

**THE EFFECT OF FREE CASHFLOW ON INVESTMENT BY THE
INSURANCE COMPANIES IN KENYA**

JOSEPHAT GICHUKI WAHOME

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DECLARATION

This research project is my original work and has not been submitted to any other university for examination.

Signature Date.....

JOSEPHAT GICHUKI WAHOME

D61/82732/2015

This Research Project was presented for examination with my authority as the University supervisor.

Signature Date.....

Dr. IRAYA

Lecturer,

School of Business, University of Nairobi

DEDICATION

This paper is dedicated to my wife Mary Wairimu for her support and encouragement, and to my whole entire family for their support throughout the course. To my daughters Natasha, Tamisha and my son David thank you for allowing me to be away from home during my studies.

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I would like to first and foremost thank God for sustaining me in the course of my studies and enabling me complete this research project.

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May the Almighty God bless you all greatly!

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ABBREVIATIONS AND ACCRONYMS

FCF:	Free Cash Flow
GDP:	Gross Domestic Product
MPT:	Modern Portfolio Theory
R&D:	Research and Development
ROA:	Return on Assets

ABSTRACT

The objective of this study was to determine the effect of free cash flow on investment by the insurance companies in Kenya. The study took the form of a descriptive survey of all the 62 insurance firms operating in Kenya. Secondary data was obtained from the annual financial statements of the insurance firms. The period in consideration was between 2012 and 2016. Regression and correlation analyses were used to analyze the data collected. The results were presented in tables. It was revealed that there was a positive relationship between free cash flow and investment by insurance companies in Kenya. It was also established that firms with large asset base had higher profits and liquidity than those with smaller asset base.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the face of globalization and turbulent business environment, firms have to take their investment decisions with a lot of seriousness. The profitability a firm is able to achieve highly depends on the investment decisions made by the management of that firm. However, investment decisions made by firms can only be implemented successfully if a firm has what it takes to effectively carry out an investment plan. Many firms across the globe take valuable time and resources to plan investment activities but end up not succeeding in implementation of these plans due to lack of capacity to implement these plans.

One of the most important aspects of financial investment is the ability of the firm to raise resources that are necessary for investment. The sources of funds for investment may originate from within the organization such as retained earnings and depreciation or from sources outside the organization such as short term and long term loans or selling of equity (Jensen & Smith, 2005). One of the most significant tools that are used in measuring the financial performance of a business entity is Free Cash Flow (FCF). FCF enables a firm to ascertain the cash available once the costs of asset development and maintenance have been catered for. FCF is further important to shareholders since it enables them to assess the financial soundness of an enterprise (Habib, 2011).

The insurance industry in Kenya is sector that makes high worth investments in assets in order to ensure that they can meet liabilities in form of compensation claims as and when need arises. Therefore, sound investment decisions in the insurance industry in Kenya are key to

the financial success of the firms. According to Griffith and Carroll (2001) if FCF's are invested wisely, they may lead to attractive return on investments to the insurance companies although they also have a potential of leading to losses if FCF's are invested in high-risk investments where a firm ends up losing the value of the investments. Therefore, FCF is an important determinant on how much the insurance firms can channel towards various investment opportunities they may come across.

1.1.1 Free Cash flow

FCF is a concept that has found extensive application in the finance world because it is an important tool in investment decision making and valuation. It is a concept that is deeply grounded on the finance theory and is very significant in analyzing the cash flow of a firm. The main purpose of FCF is to ascertain the cash available to the firm for unrestricted use once all the other cash requirements have been met (Ojode, 2014). There are different definitions of FCF that may appear to vary but they refer to one and the same thing. For instance Richardson (2006) considers FCF as the excess cash flow above what is required for maintenance of assets and financing of fresh investments. On the other hand, Subramanyam and John (2009) provide a slightly different definition that focuses on the formula of obtaining FCF. They indicate that FCF is the difference between operating cash flows and investment in operating assets.

Abdul and Abdulrahman (2014) assert that the concept of FCF compels firms to ensure that capital expenditures such as costs incurred in ensuring smooth running of the organizational operations, payments to shareholders in form of dividends since shareholders must get returns to their investments. All these expenses must be deducted from the cash generated by the organization from various operating activities and the retained earnings will form part of the

FCF available to the firm. They further posit that the balance of FCF is therefore used to finance various new investments such as acquisitions and leverage buyouts with the intention of restructuring a firm's balance sheet in order to trade in the stock market once more in a few years at higher price than the price the firm bought its own shares.

An increasing FCF is a confirmation that a firm has the potential of experiencing higher earnings in the near future and if FCF increases due to increased revenue, reduction in cost of operation and significant reduction in debts of the firm, the management of a firm may then have the ability to give better rewards or returns to the investors. The above explain the reason why financial experts consider FCF one of the most convenient measures of evaluating firm value (Richardson, 2006).

1.1.2 The Concept of Investment

According to Piana (2001) investment can be defined as the financial worth of all assets that are acquired by a firm in order to assist in producing goods and services. He further asserts that investment in the modern business sense extends to spending money on immaterial assets that may include funds channeled towards research, human resources, stocks, information technology programs and other areas. Thorp (2010) also defines investment as the allocation of money or any other resource with the expectation of getting a future return that may be in form of capital gain or investment income such as interest, dividend or rental income.

