

**THE EFFECT OF MICRO-INSURANCE ON THE FINANCIAL
PERFORMANCE OF INSURANCE COMPANIES IN KENYA**

BY

JOSEPH E. OMONDI

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DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed: _____ Date: _____

JOSEPH E. OMONDI

D63/71338/2014

This Research proposal has been submitted for examination with my approval as the University Supervisor.

Signed: _____ Date: _____

DR. KENNEDY OKIRO

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

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DEDICATION

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LIST OF ABBREVIATIONS

AKI	Association of Kenya Insurers
ANOVA	Analysis of Variance
GDP	Gross Domestic Product
MFI	Micro Finance Institution
MPT	Modern Pricing Theory
RBV	Resource Based View
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Sciences
USA	United States of America
USD	United States Dollar

ABSTRACT

Performance is paramount to any business and the insurance business is not an exception. The overall performance of the insurance industry has declined from 2014 to 2015, with poor macroeconomic conditions linked to the decline in performance (AKI, 2016). The increasing competition in the insurance sector has led to the development of micro insurance a deviation from the traditional standard insurance products. A number of insurance firms have developed agriculture micro insurance products and these include jubilee insurance, CIC insurance, Britam insurance among others. Micro insurance in Kenya has gained traction over the past few years given the fact that Kenya is an agricultural country, with the majority being small scale holders (Cytton, 2016). This study sought to determine the effect of micro-insurance on financial performance of insurance companies in Kenya. The independent variables were total premiums, total claims and total costs all on an annual basis. Financial performance of insurance companies was the dependent variable which the study sought to explain and it was measured by annual Return on Assets (ROA). Secondary data was collected for a period of 5 years (2012 to 2016) on an annual basis. The study employed an explanatory cross-sectional research design and a multiple linear regression model was used to analyze the relationship between the variables. Statistical package for social sciences version 21 was used for data analysis purposes. The results of the study produced R-square value of 0.051 which means that about 5.1 percent of the variation in financial performance of insurance companies in Kenya can be explained by the three selected independent variables while 94.9 percent in the variation was associated with other factors not covered in this research. The study also found that the independent variables had a weak correlation with financial performance of insurance companies ($R=0.227$). ANOVA results show that the F statistic was insignificant at 5% level with an F statistic of 0.830. Therefore, the model was not fit to explain financial performance of insurance companies in Kenya. The results further revealed that individually, all the three selected independent variables were not statistically significant determiners of financial performance of insurance companies in Kenya as they all had p-values greater than 0.05. This study recommends that the management and policy makers in the insurance industry should come with a way of increasing total premiums collected by firms as they ultimately influence financial performance of insurance companies. Other factors that not covered in this study but positively influences financial performance of insurance firms should also be addressed.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The concept of Micro insurance is not new. Mechanisms of forming a pool of risk have its history in a few insurance predecessors like Roman committal unions. Products like industrial life as well as common plans originated back in 19th and 20th century. The cooperatives and credit groups came with the idea of Micro Insurance. They as well formed their insurance firms to help in managing their internal risks (Richard, 2011). However, the phrase Micro insurance is new. It emerged as a development of Microfinance in the 90s when MFIs started offering insurance products, mainly credit life to secure their loans.

The Micro-insurance was initially constrained to providing credit life products that cautioned them against financial losses as a result of default when a borrower dies or is totally and permanently disabled. The above kind of insurance cover quickly became commoditized with brokers and other insurers firms. This therefore led to the falling of payments almost below sensitive levels prompting providers to start innovating coverage to protect the price. The increased competition among insurance providers has led to the development of micro insurance targeting agriculture, health, property among others (Gerrit, 2014).

Agricultural Insurance developed as way to shield farmers from losses that results from finances. This gave the said insurance ability to be the best cover and strategy for mitigating all risk related to farmers. It has also encouraged farmers to hold new productions practices with better yields and quality produce. Agricultural insurance grant farmers with substitute mechanism for stabilizing their farm income as well as

investment. The same can also guard them against catastrophic that results from natural calamities that may results to low market prices. Once there is a bad agricultural year, crop insurance helps to stabilize the farm income hence farmers are able to initiate production. It was introduced to help the country towards realisation of its vision 2030. The introduction of agriculture insurance by the providers was also targeted at improving the performance of insurance firms. However, questions still abound as to the impact of agriculture micro insurance on financial performance of insurance companies.

1.1.1 Micro Insurance

Micro insurance is a concept developed from the broader field of microfinance that composed of a variety of “micro” financial forces targeting people with low-income. In description, micro insurance same as traditional insurance, only differ in the sense that, it targets a diverse section of a population. Micro insurance is a financial deal set to protect low-income earners from particular perils in exchange for standard premium payments in proportion to the possibility and cost of the risk implicated (Churchill, 2006).

There are many players within the micro insurance chain. These chain members are, the regulators, administrators, risk carriers, delivery channels, technology, as well as related service providers. These risks carriers include non-governmental organizations, insurance providers, and community organizations among others. The micro insurance categorizes the insurance into two main groups based on their premium payment ability. Those living above the international deficiency rate of 1,25 USD per day, and up to 4 USD per day make up the segment for end market for the commercially feasible insurance providers.

In exchange of premiums payments, low-income earners are given micro insurance as specific hazards transfer from the policyholder. The actual population that makes the aimed population includes people disadvantaged from the ordinary business and social insurance plans and those individuals who did not access to insurance products (Richard, 2011). The micro insurance should thus fall inside the purview of the significant local insurance controller or administrator or any other capable body under the state laws of any influence. Micro insurance may actually be given for a wide variety of risks. Its production or contribution is measured by the amount of premium versus claims, reinsurance and administrative cost experiences (Gerrit, 2014).

Agriculture insurance development in Kenya can be traced to the year 2004, when innovation started to develop a new form of crop insurance product to caution farmers against losses related to extremes in weather. This was prompted by the struggles of the small hold farmers in accessing microfinance loans to acquire farm inputs such as quality seed and fertilizers. To date crop insurance has developed into a number of insurance products by various service providers, a trend which has continued and has been enhanced by mobile technology (McKinsey, 2015).

Agriculture micro insurance in livestock merged as an array of continuous production innovation putting into consideration the immense contribution of cattle farmers into the country's economy. The intuition behind this is therefore to protect the small farmers against possible perils as well as promoting high quality yield.

