

**EFFECT OF FIRM SPECIFIC CHARACTERISTICS ON FINANCIAL
PERFORMANCE OF FIRMS; EVIDENCE FROM GENERAL INSURANCE
COMPANIES IN KENYA**

BY

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DECLARATION

I declare that this is my original work and has not been previously presented for the award of any degree in any other university.

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APPROVAL

This study report has been submitted for examination with my approval as a university supervisor.

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DEDICATION

I dedicate this study to my parents, my father Mr. Odira Agar Snr, mother the late Lucy Achieng and my siblings Tyson, Teddy, Vallary and Natasha in equal measure. This journey would not be completed without your sacrifices, prayers and support.

ABSTRACT

The profitability of general insurance companies is crucial since their main expense is settling of insurance claims and leads to stability of the industry. Insurance companies enable entrepreneurs to undertake ventures without worry. However, there have been reports of general insurance companies collapsing due to poor performance. In this connection, it is crucial to undertake studies in order to understand the performance of general insurance in Kenya. The general objective of this study was to establish effect of firm specific characteristics on financial performance of firms, evidence from general insurance companies in Kenya. This study had the following specific objectives: To find out the effect of underwriting risk on financial performance of general insurance companies in Kenya, to establish the effect of solvency on financial performance of general insurance companies in Kenya, to find out the effect of liquidity on financial performance of general insurance companies in Kenya and to determine the effect of investments on financial performance of general insurance companies in Kenya. This study had three theories which are: Liquidity Preference Theory, Modern Portfolio theory and Stakeholders theory. This study adopted a descriptive research design. The study had a target population of all the 32 insurance companies in Kenya that are non-life. Data was collected among the general insurance companies for the period between 2011 and 2016. This study used secondary data that was collected by use of secondary data sheet. The study used multiple regression model in order to evaluate the nature and significance of the independent variables on the dependent variable. The study found that liquidity, leverage and underwriting negatively and significantly affected performance of general insurance companies in Kenya. Firm size had a positive and significant effect while solvency had a positive but non-significant effect on financial performance of general insurance companies in Kenya. The study recommends that general insurance companies should keep optimal liquidity and leverage in order to boost performance. Equally, the firms should establish a robust risk management department in order to establish a balanced portfolio of insurance business.

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LIST OF ABBREVIATIONS

BOD	Board of Directors
EPS	Earnings per Share
GDP	Gross Domestic Product
IRA	Insurance Regulatory Authority
MPT	Modern Portfolio Theory
ROA	Return on Assets
ROI	Return on Investment
US	United States

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The insurance sector is crucial in the economy because it facilitates the taking up of risky but profitable ventures. Insurance is based on the concept of pooling of risks in order to ensure that investors can participate in their activities without much worry. As a result, the stability of the sector is of paramount importance to economic development. According to Skipper (2011) the insurance industry plays an important role towards improvement of business due to risks acceptance. Insurance companies accepts risks in return for premium (Kugler and Ofoghi, 2015). In this respect, there is a need for insurance companies to curtail their operations in a way that they accept risks within acceptable limits. The profitability of insurance companies is crucial since their main expense is settling of insurance claims. As noted by Almajali, Alamro and Al-Soub (2012) general insurance companies need to practice prudence in their operations in order to sustain their growth and improve performance.

In Pakistan, Ahmed, Ahmed and Ahmed (2011) found out that the claims ratio is a major determinant of performance among insurance companies. This was attributed to the fact that huge number of claims exhausts firms' earning which lead to low poor performance. It is important to note that firms that have enough profits for ploughing back will exhibit good performance. It is for this reason that insurance firms need to underwrite risks with careful consideration. In Malaysia, Ismail (2013) revealed that size of general insurance companies had a positive impact on their performance. This implies that, the larger the firm the better the performance. In the study it was noted that a larger firm had the capacity to cover more risks and this resulted into more premium income.

In the United States, Choi (2010) the expense ratio of property insurers was found to be a major factor on financial performance. Expense ratio is the measure of the expenses including claims paid in a given period and it is an indication of the operational efficiency of firms. It is true to suffice that firms with high operational efficiency generally have better performance than those with operational inefficiencies (Leverty and Grace, 2010). This is because profit is the residual of revenue after deducting expenses. As a result, general insurance companies need to strategically adopt innovative products, new markets and channels of service delivery in order to enhance profitability which enhances overall performance.

Sinaj, Dumi and Dumi (2014) notes that in Albania, the investment experience of management of insurance companies affects their performance. Investment experience is the knowledge and expertise that is required in making of viable investment decisions. The choice of investments has an impact on solvency and liquidity of a firm. It is for this reason that a carefully selected portfolio of investments needs to be established in order to strike a match between short term need financial needs and long term needs. Kume and Xhuka (2010) indicates that the competency of the management is an important ingredient towards sustainable performance. General insurance firms need liquid assets in order to process claims as and when they are reported. However, holding too much liquid assets lead to a loss in income that would have been earned through long term investments. Long term investments attract higher returns than short term ones because the investors demand for a premium for holding for the illiquid assets (Sharku, 2011).

1.1.1 Firm Specific Characteristics

Firm specific characteristics are those characteristic that are unique to firms. This is to mean that they are common to all firms in a given industry. According to Almajali (2012) firm

specific factors are also known as micro factors because they are not generally experienced by the entire population of firms in a given sector.

In this respect, firm specific factors are those factors that firms have control over. They are mostly resource based and owe their existence to management decisions. It should be noted that the management of firms is responsible for making decisions with the objective of achieving the organisational goals. Burca and Batrinca (2014) views that firm specific factors of insurance companies includes: size of the company, financial leverage, underwriting risks, investment ratio, reliance from reinsurance , solvency margins, liquidity ratio and retained risk ratio.

A key idea that should be emphasized is the ability of firms to control the internal factors. The decisions of top management are crucial in determining the performance of firms. For instance, where the management has experience and skills that promote good governance and prudent use of resources, the chance for high profitability is high. According to Sinaj (2014) views that internal factors have a great importance to profitability of firms. This has been supported by Kume and Xhuka (2010) who indicates that management of firms has a pivotal role in enhancing performance of firms because they are responsible for planning and organizations resources in order to realize good performance.

1.1.2 Performance of Insurance Firms

Performance may be defined as the measure of how resources of an organization are utilized on earning income. This means that performance may be good or poor depending on whether resources are utilized efficiently or not. According to Burca and Batrinca (2014) performance entails equating inputs to outputs in order to provide a feedback on resources utilizations. It

should be noted that there are various means of performance depending on the needs of the evaluator. Financial performance makes use of financial terms in reporting performance.

These measures are in monetary terms which include Return on Investment (ROI), Earnings per Share (EPS) and Return on Assets (ROA) while non-financial performance expresses performance in terms of qualitative aspects such as customer satisfaction, improvements in the production processes, and existence of a culture of innovation, productivity enhancement, quality improvements and general operational efficiency (Al-Ettayem & Al-Zu'bi, 2015).

The profitability of insurance companies is important because it provides information on the ability of the firm to process claims. There are a variety of factors that affect the performance of insurance companies. According to Amhed (2011) risks are a major contributor to low performance of insurance companies in Pakistan. Their study noted that asset ownership had a significant effect on performance of insurance companies. It should be noted that assets are resources that can be used in income generating activities. Equally, Malik (2011) reveals that size of an insurance company has an effect on profitability of firms. In India, Charumathi (2012) noted that increase in premium had a positive effect on performance of insurance firms in India.

1.1.3 Firm Specific Characteristics and Financial Performance of General Insurance Firms

Financial performance of general insurance firms is important because general insurance companies ensure that claims are paid on a timely fashion. It is for this reason that the top management needs to acquire, plan and organise internal resources in a way that performance is enhanced. Kumba (2010) notes that firm specific characteristics such as size of the firm, underwriting risks, investment decisions, leverage and competency of management affects

performance of general insurance companies. According to Fareed (2014) firm specific characteristics influences performance of firms in Pakistan. The author particularly noted that size of the firm and leverage have an effect on firms' profitability.

According to Curak, Pepur and Poposki (2011) firm specific factors are expected to affect performance of insurance companies. This is because, the management is charged with the responsibility of making decisions with regard to resources utilisations and therefore potentially steering performance of the firms to a high or low level. The author notes management decisions on premium to cede, liquidity ratio and investment portfolio has a direct impact on financial returns. In this respect, it is important that decisions are made critically in order to ensure that risks underwritten, liquidity ratio, solvency ratio and investment decisions can potentially improve performance of firms.