Investment involves acquisition of an asset that is usually expected to generate some income to the investor or to appreciate in order to be sold at a higher price at a future date. In most cases investors expect higher returns from high risk investments and low returns from low risk investments. Investments are normally irreversible in the sense that the investor bears the

risk of the capital invested. Once capital has been invested it is either it generates income or the asset appreciates. If not, the investor may end up losing the entire capital invested as it is likely to become a sunk cost (Thopi, 2010).

According to Piana (2001), the key determinants of investment include the expected benefit from the investment. He further argues that benefits are associated with investment outcomes such as increase in firm value, reduction in costs increased production and gaining of competitive advantage. This is an indication that higher profits are also expected. After some time the profit, value is compared to the amount initially invested. The accessibility of funds for investment is also another key determinant of investment. Interest payable on loans and other conventions that are applicable in the lending process will determine whether investment will be possible.

1.1.3 Effect of Free Cash Flow on Investment

Studies that have been conducted over time reveal that a direct relationship exists between Free Cash Flow and level of investment achieved by firms by firms. Hann, Ogneva and Ozbas (2010) assert that maintenance of smooth operations in a firm requires a suitable amount of cash. The further argue that most managers prefer to have large amounts of retained earnings that can be utilized as investments to new physical assets for the firm. In other words, investment decisions made by firms will depend on the FCF available for the investments either to meet the cost of investment or to repay the debt acquired for such investments.

On the other hand, Abdul and Abdulrahman (2014) a minimal degree of investments in activities such as research, advertisements is a clear indication of cash flow instability. Abdul and Abdulrahman (2014) further argue that such cash flow instability implies lack of

utilization of external sources of capital to seal existing cash flow shortages hence choose to abandon investment. This implies that firms that need to maintain better levels of capital investment must ensure FCF stability in order to access cash required to finance new investments.

Kinyanjui (2014) also opines that the value of a firm is enhanced through investments. No firm can improve its net worth without engaging in investment. In cases where managers have been given the opportunity to take part in the ownership of the firm (which provides an opportunity for managers to own shares of a firm) managers are more likely to hold more cash in FCF that will enable them make good investment decisions that have the potential of increasing the value of the organization.

1.1.4 Insurance Companies in Kenya

The insurance industry in Kenya is regulated by the Insurance Act No. 487 of 1984, which was amended seven times between 2003 and 2014 and revised in 2013. The Act addresses issues related to registration of insurance companies, management of assets and liabilities, insurance company solvency and investments decisions, inspection of insurance companies, reinsurance and other aspects. The Act provides guidelines on capitalization of insurance companies by setting minimum limits; it mandates that at least a third of the ownership must be East African and blocks any one person from owning more than 25% except in exceptional circumstances (Oxford Business Group, 2017).

According to the Insurance Regulatory Authority (2017), the insurance industry in Kenya has been growing in the recent past. A number of Kenyan insurance companies have expanded their operations to countries within the region such as South Sudan and Uganda just to

mention but a few. The premiums written by the insurance companies both life and general insurance have increased over time due to growth of the middle income category in the economy. New entrants from the global insurance have also increased the level of competition that has seen mergers and acquisitions take place within the insurance industry in Kenya. Capital investments by insurance companies especially in real estate assets have kept on increasing over time.

IRA indicates that all insurance companies in Kenya are required by law to have investments that are equivalent to their liabilities in both nature and term. As a result of this, in the year 2016 insurance companies in Kenya had 58% of their investments in government securities, 20.3% of the investments were in property, 13.1% of the investments were term deposits whereas 13.2% of the investment was in form of ordinary shares. However, despite the potential for growth in the insurance industry, there are a number of challenges such as fraudulent claims that threaten the earnings and progress of insurance companies (IRA, 2016).

1.2 Research Problem

Researchers have established that there is a positive relationship between FCF and the level of investment achieved by a firm. The amount of cash managers of a firm retain after accounting for all other costs and capital payments as well as paying dividends to the owners dictates what nature of assets the firm can finance in the name of new investments (Hann, Ogneva & Ozbas, 2010).

Insurance companies in Kenya have registered remarkable growth in the recent past. Investments made by insurance companies especially in high worth investments such as buildings are now common in Kenya. It is also evident that insurance companies have

invested more than half of their capital in government securities and more than 20 per cent in property. Investment in shares traded at the Nairobi Securities exchange also takes a significant portion of insurance companies' investments (IRA, 2016). This is an indication that the insurance companies have funds that are being channeled to these investments or what may be termed as Free cash flow.

Research on the effect of FCF on investment reveals diverse findings that indicate distinct differences as far as different industries and sectors are concerned. In addition few studies have examined the effect of FCF on investment. Abdul and Abdulrahman (2014) investigated the effect of FCF on the value of the firm in the pharmaceutical sector in Jordan. The study established that FCF is very essential in assessing the value of a firm. Sheng-Syan, Chen et al., (2009) investigated the role of investment opportunities and free cash flow in explaining the value enhancing potential of stock market liberalization at the firm level. The findings of the study revealed that market's responses to stock market liberalization announcements favour high-growth firms than low-growth firms. Kinyanjui (2014) also carried out a study on the relationship between free cash flows and investments of firms quoted at the Nairobi securities exchange. The research findings reveal that there is a positive fairly significant relationship between free cash flows and investment that is as the level of free cash flows increase, the level of investments increases.

From available research, it is clear that not many studies focus on FCF and investment. In addition the study conducted by Kinyanjui focused on all firms quoted in the Nairobi Securities Exchange and yet not all Insurance companies are quoted. This indicates that it excluded several insurance companies. There is need to carry out a study that will investigate

the effect of FCF on investment particularly in the insurance industry in Kenya. The study will seek to address this research gap.

