen's (1986) argument, the manager is generally hesitant in sharing out free cash flow to the shareholders because in doing so, it will lead to the reduction of firm resources under their control while their wealth remains the same since dividends paid are not their main personal goal. According to Ferreira and Vilela (2004) managers of firms with excess cash flow are pressured to pay the excess out to investors as opposed to reinvesting the cash in less profitable opportunities. These policies could impact over-investment issues.

Free cash flow theory by Jensen (1986) deal with conflict of interest involving shareholders and managers is entrenched in the existence of self- interest behavior. According to Jensen (1986), cash flow theory is cash flow in surplus of that mandatory to finance all projects with positive net present value once discounted at the significant capital cost. Within the framework of the free cash flow hypothesis, firms prefer to increase their dividends and distribute the excess free cash flow in sequence to trim down agency costs. Consequently, markets react positively to this type of information. Managers are thus forced to make wise investments. However, the theory is associated with some limitations e.g. the theory encourages investments in the short term and discourages investments that bring profits in the long-term. Additionally, dependence on credit raises the disclosure to higher interest rates and overload credit financing may add to the risk of the projects that the firm undertakes.

These conditions support the existence of manager discretion and agency cost issues in liquidity management. Similarly, (Afza & Nazir, 2007) described the significance of the optimal level of the liquid assets for the smooth functioning of the firms. Finally, it can be concluded that the firm's managers amass cash and hold it with the organization since they are reluctant to share out to the stakeholders. Drobetz and Grüninger (2007) supported the argument and stated that cash reserves are positively interrelated to dividend payments.

Huseyin (2011), states that managers have an incentive to accumulate cash in that leads to an increase of the firm's assets under the control of managers who have got discretionary power in investment decision making. Hence, managers do not require external finance and to contribute to the capital markets' comprehensive information regarding the firm's investment projects (Huseyin, 2011). However, this may possibly lead to managers undertaking investments that have a negative effect on shareholder's wealth. Managers of firms with poor investment opportunities are expected to hold more cash to guarantee the accessibility of finances to put in growth projects, even if the projects had negative NPV (Huseyin, 2011). This would lead to the destruction of shareholder value and, even if the organization had a low market-to-book ratio and bigger investment program. Thus, using the market to book ratio as a proxy, there is a high likelihood that the relation involving investment opportunities set and cash holdings is negative. Prior empirical research and dissimilar financial factors have been included to reflect this theory (Al-Najjar & Belghitar, 2015).

However, the previous studies pursued the ground breaking research of (Opler, Pinkowitz, Stulz & Williamson, 1999). They used the Organization's profitability, leverage, dividend payout, liquidity, and firm size to understand the cash holding mechanism. Additionally, Megginson *et al*. (2014) used liquidity, firm size and growth to reflect the theory of free cash flow empirically. The advantages of the evaluation of the company by free cash flow are replicated in its straightforwardness and swiftness of the valuation compared to the approach to evaluate the price by equity to free cash flow.

The disadvantages of the approach result in neglecting cash flows bound to debt and interest and their changes during the projection period.

The free cash flow theory was established to be significant to this study because it supports the reduction of conflict of interest involving managers and stakeholders to ensure efficient and effective management of cash flows that result in wealth maximization. Also, the theory supports the shareholder's return variable used in this research by identifying how cash flow should be managed to ensure that shareholders gain derive value for their investments in a company (Richardson, 2006). This theory is informed of the moderating variable (size of the firm) by mutual funds in Kenya.

2.2.5 Miller -Orr Stochastic Cash flow Theory

According to Miller and Orr (1966), Miller and Orr's stochastic Cash management model describes cash inflows and outflows. The theory deals with cash flows that have a tendency to rise and fall in a random manner on an everyday basis. The theory conjectures that the aggregate cash flows are constantly distributed with very low levels of the mean and standard deviation. Furthermore, the Miller–Orr model reflects on cash and an option investment is high-liquidity and low-risk option and the cash flow is a random variable. It is a probabilistic or stochastic model that accepts instability in finance management. It accepts that the day by day cash flows are unverifiable and in this manner take after a trendless random walk. This model, therefore, sets bounds inside which money must be administered. The model helps firms to handle their cash flows by taking into consideration fluctuations of money on a daily basis (Premachandra, 2004).

Miller and Orr (1966) postulated that a firm allows movement of cash within the two limits namely lower and the upper limit. They argued that organizations have a propensity to buy and sell profitable securities if their cash balance is equal to those two limits. For example, if the company cash balances come into contact with the upper bound such a firm purchases a certain number of marketable securities that will help the firm to respond to its desired level of cash (Michalski, 2014). However, if the company

cash balances move towards the lower limit, such a firm tends to sell its marketable security so that it can come back to its desired level of cash. The model appears graphically in provisions of the upper limit and the subordinate limit and returning point.

Miller and Orr's model presupposes that the average distribution value of net cash flows is zero and the standard deviation is also zero and the distribution of cash within the firm assumes a normal distribution curve (Premachandra, 2004). Miller and Orr's model of cash management tends to be applied to different firms. However, the application of the model requires managers of those firms to follow certain procedures which include choosing the possible levels of cash flows that the firm intends to hold (Alvarez, Lippi, & Robatto, 2016). Secondly, managers should look at the interest rates, and compute regular cash flow standard deviation. Thirdly, a manager must identify the estimated prices at which marketable securities may be purchased and sold (Da Costa Moraes, Nagano, & Sobreiro, 2015).

Daellenbach (1974) used the model in replicated cash flows. The author concluded that in cases where cash flows are non-stationary series, the Miller and Orr model could not make significant gains if the transfer costs are low. Therefore, the large organizations perform superior for the reason that of the financial volume of cash. Gormley and Meade (2007) indicated that finance and current resources together with their successful taking care of the entire targets and intentions decides the survival or death of a concern.

An endeavor ought to keep up satisfactory liquidity for its smooth working. In the event that materials are heedlessly bought, it will bring about dormant moderate moving and outright stock. Moreover, the deficient value of the stock will result in stock-outs and interference in operations. Money should likewise be kept up at a perfect level. It might likewise result in expanded cost because of misusing, waste and theft (Gormley & Meade, 2007). The major limitation of Miller and Orr's Cash Management Model theory is the need for prior knowledge about the distribution of cash flows (Kachani & Langella, 2005).

The Miller model is relevant because it supports the key independent variable used in the research. The variable that the theory support is the variable pertaining investing cash flow management. Where firms tend to purchase and put on the market marketable securities to maintain the standard level of cash flows surrounded by the organisation. When cash flows go below the lower limit firms tend to trade profitable securities to retain cash flows surrounded by a standard level. In contrast, when cash flows go up to the superior limit organizations tend to invest in buying profitable securities such shares to maintain cash flows within a standard level. This theory is informed the dependent variable financial performance by mutual funds in Kenya.

2.3 Conceptual Framework

Zikmund (2010) defined the concept as a theoretical or universal plan inferred or derived from specific instances. McGrath (2009) defined a conceptual framework is a group of concepts that are generally specific and systematically organized to present a focus, a rationale and an instrument for the integration and explanation of information. According to Jabareen (2008), the theoretical framework is a laydown of connections of related concepts. Smyth (2004) defines a conceptual framework as a hypothesized model identifying the theories under research and the connection linking the dependent and independent variables.

According to Kothari (2004), the dependent variable is unpredictable which the investigator wishes to give explanation, while independent or explanatory variable(s) is the recognized basis of the variation of the dependent or unpredictable variable. Kothari (2004) also defined moderating variable(s) is an independent variable that is included in the original independent-dependent variables relationship since it is understood to contain a considerable effect. In this study, the predictor variables are measured by means of: Operating cash flow management, investing cash flow management, financing cash flow management, and free cash flow management while the size of the firm is the moderating variable and the dependent variable is financial performance of mutual fund (Figure 2.1).

Independent Variables

Dependent Variable

Operating Cash Flow Management
- Net cash flows from operations to Total Assets

Investing Cash Flow Management
- Net cash flows from investing to Total Assets

Financing Cash Flow Management
- Net cash inflows from financing to Total Assets

Free Cash Flow Management
- Net free cash flow to Total Assets

Financial Performance
- Return on Total Assets
- Return on Total Equity

Size of the Firm
- Natural log of Total Assets
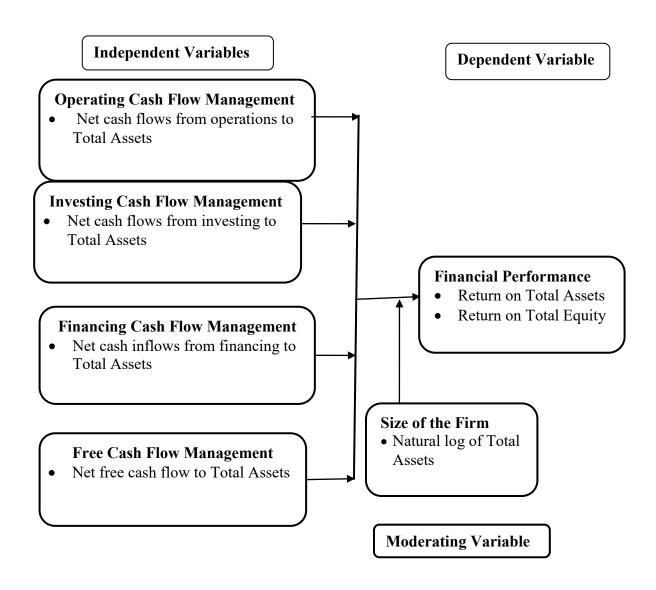
Moderating Variable

Figure 2.1: Conceptual Framework

Operationalization of the variables

Muthuva (2016) noted that research constructs must be operationalized to allow for the relationships among them to be tested. Therefore, the operationalization of the dependent and predictable variables helps to measure the variables quantitatively hence allowing the test of hypotheses.

Table 2.1: Operationalization of variables and measurement

Variable	Type	Definition and calculation Method	Source	Supporting Theory
Independent Operating cash flow management (X_1)	Continuous	• OCF= Net cash flows from operations / Total assets	• Jensen and Meckling in 1976	• Agency Theory
Investing cash flow management (X_2)	Continuous	• ICF= Net cash flows from investing / Total Assets	• Mueller (1972	• Financial Life Cycle Theory
Financing cash flow management (X_3)	Continuous	• FICF = Net cash flows from financing /Total Assets	• Baumol (1952)	• Baumol Deterministic Theory of Cash Management
Free cash flow management (X_4)	Continuous	• FCF=(EBIT+ Dividends - Depreciation)/Total Assets	• Jensen (1986)	• Free Cash Flow Theory
Moderating Variable: Size of the firm (Z)	Continuous	• Z = Logarithm transf ormation of Total Assets	• Myers (1984)	• Trade-Off theory
Dependent **Financial performance (Y)**	Continuous	ROA = Net profit/ Total Assets • ROE = Net Profit / Total Equity	• Miller and Orr (1966)	• Miller-Orr Stochastic Cash flow Theory

Table 2.1 presents the variables and respective theories of this study. Research variables included a measure of management of cash flows that included operating cash flow

management, investing cash flow management, financing cash flow management, free cash flow management, Size of the firm and financial performance.

2.3.1 Operating Cash Flow Management

Ghodrati and Abyak (2014) view operating cash flow management as the management of cash flows linked to the operation of a company and are important because showing cash amount which a firm gains during its activity. A study by Amah, Micheal, and Ihendinimu (2016) revealed that operating cash flow had a significant and positive relationship on financial performance. Habib (2011) noted that cash from operating is positively interrelated to stock return while profitability is short-term.

Documented shreds of evidence have demonstrated that operating cash flow has a positive effect on financial performance (Jintaviwatwong & Suntraruk, 2012; Al-Debi'e, 2011; Darabi, Adeli & Torkamani, 2012). Mong'o (2010) found out that operating cash flow management was negatively related to financial performance. In this study operating cash flow management was measured using net operating cash flows divided by total assets. A positive relationship was predicted between operating cash flow management and financial performance.

2.3.2 Investing Cash Flow Management

According to Zimmerer, Scarborough, and Wilson (2008), investing cash flow management is the management of cash spent on items to be used over multiple years to increase efficiency or profitability for the company. Investing cash flow management entails how a large amount of cash the business made and used in making investments in other businesses, such as the purchase of stocks or bonds of another organization. Wijewaradana and Munasinghe (2015), indicated that investment cash flow activities had a significant and negative relationship with performance.

Nwanyanwu (2015) revealed that investing in cash flow had a significant and positive effect on net profit. Similar views were held by Jafari, Gord and Beerhouse (2014) and

Kemboi (2010). The few studies that have looked at investing cash flow management reported that cash flow management is negatively correlated to financial performance (Nwakaego, Ikechukwu & Ifunanya, 2015; Moeinaddin *et al*., 2013). Based on earlier studies a positive relationship was predicted between investing cash flow management and financial performance.

2.3.3 Financing Cash Flow Management

Financing cash flow management shows whether and how much of the operating and investment activities have been financed by an outside supply of funding through shares or equity and loans or debt. This means getting funds from stockholders and on condition that they receive return with dividends in support of their savings and borrowing money from creditors and loan repayment (Joshua & Vera, 2013). According to Nwanyanwu (2015) financing cash flows consist of outflows and inflows of money concerned in obtaining cash from the outside supply for the intentions of financing the firm's operations.

Mirfakhraldini, Moeinaldin and Ebrahimpour (2009) concluded that financing had a meaningful and positive relationship with performance. In a study made by Chikashi (2013) financing cash flow and the firm performance had a negative and significant correlations. The few studies that have looked at financing cash flow report that financing cash flow is negatively correlated to financial performance (Ndungu & Oluoch, 2016); Poorzamani & Khademi, 2014; Thanh & Nguyen, 2013). To test this hypothesis, financing cash flow management was measured using net financing cash flow over total assets. Based on precedent studies work, a negative correlation was expected. Based on past research work, a negative relationship was expected between financing cash flow management and financial performance.

2.3.4 Free Cash Flow Management

According to Zhou, Yang and Zhang (2012) free cash flow management is the management of the cash flow created by a firm's operations that is available to compensate its financial commitments to those that have provided its funding. These include its equity shareholders and its lenders. Free cash flow is the finances accessible to administrators ahead of the flexible capital venture or investment conclusion. It corresponds to cash that a firm is capable to make after laying out funds mandatory to preserve or enlarge its asset base.

In Kenya, Akumu and Nyamute (2014) studied the effect of free cash on the profitability of firms listed at the NSE. The descriptive survey design was adopted and the stratified sampling technique used to select a sample size of 30 companies out of the targeted population of 60 firms at NSE. Secondary data was extracted from audited financial statements for years 2009-2013. The regression technique used adopted to analyze data. The findings mentioned that there was an insignificant inverse relationship involving free cash and profitability of listed firms at NSE.

Free cash flow determines directly the liquidity position of firms and the liquidity serves as a determinant factor contributing to dividend payment since management may manipulate earnings (Chalak & Mohammadnezhad, 2012). According to Wambua (2013), free cash flow is mainly important in determining financial performance weighted against other variables and had positive effects ROA and ROE (financial performance). Documented pieces of evidence have established that free cash flow has an effect on ROA and ROE (financial performance) (Cheng, Cullina & Zhang, 2014; Tijjani & Sani, 2016; Saez & Gutierrez, 2015). To test this hypothesis-free cash flow management was measured using net free cash flow over total assets. A positive relationship was predicted between free cash flow management and financial performance.

2.3.5 Size of the firm

According to Taani and Banykhaled (2011) company size can be computed as the decimal logarithm of the total assets of a company. In this study, the researcher identified the size of the firm to be the moderator variable measure and test the relationships involving cash flow management and financial performance. Kartika, Handayani and Dwiputra (2016) found out that firm size had a positive influence on earnings per share. Oskouei and Zadeh (2015) noted that firm size had a negative outcome on potential stock return.

Documented evidences have demonstrated that the size of the firm has an effect on financial performance (Pouraghajan, Mansourinia, Bagheri & Emamgholipour, 2013; Taani & Banykhaled, 2011; Martani, Malone & Khairurizka, 2009). These studies found that company size had a positive correlation with financial performance. Based on studies from scholars, a positive relationship was predicted between the size of the firm and financial performance.

2.3.6 Financial Performance

ROA and ROE (Financial performance) analysis were used to evaluate in general financial health of a company of a specified period of time (Ebben & Johnson, 2011). Financial performance evaluate the liquidity, stability solvency and productivity of a firm. Morris (2011) noted that the following are the main indicators used toward determining financial performance namely: return on sales, ROA and ROE. Each measure is worked out by dividing net income by total net sale, total assets, and total common equity respectively.

A study by (Ebben & Johnson, 2011) in examining the connections between cash flow management and firm financial performance, employed Return on Investment (ROI) as financial performance. Crabtree and DeBusk (2008) concluded that financial

performance is calculated by means of traditional accounting such as ROA, Earnings before Interest and Tax, profit margin and sales growth.

In Hunyani, Mauchi, Nzaro and Njanike (2011) studied the effectiveness of cash management policies using data from 2000-2010. The study objectives were to discover the explanation processes and models in cash management; scrutinize the effect of poor cash management on the general performance of the c Flexible Products Company. A descriptive survey method was adopted and a case research approach was used to seek information from the respondents. Data was obtained through interviews, administering questionnaires and observations. The research findings indicated that there was a positive and significant correlation involving the level of cash flow and the company's profitability.

According to Smith (2007), the advantage of these dimensions is their general accessibility, given that every income-oriented institutions produces these figures financial reporting per year. However, manipulations and choices of accounting methods in financial statements preparations may also lead to values that allow limited comparability of the financial strength of companies. The study assessed mutual funds financial performance using the subsequent indicators as used by the various scholars discussed in previous studies.

2.4 Empirical Literature Review

Empirical bring up the assembling of information using only support that is observable by the senses or in various cases by means of calibrated scientific instruments. Dudgeon (2008) described an empirical study as a way of gaining knowledge by analyzing quantitatively or qualitatively previously conducted researches. This section cover previous studies undertaken on the dependent, independent variables and moderating variable as highlighted on the conceptual framework. This section is arranged as indicated by the various research objectives. The segregation of cash flow management into the dimensions of operating cash flow, investing cash flow, financing cash flow and

free cash flow management is to identify how each of them impacts financial performance (ROA and ROE) of mutual funds.

2.4.1 Effect of Cash flow Management and Financial Performance

In Ghana, Northern Region Hamza, Mutala and Antwi (2015) assessed the effect of cash management practices on the financial performance of SMEs. Descriptive cross-sectional survey research design was adopted and the study used structured questionnaires to collect quantitative data. The target population for the study was 1000 owner/administrators of SMEs. The study employed stratified random sampling technique in obtaining a segment of 300SMEs consist of; trading 164, Manufacturing 26, Hairstyling 10, Dressmaking 62, and carpentry 38 enterprises. The data collected was analyzed using descriptive (mean, mode, standard deviation) and inferential statistics. The study revealed that cash flow management had a positive effect on financial at a one percent significance level.

Ali *et al*. (2013) studied the relationship linking earnings and cash flow measures of firm performance and stock returns in Iran. The study used a simple and multiple regressions to analyze the data for nine years from 2003 to 2011. They found that cash flow had a significant and negative effect on a company's performance; In addition, earning based measures were more correlated to stock returns and signify the company's performance superior than cash flow measures in several companies with superior accruals.

In Jordan, a study by Alslehat and AI-Nimer (2017) on effect of cash flow management on financial performance of the 23 Jordanian insurance companies for the period from 2009 to 2013. The independent variables were investing, operating and financing and dependent variable (financial performance). The research revealed that cash flows from operating are considered the uppermost compared with other activities which demonstrates that the Jordanian insurance companies generate money from their main business and were not facing liquidity crisis. Furthermore, cash from investing was established toward play a significant function in the financial performance.

2.4.2 Operating Cash Flow Management and Financial Performance

In Nigeria, a study by Amah, Micheal and Ihendinimu (2016) on the effect of cash flow and financial performance of listed banks. The specific of objectives their research were; to evaluate the association involving operating cash flow and financial performance, establish the correlation between financing cash flow and investing cash flow and financial performance of the listed banks. The study sampled four banks listed in the Nigeria Stock Exchange (NSE) for the period of 9 years (2005 - 2013) and adopted ex post facto research design. Net income after tax as financial performance proxy was used and the study revealed that operating cash flow had a significant and positive relationship while investing cash flow and financing cash flow had insignificant and negative effects on the financial performance of the listed banks.

In Tehran, Ghodrati and Abyak (2014) investigated the impact of operational cash flow and the returns to stockholders of the 54 listed firms in the Stock Exchange. The study covered the period 2005-2011 and adopted a descriptive-analytic random statistical sample and used cross-sectional data. The study used regression analysis to find out the impact of operating cash flow on stockholders' returns. The findings revealed that their operating cash flows had a significant and positive effect on the returns of all stakeholders. However, this happened by increasing profitability and cash flow of information asymmetry proportion to their correlation with the economic efficiency of shareholders' returns.

In Tehran, Darabi, Adeli and Torkamani (2012) conducted a study on the effect of cash flow shocks on capital and asset structure evidence from the stock exchange. External financing, operating cash flows, investments, and Dividend. This study methodology was applied, descriptive regressive research. The researcher used the Pearson correlation and simple linear regression in analyzing data collected from the 57 listed companies for the years 2005-2010. The outcome indicated that there was a meaningful positive relationship between the operating cash flows, investment, and dividends. The study also

finds out that there was no correlation linking financial restrictions and cash flow sensitivity.

In Thailand, Jintaviwatwong and Suntraruk (2012) examined earnings and operating cash flows of nonfinancial companies listed on the Stock Exchange. The primary objective of the study was to investigate whether current earnings and current operating cash flows are able to predict future operating cash flows and future stock prices by using the financial data of nonfinancial firms from 2001 to 2010. The study adopted descriptive research and by using the 2001-2008 annual data, the results from the regression analysis reveal that current earnings and current operating cash flows were positively related to future operating cash flows and future stock prices. Furthermore, in examining the projecting ability of current operating cash flows and current earnings during 2009-2010 out-of-sample data used and the study found out that current operating cash flows and current earnings were to predict future operating cash flows better than future stock prices.