1.1.4 General Insurance Companies in Kenya

According to Outreville (2013) general insurance companies are those insurance companies that cover risks that are not life related. This means that general insurance companies cover risks of losses due to damage to property and natural hazards causing financial losses to the insured. Basically, insurance companies cover risks for a consideration which is referred to as premium. In this respect, for a person, individuals or otherwise to have a valid insurance policy, they must have paid some premium since most insurance policies are done on cash and carry basis (Mehta, 2012). It is for this reason that insurance premium are paid before a risk occurs. This means that under normal circumstances insurance companies should not have premium debtors particularly where they are dealing with direct clients (Feyen & Rocha 2011).

In Kenya, Insurance business is regulated by the Insurance Regulatory Authority (IRA). IRA is mandated to fulfil the expectations that are set by the Insurance Act Cap 487 of the Kenyan Constitution. The main mandate of the body is to carry out regulation and supervision of the players in the insurance industry. The IRA is headed by a Board of Directors who have the responsibility of ensuring that all insurance industry participants act in line with the stipulations of the Insurance Act (IRA, 2018).

In this respect IRA is mandated to ensure that insurance companies, reinsurance companies, insurance brokers and agents adhere to the law provisions as stipulated by the Act, to ensure that there is a high compliance with the law, set a framework that protects the policyholders, maintain fairness in the industry, ensure that insurance companies are liquid and solvent and offer a standards of interventions and enforcement as it may be necessary (IRA, 2018).

In line with its mandate, IRA issues guidelines from time to time with the aim of enhancing stability of the industry. These guidelines are prudential in that they offer a risk management framework for insurance companies. The IRA (2018) indicates that guidelines are part and parcel of its regulatory framework. There are several guidelines which includes Suitability of persons to hold management position of insurance companies, Guidelines on claims management, guidelines on internal risk controls, market conduct guidelines, insurance risks, corporate governance risks, investment management guidelines, actuarial risks guidelines, takaful operational guidelines, guidelines on external auditors and valuation for technical liabilities for general insurance business.

The IRA (2016) further indicates that about 77.0 % of general insurance business is underwritten in Nairobi City County, Mombasa accounts for 6.7 %, Kiambu County and Nakuru at 2.3 % and 2.0 % respectively while the rest accounts for 12.0 %. This indicates

that general insurance business has not been well received in most parts of the country. The report by IRA further reveals that about 62.3 % of the gross written premium relates to general insurance companies. These statistics indicates that general insurance has received more uptake than life insurance in Kenya. The insurance industry in Kenya is diverse. There are firms that are large which are: Jubilee holding, Sanlam Kenya, Kenya Reinsurance Corporation, Liberty Holding, Britam Holding and CIC Insurance and these are listed in the Nairobi Securities Exchange.

Among the common non-life risks that insurance companies company cover in Kenya are Contractors All Risks, Fire, Political Violence and Terrorism, Agricultural policies among others.

1.2 Research Problem

Insurance industry has a major role towards promotion of business activities in any given economy. According to Ansah-Adu, Andoh, and Abor (2012), the insurance industry is crucial since its good or poor performance has a repercussion in the economy at large. The industry is characterised by a lot of risks which may be internal where the firm has control over or they may be external factors that firms cannot control. Failure to manage these risks results to financial distress. For instance, BlueShield Insurance Companies is under statutory management after a prolonged poor financial performance. Equally, Real Insurance Company was acquired by Britam due to uncertainty in its going concern. Other insurance companies that have gone under include: Standard Assurance, Kenya National Assurance Company, Access Insurance Company among others and Concord Insurance Company.

Cyton Report (2016) indicates that insurance uptake in Kenya is low approximately 2.9 % which is below the continental average of approximately 3.5 %. This low penetration has in turn lowered performance of insurance companies in Kenya (Mwangi and Murigu, 2015). More so, in the half year results Kenya Re-insurance Corporation (Kenya Re) recorded a 24 % drop in half year performance. IRA (2017) records that the total profits before tax decreased from KShs. 12.8 billion from Kshs.14.1 billion in 2015 and 2016 respectively. This indicates that performance of insurer is poor which is at 2.7 % of Gross Domestic Product (GDP). According to Charumathi (2012) financial leverage, size and share capital have a negative effect on profitability of insurers in India. In another study, Burca and Batrinca (2014) established that size of an insurance has a significant effect on profitability of insurance firms in Romania. These are contradicting findings.

As of the findings of Almajali (2012) financial leverage, liquidity, size of firm and expertise of the top management has a positive effect on financial performance of insurance companies in Jordan. There has been studies done on performance of insurance companies in Kenya. Mwangi and Murigu (2015) undertook to assess the factors that influence financial performance of general insurance companies. The study revealed that capital structure and management competency had a positive and significant relationship with financial performance. Mwangi and Iraya (2014) did a study on the determinants of performance for general insurance companies and found out that asset quality and investments yield had a positive and significant effects. In another study, Onsongo (2015) revealed that financial leverage had positive but not statistically effect on life insurers.

It is evident that none of the studies considered a combination of the variables being assessed in this study. Secondly, studies have yielded different results and therefore there is a need for

more studies to be undertaken in order to compare findings with those of prior studies. This study is unique in that it proposes to use a panel data analysis where data was to be analysed using random or fixed regression model in order to eliminate time related problems. The general objective of this study was to establish the effect of firm specific factors on performance of insurance companies in Kenya, case of general insurance companies in Nairobi City County.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study was to establish effect of firm specific characteristics on financial performance of firms, evidence from general insurance companies in Kenya.

1.3.2 Specific Objectives

This study had the following specific objectives;

1. To find out the effect of underwriting risk on financial performance of general insurance companies in Kenya.
2. To establish the effect of solvency on financial performance of general insurance companies in Kenya.
3. To find out the effect of liquidity on financial performance of general insurance companies in Kenya.
4. To assess the effect of firm leverage on financial performance of general insurance companies in Kenya.
5. To establish the effect of control effect of firm size on financial performance of general insurance companies in Kenya.

1.4 Research Hypothesis

This study sought to assess the following null hypothesis;

1. H₀1: There is no significant effect of underwriting risk on financial performance of general insurance companies in Kenya.
2. H₀2: Solvency does not significantly affect financial performance of general insurance companies in Kenya.
3. H₀3: The relationship between liquidity and financial performance of general insurance companies in Kenya is not statistically significant.
4. H₀4: The effect of firm leverage on financial performance of general insurance companies in Kenya is not statistically significant.
5. H₀5: The control effect of firm size on financial performance of general insurance companies in Kenya is not statistically significant.

1.5 Value of the Study

The role of insurance in any economy cannot be overlooked. Insurance companies are involved in fostering the confidence of entrepreneurs in pursuing investment projects that may be risky but profitable. In this respect, the stability of the industry is of importance. There have been reports of insurance firms collapsing while others have reported remarkable financial performance. For this reason, it is worthwhile for a study to be undertaken in order to ascertain the effect of firm specific factors on financial of general insurance companies in Kenya.

The IRA may find this study useful. Regulations of the insurance activities in Kenya are done by the IRA. For this reason, this study may be of importance to the Board of Directors of IRA. The study assessed the effect of firm specific factors on performance of general insurance companies and this means that the findings is of use to the Board in policy

formulation. Equally, the study may be a good tool that may communicate to the regulator on how to regulate the insurance industry.

The study may be of use to the government policy makers in that it offers valuable information on performance of insurance companies in Kenya. It is important to note that the government of any country is involved in policy formulations in order to stimulate economic development and sectoral reforms. It is for this reason that this study is of much use to policy makers in Kenya.

This study can also be useful in that it provides an empirical review to other scholars and researchers who may be conducting research on performance of insurance industries in Kenya. In addition, this study is a credit to the knowledge that is already existing on performance of insurance companies in Kenya.

Equally, this study is of benefits to the top management of general insurance companies in Kenya. This is because; the study assessed the effect firm specific factors on financial performance of insurance companies in Kenya. In this respect, the study has made recommendations to the insurance companies on how to respond to the factors with respect to the findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter has theoretical review, empirical literature review, research gaps and conceptual framework.

2.2 Theories of the Study

According to Cooper and Schindler (2012) a theory is a systematic propositions and related concepts that seeks to explain why certain situations are in the way they are. This study has three theories which are: Liquidity Preference Theory, Modern Portfolio Theory and Stakeholders theory.