The innovation around these products also focuses on ways to reduce fraudulent claims with the invention of radio frequency identification chips, which were inserted into the cow to make it harder for the farmer to remove the tag and make a claim if

the animal is still actually alive. However, the cost of more secure tags has outweighed the reduction in premiums (Richard, 2011).

1.1.2 Financial Performance

Financial performance is key to the stakeholders such as investors and administration in determining the hope success of a venture. Jim (2007) added that performance of financial entities can be gauged in a number of categories which include profit growth, employee growth, asset growth or any other type of changeable saver or management thinks is a key marker of potential success of an entity. However, insurance firms measure performance according to the gross income, net premium written, claims incurred, net commissions, management expenses, underwriting results, investment income, operating profit or loss after taxation, asset investments and shareholders fund results.

According to the Kenya micro insurance policy frame paper (2012), the top five issues likely to have high impact on the micro-insurance business are; high transaction and administrative costs, moral hazard and adverse selection. Besides, lack of necessary capacity to develop MI products and lack of reliable IT solutions is a huge barrier to MI development.

1.1.3 The effect of Micro Insurance on Financial performance

Micro insurance is a crucial tool for promoting positive financial performance for the policy providers. The principle of micro insurance also aims at boosting insurance penetration in the Kenyan market. It is a concept developed from the broader field of micro finance that is composed of a variety of 'Micro' financial forces targeting people with low income.

Existing literature on the growth of micro insurance uptake points to a number of factors on the part of micro insurance providers which includes limited financial resources, lack of proper management, use of outdated technologies, stiff competition among the policy providers, unfavourable government policies among others. Lack of public awareness and poor access to micro insurance products are stated to be main causes limiting insurance penetration in the Kenyan economy (Yaron, 1997). However, the insurance providers have a significant role in improving insurance uptake through financing and other promotional activities.

Asemelash (2002) confirmed a positive impact of micro insurance on the policyholders and the providers. He showed that micro insurance has impacted positively on individual enterprises. The concept has led to higher investment from the small holder businesses since major risks encountered in such ventures are covered under micro insurance. Micro finance institutions also rely on the solutions to secure loans offered to the small holders in the event of default occasioned by an insured peril in the micro insurance deal. On the other hand, insurance providers can hope for a higher return based on increased uptake of the policy from the small holders.

(Madole, 2013) established that age or experience of a firm, accessibility to its products, liquidity affect micro insurance uptake. There is need for a sustained effort to promote public awareness, constant innovation and product development. The study concludes that micro insurance solution is necessary for the small holders and if well managed should spur positive financial return for the policy providers.

1.1.4 Insurance Companies in Kenya

Referring to the Association of Kenya Insurance details (2012), insurance production in Kenya comprise of a number of players like; insurance and reinsurance companies, brokers and other service delivery. By the end of 2013, records have that 47 insurance licensed companies exist. Of the population given, 23 are dealing with non-life insurance only and the rest are composite. Statistics has that, 169 brokers are in existence 24 medical service providers, and 4,803 insurance agents. Other licensed players include 3 reinsurance companies, 140 investigators, 91 motor assessors, 21 loss adjusters, 3 claims settling agents, 5 risk managers, 27 insurance surveyors and the regulatory bodies.

The top ten general insurance providers are APA with a market share of 8.3 %, Jubilee at 7.9%, Kenindia at 7.7%, UAP at 6.8 %, AIG at 5.7%, Heritage at 4.8% and ICEA Lion group at 3.8 %. The micro insurance underwriters in the market are about ten with the likes of APA, Kenya orient, AAR, Jubilee, CIC, UAP and Britam just to mention a few. The market is also characterized by International health insurance providers namely; Bupa International, Aetna Global and Allianz. The Insurance Act, Chapter (487) of the Laws of Kenya, has been an efficient tool for controlling the insurance trade since its ratification in 1984.

1.2 Research Problem

Performance is paramount to any business and the insurance business is not an exception. The overall performance of the insurance industry has declined from 2014 to 2015, with poor macroeconomic conditions liked to the decline in performance (AKI, 2016). The increasing competition in the insurance sector has led to the development of micro insurance a deviation from the traditional standard insurance

products. A number of insurance firms have developed agriculture micro insurance products and these include jubilee insurance, CIC insurance, Britam insurance among others. Micro insurance in Kenya has gained traction over the past few years given the fact that Kenya is an agricultural country, with the majority being small scale holders (Cynton, 2016)

It is also increasingly being recognized that the micro insurance agenda is inevitable as a form of financial inclusion and avenue for increasing insurance penetration.

A large number of insured citizens are drawn from the official sector which totals about 5% of the entire population. This means that most of the Kenyan population is in the informal sector that is not sufficiently provided for by the conventional insurance. The Insurance penetration in the market is specifically low with about 3% but with very high growth prospects expected in the long run (Nyabochwa, 2015).

Different researchers have strongly explained the vital roles played by the micro insurance firms as far as live promotion is concern in many communities. For example, health insurance has encouraged the use of health services due to low cost of these services. Property insurance also encourages business-minded people to take risk when investing to other fields. Furthermore, various studies have demonstrated a causal link between the development of the insurance industry and national economic development by putting a price on risk and supporting entrepreneurship. Nevertheless, the probable of such micro insurance merchandise, especially agriculture is yet to be tested on the performance of insurance entities (Nyabochwa, 2015).

Several studies have been carried out in the financial performance of Insurance companies. These include Alando (2014) and Wairimu (2015) on the determinants of penetration of micro insurance products in Kenya. However, from the existing studies

it is evident that there exists a gap on research carried out on the impact of agriculture micro insurance on performance of insurance firms. Thus the study will analyse the effect of agriculture micro insurance on monetary performance of insurance companies in Kenya. This will be based on the following research questions; does micro insurance premiums influence the financial performance of insurance firms; does micro insurance claim sway the monetary performance of insurance firms and does micro insurance costs influence the monetary performance of insurance entities?

1.3 Research Objective

To establish the impact of micro insurance on the financial performance of insurance companies in Kenya

1.4 Value of the Study

This research will give an insight on the market trends and micro insurance performance indicators. This will be a revelation to the insurance players in the market, as they will look out for proper innovations that steer them towards good performance. Besides, companies will be able to have a benchmark for measuring individual achievements.