Another view on operating cash flow was studied by Al-Debi'e (2011) on determining the predictive ability of current operating cash flows and current earnings for future operating cash flows from a sample of service and industrial shareholding companies listed on Amman Stock Exchange in Jordan during the period (2000-2009). The study adopted descriptive research and used a simple regression model for analyzing panel data. The study found out that operating cash flows had positive and stronger predicting ability than that of earnings for future operating cash flows one to three year ahead forecast horizons.

In Tehran, a further study by Aghaei and Shakeri (2010) on cash flow and earnings accruals components in forecasting cash flow of accepted companies in Stock Exchange between 2003-2007. The explanatory variables of this were; cash flow, accrual, and earnings. The multiple regression model was to analyze collected secondary data and used casual research design. The study found out that cash flow, accruals, and earnings had the predictive ability of future cash flow. Further, the study found out that accruals

and cash flow model components had superior projecting ability than the earnings model. In addition, the findings showed that liquidity ratios had no relations and predictive ability of future cash flows.

In Australian, Habib (2011) investigated current cash flow, stable profitability and growth opportunities on the stock returns in Australian stock exchange. The study objective was to establish the impact of cash flow, stable profitability on growth opportunities. The study surveyed 7,229 companies listed at the stock exchange between 1992 and 2005. Multiple regression model was used to analyze data and the results of the analysis show that companies with superior growth opportunities and free cash flow had a higher value price and furthermore operating cash flow was positively related to stock return while profitability is short-term.

In Kenya, a study made by Mong'o (2010) on the effect of cash flow on performance of commercial banks over time from 2005- 2009. The study used net income after tax as the dependent variable and the cash flow components (operating, financing and investing) as explanatory variables. A Multiple regression model was adopted to explore the collected secondary data. The study findings showed that profits among commercial banks enhanced enormously during the period. Investing cash flow and financing cash flow had a significant and positive effect on the banks' profit while operating cash flow had a negative effect.

2.4.3 Investing Cash Flow Management and Financial Performance

In Sri Lankan, Wijewaradana and Munasinghe (2015) examined investing cash flows management and firm performance in Colombo Security Exchange. It specifically investigated the consequences of cash flows on business financial success under the firm's stability, liquidity, and profitability which showed the savings and its ending outcomes. The information was collected from audited financial reports of 37 manufacturing firms listed at Colombo Security Exchange selected for sample among all 19 sectors based on the year 2011. The study performed a statistical ANOVA using

variables. The study indicated that investment and financing cash flow activities had a significant and negative correlation with financial performance as ROE and ROA.

In a study by Nwanyanwu (2015) on the effect of investing cash flow and organization performance from the perspective of the print media and hospitality industry segments. The study revealed that investing cash flow represented outflows and inflows from cash associated with the purchase and disposal of productive facilities used by the company and investments in the security of other companies. The research employed a survey design where primary data was gathered through a questionnaire drawn on a scale of five points. The independent variable, cash flow had three questions while the response variable, net profit had two questions. The company's performance in expressions of net profit, from 'outstanding "to "fair" was rated by respective respondents. Considering the environment of their organization's businesses, respondents were necessitated to agree or disagree on their profitability, from "strongly agree" to "strongly disagree". The study findings revealed that cash flows from investing had a significant and positive effect on net profit.

In Nigeria, Nwakaego, Ikechukwu and Ifunanya (2015) examined the effects of investing cash flow on the company's performance of food and beverage companies in Nigeria through a survey of six listed firms in Stock Exchange. The study used operating cash flows, investing activities, financing activities as independent variables and performance as the dependent variable. Multiple Regressions technique was adopted to evaluated data gathered from the company's audited annual financial reports. The study findings were that operating and financing cash flows had a positive significant effect on the performance of the Food Sector and Beverages sector in Nigeria. Furthermore, the researchers discovered that investing cash flow had a negative effect and a considerable relationship with corporate performance.

In Tehran, another study conducted by Jafari, Gord and Beerhouse (2014) on the effect of debt, investing cash flow firm size, liquidity on cash flow sensitivity of investment companies traded in Stock Exchange. The study collected data from a section of 100

companies among the listed companies in the Stock Exchange during the five-year returns, 2008 to 2012. The research used panel data regressions in analyzing data and adopted a descriptive-correlation design. The study findings indicated that debt and cash flow sensitivity of investment had an inverse relationship, firm size and cash flow sensitivity had a positive effect and significant on cash flow investment. In addition, the results mentioned that the liquidity had is statistically considerable and positive on cash flow sensitivity of investment.

In Iran, A study made by Moeinaddin, Ardakani and Akhoondzadeh (2013) on the effect of projecting ability of earnings, investing cash flow, operating cash flows as reported in the cash flow statement in projecting future cash flows for 81 companies listed on Tehran Stock Exchange between 2006 and 2010. The Statistical method used in the research was panel regression analysis based on data. The study findings showed that earnings and amortization costs had a remarkable ability to predict future cash flows, operating cash flow, cash flow from investing had insignificant and negative effects on future cash flows.

Kemboi (2010) studied the impact of investment cash flows on listed firms in the NSE. The research employed a descriptive survey on listed firms in the capital market, firm-level panel data for the period 2000-2008. Tests were based on fundamentals q investment equations in which cash flow and debt were added as independent variables. The results of the research revealed a significant positive correlation between performance and investment levels.

2.4.4 Financing Cash Flow Management and Financial Performance

In Kenya, Ndungu and Oluoch (2016) examined the impact of financing cash flow management on market performance and adopted a descriptive research design. They collected secondary semi-annual data from five companies from the construction sector listed at the (NSE) for the years 2008 to 2015. The study adopted CAPM to analyze data. The results showed that cash flows operating cash flow had a positive effect on

market performance and at the same time investing cash flows, financing, and free cash flows all had negative results of the performance.

In Tehran, in another study conducted by Poorzamani and Khademi (2014) on the effect of corporate governance factors on cash flow resulting from operating and financing activities of the companies listed at Stock Exchange. In their research, they investigated about 193 firms enlisted during the years 2007 to 2012. The statistical method used was the panel data method. Multiple variable linear regression model was employed to analyze data. Research of the study revealed that there was no meaningful relationship between corporate governance factors and financing cash flow and in the capital market in Iran. Corporate governance factors had an insignificant and positive effect on financing cash flows. Also, there was a meaningful relationship between corporate governance factors and operating cash flows and in the capital market, in Iran, corporate governance factors have had a very important role in cash flows resulting from operating activities.

In a study made by Chikashi (2013) on investigating the effect of financing cash flow and firm performance in the case of the electric appliances industry of the Tokyo Stock Exchange. The researcher adopted the explanatory design and used the data for the fiscal year of 2009 to 2011 and employed the pooled regressions. The study findings mentioned that financing cash flow and firm performance have a significant and negative correlation. In addition, comprehensive incomes printed by the firms were superior to other earnings in predicting their future stock returns.

In Vietnam, another study by Thanh and Nguyen (2013) on the impact of financing cash flows and banks' relationship on firm performance. The study employed multiple regression in analyzing data gathered from a sample of 465 companies listed for years 2007 to 2010. The study findings mentioned that the company's performance dwindles while the numeral of bank relationships enhances. Additionally, the study also indicated that financing cash flow has a negative relationship with firms, return on equity, while assets have a negative association with return on assets (Financial Performance).

In Tehran, Mirfakhraldini, Moeinaldin and Ebrahimpour (2009) investigated the effect of accrual earnings, financing cash flows, investing cash flows on predicting future cash flow. The study adopted explanatory research design and collected data from 73 companies listed at the Stock Exchange of Tehran over the period of time from 1380 to 1385 years in the research. The results indicated that earnings, financing cash flows, investment cash flows, and earnings accruals components, have projecting ability of the potential cash flows, among three predicting models there was no difference. The financing and investment cash flows and current earnings plus depreciation expense had a meaningful and positive relationship with performance.

2.4.5 Free Cash Flow Management and Financial Performance

Tijjani and Sani (2016) investigated the impact of free cash flow on the dividend policy of oil and gas companies in Nigeria. Dividend per share was the dependent variable, Independent variable was free cash flow of the listed oil and gas companies (FCF) while the Controls variables included leverage and earnings per share. The study applied descriptive research design and collected data from financial reports of the sampled firms for yeas 2003 to 2014. Multiple regression techniques were used in analyzing data. The study findings indicated that free cash flow had significant and positive earnings per share. Furthermore, the study found out that leverage had a significant and negative effect on the dividend policy of listed gas and oil firms in Nigeria.

In China, another study by Cheng, Zhang and Cullina (2014) on the effect of free cash flow, growth opportunities on dividends of cross-listing of shares. The study used multiple regression techniques and data gathered from a sample of 1105 firms for the years 2003 to 2011. The study found that free cash flow and earnings per share had positive effects on the dividend policy for low development companies.

In Jordanian, Zurigat, Sarwati and Aleassa (2014) investigated the free cash flow hypothesis in the capital markets. Data were collected from 102 non-financial firms listed on the Amman Stock exchange for years 1998–2009 and the data was analyzed

using panel data methods and pooled. The study findings revealed that debt and dividend are not proxy techniques for justifying agency costs of free cash flow. The study findings, in addition, revealed that free cash flow and dividend had a positive relationship.

Galogah, Pouraghajan and Makrani (2013) investigated the relationship between free cash flow and stock return of 140 companies listed in the Tehran Stock Exchange in the years 2006-2011. A multivariate regression model was used and the F-Limer test performed. The research findings indicate that there was a negative and significant correlation involving free cash flows and stock returns indicating that by increasing the company's free cash flows their stock return decline and this leads to reduce firm value in the capital market.

Wambua (2013) studied the effect of agency costs on the financial performance of NSE listed firms. The study investigated the effect of board independence, executive compensation, the board size, free cash flows and chief executive duality on financial performance. The research issued questionnaires to individuals working in the public listed companies and used published information about the current performance of the public listed firms and the implications resulting from agency costs. Data were analyzed using means, standard deviation, frequency distribution, and percentages. The study concluded the firm's chief executive duality, executive remuneration, board independence, the board size, and free cash flow are all significant at a 95 percent confidence level with free cash flow being the most significant in determinant compared to other variables and had positive effects on financial performance.

In a study made by Chalak and Mohammadnezhad (2012) on the effect of free cash flows on earnings management in firms with high free cash flows and low growth. Data were collected from 63 companies at Tehran Securities Exchange and analyzed using linear regression, Pearson analysis, and variance analysis. Study findings indicated that there was a negative considerable correlation between discretionary accruals and free cash flows over and above a direct relationship linking optional accruals and free cash

flows in Iranian firms with high free cash flows and low growth in line with the free cash flow theory.

In China, Zhou, Yang and Zhang (2012) examined the correlation involving free cash flow and financial performance of Real Estate firms. The study employed descriptive design and collected data from all the firms trading in real estate for the years 2006-2010. The study used principal component analysis and regression techniques in analyzing data. The results confirmed that the free cash flow was negatively linear-correlated to financial performance, in other words in excess of free cash flow lead the financial performance to decline.

In another study by Zeitun, Tian and Keen (2007) on the effect of free cash flow on company collapse in Jordan companies using panel data of the sample representative of 167 firms for the period over 1989-2003. Logit models were employed to establish the correlation linking the possibility of default and companies' financial health. Results showed that the firm's cash flow diminishes corporate failure and free cash flow raises the probability of corporate failure consistent with the free cash flow theory.

2.4.6 Size of the Firm and Financial Performance

In Indonesia, a study by Kartika, Handayani and Dwiputra (2016) on the effect of size of the firm, current ratio, operating cash flow and financial ratios on earnings per share of the 19 companies listed during the for the years from 2010 to 2014 period. The study employed descriptive quantitative analysis and purposive type of sampling technique and used multiple regressions to evaluate the data. The finding showed that the net profit ratio, debt ratio, turnover ratio, and firm size have a positive influence on EPS while operating cash margin ratio has a negative effect on EPS. The research finds current ratio had an insignificant influence on EPS.

Oskouei and Zadeh (2015) studied predicting the prospect stock return by emphasizing on lifecycle based on cash flow statement. The study employed simple sample research

and the variables of the study were earning per share, the change in earnings and the stock return and risk factors and equity ratio, size of the firm, market model beta. The raw data was obtained from the investigation of 1123 firms-years during the period between 2002 to 2011 and analyzed using multivariate regression equations to test the research hypotheses. The findings indicated that earning per share has a significant and positive effect on the prediction of future stock return, but the earning per share has a non-significant and positive effect on future stock return. Furthermore, the study found out that the firm size had a negative effect on future stock return, the change in earnings per share (EPS) had significant and positive effects on expecting the prospect stock return. In addition, the results showed that the lowest of the book value to market value ratio in the mature stage had a positive effect on prospect stock return.

In Tehran, Pouraghajan, Mansourinia, Bagheri and Emamgholipour (2013) investigated the effect of operating cash flows, financial ratios, and size of the firm on earnings per share (EPS) of 140 companies listed at stock exchange during the time span 2006-2010. The study adopted descriptive-correlation and adopted multivariate regression to analyze panel data. The study findings mentioned that financial ratios had a positive effect and significant on the size of the firm with earnings per share (EPS). Also, the study revealed that operating cash flows had no significant effect on earnings per share (EPS).

In Jordan, another study by (Taani & Banykhaled, 2011) on effects of financial ratios, firm size and operating cash flows on earnings per share of 40 firms listed at the Amman Stock Market. Multiple regression method and stepwise regression models were employed in measuring the impact of ratios (profitability, debt to equity, liquidity, market ratio, firm's Size) on earnings per share. The study results mentioned that ROE, Market ratio, leverage ratio and cash flow from operation/ sales had a considerable impact on earnings per share. The study findings indicated that company size had a positive but inconsequential correlation with the return.

Martani, Malone and Khairurizka (2009) carried research on the relationship between firm size, financial ratios and operating cash flows with the stock returns in

manufacturing business units listed in the Indonesia Stock Exchange for the period of 2003 to 2006. The study findings mentioned that ratios of profitability and market had a positive and major effects on stock returns and there was no correlation between the debt ratios, firm size with stock returns.

Taani and Banykhaled (2011) conducted a study on effects of financial ratios, firm size and operating cash flows on earnings per share Jordanian industrial sector. The study objective was to examine the effect of accounting information on earning per share by using five categories of financial ratios. They selected a sample of 40 firms traded in the Amman Stock Market. Multiple regression method and stepwise regression models were employed in measuring the impact of ratios to earnings per share by taking profitability, liquidity, debt to equity, market ratio, size which is derived from firm's total assets, and cash flow from operating activities as independent variables and Earning Per Share as the dependent variable. The results show that ROE, Market ratio, cash flow from operation or sales and leverage ratio had a significant impact on earnings per share. The study found that company size had a positive but insignificant correlation with the return.

In Iran, Vahid, Mohsen and Mohammadreza (2012) studied the effect of investment cash flow management, financing cash flow management and firm's size on the profitability of 28 companies listed at TSE. Data was gathered for 5 (five) years 2005 -2009 period. The study findings disclosed a negative correlation involving aggressive financing and conservative investment or savings policies with value and profitability. Lastly, the outcome disclosed that the size of the firm over and above firm Growth had a positive outcomes on the organization's profitability and value, alongside firm leverage showed the negative impact. The study concluded that cash flow management and size of the play a vital function for accomplishment/success failure or success of the organization in a trade because of its profitability or productivity and liquidity.

2.5 Critique of the Existing Literature

The empirical studies reviewed are on the effect of management of cash flow on financial performance. In a study by Amah, Micheal and Ihendinihu (2016) on the effect of cash flow and financial performance of listed banks in Nigeria, the author did cite literature in relation to the area of study and stated usage of secondary data and the way it was presented. The authors' usage of inferential statistics was not clearly stated and the econometric model was not developed to show the relationship between variables and establish the relationship nature of the information. This study adopted the causal (explanatory) research design.

Jintaviwatwong and Suntraruk (2012) researched on current operating cash flows and current earnings of non-financial firms listed on the Stock Exchange of Thailand the authors did cite literature in comparison to the study area. There is adequate buildup of information in connection to the research. The paper had no theoretical framework on where the author builds up his research. Sequential chronological order of literature as per specific objectives was missing. The authors describe clearly the area of study, provides the study population of companies traded at the TSE and states the usage of descriptive research design from 2001 to 2010 a time of study.

It is evident from the presented literature on operating cash flow management and monetary performance that the authors described clearly the area of study and provided the population of firms. However, many surveys were either deficient of adequate variables or the scope of the study is wanting. For instance Ghodrati and Abyak (2014), Darabi, Adeli and Torkamani (2012), Al-Debi'e (2011), Aghaei and Shakeri (2010), Habib (2011) and Mong'o (2010) used one sector of the money market which for that reason limits oversimplification of their findings to cater for other sectors. The researchers also failed to state the sampling technique and sample size computation. In all the studies embracing and usage of inferential statistics was not clearly stated.

Wijewaradana and Munasinghe (2015) studied investing in cash flow management and firm performance in the Sri Lankan. The researcher clearly elaborated the problem statement and clearly showing the problem and how he intends to address the issue, the study showed the framework and the association involving the dependent and predictor variables very well, the author highlighted the most important challenges of manufacturing in industrial sector undergo and points out different researches that seem to support his work. The study only provides the outcome of investing cash flow and financing cash flow without considering other cash flows management such as operating and free cash flows which canister effect on monetary performance. Further, the research was done in a developed country where investing cash flows differs significantly with the rising states for instance Kenya.

It is clear from the existing literature on investing cash flow management and financial performance that the authors clearly elaborated the statement of the problem. The researchers for instance Nwanyanwu (2015), Nwakaego, Ikechukwu and Ifunanya (2015), Jafari, Gord and Beerhouse (2014), Moeinaddin *et al*. (2013), Kroes and Sumbramanyam (2012) and Kemboi clearly showed the problem and how they intended to address the issues, the researchers showed the framework and the relationship between the dependent and independent variables very well. The authors puts correct research objectives and seems to do a very thorough introduction of the journals. The biographers highlighted the research blueprint or design of the study used and reason behind its usage. In contrast they were incapable to state the technique used for sampling, computation of the sample size and analysis of data.

On financing cash flow management, the study by Poorzamani and Khademi (2014) studied the effect of corporate governance factors on cash flow resulting from operating and financing activities in firms enlisted in Tehran Stock Exchange. Research findings showed that there was no meaningful relationship between corporate governance factors and cash flow resulting from financing activities and in the capital market in Iran corporate governance factors did not had an imperative effect on cash flows resulting from financing. Ndungu and Oluoch (2016) who found that cash flows from financing

and free cash flows all had a negative and significant effect on market performance of public construction companies in Kenya, while the current study looked into the financial performance of mutual funds in Kenya.

On financing cash flow management and financial performance studies by Hamza, Mutala and Antwi (2015); Poorzamani and Khademi (2014); Chikashi (2015); Thanh and Nguyen (2013); Ali *et al.* (2013); Mirfakhraldini *et al.* (2009) introduced their research very well and offered key definition. The researchers summarized the research on all sections of their research papers, highlighted the sampling and target population and the research instrument and finally, they came up with the research model. However, the studies were done in developed economies and on different sectors, while the current study looked into the financial performance of mutual in Kenya.

On free cash flow and financial management, a study by Tian and Keen (2007) observed that firm's cash flow decreases corporate failure and free cash flow increases the probability of corporate failure consistent with the free cash flow theory in Jordanian companies using both matched samples and a cross-sectional time-series (panel data) in 1989-2003. However, this study was conducted a decade ago and a more recent study is of paramount importance so as to reflect the current perspective of the prevailing phenomenon in a developing country like Kenya.

Research articles by Tijjani and Sani (2016); Saez and Guierres (2015); Cheng *et al.* (2014); Zurigat *et al.*(2014); Galogah *et al.*(2013); Chalak and Mohammadnezhad (2012) and Zhou *et al.* (2012) puts correct the research objectives and statement of the problem. The authors arranged the literature in chronological order and highlighted the key literature review relevant to free cash flow management. However, several reviewed surveys used simple random sampling even where the population could have been stratified to yield better results or do census when the population is not large. The reviewed studies were done in developed economies and a similar study is of the essence in a developing economy in Kenya.

On the size of the firm, it is apparent from the existing literature that many surveys are either deficient of moderating variables or the scope of the study is inadequate. Oskouei and Zadeh (2015) studied predicting the future stock return by emphasizing on the life cycle based on the cash flow statement. The study highlighted the key dependent variable and independent variables. The results indicated that firm size had a negative effect on future stock returns. Pouraghajan *et al.* (2013) investigated the effect of financial ratios, operating cash flows and firm size on earnings per share of 140 listed companies in Tehran Stock Exchange during the time span 2006-2010. The results indicated that there was a positive and significant relationship between financial ratios and firm size with earnings per share. The researcher used descriptive-correlation and adopted a regression model to analyze panel data. However, in both studies, financial performance was measured using earnings per shares, but in this study, ROA and ROE were used to measure financial performance.

Taani and Banykhaeld (2011), Martani *et al.* (2009) and Al-Malay *et al.* (2009) introduced their research very well and offered a key definitions. The authors arranged the literature in chronological order and highlighted the key literature review relevant to the size of the firm and performance. However, the authors never used any theories to support their studies. This study used Agency theory, Baumol Deterministic Theory of Cash Management, Trade-off theory Free Cash flow theory financial life cycle theory and Miller -Orr Stochastic cash flow theory.

In view of the above-mentioned gaps and based on the literature reviewed, little known research has been done in Kenya in this specific subject area of the study that links cash flow management and financial performance of mutual funds in Kenya. This study, therefore, tried to address some of these deficiencies and make a contribution by linking cash flow management and financial performance of mutual funds in Kenya.