2.2.1 Liquidity Preference Theory

The theory of liquidity preference was coined by Keynes (1964) and posits that more often business units prefer to hold resources in liquid form. This is because liquid assets are easily convertible to other forms of assets while the reverse case is true for the illiquid assets. Keynes noted that where investors fix their money in long terms assets, they demand for a premium rate on top of the normal returns (Choudhry, 2011). As a result, long term investments have a higher rate of return since the investors demand compensation for fixing their money in such a loan time. According to Saunders and Cornett (2011) liquidity ensures that the firm is in apposition to service those liabilities that fall due in the short run. This means that it is important for firms to plan their investments in a way that there is cash that is available for investments and there is cash for servicing the liabilities as and when they fall

due. Bibow (1995) indicates that people need to cash other than other form of assets because its mobility and ease of conversion.

Mishkin and Eakins (2011) view that a prudent mix assets is paramount to improved profitability of firm's particularly those that operate in the financial sector. This means that a firm should have different classes of assets in different levels depending on the management ideals. Thus, maturities of assets must play a central role in investment decisions. Dang (2011) views that liquidity ensures that firms do not default in settling liabilities as and when they fall due. It is important to note that failure to service liabilities may be a signal that the firm is performing poorly. It is for this reason that liquidity decisions must be critical made by the firms that operate in the financial markets.

This theory is closely connected to this study because liquidity is one of the aspects that the study seeks to assess about. Liquidity ensures that insurance firms are liquid and that their ability to settle insurance claims as and when they fall due is not compromised. However, holding too much liquid assets has an opportunity cost in that income that would have been earned in long term investments is lost. Specifically, this theory expounds on the objective that seeks to establish the effect of liquidity and solvency on performance of general insurance companies in Kenya.

2.2.2 Modern Portfolio Theory

The theory of Modern portfolio theory (MPT) is an economic theory that was proposed by Markowitz (1952). This theory explains the basis on which investors hold different class of assets as dictated by theory risk appetite. MPT appreciates the existence of risks in a given sector and in the entire economy. It is for this reason that the theory assets that an investor

should have a portfolio of assets that optimises the returns. It is important to note that in adopting this proposition, it is assumed that risks and returns of various investments are known and may not be likely to deviate during the period of investments. With the right information investors will pick the portfolio that has the lowest level of risks and maximum returns (Sortino & Satchell, 2001).

According to Balzer (1994) diversification is a key ingredient towards risks mitigation. The firm should have various assets in different industries such that when one sector is poorly performing the other works to salvage the situation. This theory assumes that there won't be a huge catastrophic event that can affect the entire economy at the same time. In this respect, diversification is a heading tool against risks. It is true to suffice that market risks are common in the modern business environment due to information asymmetry. Thus, it is the call of the managers to market to judiciously make decisions on investment decisions. The MTP theory offers valuable information to investment managers.

This theory backs up this study because it explains on investment decisions and the basis on which such decisions can be made. It is recommended that insurers to have a portfolio of investments that ensures that market risks are dealt with. An insurer should have a portfolio of investments that has low risk assets (security), minimal loss on disposal of assets (liquidity), a variety of investments (diversification) and that investment earns highest possible returns.

2.2.3 Stakeholders Theory

The stakeholder's theory was first proposed by Mitroff (1983) and later advanced by Freeman (1983). The theory posits that the organization has various parties who directly or indirectly have interests in its continued existence and performance. In other words, this theory seeks to distance itself from the idea that entities exist to maximize shareholders wealth. The theory notes that there are other parties that have interests with the firm. It is true to suffice that customers need the entity to provide high quality goods and services, the staff need to be assured of continued employment, the suppliers need their dues paid, the government needs taxes from the firms and the societal expects the firm to protect the environment. Miles (2011) notes that stakeholder's theory views all these parties to have equal importance.

According to Turnbull (1994) considering all stakeholders is a difficult and most organisations fail to consider both the internal stakeholders and the external stakeholders. In this respect, conflicts arise when the shareholders and management looks at their interests only. For this reason, the firm need to carefully make decisions that do not violate the rights of other stakeholders that the firm interacts with (Miles, 2012). According to Leisyte and Westerheijden (2014) stakeholder's theory is a good way of curtailing the operations of the organisations in a highly competitive business environment. In the event that the stakeholder's interests are met, the performance of the firm is bound to improve (Mansell, 2013). The management of firms should ensure that all stakeholders' interests are protected.

This theory is related to this study because the study seeks to evaluate the effect of firm specific factors on performance of general insurance companies in Kenya. The management of firms should make decisions with the idea of that the impact of such actions will protect

the interests of the creditors of the insurer, the insured and the shareholders among other parties.

2.3 Determinants of Financial Performance of General Insurance Companies

Financial performance entails the ascertaining of how well firms utilise their resources in generation of income. It is important to note that due to the expectations of shareholders, firms ought to make profits in order to sustainably remain in business. According to Charumathi (2012) performance of insurance companies is critical since their main expense is payment of claims as and when they occur without undue delay. This thus means that liquidity of insurance firms is critical. Liquidity has been defined as the ability to pay liabilities as and when they fall due. Ahamed *et al.* (2010) idealises that performance of general insurance companies must be sustainable at all time if the firms are to remain competitive. Therefore, performance of general insurance firms is of special important to both the individual firms and also to the entire at large. Without a stable insurance industry, the undertaking of some ventures would be compromised and this could hamper the economic growth.

According to Ahmed *et al.* (2010) assets ownership among general insurance affects its performance. This is because the size of the company dictates the amount of risk that the firm can cover without exposing itself to solvency problems. In addition, size defined by assets ownership determines the returns on those assets which are income generating. This indicates that a firm with more assets is expected to exhibit higher performance than that with less. However, it prudent for firms to acquire only those assets that are economically viable. Theoretically firms with more fixed assets should earn more income than those with few assets.

Another factor that can affect performance of general insurance companies is underwriting risks. According to Ansah-Adu, Andoh, and Abor (2012) underwriting risk is ability that the premium collected will cater for the claims intimated in a given period. It is theoretically expected that for a general insurance company to be profitable it should collect more premium which are more than the amounts of money spend towards settling claims. In this respect, the claims ratio should be favourable. It is for this reason that insurance companies are expected to critically stipulate their underwriting policies in order not to hamper their performance. For instance, general insurance should diversify and avoid those risks that are bound to happen in certain terms as evidenced by their claims experience (Giesbert & Steiner, 2011).

2.4 Empirical Review

In this section, the empirical review is presented in respect of the specific objectives of the study:

A study done by Mwangi and Mirigu (2013) sought to assess the relationship that existed between underwriting profits and performance of non-life insurance companies in Kenya. The study used secondary data that was collected for the time period between 2000 and 2011 both years inclusive. The study adopted a descriptive research deign where data was analysed into descriptive statistic. The results were that the relationship between underwriting profits of non-life insurance companies and financial performance was positive. However, the study revealed that the relationship was not statistically significant.

Adams and Buckle (2013) sought to establish the determinants of performance of Bermudian Insurance Companies industry. The study adopted a panel data analysis where forty seven insurance companies were considered. The study revealed that liquidity, underwriting risk

and capital structure affected operational performance of the firms. Further, it was revealed that leverage and low liquidity ratio had a positive effect on performance while underwriting risk had a positive effect. In addition, the study found out that the size of the company and market development did not have significant effects on performance of firms.

Angima and Mwangi (2017) sought to establish the effect of underwriting and claims management on performance of property and casualty insurance companies in East Africa. In their study, they collected data from a sample of eighty two companies in Kenya, Uganda and Tanzania. The study adopted descriptive research design where means and standard deviations were computed. The regression analysis revealed that both underwriting and claims management explained only 4 % of the variations in financial performance while the same variables accounted for 29.5 % of variations in non-financial performance. Further, the study revealed that underwriting and claims management did not affect performance of insurance firms in a statistically significant manner.

Wasike (2016) sought to establish the factors that influence profitability in the insurance sector of Kenya. The study was a case study of composite insurance companies. The study adopted the descriptive research design where an econometric regression was developed. It was found out that claims costs, commission costs, market penetration and reinsurance costs accounted for 90.1 % of variations in profitability which was measured in terms of income after tax expense divided by gross written premiums. Further, the study found that loss ratio; reinsurance premium ratio and market share had a negative effect on profitability. Commission expense was found to have a positive and significant effect on profitability.