1.3 Research Objective

To ascertain the effect of free cash flow on investment in the insurance companies in Kenya.

1.4 Value of the Study

The research findings will be beneficial to various categories of people. The first category of people who will benefit from the findings of the study are the policy makers in the insurance industry. FCF is based on policy that governs firms. It will assist the policy makers to develop better policies on FCF in order to enhance investment decisions.

The second category of people who will benefit are the managers of insurance firms in Kenya. The managers are the decision makers concerning how much cash to hold and what investments to make. The study results will enable them understand how FCF affects investments. This will assist them make more informed decisions on FCF and investment.

The last group of people to benefit from the research findings will be the future researchers. This study will not be an end to itself. There are other issues that may crop up as a result of this study being conducted. Future researchers may therefore build upon this study and probe more issues related to the topic of this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of related studies that have been conducted by other researchers. Its purpose is to shed more light on the effect of FCF on investment and to inform the researcher on the methodology adopted by other researchers. The chapter is therefore arranged as follows: section 2.2 presents the theoretical review, section 2.3 the determinants of investment, 2.4 the empirical literature and 2.5 summary of the literature and existing research gap.

2.2 Theoretical Review

This section presents the theories that are relevant to the study. There are many theories that explain the relationship between FCF and investment but this study will be guided by five theories which include: The free cash flow theory, the Agency theory, modern portfolio theory, Neo classical Theory and the Q- Theory.

2.2.1 The Free Cash Flow Theory

This theory was developed by Jensen (1984). The theory tries to explain how managers behave or make decisions concerning free cash flows and investments. According to Jensen and Michael (1996) managers do not always utilize free cash flows in a manner that is likely to maximize profits for the organization. They argue that managers more often than not utilize free cash flows to meet their own selfish desires in activities that are more costly to the shareholders. This is what they term as the consequences of the agency problem that exists between the management of a firm and the owners. Jensen and Smith (1995) argue that

managers may end up spending the resources generated by a firm in activities that are only meant to benefit them but not the owners.

One of the main arguments of the theory is that the investments made by a firm reduce free cash flow available to pursue the personal and conflicting activities of the managers. This implies that firms should invest cash resources available to reduce mismanagement that may be caused by the managers. An argument perpetuated by Donaldson (1997) suggests that there is no point of holding free cash flows since managers may waste the resources by channeling them to activities that cannot benefit the organization. He further argues that the management is highly likely to invest in areas that can increase the firm size or award themselves abnormal allowances instead of giving shareholders dividends or buying shares. The main assumption of the agency hypothesis is based on the understanding that an organization that has free cash flow has the potential of expanding its growth far beyond shareholder wealth maximization frontiers. Therefore, decisions that prohibit managers from spending wastefully benefit shareholders of such firms more. One of the most convenient ways of avoiding wastage is therefore purchasing shares that end up consuming excess cash flows (Jensen & Smith, 1995).

The Free Cashflow theory is also important to this study in explaining how availability of cash resources may facilitate investment in a firm or may lead to wasteful spending by the managers of the firms. The theory sheds more light on how free cash flow may or may not benefit the firm depending on the decisions made by the managers of the firm.

2.2.2 The Agency Theory

The first scholars to propose, explicitly, that a theory of agency be created, and to actually begin its creation, were Stephen Ross and Barry Mitnick, independently and roughly concurrently. Ross is responsible for the origin of the economic theory of agency, and Mitnick for the institutional theory of agency, though the basic concepts underlying these approaches are similar. Indeed, the approaches can be seen as complementary in their uses of similar concepts under different assumptions. In short, Ross introduced the study of agency in terms of problems of compensation contracting; agency was seen, in essence, as an incentives problem (Jensen & Willim, 1976).

The theory further suggests that, in capital and labour markets that are characterized by imperfection, the management who happen to be agents of the owners are highly likely to make decisions that will maximize their satisfaction and not the owners of the firm. The theory also posits that management has that ability to propagate their own selfish interests since they have more information than the owners do of the firm such as the cause of some outcomes that may have been caused by the agent. Appropriate examples of self-centered management actions may involve utilization of organizational resources in the form of privileges, avoiding taking risks and thus denying the firm an investment opportunity that may seem attractive in the eyes of shareholders. External investors have an understanding that management may make investment decisions that are not commensurate to their best interests (Myers & Nicholas, 1984).

The main source of agency conflict in an organization may emanate from a situation where the manager owns less than 100 percent of the firm's common stock. In case of a sole proprietorship where the owner also serves as the manager, he will make decisions that will

minimize his welfare. The sole proprietor is likely to evaluate his satisfaction based on individual wealth accumulation and this implies trading off other things such as allowances and holidays. In the event that a sole proprietor offloads part of the ownership to an external investor, his effort towards wealth maximization may reduce since he understands that returns will be shared with the external investor. In this case, the owner-manager may assume a more relaxed lifestyle and also take allowances as well as reduce the effort towards the business since he understands that less wealth will accrue to him/her (Shankman, 1999).

The scenario in most large corporations and multinationals is that the management owns a very small and negligible percentage of the firm's common stock hence the agency problem and conflicts are more pronounced. Due to this kind of arrangement management are highly likely to make decisions that may subordinate maximization of the shareholder wealth. A good example is the fact that the objective of management is increasing the size of the firm. However, by creating a large firm, the management are not interested in providing better returns to the owners but rather to elevate their status and create more job opportunities for lower- and middle-level management, have better salaries and improve own job security to reduce chances of a hostile takeover (Jensen & Willim, 1976).