To the government, it will provide proof on whether her current effort through the ministry of agriculture on agriculture insurance is bearing fruit. From the study recommendation, the government will develop new policies and regulations to encourage provision of micro insurance to farmers. Finally, the study will contribute to knowledge on determinants of financial performance of insurance firms in developing countries. Besides, through the study findings theoretical frameworks will be validated thus enhancing their reliability in financial performance studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is a summary of substantive findings which constitute the collection of interrelated concepts that will guide this research, determining what measures to look out for and the statistical relationships of other authors works.

2.2 Theoretical review

It has not been found a common theory that can provides a unifying frame for the study about monitory wellbeing of insurance entities. This research shows relevant theories which are closer to the notion of insurance financial performance with its determinants.

2.2.1 Resource Based View

The main theoretical structure used is the Resource- Based View (RBV) in the literature of management (Runyanet al.2006). The establishment behind RBV is to be the selling point form by a company through its outstanding resources. According to Grant (1991), the knowledge of reliable competitive edge of an organization, has been the critical area of study in strategic management. To use RBV in identifying the internal and external strengths and weakness of an entity, two main assumptions must be reviewed, Barney (1991). The first assumption is structuring on Penrose (1959), this job presume that firms can be view as packages of dynamic resources and that diverse firm have different bundles same resources hence, the assumption of firm resource heterogeneity. The next, assumption has its origin from Selznick (1957) and Ricardo (1966), It states that, this approach presumes that a few of these resources can either be costly to duplicate or inelastic in provision.

Essentially, RBV illustrates a company within the requisites of the resources to the firm incorporate. Penrose (1959) emphasizes the state of a company rather than just a component, but also a set of resources. Repeatedly, the term source is restricted to those aspects that develop effectiveness and efficacy of the enterprise (Wernerfelt, 1984). Resources can be physical or intangible in its character. Substantial resources comprise of capital, capital sources and site. Intangible resources entail information, talents and status, business orientation, among others (Runyan *et al.*, 2006).

The theory attempts to describe performance spatiality amongst firms through the use of asymmetries with facts (Chen, 1996). The focus at the company strategy rank is on the roles of corporate resources in the determination of both industrial and physical borders of the company's actions. In the business strategy level, the focus is on the analytical of competitive replication, suitability of return to investment and creativity, and the margin it has set to its competitors as far as profitability is concerned.

A firm's aptitude to get a good yield in above of its charge of production is as a result of competitive advantage above its opponents. Industrial groups finances accentuate industry charismatic nature as the main foundation for greater productivity, the suggestion being that tactical executive is anxious primarily about looking for constructive business setting, identifying smart segments and strategic teams within industries and fairing competitive pressures by controlling business formation with rivals' activities. Thus, the RBV is simply the firm's information based perception.

2.2.2 Modern Portfolio Theory

The theory of Modern portfolio suggests a choice between wide varieties of investment alternatives to achieve optimal organization portfolio. The theory was advanced by Harry Markowitz in 1952. Financial institutions or investors seek to

secure financial performance of their portfolios by investing their capital carefully in a way to minimize their exposure on one particular risk or asset. This is done by focusing on diverse programme of monetary securities and business segments that are not affected in the same way or react similarly to prevailing risks such as emergence of new information. The theory supports the decision of investors in determining the most efficient investment. It enables an investor to consider the various investment options available by analysing a number of probable portfolios of the given securities. By selecting securities which doesn't always move the same way, MPT form illustrates financiers how to smack a balance of peril and optimize returns. It is focus on ordinary takings (mean) and the standard deviation (variance) of these portfolios. MPT indent to capitalize on presumed portfolio results for a set quantity of portfolio threat, or consistently reduces risk for a known point of return by cautiously selecting the scope of several assets. It replicates a portfolio like a weighted amalgamation of resources, so as the outcomes of a range is the weighted mixture of the possessions return. Because insurance companies are savings by nature, its criterion exercise for them to save in abroad portfolio to reduce peril and attach the outcome a variety of savings choices on proposal.

MPT emphasizes on asset allocation, rebalancing and maximization on order to maximize profit as reduces perils. Also accord credit to the presence of systematic and non-systematic perils. These are notions that are considered while talking about monitory savings. Insurance as it is prejudiced by risks and outcomes also discovers its meaning in MPT. Diversification is a concept that assists to guard against victimization of high peril. Over-reliance on parallel assets' investment return and hopes that conditional charges will not be taken as real debt, are risks that can be detrimental absolutely to risk portfolios in time. This therefore, means, the

underwriting skill is only meaningful as a result of Non-systematic and alphas risk. Non-systematic risks can be managed by increasing insurance coverage to more assureds in a concept of risk pooling. When the above is done, it leads to realization of diversification. Alphas, likewise, translate the surprise outcome or intrinsic productivity of an asset and in adapted this idea onto the insurance trade, this is possibly the natural kind of an insured asset and the way the dangers and other situations are reduced, in which it is further possible that the payments given by the assured may finally be seen at the conclusion of the insurance terms time. While financial assets are able of giving unusual returns, coverable perils can as well stay oddly intact and shun from changing into actual obligations to the insurance firm. The theory will be important in providing an understanding on the performance of various portfolio under which micro insurance exists in insurance firms. It assists in fostering asset rebalancing to guard against overconcentration of perils and ensure adequate spread on the various products of micro insurance. This would ensure prudent underwriting to widen insurance coverage through risk pooling.

2.3. Determinants of Insurance Financial Performance

Profitability is a significant gauge of the performance for any trade. In the cover firms the two signs of productivity; Return on Assets (ROA), clear as liquid outcome shared with whole assets, and Return on Equity (ROE) distinct as liquid result divided with equity capital.

2.3.1. Age

The volume of the firm seems to be the actual important characteristics in learning of an organization. The firm's size versus the nature of risk associated with it, conclusion and overview was given by Chen and Hambrick (1995) and Mintzberg

(1979). Company's volume indicates that there is a close relationship with business-sunk outlay attentiveness, perpendicular incorporation and general industrial productivity (Dean et al., 1998).

Several studies have been conducted to examine the effect of size and age on firm profitability. However, the empirical evidences of the linkage between profitability and firm volume are somewhat conflicting. For instance, evidence collected by Philip Hardwick and Mike Adams (1999) from UK companies suggests that there is an contrary relation among productivity with firm size. Jay Angoff Roger Brown (2007) added the relationship between the company's age and its productivity level as the use of ROA. Similarly, the research conducted on the relationship among firm features like period, site, volume business faction, profitability and growth by Swiss Re (2008) indicated that big companies seem to develop quickly compared with minor ones, while new firms develop quickly than aged companies. As oppose, Hamadan Ahamed Ali Al-Shami (2008) added that there is no an important relationship linking company's maturity with productivity. Similar to Jay Angoff, Hafiz Malik (2011) through his research in Pakistan dismisses the study of Ahmed Ali, on the relationship linking maturity of the company with the productivity attached to it.