Ćurak, Pepur and Poposki (2011) sought to establish the firm specific and external factors that determined the performance of composite insurance firms in Croatia. The study adopted a regression analysis in data analysis. Panel data was collected from a sample of Insurance Companies in the country. The study used the random fixed effect model to report the findings and revealed that underwriting risk, rates of inflation and the size of the company had a significant effect on the profitability of firms. Further, it was revealed that in Croatia, the market was highly competitive and the study recommended for tightening of regulations on order to reduce the dynamism and establish a stable insurance industry.

Kozak (2011) sought to establish the determinants of profitability of insurance companies in Poland. The study was a case study of non-life insurance companies and data was collected for a period of seven years between 2002 and 2009 both years inclusive. The study used panel data analysis. The panel corrected standard errors output revealed that class of insurance had an effect on performance of insurance companies in the country. In particular, the study revealed that reduction of motor policies which was compensated by increase in other policies enhanced the profitability of insurance companies. Further, the study revealed that increase in gross written premiums, reduction of operating costs, growth of the economy and increase in market share improved profitability of the firms.

2.5 Conceptual Framework

A conceptual entails a presentation on the variables in a diagram. The study has independent variables and dependent variables. The independent variables are underwriting factor which will be measured in terms of underwriting risk, liquidity factor which was measured in terms of liquidity risk, solvency factor which was measured in terms of solvency margin, investment was measured in terms of earning assets, , profitability was measured in terms of

earnings per share, firm leverage was measured in terms of debt to equity ratio, reinsurance premium ceding which will be measured in terms of amounts of ceded premiums, firm size which was measured in terms of total assets. The dependent variable was financial performance of general insurance companies which was measured in terms of Return on Assets.

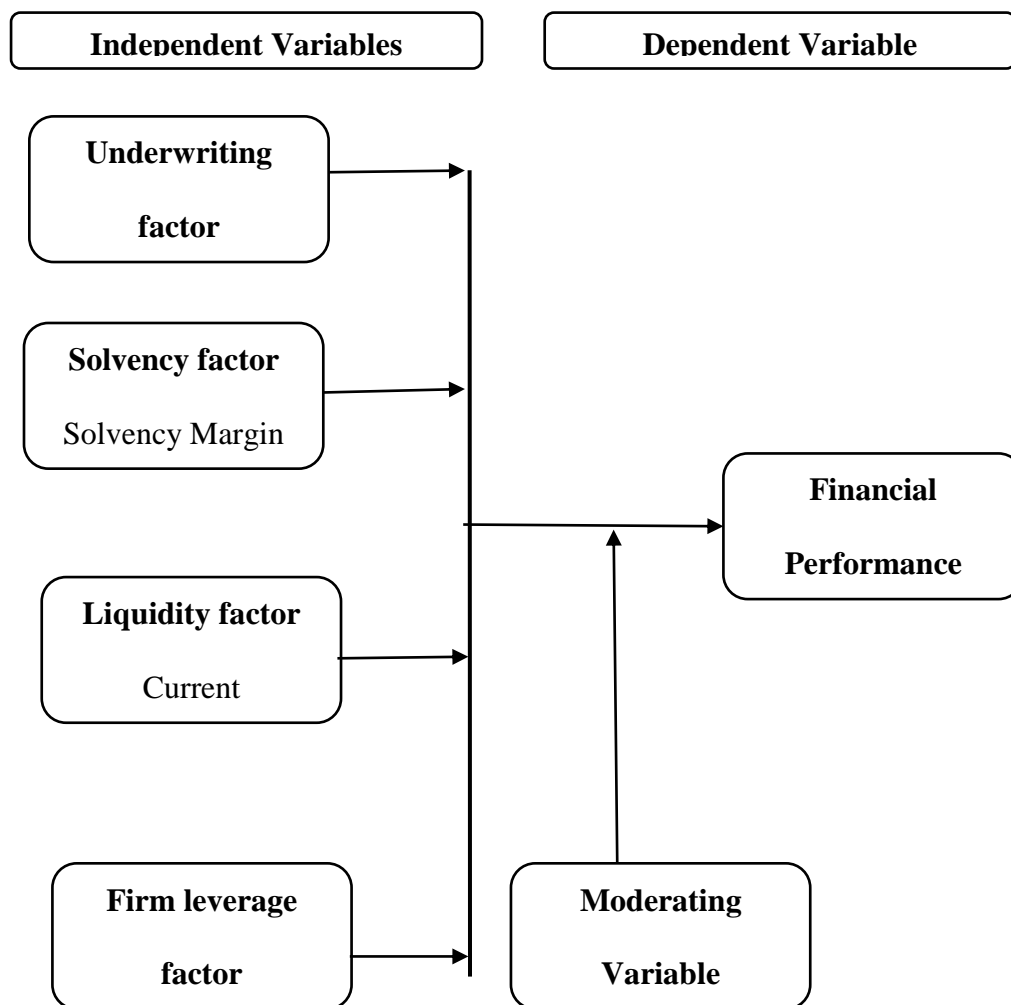


Figure 2: 1 Conceptual Framework

2.6 Summary of Literature Review and Research Gaps

A number of studies have been undertaken on insurance companies' performance. Mwangi and Mirigu (2013) sought to assess the relationship that existed between underwriting profits and performance of non-life insurance companies in Kenya and found out that the relationship between underwriting profits of non-life insurance companies and financial performance was positive. Adams and Buckle (2013) sought to establish the determinants of performance of Bermudian Insurance Companies industry and revealed that liquidity, underwriting risk and capital structure affected operational performance of the firms. Angima and Mwangi (2017) sought to establish the effect of underwriting and claims management on performance of property and casualty insurance companies in East Africa and revealed that both underwriting and claims management explained only 4 % of the variations in financial performance while the same variables accounted for 29.5 % of variations in non-financial performance.

Wasike (2016) sought to establish the factors that influence profitability in the insurance sector of Kenya and found that loss ratio, reinsurance premium ratio and market share had a negative effect on profitability. Ćurak, Pepur and Poposki (2011) sought to establish the firm specific and external factors that determined the performance of composite insurance firms in Croatia and revealed that underwriting risk, rates of inflation and the size of the company had a significant effect on the profitability of firms. Kozak (2011) sought to establish the determinants of profitability of insurance companies in Poland and revealed that class of insurance had an effect on performance of insurance companies in the country.

It thus evident that none of the studies considered the variables that this study seeks to assess. Equally, those studies globally have yielded contradicting findings with some indicating that micro factors did not have significant effect on performance of insurance companies. Equally, it appears that none of the studies were done in form of panel data analysis.

More so in Kenya, the insurance industry is not well developed and thus there is a need to assess what determines the performance of general insurance companies in Kenya. In realisation of this gap, this study was undertaken to assess the effect of firm specific factors on performance of general insurance companies in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter has research design, target population, sample size and sampling procedure, data collection procedure and data analysis technique.

3.2 Research Design

A research design is a framework that outlines how a study was done in order to meet the objectives. This means that a research design is a concise plan of actions that indicates the means through which objectives were answered. According to Polit, Beck, and Owen (2013) a research is an overall plan that ensures that research questions are accurately answered. This means that a research design is a blue print that structures the practical aspect a research. This study adopted a descriptive research design. This is because the study sought to describe the effect of firm specific factors on financial performance of insurance companies in Kenya. As noted by Sekeran (2012) a descriptive research design is preferred where the researcher aims at establishing the association between the independent and dependent variables.

Another reason for adopting a descriptive research design is because the study sought to collect and analyse data using descriptive statistics and inferential statistics. The study collected data from the Insurance Regulatory Authority for each individual insurance company. This means that the data was panel data since it was collected over a period of time. According to Cooper and Schindler (2014) a descriptive research design is suitable in analysing panel data. This study sought to establish the effect of firm specific factors on performance of general insurance companies.

3.3 Target Population

The study had a target population of all the 32 insurance companies in Kenya that are non-life. Data was collected among the general insurance companies for the period between 2011 and 2016.

Table 3: 1 Target Population

Target Population	Frequency
General Insurance Companies	32

3.4 Sample Size and Sampling Procedure

According to Sekaran (2012), a sample size is the portion of the target population that is taken as the representative of the entire population and is adopted when a census is not feasible. In this respect, this study was a census of all the 32 General Insurance Companies since data is available on the IRA reports on Insurance.

3.5 Data Collection Procedure

This study used secondary data that was collected by use of secondary data sheet. Secondary data is that data that is mined from various sources and is not first hand. This study used reports from the IRA in order to obtain raw data for data analysis.