2.6 Research Gaps

Five gaps have been identified from the reviewed literature. Amah, Micheal and Ihendinihu (2016) examined the relationship between cash flow and financial performance and the study by Jintaviwatwong and Suntraruk (2012) focused on operating cash flows and firm performance. They, however, had limitations with respect to theories and methodology applied. The study sampled four banks listed in the Nigeria Stock Exchange (NSE) for the period of 9 years (2005 - 2013) and adopted ex post facto research design. In this study, causal research designs with a census of 22 firms were adopted.

In terms of context Wijewaradana and Munasinghe (2015) provides the effect of investing cash flow and financing cash flow on firm performance in the Sri Lankan. The limitations of the study are with respect to independent variables (investment and financing cash flow) and were carried in a developed economy. Therefore, a knowledge gap exists on the effect of investing cash flow management in the context of the emerging economies. In this study, independent variables were operating cash flow management, Investing cash flow management, financing cash flow management, free cash flow management and moderating variable the size of the firm and financial performance a dependent.

The study by Poorzamani and Khademi (2014) focused on the effect of corporate governance cash flow resulting from operating and financing activities in firms listed at the Tehran Stock Exchange. Also, Ndungu and Oluoch (2016) focused on the relation between cash flows management and market performance of public construction companies in Kenya and adopted a descriptive research design. These studies limitation is with respect to the methodology applied and the sectors covered. In this study panel data was collected from the mutual funds sector and adopted explanatory research design.

The study by Zeitun, Tian and Keen (2007) focused on the firm's cash flow decreases, corporate failure and free cash flow in Jordan. The study used panel data collected from 167 Jordanian companies for years the 1989-2003. Martani, Malone and Khairurizka (2009) conducted a study on the relationship between financial ratios, firm size, and cash flows from operating activities with stock returns in the manufacturing business units listed in the Indonesia Stock Exchange during the years 2003 to 2006. The limitation of these studies was conducted a decade ago and with no adoption of finance theories and a more recent study is of paramount importance so as to reflect the current perspective of the prevailing phenomenon in emerging economy like Kenya. The study conducted by Taani and Banykhaled (2011) on effect of firm size, operating cash flows and financial ratios on earnings per share Jordanian industrial sector. The study was done in Jordan and a similar study is of essence in a developing economy in Kenya.

2.7 Summary of Reviewed Literature

Chapter two has examined the studies done by other scholars and researchers on the subject of cash flow management on financial performance of firms. It reviewed the theories on which the study is grounded and include: agency theory, baumol deterministic theory of cash management, trade off theory, free cash flow theory, financial life cycle theory and Miller -Orr Stochastic cash flow theory. It also present the conceptual framework clearly showing the dependent and independent variables.

Further the chapter lists the empirical literature per study objectives. The empirical studies identified in this chapter support this study. For instance, Amah, Micheal and Ihendinihu (2016) examined the relationship between cash flow and financial performance of listed banks in Nigeria. Ghodrati and Abyak (2014) investigated the effect of operational cash flow on the returns to stockholders of 54 firms from Tehran Stock Exchange. Other studies include; Darabi, Adeli and Torkamani (2012); Jintaviwatwong and Suntraruk (2012); Al-Debi'e (2011); Aghaei and Shakeri (2010) and Habib (2011).

On investing cash flow and financial performance, Wijewaradana and Munasinghe (2015) examined cash flows management and firm performance in the Sri Lankan. Nwanyanwu (2015) examined the relationship between cash flow and organization performance from the perspective of the hospitality and print media industrial sectors of the economy. Other studies included; Nwakaego, *et al*. (2015); Jafari *et al*. (2014; Moeinaddin *et al*. (2013) and Kemboi (2010).

On financing cash flow and financial performance, Ndungu and Oluoch (2016) examined the effect of cash flow management on market performance of public construction companies in Kenya. In Ghana, a study by Hamza, Antwi and Mutala (2015) investigated management cash practices and its effect on the financial performance of SMEs. Other studies include; Poorzamani and Khademi (2014); Mirfakhraldini *et al*. (2009); Chikashi (2013) and Ali *et al*. (2013).

On free cash flow and financial performance; Tijjani and Sani (2016) investigated the impact of free cash flow on dividend policy of oil and gas companies in Nigeria and in a study conducted by Cheng, Cullina and Zhang (2014) on free cash flow, growth opportunities and dividends of cross-listing of shares in China. On moderating, Oskouei and Zadeh (2015) studied predicting the future stock return by emphasizing on life cycle based on cash flow statement and Pouraghajan *et al*. (2013) carried a study on the relationship between financial ratios, operating cash flows and firm size on earnings per share of 140 listed companies in Tehran Stock Exchange. Other studies that include; Taani and Banykhaled (2011) and Martani, Malone and Khairurizka (2009). The chapter provides critique to the literature that forms the basis of identifying the research gaps as also discussed in the chapter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

A research methodology may be a part that has got to explain technical procedures during a manner appropriate for the audience (Zikmund, Carr, Babin & Griffin, 2010). (Kombo & Tromp, 2009) concurred with (Zikmund *et al*., 2010) that research methodology deals with the outline of the methods applied in closing the research study. Therefore this chapter presents the methodology utilized in conducting this study. This includes identifying research design, research philosophy, target population, sampling frame, and sampling technique and size. This section explains the info collection instrument used for the study and processing and analysis, Diagnostic tests and models utilized in the study to explore the effect of management of cash flow on financial performance in mutual funds in Kenya.

3.2 Research Philosophy

Philosophy is defined because the general beliefs, concepts, and attitudes of a private or a bunch (Mertens, 2010). The philosophical method is predicated on one's ability to create sound and reasoned arguments (Baronett, 2008). Research philosophies involve the event of information and also the basic nature of how that knowledge was developed (Saunders, 2012). Philosophies are classified into four primary types which are Positivism, Interpretivism, Transformative and Pragmatism (Creswell, 2013). Scholars in science use two major philosophical doctrines; positivism and interpretivism in most of their inquiries. Consistent with the principles of positivism, it depends on quantifiable observations that lead themselves to statistical analysis. It's an atomistic, ontological view of the globe as comprising discrete, observable elements and events that interact in an observable, determined and regular manner (Collins, 2011). Tthe overall rule, positivist studies usually adopt the deductive approach, whereas the inductive research

approach is typically related to a phenomenology philosophy (Crowther & Lancaster, 2008).

The study adopted the positivist philosophy, this can be because positivism may be a philosophy that emphasizes learning through action and building a content from experience and reflection. The philosophy presumes that the investigator and also the material of the study are independent and had no influence on one another. Shields (2008) states that positivism philosophy may be a potentially compelling approach to financial management. Generally, quantitative data is collected when the researcher has adopted the positivist approach and data collected will be scientifically analyzed. In positivism studies, the role of the researcher is restricted to data collection and interpretation through objective approach and also the research findings are usually observable and quantifiable (Collins, 2011).

3.3 Research Design

Research design is about building an idea that reflects how researchers will answer the research questions (Saunders, 2012). Research design may be a methodological connection between the philosophies and subsequent selection of knowledge collection methods (Denzin & Lincoln, 2011). Tashakkori and Teddlie (2010) posit that explanatory research is meant to clarify, instead of to easily describe the phenomena studied. This design does not involve manipulation of the predictable variables in making inferences about causality (Kerlinger & Lee, 2000).

Causal or explanatory research design was used because of the character of the matter and also the availability of knowledge. This research design reveals a cause and effect relationship between dependent and independent variables. A variable quantity may be a symbol or concept that is predictable and caused by an experimental variable (Garcia & Martinez, 2007). Consistent with Creswell and Garret (2008), the causal research design is employed to analyze the extent to which variable changes are reflected in alteration within the other variable.

Causal research or explanatory is meant to gather data and build data structures and knowledge that allow the researcher to model the cause and effect interaction connecting two or more variables (Hair, Money & Samouel, 2007). Krauss (2005) points out that causal research examines whether one variable causes or determines the worth of another variable. Explanatory research attempts to reveal a reason and outcome relationship between variables.

Explanatory design is preferred in situations where some key information is obtainable about the phenomenon of the study (Cooper& Schindler, 2003). It uses quantitative data in most cases because the case is during this study (Mwangi, Muturi &Ngumi, 2016). The look has also been employed by Chikashi (2013) within the exploration of comprehensive income and firm's performance in electric appliances industry of the Tokyo exchange and Mirfakhraldini, Moeinaldin and Ebrahimpour (2009) in investigating the effect of accrual earnings, financing cash flows, investing incomes on predicting future cash flow.

The study used data on the management of money flow and financial performance on mutual funds for 6 years (2011-2016). This data was obtained from annual audited financial reports of mutual funds at CMA. The quantitative approach was followed during a logical manner to explain and test relationships and examine the cause and effect among variables.

3.4 Target Population

The population may be a large collection of all subjects from where the sample is drawn (Saunders *et al.,* 2009). Gall, Gall and Borg (2007) noted that a target population provides a solid foundation and commencement upon which to create the consistency and soundness of the research. Observe that population refers to all or any possible cases which are of interest to a study (Gay, Airasian & Mills, 2006). The population helps in determining whether sampled cases are eligible or ineligible for the study. During this study, the target population consisted of all 25 mutual funds in Kenya. Appendix (iii)

present an inventory of mutual funds registered between 1st of January, 2011 to 31st December 2016. The explanation to limit the time of the research to 6 (6) years was that the newest data was readily available for this era.

3.5 Sampling Frame

Saunders, Lewis and Thornhill (2009) posit that sampling frame is that the list of the accessible populations of the people, events or documents that would be included during a survey and from where the researcher will pick a sample to gather data. Mwangi, Muturi & Ngumi, 2016) posit that a sampling frame may be a source list containing all names of the universe. Semykina (2012) concluded that the sampling frame may be a list of the target population where a sample is chosen for the study. The sampling frame for this study included all the 25 licensed mutual funds (Appendix III) that were breathing in Kenya by January 2011.

3.6 Sample and Sampling Technique

 A sample could be a portion of the target population from which data is collected, summarized, analyzed and inferences about the target population from which the sample is drawn are done (Mwangi, Muturi & Ngumi, 2016). A decent sample should be logical and practicable (representative) and have regard for time, costs, validity, and accuracy of the information (Mwangi, Muturi & Ngumi,2016). The study adopted a census approach due to the tiny number of mutual funds in Kenya, therefore accessible and not prohibitive in terms of cost, time and other resources (Saunders, Lewis & Thornhill, 2009). Such a technique enhances the validity of the collected data by including certain information-rich cases for study (Ojera *et al*., 2011).

Due to the information availability limitation, 22 out of the 25 listed mutual funds were involved within the study. Twenty-two (22) firms were however studied as data for the 2 firms; Natbank Trustee & Investment Services and that i & M Capital wasn't available since the firms were newly registered within the year 2016 and had not submitted any

financial reports to CMA for the study period. The third firm, Old mutual investment group data wasn't available for analysis as had not submitted audited financial reports. This translates to roughly 88% of the target population, which is sweet representation as supported by Gay, Airasian and Mills (2006) who posit that a sample size of 20% of the target population is adequate for little populations but a 1000 units. The list of those mutual funds was extracted from the CMA list of mutual funds in Kenya by the tip of the year 2016 and verified using the CMA's annual reports.

3.7 Data Collection Instruments

According to Mugenda (2009), scientific inquiry demands that a researcher develops tools that yield accurate and meaningful data so as to create a conclusive decision. The study employed secondary data that was collected from audited annual company reports and CMA's reports and publications for the years 2011-2016. The gathering of secondary data was done using the secondary data collection sheet presented in Appendix (III). The knowledge gathered and analyzed from these reports aided the researcher in making significant analysis in relevance independent variables (operating cash flow management, investing cash flow management, financing cash flow management, and free cash flow management; moderating variable (size of the firm) and variable (financial performance). Nearly all studies on effective management of money flow on financial performance have used secondary data (Amah, *et al*., 2016; Ghodrati & Abyak, 2014; Jintaviwatwong & Suntraruk, 2012; Wijewaradana & Munasinghe, 2015)

3.8 Data Collection Procedures

The study utilized panel data over a six-year period (2011 to 2016) which consisted of a statistic, per Gujarati (2008), a mix of cross-sections and statistic improve the amount and quality of information to levels that may somewhat be impossible to realize with only 1 of the 2 statistic data refers to data collected for a period of your time on single or additional variables. The frequency is solely a measure of the interval over or the

regularity with which, the information are collected or recorded (Brooks, 2008). Cross-section data talk over with data on one or additional variables collected at an equal point in time. The information for all the variables within the study were extracted from secondary sources; audited annual reports and financial statements of the mutual funds registered at CMA covering the years 2011 to 2016. Panel data was gathered from the handbooks and website of CMA and specific mutual funds' websites. The information was obtained to look at the results and cross-sections of operating cash flow management, investing cash flow management, financing cash flow management, free cash flow management, size of the firm, returns on assets and equity. Regression coefficients were interpreted using the Eviews software output to make sure that enough degrees of freedom within the models to be estimated are available, yearly data covering the complete study period was collected.

Panel data that was extracted included the profit-and-loss statement, report of monetary position, cash flows statement and notes to the accounts employing a secondary data collection schedule (Appendix III). These data included; net cash flows from operations, financing, investing, net free cash flows, net profit, retained profit, total assets, and total equity. Editing, classification, and tabulation of the financial data collected from the above-mentioned sources were done as per the wants of this study.

3.9 Processing and Analysis.

Marshall and Rossman (2007) defined data analysis because the computation of certain measures together with trying to find interaction patterns that exist among data groups. Data Analysis could be a process of collecting, transforming, cleaning, and modeling data with the goal of discovering the desired information, processing and analysis is crucial to make sure that everyone relevant data is gathered for contemplated evaluation and analysis (Mugenda, 2008). The research involved descriptive analysis, diagnostic tests, correlation analysis, and multivariate analysis.

3.9.1 Data Presentation and Discussion

The study sought to ascertain the effect of management of money flow on the financial performance of mutual funds. Secondary data was collected and analyzed from twenty mutual funds. Measures like mean, minimum, maximum, and variance are descriptive analysis wont to illustrate the sample data matrix so as to explain the kind and reveal the patterns of the information collected. Mbwesa (2006), descriptive analysis involves finding numerical summaries to produce a deeper insight into the characteristics and outline of the variables under study. The study determined the central tendency measure of the information including calculating for the mean, variance, standard errors, jarque-bera, maximum and minimum values of the variables over time which were presented in tables and interpreted appropriately.

Inference analyses like the R square, F-tests, and t-tests were generated by Eviews 10 to check the importance of the connection between the variables under the study and establish the extent to which the predictor variables explain the variation variable. R-Squared is employed to check the strength of the relationship of the independent variables in predicting the variable quantity (Gujarat, 2008). The t-test was accustomed test the direction of the connection between the independent variables and therefore the variable quantity, that is, whether the connection was negative or positive. Its p-value was accustomed make conclusions on whether to fail to simply accept or reject the null hypothesis. F-test was accustomed test the regression model significance and its p-value was applied in determining the robustness of the model.

The correlation was utilized in assessing the direction of the connection linking two variables yet on measure the strength of the association between variables (Tabachnick & Fidell, 2007). Correlation analysis involves using the collected data to work out whether a relationship exists between two or more quantifiable variables where the magnitude and direction of correlation are expressed by the parametric statistic (Cohen *et al*., 2013). Correlation test may be a test supported the ration of two weighted method of least squares estimates of scale obtained from order statistics. An assumption of

multivariate analysis is that independent variables aren't correlated with one another. Spearman rank-order coefficient was accustomed determine the magnitude and direction of the relationships between the variable quantity and independent variables. The values of the parametric statistic are between -1 and +1. a price of 0 implies no relationship, +1 parametric statistic indicates that the 2 variables are perfectly correlated in a very positive linear sense, while a values of -1 parametric statistic indicates that two variables are perfectly correlated in a very negative linear sense, that is, one variable increases because the other decreases (Collis & Hussey, 2013).

3.9.2 Diagnostic Tests

Linear regression tests were conducted before the information was analyzed further. These tests are multicollinearity to check whether quite two independent variables are inter-correlated, autocorrelation tests to seek out out if there's a correlation between the residue terms for any two observations, Heteroskedasticity test to work out if the dimensions of the error term differs across values of an variable. The Hausman test was accustomed test the random effect and stuck effect, Granger causality tests were conducted to work out the causal relationship that will exist between independent variables and variable quantity. Correlation analysis and multivariate analysis were administered. Finally, a hypothesis test to spot the variable which can not be instrumental to the study.

Multicollinearity Test

Multicollinearity occurs in statistics multiple correlation model two independent variables or more are highly correlated (Bickel, 2010). This suggests the model can estimate all the coefficients which the coefficients remain the simplest linear unbiased estimates which the quality errors are correct and efficient (Runkle, DeFusco, Anson, Pinto & McLeavey,2013). OLS assumes that there's no exact linear relationship among explanatory variables. Alma, Kurt and Ugur (2009) affirmed that multicollinearity may

be a situation that exists where two independent variables or more are correlated with one another.

Variance Inflation Factor (VIF) and Tolerance were accustomed evaluate the matter of multicollinearity within the multiple correlation models. VIF statistic of a predictor in a very model is that the reciprocal of tolerance and it indicates what quantity larger the error variance for the unique effect of a predictor (Baguley, 2012). Cohen, West and Aiken (2013) defines Tolerance factors (TOL) and VIF as an index of the quantity that the variance of every parametric statistic is increased relative to a situation during which all of the predictor variables are uncorrelated and suggested a VIFs of 5 or more to be the rule of thumb for concluding VIF to be overlarge hence not suitable. Runkle *et al*. (2013) argued that if two (2) or more variables have a VIF of 5 or greater than 5, one in all them must be far away from the multivariate analysis as this indicated multicollinearity.

The common way of detecting multicollinearity is to research the variance inflation factors (VIF) and therefore the tolerance factors (TOL), which are computed as follows;

$$VIF = 1/(1 - R_{2k}) \quad TOL = 1 - R_{2k}$$

Where R_{2k} is R_2 resulting from the auxiliary regression of the Kth regressor on all other regressors of the model.

The VIF measures the consequences of R_{2k} on the variance of the estimated parametric statistic for the Kth variable. The tolerance factor is up to the inverse of the VIF and is interpreted because the proportion of variance within the Kth variable that's not associated with the opposite independent variables within the model.

Autocorrelation Test

Autocorrelation is that the correlation between the residue terms for any two observations; it's expected that the residue terms for any two observations should be

independent (Field, 2005). Durbin-Watson test accustomed determine the existence of autocorrelation between variables. Gujarati (2003) observed that the Durbin -Watson range from zero to four, a price near 0 indicates positive autocorrelation while a price near four indicates negative autocorrelation. A price starting from 1.5 to 2.5 indicates that there's no presence of autocorrelation.

According to Gujarati (2008), panel data may exhibit a correlation between the error terms of a given cross-sectional unit at two different times. That leads OLS estimators to be inefficient. Within the presence of autocorrelation, the statistical significance of those estimators is not reliable and therefore the hypothesis-testing procedure becomes suspect. Eviews was accustomed the Durbin-Watson test autocorrelation in panel data models. This test examines the correlation within the idiosyncratic error terms between two subsequent periods.

The low p-value resulting from this test indicated that the null hypothesis of no partial correlation was rejected. Consequently, the sample panel data set is subject to autocorrelation, which was addressed to keep up the efficiency of the estimators. A typical thanks to cater to autocorrelation issues is to use the least-squares to a transformed regression model (Gujarati, 2008).

In the case of a fixed-effects model, the minimum variance estimators are the OLS estimators, which are supported a transformed model (Hill, Griffiths, & Lim, 2011). The statistical software Eveiws computes these estimators by default when performing a hard and fast effects regression.

Normality Test

Jarque-Bera test was accustomed check the normality of the info. Jarque-Bera test is predicated on the sample skewness and sample kurtosis (Neeraj, 2010). Hair *et al*. (2007) and Tabachnick and Fidell (2007) argued that data is taken into account to be normal if kurtosis is between negative seven (7) to positive seven (7) and skewness is

between negative two (2) to positive two(2). In line with Ghasemin and Zahediasi (2012), the variables are alleged to be roughly normally distributed especially if the results are to be generalized beyond the sample.

In this study, the Jarque-Bera test was accustomed test whether the regression residuals followed a standard distribution. This test was preferred over the opposite test because it's measured base on sample kurtosis and skewness. The Jarque-Bera test statistic is defined as:

$$\dots\dots\frac{N}{6}\left(S^2 + \frac{(K-3)^2}{4}\right)\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots.(i)$$

with;

S represents sample skewness, K represents the sample kurtosis and N represents sample size respectively.

The JB statistic gives a sign of the deviation of the distribution of 0 (skewness and Kurtosis if it absolutely was truly a standard distribution). A p-value of 0 indicates that the null hypothesis is rejected. Gujarat (2008) concluded that the null hypothesis is rejected when the p-value is a smaller amount than 0.05 and accepts it if otherwise.

Heteroscedasticity Test

In this study, the Breusch Pagan test was applied to test heteroscedasticity so as to get results of greater accuracy. Breusch-Pagan allows the heteroscedasticity process to be a function of independent variables, and it's was applied within the assumption that heteroscedasticity was a linear function of the predictor variables within the regression model. Heteroscedasticity is perceived as an explicit element of cross-sectional data and this does not imply that it can't be linked with time-series data. Furthermore, financial statistic data are characterized by chaotic behavior, pronounced instability and volatility clustering (Birău, 2012).

According to Hill, Griffiths and Lim (2011) pooled OLS regression appears to hold out inefficiencies thanks to problems with heteroscedasticity and autocorrelation. These issues were addressed by the specification of a fixed-effects model with robust standard errors. The appliance of a fixed-effects model presupposes the existence of unobserved effects within the model, that is, the presence of heterogeneity between the individuals to account for (Hill *et al.*, 2011). The Breusch Pagan test helps you choose between a random-effects regression and an easy OLS regression. The null hypothesis within the Breusch Pagan test is that variances across entities are zero.