Old firms are associated with a high profitability index. This could be as a result of a high point of experience in the operation of a company, hence low cost of production and high profit margin.to exploit the economies of scale, older firms stood a high chance compared to small firms, hence is their more profitable Flamini et.al (2009).

2.3.2. Liquidity

Liquidity in the background of insurance firms is the ability of an insurer to honour its debts or debt obligations as and when they fall due. These include operating expenses and settlement of claims lodged under various insurance policies. Liquidity of a

company is measured against its current asset. Higher liquidity ratio means that more current assets are held idle and possibly will provide in gainful savings. For an insurance enterprise, income flow (mainly premium and investment income) and liquidation of property are the key basis of cash. Renbao and Kie Ann (2004). Empirical evidences regarding liquidity have revealed almost inconsistent results. For instance, Naveed Ahmed et.al. (2011) Pakistan study instituted a trivial relationship that ROA has with liquidity. Similarly, several other studies also have been conducted to measure the performance of the insurance companies.

In contrast, Chen and Wong (2004) concluded that, liquidity is a significant determinant of financial wellbeing of insurance trades with a negative relationship. Likewise, Hakim and Neaime (2005) observed that liquidity, current capital and assets are the important controllers of banks productivity.

Mehari and Aemiro (2013), emphasizes that, insurance firms that have highly liquidity assets have a guarantee stable long run. This will earn them a competitive advantage hence outdoes those with less liquid assets. The results of the regressions performed by Boadi et al. (2013), Mehari and Aemiro (2013) outcomes of their study shows the significant relationship between liquidity and ROA. However, the same shows statistically insignificant. Boadi et al., (2013) added that every time current assets pay recent liabilities there is a straight blow on productivity although this one may be immaterial. Almajali et al., (2012) found that liquidity has an important arithmetical effect on financial presentation of insurance firms, and point out that firms need to reduce current liabilities and raise current assets, due to the positive link involving liquidity and financial recital.

2.3.3. Leverage

Leverage entails the level in which a company employ its securities, like debt as well as preferred equity. Leverage unearths avenues for competition predation in rigorous produce markets, thus taming the performance outcome of leverage on the degree of rivalry in the insurance industry Harrington (2005).

It is evident that the leverage above the best level can lead to high risk and low value of the company Renbao Chen and Rie Ann Wong (2004). Empirical facts with view to leverage instituted to be numerically important connection although pessimistic. For example Hamadan Ahamed Ali Al-Shami (2008) in UAE, Hifza Malik (2011) in Pakistan, SylwesterKozak (2011) in UK Swiss Re (2008) in Egypt and Flamini et al (2009) in Sub-Saharan nations established that unenthusiastic but numerically important association involving leverage and productivity of a company. Harrington (2005) added much studies have been given to the relationship of leverage and productivity, as an avenue of sustaining the capital formation theories, as well as disputing the fact that insurance companies that holds minor leverage normally reports high ROA and minor ROE.

2.3.4. Loss ratio (LOSS)

Insurance firms might grow by taking sensible leverage risk or could become bankrupt if the peril is not managed. Insurance firms that have higher leverage have improved effective presentation than insurance firms that has little leverage. Nevertheless, extra pragmatic facts bear the analysis that leverage risks decreases firm's recital. Furthermore, a negative association involving leverage plus performance has as well been instituted in Browne (2001).

Malik (2011) and Ahmed et al. (2011) as well instituted similar effect. The outcome of this research also point out that having a huge ratio of real assets to total assets (tangible) involve important and helpful effects on presentation.

2.3.5. Tangible assets

Insurance companies derive income mainly from their policy sales and investment portfolios. The rate of return on the fund is a key driver on the overall earning for insurance companies.

Insurance companies derive income mainly from their policy sales and investment portfolio. The rate of return on the fund ia a key driver on the overall earning for insurance companies.

A new revise by Hafiz Malik (2011) established that there live a constructive and important association linking real assets and effectiveness of insurance firms and disputed if the level of fixed assets formation is high, the bigger the insurance company. In distinction to this, Yuqi (2007) instituted that no major relationship linking real assets with profitability of insurance companies.

2.3.6. Growth Rate

The ultimate of growth is calculated using the total assets percentage change or simply insurance firm's premium change. This is expected to absolutely relate with productivity of insurance corporations.

Experimental proof by Naveed Ahmed et al (2011) in Pakistan, Yuqi Li (2007) in UK and Hamadin Ahmed Ali Al-Shami (2008) in UAE of their research instituted a positive and statistically important association between growth and productivity of insurance firms.

2.4 Empirical Studies

Burca&Batrinca (2014) research, so as to resolve the features that control the financial stability (return on total assets ratio) in the Romanian insurance market throughout the period 2008-2012, tested 13 vivid variables: insurance financial leverage, size of the entity, firm's age in the Romanian market, premiums gross growth, equity, whole sell share, expansion, underwriting perils, assets ratio, reinsurance trust, reserved risk ratio, solvency scope and growth of GDP per capita. The research instituted that a positive connection exists between firm's size and financial recital, since larger firms have more resources, a better risk diversification, difficult information systems and a better costs administration. The relationship between the enlargement of gross written premiums and insurers' financial performance is not positive, as required, as in some cases, an excessive growth of underwritings creates a high underwriting risk and the necessity to raise the size of technological reserves.

Omondi &Muturi (2013) research was based on 29 programmed companies (without scheduled financial institutions and insurance firms) that have been functioning at the Nairobi securities exchange since 2006-2012. The research pointed out that leverage (ratio of debt-equity) has a significant downbeat cause on monetary presentation (ROA). The research also gives proof to deduce that liquidity (current assets over current liabilities) play a vital role in recovering the company's financial performance. According to the study results, the study presumes that the size of the firm bears a vital helpful result on financial presentation of insurance firms.

In another study carried out by Oscar Akotey, Sackey, Amoah, &Manso (2013) in Ghana with an aim to measure the financial routine of the life cover industry of an up-

and-coming market. The study used descriptive methodology to analyse the financial statement of insurance companies for a period covering 11 years (2000-2010) with data analysed through panel.