The relevance of this theory to this study is that insurance companies are firms that have owners. The owners have entrusted the management of the firms to agents who are employees of the firms. The investment decisions made by these agents may not at all times be aimed at benefitting the owners but to serve the selfish interests of the managers.

2.2.3 The Modern Portfolio Theory

The modern portfolio theory (MPT) was first developed an Economist by the name Harry Markowitz in 1952. The MPT is also referred to as the mean-variance analysis. The MPT is a mathematical model used in gathering a collection of assets such that the expected return is maximized for a given level of risk, defined as variance. The main vision of MPT is that an asset's risk and return should not be assessed by itself, but by how it contributes to a portfolio's overall risk and return (Low, Faff & Aas, 2016).

One of the critical assumptions of MPT is that do not like taking risks hence the reason why they will always choose investment opportunities that have less or minimal risk. However, investros are likely to take up investments that have high risk if the return expected from such an investment is very high. The exact trade-off will be the same for all investors, but different investors will evaluate the trade-off differently based on individual risk aversion characteristics. The implication is that a rational investor will not invest in a portfolio if a second portfolio exists with a more favorable risk-expected return profile, that is, if for that level of risk an alternative portfolio exists that has better expected returns (Doganoglu, Hartz & Mittnik, 2007).

In relation to this study, the MPT is important in explaining why the insurance companies in Kenya have different levels of amounts spent on different investments. This is likely to relate to the level of risk since insurance companies are also risk averse.

2.2.4 Neo-classical Theory of Investment

The Neo classical theory of investment was first proposed by Jorgenson (1963). The starting point of his theory was the optimization problem that each firm experiences. Jorgenson

argued that maximizing profits of a firm at any given period was necessary in order to yield optimal level of capital stock for the firm. The theory suggests that the expectations of a firm in terms of profit maximization depends on the information available to the firm at that particular point. The theory also mentions that labour is significant addressing the optimization problem faced by firms Jorgenson (1971).

The Neo Classical theory of investment is important to this study since it tries to explain the reason why firms seek to make investments. All firms including insurance companies desire to optimize their capital and maximize their profits among other decisions that are made by firms.

2.2.5 Q Theory of Investment

The Q theory of investment was developed by Brainard and Tobin (1968) and was later discussed by Tobin (1969). This theory was developed as a result of two major shortcomings that were present in the Neo-classical theory of investment. The first shortcoming was the assumption that adjustment of the capital stock, to its desired level, is instantaneous and complete at each period. The second problem was that expectations play no role in the neoclassical theory. This implies that in trying to optimize capital, the expectations of the firm did not play any significant role in making optimization decisions.

Keynes (1936) had early overshadowed the suggestion made by Brainard and Tobin (1968) when he argued that stock markets will provide guidance to investors and that it beats logic to build up a new enterprise at a cost higher than the cost of purchasing the existing one. The theory therefore takes into consideration the marginal return on investment when making investment decisions.

This theory is also important in this study since it explains how firms make investment decisions. It clarifies that the marginal return on investment is an important factor to be considered before making investment decisions. This is important since insurance firms in Kenya have diversified their investments and this explains why there is great variation on the investments made by the firms.

2.3 Determinants of Investment in Insurance Companies

The investments an insurance firm can make at any given time is dependent upon a number of factors. These factors include the expectations of the firm in terms of return on the capital invested or the appreciation of the asset acquired, the size of the firm, liquidity constraints, real interest rates and the retained earnings policy of the firm. These determinants are reviewed in detail herein.

2.3.1 Business Expectations

Keynes had an understanding that the income that emanates from capital assets depended on two important things namely: the facts that were known and the with some great level of certainty as well as future occurrences that could easily be forecasted with a certain level of accuracy and involve some significant risk level. These facts exist and are known with certainty that determine short-term expectations (Supriya, 2016).

Any business outcome expectations especially in the short term concerning desired income largely depend on the available value of assets which are capital in nature and the power of demand that consumer hold on goods requiring a good deal of those assets for their production. On the other hand investors assume that existing consumption trend will persist to

the foreseeable future and base their expectations of prospective yield from investment in capital assets on it.

With regard to long-term expectations, Keynes was more interested on changes in future in the assets that are capital in nature and movement in aggregate level of demand for future life entirety of assets that probable yields are being considered. If firms direct their resources towards the acquisition of additional assets with somehow a longer life to be used to produce goods, they are said to be interested with forces which are long-run on which earnings in future from assets which are capital in nature depend. These forces which are long run tend to make expectations which are long run about the future yield not certain. Investments are made very volatile by these Changes in expectations which are long term. Keynes therefore, put a significant importance to the confidence for deciding investment. (Supriya, 2016).

2.3.2 The Size of the Firm

Large firms enjoy a number of benefits such as generation of higher income since they have huge revenue and cheaper credit facilities from capital markets. (Ross, Westerfield & Jaffe, 2002). On the other hand smaller firms, may not have enough capital that can be diverted into investment in assets. Small firms have low turnover and their revenues are also limited. This limits their ability to expand their investments or to make high worth investment decisions the way larger firms can be able to do.