3.6 Data Analysis Technique

Data analysis is the processing of raw data into inferences that one can draw meaning from. According to Kothari (2004) data processing is a process of gathering information from data. In this respect, it involves data manipulations in order to obtain meaningful information on the data. The choice of data analysis technique depends on the research design picked. To this

end, this study adopted descriptive statistics which was used analyzed through descriptive statistics and was done by use of STATA.

3.6.1 Multivariable Analytical Model

The study used a multiple regression model in order to evaluate the nature and significance of the independent variables on the dependent variable:

$$Y_{it} = \beta_0 + \beta_{1i}X_{1t} + \beta_{2i}X_{2t} + \beta_{3i}X_{3t} + \beta_{4i}X_{4t} + \beta_{5i}X_{5t} + e_{it}$$

Where by:

Y_{it} = Performance of General Insurance Company

β_0 = is the constant to be estimated by the model

$\beta_{1i}, \beta_{2i}, \beta_{3i}, \beta_{4i}, \beta_{5i}$ = Coefficients of the determinants of performance of general insurance companies;

X_{1t} = Liquidity aspect at year t

X_{2t} = Underwriting factor at year t

X_{3t} = Solvency factor at year t

X_{4t} = Leverage at year t

X_{5t} = Size of the company at year t

t = 2011....2016

e_{it} = error term in the model

The study had 95 % confidence level in the regression analysis. In order to ascertain the relationship between the variables, the study computed the ANOVA test and F-test. The Coefficient of Determination, R^2 was used to explain the variation in financial performance of general insurance company that is accounted for by the independent variables.

Before commencing on the regression modeling, the following diagnostic tests were done.

3.6.2 Test of Autocorrelation

Autocorrelation is the situation that results where the error term in a regression model is correlated over time. According to Brooks (2008) autocorrelation is a serious problem that make regression modelling complex because it makes the findings of the regression spurious. This indicates that the independent variables should not be correlated with each other in order to enhance determination of coefficients. The study used the Wooldridge test of autocorrelation. It is important to note that where the statistic is less than 0.05 at 95% confidence level, the set of data has serial correlation.

3.6.3 Multi Collinearity Test

Multicollinearity is a linear regression problem that indicates that two or more of the independent variables are correlated. According to Brooks (2008) multicollinearity makes adopting a regression model spurious. This study used the Variance Inflation Factor (VIF) in determining the multicollinearity.

3.6.4 Measures of Normality

Normality is a measure of whether a given set of data exhibits a normal characteristics. This study used the Jarque-Bera Statistics of Skewness and Kurtosis. Brooks (2008) indicates that normally distributed data has a measure of skewness of zero and three respectively.

3.6.5 Variables Operationalisation

Table 3: 2 Variables Operationalisation

Name of Variable	What it means	Nature	How it was measured	Scale
Underwriting factor	This is refers to a situation where business underwritten fails to meet the insurance compensation in a given period	Independent variable	Total insurance claims divided by total premium	Ratio
Liquidity	This refers to firms capacity in clearing liabilities in a timely fashion	Independent variable	Current assets divided by short e term liabilities	Ratio
Solvency	This measures whether assets can cover debts	Independent variable	Total assets divided by total liabilities	Ratio
Leverage	This is the debt equity ratio	Independent variable	Total debt divided by total equity	Ratio
Size	This is the capacity of insurance company in terms of assets ownership	Moderating	Log of Total assets	Ratio
Return on Assets	This is the profits made at a certain level of assets	Dependent variable	Profit divided by total assets	Ratio

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction to the Chapter

This chapter entails data analysis, presentation of findings and discussion of findings. The study sought to establish the effect of firm specific characteristics on financial performance of firms. The study utilized data from general insurance companies in Kenya which was collected from the Insurance Regulatory Authority from 2011 to 2016. Since data was collected for each individual general insurance company in Kenya in the period of analysis, the study followed panel data analysis.

4.2 Data Analysis

Panel data analysis involves analysis of data that has been collected from same entities over some time. In this respect, panel data analysis is regarded as two-dimensional data analysis since it encompasses both cross-sectional and longitudinal data analysis. The data was first analyzed into descriptive statistics and exploratory data analysis and secondly regression model was done through selection of the best model to present the findings.

4.3 Descriptive Data Analysis

Descriptive statistics aims at presenting the trend of the values of the values over the time of analysis. The data analysis revealed that the mean ROA was 0.085 with a standard deviation of 0.101, maximum was 0.46 and the minimum was -0.43. This finding indicates that financial performance of general insurance companies in Kenya over the period was low. The mean underwriting risk was 0.777 with a standard deviation of 0.959, maximum underwriting risk was 5.764 and the best risk rate was 0.128. These findings reveals that underwriting risk was not management effectively for most of the general insurance companies in Kenya.

Solvency had a mean of 5.94 with a mean of 9.067, the maximum was 75.55 while the minimum was -14.87. This reveals that solvency was not a major threat to most of the general insurance companies in Kenya. However, some firms portrayed unfavorable solvency margins. The study also found that liquidity had a mean of 7.509 with a standard deviation of 6.624, the maximum was 41.24 and the worst liquidity was 0.20. This indicates that most of the general insurance companies in Kenya were liquid. Perhaps, this is because the IRA lays specific guidelines on investments and asset portfolio for the firms. Leverage had a mean of 1.291 with a standard deviation of 1.218, the maximum was 8.019 and the lowest was 0.074. Leverage for general insurance companies entails a measure of all debts and provisions in comparison to shareholders funds. The reason for high leverage is due to presence of large provisions for claims. The mean firm size was 14.97 with a standard deviation of 0.795, the maximum was 16.59 while the minimum was 13.00. This findings indicates that general insurance companies were large as measured by the total assets. These findings were obtained by using the command *sum varlist* on STATA. These findings are presented on Table 4.1

Table 4: 1Descriptive Statistics of Variables

Variable	Obs	Mean	Std.Dev.	Min	Max
ROA	192	.085	.101	-.43	.46
Underwriti~k	192	.777	.959	.128	5.764
Solvency	192	5.94	9.067	-14.87	75.55
Liquidity	192	7.509	6.624	.2	41.24
Leverage	192	1.291	1.218	.074	8.019
Logfirmsize	192	14.927	.792	13	16.592

4.3.1 Exploratory Data Analysis

For a panel data, it is important to undertake exploratory data analysis particularly for the dependent variable. This aims at providing a good visual impression on the trend of the variable across the companies over time in order to identify whether there are time related

fixed effects. This was done in two phases. At first, the Return on Assets for each individual general insurance company was obtained. The individual general insurance company growth plot indicated that there were no major variations within the firms and all firms seemed to follow a similar trend. However, general insurance company 17 and 26 look like outliers but since they are only two of such nature, the existence of time related fixed effects was ruled.

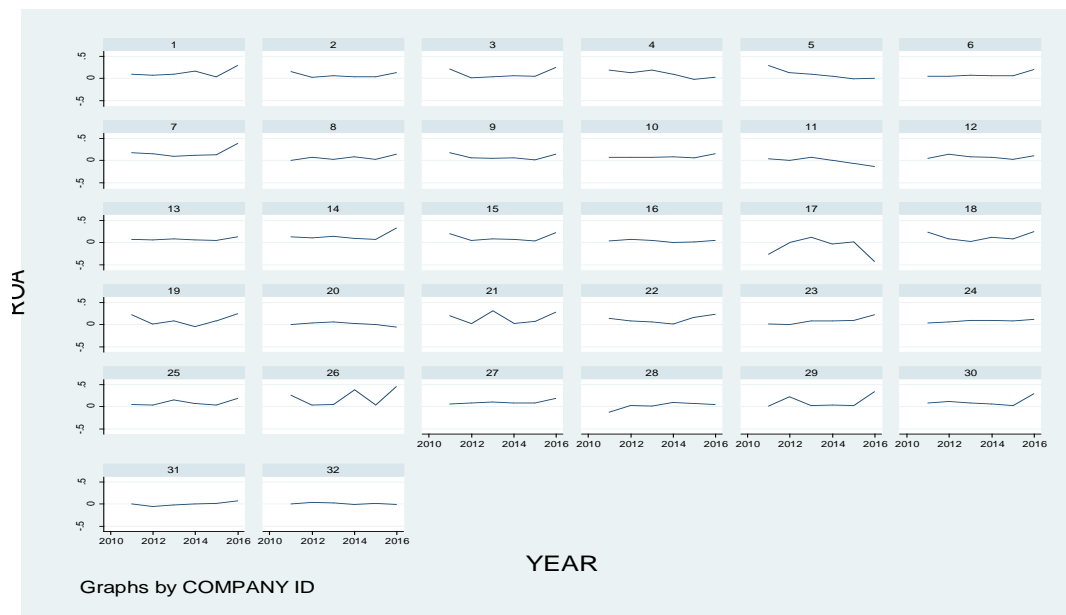


Figure 4: 1 Growth plot of ROA for Individual General Insurance Company

The overlain growth plot of ROA for all general insurance companies indicated that all firms had different Y-intercepts but within similar range and thus the set of data was fit for panel data analysis. These findings were obtained by using the command *xtline ROA* and *xtline ROA, overlay* on STATA. These findings are presented on Figure 4.1 and Figure 4.1