Hausman Specification Test

Hausman specification test estimates the steadiness of an estimator compared to an alternate estimator. It enables one to estimate if the model relates to the info. The Hausman test was accustomed test the random effect and glued effect. The difference between random effect and glued effects is whether or not the unnoticed individual effect represented fundamentals that are correlated with the independent variables within the regression model (Green, 2008). To ascertain the appropriate estimation effect for the study, the Hausman test was carried on the panel regression model. The estimation effects were random and glued effects (Gujarat, 2008). The test was conducted on a null hypothesis that stated that the random effect model was suitable. The choice criteria behind the test were to fail to simply accept or reject the null hypothesis if the corresponding p-value for the chi-square statistic wasn't over 0.05 if the p-value was over 0.05 the null hypothesis was accepted.

The equation for the fixed effects model therefore becomes;

$$Y_{i,t} = \beta_1 X_{i,t} + \alpha_i + u_{i,t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{(ii)}$$

Where;

α_i (I represent 1….n) is intercept of n entity.

Yi,t denoted variable quantity, where i represent entity and t denotes time.

Xi,t represents one experimental variable, $\beta 1$ is that the coefficient and uit is that the error term, whose covariance with $X \neq 0$

The random effects model is

Yi,t represent $\beta Xi,t + \alpha + ui,t + \varepsilon i,t$……………………………………………..(iii)

β is that the coefficient, α is that the intercept, $\varepsilon i,t$ within entity error and ui,t between-entity error, whose covariance with X=0. While the fixed effect model restricts inferences only on the sample used, the random effect model allows generalization beyond the sample to a bigger population (Vicente, 2001).

According to Banafa, Muturi and Ngugi (2016), the fixed and random effects models cater to heterogeneity or individuality among the institutions by allowing each institution to possess their own interception point which is time-invariant. A Hausman test was meted out to spot the more efficient estimation method model between the fixed and random to handle the objectives of this study. The null hypothesis for this Hausman test was that the random effect model is preferred to the fixed-effect model and was to be rejected if the p-value is a smaller amount than 5% to imply that a hard and fast model is preferred (Green, 2008).

Granger Causality Test

Causality is that the relationship between cause and effect. Fundamentally, the term causality suggests a cause and effect relationship between two sets of variables Y and X (Pearl, 2012). Pairwise Granger causality tests were conducted to see the causal relationship that will exist between operating cash flow management, investing cash flow management, financing cash flow management, free cash flow management and size of the firm on the financial performance of mutual funds in Kenya. It's a statistical concept of causality that's supported prediction (Granger, 1969).

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According to Gujarati (1995), the steps involved in testing for Granger causality are; first regress current Yt on all past values Yt and other variables, excluding the lagged Xt variables during this regression. Hence, from this regression, the residual sum of squares is obtained. The second step is to run the regression including the lagged Xt variable (unrestricted regression). From the regression, the unrestricted residual sum of squares is obtained. The third step was to check the null hypothesis Ho lagged Xt terms does not belong within the regression.

The fourth step was to check this hypothesis and therefore the F-test was wont to determine the null hypothesis. The fifth step was to test on if the F-value exceeded the critical F-values at the chosen level of significance, or if the P-value is a smaller amount than the alpha level of significance, the null hypothesis was rejected during which case the lagged Xt values belong within the regression. This was in our own way of claiming that Xt Granger causes Yt (Gujarati, 1995). The sixth and final step was to repeat steps 1-5 to check the model (2), in other words to check whether Yt grangers causes Xt.

The granger causality model is specified as:

$$Yt= \beta0 +\sum j=1\ \beta j+Yt\text{-}j+\sum k=1r\ kXt\text{-}k+Ut\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{.(iv)}$$

F-test or the probability was wont to examine the null hypothesis. The selection of lags J and K and this is often critical because insufficient lags yield autocorrelated errors and

incorrect test statistics and too many lags reduce the facility of the test. To see the causal relationship reverse model are often estimated as follows:

$$X_t = \beta_0 + \sum_{j=1} \beta_j + Y_{t-j} + \sum_{k=1}^{r} k X_{t-k} + U_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (v)}$$

Testing

H0: $\beta_0 = \beta_j \dots = 0$

against

H0: NotH0

is a test that Xt does not Granger cause Yt.

In the same way testing

H0: $\beta_0 = \beta_j \dots = 0$

against

H1: Not H0 could be a test that Yt does not Granger cause Xt.

In every case, a rejection of the null hypothesis (H0) implies there's Granger causality between the variables. In testing for Granger causality, two variables are usually analyzed together, while testing for his or her interaction. All the possible results of the analyses are four: unidirectional Granger causality from variable Yt to variable Xt, unidirectional Granger causality from variable Xt to Yt, bi-directional causality and no causality.

3.9.3 Panel Regression Model

Cohen, West and Aiken (2014) assert that rectilinear regression analysis involves measuring the linear association between a dependent and an independent variable(s).

multivariate analysis is employed to forecast the values of an eternal interval or scaled variable from the precise variable quantity values. Hamilton (2006) stated that multiple correlation analysis involves combining several predictor variables in a very single equation. This study adopted a panel data regression, using the normal method of least squares (OLS) method where the information that included statistic and cross-sectional data were pooled into a panel data set and estimated using panel data regression.

Panel data models offer several advantages like the chance to require the heterogeneity between the themes of the study explicitly under consideration. Moreover, since panel data combine both time-series and cross-sectional observations, panel data present the advantage of offering an oversized number of knowledge points, increasing the degrees of freedom and reducing the collinearity among explanatory variables, hence improving the efficiency of econometric estimates (Schroyen, 2017). After the gathering of panel data, pooling the information about the observed individuals at different times together would camouflage the heterogeneity which will exist among the individuals (Gujarati, 2008). For that reason, the individuality of every individual was incorporated within the single error term of the model, leading the error term that was correlated with a number of the regressors included within the model.

In order to account for heterogeneity, two models are widely noted in practice, namely the fixed effects model and therefore the random-effects model (Schroyen, 2017). On the one hand, the fixed effects model takes under consideration heterogeneity by allowing each of the individuals to possess a definite intercept, thus capturing their own special features. On the opposite hand, the random-effects model assumes that the individuals within the sample are drawn from a bigger population which they need a typical value for the intercept. The random-effects model assumes there's no correlation between the unobserved heterogeneity amongst individuals and therefore the explanatory variables included within the model (Gujarati, 2008). The random-effects model enables time-invariant variables to be included within the model, which wasn't the case with a fixed-effects model. However, it absolutely was noted that the fixed effects model indeed controls for all-time invariant variables, whereas the random-

effects model estimated only those time-invariant variables that are explicitly introduced within the model (Schroyen, 2017).

In multivariate analysis usually, the investigator seeks to determine the causal effect of 1 variable upon another (Banafa, Muturi & Ngugi, 2016). In multiple correlation analyses, all the independent variables are entered into the equation without delay because there aren't any control variables (Cameron & Trivedi, 2005). Heidarpoor, Tavangar and Roshan (2015) used the model to investigated the link between the life cycle and operational cash flows of the listed firms within the Tehran stock market. Ahmed and Javid (2009) used the model to conduct a descriptive survey on the effect of free income on dividend payout non-financial firms listed within the Karachi stock market in Pakistan. They used multiple analytical models to estimate the link between cash flows management and financial performance.

The study hypotheses were measured using two-panel data regression equations. The study hypotheses were measured using two panel data regression equations.

Panel 1 $ROA_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \beta_3 X_{3,it} + \beta_4 X_{4,it} + \varepsilon_{it}$…………………(vi)

Panel 2 $ROE_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \beta_3 X_{3,it} + \beta_4 X_{4,it} + \varepsilon_{it}$…..……………..(vii)

Where;

ROA_{it} represents Return on Assets for every firm i and time t,

ROE_{it} denote Return on Equity for every firm i and time t

X_{1it} represents Operating cash flow Management for every firm i and time t

X_{2it} represent Investing cash flow Management for every firm i and time t

X_{3it} denote Financing cash flow Management for every firm i and time t

X4it represent Free cash flow Management for every firm i and time t

βo represent Constant, β1 β4 represent parametric statistic of independent variables

(X1it ……….X4it).

3.9.4 Moderated Multiple Correlation Model

Moderated multivariate analysis was wiped out order to check the moderating effect of the dimensions of the firm on the link between the management of cash flow and financial performance. Cohen, West and Aiken (2014) reported that the Moderated multivariate analysis (MMR) approach involves the addition of interaction effects to a multivariate analysis model by comparing two different statistical procedure regression equations. The variable quantity was regressed with the vector of every variable and size of the firm to check for the interaction effects. Using the MMR analysis, the moderating effect of the dimensions of the firm was analyzed by interpreting the R^2 change within the models obtained from the model summaries and also the regressions coefficients for the merchandise term obtained from the coefficients. The moderation effect of the Firm's Size and financial performance by mutual funds in Kenya was tested using the hierarchical Moderated Multivariate Analysis (MMR) model (Baron & Kenny, 1986).

MMR Model 1 $ROA_{it} = \beta_o + \beta_1 X1_{it}*Z + \beta_2 X2_{it}*Z + \beta_3 X3_{it}*Z + \beta_4 X4_{it}*Z + \varepsilon$ it.(viii)

MMR Model 2 $ROE_{it} = \beta_o + \beta_1 X_{it}*Z + \beta_2 X2_{it}*Z + \beta_3 X3_{it}*Z + \beta_4 X4_{it}*Z + \varepsilon$ it……(ix)

Where;

Z = Size of the firm (moderating variable)

βo is constant (ROA and ROE- intercept) which is that the value of variable quantity when all the independent variables are zero. β1, β2, β3, β4, and β5 are regression constants or the speed of change induced by $X1_{it}*Z$, $X2_{it}*Z$, $X3_{it}*Z$ and $X4_{it}*Z$ on ROA_{it} and ROE_{it}. ε is that the standard error term. Eviews software was wont to

generate the precise values of β1, β2, β3, β4, and β5. The results for equation MMR models 1 and a pair of indicated whether there was any moderating effect of the dimensions of the firm on the financial performance of mutual funds in Kenya.

The magnitude of the moderation effect was shown by the change in R^2 within the model summary. The t-test statistic was wont to test the importance of every individual predictor or variable and hypothesis. The p-value for every t-test was wont to make conclusions on whether to fail to simply accept or fail to reject the null hypothesis. The benchmark for this study for failure to reject or fail to simply accept the null hypothesis was level of significance of 5 percent. If the p-value was but 5% the null hypothesis was rejected and also the alternative hypothesis was accepted. Additionally, if the p-value was greater than 5% the null hypothesis was accepted and also the alternate hypothesis was rejected.

Table 3.1: Operationalisation and Measurement of Study Variables

Type	Variables	Symbol	Definition and calculation Method
Dependent variable	Financial performance	**Y**	• ROA=Net profit/Total Assets • ROE= Net Profit/Total Equity
Independent Variables	Operating cash flow management	$\mathbf{X_1}$	• OCF=Net cash flows from operations/Total assets
	Investing cash flow management	$\mathbf{X_2}$	• ICF=Net cash flows from investing / Total Assets
	Financing cash flow management	$\mathbf{X_3}$	• FICF=Net cash flows from financing /Total Assets
	Free cash flow	$\mathbf{X_4}$	• FCF=(EBIT+Dividends-Depreciation)/Total Assets
Moderating Variable	Size of the firm	**Z**	• Z= Logarithm transformation of Total Assets

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings and a discussion of the identical in line with the objectives of the study as guided by the techniques mentioned in chapter three. The information collected was cleaned, edited and arranged for analysis and presentation. Descriptive statistics and diagnostic tests were performed to validate the utilization of the techniques as appropriate. Correlation and multivariate analysis of the variables without and with the moderating variable and inferential statistics let alone their interpretations were considered instrumental in explaining the interactions between the effect of management of money flow and financial performance of mutual funds in Kenya.

The target population consisted of all 25 mutual funds in Kenya. The CMA had 25 mutual funds registered from 1st of January, 2011 to 31st December 2016. Twenty two (22) firms were however studied as data for the 2 of the three firms Natbank Trustee & Investment Services and that i & M Capital wasn't available since the three firms were newly registered within the year 2016 and had not submitted any financial reports to CMA for the study period. Old Mutual investment group data weren't available for analysis. This translates to roughly 88% of the target population, which is great representation. Gay, Airasian and Mills (2006) indicated that a sample size of 20% of the target population is adequate for a tiny low population of fewer than 1000 units.

4.2 Descriptive Studies

The study determined the central tendency measure for all the independent variables and moderating variables of the information including calculating for the mean, maximum, minimum, variance, skewness, kurtosis and Jarque-B values of the variables over time,

which was presented in tables and interpreted appropriately. The study used edited data so as to avoid material errors and inconsistencies.

4.2.1 Descriptive Statistical Analysis of Operating Cash Flow Management

Descriptive statistics for operating cash flow management are presented in table 4.1.

Table 4.1: Results of Descriptive statistics of OCF

	Mean	**Max**	**Min**	**Std.Dev**	**Skewness**	**Kurtosis**	**Jarque-B**	**Prob.**
OCF	0.6823	0.9968	0.0000	0.2720	-0.1716	1.5839	11.6772	0.0752

Results in table 4.1 indicate that operating cash from management average rate was 68.23% of the mutual funds for 132 observations, minimum and maximum value of 0.0000 and 0.9968 respectively and a regular deviation of 0.2720. This demonstrates that an outsized portion of mutual funds' cash was from operating activities. Operating cahs flow management reported negative Skewness of -0.1716 indicated that the distribution was negatively skewed and therefore the majority lied on the left tail of the distribution.

The kurtosis coefficient which measures of thickness of the tails of the distribution was 1.5839 and was considered to be moderate and implied it's within normality. Tabachnick and Fidell (2007) argued that skewness values should not be greater than 2 while kurtosis values should not be greater than 7 for data to be considered normal. The Jarque-Bera test value of 11.6772 with p-value 0.0752 for OCF was over 0.05, a sign that the study variable is approximately normally distributed and hence the study accepts the null hypothesis and concludes that the info were normally distributed (Gujarat, 2008).

4.2.2 Descriptive Statistical Analysis of Investing Cash Flow Management

Table 4.2 describe descriptive statistics on investment cash flow management for a period of six years.

Table 4.2: Results of Descriptive statistics of ICF

	Mean	Max	Min	Std.Dev	Skewness	Kurtosis	Jarque	Prob.
ICF	-0.0479	0.8887	-0.7989	0.2110	-0.2218	2.071	5.8290	0.0831

The ends up in Table 4.2 indicates that the common rate of investing cash from management for 132 observations was -4.79%, minimum and maximum value of -0.798 and 0.8887 respectively and a typical deviation of 0.2110. This demonstrated that mutual funds' cash was from investing activities. All mutual funds, however, reported negative skewness of -0.2218 on their cash flows to point out that the bulk lied on the left tail of the distribution. The kurtosis coefficient of 2.0710 which measured the thickness of the tails of the distribution, implied that the tail was very thick. Tabachnick and Fidell (2007) and Hair *et al*. (2007) argued that skewness values should not be greater than 2 while kurtosis values should not be greater than 7 for data to be considered normal. The Jarque-Bera test value of 5.8290 with p-value 0.0831for ICF was over 0.05, a sign that the variable data were approximately normally distributed and hence the study fails to reject the null hypothesis and conclude that the information was normally distributed (Gujarat, 2008).

4.2.3 Descriptive Statistical Analysis of Financing Cash flow Management

Table 4.3: Results of Descriptive statistics of FICF

	Mean	Max	Min	Std.Dev	Skewness	Kurtosis	Jarque	Prob.
FICF	0.0243	0.9413	-0.5773	0.2583	0.6951	2.4054	12.5741	0.0792

The leads to Table 4.3 indicate that financing cash from management average rate of two.43% for 132 observations had a minimum and maximum value of -0.5773 and 0.9413 respectively and a customary deviation of 0.2583. All mutual funds, however, reported positive skewness of 0.6951 on their cash flows to point out that the bulk fell on the correct tail of the distribution. The kurtosis coefficients of 2.4054, measured the thickness of the tails of the distribution and was considered to be within the appropriate range of seven. Tabachnick and Fidell (2007) and Hair *et al*. (2007) argued that skewness values should not be greater than 2 while kurtosis values should not be greater than 7 for data to be considered normal. The Jarque-Bera test value of 12.5741 with a p-value of 0.0792 for FICF was quite 0.05, a sign that the variable was approximately normally distributed and hence the study fails to reject the null hypothesis and conclude that the information was normally distributed (Gujarat, 2008).

4.2.4 Descriptive Statistical Analysis of Free cash flow management

Table 4.4: Results of Descriptive Statistics of FCF

	Mean	Max	Min	Std Dev	Skewness	Kurtosis	Jarque	Prob.
FCF	0.2014	0.9429	-0.6271	0.3350	0.2923	2.4593	3.4876	0.1748

The leads to Table 4.4 indicates that free cash from management average rate was 20.14% for 132 observations, minimum and maximum value of -0.6271 and 0.9429 respectively and variance of 0.3350. Skewness of 0.2923 indicated that the distribution with an asymmetric tail extended toward positive side. This means that a lot of mutual weren't utilizing their free cash flows above and thus majority lied on the correct tail of the distribution. The kurtosis coefficient of 2.4593, which measurement of the thickness of the tails of the distribution, was considered to be very high. Hair *et al*. (2007) argued that skewness values mustn't be greater than 2 while kurtosis values mustn't be greater than 7 for data to be considered normal. The Jarque-Bera test value of three.4876 with p-

value 0.1748 for FCRF was quite 0.05, a sign that the variable was approximately normally distributed and hence the study accept the null hypothesis and conclude that the information was normally distributed (Gujarat, 2008).

4.2.5 Descriptive Statistical Analysis of Size of the Firm

Results in Table 4.5 shows that the descriptive statistics of size of the firm.

Table 4.5: Results of Descriptive Statistics of Size of the Firm

	Mean	Max	Min	Std. Dev	Skewness	Kurtosis	Jarque	Prob.
Size	6.8218	9.3698	0.0000	1.0108	-0.6088	2.991	8.1544	0. 0801

Results in Table 4.5 shows that the scale of the firm (moderating variable) had a mean rate of 6.8218, a minimum of 0.0000 and a maximum of 9.3697 with a regular deviation of 1.0108. Results revealed a negative skewness of -0.6088 indicating that the bulk lied on the left tail of the distribution. Tabachnick and Fidell (2007) and Hair *et al*. (2007) argued that skewness values should not be greater than 2 while kurtosis values should not be greater than 7 for data to be considered normal. The Jarque-Bera test value of 8.1544 with p-value 0. 0801 for the scale of the firm was over 0.05, a sign that the variable is approximately normally distributed and hence the study fails to reject the null hypothesis and conclude that the information was normally distributed (Gujarat, 2008).

4.3 Diagnostic Tests Results

These are tests performed on the information variables to make sure conformity with the necessities and assumptions of the multivariate analysis techniques used and to make sure that the results are more robust and valid. The fixed and random effects model presupposes the existence of certain assumptions and one in all the assumptions refers to

the linearity of the parameters. The second assumption requires the expected, or mean, the worth of the error terms to be zero.

The third hypothesis refers to the speculation of homoscedasticity: the variance of the error terms must remain constant. The fourth postulation necessitates no autocorrelation involving two dissimilar error terms. The fifth supposition refers to the nonexistence of multicollinearity. In conclusion, the sixth postulation of normality in the distribution of the error terms by means of zero mean and stable variance $\square^2$ is from time to time assumed (Hill, Griffiths, & Lim, 2011).

4.3.1 Multicollinearity Test Results

Multicollinearity occurs when explanatory variables during a regression model are correlated. This correlation could be a problem because independent variables should be independent. During this study, variance inflation factor and tolerance limits were accustomed test for the presence of multicollinearity. The VIF is 1/Tolerance, it's always greater than or adequate to 1.

Table 4.6: Tolerance and Variance Inflation Factor ROA

Variables	Tolerance	VIF
OCF	0.719	1.392
INCF	0.752	1.330
FICF	0.704	1.421
FRFC	0.751	1.332
Z	0.741	1.350

Results in Table 4.6 the values for tolerance were 0.719, 0.752, 0.704, 0.751 and 0.741 quite 0.1 and VIF were 1.392, 1.330, 1.421, 1.332 and 1.350 are but 10 indicating that there was no multicollinearity. Tolerance value for a given experimental variable is a smaller amount than 0.1 and values of VIF that exceed 10 are often considered

indicating multicollinearity, but in weaker models values above 2.5 is also a cause for concern (Runkle *et al*., 2013).

Results in Table 4.7 indicated whether there was multicollinearity in ROE model. The OCF, INCF, FICF, FRFC and Z values for tolerance were 0.682, 0.696, 0.663, 0.695 and 0.696 respectively while values VIF were 1.466, 1.437, 1.508, 1.438 and 1.444 respectively. The tolerance value for respective variable quantity was but 0.1 and also the values of VIF were below 5 implying no multicollinearity. The rule of thumb is that if any of the VIF values exceed 5 or 10, it implies that the associated regression coefficients are poorly estimated thanks to multicollinearity (Cohen, West & Aiken, 2013).

Table 4.7: Tolerance and Variance Inflation Factor ROE

Variables	Tolerance	VIF
OCF	0.682	1.466
INCF	0.696	1.437
FICF	0.663	1.508
FRFC	0.695	1.438
Z	0.693	1.444

4.3.2 Autocorrelation Test Results

According to Gujarat (2009), autocorrelation occurs when the error terms are correlated with one another. In regression model the key assumption is that the error terms are independent of every other, during this study, the Durbin-Watson test was wont to test for the presence of autocorrelation between variables. Panel data exhibit a correlation between the error terms of a given cross-sectional unit at two different times. That leads OLS estimators to be inefficient. Within the presence of autocorrelation, the statistical significance of those estimators is not reliable and therefore the hypothesis-testing

procedure becomes suspect. Evie's computed the Durbin-Watson test for correlation in panel data models. This test examines the correlation within the idiosyncratic error terms between two subsequent periods and provided leads to Table 4.8.