Research from the few past years indicates that small firms have serious informational challenges compared to large firms. For instance the investment activities of small firms are affected by factors that may not necessarily be very intense. Secondly the theory associated with failure of markets because of lack of balanced information, founded on the notion that

those within the organization have more information than those outside the organization concerning the progress of the firm. This imbalance has the potential of increasing the cost of raising funds from outside investors. When there is information asymmetry is the reason why some a conclusion that small firms are disadvantaged as far as sufficiency of financial capital is concerned has been made (Weinberg, 1994).

2.3.3 Liquidity Constraints

The liquidity challenges faced by a firm have an inverse relationship with the size of the firm. Small firms have the potential to experience better growth if they can find ways of addressing the liquidity challenges they face. The inverse relationship between the size of a firm and liquidity may become worse or more pronounced depending on the degree of liquidity challenges experienced. This implies that the more the liquidity constraints increase the more the negative effect of the size on the growth increases.

2.3.4 Real Interest Rates

Rittenberg and Tregarthen (2014) state the prevailing actual rate of interest has an inverse relationship with the level of investment achieved by a firm. This implies that if the rate of interest is high, the price a firm has to pay in order to acquire funds for investment purposes is also high and this in turn reduces the level of investments that a firm can be able to make. On the other hand when the rate of interest is low, credit becomes cheaper hence firms can be able to acquire funds for investments. According to Geng and N'diaye (2012) at the aggregate level, a 100 basis points increase in real interest rates reduces corporate investment in China by about ½ percent of GDP. Based on these estimates, raising real interest rates to the level of

the marginal product of capital net of depreciation would probably lower investment by about 3 percent of GDP.

The estimated effect for China of real interest rates on investment is much larger than the average of the other 52 economies in the panel. The estimated impact of interest rates changes on corporate investment is about half as big when estimated based on the firm-level data. This could possibly reflect the smaller reliance of this sample (which are large, listed enterprises) on bank-intermediated financing (Rittenberg and Tregarthen, 2014).

2.3.5 Retained Earnings Policy

From the view of cash flow responsiveness past research revealed that firms that are strained build up excessive cash holdings and maintain higher segment of earned cash during a certain period, which depicts liquidity is very crucial when firms are unable to generate funds from externally and they require resources that are liquid to invest in profitable projects in future (Khurana et. al., 2006). Almeida et. al. (2004) points out those firms strained financially will spare a lot of cash now to finance investments in future. Instinctively, increasing likelihood sparing cash from free cash flows will show profitable projects are available and financial strains and the payout ratio of the firm will reduce, provided there is a limitation to certain level of external finance that a firm can access.

The payment of cash dividends to shareholders now is the opportunity cost of retaining the internal funds and investing the same in projects that have positive NPV that have greater returns to the shareholders in the future. This is influenced by the shareholders view that is largely explained by the „bird in hand“ theory, where the shareholder perceives the uncertainty of the future cash flows, which have a risk aspect in them. According to Amidu

(2007) the bird in hand theory posits that there is a significant association between the value of the firm and the amount paid to shareholders in form of dividends. It further indicates that there is low risk in dividends compared to gains made on capital invested due to high degree of certainty. Investors would therefore prefer dividends to capital gains.

2.4 Empirical Literature

A number of studies have been carried on FCF. For instance Abdul and Abdulrahman (2014) investigated the impact of Free cash flow on the value of the firm. The primary objective the research was to investigate the relationship between Free Cash Flow of Equity and the value of the firm. The study involved firms from the pharmaceutical sector in Jordan. Panel data covering the period between 2004 and 2010 was utilized for this study. The research results revealed that the value of a firm is evaluated based on Free Cash Flow to Equity. This basically implies that if a firm has higher Free Cash flow then its value is likely to be higher also.

Kinyanjui (2014) also investigated the association between free cash flows and investments made by firms that are quoted in the Nairobi securities exchange. The basic objective of the research was to unearth the degree of association between FCF and investment decisions that are made by firms quoted at the Nairobi securities exchange. The research took the form of a survey design where secondary data was utilized. The data was for the duration between 2009 and 2013. The relationship strength was tested using multivariate regression analysis. The regression model results point out that FCF have a positive impact on Net Capital Expenditure. The study used only three variables to represent FCF and investments. It was established that a direct association exists FCF and the level of firm investment. This implies

that both FCF and investment move towards the same direction. In other words firms that enjoy better FCFs have high chances of making great investments in terms of value.

Ojode (2014) also did an investigation concerning the relationship between FCF and the level of profitability of firms that are quoted at the NSE. The intention of the research was to evaluate the effect of FCF on the profitability of the firm. The study adopted a descriptive survey research design. The target population consisted of 61 firms listed in the Nairobi securities exchange in the year 2014. A sample of 30 firms was selected through stratified sampling technique. Secondary data that was obtained from annual books of accounts that were already audited was used. The relationship was measured using multiple linear regression. The study results established that there was a significant negative association between FCF and firm profitability. This basically means that firms with Free Cash flow are likely to make lower profits. The results therefore seem to indicate that Free cash flow is detrimental to firm profitability.