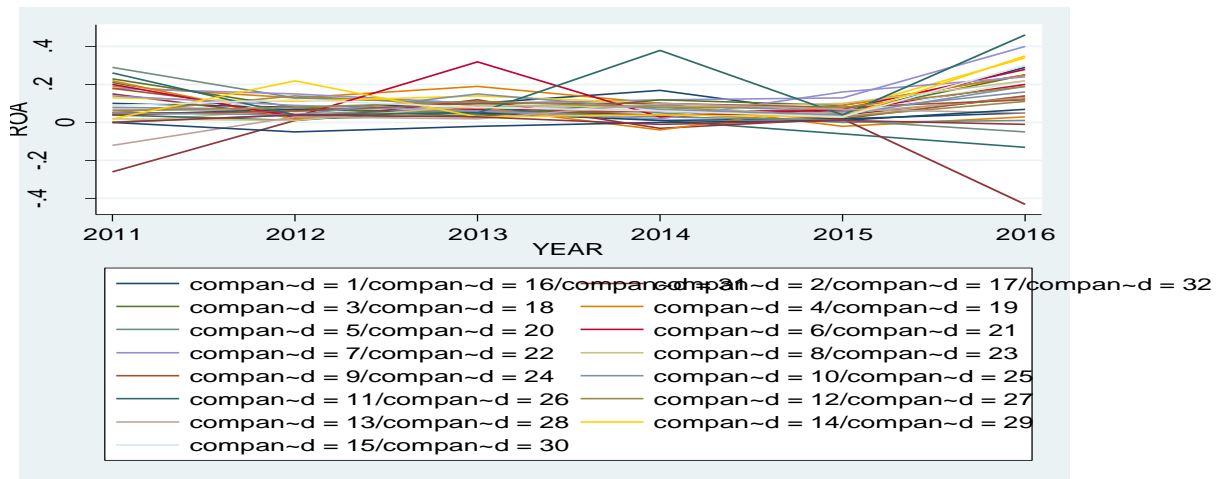


Figure 4: 2 Overlain plot for ROA of All General Insurance Companies

4.3.2 Correlation Matrix of Independent Variables

Correlation is a term that denotes how variables are related to each other. In this respect variables can be negatively or positively related to each other or perfectly related to each other. Where there is a perfect correlation, it means that the two variables are one and thus one should be dropped in carrying out panel data analysis. The study found that underwriting had appositive correlation of 0.118 with solvency, negative correlation of -0.108 with liquidity, negative correlation of -0.032 with leverage and positive correlation of 0.088 with firm size. Also, solvency had a positive correlation of 0.068 with firm size, negative correlation of -0.162 with leverage and was negatively correlated with liquidity at -0.160. Leverage and liquidity had a positive correlation with liquidity at 0.100 and negative correlation with firm size of -0.106. Further, leverage and firm size had a positive correlation of 0.087. These findings indicated that no single independent variable was perfectly correlated with other. Thus all the variables were considered in data analysis. These findings were obtained by using the command *correlate varlist* on STATA. The findings on correlation are presented on Table 4.2

Table 4: 2Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)
(1) underwritingrisk	1.000				
(2) solvency	0.118	1.000			
(3) liquidity	-0.108	-0.160	1.000		
(4) leverage	-0.032	-0.162	0.100	1.000	
(5) logfirmsize	0.088	0.068	-0.106	0.087	1.000

4.4 Panel Data Analysis

Panel data analysis was followed because the data was collected for each individual general insurance company over a period of time, that is, from 2011 to 2016. Before selecting the appropriate model using the Hausman Model specification test for reporting the findings, the study carried out a number of diagnostic tests in order to test the suitability and fitness of the set of data. These tests were test for autocorrelation, multicollinearity, normality test and heteroscedasticity test.

4.4.1 Serial Correlation

Serial correlation is equally known as autocorrelation and it means the situation where the error term in past values of the variables has an impact on the future values of the variables. Autocorrelation is an error that renders the results of regression analysis spurious because In other words, serial correlation implies that the error terms are correlated and thus making regression modelling complex. Basically, autocorrelation occurs when variables are measured erroneously, there is wrong model and if vital variables are left out in the data set. The study adopted the Woolridge test to test serial correlation. The study found Wooldridge statistic value of 0.000. It is important to note that where the statistic is less than 0.05 at 95% confidence level, the set of data has serial correlation. It is for this reason that the study adopted the panel corrected standard errors (robust model) in order to correct autocorrelation

in the data set. The STATA command is *xserial varlist*. The findings are presented on Table 4.3

Table 4: 3 Serial Correlation Test

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation
 $F(1, 31) = 37.250$
 Prob > F = 0.0000

4.4.2 Multicollinearity

Multicollinearity is situation where the independent variables influence each other. This study used Variance Inflation Factor (VIF) in determining the multicollinearity. The study found out that solvency had a VIF of 1.06 with a tolerance value of 0.943, liquidity had a VIF of 1.041 with tolerance of 0.961, leverage had a VIF of 1.033 with tolerance of 0.968 and underwriting risk had a VIF of 1.023 with a tolerance value of 0.978. These findings indicates that the independent variables did not exhibit multicollinearity problem. This is because all the VIF were less than 10.00 and tolerance values were more than 0.1. Tolerance is obtained by dividing 1 by VIF since it is the reciprocal of VIF. These were obtained by using the STATA command, *vif varlist*. The findings are presented on Table 4.4

Table 4: 4 Variance inflation factor

	VIF	1/VIF
Solvency	1.06	.943
Liquidity	1.041	.961
Leverage	1.033	.968
Underwriting risk	1.023	.978
Mean VIF	1.039	.

4.4.3 Testing for Heteroskedasticity

There was a need to test for heteroscedasticity in the data set. Heteroskedasticity means a situation where the regression model error term is not constant across all observations. In other words, the error term is not homoscedasticity which tends to render the regression output spurious. It is important to note that regression model is done on the assumption that the error term is equal or has constant variance all along, that is, homoscedastic. Thus, heteroscedasticity exists where the error term in the regression model of time series data has unequal variance. This study used the modified Wald Test that is typically preferred in testing for heteroscedasticity. The Wald test results indicated a P value of 0.000 which infers that the given set of data was heteroskedastic. This was expected since data with serial correlation normally exhibits heteroscedasticity problems (Brooks, 2008). However, there are remedies to the problem which is sorted out by use of the panel corrected standard errors. The STATA command was *xttest 3*. These results are presented on Table 4.5

Table 4: 5 Modified Wald Test for Heteroskedasticity

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model
H0: $\sigma(i)^2 = \sigma^2$ for all i
chi2 (32) = 4352.84
Prob > chi2 = 0.0000

4.4.4 Normality Test

Normality is a measure of whether a given set of data exhibits a normal characteristics. This study used the Jarque-Bera Statistics of Skewness and Kurtosis. Brooks (2008) indicates that normally distributed data has a measure of skewness of zero but within the range of -3 to 3 and three but within the range of -10 to 10 respectively. The study revealed that ROA had skewness of 0.5579 and Kurtosis statistic of 0.00, underwriting risk had skewness of 0.00 and Kurtosis statistic of 0.00, solvency had skewness of 0.00 and Kurtosis statistic of 0.00,

leverage had skewness of 0.00 and Kurtosis statistic of 0.00 and firm size had a skewness of 0.426 with a kurtosis of 0.067. These findings indicates that the data set exhibited normal distribution as all the skewness statistics were between -3 and 3 while kurtosis were between -10 to 10. The measure of normality was obtained using the STATA command, *sktest, varlist*. These findings are tabulated on Table 4.6

Table 4: 6 Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj_chi2(2)	Prob>chi2
ROA	192	0.5579	0	23.1	0
Underwriting ~k	192	0	0	.	0
solvency	192	0	0	.	0
liquidity	192	0	0	.	0
leverage	192	0	0	.	0
Log firm size	192	0.426	0.067	4.03	0.133

4.4.5 Hausman Model Specification

It was important to decide which model was suitable in reporting the findings of the study. This was done in respect of using Fixed Effect model or Random Effects model. Fixed Effect models implies a situation where the group means are known to be fixed indicating that the slope coefficients are constant. On the contrary where group means are random then the best model to use is the Random Effects model. The study adopted the Hausman Test in identification of the model that was suitable for reporting on the effect of firm specific characteristics on financial performance of general insurance companies in Kenya.