According to a study carried out by (Ayeh, 2010) that focused on the performance of the micro insurance industry in Ghana with specific reference to the role of partner agent model. The study major aim was to review the various existing micro insurance products and assess the level of knowledge or awareness of the low income earners regarding the various formal micro insurance products available in Ghana. The study used descriptive research which was largely qualitative in gathering and analysing data generated from primary and secondary data. The major findings indicated that there are currently three main micro insurance products in Ghana: Funeral (Anidaso), National Health Insurance Scheme (NHIS) and the Credit Life and Property insurance. The study revealed that respondents exhibited average awareness about the NHIS but had little or no knowledge about the funeral and credit and life property policies. It was evident that the agent (MFIs) in the distribution of the funeral and credit life and property policies have not contributed to creating awareness on the various policies available for their clients but rather staff of the partner (Insurance Agency) contributed to creating awareness through frequent sensitization and marketing programs.

In another study carried out by Nyabonchwa (2015) to assess the factors influencing the use of Agriculture insurance among farmers in Kiambu County. Specifically, the study was out to test the effect of awareness, socio-economic factors and stakeholder influence on the uptake of agriculture insurance. Descriptive research design was used to collect data from farmers and key informants. The study found that awareness

influences the use of Agriculture insurance among farmers in Kiambu County. The study also found that socio-economic factors such as the cost of insurance, type of farming practiced, risks surrounding crops and livestock and income generated from farming influences the use of Agriculture Insurance. The study finally found that stakeholders influence the use of Agriculture insurance in through offering insurance at high costs premiums, long procedures in the acquisition of the policy, delays in compensation in case of loss, inadequate creation of awareness on the available policies and limited risk coverage by the insurance firms. The study focused on the factors enhancing uptake of insurance on the consumer side but did not delve on the supply side (insurance side) thus necessitating the study.

According to Ndungu (2015), in examining the effects of monetary performance of insurance firms in Nairobi, through the use of variable cost like return on assets, cost reduction, earning per share and liquidity, the study shown how banc assurance has contributed much on insurance companies financially. The design adopted was the descriptive research. It is evidence from the study that insurance companies have grown financially as result of banc assurance. On cost cutting, it is evidence from the results that many customers in every item for consumption bundle market decreases fees; hence the extent of competition in the market of every package also decreases cost; that there is a high cost of average on premium products and finally, that cross-holdings cut fees and banc assurance cut prices. The price decline reduces when the two tactics are joint. Accordingly, it is obvious from the study results that banc assurances improve insurance firm's return on asset because firms inclined to raise its property holdings in order to lessen peril. Moreover, the findings underline that Bancassurance rises insurance company's earning per divide, this can be imitation from the increased productivity and return on assets. Lastly, it can be noted from the

outcomes that Bancassurance develops an increase in a company's liquidity. It is concluded that insurance entities with fused on banks documentation high productivity since there is an obvious growth in the number of customers in each produce package market.

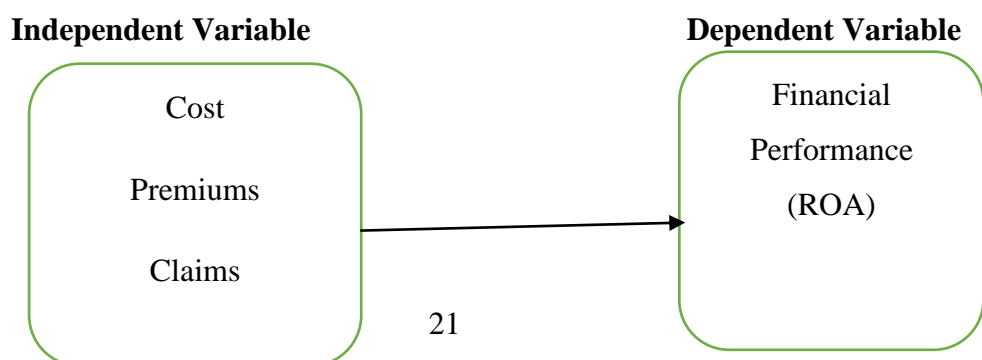
Githaiga (2014) did a study to determine the disputes opposing the recital of agriculture cover in Kenya. The study was conducted on the insurance companies dealing with general insurance with the study using descriptive study design. From the findings of the study it was established that agriculture risks are systemic in nature and therefore affect a large number of farmers in the same geographical area therefore posing a major challenge to local insurance companies since such risks can seriously affect the financial solvency of a company. Adverse Selection and Moral Hazard is another major challenge that was established to be facing agriculture insurance. The existence of government emergency aid in case of crop failures pose as financial solution to farmers therefore denying them to the need to take agriculture insurance. Other findings from the study were limited access to international reinsurance markets therefore denying the local companies the capacity to underwrite agriculture insurance. Poor agricultural risk infrastructure results in poor pricing of agriculture and lack of historical data necessary to undertake proper underwriting of agriculture risks, low risk awareness and lack of insurance culture amount to some of the major challenges facing this class of insurance. The study focused on agriculture insurance with specific focus on the challenges and not the impact of agriculture insurance on the performance of insurance companies.

2.5 Conceptual Framework

The conceptual framework figure outlines the relationship between the dependent and independent variable. In this study, the dependent variable is financial performance of insurance companies that provides micro insurance products as measured by Return on Asset while the independent variables are the various determinants (cost, premium, claims experience).

Return on asset is to be used as a measure of financial performance since it accommodates the asset employed to support business activities and the data is easily available in the secondary data sources. Tarazi (2007) suggest that ideal underwriting return is experienced when a company rates the product offered competitively in terms of premiums. This would ensure that the company builds adequate reserve from the insurance pool to be able to respond to claims. Product contribution on the overall performance can also be affected by the cost. This entails the cost of distribution and other marketing cost to effectively reach out to the target customers. Other cost elements include administration. Claims experience is considered a major factor in determining financial return of any insurance product. This calls for prudent underwriting and to ensure adequate pool is developed (Hifza Malik, 2011)

Insurance product through cost, premiums and claims therefore has the effect to affect the performance of insurance firms. Thus, the study will seek to set up the potential result of micro insurance on financial presentation of insurance firms



2.6 Summary of Literature Review

Micro Insurance is crucial in developing strategy to promote poverty reduction and increase insurance penetration in the Kenyan economy. This is because it has the capacity to offer solutions to perils facing smallholder enterprises on a daily basis. Microfinance institutions can use the concept of micro insurance to secure loans advanced to individuals without requiring further collaterals, hence increasing accessibility of loans to individuals who are not served by the formal banking sector. Micro insurance concept offers peace of mind to individual policyholders thereby encouraging them to increase investment in the enterprises for higher returns.