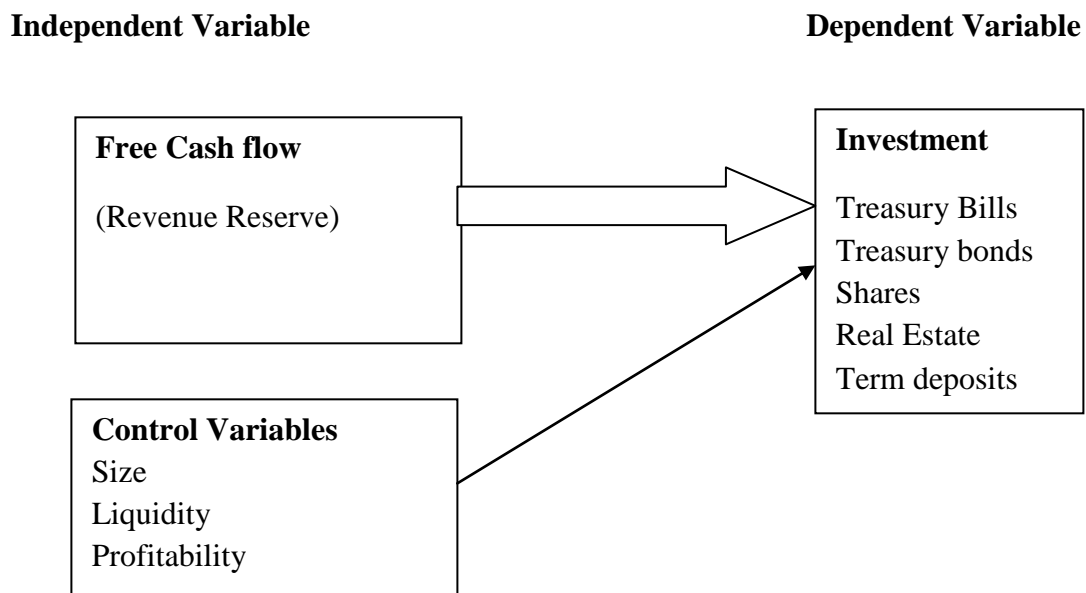
Wang, Zhu and Hoffmire (2015) carried out a study that consisted of three major issues: The quality of financial reports, FCF and efficiency of investment decisions. The primary objective of the research was to investigate the relationship that existed among the three variables mentioned above more particularly in firms that operate in regions considered to be emerging markets. The sample size for the research consisted of 3,726 Chinese firms that were listed in the duration from 2008–2012. The results obtained from the study confirmed that the quality of financial records was closely associated with a high level of investment especially by firms that have FCF. The results seem to imply that firms with FCF may overinvest and also spend more resources on financial reporting in order to justify their actions.

Navid (2014) also carried out a study on the association between cash flow and capital expenditure: evidence from German automobile sector. The results from the study revealed that there was a significant relationship that exists between cash flow and capital expenditure especially in the long run. This implies that cash flow is negatively correlated with capital expenditure based on this value (-0.963). This study largely focused on cash flow and not free cash flow. It therefore never accurately captured the effect of free cash flow on investment.

2.5 Conceptual Framework

A conceptual framework is a diagram that illustrates the correlation between the independent variables and the dependent variable. In this study, Investment is the dependent variable whereas free cash flow is the independent variable. The control variable in this relationship is the performance of a firm measured through Return on Assets (ROA).

Figure 2.1: Conceptual Framework



2.6 Summary and Research Gap

The literature reviewed reveals that there is evidence of research activity on FCF. However, most of the studies focus on the relationship between FCF and other variables other than investment. It was further clear that studies that have focused on the effect of FCF on investment in the insurance industry are scarce. This leaves a research gap that needs to be bridged. This study will therefore seek to investigate the effect of FCF on investment in the insurance industry in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives the methodology that was used to examine the effect of FCF on investment in the insurance industry in Kenya. Section 3.2 presents the research design adopted; 3.3 explains the population of this study as well as sampling methods that were applied; 3.4 explains the data collection procedures and instruments whereas 3.5 contains the data analysis techniques that were employed.

3.2 Research Design

Rajendra (2008) defines a research design as an interconnection and arrangement of conditions for the purpose of ensuring that data is accurately collected and analyzed in a way that can be able to achieve the objective of the study. Rajendra also asserts that a design enables the researcher to understand the structure of the study, thus limiting the possibility of inaccurate inferences.

This study was a descriptive survey of all insurance companies in Kenya. A survey was suitable for the study since it allowed the researcher to evaluate the effect of FCF on investment in the insurance industry in Kenya. This assisted in generalization of the findings on the entire industry.

3.3 Population

Population is defined as the entire spectrum of a system or process of interest. It is the universe of people to which the study can be generalized (Johnston and VanderStoep, 2009). The target population consisted of insurance companies in Kenya. According to the Insurance

Regulatory Authority (2016) there were a total of 62 registered insurance companies in Kenya. The 62 companies therefore formed the target population for this study. Since the population was small, this study involved a census of all insurance companies in Kenya.

3.4 Data and Data Collection Instruments

Secondary data was used in the study. The data was obtained from insurance companies audited/published financial statements which are done annually. A schedule of data collection was used to collect the relevant secondary data that was used.

This data was quantitative and was of two types containing a period of five years starting 2012-2016. The study utilized the data on retained revenue and also the change in investments.

3.5 Data Analysis

This study sought to establish effect of FCF on investment in the insurance companies in Kenya. Multivariate linear regression was utilized in measuring the relationship between variables. Correlation analysis was used to show the strength and direction of the relationship between the variables. The study adopted the following conceptual model in explaining the relationship between the variables.

3.5.1 Conceptual model

$$P = f(a + b)$$

The above model was based on an assumption that Investment by insurance companies is a function of free cash flow. This study assumed that there was a positive relationship between the two variables.