Table 4.8: Measure of Autocorrelation - Durbin-Watson

Dependent Variable	Model	F	Durbin-Watson autocorrelation
ROA without Moderating	1	4.9286	1.9836
ROA with Moderating	3	4.6950	1.9636
ROE without Moderating	2	5.1265	1.9912
ROE with Moderating	4	4.8640	1.9855

Results in Table 4.8 shows that the worth for Durbin-Watson for models 1, 2, 3 and 4 were 1.9836, 1.9636, 1.9912 and 1.9855 respectively, implying that there's autocorrelation and this ensured the independence of errors and enhanced accuracy of the regression models. Gujarati (2003) observed that the Durbin-Watson statistic ranges from 0 to 4. Therefore the observations were statistically independent. a worth starting from 1.5 to 2.5 indicates that there's no presence of autocorrelation.

4.3.3 Normality Test Results

Inferential statistics are proposed to understand whether there's an underlying correlation within the actual variables for purposes of chronological analysis. The variables were subjected to standard tests to test whether the regression residuals followed a normal distribution. During this study, the Jargue-Bera test was wont to test whether the regression residuals followed a standard distribution with a null hypothesis that the residuals are normally distributed and therefore the alternative hypothesis is that the info is not normally distributed. Jarque-Bera test is predicated on the sample skewness and sample kurtosis (Neeraj, 2010). Leads to table 4.9 present the Normality test ROA and ROE.

Table 4.9: Normality Test ROA and ROE

	Mean	Max	Min	Std.Dev	Skewness	Kurtosis	Jarque	Prob.
ROE	0.1073	0.4712	-0.3512	0.1556	-0.6775	1.8118	17.8631	0.0605
ROA	0.0906	0.3987	-0.3149	0.1379	-0.5745	1.7522	15.8246	0.0759

(**)……………significant at 5%

As shown in Table 4.9 above, for all mutual funds in Kenya the typical ROE over the amount was 10.73% with a minimum value of -0.3512, the most value of 0.4712 and a customary deviation of 0.1556. This showed that though on the average mutual funds had a positive return on equity, the bulk of mutual funds ROE are to the correct of the distribution. The mean for ROA was 9.06% with a customary deviation of 0.1379 and a minimum and maximum of -0.3149 and 0.3987 respectively. This shows that mutual funds were generally profitable to reward investment in assets. The fluctuation of returns in ROE was however more than ROA as evidenced by standard deviations.

Results also indicated that the kurtosis coefficient during which measures of thickness of the tails of the distribution was 1.7522 and skewness -0.5745 for ROA and kurtosis coefficient of 1.8118 and skewness -0.6775 for ROE were considered to be within the accepted range of normality. Tabachnick and Fidell (2007) and Hair *et al*. (2007) argued that skewness values mustn't be greater than 2 while kurtosis values mustn't be greater than 7 for data to be considered normal. The Jarque-Bera test value of 15.8246 and 17.8631 with a p-value of 0.0759 and 0.0605 for ROA and ROE respectively were over 0.05, a sign that each one variables are approximately normally distributed and hence the study fails to reject the null hypothesis and conclude that the info was normally distributed (Gujarat, 2008).

4.3.4 Heteroscedasticity Test Results

Ordinary statistical method regression assumes that each one residuals are drawn from a population that contains a constant variance (homoscedasticity). Heteroscedasticity

could be a situation where the variance of the residual term varies with changes in explanatory variables (Gujarat, 2008). These issues were addressed by the specification of a random-effects model with robust standard errors. However, the appropriateness of such a model still remains to be established. the appliance of a random-effects model presupposes the existence of unobserved effects within the model, that is, the presence of heterogeneity between the individuals to account for.

In this case, the presence of heteroscedasticity was identified by the utilization of Breusch-Godfrey LM test statistic Heteroskedasticity is perceived as a selected feature of cross-sectional data, but that does not mean it cannot be related to time-series data (Birău, 2012). The null hypothesis was no heteroscedasticity for all models with or without a moderator.

Table 4.10: Heteroscedasticity Test ROA

Model	Statistic	d.f	Prob.
ROA without Moderating	287.5496	231	0.0067
ROA with Moderating	288.7061	231	0.0059

(**)……………significant at 5%

Results in table 4.10 indicated that ROA regression model without moderating because the response variable, the test yielded a statistic value of 287.5496, df 231 with a p-value of 0.0067 and moderately and therefore the test yielded a statistic value of 288.7061, df 231 with a p-value of 0.0059 as shown in table 4.5. Supported the output the p-values for both models were but 5% and thus there was no heteroskedasticity problem and hence the null hypotheses were accepted to indicate the none existence of heteroscedasticity.

Results in Table 4.11 present Heteroscedasticity test on ROE model.

Table 4.11: Heteroscedasticity Test Statistics ROE

Model	Statistic	d.f	Prob.
ROE without Moderating	274.1102	231	0.0272
ROE with Moderating	281.2086	231	0.0134

(**)……………significant at 5%

Results in Table 4.11 showed that for a regression model with ROE because the response variable, the test yielded a statistic value of 274.1102, df 231 with a p-value of 0.0272 immoderately and value of 281.2086, df 231 with a p-value of 0.0134 as shown in Table 4.11. Supported the output the p-value is a smaller amount than 5% and so there was no heteroskedasticity problem and hence the null hypothesis was accepted to suggest the none existence of heteroscedasticity. Supported the output the p-values for both models were but 5% and so there was no heteroskedasticity problem and hence the null hypotheses were accepted to suggest the none existence of heteroscedasticity.

4.3.5 Pairwise Granger Causality Test

In this study Pairwise Granger causality test was accustomed test the hypothesis regarding the presence and also the direction of causality between management of money flow and financial performance of mutual funds. The null hypothesis for the granger causality test is that lagged values do explain the variation in an exceedingly variable. The test was performed so as to search out pot if two (2) variables are related at a direct moment in time. An analysis of the pairwise correlations between the explanatory variables indicated more precision whether two of them are highly correlated or not. The pairwise correlations among independent variables are shown in Table 4.12. The results indicate the absence of perfect correlation between any pair of

explanatory variables. Yet, a number of the pairs of variables demonstrate noteworthy correlations.

Table 4.12: Granger causality Test Results on Returns on Assets (ROA)

Null Hypothesis	Obs	F- Statistic	Prob.	Decision	Causality Type
OCF≠ROA	88	1.7409	0.1817	$DNRH_0$	No Causality
ROA≠OCF		0.0961	0.9083	$DNRH_0$	No Causality
ICF≠ROA	88	1.1360	0.3260	$DNRH_0$	No Causality
ROA≠ICF		0.0143	0.9857	$DNRH_0$	No Causality
FICF≠ROA	88	0.0669	0.9352	$DNRH_0$	No Causality
ROA≠FICF		7.4921	0.0010	$RejectH_0$	One way
FCF ≠ ROA	88	0.5643	0.5709	$DNRH_0$	No Causality
ROA≠ FCF		1.50722	0.2275	$DNRH_0$	No Causality
Z≠ ROA	88	6.2106	0.0030	$RejectH_0$	One way
ROA≠ Z		1.5072	0.2275	$DNRH_0$	No Causality

Alpha (α) = 0.05

Decision rule: reject H_0 if P-value < 0.05

Key: DNR = Do not reject;

≠ : Does not Granger cause

Results in Table 4.12 indicated that the p-values for all lagged values of ROA respectively are regressed against operating income, investing income, financing cash flow, free cash flow and size of the firm all combined are all greater than 5% level of significance hence the null hypotheses that financial performance does not granger cause management of money flow is not rejected. This can be in agreement with Dragota *et al*. (2008) who observed that profitability does not Granger cause capital structure of listed firms in Romania.

In summary, the tests imply that while one component of management of cash flow does not granger cause financial performance, a mix of the identical does. Financial performance (ROA) does not however granger cause cash flow management. a 1 way causal relationship was established between financing cash flow management, Size of the firm (moderating variable) and Return on Assets. No causal relationships were established between operating cash flow management, investing cash flow management, free cash flow management with returns on assets.

Results in Table 4.13 present granger causality test on return on equity.

Table 4.13: Granger causality Test on Returns on Equity (ROE)

Null Hypothesis	Obs	F- Statistic	Prob.	Decision	Causality Type
OCF$\neq$ROE	88	0.1517	0.8594	DNRH$_0$	No Causality
ROE$\neq$OCF		0.1653	0.8478	DNRH$_0$	No Causality
ICF$\neq$ROE	88	1.3664	0.2606	DNRH$_0$	No Causality
ROE$\neq$ICF		0.0589	0.9427	DNRH$_0$	No Causality
FICF$\neq$ROE	88	0.4581	0.6340	DNRH$_0$	No Causality
ROE$\neq$FICF		7.4738	0.0010	RejectH$_0$	One way
FCF $\neq$ ROE	88	1.2587	0.2893	DNRH$_0$	No Causality
ROE$\neq$ FCF		1.6195	0.2041	DNRH$_0$	No Causality
Z $\neq$ ROE	88	1.8434	0.1646	DNRH$_0$	No Causality
ROE$\neq$ Z		1.0186	0.3655	DNRH$_0$	No Causality

Alpha (α) = 0.05

Decision rule: reject H$_0$ if P-value < 0.05

Key: DNR = Do not reject;

$\neq$: Does not Granger cause

Results in table 4.13 indicated that the p-values for all lagged values of ROE respectively are regressed against operating cash flow, investing cash flow, financing cash flow, free cash flow and size of the firm all combined are all greater than 5% level of significance hence the null hypotheses that financial performance does not granger cause management of cash flow was not rejected. This is in agreement with Dragota *et al.* (2008) who observed that profitability does not Granger because capital structure of listed firms in Romania. Results indicate that a one way direction causal relationship was established between Return in Equity and financing cash flow management. No causal relationships were established between returns on equity and Operating cash flow management, investing cash flow management, free cash flow management and Size of the firm.

4.4 Correlation Analysis Results

Correlation could be a bivariate analysis that measures the strength of association between two variables and also the direction of the link. Multiple correlation analysis relies on the idea that the independent variables don't seem to be correlated with one another. In terms of the strength of a relationship, the worth of the parametric statistic varies between +1 and -1 during this study, the Spearman rank-difference correlation coefficient was wont to determine the magnitude and direction of the relationships between the variable quantity and independent variables in line with Mwangi, Muturi and Ngumi (2016), the values of the parametric statistic (R) are imagined to be between -1 and +1. a worth of 0 implies no relationship, +1 parametric statistic indicates that the 2 variables are perfectly correlated in a very positive linear sense, that is, both variables increase together while a values of -1 parametric statistic indicates that two variables are perfectly correlated in a very negative linear sense, that is, one variable increases because the other decreases (Collis & Hussey, 2013).

4.4.1 ROA Correlation Analysis

Results in Table 4.14 indicates that there was a positive and insignificant relationship between operating cash flow management and Financial Performance (ROA) of mutual funds in Kenya as indicated by correlation of 0.114240. The p-Value of 0.1921 was quite the suitable significance level (α), hence the null hypothesis that there was no relationship between Operating cash flow management and ROA of Mutual funds in Kenya was accepted and also the alternative hypothesis was rejected.

Table 4.14 present return on assets correlation finding results.

Table 4.14: ROA Correlation

	ROA	OCF	ICF	FICF	FRECF	SIZE(Z)
ROA	1					
Sig	0.0000					
OCF	0.1142	1				
Sig.	0.1921	0.000				
ICF	-0.2058	-0.1160	1			
Sig.	0.0179	0.1850	0.000			
FICF	-0.4088	0.0575	-0.0093	1		
Sig	0.0000	0.5124	0.9157	0.000		
FRECF	0.3983	0.1880	-0.1816	-0.3455	1	
Sig.	0.0000	0.0309	0.0371	0.0000	0.0000	
SIZE(Z)	0.3301	0.0151	0.0472	-0.0559	0.2814	1
Sig	0.0001	0.8630	0.5905	0.5240	0.0011	

**. Correlation is significant at the 0.05

There was a positive and significant relationship between free cash flow management and Financial Performance (ROA) of mutual funds in Kenya as indicated by correlation of 0.398391. The p-Value of 0.0000 was but the suitable significance level (α), hence the

null hypothesis that there's no relationship between free cash flow management and ROA of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted.

There was a positive and significant relationship between the dimensions of the firm size and Financial Performance (ROA) of mutual funds in Kenya as indicated by correlation of 0.3301 respectively. The p-Value of 0.0001 for the dimensions of the firm respectively was but the suitable significance level (α), hence the null hypothesis that there's no relationship between the dimensions of the firm's size and ROA of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted.

There was a big negative relationship between investing cash flow management, and Financial Performance (ROA) of mutual funds in Kenya as indicated by correlation of -0.2058. The p-Value of 0.0179 was but the suitable significance level (α), hence the null hypothesis that there was no relationship between investing cash flow management and ROA of mutual funds in Kenya was rejected and also the alternative hypothesis accepted. There was a big negative relationship between financing cash flow management and Financial Performance (ROA) of mutual funds in Kenya as indicated by correlation of -0.4088 respectively. The p-Value of 0.0001 was but the suitable significance level (α), hence the null hypothesis that there was no relationship between financing cash flow management and ROA of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted. This was to make sure there have been no highly correlated variables so on avoid the matter of multicollinearity within the model.

4.4.2 ROE Correlation Analysis

Results in Table 4.15 indicate that there was a positive and insignificant relationship between operating cash flow management and Financial Performance (ROE) of mutual funds in Kenya as indicated by correlation of 0.0376. The p-Value of 0.6682 is quite the suitable significance level (α), hence the null hypothesis that there was no relationship between Operating cash flow management and ROE of Mutual funds in Kenya was

accepted and also the alternative hypothesis was rejected. There was a positive and significant relationship between free cash flow management and Financial Performance (ROE) of mutual funds in Kenya as indicated by correlation of 0.4075. The p-value of 0.0000 was but the suitable significance level (α), hence the null hypothesis that there's no relationship between free cash flow management and ROA of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted.

There was a positive and significant relationship between the dimensions of the firm and Financial Performance (ROE) of mutual funds in Kenya as indicated by correlation of 0.2960. The p-Value of 0.0006 was but the suitable significance level (α), hence the null hypothesis that there's no relationship between free cash flow management, size of the firm and ROA of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted.

Table 4.15: ROE Correlation

	ROE	OCF	ICF	FICF	FRECF	SIZE(Z)
ROE	1					
Sig	0.0000					
OCF	0.0376	1				
Sig	0.6682	0.0000				
ICF	-0.2593	-0.1160	1			
Sig	0.0027	0.1850	0.0000			
FICF	-0.4007	0.0575	0.0273	1		
Sig	0.0000	0.5124	-0.0093	0.0000		
FRECF	0.4075	0.1880	-0.1816	-0.3455	1	
Sig	0.0000	0.0309	0.0371	0.0000	0.0000	
SIZE(Z)	0.2960	0.0151	0.4725	-0.0559	0.2814	1
Sig	0.0006	0.8630	0.5905	0.5240	0.0011	0.0000

**. Correlation is significant at the 0.05

There was a negative and significant relationship between investing cash flow management and Financial Performance (ROE) of mutual funds in Kenya as indicated

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by correlation of -0.2593. The p-Value of 0.0027 was but the suitable significance level (α), hence the null hypothesis that there was no relationship between investing cash flow management and ROE of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted. There was a negative and significant relationship between financing cash flow management and Financial Performance (ROE) of mutual funds in Kenya as indicated by correlation of -0.4007. The p-Value of 0.0000 was but the suitable significance level (α), hence the null hypothesis that there was no relationship between financing cash flow management and ROE of mutual funds in Kenya was rejected and also the alternative hypothesis was accepted.

4.5 Choice of Model: Testing for the Validity of the Fixed Effects Model

This study employed the utilization of the Hausman test to work out the foremost suitable model. The null hypothesis (H0) for this Chi-square test was that the random effect model is preferred and therefore the alternative hypothesis (H1) was that fixed effect model was the popular model for the test and was to be rejected if the p-value were but 5% to imply that fixed model is preferred (Green, 2008).

Table 4.16: Correlated Random Effects - Hausman Test ROA

Test Summary			Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
Cross-section random Model 1			12.1132	4	0.0165	
Cross-section random Model 2			10.4707	4	0.0332	
Test cross-section random effects						
Variable	Model	Variable	Fixed	Random	Var(Diff)	Prob.
ROA	1	OCF	0.1498	0.1176	0.0003	0.0929
		INC	0.0202	0.0105	0.0001	0.4376
		FICF	-0.1843	-0.2250	0.0004	0.0629
		FCF	-0.0029	0.0486	0.0006	0.0452
	2	OCF*Z	0.0194	0.0167	0.0000	0.3153
		INC*Z	0.0014	0.0001	0.0000	0.4323
		FICF*Z	-0.0247	0.0055	0.0000	0.0901
		FRECF*Z	-0.0002	-0.0301	0.0000	0.0840

Model 1without moderator; Model 2 with Moderator (size of the firm).

(**)……………significant at 5%

Results in Table 4.16 shows the results from the Hausman test. The Chi-square test statistic for ROA model 1 and model 2 was 12.1132 and 10.4707 respectively with a big values. of 0.0165 and 0.0332 respectively which is critical at 5 percent level of significance which therefore means the null hypothesis was rejected in favour of the fixed effects model. Therefore, fixed effects model was accepted as suitable for this equation as recommended by Green (2008).

Table 4.17: Correlated Random Effects - Hausman Test ROE

Test cross-section random effects						
Test Summary			Chi-Sq. Statistic		Chi-Sq. d.f.	Prob.
Cross-section random Model 1			15.2969		4	0.0041
Cross-section random Model 2			13.7169		4	0.0083
Test cross-section random effects						
Variable	Model	Variable	Fixed	Random	Var(Diff)	Prob.
ROE	1	OCF	0.1130	0.0956	0.0004	0.3990
		INC	0.0067	-0.0079	0.0001	0.2683
		FICF	-0.1629	-0.2233	0.0005	0.0105
		FCF	-0.0390	0.0350	0.0007	0.0080
	2	OCF*Z	0.0124	0.0128	0.0000	0.9041
		INC*Z	-0.0005	-0.0027	0.0000	0.2325
		FICF*Z	-0.0207	-0.0290	0.0000	0.0122
		FCF*Z	-0.0056	0.0034	0.0000	0.0129

Model 1without moderator; Model 2 with Moderator

(**)……………significant at 5%

Results in Table 4.17 shows the results from the Hausman test. The Chi-square test statistic is for ROE model 1 and model 2 is 15.2969 and 13.7169 respectively with a big prob. of 0.0041and 0.0083 respectively which is critical at 5 percent level of significance

which therefore means the null hypothesis was rejected in favour of the fixed-effects model. Therefore the fixed-effects model was accepted as suitable for this study.

4.6. Multivariate Analysis Results

Regression analysis was conducted to empirically determine the effect of management of money flow on financial performance.

4.6.1 Operating Cash flow Management and Financial Performance

This was the primary objective the researcher analyzed the effect of operating income management on the financial performance of the mutual funds in Kenya.

Regression analysis was conducted to empirically determine whether operating cash flow had a major effect on financial performance. Ends up in Table 4.19 present panel estimation of operating cash flow management and financial performance.

Table 4.18: Panel estimation of OCF and Financial Performance -Fixed Model

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic)	Durbin-Watson
ROA	0.5305	0.4086	0.1060	4.3526	0.0000	1.9579
ROE	0.5639	0.4507	0.1152	4.9814	0.0000	1.9180

Regression ends up in table 4.18 show that the worth R squared of 0.5301 indicates that 53.01% for ROA and of 0.564 that 56.4% for ROE of the panel's variance within the financial performance of mutual funds in Kenya is explained by the variance in operating cash flow management within the linear model. The result shows that operating cash flow management is statistically significant in explaining the financial performance of mutual funds in Kenya. The results indicate that the goodness of suited

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the regression between operating cash flow management and financial performance was suitable within the statistical regression.

An F statistics of 4.3526 and 4.9814 for ROA and ROE respectively, supported by the probability of (0.0000) and (0.0000) for ROA and ROE respectively indicate that the models were statistically significant at 5% level of significance.

Table 4.19 present coefficient results for the effect of operating cash flow management on financial performance.

Results in Table 4.19 show that the coefficient of operating cash flow management was 0.1191. This demonstrated the positive effect of operating cash flow management on ROA. The p-value was 0.0082 with regard to ROA showing a major effect on ROA. Therefore we fail to simply accept the null hypothesis that operating cash flow management has no significant effect on ROA of mutual funds in Kenya and fails to reject the choice hypothesis.

Table 4.19: Coefficient Results for the Effect of OCF and Financial Performance

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	0.0093	0.0315	0.2951	0.7685
	OCF	0.1191	0.0442	2.6947	0.0082
ROE	C	0.0508	0.0343	1.4824	0.1412
	OCF	0.0826	0.0480	1.7190	0.0886

(**)……………significant at 5%

With reference to ROE, the results show that the coefficient of operating cash flow management was 0.0826. This demonstrated the positive effect of operating cash flow management on ROE. The p-value was 0.0886 which is larger than a 5% level of significance, this means that operating cash flow management had an insignificant positive effect on ROE. The possible reason for the insignificant relationship between

operating income management and financial performance ROE can be as a results of the present assets of the mutual funds were insufficient or the assets are ineffectively utilized to realize a return. Therefore the study fails to reject the null hypothesis that operating income management has no significant effect on ROE of mutual funds in Kenya and fail to simply accept the choice hypothesis.