Modern portfolio theory links financial performance to asset rebalancing and maximization in order to increase performance and reduce perils. It guard against high perils and calls for prudent underwriting. This entails a wide insurance coverage through risk pooling. Muiruri (2014) demonstrated that micro insurance establishments offer services to customers who are majorly SMEs and has contributed to growth, which has been rapid over the years. Due to increase in public awareness on micro insurance products coupled with stiff competition from the policy providers and claims experience, further investigations are required to establish the relationship between micro insurance and financial performance to validate the more generalised results.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes methods of research applied to objectively establish the influence of micro-insurance on financial performance. It also shows the population of study, research design, criterion used in the collection and analysis of data.

3.2 Research Design

The research plan was explanatory study design, which helped in establishing the associations between variables. The explanatory sort of research design helps to recognize and assess the causal relations involving the different variables under thought (Marczyk, 2005). The method is chosen since it is more precise and accurate since it involves explaining causation among the study variables (Babbie, 2004).

3.3 Population

Population is defined as the total set of persons, proceedings or stuff with ordinary features that match with the given design (Mugenda & Mugenda, 2003). The targeted population comprised of 51 insurance firms that are registered in Kenya.

3.4 Sampling design

The population size of insurance companies in Kenya is 51 firms. Out of these insurance companies approximately 15 offer micro insurance products. From the above 15 to choose sample insurance companies, purposive sampling method was used. In the sample, insurance companies with full financial assertion for the research phase will be built-in purposively i.e. based on the age as well as accessibility data for

the research time. Purposive sampling was used to select the number of insurance firms that have been providing micro insurance products since 2012.

3.5 Data Collection

Based on Flick (2009), data gathering involves collection of experimental proof with the objective of gaining fresh view about the state as well as to respond to the issues that initiated the study. The research used published secondary data from financial statement, financial information about the insurance firms for 2012 to 2016-time period. Data collection forms were administered specifically to the Head of Department of either Underwriting or Finance Department in the insurance companies chosen to obtain the premiums, claims and reinsurance scores.

3.6 Data Analysis

The study utilized both vivid and inferential figures in analyzing the facts. Analysis has been conducted with the help of Statistical package for social sciences (SPSS version 21). First, data composed was sieved, categorized and assembled. Expressive statistics were used to profile the characteristics of the data. The study used multiple linear regression equation so as to establish the relationship between the micro insurance premium, claims, and reinsurance and profit variables. The findings were presented in form of frequency tables to assist in the study and simplicity by which the inferential information was collected.

3.6.1 Diagnostic test

Linearity show that two variables X and Y are related by a mathematical equation $Y=c+bX$ where c is a constant number. The linearity test was obtained through the F-statistic in ANOVA. Normality is a test for the assumption that the residual of the response variable is normally distributed around the mean. This was determined by

Shapiro-walk test or Kolmogorov-Smirnov test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It was tested using Durbin-Watson statistic (Khan, 2008).

Multicollinearity is said to occur when there is a nearly exact or exact linear relation among two or more of the independent variables. This was tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent variable is an indication that the determinant is one while it is zero if there is a complete linear dependence between them and as it approaches to zero then the multicollinearity becomes more intense (Burns & Burns, 2008).

3.6.2 Analytical Model

The study applied the following regression model. The multiple linear regression equation took into consideration three independent variables for the 10 companies from 2012 to 2016 period.

$$Y_{it} = \beta_0 + \sum \beta_K X_{it} + \varepsilon_{it}$$

Where:

□ Y_{it} represents the dependent variables (ROA) of insurance i for time period t .

□ β_0 is the intercept

□ β_K represents the coefficients of the X_{it} variables

□ X_{it} , represents the explanatory variables (premiums, costs and claims) of insurance i for time period t .

□ ϵ_{it} is the error term

$$ROA = \beta_0 + \beta_1 \text{Prem}_{it} + \beta_2 \text{Claims}_{it} + \beta_3 \text{Cost}_{it} + \epsilon_{it}$$

Where:

- ROA = Return on total assets on an annual basis;
- Premium = Natural logarithm of Total Premiums on an annual basis;
- Claims = Natural logarithm of Total Claims on an annual basis
- Cost = Natural logarithm of Total cost associated with the micro insurance on an annual basis;
- ϵ = is the error component for company i at time t assumed to have mean zero $E[\epsilon_{it}] = 0$
- β_0 = Constant
- $\beta_1, 2, 3$, are parameters to be estimated;
- i = Insurance company $i = 1, \dots, 9$; and t = the index of time periods and $t = 1, \dots, 12$

3.6.4 Test for Significance

To test the statistical significance, the F- test and the t – test was used at 95% confidence level. The F statistic was utilized to establish a statistical significance of regression equation while the t statistic was used to test statistical significance of study coefficients.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter focused on the analysis of the collected data from Association of Kenya Insurers (AKI) and individual insurance company websites to establish the effect of micro-insurance on financial performance of insurance companies in Kenya. Using descriptive statistics, correlation analysis and regression analysis, the results of the study were presented in table forms as shown in the following sections.

4.2 Diagnostic Tests

The study looked for data that would be able to meet the objectives of the study. The data collected from the various sources i.e. Association of Kenya Insurers (AKI) and individual insurance company websites was cross checked for errors to test the validity of the data sources. The research assumed a 95 percent confidence interval or 5 percent significance level (both leading to identical conclusions) for the data used. These values helped to verify the truth or the falsity of the data. Thus, the closer to 100 percent the confidence interval (and thus, the closer to 0 percent the significance level), the higher the accuracy of the data used and analyzed is assumed to be.

The researcher also carried out normality test on the collected data. The null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The results of the test are as shown in Table 4.1.

Table 4.1: Normality Test

ROA	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Premiums	.184	50	.260	.948	50	.866
Claims	.187	50	.260	.903	50	.763
Cost	.191	50	.260	.918	50	.824

a. Lilliefors Significance Correction

Source: Research Findings (2017)

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 which implies that the research data was normally distributed and therefore the null hypothesis was rejected. The data was therefore appropriate for use to conduct parametric tests such as Pearson’s correlation, regression analysis and analysis of variance.