The results indicated that The Hausman test provided a P-value of 0.05 which was equal to 0.05 meaning that the suitable model was the Fixed Effects regression Model. However, the panel data had serial correlation and heteroscedasticity problem which corrected by using the robust model. As such, the study reported the findings based on the robust standard errors.

The Hausman test was obtained by using the STATA command *hausman fe re*. These findings are presented on Table 4.7

Table 4: 7Hausman (1978) specification test

	Coef.
Chi-square test value	9.442
P-value	.051

4.4.6 Prais Winstein Regression Model with Robust Errors

The study adopted the robust error model because the data set violated the assumptions of regression particularly with respect to panel data. The data set had first order serial correlation and also had heteroscedasticity issues. The study found an R square of 0.394 which implies that 39.4 % of variations in Return on Asset of general insurance companies in Kenya is explained by the changes in underwriting risk, liquidity, solvency and leverage. The probability was less than Chi-square at 0.001 indicating that the overall model is fit to describe the changes in ROA with respect to the selected variables. The STATA command is for this analysis is *xtpcse varlist, hetonly correlation(psar1)*. These findings are presented on Table 4.8

Table 4: 8Prais-Winsten regression, heteroskedastic panels corrected standard errors

roa	Coef.	St.Err	t-value	p-value	Sig.
liquidity	-0.002	0.001	-1.86	0.062	*
underwritingrisk	-0.015	0.005	-3.05	0.002	***
solvency	0.001	0.001	1.23	0.220	
leverage	-0.022	0.009	-2.51	0.012	**
_cons	0.139	0.014	9.82	0.000	***
Mean dependent var	0.085	SD dependent var			0.101
R-squared	0.394	Number of obs			192.000
Chi-square	19.314	Prob > chi2			0.001

*** p<0.01, ** p<0.05, * p<0.1

The study had developed an analytical model which was set as:

$$Y_{it} = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + e_{it}$$

The coefficients are therefore fitted as

$$Y_{it} = 0.139 - 0.002X_{1t} - 0.015X_{2t} + 0.001X_{3t} - 0.022X_{4t}$$

Y is financial performance of companies measured in terms of ROA, 0.139 is the Y-intercept which represents ROA in absence of the predictor variables, -0.002 is the reduction in ROA after one unit increase in Liquidity, -0.015 is the reduction in ROA after one unit increase in underwriting risk. 0.001 is the increase in ROA after one unit increase in solvency and -0.022 is the decrease in ROA after one unit increase in in leverage.

4.4.7 Testing for Control Variable

The study had one control variable that is firm size, which was measured in terms of the total assets. The panel errors corrected regression model with firm size indicated that the overall significance of the model improved as revealed by the P-Value of 0.000. This means that including firm size as control variable actually improved the model. The R² was found to be 0.391 which meant that 39.1 % of variations in Return on Assets were accounted for by changes in liquidity, underwriting risk, solvency, leverage and firm size. The findings are presented on Table 4.9

Table 4: 9Prais-Winsten regression, heteroskedastic panels corrected standard errors (Control Variable)

ROA	Coef.	St.Err	t-value	p-value	Sig.
liquidity	-0.002	0.001	-2.09	0.037	**
underwritingrisk	-0.015	0.005	-3.02	0.003	***
solvency	0.001	0.001	0.75	0.451	
leverage	-0.024	0.008	-2.83	0.005	***
logfirm size	0.025	0.009	2.65	0.008	***
_cons	-0.221	0.139	-1.59	0.111	
Mean dependent var	0.085	SD dependent var		0.101	
R-squared	0.391	Number of obs		192.000	
Chi-square	25.353	Prob > chi2		0.000	

*** p<0.01, ** p<0.05, * p<0.1

The model was fitted as;

$$Y_{it} = -0.221 - 0.002X_{1t} - 0.015X_{2t} + 0.001X_{3t} - 0.022X_{4t} + 0.025X_{5t}$$

Where:

Y is financial performance of companies measured in terms of ROA.

-0.221 is the Y-intercept which represents ROA in absence of the predictor variables

-0.002 is the reduction in ROA after one unit increase in Liquidity

-0.015 is the reduction in ROA after one unit increase in underwriting risk.

0.001 is the increase in ROA after one unit increase in solvency

-0.022 is the decrease in ROA after one unit increase in leverage

0.025 is the increase in ROA after one unit increase on firm size.

4.4.8 Testing Hypotheses

The study had formulated null hypotheses which were tentative conclusion that the independent variables did not affect the financial performance of insurance companies in a statistically significant way. The alpha value was 0.05 which meant that if the P-value was less than 0.05, then the null hypothesis was to be rejected in favor of the alternative one. Liquidity had a P-value of 0.037 which was less than 0.05 indicating that that the hypothesis that was stated as H_03 : *The relationship between liquidity and financial performance of general insurance companies in Kenya is not statistically significant* as rejected. It meant that liquidity has a statistically significant effect on ROA. Underwriting had a P-Value of 0.003 meaning that the hypothesis that was set as H_01 : *There is no significant effect of underwriting risk on financial performance of general insurance companies in Kenya* was equally rejected. Solvency had a P-value of 0.451 which was more than 0.05 indicating that the relationship between the solvency and financial performance of general insurance companies was not statistically significant. Further, the P-Value for leverage and firm size were 0.005 and 0.008 indicating that the null hypotheses were rejected. This means that the hypothesis set as H_02 :

Solvency does not significantly affect financial performance of general insurance companies in Kenya was upheld while *H₀₄: The effect of firm leverage on financial performance of general insurance companies in Kenya is not statistically significant* and *H₀₅: The control effect of firm size on financial performance of general insurance companies in Kenya is not statistically significant* were both rejected.

In respect to these findings the final model was set:

$$Y_{it} = -0.221 - 0.002X_{1t} - 0.015X_{2t} - 0.022X_{3t} + 0.025X_{4t}$$

Where:

Y is financial performance of companies measured in terms of ROA.

-0.221 is the Y-intercept which represents ROA in absence of the predictor variables

-0.002 is the reduction in ROA after one unit increase in Liquidity

-0.015 is the reduction in ROA after one unit increase in underwriting risk.

-0.022 is the decrease in ROA after one unit increase in leverage

0.025 is the increase in ROA after one unit increase on firm size.

4.5 Discussion of Findings

This study sought to establish the effect of underwriting risk, liquidity, solvency, leverage and firm size on financial performance of firms in Kenya, the case of general insurance companies in Kenya. The study found out that there is negative effect of underwriting risk on financial performance of general insurance companies in Kenya. Further, the effect of underwriting risk was found to be statistically significant. Underwriting risk is the chance that the premium collected are not enough to cover the claims reported in a given year. Theoretically, it is expected that underwriting risk should have a negative effect on financial performance of insurance firms. The study validated this notion. These findings agrees with those of a study done by Mwangi and Mirigu (2013) who sought to assess the relationship

that existed between underwriting profits and performance of non-life insurance companies in Kenya and revealed that underwriting risk had a negative effect on performance of insurance firms. On the contrary, Adams and Buckle (2013) sought to establish the determinants of performance of Bermudian Insurance Companies industry and revealed that underwriting risk had a positive effect on financial performance.

The study found that liquidity had a negative effect on financial performance of general insurance companies in Kenya. Further, the effect was found to be statistically significant. Liquidity entails having liquid assets in the firm which may not be earning income. It is important to note that too much liquid assets leads to losses of revenue that could have been earned if the assets were invested for long term ventures. This finding agrees with those of Adams and Buckle (2013) who noted that high liquidity resulted to low performance of insurance firms in the Bermuda region.