The ROA and ROE models' findings are in keeping with Baumol's deterministic theory of money management and Financial life cycle theory. Result for positive relationship was obtained by (Ghodrati & Abyak, 2014), the results showed that there have been positive and significant relationship between operating cash flow and are positively related to financial management. Results from Amah, Micheal and Ihendinihu (2016) showed that cash flow from operating activities had a major and positive relationship with performance. The findings are in line with the study by Habib (2011) who revealed that there was a positive relationship between operating cash flow and stock return while profitability is short-term. The results of Jintaviwatwong and Suntraruk (2012) showed that current operating cash flows are positively related to future operating cash flows and future stock prices. The findings are in keeping with the study done by Al-Debi'e (2011) and Darabi, Adeli and Torkamani (2012) who found that there was a meaningful positive relationship among the operating cash flows, investment, and dividends. The findings contradict agency theory and free income theory and therefore the findings by (Mong'o, 2010) that operating cash flow management was found to be negatively associated with financial performance. The conflicting findings rely on the market environment, study perspective, sample determination, and variable selection.

The output yields the model;

ROA= $0.009 + 0.119X_1$

4.6.2 Investing Cash flow Management and Financial Performance

The second objective of the study was to look at the effect of investing cash flow management on the financial performance of mutual funds in Kenya.

Regression ends up in Table 4.20 indicate the goodness of appropriate the regression between investing income management and financial performance was satisfactory within the statistical regression.

Table 4.20: Panel estimation of ICF and Financial Performance -Fixed Model

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic	Durbin-Watson
ROA	0.497872	0.3675	0.1096	3.8192	0.0000	1.8510
ROE	0.551560	0.4351	0.1169	4.7375	0.0000	1.8877

Table 4.20 show that R squared of 0.4978 indicating 49.8 % for ROA of the variances in financial performance of mutual funds in Kenya are explained by the variation in investing cash flow management within the linear model. The result shows that investing cash flow management is statistically significant in explaining variation in financial performance of mutual funds in Kenya. An F statistic of three.8192 for ROA indicated that the model was significant, this can be supported by the probability of (0.0000) which but the standard probability of (0.05) and hence significant.

With regards to ROE model, an R squared of 0.5515 indicates that 55.2% for ROE of the variation within the financial performance of mutual funds in Kenya is explained by the variation in investing cash flow management within the linear model. The result reveals that investment cash flow management is statistically insignificant in explaining the financial performance of mutual funds in Kenya. An F-statistic of 4.7375 for ROE

indicated that the model was significant, this can be supported by the probability of (0.0000) but the standard probability of (0.05) and hence significant.

Results in table 4.21 present coefficient results for the effect of investigating cash flow on financial performance.

Results in Table 4.21 show that the Beta coefficient of investing cash flow management was 0.0086. This demonstrated the positive effect of investing cash flow management on ROA. The p-value was 0.8692 with relevance ROA implying an insignificant effect on ROA. With respect to ROE, the results show that the Beta coefficient of investing cash flow management was 0.0024. This demonstrated the positive effect of investing cash flow management on ROE. The p-value was 0.9649 with relevance ROE showing an insignificant effect on ROE. Therefore the study fails to reject the null hypothesis that investing cash flow management has no significant effect on the financial performance of mutual funds in Kenya and fails to simply accept the choice hypothesis.

Table 4.21: Coefficient Results for the Effect of ICF and Financial Performance

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	0.091042	0.009863	9.230545	0.0000
	ICF	0.008572	0.051947	0.165022	0.8692
ROE	C	0.107384	0.010516	10.21161	0.0000
	ICF	0.002444	0.055385	0.044127	0.9649

The ROA and ROE model findings are per Baumol's deterministic theory of money management and financial life cycle theory advanced by Mueller (1972) who postulate that as Companies investment opportunities decline while firms mature their cash flows increase substantially. The study is in tandem with a study by Nwanyanwu (2015) who revealed that there was a positive relationship between investing cash flow position and earnings. The study findings are in line with the results of the study conducted by

Kemboi (2010) and Jafari, Gord and Beerhouse (2014) who revealed that cash flow from investments had a positive and significant effect on financial performance. The study contradicts the study results of Nwakaego, Ikechukwu and Ifunanya (2015) who observed that investing cash flow had a major negative relationship with corporate performance. The results also contradict that of Moeinaddin *et al*. (2013) and Wijewaradana and Munasinghe (2015) who revealed that investment and financing cash flow activities had a major and negative relationship with performance. The conflicting empirical results depend upon the industry background and market environment.

4.6.3 Financing Cash flow Management and Financial Performance

The third objective of the study was to research the effect of financing cash flow management on the financial performance of mutual funds in Kenya.

Regression leads to Table 4.22 present the effect of financing cash management on financial performance.

Table 4.22: Panel estimation of FICF and Financial Performance -Fixed Model

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic)	Durbin-Watson
ROA	0.5441	0.4258	0.1044	4.5988	0.0000	1.9187
ROE	0.5803	0.4714	0.1130	5.3269	0.0000	1.9774

Regression leads to Table 4.22 show that R squared of 0.544199 for ROA indicates that 54.4% of the variation within the financial performance of mutual funds in Kenya is explained by the variation in financing cash flow management within the linear model. The result revealed that financing cash flow management is statistically significant in explaining the variation of the financial performance of mutual funds in Kenya. An F statistic of 4.5988 for ROA indicated that the model was significant. this is often

supported by the probability of (0.0000) but the traditional probability of (0.05) hence significant.

With regards to ROE, R squared of 0.5803 for ROE indicates that 58.0% of the variances in financial performance (ROE) of mutual funds in Kenya are explained by the variances in financing cash flow management within the linear model. An F statistic of 5.3269 indicated that the model was significant, this is often supported by the probability value of 0.0000. The reported probability of 0.0000 is a smaller amount than the traditional probability of (0.05) hence significant.

The ends up in Table 4.23 indicated that the Beta coefficient of financing cash flow management with relevance ROA was -0.1556 hence financing cash flow had a negative effect on ROA. The p-value was 0.0015 for ROA which was but a 5% level of significance. This means that financing cash flow management had a big negative impact on ROA.

Table 4.23: Coefficient Results for the Effect of FICF and Financial Performance

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	0.0944	0.0091	10.2994	0.0000
	ICF	-0.1556	0.0477	-3.2558	0.0015
ROE	C	0.1106	0.0099	11.1480	0.0000
	ICF	-0.1382	0.0517	-2.6716	0.0088

With regards to ROE, the results found that the coefficient of financing cash flow management with relevance ROE was -0.1382, hence financing cash flow had a negative effect on ROE. The p-value was 0.0088 for ROE which was but a 5% level of significance. This means that financing cash flow management had a big negative impact on ROE. Therefore we fail to simply accept the null hypothesis that financing

cash flow management has no significant effect on the financial performance of mutual funds in Kenya and fails to reject the choice hypothesis.

The findings for ROA and ROE Models are in step with the trade-off theory and agency theory. The study findings are in line thereupon of Ali *et al*. (2013) and Chikashi (2013) which showed that the company's performance and financing cash flow had a big negative effect. The study is additionally supported by that of Thanh and Nguyen (2013) who discovered that income encompasses a negative relationship with firms, return on equity, while assets had a negative association with return on assets. The study is supported by results of (Ndungu & Oluoch, 2016) who showed that cash flow from investing, financing and free cash flows all had a negative effect on the market performance of construction companies.

The study contradicts that of Poorzamani and Khademi (2014) who found that there was an insignificant positive relationship between corporate governance factors and income resulting from financing activities and within the capital market. The study by Hamza, Mutala and Antwi (2015) revealed that SME financial performance was positively associated with the efficiency of money management (ECM) at a 1 percent significance level. The results also contradict a study by Mirfakhraldini, Moeinaldin and Ebrahimpour (2009) who found that the financing and investment cash flows and current earnings plus depreciation expense had a meaningful and positive relationship with performance. The conflicting findings rely on the industry background and methodology differences.

The output yields the models;

ROA= $0.094-0.155X_3$

ROE= $0.111-0.138X_3$

4.6.4 Free Cash flow Management and Financial Performance

The fourth specific objective was to gauge the effect of free cash flow management on the financial performance of mutual funds in Kenya. Regression leads to Table 4.24 present the effect of financing cash management on financial performance.

Table 4.24: Panel estimation of FCF and Financial Performance -Fixed Model

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F- statistic	Prob (F- statistic	Durbin- Watson
ROA	0.4990	0.3690	0.1095	3.8377	0.0000	1.8428
ROE	0.5520	0.4357	0.1168	4.7464	0.0000	1.8900

Regression ends up in Table 4.24 show R squared of 0.4990 for model ROA indicates that 49.9% of the variances in financial performance (ROA) of mutual funds in Kenya are explained by the variances in free cash flow management within the linear model. The result analysis showed that free cash flow management is statistically significant in explaining the financial performance of mutual funds. An F statistic of three.44 indicated that the combined model was significant for model ROA. This is often supported by the prob. (F-Statistic) of (0.0000) for model ROA which is over the standard probability of (0.05) hence significant.

With regards to the ROE model, an R squared of 0.5520 for model ROE indicates that 55.2% of the variances in financial performance (ROE) of mutual funds in Kenya are explained by the variances in free cash flow management within the linear model. The result analysis showed that free cash flow management is statistically significant in explaining the financial performance of mutual funds. An F statistic of 4.7464 indicated that the combined model was significant for model ROE. This is often supported by the probability value of 0.0000 for model ROE. The reported prob. (F-Statistic) of 0.0000 is a smaller amount than the standard probability of (0.05) hence significant.

Results in Table 4.25 show that the coefficient of free cash flow management with reference to the ROA model was 0.024, hence free income management had a positive effect on ROA. The p-value was (0.5987) for model ROA which is over a 5% level of insignificance respectively. This means that free cash flow management had an insignificant positive impact on ROA.

Table 4.25: Coefficient Results for the Effect of FCF and Financial Performance

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	0.0857	0.0132	6.4691	0.0000
	FCF	0.0241	0.0457	0.5278	0.5987
ROE	C	0.1105	0.0141	7.8131	0.0000
	FCF	-0.0161	0.0488	-0.3306	0.7416

With regards to ROE, the results show that the coefficient of free cash flow management with relevance ROE was -0.0161, hence free cash flow management had a negative effect on ROE. The p-value was 0.7416 for model ROE which is quite a 5% level of significance respectively. This means that free cash flow management had an insignificant impact on ROE. Therefore the study fails to reject the null hypothesis that free income management has no significant effect on the financial performance of mutual funds in Kenya and fails to just accept the choice hypothesis.

The study findings for the ROA model are in step with Baumol's deterministic theory of money management and in line with a study by the study of Saez and Gutierrez (2015) who revealed that relations between free cash flow and dividend yield are positive. The study is supported by Wambua (2013) found that free cash flow had positive effects on financial performance. Also, inconsistent with results from a study by Tijjani and Sani, (2016) and Cheng, Cullina and Zhang (2014) who revealed that free cash flow and earnings per share had positive effects on the dividend policy. The study concurs

thereupon of Zurigat, Sarwati and Aleassa (2014) who found that free cash flows had positive effects on the dividend policy. The study findings for ROA model of this study contradict with the free cash flow theory (Jensen, 1986) and agency theory and empirical findings of Zeitun, Tian and Keen (2007) who revealed that firm's income decreases corporate failure and free income increases the probability of corporate failure. The findings also contradict a study by Zhou *et al.* (2012) and Chalak and Mohammadnezhad (2012) who revealed that the free cash flow of an organization is negatively linear-correlated to its financial performance. The study also contradicts a study by Galogah, Pouraghajan and Makrani (2013) who found that there was a negative and significant relationship between free cash flows and stock returns.

The study findings for the ROE model of this study are in step with free cash flow theory advanced by Jensen (1986) who postulates that Jensen (1986) who postulates that free cash flow is inversely associated with financial performance. The study is in line with the empirical findings of Galogah, Pouraghajan and Makrani (2013) who found that there was a negative and significant relationship between free cash flows and stock returns Zhou *et al*. (2012) and Chalak and Mohammadnezhad (2012) who revealed that the free cash flow of an organization is negatively linear-correlated to its financial performance. However, many researchers reached inconsistent conclusions, which showed free cash flow had a direct correlation with financial performance. The study contradicts Baumol's deterministic theory of cash flow management and a study by Zeitun, Tian and Keen (2007) who revealed that a firm's cash flow decreases corporate failure and free cash flow increases the probability of corporate. The study also contradicts a study by the study of Saez and Gutierrez (2015) who revealed that relations between free income and dividend yield are positive. The study disagrees with study by Wambua (2013) that found that free cash flow had positive effects on financial performance. Similarly, the results are, inconsistent with results from a study by Tijjani and Sani, (2016) and Cheng, Cullina and Zhang (2014) who revealed that free income and earnings per share had positive effects on the dividend policy. The study contradicts a study by Zurigat, Sarwati and Aleassa (2014) found that free cash flows had positive

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effects on financial performance. The conflicting findings depend upon the market environment, variable selection and also the formula for calculating free income is not uniform.

4.6.5 Effect of Size of the Firm on Financial Performance of Mutual Funds

The fifth objective was to assess the moderating effect of the scale of the firm on the connection between the management of cash flow on the financial performance of mutual funds in Kenya.

Regression leads to Table 4.26 indicate the goodness of suitable the regression between moderating effect (size of the firm) and financial performance was satisfactory within the rectilinear regression. An R squared of 0.5093 for model ROA indicates that fifty.9% of the variation in financial performance (ROA) of mutual funds in Kenya is explained by the variation in size of the firm within the linear model. The result shows that the scale of the firm is statistically significant in explaining the variation financial performance of mutual funds in Kenya. An F statistic of three.9989 indicated that the combined model was significant. This can be supported by the probability (F-statistics) value of (0.0000) for the ROA model. The reported probability of (0.0000) is a smaller amount than the traditional probability of (0.05) hence significant.

Table 4.26: Panel estimation of Size of the Firm and Financial Performance

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic)	Durbin-Watson
ROA	0.5093	0.3819	0.1083	3.9989	0.0000	1.8721
ROE	0.5543	0.4386	0.1165	4.7913	0.0000	1.8982

With regards to ROE, an R squared of 0.5543 for model ROE indicates that 55.4% of the variance in financial performance (ROE) of mutual funds in Kenya is explained by the

variance in size of the firm within the linear model. The resulting review that cash management is statistically significant in explaining the financial performance of mutual funds in Kenya. An F statistic of 4.7913 indicated that the combined model was insignificant. This can be supported by the prob. (F-statistic) value of 0.0000 for the ROE model. The reported probability of 0.0000 is a smaller amount than the traditional probability of (0.05) hence significant.

Table 4.27: Coefficient Results for the Effect of Size of the firm and Financial Performance

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	0.0271	0.0414	0.6551	0.5138
	Size	0.0093	0.0059	1.5698	0.1195
ROE	C	0.0721	0.0446	1.6174	0.1088
	Size	0.0051	0.0063	0.8076	0.4211

Results in table 4.27 show that the Beta coefficient of size of the firm with relevance ROA was 0.0093, hence size of the firm had a positive effect on ROA. The p value was 0.1195 for model ROA which is quite 5% level of significance respectively. This indicate that size of the firm had an insignificant impact on ROA.

With regards to ROE results show that the coefficient of size of the firm with relevance ROE was 0.0051, hence size of the firm had a positive effect on ROE. The p value was 0.4211 for model ROE which is quite 5% level of significance respectively. Therefore, the hypothesis that Size of the firm has no effect on the link between management of cash flow and financial performance of mutual funds in Kenya was accepted and therefore the alternative hypothesis was rejected.

The study findings for ROA and ROE models are per a study by Taani and Banykhaled (2011) who revealed that an insignificant relationship between firm size and earnings

per share. The study concurs with the study by Kartika, Handayani and Dwiputra (2016) and Pouraghajan, Mansourinia, Bagheri and Emamgholipour (2013) who revealed that there was a positive and significant relationship between financial ratios and firm size with earnings per share.

4.7 Multiple Regression Analysis

A multiple correlation analysis was conducted to research the causal relationship between the independent variables and therefore the variable. The response variable within the model is financial performance (ROA and ROE) while the explanatory variables are; Operating cash flow management (X1), Investing cash flow management (X2), Financing cash flow management (X3), Free cash flow management (X4), and e is that the standard error term.

Panel1 ROA = $\beta_0 + \beta_1X_1 + \beta_2 X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Panel 2ROE = $\beta_0 + \beta_1X_1 + \beta_2 X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

4.7.1 Effect of management of cash flow and Financial Performance

Regression analysis was conducted to empirically determine the effect of management of cash flow on financial performance.

Table 4.28: Panel estimation of management of cash flow and Financial Performance

Model	R^- Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic	Durbin-Watson
ROA	0.5941	0.4736	0.1000	4.9286	0.0000	1.9836
ROE	0.6036	0.4858	0.1115	5.1265	0.0000	1.9912

(**)……………significant at 5%

Results in Table 4.28 shows that R-squared was 0.5941 which suggests that the independent variables within the model explain the changes in ROA by up to 59.4 percent. The 40.6% remaining is explained by the random variables. The F- statistic is 4.92867 with sig. 0.0000 which is important at 5 percent level of significance meaning that the model is stable and acceptable for this study. The Durbin- Watson statistic is 1.984 which is near 2 meaning there's no serial correlation within the model. Results also show that the intercept (Constant) had a coefficient of -0.0055 and an insignificant probability value of 0.8550 which is quite a 5 percent level of significance. this implies that as operating cash flow management, Investing cash flow management, Financing cash flow management, and Free cash flow management jointly decrease by 0.56 percent each year returns on Assets.

With regards to ROE mode, an R-squared was 0.6036 which suggests that the independent variables within the model explain the changes in ROE by up to 60.4 percent. The 39.6% remaining is explained by the random variables. The F- statistic is 5.1265 with sig. 0.0000 which is important at 5 percent level of significance meaning that the model is stable and acceptable for this study. The Durbin- Watson statistic is 1.9912 which is near 2 meaning there's no serial correlation within the model. Results also show that the intercept (Constant) had a coefficient of 0.04228 and an insignificant probability value of 0.2157 which is quite a 5 percent level of significance. this implies that as operating cash flow management, Investing cash flow management, Financing cash flow management, and Free cash flow management jointly increase by 4.2 percent each year returns on Assets.

4.8 Hypotheses Testing

According to Gujarati (2008), hypothesis testing may be a process through which the researcher infers the results of sample data on the larger population supported a presupposition made before the commencement of research. During this study, hypothesis testing was done by determining the statistical significance of explanatory variables' coefficients. This was done by employing a two-tailed t-test statistic and also

the corresponding p-values at 5%. all told the four null hypotheses, the choice rule was that if the beta coefficient of the explanatory variable was different from zero and also the corresponding p-value observed was but the set significance level; the null hypothesis was to be rejected and otherwise to not reject the null hypothesis.

Table 4.29: Coefficient Results for the Effect of management of cash flow and Financial Performance-Fixed Effects Model

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	-0.0055	0.0304	-0.1831	0.8550
	OCF	0.1498	0.0427	3.5039	0.0007
	ICF	0.0202	0.0477	0.4236	0.6727
	FICF	-0.1843	0.0466	-3.9490	0.0001
	FCF	-0.0029	0.0424	-0.0684	0.9455
ROE	C	0.0422	0.0339	1.2457	0.2157
	OCF	0.1130	0.0476	2.3706	0.0197
	ICF	0.0067	0.0532	0.1277	0.8986
	FICF	-0.1629	-0.2233	-3.1304	0.0023
	FCF	-0.0390	0.0473	-0.8240	0.4118

(**)……………significant at 5%

H_{01}: Operating cash flow management has no significant influence on financial performance in mutual funds in Kenya.

The findings for ROA overall model in Table 4.29 show that the coefficient for Operating cash flow management had a coefficient of 0.1498 and a major probability value of 0.0007 which is a smaller amount than 0.05, hence significant. This implied that operating income management had a major effect on ROA. Supported the study findings, the null hypothesis was rejected. Therefore, it absolutely was concluded that

operating cash flow management had a major effect on the financial performance of mutual funds in Kenya.

With regards to ROE overall model results show that the coefficient for Operating cash flow management had a coefficient of 0.1130 and a major probability value of 0.0197 which is a smaller amount than 0.05, hence significant. This implied that operating cash flow management had a major effect on financial performance. Thus, the null hypothesis was rejected and therefore the conclusion was made that operating cash flow management had a major effect on the financial performance of mutual funds in Kenya.

The overall ROA and ROE models' findings for the effect of operating cash flow management on financial (ROA and ROE) accept as true with the prevailing empirical literature and therefore the Baumol deterministic theory of money management and Financial life cycle theory. Several studies have reported a major positive between operating cash flow and financial performance (Ghodrati & Abyak, 2014; Michael & Ihendinihu, 2016; Habib, 2011; Jintaviwatwong & Suntraruk,2012; Al-Debi'e, 2011; Darabi, Adeli & Torkamani, 2012). On the contrary, study findings contradicted agency theory and free cash flow theory and research findings of Mong'o (2010) who documented a major negative relationship between operating income and financial performance.

H$_{02}$: Investing cash flow management has no significant influence on financial performance in mutual funds in Kenya

The overall ROA model findings in Table 4.29 show that the coefficient for investing cash flow management had a coefficient of 0.0202 and an insignificant probability value of 0.6727 which is over 0.05, hence insignificant. This implied that investing cash flow management had a positive insignificant effect on ROA. With regards to the general ROE model, the findings show that the coefficient for investing cash flow management had a coefficient of 0.0067 and an insignificant probability value of 0.8986 which is over 0.05, hence insignificant. This implied that investing cash flow management had a

positive and insignificant effect on both ROA and ROE models. Supported the study findings null hypothesis was accepted. Therefore, it absolutely was concluded that investing cash flow management had no significant effect on financial performance (ROA and ROE) of mutual funds in Kenya at a 95% confidence level.

The research findings presented show that investing cash flow management is positively correlated to financial performance. Overall it absolutely was reported that the study findings are in tandem with Baumol deterministic theory of cash flow management and financial life cycle theory advanced by Mueller (1972) who postulate that as companies investment opportunities decline while firms mature their cash flows increase substantially. The study is in agreement with existing empirical studies of (Nwanyanwu, 2015; Kemboi, 2010; Jafari, Gord & Beerhouse, 2014; Nwakaego, Ikechukwu & Ifunanya, 2015). However, the results contradict agency theory and therefore the study findings of Wijewaradana and Munasinghe (2015) and Moeinaddin *et al.* (2013) who discovered that investment flow activities had a major negative relationship with performance.