3.5.2 Analytical Model

$I = \alpha + \beta_1 \text{Log}X_1 + \beta_2 X_2 + \beta_3 \log X_3 + \beta_4 \text{Ln}X_4 + e$ as explained in Table 3.1

Table 3.1: Explanation of Variables

Variable No.	Variable Name	Measurement
I	Investment	Aggregate absolute investment by insurance firms
X ₁	Free cash flow	Log of absolute retained revenue
X ₂	Profitability	Return on Equity (ROE)
X ₃	Size	log of current assets
X ₄	Liquidity	Natural Log of current assets/current liabilities

3.5.3 Diagnostic and Significance Tests

The data collected was tested to confirm whether there was similarity in the observed values. In this case multicollinearity test was carried out to ascertain whether there were any two variables that were closely correlated to an extent of affecting the outcome. The significance of the relationship between variables was tested using a p value of 0.005 where a value less than 0.005 were considered as a significant relationship.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

The objective of this study was to determine the effect of free cash flow on investment by the insurance companies in Kenya. Secondary data was obtained from the annual financial statements of the 62 insurance companies in Kenya. The results are presented next.

4.2 Descriptive Statistics

This study had aggregate absolute investment by insurance firms as the dependent variable which was measured using the log of aggregate absolute investment. The independent variables included free cash flow where the Log of absolute retained revenue was used; profitability which was measured using Return on Equity; the size of the firm which was measured using the log of current assets and liquidity which was measured using the Natural Log of current assets/current liabilities. Descriptive statistics were obtained and the results are presented in Table 4.1

Table 4.1: Descriptives

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Investment	310	.0000	7.6532	6.120106	1.6923328
Free Cash Flow	310	.0000	7.1285	3.713210	2.7392601
Profitability	310	-.2430	9.2200	.887547	1.7615277
Size	310	3.6010	6.7974	5.895931	.5416009
Liquidity	310	-1.6468	4.8554	1.218656	1.0748401
Valid N (listwise)	310				

It was established that aggregate average investment had the highest mean of 6.12. This is because most of the insurance firms in Kenya had huge investments in various sectors ranging

from government securities to tangible assets. It was therefore evident that insurance firms have channeled enormous resources towards investments. The independent variable size had a mean of 5.896. The size was based on the current assets of the insurance companies. This was an indication that most of the insurance companies had huge current assets that could easily be converted into cash in case there was need. Free cash flow had a mean of 3.713 which implies that most of the insurance companies had a substantial amount of money held in form of retained revenue. Liquidity had a mean of 1.219 implying that most of the insurance firms had the ability to meet their current obligations. Profitability had the lowest mean of 0.887 implying that most of the insurance firms are able to generate a profit of at least 0.887 for each shilling provided by the shareholders. This was an indication that most of the insurance companies have put the shareholder funds into proper use thus enabling them to generate reasonable profits.

4.3 Correlation Analysis

The study sought to establish the nature of relationship that existed between the variables of the study. A correlation analysis was conducted among the four independent variables (free cashflow, profitability, size and liquidity and the independent variable investment. The results are presented in Table 4.2.

Table 4.2: Correlation Results

	Investment	Free cash flow	Profitability	Size	Liquidity
Investment : Pearson Cor Sig (2-tailed) N	1 .310				
Free cash flow: Pearson Cor Sig (2-tailed) N	.538 .000 310	1 .310			
Profitability : Pearson Cor Sig (2-tailed) N	.314 .010 310	.421 .000 310	1 .310		
Size : Pearson Cor Sig (2-tailed) N	.524 .000 310	.443 .000 310	.416 .002 310	1 .310	
Liquidity : Pearson Cor Sig (2-tailed) N	.318 .016 310	.256 .032 310	.324 .019 310	.448 .000 310	1 .310

The study results revealed that existed a moderate positive relationship between free cash flow and investment as supported by a correlation coefficient of 0.538. This implies that to some extent an increase in free cash flow leads to an increase in the level of investment among the insurance companies in Kenya. The study further established that there was a weak positive relationship between profitability and investment as revealed by a correlation coefficient of 0.314. This implies that an increase in investment would lead to increase in profitability to some small extent.

It was further evident that there was a significant moderate positive correlation between profitability and free cash flow as indicated by a correlation coefficient of 0.524. This implies that a change in the profitability of insurance firms in Kenya leads to a change in the profitability. The size of the firm and investment had a significant positive correlation of 0.524; size and free cash flow had a correlation coefficient of 0.443. The results revealed that

there were two significant correlations that existed between the size of the insurance firm and profitability (correlation coefficient of 0.394 and significance of 0.002) as well as Liquidity and size (correlation coefficient of 0.448 and significance of 0.000). This implies that the bigger the size of the insurance firm, the higher its profitability is likely to be and the bigger the size of the insurance firm, the higher the liquidity of that firm and the reverse is true. Lastly it was also established that there was a significant positive correlation between liquidity and size as supported by correlation coefficient of 0.448. This implies that larger firms have high liquidity than smaller firms.

4.4 Effect of Free Cash flow on Investment

The main objective of this study was to determine the effect of free cash flow on investment by the insurance companies in Kenya. In order to achieve this objective, a regression analysis was carried out with the assumption that there was a positive relationship between free cash flow and investment by insurance companies. Investment was the dependent variable and the independent variable was free cash flow, profitability, size and liquidity. The results from regression analysis are presented in Tables 4.3, 4.4 and 4.5

Table 4.3: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.624 ^a	.389	.326	.652841

The study revealed that the independent variables of liquidity, free cash flow, profitability and size have a role to play in investments by insurance companies in Kenya. The coefficient of

determination (R square) has a value of 0.389 implying that free cash flow contributes to 38.9 percent of investments made by insurance firms in Kenya.