The study found that solvency had a positive and non-significant relationship with financial performance of the firms. Solvency focuses on ensuring that the existing assets can cover the total debts. High solvency margins enhance stability of firms and thus improve the potential of higher earnings. The results match those of Ćurak, Pepur and Poposki (2011) who found out that in Croatia, solvency margins are required by the law were beneficial to the insurance firms in the country.

Leverage was found to have a negative effect on financial performance of insurance companies in Kenya. Leverage for insurance companies is composite of non-paid claims in respect to the shareholders' funds. When too much claims are left outstanding the performance of insurance companies tends to deteriorate since the market is aware of this

information and this may act as indicators of financial distress. The study found out that firm size has a positive effect on financial performance of insurance companies in Kenya. Perhaps, this is because a larger company can cover more risks in return for premiums which would improve earnings. These findings agrees with those of Kozak (2011) sought to establish the determinants of profitability of insurance companies in Poland and revealed that larger firms get more insurance business which resulted into more profits.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction to the Chapter

Chapter five entails discussions on findings per objective of the study, conclusions and recommendations. Also, the chapter highlights the major limitations that were encountered in undertaking the study. At the end, suggestions for further research are made with respect to the gap that this study did not fill.

5.2 Summary of Findings

The general objective of this study was to establish effect of firm specific characteristics on financial performance of firms, evidence from general insurance companies in Kenya. The study carried out a panel data analysis of 32 general insurance companies in Kenya. Secondary data was collected from Insurance Regulatory Authority from 2011 to 2016. The first objective of the study was to find out the effect of underwriting risk on financial performance of general insurance companies in Kenya. The study found out that underwriting risk had a negative effect on financial performance as evidenced by the coefficient of -0.015. Equally, the study found out that underwriting risk had a statistically significant effect on financial performance of general insurance companies as indicated by P-value of 0.003.

The second objective of the study was to establish the effect of solvency on financial performance of general insurance companies in Kenya. It was found out that solvency has a positive effect on financial performance as indicated by coefficient of 0.001. However, the study revealed that the relationship was not statistically significant. The P-value was 0.451.

The third objective of the study was to find out the effect of liquidity on financial performance of general insurance companies in Kenya. The results revealed that liquidity had

a negative and statistically significant effect on financial performance of firms as indicated by the coefficient of -0.002 and a P-value of 0.037.

The fourth objective sought to assess the effect of firm leverage on financial performance of general insurance companies in Kenya. It was revealed that leverage had a negative effect on financial performance of general insurance companies as indicated by the coefficient of -0.024. In addition, the study found that the effect of leverage was statistically significant as shown by the P-value of 0.005.

Including firm size in the model improved the overall fitness of the model as the P-value was 0.000. In addition the study revealed that firm size had a positive effect on financial performance of insurance companies in Kenya as evidenced by the mean of 0.025. Further, it was established that relationship between firm size and financial performance of general insurance companies was statistically significant as shown by the P-value of 0.008

5.3 Conclusions

The general objective of this study was to establish effect of firm specific characteristics on financial performance of firms, evidence from general insurance companies in Kenya. The study concludes that underwriting risk, liquidity and leverage have negative and significant effect on financial performance of general underwriters. The study also concludes that solvency has a positive and non-significant effect on financial performance of general insurance in Kenya. The study further concludes that firm size has a positive and statistically significance effect on financial performance of general insurance companies in Kenya.

5.4 Recommendations

Based on the findings of the study, the study recommends that it is important that general insurance companies establish a robust risk management guideline as it was found out that underwriting risk negatively impacts on performance. It is equally important for the management of the firms to keep optimum liquidity since too much liquid assets reduces interest income. On leverage, claims should be promptly paid in order to ensure that stability and profitability of firms is maintained high at all times. It is recommended that firms should keep debts that can be paid as solvency has been found to positively impact on financial performance of the companies. In a general the postulates of the Modern Portfolio Theory should be applied in order to maintain a combination of assets with optimal risk-return trade off.

5.5 Limitations of the Study

This study has a few limitations. Foremost, use of historical data from the publications of IRA does not out-rightly guarantee that the same trend is bound to be observed in future times. Thus the application of the study findings in real life policy decision making is subject to debate. Secondly, the study collected data from IRA and did not go further in substantiating the accuracy of the same records from the individual general underwriters. Lastly, the study considered 32 insurance firms and thus this sample may not be a representative of the entire population of firms in Kenya.

5.6 Suggestions for Further Research

This study evaluated the effect of firm specific traits on financial performance of general insurance companies in Kenya. The study recommends that another study be done using the non-life insurance companies in order to compare findings. Also, another study can be done using the same variables with respect to long term insurance business and composite insurance companies in Kenya. In addition, other studies can be done with focus similar variables with inclusion of managerial expertise index, premium retention ratio and age of the general insurance company. This will provide more information on factors that influence financial performance of insurance companies in Kenya.

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APPENDICES

Appendix A: List of General Insurance Companies

1	AIG Kenya
2	AMACO
3	APA
4	Britam
5	Cannon
6	CIC General
7	Corporate
8	Directline
9	Fidelity
10	First Assurance
11	Gateway
12	Geminia
13	General Assurance
14	Heritage
15	ICEA
16	Intra Africa
17	Invesco
18	Jubilee
19	Kenindia
20	Kenya Orient
21	Kenya Alliance
22	Madison
23	Mayfair
24	Mercantile
25	Occidental
26	Pacis
27	Phoenix
28	The Monarch
29	Trident
30	UAP
31	Takaful
32	Xplico

Source; IRA (2016)

Appendix B: Secondary Data Collection Sheet

Year	ROA (EBIT/Total Assets)	Liquidity aspect (Current assets/short term liabilities)	Underwriting Risk aspect (Gross claims/ Gross premiums)	Solvency risk (Total assets Total /Liabilities)	Leverage (debt-equity Margin)	Firm size (Total assets)
2011						
2012						
2013						
2014						
2015						
2016						

Appendix C: Time Budget

The Gantt chart below shows the duration of activities of the study. The Gantt Chart is scheduled for three months.

Activity	Week 1-4	Week 5-8	Week 9-10	Week 11-12
Proposal Development				
Defense				
Data Collection				
Data Coding and Editing				
Data analysis				
Report Writing				

Appendix D: Stata Output Exclusive of Firm Size

Prais-Winsten regression, heteroskedastic panels corrected standard errors

```

Group variable:  companyid      Number of obs   =   192
Time variable:  year           Number of groups =   32
Panels:         heteroskedastic (balanced)  Obs per group: min =    6
Autocorrelation: panel-specific AR(1)      avg =    6
                                                max =    6
Estimated covariances   =    32      R-squared       =   0.3944
Estimated autocorrelations =    32      Wald chi2(4)    =   19.31
Estimated coefficients  =    5        Prob > chi2     =   0.0007
    
```

b	Het-corrected				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
liquidity	-.0019364	.001039	-1.86	0.062	[-.0039729 .0001001]
underwritingrisk	-.0150256	.0049196	-3.05	0.002	[-.0246679 -.0053833]
solvency	.0010451	.0008521	1.23	0.220	[-.000625 .0027153]
leverage	-.0218742	.0087029	-2.51	0.012	[-.0389316 -.0048168]
_cons	.1392529	.0141809	9.82	0.000	[.1114588 .1670469]
rhos = -.5980643 -.0087357 -.2212018 .3786213 .1135198 ... -.6491795					

Appendix E: Stata Output with Firm Size

```

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Group variable:  companyid      Number of obs   =   192
Time variable:  year           Number of groups =   32
Panels:        heteroskedastic (balanced)  Obs per group: min =    6
Autocorrelation: panel-specific AR(1)      avg =    6
                                                max =    6
Estimated covariances =    32      R-squared       =  0.3910
Estimated autocorrelations =    32      Wald chi2(5)   =  25.35
Estimated coefficients =    6         Prob > chi2    =  0.0001
    
```

roa	Het-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
liquidity	-.0021631	.0010356	-2.09	0.037	-.0041929	-.0001333
underwritingrisk	-.0154743	.0051281	-3.02	0.003	-.0255252	-.0054234
solvency	.0006857	.0009106	0.75	0.451	-.001099	.0024704
leverage	-.0238838	.0084507	-2.83	0.005	-.0404469	-.0073206
logfirmsize	.0245417	.0092802	2.64	0.008	.0063529	.0427305
_cons	-.2206235	.1385041	-1.59	0.111	-.4920865	.0508396

```

      rho5 = -.6345214 -.2390339 .0932764 .352789 .0829076 ... =.1604294
    
```