H_{03}: Financing cash flow management has no significant effect on financial performance in mutual funds in Kenya.

The ROA model findings in Table 4.29 show that the coefficient for financing cash flow management had a coefficient of -0.1843 and a major probability value of 0.0001 which is over 0.05, hence significant. This implied that financing cash flow management had a major effect on financial performance. With regards to the ROE model, the results show that the coefficient for financing cash flow management had a coefficient of -0.1629 and a major probability value of 0.0023 which is over 0.05, hence significant. This implied that financing cash flow management had a major effect on financial performance. The study findings led to failing to simply accept the null hypothesis that financing cash flow management has no significant effect on the financial performance of mutual funds in Kenya and fails to reject the choice hypothesis at a 95% confidence level.

The ROA and ROE models' findings of this study are according to the trade-off theory and agency theory. The study findings are in line with studies of (Ali *et al*., 2013; Chikashi, 2013; Thanh & Nguyen, 2013; Ndungu & Oluoch, 2016) which showed that company's performance and financing cash flow had a major negative relationship. The study contradicts that of Poorzamani and Khademi (2014) who found that there was an insignificant positive relationship between corporate governance factors and cash flow resulting from financing activities and within the capital market. The study by Hamza, Mutala and Antwi (2015) revealed that SME financial performance was positively associated with the efficiency of cash flow management (ECM) at a 1 percent significance level. The results also contradict a study by Mirfakhraldini, Moeinaldin and Ebrahimpour (2009) who found that the financing and investment cash flows and current earnings plus depreciation expense had a meaningful and positive relationship with performance.

H_{04}: Free cash flow management has no significant influence on the financial performance of mutual funds in Kenya.

The ROA model findings in Table 4.29 show that the coefficient at free cash flow management had a coefficient of -0.0029 and an insignificant probability value of 0.9455 which is over 0.05, hence insignificant. This implied that free cash flow management had an insignificant effect on ROA. With regards to ROE, the results show the coefficient at free cash flow management had a coefficient of -0.0390 and an insignificant probability value of 0.4118 which is over 0.05, hence insignificant. This implied that free cash flow management had an insignificant effect on financial performance (ROA and ROE). The study findings led to failing to reject the null hypothesis that free cash flow management has no significant effect on the financial performance of mutual funds in Kenya and fail to just accept the choice hypothesis at 95% confidence level.

The ROA and ROE model results confirm the recent findings of Zhou *et al*. (2012) and Chalak and Mohammadnezhad (2012) who discovered that the free cash flow of a

corporation is negatively linear-correlated to its financial performance. We discover evidence in support of the free cash flow hypothesis advanced by Jensen (1986) and agency theory who postulates that free cash flow is inversely associated with performance and managers with unused large free cash flow at their disposal. The findings of this study are in keeping with the empirical findings of Galogah, Pouraghajan and Makrani (2013) who found that there was a negative and significant relationship between free cash flows and stock returns. The study also contradict Baumol deterministic theory of cash flow management and studies of (Saez & Gutierrez, 2015; Zeitun, Tian & Keen, 2007; Tijjani & Sani, 2016; Cheng, Cullina & Zhang, 2014; Zurigat, Sarwati & Aleassa, 2014) who discovered that relations between free cash flow and performance are positive. The study disagrees with a study by Wambua (2013) found that free cash flow had positive effects on financial performance.

The output yields the models;

ROA= -0.0055 +0.1498X_1 -0.1843X_3

ROE= 0.0422-0.1629X_3

4.9 Moderating Effect of Size of the Firm

The fifth hypothesis of the study was that there's no significant moderating effect of the dimensions of the firm (Z) on the connection between management of cash flow and financial performance of mutual funds in Kenya. Moderated multivariate analysis was worn out order to check the moderating effect of the dimensions of the firm on the connection between the management of cash flow and financial performance of mutual funds in Kenya. The moderation effect of a firm's size and financial performance by mutual funds in Kenya was tested using the hierarchical Moderated multiple correlation (MMR) model (Baron & Kenny, 1986).

MRR1 ROA = βo+ β1X1*Z+ β2 X2*Z + β3X3*Z + β4 X4*Z+ ε it

MMR 2ROE = βo+ β1X1*Z+ β2 X2*Z + β3X3*Z + β4 X4*Z+ ε it

Where;

βo is constant (ROA and ROE- intercept) which is that the value of dependent value when all the independent variables are zero. β1, β2, β3, β4, and β5 are regression constants or the speed of change induced by X1*Z, X2*Z, X3*Z and X4*Z on ROA and ROE. e is that the standard error term.

4.9.1 Moderating variable (Size) on the management of cash flow and Financial Performance

Table 4.30: Panel estimation of management of cash flow and Financial Performance

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F- statistic	Prob (F- statistic	Durbin- Watson
ROA	0.5823	0.4583	0.1014	4.6950	0.0000	1.9636
ROE	0.5909	0.4694	0.1132	4.8640	0.0000	1.9855

Dependent Variable: ROA and ROE

(**)……………significant at 5%

Results in Table 4.30 show that the R-squared was 0.582389 which suggests that the independent variables and moderating variable (size of the firm) within the model explain the changes in ROA by up to 58.2 percent. The 41.8% remaining is explained by the random variables. The F-test, the linear regression's F-test has the null hypothesis that there's no linear relationship between the predictor variables and also the variable quantity (in other words $R^2=0$). The F- statistic is 4.6950 with sig. 0.0000 which is a smaller amount than 5 percent level of significance meaning that the model is stable and acceptable for this study. The hypothesis that the dimensions of the firm has no

moderating effect on the connection between management of cash flow and ROA of mutual funds in Kenya didn't be accepted and also the alternative hypothesis was accepted. The Durbin- Watson statistic is 1.963617 which is near 2 meaning there's no serial correlation within the model.

With regards to ROE, results indicated that R squared was 0.5909 which suggests that the independent variables and moderating variable (size of the firm) within the model explain the changes in ROE by up to 59.1%. The 40.9% remaining is explained by the random variables. The F-test, the linear regression's F-test has the null hypothesis that there's no linear relationship between the predictor variables and also the variable quantity (in other words $R^2=0$). The F- statistic was 4.8640 with sig. 0.0000 which is a smaller amount than 5 percent level of significance meaning that the model was stable and acceptable for this study. The Durbin- Watson statistic is 1.9855 which is near 2 meaning there's no serial correlation within the model. The hypothesis that the scale of the firm has no moderating effect on the link between management of cash flow and ROE of mutual funds in Kenya didn't be accepted and also the alternative hypothesis was accepted.

As shown in table 4.31, results on the effect of management of money flow on ROA while the scale of the firm is incorporated within the model show that the coefficient of operating cash flow management was 0.0194 hence operating cash flow management had a positive effect on ROA. The p-value was 0.0013 which is a smaller amount than a 5% level of significance. This means that the moderating effect of the scale of the firm on operating cash flow management was significant on ROA's contribution. The coefficient of investing cash flow was 0.0014 hence a positive relationship between investing cash flow management and ROA. The p-value was 0.8329 which is bigger than 5% level of significance. This means that the moderating effect of the scale of the firm on investing income management was insignificant on ROA's contribution.

The coefficients of financing cash flow management and free cash flow management were negative at -0.0247 and -0.0056 respectively showing a negative impact of

financing cash flow management and free cash flow management towards ROA too a bit like before incorporating the moderator. The p values were 0.0004 and 0.9713 for financing cash flow management and free cash flow management hence the moderating effect of the scale of a firm on financing cash flow management and free cash flow management was significant and insignificant respectively on ROA's contribution at 5% level of significance.

Table 4.31: Coefficient Results for the Effect of Moderating effect and Financial Performance-Fixed Effects Model

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	C	-0.0008	0.0305	-0.0278	0.9778
	OCF	0.0194	0.0058	3.3204	0.0013
	ICF	0.0014	0.0068	0.2115	0.8329
	FICF	-0.0247	0.0067	-3.6889	0.0004
	FCF	-0.0002	0.0056	-0.0360	0.9713
ROE	C	0.0571	0.0340	1.6774	0.0965
	OCF	0.0124	0.0065	1.9052	0.0596
	ICF	-0.0005	0.0076	-0.0694	0.9448
	FICF	-0.0207	0.0074	-2.7660	0.0067
	FCF	-0.0056	0.0063	-0.8926	0.3742

(**)……………significant at 5%

With regards to ROE model, results on the effect of management of cash flow on ROE while size of the firm is incorporated within the model show that the coefficients of operating cash flow management and investing cash flow management were 0.0124 and -0.0005 hence operating cash flow management and investing cash flow management had a positive and negative effect on ROE respectively. The p values were 0.0596 and 0.9448 which is quite a 5% level of significance. This indicated that the moderating

effect of the scale of the firm on operating cash flow and investing cash flow management was insignificant on ROE's contribution.

The coefficients of financing cash flow management and free cash flow management were negative at -0.0207 and -0.0056 respectively showing a negative impact of financing cash flow management and free cash flow management towards ROE too a bit like before incorporating the moderator. The p values were 0.0067 and 0.3742 for financing cash flow management and free cash flow management hence the moderating effect of size of the firm on financing cash flow management and free cash flow management was significant and insignificant respectively on ROE's contribution at 5% level of significance.

The output yields the models;

$$ROA = -0.0009 + 0.0194X_1 - 0.0247X_3$$

$$ROE = 0.0571 - 0.0207X_3$$

4.10 Model Summary

Table 4.32: Summary of Regression model with and without Moderating Variable.

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic	Durbin-Watson
ROA1	0.5941	0.4736	0.1000	4.9286	0.0000	1.9836
ROA2	0.5823	0.4583	0.1014	4.6950	0.0000	1.9636

ROA1: Without moderating Variable, ROA2: With moderating variable.

(**)……………significant at 5%

The overall moderating effect of the scale of the firm on the management of cash flow towards ROA was 1.17% since the proportion of variation of the ROA thanks to

variation within the explanatory variables when the moderator is incorporated was 58.24%, compared with 59.41% without the moderator.

Table 4.33: Summary of a Regression Model with and without Moderating Variable.

Model	R⁻ Squared	Adjusted R-Squared	S.E of Regression	F-statistic	Prob (F-statistic	Durbin-Watson
ROE1	0.6036	0.4858	0.1115	5.1265	0.0000	1.9912
ROE2	0.5909	0.4694	0.1132	4.8640	0.0000	1.9855

ROE1: Without moderating Variable, ROE2: With moderating variable.

(**)……………significant at 5%

Table 4.33 summary regression ROE 1 and a pair of models without moderating and with moderating variables indicate an interaction between management of cash flow and financial performance (ROE). The general moderating effect of the scale of the firm on the management of cash flow towards ROE was 1.26% since the proportion of variation of the ROE thanks to variation within the explanatory variables when the moderator is incorporated was 59.1% compared with 60.36% without the moderator.

As indicated from table 4.34 regression results of ROA as a variable shows that before moderating variable OCF, ICF, FICF, and FCF were 14.98%, 2.02%, -18.44% and -0.29% respectively. The table also shows the results of ROA as dependent with size of the firm as moderating variable that the coefficients of OCF, ICF, FICF, and FCF were 1.95%, 0.15%, -2.47% and -0.02% showing that a rise of size of the firm had a positive on OCF and ICF and negative effect on FICF and FCF.

The leads to table 4.34 indicated that when ROE was used as a variable quantity without the dimensions of the firm as a moderating variable, the coefficient of determination for OCF, ICF, FICF, and FCF were 11.30%, 0.68%, -16.30% and -3.90%. When moderating variable was introduced on the model coefficient of determination for OCF, ICF, FICF and FCF were 1.25%, -0.05%, -2.07% and -0.57% showing that a rise on the dimensions of the firm had a positive effect on OCF and negative effect of on ICF, FICF, and FCF.

Table 4.34: Summary of Coefficient with and without Moderating Variable.

Dependent	Independent	Model 1	Model 2	Change %
	Variables	Coef %	Coef %	
ROA	C	-0.5576	-0.0851	0.4725
	OCF	14.9846	1.9455	-13.0391
	ICF	2.0227	0.1454	-1.8773
	FICF	-18.4364	-2.4741	15.9623
	FCF	-0.2907	-0.0204	0.2703
ROE	C	4.2282	5.7166	1.4884
	OCF	11.3034	1.2464	-10.0570
	ICF	0.6799	-0.0533	-0.7332
	FICF	-16.2950	-2.0713	14.2237
	FCF	-3.9002	-0.5652	3.3350

Model 1 is without moderator, model 2 is with moderator.

(**)……………significant at 5%

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings, conclusions and policy recommendations. It further provides a suggestion for further study in sequence with the restrictions identified within the study. The final objective of the study was to analyze the effect of management of cash flow on the financial performance of mutual funds in Kenya. The summary of the findings and also the conclusions are organized round the specific objectives and study hypotheses stated in section 1.3 and 1.4 of chapter one. The study arranged the findings conclusions as discussed as per study objectives with their corresponding hypotheses.

5.2 Summary of the Findings

The study sought to ascertain the effect of management of cash flow on were studied were; Operating cash flow management, Investing cash flow management, Financing cash flow management, and Free cash flow management. The moderating variable was represented by the scale of the firm. Return on asset (ROA) and Return on equity (ROE) represented indicators for financial performance. The findings supported the general relationship between management of cash flow and financial performance.

The study adopted the positivist philosophy and anchored on causal research design because of the character of the matter and availability of the information. The population of the study was 22 mutual funds registered by capital markets authority during the 6 year study period from 2001 to 2016. The sampling frame for this study consisted of all mutual funds registered at Capital Market Authority as of 31st December 2016. This study adopted a census approach thanks to the tiny number of mutual funds in Kenya, therefore accessible and not prohibitive in terms of cost, time and other resources.

The study employed secondary data that was collected from audited annual company reports and also the Capital Market Authority's reports and publications for the years 2011-2016. This study performed several diagnostic tests including multicollinearity test, autocorrelation test, normality test, heteroscedasticity test, pairwise granger causality test, Hausman test and stuck and random effect tests in support of the appliance of the panel data regression. OLS regression was accustomed analyze the character and also the degree of the relationships between the management of money flow and also the financial performance of mutual funds in Kenya. Conclusions on the statistical significance between the varied components of management of money flow on financial performance measured by return on assets and return on equity were drawn.

5.2.1 Operating Cash flow Management and Financial Performance

The first specific objective of the study was set to search out the effect of operating cash flow management on the financial performance of Mutual funds in Kenya. The study employed operating cash flow management of the mutual funds employing a ratio of net cash flows from operations to total assets of a firm. The findings revealed that operating cash flow management had a beta coefficient of 0.1191 and 0.0826 for Return on Assets and Return on Equity indicating a positive influence on the financial performance of mutual funds in Kenya.

The effect of operating cash flow management on financial performance (ROA) is statistically significant at a 5% level of significance as supported by the p-value of 0.0082 and hence null hypothesis was rejected. However, The effect of operating cash flow management on financial performance (ROE) was statistically insignificant at 5% level of significance level because the p-value was 0.0886 and hence the null hypothesis was accepted. This finding is additionally supported by the coefficient determination of and for ROA and ROE model which shows that the variations in mutual funds financial performance are explained by operating cash flow management.

5.2.2 Investing Cash flow Management and Financial Performance

The second specific objective of the study was to work out the effect of investing i cash flow management on the financial performance of mutual funds in Kenya. The experimental variable investing cash flow management was measured using the ratio on net cash flow from investments to total assets. Results revealed that investing cash flow management had a positive Beta coefficient of 0.0085 and 0.0024 for ROA and ROE respectively. The p-values were 0.8692 and 0.9649 for ROA and ROE respectively at 5% level of significance. This finding implies that investing cash flow management had an insignificant and positive effect on ROA and ROE and hence the null hypothesis was accepted. This means that the null hypothesis that investing cash flow management has no significant effect on the financial performance of mutual funds in Kenya was accepted and also the alternative hypothesis was rejected.

5.2.3 Financing Cash flow Management and Financial Performance

The third specific objective of the study was to ascertain the effect of financing cash flow management on financial performance of mutual funds in Kenya. The study employed financing cash flow management of the mutual funds employing a ratio of net cash flows from financing to total assets of a firm. Results indicated the Beta coefficient of -0.1556 and -0.1382 and p-values of 0.0015 and 0.0088 for ROA and ROE models respectively indicating negative and significant effect at a 5% level of significance. the importance test showed the effect of financing cash flow management on financial performance (ROA and ROE) was negative and significant and hence null hypothesis was rejected. This suggests that the null hypothesis that financing cash flow management incorporates a significant effect on the financial performance of mutual funds in Kenya is rejected and also the alternative hypothesis was accepted.

5.2.4 Free Cash flow Management and Financial Performance

The fourth specific objective of the study was to judge the effect of free income management on the financial performance of mutual funds in Kenya. The study employed free cash flow management of the mutual funds employing a ratio of earnings before interest and tax plus dividends less depreciation to total assets. Results showed that firm free cash flow management had a Beta coefficient of 0.0241 and -0.0161 insignificant positive and negative effect on ROA and ROE respectively at a 5% level of significance. The analysis produced a coefficient of determination which shows that the variations in mutual funds financial performance are explained by free cash flow management. The importance test showed the effect of free cash flow management on performance was insignificant and hence the null hypothesis was accepted. This suggests that the null hypothesis that free cash flow management has no significant effect on the financial performance of mutual funds in Kenya was accepted and therefore the alternative hypothesis was rejected.

5.2.5 Moderating (size of the firm) and Financial Performance

The fifth objective of the study sought to see the moderating effects of the scale of the firm on the connection between the management of cash flow and therefore the financial performance of mutual funds in Kenya. The moderating variable size of the firm was measured using the natural log of total assets for a firm. The findings revealed that the scale of the firm had a moderating effect on the financial performance of mutual funds in Kenya. The moderation effect was tested using the change within the coefficient of determination (R2). The general coefficient of determination without the moderating variable was on top of after the introduction of the moderating variable. This means that the moderating variable (size of the firm) reduces the consequences of the management of money flow on financial performance.

The moderating effect of size of the firm on management of cash flow and financial performance was statistically insignificant with the p-value of quite 0.05 and hence the null hypothesis was accepted and therefore the study concluded that there was insignificant moderating effect of size of the firm on the connection between management of cash flow and financial performance (return on assets and return on equity) of mutual funds in Kenya. This means that the null hypothesis that the scale of the firm has no significant moderating effect on the financial performance of mutual funds in Kenya was accepted and therefore the alternative hypothesis was rejected.

5.3 Conclusions

Conclusions fell upon the influence of independent variables (operating cash flow management, investment cash flow management, financing cash flow management, and free cash flow management), the influence of moderating variable (size of the firm) on the variable quantity of the financial performance of mutual funds in Kenya supported the findings of the study.

5.3.1 Operating Cash flow Management and Financial Performance

The study concludes that operating cash flow management plays an important role in determining the financial performance of mutual funds in Kenya. supported the findings of the study, it had been concluded that operating cash flow management influence the financial performance of mutual funds in Kenya positively. The effect of operating cash flow management on ROA and ROE significant and insignificant positive effect respectively. The study indicates that the contribution of net operating cash flow on income is thanks to either direct or indirect way which is linked on to financial performance. The general implication is that operating cash flow management marked the very best as compared with the opposite activities which indicates that the mutual funds generate money from their main business and don't seem to be facing a liquidity problem.

5.3.2 Investing Cash flow Management and Financial Performance

The study concluded that investing in cash flow management influence the financial performance of mutual funds in Kenya positively. The web income from investing activities is positive which can indicate good efficiency in their investment policies and proper investment spending. the web income from investing was found to own insignificant positive effect on ROA and ROE respectively explained by link of those flows to the terms of investments and therefore the purchase of apparatus and property and this stuff are a part of the equation calculating the ROA calculated by net income to total assets, thus increasing investment has effect on financial performance (ROA).

5.3.3 Financing Cash flow Management and Financial Performance

The study concludes that financing cash flow management influence the financial performance of mutual funds in Kenya negatively. The web income from financing activities revealed to be more negative as an indicator of the weakness of the financial efficiency of mutual funds' ability to satisfy up its financial commitments without having to empty their assets. Converse results were found regarding the effect of financing cash flow management on financial performance because the study revealed a big negative relationship between financing activities on ROA and ROE explained by the poor net cash flow from financing activities.

5.3.4 Free Cash flow Management and Financial Performance

The results indicated free cash flow management had insignificant positive and negative relationships on financial performance represented by ROA and ROE respectively. However, it is concluded that free cash flow has a sway on financial performance. This means that a firm's management of cash flow decreases corporate failure and free income management increases the probability of corporate failure.

5.3.5 Moderating (size of the firm) and Financial Performance

On the moderating effect of economic performance by the scale of the firm of mutual funds in Kenya, the study concluded that in point of fact size of the firm had a big moderating effect on the connection between the independent variables and therefore the variable quantity because the R squared all told the independent variables changed after the introduction of moderating variable. The scale of the firm was found to own a moderating effect within the overall model since R squared within the overall model increased implying that the scale of the firm increased the influence that the predictor variables combined had on the financial performance of mutual funds in Kenya. this can be matter-of-fact since of course, the scale of the firm of a open-end fund dictates plenty on the financial performance of the firm hence a change in size of the firm is certain to affect the financial performance of firm in terms of income, operating cash flows, investing cash flows, financing cash flows and free cash flows.

5.4 Recommendations

The recommendations have supported the findings and conclusion of the actual objectives of the study.