Table 4.4: Relationship significance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	120.321	306	87.328	24.367	.000 ^a
	Residual	54.382	4	3.456		
	Total	174.703	309			

The p value (0.000) is less than 0.05 indicating that this relationship between free cash flow and investment is considered statistically significant. This implies that free cash flow significantly affects the level of investment made by insurance companies in Kenya.

Table 4.5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.246	3.642		9.203	.000
	Free Cash Flow	.454	.21	.511	3.214	.000
	Profitability	.298	.208	.188	1.228	.014
	Size	.394	.314	.256	2.897	.000
	Liquidity	.152	.126	.161	0.985	.047

The study findings revealed that all the four independent variables had positive coefficients. Free cash flow had a regression coefficient of 0.454; profitability had a coefficient of 0.298; the size of the firm had a regression coefficient of 0.394 and liquidity had a regression coefficient of 0.152. This implies that an increase in any of the independent variables would increase investment to some small extent and the reverse being true.

4.5 Discussion of Findings

The study established that the insurance firms in Kenya hold high amount of retained revenue. The retained revenues was the second highest after amount held in investment. This was an indication that the need for funds for future investment was one of the reasons why the firms held huge amount of retained revenue. The study results therefore concur the position held by Khurana et. al., (2006) and Almeida et. al. (2004) who indicated that firms that are strained build up excessive cash holdings and maintain higher segment of earned cash during a certain period, which depicts liquidity is very crucial when firms are unable to generate funds from externally and they require resources that are liquid to invest in profitable projects in future and that those firms strained financially will spare a lot of cash now to finance investments in future.

The study findings established that there was a significant relationship between the size of the firm and its profitability. This implies that large firms have the ability to generate more profits than smaller firms. The results agree with the findings of Ross, Westerfield & Jaffe (2002) who established that large firms enjoy a number of benefits such as generation of higher income since they have huge revenue and cheaper credit facilities from capital markets. They also revealed that smaller firms may not have enough capital that can be diverted into investment in assets. Small firms have low turnover and their revenues are also limited. This limits their ability to expand their investments or to make high worth investment decisions the way larger firms can be able to do.

It was further evident from the study results that there was a significant positive relationship between liquidity and the size of the firm. This implies that large firms have the potential of

raising huge amount of capital and can easily access enough funds for investment whereas small firms may not raise substantially huge amounts of capital. The results are in line with those of Westerfield & Jaffe (2002) who also established that small firms have challenges in raising investment capital because of their limited revenue.

The study further established that there was a positive association between free cash flow and investment. This was an indication that an increase in free cash flow would lead to increase in investment to some extent. This finding agrees with that of Kinyanjui (2014) who established that a direct association exists between FCF and the level of firm investment. This implies that both FCF and investment move towards the same direction. In other words firms that enjoy better FCFs have high chances of making great investments in terms of value.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

A study was carried out to establish the effect of free cash flow on investment by insurance companies in Kenya. This chapter presents a summary of the findings, the conclusion, recommendations and suggestions for further research.

5.2 Summary of Findings

The study established that insurance companies in Kenya have invested huge amount of investments both in current and other assets. It was further established that most of the firms had huge value of current assets and this was an indication that most of the insurance firms were big in size based on assets. It was also evident that most of the insurance companies in Kenya had a high free cash flow since they had relatively high amounts of retained revenues. The insurance companies were also found to have sound liquidity that can enable them meet their current financial obligations without any major challenges.

The correlation analysis conducted established that there were positive correlations between various variables. There was no inverse correlation between any two variables. This was an indication that free cash flow is positively correlated to investment. The most significant positive correlations existed between the size of the insurance company and profitability as well as between liquidity and the size of the firm. It was evident from the results that large insurance firms i.e. those with higher value of assets make more profits than those with small asset base. Similarly those with a higher asset base were found to have greater liquidity than those with small asset base.

The study also established that free cash flow has a significant effect on investment. There exists a positive relationship between free cash flow and investment since all the independent variables had positive coefficients. It was established that a higher free cash flow could be associated with an increase in the level of investment by the insurance companies in Kenya.

5.3 Conclusion

Insurance companies in Kenya have invested huge amount of funds in various types of investments. The insurance firms have also invested significant amount of funds on current assets that can easily be converted into cash. Free cash flow for most of the insurance companies was found to be high since majority of the insurance companies had large amount of funds in form of retained revenue. Large firms were found to have higher profit margins than small firms. Large firms were also found to have better liquidity than small firms. The study also established that majority of the insurance firms made significant profit for each share of capital provided by the shareholders. Finally it was revealed that there was a positive association between free cash flow and investment. Higher free cash flow implies higher investment for insurance firms.

5.4 Recommendations

The study revealed that there was a positive relationship between free cash flow and investment by insurance companies in Kenya. More insurance companies should be encouraged to develop their retained revenue reserves to enable them access enough funds for future investment.

The size of the company was found to have a significant positive relationship with profitability and liquidity. Growing the size of the firm by increasing the asset base is

therefore of paramount important to insurance companies in Kenya. Insurance companies should be encouraged to strive to grow their companies and enjoy economies of scale.

5.5 Suggestions for Further Research

The study established that 38.9 percent of investment by insurance companies in Kenya is attributed to free cash flow. This implies that 61.1 percent of the variance is explained by other factors that are not within the confines of this study. More and expansive research is therefore required in order to reveal these factors.

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