4.4 Descriptive Analysis

Descriptive statistics gives a presentation of the mean, maximum and minimum values of variables applied together with their standard deviations in this study. Table 4.2 below shows the descriptive statistics for the variables applied in the study. An analysis of all the variables was obtained using SPSS software for the period of ten years (2012 to 2016) on an annual basis. Financial performance had a mean of 18.538with a standard deviation of 227.284. Premiums recorded a mean of 8565263.42with a standard deviation of 7122539.181. Claims had a mean of 4979169.92and a standard deviation of 5113441.342while costs resulted to a mean of 3540257.94with a standard deviation of 5178216.838.

Table 4.2: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	50	03	61.8	18.538	227.284
Total premiums	50	1701	26907645	8565263.42	7122539.181
Total claims	50	196	20482024	4979169.92	5113441.342
Total costs	50	234	21920789	3540257.94	5178216.838
Valid N (list wise)	50				

Source: Research Findings (2017)

4.4 Correlation Analysis

Correlation analysis is used to establish if there exists a relationship between two variables which lies between (-) strong negative correlation and (+) perfect positive correlation. Pearson correlation was employed to analyze the level of association between financial performance of insurance companies in Kenya and the independent variables for this study (total premiums, total claims and total costs).

From correlation analysis, the study showed the existence of a weak negative correlation between total premium and financial performance ($p = -.210$, $p > .143$). This goes to show that the total premiums collected by an insurance firm have an association with financial performance but that association is not significant. The relationship between total claims and financial performance was found to be weak and negative ($p = -.201$, $p > 0.162$). This implies that movement in total claims is negatively correlated to financial performance of insurance companies but that association is not

to a significant extent. The study also showed that there exists a weak negative correlation between total costs and financial performance of insurance companies in Kenya ($p = -.166$, $p > .248$). This shows that total costs have a weak negative association with financial performance but the association is not significant. Although the independent variables had an association to each other, the association was not strong to cause Multicollinearity as all the r values were less than 0.70. This implies that there was no Multicollinearity among the independent variables and therefore they can be used as determinants of financial performance of insurance companies in regression analysis.

Table 4.3: Correlation Analysis

Correlations					
		ROA	TOTAL PREMIUMS	TOTAL CLAIMS	TOTAL COSTS
ROA	Pearson Correlation	1	-.210	-.201	-.166
	Sig. (2-tailed)		.143	.162	.248
TOTAL PREMIUMS	Pearson Correlation	-.210	1	.688**	.567**
	Sig. (2-tailed)	.143		.000	.000
TOTAL CLAIMS	Pearson Correlation	-.201	.688**	1	.340*
	Sig. (2-tailed)	.162	.000		.016
TOTAL COSTS	Pearson Correlation	-.166	.567**	.340*	1

	Sig. (2-tailed)	.248	.000	.016	
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Source: Research Findings (2017).

4.5 Regression Analysis and Hypothesis Testing

Financial performance of insurance companies was regressed against three predictor variables; total premiums, total claims and total costs. The regression analysis was undertaken at 5% significance level. The critical value obtained from the F – table was compared with the one obtained from the regression analysis. The study obtained the model summary statistics as shown in table 4.4 below.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.227 ^a	.051	-.010	228.473	1.915

a. Predictors: (Constant), total costs, total claims, total premiums

b. Dependent Variable: ROA

Source: Research Findings (2017)

R squared, being the coefficient of determination indicates the deviations in the response variable that is as a result of changes in the predictor variables. From the outcome in table 4.4 above, the value of R square was 0.051, a discovery that only 5.1 percent of the deviations in financial performance of insurance firms in Kenya are caused by changes in total premiums, total claims and total costs. Other variables not included in the model justify for 94.9 percent of the variations in financial performance of insurance firms in Kenya. Also, the results revealed that there exists a weak relationship among the selected independent variables and financial

performance as shown by the correlation coefficient (R) equal to 0.227. A Durbin-Watson statistic of 1.915 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

Table 4.5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130034.630	3	43344.877	.830	.484 ^b
	Residual	2401199.150	46	52199.982		
	Total	2531233.780	49			

a. Dependent Variable: ROA

b. Predictors: (Constant), total costs, total claims, total premiums

The significance value is 0.484 which is more than $p=0.05$. This implies that the model was not statistically significant in predicting how total premiums, total claims and total costs affect financial performance of insurance firms in Kenya. Given 5% level of significance, critical value from the table is 2.74, table 4.5 above shows computed F value as 0.830. This confirms that overall the multiple regression model is not statistically significant, in that it is not a suitable prediction model for explaining how the selected independent variables affect financial performance of insurance firms in Kenya.

Table 4.6: Model Coefficients

Coefficients of determination were used as indicators of the direction of the relationship between total premiums, total claims and total costs and financial performance of insurance firms in Kenya. The p-value under sig. column was used as

an indicator of the significance of the relationship between the dependent and the independent variables. At 95% confidence level, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates a statistically insignificant relationship between the dependent and the independent variables. The results are as shown in table 4.6

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	237.357	52.399		4.530	.000
1 Total premiums	.080	1.580	.025	.050	.960
Total claims	-.810	1.928	-.182	-.420	.676
Total costs	-.524	.916	-.119	-.572	.570

a. Dependent Variable: ROA

Source: Research Findings (2017).

From the above results, it is evident that all the three independent variables are insignificant determinants of financial performance of insurance companies in Kenya as shown by p values that are greater than 0.05.

The following regression equation was estimated:

$$Y = 237.357 + 0.080X_1 - 0.810X_2 - 0.524X_3$$

Where,

Y = Financial performance of insurance companies in Kenya

X₁= Total Premiums

X_2 = Total Claims

X_3 = Total Costs

On the estimated regression model above, the constant = 237.357 shows that if selected dependent variables (total premiums, total claims and total costs) were rated zero, financial performance would be 237.357. A unit increase in total premiums would lead to an increase in financial performance by 0.080 while a unit increase in total claims and total costs would lead to a decrease in financial performance by -0.810 and -0.524 respectively.