5.4.1 Operating Cash flow Management and Financial Performance

Operating cash flow management had a positive effect on ROA and ROE was positive one hence, an appropriate mixture of cash flow components should be adopted so as to extend the financial performance of mutual funds. The study recommends that stakeholders should be encouraged to use income ratios in evaluating the performance of an organization before forming an independent opinion on the financial plan. This can give detailed information on the financial performance of the corporate to enable investors to create effective investment decisions. The study also suggests the implementation of management of money flow policies so as to revive the boldness of Kenya investors and creditors.

5.4.2 Investing Cash flows Management and Financial Performance

Investing cash flow management relationship with financial performance represented by ROA and ROE is positive hence, managers should increase the amount of investment to require advantage of the investment trust return. The study suggests that regulatory authorities like CMA, NSE, and CBK should encourage mutual funds to set-up a result-oriented income system that may encourage the general public investors to avail themselves of any financial risk which will affect their investment. Mutual funds should come up with policies for income management.

5.4.3 Financing Cash flows Management and Financial Performance

The relationship with financial performance (ROA) and ROE was established to be a negative relationship. Hence, it's recommended that Managers of mutual funds should decrease in over-investment through the spreading out programs but efforts are made by management to extend the worth of the firm through other means just like the funding policy and springing up with effective financing policy to boost company performance. The managers should come up with the strategy of the employment of dividend policy which can support the continual improvement of stockholder equity through the gradual increase of retained earnings. This can be an efficient way of making very valuable internal financing that will support the sustainable growth of the firm. Thus, while improving the management of the income system process through the dividend policy, the firm would even be able to strengthen its equity position and thus its credibility with a healthy and sustainable growth objective.

5.4.4 Free Cash flows Management and Financial Performance

The findings on the effect of free cash flow management on financial performance showed a positive and negative relationship on ROA and ROE respectively of mutual funds hence, mangers should endeavor to boost the extent of free cash flow and financial performance by investing thereby paying higher dividends.

5.5 Areas for Further Research

This study failed to include all financial measurements like Age of the firm, income holdings and their effect on the financial performance of mutual funds. Further studies will be conducted with of these variables to check the importance of the above variables both on the return on assets and return on equity of the mutual funds. Further research can extend this study by replicating the methodology to research data of companies within the other sectors. Moreover, the information sample will be separated and analyzed by industry. During this way, a contribution may well be made to developing a more industry-specific theory.

This research used the technique of multivariate analysis in determining the effect of management of money flow on the financial performance of mutual funds. it should be possible that the regression model failed to match the income data. In other words, an improved model could also be derived from a unique method, like the Box-Jenkins time-series model, E-garch, Vector Autoregression among others. However, the modes need many time-series of information.

Future research may well be conducted when income data is adequate. Similar studies might also be replicated within the sub-Saharan countries to explore further the results of management of money flow on financial performance with firm board size because the control variable. The results of this research rely solely on a secondary data method. The findings of this research would be further credibility by conducting survey research to gather data directly from the users of monetary statements or related parties. Further research may provide evidence in practice and financial reports users could use management of cash flow in predicting future financial performance.

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APPENDICES

Appendix I: Letter of Authorization

Chief Executive Officer

Name of the Institution……………..

P.O. Box ………………………

NAIROBI.

Date…………………………

Dear Madam/Sir,

Re: Research Data on "Effect of management of cash flow on financial performance of mutual funds in Kenya".

I am a student pursuing a Doctorate Degree in Business Administration- Finance Option at Jomo Kenyatta University of Agriculture and Technology. I am currently conducting a research on the **Effect of management of cash flow on financial performance of mutual funds in Kenya,** as a requirement partial fulfillment for the award of the upper degree.

The purpose of this letter is, therefore, to concern your consent and approval to gather appropriate data from your firm. the info collected are handled with the utmost privacy and only used for the needs of this research.

The results of this research are of benefit and value addition to companies, universities and research institutions in Kenya in terms of managing cash flow and financial performance.

I wish your company a successful business.

Yours faithfully,

Murkor Abiud Soet

Registration Number: HD 433/ 0574 /2014

Appendix II: Letter of Introduction

To…………………………………

Date…………………………

Dear Madam / Sir,

Research Data on "Effect of management of Management of Cash flow on the financial performance of mutual funds in Kenya".

I am a student pursuing a Doctorate Degree in Business Administration- Finance Option at Jomo Kenyatta University of Agriculture and Technology. I'm currently conducting research on the Effect of management of cash flow on the financial performance of mutual funds in Kenya, as a requirement partial fulfillment for the award of the upper degree.

The purpose of this letter is, therefore, to necessitate your consent and approval to gather appropriate data from your firm. The info collected are going to be handled with the utmost privacy and only used for the needs of this research.

The results of this research are going to be of benefit and value addition to companies, universities and research institutions in Kenya in terms of managing of cash flow and financial performance.

I wish your company a successful business sector.

Yours faithfully,

Murkor Soet Abiud

Registration Number: HD 433/ 0574 /2014

Appendix III: List of Mutual funds in Kenya

1. Amana Capital Limited
2. Alpha Africa Asset Managers
3. Apollo Asset Management Company Limited
4. Aureos Kenya Managers Limited
5. Britam Asset Managers (Kenya) Limited
6. Canon Asset Managers Limited
7. Nabo Capital Limited
8. CIC Asset Management Limited
9. Co-optrust Investment Services Limited
10. Dry Associates Limited
11. FCB Capital Limited
12. Fusion Investment Management Limited
13. GenAfrica Asset Managers Limited
14. ICEA Lion Asset Management Limited
15. Madison Asset Management Services Limited
16. Old Mutual Investment Group Limited
17. Old Mutual Investment Services (K) Limited
18. Pinebridge Investments East Africa Limited
19. Pan African Asset Management Limited
20. Standard Chartered Investment Services Limited
21. Stanlib Kenya Limited
22. UAP Investments Limited
23. Zimele Asset Management Company Limited
24. Natbank Trustee and Investment Services Limited
25. I & M Capital Limited.

Appendix IV: Indices Dependent, Moderating Variable Independent Variables

Firms	Company Code	Year	Financial Performance		Independent Variables				Moderating Variable
			ROA	ROE	OCF	ICF	FICF	FCF	Z=Log of total Assets
Amana Capital	1	2011	-0.1437	-0.2536	0.2681	-0.0263	0.0000	0.6233	8.8148
Amana Capital	1	2012	-0.0630	-0.0674	0.9346	-0.0015	0.0350	0.3361	7.4273
Amana Capital	1	2013	-0.1477	-0.1926	0.7665	-0.0015	0.6426	0.4604	7.5639
Amana Capital	1	2014	-0.2490	-0.3006	0.8282	-0.4916	0.8593	-0.1420	7.3211
Amana Capital	1	2015	0.2535	0.3050	0.8313	-0.0374	0.0000	-0.4115	7.4676
Amana Capital	1	2016	0.0744	0.1148	0.6479	0.2199	0.0000	-0.3628	7.5104
Alpha Africa Asset	2	2011	-0.0263	-0.0295	0.8902	0.0000	0.0000	0.0000	6.2167
Alpha Africa Asset	2	2012	-0.2767	-0.2924	0.8301	-0.1693	0.7064	-0.6271	7.0579
Alpha Africa Asset	2	2013	-0.1591	-0.1812	0.7277	-0.2623	0.7566	-0.0467	5.4932
Alpha Africa Asset	2	2014	-0.2490	-0.3006	0.8282	-0.4916	0.9396	0.0000	4.0738
Alpha Africa Asset	2	2015	-0.3149	-0.1237	0.5452	-0.0152	0.3673	-0.1857	7.2383
Alpha Africa Asset	2	2016	0.2235	0.1304	0.7143	0.1096	0.0000	-0.0989	7.6356
Apollo Asset	3	2011	0.0959	0.1167	0.8221	-0.1876	0.0426	-0.0440	6.7136
Apollo Asset	3	2012	0.0599	0.0668	0.8963	0.1886	-0.0940	-0.0475	6.6991
Apollo Asset	3	2013	0.1029	0.1162	0.8856	-0.0098	-0.0433	0.0000	6.9269
Apollo Asset	3	2014	0.2547	0.2896	0.8794	-0.0415	0.0000	0.1765	7.3135
Apollo Asset	3	2015	0.1775	0.3749	0.4736	-0.1672	-0.1768	0.1831	6.9298
Apollo Asset	3	2016	0.1353	0.2675	0.5058	-0.2558	-0.2697	0.1960	6.7692
Aureos Kenya	4	2011	0.0909	0.2237	0.4065	0.0053	0.0000	0.2498	7.3890
Aureos Kenya	4	2012	0.1062	0.2053	0.5175	-0.2265	0.0000	0.3590	6.7822
Aureos Kenya	4	2013	0.1433	0.1875	0.7643	-0.1408	0.0000	0.5741	6.5024
Aureos Kenya	4	2014	0.1324	0.2991	0.4428	-0.0052	0.0000	0.3655	7.5288

Aureos Kenya	4	2015	0.1456	0.3430	0.4245	0.0111	0.0341	-0.4245	7.3557
Aureos Kenya	4	2016	0.0998	0.2066	0.4831	-0.0155	0.0251	-0.4312	8.1083
Britam Asset	5	2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Britam Asset	5	2012	0.3417	0.2676	0.7308	-0.4328	0.0000	0.3861	7.5977
Britam Asset	5	2013	0.3638	0.1502	0.7251	-0.4467	-0.4033	0.5547	7.5905
Britam Asset	5	2014	0.1007	0.2138	0.4712	0.0000	0.0000	0.3841	7.9546
Britam Asset	5	2015	0.1383	0.2120	0.6526	-0.1052	-0.0800	0.5576	7.3557
Britam Asset	5	2016	0.1866	0.2827	0.6601	-0.0614	0.1001	0.5842	8.1083
Canon Asset Mgt	6	2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Canon Asset Mgt	6	2012	0.0322	0.0334	0.9651	0.2739	0.6448	0.0361	7.0466
Canon Asset Mgt	6	2013	0.2769	0.2897	0.9558	-0.6589	0.0000	0.0665	6.0133
Canon Asset Mgt	6	2014	0.1091	0.1119	0.9754	-0.1127	0.0000	0.0797	6.3333
Canon Asset Mgt	6	2015	0.0889	0.0919	0.9665	0.0860	0.0000	0.0402	6.8877
Canon Asset Mgt	6	2016	0.0088	0.0089	0.9837	0.1077	0.0000	0.0325	7.0007
Nabo Capital Ltd	7	2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nabo Capital Ltd	7	2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nabo Capital Ltd	7	2013	0.2017	0.1881	0.6290	-0.5986	0.0000	0.2020	7.4546
Nabo Capital Ltd	7	2014	0.1628	0.1458	0.3554	0.2202	0.0000	0.3327	8.5147
Nabo Capital Ltd	7	2015	0.1496	0.3585	0.4175	-0.2115	0.0000	0.0011	7.7252
Nabo Capital Ltd	7	2016	-0.0320	-0.0686	0.4661	0.1499	0.0000	-0.0287	8.3416
CIC Asset Mgt	8	2011	0.0531	0.0544	0.9764	0.0713	0.8866	0.0573	8.5121
CIC Asset Mgt	8	2012	0.0039	0.0048	0.8205	0.0161	0.0000	0.0518	5.3833
CIC Asset Mgt	8	2013	0.0056	0.0063	0.8880	0.2054	0.0000	0.0614	6.5840
CIC Asset Mgt	8	2014	0.0003	0.0004	0.6918	0.3373	0.0000	0.0481	8.3410
CIC Asset Mgt	8	2015	0.0326	0.0393	0.8293	0.0019	0.0000	0.7414	8.1833
CIC Asset Mgt	8	2016	0.0135	0.0171	0.7885	-0.3306	0.0000	0.6929	7.1455
Co-optrust	9	2011	0.1345	0.1388	0.9688	-0.3357	0.0000	0.8693	7.3909

Invest									
Co-optrust Invest	9	2012	0.1717	0.1811	0.9479	-0.0003	0.0000	0.8681	7.7535
Co-optrust Invest	9	2013	0.1829	0.1940	0.9432	-0.1386	0.0000	0.8792	7.8130
Co-optrust Invest	9	2014	0.2296	0.4103	0.5595	-0.0782	-0.2779	0.4900	7.1316
Co-optrust Invest	9	2015	0.0891	0.1452	0.6135	0.0389	0.0000	0.5541	7.8861
Co-optrust Invest	9	2016	0.1932	0.2181	0.8861	-0.1944	-0.3559	0.8809	6.6649
Dry Associates Ltd	10	2011	0.0984	0.1226	0.8025	-0.1852	-0.4096	0.4582	7.2418
Dry Associates Ltd	10	2012	0.3340	0.1971	0.6945	0.1892	-0.1581	0.1258	7.3537
Dry Associates Ltd	10	2013	0.2125	0.3142	0.9674	-0.5707	-0.0023	0.0607	7.3781
Dry Associates Ltd	10	2014	0.2851	0.3171	0.5299	-0.0564	-0.0038	0.2576	7.6799
Dry Associates Ltd	10	2015	0.1311	0.3766	0.9102	-0.3205	0.0000	0.2537	7.7305
Dry Associates Ltd	10	2016	0.3221	0.2324	0.9857	-0.2525	0.0000	0.8743	7.4943
FCB Capital Limited	11	2011	0.0307	0.1125	0.2731	0.0000	0.0000	0.0042	7.4193
FCB Capital Limited	11	2012	-0.0031	-0.0131	0.6353	0.0000	0.0000	0.0006	6.5598
FCB Capital Limited	11	2013	0.0252	0.0364	0.6919	0.0000	0.0000	0.0235	5.3802
FCB Capital Limited	11	2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
FCB Capital Limited	11	2015	-0.0491	-0.0569	0.8622	0.0000	0.0000	-0.1719	7.7538
FCB Capital Limited	11	2016	0.0496	0.0513	0.9660	0.0000	0.0000	-0.1323	6.8680
Fusion Investment	12	2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7.3375
Fusion Investment	12	2012	-0.0010	-0.0011	0.8877	0.8887	0.8887	-0.0010	7.1836
Fusion Investment	12	2013	-0.1696	-0.3368	0.5037	-0.1917	0.0001	-0.1704	7.1964
Fusion	12	2014	0.2322	0.1433	0.5362	-0.0067	0.3218	-0.3832	7.3216

Name	ID	Year							
Investment									
Fusion Investment	12	2015	0.1347	0.1488	0.7103	-0.0576	0.0000	0.0869	6.9575
Fusion Investment	12	2016	0.2197	0.2374	0.9253	-0.0326	0.0000	0.3060	0.0000
GenAfrica Asset	13	2011	0.1489	0.2708	0.8065	-0.1883	-0.5774	0.4299	7.7532
GenAfrica Asset	13	2012	0.1460	0.1447	0.9292	-0.0062	-0.3083	0.4114	7.7512
GenAfrica Asset	13	2013	0.1522	0.1809	0.6455	0.0108	-0.3087	0.0450	7.7649
GenAfrica Asset	13	2014	0.1485	0.1409	0.3442	0.0003	-0.3071	0.0299	8.1301
GenAfrica Asset	13	2015	0.1461	0.1620	0.7440	-0.0147	-0.3541	0.4798	7.1941
GenAfrica Asset	13	2016	0.3987	0.1527	0.7559	-0.0807	-0.3275	0.5148	8.1646
ICEA Lion Asset	14	2011	0.1702	0.1993	0.8539	-0.0032	0.0000	0.3630	6.2840
ICEA Lion Asset	14	2012	0.1191	0.1357	0.8773	0.0009	0.0000	0.4414	5.5119
ICEA Lion Asset	14	2013	0.1717	0.2062	0.8328	-0.2282	0.0000	0.5044	6.6141
ICEA Lion Asset	14	2014	0.1938	0.2378	0.8152	-0.5580	0.0000	0.5702	7.1567
ICEA Lion Asset	14	2015	0.1866	0.2260	0.8254	-0.0965	0.0000	0.6333	7.4424
ICEA Lion Asset	14	2016	0.1377	0.1673	0.8233	-0.0860	0.0000	0.6638	5.4555
Madison Asset	15	2011	-0.1787	-0.1680	0.9585	-0.7989	0.0000	-0.2938	6.6410
Madison Asset	15	2012	-0.0095	-0.0115	0.8240	0.4042	0.0000	-0.2208	7.0112
Madison Asset	15	2013	0.0236	0.0294	0.8015	-0.1480	0.0000	-0.1849	6.0343
Madison Asset	15	2014	0.1143	0.1363	0.8381	0.1271	0.0000	-0.0527	6.4329
Madison Asset	15	2015	0.0829	0.0907	0.9146	-0.0630	0.1803	0.0829	8.1423
Madison Asset	15	2016	0.1119	0.1477	0.7575	0.1020	0.0000	0.0353	7.0175
Old Mutual Inv	16	2011	-0.2791	-0.1986	0.2831	-0.0017	0.3748	-0.1946	7.5851
Old Mutual Inv	16	2012	-0.2345	-0.3512	0.6677	-0.0121	0.0000	0.0540	7.7795
Old Mutual Inv	16	2013	-0.0210	-0.0264	0.7942	-0.0637	0.4158	0.0499	7.0824
Old Mutual Inv	16	2014	0.1498	0.1832	0.8178	-0.0040	0.0000	0.0420	7.0594
Old Mutual Inv	16	2015	0.0386	0.0483	0.7980	-0.0032	0.0000	0.0962	8.4305

Name		Year							
Old Mutual Inv	16	2016	0.0391	0.0480	0.8138	-0.0264	0.0000	0.0718	8.2876
Pinebridge Ltd	17	2011	0.1600	0.2124	0.7533	-0.0119	0.0000	-0.2328	7.7268
Pinebridge Ltd	17	2012	0.2265	0.2862	0.7913	-0.0182	0.0000	0.0518	7.9795
Pinebridge Ltd	17	2013	0.1324	0.1431	0.7532	-0.0019	0.0000	0.0783	8.4371
Pinebridge Ltd	17	2014	0.3100	0.1421	0.7356	-0.0173	0.2434	0.1362	8.4807
Pinebridge Ltd	17	2015	0.2743	0.3630	0.7557	-0.0012	-0.2380	0.2086	8.5133
Pinebridge Ltd	17	2016	0.1898	0.2877	0.6595	-0.0014	-0.1672	0.1654	8.6061
Sanlam Investment	18	2011	0.0464	0.0598	0.7760	-0.0009	0.0000	0.4280	7.0421
Sanlam Investment	18	2012	0.1380	0.1611	0.6219	-0.0012	0.0000	0.3587	6.7343
Sanlam Investment	18	2013	0.0400	0.0548	0.7292	-0.4394	0.0000	0.5346	6.7750
Sanlam Investment	18	2014	0.1049	0.1483	0.7069	0.3590	0.0000	0.5463	7.6662
Sanlam Investment	18	2015	0.1328	0.1523	0.2540	0.0697	0.0000	0.2582	7.5741
Sanlam Investment	18	2016	0.1215	0.1549	0.3913	-0.0058	-0.3453	0.2220	7.7037
Standard Chartered	19	2011	0.0456	0.0467	0.9756	0.0000	0.0000	0.6950	7.8432
Standard Chartered	19	2012	0.1386	0.1445	0.9589	0.0000	0.0000	0.7230	7.9253
Standard Chartered	19	2013	0.1434	0.1464	0.9794	0.0000	0.0000	0.7737	7.9824
Standard Chartered	19	2014	0.2232	0.2365	0.9438	0.0000	0.0000	0.7925	8.1052
Standard Chartered	19	2015	0.1411	0.1506	0.8135	0.0000	0.0000	0.7701	8.4410
Standbard Chartered	19	2016	0.3516	0.4712	0.7462	0.0000	0.0000	0.9429	8.3643
Stanlib Kenya Ltd	20	2011	0.3313	0.2506	0.6551	0.0545	-0.2760	0.5748	7.2196
Stanlib Kenya Ltd	20	2012	0.2217	0.3102	0.7146	-0.2812	0.0000	0.6791	7.6878
Stanlib Kenya Ltd	20	2013	0.1684	0.1823	0.9234	-0.1526	-0.0291	0.0000	9.3697
Stanlib Kenya Ltd	20	2014	0.1690	0.1719	0.9827	-0.0317	0.0117	0.0000	8.3075
Stanlib Kenya	20	2015	0.0393	0.0493	0.7977	0.0000	0.0000	0.7485	8.3909

Stanlib Kenya Ltd	20	2016	-0.1765	-0.1525	0.1172	0.0000	0.0000	0.6286	6.8228
UAP Investments	21	2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UAP Investments	21	2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UAP Investments	21	2013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UAP Investments	21	2014	0.0529	0.0532	0.9942	0.0000	0.9413	0.0000	6.1663
UAP Investments	21	2015	0.3149	0.1460	0.3010	0.0525	0.0000	-0.3242	7.3104
UAP Investments	21	2016	0.1554	0.1423	0.3670	0.2407	0.0000	-0.1089	7.5968
Zimele Asset	22	2011	0.0330	0.0331	0.9967	0.4030	-0.4779	0.1405	6.6361
Zimele Asset	22	2012	0.0601	0.0603	0.9968	0.1981	-0.2576	0.2014	6.6455
Zimele Asset	22	2013	0.0330	0.0430	0.7686	-0.0979	0.0000	-0.1479	6.1607
Zimele Asset	22	2014	0.0446	0.0670	0.6660	-0.0819	0.2045	-0.0768	6.8327
Zimele Asset	22	2015	0.0668	0.0913	0.7308	-0.0113	-0.1644	0.5104	7.1885
Zimele Asset	22	2016	0.0142	0.1142	0.1243	-0.0036	0.0000	0.0156	7.1121

Appendix V: Secondary Data Collection Sheet

Firm…….

Variables	Description	2011	2012	2013	2014	2015	2016
Operating cash flow Management	Net cash flows from operating						
Investing cash flow Management	Net cash flows from investing						
Financing cash flow Management	Net cash flows from financing						
Free cash flow Management	Earnings before interest						
	Dividends						
	Depreciation						
ROA	Net profit/Loss						
ROE	Retained Earnings						
Size of the firm	Total Assets						
	Total Equity						