4.7 Discussion of Research Findings

The study sought to determine the effect of micro-insurance on financial performance of insurance firms in Kenya. The independent variable was micro-insurance as measured by total premiums received by insurance firms, total claims and total costs all measured on an annual basis for the 10 selected insurance firms. Financial performance was the dependent variable which the study sought to explain and it was measured by return on assets of the selected insurance firms. The effect of each of the independent variables on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed existence of a weak negative correlation between total premium and financial performance ($p = -.210$, $p > .143$). This goes to show that the total premiums collected by an insurance firm have an association with financial performance but that association is not significant. The relationship between total claims and financial performance was found to be weak and negative ($p = -.201$, $p > 0.162$). This implies that movement in total claims is negatively correlated to financial performance of insurance companies but that association is not to a significant extent. The study also showed that there exists a

weak negative correlation between total costs and financial performance of insurance companies in Kenya ($p = -.166$, $p > .248$). This shows that total costs have a weak negative association with financial performance but the association is not significant.

The model summary revealed that the independent variables: total premiums, total claims and total costs explains 5.1% of changes in the dependent variable as indicated by the value of R^2 which implies that there are other factors not included in this model that account for 95.9% of changes in financial performance of insurance companies in Kenya. The model was found not to be fit at 95% level of confidence since the F-value of 0.830 is less than the critical value. This implies that overall the multiple regression model is statistically insignificant, in that it is not a suitable prediction model for explaining financial performance of insurance firms in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the previous chapter, conclusion, limitations encountered during the study. This chapter also elucidates the policy recommendations that policy makers can implement to achieve the expected financial performance of insurance firms in Kenya. Lastly the chapter presents suggestions for further research which can be useful by future researchers.

5.2 Summary of Findings

The study sought to investigate the effect of micro-insurance on financial performance of insurance companies in Kenya. The independent variables for the study were total premiums received by insurance firms, total claims and total costs. The study adopted an explanatory research design. Secondary data was obtained from AKI and individual insurance companies' websites and was analyzed using SPSS software version 21. The study used annual data covering a period of five years from 2012 to 2016.

From the results of correlation analysis, a weak negative correlation was found to exist between total premiums and financial performance of insurance companies in Kenya. The relationship between total claims and total costs with financial performance of insurance companies in Kenya was found to be weak and negative. All the three independent variables (total premium, total claims and total costs) were found to have an insignificant relationship with financial performance as indicated by p values that are more than 0.05.

The co-efficient of determination R-square value was 0.051 which means that about 5.1 percent of the variation in financial performance of insurance companies in Kenya can be explained by the three selected independent variables while 94.9 percent in the variation of financial performance is associated with other factors not covered in this research. The study also found that the independent variables had a weak correlation with financial performance of insurance companies in Kenya ($R=0.227$). ANOVA results show that the F statistic was insignificant at 5% level with a $p=0.484$ which has higher than 0.05. Therefore, the model was not fit to explain the relationship between the selected variables.

The regression results show that when all the selected dependent variables (total premiums, total claims and total costs) are rated zero, the financial performance would be 237.357. A unit increase in total premiums would lead to an increase in financial performance by 0.080 while a unit increase in total claims and total costs would lead to a decrease in financial performance by -0.810 and -0.524 respectively. Analysis of model coefficients revealed that all the independent variables were individually statistically insignificant determinants of financial performance of insurance companies in Kenya.

5.3 Conclusion

From the study findings, the study concludes that the financial performance of insurance companies in Kenya has a positive association with total premiums. The study therefore concludes that higher premiums lead to improved financial performance even though not to a significant extent. The study found that total claims had a negative correlation with financial performance of insurance firms and we can therefore conclude that higher claims tend to discourage financial performance of insurance firms. Total costs were also found to be negatively related to financial

performance of insurance companies and therefore an increase in total costs leads to a decrease in financial performance of insurance companies.

This study concludes that independent variables selected for the study total premiums, total claims and total costs influence financial performance of insurance companies but not to a large extent as they only account for 5.1 percent of the changes in financial performance. The fact that the four independent variables explain 5.1% of changes in financial performance imply that the variables not included in the model explain 94.9% of changes in financial performance. The overall model was found to be insignificant as explained by the F statistic. It is therefore sufficient to conclude that the variables selected for this study do not significantly influence financial performance as shown by the p value in anova summary.

5.4 Recommendations

The study established that there is a positive influence of total premiums on financial performance of insurance firms although the influence is not statistically significant. This study recommends that the management and policy makers in the insurance industry should come with a way of increasing total premiums collected by firms as they ultimately influence financial performance of insurance companies. Other factors that not covered in this study but positively influences financial performance of insurance firms should also be addressed.

The study found that total claims and total costs have a negative relationship with financial performance of insurance companies. The variables were also found to be insignificant determinants of financial performance. This study recommends that managers of insurance firms should pay attention to the costs of doing business and reduce those that can be reduced. In addition, due diligence should be done before

giving an insurance cover to avoid having higher claims that will affect financial performance negatively.

5.5 Limitations of the Study

The scope of this research was for five years 2012-2016. It has not been determined if the results would hold for a longer study period. Furthermore, it is uncertain whether similar findings would result beyond 2016. A longer study period is more reliable as it will take into account major changes in the industry and economy as a whole.

One of the limitations of the study is the quality of the data. It is difficult to conclude from this research whether the findings present the true facts about the situation. The data that has been used is only assumed to be accurate. The measures used may keep on varying from one year to another subject to prevailing condition. The study utilized secondary data, which had already been obtained and was in the public domain, unlike the primary data which is first-hand information. The study also considered selected determinants and not all factors affecting financial performance of insurance firms mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

This study focused on micro-insurance and financial performance of insurance companies and relied on secondary data. A research study where data collection relies

on primary data i.e. in depth questionnaires and interviews covering all insurance firms with micro-insurances recommended so as to compliment this research.

The study was not exhaustive of the independent variables affecting financial performance of insurance companies in Kenya and this study recommends that further studies be conducted to incorporate other variables like management efficiency, industry performance, firm specific characteristics, corporate governance and macro-economic variables. Establishing the effect of each variable on financial performance of insurance firms will enable policy makers know what tool to use when controlling performance.

The study concentrated on the last 5 years since it was the most recent data available. Future studies may use a range of many years e.g. from when micro-insurance was introduced in Kenya to date and this can be helpful to confirm or disapprove the findings of this study. The study limited itself by focusing on 10 insurance firms only. The recommendations of this study are that further studies be conducted on other insurance firms in Kenya. Finally, due to the shortcomings of regression models, other models such as the Vector Error Correction Model (VECM) can be used to explain the various relationships between the variables.

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